HAVKON® PNEUMATIC

2014

CONTENTS

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CONTENTS

HAVKON® PNEUMATIC

Standard Cylinders

Standard cylinder is composed of Front & End Cover, Barrel, Piston, Piston Rod and Seal Rings, which is most regular pneumatic cylinder. XCPC manufactured standard cylinder for over 20 years, it became to be the leader in this filed in China. The bore range is from 32mm to 320mm. Our standard cylinder include: DNC (ISO6431,VDMA24562,) DNG(ISO15552) ,SI(ISO6431), SC/SU, MB(Japanese Standard), we can also produce specialized cylinder according to customer's requirement.

HAVKON® PNEUMATIC

A

DNC Series ISO6431 Standard Cylinder

DNC-50×100

MDNC-50×100

TDNC-50×100

Ordering Code

□ — DNC — 63 × 50 — 25 — S — □

Tube Type
Blank:Square Type
T:Tie-rod Type
M:Mickey Mouse Type

Series Code
DNC:ISO6431 Standard Double Action Type
DNCD:ISO6431 Standard Two Axis Double Action Type
DNCJ:ISO6431 Two Axis Stroke Adjust Type

Cylinder Bore
32mm-125mm

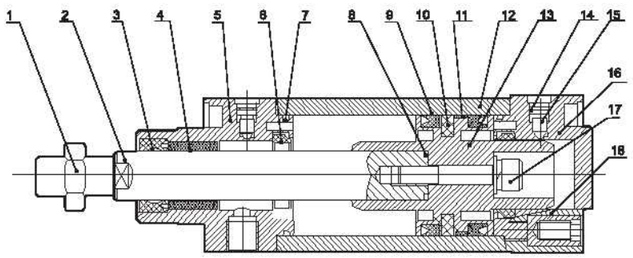
Stroke

Adjust Storke
25:25mm
50:50mm
75:75mm

Magnet Code
Blank:Without Magnet
S:With Magnet

Fixed Type
Blank:Normal type
LB:Front and back fixed type
FA:Front cover fixed type(Front flange type)
FB:Back cover fixed type(Back flange type)
CA:Back cover fixed type (Single Earring)
CB:Back cover fixed type(Double Earring)
SDB:Back cover fixed type

Internal structure



NO	Designation	NO	Designation
1	Piston Rod Nut	2	Piston Rod
3	Front Cover Seal Ring	4	Bearing
5	Front Cover	6	Buffering O-Ring
7	O-Ring	8	Piston rod O-Ring
9	Piston O-Ring	10	Magnet(Optional)
11	Wear Ring	12	Barrel
13	Piston	14	Cushion Seal
15	Cushion Needle	16	Back Over
17	Hex Socket Screw	18	Profile Bolt

Specification

Bore(mm)	32	40	50	63	80	100	125
Motion Pattern	Fltered Air						
Working Medium	Double Action						
Compression Pressure	1.5MPa						
Max.Operating Pressure	1.0MPa						
Min.Operating Pressure	0.1MPa						
Buffer	Air Buffer(Standard)						
ConditionTemperature	-5~70℃						
Operating Speed	50~800mm/s						
Port Size	G1/8"	G1/4"		G3/8"		G1/2"	

Stroke

Bore	Standard Stroke	Buffer Stroke	Stroke Range
32	25 40 50 80 100 125 160 200 250 320 400 500	20	10~2000
40			
50		22	
63			
80		32	
100			
125		35	

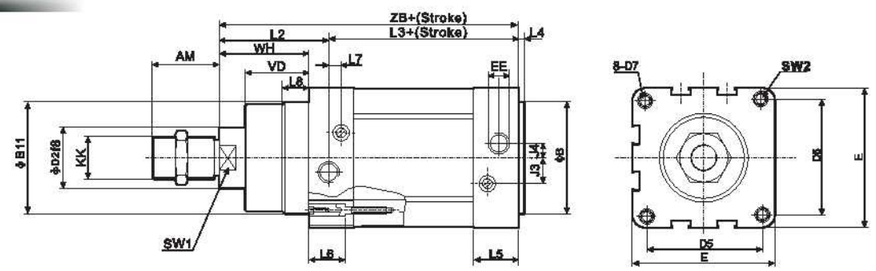
HAVKON® PNEUMATIC

A

DNC Series ISO6431 Standard Cylinder

Overall Dimensions

Normal Type
DNC-S

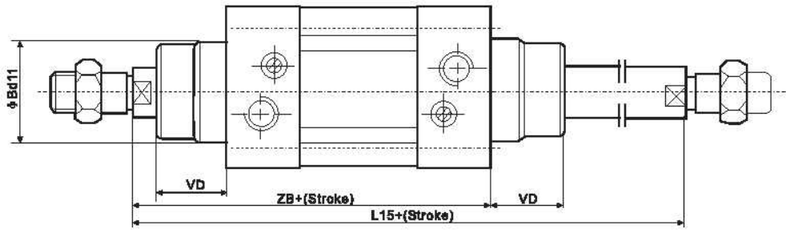


Dimension Sheet

Bore	AM	B	D2	D5	D7	E	EE(G)	J3	J4	KK	L2	L3	L4	L5	L6	L7	L8	SW1	SW2	VD	WH
32	22	30	12	32.5	M6	45	1/8	6	5.2	M10×1.25	41.6	62.8	4	26	16	3.3	10	10	6	12	26
40	24	35	16	38	M6	54	1/4	8	6	M12×1.25	44	77	4	29.6	16	3.6	10.5	13	6	20	30
50	32	40	20	48.5	M8	64	1/4	10	8.5	M16×1.5	51	78	4	30	17	5.1	11.5	17	8	27	37
63	32	45	20	56.5	M8	75	3/8	12.4	10	M16×1.5	54	87	4	35.6	17	6.6	15	17	8	27	37
80	40	45	25	72	M10	93	3/8	12.5	8	M20×1.5	62.4	95.2	4	35.9	17	10.5	15.7	22	10	34.7	46
100	40	55	25	89	M10	110	1/2	11.8	10	M20×1.5	69.8	100.4	4	39	17	8	19.2	22	10	38	51
125	54	60	32	110	M12	134	1/2	13	8	M27×2	83	124	6	44.7	22	14	20.5	28	12	46	65

Overall Dimensions

Double Piston Rod Type
DNC-D-S



Dimension Sheet

Bore	32	40	50	63	80	100
B	30	35	40	45	45	55
L15	46	165	180	195	220	240
VD	16	20	27	27	34.7	38.2
ZB	120	135	143	158	174	189

DNCB Series Booster Cylinder

DNCB-50×25×50

Specification

Motion Pattern	Fltered Air
Compression Pressure	1.5MPa
Max.Operating Pressure	1.0MPa
Min.Operating Pressure	0.1MPa
ConditionTemperature	-5~70℃

Product Instruction

Booster cylinder combine 2 or more ISO15552 standard cylinder with the same bore and stroke, Create twice or multiple force as standard cylinder. The connection of 2 or more cylinders are linked with the same material Compact structure and easy for installartion.

HAVKON® PNEUMATIC

A

DNG Series ISO15552 Standard Cylinder

DNG-200×100-S

DNG-250×200-S

NEW

Ordering Code

DNG — 160 × 100 — 25 — S — □

Series Code
DNG:ISO15552 Standard Double Action Type
DNGD:ISO15552 Standard Two Axis Double Action Type
DNGJ:ISO15552 Two Axis Stroke Adjust Type

Cylinder Bore
160mm-320mm

Stroke

Adjust Storke
25:25mm
50:50mm
75:75mm

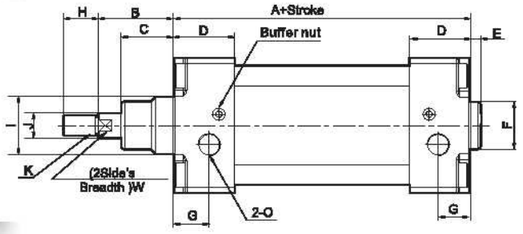
Magnet Code
Blank:Without Magnet
S:With Magnet

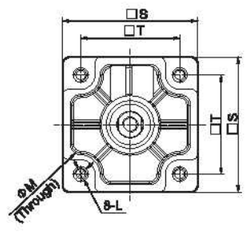
Fixed Type
Blank:Normal type
LB:Front and back fixed type
FA:Front cover fixed type(Front flange type)
FB:Back cover fixed type(Back flange type)
CA:Back cover fixed type (Single Earring)
CB:Back cover fixed type(Double Earring)

Specification

Bore(mm)	160	200	250	320
Motion Pattern	Double Action			
Working Medium	Air			
Fixed Type	Normal type FA type FB type CA type CB type LB type TC type			
Working Pressure Range	0.1~1.0MPa			
Ensured Pressure Resistance	1.5MPa			
Operating Temperature Range	-5~60℃			
Operating Speed Range	50~500mm/s			
Buffer Type	Adjustable Buffer			
Port Size	G3/4"		G1"	
Lubrication	Not required (Use Turbine oilISO Vg32 when necessary)			

Overall Dimensions





Dimension Sheet

Bore/Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	S	T	O
160	180	80	60	50	6	Φ65	25	72	Φ85	40	M36×2	M16	Φ25dφ30	180	140	G3/4"
200	180	95	70	50	6	Φ75	25	72	Φ75	40	M36×2	M16	Φ25dφ30	220	175	G3/4"
250	200	105	67	52	10	90	31	84	90	50	M42×2	M20	Φ30	270	220	G1"
320	218	120	82	52	10	110	31	96	110	63	M48×2	M24	Φ34	340	270	G1"

HAVKON® PNEUMATIC

A

SI Series ISO6431 Standard Cylinder

SI-50×100

SIJ-50×100-25

Ordering Code

SI — 50 × 50 — 25 — S — □

Series Code
SI:ISO6431 Standard Double Action Type
SID:ISO6431 Standard Two Axis Double Action Type
SIJ:ISO6431 Two Axis Stroke Adjust Type

Cylinder Bore
32mm-200mm

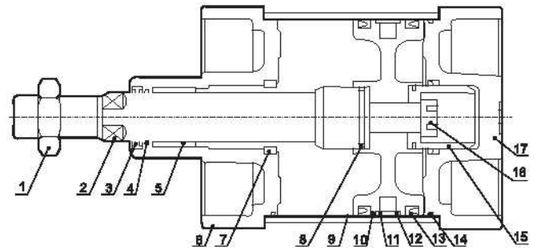
Stroke

Adjust Storke
25:25mm
50:50mm
75:75mm

Magnet Code
Blank:Without Magnet
S:With Magnet

Fixed Type
Blank:Normal type
LB:front and back fixed type
FA:front cover fixed type(Front flange type)
FB:back cover fixed type(Back flange type)
CA:back cover fixed type (Single Earring)
CB:back cover fixed type(Double Earring)
TC:Central Trunnion Type
TC-M:Central Trunnion type attaching foot seat

Internal structure



NO	Designation	NO	Designation
1	Piston Rod Nut	10	Piston
2	Piston rod	11	Wearing
3	Front cover seal ring	12	Magnet(Optional)
4	O-Ring	13	Pistion O-Ring
5	Bearing	14	Pipe wall O-Ring
6	Front cover	15	Damping
7	Buffering O-Ring	16	Hex socket screw
8	Piston rod O-Ring	17	Back cover
9	Barrel		

Specification

Bore(mm)	32	40	50	63	80	100	125	160	200
Motion Pattern	Double Action								
Working Medium	Air								
Fixed Type	Normal type FA type FB type CA type CB type LB type TC type								
Working Pressure Range	0.1~0.9MPa								
Ensured Pressure Resistance	1.35MPa								
Operating Temperature Range	-5~70℃								
Operating Speed Range	50~800mm/s								
Buffer Type	Adjustable Buffer								
Buffer Stroke	24						32		
Port Size	G1/8"	G1/4"		G3/8"		G1/2"		G3/4"	

HAVKON® PNEUMATIC

SI Series ISO6431 Standard Cylinder

Cylinder theory output

Cylinder inside Diameter	Extern Diameter of Piston Rod	Potion Patterm		Compression Area(cm²)	Air Pressure(kgf/cm²)								
					1	2	3	4	5	6	7	8	9
32	12	Double Action	Press Side	8.04	8.04	16.08	24.12	32.16	40.20	48.24	56.28	64.32	72.36
			Pull Side	6.90	6.90	13.80	20.07	27.60	34.50	41.40	48.30	55.20	62.10
40	16	Double Action	Press Side	12.56	12.56	25.12	37.68	50.24	62.80	75.36	87.92	100.24	113.04
			Pull Side	10.55	10.55	21.10	31.65	42.20	52.75	63.30	73.85	84.40	94.95
50	20	Double Action	Press Side	19.63	19.63	39.26	58.89	78.52	98.15	117.78	137.41	157.04	176.67
			Pull Side	16.49	16.49	32.98	49.47	65.96	82.45	98.94	115.43	139.92	148.41
63	20	Double Action	Press Side	31.17	31.17	62.34	93.51	124.68	155.85	187.02	218.19	249.36	280.53
			Pull Side	28.03	28.03	56.06	84.09	112.12	140.15	168.18	196.21	224.24	252.27
80	25	Double Action	Press Side	50.26	50.26	100.52	150.78	201.04	251.30	301.56	351.82	402.08	452.34
			Pull Side	45.36	45.36	90.72	136.08	181.44	226.80	272.16	317.52	326.88	408.24
100	25	Double Action	Press Side	78.53	78.53	157.06	235.59	314.12	392.65	471.18	428.82	628.24	706.77
			Pull Side	71.47	71.47	142.94	214.41	285.88	357.35	428.82	500.29	517.76	643.23
125	32	Double Action	Press Side	122.72	122.72	245.44	368.16	490.88	613.60	736.32	859.04	981.76	1104.48
			Pull Side	114.68	114.68	229.36	344.04	458.72	573.40	688.08	802.76	917.44	1032.12
160	40	Double Action	Press Side	201.06	201.06	402.12	603.18	804.24	1005.30	1206.36	1407.42	1608.48	1809.54
			Pull Side	188.49	188.49	376.98	565.47	753.96	942.45	1130.94	1319.43	1507.92	1696.41
200	40	Double Action	Press Side	314.16	314.16	628.32	942.48	1256.64	1570.80	1884.96	2199.12	2513.28	2827.44
			Pull Side	301.57	301.57	603.14	904.71	1206.28	1507.80	1809.42	2100.99	2412.56	2714.13

Stroke

Bore(mm)	Standard Stroke	Max.Stroke	Permissible Stroke
32	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500	1000	2000
40	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800	1200	2000
50	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1200	2000
63	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
80	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
100	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
125	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
160	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
200	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000

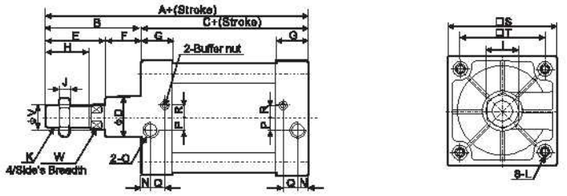
■ If you need special stroke,please Tell us, we can make according your require.

HAVKON® PNEUMATIC

SI Series ISO6431 Standard Cylinder

Overall Dimensions

SI



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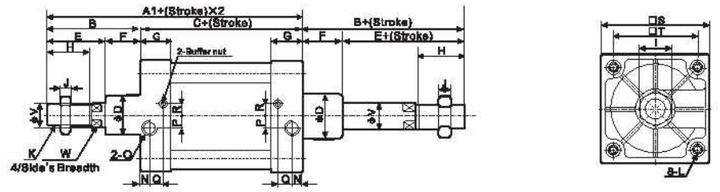
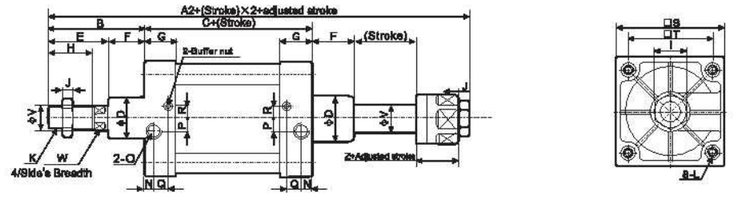


SIJ



Dimension Sheet

Bore/Symbol	A	A1	A2	B	C	D	E	F	G	H	I	J	K	L
32	142	190	187	48	94	30	28	16	27.5	22	17	6	M10×1.25	M6
40	159	213	207	54	105	35	32	18	29	24	19	7	M12×1.25	M6
50	175	244	233	69	105	40	42	25	30	32	24	8	M16×1.5	M8
63	190	259	250	69	120	40	40	24	31.5	32	24	8	M16×1.5	M8
80	214	300	286	86	128	40	53	30	35.5	40	30	10	M20×1.5	M10
100	229	320	308	91	138	45	55	32	36	40	30	10	M20×1.5	M10
125	279	398	372.5	119	160	60	74	45	48	54	41	13.5	M27×2	M12
160	332	484	448	152	160	65	94	58	50	72	55	18	M36×2	M16
200	337	514	472	157	160	75	100	57	50	72	55	18	M36×2	M16

Bore/Symbol	N	O	P	Q	R	S	T	V	W	Z
32	13.5	G1/8"	4	7.5	7	47	32.5	12	10	21
40	16	G1/4"	6	8.5	9	53	38	16	13	21
50	15.5	G1/4"	8.5	7.5	7.5	65	46.5	20	17	23
63	16.5	G3/8"	7.5	8.5	9	75	56.5	20	17	23
80	16.5	G3/8"	11	8.5	13.5	95	72	25	22	29
100	18.5	G1/2"	13.5	9.5	14.5	115	89	25	22	29
125	23	G1/2"	14	12	14	140	110	32	27	35
160	25	G3/4"	15	12	20	180	140	40	36	40
200	25	G3/4"	15	12	20	220	175	40	36	40

HAVKON® PNEUMATIC

A

SC/SU Series Standard Cylinder

SC-50×100 SU-50×100 SCJ-50×100-25

Ordering Code

SC — 50 × 50 — 25 — S — □

Series Code
SC:Standard double action(Tie-rod Type)
SCD:Double-shaft double action(Tie-rod Type)
SCJ:Double axis double acting adjustable type(Tie-rod Type)
SU:Standard double acting (Micky Mouse Type)

Cylinder Bore 32mm-200mm

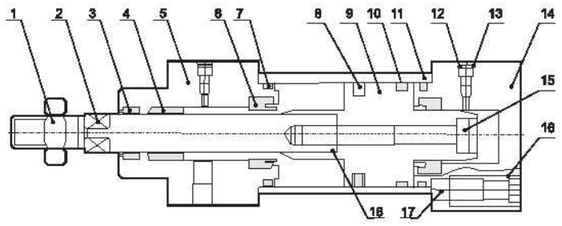
Stroke

Adjust Storke
25:25mm
50:50mm
75:75mm

Magnet Code
Blank:Without Magnet
S:With Magnet

Fixed Type
Blank:Normal type
LB:front and back fixed type
FA:front cover fixed type(Front flange type)
FB:back cover fixed type(Back flange type)
CA:back cover fixed type (Single Earring)
CB:back cover fixed type(Double Earring)
TC:Central Trunnion Type
TC-M:Central Trunnion Type attaching foot seat

Internal structure



NO	Designation	NO	Designation
1	Piston Rod Nut	10	Wear Ring
2	Piston rod	11	Barrel
3	Front cover seal ring	12	Buffering Barrel o-ring
4	Bearing	13	Damping adjustable screw
5	Front cover	14	Back cover
6	Buffering o-ring	15	Hex socket screw
7	Pipe wall o-ring	16	Tie Rod Nut
8	Piston o-ring	17	Tie rod
9	Piston	18	Piston rod o-ring

Specification

Bore(mm)	32	40	50	63	80	100	125	160	200
Motion Pattern	Double Action								
Working Medium	Air								
Fixed Type	Basic type FA type FB type CA type CB type LB type TC type TC-M type								
Operating Voltage Range	0.1~0.9kgf/cm²								
Ensured Pressure Resistance	1.35Mpa								
Operating Temperature Range	-5~70℃								
Operating Speed Range	300~800mm/s								
Buffer Type	Adjustable Buffer								
Buffer Stroke	24					32			
Port Size	G1/8"	G1/4"		G3/8"		G1/2"		G3/4"	

■SCD,SCJ Fixed Type:FA,FB,LB,TC & TC-M Type.

HAVKON® PNEUMATIC

A

SC/SU Series Standard Cylinder

Cylinder theory output

Cylinder inside Diameter	External Diameter of Piston Rod	Potion Patterm		Compression Area(cm²)	Air Pressure(kgf/cm²) 1	2	3	4	5	6	7	8	9
32	12	Double Action	Press Side	8.04	8.04	16.08	24.12	32.16	40.20	48.24	56.28	64.32	72.36
			Pull Side	6.90	6.90	13.80	20.07	27.60	34.50	41.40	48.30	55.20	62.10
40	16	Double Action	Press Side	12.56	12.56	25.12	37.68	50.24	62.80	75.36	87.92	100.24	113.04
			Pull Side	10.55	10.55	21.10	31.65	42.20	52.75	63.30	73.85	84.40	94.95
50	20	Double Action	Press Side	19.63	19.63	39.26	58.89	78.52	98.15	117.78	137.41	157.04	176.67
			Pull Side	16.49	16.49	32.98	49.47	65.96	82.45	98.94	115.43	139.92	148.41
63	20	Double Action	Press Side	31.17	31.17	62.34	93.51	124.68	155.85	187.02	218.19	249.36	280.53
			Pull Side	28.03	28.03	56.06	84.09	112.12	140.15	168.18	196.21	224.24	252.27
80	25	Double Action	Press Side	50.26	50.26	100.52	150.78	201.04	251.30	301.56	351.82	402.08	452.34
			Pull Side	45.36	45.36	90.72	136.08	181.44	226.80	272.16	317.52	326.88	408.24
100	25	Double Action	Press Side	78.53	78.53	157.06	235.59	314.12	392.65	471.18	428.82	628.24	706.77
			Pull Side	71.47	71.47	142.94	214.41	285.88	357.35	428.82	500.29	517.76	643.23
125	32	Double Action	Press Side	122.72	122.72	245.44	368.16	490.88	613.60	736.32	859.04	981.76	1104.48
			Pull Side	114.68	114.68	229.36	344.04	458.72	573.40	688.08	802.76	917.44	1032.12
160	40	Double Action	Press Side	201.06	201.06	402.12	603.18	804.24	1005.30	1206.36	1407.42	1608.48	1809.54
			Pull Side	188.49	188.49	376.98	565.47	753.96	942.45	1130.94	1319.43	1507.92	1696.41
200	40	Double Action	Press Side	314.16	314.16	628.32	942.48	1256.64	1570.80	1884.96	2199.12	2513.28	2827.44
			Pull Side	301.57	301.57	603.14	904.71	1206.28	1507.80	1809.42	2100.99	2412.56	2714.13

Stroke

Bore(mm)	Standard Stroke	Max.Stroke	Permissible Stroke
32	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500	1000	2000
40	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800	1200	2000
50	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1200	2000
63	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
80	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
100	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
125	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
160	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000

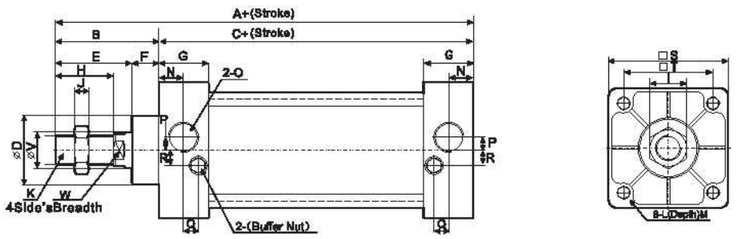
HAVKON® PNEUMATIC

A

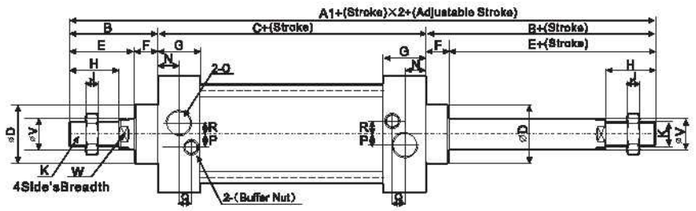
SC/SU Series Standard Cylinder

Overall Dimensions

SC



SCD



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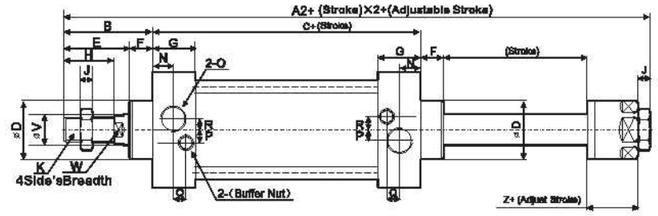


Dimension Sheet

Bore/Symbol	A	A1	A2	B	C	D	E	F	G	H	I	J	K
32	140	187	182	47	93	28	32	15	27.5	22	17	6	M10×1.25
40	142	191	185	49	93	32	34	15	27.5	24	17	7	M12×1.25
50	150	207	196	57	93	36	42	15	27.5	32	23	8	M16×1.5
63	153	210	199	57	96	36	42	15	27.5	32	23	8	M16×1.5
80	182	257	242	75	107	47	54	21	33	40	26	10	M20×1.5
100	188	263	248	75	108	47	54	21	33	40	26	10	M20×1.5
125	239	330	363	104	136	56	71	32	40	54	36	9	M27×2
160	291	412	450	121	162	62	92	60	50	72	50	16	M36×2
200	272	409	451	132	140	75	117	30	41	72	50	16	M36×2

Bore/Symbol	L	M	N	O	P	Q	R	S	T	V	W	Z
32	M6×1	9.5	13.7	G1/8"	3.5	7.5	7	45	33	12	10	21
40	M6×1	9.5	13.5	G1/4"	6	8.2	9	50	37	16	14	21
50	M6×1	9.5	13.5	G1/4"	8.5	8.2	9	62	47	20	17	23
63	M8×1.25	9.5	13.5	G3/8"	7	8.2	8.5	75	56	20	17	23
80	M10×1.5	11.5	16.5	G3/8"	10	9.5	14	94	70	25	22	29
100	M10×1.5	11.5	16.5	G1/2"	11	9.5	14	112	84	25	22	29
125	M12×1.75	21	16.5	G1/2"	/	/	/	140	110	32	28	33
160	M16×2	25	26	G3/4"	/	/	/	180	140	40	36	38
200	M16×2	25	22.5	G3/4"	/	/	/	220	175	45	42	42

HAVKON® PNEUMATIC

A

MB Series Standard Cylinder(Japanese standard)

Ordering Code

MB — 50 × 50 — S — □

Series Code
Japanese standard
Double Action Type

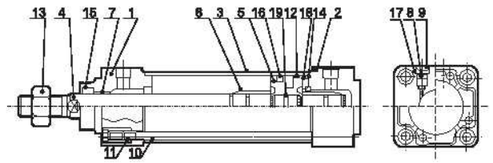
Cylinder Bore
32mm-100mm

Stroke

Magnet Code
Blank:Without Magnet
S:With Magnet

Fixed Type
Blank:basic type
LB:front and back fixed type
FA:front cover fixed type(Front flange type)
FB:back cover fixed type(Rear flange type)
CA:back cover fixed type (Single Earring)
CB:back cover fixed type(double Earring)
TC:Central Trunnion type
TC-M:Central Trunnion type attaching foot seat

Internal structure



NO	Designation	NO	Designation	NO	Designation
1	Front cover	6	Buffer ring	11	Tie rod nut
2	Back Cover	7	Bearing	12	Wear ring
3	Barrel	8	Cushion Screw	13	Piston rod nut
4	Piston rod	9	Cushion Seal	17	Buffer seal ring
5	Piston	10	Tie rod	19	Piston O-ring

Specification

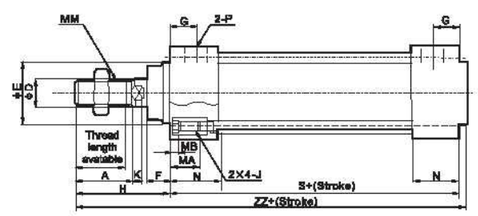
Cylinder diameter	32	40	50	63	80	100
Working Medium	Air					
Action type	Double acting					
Proof pressure	15.3kgf/cm²(1.5Mpa)					
Max.pressure	10.2kgf/cm²(1.0Mpa)					
Min.pressure	0.5kgf/cm²(0.05Mpa)					
Environment and fluid temp	-10~+60℃					
Piston veocity	50~1000mm/s					
Buffering	Air buffering					
Stroke tolerance	~0~250$^{+1.0}_{0}$, 251~1000$^{+1.4}_{0}$, 1001~1500$^{+1.8}_{0}$					
Rc(PT)Joint size	G1/8"	G1/4"	G3/8"	G1/2"		

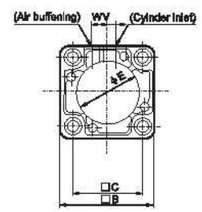
Stroke

Bore(mm)	Standard stroke
32	25,50,75,100,125,150,175,200,250,300,350,400,450,500
40	25,50,75,100,125,150,175,200,250,300,350,400,450,500
50	25,50,75,100,125,150,175,200,250,300,350,400,450,500,600
63	25,50,75,100,125,150,175,200,250,300,350,400,450,500,600
80	25,50,75,100,125,150,175,200,250,300,350,400,450,500,600,700,750
100	25,50,75,100,125,150,175,200,250,300,350,400,450,500,600,700,750

Overall Dimensions

MB Series ϕ32~ ϕ200





Dimension Sheet

Diameter	Stroke range	Thread length available	A	□B	□C	ϕD	ϕE	F	G	MA	MB	J	K	MM	N	P	S	V	W	H	ZZ
32	~500	19.5	22	46	32.5	12	30	13	13	16	4	M6×1.0	6	M10×1.25	27	1/8	84	4	6.5	47	135
40	~500	27	30	52	38	16	35	13	14	16	4	M6×1.0	6	M14×1.5	27	1/4	84	4	9	51	139
50	~600	32	35	65	46.5	20	40	14	15.5	16	5	M8×1.25	7	M18×1.5	31.5	1/4	94	5	10.5	58	156
63	~600	32	35	75	56.5	20	45	14	16.5	16	5	M8×1.25	7	M18×1.5	31.5	3/8	94	9	12	58	156
80	~750	37	40	95	72	25	45	20	19	16	5	M10×1.5	10	M22×1.5	38	3/8	114	11.5	14	72	190
100	~750	37	40	114	89	30	55	20	19	16	5	M10×1.5	10	M26×1.5	38	1/2	114	17	15	72	190

HAVKON® PNEUMATIC

A

CA1 Series Standard Cylinder

CA1B 40×100

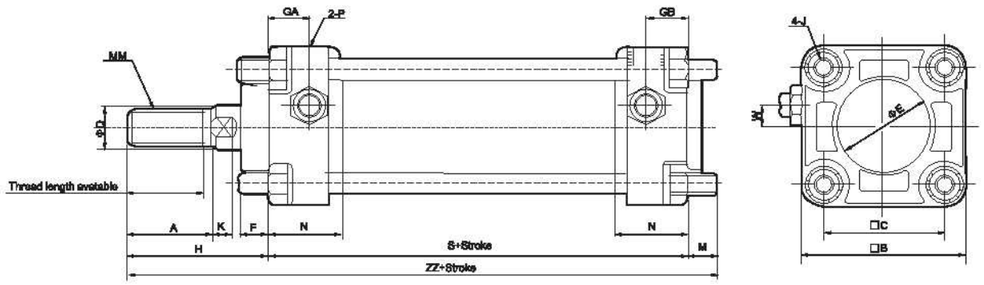
Ordering Code

CA1	40	—	100
Serise Code CA1B:Normal Type CDA1B:Attach Magnet Type	Cylinder Bore 40mm-100mm		Stroke

Specification

Bore(mm)	40	50	63	80	100
Working Medium	Air				
Motion Pattern	Double action Type				
Ensured Pressure Resistance	15.3kgf/cm²(1.5Mpa)				
Max.pressure	10.2kgf/cm²(1.0Mpa)				
Min.pressure	0.5kgf/cm²(0.05Mpa)				
Operating Temperature Range℃	5~+60℃				
Operating Speed Range	50~500mm/s				
Buffering	Air buffering				
Margin of Stroke Error(mm)	~0~250 +1.0 0	251~1000 +1.4 0	1001~1500 +1.8 0		
Port size	G1/4"	G3/8"	G3/8"	G1/2"	G1/2"

Overall Dimensions



Dimension Sheet

Diameter	Stroke range	Thread length available	A	□B	□C	ΦD	ΦE	F	GA	GB	J	K	M	MM	N	P	S	W	H	ZZ
40	~500	27	30	60	44	16	32	10	15	15	M8×1.25	6	11	M14×1.5	27	1/4	84	8	51	146
50	~600	32	35	70	52	20	40	10	17	17	M8×1.25	7	11	M18×1.5	30	3/8	90	0	58	159
63	~600	32	35	85	64	20	40	10	17	17	M10×1.25	7	14	M18×1.5	31	3/8	98	0	58	170
80	~750	37	40	102	78	25	52	14	21	21	M12×1.75	11	17	M22×1.5	37	1/2	116	0	71	204
100	~750	37	40	116	92	30	52	14	21	21	M12×1.75	11	17	M26×1.5	40	1/2	126	0	72	215

MA6432 Series Stainless Steel Mini Cylinder(ISO6432)

MA6432 10×50

MA6432 25×50

Ordering Code

MA6432 — □ 20 × 50 — 25 S — □

Type
MA:Double Action Type
MSA:Single-Extrusion Type
MAD:Double-shaft Double Action Type
MAJ:Double-shaft and adjustable stroke type
MAC:With Cushion Type

Back Cover Type
Blank:Fishtail type
CM:Rounded type
U:Horizontal type

Cylinder Bore
8mm-25mm

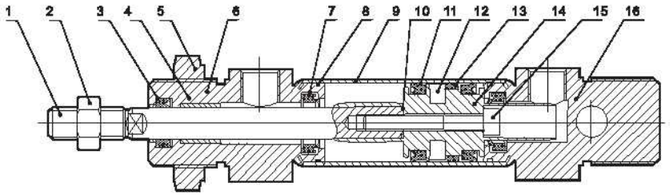
Stroke

Adjustable Stroke Type
0~100mm

Magnet Code
Blank:Without Magnet
S:With Magnet

Fixed Type
Blank:Normal type
LB:Front and back fixed type
FA:Front cover fixed type
SDB:Back cover swinging type
U:Back cover fixed type

Internal structure



NO	Designation	NO	Designation
1	Piston Rod	9	Barrel
2	Piston Rod Nut	10	Piston rod O-ring
3	Front Cover Seal	11	Piston O-ring
4	Bearing	12	Magnet(Optional)
5	Hexagon Screw	13	Wear Ring
6	Front Cover	14	Piston
7	Cushion Ring	15	Hex Socket Screw
8	O-ring	16	Back Cover

Specification

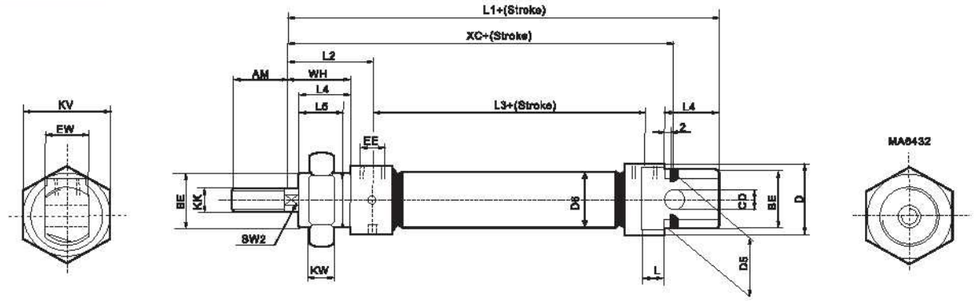
Cylinder diameter	8	10	12	16	20	25
Fluid	Air					
Motion pattern	Double Action or single Action					
Ensured Pressure Resistance	15.3kgf/cm²(1.5Mpa)					
Max.pressure	10.2kgf/cm²(1.0Mpa)					
Min.pressure	0.5kgf/cm²(0.05Mpa) 1kgf/cm²(0.1Mpa)					
Environment and fluid temp	-10~+80℃(Internal Magnetic Install by Tach strap:Type Max:60℃)					
Piston veocity	Rubber Bufer(Standard),Air Buffer(Option)					
Buffering	50~750mm/s					
Kinetic energy To Lerance(kgf/cm)	0.2	0.3	0.4	0.9	2.7	4
Pipe Size	M5×0.8				G1/8"	

Stroke

Bore(mm)	Standard stroke	Max.Stroke(mm)
8	10,25,40,50,80,100,125,160,200	400
10	10,25,40,50,80,100,125,160,200	400
12	10,25,40,50,80,100,125,160,200	400
16	10,25,40,50,80,100,125,160,200	400
20	25,40,50,80,100,125,150,160,175,200,250,300	1000
25	25,40,50,80,100,125,150,160,175,200,250,300	1000

MA6432 Series Stainless Steel Mini Cylinder(ISO 6432)

Overall Dimensions



Dimension Sheet

Bore/Symbol	AM	BE	ΦCD	ΦD	ΦD5	ΦD6	EE	EW	AM	KK	KV	KW	L	L1	L2	L3	L4	L5	SW2	WH	XC
8	12	M12×1.25	4	15	15	12	M5	8	12	M4	19	6	6	78	22	34	12	10	-	16	64
10	12	M16×1.25	4	15	15	12	M5	8	12	M4	19	6	6	78	22	34	12	10	-	16	64
12	16	M16×1.5	6	20	20	16	M5	12	16	M6	24	8	9	89	28	38	17	15	5	22	75
16	16	M16×1.5	6	20	20	16	M5	12	16	M6	24	8	9	95	28	44	17	15	5	22	82
20	20	M22×1.5	8	27	27	22	G1/8"	16	20	M8	32	11	12	112	32	51.6	20	18	7	24	95
25	22	M22×1.5	8	27	27	22	G1/8"	18	22	M10×1.25	32	11	12	120	36	53.1	22	20	9	26	104

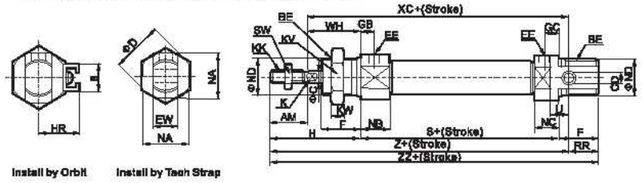
MA6432-N Series Stainless Steel Mini Cylinder (ISO6432)

MA6432-N25×150

MAC6432-N40×150

Overall Dimensions

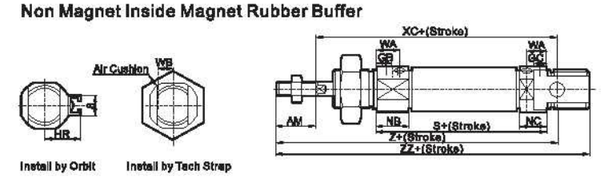
Non Magnet Inside Magnet Rubber Buffer



Dimension Sheet

Bore	AM	BE	ΦC	ΦCD	ΦD	EE	EW	F
Φ8	12	M12×1.25	4	4	17	M5×0.8	8	12
Φ10	12	M16×1.25	4	4	17	M5×0.8	8	12
Φ12	16	M16×1.5	6	6	20	M5×0.8	12	17
Φ16	16	M16×1.5	6	6	20	M5×0.8	12	17
Φ20	20	M22×1.5	8	8	28	G1/8"	16	20
Φ25	22	M22×1.5	10	8	33.5	G1/8"	16	22

Non Magnet Inside Magnet Rubber Buffer



Bore	GB	GC	WA	WB	H	HR	K	KK	KV	KW	NB	NC	NA	ΦND	RR	S	SW	U	WH	XC	Z	ZZ
Φ8	7	5	-	-	28	10	-	M4×0.7	19	6	11.5	9.5	15	12	10	46	7	6	16	64	76	86
Φ10	7(5.5)	7(5.5)	10.5	4.5	28	10.5	-	M4×0.7	19	6	11.5(13.5)	9.5(13.5)	15	12	10	46(53)	7	6	16	64(71)	76(83)	86(93)
Φ12	8(5.5)	6(5.5)	9.5	5.5	38	14	5	M6×4	24	8	12.5(12.5)	10.5(12.5)	18	16	14	50(54)	10	9	22	75(79)	91(95)	105(109)
Φ16	8(5.5)	6(5.5)	9.5	5.5	38	14	5	M6×0.8	24	8	12.5	10.5(12.5)	18	16	13	56	10	9	22	82	98	111
Φ20	8	8	17	8.5	44	17	6	M8×1.25	32	11	15	15	24	22	11	62	13	12	24	95	95	126
Φ25	8	8	20	10	50	20	8	M10×1.25	32	11	15	15	30	22	11	65	17	12	28	104	126	137

■Our company can also provide SMC ISO6432 standard stainless steel mini cylinder, if you need this, pls add -N after normal ordering code.

HAVKON® PNEUMATIC

A

MA Series Stainless Steel Mini Cylinder

MA 25×50

MAJ 25×50-25

Ordering Code

MA — □ 20 × 50 — 25 S — □

Type
MA:Double Action Type
MSA:Single Extrusion Type
MAD:Double Shaft Double Action Type
MACD:Double Shaft Double Action Damping Type
MAJ:Double-shaft And Adjust Able Stroke Type
MAC:With Cushion Type

Back Cover Type
Blank:Fishtail type
CM:Rounded type
U:Horizontal type

Cylinder Bore
16mm~40mm

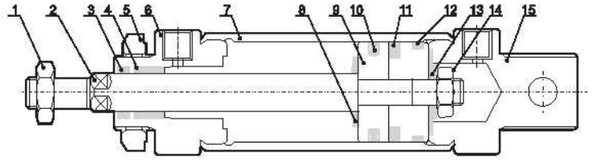
Stroke

Adjustable Stroke Type
0~100mm

Magnet Code
Blank:Without Magnet
S:With Magnet

Fixed Type
Blank:Normal type
LB:Front and back fixed type
FA:Front cover fixed type
SDB:Back cover swinging type
U:Back cover fixed type

Internal structure



NO	Designation	NO	Designation
1	Piston Rod Nut	2	Piston Rod
3	Front Cover Seal Ring	4	Oiled Bearing
5	Front Cover Nut	6	Front Cover
7	Stainless steel tube	8	Anti-crash cushion
9	Piston	10	Piston O-Ring
11	Magnet(Optional)	12	Wear ring
13	Back cushion	14	Hex socket screw
15	Back Cover		

Specification

Bore(mm)		16	20	25	32	40
Motion pattern		Double Action or Single Action				
Working Medium		Air				
Fixed Type		Normal Type LB Type FA Type SDB Type U Type				
Operating Voltage Range		0.1~0.9MPa				
Ensured Pressure Resistance		1.35MPa				
Operating Temperature Range		-5~70℃				
Operating Speed Range		50~800mm/s				
Buffer Type	Standard Type	Anti-crash cushion				
	Damping Type	-	Adjustable cushion			
Pipe Size		M5×0.8	G1/8"	G1/8"	G1/8"	G1/8"

■Our Company can also make flat for cylinder covers inlet and outlet position. If you require this, it should be specified.

Stroke

Bore(mm)	Standard Stroke	Max.Stroke	Permissible Stroke
16	25 50 75 80 100 125 160 175 200	300	500
20	25 50 75 80 100 125 160 175 200 250 300	500	650
25	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500	500	650
32	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500	500	650
40	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500	500	650

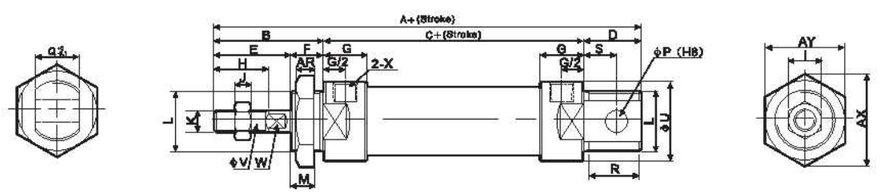
HAVKON® PNEUMATIC

A

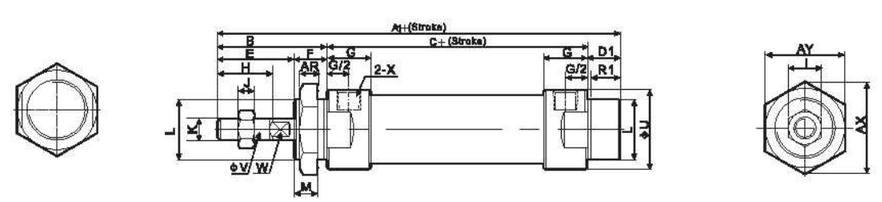
MA Series Stainless Steel Mini Cylinder

Overall Dimensions

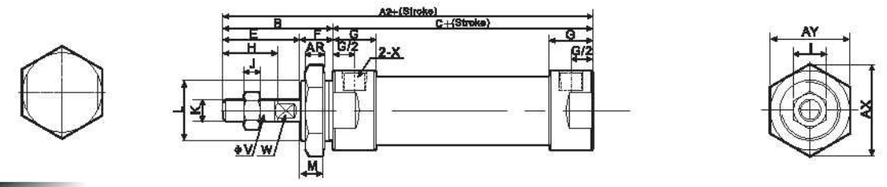
MA



MA-CM



MA-U



Dimension Sheet

Bore/Symbol	A	A1	A2	B	C	D	D1	E	F	G	H	I	J	K
16	114	114	98	38	60	16	16	22	16	10	16	10	5	M6×1
20	137	128	116	40	76	21	12	28	12	16	20	12	6	M8×1.25
25	141	134	120	44	76	21	14	30	14	16	22	17	6	M10×1.25
32	147	134	120	44	76	27	14	30	14	16	22	17	6	M10×1.25
40	149	136	122	46	76	27	14	32	14	16.7	24	17	7	M12×1.25

Bore/Symbol	L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
16	M16×1.5	14	6	12	14	14	9	21	6	5	M5	6	24	27.5
20	M22×1.5	10	8	16	19	10	12	27	8	6	G1/8"	7	33	29
25	M22×1.5	12	8	16	19	12	12	30	10	8	G1/8"	7	33	29
32	M24×2.0	12	10	16	25	12	15	35	12	10	G1/8"	8	37	32
40	M30×2.0	12	12	20	25	12	15	41.6	16	14	G1/8"	9	47	41

MAL6432 Series Aluminum alloy mini cylinder(ISO6432)

MAL6432 20×75

Specification

Motion Pattern	Double Action or Single Action
Operating Voltage Range	0.1~0.9MPa
Ensured Pressure Resistance	1.35MPa
Operating Temperature Range	-5~70℃
Operating Speed Range	30~800mm/s

Product Instruction

Our company can also provide MAL series ISO6432 standard aluminum alloy mini cylinder,If you need this,pls change ordering code MAL into MAL6432.

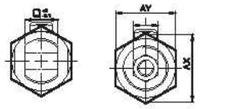
HAVKON® PNEUMATIC

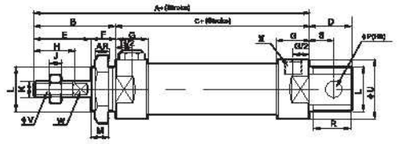
A

MA Series Stainless Steel Mini Cylinder

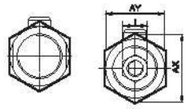
Overall Dimensions

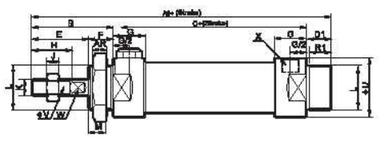
MSA





MSA-CM





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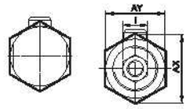
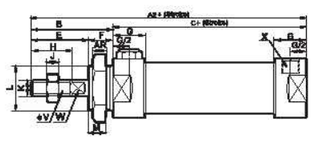




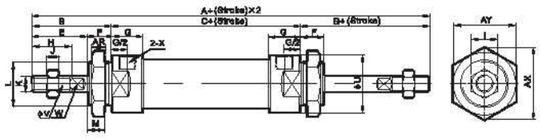
Dimension Sheet

Symbol	A		A1		A2		B	C		D	D1	E	F	G	H	I	J
Bore/Stroke	0-50	51-100	0-50	51-100	0-50	51-100		0-50	51-100								
16	114	139	128	153	98	123	38	60	85	16	16	22	16	10	16	10	5
20	137	162	134	159	116	141	40	76	101	21	12	28	12	18	20	12	6
25	141	166	134	159	120	145	44	76	101	21	14	30	14	16	22	17	6
32	147	172	136	161	120	145	44	76	101	27	14	30	14	16	22	17	6
40	149	174	122	144	122	147	46	76	101	27	14	32	14	22	24	17	7

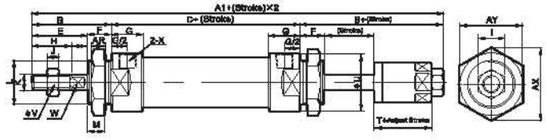
Inside Diameter/Symbol	K	L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
16	M6×1	M16×1.5	14	6	12	14	14	9	21	6	5	M5	6	25	22
20	M8×1.25	M22×1.5	10	8	16	19	10	12	27	8	6	G1/8"	7	33	29
25	M10×1.25	M22×1.5	12	8	18	19	12	12	30	10	8	G1/8"	7	33	29
32	M10×1.25	M24×2.0	12	10	16	25	12	15	35	12	10	G1/8"	8	37	32
40	M12×1.25	M30×2.0	12	12	20	25	12	15	41.6	16	14	G1/8"	9	47	41

Overall Dimensions

MAD



MAJ



Dimension Sheet

Inside Diameter/Symbol	A	A1	B	C	E	F	G	H	I	J	K
16	136	135	38	60	22	16	10	16	10	5	M6×1
20	156	153	40	70	28	12	16	20	12	6	M8×1.25
25	164	161	44	70	30	14	16	22	17	6	M10×1.25
32	164	161	44	70	30	14	16	22	17	6	M10×1.25
40	168	164	46	92	32	14	22	14	17	7	M12×1.25

Inside Diameter/Symbol	L	M	U	V	W	X	AR	AX	AY	T
16	M16×1.5	14	21	6	5	M5	6	25	22	16
20	M22×1.5	10	29	9	6	G1/8"	7	33	29	19
25	M22×1.5	12	34	10	8	G1/8"	7	33	29	21
32	M24×1.5	12	39.5	12	10	G1/8"	8	37	32	21
40	M30×2.0	12	49.5	16	12	G1/8"	9	47	41	21

HAVKON® PNEUMATIC

A

MAL Series Aluminum alloy Mini Cylinder

MAL 25×50

MALJ 25×50-25

Ordering Code

MAL — □ 20 × 50 — 25 S — □

Type
MAL: Double Action type
MALC:With cushion type
MSAL: Single Extrusion Type
MALD: Dual Double Action Type
MALCD: Dual Shaft Action Damping Type
MALJ:Double-shaft And Adjust Able Stroke Type
MALC:With Cushion Type

Back Cover Type
Blank:Fishtail type
CM:Rounded type
U:Horizontal type

Cylinder Bore
16mm~40mm

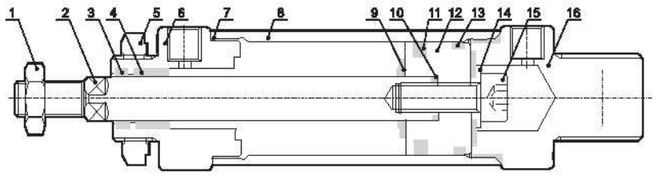
Stroke

Adjustable Stroke Type
0~100mm

Magnet Code
Blank:Without Magnet
S:With Magnet

Fixed Type
Blank:Normal type
LB:Front and back fixed type
FA:Front cover fixed type
SDB:Back cover swinging type

Internal structure



NO	Designation	NO	Designation
1	Piston Rod Nut	2	Piston Rod
3	Front Cover Seal Ring	4	Oiled Bearing
5	Front Cover Nut	6	Front Cover
7	Pipe wall O-ring	8	Alminum tube
9	Anti-crash cushion	10	Piston rod O-Ring
11	Piston O-Ring	12	Piston
13	Wear ring	14	Back cushion
15	Hex socket screw	16	Back Cover

Specification

Bore(mm)		16	20	25	32	40
Motion pattern		Double Action or Single Action				
Working Medium		Air				
Fixed Type		Normal Type LB Type FA Type SDB Type				
Operating Voltage Range		0.1~0.9MPa				
Ensured Pressure Resistance		1.35MPa				
Operating Temperature Range		-5~70℃				
Operating Speed Range		30~800mm/s				
Buffer Type	Standard Type	Anti-crash cushion				
	Damping Type	-	Adjustable cushion			
Port Size		M5×0.8	G1/8"	G1/8"	G1/8"	G1/4"

■Our Company can also make flat for cylinder covers inlet and outlet position. If you require this, it should be specified.

HAVKON® PNEUMATIC

A

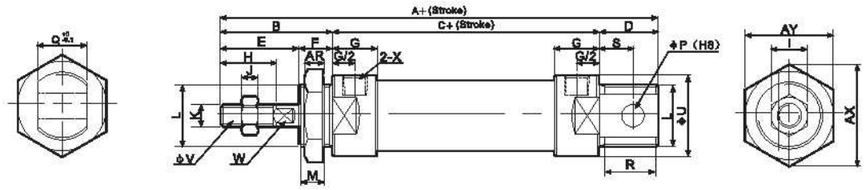
MAL Series Aluminum alloy Mini Cylinder

Stroke

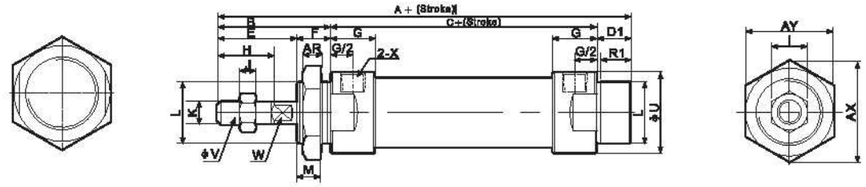
Bore(mm)	Standard Stroke	Max.Stroke	Permissible Stroke
16	25 50 75 80 100 125 160 175 200	300	500
20	25 50 75 80 100 125 160 175 200 250 300	500	650
25	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500	500	650
32	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500	500	650
40	25 50 75 80 100 125 160 175 200 250 300 350 400 450 500	500	650

Overall Dimensions

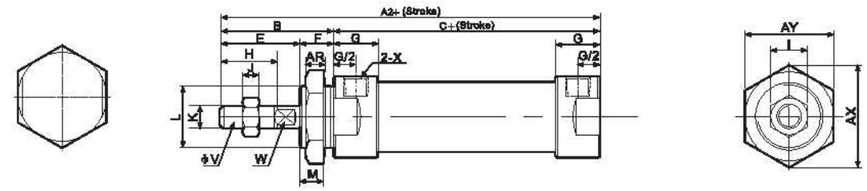
MAL



MAL-CM



MAL-U



Dimension Sheet

Bore/Symbol	A	A1	A2	B	C	D	D1	E	F	G	H	I	J	K
16	114	114	98	38	60	16	16	22	16	10	16	10	5	M8×1
20	131	122	110	40	70	21	12	28	16	16	20	12	6	M8×1.25
25	135	128	114	44	70	21	14	30	16	16	22	17	6	M10×1.25
32	141	128	114	44	70	27	14	30	16	16	22	17	6	M10×1.25
40	165	152	138	45	92	27	14	32	22	22	24	17	7	M12×1.25

Bore/Symbol	L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
16	M16×1.5	14	6	12	14	14	9	21	6	5	M5	6	25	22
20	M22×1.5	10	8	16	19	10	12	29	8	6	G1/8"	7	33	29
25	M22×1.5	1	8	16	19	12	12	34	10	8	G1/8"	7	33	29
32	M24×2.0	12	10	16	25	12	15	39.5	12	10	G1/8"	8	37	32
40	M30×2.0	12	12	20	25	12	15	49.5	16	14	G1/4"	9	37	41

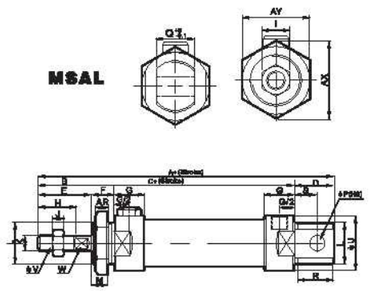
HAVKON® PNEUMATIC

A

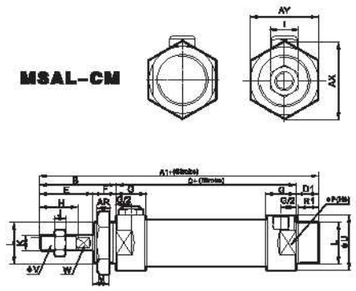
MAL Series Aluminum alloy Mini Cylinder

Overall Dimensions

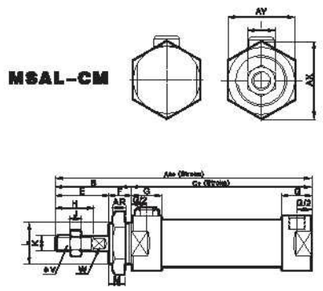
MSAL



MSAL-CM



MSAL-CM



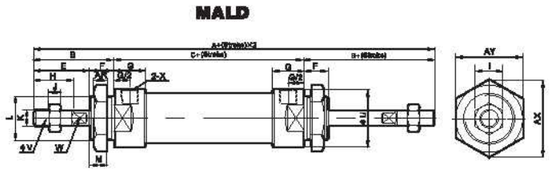
Dimension Sheet

Symbol	A		A1		A2		B	C		D	D1	E	F	G	H	I	J
Bore/Stroke	0-50	51-100	0-50	51-100	0-50	51-100		0-50	51-100								
20	131	156	122	147	110	135	40	70	95	21	12	28	12	16	20	12	6
25	135	160	160	153	114	139	44	70	95	21	14	30	14	16	22	17	6
32	141	166	166	153	114	139	44	70	95	27	14	30	14	16	22	17	6
40	165	190	190	177	138	163	46	92	117	27	14	32	14	22	24	17	7

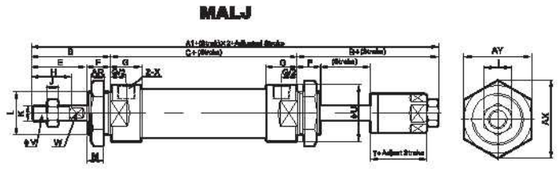
Inside Diameter/Symbol	K	L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
20	M8×1.25	M22×1.5	10	8	16	19	10	12	29	8	6	G1/8"	7	33	29
25	M10×1.25	M22×1.5	12	8	16	19	12	12	34	10	8	G1/8"	7	33	29
32	M10×1.25	M24×2.0	12	10	16	25	12	15	39.5	12	10	G1/8"	8	37	32
40	M12×1.25	M30×2.0	12	12	20	25	12	15	49.5	16	14	G1/4"	9	47	41

Overall Dimensions

MALD



MALJ



Dimension Sheet

Inside Diameter/Symbol	A	A1	B	C	E	F	G	H	I	I	K
20	150	147	40	70	28	12	16	20	12	6	M8×1.25
25	158	155	44	70	30	14	16	22	17	6	M10×1.25
32	158	155	44	70	30	14	16	22	17	6	M10×1.25
40	184	180	46	92	32	14	22	24	17	7	M12×1.25

Inside Diameter/Symbol	L	M	U	V	W	X	AR	AX	AY	T
20	M22×1.5	10	29	8	6	G1/8"	7	33	29	19
25	M22×1.5	12	34	10	8	G1/8"	7	33	29	21
32	M24×1.5	12	39.5	12	10	G1/8"	8	37	32	21
40	M30×2.0	12	49.5	16	14	G1/4"	9	47	41	21

HAVKON® PNEUMATIC

A

CM2 Series Stainless Steel mini Cylinder

CDM2B 32×50 CDM2B 20×50

Ordering Code

CM2 — 32 — 150 — A

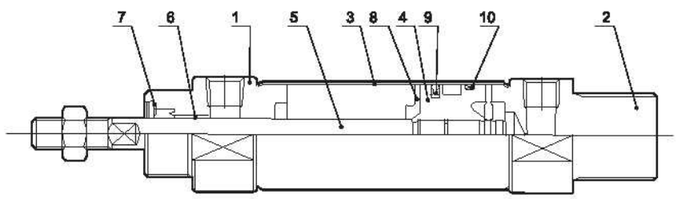
Series Code CM2:Normal Type CDM2B:Attach magnet Type

Cylinder Bore 20mm-40mm

Stroke 0~1000mm

Buffer Blank:Rubber Buffer A:Air Buffer

Internal structure

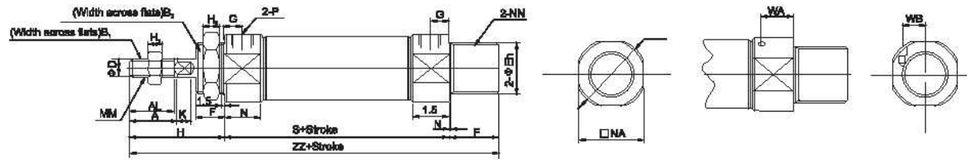


NO.	Designation
1	Front Cover
2	Back Cover
3	Barrel
4	Piston
5	Piston rod
6	Oiled Bearing
7	Front Cover Seal Ring
8	Anti-crash cushion
9	Piston Seal
10	Wear Ring

Specification

Bore(mm)	20	25	32	40
Working Medium	Air			
Motion Pattern	Double action			
Ensured Pressure Resistance	15.3kgf/cm²(1.5Mpa)			
Max.pressure	10.2kgf/cm²(1.0Mpa)			
Min.pressure	0.5kgf/cm²(0.05Mpa)			
Operating Temperature Range	-10~+70℃			
Operating Speed Range	50~750mm/s			
Buffering	Rubber buffer(Standard),Air buffer(Optional)			
Margin of Stroke Error(mm)	+1.4 0mm			
Port size	G1/8"	G1/8"	G1/8"	G1/4"

Overall Dimensions



Dimension Sheet

Diameter	Stroke range	A	AL	B1	B2	D	E	F	G	H	H1	H2	I	K	MM	N	NA	NN	P	S	ZZ	WA	WB
20	~300	18	15.5	13	26	8	20 $^{0}_{-0.033}$	13	8	41	5	8	28	5	M8×1.25	15	24	M20×1.5	1/8	62	116	11.5	8.5
25	~300	22	19.5	17	32	10	26 $^{0}_{-0.033}$	13	8	45	6	8	33.5	5.5	M10×1.25	15	30	M26×1.5	1/8	62	120	11.5	10
32	~300	22	19.5	17	32	12	26 $^{0}_{-0.033}$	13	8	45	6	8	37.5	5.5	M10×1.25	15	34.5	M28×1.5	1/8	64	122	11.5	11.5
40	~300	24	21	22	41	14	32 $^{0}_{-0.033}$	16	11	50	6	10	46.5	7	M14×1.5	21.5	42.5	M32×2	1/4	88	154	14	15

HAVKON® PNEUMATIC

A

CJ2 Series Stainless Steel Type Cylinder

CJ2B 16×50 CJ2B 6×25

Ordering Code

CJ2 — 10 — 60 — S — □

Series Code CJ2B:Normal Type CDJ2B:Attach magnet Type

Cylinder Bore 6mm-16mm

Stroke 0~200mm

Action S:single action (with spring return) T:single action (with spring extent)

The type of air hole on the head cover end

Mark \ Bore	Φ6	Φ10	Φ16
Blank	-	Vertical	
R	Horizontal		

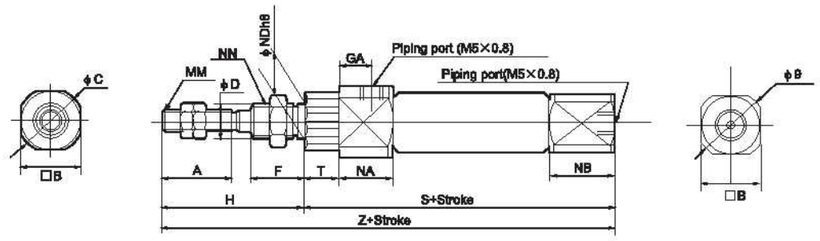
Specification

Bore(mm)	6	10	16
Working Medium	Air		
Motion Pattern	Double action/Single Action Extrusion type/Single Action Drawing-in Type		
Ensured Pressure Resistance	1.05Mpa(10.5kgf/cm²)		
Max.pressure	0.7Mpa(7.1kgf/cm²)		
Min.pressure	0.25Mpa(2.5kgf/cm²)	0.15Mpa(1.5kgf/cm²)	
Operating Temperature Range	-10~+70℃		
Operating Speed Range	50~750mm/s		
Buffering	Both side Rubber buffer(Standard)		
Margin of Stroke Error(mm)	+1.0 0 mm		
Port size	M5×0.8		

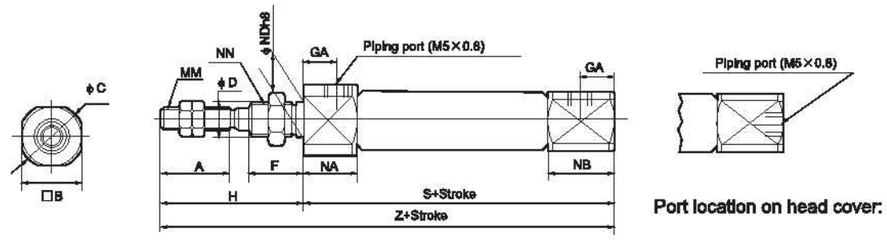
Overall Dimensions

Normal Type

CJ2B6



CJ2B10/16



Port location on head cover:

Dimension Sheet

Bore(mm)	A	B	C	D	F	GA	GB	H	MM	NA	NB	NDh8	NN	S	T	Z
6	15	12	14	3	8	14.5	-	28	M3×0.5	16	7	6	M6×1.0	49	3	77
10	15	12	14	4	8	8	5	28	M4×0.7	12.5	9.5	8	M8×1.0	46	-	74
16	15	18	20	5	8	8	5	28	M5×0.8	12.5	9.5	10	M10×1.0	47	-	75

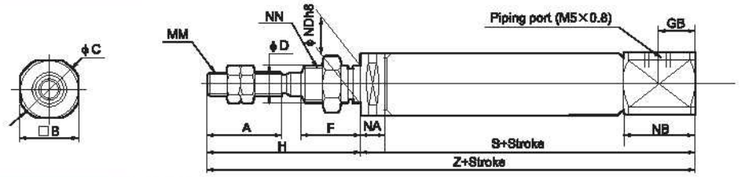
HAVKON® PNEUMATIC

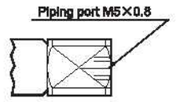
A

CJ2 Series Stainless Steel Type Cylinder

Overall Dimensions

Normal Type:Spring return CJ2B–CDJ2B





Port location on head cover:

Dimension Sheet

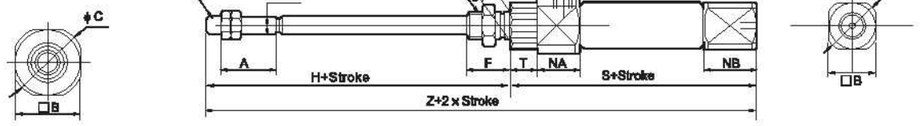
Bore (mm)	A	B	C	D	F	GB	H	MM	NA	NB	NB b8	*S 5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	*Z 5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	15	8	18	3	8	-	28	M3×0.5	3	7	6 0 -0.018	34.5 (39.5)	43.5 (48.5)	47.5 (52.5)	81.5 (86.5)	-	-	-	-	62.5 (67.5)	71.5 (76.5)	75.5 (80.5)	89.5 (94.5)	-	-	-	-
10	15	12	14	4	8	5	28	M4×0.7	5.5	9.5	8 0 -0.022	45.5	53	65	77	-	-	-	-	73.5	81	93	105	-	-	-	-
16	15	18	20	5	8	5	28	M5×0.8	5.5	9.5	10 0 -0.022	45.5	54	66	78	84	108	126	138	73.5	82	94	106	112	136	154	166

※ Attach Magnet size

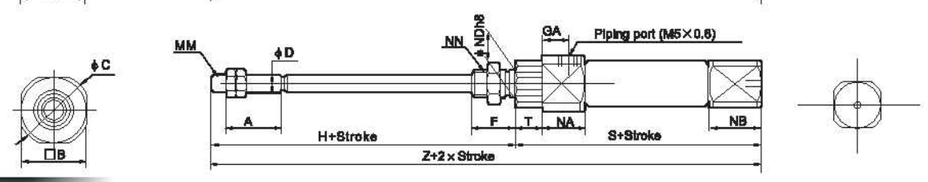
Overall Dimensions

Normal Type:Spring extent CJ2B–CDJ2B

CJ2B6



CJ2B10/16



Dimension Sheet

Bore (mm)	A	B	C	D	F	GA	H	MM	NN	NA	NB	NB b8	T	*S 5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	*Z 5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	15	8	14	3	8	14.5	28	M3×0.5	M6×1	16	3	6 0 -0.018	3	46.5 (51.5)	55.5 (60.5)	59.5 (60.5)	73.5 (78.5)	-	-	-	-	74.5 (79.5)	83.5 (88.5)	87.5 (92.5)	101.5 (106.5)	-	-	-	-
10	15	12	14	4	8	8	28	M4×0.7	M8×1	12.5	5.5	8 0 -0.022	-	48.5	56	68	80	-	-	-	-	76.5	84	96	108	-	-	-	-
16	15	18	20	5	8	8	28	M5×0.8	M10×1	12.5	5.5	10 0 -0.022	-	48.5	57	69	81	87	111	129	141	76.5	85	97	109	115	139	157	169

※ Attach Magnet size

Special Cylinder

MARU 20×50 | TMAL-AC-40×25 | TMAL 50×30-T | MALC 50×100 | MAB 20×100×50

Product Instruction

■ Our company has R&D department,can research,develop and produce all kinds of cylinders with advanced technology and sufficient professional experience. We can research and develop new products according to customer's drawing, and strive all products for excellence. If you have new product to develop,pls don't hesitate to contact us,we will try our best to help you.

HAVKON® PNEUMATIC

A

ADVU Series Compact Cylinder(ISO6431)

Ordering Code

ADVU — 50 × 80 — A — P — A — S2

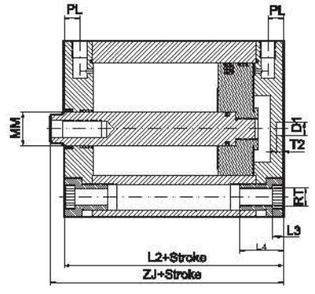
Type	Cylinder Bore	Stroke	Cog Type	Buffer Type	Magnet Code	Plunger Code
ADVU:Double Action Type AEVUZ:Single-driven type AEVUD:Double-shaif Double Action Type	16mm-100mm	Normal Type: Φ16-25:1-200mm Φ32-63:1-300mm Φ80-100:1-400mm Single Action: Φ12:1-10mm Φ16-100:1-25mm	Blank:zniner Thread A:Outer Thread		Blank:Without Magnet A:Attach Magnet	Blank:Single end connecting rod S2:Both ends connecting rod

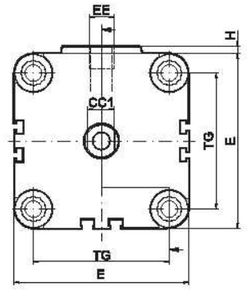
Specification

Bore(mm)		16	20	25	32	40	50	63	80	100
Action		Double acting, single rod/double rod								
Working Medium		Air								
Ensured Pressure Resistance		1.5MPa								
Operating pressure range	ADVU - -P-A	0.12~1.0MPa	0.1~1.0MPa		0.08~1.0MPa			0.06~1.0MPa		
	ADVU - -P-A-S2	0.13~1.0MPa	0.12~1.0MPa		0.1~1.0MPa			0.8~1.0MPa		
Ambient and fluid temperature		-20~80 (No freezing)								
Port size		M5			G1/8"					G1/4"
Piston rod thread	Female thread	M4	M5		M6		M8		M10	M12
	Male thread	M8	M10×1.25				M12×1.25		M16×1.5	M20×1.5
Cushion		Rubber bumper								

Overall Dimensions

ADVU□-□-P-A /Series





■ Note
To attach cylinder. 12 and 16 mmfrom above, use only 2 screwsdiagonally or non-magnetic screws.
+= plus stroke length
2 Minimum screw-in depth

Dimension Sheet

Bore size(mm)	D1	E	EE	H	L2	L3	L4	MM	PL	RT	T2	TG	ZJ	CC1
16	6	29	M5	1	38	4	18.5	8	8	M4	4	18	41	6
20	6	35.5	M5	1.5	38	4	18.5	10	8	M5	4	22	41	8
25	6	39.5	M5	1.5	39.5	4	18.5	10	8	M5	4	26	43.5	8
32	6	49.5	G1/8	2	44.5	5	22	12	8	M6	4	32	49.5	10
40	6	59.5	G1/8	2.5	45.5	5	22	12	8	M6	4	42	51	10
50	6	68	G1/8	2.8	46.5	5	22	16	8	M8	4	50	53	14
63	8	86	G1/8	4	50	6	26	16	8	M10	4	62	56	14
80	8	106	G1/8	4	56	8	26	20	8.5	M10	4	82	62	17
100	8	128	G1/4	5	66.5	8	26	35	10.5	M10	4	103	76.5	22

■ Note:ADVU Series Cylinder With 100mm Bore Is Being Developed, Not Available At The Moment.

HAVKON® PNEUMATIC

SDA Series Thin Type(Compact) Cylinder

SDA 32×25

SDAJ 32×25-10

Ordering Code

SDA — 20 — 30 — 5 — S — B

Type
SDA: Double Action Type
SSA: Single Action Extrusion Type
STA: Single Action Drawing-in Type
SDAD: Double-shalf Double Action Type
SDAJ:Double-shalf and Adjustable Stroke Type

Cylinder Bore
12mm~100mm

Stroke

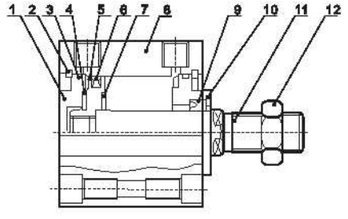
Adjust Stroke
5mm
15mm
25mm

Magnet Code
Blank:Without Magnet
S:Attach Magnet

Cog Type
Blank:Inner Thread
B:outer Thread
N:no Thread

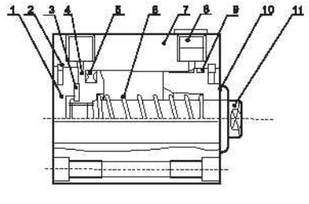
Internal structure

SDA Type



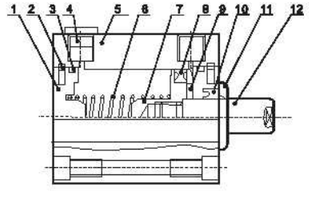
NO	Designation	NO	Designation
1	Back cover	2	Type C buckle ring
3	O-ring	4	Anti-crash cushion
5	Piston	6	Piston O-ring
7	Anti-crash cushion	8	Barrel
9	Front cover seal ring	10	Front cover
11	Piston rod	12	Piston Rod Nut

SSA Type



NO	Designation	NO	Designation
1	Back cover	2	Type C buckle ring
3	Anti-crash cushion	4	Piston
5	Piston O-ring	6	Compressed spring
7	Barrel	8	Silencer
9	Cover O-ring	10	Front cover
11	Piston rod		

STA Type



NO	Designation	NO	Designation
1	Back cover	2	Type C buckle ring
3	Cover O-ring	4	Silencer
5	Barrel	6	Compressed spring
7	Piston	8	Piston O-ring
9	Anti-crash cushion	10	Frount cover sealring
11	Front cover	12	Piston rod

HAVKON® PNEUMATIC

SDA Series Thin Type(Compact) Cylinder

Specification

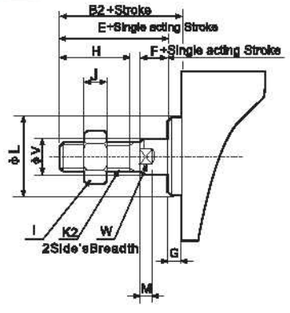
Bore(mm)		12	16	20	25	32	40	50	63	80	100
Motion Pattern		Double Acting									
		Single Acting Extrusion type Single Acting Drawing-in Type						-			
Working Medium		Air									
Operating Voltage Range	Double Action	0.1~0.9MPa									
	Single Action	0.2~0.9MPa						-			
Ensured Pressure Resistance		1.35MPa									
Operating Temperature Range		-5~70℃									
Operating Speed Range	Double Action	30~500mm/s						30~350mm/s		30~250mm/s	
	Single Action	100~500mm/s						-			
Buffer Type		Fixed Type Buffer									
Port Size		M5×0.8				G1/8"		G1/4"		G3/8"	

Stroke

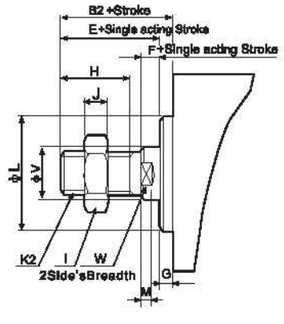
Bore(mm)		12	16	20	25			32	40	50	63	80	100
Double Action	Not attach magnet	5~60 mm Every 5mm is grouped as one grade		5~85 mm Every 5mm is grouped as one grade	5~90 mm Every 5mm is grouped as one grade		100~110 mm Every 5mm is grouped as one grade	5~90 mm Every 5mm is grouped as one grade			100~130 mm Every 5mm is grouped as one grade		
	Attach magnet	5~50 mm Every 5mm is grouped as one grade		5~75mm Every 5mm is grouped as one grade	5~90 mm Every 5mm is grouped as one grade		100mm	5~90 mm Every 5mm is grouped as one grade			100~120 mm Every 5mm is grouped as one grade		
Single Action	Not attach magnet	5~30 mm Every 5mm is grouped as one grade			5~30 mm Every 5mm is grouped as one grade		-						
	Attach magnet	5~30 mm Every 5mm is grouped as one grade			5~30 mm Every 5mm is grouped as one grade		-						
Max.Stroke		60mm		100mm	120mm			130mm					

Outer Thread Dimension

ϕ12~ϕ16



ϕ20~ϕ100



Bore/Symbol	B2	E	F	G	H	I	J	K2	L	M	V	W
12	17	16	4	1	10	8	4	M5×0.8	10.2	2.8	6	5
16	17.5	16	4	1.5	10	8	4	M5×0.8	11	2.8	6	5
20	20.5	19	4	1.5	13	10	5	M6×1.0	16	2.8	8	6
25	23	21	4	2	15	12	6	M10×1.5	17	2.8	10	8
32	25	22	4	3	15	17	8	M14×1.5	22	2.8	12	10
40	35	32	4	3	25	19	8	M18×1.5	28	2.8	16	14
50	37	33	5	4	25	27	11	M18×1.5	38	2.8	20	17
63	37	33	5	4	25	27	11	M22×1.5	40	2.8	20	17
80	44	39	6	5	30	32	13	M22×1.5	45	4	25	22
100	50	45	7	5	35	36	13	M26×1.5	55	4	32	27

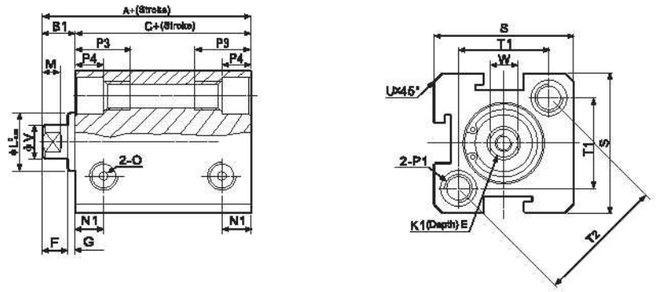
HAVKON® PNEUMATIC

A

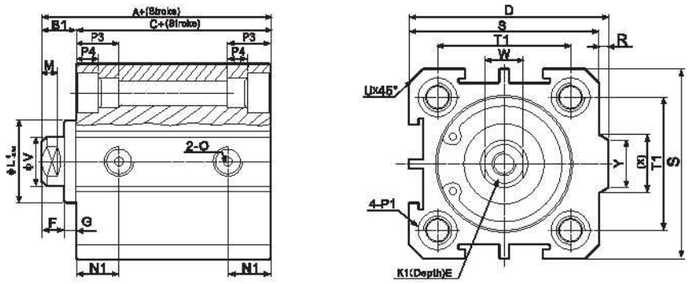
SDA Series Thin Type(Compact) Cylinder

Overall Dimensions

SDA.SDAS Type ϕ12–ϕ16



SDA.SDAS Type ϕ20–ϕ100



Dimension Sheet

Type / Bore Size/Symbol	Standard type A	B1	C	Attach Magnet A	B1	C	D	E Stroke≤10	E Stroke>10	F	G	K1	L	M	N1
12	22	5	17	32	5	27	-	6		4	1	M3×0.5	10.2	2.8	6.3
16	24	5.5	18.5	34	5.5	28.5	-	6		4	1.5	M3×0.5	11	2.8	7.3
20	25	5.5	19.5	35	5.5	29.5	36	8		4	1.5	M4×0.7	15	2.8	7.5
25	27	6	21	37	6	31	42	10		4	2	M5×0.8	17	2.8	8
32	31.5	7	24.5	41.5	7	34.5	50	12		4	3	M6×1	22	2.8	9
40	33	7	28	43	7	38	58.5	12		4	3	M8×1.25	28	2.8	10
50	37	9	28	47	9	38	71.5	15		5	4	M10×1.5	38	2.8	10.5
63	41	9	32	51	9	42	84.5	15		5	4	M10×1.5	40	2.8	11.8
80	52	11	41	62	11	51	104	15	20	6	5	M14×1.5	45	4	14.5
100	63	12	51	73	12	61	124	18	20	7	5	M18×1.5	55	4	20.5

Bore Size/Symbol	N3	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
12	6	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:Φ4.2	12	4.5	-	25	16.2	23	1.6	6	5	-	-
16	6.5	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:Φ4.2	12	4.5	-	29	19.8	28	1.6	6	5	-	-
20	-	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:Φ4.2	14	4.5	2	34	24	-	2.1	8	6	11.3	10
25	-	M5×0.8	Double Sides:Φ8.2/Thread:M6×1.0/Through ports:Φ4.6	15	5.5	2	40	28	-	3.1	10	8	12	10
32	-	G1/8"	Double Sides:Φ8.2/Thread:M6×1.0/Through ports:Φ4.6	16	5.5	6	44	34	-	2.15	12	10	18.3	15
40	-	G1/8"	Double Sides:Φ10/Thread:M8×1.25/Through ports:Φ6.5	20	7.5	6.5	52	40	-	2.25	16	14	21.3	16
50	-	G1/4"	Double Sides:Φ11/Thread:M8×1.25/Through ports:Φ6.5	25	8.5	9.5	62	48	-	4.15	20	17	30	20
63	-	G1/4"	Double Sides:Φ11/Thread:M8×1.25/Through ports:Φ6.5	25	8.5	9.5	75	60	-	3.15	20	17	28.7	20
80	-	G3/8"	Double Sides:Φ14/Thread:M12×1.75/Through ports:Φ9.2	25	10.5	10	94	74	-	3.65	25	22	36	26
100	-	G3/8"	Double Sides:Φ17.5/Thread:M14×2/Through ports:Φ11.3	30	13	10	114	90	-	3.65	32	27	35	26

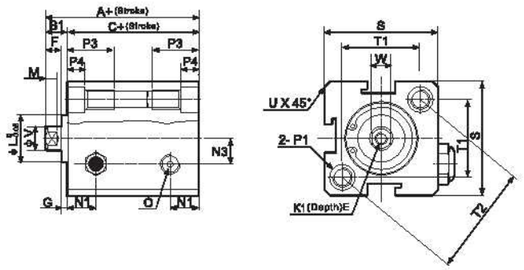
HAVKON® PNEUMATIC

A

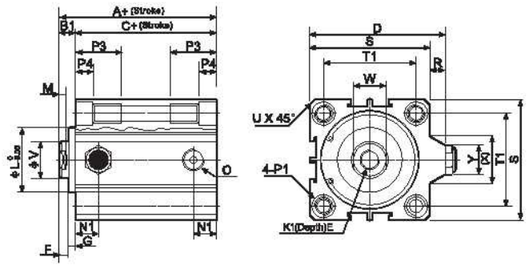
SDA Series Thin Type(Compact) Cylinder

Overall Dimensions

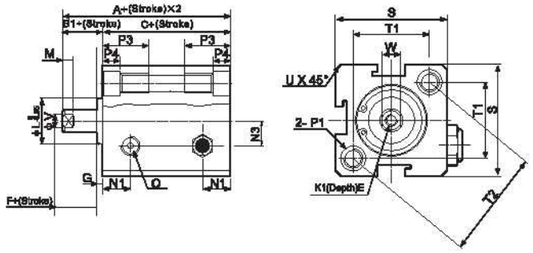
SSA.SSAS Type ϕ12–ϕ16



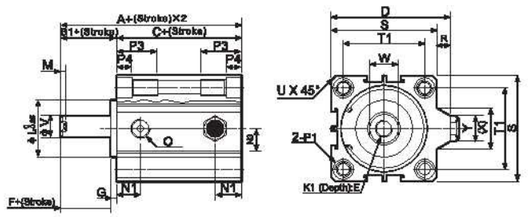
SSA.SSAS Type ϕ20–ϕ40



STA.STAS Type ϕ12–ϕ16



STA.STAS Type ϕ20–ϕ40



Dimension Sheet

Type / Bore /Stroke/ Symbol	Standard Type A ≤10	A >10	B1	C ≤10	C >10	Attach magnet A ≤10	A >10	B1	C ≤10	C >10	D	E	F	G	K1	L	M	N1
12	32	42	5	27	37	42	52	5	37	47	-	6	4	1	M3×0.5	10.2	2.8	6.3
16	34	44	5.5	28.5	38.5	44	54	5.5	38.5	48.5	-	6	4	1.5	M3×0.5	11	2.8	7.3
20	35	45	5.5	29.5	39.5	45	55	5.5	39.5	49.5	36	8	4	1.5	M4×0.7	16	2.8	7.5
25	37	47	6	34	41	47	57	6	41	51	42	10	4	2	M5×0.8	17	2.8	8
32	41.5	51.5	7	34.5	44.5	51.5	61.5	7	44.5	54.5	50	12	4	3	M6×1	22	2.8	9
40	43	53	7	36	46	53	63	7	46	56	58.5	12	4	3	M8×1.25	28	2.8	10

Bore Size/Symbol	N3	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
12	6	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:Φ4.2	12	4.5	-	25	16.2	23	1.6	6	5	-	-
16	6.5	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:Φ4.2	12	4.5	-	29	19.8	28	1.6	6	5	-	-
20	-	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:Φ4.2	14	4.5	2	34	24	-	2.1	8	6	11.3	10
25	-	M5×0.8	Double Sides:Φ8.2/Thread:M6×1.0/Through ports:Φ4.6	15	5.5	2	40	28	-	3.1	10	8	12	10
32	-	G1/8"	Double Sides:Φ8.2/Thread:M6×1.0/Through ports:Φ4.6	16	5.5	6	44	34	-	2.15	12	10	18.3	15
40	-	G1/8"	Double Sides:Φ10/Thread:M8×1.25/Through ports:Φ6.5	20	7.5	6.5	52	40	-	2.25	16	14	21.3	16

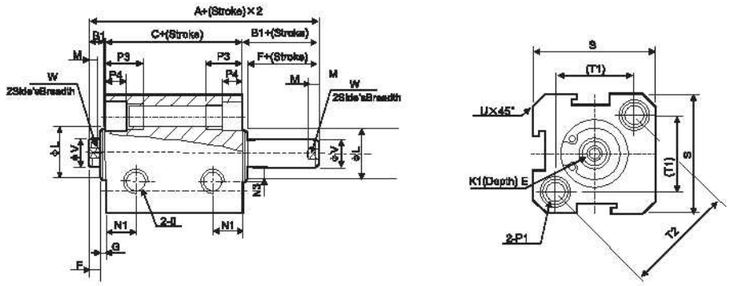
HAVKON® PNEUMATIC

A

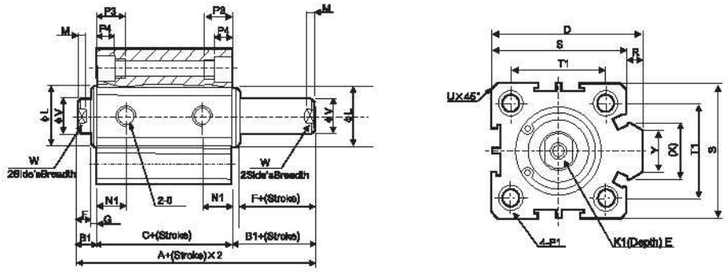
SDA Series Thin Type(Compact) Cylinder

Overall Dimensions

SDAD.SDADS Type
ϕ12~ϕ16



SDAD.SDADS Type
ϕ20~ϕ100



Dimension Sheet

Type	Standard type			Attach Magnet			D	E		F	G	K1	L	M	N1
Bore Size/Symbol	A	B1	C	A	B1	C		Stroke≤10	Stroke>10						
12	27	5	17	37	5	27	-	6		4	1	M3×0.5	10.2	2.8	6.3
16	29.5	5.5	18.5	39.5	5.5	28.5	-	6		4	1.5	M3×0.5	11	2.8	7.3
20	30.5	5.5	19.5	40.5	5.5	29.5	36	8(Stroke=5/tls6.5)		4	1.5	M4×0.7	16	2.8	7.5
25	33	6	21	43	6	31	42	10(Stroke=5/tls7)		4	2	M5×0.8	17	2.8	8
32	38.5	7	24.5	48.5	7	34.5	50	8	12	4	3	M6×1	22	2.8	9
40	40	7	28	50	7	36	58.5	9	12	4	3	M8×1.25	28	2.8	10
50	46	9	28	56	9	38	71.5	11	15	5	4	M10×1.5	38	2.8	10.5
63	50	9	32	60	9	42	84.5	11	15	5	4	M10×1.5	40	2.8	11.8
80	63	11	41	73	11	51	104	14	20	6	5	M14×1.5	45	4	14.5
100	75	12	51	85	12	61	124	18	20	7	5	M18×1.5	55	4	20.5

Bore Size/Symbol	N3	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
12	6	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:Φ4.2	12	4.5	-	25	16.2	23	1.6	6	5	-	-
16	6.5	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:4.2	12	4.5	-	29	19.8	28	1.6	6	5	-	-
20	-	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:Φ4.2	14	4.5	2	34	24	-	2.1	8	6	11.3	10
25	-	M5×0.8	Double Sides:Φ8.2/Thread:M6×1.0/Through ports:Φ4.6	15	5.5	2	40	28	-	3.1	10	8	12	10
32	-	G1/8"	Double Sides:Φ8.2/Thread:M6×1.0/Through ports:Φ4.6	16	5.5	6	44	34	-	2.15	12	10	18.3	15
40	-	G1/8"	Double Sides:Φ10/Thread:M8×1.25/Through ports:Φ6.5	20	7.5	6.5	52	40	-	2.25	16	14	21.3	16
50	-	G1/4"	Double Sides:Φ11/Thread:M8×1.25/Through ports:Φ6.5	25	8.5	9.5	62	48	-	4.15	20	17	30	20
63	-	G1/4"	Double Sides:Φ11/Thread:M8×1.25/Through ports:Φ6.5	25	8.5	9.5	75	60	-	3.15	20	17	28.7	20
80	-	G3/8"	Double Sides:Φ14/Thread:M12×1.75/Through ports:Φ9.2	25	10.5	10	94	74	-	3.85	25	22	36	28
100	-	G3/8"	Double Sides:Φ17.5/Thread:M14×2/Through ports:Φ11.3	30	13	10	114	90	-	3.65	32	27	35	26

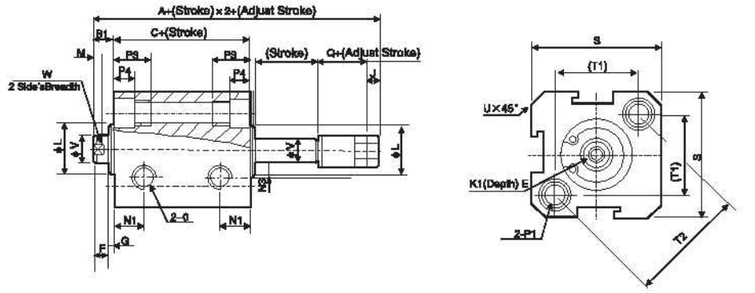
HAVKON® PNEUMATIC

A

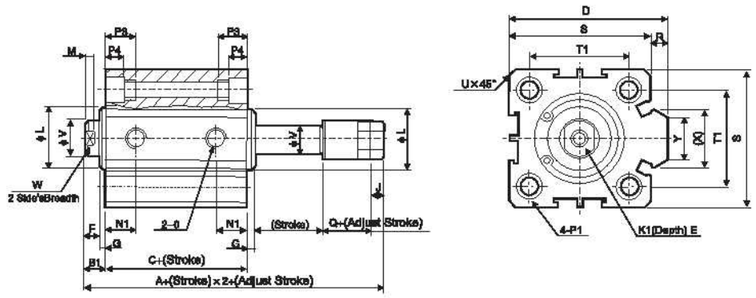
SDA Series Thin Type(Compact) Cylinder

Overall Dimensions

SDAJ.SDAJS Type
ϕ12~ϕ16



SDAJ.SDAJS Type
ϕ20~ϕ100



Dimension Sheet

Type	Standard type			Attach Magnet			D	E		F	G	K1	L	M	N1
Bore Size/Symbol	A	B1	C	A	B1	C		Stroke≤10	Stroke>10						
12	22	5	17	32	5	27	-	6		4	1	M3×0.5	10.2	2.8	6.3
16	24	5.5	18.5	34	5.5	28.5	-	6		4	1.5	M3×0.5	11	2.8	7.3
20	25	5.5	19.5	35	5.5	29.5	36	8		4	1.5	M4×0.7	15	2.8	7.5
25	27	6	21	37	6	34	42	10		4	2	M5×0.8	17	2.8	8
32	31.5	7	24.5	41.5	7	34.5	50	12		4	3	M6×1	22	2.8	9
40	33	7	28	43	7	36	58.5	12		4	3	M8×1.25	28	2.8	10
50	37	9	28	47	9	38	71.5	15		5	4	M10×1.5	38	2.8	10.5
63	41	9	32	51	9	42	84.5	15		5	4	M10×1.5	40	2.8	11.8
80	52	11	41	62	11	51	104	15	20	6	5	M14×1.5	45	4	14.5
100	63	12	51	73	12	61	124	18	20	7	5	M18×1.5	55	4	20.5

Bore Size/Symbol	N3	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
12	6	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:Φ4.2	12	4.5	-	25	16.2	23	1.6	6	5	-	-
16	6.5	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:Φ4.2	12	4.5	-	29	19.8	28	1.6	6	5	-	-
20	-	M5×0.8	Double Sides:Φ6.5/Thread:M5×0.8/Through ports:Φ4.2	14	4.5	2	34	24	-	2.1	8	6	11.3	10
25	-	M5×0.8	Double Sides:Φ6.5/Thread:M6×1.0/Through ports:Φ4.6	15	5.5	2	40	28	-	3.1	10	8	12	10
32	-	G1/8"	Double Sides:Φ6.5/Thread:M6×1.0/Through ports:Φ4.6	16	5.5	6	44	34	-	2.15	12	10	18.3	15
40	-	G1/8"	Double Sides:Φ6.5/Thread:M8×1.25/Through ports:Φ6.5	20	7.5	6.5	52	40	-	2.25	16	14	21.3	16
50	-	G1/4"	Double Sides:Φ8.5/Thread:M8×1.25/Through ports:Φ8.5	25	8.5	9.5	62	48	-	4.15	20	17	30	20
63	-	G1/4"	Double Sides:Φ6.5/Thread:M8×1.25/Through ports:Φ6.5	25	8.5	9.5	75	60	-	3.15	20	17	28.7	20
80	-	G3/8"	Double Sides:Φ6.5/Thread:M12×1.75/Through ports:Φ9.2	25	10.5	10	94	74	-	3.65	25	22	36	26
100	-	G3/8"	Double Sides:Φ6.5/Thread:M12×1.75/Through ports:Φ11.3	30	13	10	114	90	-	3.65	32	27	35	26

HAVKON® PNEUMATIC

A

CQ2 Series Compact Cylinder

CQ2B 32×30-M

CQ2B 16×25

Ordering Code

CQ2 — □ 12 — 10 D □

Series Code
CQ2:Normal Type
CDQ2:Attach magnet Type

Mounting Style
B:with through bore
A:with female thread on both ends

Cylinder Bore
Single action:12mm-50mm
Double action:12mm-100mm

Stroke
0~100mm

Action
D:Double action
S:Single action(with spring return)
T:Single action(with spring extent)

Cylinder body (optional)
Blank:Inner Thread Type
M:Thread outer Type
C:With cushion

Specification

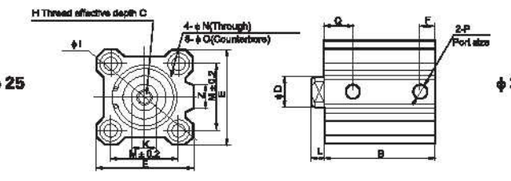
Bore(mm)	12	16	20	25	32	40	50	63	80	100
Working Medium	Air									
Motion Pattern	Double action/Single Action Extrusion type/Single Action Drawing-In Type									
Ensured Pressure Resistance	15.3kgf/cm²(1.5Mpa)									
Max.pressure	10.2kgf/cm²(1.0Mpa)									
Environment and fluid temp	5~+60℃									
Thread Type	Inner Thread(Standard)/Outer Thread(Optional)									
Buffering	NO									
Margin of Stroke Error(mm)	$^{+1.0}_{0}$									
Installation	Through Hole (Standard), Inner size on the two sides(Optional)									
Port size	M5×0.8				G1/8"		G1/4"		G3/8"	

■ Note:Pls Confirm Single Type Can't With Cushion.

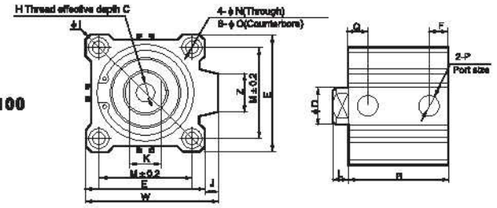
Overall Dimensions

Through Hole Type/CQ2B Series

ϕ12~ϕ25



ϕ32~ϕ100



HAVKON® PNEUMATIC

A

CQ2 Series Compact Cylinder

Dimension Sheet(Double Action)

Model	Stroke range (mm)	B	ΦD	E	F	H	C	ΦI	J	K	L	M	ΦN	ΦO	P	Q	W	Z
CQ2B12-□D	5~30	17+st	6	25	5	M3×0.5	6	32	-	5	3.5	15.5	3.5	6.5 depth 3.5	M5×0.8	7.5	-	-
CQ2B16-□D	5~30	18.5+st	8	29	5.5	M4×0.7	8	38	-	6	3.5	20	3.5	6.5 depth 3.5	M5×0.8	8	-	10
CQ2B20-□D	5~50	19.5+st	10	36	5.5	M5×0.8	7	47	-	8	4.5	25.5	5.5	9 depth 7	M5×0.8	9	-	10
CQ2B25-□D	5~50	22.5+st	12	40	5.5	M6×1.0	12	52	-	10	5	28	5.5	9 depth 7	M5×0.8	11	-	10
CQ2B32-□D	5 10~50	23+st	16	45	5.5 7.5	M8×1.25	13	60	4.5	14	7	34	5.5	9 depth 7	M5×0.8 1/8	11.5 10.5	49.5	18
CQ2B40-□D	5~50	29.5+st	16	52	8	M8×1.25	13	69	5	14	7	40	5.5	9 depth 7	1/8	11	57	18
CQ2B50-□D	10~50	30.5+st	20	64	10.5	M10×1.5	15	86	7	17	8	50	6.6	11 depth 8	1/4	10.5	71	22
CQ2B63-□D	10~50	36+st	20	77	10.5	M10×1.5	15	103	7	17	8	60	9	14 depth 10.5	1/4	15	84	22
CQ2B80-□D	10~50	43.5+st	25	98	12.5	M16×2.0	21	132	6	22	10	77	11	17.5 depth 13.5	3/8	16	104	26
CQ2B100-□D	10~50	53+st	30	117	13	M20×2.5	27	156	6.5	27	12	94	11	17.5 depth 13.5	3/8	23	123.5	26

Note 2) Long Stroke

Model	Stroke (mm)	B	F	P	Q
32	75,100	33	7.5	1/8	10.5
40	75,100	38.5	8	1/8	11
50	75,100	40.5	10.5	1/4	10.5
63	75,100	46	10.5	1/4	15
80	75,100	53.5	12.5	3/8	16
100	75,100	63	13	3/8	23

St=Stroke

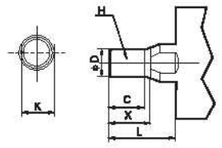
Note 1)The standard stroke is at a distance of each 5 mm.
Note 2)The stroke between 55mm-100mm(55,60,65,70,80,85,90,95,)need to be added thickness of 5,10,15 or 20mm pad.
Note 3)External dimensions with rumper are same as standard type as shown above.

Dimension Sheet(Single Action)

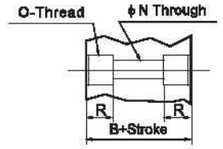
Model	B			ΦD	E	F		H	C	ΦI	J	K	L	M	ΦN	ΦO	P			Q		W	Z
	5st	10st	20st			5st	10st										5st	10st	20st	5st	10st		
CQ2B12-□S	22	27	-	6	25	5	5	M3×0.5	6	32	-	5	3.5	15.5	3.5	6.5 depth 3.5	M5×0.8	-	7.5	7.5	-	-	
CQ2B16-□S	23.5	28.5	-	8	29	5.5	5.5	M4×0.7	8	38	-	6	3.5	20	3.5	6.5 depth 3.5	M5×0.8	-	8	8	-	10	
CQ2B20-□S	24.5	29.5	-	10	36	5.5	5.5	M5×0.8	7	47	-	8	4.5	25.5	5.5	9 depth 7	M5×0.8	-	9	9	-	10	
CQ2B25-□S	27.5	32.5	-	12	40	5.5	5.5	M6×1.0	12	52	-	10	5	28	5.5	9 depth 7	M5×0.8	-	11	11	-	10	
CQ2B32-□S	28	33	-	16	45	5.5	7.5	M8×1.25	13	60	4.5	14	7	34	5.5	9 depth 7	M5×0.8	1/8	-	11.5	11.5	49.5	18
CQ2B40-□S	34.5	39.5	-	16	52	8	8	M8×1.25	13	69	5	14	7	40	5.5	9 depth 7	1/8		-	11	11	57	18
CQ2B50-□S	-	40.5	50.5	20	64	10.5	10.5	M10×1.5	15	86	7	17	8	50	6.6	11 depth 8	-	1/4		10.5	10.5	71	22

St=Stroke

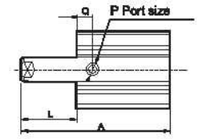
Thread outer Type



(Inner Thread Type)/CQ2A



Single Action (with Spring extent) ϕ12~ϕ50



Thread outer Type

Bore (mm)	C	X	ΦD	H	L	K
12	9	10.5	6	M5×0.8	14	5
16	10	12	8	M6×1.0	15.5	6
20	12	14	10	M8×1.25	18.5	8
25	15	17.5	12	M10×1.25	22.5	10
32	20.5	23.5	16	M14×1.5	28.5	14
40	20.5	23.5	16	M14×1.5	28.5	14
50	26	28.5	20	M18×1.5	33.5	17
63	26	28.5	20	M18×1.5	33.5	17
80	32.5	35.5	25	M22×1.5	43.5	22
100	32.5	35.5	30	M26×1.5	43.5	27

Note3)Inner Thread Type

Bore (mm)	O	R
12	M4×0.7	7
16	M4×0.7	7
20	M6×1.0	10
25	M6×1.0	10
32	M6×1.0	10
40	M6×1.0	10
50	M8×1.25	14
63	M10×1.5	18
80	M12×1.75	22
100	M12×1.75	22

Single Action (with Spring extent)

Bore (mm)	A			L		
	5st	10st	20st	5st	10st	20st
12	30.5	40.5	-	8.5	13.5	-
16	32	42	-	8.5	13.5	-
20	34	44	-	9.5	14.5	-
25	37.5	47.5	-	10	15	-
32	40	50	-	12	17	-
40	46.5	56.5	-	12	17	-
50	-	58.5	78.5	-	18	28

*External dimensions with rumper are same as standard type as shown above.

HAVKON® PNEUMATIC

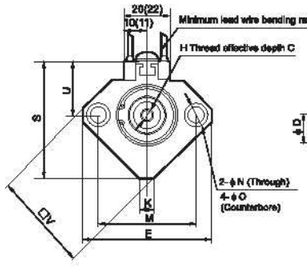
A

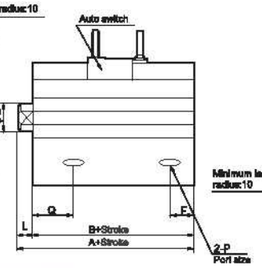
CQ2 Series Compact Cylinder

Overall Dimensions

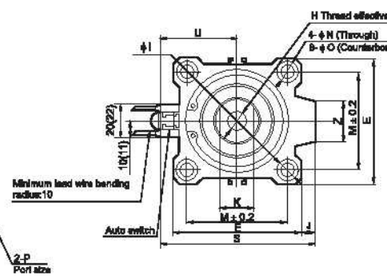
CDQ2B Series

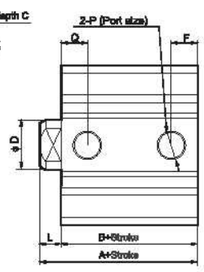
ϕ12~ϕ25





ϕ32~ϕ100





Dimension Sheet(Double Action)

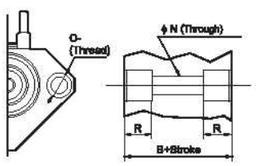
Model	Note1) Stroke range (mm)	A	B	ΦD	E	F	H	C	ΦI	J	K	L	M	ΦN	ΦO	P	Q	S	U	V	Z
CDQ2B12	5~30	31.5	28	6	32	6.5	M3×0.5	6	-	-	5	3.5	22	3.5	6.5 depth 3.5	M5×0.8	11	35.5	19.5	25	-
CDQ2B16	5~30	34	30.5	8	38	5.5	M4×0.7	8	-	-	6	3.5	28	3.5	6.5 depth 3.5	M5×0.8	10	41.5	22.5	29	-
CDQ2B20	5~50	36	31.5	10	46.8	5.5	M5×0.8	7	-	-	8	4.5	36	5.5	9 depth 7	M5×0.8	10.5	48	24.5	36	-
CDQ2B25	5~50	37.5	32.5	12	52	5.5	M6×1.0	12	-	-	10	5	40	5.5	9 depth 7	M5×0.8	11	53.5	27.5	40	-
CDQ2B32	5~50	40	33	16	45	7.5	M8×1.25	13	60	4.5	14	7	34	5.5	9 depth 7	1/8	10.5	58.5	31.5	-	18
CDQ2B40	5~50	46.5	39.5	16	52	8	M8×1.25	13	69	5	14	7	40	5.5	9 depth 7	1/8	11	66	35	-	18
CDQ2B50	10~50	48.5	40.5	20	64	10.5	M10×1.5	15	86	7	17	8	50	6.6	11 depth 8	1/4	10.5	80	41	-	22
CDQ2B63	10~50	54	46	20	77	10.5	M10×1.5	15	103	7	17	8	60	9	14 depth 10.5	1/4	15	93	47.5	-	22
CDQ2B80	10~50	63.5	53.5	25	98	12.5	M16×2.0	21	132	6	22	10	77	11	17.5 depth 13.5	3/8	16	112.5	57.5	-	26
CDQ2B100	10~50	75	63	30	117	13	M20×2.5	27	156	6.5	27	12	94	11	17.5 depth 13.5	3/8	23	132.5	67.5	-	26

Note2) (Long Stroke)

Model	Stroke (mm)	A	B	F	P	Q
32	75,100	40	33	7.5	1/8	10.5
40	75,100	46.5	39.5	8	1/8	11
50	75,100	48.5	40.5	10.5	1/4	10.5
63	75,100	54	46	10.5	1/4	15
80	75,100	63.5	53.5	12.5	3/8	16
100	75,100	75	63	13	3/8	23

Note 1)The standard stroke is at a distance of each 5 mm.
Note 2)The stroke between 55mm-100mm(55,60,65,70,80,85,90,95,)need to be added thickness of 5,10,15 or 20mm pad.
Note 3)External dimensions with rumper are same as standard type as shown above.
Note 4)The stroke of cylinder in 5 mm can be fixed only one magnetism swith

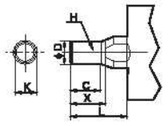
Inner Thread Type
CDQ2A



Note3)Inner Thread Type

Bore (mm)	O	R
12	M4×0.7	7
16	M4×0.7	7
20	M6×1.0	10
25	M6×1.0	10
32	M6×1.0	10
40	M6×1.0	10
50	M8×1.25	14
63	M10×1.5	18
80	M12×1.75	22
100	M12×1.75	22

Thread outer type



Thread outer type

Bore (mm)	C	X	ΦD	H	L	K
12	9	10.5	6	M5×0.8	14	5
16	10	12	8	M6×1.0	15.5	6
20	12	14	10	M8×1.25	18.5	8
25	15	17.5	12	M10×1.25	22.5	10
32	20.5	23.5	16	M14×1.5	28.5	14
40	20.5	23.5	16	M14×1.5	28.5	14
50	26	28.5	20	M18×1.5	33.5	17
63	26	28.5	20	M18×1.5	33.5	17
80	32.5	35.5	25	M22×1.5	43.5	22
100	32.5	35.5	30	M26×1.5	43.5	27

HAVKON® PNEUMATIC

A

CJP Series Needle Cylinder

CJPB10-15

Ordering Code

CJP — 10 — 5 — B

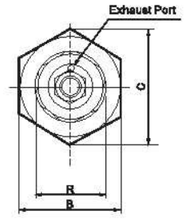
Series Code	Cylinder Bore	Stroke	Thread Type
CJPB:Panel mount Type CJPS:Invisible Type	6mm-6mm 10mm-10mm 15mm-15mm	0~30mm	Blank:With Thread B:No. Thread

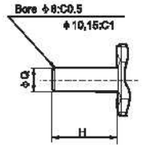
Specification

Bore(mm)	6	10	15
Working Medium	Air		
Motion Pattern	Double action / Single Action(Drawing-in Type)		
Ensured Pressure Resistance	10.5kgf/cm²(1.05Mpa)		
Max.pressure	7kgf/cm²(0.7Mpa)		
Min.pressure	2kgf/cm²(0.2Mpa)	1.5kgf/cm²(0.15Mpa)	
Operating Temperature Range	5~+60℃		
Buffering	NO		
Margin of Stroke Error(mm)	$^{+1.0}_{0}$		
Port size	M5×0.8 Panel mount Type		

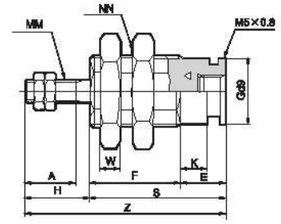
Overall Dimensions

Panel Mounting Style
CJPB





with rod end thread

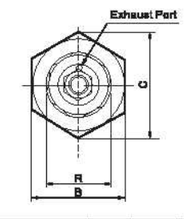


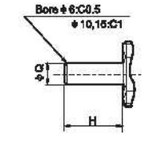
St=(Stroke) mm

Bore(mm)	A	B	C	E	F 5st	F 10st	F 15st	ΦG	H	K	MM	NN	R	S 5st	S 10st	S 15st	W	Z 5st	Z 10st	Z 15st	Q
6	7	12	13.9	6	12.5	19.5	26.5	8.5	9	3.5	M3×0.5	M10×1.0	9	18.5	22.5	32.5	3	27.5	34.5	41.5	3
10	10	19	22	6	14.5	21	28	12	12	3.5	M4×0.7	M15×1.5	13	20.5	27	34	4	32.5	39	46	5
15	12	27	31	7	16.5	22.5	29	18	14	4.2	M5×0.8	M22×1.5	20	23.5	29.5	36	5	37.5	43.5	50	6

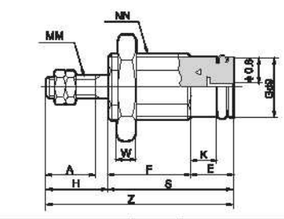
Overall Dimensions

(Plug Mounting Style)CJPS





with rod end thread



Bore(mm)	A	B	C	E	F 5st	F 10st	F 15st	ΦG	H	K	MM	NN	R	S 5st	S 10st	S 15st	W	Z 5st	Z 10st	Z 15st	Q
6	7	12	13.9	6	12.5	19.5	26.5	8.5	9	3.5	M3×0.5	M10×1.0	9	18.5	22.5	32.5	3	27.5	34.5	41.5	3
10	10	19	22	6	14.5	21	28	12	12	3.5	M4×0.7	M15×1.5	13	20.5	27	34	4	32.5	39	46	5
15	12	27	31	7	16.5	22.5	29	19	14	4.2	M5×0.8	M22×1.5	20	23.5	29.5	36	5	37.5	43.5	50	6

HAVKON® PNEUMATIC

Rotary table/Air gripper/Rodless Cylinders

Cylinders for special industries and requirement. XCPC provide the highest quality products of these cylinders in China. It is the high cost effective product you can find in our company. They are include: MSQ(Rotary table), XHZ/XHC(Clamp Gripper), XHL(Parallel style), XHT(Angle Gripper) and CY1(Rod-less).etc.

A

TN Series Double-Shaft Cylinder

TN 20×25

Ordering Code

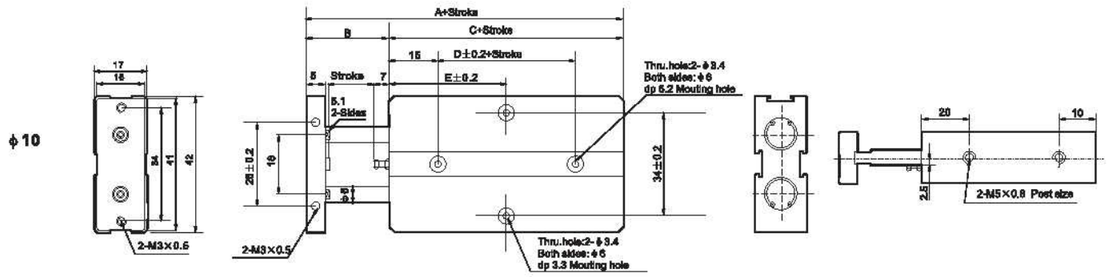
TN — 20 × 50 — S

Series Code	Cylinder Bore	Stroke	Magnet Code
Double-Shaft Double Action Type	10mm 16mm 20mm 25mm 32mm		Blank:Without Magnet S:Attach Magnet

Specification

Bore(mm)	10	16	20	25	32
Motion Pattern	Double action				
Working Medium	Air				
Operating Voltage Range	1~9kgf/cm²				
Ensured Pressure Resistance	10.5kgf/cm²				
Operating Temperature Range	-5~+70℃				
Operating Speed Range	100~500mm/s				
Adjustable Stroke	-10~0mm				
Cushion Type	Adjustable Cushion				
Non-rotating Precision	0.4℃		0.3℃		
Port Size	M5×0.8				G1/8"

Overall Dimensions

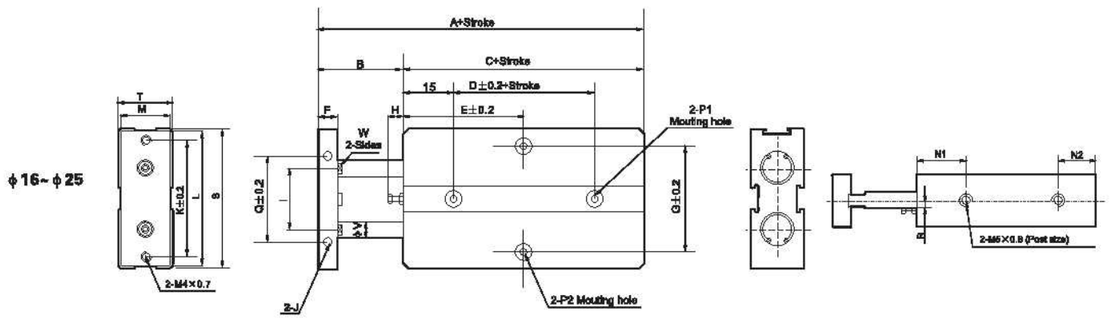


Dimension Sheet

Bore size / Item	A	B	C	D	E						
					10	20	30	40	50	60	70
10	63	12	51	10	30	30	35	40	45	50	55

TN Series Double-Shaft Cylinder

Overall Dimensions

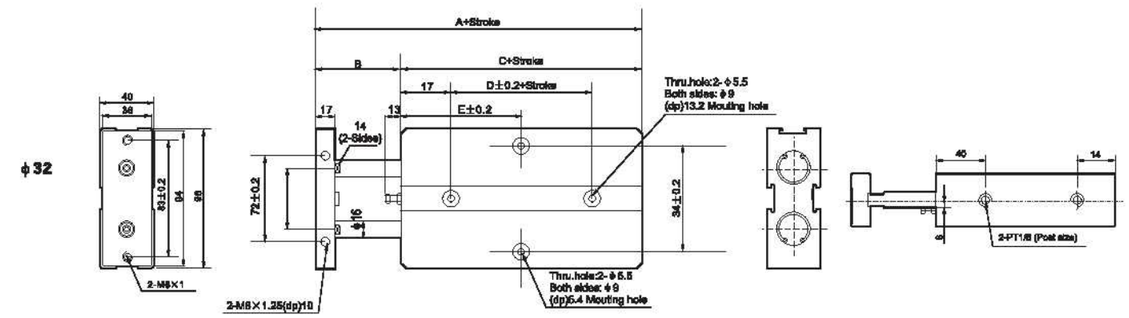


Dimension Sheet

Bore size / Item	A	B	C	D	E												F	G	H	I
					10	20	30	40	50	60	70	80	90	100	125	150				
16	68	15	53	20	30	35	40	45	50	55	60	65	70	75	87.5	100	8	47	6	24
20	78	20	58	20	35	35	40	45	50	55	60	65	70	75	87.5	100	10	55	9	28
25	81	19	62	30	40	40	45	50	55	60	65	70	75	80	92.5	105	10	66	8	34

Bore size/Item	J	K	L	M	N1	N2	P1	P2	Q	R	S	T	V	W
16	M4×0.7/dp 5	47	53	20	22	11	Both sides : ϕ7.5(dp) 7.2mm Thru.hole: ϕ4.5	Both sides: ϕ8(dp) 4.4mm Thru.hole: ϕ4.5	34	3	54	21	8	6.1
20	M4×0.7/dp 5	55	61	24	25	12	Both sides: ϕ7.5(dp) 7.2mm Thru.hole: ϕ4.5	Both sides: ϕ8(dp) 4.4mm Thru.hole: ϕ4.5	44	3.5	62	25	10	8.1
25	M4×0.7/dp 8	66	72	29	27	12	Both sides: ϕ7.5(dp) 7.2mm Thru.hole: ϕ4.5	Both sides: ϕ8(dp) 4.4mm Thru.hole: ϕ4.5	56	7	73	30	12	10.2

Overall Dimensions



Dimension Sheet

Bore size / Item	A	B	C	D	E											
					10	20	30	40	50	60	70	80	90	100	125	150
32	108	30	78	35	45	50	55	60	65	70	75	80	85	90	102.5	115

CXS Series Double-Shaft Cylinder

CXS 20×50

Ordering Code

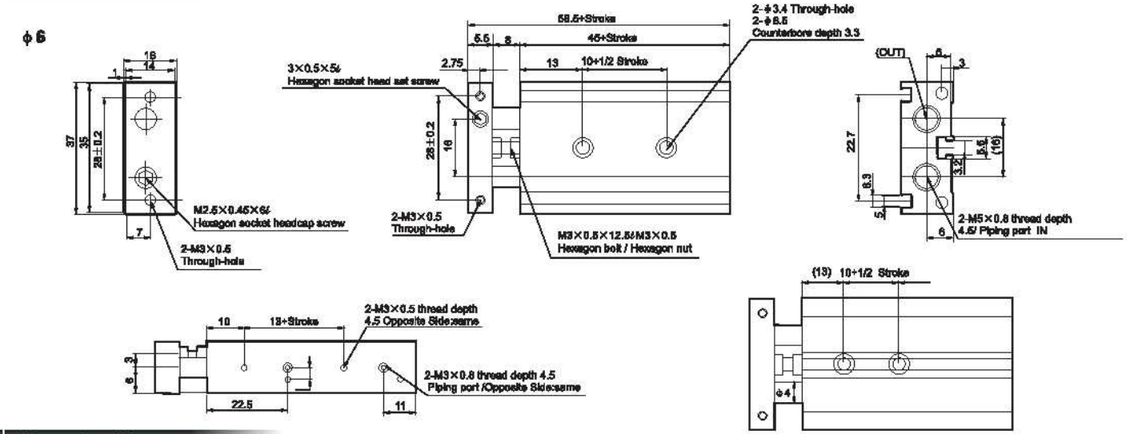
CXS — M — 20 × 50

- **Series Code**: CXS:Attach magnet Type
- **Type of Bearing**: M:Slide Bearing Type; L:Ball Guide Bearing Type
- **Cylinder Bore**: 6mm, 10mm, 16mm, 20mm, 25mm, 32mm
- **Stroke**: 0~100mm

Specification

Bore(mm)	6	10	15	20	25	32
Working Medium	Air					
Motion Pattern	Double action					
Ensured Pressure Resistance	1.05Mpa(10.7kgf/cm²)					
Max.pressure	0.7Mpa(7.1kgf/cm²)					
Min.pressure	0.15Mpa(1.5kgf/cm²)	0.1Mpa(1.0kgf/cm²)		0.05Mpa(0.51kgf/cm²)		
Operating Temperature Range	5~+60℃					
Buffering	Both ends buffer					
Structure	Double Power					
Stroke Adjustable Range	Return Stroke: 0~5mm					
Bearing	Slide Bearing/Ball Guide Bearing					
Precision of Piston rod Non-rotating: Slide Bearing	±0.1	±0.15	±0.13	±0.11	±0.1	±0.08
Precision of Piston rod Non-rotating: Ball Guide Bearing	±0.1	±0.1	±0.07	±0.06	±0.05	±0.04
Port size	M5×0.8					G1/8"

Overall Dimensions

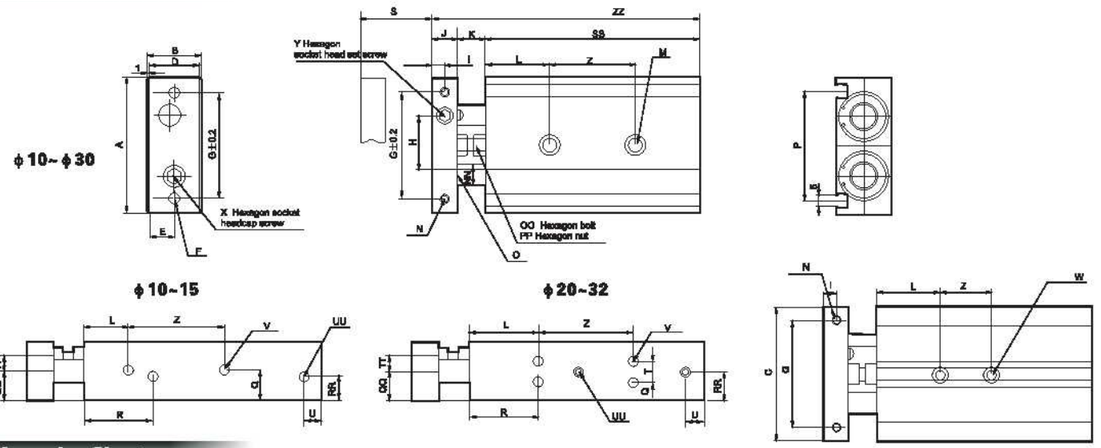


Dimension Sheet

Model	Stroke	10+1/2 Stroke	13+Stroke	45+Stroke	58.5+Stroke
CXS□6-10	10	15	23	55	68.5
CXS□6-20	20	20	33	65	78.5
CXS□6-30	30	25	43	75	88.5
CXS□6-40	40	30	53	85	95.5
CXS□6-50	50	35	63	95	108.5

CXS Series Double-Shaft Cylinder

Overall Dimensions



Dimension Sheet

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	NN	O	OO	P
CXS□10-10 /20/30/40/50	46	17	44	15	7.5	2-M4×0.7	35	20	4	8	9	20	2-Φ3.4/through 2-Φ6.5 Counterbore depth3.3	2-M3×0.5 thread depth 5	Φ6	5	M4×0.7×14.5L	33.6
CXS□15-10 /20/30/40/50	58	20	56	18	9	2-M5×0.8	45	25	5	10	9	30	2-Φ4.3/through 2-Φ8 Counterbore depth4.4	2-M4×0.7 thread depth 6	Φ8	6	M4×0.7×14.5L	48
CXS□20-10/20/ 30/40/50/75/100	64	25	62	23	11.5	2-M5×0.8	50	28	6	12	12	30	2-Φ5.5/through 2-Φ9.5 Counterbore depth5.3	2-M4×0.7 thread depth 6	Φ10	8	M6×1.0×18.5L	53
CXS□25-10/20/ 30/40/50/75/100	80	30	78	28	14	2-M6×1.0	60	35	6	12	12	30	2-Φ6.9/through 2-Φ11 Counterbore depth6.3	2-M5×0.8 thread depth 7.5	Φ12	10	M6×1.0×18.5L	64
CXS□32-10/20/ 30/40/50/75/100	98	38	96	36	18	2-M8×1.0	75	44	8	16	14	30	2-Φ6.9/through 2-Φ11 Counterbore depth6.3	2-M5×0.8 thread depth 8	Φ16	13	M8×12.5×23L	76

Model	PP	Q	QQ	R	RR	T	TT	U	UU	V	W	X	Y
CXS□10-10 /20/30/40/50	M4×0.7	8.5	7	30	7	-	5	8	4-M5×0.8 thread depth 4.5	4-M3×0.5 thread depth 4.5	2-M4×0.7 thread depth 7	M3×0.5×10L	M3×0.5×5L
CXS□15-10 /20/30/40/50	M4×0.7	10	10	38.5	10	-	5	8	4-M5×0.8 thread depth 4.5	4-M4×0.7 thread depth 5	2-M5×0.8 thread depth 8	M5×0.8×10L	M4×0.7×4L
CXS□20-10/20/ 30/40/50/75/100	M6×1.0	7.75	12.5	45	7.75	9.5	6.5	8	4-M5×0.8 thread depth 4.5	8-M4×0.7 thread depth 6	2-M6×1.0 thread depth 10	M6×1.0×12L	M5×0.8×5L
CXS□25-10/20/ 30/40/50/75/100	M6×1.0	8.5	15	46	15	13	9	9	4-1/8 thread depth 6.5	8-M5×0.8 thread depth 7.5	2-M8×1.25 thread depth 12	M6×1.0×14L	M6×1.0×5L
CXS□32-10/20/ 30/40/50/75/100	M8×1.25	9	19	56	19	20	11.5	10	4-1/8 thread depth 6.5	8-M5×0.8 thread depth 7.5	2-M8×1.25 thread depth 12	M8×1.25×16L	M8×1.25×8L

Model	S	SS	Z	ZZ	Model	S	SS	Z	ZZ	Model	S	SS	Z	ZZ	Model	S	SS	Z	ZZ	Model	S	SS	Z	ZZ
CXS□10-10	10	85	30	82	CXS□15-10	10	70	25	89	CXS□20-10	10	80	30	104	CXS□25-10	10	82	30	106	CXS□32-10	10	92	40	122
CXS□10-20	20	75		92	CXS□15-20	20	80		99	CXS□20-20	20	90		114	CXS□25-20	20	95		116	CXS□32-20	20	102		132
CXS□10-30	30	85	40	102	CXS□15-30	30	90	35	109	CXS□20-30	30	100	40	124	CXS□25-30	30	102	40	126	CXS□32-30	30	112	50	142
CXS□10-40	40	95		112	CXS□15-40	40	100		119	CXS□20-40	40	110		134	CXS□25-40	40	112		136	CXS□32-40	40	122		152
CXS□10-50	50	105		122	CXS□15-50	50	110		129	CXS□20-50	50	120		144	CXS□25-50	50	122		146	CXS□32-50	50	132		162
										CXS□20-75	75	145	60	169	CXS□25-75	75	147	60	171	CXS□32-75	75	157	70	187
										CXS□20-100	100	170		194	CXS□25-100	100	172		196	CXS□32-100	100	182		212

CU Series Free Installation Cylinder

CDU 25×30

CDUK 16×30

Ordering Code

CU — □ — 10 × 30 — □

Series Code
CU:Normal Type
CDU:Attach magnet Type

Kinds
Blank:Normal Type
K:Non-Rotating piston rod Type

Cylinder Bore
6mm
10mm
16mm
20mm
25mm
32mm

Stroke
0~50mm

Action
D:Double action
S:Single Action Spring Drawing-In Type
T:Single Action Spring Extusion Type

Specification

Bore(mm)		6mm	10mm	16mm	20mm	25mm	32mm
Working Medium		Air					
Motion Pattern		Double action/Single Action Extrusion type/Single Action Drawing-In Type					
Ensured Pressure Resistance		1.05Mpa(10.5kgf/cm²)					
Max. Working-pressure		0.7Mpa(7.1kgf/cm²)					
Min. operating pressure	Single	0.2MPa	0.15MPa		0.13MPa		
	Double	0.12MPa	0.08MPa		0.05MPa		
Ambient and Medium Temperature		Without auto switch:-10~70℃(No freezing) With auto swith:-10~60℃(No freezing)					
Lubrication		Non-lube					
Piston speed		50-500 mm/s					
Cushion		Rubber bumper Note					
Rod end thread		Male thread					
Thread tolerance		Class 2					
Cushion		Both ends buffer					
Margin of Stroke Error(mm)		$^{+1.0}_{0}$ mm					
Precision of Piston rod with Non-rotating		±0.8°			±0.5°		
Port Size		M5×0.8					G1/8"

Note) Φ6 single acting with auto switch type: One side rubber bumper.

Standard stroke

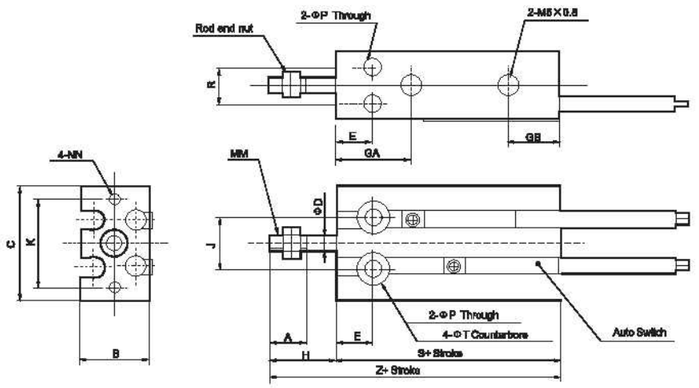
	Bore size (mm)	Standard stroke(mm)
Double Acting	6,10,16	5,10,15,20,25,30
	20,25,32	5,10,15,20,25,30,40,50
Single Acting	6,10,16,20,25,32	5,10,15

CU Series Free Installation Cylinder

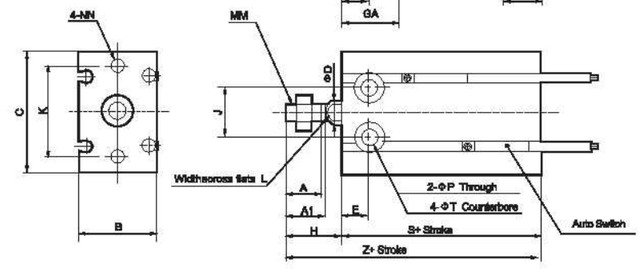
Overall Dimensions

Double Acting, Single Rod

ϕ6~ϕ10



ϕ16~ϕ32



Dimension Sheet

缸径/Bore size(mm)	A	A1	B	C	D	E	GA	GB	H	K	J	L	MM
6	7	-	13	22	3	7	15	10	13	17	10	-	M3×0.5
10	10	-	15	24	4	7	16.5	10	16	18	11	-	M4×0.7
16	11	12.5	20	32	6	7	16.5[Note]	11.5	16	25	14	5	M5×0.8
20	12	14	26	40	8	9	19	12.5	19	30	16	6	M6×1.0
25	15.5	18	32	50	10	10	21.5	13	23	38	20	8	M8×1.25
32	19.5	22	40	62	12	11	23	12.5	27	48	24	10	M10×1.25

Bore size (mm)	NN	P	Q	QA	R	T	Without Auto Switch		With Auto Switch	
							S	Z	S	Z
6	M3×0.5 depth 5	3.2	-	-	7	6 depth 4.8	33	46	33	46
10	M3×0.5 depth 5	3.2	-	-	9	6 depth 5	36	52	36	52
16	M4×0.7 depth 6	4.5	4	2	12	7.6 depth 6.5	30	46	40	56
20	M5×0.8 depth 8	5.5	9	4.5	16	9.3 depth 8	36	55	46	65
25	M5×0.8 depth 8	5.5	9	4.5	20	9.3 depth 9	40	63	50	73
32	M6×1.0 depth 9	6.6	13.5	4.5	24	11 depth 11.5	42	69	52	79

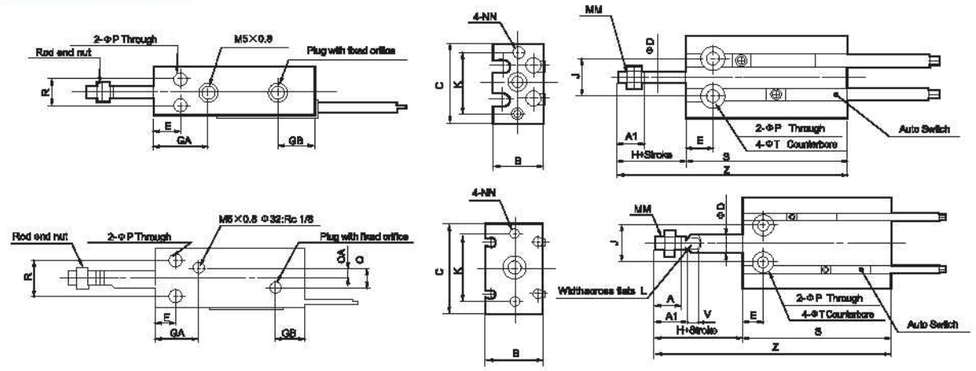
Note)5 (CU16-5D):14.5mm

Note)5 Stroke(CU16-5D):14.5mm

CU Series Free Installation Cylinder

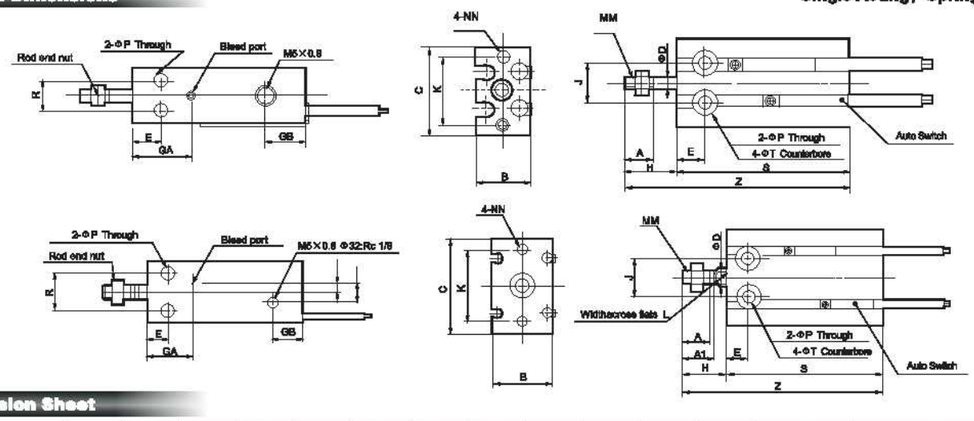
Overall Dimensions

Single Acting, Spring Extend



Overall Dimensions

Single Acting, Spring Return



Dimension Sheet

Bore size(mm)	A	A1	B	C	D	E	GA	GB	H	K	J	L	MM	NN	P
6	7	-	13	22	3	7	15	10	13	17	10	-	M3×0.5	M3×0.5 (depth) 5	3.2
10	10	-	15	24	4	7	16.5	10	16	18	11	-	M4×0.7	M3×0.5 (depth) 5	3.2
16	11	12.5	20	32	6	7	16.5	11.5	16	25	14	5	M5×0.8	M4×0.7 (depth) 6	4.5
20	12	14	26	40	8	9	19	12.5	19	30	16	6	M6×1.0	M5×0.8 (depth) 8	5.5
25	15.5	18	32	50	10	10	21.5	13	23	38	20	8	M8×1.25	M5×0.8 (depth) 8	5.5
32	19.5	22	40	62	12	11	23	12.5	27	48	24	10	M10×1.25	M6×1.0 (depth) 9	6.6

Bore size (mm)	Q	QA	R	T	V (Note)	Without Auto Switch						With Auto Switch					
						S			Z			S			Z		
						5st	10st	15st	5st	10st	15st	5st	10st	15st	5st	10st	15st
6	-	-	7	6 (depth) 4.8	-	38	43	48	56	66	76	38	43	48	56	66	76
10	-	-	9	6 (depth) 5	-	41	46	56	62	72	87	41	46	56	62	72	87
16	4	2	12	7.6 (depth) 6.5	3.5	45	50	60	66	76	91	45	50	60	66	76	91
20	9	4.5	16	9.3 (depth) 8	5	41	46	56	65	75	90	51	56	66	75	85	100
25	9	4.5	20	9.3 (depth) 9	5	45	50	60	73	83	98	55	60	70	83	93	108
32	13.5	4.5	24	11 (depth) 11.5	5	47	52	62	79	89	104	57	62	72	89	99	114

Note) "V" Only for Single Acting,Spring Extend

STM Series Slide Bearing Cylinder

STMB 16×50

STMS 16×125

Ordering Code

STM	—	B	—	16	×	50
Series Code Sliding Type		Mounting type B:Body fixed Type S:Sliding Block Fixed Type		Cylinder Bore 10mm-25mm		Stroke 0~250mm

Specification

Bore(mm)	10	16	20	25
Motion Pattern	Double action			
Working Medium	Air			
Operating Temperature Range	-5~+70℃			
Operating VoltageRange	1.0~9.0kgf/cm²			
Ensured Pressure Resistance	13.5Mpa			
Operating Speed Range	50~200mm/s			
Buffer Type	Shock Absorber			
Lubrication	NO			
Non-rotating Precision	±0.1°		±0.05°	
Port size	M5×0.8			G1/8"

Standard stroke

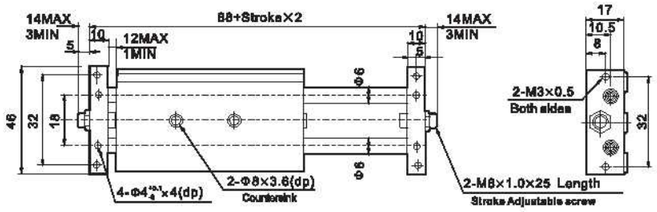
Bore size (mm)	Standard stroke (mm)
10	25 50 75 100
16	25 50 75 100 125 150 175 200
20	25 50 75 100 125 150 175 200 250
25	25 50 75 100 125 150 175 200 250

Theoretical thrust

Bore size	Rod size (mm)	Pressure area (cm²)	Operating pressure(Kgf/mm²)								
			1	2	3	4	5	6	7	8	9
10mm	6	0.50	0.48	0.95	1.43	1.9	2.38	2.85	3.43	3.8	4.28
16mm	8	1.51	1.43	2.87	4.30	5.74	7.17	8.61	10.04	11.48	12.91
20mm	10	2.36	2.24	4.48	6.73	8.97	11.21	13.45	15.69	17.94	20.18
25mm	12	3.78	3.51	7.18	10.77	14.36	17.96	21.55	25.14	28.73	32.32

STM Series Slide Bearing Cylinder

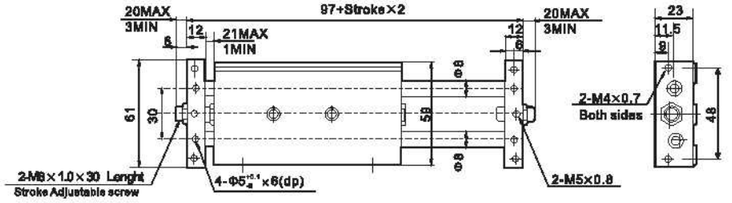
Overall Dimensions



STMB–10

Item/Stroke	25	50	75	100
A	81	106	131	156
B	65	85	85	85
C	35	60	60	60
D	46	71	96	121
E	15	40	40	40

Overall Dimensions



STMB–16

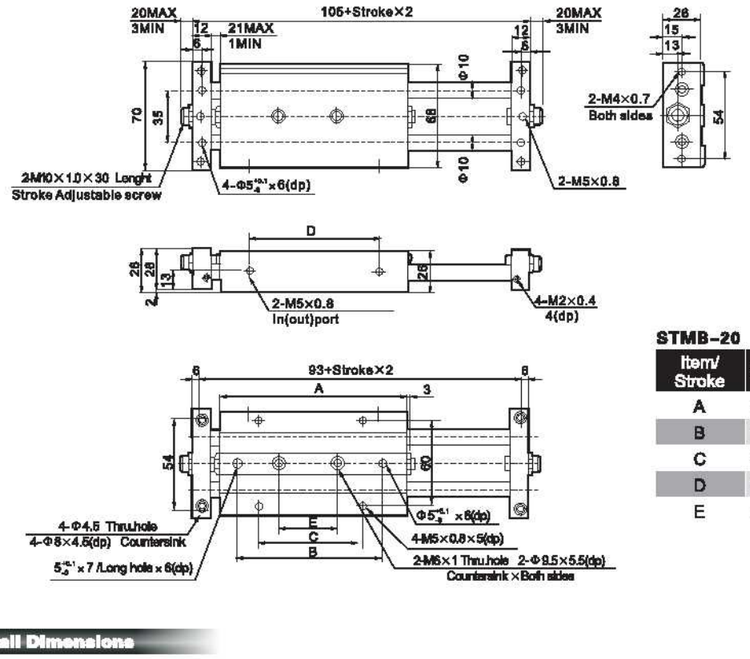
Item/ Stroke	25	50	75	100	125	150	175	200
A	86	111	136	161	186	211	236	261
B	55	70	105	130	150	150	150	150
C	-	-	75	100	120	120	120	120
D	48	73	98	123	148	173	198	223
E	25	50	45	70	90	90	90	90

HAVKON® PNEUMATIC

A

STM Series Slide Bearing Cylinder

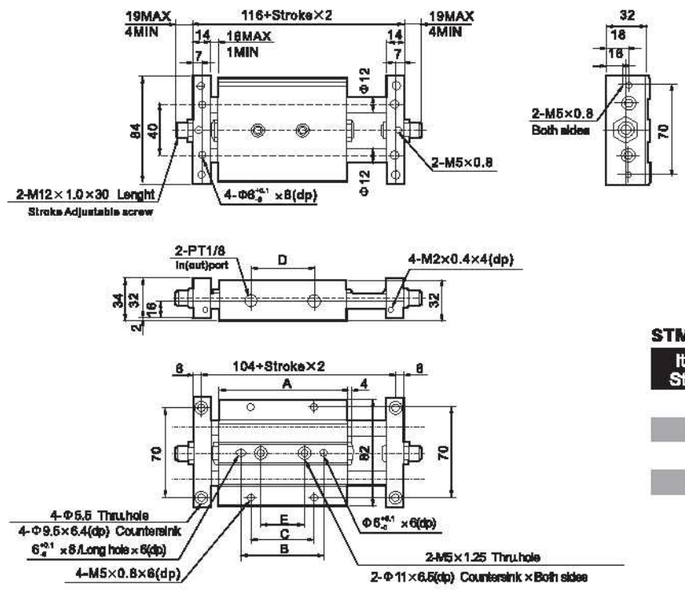
Overall Dimensions



STMB-20

Item/Stroke	25	50	75	100	125	150	175	200	250
A	94	119	144	169	194	219	244	269	319
B	60	85	110	135	150	150	150	150	150
C	50	50	75	100	120	120	120	120	120
D	53	78	103	128	153	178	203	228	278
E	35	45	45	70	90	90	90	90	90

Overall Dimensions



STMB-25

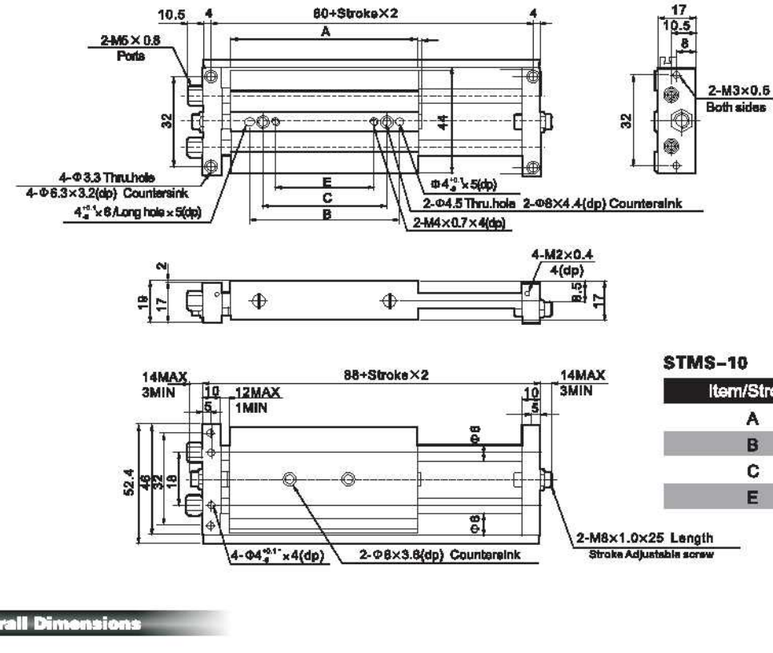
Item/Stroke	25	50	75	100	125	150	175	200	250
A	101	126	151	176	201	226	251	276	326
B	65	90	115	140	140	140	140	140	140
C	50	50	75	100	100	100	100	100	100
D	50	75	100	125	150	175	200	225	175
E	35	45	45	70	95	100	100	100	100

HAVKON® PNEUMATIC

A

STM Series Slide Bearing Cylinder

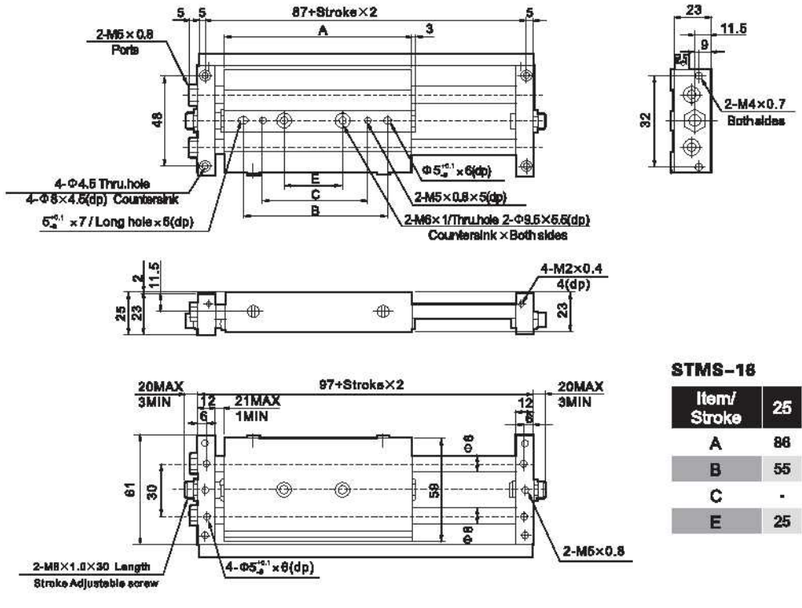
Overall Dimensions



STMS-10

Item/Stroke	25	50	75	100
A	81	106	131	156
B	65	85	85	85
C	35	60	60	121
E	15	40	40	40

Overall Dimensions



STMS-16

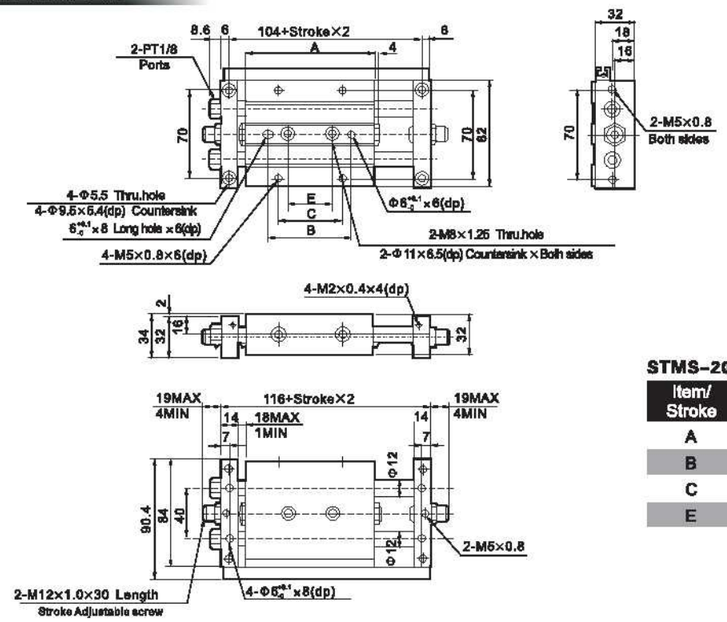
Item/Stroke	25	50	75	100	125	150	175	200
A	86	111	136	161	186	211	236	261
B	55	70	105	130	150	150	150	150
C	-	-	75	100	120	120	120	120
E	25	50	45	70	90	90	90	90

HAVKON® PNEUMATIC

A

STM Series Slide Bearing Cylinder

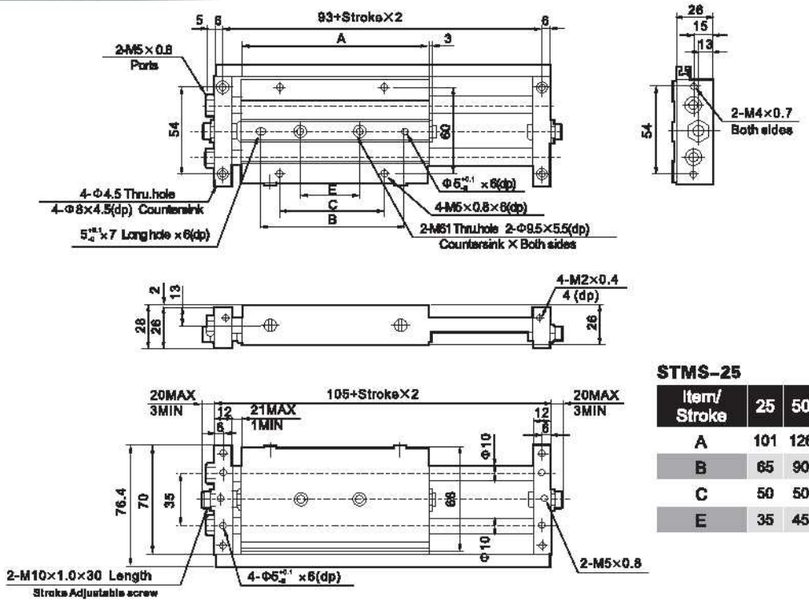
Overall Dimensions



STMS-20

Item/ Stroke	25	50	75	100	125	150	175	200	250
A	94	119	144	169	194	219	244	269	319
B	60	85	110	135	150	150	150	150	150
C	50	50	75	100	120	120	120	120	120
E	35	45	45	70	90	90	90	90	90

Overall Dimensions



STMS-25

Item/ Stroke	25	50	75	100	125	150	175	200	250
A	101	126	151	176	201	226	251	276	326
B	65	90	115	140	140	140	140	140	140
C	50	50	75	100	100	100	100	100	100
E	35	45	45	70	95	100	100	100	100

HAVKON® PNEUMATIC

A

MGP Series Three-Shaft Cylinder

MGPM 20×30

MGPM 25×50

Ordering Code

MGP — M — 25 × 40

- **MGP** — Series Code: MGP:Attach magnet Type
- **M** — Type of Bearing: M:Slide Bearing, L:Ball Guide Bearing
- **25** — Cylinder Bore: 12mm-100mm
- **40** — Stroke: 10~200mm

Specification

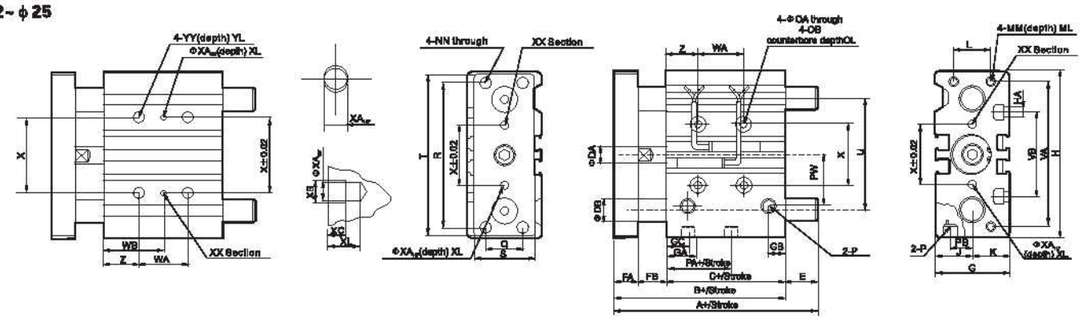
Bore(mm)		12	16	20	25	32	40	50	63	80	100
Working Medium		Air									
Motion Pattern		Double-action									
Ensured Pressure Resistance		1.5Mpa(15.3kgf/cm²)									
Max.Operating pressure		1.0Mpa(10.2kgf/cm²)									
Min. Operating pressure		0.12Mpa(1.2kgf/cm²)									
Ambient and Medium Temperature		-10~+60℃									
Piston Speed		50~500mm/s									50~400mm/s
Buffer		Rubber Cushion									
Tolerance of Stroke		$^{+1.5}_{0}$ mm									
Bearing		Slide bearing/ball guide bearing									
Precision of Piston rod Non-rotating	Slide Bearing	±0.06°		±0.07°		±0.06°		±0.05°		±0.04°	
	Ball Guide Bearing	±0.10°		±0.09°		±0.08°		±0.06°		±0.05°	
Port size		M5×0.8		G1/8"				G1/4"		G3/8"	

Standard stroke

Bore size (mm)	Standard stroke (mm)
12,16	10,20,30,40,50,75,100,125,150,175,200,250
20,25	20,30,40,50,75,100,125,150,175,200,250,300,350,400
32 to 100	25,50,75,100,125,150,175,200,250,300,350,400

Overall Dimensions

ϕ12~ϕ25



MGPM、MGPL Common Dimensions Sheet

Bore size	Standard stroke (mm)	B	C	DA	FA	FB	G	GA	GB	H	HA	J	K	L	MM	ML	NN	OA
12	10,20,30,40, 50,75,100	42	29	6	8	5	26	11	7.5	58	M4	13	13	18	M4×0.7	10	M4×0.7	4.3
16		46	33	8	8	5	30	11	8	64	M4	15	15	22	M5×0.8	12	M5×0.8	4.3
20	20,30,40,50, 75, 100,125,150,175,200	53	37	10	10	6	36	10.5	8.5	83	M5	18	18	24	M5×0.8	13	M5×0.8	5.6
25		53.5	37.5	12	10	6	42	11.5	9	93	M5	21	21	30	M6×1.0	15	M6×1.0	5.6

Bore size	Standard stroke (mm)	OB	OL	P	PA	PB	PW	Q	R	S	T	U	VA	VB	X	XA	XB	XC	YL	Z
12	10,20,30,40, 50,75,100	8	4.5	M5×0.8	13	8	18	14	48	22	56	41	50	37	23	3	3.5	3	10	5
16		8	4.5	M5×0.8	15	10	19	16	54	25	62	46	56	38	24	3	3.5	3	10	5
20	20,30,40,50, 75, 100,125,150,175,200	9.5	5.5	RC1/8	12.5	10.5	25	18	70	30	81	54	72	44	28	3	3.5	3	12	17
25		9.5	5.5	RC1/8	12.5	13.5	28.5	26	78	38	91	64	82	50	34	4	4.5	3	12	17

Bore size	Standard stroke (mm)	WA			WB			XL	YY
		30 st or less	Over 40 st to 100 st	125 st or less	30 st or less	Over 40 st to 100 st	125 st or less		
12	10,20,30,40, 50,75,100	20	40	-	15	25	-	6	M5×0.8
16		24	44	-	17	27	-	6	M5×0.8
20	20,30,40,50, 75, 100,125,150,175,200	24	44	120	29	39	77	6	M6×1.0
25		24	44	120	29	39	77	6	M6×1.0

MGPG Slide bearing

Bore size	A			DB	E		
	50st≥	50st< 100st≥	100st<		50st≥	50st< 100st≥	100st<
12	42	60.5	85	8	0	18.5	43
16	46	64.5	85	10	0	18.5	49

MGPL Ball bushing bearing

Bore size	A			DB	E		
	30st≥	30st< 100st≥	100st<		30st≥	30st< 100st≥	100st<
12	43	55	85	6	1	13	43
16	49	65	95	8	3	19	49

MGPM Slide bearing

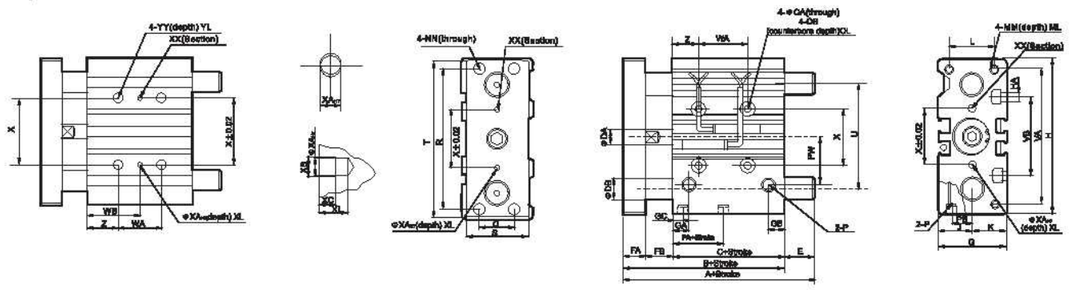
Bore size	A			DB	E		
	50st≥	50st< 200st≥	200st<		50st≥	50st< 200st≥	200st<
20	53	84.5	122	16	0	31.5	69
25	53.5	85	122	20	0	31.5	68.5

MGPL Ball bushing bearing

Bore size	A				DB	E			
	30st≥	30st< 100st≥	100st< 200st≥	200st<		30st≥	30st< 100st≥	100st< 200st≥	200st<
20	63	80	104	122	10	10	27	51	69
25	69.5	80.5	104.5	122	13	16	32	51	68.5

Overall Dimensions

ϕ32~ϕ63



MGPM、MGPL Common Dimensions Sheet

Bore size	Standard stroke(mm)	B	C	DA	FA	FB	G	GA	GB	GC	H	HA	J	K	L	MM	ML	NN	OA
32	25,50,70,100, 125,150,175,200	59.5	37.5	16	12	10	48	12.5	9	12.5	112	M6	24	24	34	M8×1.25	20	M8×1.25	6.6
40		66	44	16	12	10	54	14	10	14	120	M6	27	27	40	M8×1.25	20	M8×1.25	6.6
50		72	44	20	16	12	64	14	11	12	148	M8	32	32	46	M10×1.5	22	M10×1.5	8.6
63		77	49	20	16	12	78	16.5	13.5	16.5	162	M10	39	39	58	M10×1.5	22	M10×1.5	8.6

Bore size	Standard stroke(mm)	OB	OL	P	PA	PB	PW	Q	R	S	T	U	VA	VB	X	XA	XB	XC	XL	Z
32	25,50,70,100, 125,150,175,200	11	7.5	RC1/8	7	15	34	30	98	44	110	78	98	63	42	4	4.5	3	6	21
40		11	7.5	RC1/8	13	18	38	30	104	44	118	86	106	72	50	4	4.5	3	6	22
50		14	9	RC1/4	9	21.5	47	40	130	60	148	110	130	92	66	5	6	4	8	24
63		14	9	RC1/4	14	28	55	50	130	70	158	124	142	110	80	5	6	4	8	24

Bore size	Standard stroke(mm)	WA			WB			YY	YL
		25 st	50,75,100 st	100 st or above	25 st	50,75,100 st	100 st or above		
32	25,50,70, 100,125, 150,175,200	24	48	124	33	45	83	M8×1.25	16
40		24	48	124	34	46	84	M8×1.25	16
50		24	48	124	36	48	86	M10×1.5	20
63		28	52	128	38	50	88	M10×1.5	20

MGPM Slide bearing

Bore size	A			DB	E		
	50st≥	50st<200st≥	200st<		50st≥	50st<200st≥	200st<
32	97	102	140	20	37.5	42.5	80.5
40	97	102	140	20	31	36	74
50	106.5	118	161	25	34.5	46	89
63	106.5	118	161	25	29.5	41	84

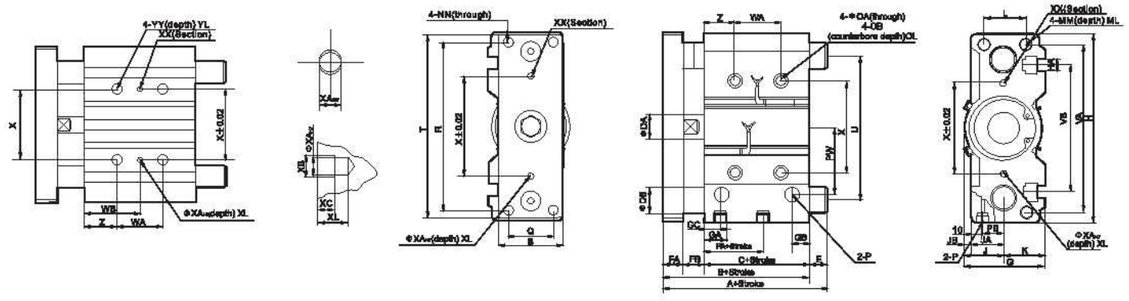
MGPL Ball bushing bearing

Bore size	A				DB	E			
	50st≥	50st<100st≥	100st<200st≥	200st<		50st≥	50st<100st≥	100st<200st≥	200st<
32	81	98	118	140	16	21.5	38.5	58.5	80
40	81	98	118	140	16	15	32	52	74
50	93	114	134	161	20	21	42	62	89
63	93	114	134	161	20	16	37	57	84

MGP Series Three-Shaft Cylinder

Overall Dimensions

ϕ80~ϕ100



Dimension sheet

Bore size	Standard stroke (mm)	B	C	DA	FA	FB	G	GA	GB	GC	H	HA	J	LA	JB	K	L	MM	ML	NN	QA
80	20,50, 75, 100,125, 150,175,200	95.5	56.5	25	22	18	91.5	19	15.5	14.5	202	M12	45.5	38	7.5	46	54	M12×1.75	30	M12×1.75	10.6
100		116	66	30	25	25	111.5	23	19	18	240	M14	55.5	45	10.5	56	62	M14×2.0	32	M14×2.0	12.5

Bore size	Standard stroke (mm)	OB	OL	P	PA	PB	PW	Q	R	S	T	U	VA	VB	X	XA	XB	XC	XL	Z
80	20,50, 75, 100,125, 150,175,200	17.5	8	RC3/8	14.5	25.5	74	52	174	75	198	156	180	140	100	6	7	5	10	28
100		20	8	RC3/8	17.5	32.5	89	64	210	90	236	188	210	168	124	8	7	5	10	11

Bore size	Standard stroke (mm)	WA			WB			YY	YL
		25 st	50,75,100 st	100 st or above	25 st	50,75,100 st	100 st or above		
80	20,50, 75, 100,125, 150,175,200	28	52	128	42	54	92	M12×1.75	24
100		48	72	148	35	47	85	M14×2.0	28

MGPM Slide bearing

Bore size	A			DB	E		
	50st≥	50st<200st≥	200st<		50st≥	50st<200st≥	200st<
80	115	142	193	30	18.5	45.5	96.5
100	137	162	203	36	21	46	87

MGPL Ball bushing bearing

Bore size	A				DB	E			
	50st≥	25st<50st≥	50st<200st≥	200st<		50st≥	25st<50st≥	50st<200st≥	200st<
80	109.5	130	160	193	25	13	33.5	63.5	96.5
100	121	147	180	203	30	5	31	64	87

RSQ Series Stopper Cylinder(Fixed Mounting height)

Ordering Code

RSQ — B — 20 × 15 — D — R

Series Code
RSQ:Basic Type
RSDQ:Magnet Within Type

Installation
B:hole
A:Internal thread both ends

Cylinder Bore
12mm
16mm
20mm
32mm
40mm
50mm

Stroke

Action
D:Double action
S:Single action (with spring return)
T:Single action (with spring extent)

Rod end Type
Blank:Round bar type(Φ20-Φ50)
K:Chamfered Type(Φ20-Φ50)
R:Roller type(Φ20-Φ50)
L:Level type with shock absorber(Φ32-Φ50)
B:Level type with adjustable shock absorber (Φ32-Φ50)
C:Level type with adjustable shock absorber, with cancel cap(Φ32-Φ50)
D:Level type with adjustable shock absorber, with lock menchanism(Φ32-Φ50)
E:Level type with adjustable shock absorber, with cancel cap & lock(Φ32-Φ50)

Specification

Bore(mm)	12	16	20	32	40	50
Motion Pattern	Double acting,Double acting with spring loaded,Single acting(Spring extend)					
Fluid	Air					
Ensured Pressure Resistance	1.5Mpa(15.3kgf/cm²)					
Max.pressure	1.0Mpa(10.2kgf/cm²)					
Ambient and fluid temperature	-10~+70℃ With auto switch:No freezing +60℃					
Buffering	Rubber bumper					
Tolerance of stroke	+1.4 (mm) 0					
*Lubrication	Not required					
Mounting	Through-hole,Both ends tapped common					
Port size	M5×0.8	RC(PT1/8)				

Model

Bore size (mm)		12	16	20	32	40	50
Mounting	Through-hole	●*	●	●	●	●	●
	Both ends tapped style		●	●	●	●	●
Built-in magnet		●	●	●	●	●	●
Piping	Screw-in type	M5×0.8		Rc 1/8			
	Built-in One-touch fitings	-		ϕ6/4			ϕ8/6
Action		Double acting Single acting(Single extend),Double acting with spring loaded					
Rod end configuration	Round bar		●		●		
	Chamfered		●		●		
	Roller type		●		●		
	Lever type		-		●		

*12 tubes can have both through-hole and tap mountings in the same tube.

Standard stroke

Bore size (mm)	Rod end configuration		
	Round bar,Chamfered type	Roller type	Lever type with shock absorber
12	10	10	-
16	10,15	10,15	-
20	10,15,20	10,15,20	-
32			10,15,20
40	20,25,30	20,25,30	20,25,30
50			

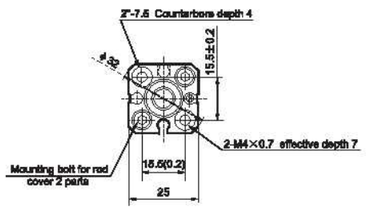
RSQ Series Stopper Cylinder(Fixed Mounting height)

Overall Dimensions

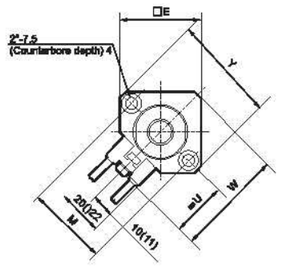
Basic style:Through-hole mounting,Screw mounting

These 5 figures show the piston rod extended.

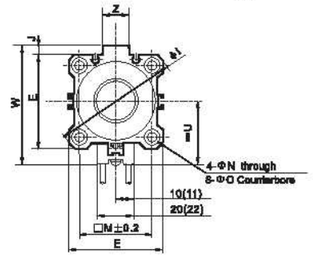
Bore size: ϕ12 RS□QB12-10□



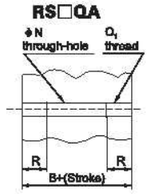
Bore size: ϕ16, ϕ20 RS□QB $\frac{16}{20}$□-□□



Bore size: ϕ32, ϕ40, ϕ50 RS□QB $\frac{32}{40}$-□-□□

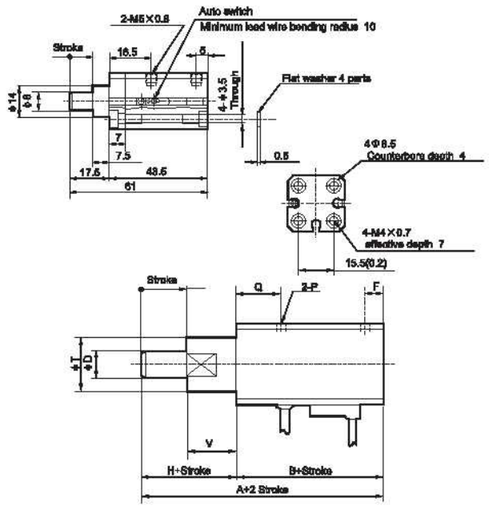


RS□QA



Screw mounting style:Both ends tapped style (mm)

Modle	B	N	Q1	R
RS□QA16	41.5	3.5	M4×0.7	7
RS□QA20	45	5.5	M6×1	10
RS□QA32	48	5.5	M6×1	10
RS□QA40	52.5	5.5	M6×1	10
RS□QA50	54	6.6	M8×1.25	14



Dimension Sheet

Bore size (mm)	A	B	D	E	F	G	H	I		M	N	O Counerbore	P	Q	T	U	V	W	Y	Z
16	59.5	41.5	10	29	6	3	18	-	-	28	3.5	6.5 depth 4	M5×0.8	17	20	22.5	18	41.5	38	-
20	67	45	12	36	8	4	22	-	-	36	5.5	9 depth 7	Rc 1/8	20	24	24.5	22	48	47	-
32	68	48	20	45	7.5	8	20	60	4.5	34	5.5	9 depth 7	Rc 1/8	20	36	31.5	20	58.5	-	14
40	80.5	52.5	25	52	8	10	28	69	5	40	5.5	9 depth 7	Rc 1/8	24.5	44	35	28	66	-	14
50	82	54	25	64	8	10	28	86	7	50	6.6	11 depth 8	Rc 1/8	24.5	56	41	28	80	-	19

Note1)Dimensions without auto switch are the same as drawing above.
Note2)These figures show the dimensions when equipped with D-A 73 or D-A 80 auto switches.
Note3)These figures show the piston rod extened.

XCK Series Clamping Cylinder

Welding equipment for automative use
1. Disassemble
2. Light weight and Compact
3. No Lubrication
4. Build-in speed control
5. No need dust cover
6. Can be used for welding equipment which used to generate the electromgnetice

			Model		A
Width of earring	16.5mm	XMN Series	XCK63	XCK50	16.5
	19.5mm	XMNB Series	XCK63-B	XCK50-B	19.5

Ordering Code

XCK — 50 × 100 — S — B

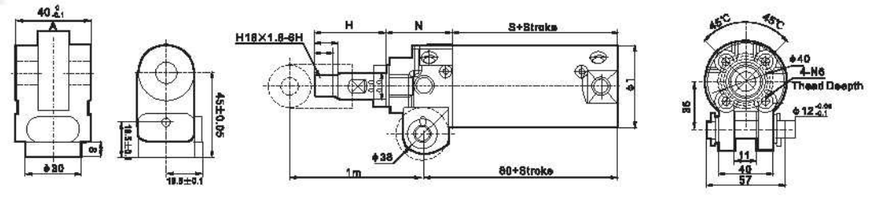
- XCK: Series Code
- 50: Cylinder Bore
- 100: Stroke 50mm-63mm
- S: Magnet Code Blank:No Magnet S:Magnet inside
- B: Width of earring Blank:16.5mm B:19.5mm

Specification

Bore(mm)	40	50	63
Working Medium	Air		
Ensured Pressure Resistance	1.5Mpa(15kgf/cm²)		
Max.Working pressure	1.0Mpa(10kgf/cm²)		
Min.Working pressure	0.1Mpa(1kgf/cm²)		
Temperature Range	-5~60℃		
Piston Speed	50~500mm/s		
Air Buffer	Yes		
Lubrication	No Need		
Thread Tolerance	6H		
Stroke Tolerance	$^{+1.5}_{0}$ (mm)		
Speed Controller	Yes		
Mounting Type	Double Ear Ring		
Rc(PT)Port size	G1/4"		

Overall Dimensions

ϕ50~ϕ63



Bore size (mm)	H	ϕ1	L	N	S
50	52	58	97	49	58
63	52	72	97	49	58

N Type(Standard)

Code		H					L				
Stroke(mm)		50	75	100	125	150	50	75	100	125	150
Bore (mm)	50	52	62	70	83	83	97	107	115	128	128
	63	52	62	70	83	83	97	107	115	128	128

HAVKON® PNEUMATIC

MSQ Series Rotary Table,Rack & Pinion Cylinder

MSQB 20-A

MSQB 30-A

Ordering Code

MSQ — B × 10 — A — S

- MSQ: Series Code
- B: Basic Type
- 10: Size Code 10mm~200mm
- A: A:With Adjustable Angle Screw R:With Shock Absorber
- S: Always with magnet

Specification

Bore(mm)		10	20	30	50	70	100	200
Fluid		Air(non-lube)						
Max.pressure	With adjustment bolt	1Mpa(10.2kgf/cm²)						
	R:With Shock Absorber	0.6 MPa (6.1kgf/cm²)注/Note						
Min.pressure	Basic type	0.1 Mpa(1.0kgf/cm²)						
	High precision type	0.2 Mpa		0.1 Mpa		-		
Ambient and fluid temperature		0~60℃(No freezing)						
Cushion	With adjustment bolt	Rubber bumper						
	R:With Shock Absorber	Shock absorber						
Angle adjustment range		0~190℃						
Maximum rotation		190℃						
Piston bore		ϕ15	ϕ18	ϕ21	ϕ25	ϕ28	ϕ32	ϕ40
Port size	End ports	M5×0.8		RC1/8"				
	Side ports	M5×0.8						

■ Note:The maximum operating pressure of the actuator is restricted by the maximun allowable thrust of the shock absorber.

Allowable Kinectic Energy and Rotation Time Adjustment Range

Size	Allowable kinectic energy(mJ)		Rotation time adjiustment range for stable operation (s/90°)	
	With adjustment bolt	With internal shock absotber	With adjustment bolt	With internal shock absotber(Note)
10mm	7	39	0.2 to 1.0	0.2 to 0.7
20mm	25	116		
30mm	48	116		
50mm	81	294		
70mm	240	1100	0.2 to 1.5	0.2 to 1.0
100mm	320	1600	0.2 to 2.0	
200mm	560	2900	0.2 to 2.5	

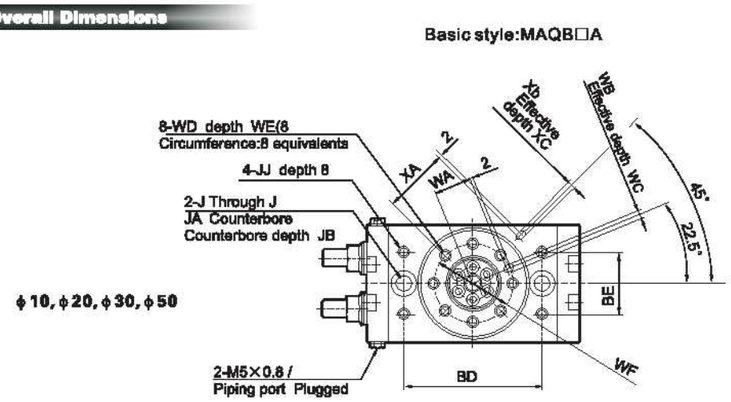
■ Note:Be careful if a type with internal absorber is used below the minimum speed,the energy absorption ability will decrease drastiacally.

HAVKON® PNEUMATIC

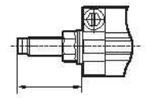
MSQ Series Rotary Table,Rack & Pinion Cylinder

Overall Dimensions

Basic style:MAQB□A

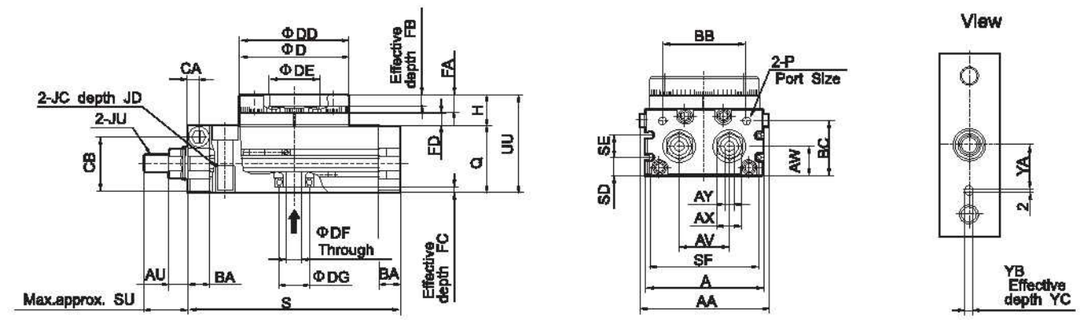


ϕ10, ϕ20, ϕ30, ϕ50



Bore Size (mm)	FU
10	31.5
20	34.7
30	34.7
50	51.7

With internal shock absorber MAQB□R



Dimension Sheet

Bore size(mm)	AA	A	AU	AV	AW	AX	AY	BA	BB	BC	BD	BE	CA	CB	D	DD	DE	DF
10	55.4	50	8.6	20	15.5	12	4	9.5	34.5	27.8	60	27	4.5	28.5	46h9	46h9	20H9	5
20	70.8	65	10.6	27.5	16	14	5	12	46	30	67	34	6	30.5	60h9	61h9	28H9	9
30	75.4	70	10.6	28	18.5	14	5	12	50	32	84	37	6.5	33.5	65h9	67h9	32H9	9
50	85.4	80	14	38	22	19	6	15.5	63	37.5	100	50	10	37.5	75h9	77h9	35H9	10

Bore size(mm)	DG	FA	FB	FC	FD	H	J	JA	JB	JC	JD	JJ	JU	P
10	15H9	8	4	3	4.5	13	6.8	11	6.6	M6×1.25	12	M5×0.8	M6×1	M5×0.8
20	17H9	10	6	2.5	6.5	17	8.6	14	8.5	M10×1.5	15	M6×1	M10×1	M5×0.8
30	22H9	10	4.5	3	6.5	17	8.6	14	8.5	M10×1.5	15	M6×1	M10×1	Rc 1/8
50	26H9	12	5	3	7.5	20	10.5	18	10.5	M12×1.75	18	M8×1.25	M14×1.5	Rc 1/8

Bore size(mm)	Q	S	SD	SE	SF	SU	UU	WA	WB	WC	WD	WE	WF	XA	XB	XC	YA	YB	YC
10	34	92	9	13	45	17.7	47	15	3H9	3.5	M5×0.8	8	32	27	3H9	3.5	19	3H9	3.5
20	37	117	10	12	60	25	54	20.5	4H9	4.5	M6×1	10	43	36	4H9	4.5	24	4H9	4.5
30	40	127	11.5	14	65	25	57	23	4H9	4.5	M6×1	10	48	39	4H9	4.5	28	4H9	4.5
50	48	152	14.5	15	75	31.4	66	26.5	5H9	5.5	M8×1.25	12	55	45	5H9	5.5	33	5H9	5.5

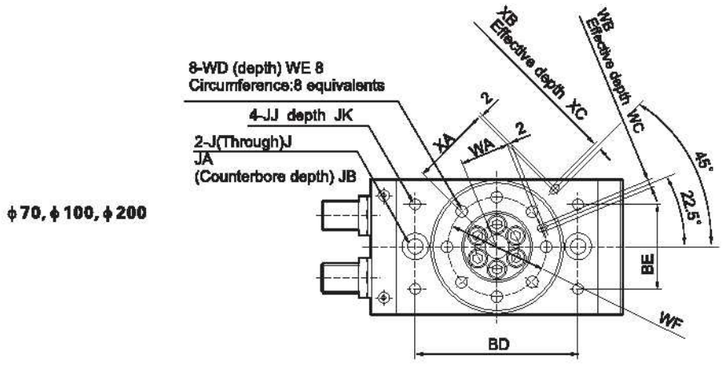
HAVKON® PNEUMATIC

A

MSQ Series Rotary Table,Rack & Pinion Cylinder

Overall Dimensions

Basic style:MAQB□A

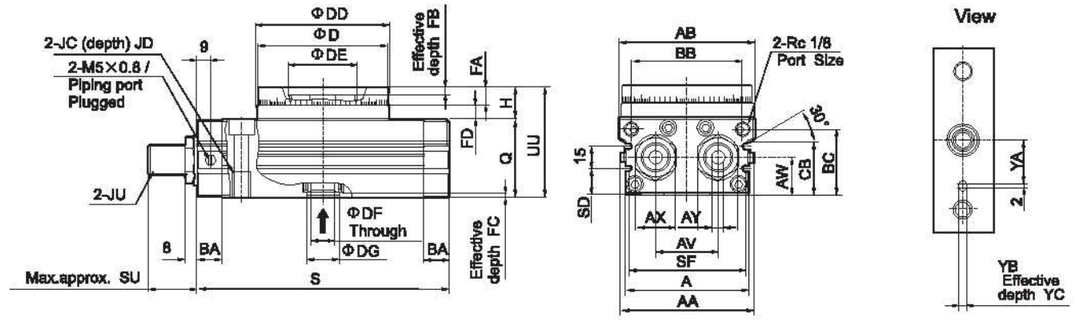


ϕ70, ϕ100, ϕ200

Max.approx. FU

Bore Size (mm)	FU
70	55.4
100	55.5
200	74.7

With shock absorber MAQB□R



Dimension Sheet

Bore size(mm)	AA	AB	A	AV	AW	AX	AY	BA	BB	BC	BD	BE	CB	D	DD	DE
70	90	92	84	42	25.5	27	8	17	75	44.5	110	57	36	88h9	90h9	46H9
100	101	102	95	50	29.5	27	8	17	85	50.5	130	66	42	98h9	100h9	56H9
200	119	120	113	60	36.5	36	10	24	103	65.5	150	80	57	116h9	118h9	64H9

Bore size(mm)	DF	DG	FA	FB	FC	FD	H	J	JA	JB	JC	JD	JJ	JK	JU
70	16	22H9	12.5	5	3.5	6	22	10.4	17.5	10.5	M12×1.75	18	M8×1.25	10	M20×1.5
100	19	24H9	14.5	6	3.5	12	27	10.4	17.5	10.5	M12×1.75	18	M8×1.25	10	M20×1.5
200	24	32H9	16.5	9	5.5	15	32	14.2	20	12.5	M16×2	25	M12×1.75	13	M27×1.5

Bore size(mm)	Q	S	SD	SF	SU	UU	WA	WB	WC	WD	WE	WF	XA	XB	XC	YA	YB	YC
70	53	170	18	79	34.2	75	32.5	5H9	5.5	M8×1.25	12.5	67	54	5H9	3.5	39	5H9	3.5
100	59	189	22	90	34.3	86	37.5	6H9	6.5	M10×1.55	14.5	77	59	6H9	4.5	49	6H9	4.5
200	74	240	29	108	40.2	106	44	8H9	8.5	M12×1.75	16.5	90	69	8H9	4.5	54	8H9	6.5

HAVKON® PNEUMATIC

A

XHZ2/XHC2 Series Style Pneumatic Gripper

Ordering Code

XHZ — 2 × 32 — D — □

Model	Finger Quantity	Bore	Acting Type	Dusty Seal Material
XHZ:XHZ Parrallel Type Gripper XHC:XHC Point Type Gripper	2PCS	6mm-40mm	D:Double-acting S:Single-acting(Normally open) C:Single-acting(Normally closed)	Blank:CR F:FKM S:Si

Specification

Bore(mm)		6	10	16	20	25	32	40
Fluid		Air						
Motion Pattern		Double-acting,single acting(Normally open/Normally closed)						
Max.pressure MPa		0.7MPa						
Max.pressure Mpa	Double Acting	0.15	0.2	0.1				
	Single Acting	0.3	0.35	0.25				
Ambient and fluid temperature		-10~60℃						
Max.operating frequency		180 c.p.m					60 c.p.m	
Repeatability Precision(mm)		±0.01					±0.02	
*Lubrication		Not required						
Port Size		M3×0.5		M3×0.8				

XHL2 Series Parallel style wide Opening Air Gripper

Ordering Code

XHL — 2 × 16 — D □ — S

Model	Finger Quantity	Bore	Action	Finger Open/Close Stroke	Always with magnet
XHL:XHL wide Opening Air Gripper	2PCS	10mm-40mm	D:Double-Acting		

Bore	Φ10	Φ16	Φ20	Φ25	Φ32	Φ40
Blank	20	30	40	50	70	100
1	40	60	80	100	120	160
2	60	80	100	120	160	200

Specification

Bore(mm)	10	16	20	25	32	40
Fluid	Air					
Motion Pattern	Double-Acting					
Max.pressure Mpa(kgf/cn²)	0.6(6.1)					
Max.pressure Mpa(kgf/cn²)	0.15(1.5)	0.1(1.0)				
Ambient and fluid temperature	-10~60℃					
Repeatability Precision(mm)	±0.1mm					
Effective gripping force (N) at 0.5 Mpa	14	45	74	131	228	396
Port Size	M5×0.8				G1/8"	

HAVKON® PNEUMATIC

A

XHT2 Series Angle Style Air Gripper Toggle Type

Ordering Code

XHT	—	2	×	32	—	D	—	S
Model XHT:XHT ToggleType Air Gripper		**Finger Quantity** 2PCS		**Cylinder Diameter** 32mm-63mm		**Action** D:Double-Acting		**Always with magnet**

Specification

Model	MHT2-32D	MHT2-40D	MHT2-50D	MHT2-63D
Bore size	32	40	50	63
Motion Pattern	Double acting			
Fluid	Air			
Operating Voltage Range	0.1~0.6 MPa			
Ambient and fluid temperature	5~60℃			
Lubrication	Not required			
Finger opening angle (Total)	-3° ~28°	-3° ~27°	-2° ~23°	-2° ~23°
Weight (kg)	0.80	1.09	1.93	2.8
Mffective gripping force (N.m) at 0.5 Mpa	12.4	36.0	63.0	106

CY1 Series Rodless Cylinder

Ordering Code

CY1	—	B	—	25	×	50	—	B
Series Code Rodless Cylinder		**Model** B:Normal Type S:Sliding Type L:Sliding Type Ball guide bearing Type R:Magnetically Coupled-Direct Mout type RG:Magnetically Coupled-Direct mout-Single Joint Type		**Cylinder Bore** 6mm 10mm 15mm 20mm 25mm 32mm 40mm 50mm 63mm		**Stroke** 0~1000mm		**Magnet Code** Blank:Without magne B:Attach magnet

Specification

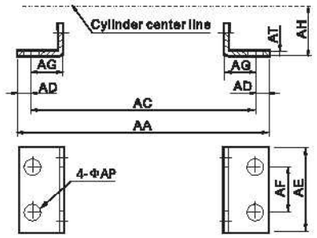
Bore(mm)	6	10	15	20	25	32	40	50	63
Working Medium	Air								
Motion Pattern	Double action								
Ensured Pressure Resistance	10.5kgf/cm²(1.05Mpa)								
Max.pressure	7.1kgf/cm²(0.7Mpa)								
Min.pressure	1.8kgf/cm²(0.18Mpa)								
Ambient and fluid temperature	Cy1 B/S:5~+60℃ Cy1 L:-10~+60℃ Cy1 R:-10~+60℃								
Piston Speed	Cy1 B/S:50~400mm/s Cy1 L:50~1000mm/s Cy1 R:50~500mm/s								
Buffering	Cy1 B/S:Both ends buffer Cy1 L: Shock absorber/Rubber bumper								
Margin of Stroke Error(mm)	~0~250$^{+1.0}_{\ 0}$ 251~1000$^{+1.4}_{\ 0}$ 1001~1500$^{+1.8}_{\ 0}$								
**Lubrication	Not required								
Port size	M5×0.8			G1/8"				G1/4"	

HAVKON® PNEUMATIC

Cylinder Accessories

Cylinder accessories include the mounting parts to fix the air cylinder, made by aluminum or steel. They are available for Standard Cylinders and Mini Cylinders. Magnetism Switch are used as sensor which connected with PLC, to recognize the position of piston inside of air cylinder.

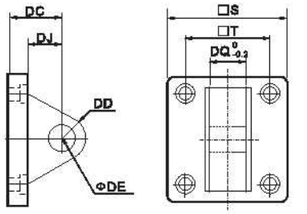
ISO 6431 Standard Cylinder Accessories



ISO-LB Type Foot Bracket

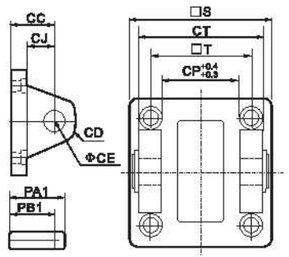
Symbol/Bore	32	40	50	63	80	100	125	160	200
AA	158	179	190	209	248	266	290	340	380
AC	142	161	170	185	210	228	250	300	320
AD	8	9	10	12	19	19	20	20	30
AE	47	53	65	75	95	115	140	180	220
AF	32	36	45	50	63	75	90	115	135
AG	24	28	32	32	41	45	45	60	70
AH	32	36	45	50	63	71	90	115	135
AP	7	9	9	9	12	14.5	16.5	18.5	24
AT	3	3	3	3	4	4	6	6	9

Single Earring



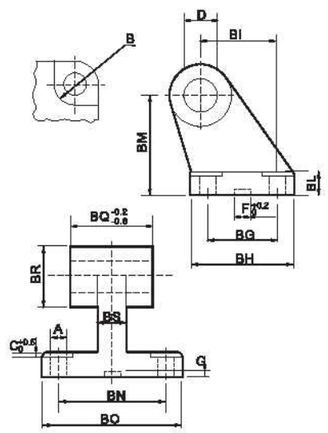
Symbol/Bore	32	40	50	63	80	100	125	160	200
S	47	53	65	75	95	115	140	180	220
T	32.5	38	46.5	56.5	72	89	110	140	175
DC	22	25	27	32	38	41	50	55	60
DD	9	12	12	15	15	20	25	30	30
DE	10	12	12	16	16	20	25	30	30
DJ	13	16	17	22	22	27	33	35.5	36
DQ	25.8	27.8	31.7	39.7	49.7	59.7	69.7	89.7	89.7

Double Earring



Symbol/Bore	32	40	50	63	80	100	125	160	200
CC	22	25	27	32	38	41	50	55	60
CD	9	12	12	15	15	20	25	30	30
CE	10	12	12	16	16	20	25	30	30
CJ	13	16	17	22	22	27	31	35.5	36
CP	26	28	32	40	50	60	70	90	90
CT	45	52	60	70	90	110	130	170	170
PA1	51	59	67	77	97	119	139	181	181
PB1	45.5	52.5	60.5	70.5	90.5	110.5	130.5	170.5	170.5
S	47	53	65	75	95	115	140	180	220
T	32.5	38	46.5	56.5	72	89	110	140	175

ISO-SDB Type

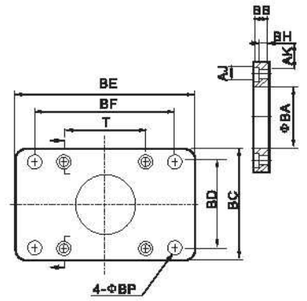


Symbol/Bore	32	40	50	63	80	100	125
A	6.6	6.6	9	9	11	11	14
B	11	11	15	15	18	18	20
BG	18	22	30	35	40	50	60
BH	31	35	45	50	60	70	90
BI	21	24	33	37	47	55	70
BL	8	10	12	14	14	17	20
BM	32	36	45	50	63	71	90
BN	38	41	50	52	66	76	94
BO	51	54	65	67	86	96	124
BS	10	15	16	16	20	20	30
BR	20	22	26	30	30	38	45
C	1.6	1.6	1.6	1.6	2.5	2.5	3.2
D	10	12	12	16	16	20	25
F	10.5	10.5	10.5	10.5	10.5	10.5	10.5
G	3	3	3	3	3	3	3
BQ	26	26	32	40	50	60	70

HAVKON® PNEUMATIC

A

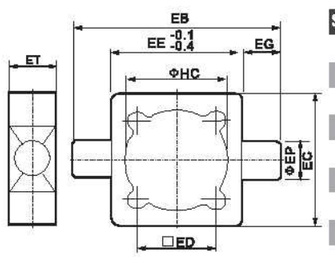
ISO 6431 Standard Cylinder Accessories



ISO-FA/FB Type Flange

Symbol/Bore	32	40	50	63	80	100	125	160	200
AJ	11	11	14	14	17	17	19	25	25
AK	7	7	9	9	11	11	13	17	17
BA	30.5	35.5	40.5	45.5	45.5	55.5	60.5	65.5	75.5
BB	10	10	12	12	16	16	20	20	25
BC	47	53	65	75	95	115	140	180	220
BD	32	36	45	50	63	75	90	115	135
BE	80	90	110	125	154	186	224	280	320
BF	64	72	90	100	126	150	180	230	270
BH	4	4	4	6	6	6	8	8	12
BP	7	9	9	9	12.5	14.5	16.5	18.5	24
T	32.5	38	46.5	56.5	72	89	110	140	175

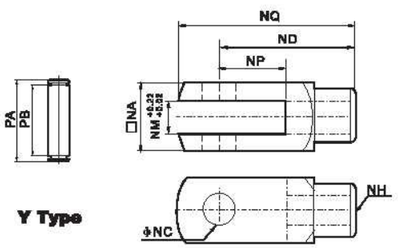
ISO-SI-TC



Symbol/Bore	32	40	50	63	80	100
EB	100	113	125	140	160	182
EC	52	63	74	80	105	128
ED	32.5	38	46.5	56.5	72	89
EE	52	63	75	90	105	128
EG	25	25	25	25	25	25
EP	12	16	16	20	20	25
ET	20	22	22	28	28	34
HC	37	45	55	68	87	107.5

ISO-Y Joint

ISO-Y+Pin **ISO-Y+Clip**



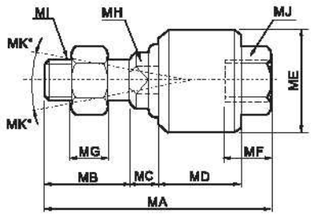
Y Type **I Type**

ISO-I Joint

Symbol/Bore	32	40	50	63	80	100	125	160	200
NA	19	25.4	32	32	44.4	44.4	55	70	70
NC	10	12	16	16	20	20	30	35	35
ND	40	48	64	64	80	80	110	144	144
NE	52	67	89	89	112	112	155	201	201
NF	15	24	32	32	40	40	50	50	55
NG	20	20	23	23	30	30	58	72	72
NH	M10×1.25	M12×1.25	M16×1.5	M16×1.5	M20×1.5	M20×1.5	M27×2.0	M36×2.0	M36×2.0
NM	10	12	16	16	20	20	30	35	35
NP	20	24	32	32	40	40	54	72	72
NQ	52	62	83	83	105	105	148	191	191
PA	26.2	32.8	39.3	39.3	53.3	53.3	64	80	80
PB	20	26.5	33	33	45	45	55.6	70.6	70.6

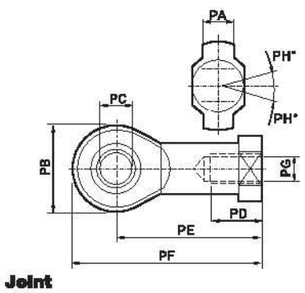
ISO 6431 Standard Cylinder Accessories

ISO-UJ Type Float Joint



Symbol /Bore	MA	MB	MC	MD	ME	MF	MG	MH	MI	MK
32	58	22	7	21	26	11.5	7	10	M10×1.25	12
40	58	22	8	21	28	11.5	8	12	M12×1.25	12
50	90	27	10	41	44.5	20	10	17	M16×1.5	7
63	90	27	10	41	44.5	20	10	17	M16×1.5	7
80	102	29	13	46	53	24	13	22	M20×1.5	10
100	102	29	13	46	53	24	13	22	M20×1.5	10
125	147	54	13	64	62	39	14	30	M27×2.0	9
160	147	43	23	58	88	35	13.5	36	M36×2.0	15
200	147	43	23	58	88	35	13.5	36	M36×2.0	15

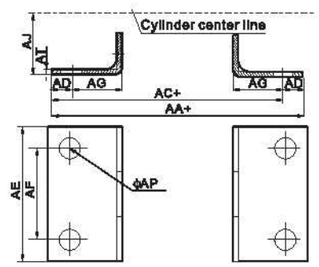
ISO-PHS Type Fish eye Joint



Symbol/Bore	PA	PB	PC	PD	PE	PF	PG	PH
32	11	26	10	21	43	56	M10×1.25	13
40	12	30	12	24	50	65	M12×1.25	13
50	15	38	16	33	64	83	M16×1.5	15
63	15	38	16	33	64	83	M16×1.5	15
80	18	46	20	40	77	100	M20×1.5	15
100	18	46	20	40	77	100	M20×1.5	15
125	37	70	30	51	110	145	M27×2.0	15
160	43	80	35	56	125	165	M36×2.0	16
200	43	80	35	56	125	165	M36×2.0	16

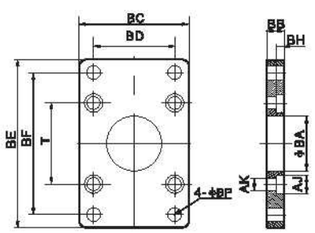
Standard Cylinder Accessories

LB Type Foot Bracket



Symbol/Bore	32	40	50	63	80	100	125	160	200
AA	153	169	173	184	199	210	249	328	380
AC	134	140	149	158	167	174	213	288	320
AD	9.5	14.5	12	13	16	18	18	20	30
AE	50	57	68	80	97	112	140	180	220
AF	33	36	47	56	70	84	90	115	135
AG	20.5	23.5	28	31	30	30	45	60	70
AJ	28	30	36.5	41	49	57	90	115	135
AP	9	12	12	12	14	14	16	18	22
AT	3	3	3	3	4	4	8	8	10

FA/FB Type Flange

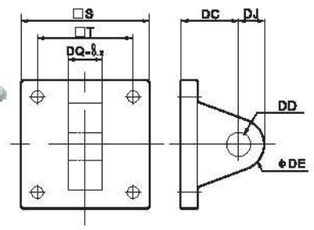


Symbol/Bore	32	40	50	63	80	100	125	160	200
BA	28.3	32.3	38.3	38.3	47.3	47.3	56	63	81
BB	10	10	10	12	16	16	20	25	25
BC	47	52	65	76	95	115	140	180	220
BD	33	36	47	56	70	84	90	115	135
BE	72	84	104	116	143	162	224	280	320
BF	58	70	86	98	119	138	180	230	270
BH	6.5	6.5	6.5	8.5	10.5	10.5	15	20	20
AJ	10.5	10.5	13.5	13.5	5	5	19	25	25
AK	6.5	6.5	6.5	8.5	10.5	10.5	12.5	16.5	16.5
BP	7	7	9	9	11	11	16	18	22
T	33	37	47	56	70	84	110	140	175

HAVKON® PNEUMATIC

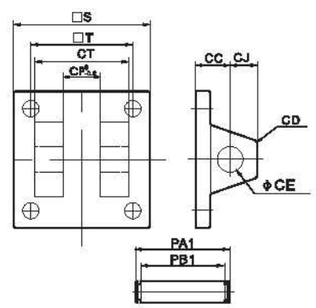
Standard Cylinder Accessories

CA Type Single Earring



Symbol/Bore	32	40	50	63	80	100	125	160	200
S	48	50	62	75	94	112	140	180	220
T	33	37	47	56	70	84	110	140	175
DC	34	34	34	34	48	48	50	55	60
DD	14	14	15	15	20	20	25	30	30
DE	12	14	14	14	20	20	25	30	30
DJ	14	14	15	15	20	20	25	30	30
DQ	16	20	20	20	32	32	70	90	90

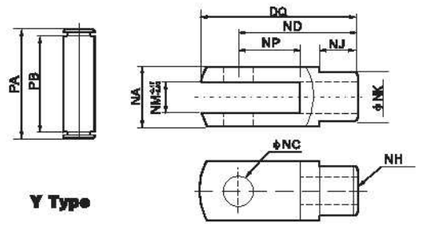
CB +Pin Type Double Earring



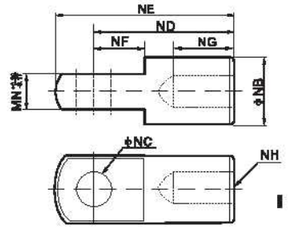
Symbol/Bore	32	40	50	63	80	100	125	160	200
CC	19	19	19	19	32	32	50	55	60
CD	5	5	3	2	8	8	25	30	30
CE	12	14	14	14	20	20	25	30	30
CJ	13	13	15	15	21	21	25	30	30
CP	16	20.5	20.3	20.3	32.3	32.3	70	90	90
CT	32	44	52	52	64	64	120	160	160
PAI	41	51.8	60.3	60.3	73.8	73.8	130	170	170
PBI	33.5	45.8	54	54	65.5	65.5	121.5	161.5	161.5
S	48	50	62	75	94	94	140	180	220
T	33	37	47	56	70	70	110	140	175

■ Note:CA and CB From 32-100,we can supply two kinds of materials products:1.Iron 2. Aluminium .When placing order, please indicate product material. From 125-200 are all Iron.

Y+Pin Type Joint



Y Type



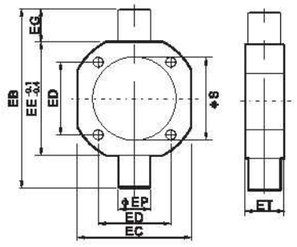
I Type

I Type Joint

Symbol/Bore	32	40	50	63	80	100	125	160	200
NA	19	25.4	32	32	44.4	44.4	55	80	80
NB	20	24	32	32	40	40	45	54	54
NC	10	12	16	16	20	20	25	30	30
ND	40	48	64	64	80	80	110	120	120
NE	52	67	89	89	112	112	155	130	130
NF	15	24	32	32	40	40	40	35	35
NG	20	20	23	23	30	30	56	50	50
NH	M10×1.25	M12×1.25	M16×1.5	M16×1.5	M20×1.5	M20×1.5	M27×2	M36×2	M36×2
NJ	12	20	22	22	30	30	30	40	40
NK	18	23	30	30	38	38	54	54	54
NM	10	12	16	16	20	20	48	40	40
MP	20	24	32	32	40	40	64	35	35
NQ	52	62	83	83	105	105	148	150	150
PA	25	32.8	39.3	39.3	53.3	53.3	64	91	91
PB	19.5	26.5	33	33	45	45	55	81	81

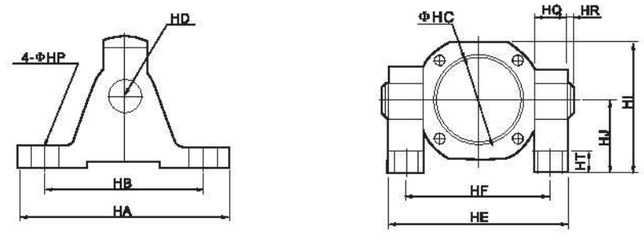
Standard Cylinder Accessories

TC Type



Symbol/Bore	40	50	63	80	100	125	160	200
EB	113	126	138	164	182	210	264	338
EC	63	76	88	114	132	160	200	240
ED	37	47	56	70	84	110	140	175
EE	63	76	88	114	132	160	200	240
EG	25	25	25	25	25	25	32	48
EP	25	25	25	25	25	25	32	37
ET	30	30	30	30	40	30	38	44
S	45.5	55.5	68.5	87.5	107.5	134.5	172.5	212.5

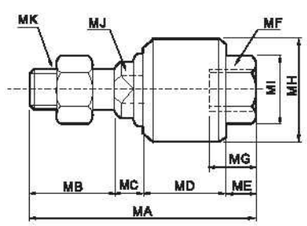
TC-M Type



Symbol/Bore	HA	HB	HC	HD	HE	HF	HI	HJ	HQ	HR	HT	HP
40	110	80	45.5	22	109	86	81.5	50	23	2	12	12
50	110	80	55.5	22	122	99	88	50	23	2	12	12
63	110	80	68.5	22	134	111	94	50	23	2	12	12
80	120	85	87.5	22	160	137	127	70	23	2	14	14
100	120	85	107.5	22	178	155	136	70	23	2	14	14

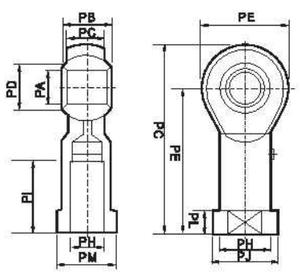
Mini Cylinder Accessories

M-UJ Type



Symbol/Bore	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK
20	51	20	6	17	8	M8×1.25	12	24	13	8	M8×1.25
25	58	22	7	21	8	M10×1.25	12	26	17	10	M10×1.25
32	58	22	7	21	8	M10×1.25	12	26	17	10	M10×1.25
40	58	22	8	21	7	M12×1.25	12	28	19	12	M12×1.25

M-PHS Type

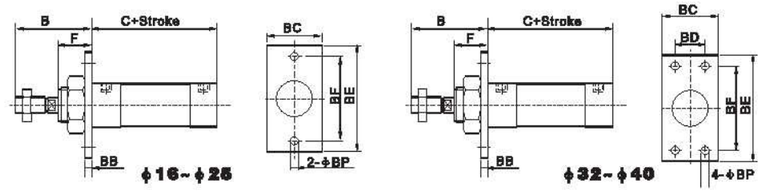


Symbol/Bore	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM
20	8	12	9	10.4	22	36	47	M8×1.25	17	16	12.5	5	14
25	10	14	11	12.9	26	43	56	M10×1.25	21	19	15	6.5	17
32	10	14	11	12.9	26	43	56	M10×1.25	21	19	15	6.5	17
40	12	16	12	15.4	30	50	65	M12×1.25	24	22	17.5	6.5	19

HAVKON® PNEUMATIC

Mini Cylinder Accessories

M-FA Type



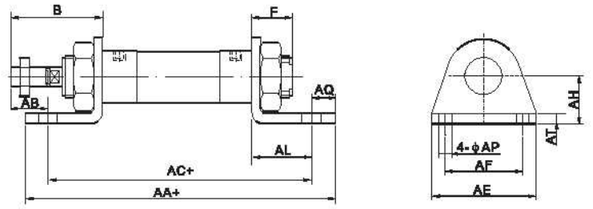
NEW

M-FA-A Type

Symbol / Bore	B	C MA Series	C MAL Series	C(MSA Series) 0-50	C(MSA Series) 51-100	C(MSAL Series) 0-50	C(MSAL Series) 51-100	BB	BC	BD	BE	BF	BP	F
16	38	60	-	60	85	-	-	3	26	-	52	40	5.5	16
20	40	76	70	76	101	70	95	4	38	-	64	50	6.5	12
25	44	76	70	76	101	70	95	4	38	-	64	50	6.5	14
32	44	76	70	76	101	70	95	4	47	33	72	58	6.5	14
40	46	76	92	76	101	92	117	4	50	36	84	70	6.5	14

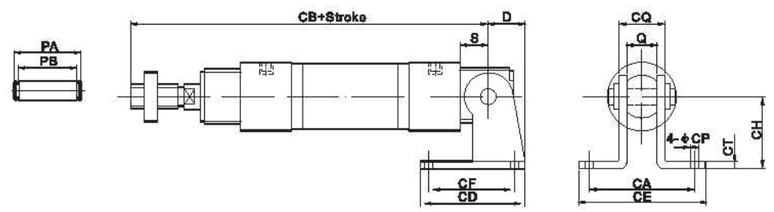
■ Our company can also provide this used for mini cylinder flange, if you need, pls add A after all ordering code, like M-FA-32-A

M-LB Type



Symbol / Bore	B	F	AA (MA Series)	AA (MAL Series)	AA(MSA Series) 0-50	AA(MSA Series) 51-100	AA(MSAL Series) 0-50	AA(MSAL Series) 51-100	AB	AC (MA Series)	AC (MAL Series)	AC(MSA Series) 0-50	AC(MSA Series) 51-100	AC(MSAL Series) 0-50	AC(MSAL Series) 51-100	AE	AF	AL	AQ	AP	AT	AH
16	38	16	98	-	98	123	-	-	25	86	-	86	111	-	-	44	32	13	6	5.5	3	20
20	40	12	122	116	122	147	116	141	25	106	100	106	131	100	125	54	40	15	8	6.5	3	25
25	44	14	122	116	122	147	116	141	29	106	100	106	131	100	125	54	40	15	8	6.5	3	25
32	44	14	142	136	142	167	136	161	19	126	120	126	151	120	145	59	45	25	8	6.5	4	32
40	46	14	142	158	142	167	158	183	21	126	142	126	151	142	167	64	60	25	8	6.5	4.5	36

M-SDB Type



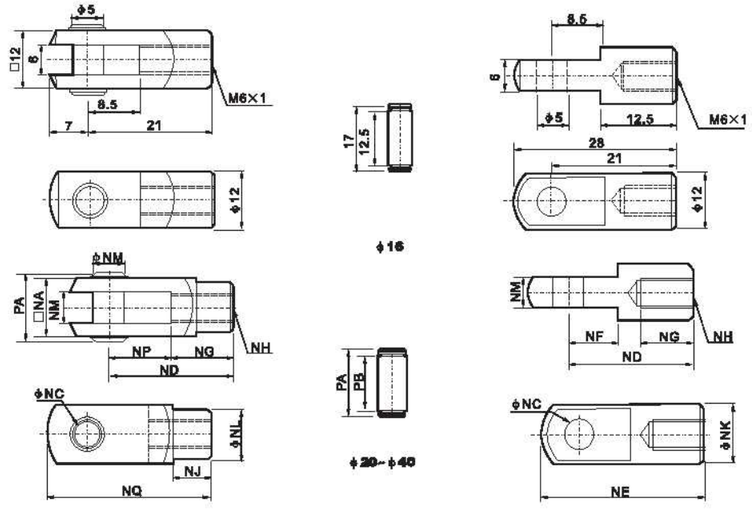
Symbol / Bore	D	S	Q	CA	CB(MA Series)	CB(MAL Series)	CB (MSA Series) 0-50	CB (MSA Series) 51-100	CB (MSAL Series) 0-50	CB (MSAL Series) 51-100	CD	CE	CF	CH	CT	CP	CQ	PA	PB
16	16	9	12	-	107	-	107	132	-	-	23	-	12	20	2.3	5.5	16.5	21	17
20	21	12	16	51	128	122	128	153	122	147	48	67	32	32	3	6.5	22	27	22.5
25	21	12	16	51	132	126	132	157	126	151	48	67	32	32	3	6.5	22	27	22.5
32	27	15	16	51	135	129	135	160	129	154	52	67	36	36	4	6.5	24	30	24.5
40	27	15	20	55	137	153	137	162	153	178	56	71	40	40	4	6.5	28	34	28.5

Mini Cylinder Accessories

M-Y Joint

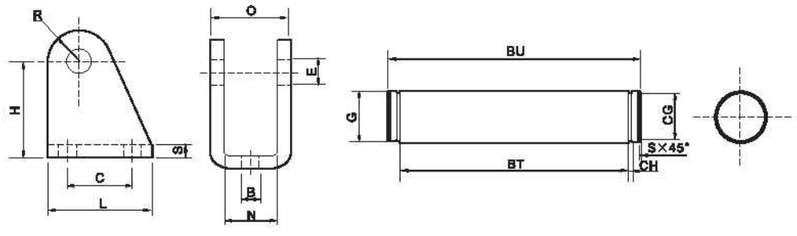
M-Y+Pin **M-Y+Clip**

M-I Joint



Symbol/Bore	NA	NC	ND	NE	NF	NG	NH	NJ	NK	NL	NM	NN	NP	NQ	PA	PB
20	16	8	30	40	11	15	M8×1.25	10	16	14	8	8	15	40	21	16.5
25	19	10	40	52	15	20	M10×1.25	12	20	18	10	10	20	52	25	19.5
32	19	10	40	52	15	20	M10×1.25	12	20	18	10	10	20	52	25	19.5
40	25.4	10	45	57	15	25	M12×1.25	15	24	23	14	10	20	57	31	26

M-U+Pin Joint



Symbol/Bore	B	E	C	H	L	N	O	R	S	G	BT	CG	CH	BU	S
8/10	4.5	4	12.5	24	20	8.1	13	5	2.5	4	14	3.7	0.5	17	0.2
12/16	5.5	6	15	27	25	13	18	7	3	6	19	5.6	0.8	24	0.4
20/25	6.6	8	20	29.5	32	16.1	24	10	4	8	25.2	7.5	0.9	29.5	0.5

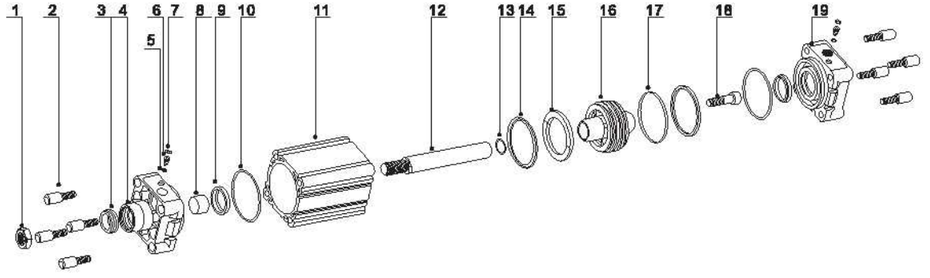
Special cylinder accessories

■ Our company can customize all kinds of non-standard cylinder accessories according to your drawing or sample.

Assembly kits for pneumatic cylinder

DNC Series Cylinder Kits

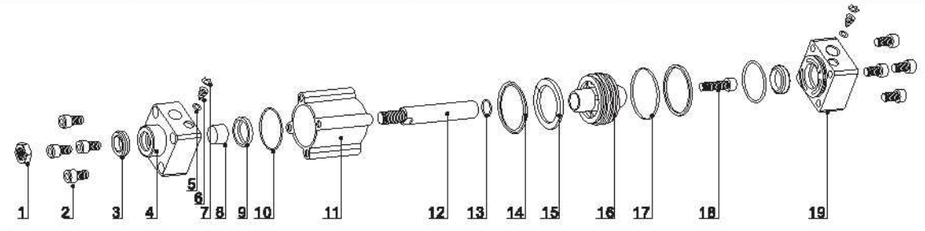
Product	Model/ Specification	Part name	Material	Part name	Material
	DNC Kits (ISO6431&V DMA24562) Bore size: ϕ 32,40, 50,63,80, 100,125	Front cover	Aluminum alloy	Piston seal	NBR
		Back cover	Aluminum alloy	Wear ring	PA66
		Piston	Aluminum alloy	Self lubricating bearing	PTFE+Brass
		Piston rod(Without)	S45C hard chrome carbon steel	Magnet(optional)	RbFeb
		Barrel(Without)	Hard anodized aluminum	Cushion needle	Brass
		Front Cover seal	PUR	Hexagon screw	Carbon steel
		Cushion seal	NBR	Nut	Carbon steel
		Pision rod O-ring	NBR	Profile bolt	Carbon steel
		Cover O-ring	NBR		



NO	Designation	NO	Designation	NO	Designation	NO	Designation	NO	Designation
1	Nut	5	O-ring	9	Cushion seal	13	Rod O-ring	17	Wear ring
2	Profile bolt	6	Adjustable screw	10	Cover O-ring	14	Piston seal	18	Hex Socket Screw
3	Front Cover seal	7	Block slip	11	Barrel(Without)	15	Magnet(optional)	19	Back cover
4	Front cover	8	Self Lubricating bearing	12	Piston rod(Without)	16	Piston		

SI Series Cylinder Kits

Product	Model/ Specification	Part name	Material	Part name	Material
	SI Kits (ISO6431) Bore size: ϕ 32,40,50, 63,80,100,125, 160,200	Front cover	Aluminum alloy	Piston seal	NBR
		Back cover	Aluminum alloy	Wear ring	PA66
		Piston	Aluminum alloy	Self lubricating bearing	PTFE+Brass
		Piston rod(Without)	S45C hard chrome carbon steel	Magnet(optional)	RbFeb
		Barrel(Without)	Hard anodized aluminum	Cushion needle	Brass
		Front Cover seal	NBR	Hexagon screw	Carbon steel
		Cushion seal	NBR	Nut	Carbon steel
		Pision rod O-ring	NBR	Profile bolt	Carbon steel
		Cover O-ring	NBR		



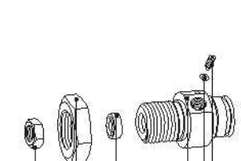
NO	Designation	NO	Designation	NO	Designation	NO	Designation	NO	Designation
1	Nut	5	O-ring	9	Cushion Seal	13	Rod O-ring	17	Wear ring
2	Profile bolt	6	Adjustable screw	10	Cover O-ring	14	Piston seal	18	Hex Socket screw
3	Front Cover seal	7	Block slip	11	Barrel(Without)	15	Magnet(optional)	19	Back cover
4	Front cover	8	Self Lubricating bearing	12	Piston rod(Without)	16	Piston		

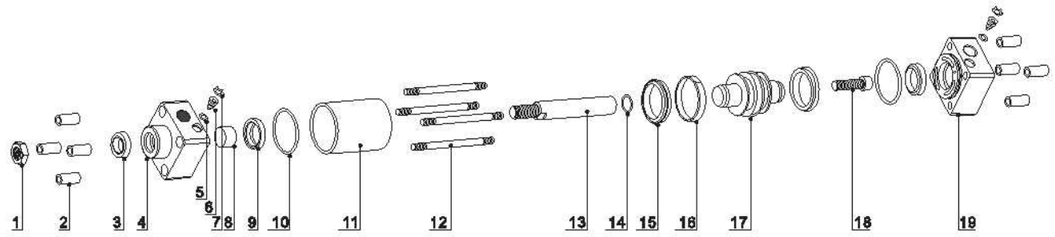
HAVKON® PNEUMATIC

A

Assembly kits for pneumatic cylinder

SC Series Cylinder Kits

Product	Model/ Specification	Part name	Material	Part name	Material
	**SC Kits** Bore size: ϕ32,40,50, 63,80,100,125, 160,200,	Front cover	Aluminum alloy	Piston seal	NBR
		Back cover	Aluminum alloy	Wear ring	PA66
		Piston	Aluminum alloy	Self lubricating bearing	PTFE+Brass
		Piston rod(Without)	S45C hard chrome carbon steel	Magnet(optional)	RbFeb
		Barrel(Without)	Hard anodized aluminum	Cushion needle	Brass
		Front Cover seal	NBR	Hexagon screw	Carbon steel
		Cushion seal	NBR	Nut	Carbon steel
		Piston rod O-ring	NBR	Tie-rod nut	Carbon steel
		Cover O-ring	NBR		



NO	Designation	NO	Designation	NO	Designation	NO	Designation	NO	Designation
1	Nut	5	O-ring	9	Cushion ring	13	Piston rod(Without)	17	Piston
2	Tie-rod nut	6	Adjustable screw	10	Cover O-ring	14	Rod O-ring	18	Hex Socket Screw
3	Front Cover seal	7	Block slip	11	Barrel(Without)	15	Piston seal	19	Back cover
4	Front cover	8	Self Lubricating bearing	12	Tie rod(Without)	16	Wear ring		

MA/MA6432 Series Cylinder Kits

Product	Model/ Specification	Part name	Material	Part name	Material
	**MA Kits** Bore size: ϕ16,20,25,32,40 **MA6432 Kits** (ISO6432) Bore size: ϕ8,10,12, 16,20,25	Front cover	Aluminum alloy	Piston seal	NBR
		Back cover	Aluminum alloy	Wear ring	PA66
		Piston	Aluminum alloy	Self lubricating bearing	PTFE+Brass
		Piston rod(Without)	S45C hard chrome carbon steel	Magnet(optional)	RbFeb
		Barrel(Without)	Stainless Steel	Cushion needle	Brass
		Front Cover seal	NBR	Hexagon screw	Carbon steel
		Cushion seal	NBR	Nut	Carbon steel
		Piston rod O-ring	NBR		
		Cover O-ring	NBR		

NO	Designation	NO	Designation	NO	Designation	NO	Designation	NO	Designation
1	Rod nut	5	O-ring	9	Cover O-ring	13	Piston	17	Back cover
2	Cover Nut	6	Adjustable screw	10	Barrel(Without)	14	Wear ring		
3	Front Cover seal	7	Self Lubricating bearing	11	Piston rod(Without)	15	Magnet(optional)		
4	Front cover	8	Cushion ring	12	Piston seal	16	Hexagon Screw		

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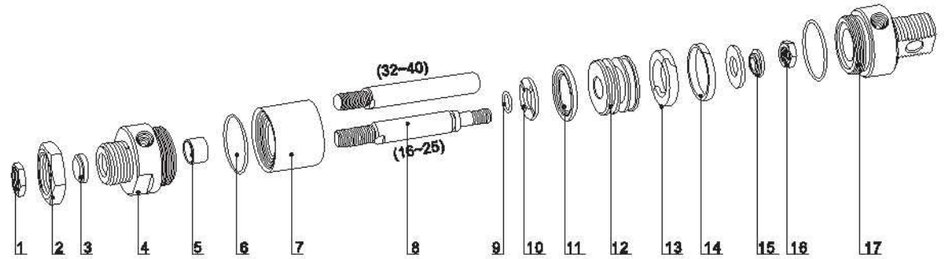
Assembly kits for pneumatic cylinder

MAL Series Cylinder Kits

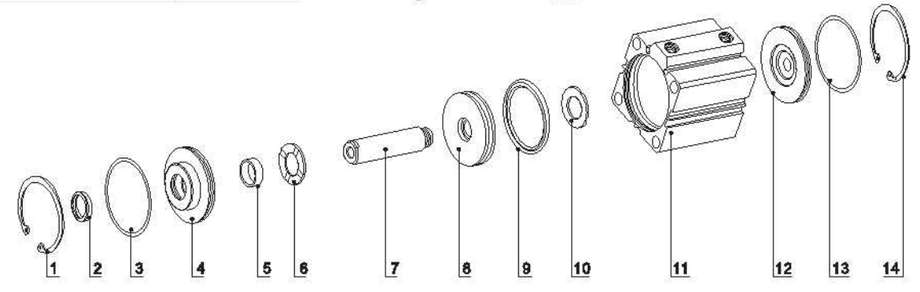
Product	Model/ Specification	Part name	Material	Part name	Material
	**MAL Kits** Bore size: ϕ16,20, 25,32,40	Front cover	Aluminum alloy	Piston seal	NBR
		Back cover	Aluminum alloy	Wear ring	PA66
		Piston	Aluminum alloy	Self lubricating bearing	PTFE+Brass
		Piston rod(Without)	S45C hard chrome carbon steel	Magnet(optional)	RbFeb
		Barrel(Without)	Hard anodized aluminum	Cushion needle	Brass
		Anti-bump cushion	NBR	Hexagon screw	Carbon steel
		Front Cover seal	NBR	Nut	Carbon steel
		Cover O-ring	NBR	Muffler	Cu



NO	Designation	NO	Designation	NO	Designation	NO	Designation	NO	Designation
1	Rod nut	5	Self Lubricating bearing	9	Rod O-ring	13	Magnet(optional)	17	Back cover
2	Cover Nut	6	Cover O-ring	10	Anti-bump cushion	14	Wear ring		
3	Front Cover seal	7	Barrel(Without)	11	Piston seal	15	Impact gasket		
4	Front cover	8	Piston rod(Without)	12	Piston	16	Nut		

SDA Series Cylinder Kits

Product	Model/ Specification	Part name	Material	Part name	Material
	**SDA Kits** Bore size: ϕ12,16,20, 25,32,40, 50,63,80,100	Front cover	Aluminum alloy	Piston seal	NBR
		Back cover	Aluminum alloy	Self lubricating bearing	PTFE+Brass
		Piston	Aluminum alloy	Magnet(optional)	RbFeb
		Piston rod(Without)	S45C hard chrome carbon steel	C type buckle	Steel
		Barrel(Without)	Hard anodized aluminum	Nut	Carbon steel
		Anti-bump cushion	NBR	Muffler	Cu
		Cover O-ring	NBR		



NO	Designation	NO	Designation	NO	Designation	NO	Designation	NO	Designation
1	C type buckle	4	Front cover	7	Piston rod(Without)	10	Anti-bump cushion	13	Cover O-ring
2	Front cover seal	5	Self Lubricating bearing	8	Piston	11	Barrel(Without)	14	C type buckle
3	Cover O-ring	6	Anti-bump cushion	9	Piston Seal	12	Back cover		

Assembly kits for pneumatic cylinder

Product	Model/Specification	Product
	**MB Kits** (Japan Standard) Bore size: ϕ32,40, 50,63,80,100	**DNG Kits**(ISO15552) 
	**ADVU Kits** (ISO6431) Bore size: ϕ16,20, 25,32,40,50, 63,80	Bore size: ϕ160,200,250,320

Tube and piston rod for pneumatic cylinder

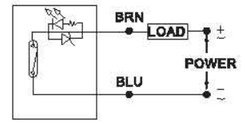
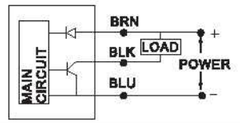
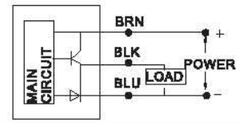
Product	Model/Specification	Product	Model/Specification
	**SC,MAL** Round Aluminum Tube Bore size: ϕ16,20, 25,32,40,50,63, 80,100,125,160, 200,250,320		**SI** Mickey Mouse Aluminum Tube Bore size: ϕ32,40,50, 63,80,100, 125,160,200
	**DNC** Square Aluminum Tube Bore size: ϕ32,40,50, 63,80,100,125		**SDA** Aluminum Tube Bore size: ϕ12,16,20,25, 32,40,50,63,80,100 Note:Normally we provide SDA un-oxided aluminium tube, if you need that with oxide, pls be specified, because price is different.
	**ADVU** Aluminum Tube Bore size: ϕ,20, 25,32,40,50,63,80		**MA,MA6432** Stainless Steel Tube (High precision) Bore size: ϕ8,10,12, 16,20,25,32,40
	**Piston rod** (45# Steel Chrome-plated) Bore size: ϕ6,8,10,12, 16,20,25,32,40,45, 50,60,70,etc.	Note:Our company can provide different diameteres piston rodes including **stainless steel** material's according to customers requirement.	

XC–03 Series Magnetism Switch

Features and Applications

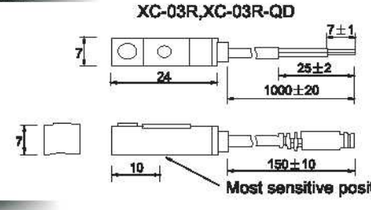
1.Compact design
2.LSU type LED light
3.Anti-vibration application
4.Simple installation
5.BK series metal brand together
6.Suitable for many kinds of air cylinder.

Specification

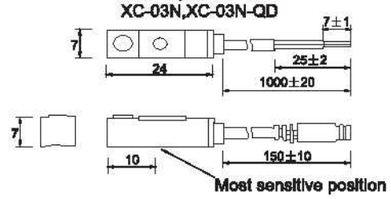
Type	XC-03R	XC-03N	XC-03P
Connect Diagram / Parameter			
Wiring method	2-WireType	3-WireType	
Switching logic	SPST Normally Open	Solid State Output,Normally Open	
Sensor type	Reed switch	NPN Input	PNP Output
Operating voltage	5-240V DC/AC	5-30V DC	
Max.switching current	100mA max.	200mA max.	
Contact rating	10W max.	6W max.	
Current consumption	None	20mA max @ 24V(Switch Active)	
Voltage drop	3.0V max.	0.5V max @ 200mA	
Leakage current	None	0.01mA max.	
Indicator	Red LED	Red LED	Green LED
Max.exchange frequency	200Hz	1000Hz	
Temperature range		-10~70℃	
Shock	30G	50G	
Vibration		9G	
Enclosure classification		IEC 529 IP67(NEMA 6)	
Protection circuit	None	With protection	
Cable	ϕ2.8,2C PVC Gray color,oil resistance PVC	ϕ2.8,2C PVC Blank color,oil resistance PVC	

Overall Dimensions

XC-03R,XC-03R-QD



XC-03P,XC-03P-QD
XC-03N,XC-03N-QD

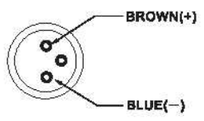


Joint Pipe Bore

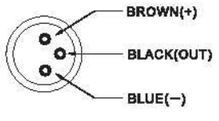
PBK metal band for XC-03 series
For round cylinder ϕ6-ϕ63

QD Pinout

2 wire QD wiring



3 wire QD wiring



HAVKON® PNEUMATIC

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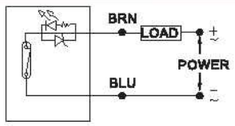
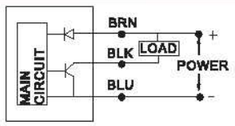
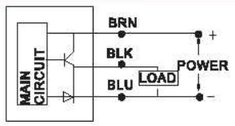
XC-21R Series Magnetism Switch

Features and Applications

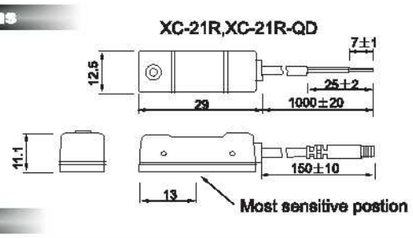
1.Compact design
2.LED light
3.Anti-vibration application
4.PI,PM series clamp together
5.Simple installation
6.Suitable for all kinds of standard tie-rod and micky-mouse barrel cylinder.

Specification

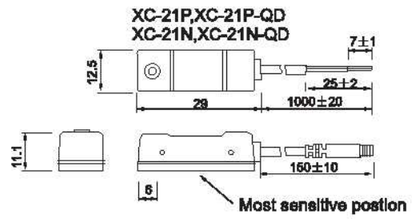
Type / Parameter	XC-21R	XC-21N	XC-21P
Connect Diagram			
Wiring method	2-WireType	3-WireType	
Switching logic	SPST Normally Open	Solid State Output,Normally Open	
Sensor type	Reed switch	NPN Input	PNP Output
Operating voltage	5-240V DC/AC	5-30V DC	
Max.switching current	100mA max.	200mA max.	
Contact rating	10W max.	6W max.	
Current consumption	None	20mA max@ 24V(Switch Active)	
Voltage drop	3.5V max.	0.5V max	
Leakage current	None	0.01mA max.	
Indicator	Red LED	Red LED	Green LED
Max.exchange frequency	200Hz	1000Hz	
Temperature range		10~70℃	
Shock	30G	50G	
Vibration		9G	
Enclosure classification		IEC 529 IP67(NEMA 6)	
Protection circuit	None	With protection	
Cable	Φ4.0,2C PVC Gray color,oil resistance PVC	Φ4.0,2C PVC Blank color,oil resistance PVC	

Overall Dimensions

XC-21R,XC-21R-QD



XC-21P,XC-21P-QD
XC-21N,XC-21N-QD



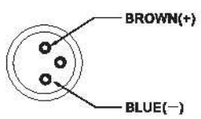
Joint Pipe Bore

Installation of XC-21

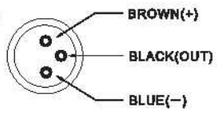
PM	PAC	PAB	PN	PI
Fixed clamping device	Fixed clamping device	Fixed steel belt	Fixed steel belt	Fixed clamping device
				
For tie-rod cylinder Φ32-Φ150 tie-rod dimension Φ5-Φ18	For tie-rod cylinder Φ32-Φ125 tie-rod dimension Φ5-Φ12	For tie-rod cylinder Φ12-Φ100 tie-rod dimension Φ12-Φ100	For round cylinder Φ12-Φ100	For micky-mouse cylinder Φ32-Φ100

QD Pinout

2 wire QD wining



3 wire QD wining



HAVKON® PNEUMATIC

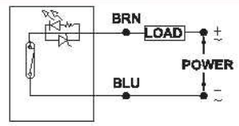
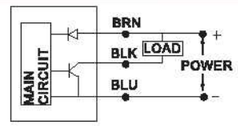
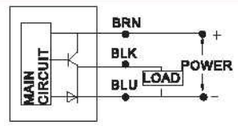
A

XC-31R Series Magnetism Switch

Features and Applications

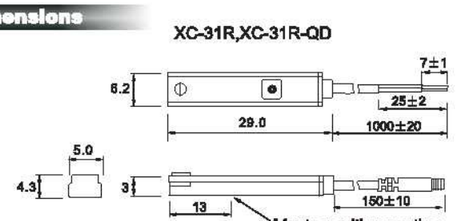
1.Compact design
2.LED light
3.Anti-vibration application
4.For groove and bandage fixing type
5.Simple installation
6.Suitable for all kinds of groove type and mini type cylinder.

Specification

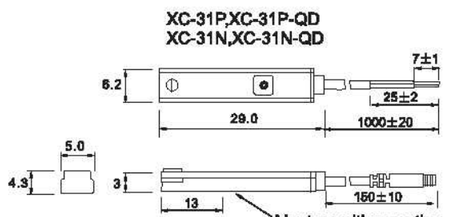
Type / Parameter	XC-31R	XC-31N	XC-31P
Connect Diagram			
Wiring method	2-WireType	3-WireType	
Switching logic	SPST Normally Open	Solid State Output,Normally Open	
Sensor type	Reed switch	NPN Input	PNP Output
Operating voltage	5-240V DC/AC	5-30V DC	
Max.switching current	100mA max.	100mA max.	
Contact rating	10W max.	3W max.	
Current consumption	None	17mA max @ 24V(Switch Active)	14mA max@24V(Switch Active)
Voltage drop	2.5V max.@ 100mA	0.5V max @ 200mA	
Leakage current	None	0.01mA max.	
Indicator	Red LED	Red LED	Green LED
Max.exchange frequency	200Hz	1000Hz	
Temperature range		-10~70℃	
Shock	30G	50G	
Vibration		9G	
Enclosure classification		IEC 529 IP67(NEMA 6)	
Protection circuit	None	With protection	
Cable	Φ3.0,2C PVC Gray color,oil resistance PVC	Φ3.0,2C PVC Blank color,oil resistance PVC	

Overall Dimensions

XC-31R,XC-31R-QD

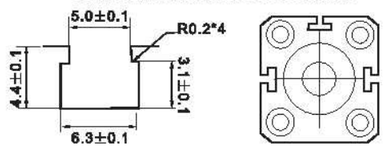


XC-31P,XC-31P-QD
XC-31N,XC-31N-QD



Joint Pipe Bore

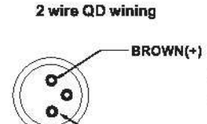
Groove dimension of XC-31 series



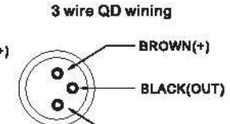
For DNC cylinder

QD Pinout

2 wire QD wining



3 wire QD wining

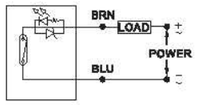
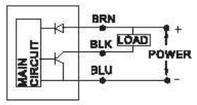
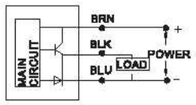


XC-11R Series Magnetism Switch

Features and Applications

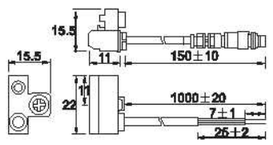
1. Compact design
2. LED light
3. Anti-vibration application
4. For groove and bandage fixing type
5. Simple installation
6. Suitable for thin type(compact) cylinder

Specification

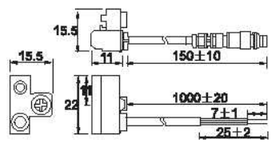
Type / Parameter	XC-11R	XC-11RB	XC-11N	XC-11P
250 / 320 Connect Diagram				
Switching logic	SPST Normally Open	SPST Normally Closed	Solid State Output,Normally Open	
Sensor type	Reed switch		NPN Input	PNP Output
Operating voltage	5-240V DC/AC	5-120V DC/AC	5-30V DC	
Max.switching current	100mA max.		200mA max.	
Contact rating	10W max.		6W max.	
Current consumption	None		20mA max@ 24V(Switch Active)	
Voltage drop	2.5V max.@100mA		0.5V max @ 200mA	
Leakage current	None		0.01mA max.	
Indicator	Red LED		Red LED	Green LED
Cabel	ϕ3.2,2C PVC Gray color,oil resistance PVC		ϕ3.2,3C PVC Blank color,oil resistance PVC	
Sensitivity	40Gauss			
Max.switch frequency	200Hz		1000Hz	
Temperature range	-10~70℃			
Shock	30G		50G	
Vibration	9G			
Enclosure classification	IEC 529 IP67(NEMA 6)			
Protection circuit	None		With protection	

Overall Dimensions

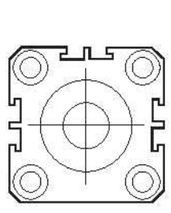
XC-11R
XC-11R-QR

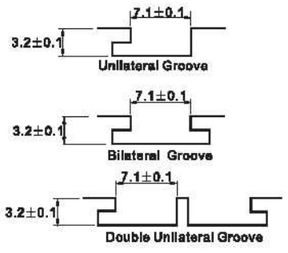


XC-11N
XC-11N-QD



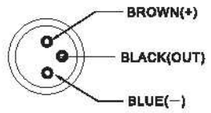
Joint Pipe Bore



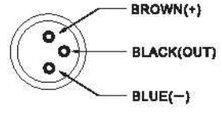


QD Pinout

2 wire QD wining



3 wire QD wining



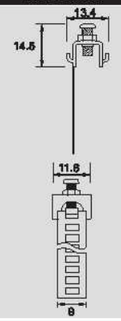
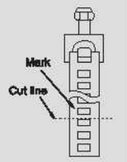
HAVKON® PNEUMATIC

A

BK / PBN / PN Series Clamp

BK Series Clamp

Clamp is designed for mounting XC-03 series sensor on ϕ6 bore and above round cylinder

Product	Dimension	Mounting			
		Step 1	Step 2	Step 3	Step 4
		1.Release the screw up 2.Make the screw within the collect	1.Put one end of the band to the hanger 2.Install the switch and strain the metal hand. 3.Another end of the band to the hanger and make mark.	1.Cut the metal band at the opposite face of the marked position	1.Put the metal band on the marked position. 2.Install the switch,lock the screw. 3.Finally lock the screw nut.
					

BK-81:For round cylind cylinder and tie-rod cylinder ϕ6-ϕ63.
BK-82:For round cylind cylinder and tie-rod cylinder ϕ6-ϕ125.(Speed design for≥ ϕ125)

PBN Series Clamp

Clamp is designed for mounting XC-20 series sensor on ϕ12 bore and above round cylinder

Product	Dimension	Mounting			
		Step 1	Step 2	Step 3	Step 4
		1.Release the screw up 2.Make the screw within the collect	1.Put one end of the band to the hanger 2.Install the switch and strain the metal hand. 3.Another end of the band to the hanger and make mark.	1.Cut the metal band at the opposite face of the marked position	1.Put the metal band on the marked position. 2.Install the switch,lock the screw. 3.Finally lock the screw nut.

BK-81:For round cylind cylinder and tie-rod cylinder ϕ6-ϕ63.
BK-82:For round cylind cylinder and tie-rod cylinder ϕ8-ϕ125.(Speed design for≥ ϕ125)

PN Series Clamp

Clamp is designed for mounting XC-20series sensor on ϕ12 bore and above round cylinder

Product	Dimension	Mounting			
		Step 1	Step 2	Step 3	Step 4
		1.Release the screw up 2.Make the screw within the collect	1.Put one end of the band to the hanger 2.Install the switch and strain the metal hand. 3.Another end of the band to the hanger and make mark.	1.Cut the metal band at the opposite face of the marked position	1.Put the metal band on the marked position. 2.Install the switch,lock the screw. 3.Finally lock the screw nut.

PN — S — 20

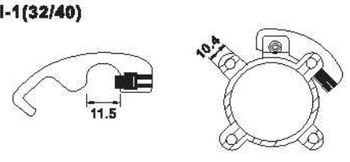
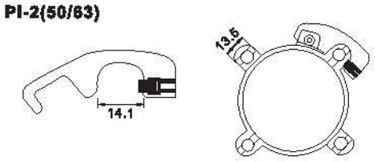
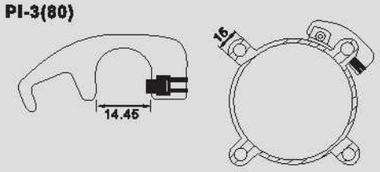
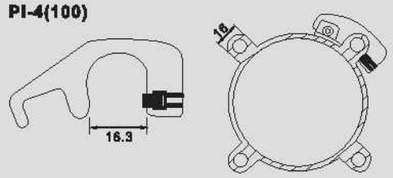
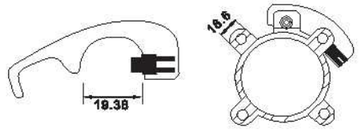
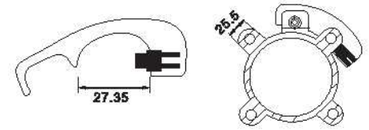
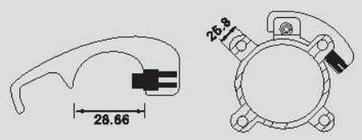
12:Round cylinder ϕ12
16:Round cylinder ϕ16
150:Round cylinder ϕ150

S:Stainless steel round cylinder
A:Aluminum round cylinder

PI / PAC Series Bracket

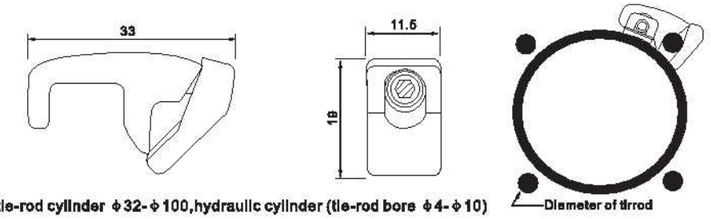
PI Series Bracket

Bracket is designed for mounting XC-21 series sensor on ISO profile cylinder.(mickey mouse Type)

Product	Dimension/Installation
	PI-1(32/40) 
	PI-2(50/63) 
	PI-3(80) 
	PI-4(100) 
	PI-5(125) 
	PI-6(160) 
	PI-7(200) 

PAC Series Bracket

Bracket is designed for mounting XC-21 series on tie-rod cylinder.

Product	Dimension/Installation
	 Using for tie-rod cylinder ϕ32-ϕ100,hydraulic cylinder (tie-rod bore ϕ4-ϕ10)

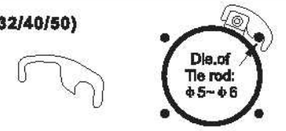
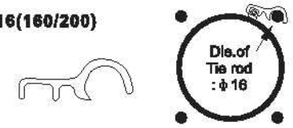
HAVKON® PNEUMATIC

A

PM / SU Series Bracket

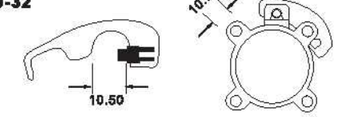
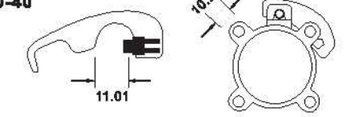
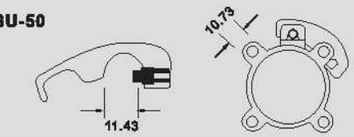
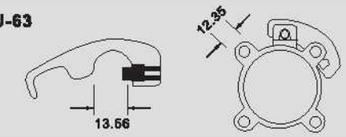
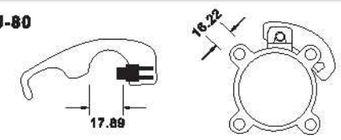
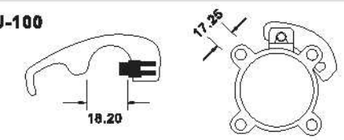
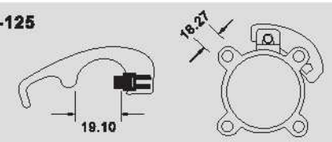
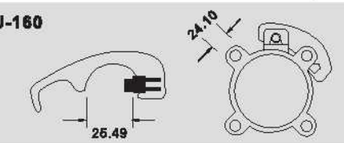
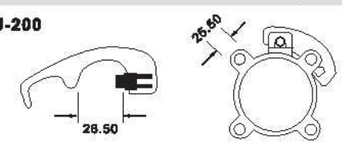
PM Series Bracket

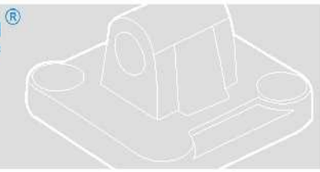
Bracket is designed for mounting XC-21 series on tie-rod cylinder.

Product	Dimension/Installation
	PM-6(32/40/50) 
	PM-8(63) 
	PM-10(80/100) 
	PM-12(125) 
	PM-16(160/200) 

SU Series Bracket

Bracket is designed for mounting XC-21R sensor on mickey mouse Type cylinder (SUType).

Product	Dimension/Installation
	SU-32 
	SU-40 
	SU-50 
	SU-63 
	SU-80 
	SU-100 
	SU-125 
	SU-160 
	SU-200 



A

HAC/HAD series Shock Absorbers

HAD2050-2 HAD2016 HAD1275

Ordering Code

HAD — 25 — 50 — 2 — N

- **Series** HAC:Porous fixed; HAD:Adjustable; HACD: Multi-buffer-type
- **Bushing outer Thread**
- **Stroke** 6~150mm
- **Impact speed** 1.high-speed; 2. Moderate Speed; 3.Low speed
- **Buffer cap** Blank:with buffer cap; N:Without buffer cap

Specification

HAC Series

Model	Stroke	Max.Absorbing Energy (NM)	Max.Absorb. Energy/Hour (NM)	Max.Effective Mass(kg)			Max.Impact Speed (m/s)		
				1	2	3	1	2	3
HAC-0806	6	2	7,00	0.5	2	6	2	1	0.5
HAC-1005	5	3	10,800	1	3	7	3	1.5	0.8
HAC-1008	8	4	14,400	2	4	9	3	1.5	0.8
HAC-1210	10	5	18,000	5	10	30	2	1.5	0.8
HAC-1412	12	15	36,000	8	50	100	3	1.5	0.8
HAC-1416	16	20	40,000	10	70	150	3	1.5	0.8
HAC-1420	20	25	48,000	12	80	160	3	1.5	0.8
HAC-2020	20	40	48,000	30	200	700	3.5	2	1
HAC-2030	30	50	54,000	30	200	700	3.5	2	1
HAC-2050	50	60	66,000	60	400	1200	3.5	2	1
HAC-2525	25	80	60,000	200	800	1500	4	2.5	1
HAC-2540	40	120	84,000	300	1200	2000	4	2.5	1
HAC-2550	50	98	98,000	15	40	160	4	2.5	1
HAC-2580	80	150	127,500	20	50	200	4	2.5	1
HAC-3660	60	250	125,000	400	1500	2400	4	2.5	1
HAC-2030	30	45	54,000	40	300	900	3.5	2	1
HAC-2035	35	52	64,400	40	200	650	3.5	2	1

■ Working Temperature-10~80℃

HAD Series

Model	HAD-1410	HAD-1415	HAD-2016	HAD-2025	HAD-2525	HAD-2530	HAD-2540	HAD-2550	HAD-2580
Stroke	10	15	16	25	25	30	40	50	80
Max.Absorbing Energy(NM)	20	22	25	39	85	95	100	98	150
Max.Absorb.Energy/Hour(NM)	24,000	26,400	32,000	39,000	51,000	57,000	84,000	98,000	127,500
Max.Effective Mass(kg)	80	120	200	312	400	480	700	720	800
Max.Impact Speed(m/s)	3.2	3.2	3.6	3.6	3.6	3.6	3.6	4.2	4.2

Model	HAD-3625	HAD-3650	HAD-4225	HAD-4250	HAD-4275	HAD-64050	HAD-64100	HAD-64150
Stroke	25	50	25	50	75	50	100	150
Max.Absorbing Energy(NM)	150	300	260	500	750	12,000	24,000	36,000
Max.Absorb.Energy/Hour(NM)	90,000	108,000	130,000	155,000	187,000	1,560,000	1,920,000	2,520,000
Max.Effective Mass(kg)	1,400	1,400	3,000	4,000	6,000	12,727	18,181	23,636
Max.Impact Speed(m/s)	3.2	4.8	3.6	4.8	4.8	1.6	1.6	1.6

■ Working Temperature-10~80℃

HR series speed regulator

HR30

Ordering Code

HR — 30 — F

- **Series** HR:adjustable oil speed regulator
- **Stroke** 15~100mm
- **Bracket**

HAVKON® PNEUMATIC

Pneumatic Actuator

According to ISO5211, DIN3337, VD/VDE3845 and NAMUR international standard, XCPC provide the qualified pneumatic actuator which is compact, modernized design for your selection. Single acting and double acting as optional, size from 32mm to 270mm, and meet the different requirement of application to satisfy our customers.

B

HAVKON® PNEUMATIC

XAT Series Pneumatic Actuator

XAT-52DA

XAT-63DA

XAT-75DA

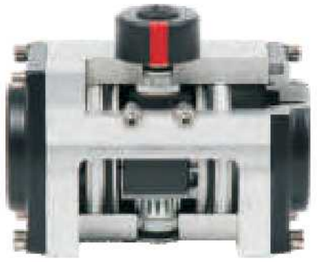
Ordering Code

X	AT	□	—	□	—	□
XCPC Product	Actuator Type	Size 32-270mm		DA:Air return Type SR:Spring return Type		Qty of Spring 5~12pcs

Designing Features

Designing Features (of Hawks 10 Series Pneumatic Actuator)

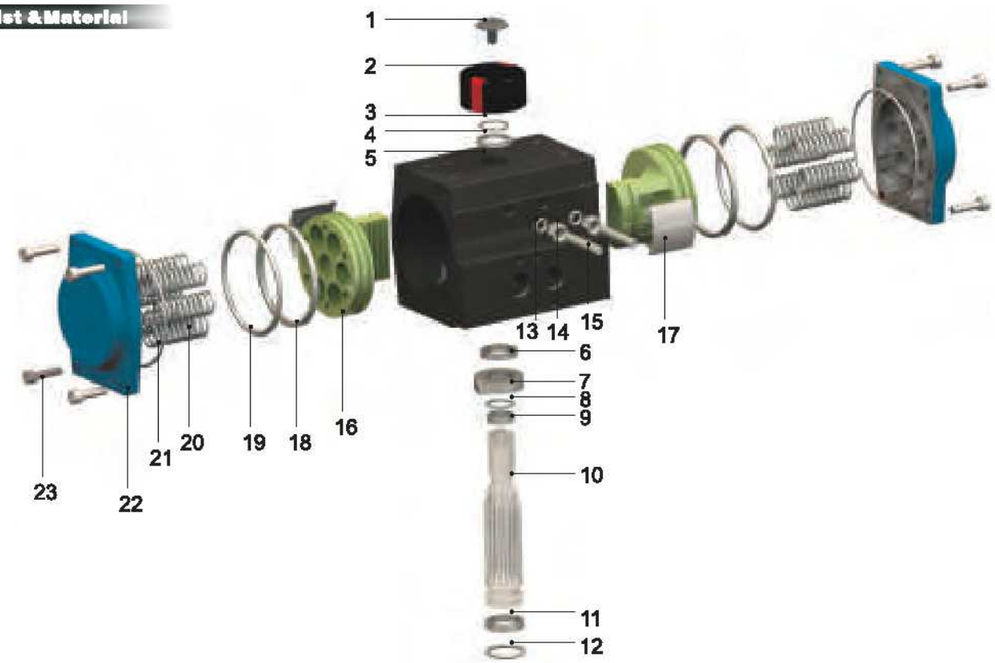
- Extruded aluminum ASTM6005 body with both internal and external corrosion protection having honed cylinder surface for longer life and low coefficient of friction.
- Dual piston rack and pinion design for compact construction, symmetric mounting position, high-cycle life and fast operation, reverse rotation can be accomplished in the field by simply inverting the pistons.
- Multiple bearings and guides on racks and pistons, low friction, high cycle life and prevent shaft blowout.
- Modular preloaded spring cartridge design, with coated spring for simple versatile range,greater safely and corrosion resistance, longer cycle life.
- Fully machined teeth on piston and pinion for accurate low backlash rack and pinion engagement, maximum efficiency.
- Carbon steel with nickel plated or stainless steel fasteners for long term corrosion resistance.
- Full conformance to the latest specifications: ISO5211, DIN 3337 and Namur or product interchangeability and easy mounting of solenoids, limit switches and other accessories.



HAVKON® PNEUMATIC

XAT Series Pneumatic Actuator

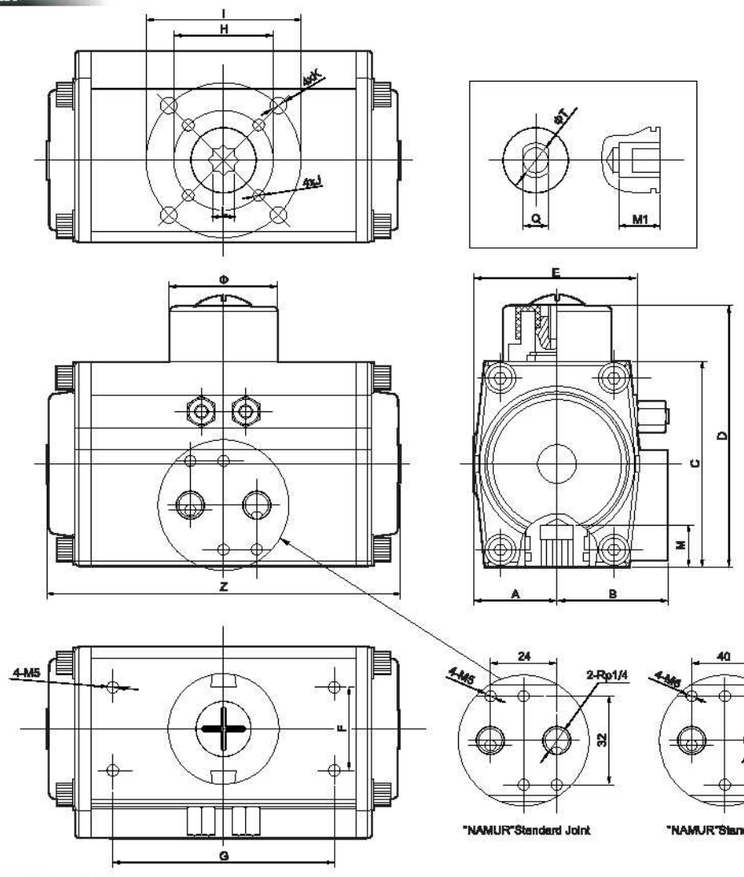
Part List &Material



No	Designation	Qty	Standard Material	Protection	Optional Material
1	Indicator Screw	1	Plastics		
2	Indicator	1	Plastics		
3	Circlip	1	Carbon Steel	Nickel Plated	Stainless Steel
4	Gasket	1	Engineering Plastics		
5	Body	1	Cast Aluminum	Hard Anodize, Etc	
6	Retainer Ring	1	Engineering Plastics		
7	Cam	1	Steel Alloy		
8	O Ring (Upper Bearing)	1	NBR		Fluorine Rubber/Silicone Rubber
9	Upper Bearing	1	Engineering Plastics		
10	Pinion	1	Carbon Steel/Stainless Steel	Nickel Plated	
11	Lower Bearing	1	Engineering Plastics		Stainless Steel
12	O Ring (Lower Bearing)	1	NBR		Fluorine Rubber/Silicone Rubber
13	O Ring (Adjust Screw)	2	NBR		Fluorine Rubber/Silicone Rubber
14	Nut (Adjust Screw)	2	Carbon Steel	Nickel Plated	Stainless Steel
15	Adjust Screw	2	Carbon Steel	Nickel Plated	Stainless Steel
16	Piston	2	Cast Aluminum/Casting	Anodized/Zinc Galvanized	Stainless Steel
17	Guide (Piston)	2	Engineering Plastics		
18	O Ring (Piston)	2	NBR		Fluorine Rubber/Silicone Rubber
19	Washer (Piston)	2	Engineering Plastics		
20	Spring (Single Acting)	0~12	Spring Steel	Dipping Paint	
21	O Ring (End Cap)	2	NBR		Fluorine Rubber/Silicone Rubber
22	End Cap	2	Cast Aluminum	Powder Coating, Etc	
23	Cap Screw	8	Carbon Steel	Nickel Plated	Stainless Steel

XAT Series Pneumatic Actuator

Overall Dimensions



Dimension Sheet

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	Z	Φ	Air joint
32DA	20	25	45	65		25	50	Φ36		M5x8		9x9	12	100	40	NAMUR Rp 1/8"
40DA	25	32	60	80	50	25	50	Φ36	Φ50	M5x8	M6x8	9x9	12	108	40	NAMUR Rp 1/8"
52DA/SR	30	40	74.3	95	59	30	80	Φ36	Φ50	M5x8	M6x8	11x11	15	135	40	NAMUR Rp 1/4"
63DA/SR	36	44	88	107.5	74	30	80	Φ50	Φ70	M6x10	M8x13	14x14	16	142	40	NAMUR Rp 1/4"
75DA/SR	42	50	100.5	121	80.5	30	80	Φ50	Φ70	M6x10	M8x13	14x14	16	168	40	NAMUR Rp 1/4"
83DA/SR	46	57	108.5	128.7	88	30	80	Φ50	Φ70	M6x10	M8x13	17x17	19	188	40	NAMUR Rp 1/4"
92DA/SR	50	57	117	137	96.5	30	80	Φ50	Φ70	M6x10	M8x13	17x17	22	192	40	NAMUR Rp 1/4"
105DA/SR	57.5	64	133	153	109.5	30	80	Φ70	Φ102	M8x13	M10x16	22x22	26	258	40	NAMUR Rp 1/4"
127DA/SR	68.5	89	161	181	132	30	80/130	Φ70	Φ102	M8x13	M10x16	22x22	26	310	55	NAMUR Rp 1/4"
140DA/SR	75	77	180	200	137.5	30	80/130	Φ102	Φ125	M10x16	M12x20	27x27	31	370	55	NAMUR Rp 1/4"
160DA/SR	86	78	198	218	158	30	80/130	Φ102	Φ125	M10x16	M12x20	27x27	31	397	55	NAMUR Rp 1/4"
190DA/SR	103	103	230	260	189	30	130		Φ140		M16x25	36x36	40	525	80	NAMUR Rp 1/4"
210DA/SR	113	113	255	285	210	30	130		Φ140		M16x25	36x36	40	532	80	NAMUR Rp 1/4"
240DA/SR	129	129	290	320	245	30	130		Φ165		M20x25	46x46	50	602	80	NAMUR Rp 1/4"
270DA/SR	146	146	326	356	273	30	130		Φ165		M20x25	46x46	50	722	80	NAMUR Rp 1/2"

HAVKON® PNEUMATIC

XAT Series Pneumatic Actuator

Connection Type and Weight

Connection Type

1. Air supply connection is designed in accordance with NAMUR Standard to install solenoid valves.
2. The NAMUR drive pinion and the NAMUR top mounting connection permit direct installation of accessories such as limit switch box and positioner.
3. Bottom mounting connection is designed in accordance with ISO5211 and DIN3337 standards for direct mounting with valve gear boxes or mounting brackets.

New Type
New connection types are continued researching and developing.

Customer Need
We can design and produce all kinds of connection types according to customer'needs.

Air Volume (cm)^3

Model	32	40	52	63	75	83	92	105	127	140	160	190	210	240	270
CW	40	65	135	220	350	540	760	1100	2150	2950	4260	5900	7500	11000	17000
CCW	30	43	110	160	270	410	570	860	1590	2100	3080	5900	7500	9000	14000

Weight (kgs)

Model	32	40	52	63	75	83	92	105	127	140	160	190	210	240	270
DA	0.5	0.75	1.1	1.96	2.4	2.9	3.95	5.8	9.3	14.5	17.5	31.3	46.8	67.3	97
SR			1.6	2.1	3	3.9	5.4	8.1	12.9	18.7	23.5	35.3	58.8	80.2	118

Note: Spring Return unit weights are with full 6 sets of springs per piston.

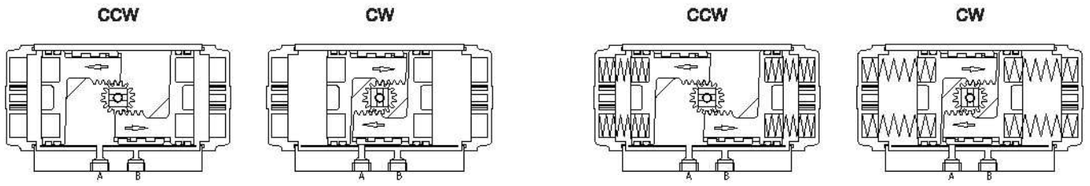
HAVKON® PNEUMATIC

XAT Series Pneumatic Actuator

Double Acting Operating Principle

Single Acting Operating Principle

Operating Principle and Condition



CCW
Input the compressed air from the A, the left and right plungers move reversely, the output pinion rotates counter-clockwise, and the air at the sides of the both plungers exhausts from B.

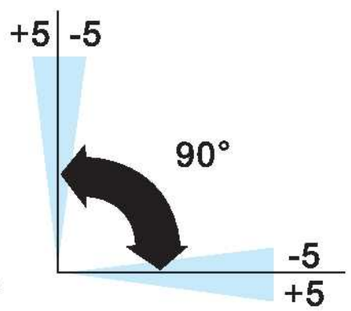
CW
Input the compressed air from the B, the left and right plungers move to the center, the output pinion rotates clockwise, and the air between the two plungers exhausts from A.

CCW
Input the compressed air from the A, the left and right plungers move reversely, the output pinion rotates counter-clockwise, and the air at the sides of the both plungers exhausts from B.

CW
When it is out of air or power, the two plungers move to the center under the spring action, the output pinion rotates clockwise, and the air exhausts from A.

Operating Condition

1. Operating Media
   Dry and clear air, or the non-corrosive gases
   The maximum particle diameter must less than 40um
2. Air Supply Pressure
   The minimum supply pressure is 2.5Bar
   The maximum supply pressure is 10Bar
3. Operating Temperature
   Standard: -20℃~+80℃
   Low temperature: -35℃~+80℃(can be customized)
   High temperature: -15℃~+150℃(can be customized)
4. Travel Adjustment
   Have adjustment range of +-5 degree for the rotation at 0 and 90 degree
5. Application
   Either indoor or outdoor



HAVKON® PNEUMATIC

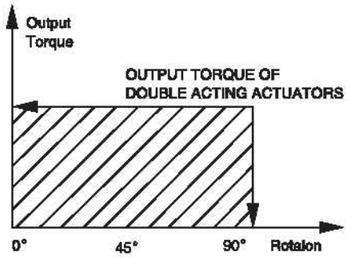
XAT Series Pneumatic Actuator

Double Acting Torque List

Torque List and Reference Selection

Model \ Torque	Air Pressure(Bar)									
	2.5	3	3.5	4	4.5	5	5.5	6	7	8
XAT-32DA	3.2	3.8	4.4	5.0	5.7	6.31	6.9	7.6	8.8	10.1
XAT-40DA	4.9	6.0	6.9	7.9	8.9	9.85	10.8	11.8	13.8	15.8
XAT-52DA	9.9	12.0	13.8	15.8	17.7	19.7	21.7	23.6	27.6	31.5
XAT-63DA	14.5	17.7	20.3	23.2	26.1	29.0	31.9	34.8	40.6	46.4
XAT-75DA	24.8	30.2	34.7	39.6	44.6	49.5	54.5	59.4	69.3	79.2
XAT-83DA	35.3	43.0	49.4	56.4	63.5	70.5	77.6	84.6	98.7	112.8
XAT-92DA	49.5	60.4	69.3	79.2	89.1	99.0	108.9	118.8	138.6	158.4
XAT-105DA	80.5	98.2	112.7	128.8	144.9	161.0	177.1	193.2	225.4	257.6
XAT-127DA	141.5	172.6	198.1	226.4	254.7	283.0	311.3	339.6	396.2	452.8
XAT-140DA	215.0	262.3	301.0	344.0	387.0	430.0	473.0	516.0	602.0	688.0
XAT-160DA	281.0	342.8	393.4	449.6	505.8	562.0	618.2	674.4	786.8	899.2
XAT-190DA	532.0	638.4	744.8	851.2	957.6	1064.0	1170.4	1276.8	1489.6	1702.4
XAT-210DA	665.0	798.0	931.0	1064.0	1197.0	1330.0	1463.0	1596.0	1862.0	2128.0
XAT-240DA	962.0	1154.4	1346.8	1539.2	1731.6	1924.0	2116.4	2308.8	2693.6	3078.4
XAT-270DA	1462.0	1754.4	2046.8	2339.2	2631.6	2924.0	3216.4	3508.8	4093.6	4678.4

TYPE: Double acting pneumatic actuator
The suggested safe factor for double acting actuators under normal working conditions is 20%~30%.
Example:
The torque needed by valve=100 Nm
The torque considered safe factor=100 (1+30%)=130 Nm
Air supply pressure=5Bar
According to the above table, we can choose the minimum model is XAT-105DA.



Reference Selection

Model	If air pressure	Reference	Reference	Valve	Double	ISO5211
XAT-32DA	6.3				8	F03
XAT-40DA	9.85				9	F03/05
XAT-52DA	19.7	40	2"	9	9	F03/05
XAT-63DA	29	65	2.5"	11	11	F05/07
XAT-75DA	49.5	80	3"	20	14	F05/07
XAT-83DA	70.5	100	4"	29	17	F05/07
XAT-92DA	99	100	4"	47	17	F05/07
XAT-105DA	161	125	5"	82	22	F07/10
XAT-127DA	283	150	6"	130	22	F07/10
XAT-140DA	430	250	10"	360	27	F10/12
XAT-160DA	562	250	10"	360	27	F10/12
XAT-190DA	1064	300	12"	475	36	F14
XAT-210DA	1330	350	14"	760	36	F14
XAT-240DA	1924	400	16"	1300	46	F16
XAT-270DA	2924	500	20"	2340	46	F16

HAVKON® PNEUMATIC

XAT Series Pneumatic Actuator

Single Acting Torque List and Reference Selection

Model	Spring Sets	Spring Torque 90°	Spring Torque 0°	Air Pressure(Bar) 2.5 0°	2.5 90°	3 0°	3 90°	3.5 0°	3.5 90°	4 0°	4 90°	4.5 0°	4.5 90°	5 0°	5 90°	5.5 0°	5.5 90°	6 0°	6 90°	7 0°	7 90°	8 0°	8 90°
52	4	6.6	3.8	6.1	3.3	8.1	5.2	10.0	7.2	12.0	9.2	13.9	11.1	15.9	13.1	17.9	15.1	19.8	17.0	23.8	21.0	27.7	24.9
	5	8.3	4.8			5.1	3.6	9.0	5.5	11.0	7.5	13.0	9.5	15.0	11.5	16.9	13.4	18.9	15.4	22.8	19.3	26.8	23.3
	6	9.9	5.7					8.1	3.8	10.1	5.9	12.0	7.8	14.0	9.8	16.0	11.8	17.9	13.7	21.9	17.7	25.8	21.6
	7	11.8	6.7							9.1	4.2	11.1	6.2	13.1	8.2	15.0	10.1	17.0	12.1	20.9	16.0	24.8	20.0
	8	13.2	7.6									10.1	4.5	12.1	6.5	14.1	8.5	16.0	10.4	20.0	14.4	23.9	18.3
	9	14.9	8.6									9.2	2.9	11.2	4.9	13.1	6.8	15.1	8.8	19.0	12.7	23.0	16.7
	10	16.5	9.5											10.2	3.2	12.2	5.2	14.1	7.1	18.1	11.1	22.0	15.0
	11	18.2	10.5													11.2	3.5	13.2	5.5	17.1	9.4	21.1	13.4
	12	19.8	11.4															12.2	3.8	16.2	7.8	20.1	11.7
63	4	10.6	5.3	9.2	3.9	12.1	6.8	15.0	9.7	17.9	12.6	20.8	15.5	23.7	18.4	26.8	21.3	29.5	24.2	35.3	30.0	41.1	35.8
	5	13.3	6.7			10.8	4.1	13.7	7.0	16.6	9.9	19.5	12.8	22.4	15.7	25.3	18.6	28.2	21.5	34.0	27.3	39.8	33.1
	6	16.0	8.0					12.3	4.3	15.2	7.2	18.1	10.1	21.0	13.0	23.9	15.9	26.8	18.8	32.6	24.6	38.4	30.4
	7	18.6	9.3							13.9	4.6	16.8	7.5	19.7	10.4	22.6	13.3	25.5	16.2	31.3	22.0	37.1	27.8
	8	21.3	10.6									15.5	4.8	18.4	7.7	21.3	10.6	24.2	13.5	30.0	19.3	35.8	25.1
	9	23.9	12.0											17.0	5.1	19.9	8.0	22.8	10.9	28.8	16.7	34.4	22.5
	10	26.6	13.3													18.6	5.3	21.5	8.2	27.3	14.0	33.1	19.8
	11	29.3	14.6															20.2	5.5	26.0	11.3	31.8	17.1
	12	31.9	16.0																	24.6	8.7	30.4	14.5
75	4	18.7	10.9	13.9	6.0	16.8	11.0	23.8	15.9	28.7	20.9	33.7	25.8	38.6	30.8	43.6	35.7	48.5	40.7	58.4	50.6	68.3	60.5
	5	23.4	13.6			16.1	6.3	21.0	11.3	26.0	16.2	30.8	21.2	35.9	26.1	40.8	31.1	45.6	36.0	55.7	45.8	65.6	55.8
	6	28.1	16.3					18.3	6.6	23.3	11.5	28.2	16.5	33.2	21.4	38.1	26.4	43.1	31.3	53.0	41.2	62.9	51.1
	7	32.8	19.1							20.5	6.8	25.5	11.8	30.4	16.7	35.4	21.7	40.3	26.6	50.2	36.5	60.1	46.4
	8	37.4	21.8									22.8	7.1	27.7	12.1	32.7	17.0	37.6	22.0	47.5	31.9	57.4	41.8
	9	42.1	24.5											25.0	7.4	29.9	12.3	34.9	17.3	44.8	27.2	54.7	37.1
	10	46.8	27.2													27.2	7.7	32.2	12.8	42.1	22.5	52.0	32.4
	11	51.5	30.0															29.4	7.9	39.3	17.8	49.2	27.7
	12	56.2	32.7																	36.6	13.1	46.5	23.0
83	4	26.8	17.1	18.1	6.4	25.2	13.5	32.2	20.5	39.3	27.6	46.3	34.6	53.4	41.7	60.4	48.7	67.5	55.8	81.6	69.9	95.7	84.0
	5	36.1	21.4			20.9	6.3	27.9	13.3	35.0	20.4	42.0	27.4	49.1	34.5	56.1	41.5	63.2	48.6	77.3	62.7	91.4	76.8
	6	43.3	25.7					23.6	6.1	30.7	13.1	37.7	20.2	44.8	27.2	51.8	34.3	58.9	41.3	73.0	55.4	87.1	69.5
	7	50.5	30.0							26.4	5.9	33.5	13.0	40.5	20.0	47.6	27.1	54.6	34.1	68.7	48.2	82.8	62.3
	8	57.7	34.3									29.2	5.8	38.2	12.8	43.3	19.9	50.3	26.9	64.4	41.0	78.5	55.1
	9	64.9	38.6											31.9	5.6	39.0	12.7	46.0	19.7	60.1	33.8	74.2	47.9
	10	72.1	42.8													34.7	5.5	41.8	12.5	55.9	26.6	70.0	40.7
	11	79.3	47.1															37.5	5.3	51.6	19.4	65.7	33.5
	12	86.5	51.4																	47.3	12.2	61.4	26.3
92	4	38.7	23.7	25.8	12.8	35.7	22.7	45.6	32.6	55.5	42.5	65.4	52.4	75.3	62.3	85.2	72.2	95.1	82.1	115	102	135	122
	5	45.9	29.6	19.9	3.6	29.6	13.5	39.7	23.4	49.6	33.3	59.5	43.2	69.4	53.1	79.3	63.0	89.2	72.9	109	92.7	129	112
	6	55.1	35.5			23.9	4.3	33.8	14.2	43.7	24.1	53.6	34.0	63.5	43.9	73.4	53.8	83.3	63.7	103	83.5	123	103
	7	64.3	41.4					27.9	5.0	37.8	14.9	47.7	24.8	57.6	34.7	67.5	44.6	77.4	54.6	97.2	74.3	117	94.1
	8	73.5	47.4							31.8	5.7	41.7	15.6	51.6	25.5	61.5	35.4	71.4	45.3	91.2	65.1	111	84.9
	9	82.7	53.3									35.8	6.4	45.7	18.3	55.6	26.2	65.5	36.1	85.3	55.9	105	75.7
	10	91.8	59.2											39.8	7.2	49.7	17.1	59.6	27.0	79.4	46.8	99.2	66.6
	11	101	65.1													43.8	7.9	53.7	17.8	73.5	37.6	93.3	57.4
	12	110	71.0															47.8	8.6	67.6	28.4	87.4	48.2
105	4	63.2	34.4	46.1	17.3	62.2	33.4	78.3	49.5	94.4	65.6	111	81.7	127	97.8	143	114	159	130	191	162	223	194
	5	79.0	43.0			53.6	17.6	69.7	33.7	85.8	49.8	102	65.9	118	82.0	134	98.1	150	114	182	146	215	179
	6	94.8	51.6					61.1	17.9	77.2	34.0	93.3	50.1	109	66.2	126	82.3	142	98.4	174	131	206	163
	7	111	60.2							68.6	18.2	84.7	34.3	101	50.4	117	66.5	133	82.8	165	115	197	147
	8	126	68.8									76.1	18.5	92.2	34.6	108	50.7	124	66.8	157	99.0	189	131
	9	142	77.4											83.6	18.8	100	34.9	116	51.0	148	83.2	180	115
	10	158	86.0													91.1	19.1	107	35.2	139	67.4	172	100
	11	174	94.6															98.6	19.4	131	51.6	163	83.8
	12	190	103																	122	35.8	154	68.0
127	4	128	77.1	84.4	13.8	92.7	42.1	121	70.4	149	98.7	178	127	206	155	234	184	263	212	319	269	376	325
	5	160	96.4			73.4	10.2	102	38.5	130	66.8	158	95.1	187	123	215	152	243	180	300	237	356	293
	6	192	116							111	34.9	139	63.2	167	91.5	196	120	224	148	281	205	337	261
	7	223	135									120	31.3	148	59.6	176	87.9	205	116	261	173	318	229
	8	255	154											129	27.8	157	55.9	185	84.2	242	141	299	197
	9	287	173													138	24.0	166	52.3	223	109	279	166
	10	319	193															147	20.4	203	77.0	260	134
	11	351	212																	184	45.1	241	102
	12	383	231																	165	13.2	222	69.8

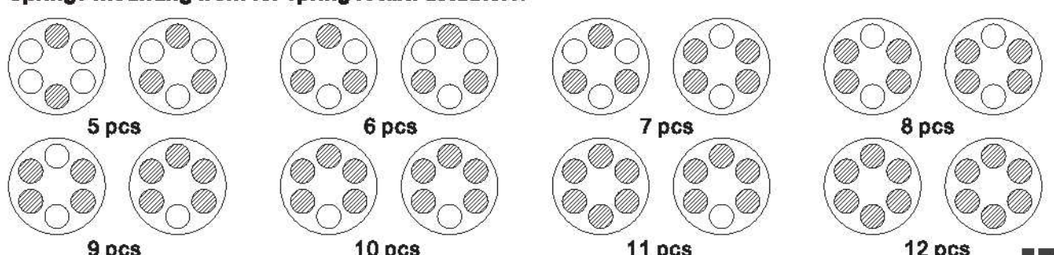
HAVKON® PNEUMATIC

XAT Series Pneumatic Actuator

Single Acting Torque List and Reference Selection

Model	Spring Sets	Spring Torque 90°	Spring Torque 0°	Air Pressure(Bar) 2.5 0°	2.5 90°	3 0°	3 90°	3.5 0°	3.5 90°	4 0°	4 90°	4.5 0°	4.5 90°	5 0°	5 90°	5.5 0°	5.5 90°	6 0°	6 90°	7 0°	7 90°	8 0°	8 90°
140	4	161	102	113	34.3	156	77.3	199	120	242	163	285	206	328	249	371	292	414	335	500	421	586	507
	5	228	128			131	32.1	174	75.1	219	118	260	161	303	204	346	247	389	290	475	376	561	462
	6	271	153					148	29.9	191	72.9	234	116	277	159	320	202	363	245	449	331	535	417
	7	316	179							166	27.7	209	70.7	252	114	295	157	338	200	424	286	510	372
	8	361	204									183	25.6	226	68.6	269	112	312	155	398	241	484	327
	9	407	230											201	23.4	244	66.4	287	109	373	195	459	281
	10	452	255													218	21.2	261	84.2	347	150	433	238
	11	497	281															236	19	322	105	408	191
	12	542	308																	296	60	382	148
160	4	234	143	138	47	194	103	251	159	307	216	363	272	419	328	475	384	532	440	644	553	756	665
	5	293	179			159	44.7	215	101	271	157	327	213	384	270	440	326	496	382	608	494	721	607
	6	351	214					179	42.4	235	98.6	292	155	348	211	404	267	460	323	573	436	685	548
	7	410	250							200	40.1	256	96.3	312	153	366	209	425	285	537	377	649	490
	8	468	286									220	37.8	276	94	333	150	389	206	501	319	614	431
	9	527	321											241	35.5	297	91.7	353	148	466	260	578	373
	10	585	357													261	33.2	317	89.4	430	202	542	314
	11	644	393															282	30.9	394	143	507	255
	12	702	428																	358	84.8	471	197
190	4	242	160	372	280	476	396	585	503	691	609	798	718	904	822	1010	928	1117	1035	1330	1248	1542	1460
	5	309	200	332	223	438	329	545	436	651	542	758	649	864	755	970	861	1077	968	1290	1181	1502	1393
	6	371	240	292	161	398	267	505	374	611	480	718	587	824	693	930	799	1037	906	1250	1119	1462	1331
	7	433	280	252	99	358	205	465	312	571	418	678	525	784	631	890	737	997	844	1210	1057	1422	1269
	8	496	320			318	143	425	260	531	356	638	463	744	569	850	676	957	782	1170	995	1382	1207
	9	557	360					385	188	491	294	598	401	704	507	810	613	917	720	1130	933	1342	1145
	10	618	400							451	233	558	340	664	446	770	552	877	659	1090	872	1302	1084
	11	680	440									518	278	624	384	730	490	837	597	1050	810	1262	1022
	12	742	480											584	322	690	428	797	535	1010	748	1222	960
210	4	304	220	446	361	578	494	711	627	844	760	977	893	1110	1026	1243	1159	1376	1292	1642	1558	1908	1824
	5	360	275	390	285	523	418	656	551	789	684	922	817	1055	950	1188	1083	1321	1216	1587	1482	1853	1748
	6	458	330	335	209	468	342	601	475	734	608	867	741	1000	874	1133	1007	1266	1140	1532	1406	1798	1672
	7	532	385	280	133	413	266	546	399	679	532	812	665	945	798	1078	931	1211	1064	1477	1330	1743	1596
	8	608	440			358	190	491	323	624	456	757	589	890	722	1023	855	1156	988	1422	1254	1688	1520
	9	684	495					436	247	569	380	702	513	836	646	968	779	1101	912	1367	1178	1633	1444
	10	760	550							514	304	647	437	780	570	913	703	1046	836	1312	1102	1578	1368
	11	838	605									592	361	725	494	856	627	991	760	1257	1026	1523	1292
	12	912	660											670	416	803	551	936	684	1202	950	1468	1216
240	4	443	328	634	519	826	711	1019	904	1211	1096	1404	1289	1596	1481	1788	1673	1981	1866	2366	2251	2750	2635
	5	554	410	552	408	744	600	937	793	1129	985	1322	1178	1514	1370	1706	1562	1899	1755	2284	2140	2668	2524
	6	665	492	470	297	662	489	855	682	1047	874	1240	1067	1432	1259	1624	1451	1817	1644	2202	2029	2586	2413
	7	776	575	387	186	579	378	772	571	964	763	1157	956	1349	1148	1541	1340	1734	1533	2119	1918	2503	2302
	8	887	658			496	267	691	480	883	652	1076	845	1268	1037	1460	1229	1653	1422	2038	1807	2422	2191
	9	998	739					808	349	800	541	993	734	1185	926	1377	1116	1570	1311	1955	1696	2339	2080
	10	1108	821							718	431	911	624	1103	816	1295	1008	1488	1201	1873	1586	2257	1970
	11	1219	903									829	513	1021	705	1213	897	1406	1090	1791	1475	2175	1859
	12	1330	985											939	594	1131	786	1324	979	1709	1364	2093	1748
270	4	631	446	1014	831	1306	1123	1599	1416	1891	1708	2184	2001	2476	2293	2768	2585	3061	2878	3646	3463	4230	4047
	5	787	560	902	675	1194	967	1487	1260	1778	1552	2072	1845	2364	2137	2658	2429	2948	2722	3534	3307	4116	3891
	6	943	672	790	519	1082	811	1375	1104	1667	1396	1960	1689	2252	1981	2544	2273	2837	2566	3422	3151	4006	3735
	7	1101	783	679	361	971	653	1264	946	1556	1238	1849	1531	2141	1823	2433	2115	2726	2408	3311	2993	3895	3577
	8	1258	895			859	496	1152	789	1444	1081	1737	1374	2029	1666	2321	1958	2614	2251	3199	2836	3783	3420
	9	1416	1007					1040	631	1332	923	1625	1216	1917	1508	2209	1800	2502	2093	3087	2678	3671	3262
	10	1572	1119							1220	787	1513	1080	1805	1352	2097	1644	2380	1937	2975	2522	3558	3106
	11	1730	1231									1401	902	1693	1194	1985	1486	2278	1779	2863	2384	3447	2948
	12	1887	1342											1582	1037	1874	1329	2167	1622	2752	2207	3336	2791

Springs mounting from for spring return actuators:

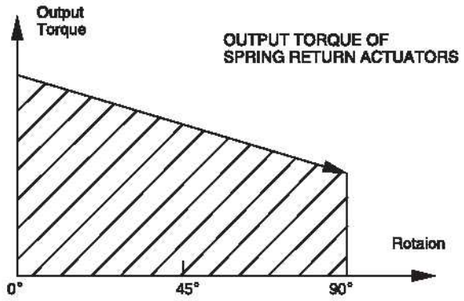


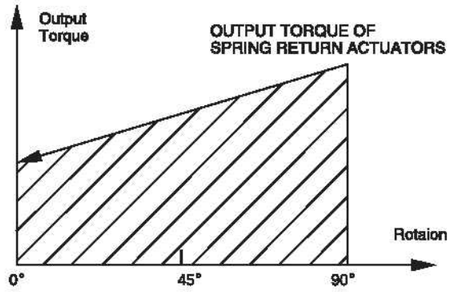
HAVKON® PNEUMATIC

XAT Series Pneumatic Actuator

Reference Selection

TYPE:
Single acting pneumatic actuator
The suggested safe factor for single acting actuators under normal working conditions is 20%~30%.
Example:
The torque needed by valve=100 Nm
The torque considered safe factor=100 (1+30%)=130 Nm
Air supply pressure=5Bar
According to the above table, we can choose the minimum model is XAT-40SR with full 6pcs spring.





HAVKON® PNEUMATIC

Air source treatment units

XCPC produce different standards of air source treatment unit(short as FRL), which include air filter, regulator, lubricator. They are offered as separation or combination, auto drain is available for some models. XCPC is one of the leading factory in this area for 10 years, with high reputation in domestic and international market.

HAVKON® PNEUMATIC

OU Series Air Source Treatment Unit

Hot

The XOU consisted of XOFR and XOL,each unit can be ordered separately.

The XOF with water separator cleans the compressed air of fluid oil,condensation and dirt. Particles.For special application,the standard 40μm filter element may easily be replaced by a 5μm filter element.

The XOR maintain imputting constant operating pressure despite fluctuation in line pressure and the amount of air consumed.The proportional lubricator adds a regulated quantity of oil to the filtered air.The oil-mist content proportional to the flow and oil can be added during operation. The oil drip rate is controlled by the adjustable bolt.Normally,1to 12 drops/1000L of the air is Sufficient

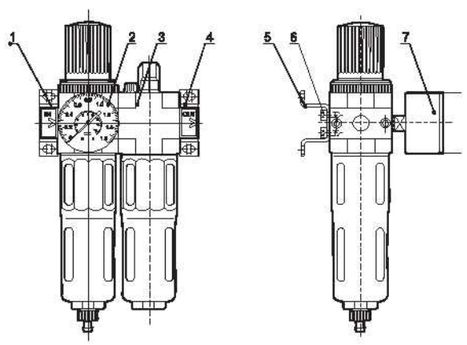
Ordering Code

XO	—	U	—	1/4	—	□	—	□	—	MINI
Series XO Series		**Function code** FR.L Combination		**Port Size** G1/8" G1/4" G3/8" G1/2" G3/4" G1"		**Grade of filtration** Blank:40 μ m 5M:5 μ m		**Manometer** Blank:12bar 7:7bar		**Size** MINI MIDI MAXI

Specification

Service units		MINI			MIDI			MAXI	
Manual Drain	Working pressure:12bar,40μm	XOU-1/8-MINI	XOU-1/4-MINI	XOU-3/8-MINI	XOU-3/8-MIDI	XOU-1/2-MIDI	XOU-3/4-MIDI	XOU-3/4-MAXI	XOU-1-MAXI
	Working pressure:7bar,40μm	XOU-1/8-7-MINI	XOU-1/4-D-7-MINI	XOU-3/8-7-MINI	XOU-3/8-7-MIDI	XOU-1/2-7-MIDI	XOU-3/4-7-MIDI	XOU-3/4-7-MAXI	XOU-1-7-MAXI
	Working pressure:12bar,5μm	XOU-1/8-5M-MINI	XOU-1/4-5M-MINI	XOU-3/8-5M-MINI	XOU-3/8-5M-MIDI	XOU-1/2-5M-MIDI	XOU-3/4-5M-MIDI	XOU-3/4-5M-MAXI	XOU-1-5M-MAXI
Manometer	0~12bar	OMA-40-16-1/8			OMA-50-16-1/4				
	0~7bar	OMA-40-10-1/8			OMA-50-10-1/4				
Medium		Compressed air							
Features of structure		Sintered filter with water sparator;MINI/MIDI:MAXI:Piston regulator;Diaphragm type regulator;Direct constant-density lubricator							
Mounting type		Pipe mounting or foot mounting							
Assembly position		Vertical ±5°							
Connection		G1/8"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G3/4"	G1"
Standard nominal flow rate	XOU-...(-A)	700	1000	1200	2000	2600	2600	7000	8000
	XOU-...-7-(-A)	800	1300	1500	2500	2800	2800	8500	8700
	XOU-...-5M-(-A)	600	850	1050	1700	1800	2100	8500	7200
Primary pressure	Manualcondensate drain	1~16bar							
	Automatic condensate drain	1.5~12bar							
Working pressure		0.5~12bar/0.5~7bar							
Min.Standard nominal flow rate		3 L/min			6 L/min			10 L/min	
Grade of filtration		40μm/5μm							
Capacity of condensate fluid		22ml							
Timperature range		0~60℃							
Materials information		Housing:Zinc die-casting;Filter bowl and oil bowl:PC;Meta bowl guard:Aluminium alloy;Sealing:NBR;Adjusting knob:POM							

Internal structure



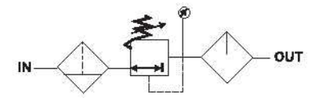
NO	Item	Material
1	Flange-IN	Zinc alloy
2	Filter + Regulator	
3	Lubricator	
4	Flange - OUT	Zinc alloy
5	Bracket	SPCC
6	Allen screw	S35C
7	Pressure guage	

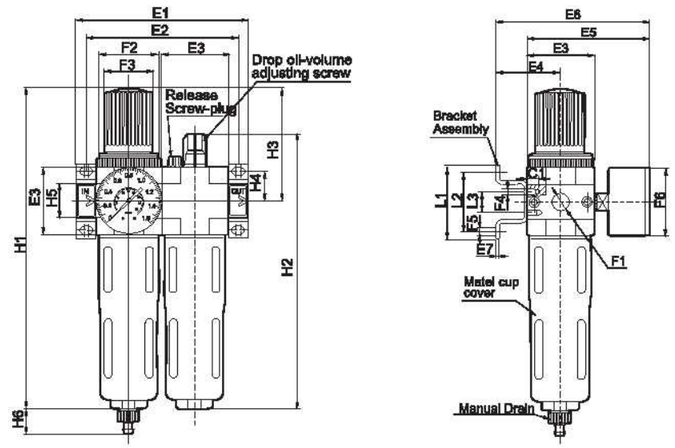
HAVKON® PNEUMATIC

XOU Series Air Source Treatment Unit

Overall Dimensions

Graphic Symbol





Dimension Sheet

Model	E1	E2	E3	E4	E5	E6	E7	F1	F2
XOU-...-MINI	104	92	40	39	76	95	2	G1/8",G1/4",G3/8"	M36×1.5
XOU-...-MIDI	140	125	55	47	93	112	3	G1/8",G1/2",G3/4"	M52×1.5
XOU-...-MAXI	162,182	146,157	66	53	104	124	3	G3/4",G1"	M36×1.5

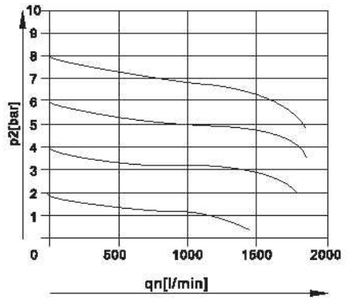
Model	F3Φ	F4	F5Φ	F6Φ	L1	L2	L3	H1	H2	H3	H4	H5	H6
XOU-...-MINI	31	M4	4.5	40	44	35	11	194	169	69	17.5	20	15
XOU-...-MIDI	50	M5	5.5	52	71	60	22	250	206	97	24.5	32	15
XOU-...-MAXI	31	M5	5.5	63	71	60	22	252	223	80	24.5	32,40	15

Note: The Color Can Be Customized According to Your Reqirement.

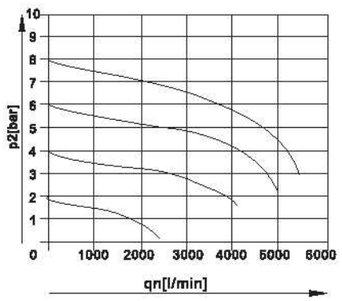
Flow diagram

Standard flow rate qn as a function of the output pressure p2

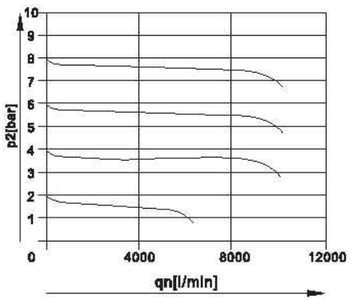
OU-1/4-MINI



OU-1/2-MIDI



OU-1-MAXI



Primary pressure: p1=10 bar

HAVKON® PNEUMATIC

XOFR Series Filter & Regulator

Hot

Filter and pressure regulator combine a single unit, and cleans the compressed air of fluid oil,condensation and dirt particles.For special application,the standard 40μm filter element may easily be replaced by a 5μm filter element.

The XOR maintain im putting constant operating pressure despite fluctuation in line pressure and the amount of air consumed.

Ordering Code

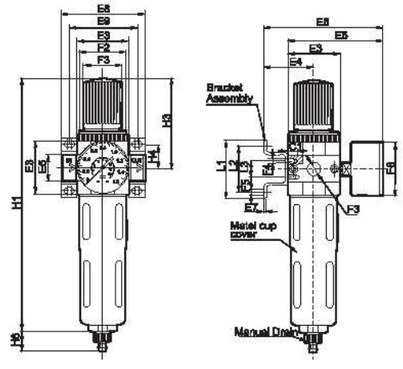
XO	—	FR	—	1/4	—	□	—	□	—	MINI
Series XO Series		**Function code** Filter&Regulator		**Port Size** G1/8" G1/2" G1/4" G3/4" G3/8" G1"		**Grade of filtration** Blank:40μm 5M:5μm		**Manometer** Blank:12bar 7:7bar		**Size** MINI MIDI MAXI

Specification

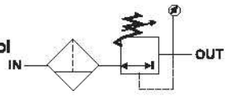
Filter regulators		MINI			MIDI			MAXI	
Manual Drain	Working pressure:12bar,40μm	XOFR-1/8-MINI	XOFR-1/4-MINI	XOFR-3/8-MINI	XOFR-3/8-MIDI	XOFR-1/2-MIDI	XOFR-3/4-MIDI	XOFR-3/4-MAXI	XOFR-1-MAXI
	Working pressure:7bar,40μm	XOFR-1/8-7-MINI	XOFR-1/4-D-7-MINI	XOFR-3/8-7-MINI	XOFR-3/8-7-MIDI	XOFR-1/2-7-MIDI	XOFR-3/4-7-MIDI	XOFR-3/4-7-MAXI	XOFR-1-7-MAXI
	Working pressure:12bar,5μm	XOFR-1/8-5M-MINI	XOFR-1/4-5M-MINI	XOFR-3/8-5M-MINI	XOFR-3/8-5M-MIDI	XOFR-1/2-5M-MIDI	XOFR-3/4-5M-MIDI	XOFR-3/4-5M-MAXI	XOFR-1-5M-MAXI
Manometer	0~12bar	OMA-40-16-1/8			OMA-50-16-1/4				
	0~7bar	OMA-40-10-1/8			OMA-50-10-1/4				
Medium		Compressed air							
Features of structure		Sintered filter with water sparator;MINI/MID:Diaphragm type-regulator;MAXI:Piston regulator;							
Mounting type		Pipe mounting or foot mounting							
Assembly position		Vertical ±5°							

Connection		G1/8"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G3/4"	G1"
Standard nominal flow rate	XOFR-...	750	1400	1600	3100	3400	3400	9000	10000
	XOFR-...-7	900	1500	1700	3400	3900	3900	9500	16000
	XOFR-...-5M	650	1200	1350	2400	2500	2500	7300	7600
Primary pressure	Manual drain	1~16bar							
Working pressure		0.5~12bar/0.5~7bar							
Grade of filtration		40μm/5μm							
Max.Condensate Capacity		22ml							
Timperature range		0~60℃							
Materials Information		Housing:Zinc die-casting;Filter bowl:PC;Meta bowl guard:Aluminium alloy;Sealing:NBR;Adjusting knob:POM							

Overall Dimensions



Graphic Symbol



Dimension Sheet

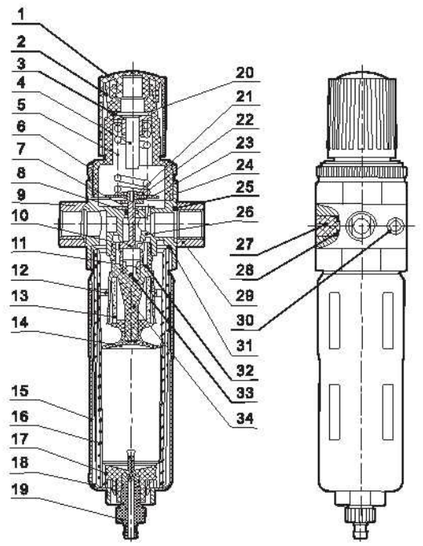
Model	E3	E4	E5	E6	E8	E9	F1	F2
XOFR-...-MINI	40	39	78	95	64	52	G1/8",G1/4",G3/8"	M36×1.5
XOFR-...-MIDI	55	47	93	112	85	70	G1/8",G1/2",G3/4"	M52×1.5
XOFR-...-MAXI	66	53	104	124	96,116	80,91	G3/4",G1"	M36×1.5

Model	F3Φ	F4	F5Φ	F6Φ	L1	L2	L3	H1	H3	H4	H5	H6
XOFR-...-MINI	31	M4	4.5	40	44	35	11	194	89	17.5	20	15
XOFR-...-MIDI	50	M5	5.5	52	71	60	22	250	98	24.5	32	15
XOFR-...-MAXI	31	M5	5.5	63	71	60	22	252	80	24.5	32,40	15

HAVKON® PNEUMATIC

XOFR Series Filter & Regulator

Internal structure

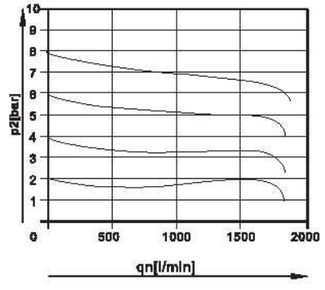


NO	Item	Material	NO	Item	Material
1	Pressure knob	POM	18	Inner joint	POM
2	Regulator cap	POM	19	Condensate drain	POM
3	Regulator nut	S35C	20	Wearing sheet	Insulation sheet
4	Adjusting spindle	S35C	21	OR Sheet	NBR
5	Pressure spring	SWC	22	Overflow base	6061-T6
6	Fixed ring	6061-T6	23	One part of diaphragm	SPCC
7	One part of membrane	PA6+G15	24	Diaphragm	NBR+Nylon Mesh
8	O-ring	NBR	25	O-ring	NBR
9	Flange-IN	Zinc alloy	26	OR Body	Zinc alloy
10	Spool	Brass	27	Plug	POM
11	O-ring	NBR	28	O-ring	NBR
12	Whirl wind impeller	POM	29	Flange-OUT	Zinc alloy
13	Filter element	PE	30	Allen screw	S35C
14	Manger	POM	31	O-ring	NBR
15	Metal bowl guard	Aluminium alloy	32	Spring	SWPB
16	Filter bowl	PC	33	Fasteners	Brass
17	O-ring	NBR	34	Filter element base	POM

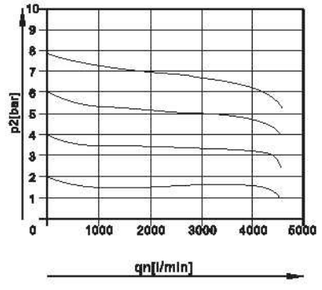
Flow diagram

Standard flow rate qn as a function of the output pressure p2

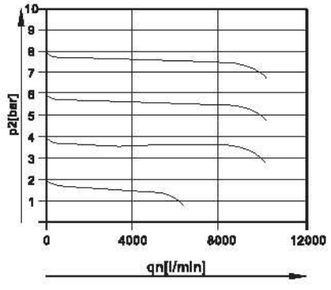
OFR-1/4-MINI



OFR-1/2-MIDI



OFR-1-MAXI



Primary pressure: p1=10 bar

HAVKON® PNEUMATIC

XOR Series Regulator

Hot

The XOR maintain imputting constant operating pressure despite fluctuation in line pressure and the amount of air consumed.

Ordering Code

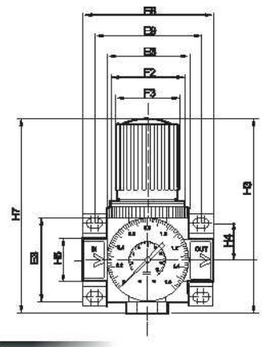
XO	—	R	—	1/4	—	□	—	MINI
Series		**Function code**		**Port Size**		**Manometer**		**Size**
XO Series		Regulator		G1/8" G1/4" G3/8" G1/2" G3/4" G1"		Blank:12bar 7:7bar		MINI MIDI MAXI

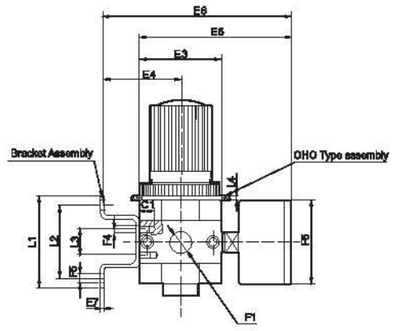
Specification

NEW

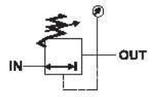
Regulators		MINI			MIDI			MAXI	
Working pressure 12bar		XOR-1/8-MINI	XOR-1/4-MINI	XOR-3/8-MINI	XOR-3/8-MIDI	XOR-1/2-MIDI	XOR-3/4-MIDI	XOR-3/4-MAXI	XOR-1-MAXI
Working pressure 7bar		XOR-1/8-7-MINI	XOR-1/4-7-MINI	XOR-3/8-7-MINI	XOR-3/8-7-MIDI	OXR-1/2-7-MIDI	XOR-3/4-7-MIDI	XOR-3/4-7-MAXI	XOR-1-7-MAXI
Manometer	0~12bar	OMA-40-16-1/8			OMA-50-16-1/4				
	0~7bar	OMA-40-10-1/8			OMA-50-10-1/4				
Medium		Filtered,compressed air(lubricated or unlubricated)							
Features of structure		MINI/MIDI:Diaphragm type regulator;MAXI: Piston regulator							
Mounting type		Pipe/foot/Plate mounting							
Assembly position		Any							
Connection		G1/8"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G3/4"	G1"
Standard nominal flow rate	XOR-...	800	1500	1700	3200	3500	3500	11000	11500
	XOR-...-7-	1000	1600	1800	3300	4000	4500	12000	12500
Primary pressure		1~16bar							
Working pressure		0.5~12bar/0.5~7bar							
Timperature range		0~60℃							
Materials information		Housing:Zinc die-casting; Sealing:NBR; Adjusting knob:POM							

Overall Dimensions





Graphic Symbol



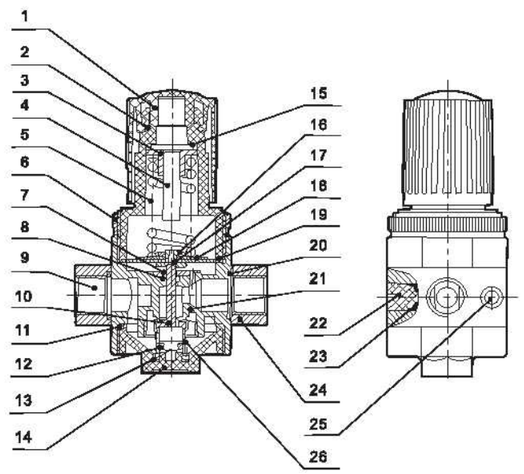
Dimension Sheet

Model	E3	E4	E5	E6	E8	E9	F1	F2	F3Φ	F4	F5Φ	F6Φ	L1	L2	L3	L4	H3	H4	H7
XOR-...-MINI	40	39	76	95	64	52	G1/8",G1/4",G3/8"	M36×1.5	31	M4	4.5	40	44	35	11	Max.3	69	17.5	96
XOR-...-MIDI	55	47	93	112	85	70	G1/8",G1/2",G3/4"	M52×1.5	50	M5	5.5	52	71	60	22	Max.5	98	24.5	96
XOR-...-MAXI	66	53	104	124	96,116	80,91	G3/4",G1"	M36×1.5	31	M5	5.5	63	71	60	22	Max.4	80	24.5	96

HAVKON® PNEUMATIC

XOR Series Regulator

Internal structure

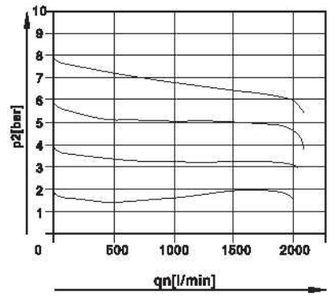


NO	Item	Material
1	Pressure knob	POM
2	Regulator cap	POM
3	Regulator nut	S35C
4	Adjusting spindle	S35C
5	Pressure spring	SWC
6	Fixed ring	6061-T6
7	One part of membrane	NBR
8	O-ring	NBR
9	Flange-IN	Zinc alloy
10	Spool	Brass
11	O-ring	NBR
12	O-ring	NBR
13	Fasteners	Brass
14	Locker cover	Zinc alloy
15	Wearing sheet	Insulation sheet
16	OR Sheet	NBR
17	Overflow base	6061-T6
18	One part of diaphragm	SPCC
19	Diaphragm	NBR+Nylon Mesh
20	O-ring	NBR
21	OR Body	Zinc alloy
22	Plug	POM
23	O-ring	NBR
24	Flange-OUT	Zinc alloy
25	Allen screw	S35C
26	Spring	SWPB

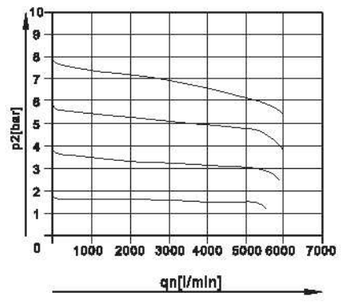
Flow diagram

Standard flow rate qn as a function of the output pressure p2

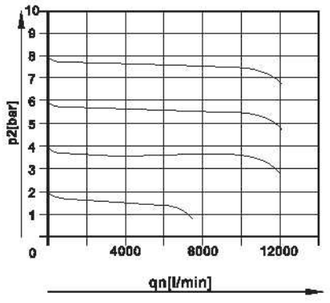
OR-1/4-MINI



OR-1/2-MIDI



OR-1-MAXI



Primary pressure: p1=10 bar

HAVKON® PNEUMATIC

OF Series Air Filter

Hot

The OF with water separator cleans the compressed air of fluid oil,condensation and dirt particles,for special application,the standard 40μm filter element may easily be replaced by a 5μm filte relement.

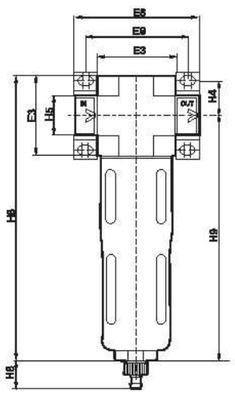
Ordering Code

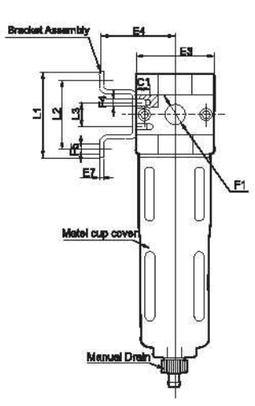
XO	—	F	—	1/4	—	□	—	MINI
Series		**Function code**		**Port Size**		**Grade of filtration**		**Size**
XO Series		Filter		G1/8" G1/4" G3/8" G1/2" G3/4" G1"		Blank:40μm 5M:5μm		MINI MIDI MAXI

Specification

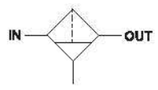
Filters		MINI			MIDI			MAXI	
40μm	Manual Drain	XOF-1/8-MINI	XOF-1/4-MINI	XOF-3/8-MINI	XOF-3/8-MIDI	XOF-1/2-MIDI	XOF-3/4-MIDI	XOF-3/4-MAXI	XOF-1-MAXI
5μm		XOF-1/8-5M-MINI	XOF-1/4-5M-MINI	XOF-3/8-5M-MINI	XOF-3/8-5M-MIDI	XOF-1/2-5M-MIDI	XOF-3/4-5M-MIDI	XOF-3/4-5M-MAXI	XOF-1-5M-MAXI
Medium		Compressed air							
Features of structure		Sintered filter with water spartor							
Mounting type		Pipe mounting or foot mounting							
Assembly position		Vertical ±5°							
Connection		G1/8"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G3/4"	G1"
Standard nominal flow rate	OF-...	1000	1200	1400	2700	3000	3000	5000	5300
	OF-...-5M	600	950	1100	1800	1900	1900	3200	3300
Primary pressure	Manual drain	1~16bar							
Grade of filtration		40μm/5μm							
Max.condensate capacity		22ml							
Timperature range		0~60℃							
Materials information		Housing:Zinc die-casting;Filter bowl :PC;Metal bowl guard:Aluminium alloy;Sealing:NBR							

Overall Dimensions





Graphic Symbol



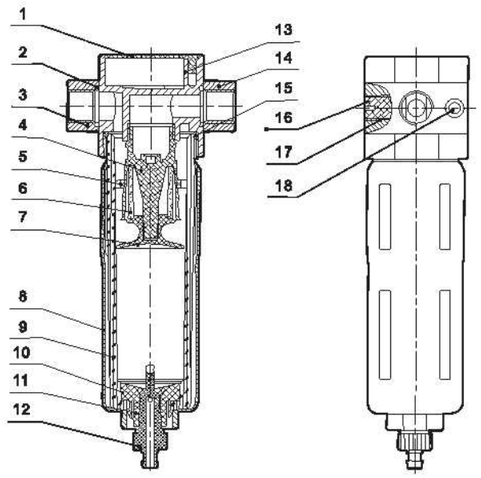
Dimension Sheet

Model	E3	E4	E7	E8	E9	F1	F4	F5Φ	L1	L2	L3	H4	H5	H6	H8	H9
XOF-...-MINI	40	39	2	64	52	G1/8",G1/4",G3/8"	M4	4.5	44	35	11	17.5	20	15	144	129
XOF-...-MIDI	55	47	3	85	70	G1/8",G1/2",G3/4"	M5	5.5	71	60	22	24.5	32	15	179	156
XOF-...-MAXI	66	53	3	96,116	80,91	G3/4",G1"	M5	5.5	71	60	22	24.5	32,40	15	203	175

HAVKON® PNEUMATIC

OF Series Air Filter

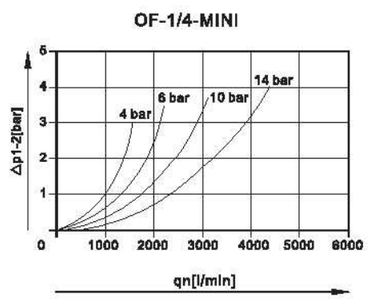
Internal structure

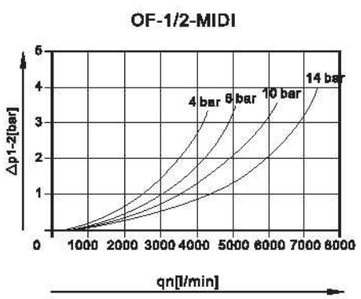


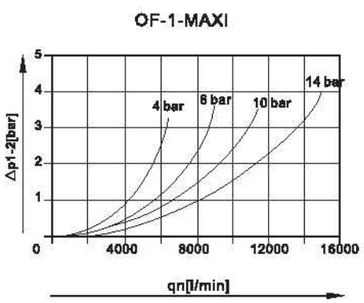
NO	Item	Material
1	Ornament cover(round)	POM
2	O-ring	NBR
3	Flange-IN	Zinc alloy
4	Filter element base	POM
5	Whirl wind impriler	POM
6	Filter element	PE
7	Manger	POM
8	Metal bowl guard	Aluminium alloy
9	Filter bowl	PC
10	O-ring	NBR
11	Inner joint	POM
12	Condensate drain	POM
13	OF Body	Zinc alloy
14	Flange-OUT	Zinc alloy
15	O-ring	NBR
16	Plug	POM
17	O-ring	NBR
18	Allen screw	S35C

Flow diagram

Standard flow rate qn as a function of the output pressure p2







Primary pressure: p1=10 bar

HAVKON® PNEUMATIC

OL Series Lubricator

The direct constant-density lubricator add regulatd quantity oil to the compressed air.A valve maintains oil mist content proportional to the compressed oil flow.

The pressure drop that occurs when the air flow through a sight feed oil cup delives oil from the bowl to the sight oil indicator.The drop of the oil flows into the air channel when it is atomized.

The oil drip rate is controlled by means of the regulating screw.Normally,1 to 12 drops/1000L of the air is sufficient.

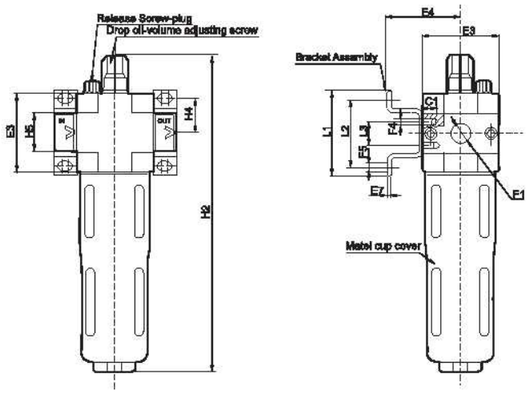
Ordering Code

XO	—	L	—	1/4	—	MINI
Series		**Function code**		**Port Size**		**Size**
XO Series		Lubricator		G1/8" G1/2" G1/4" G3/4" G3/8" G1"		MINI MIDI MAXI

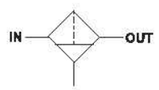
Specification

Lubricators	MINI			MIDI			MAXI	
	XOL-1/8-MINI	XOL-1/4-MINI	XOL-3/8-MINI	XOL-3/8-MIDI	XOL-1/2-MIDI	XOL-3/4-MIDI	XOL-3/4-MAXI	XOL-1-MAXI
Medium	Compressed air							
Features of structure	Sintered filter with water spartor The direct Constant-density Lubricator							
Mounting type	Pipe mounting or foot mounting							
Assembly position	Vertical ±5°							
Connection	G1/8"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G3/4"	G1"
Standard nominal flow rate	1300	2300	2700	5500	8100	8300	8400	9000
Max.Working pressure	16bar							
Min.Standard nominal flow rate	3 L/min			6 L/min			10 L/min	
Max.condensate capacity	22ml							
Timperature range	0~60℃							
Materials information	Housing:Zinc die-casting;Oil bowl and Drip cap :PC;Metal bowl guard:Aluminium alloy;Sealing:NBR							
Recommended oil	ISO VG 32 or the same grade							

Overall Dimensions



Graphic Symbol



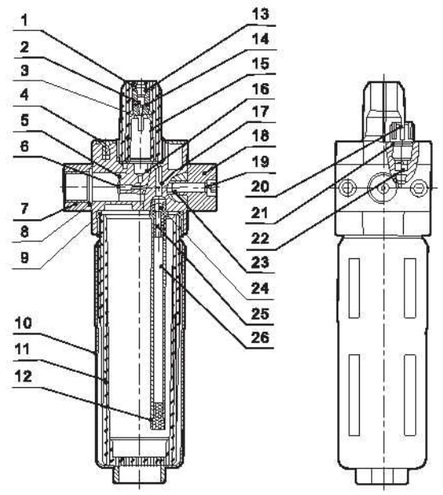
Dimension Sheet

Model	E3	E4	E7	F1	F4	F5Φ	L1	L2	L3	H4	H5
XOL-...-MINI	40	39	2	G1/8",G1/4",G3/8"	M4	4.5	44	35	11	17.5	20
XOL-...-MIDI	55	47	3	G1/8",G1/2",G3/4"	M5	5.5	71	60	22	24.5	32
XOL-...-MAXI	66	53	3	G3/4",G1"	M5	5.5	71	60	22	24.5	32,40

HAVKON® PNEUMATIC

OL Series Lubricator

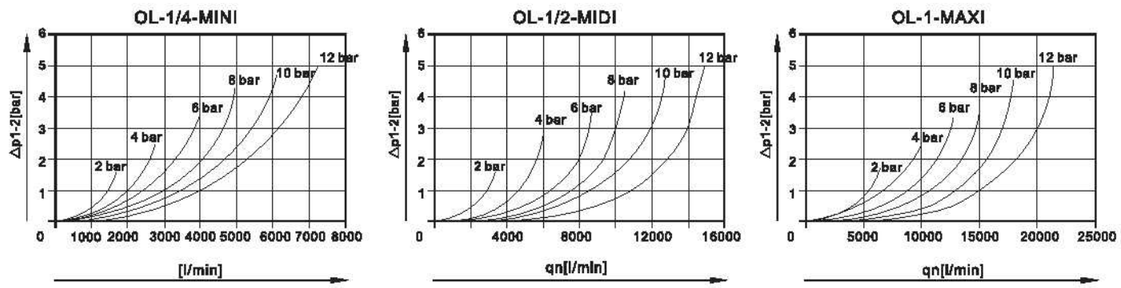
Internal structure



NO	Item	Material
1	Upper glass	PC
2	Adjust screw	Brass
3	O-ring	NBR
4	Ornament cover(circular)	PO
5	Windshield chip	NBR
6	Windshield base	Brass
7	Flange-IN	Zinc alloy
8	O-ring	NBR
9	O-ring	NBR
10	Metal bowl guard	Aluminium alloy
11	Lubricator bowl	PC
12	Oil-filter plup	Brass powder sintered
13	O-ring	NBR
14	Screw base	Brass
15	Oil dropping	PC
16	Seal piece	NBR
17	OL Body	Zinc alloy
18	Flange-OUT	Zinc alloy
19	Allen screw	S35C
20	Bleeder screw	POM
21	O-ring	NBR
22	Valve pin	Brass
23	Double-end bolt	SUS
24	Steel ball	SUS304
25	Oil tube connection	POM
26	Oil tube	PU

Flow diagram

Standard flow rate qn as a function of the output pressure p2



Primary pressure: p1=10 bar

HAVKON® PNEUMATIC

A Series Air Source Treatment Unit

F.R.L Part list

AR3000	NO	NAME	QTY	MATERIAL
	1	Regulator seat	1	ZZnA14-1
	2	O-ring	1	NBR
	3	O-ring	1	NBR
	4	Washer	1	Carbon steel
	5	Spring	1	Stainless steel
	6	Retainer ring	1	Carbon steel
	7	Valve core	1	Brass
	8	Spool	1	Brass+NBR
	9	Regulator Body	1	Aluminum
	10	Plug	1	Carbon steel
	11	O-ring	1	NBR
	12	Retainer ring	1	Carbon steel
	13	Pipe	1	POM
	14	Diaphragm seat	1	Brass
	15	Diaphragm	1	NBR
	16	Spring seat	1	Carbon steel
	17	Spring	1	Carbon steel
	18	Regulate Nut	1	Carbon steel
	19	Washer	1	POM
	20	Regulate bolt	1	Carbon steel
	21	Valve cover	1	Reinforce nylon
	22	Spring washer	4	Carbon steel
	23	Cross screw	4	Carbon steel
	24	Nut	1	Reinforce nylon
	25	Symbol ring	1	Reinforce nylon
	26	Regulate handle	1	Reinforce nylon

AF3000	NO	NAME	QTY	MATERIAL
	1	Regulator Body	1	Aluminum
	2	O-ring	1	NBR
	3	Whirlwing blade	1	ABS
	4	Filter Element	1	Brass
	5	Bolt biard	1	Carbon Steel
	6	Drain biard	1	ABS
	7	Water cup	1	Poly Carbonate
	8	Valve Core	1	Brass
	9	Spring	1	Stainless steel
	10	O-ring	1	NBR
	11	Drain valve	1	Brass
	12	O-ring	1	NBR
	13	Hex Nut	1	Brass
	14	Nut	1	Brass
	15	Bowl guard	1	Carbon steel
	16	Spring	1	Stainless steel
	17	Pin	1	ABS
	18	Lock	1	ABS

XAL3000	NO	NAME	QTY	MATERIAL
	1	Plug	1	ABS
	2	O-ring	1	NBR
	3	Oil regulate Screw	1	ABS
	4	Oil drop tube	1	Polycarbonate
	5	O-ring	1	NBR
	6	Oil drop tube	1	Polycarbonate
	7	O-ring	1	NBR
	8	Lubricator Body	1	Aluminum
	9	Regulate needle	1	Brass
	10	O-ring	1	NBR
	11	Oil regulate valve seat	1	Brass
	12	Reed	1	Poly ure thane
	13	Reed seat	1	ZZnA14-1
	14	Bracket	1	ZZnA14-1
	15	Small hole seat	1	Brass
	16	Steel Ball	1	Carbon steel
	17	Spring	1	Stainless steel
	18	One way valve seat	1	Brass
	19	Reed seat board	1	ZZnA14-1
	20	Screw	2	Carbon steel
	21	Filter Element	1	Brass
	22	O-ring	1	NBR
	23	Middle Part	1	Aluminum
	24	Spring washer	4	Carbon steel
	25	Hex Screw	4	Carbon steel
	26	O-ring	1	NBR
	27	Steel Ball	1	Carbon steel
	28	Fitting	1	POM
	29	Pin	1	Carbon steel
	30	Oil tube	1	PU
	31	O-ring	1	NBR
	32	O-ring	1	NBR
	33	Oil cup	1	Polycarbonate
	34	Bowl guard	1	Carbon steel
	35	Spring	1	Stainless steel
	36	Pin	1	ABS
	37	Lock	1	ABS

XAW3000	NO	NAME	QTY	MATERIAL
	1	Valve core	1	Brass
	2	Spring	1	Stainless steel
	3	O-ring	1	NBR
	4	Drain valve	1	Brass
	5	O-ring	1	NBR
	6	Hex Nut	1	Brass
	7	Nut	1	Brass
	8	Pin	1	ABS
	9	Lock	1	ABS
	10	Spring	1	Stain Steel
	11	Bowl guard	1	Carbon steel
	12	Whirlwing blade	1	ABS
	13	Filter element	1	Brass
	14	Bolt	1	Carbon Steel
	15	Drain board	1	ABS
	16	O-ring	1	NBR
	17	Water cup	1	Polycarbonate
	18	Diaphragm Pollet	1	Carbon steel
	19	Diaphragm	1	NBR
	20	Diaphragm seat	1	Brass
	21	Pipe	1	POM
	22	Retainer ring	1	Carbon steel
	23	O-ring	1	NBR
	24	Regulator Body	1	Aluminum
	25	Plug	1	Carbon steel
	26	Spool	1	Brass+NBR
	27	Valve core	1	Brass
	28	O-ring	1	NBR
	29	Retainer ring	1	Carbon steel
	30	Spring	1	Stain steel
	31	Overflow valve seat	1	ZZnA14-1
	32	Regulate handle	1	Reinforce nylon
	33	Symbol ring	1	Reinforce nylon
	34	Nut	1	Reinforce nylon
	35	Valve cover	1	Reinforce nylon
	36	Cross screw	4	Carbon steel
	37	Spring washer	4	Carbon steel
	38	Regulate Bolt	1	Carbon steel
	39	Washer	1	POM
	40	Regulate Nut	1	Carbon steel
	41	Spring	1	Carbon steel

HAVKON® PNEUMATIC

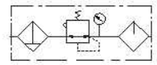
AC1000~5000 Series Air Filter Combination(F.R.L Combination)

XAC5000-10

XAC4000-04

XAC1000-M5

Graphic Symbol



Ordering Code

XA — C — 3000 — 04 — □

Series
XA series

Function code
F.R.L Combination

Specification Code
1000
2000
3000
4000
5000

Port Size
M5:M5×0.8
01:G1/8"
02:G1/4"
03:G3/8"
04:G1/2"
06:G3/4"
10:G1"

Drain Type
Blank:Manual Drain Type
D:Auto Drain Type (Avaible for 2000 or above)

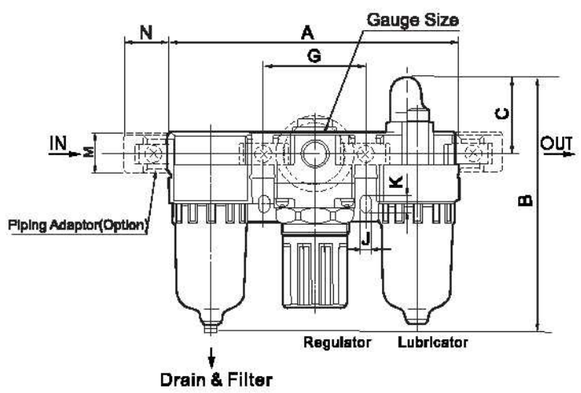
Specification

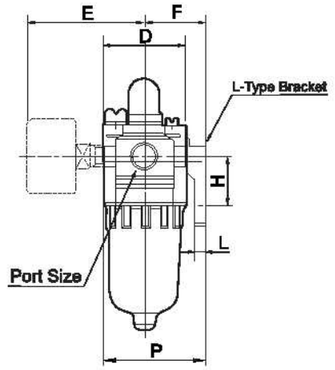
Model		XAC1000-M5	XAC2000-01	XAC2000-02	XAC3000-02	XAC3000-03	XAC4000-03	XAC4000-04	XAC4000-06	XAC5000-06	XAC5000-10
Rated Flow		90	500	500	2000	2000	4000	4000	4500	5000	5000
Port Size		M5	G1/8"	G1/4"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G3/4"	G1"
Filter Precision		25 μ									
Highest Working Pressure		1.0MPa									
Ensured pressure Resistance		1.5MPa									
Operating Temperature Range		5~60℃									
Range of Adjustable Pressure		0.05~0.7MPa			0.05~0.85MPa						
Recommended Oil Use		ISO VG 32									
Container Material		Polycarbonate									
Protective Cover		Not Available			Available						
Drain Function		Differential Drain			Differential Drain/Automatic Drain						
Valve Type		With Over flow									
Composing Elements	Filter	XAF1000-M5	XAF2000-01	XAF2000-02	XAF3000-02	XAF3000-03	XAF4000-03	XAF4000-04	XAF4000-06	XAF5000-06	XAF5000-10
	Regulator	XAR1000-M5	XAR2000-01	XAR2000-02	XAR3000-02	XAR3000-03	XAR4000-03	XAR4000-04	XAR4000-06	XAR5000-06	XAR5000-10
	Lubricator	XAL1000-M5	XAL2000-01	XAL2000-02	XAL3000-02	XAL3000-03	XAL4000-03	XAL4000-04	XAL4000-06	XAL5000-06	XAL5000-10

HAVKON® PNEUMATIC

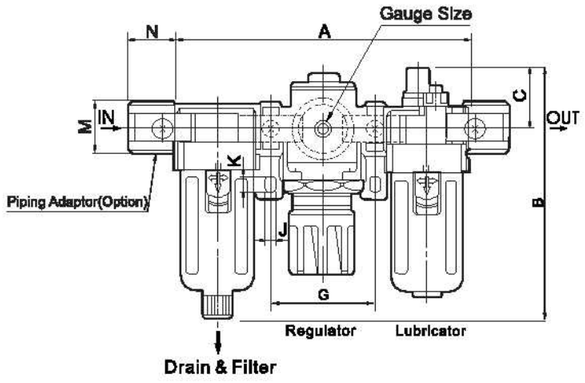
AC1000~5000 Series Air Filter Combination(F.R.L Combination)

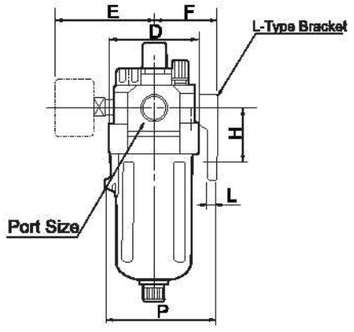
Overall Dimensions





XAC1000~2000





XAC3000~5000

Dimension Sheet

Model	Port Size(G)	A	B	C	D	E	F	G	H	J	K	L	M	N	P
XAC1000	M5	91	84.5	25.5	25	26	25	33	20	4.5	7.5	5	17.5	16	36.5
XAC2000	G1/8"~G1/4"	140	125	38	40	56.8	30	50	24	5.5	8.5	5	22	23	50
XAC3000	G1/4"~G3/8"	181	156.5	38	53	60.8	41	64	35	7	11	7	34.2	26	70.5
XAC4000	G3/8"~1/2"	236	191.5	41	70	65.5	50	84	40	9	13	7	42.2	33	88
XAC4000-06	G3~4"	153	193	40.5	70	69.5	50	89	40	9	13	7	46.2	36	88
XAC5000	G3/4"~G1"	300	271.5	48	90	75.5	69.8	105	50	12	16	10.5	55.5	40	115

HAVKON® PNEUMATIC

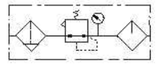
AC1010~5010 Series Air Filter Combination(FR.L Combination)

XAC5010-10

XAC4010-04

XAC1010-M5

Graphic Symbol



Ordering Code

XA C 3010 — 04 □

Series
XA series

Function code
F.R.L Combination

Specification Code
1010
2010
3010
4010
5010

Port Size
M5:M5×0.8
01:G1/8"
02:G1/4"
03:G3/8"
04:G1/2"
06:G3/4"
10:G1"

Drain Type
Blank:Manual Drain Type
D:Auto Drain Type (Availble for 2000 or above)

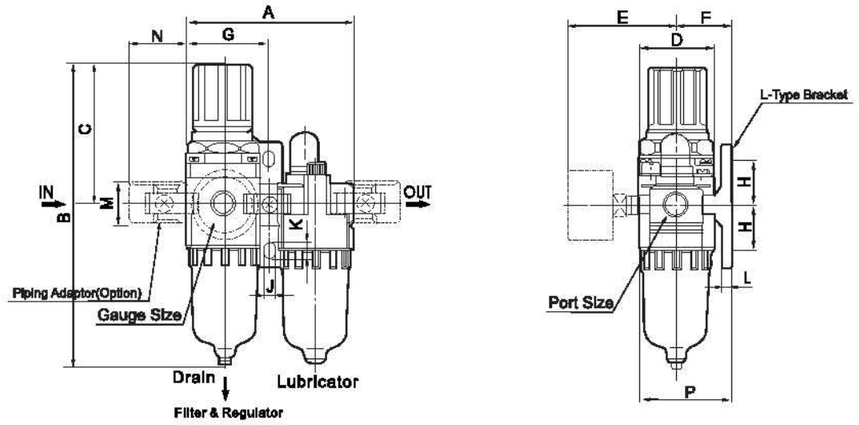
Specification

Model		XAC1010-M5	XAC2010-01	XAC2010-02	XAC3010-02	XAC3010-03	XAC4010-03	XAC4010-04	XAC4010-06	XAC5010-06	XAC5010-10
Rated Flow		90	500	500	1700	1700	3000	3000	3000	4000	4000
Port Size		M5	G1/8"	G1/4"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G3/4"	G1"
Filter Precision		25μ									
Highest Working Pressure		1.0MPa									
Ensured pressure Resistance		1.5MPa									
Operating Temperature Range		5~60℃									
Range of Adjustable Pressure		0.05~0.7MPa	0.05~0.85MPa								
Recommended Oil Use		ISO VG 32									
Container Material		Polycarbonate									
Protective Cover		Not Available	Available								
Drain Function		Differential Drain	Differential Drain,Automatic Drain								
Valve Type		With Over flow									
Composing Elements	Filter&Regulator	XAW1000-M5	XAW2000-01	XAW2000-02	XAW3000-02	XAW3000-03	XAW4000-03	XAW4000-04	XAW4000-06	XAW5000-06	XAW5000-10
	Lubricator	XAL1000-M5	XAL2000-01	XAL2000-02	XAL3000-02	XAL3000-03	XAL4000-03	XAL4000-04	XAL4000-06	XAL5000-06	XAL5000-10

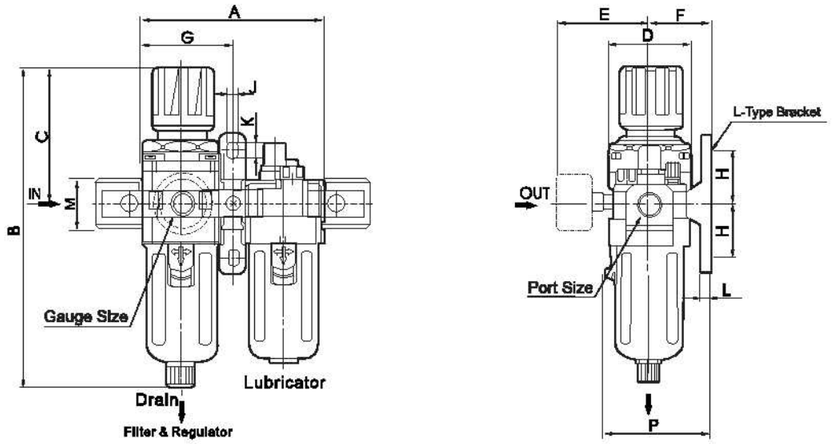
HAVKON® PNEUMATIC

AC1010~5010 Series Air Filter Combination(FR.L Combination)

Overall Dimensions



XAC1010~2010



XAC3010~5010

Dimension Sheet

Model	Port Size(G)	A	B	C	D	E	F	G	H	J	K	L	M	N	P
XAC1010	M5	58	109.5	50.5	25	26	25	29	20	4.5	7.5	5	17.5	16	38.5
XAC2010	G1/8" ~G1/4"	90	164.5	78	40	56.8	30	45	24	5.5	8.5	5	22	23	50
XAC3010	G1/4" ~G3/8"	117	211	92.5	53	60.8	41	58.5	35	7	11	7	34.2	26	70.5
XAC4010	G3/8" ~1/2"	154	262	112	70	70.5	50	77	40	9	13	7	42.2	33	88
XAC4010-06	G3~4"	164	267	114	70	70.5	50	82	40	9	13	7	46.2	36	88
XAC5010	G3/4" ~G1"	195	338	116	90	75.5	69.8	97.5	50	12	16	10.5	55.5	40	115

HAVKON® PNEUMATIC

AF1000~5000 Series Air Filter

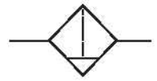
XAF5000-10

XAF4000-04

XAF1000-M5

Ordering Code

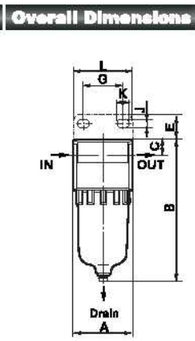
XA	F	3000	—	04	□
Series: XA series	Function code: Filter	Specification Code: 1000 / 2000 / 3000 / 4000 / 5000		Port Size: M5:M5×0.8 / 01:G1/8" / 02:G1/4" / 03:G3/8" / 04:G1/2" / 06:G3/4" / 10:G1"	Drain Type: Blank:Manual Drain Type / D:Auto Drain Type (Avalble for 2000 or above)

Graphic Symbol 

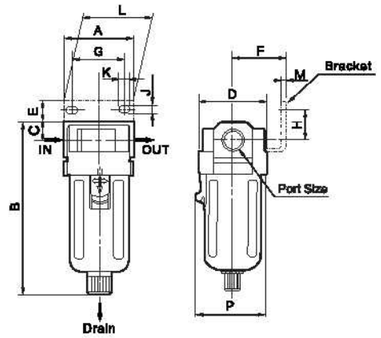
Specification

Model	XAC1000 -M5	XAC2000 -01	XAC2000 -02	XAC3000 -02	XAC3000 -03	XAC4000 -03	XAC4000 -04	XAC4000 -06	XAC5000 -06	XAC5000 -10
Rated Flow	110	750	750	1500	1500	4000	4000	6000	7000	7000
Port Size	M5	G1/8"	G1/4"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G3/4"	G1"
Filter Precision	25μ									
Highest Working Pressure	1.0MPa									
Ensured pressure Resistance	1.5MPa									
Operating Temperature Range	5~60℃									
Container Material	Polycarbonate									
Protective Cover	Not Available			Available						
Drain Function	Differential Drain			Differential Drain,Automatic Drain						

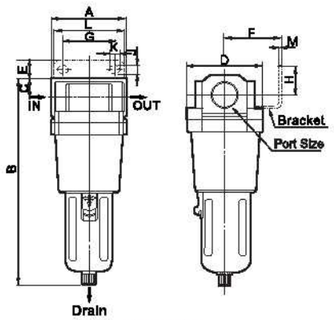
Overall Dimensions



XAF1000~2000



XAF3000~4000



XAF5000

Dimension Sheet

Model	Port Size(G)	A	B	C	D	E	F	G	H	J	K	L	M	P
XAF1000	M5	25	66	7	25	-	-	-	-	-	-	-	-	26.5
XAF2000	G1/8" ~G1/4"	40	97.5	11	40	17	30	27	22	5.4	8.4	40	2.3	40
XAF3000	G1/4" ~G3/8"	53	132.5	14	53	16	41	40	23	6.5	8	53	2.3	56
XAF4000	G3/8" ~1/2"	70	168.5	18	70	17	50	54	26	8.5	10.5	70	2.3	73
XAF4000-06	G3~4"	75	172.5	20	70	14	50	54	25	8.5	10.5	70	2.3	73
XAF5000	G3/4" ~G1"	90	247.5	24	90	23	66.5	66	35	11	13	90	3.2	90

HAVKON® PNEUMATIC

AR 1000~5000 Series Regulator


XAR5000-10

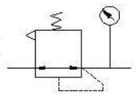

XAR4000-04


XAR1000-M5

Ordering Code

XA	R	3000	—	04
Series: XA series	Function code: Regulator	Specification Code: 1000 / 2000 / 3000 / 4000 / 5000		Port Size: M5:M5×0.8 / 01:G1/8" / 02:G1/4" / 03:G3/8" / 04:G1/2" / 06:G3/4" / 10:G1"

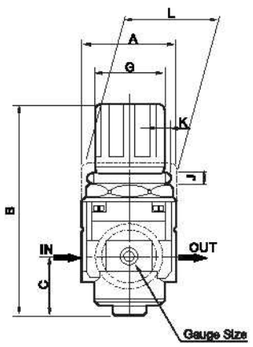
Graphic Symbol

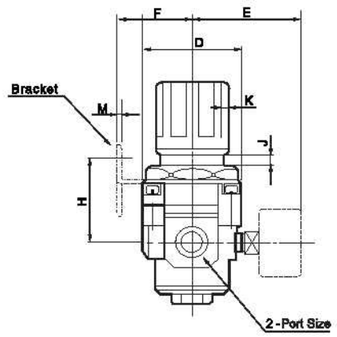


Specification

Model	XAR1000 -M5	XAR2000 -01	XAR2000 -02	XAR3000 -02	XAR3000 -03	XAR4000 -03	XAR4000 -04	XAR4000 -06	XAR5000 -06	XAR5000 -10
Rated Flow	100	550	550	2500	2500	6000	6000	6000	8000	8000
Port Size	M5	G1/8"	G1/4"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G3/4"	G1"
Highest Working Pressure	1.0MPa									
Ensured pressure Resistance	1.5MPa									
Operating Temperature Range	5~60℃									
Range of Adjustable Pressure	0.05~0.85MPa									
Valve Type	With Overflow									

Overall Dimensions





AR1000~3000:Max3.5
AR4000~5000:Max6

XAR1000~5000

Dimension Sheet

Model	Port Size(G)	A	B	C	D	E	F	G	H	J	K	L	M	N
XAR1000	M5	25	61.5	11	25	28	25	28	30	4.5	6.5	40	2	20.5
XAR2000	G1/8" ~G1/4"	40	95	17	40	56.8	30	34	44	5.4	15.4	55	2.3	33.5
XAR3000	G1/4" ~G3/8"	53	127.5	35	53	60.8	39	40	46	6.5	8	53	2.3	42.5
XAR4000	G3/8" ~1/2"	70	149.5	37.5	70	65.5	49.5	54	54	8.5	10.5	70	2.3	52.5
XAR4000-06	G3~4"	75	154	40.5	70	69.5	49.5	54	55.5	8.5	10.5	70	2.3	52.5
XAR5000	G3/4" ~G1"	90	168	48	90	75.5	49.5	54	62	8.5	10.5	70	2.3	52.5

HAVKON® PNEUMATIC

AW 1000~5000 Series Filter & Regulator


XAW5000-10

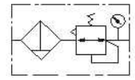

XAW4000-04


XAW1000-M5

Ordering Code

XA	W	3000	—	04	□
Series: XA series	Function code: Filter & Regulator	Specification Code: 1000 / 2000 / 3000 / 4000 / 5000		Port Size: M5:M5×0.8 / 01:G1/8" / 02:G1/4" / 03:G3/8" / 04:G1/2" / 06:G3/4" / 10:G1"	Drain Type: Blank:Manual Drain Type / D:Auto Drain Type (Avalble for 2000 or above)

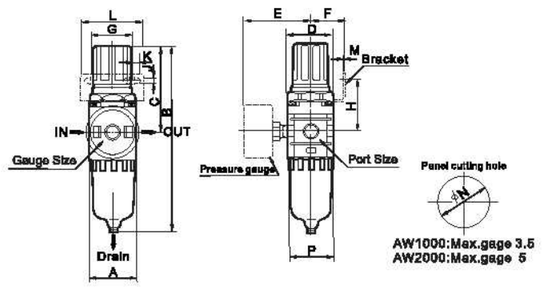
Graphic Symbol



Specification

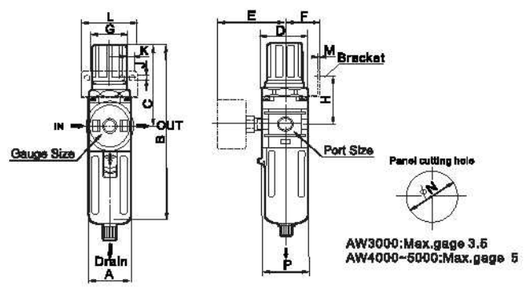
Model	XAW1000 -M5	XAW2000 -01	XAW2000 -02	XAW3000 -02	XAW3000 -03	XAW4000 -03	XAW4000 -04	XAW4000 -06	XAW5000 -06	XAW5000 -10
Rated Flow	100	550	550	2000	2000	4000	4000	4500	5000	5000
Port Size	M5	G1/8"	G1/4"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G3/4"	G1"
Filter Precision	25μ									
Highest Working Pressure	1.0MPa									
Ensured pressure Resistance	1.5MPa									
Operating Temperature Range	5~60℃									
Range of Adjustable Pressure	0.05~0.7MPa	0.05~0.85MPa								
Container Material	Polycarbonate									
Protective Cover	Not Available	Available								
Drain Function	Differential Drain	Differential Drain,Automatic Drain								
Valve Type	With Overflow									

Overall Dimensions



AW1000:Max.gage 3.5
AW2000:Max.gage 5

XAW1000~2000



AW3000:Max.gage 3.5
AW4000~5000:Max.gage 5

XAW3000~5000

Dimension Sheet

Model	Port Size(G)	A	B	C	D	E	F	G	H	J	K	L	M	N	P
XAW1000	M5	25.	109.5	50.5	25	28	25	28	30	4.5	6.5	40	2	20.5	28
XAW2000	G1/8" ~G1/4"	40	164.5	78	40	56.8	30	34	43.5	5.4	15.4	55	2.3	33.5	40
XAW3000	G1/4" ~G3/8"	53	211	92.5	53	60.8	39	40	46	6.5	8	53	2.3	42.5	56
XAW4000	G3/8" ~1/2"	70	262	112	70	70.5	49.2	54	53.5	8.5	10.5	70	2.3	52.2	73
XAW4000-06	G3~4"	75	267	114	70	70.5	49.2	54	55.5	8.5	10.5	70	2.3	52.5	73
XAW5000	G3/4" ~G1"	90	338	116	90	75.5	49.2	54	62	8.5	10.5	70	2.3	52.5	90

HAVKON® PNEUMATIC

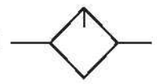
AL 1000~5000 Series Lubricator

XAL5000-10 XAL4000-04 XAL1000-M5

Ordering Code

XA	L	3000	—	04
Series XA series	Function code Lubricator	Specification Code 1000 2000 3000 4000 5000		Port Size M5:M5×0.8 01:G1/8" 02:G1/4" 03:G3/8" 04:G1/2" 06:G3/4" 10:G1"

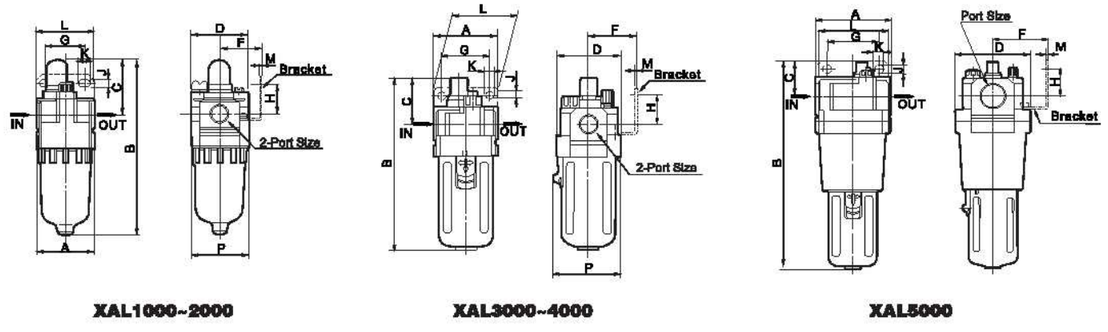
Graphic Symbol



Specification

Model	XAL1000 -M5	XAL2000 -01	XAL2000 -02	XAL3000 -02	XAL3000 -03	XAL4000 -03	XAL4000 -04	XAL4000 -06	XAL5000 -06	XAL5000 -10
Rated Flow	95	800	800	1700	1700	5000	5000	6300	7000	9000
Port Size	M5	G1/8"	G1/4"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G3/4"	G1"
Highest Working Pressure	1.0MPa									
Ensured pressure Resistance	1.5MPa									
Operating Temperature Range	5~60℃									
Recommended Oil Use	ISO VG 32									
Container Material	Polycarbonate									
Protective Cover	Not Available				Available					

Overall Dimensions



XAL1000~2000 XAL3000~4000 XAL5000

Dimension Sheet

Model	Port Size(G)	A	B	C	D	F	G	H	J	K	L	M	P
XAL1000	M5	25	81.5	25.5	25	-	-	-	-	-	-	-	27
XAL2000	G1/8" ~G1/4"	40	122	38	40	30	27	22	5.4	8.4	40	2.3	40
XAL3000	G1/4" ~G3/8"	53	142	38	53	41	40	23	6.5	8	53	2.3	56
XAL4000	G3/8" ~1/2"	70	177	41	70	50	54	26	8.5	10.5	70	2.3	73
XAL4000-06	G3~4"	75	177	39	70	50	54	25	8.5	10.5	70	2.3	73
XAL5000	G3/4" ~G1"	90	254	45	90	66.5	86	35	11	13	90	3.2	90

HAVKON® PNEUMATIC

XG Series 2000~5000 Source Treatmat Unit

Ordering Code

Model	Port Size
XGC2-01	G1/8"
XGC2-02	G1/4"
XGC3-02	G1/4"
XGC3-03	G3/8"
XGC3-04	G1/2"

XGC2 — 01 — □ — L

Series Code: Filter&Regulator+ Lubricator
Port Size
Drian Type: Blank:Differential Drain; D:Automatic Drain
Pressure Range: Blank:Standard; L:Low-Pressure Type

Model	Port Size
XGWL2-01	G1/8"
XGWL2-02	G1/4"
XGW3-02	G1/4"
XGW3-03	G3/8"
XGW3-04	G1/2"

XGWL2 — 01 — □ — L

Series Code: Filter&Regulator+ Lubricator
Port Size
Drian Type: Blank:Differential Drain; D:Automatic Drain
Pressure Range: Blank:Standard; L:Low-Pressure Type

Model	Port Size
XGFR2-01	G1/8"
XGFR2-02	G1/4"
XGFR3-02	G1/4"
XGFR3-03	G3/8"
XGFR3-04	G1/2"

XGFR2 — 01 — L — □

Series Code: Filter&Regulator
Port Size
Pressure Range: Blank:Standard; L:Low-Pressure Type
Bracket: Blank:Without bracket; J:With bracket

Model	Port Size
XGF2-01	G1/8"
XGF2-02	G1/4"
XGF3-02	G1/4"
XGF3-03	G3/8"
XGF3-04	G1/2"

XGF2 — 01 — D — W

Series Code: Filter
Port Size
Drian Type: Blank:Differential Drain; D:Automatic Drain
Precision Filter: Blank:40μm; W:5μm

Model	Port Size
XGL2-01	G1/8"
XGL2-02	G1/4"
XGL3-02	G1/4"
XGL3-03	G3/8"
XGL3-04	G1/2"

XGL2 — 01 — □

Series Code: Lubricator
Port Size
Thread Type: Blank: BSP; NPT: NPT; PT: PT

Model	Port Size
XGR2-01	G1/8"
XGR2-02	G1/4"
XGR3-02	G1/4"
XGR3-03	G3/8"
XGR3-04	G1/2"

XGR2 — 01 — L — □

Series Code: Regulator
Port Size
Pressure Range: Blank:Standard; L:Low-Pressure Type
Bracket: Blanke:Without bracket; J:With bracket

HAVKON® PNEUMATIC

MAC 2000~5000 Series Air Filter Combination(Three Elements)

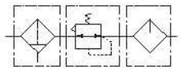
XMAC4000-04

XMAC2000-02

Ordering Code

XMA	C	3000	—	04	□
Series	**Function code**	**Specification Code**		**Port Size**	**Drain Type**
XMA series	Filter+Regulator+ Lubricator	2000 3000 4000 5000		01:G1/8" 02:G1/4" 03:G3/8" 04:G1/2" 06:G3/4" 10:G1"	Blank:Manual Drain Type D:Auto Drain Type (Avaible for 3000 or above)

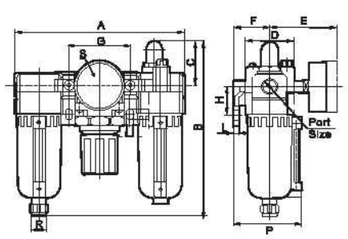
Graphic Symbol



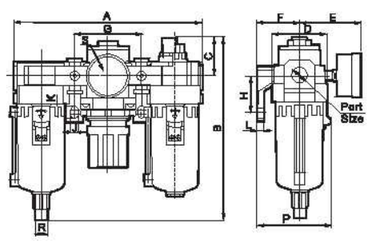
Specification

Model	XMAC2000 -01	XMAC2000 -02	XMAC3000 -02M	XMAC3000 -03	XMAC4000 -03	XMAC4000 -04	XMAC4000 -06	XMAC5000 -06	XMAC5000 -10
Ensured Pressure Resistance	1.5MPa(15kgf/cm²)								
Highest Working Pressure	1.0MPa(10kgf/cm²)								
Operating Temperature Range	5~60℃								
Filter Precision	25μ & 5μ & 50μ								
Recommended Oil Use	Turbie NO.1 Oil ISOVG32								
Container Material	Aluminum Die Casting								
Pressure Regulating Range	0.05~0.85MPa(0.05~0.85kgf/cm²)								
Valve Type	With Overflow								
Assembly Filter	XMAF2000		XMAF3000		XMAF4000		XMAF4000-06	XMAF5000	
Assembly Regulator	XMAR2000		XMAR3000		XMAR4000		XMAR4000-06	XMAR5000	
Assembly Lubricator	XMAL2000		XMAL3000		XMAL4000		XMAL4000-06	XMAL5000	
Rated Flow(L/min)	500		2000		4000		4500	5000	
Port Size(G)	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	3/4"	1"

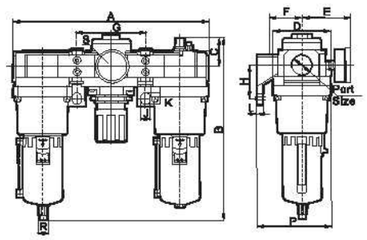
Overall Dimensions



XMAC2000



XMAC3000~4000



XMAC5000

Dimension Sheet

Model	Port Size(G)	A	B	C	D	E	F	G	H	J	K	L	P	R	S
XMAC2000	1/8"-1 /4"	140	147	38	40	56.8	30	50	24	5.5	8.5	5	56	ϕ8	G1/8
XMAC3000	1 /4"-3/8"	161	178	38	53	60.8	41	64	35	7	11	7	70.5	ϕ8	G1/8
XMAC4000	1 /2"	238	207	41	70	65.5	50	84	40	9	13	7	87.5	ϕ8	G1/4
XMAC4000-06	3 /4"	253	208.5	40.5	70	69.5	50	89	40	9	13	7	87.5	ϕ8	G1/4
XMAC5000	3 /4"-1"	300	287	48	90	75.5	69.8	105	50	12	16	10.5	115	ϕ8	G1/4

HAVKON® PNEUMATIC

XMAC 2010~5010 Series Air Filter Combination(Two Elements)

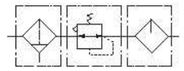
XMAC4010-04

XMAC2010-02

Ordering Code

XMA	C	3010	—	04	□
Series	**Function code**	**Specification Code**		**Port Size**	**Dtian Type**
XMA series	FRL Combination	2010 3010 4010 5010		01:G1/8" 02:G1/4" 03:G3/8" 04:G1/2" 06:G3/4" 10:G1"	Blank:Manual Drain Type D:Auto Drain Type (Avaible for 3000 or above)

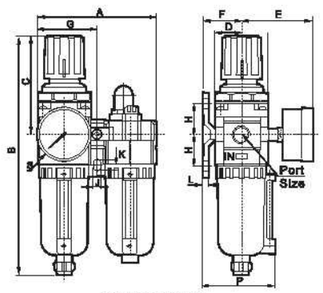
Graphic Symbol



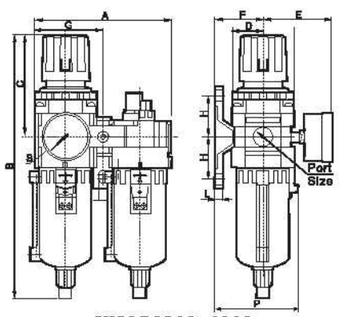
Specification

Model	XMAC2010 -01	XMAC2010 -02	XMAC3010 -02	XMAC3010 -03	XMAC4010 -03	XMAC4010 -04	XMAC4010 -06	XMAC5010 -06	XMAC5010 -06
Ensured Pressure Resistance	1.5MPa(15kgf/cm²)								
Highest Working Pressure	1.0MPa(10kgf/cm²)								
Operating Temperature Range	5~60℃								
Filter Precision	25μ & 5μ & 50μ								
Recommended Oil Use	Turbie NO.1 Oil ISOVG32								
Container Material	Aluminum Die Casting								
Pressure Regulating Range	0.05~0.85MPa(0.05~0.85kgf/cm²)								
Valve Type	With Overflow								
Assembly Filter with pressure reducer	XMAW2000		XMAW3000		XMAW4000		XMAW4000-06	XMAW5000	
Assembly Lubricator	XMAR2000		XMAR3000		XMAR4000		XMAR4000-06	XMAR5000	
Rated Flow(L/min)	500		1700		3000		3000	4000	
Port Size(G)	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	3/4"	1"

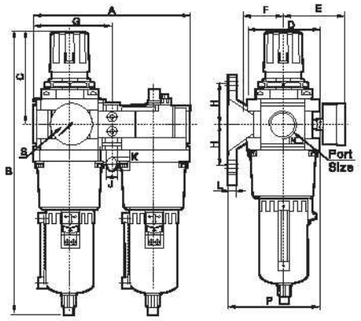
Overall Dimensions



XMAC2010



XMAC3010~4010



XMAC5010

Dimension Sheet

Model	Port Size(G)	A	B	C	D	E	F	G	H	J	K	L	P	S
XMAC2010	1/8"-1 /4"	90	186.5	78	40	56.8	30	45	24	5.5	8.5	5	56	G1/8
XMAC3010	1 /4"-3/8"s	117	232.5	92.5	53	60.8	41	58.5	35	7	11	7	69.5	G1/8
XMAC4010	1 /2"	154	277	112	70	65.5	50	77	40	9	13	7	87.5	G1/4
XMAC4010-06	3 /4"	164	282.5	114	70	69.5	50	82	40	9	13	7	87.5	G1/4
XMAC5010	3 /4"-1"	195	353.5	116	90	75.5	69.8	97.5	50	12	16	10.5	115	G1/4

HAVKON® PNEUMATIC

MAW 2000~5000 Series Filter & Regulator

XMAW4000-04

XMAW2000-02

Ordering Code

XMA — W — 3000 — 04 — □

Series
XMA series

Function code
Filter&Regulator

Specification Code
2000
3000
4000
5000

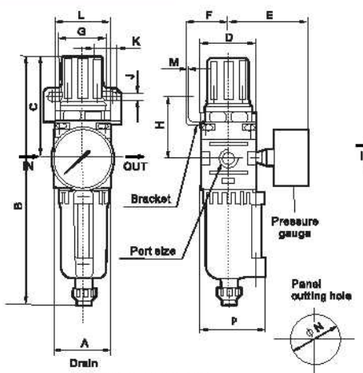
Port Size
01:G1/8"
02:G1/4"
03:G3/8"
04:G1/2"
06:G3/4"
10:G1"

Drain Type
Blank:Manual Drain Type
D:Auto Drain Type (Avaible for 2000 or above)

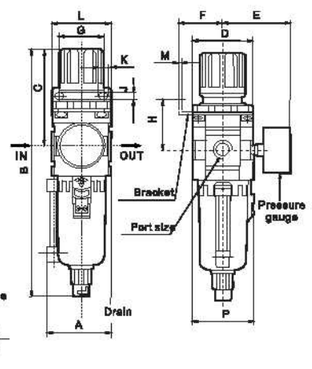
Specification

Model	XMAW2000-01	XMAW2000-02	XMAW3000-02	XMAW3000-03	XMAW4000-03	XMAW4000-04	XMAW4000-06	XMAW5000-06	XMAW5000-10
Ensured Pressure Resistance	1.5MPa(15kgf/cm²)								
Highest Working Pressure	1.0MPa(10kgf/cm²)								
Operating Temperature Range	5~60℃								
Filter Precision	25μ & 5μ & 50μ								
Container Material	Aluminum Die Casting								
Pressure Regulating Range	0.05~0.85MPa(0.5~0.85kgf/cm²)								
Valve Type	With Overflow								
Rated Flow(L/min)	550		2000		4000		4500	5500	
Port Size(G)	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	3/4"	1"
Pressure Gauge Size	1/8		1/8		1/4		1/4	1/4	

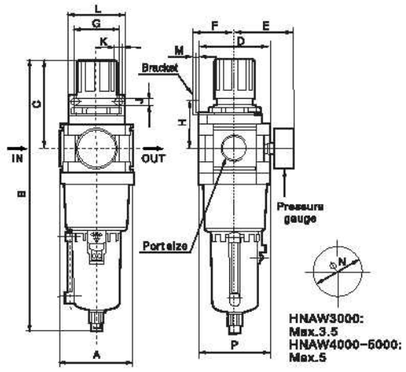
Overall Dimensions



XMAW2000



XMAW3000~4000



XMAW5000

Dimension Sheet

Model	Port Size(G)	A	B	C	D	E	F	G	H	J	K	L	M	P
XMAW2000	1/8"-1 /4"	40	186.5	78	40	56.8	30	34	43.5	5.4	15.4	55	2.3	46
XMAW3000	1 /4"-3/8"s	57.5	232.5	92.5	53	60.8	39	40	46	6.5	8	53	2.3	55
XMAW4000	1 /2"s	74	278	112	70	70.5	49.2	54	53.5	8.5	10.5	70	2.3	72.5
XMAW4000-06	3 /4"s	76.5	282	114	70	70.5	49.2	54	55.5	8.5	10.5	70	2.3	72.5
XMAW5000	3 /4"-1"	90	355	116	90	75.5	49.2	54	62	8.5	10.5	70	2.3	90

HAVKON® PNEUMATIC

XMAF 2000~5000 Series Air Filter

XMAF4000-04

XMAF2000-02

Ordering Code

XMA — F — 3000 — 04 — □

Series
XMA series

Function code
Filter

Specification Code
2000
3000
4000
5000

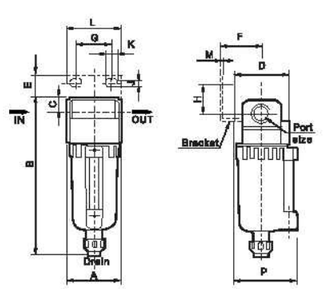
Port Size
01:G1/8"
02:G1/4"
03:G3/8"
04:G1/2"
06:G3/4"
10:G1"

Drain Type
Blank:Manual Drain Type
D:Auto Drain Type (Avaible for 2000 or above)

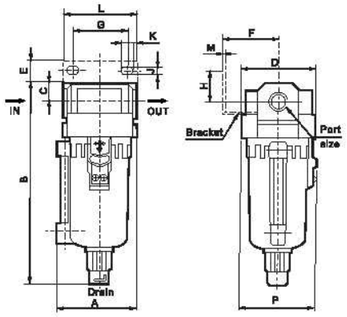
Specification

Model	XMAF2000-01	XMAF2000-02	XMAF3000-02	XMAF3000-03	XMAF4000-03	XMAF4000-04	XMAF4000-06	XMAF5000-06	XMAF5000-10
Ensured Pressure Resistance	1.5MPa(15kgf/cm²)								
Highest Working Pressure	1.0MPa(10kgf/cm²)								
Operating Temperature Range	5~60℃								
Filter Precision	25μ & 5μ & 50μ								
Container Material	Aluminum Die Casting								
Rated Flow(L/min)	750		1500		4000		6000	7000	
Port Size(G)	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	3/4"	1"
Bowl Capacity	15		20		45		45	130	

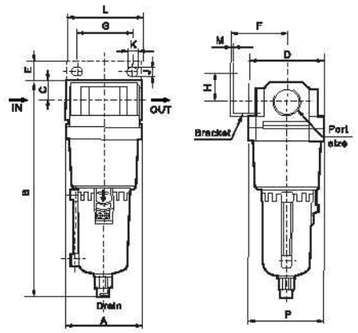
Overall Dimensions



XMAF2000



XMAF3000~4000



XMAF5000

Dimension Sheet

Model	Port Size(G)	A	B	C	D	F	G	H	J	K	L	M	P
XMAF2000	1/8"-1 /4"	40	119.5	11	40	17	27	22	5.4	8.4	40	2.3	46
XMAF3000	1 /4"-3/8"s	57.4	154	14	53	16	40	23	6.5	8	53	2.3	55
XMAF4000	1 /2"	74	184	18	70	17	54	26	8.5	10.5	70	2.3	72.5
XMAF4000-06	3 /4"	76.5	188	20	70	14	54	25	8.5	10.5	70	2.3	72.5
XMAF5000	3 /4"-1"	90	283	24	90	23	66	35	11	13	90	3.2	90

HAVKON® PNEUMATIC

MAL 2000~5000 Series Lubricator

XMAL4000-04

XMAL2000-02

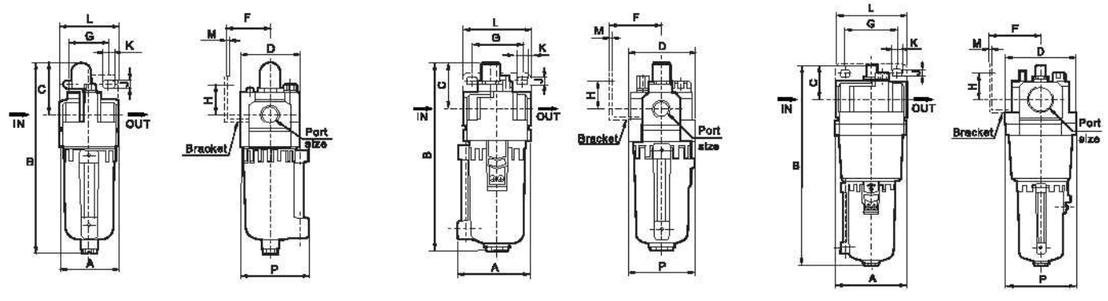
Ordering Code

XMA	L	3000	—	04
Series	**Function code**	**Specification Code**		**Port Size**
XMA series	Lubricator	2000 3000 4000 5000		01:G1/8" 02:G1/4" 03:G3/8" 04:G1/2" 06:G3/4" 10:G1"

Specification

Model	XMAL2000 -01	XMAL2000 -02	XMAL3000 -02	XMAL3000 -03	XMAL4000 -03	XMAL4000 -04	XMAL4000 -06	XMAL5000 -06	XMAL5000 -10
Ensured Pressure Resistance	1.5MPa(15kgf/cm²)								
Highest Working Pressure	1.0MPa(10kgf/cm²)								
Operating Temperature Range	5~60℃								
Recommended Oil Use	Turbie NO.1 Oil ISOVG32								
Container Material	Aluminum Die Casting								
Minimal Flow of Oil Drop(L/min)	15		30	40	40	50	50	190	
Rated Flow(L/min)	800		1700		5000		6300	7000	
Port Size(G)	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	3/4"	1"
Bowl Capacity	25		50		130		130	130	

Overall Dimensions



XMAL2000 XMAL3000~4000 XMAL5000

Dimension Sheet

Model	Port Size(G)	A	B	C	D	F	G	H	J	K	L	M	P
XMAL2000	1/8"-1 /4"	40	137	39	50	30	27	22	5.4	8.4	40	2.3	40
XMAL3000	1 /4"-3/8"	57.4	154.5	39	53	41	40	23	6.5	8	53	2.3	55
XMAL4000	1 /2"	74	185.5	41	70	50	54	26	8.5	10.5	70	2.3	72.5
XMAL4000-06	3 /4"	76.5	185.5	39	70	50	54	25	8.5	10.5	70	2.3	72.5
XMAL5000	3 /4"-1"	90	262.5	45	90	66.5	66	35	11	13	90	3.2	90

HAVKON® PNEUMATIC

AC,BC Series Air Source Treatment Unit(F.R.L)

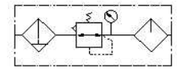
BC3000

AC2000

Ordering Code

BC	—	3000	—	□
Series		**Port Size**		**Drain Type**
AC:Small Size BC:Middle Size		1500:G1/8" 2000:G1/4" 3000:G3/8" 4000:G1/2"		Blank:Manual Drain Type D:Auto Drain Type

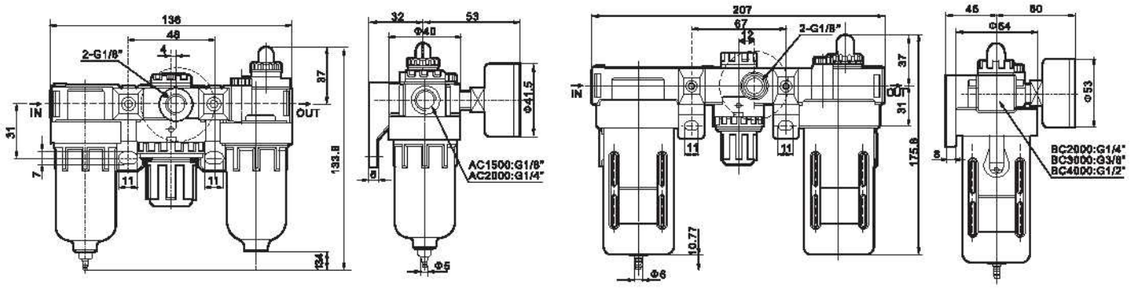
Graphic Symbol



Specification

Model		AC1500	AC2000	BC2000	BC3000	BC4000
Operating Fluid		Air				
Port Size		G1/8"	G1/4"	G1/4"	G3/8"	G1/2"
Fitlering Element Reughness		40 μ				
Range of Adiustable Pressure		0.05~0.85MPa				
Max Adiustable Pressure		0.95MPa				
Ensu red Pressure Resistance		1.5MPa				
Operating Temperature Range		5~60℃				
Capacitv of Filter Cup		15 cc		60 cc		
Capacity of Oil Feed Cup		25 cc		90 cc		
Suggested Lube		ISO VG 32 or Same Grade Oil				
Weight		0.7 KG		0.9 KG		
Material	Body	Aluminum Die-casting Forming				
	Container Cup	PE				
	Protedive Cup Cover	-		Iron		
Composing Elementsl	Fitier	AF1500	AF2000	BF2000	BF3000	BF4000
	Regulator	AR1500	AR2000	BR2000	BR3000	BR4000
	Lubricator	AL1500	AL2000	BL2000	BL3000	BL4000

Overall Dimensions



AC Series BC Series

HAVKON® PNEUMATIC

AFC,BFC Series Air Source Treatment Unit(FR.L)

BFC3000

AFC2000

Ordering Code

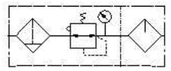
BFC — 3000 — □

Series
AFC:Small Size
BFC:Middle Size

Port Size
1500:G1/8"
2000:G1/4"
3000:G3/8"
4000:G1/2"

Drain Type
Blank:Manual Drain Type
D:Auto Drain Type

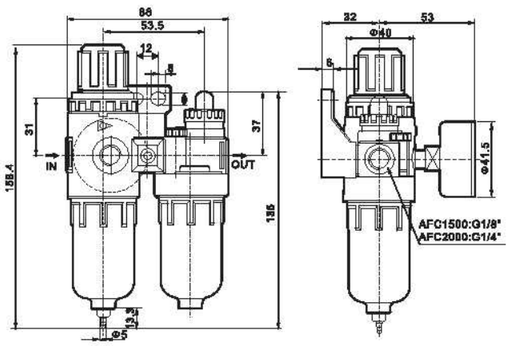
Graphic Symbol



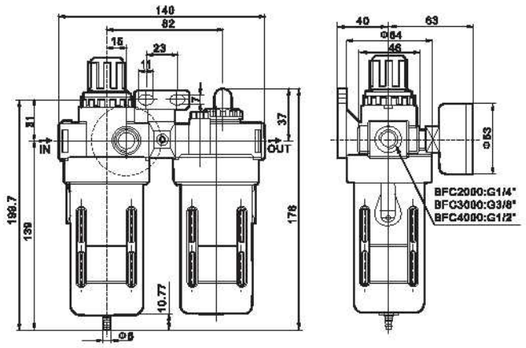
Specification

Model		AFC1500	AFC2000	BFC2000	BFC3000	BFC4000
Operating Fluid				Air		
Port Size		G1/8"	G1/4"	G1/4"	G3/8"	G1/2"
Fitiering Element Reughness				40 μ		
Range of Adiustable Pressure				0.05~0.85MPa		
Max Adiustable Pressure				0.95MPa		
Ensured Pressure Resistance				1.5MPa		
Operating Temperature Range				5~60℃		
Capacitv of Filter Cup		15 cc		60 cc		
Capacity of Oil Feed Cup		25 cc		90 cc		
Suggested Lube				ISO VG 32 or Same Grade Oil		
Weight		0.5 KG		0.7 KG		
Material	Body			Aluminum Die-casting Forming		
	Container Cup			PE		
	Protedive Cup Cover	-		Iron		
Composing Elements	Fitier & Regulator	AFR1500	AFR2000	BFR2000	BFR3000	BFF4000
	Lubricator	AL1500	AL2000	BL2000	BL3000	BL4000

Overall Dimensions



AFC Series



BFC Series

AFR,BFR Series Filter&Regulator

BFR3000

AFR2000

Ordering Code

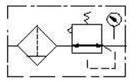
BFR — 3000 — □

Series
AFR:Small Size
BFR:Middle Size

Port Size
1500:G1/8"
2000:G1/4"
3000:G3/8"
4000:G1/2"

Drain Type
Blank:Manual Drain Type
D:Auto Drain Type

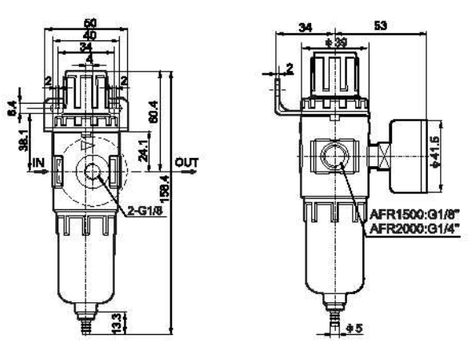
Graphic Symbol



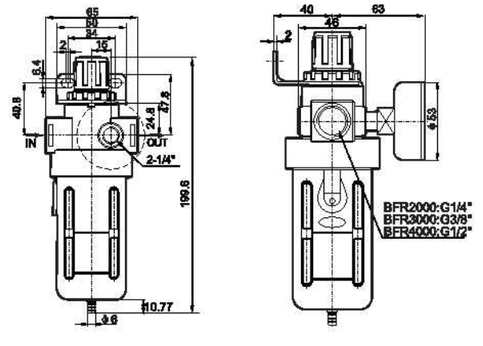
Specification

Model		AFR1500	AFR2000	BFR2000	BFR3000	BFR4000
Operating Fluid				Air		
Port Size		G1/8"	G1/4"	G1/4"	G3/8"	G1/2"
Range of Adiustable Pressure				0.05~0.85MPa		
Max Adiustable Pressure				0.95MPa		
Ensured Pressure Resistance				1.5MPa		
Operating Temperature Range				5~60℃		
Capacitv of Filter Cup		15 cc		60 cc		
Weight		0.26 KG		0.40 KG		
Material	Body			Aluminum Die-casting Forming		
	Container Cup			PE		
	Protedive Cup Cover	-		Iron		

Overall Dimensions



AFR Series



BFR Series

HAVKON® PNEUMATIC

AF,BF Series Air Filter

BF3000

AF2000

Ordering Code

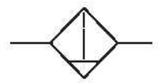
BF — 3000 — □

Series
AF:Small Size
BF:Middle Size

Port Size
1500:G1/8"
2000:G1/4"
3000:G3/8"
4000:G1/2"

Drian Type
Blank:Manual Drain Type
D:Auto Drain Type

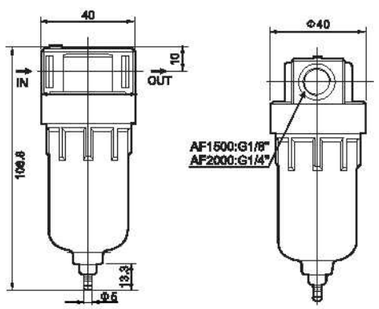
Graphic Symbol



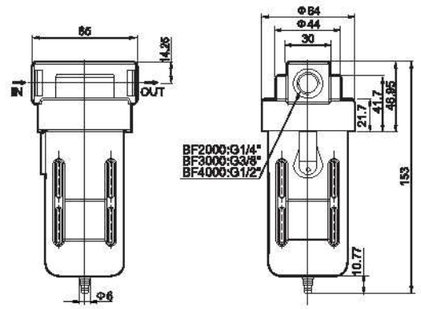
Specification

Model	AF1500	AF2000	BF2000	BF3000	BF4000
Operating Fluid	Air				
Port Size	G1/8"	G1/4"	G1/4"	G3/8"	G1/2"
Fitiering Element Reughness	40 μ				
Ensured Pressure Resistance	1.5MPa				
Operating Temperature Range	5~60℃				
Capacity of Filter Cup	15 cc		60 cc		
Weight	0.14 KG		0.33KG		
Material — Body	Aluminum Die-casting Forming				
Material — Container Cup	PE				
Material — Protedive Cup Cover	-		Iron		

Overall Dimensions



AF Series



BF Series

HAVKON® PNEUMATIC

AR,BR Series Regulator

BR3000

AR2000

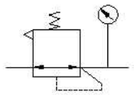
Ordering Code

BR — 2000

Series
AR:Small Size
BR:Middle Size

Port Size
1500:G1/8"
2000:G1/4"
3000:G3/8"
4000:G1/2"

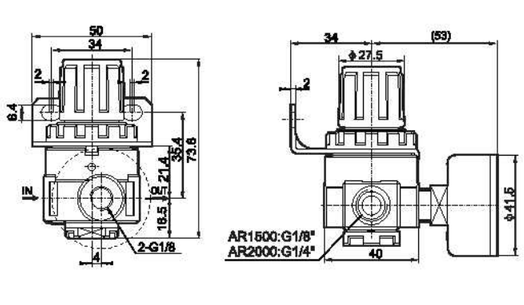
Graphic Symbol



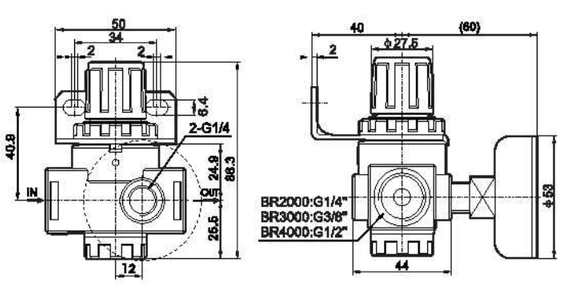
Specification

Model	AR1500	AR2000	BR2000	BR3000	BR4000
Operating Fluid	Air				
Port Size	G1/8"	G1/4"	G1/4"	G3/8"	G1/2"
Range of Adjustable Pressure	0.05~0.85MPa				
Max.Adjustable Pressure	0.95MPa				
Ensured Pressure Resistance	1.5MPa				
Operating Temperature Range	5~60℃				
Weight	0.20KG		0.23KG		
Material of Body	Aluminum Die-casting Forming				

Overall Dimensions



AR Series



BR Series

HAVKON® PNEUMATIC

AL,BL Series Lubricator

BL3000

AL2000

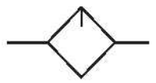
Ordering Code

BL — 2000

Series
AL:Small Size
BL:Middle Size

Port Size
1500:G1/8"
2000:G1/4"
3000:G3/8"
4000:G1/2"

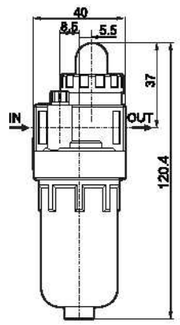
Graphic Symbol

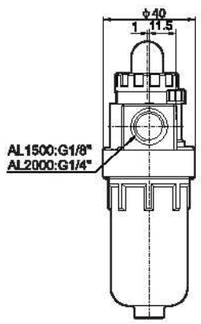


Specification

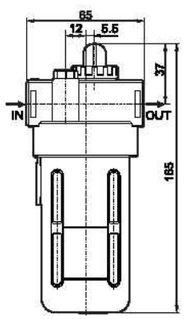
Model		AL1500	AL2000	BL2000	BL3000	BL4000
Operating Fluid				Air		
Port Size		G1/8"	G1/4"	G1/4"	G3/8"	G1/2"
Ensured Pressure Resistance				1.5MPa		
Operating Temperature Range				5~60℃		
Suggested Lube				ISO VG 32 or Same Grade Oil		
Capacity of Oil Feed Cup			25 cc		90 cc	
Weight			0.17 KG		0.25KG	
Material	Body			Aluminum Die-casting Forming		
	Container Cup			PE		
	Protective Cup Cover		-		Iron	

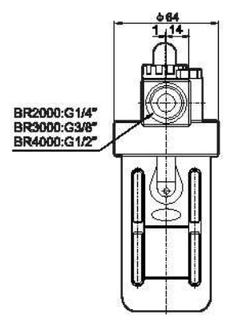
Overall Dimensions





AL Series





BL Series

HAVKON® PNEUMATIC

XACT300 Series Air Source Treatment Unit

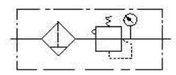
Ordering Code

XACT300 — 10A

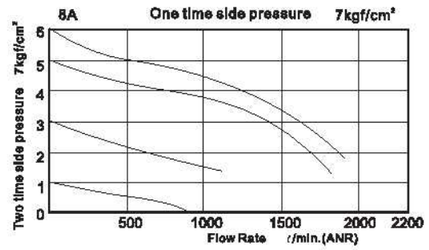
Series

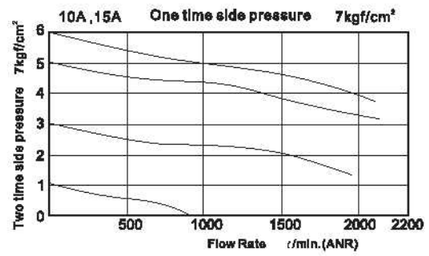
Port Size
8A:G1/4"
10A:G3/8"
15A:G1/2"

Graphic Symbol



Flow Chat

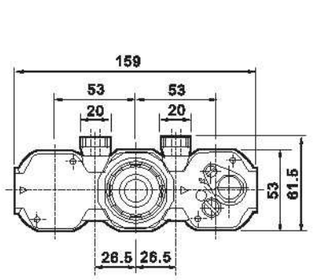


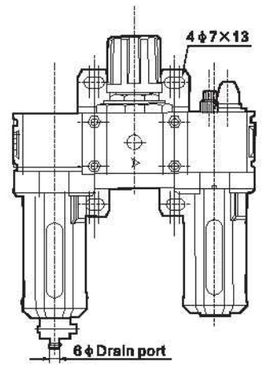


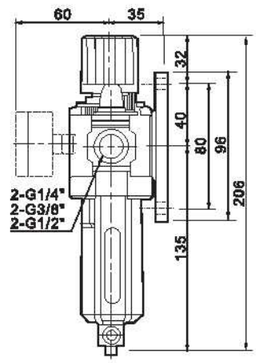
Specification

Model	XACT300		
Port Size Code	8A	10A	15A
Port Size Dimension	G1/4"	G3/8"	G1/2"
Operating Pressure Range	0~0.99MPa		
Pressure Resistance	1.5MPa		
Pressure Range	0.05~0.85MPa		
Operating Fluid	Air		
Ambient Temperature	5~60℃		
Filter Precision	5μm		
Capacity Of Oil Feed Cup	55 c.c		
Min. Air Flow of Oil	50 ℓ/min	60 ℓ/min	60 ℓ/min
Recommended Oil Use	Machine Oil SO-VG32		
Assembly	XAF300,XAR300,XAL300		
Accessory	Pressure Gauge/braket		

Overall Dimensions







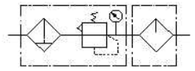
HAVKON® PNEUMATIC

XACP300 Series Air Source Treatment Unit

Ordering Code

XACP300 — 10A

Graphic Symbol



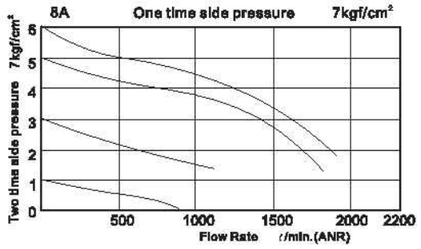
Series

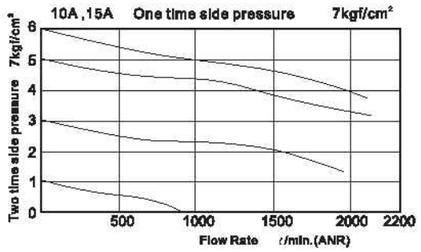
Port Size
8A:G1/4"
10A:G3/8"
15A:G1/2"

Specification

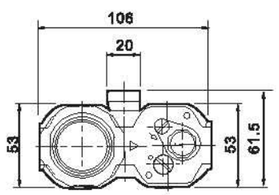
Model	XACP300		
Port Size Code	8A	10A	15A
Port Size Dimension	G1/4"	G3/8"	G1/2"
Operating Pressure Range	0~0.99MPa		
Pressure Resistance	1.5MPa		
Pressure Range	0.05~0.85MPa		
Operating Fluid	Air		
Ambient Temperature	5~60℃		
Filter Precision	5μm		
Capacity Of Oil Feed Cup	55 c.c		
Min. Air Flow of Oil	50 l /min	60 l /min	60 l /min
Recommended Oil Use	Machine Oil SO-VG32		
Assembly	XAFR300,XAL300		
Accessory	Pressure Gauge/braket		

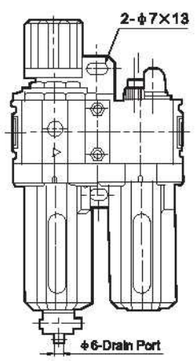
Flow Chat

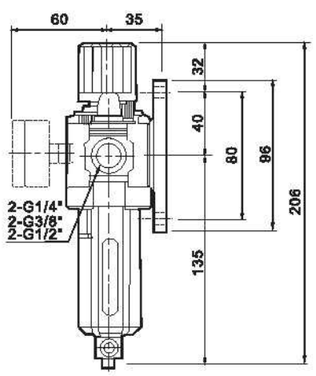




Overall Dimensions







HAVKON® PNEUMATIC

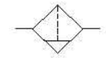
PIR Series Precision Regulator

NEW

Port Size G1/8",G1/4",G3/8"
Standard Type, Autom Drain Type and Metal Cup as Optional。

Designed to be compact and light weight with high output flow and precise setting presure, Can be mounted easily with bracket or assemble with XA series F.R.L.

Graphic Symbol



Ordering Code

PIR — 20 — 00 — 02

Series
PIR series

Valve Body Size
10
20
30

Pressure Range
00(0.005~0.2Mpa)
10(0.05~0.4Mpa)
20(0.01~0.8Mpa)

Port Size
01:G1/8"
02:G1/4"
03:G3/8"
04:G1/2"

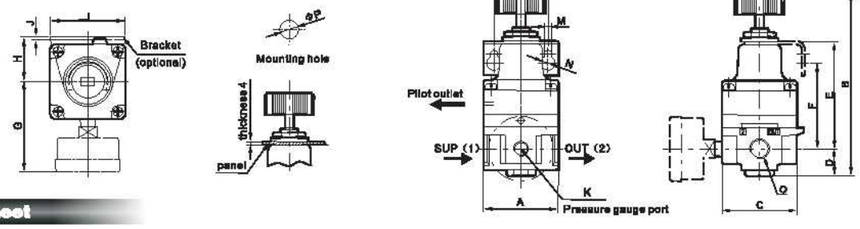
Order Example

1):PIR Series, Valve Body: 20, Port Size: G1/4,
Pressure Range: 10, Model: PIR-2010-02
1):PIR Series, Valve Body: 30, Port Size: G1/2,
Pressure Range: 20, Model: PIR-3010-04

Specification

Specification	PIR1000-01	PIR1010-01	PIR1020-01	PIR2000-02	PIR2010-0.2	PIR2020-02	PIR3000-03/04	PIR3010-03/04	PIR3020~03/04
Pressure Range	0.005~0.2	0.01~0.4	0.01~0.8	0.005~0.2	0.01~0.2	0.01~0.8	0.01~0.2	0.01~0.4	0.01~0.8
Port Size	G1/8			G1/4			G3/8、G1/2		
Air consumption	Max 3.5L/min			Max 3.1L/min			Max 9.5L/min Outlet: Max 2L/min		
Minimum pressure	Setting pressure+0.05			Setting pressure+0.05			Setting pressure+0.05		
Maximum pressure	1.0MPa								
Sensitivity	Within 0.2% of full span								
Repeatability	Within ±0.5% of full span								
Ambient and Fluid Temperature	-5~+60 (with no freezing)								
Pressure Gauge Port	G1/8								

Overall Dimensions



Dimension Sheet

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
PIR1000-01	35	90	35	10	51	44	43	25	42	2	G1/8	28	4.5	φ8.5	G1/8	φ10.5
PIR1010-01	35	90	35	10	51	44	43	25	42	2	G1/8	28	4.5	φ8.5	G1/8	φ10.5
PIR1020-01	35	90	35	10	51	44	43	25	42	2	G1/8	28	4.5	φ8.5	G1/8	φ10.5
PIR2000-02	50	123	50	18	71	63	60	30	50	2	G1/8	36	5.5	φ9.5	G1/8	φ12.5
PIR2010-02	50	123	50	18	71	63	60	30	50	2	G1/8	36	5.5	φ9.5	G1/8	φ12.5
PIR2020-02	50	123	50	18	71	63	60	30	50	2	G1/8	36	5.5	φ9.5	G1/8	φ12.5
PIR3000-03	66	148	66	22	76	76	68	48	82	2.3	G1/8	60	9	φ16.5	G3/8	φ12.5
PIR3010-03	66	148	66	22	76	76	68	48	82	2.3	G1/8	60	9	φ15.5	G1/2	φ12.5
PIR3020-03	66	148	66	22	76	76	68	48	82	2.3	G1/8	60	9	φ15.5		φ12.5

HAVKON® PNEUMATIC

XS Series Air Source Treatment Unit

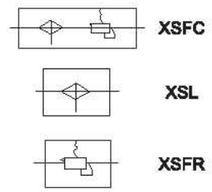
The product have the function of filter,regulator and lubricator.It's stucture tightly,flow rate largely,output steadily and installation simply.The element has pressure gauge,installation bracket and lubricator. The lubricator can non-stop gas.All have the cup shape protect cover.Use safe and appearance elegant.

Ordering Code

XS — FC — 200

Series	Function code	Port Size
XS series	FC:Filter&Regulater+Lubricator FR:Regulater&Filter L:Lubricator	200:G1/4" 300:G3/8" 400:G1/2"

Graphic Symbol



Specification

Model	XSFC/FR/L-200	XSFC/FR/L-300	XSFC/FR/L-400
Port Size	G1/4"	G3/8"	G1/2"
Pressuer Gauge Bore	G1/8"	G1/8"	G1/8"
Ensured Pressure Resistance	1.5MPa		
Higheet Working Pressure	1.0MPa		
Environment and Fluid Temperature	5~60℃		
Protective Cover	Available		

XC Series Air Source Treatment Unit

Ordering Code

XC — 1 — 04 — C — 5

Series	Specification	Port Size	Group Type	Filter Precision
XC Series	1=G1/4" 2=G3/8"、G1/2" 04=G1"	04=G1/4" 38=G3/8" 02=G1/2" 01=G1"	C=D+L E=V+D+L G=D+L+AVP HNA=V+D+L+AVP+PRESS NO HNC=V+D+L+AVP+PRESS NC N=V+D p=D+AVP Q=V+D+AVP T=V+D+L+AVP U=F13+FB3(Only G3/8、G1/2,G1) ZNA=V+D+AVP+PRESS NO ZNA=V+D+AVP+PRESS NC	5=5μm 25=25μm

Specification

Structure Type	Compact-Type
Material	Al-alloy, Brass, Nylon, NBR
Port Size	G1/4", G3/8", G1/2", G1"
Installation Type	Upright place. board connection or wall installation
Working Temperature	5~60℃(1MPa)
Surface Coat	Painted

XC Series Filter,Regulator & Lubricator Combination Code

D	Regulator&Filter Combination 0-1 Mpa Semi-auto drain,filter precision 5μm or 25μm	AVP	Eletricity control soft startvalve
		PRESS	Pressure switch(NC or NO)
V	Two-position three-way separate valve	F13	Filter auto drain(only G3/8,G1/2,G1)filter precision 5μm or 25 μm
L	Lubricator	Fb3	Gather Filter auto drain(only G3/8",G1/2",G1")

HAVKON® PNEUMATIC

XU Series Air Source Treatment Unit

XUC-04 XUWL-04 XUW-04

Ordering Code

XU — C — 02 — □

Series	Function code	Port Size	Drain Type
XU Series	C:Filter+Regulator+Lubricator WL:Filter&Regulator+Lubricator W:Filter&Regulator R:Regulator F:Filter L:Lubricator	02:G1/4" 03:G3/8" 04:G1/2" 06:G3/4" 08:G1"	Blank:Manual Drain Type D:Auto Drain Type

Specification

Model	XUC/WL/W-02 XUF/R/L-02	XUC/WL/W-03 XUF/R/L-03	XUC/WL/W-04 XUF/R/L-04	XUC/WL/W-06 XUF/R/L-06	XUC/WL/W-08 XUF/R/L-08
Port Size	G1/4"	G3/8"	G1/2"	G3/4"	G1"
Gauge	1/4"				
Fluid	Air				
Pressure Range	0.05~0.85MPa				
Max.Flow rate(Nl/min)	2050		2500	7900	8100
Ambient Temperature	-10~60℃				
Filter Precision	Standard:20 μm				
Oil Recommended	Turbine oil(ISO VG32)				
Cup Material	Polycarbonate				
Structure	Over flow tpye				

H Series High Pressure Regulator/Filter

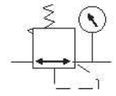
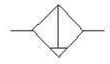
QSLH-15

QTYH-25

Ordering Code

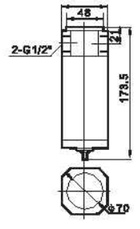
QTYH — 15 — QSLH — 15

High pressure Regulator	Connection	High Pressure Filter	Pors Size
	8:G1/4" 15:G1/2" 20:G3/4" 25:G1"		8:G1/4" 15:G1/2" 20:G3/4" 25:G1"

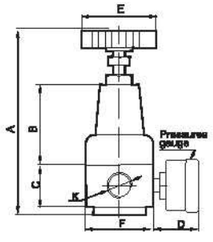
Graphic Symbol QTYH-□  QSLH-□ 

Overall Dimensions

QSLH -8(15)



QTYH-25



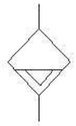
Specification

Max. pressure	3.5MPa
Pressure Regulating Range	0.5~3.5MPa
Ambient and Fluid Temperature	-5~50℃

Dimension Sheet

Modle	Port Size	A	B	C	D	E	F
QTYH-8	G1/4"	150	64	34	36	60	55×55
QTYH-15	G1/2"	150	64	34	36	60	55×55
QTYH-20	G3/4"	235	91	45	32	95	80×80
QTYH-25	G1"	235	91	45	32	94	80×80

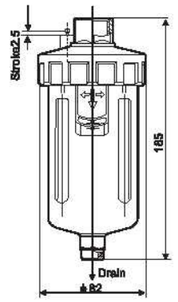
HAD402 series Auto Drain

Graphic Symbol 

Specification

Model	HAD402-02	HAD402-03	HAD402-04
Ensured Pressure Resistance		1.5MPa	
Operating Pressure		0.15MPa~1.00MPa	
Ambient and Fluid Temperature		5~60℃	
Port Size	G1/4"	G3/8"	G1/2"
Drain Bore		G1/8"	
Drain Status		Normal Open type	
Working Medium		Compressed Air	

Overall Dimensions



■ Range of Application:

This product often applies to auto remove the see per at the lower places of piping,frozen type air drying machine.Oil separator, air storage tanks and the bottom of various air filters. It can be installed In the places inconvenient for manual discharge of sewage,such as higher,lower and narrow places,especially there slarge consumption of air or frequent water drains.It can prevent the compressed air being re-polluted by con-dense water resulting from neglect of manual drain.

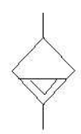
■ Features:

Auto Drain/Air Shutoff Drain/Manual Drain
The water cup is provided with metal protective cover

■ Points for Attention:

When using,the draine r should be installed ve rtically the drain port facing down

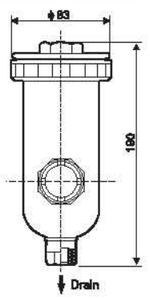
SAH402 series High Pressure Auto Drain

Graphic Symbol 

Specification

Model	SAH402-02	SAH402-03	SAH402-04
Ensured Pressure Resistance		2.5MPa	
Operating Pressure		0.15MPa~2.00MPa	
Ambient and Fluid Temperature		5~60℃	
Port Size	G1/4"	G3/8"	G1/2"
Drain Bore	G1/8"	G1/4"	G3/8"
Drain Status		Normal Open type	
Working Medium		Compressed Air	

Overall Dimensions



■ Range of Application:

This product serves as a drainer for high-pressure air source system and functions to divert water for the whole pipeline system. It is generally used for the equipment inconvenient for manual discharge of water or comparatively high frequency of water discharge such as the low spots of pipeline,freezing type air drier and the water deposit place of air chamber etc.

■ Features:

Auto Drain
Metal protective cover with view window

■ Points for Attention:

When using,the draine r should be installed vertically the drain port facing down.

XADV Series Auto Drain

XADV 300-FN　XADV 300-FW

XADV 400-FN(BC-FN)　XADV 400-FW(BC-FW)

XADV 200-G10(AC-G10)　XADV-MA-G14

Ordering Code

XADV — 200 — FN/W

- **Series**: XADV Series
- **Machine Type**: 200 Series / 300 Series / 400 Series / BC Series
- **Drain Principle**: F:Floating ball Type (N:Female Thread W:Male Thread)

Ordering Code

XADV — 200 — G10

- **Series**: XADV Series
- **Machine Type**: 200 Series / 300 Series / 400 Series / BC Series / MA Series / AC Series
- **Drain Principle**: G:Level Type(10,12 Number Stands for inner diameter of equipped water cup)

■ Range of Application:

This product is installed at the bottom of water cups for auto dischargers,air filters and air filter regulators and can auto discharge the condense water gathered in the water cup.

■ Technical Requirements:

Working medium:Compressed air
Ambient and media temperature:5~60℃
Operating pressure range:0.15~1.00Mpa

■ Features:

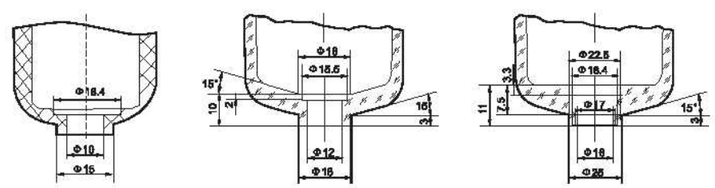
Auto drainer/Air Shut off Drain/Manual Drain

■ Points for Attention:

When using,the drainer should be installed vertically the drain port facing down.

XADV 400-G12 (XADV BC-GN16)　XADV 300-G12 (XADV 300-G14)

Dimensional Drawing of Water Cup Connecting Part

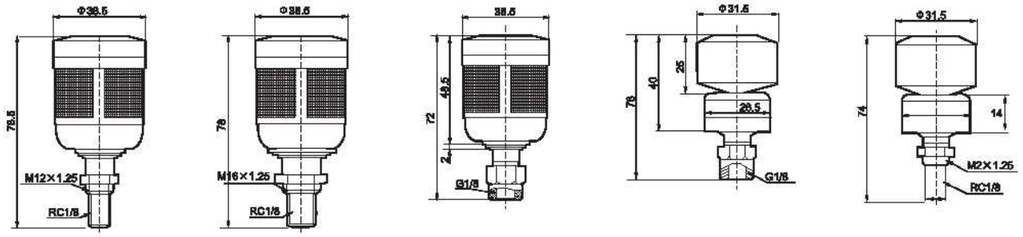


XADV-200(AC)　ADV-300　XADV-(BC)

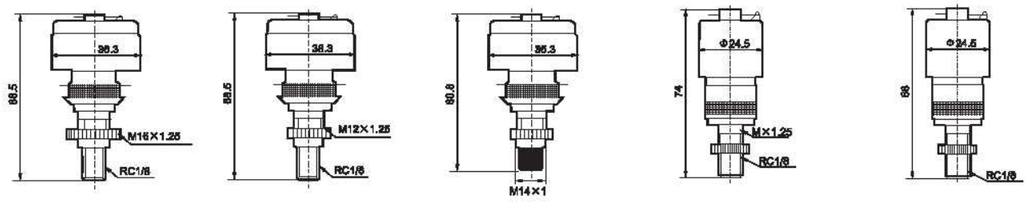
HAVKON® PNEUMATIC

XADV Series Auto Drain

Overall Dimensions



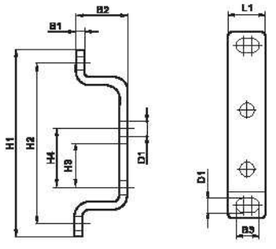
XADV-400-FW | XADV-BC-FW | XADV-400-FN(BC-FN) | ADV-300-FN | ADV-300-FW



XADV-400-Q12 | XADV-BC-Q16 | XADV-MA-Q14 | XADV-300-Q12 (XADV-300-Q14) | XADV-200-Q10 (XADV-AC-Q10)

XO Series Air Unit Accessories

Mounting bracket OHC

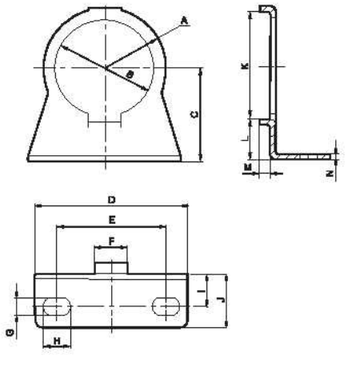


Dimension Sheet

Model	B1	B2	B3	D1	H1
OHC-MINI	2	19	7.3	4.3	43
OHC-MIDI/MAXI	3	19	8.3	5.3	70

Model	H2	H3	H4	L1
OHC-MINI	35	5.5	11	12
OHC-MIDI/MAXI	60	16.5	22	14

Mounting bracket OHO



Dimension Sheet

Model	A	B	C	D	E	F	G
OHO-MINI/MAXI	22.5	36.5	35	56	40	12	6.5
OHO-MIDI	30	52.5	48	70	53	12	8.5

Model	H	I	J	K	L	M	N
OHO-MINI/MAXI	10	12	20	40.4	15	4	2
OHO-MIDI	10.5	17.5	27	55.5	20	4	2

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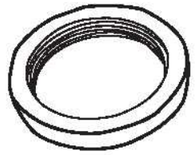
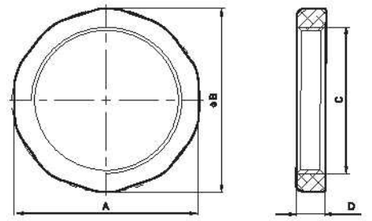
XO Series Air Unit Accessories



Nut HMR



Dimension Sheet

Model	A	B
HMR-MINI/MAXI	44	45
HMR-MIDI	60	62

Model	C	D
HMR-MINI/MAXI	M36x1.5	7
HMR-MIDI	M52x1.5	8

Pressure gauge OMA

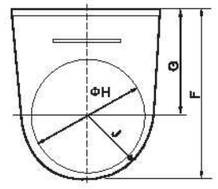
Dimension Sheet

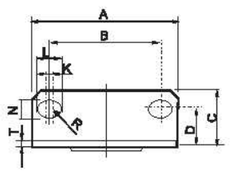
Model	Normal size	Pneumatic connection	Indicating range
OMA-10-1/8	40	G1/8	0-10 bar
OMA-16-1/8			0-16 bar
OMA-10-1/4	50	G1/4	0-10 bar
OMA-16-1/4			0-16 bar

The Pressure gauge is used to measure and display the pressure of the controlles system.

XA Series Air Unit Accessories

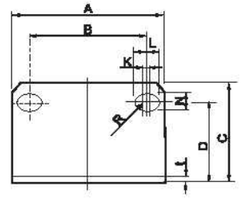
Bracket for AR/AW

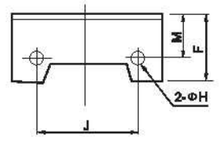




Model	A	B	C	D	F	G	ΦH	J	K	L	N	R	T	Applicable Model
B120	40	28	17	11	37.8	25	20.5	12.3	2	6.5	4.5	2.25	2	AR/AW1000
B220	55	34	25	19	50	30	33.5	20	10	15.4	5.4	2.7	2.3	AR/AW2000/AR2500
B320	53	40	21.5	14	64	39	42.5	25	1.5	8	6.5	3.25	2.3	AR/AW3000
B420	70	54	27	18	79.2	49.2	52.5	30	2	10.5	8.5	4.26	2.3	AR/AW4000-5000

Bracket for AL/AF





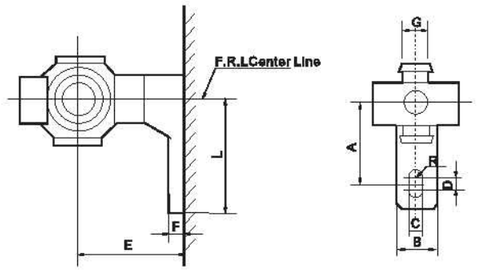
Model	A	B	C	D	F	G	ΦH	J	K	L	N	R	t	Assembly Screw	Applicable Model
B240	40	27	33	27	18	4.5	28	3	8.4	14	5.4	2.7	2.3	M4×8	AF/AL2000
B340	53	40	39	32	22.5	4.5	35	1.5	8	19	6.5	3.25	2.3	M4×8	AF/AL3000
B440	70	54	47	38	31.5	5.5	47	2	10.5	20	8.5	4.25	2.3	M5×10	AF/AL4000
B540	70	54	47	38	27.5	5.5	47	2	10.5	20	8.5	4.25	2.3	M5×10	AF/AL4000-06
B640	90	68	64	52	43	6.5	60	2	13	29	11	5.5	3.2	M6×10	AF/AL5000

HAVKON® PNEUMATIC

XA Series Air Unit Accessories

Spacer With L-Type bracket

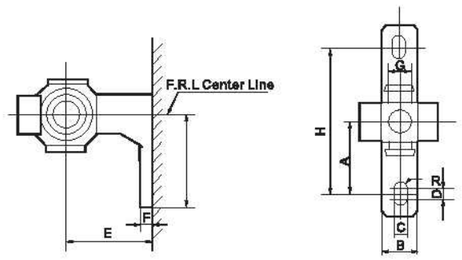
L-Type Spacer



Model	Spacer with L-Tpe Bracket	A	B	C	D	E	F	G	R	L	Applicable Model
B110L	Y10L	20	12	4.5	3	25	5	8	2.25	27	AC1000
B210L	Y20L	24	15	5.5	3	30	5	10	2.75	33	AC2000
B310L	Y30L	35	16	7	4	41	7	11	3.5	45	AC2500~3000
B410L	Y40L	40	22	9	4	50	7	14	4.5	50	AC4000
B510L	Y50L	40	22	9	4	50	7	14	4.5	50	AC4000-06
B610L	Y60L	50	23	12	4	69.8	10.5	15	6	63	AC5000

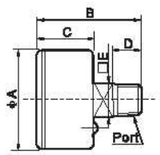
Spacer With T-Type bracket

T-Type Spacer



Model	Spacer with T-Tpe Bracket	A	B	C	D	E	F	G	H	R	L	Applicable Model
B110T	Y10T	20	12	4.5	3	25	5	8	40	2.25	27	AC1010
B210T	Y20T	24	15	5.5	3	30	5	10	48	2.75	33	AC2010
B310T	Y30T	35	16	7	4	41	7	11	70	3.5	45	AC3010
B410T	Y40T	40	22	9	4	50	7	14	80	4.5	50	AC4000
B510T	Y50T	40	22	9	4	50	7	14	80	4.5	50	AC4010-06
B610T	Y60T	50	23	12	4	69.8	10.5	15	100	6	63	AC5010

Pressure Gauge

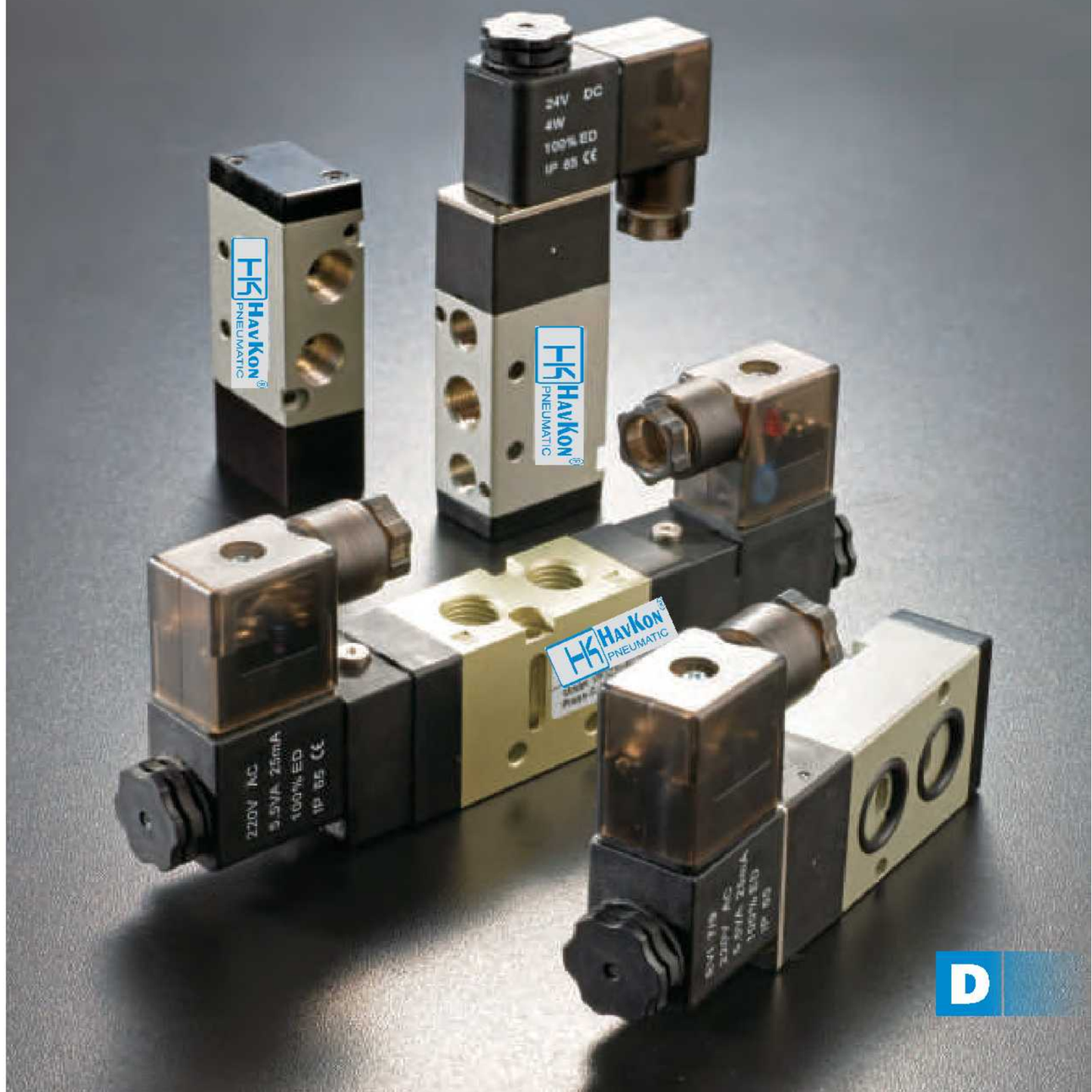


Model	Pressure Range		A	B	C	D	E	Applicable Model
G27-10-R1		G1/16"	26	17.5	11	6.5	11	AR1000 AW1000
G36-10-01	0~1MPa(Red) 0~150psi(Blue)	G1/8"	42	38.5	24	10	11	AR2000~3000 AW2000~3000
G46-10-02		G1/4"	52.5	43.5	25	10	14	AR4000~5000 AW4000~5000

HAVKON® PNEUMATIC

Solenoid valves

Solenoid valves are used for change directional of air flow, control by electricity. There are 3/2, 5/2 and 5/3 way/position as optional, and the port size from 1/8" to 1/2".XCPC never stop its step to improve the quality, 2 times life time, less friction inside the valve body and high dust prevention, the new type of solenoid valve is available now.



D

HAVKON® PNEUMATIC

4V,3V Series Solenoid Valve,4A,3A Series Pneumatic Control Valve

Product instruction

This solenoid valve is our new developed product. All the installation dimension is the same as 3V, 4V series, and the valve spindle material is still aluminum, but we changed the material outside valve spindle into POM (polyformaldehyde). Then it will be not only the seal-ring that operate separately, which will bring the new product two advantages:

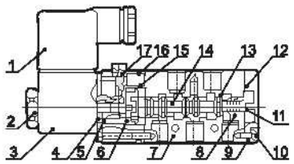
If you need this new product, please add the word "new" (abbreviation "N")
after the ordering code, for example: 4V210-08-N.

1. High dust prevention, air-proof
2. One or twice lifetime than normals'

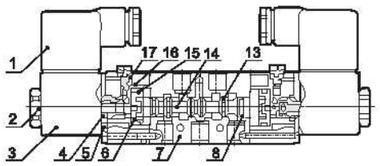
1. Spool:materal aluminum 6061
2. O-ring:material NBR
3. White case:Material POM

4V Series Internal structure

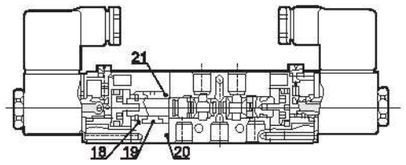
4V110~410



4V120~420



4V130~430



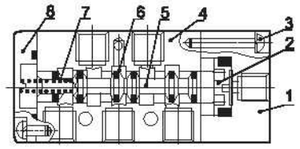
NO	Designation	NO	Designation
1	Connector	12	Seal ring
2	Nut	13	O-Ring
3	Coil	14	Spool
4	Active Amature	15	O-Ring
5	Steel Part	16	Spring
6	Piston	17	Pin
7	Body	18	Spring Seat
8	Wearing	19	Spring
9	End Cap	20	Side Cover
10	Screw	21	Spring Seat
11	Spring		

HAVKON® PNEUMATIC

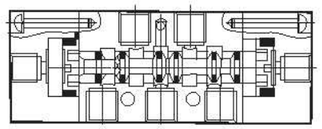
4V,3V Series Solenoid Valve,4A,3A Series Pneumatic Control Valve

4A Series Internal structure

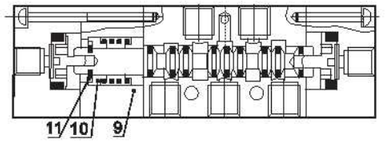
4A110~410



4A120~420



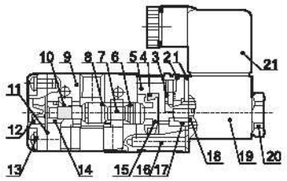
4A130~430



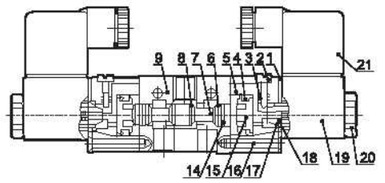
NO	Designation
1	Air control cover
2	Piston
3	Screw
4	Valve body
5	Spool
6	O-Ring
7	Spring
8	Rear cover
9	Back seat
10	Spring seat
11	C-type buckle

3V Series Internal structure

3V110~410



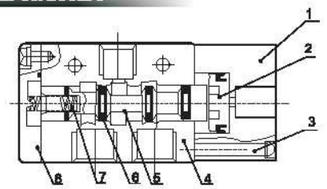
3V120~420



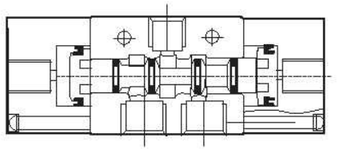
NO	Designation	NO	Designation
1	Washer	12	End Cap
2	Pin	13	Screw
3	Spring	14	Wearing
4	O-Ring	15	Piston
5	Body	16	Screw
6	O-Ring	17	O-Ring
7	Spool	18	Active Amature
8	O-Ring	19	Coil
9	Body	20	Nut
10	Spring	21	Connector
11	Seal		

3A Series Internal structure

3A110~410



3A120~420



NO	Designation
1	Air control cover
2	Piston
3	Screw
4	Valve body
5	Spool
6	O-Ring
7	Spring
8	Rear cover

HAVKON® PNEUMATIC

4V,3V100 Series Solenoid Valve,4A,3A 100 Series Pneumatic Control Valve

4A120-06

4V120-06

3A110-06

3V110-06

Ordering Code

4V | 1 | 10 | — | 06 | □ | — | AC220V | — | □

Specification Code
4V:Two(Three)-position Five-way Solenoid Valve
4A:Two(Three)-position Five-way pneumatic control valve
3V:Two-position Three-way Solenoid valve
3A:Two-position Three-way pneumatic control valve

Series Code
100 Series

Coil and Places
10:Single-head Double-position
20:Double-head Double-position
30C:Double-head Three-position Close Type
30E:Double-head Three-position Exhaust Type
30P:Double-head Three-position Pressure Type

Port Size
M5:M5×0.8
06:G1/8"

Port connection and initial State
NC:Two-position Three-way Normal Close Type
NO:Two-positiOn Three-way Normal Open Type

Standard Voltage
DC12V
DC24V
AC24V 50Hz/60Hz
AC110V 50Hz/60Hz
AC220V 50Hz/60Hz
AC380V 50Hz/60Hz

Wiring Form
Blank:Standard Connector
LD:With Lighting Connector
LD1:With Lighting Connector
W:Lead Wire Type

Specification

Model	4V110-M5 / 4A110-M5	4V120-M5 / 4A120-M5	4V130C-M5 / 4A130C-M5	4V130E-M5 / 4A130E-M5	4V130P-M5 / 4A130P-M5	4V110-06 / 4A110-06	4V120-06 / 4A120-06	4V130C-06 / 4A130C-06	4V130E-06 / 4A130E-06	4V130P-06 / 4A130P-06
Position and Way NO.	Two-position Five-way		Three-position Five-way			Two-position Five-way		Three-position Five-way		
Effective Sectional Area	10mm²(CV=0.56)		7mm²(CV=0.40)			12mm²(CV=0.67)		9mm²(CV=0.5)		

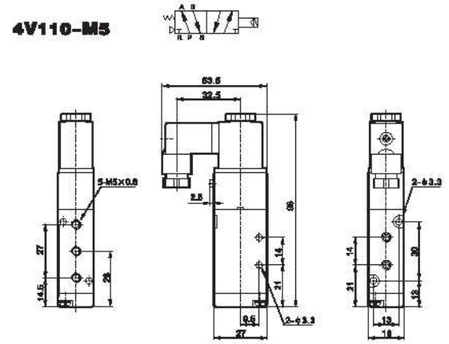
Model	3V110-M5	3V120-M5	3A110-M5	3A120-M5	3V110-06	3V120-06	3A110-06	3A120-06
Position and Way NO.	Two-position Three-way				Two-position Three-way			
Effective Section Area	10mm²(CV=0.56)				12mm²(CV=0.67)			
Joint Pipe Bore	Air Inlet=Air Outlet=Exhaust=M5x0.8				Air Inlet=Air Outlet=Exhaust=G1/8"			
Working Medium	40 Micron Filtered Air							
Motion Pattern	Inner Guide Type							
Working-pressure	0.15~0.8 M Pa							
Max. Pressure Resistance	1.2MPa							
Operating Temperature	5~50℃							
Voltage Range	±10%							
Power Consumption	AC: 2.5VA DC: 2.5W							
Insulation & Protection Class	F Class. IP65							
Wiring Form	Lead Wire or Connector type							
Highest Action Frequency	5 Cycle / Second							
Shortest Excitation Time	0.05 Second							

HAVKON® PNEUMATIC

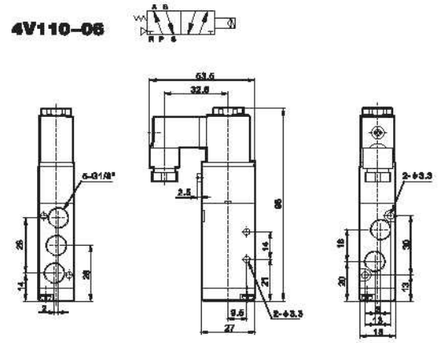
4V,3V100 Series Solenoid Valve,4A,3A100 Series Pneumatic Control Valve

Overall Dimensions

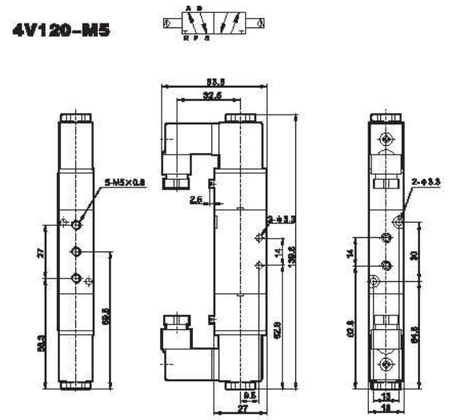
4V110-M5



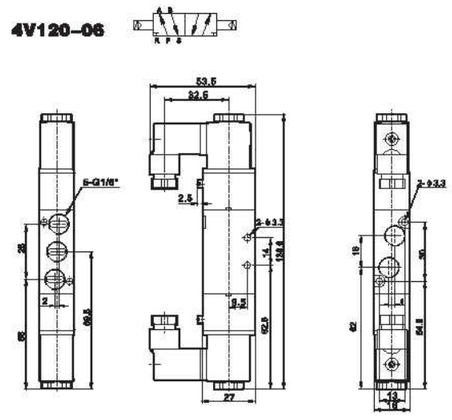
4V110-06



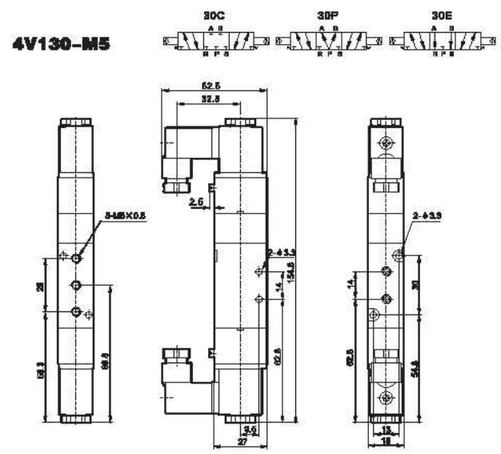
4V120-M5



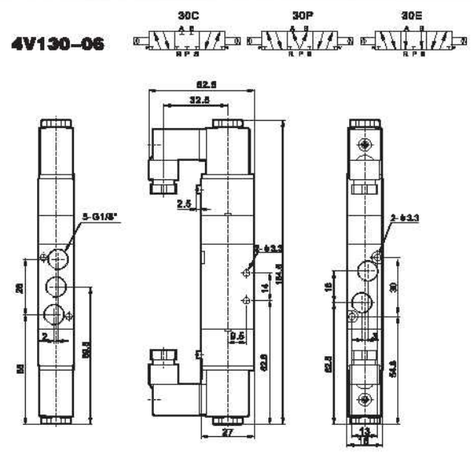
4V120-06



4V130-M5



4V130-06

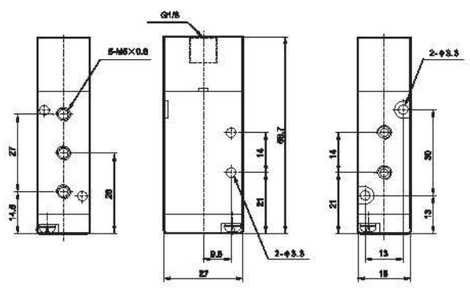


HAVKON® PNEUMATIC

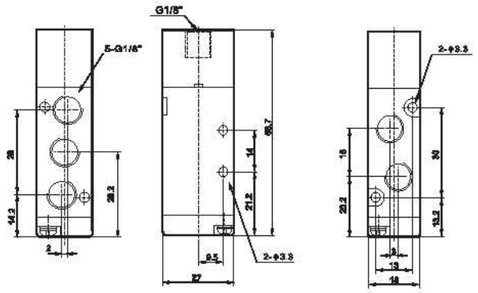
4V,3V100 Series Solenoid Valve,4A,3A100 Series Pneumatic Control Valve

Overall Dimensions

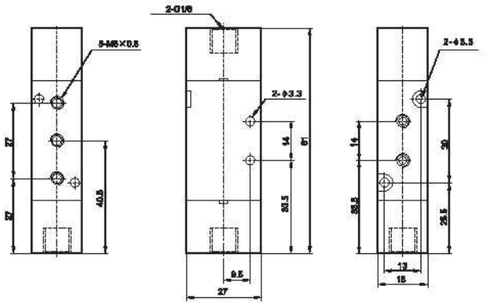
4A110-M5



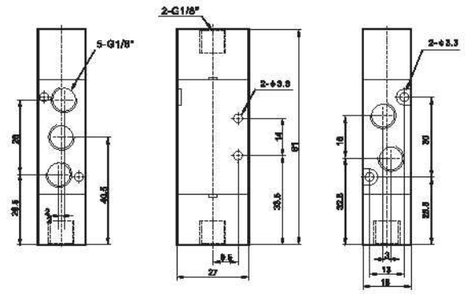
4A110-06



4A120-M5



4A120-06



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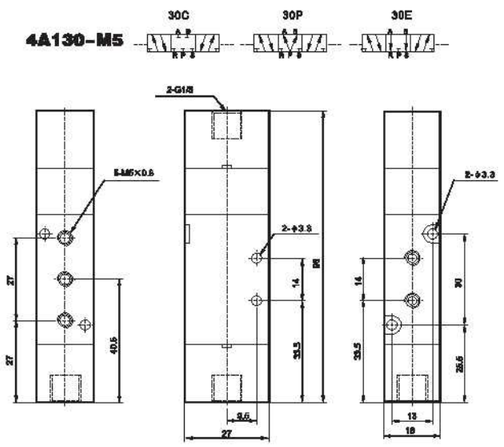

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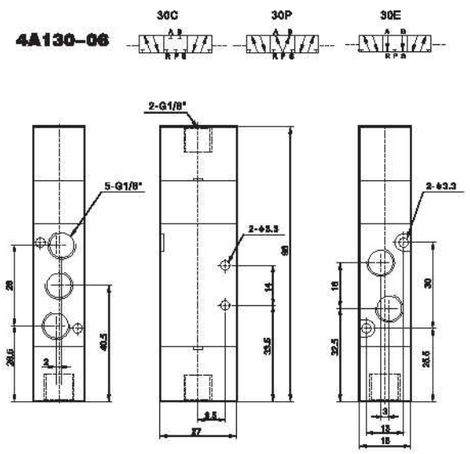
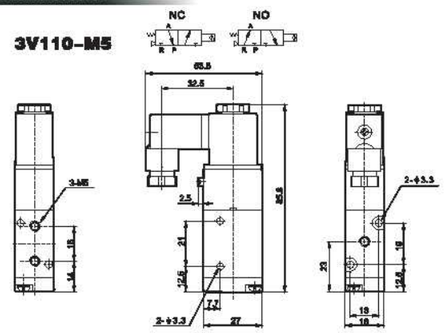


HAVKON® PNEUMATIC

4V,3V100 Series Solenoid Valve,4A,3A100 Series Pneumatic Control Valve

Overall Dimensions

3V110-M5



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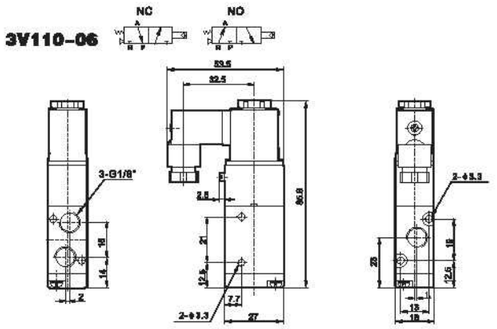

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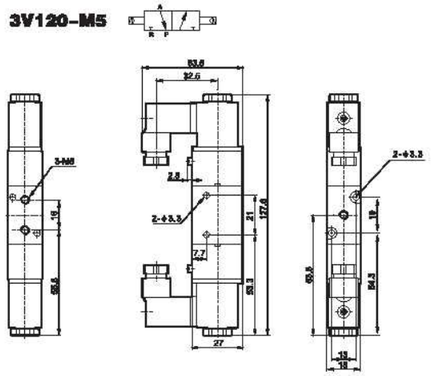

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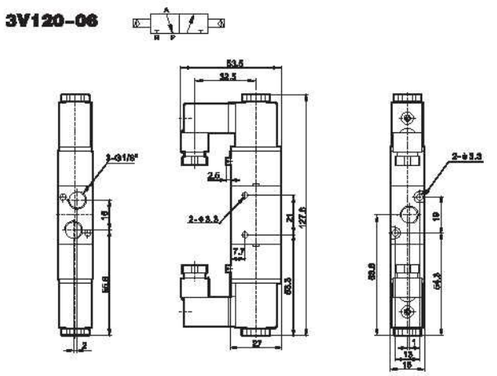

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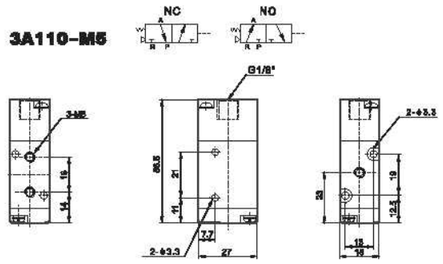

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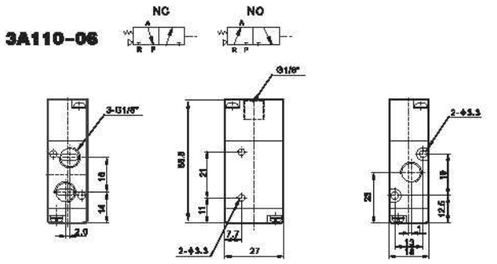

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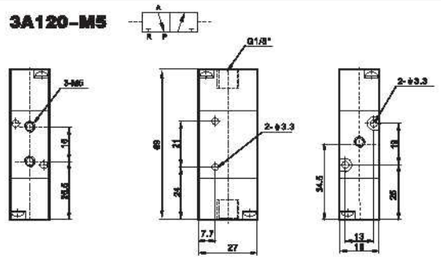

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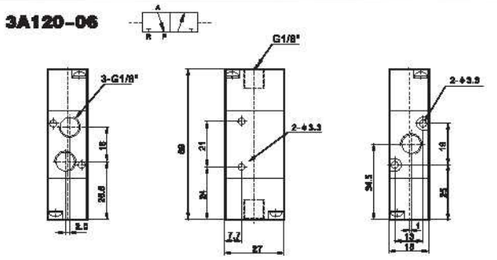


HAVKON® PNEUMATIC

4V,3V200 Series Solenoid Valve, 4A,3A200 Series Pneumatic Control Valve

4A210-08

4V210-08

3A210-08

4V220-08

Ordering Code

4V	2	10	—	08	□	—	AC220V	—	□

Specification Code
4V:Two(Three)-position Five-way Solenoid Valve
4A:Two(Three)-position Five-way pneumatic control valve
3V:Two-position Three-way Solenoid Valve
3A:Two-position Three-way Pneumatic Control Valve

Series Code
200 Series

Coil and Places
10:Single-head double-position
20:Double-head double-position
30C:Double-head Three-position Close Type
30E:Double-head Three-position Exhaust Type
30P:Double-head Three-position Pressure Type

Port Size
06:G1/8"
08:G1/4"

Port connection and Initial State
NC:Two-position Three-way Normal Close Type
NO:Two-positiOn Three-way Normal Open Type

Standard Voltage
DC12V
DC24V
AC24V 50Hz/60Hz
AC110V 50Hz/60Hz
AC220V 50Hz/60Hz
AC380V 50Hz/60Hz

Wiring Form
Blank:Standard Connector
LD:With Lighting Connector
LD1:With Lighting Connector
W:Lead Wire Type

Specification

Model	4V210-06 / 4A210-06	4V220-06 / 4A220-06	4V230C-06 / 4A230C-06	4V230E-06 / 4A230E-06	4V230P-06 / 4A230P-06	4V210-08 / 4A210-08	4V220-08 / 4A220-08	4V230C-08 / 4A230C-08	4V230E-08 / 4A230E-08	4V230P-08 / 4A230P-08
Position and Way NO.	Two-position Five-way		Three-position Five-way			Two-position Five-way		Three-position Five-way		
Effective Sectional Area	14mm²(CV=0.78)		12mm²(CV=0.67)			16mm²(CV=0.89)		12mm²(CV=0.67)		

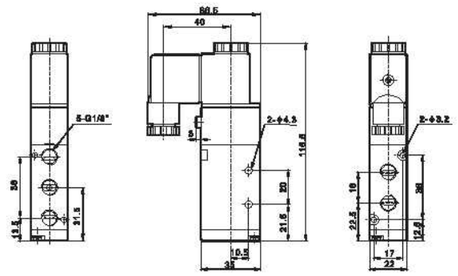
Model	3V210-06	3V220-06	3A210-06	3A220-06	3V210-08	3V220-08	3A210-08	3A220-08
Position and Way NO.	Two-position Three-way				Two-position Three-way			
Effective Section Area	14mm²(CV=0.78)				16mm²(CV=0.89)			
Joint Pipe Bore	Air Inlet=Air Oute=Exhaust=G1/8"				Air Inlet=Air Outet1/4" Exhaust=Gl/"1/8"			
Working Medium	40 Micron Filtered Air							
Motion Pattern	Inner Guide Type							
Working-pressure	0.15~0.8 M Pa							
Max. Pressure Resistance	1.2MPa							
Operating Temperature	5~50℃							
Voltage Range	±10%							
Power Consumption	AC: 2.5VA DC: 2.5W							
Insulation & Protection Class	F Class. IP65							
Wiring Form	Lead Wire or Connector type							
Highest Action Frequency	5 Cycle / Sec							
Shortest Excitation Time	0.05 Second							

HAVKON® PNEUMATIC

4V,3V200 Series Solenoid Valve, 4A,3A200 Series Pneumatic Control Valve

Overall Dimensions

4V210-06



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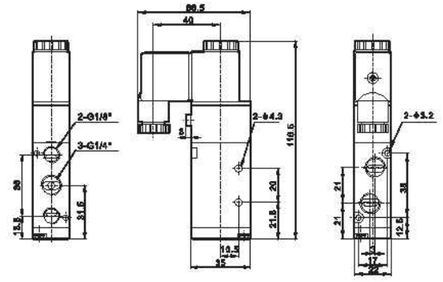

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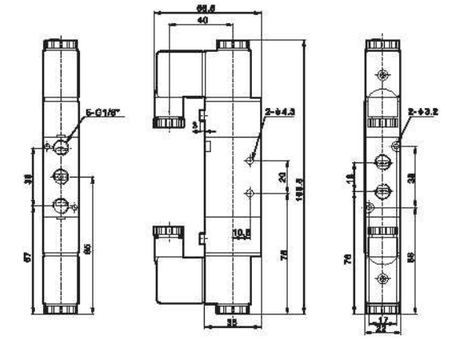

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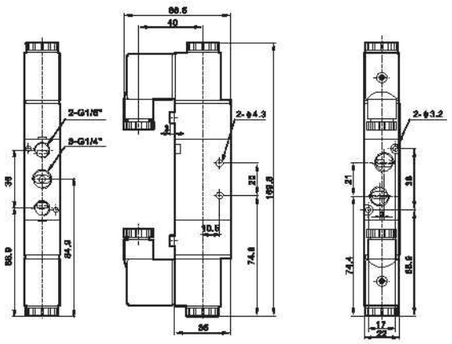

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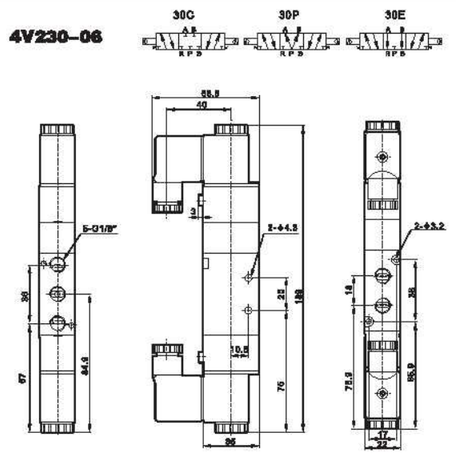

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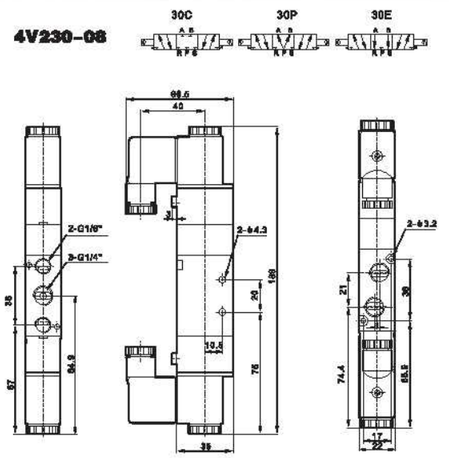
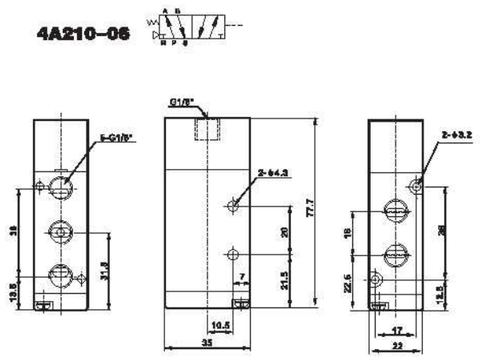


HAVKON® PNEUMATIC

4V,3V200 Series Solenoid Valve, 4A,3A200 Series Pneumatic Control Valve

Overall Dimensions

4A210-06



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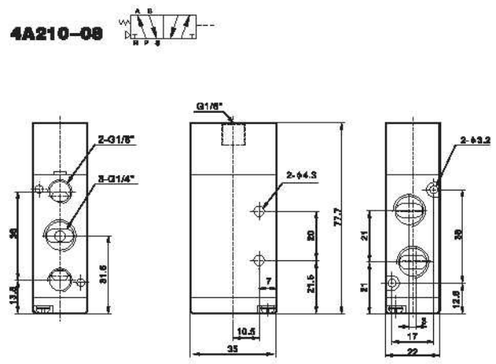

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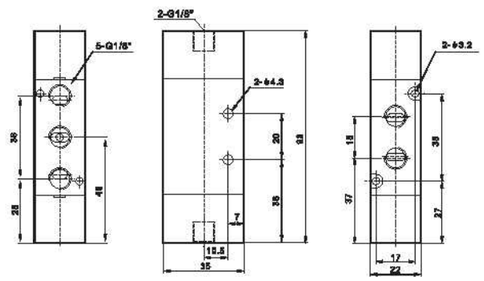

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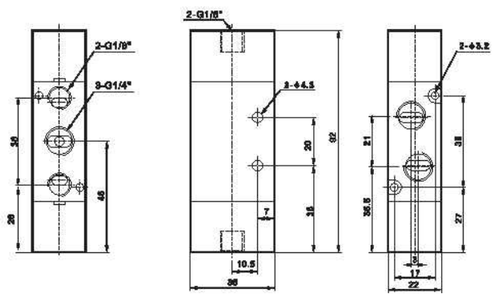

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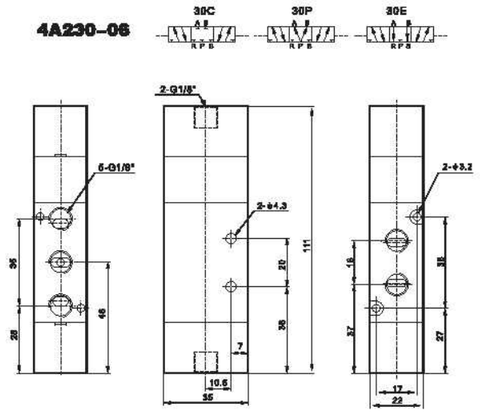

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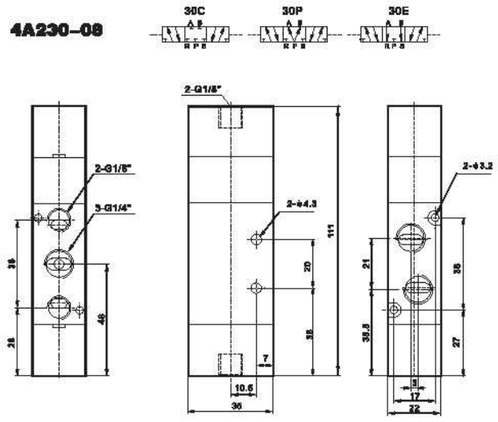
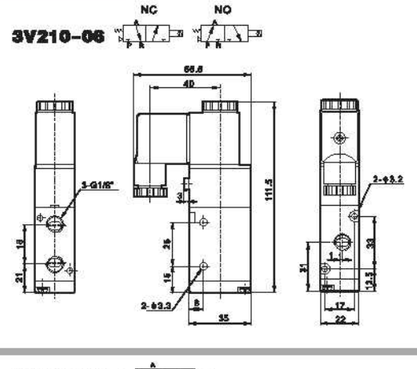


HAVKON® PNEUMATIC

4V,3V200 Series Solenoid Valve, 4A,3A200 Series Pneumatic Control Valve

Overall Dimensions

3V210-06



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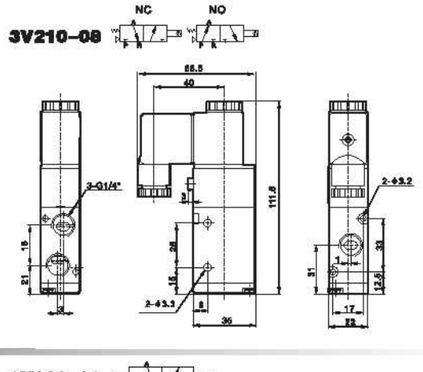

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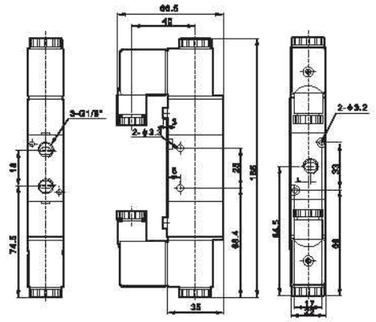

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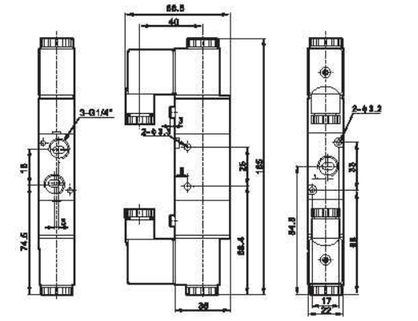

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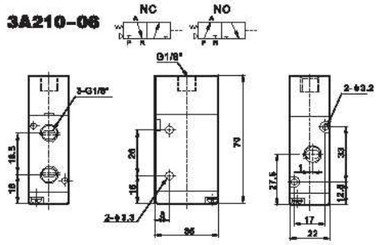

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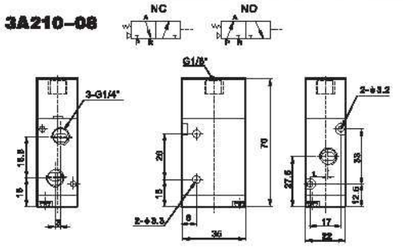

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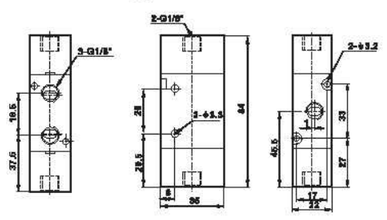

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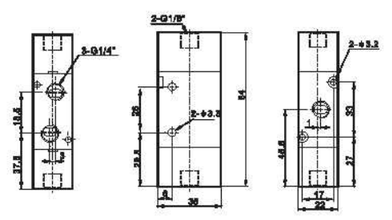


HAVKON® PNEUMATIC

4V,3V300 Series Solenoid Valve, 4A,3A300 Series Pneumatic Control Valve

4A310-10

3V310-10

3A310-10

4V320-08

Ordering Code

4V	3	10	—	10	□	—	AC220V	—	□
Specification Code 4V:Two(Three)-position Five-way Solenoid Valve 4A:Two(Three)-position Five-way pneumatic control Valve 3V:Two-position Three-way Solenoid Valve 3A:Two-position Three-way Pneumatic Control Valve	**Series Code** 300 Series	**Coil and Places** 10:Single-head Double-position 20:Double-head Double-position 30C:Double-head Three-position Close Type 30E:Double-head Three-position Exhaust Type 30P:Double-head Three-position Pressure Type		**Port Size** 08:G1/4" 10:G3/8"	**Port connection and Initial State** NC:Two-position Three-way Normal Close Type NO:Two-position Three-way Normal Open Type		**Standard Voltage** DC12V DC24V AC24V 50Hz/60Hz AC110V 50Hz/60Hz AC220V 50Hz/60Hz AC380V 50Hz/60Hz		**Wiring Form** Blank:Standard Connector LD:With Lighting Connector LD1:With Lighting Connector W:Lead Wire Type

Specification

Model	4V310-08	4V320-08	4V330C-08	4V330E-08	4V330P-08	4V310-10	4V320-10	4V330C-10	4V330E-10	4V330P-10
	4A310-08	4A320-08	4A330C-08	4A330E-08	4A330P-08	4A310-10	4A320-10	4A330C-10	4A330E-10	4A330P-10
Position and Way NO.	Two-position Five-way		Three-position Five-way			Two-position Five-way		Three-position Five-way		
Effective Sectional Area	25mm²(CV=1.40)		18mm²(CV=1.00)			30mm²(CV=1.68)		18mm²(CV=1.00)		

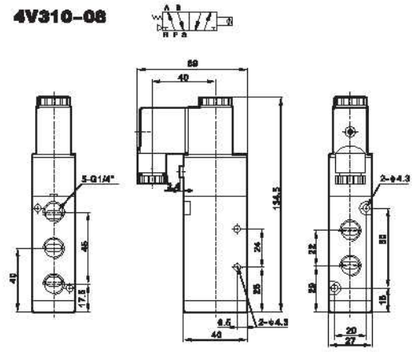
Model	3V310-08	3V320-08	3A310-08	3A320-08	3V310-10	3V320-10	3A310-10	3A320-10
Position and Way NO.	Two-position Three-way				Two-position Three-way			
Effective Section Area	25mm²(CV=1.40)				30mm²(CV=1.68)			
Joint Pipe Bore	Air Inlet=Air Oute=Exhaust=G1/4"				Air Inlet=Air Outet=3/8" Exhaust=G1/4"			
Working Medium	40 Micron Filtered Air							
Motion Pattern	Inner Guide Type							
Working-pressure	0.15~0.8 M Pa							
Max. Pressure Resistance	1.2MPa							
Operating Temperature	5~50℃							
Voltage Range	±10%							
Power Consumption	AC: 4.5VA DC: 3W							
Insulation & Protection Class	F Class, IP65							
Wiring Form	Lead Wire or Connector Type							
Highest Action Frequency	5 Cycle / Sec							
Shortest Excitation Time	0.05 Second							

HAVKON® PNEUMATIC

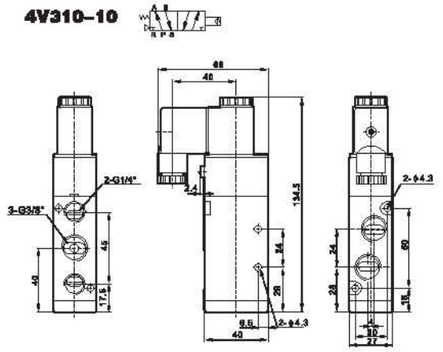
4V,3V300 Series Solenoid Valve, 4A,3A300 Series Pneumatic Control Valve

Overall Dimensions

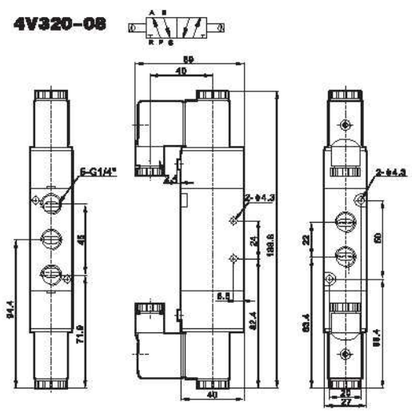
4V310-08



4V310-10



4V320-08



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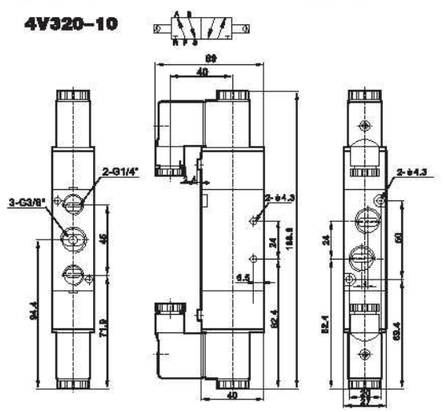

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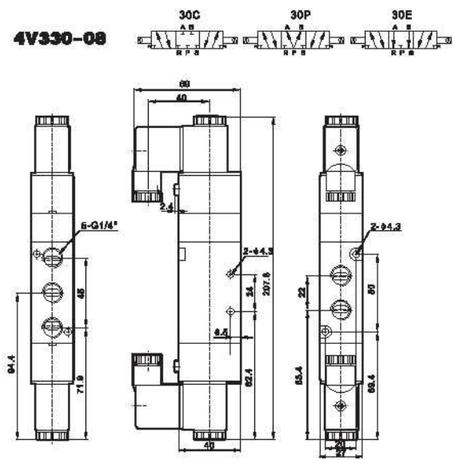

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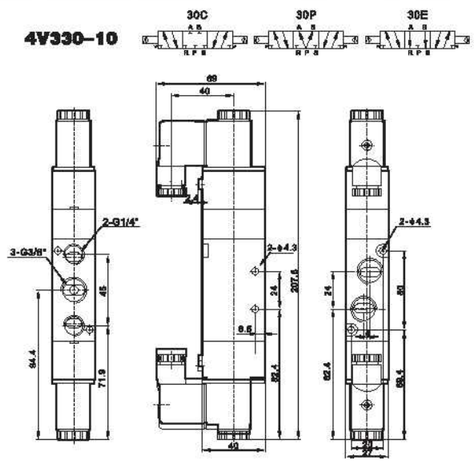
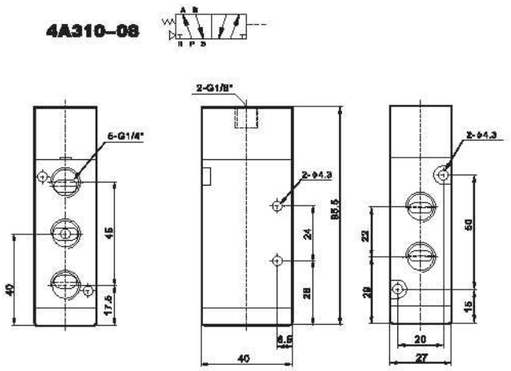


HAVKON® PNEUMATIC

4V,3V300 Series Solenoid Valve, 4A,3A300 Series Pneumatic Control Valve

Overall Dimensions

4A310-08



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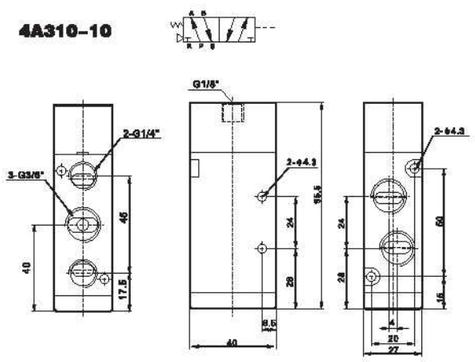

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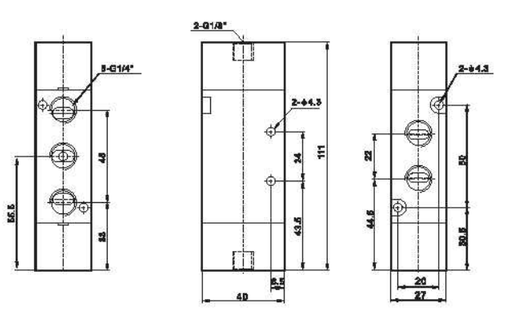

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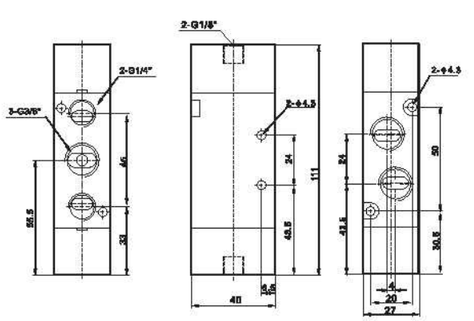

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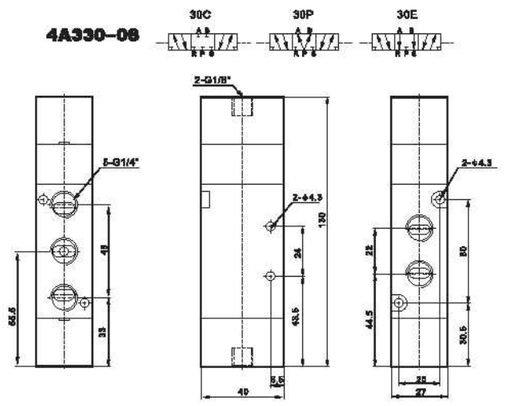

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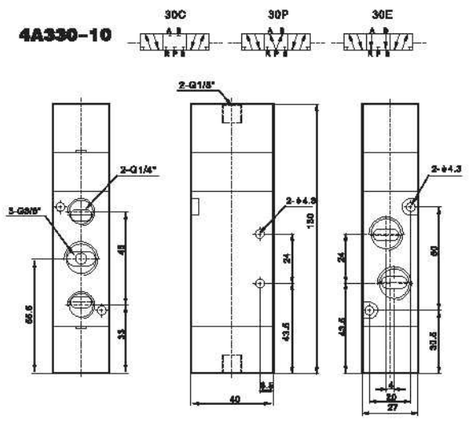
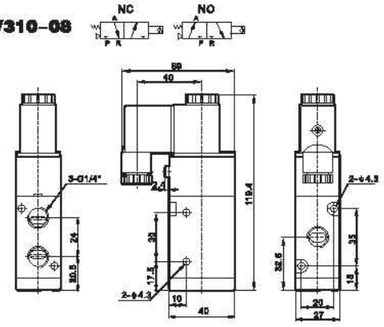


HAVKON® PNEUMATIC

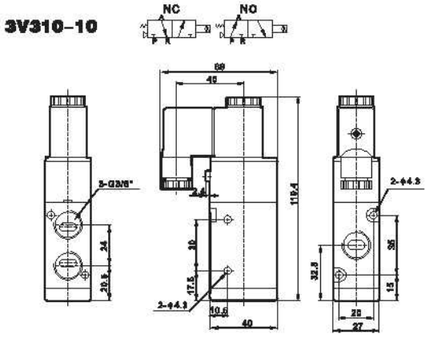
4V,3V300 Series Solenoid Valve, 4A,3A300 Series Pneumatic Control Valve

Overall Dimensions

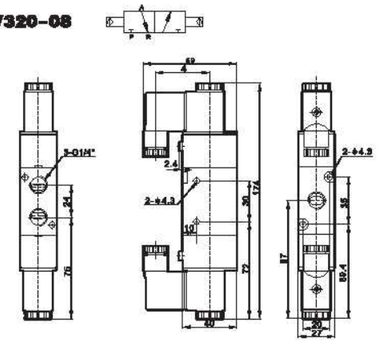
3V310-08



3V310-10



3V320-08



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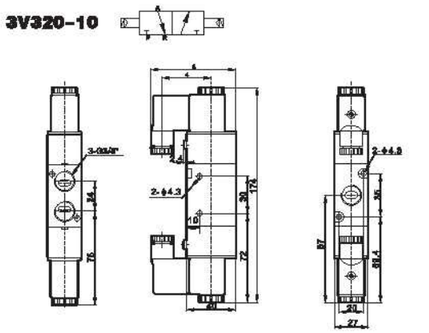

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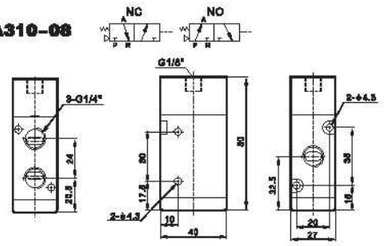

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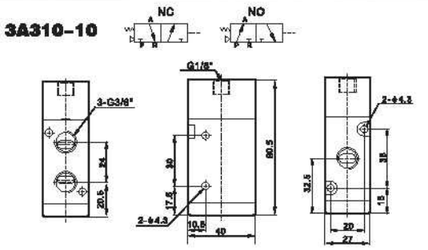

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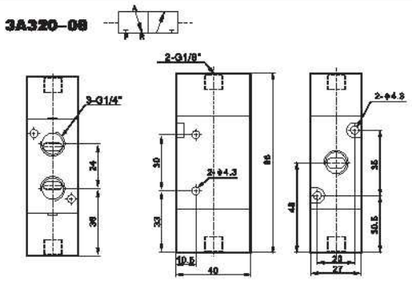

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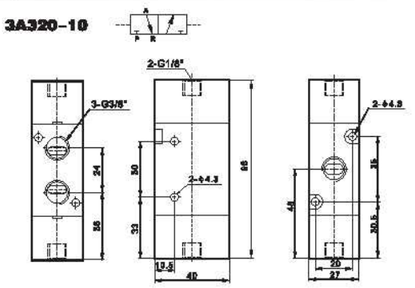


HAVKON® PNEUMATIC

4V,3V400 Series Solenoid Valve,4A,3A400 Series Pneumatic Control Valve

3A410-10

3V410-15

4A410-15

4V420-15

Ordering Code

4V	4	10	—	10	□	—	AC220V	—	□

Specification Code
4V:Two(Three)-position Five-way Solenoid Valve
4A:Two(Three)-position Five-way Pneumatic control Valve
3V:Two-position Three-way Solenoid Valve
3A:Two-position Three-way Pneumatic Control Valve

Series Code
400 Series

Coil and Places
10:Single-head Double-position
20:Double-head Double-position
30C:Double-head Three-position Close Type
30E:Double-head Three-position Exhaust Type
30P:Double-head Three-position Pressure Type

Port Size
15:G1/2"

Port connection and initial State
NC:Two-position Three-way Normal Close Type
NO:Two-positiOn Three-way Normal Open Type

Standard Voltage
DC12V
DC24V
AC24V 50Hz/60Hz
AC110V 50Hz/60Hz
AC220V 50Hz/60Hz
AC380V 50Hz/60Hz

Wiring Form
Blank:Standard Connector
LD:With Lighting Connector
LD1:With Lighting Connector
W:Lead Wire Type

Specification

Model	4V410-15 / 4A410-15	4V420-15 / 4A420-15	4V430C-15 / 4A430C-15	4V430E-15 / 4A430E-15	4V430P-15 / 4A430P-15
Position and Way NO.	Two-position Five-way		Three-position Five-way		
Effective Sectional Area	50mm²(CV=2.79)		30mm²(CV=1.68)		

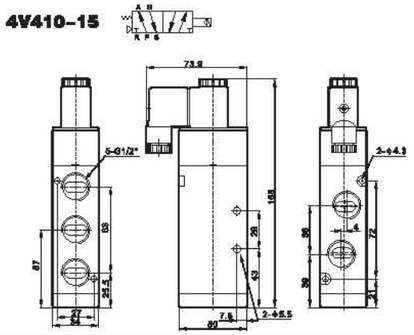
Model	3V410-08	3V420-08	3A410-08	3A420-08
Position and Way NO.	Two-position Three-way			
Effective Section Area	50mm²(CV=2.79)			
Joint Pipe Bore	Air Inlet=Air Outlet=Exhaust=G1/2"			
Working Medium	40 Micron Filtered Air			
Motion Pattern	Inner Guide Type			
Working-pressure	0.15~0.8 M Pa			
Max. Pressure Resistance	1.2MPa			
Operating Temperature	5~50℃			
Voltage Range	±10%			
Power Consumption	AC: 4.5VA DC: 3W			
Insulation & Protection Class	F Class. IP65			
Wiring Form	Lead Wire or Connector Type			
Highest Action Frequency	5 Cycle / Sec			
Shortest Excitation Time	0.05 Second			

HAVKON® PNEUMATIC

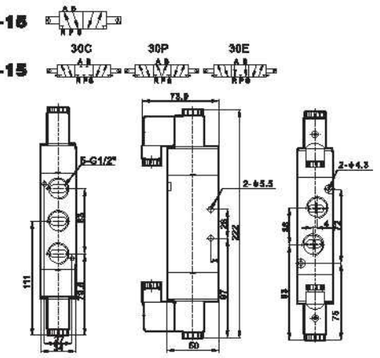
4V,3V400 Series Solenoid Valve,4A,3A400 Series Pneumatic Control Valve

Overall Dimensions

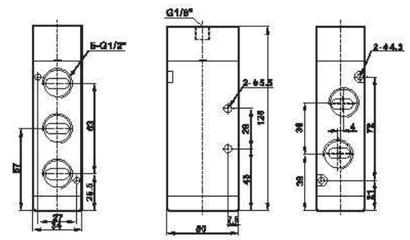
4V410-15



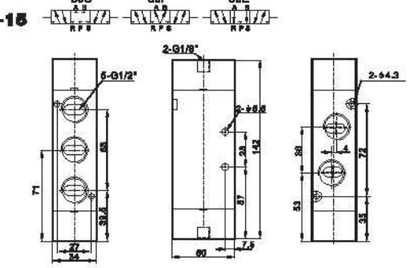
4V420-15
4V430-15



4A410-15



4A420-15
4A430-15



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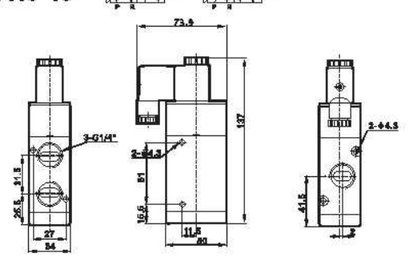

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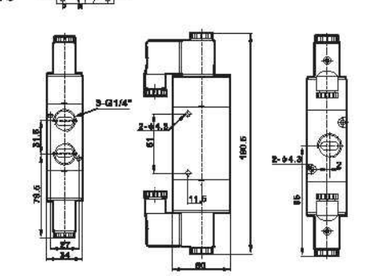

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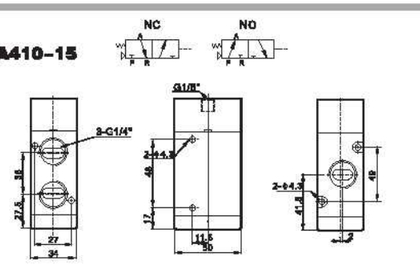
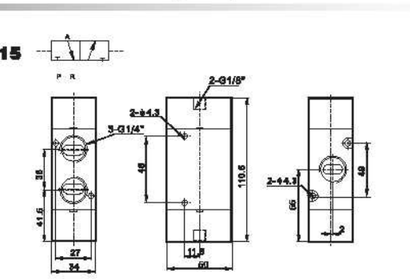


3A420-15



HAVKON® PNEUMATIC

4M Series Plate Type Valve

4M210-08

4M310-10

4M220-08

Ordering Code

4M	2	10	—	06	—	AC220V	—	□

Specification Code
4M:Two-position Five-way Plate Type Valve

Body Size
2:1/8" and 1/4" Valve body
3:1/4" and 3/8" Valve body

Coil and Places
10:Single-head Double-position
20:Double-head Double-position

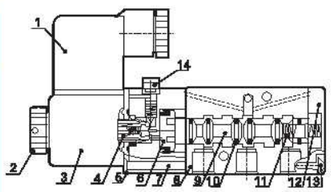
Port Size
06:G1/8"
08:G1/4"
10:G3/8"

Standard Voltage
DC12V
DC24V
AC24V 50Hz/60Hz
AC110V 50Hz/60Hz
AC220V 50Hz/60Hz
AC380V 50Hz/60Hz

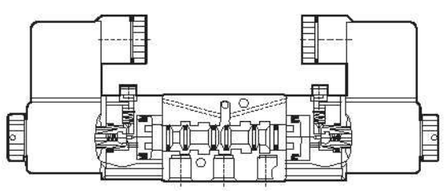
Wiring Form
Blank:Standard Connector
LD:With Lighting Connector
LD1:With Lighting Connector
W:Lead Wire Type

Graphic Symbol

Internal structure



4M 210~310



4M 220~320

NO	Designation	NO	Designation
1	Connector	8	Valve body
2	Nut	9	Spool
3	Coil	10	O-Ring
4	Pilot units	11	Spring
5	Plate	12	Rear cover
6	Piston	13	Screw
7	Screw	14	Manual override

Specification

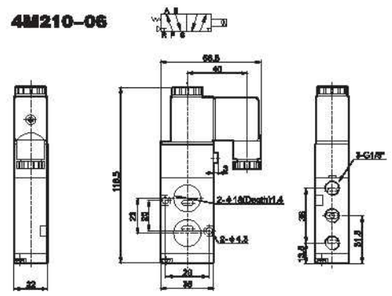
Model	4M210-06	4M220-06	4M210-08	4M220-08	4M310-08	4M320-08	4M310-10	4M320-10
Working Medium	40 Micron Filtered Air							
Motion Pattern	Inner Guide Type							
Position and Way NO.	Two-position Five-way							
Effective Section Area	14mm²(CV=0.78)		16mm²(CV=0.89)		25mm²(CV=1.39)		30mm²(CV=1.67)	
Port Size	Air Inlet=Exhaust=G1/8"		Air Inlet=G1/4"/Exhaust=G1/8"		Air Inlet=Exhaust=G1/4"		Air Inlet=G3/8"Exhaust=G1/4"	
Lubricate	Not Necessary							
Working-Pressure	0.15~0.8MPa							
Max.Pressure Resistance	1.2MPa							
Operating Temperature	5~60℃							
Voltage Range	-15%~+10%							
Power Consumption	AC380V:2.5VA,AC220V:2.0VA,AC110V:2.5VA,AC24V:3.5VA,DC24V:3.0W,DC12V:2.5W							
Insulation & Protection Class	F Class,IP65							
Wiring Form	Lead wire or Connector Type							
Highest Action Frequency	5 Cycle / Sec							
Shortest Excitation Time	0.05 Second							

HAVKON® PNEUMATIC

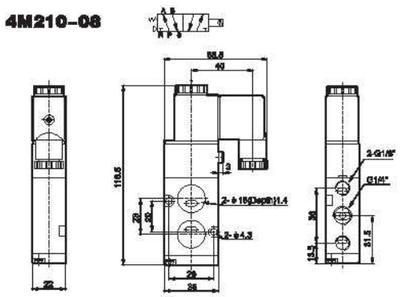
4M Series Plate Type Valve

Overall Dimensions

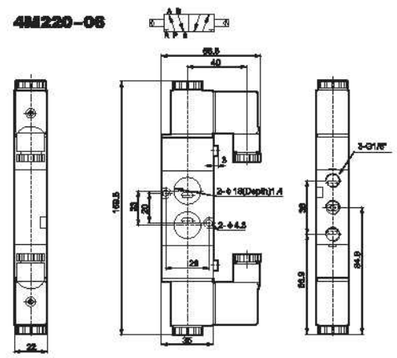
4M210-06



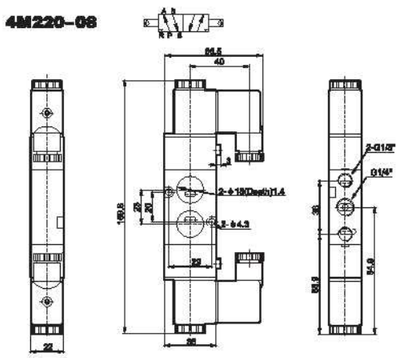
4M210-08



4M220-06



4M220-08



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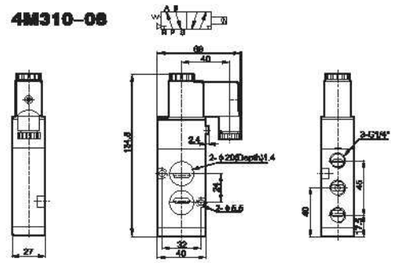
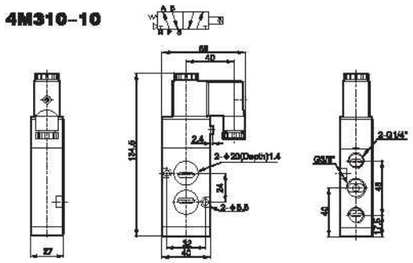
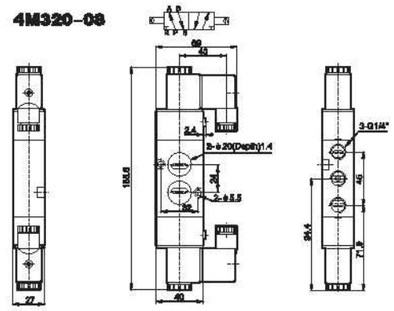


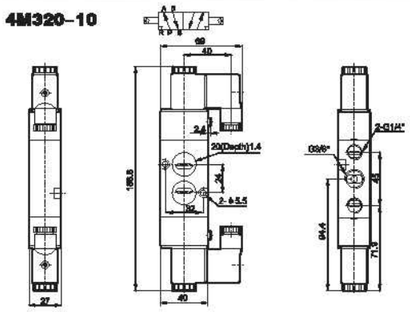
4M310-10



4M320-08



4M320-10



HAVKON® PNEUMATIC

VF、VZ Series Solenoid Valve

VF5120

VF3230

Ordering Code

VF3	1	—	30	AC220V	—	□

Series No.
VF3 Series
VF5 Series
VZ5 Series

Coil and Places
1:Single-Coil Double-position
2:Double-Coil Double-position
3:Double-Coil Three-position Close Type
4:Double-Coil Three-position Exhaust Type
5:Double-Coil Three-position Pressure Type

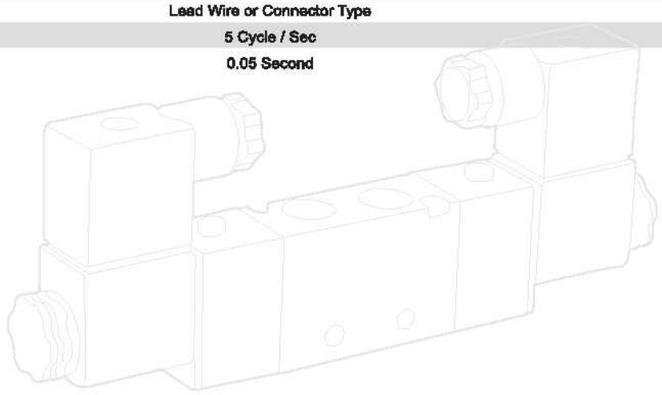
Order No.
VF3:30
VF5:20
VZ5:20

Standard Voltage
DC12v
DC24v
AC24v 50Hz/60Hz
AC110v 50Hz/60Hz
AC220v 50Hz/60Hz
AC380v 50Hz/60Hz

Wiring Form
Blank:Standard Connector
LD:With Lighting Connector
W:Lead Wire Type

Specification

Model	VF3130	VF3230	VF33(45)30	VF5120	VF5220	VF53(4/5)20	VZ5120	VZ5220	VZ53(3/4)20
Position and Way No.	Two-position Five-way		Three-position Five-way	Two-position Five-way		Three-position Five-way	Two-position Five-way		Three-position Five-way
Effective Section Area	16mm²(CV=0.89)		12mm²(CV=0.67)	25mm²(CV=1.40)		18mm²(CV=1.00)	12mm²(CV=0.67)		9mm²(CV=0.50)
Working Medium	40 Micron Filtered Air								
Motion Pattern	Inner Guide Type								
Working-Pressure	0.15~0.8MPa								
Max.Pressure Resistance	1.2MPa								
Operating Temperature	5~50℃								
Voltage Range	±10%								
Power Consumption	AC:4.5VA DC:3W								
Insulation & Protection Class	IP65/F Class.IP65								
Wiring Form	Lead Wire or Connector Type								
Highest Action Frequency	5 Cycle / Sec								
Shortest Excitation Time	0.05 Second								

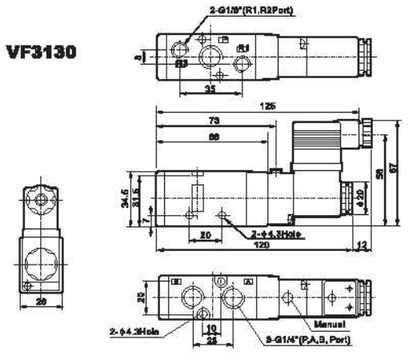


HAVKON® PNEUMATIC

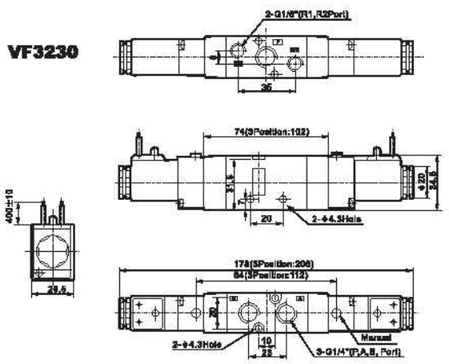
VF、VZ Series Solenoid Valve

Overall Dimensions

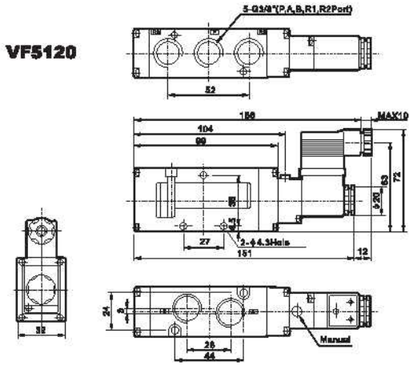
VF3130



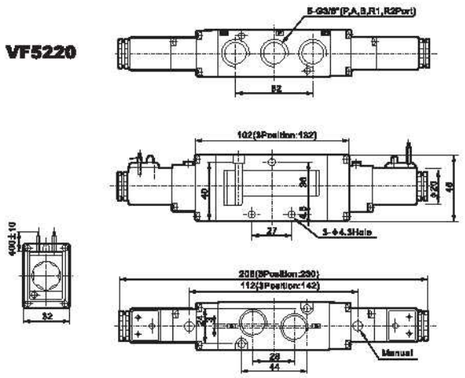
VF3230



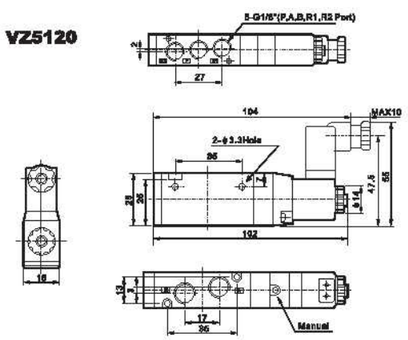
VF5120



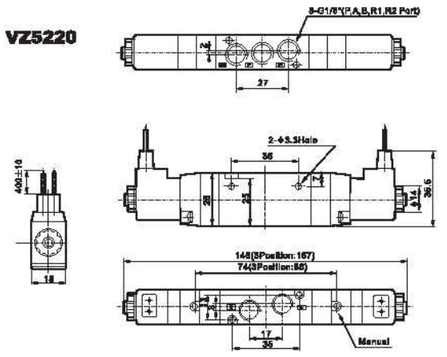
VF5220



VZ5120



VZ5220



HAVKON® PNEUMATIC

3V1 Series Solenoid Valve

3V1-06

Ordering Code

3V	1	06	–	B	AC220V	–	□

Specification Code
3V: Two-position Three-way Solenoid Valve

Series Code
100 Series

Port Size
M5:M5×0.8
06:G1/8"

Connecting Type
Blank:Pipe Connection Type
B:Plate Connection Type

Standard Voltage
DC12v
DC24v
AC24v 50Hz/60Hz
AC110v 50Hz/60Hz
AC220v 50Hz/60Hz
AC380v 50Hz/60Hz

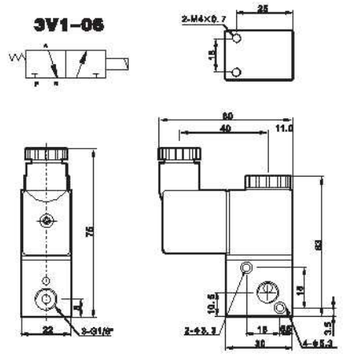
Wiring Form
Blank:Standard Connector
G:Lead Wire Type
L:With Lighting Connector

Specification

Model	3V1-M5	3V1-06
Working Medium	40 Micron Filtered Air	
Motion Pattern	Direct Drive Type	
Joint Pipe Bore	M5	1/8"
Ambient Temperature	-10~+60℃	
Gas Temperature	5~60℃	
Air Outlet Diameter	1.0mm	
Lubrication	Not Necessary	
Working-pressure	0~0.8MPa	
Max.Pressure Resistance	1.2MPa	
Power Consumption	AC:4.5VA DC:3.0W	
Protect Class	IP65	
Power Connection Form	Gorl	
Material of Body	Aluminum alloy	
Highest Action Frequency	10Cycle / Sec	
Insulation	F Class	
Voltage Range	±10%	
Shortest Excitation Time	0.05 Second	

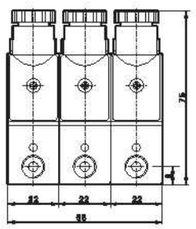
Overall Dimensions

3V1-06

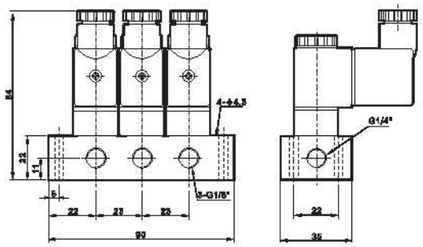


Overall Dimensions

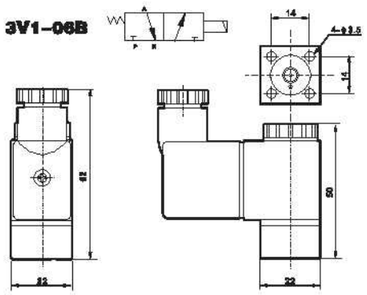
3V1-06-3F



3V1-06B-3F



3V1-06B



HAVKON® PNEUMATIC

Base For 4V、4A Series Valve

Base Ordering Code

4V	–	100M	–	□F

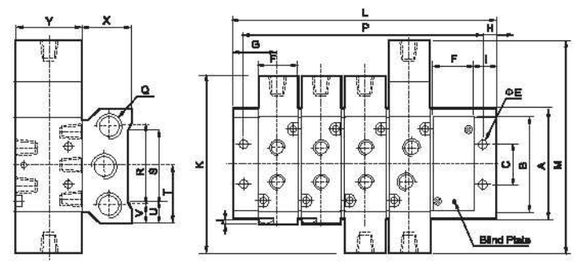
Series Code
4V:For 4V Series ues
4A:For 4A Series ues

Specification Code
100M:Base for 100 Series Use
200M:Base for 200 Series Use
300M:Base for 300 Series Use
400M:Base for 400 Series Use

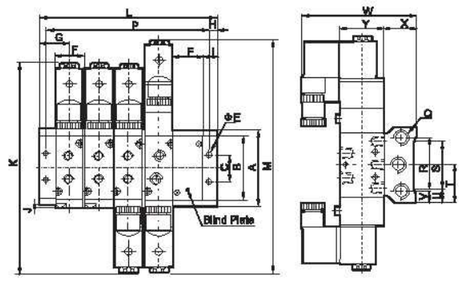
Joint Base Number
100M:Wantonly Joint
200M:Wantonly Joint
300M:Wantonly Joint
400M:Wantonly Joint

Overall Dimensions

4A Series



4V Series



Dimension Sheet(4A Series)

Model	A	B	C	E	F	G	H	I	J	K	L 1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
100M-□F	58	43.2	20	4.5	18.3	19	5	10	0.8	139.4	38	57	76	95	114	133	152	171	190	209	228	247	266	285	304	323
200M-□F	61	50.7	21	4.5	22.4	23	6	12	1.2	170	46	69	92	115	138	161	184	207	230	253	276	299	322	345	368	391
300M-□F	75	64.8	26	4.5	27.3	27	6	13.5	2.5	188.8	54	82	110	138	166	194	22	250	278	306	334	362	-	-	-	-
400M-□F	104	94.5	32	5.5	34.3	31.5	7	14.5	5	221.8	63	98	133	168	203	238	273	-	-	-	-	-	-	-	-	-

Model	M	P 1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F	Q	R	S	T	U	V	W	X	Y
100M-□F	154.5	28	47	66	85	104	123	142	161	180	199	218	237	256	275	294	313	G1/4"	40	30	29	14	9	79	25	27
200M-□F	189	34	57	80	103	126	149	172	195	218	241	264	287	310	333	256	379	G1/4"	43	32	30.5	14.5	9	93	26	35
300M-□F	208	42	70	98	126	154	182	210	238	266	294	322	350	-	-	-	-	G3/8"	53	48	37.5	13.5	11	99.5	30	40
400M-□F	243	49	84	119	154	189	224	259	-	-	-	-	-	-	-	-	-	G1/2"	68	67	52	18.5	18	112.5	38	50

Dimension Sheet(4V Series)

Model	A	B	C	E	F	G	H	I	J	K	L 1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
100M-□F	58	43.2	20	4.5	18.3	19	5	10	0.8	81	38	57	76	95	114	133	152	171	190	209	228	247	266	285	304	323
200M-□F	61	50.7	21	4.5	22.4	23	6	12	1.2	92	46	69	92	115	138	161	184	207	230	253	276	299	322	345	368	391
300M-□F	75	64.8	26	4.5	27.3	27	6	13.5	2.5	111	54	82	110	138	166	194	22	250	278	306	334	362	-	-	-	-
400M-□F	104	94.5	32	5.5	34.3	31.5	7	14.5	5	142	71	98	133	168	203	238	273	-	-	-	-	-	-	-	-	-

Model	M	P 1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F	Q	R	S	T	U	V	X	Y
100M-□F	96	28	47	66	85	104	123	142	161	180	199	218	237	256	275	294	313	G1/4"	40	30	29	14	9	25	27
200M-□F	111	34	57	80	103	126	149	172	195	218	241	264	287	310	333	256	379	G1/4"	43	32	30.5	14.5	9	26	35
300M-□F	130	42	70	98	126	154	182	210	238	266	294	322	350	-	-	-	-	G3/8"	53	48	37.5	13.5	11	30	40
400M-□F	163	49	84	119	154	189	224	259	-	-	-	-	-	-	-	-	-	G1/2"	68	67	52	18.5	18	38	50

HAVKON® PNEUMATIC

Base For VF、VZ Series Valve

Base Ordering Code

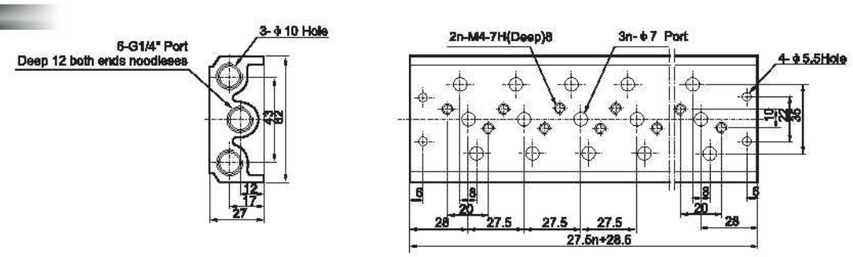
VF3000M — **□F**

Specification Code
VF3000M:For VF3 Series Use
VF5000M:For VF5 Series Use
VZ5000M:For VZ5 Series Use

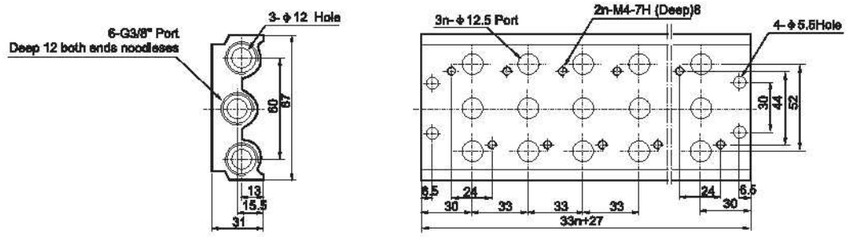
Joint Base Number
VF3000M:Wantonly Joint
VF5000M:Wantonly Joint
VZ5000M:Wantonly Joint

Overall Dimensions

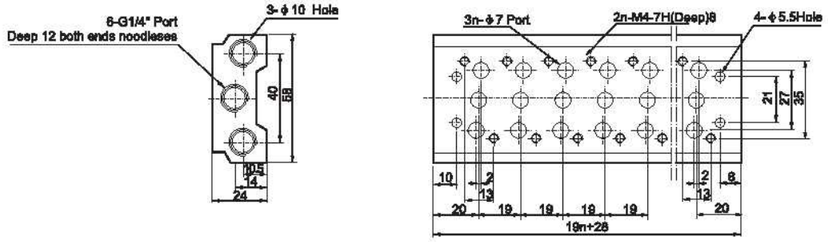
VF3000M



VF5000M



VZ5000M



Base For 4M Series Valve

Blind Plate Ordering Code

4M — **100M** — **B**

Series Code
4M:For 4M Series ues

Specification Code
100M:For 100 Series Use
200M:For 200 Series Use
300M:For 300 Series Use
400M:For 400 Series Use

Blind Plate Code
B:Base Purposed Blind Plate

Blind plate Operating Instructions: When base quantity is more than solenoid (pneumatic) valve quantity, can use blind plate to seal the redundant valve base temporary, and then change it if add extra solenoid (pneumatic) valve. Like this can expand system.

HAVKON® PNEUMATIC

Hand/Mechanical Valve

The valve is controlled by human or machine, to switch the direction of air flow. These valves included hand pull, hand draw, button control, rotary and foot valve. Body is made from aluminum, machining by CNC center. XCPC used the high grade of material and imported machine to make all the details perfect.

D

HAVKON® PNEUMATIC

MSV Series Mechanical Valve

MSV86522-EB | MSV86522-PB | MSV86522-TB | MSV86522-LB | MSV86522-PP | MSV86522-PPL | MSV86522-R

Ordering Code

MSV	98	32	1	R

Specification Code
Mechanical Valve

Series Code
98 Series
86 Series

Position and Way Number
32:Two-position Three-way
52:Two-position Five-way

Port Size
1:G1/8"
2:G1/4"

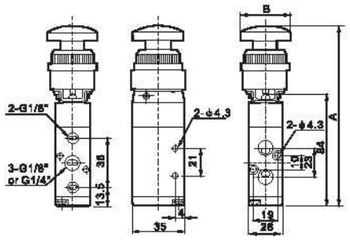
Button type
Blank:Normal Type
R: Roller Type
TB:Selective Knob
LB:Strengthened Knob
PB:Large Round Boutton
PP:Flat Round Button
PPL:Convex Round Button
EB:With Lock Button

Specification

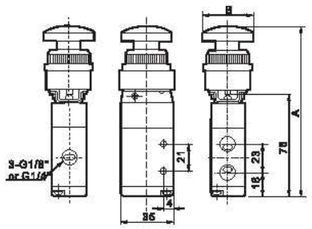
Model	MSV86321	MSV86522	MSV98322
Working Medium	40 Micron Filtered Air		
Position and Way No.	Two-position Three-way	Two-position Five-way	Two position Three-way
Effective Section Area	12mm² (CV=0.67)	16mm²(CV=0.89)	16mm²(CV=0.89)
Port Size	G1/8"	G1/4"	G1/4"
Pressure Range	0~0.8Mpa		
Temperature Range	0~60℃		

Overall Dimensions

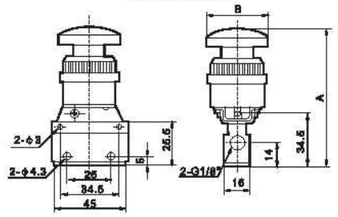
MSV86522



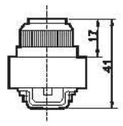
MSV98322



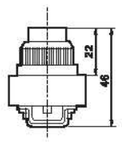
MSV86321



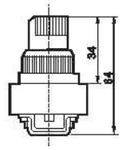
PP



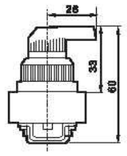
PPL



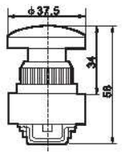
TB



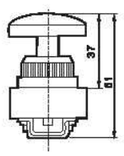
LB



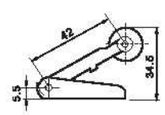
PB



EB



R



Dimension Sheet

Series	Symbol/Model	PP	PPL	LB	TB	EB	PB	R
MSV86522	A	114	119	133	136.5	134	131	107.5
	B	39.5	24.5	26.5	36.5	39.5	37.5	42.5
MSV98322	A	106	111	125	129.5	126	123	99.5
	B	39.5	24.5	26.5	36.5	39.5	37.5	42.5
MSV86321	A	66	71	85	88.5	86	83	59.5
	B	39.5	24.5	26.5	36.5	39.5	37.5	42.5

HAVKON® PNEUMATIC

JMJ Series Mechanical Valve

JMJ-01 | JMJ-02 | JMJ-03 | JMJ-04 | JMJ-05 | JMJ-06 | JMJ-07

Ordering Code

JMJ	—	01

Specification Code
Joint Pipe Bore G1/4"Two-position Three-way Mechanical Valve

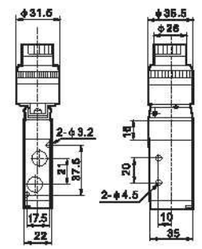
Type
01:Selective Knob
02:Strengthened Knob
03:With Lock Button
04:Large Round Button
05:Flat Round Button
06:Convex Round Button
07:With Lock Button

Specification

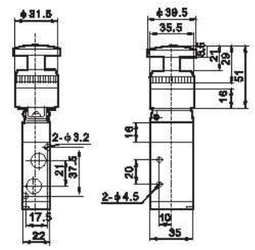
Model	JMJ-01、02、03、04、05、06、07
Port Size	G1/4"
Working Medium	Air
Temperature Range	0~60℃
Pressure Range	0~1MPa
Effective Section Area	25mm²
Lubrication	Not Necessary

Overall Dimensions

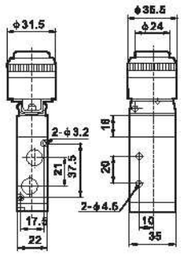
JMJ-01



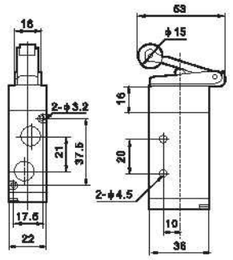
JMJ-03

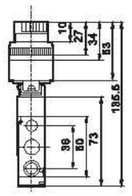


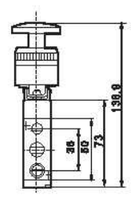
JMJ-05

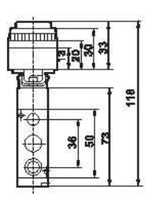


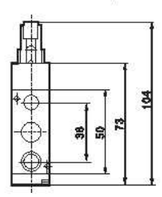
JMJ-07



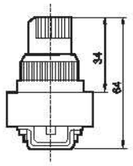








01



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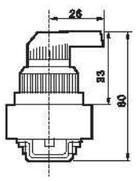
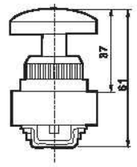


03



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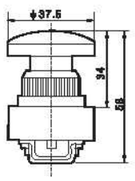
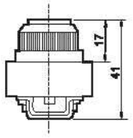


05



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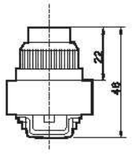

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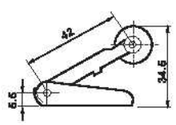


HAVKON® PNEUMATIC

JM Series Mechanical Valve

JM-05 JM-06 JM-06A JM-07

Ordering Code

JM — 05

Specification Code
Stop-type Machinery Valve

Button Type
05:Selective Knob
06:With Lock Button
06A:Plat Round Button
07:Roller Type

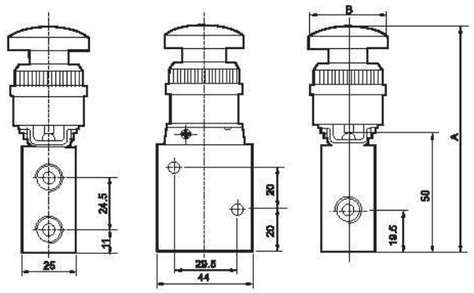
Specification

Model	JM-05	JM-06	JM-06A	JM-07
Working Medium	40 Micron Filtered Air			
Position and Way No.	0~0.8MPa			
Port Size	G1/4"			
Working-pressure Range	Two-position Three-way,Two-position Two-way			
Operating Temperature	0~60℃			

Dimension Sheet

Model	JM-05	JM-06	JM-06A	JM-07
A	114	111	96	84.5
B	36.5	39.5	39.5	42.5

Overall Dimensions



MOV Series Mechanical Valve

MOV-01 MOV-02 MOV-03 MOV-04

Ordering Code

MOV — 01

Specification Code
Machine-Control, Hand-Control Valve

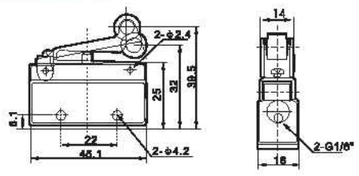
Button Type
01:Selective Knob
02:Roller Type
03:With Lock Button
04:Plat Round Button

Specification

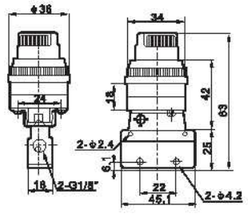
Model	MOV-01	MOV-02	MOV-03	MOV-04
Working Medium	Air			
Position and Way No.	Two-position Two-way			
Port Size	G1/8"			
Working-pressure Range	0~0.8MPa			
Operating Temperature	0~70℃			

Overall Dimensions

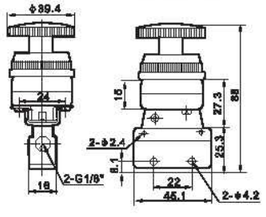
MOV-02



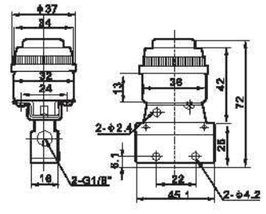
MOV-01



MOV-03



MOV-04



HAVKON® PNEUMATIC

4R Series Hand-draw Valve

4R110-06 4R210-08 3R210-08

Ordering Code

4R — 2 — 10 — 06

Specification Code
4R:Two-position Five-way Hand-draw Valve
3R:Two-position Three-way Hand-draw Valve

Series Code
200 Series
300 Series
400 Series

Number of Places
10:Single-head Double-position

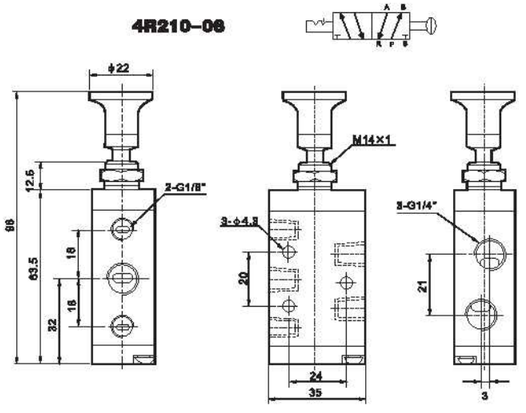
Port Size
06:G1/8"
08:G1/4"
10:G3/8"
15:G1/2"

Specification

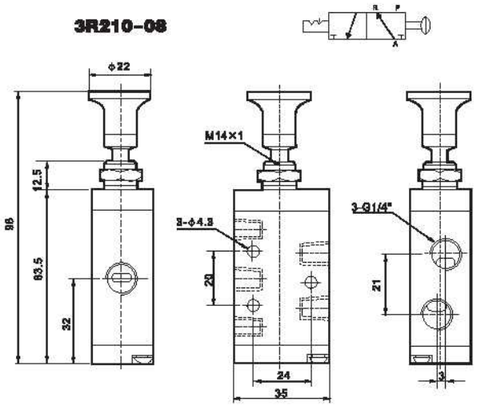
Model	4R110-06	4R210-08	4R310-10	4R410-15	3R110-06	3R210-08	3R310-10	3R410-15
Working Medium	Compresses Air							
Position and Way No.	Two-position Five-way				Two-position Three-way			
Joint Pipe Bore	G1/8"	G1/4"	G3/8"	G1/2"	G1/8"	G1/4"	G3/8"	G1/2"
Working-pressure Range	0~1.0MPa							
Operating Temperature Range	-5~60℃							
Operating Method	Direct Action Type							
Lubrication	Not Required							

Overall Dimensions

4R210-08



3R210-08



HAVKON® PNEUMATIC

HV,K34 Series Hand-switching Valve

HV-03

K34R-08

K34-R-L8D

K34-R-L6D

Ordering Code

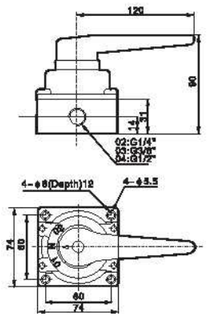
HV	—	02	□	K	34	—	R_8	L8	D
Specification Code: Hand-switching Valve		Port Size: 02:G1/4" 03:G3/8" 04:G1/2"	Joint Pipe Type: Blank:Pipe Connection Type B:Plate Connection Type	Specification Code: Hand-switching Valve	Position and way NO.: 24:Two-position Four-way 34:Three-position Four-way		Type Code: R_8:Hand-switching Valve	Port Size: L6:G1/8" L8:G1/4"	Base Joint

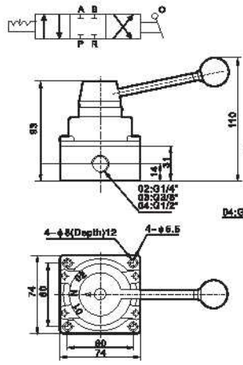
Specification

Model	HV-02	HV-03	HV-04	$K34R_8$-L6	$K34R_8$-L8
Working Medium	40 Micron Filtered Air				
Effective Sectional Atea	$30mm^2$(cv=1.68)			$18mm^2$(cv=1.00)	
Port Size	G1/4"	G3/8"	G1/2"	G1/8"	G1/4"
Working-pressure Range	0~0.8MPa				
Operating Temperature Range	0~60℃				

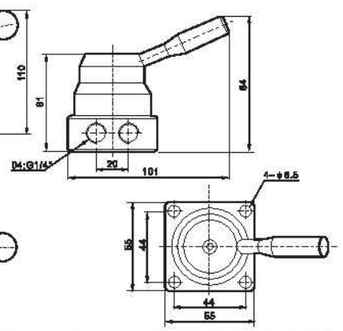
Overall Dimensions

HV





K34R-08



4HV Series Hand-switching Valve

Ordering Code

4HV	230	—	08	—	T
Specification Code: 4HV: Hand-switching Valve	Number of Places: 230: Three-position Four-way 330: Three-position Four-way 430: Three-position Four-way		Port Size: 08: PT1/4" 10: PT3/8" 15: PT1/2"		Install Type: Blank: Body of Valve Install T: Panel Install

HAVKON® PNEUMATIC

TSV Series Hand-pull Valve

TSV86522-M

TSV98322-M

Ordering Code

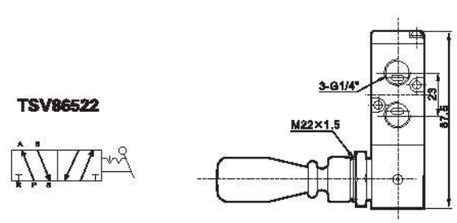
TSV86	52	2	—	M	TSV98	32	2	—	M
Specification Code: Hand-pull Valve	Position and Way NO.: Two-position Five-way	Port Size: 1:G1/8" 2:G1/4"		Type Code: M:Machinery Locking Type S:Spring Return Type	Specification Code: Hand-pull Valve	Position and Way NO.: Two-position Three-way	Port Size: 1:G1/8" 2:G1/4"		Type Code: M:Machinery Locking Type S:Spring Return Type

Specification

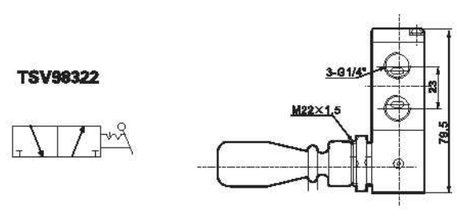
Model	TSV86522M/S	TSV98322M/S
Working Medium	40 Micron Filtered Air	
Motion Pattern	Direct Drive Type	
Effective Sectional Area	$18mm^2$(CV=1.00)	
Port Size	G1/4	
Working-pressure Range	0~1.0MPa	
Operating Temperature Range	0~60℃	

Overall Dimensions

TSV86522



TSV98322



HAVKON® PNEUMATIC

4H Series Hand-pull Valve

4H330-10

4H210-06

Ordering Code

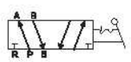
4H	2	10	—	06	—	□
Specification Code 4H:Two(Three)-position Five-way Hand Pull Valve	Button Type 2:200 Series 3:300 Series 4:400 Series	Specification Code 10:Single-head Double-position 30:Single-head Three-position		Port Size 06:G1/8" 08:G1/4" 10:G3/8" 15:G1/2"		Type Code Blank:Three-position Five-way Reset Type L:Three-position Five-way Locking Type

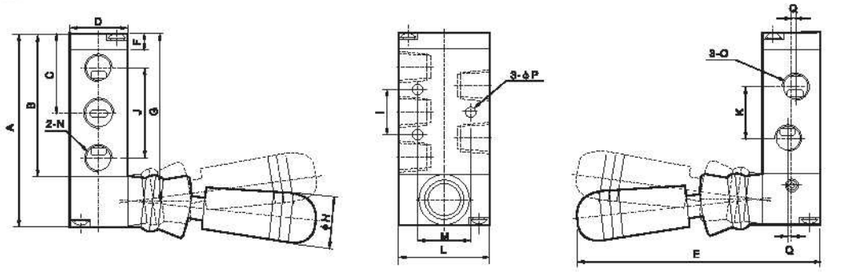
Specification

Model	4H210-06	4H210-08	4H230-08	4H310-08	4H310-10	4H330-10	4H410-15	4H430-15
Working Medium	40 Micron Filtered Air							
Motion Pattern	Direct Drive Type							
Effective Section Area	14mm²(CV=0.78)	16mm²(CV=0.89)	12mm²(CV=0.67)	25mm²(CV=1.4)	30mm²(CV=1.68)	30mm²(CV=1.68)	50mm²(CV=2.79)	50mm²(CV=2.79)
Port Size	Air Inlet=Air Outlet= Exhaust=G1/8"	Air Inlet=Air Outlet= Exhaust=G1/4"		Air Inlet=Air Outlet= Exhaust=G1/4"	Air Inlet=Air Outlet= G3/8" Exhaust=G1/4"		Air Inlet=Air Outlet= Exhaust=G1/2"	
Working-Pressure Range	0~1.0MPa							
Operating Temperature Range	0~60℃							

Overall Dimensions

4H Series





Symbol/Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
4H210-06	76	56.5	31.5	22	95	6.5	66.5	18	20	36	21	35	21	G1/8"	G1/8"	4.3	-
4H230-06	76	56.5	31.5	22	95	6.5	66.5	18	20	36	21	35	21	G1/8"	G1/8"	4.3	-
4H230-06(Automatic Reset)	95	75.5	31.5	22	95	6.5	85.5	18	20	36	21	35	21	G1/8"	G1/8"	4.3	-
4H210-08	76	56.5	31.5	22	95	6.5	66.5	18	20	36	21	35	21	G1/8"	G1/4"	4.3	1.5
4H230-08L	76	56.5	31.5	22	95	6.5	66.5	18	20	36	21	35	21	G1/8"	G1/4"	4.3	1.5
4H230-08(Automatic Reset)	95	75.5	31.5	22	95	6.5	85.5	18	20	36	21	35	21	G1/8"	G1/4"	4.3	1.5
4H310-08	92	72.5	40	27	100	7.5	82.5	18	24	45	24	40	27	G1/4"	G1/4"	4.3	-
4H310-10	92	72.5	40	27	100	7.5	52.5	18	24	45	24	40	27	G1/4"	G3/8"	4.3	2
4H410-15	126	102	55.5	34	100	7.5	114	18	28	63	36	50	35	G1/2"	G1/2"	5.5	-

HAVKON® PNEUMATIC

XC Series Mechanical Manual Valve

Ordering Code

XC	—	322N	—	HV	—	6
Series Code		322N:Two-position Three-way(3/2) 332N:Two-position Three-way(3/2) 522N:Two-position Five-way(5/2) 532N:Two-position Five-way(5/2)		HV:Manual Valve		Port Size 06:1/8" 08:1/4"

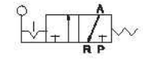
Specification

Model	XC322N-HV6	XC332N-HV8	XC522N-HV6	XC532N-HV8
Working Medium	Compresses Air			
Position and Way No.	Two-position Three-way		Two-position Five-way	
Port Size	G1/8"	G1/4"	G1/8"	G1/4"
Working-pressure Range	0~1.0MPa			
Operating Temperature Range	-5~60℃			

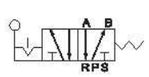
Overall Dimensions

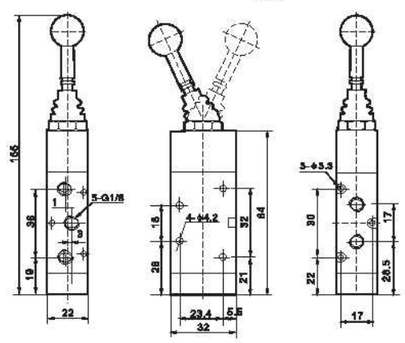
XC322N-HV6

XC332N-HV8



XC522N-HV6





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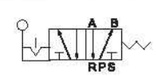
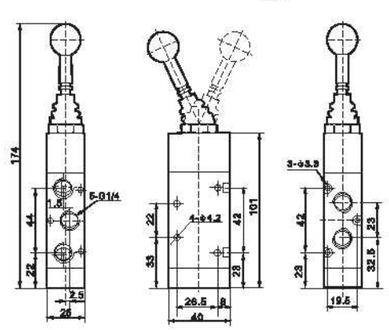




HAVKON® PNEUMATIC

XC Series Mechanical Hand-draw Valve

NEW

Ordering Code

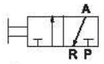
XC	—	322N	—	R	—	6	—	S
Series Code		322N:Two-position Three-way(3/2) 332N:Two-position Three-way(3/2) 522N:Two-position Five-way(5/2) 532N:Two-position Five-way(5/2)		R:Hand-draw Valve		Port Size 06:1/8" 08:1/4"		S:Spring Return

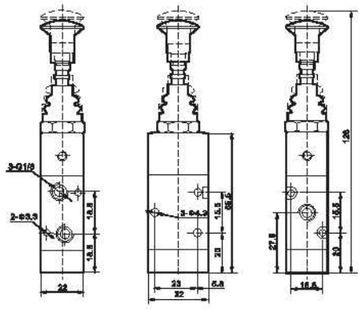
Specification

Model	XC322N-R6	XC332N-R8	XC322N-R6S	XC332N-R8S	XC522N-R6	XC532N-R8	XC522N-R8S	XC532N-R8S
Working Medium	Compresses Air							
Position and Way NO.	Two-position Three-way				Two-position Five-way			
Port Size	G1/8"							
Working-pressure Range	0~1.0MPa							
Operating Temperature Range	-5~60℃							

Overall Dimensions

XC322N-R6





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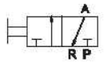

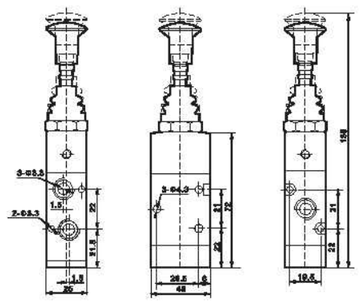

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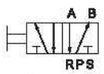

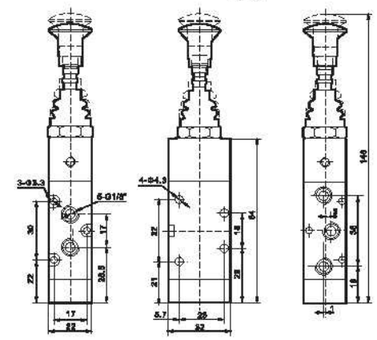

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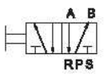
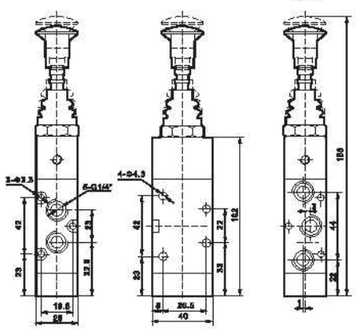




HAVKON® PNEUMATIC

XC Series Hand-Pull Valve

NEW

Ordering Code

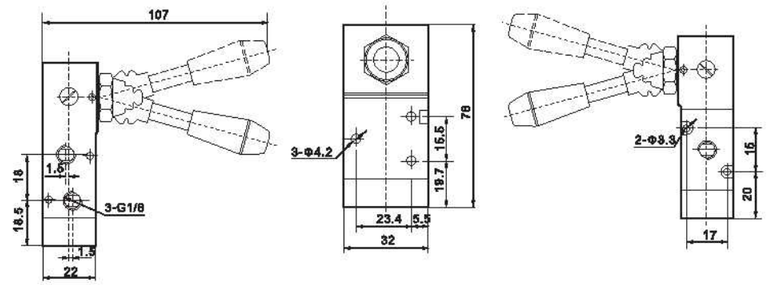
XC	—	522N	—	H	—	6	—	S
Series Code		322N:Two-position Three-way(3/2) 332N:Two-position Three-way(3/2) 522N:Two-position Five-way(5/2) 532N:Two-position Five-way(5/2) 533N:Three-position Five-way(5/3)		H:Hand-pull valve		Port Size 06:1/8" 08:1/4"		S:Spring return

Specification

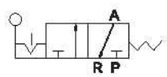
Model	XC322N-H6	XC322N-H6S	XC332N-H8	XC332N-H8S	XC522N-H6	XC522N-H6S	XC532N-H8	XC532N-H8S
Working Medium	40Micron Filtered Air							
Position and Way NO	Two-position Three-way				Two-position Five-way			
Operating Method	Direct Drive Type							
Effective Sectional Area	18mm² (CV=1.00)							
Port Size	G1/8"		G1/4"		G1/8"		G1/4"	
Working-pressure Range	0~1.0MPa							
Operating Temperature Range	0~60℃							

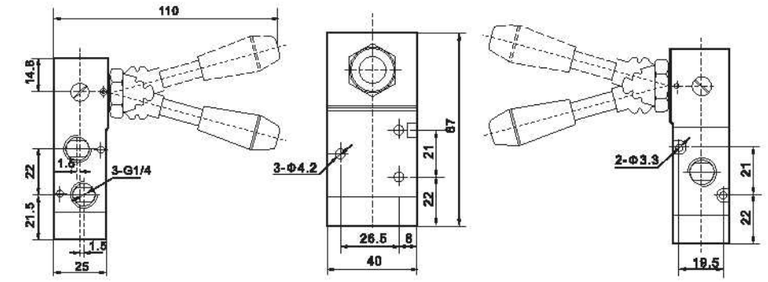
Overall Dimensions

XC322N-H6



XC332N-H8



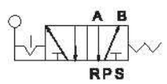


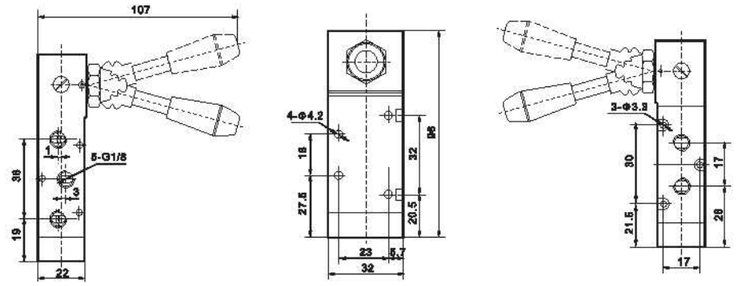
HAVKON® PNEUMATIC

XC Series Hand-Pull Valve

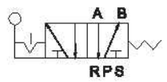
Overall Dimensions

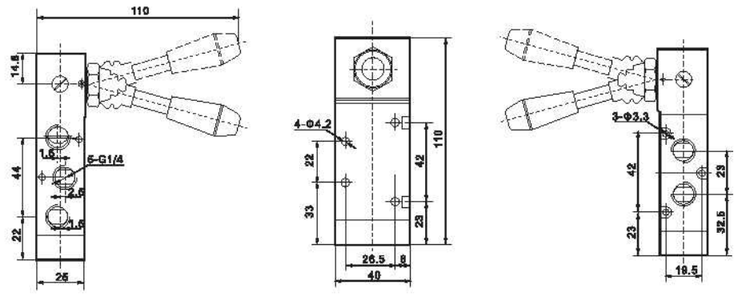
XC522N-H6





XC532N-H8





XC-MV Series Mechanical Valve

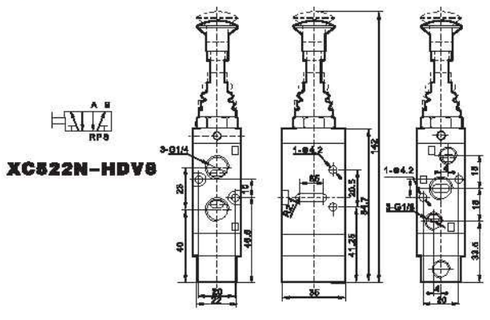
Ordering Code

XC	—	522N	—	HDV	—	8
Series Code		522N: Two-position Five-way (5/2)		HDV: Hand-draw Valve		Port Size 06:1/8" 08:1/4"

Specification

Model	XC522N-HDV6	XC522N-HDV8
Working Medium	Compresses Air	
Position and Way number	Two-position Five-way	
Port Size	G1/8"	G1/4"
Working-pressure Range	0~1.0MPa	
Operating Temperature Range	-5~60℃	

Overall Dimensions



HAVKON® PNEUMATIC

XC-MV Series Mechanical Valve

Ordering Code

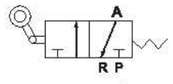
XC	—	322N	—	MV	—	A
Series Code		322N:Two-position Three-way(3/2) 522N:Two-position Five-way(5/2)		MV:Mechanical Valve		A:A Type

Specification

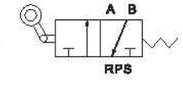
Model	XC322N-MVA	XC522N-MVA
Working Medium	Compresses Air	
Position and Way No.	Two-position Three-way	Two-position Five-way
Port Size	G1/8"	
Working-pressure Range	0~1.0MPa	
Operating Temperature Range	0~60℃	

Overall Dimensions

XC322N-MVA



XC522N-MVA



XC-MV Series Mechanical Valve

Ordering Code

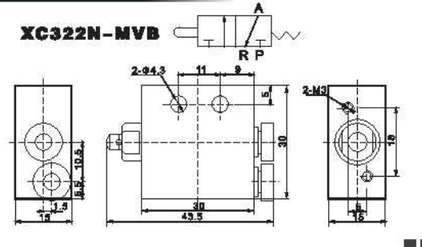
XC	—	322N	—	MV	—	B
Series Code		322N:Two-position Three-way(3/2)		MV:Mechanical Valve		B:B Type

Specification

Model	XC322N-MVB
Working Medium	Compresses Air
Position and Way number	Two-position Three-way
Port Size	Φ4
Working-pressure Range	0~1.0MPa
Operating Temperature Range	0~60℃

Overall Dimensions

XC322N-MVB



HAVKON® PNEUMATIC

XC-MV Series Mechanical Valve

Ordering Code

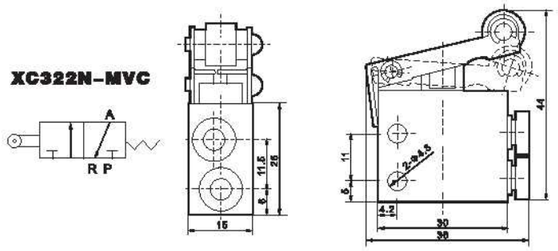
XC	—	322N	—	MV	—	C
Series Code		322N:Two-position Three-way(3/2)		MV：Mechanical Valve		C:C Type

Specification

Model	XC322N-MVC
Working Medium	Compresses Air
Position and Way No.	Two-position Three-way
Port Size	Φ4
Working-pressure Range	0~1.0MPa
Operating Temperature Range	0~60℃

Overall Dimensions

XC322N-MVC



HAVKON® PNEUMATIC

4F.FV Series Foot Valve

4F210-08L

4F210-08

FV420

4F210-08LG

Ordering Code

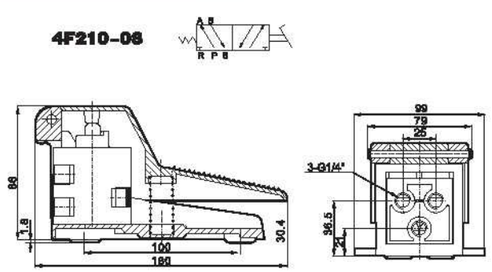
4F	2	10	—	08	—	□	FV	—	320
Specification Code 4F:Two-position Five-way Foot Valve	Series NO. 2:200 Series	Number of Places 10:Single-head Double-position		Port Size 08:G1/4"		Type Code Blank:standard type L:with lock G:with cover LG:with lock and cover	Specification Code FV:Foot Valve		Position Number 320:Two-position Three-way 420:Two-position Four-way

Specification

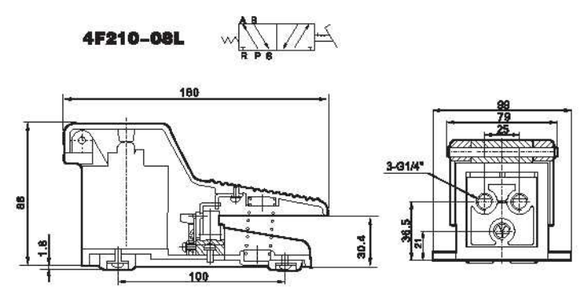
Model	4F210-06	4F210-08L	4F210-08G	4F210-08LG	FV420	FV320
Working Medium	40 Micron Filtered Air					
Position and Way Number	Two-position Five-way				Two-position Four-way	Two-position Three-way
Motion Patten	Direct Drive Type					
Port Size	Air Inlet=Air Outlet=Exhaust=G1/4"				Air Inlet=Air Outlet=G1/4" Exhaust=G1/8"	
Working-pressure Range	0.15~0.9MPa					
Operating Temperature Range	0~60℃					

Overall Dimensions

4F210-08



4F210-08L



XC-MV Series Mechanical Valve

Ordering Code

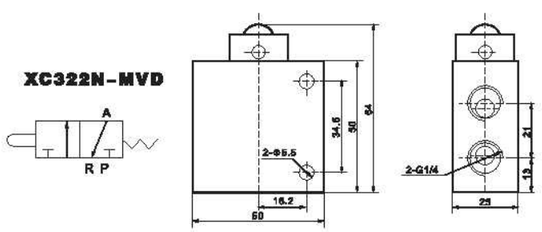
XC	—	322N	—	MV	—	D
Series Code		322N:Two-position Three-way(3/2)		MV:Mechanical Valve		D:D Type

Specification

Model	XC322N-MVD
Working Medium	Compresses Air
Position and Way NO	Two-position Three-way
Effective Sectional Area	16mm² (CV=0.89)
Port Size	G1/4"
Working-pressure Range	0~1.0MPa
Operating Temperature Range	0~60℃

Overall Dimensions

XC322N-MVD

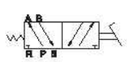


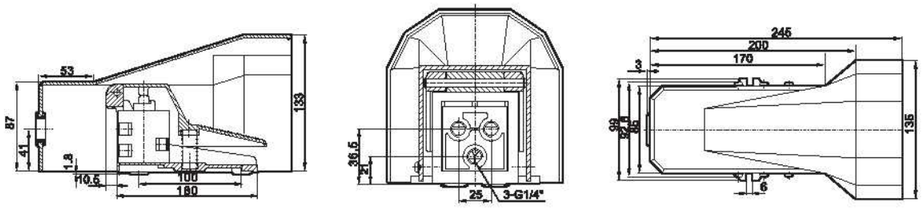
HAVKON® PNEUMATIC

4F.FV Series Foot Valve

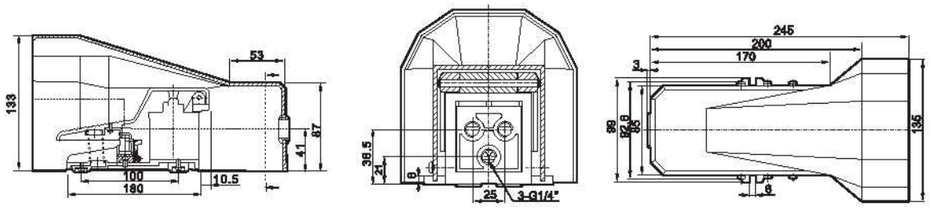
Overall Dimensions

4F210-08G

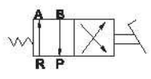


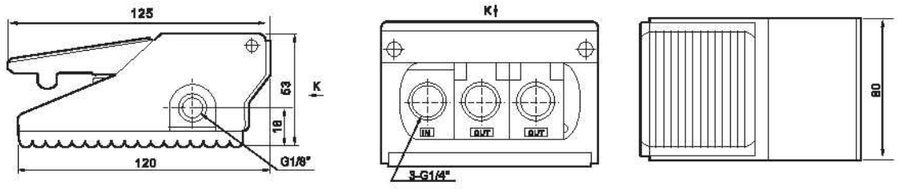


4F210-08LG

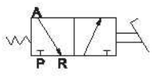


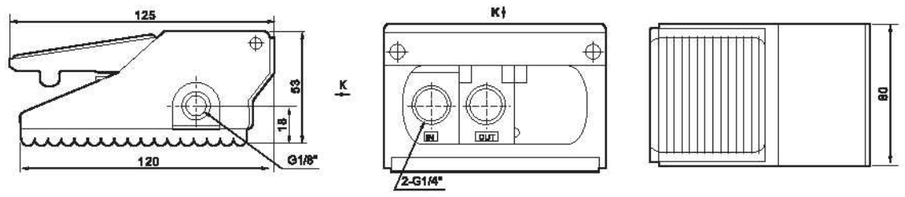
FV420





FV320





HAVKON® PNEUMATIC

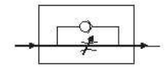
RE Series Flow Control Valve

Ordering Code

RE — 01

Series Code
RE:Ordinary Type
Flow Control Valve

Port Size
01:G1/8"
02:G1/4"
03:G3/8"
04:G1/2"

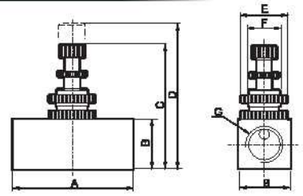


Graphic Symbol

Specification

Model	RE-01	RE-02	RE-03	RE-04
Port Size	G1/8"	G1/4"	G3/8"	G1/2"
Working Medium	Air			
Working-pressure Range	0~0.95MPa			
Operating Temperature Range	0~60℃			

Overall Dimensions



Dimension Sheet

Model	A	B	C	D	E	F	G
RE-01	45	19	43	50	Φ19	M14×1	G1/8
RE-02	45	19	43	50	Φ19	M14×1	G1/4
RE-03	55	25	55	62	Φ25	M18×1	G3/8
RE-04	55	25	55	62	Φ25	M18×1	G1/2

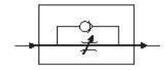
ASC Series Check Valve

Ordering Code

ASC — 08

Series Code
ASC:Accurate Type
Flow Control Valve

Port Size
06:G1/8"
08:G1/4"
10:G3/8"
15:G1/2"

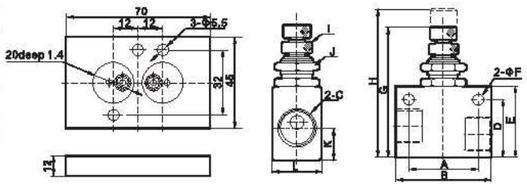


Graphic Symbol

Specification

Model	ASC-06	ASC-08	ASC-10	ASC-15
Port Size	G1/8"	G1/4"	G3/8"	G1/2"
Working Medium	Air			
Working-pressure Range	0~0.95MPa			
Operating Temperature Range	0~60℃			

Overall Dimensions



Dimension Sheet

Model	A	B	C	D	E	F	G	H	I	J	K	L
ASC-06	22	32	G1/8	22	27	4.3	49.7	56.5	M6×0.5	M12×0.75	12	18
ASC-08	26	36	G1/4	22	27	4.3	49.7	56.5	M6×0.5	M12×0.75	12	18
ASC-10	28	40	G3/8	25	30	4.3	52.7	59.5	M6×0.5	M12×0.75	13	22
ASC-15	28	40	G1/2	30	35	4.3	58.7	65.5	M6×0.5	M12×0.75	13.5	26

KLA Series Check Valve

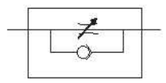
Ordering Code

KLA — 10

Specification Code
KLA:Check Valve

Port Size
06:G1/8"
08:G1/4"
10:G3/8"
15:G1/2"

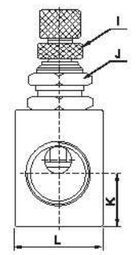
Graphic Symbol



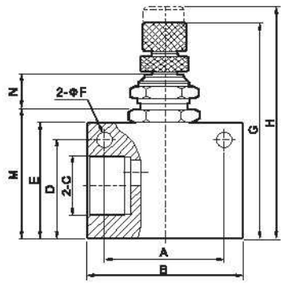
Specification

Model		KLA-06	KLA-08	KLA-10	KLA-15
Working Medium		Air			
Port Size		G1/8"	G1/4"	G3/8"	G1/2"
Working-pressure Range		0.5~0.95 Kgf/cm²			
Ensured Pressure Resistance		15.0 Kgf/cm²			
Operating Temperature Range		-5~60℃			
Body of Material		Aluminum Alloy Lyl2			
Standard Rated Flow(L/min)	Check Valve	200	450	1250	1650
	One-way Valve	400	800	1500	2000

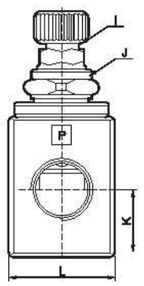
Overall Dimensions



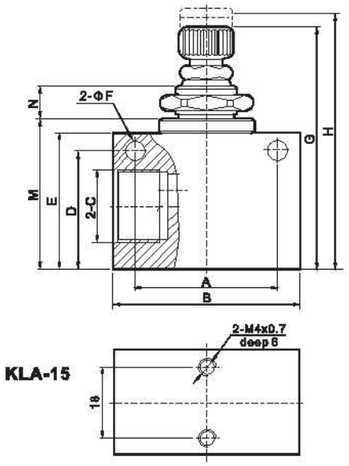
KLA-06



KLA-08



KLA-10



KLA-15

Dimension Sheet

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
KLA-06	22	32	PT1/8	18	23	4.3	46.8	52.3	M6×0.5	M12×0.75	10	18	26	8.6
KLA-08	26	36	PT1/4	23	27	4.3	50.8	56.3	M6×0.5	M12×0.75	13.5	18	30	8.6
KLA-10	35	50	G3/8	32	37	5.3	65	74	M8× 0.75	M16 ×1	17.5	28	40.5	10.2
KLA-15	35	50	G1/2	32	37	5.3	65	74	M8×0.75	M16 ×1	17.5	28	40.5	10.2

KA Series Check Valve

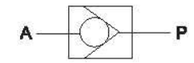
Ordering Code

KA — L8

Series Code
KA:Check Valve

Port Size
L06:G1/8"
L08:G1/4"
L10:G3/8"
L15:G1/2"
L20:G3/4"
L25:G1"
L32:G1/4"
L40:G1-1/2"
L50:G2"

Graphic Symbol



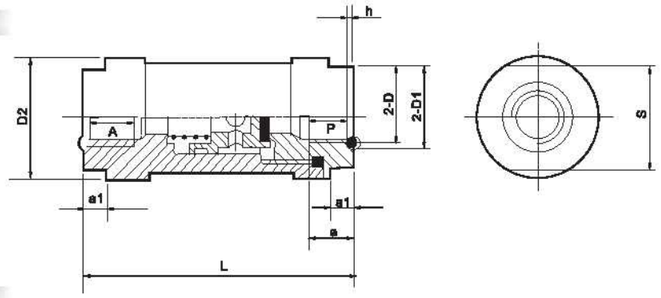
Product Explain

The valve is unidirectional control element. When passing the valve,the working medium can only flow along a given direction.In operation,when the medium pressure direction changes,the valve functions to stop the return of the medium in the system. Therefore,the product is also called non-return valve.

Specification

Model	KA-L06	KA-L08	KA-L10	KA-L15	KA-L20	KA-L25	KA-L32	KA-L40	KA-L50
Working-pressure	0.05~0.8MPa								
Entironment Temperature	-10~+55℃								
Medium Temperature	0~+55℃								
Circulating Ability	10	20	40	60	110	190	300	400	650
Startup Ability	≤0.03MPa								
Leak Out Flow(cm³/min)	50	50	120	120	250	250	500	500	500
Respond Time(Sec)	0.03								
Life(Ten Thousand Times)	≥150								

Overall Dimensions



Dimension Sheet

Model	Joint Pipe Code	D	D1	D2	S	L	a	a1	h
KA-L3	3	M6×1	Φ9	Φ15	12	36	6	5	$1.4^{0}_{-0.1}$
KA-L6	6	G1/8 M10×1	Φ13	Φ28	24	64	10	6	$1.4^{0}_{-0.1}$
KA-L8	8	G1/4 M12×1.5	Φ16	Φ28	24	64	12	6	$1.4^{0}_{-0.1}$
KA-L10	10	G3/8 M16×1.5	Φ20	Φ40	36	86	14	10	$1.8^{0}_{-0.1}$
KA-L15	15	G1/2 M20×1.5	Φ26	Φ40	36	86	14	10	$1.8^{0}_{-0.1}$
KA-L20	20	G3/4 M27×2	Φ32	Φ55	46	112	21	12	$1.8^{0}_{-0.1}$
KA-L25	25	G1 M33×2	Φ40	Φ55	46	112	23	12	$2.7^{0}_{-0.12}$
KA-L32	32	G11/4 M422	Φ48	Φ88	75	161	25	22	$2.7^{0}_{-0.12}$
KA-L40	40	G11/2 M48×2	Φ54	Φ88	75	161	26	26	$2.7^{0}_{-0.12}$
KA-L50	50	G2 M60×2	Φ70	Φ100	90	95	26	26	$4.5^{0}_{-0.18}$

HAVKON® PNEUMATIC

KAM Series Check Valve

Ordering Code

KAM — 15

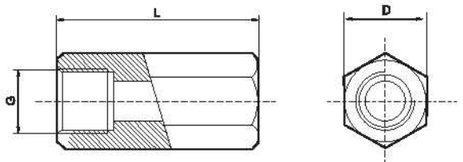
Series Code
KAM:KAM Series Check Valve

Port Size
06:G1/8"
08:G1/4"
10:G3/8"
15:G1/2"

Specification

Model	KAM-06	KAM-08	KAM-10	KAM-15
Port Size	G1/8"	G1/4"	G3/8"	G1/2"
Flow mm²/S	10	20	40	60
Leak Out Flow(cm³/min)	≤45	≤60	≤80	≤95
Operation Medium	Compress Air			
Working Temperature Range	-5~60℃			
Working Pressure	0.05~1.2MPa			

Overall Dimensions



Dimension Sheet

Model	D	G	L
KAM-06	G1/8"	37	14
KAM-08	G1/4"	48	17
KAM-10	G3/8"	50	21
KAM-15	G1/2"	60	24

XQ Series Quick Exhaust Valve

The valve is generally installed on the pipeline between the cylinder and reversal valve and near the cylinder, which directly discharge the air from cylinder without passing the reversal valve and thusto achieve the goal of fast reversion of cylinder.The effect on improving cylinder speed is especially obvious.
P: Connect reversal valve export
A: Connect cylinder
R: Connect muffler

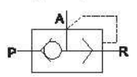
Ordering Code

XQ — 170800

Series Code
XQ:Quick Exhaust Valve

Port Size
170600:G1/8"
170800:G1/4"
171000:G3/8"
171500:G1/2"

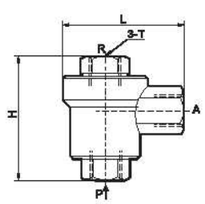
Graphic Symbol



Specification

Model	XQ170600	XQ170800	XQ171000	XQ171500
Joint Threaded	G1/8"	G1/4"	G3/8"	G1/2"
Port Size	6mm	8mm	8mm	15mm
Flow	≥0.9m³/min	≥0.9m³/min	≥2.5m³/min	≥4.5m³/min
Timerate(Ten Thousand Times)	≤200			
Working Pressure Range	0.12~1.0MPa			
Exchange Times(S)	≤0.03	≤0.03	≤0.04	≤0.05

Overall Dimensions



Dimension Sheet

Model	T	H	L
XQ170600	G1/8"	39	32
XQ170800	G1/4"	51	45
XQ171000	G3/8"	68	62
XQ171500	G1/2"	77	86

HAVKON® PNEUMATIC

AS Series Check Valve

Ordering Code

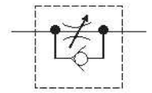
AS — 4000 — 02

Series Code
AS:Check Valve

Specification Code
4000

Port Size
02:G1/4"
03:G3/8"
04:G1/2"

Graphic Symbol

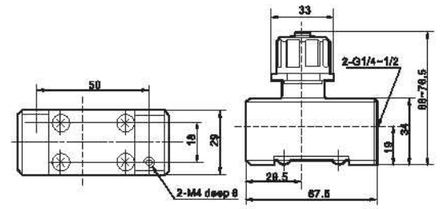


Specification

Model		AS4000-02	AS4000-03	AS4000-04
Port Size		G1/4"	G3/8"	G1/2"
Free Flow	Flow(L/min)	1670		
	Effective Sectional Area(mm²)	25.5		
Controlled Flow	Flow(L/min)	1670		
	Effective Sectional Area(mm²)	25.5		
Ensured Pressure Resistance		1.5MPa		
Highest Working Pressure		1.0MPa		
Lowest Working Pressure		0.05MPa		
Ambient and Media Temperature		5~60℃		
Regulated Flow Turnsq		8~9		

Note*:Input pressure is 0.5MPa.
Note*:8 turns for AS4000

Overall Dimensions



AS4000

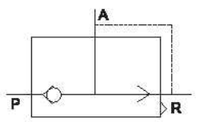
QE Series Quick Exhaust Valve

Ordering Code

QE — 01

Series Code
QE:Quick Exhaust Valve

Port Size
01:G1/8" 02:G1/4"
03:G3/8" 04:G1/2"
06:G3/4"

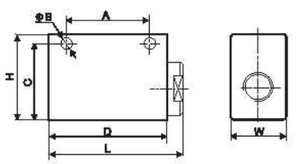


Graphic Symbol

Specification

Model	QE-01	QE-02	QE-03	QE-04	QE-06
Port Size	G1/8"	G1/4"	G3/8"	G1/2"	G3/4"
Effective Sectional Area	16mm²	27.5mm²	38mm²	71mm²	72.5mm²
Working Medium	Air				
Working Pressure Range	0~1.0MPa				
Operating Temperature Range	0~60℃				

Overall Dimensions



Dimension Sheet

Model	Bore	L	W	H	A	B	C	D
QE-01	G1/8"	46	20	32	30	4.3	27	40
QE-02	G1/4"	62	25	40	39	5.6	33.5	55
QE-03	G3/8"	62	25	40	39	5.6	33.5	55
QE-04	G1/2"	98	38	64	60	8.5	51	90
QE-06	G3/4"	98	38	64	60	8.5	51	90

HAVKON® PNEUMATIC

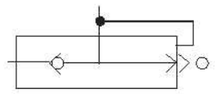
XKP Series Quick Exhaust Valve

Ordering Code

XKP — L15

Series Code
XKP:Quick Exhaust Valve

Port Size
L6:G1/8"
L8:G1/4"
L10:G3/8"
L15:G1/2"
L20:G3/4"
L25:G1"
L32:G1-1/4"
L40:G1-1/2"
L50:G2"

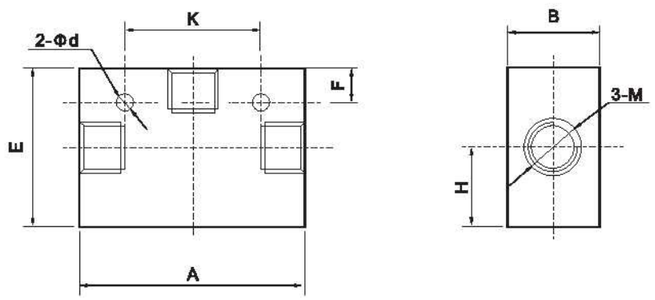


Graphic Symbol

Specification

Model		XKP-L6	XKP-L8	XKP-L10	XKP-L15	XKP-L20	XKP-L25	XKP-L32	XKP-L40	XKP-L50
Section Area	P→A	10	20	40	60	110	190	300	400	650
	A→□	20	40	60	110	190	300	400	650	900
Leak Out Flow(cm^3/min)		⩽10		⩽25		⩽50			⩽70	
Working Medium		Compress Air								
Operating Temperature Range		-5~+60℃								
Working-pressure		0.05~1.2MPa								

Overall Dimensions



Dimension Sheet

Model	M	A	K	B	E	H	F	d
XKP-L6	G1/8	75	-	36	41	10	-	-
XKP-L8	G1/4							
XKP-L10	G3/8	82	58	44	60	23	8	7
XKP-L15	G1/2							
XKP-L20	G3/4	128	98	72	95	36	8	10
XKP-L25	G1							
XKP-L32	G1 1/4	158	126	88	112	44	10	10
XKP-L40	G1 1/2							
XKP-L50	G2	190	148	102	130	52	10	12

HAVKON® PNEUMATIC

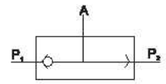
ST Series Shuttle Valve

Ordering Code

ST — 01

Series Code
ST:Shuttle Valve

Port Size
01:G1/8"
02:G1/4"
03:G3/8"
04:G1/2"
06:G3/4"
08:G1"

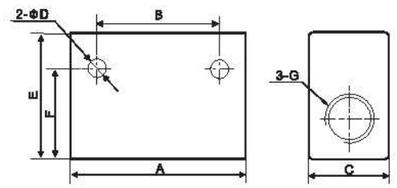


Graphic Symbol

Specification

Model	ST-01	ST-02	ST-03	ST-04	ST-06	ST-08
Working Medium	Air					
Effective Sectional Area	7.5mm^2	21mm^2	40mm^2	60mm^2	110mm^2	190mm^2
Port Size	G1/8"	G1/4"	G3/8"	G1/2"	G3/4"	G1"
Working Pressure Range	0~1.0MPa					
Operating Temperature Range	-5~60℃					

Overall Dimensions



Dimension Sheet

Model	A	B	C	D	E	F	G
ST-01	40	24	16	4.5	25	20.5	G1/8"
ST-02	50	35	22	5.5	35	25	G1/4"
ST-03	75	48	30	7	50	42	G3/8"
ST-04	75	48	30	7	50	42	G1/2"
ST-06	110	72	40	7	70	58	G3/4"
ST-08	110	72	40	7	70	58	G1"

CV Series Vacuum Valve

Ordering Code

CV — 15L

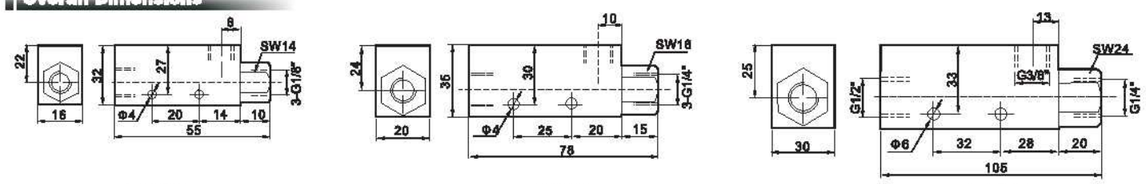
Series Code
ST:Shuttle Valve

Port Size
10L:G1/8"
15L:G1/4"
20L:G3/8"

Specification

Model	CV-10L	CV-15L	CV-20L
Working Medium	Air		
Working pressure	1.0MPa		
Shortest Excitation Time	0.05 Second		
Leakage Volume	⩽10cm^3/min		

Overall Dimensions



CV-10L　　CV-15L　　CV-20L

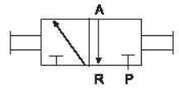
HAVKON® PNEUMATIC

HSV Hand Sliding Valve

Ordering Code

HSV	—	03
Specification Code HSV:Hand Sliding Valve		**Port Size** 01:G1/8" 02:G1/4" 03:G3/8" 04:G1/2" 06:G3/4"

Graphic Symbol

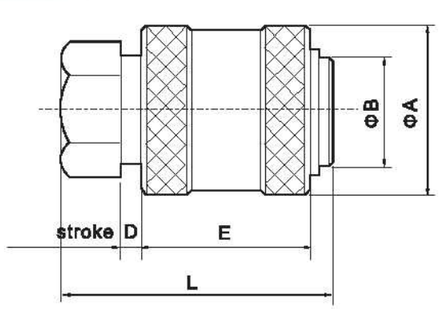


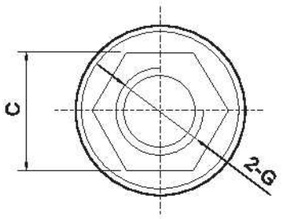
This valve is a two-position three-way hand sliding valve,which is usually installed in the piping to turn on/off airs.When it is turned off,the air pressure in the pneumatic system is exhausted simultaneously.

Specification

Model	HSV-01	HSV-02	HSV-03	HSV-04	HSV-06
Port Size	G1/8"	G1/4"	G3/8"	G1/2"	G3/4"
Flow Bore	4mm	7mm	10mm	12mm	16mm
Working Medium	Filtered Air				
Working-pressure	0~1.0MPa				
Ambient Temperature Range	5~60℃				
Working Force	20N				30N

Overall Dimensions





Dimension Sheet

Model	A	B	C	D	E	L	G
HSV-01	20	13	14	3	20	32	G1/8
HSV-02	27	18	19	5	32	48	G1/4
HSV-03	30	21	22	5	32	48	G3/8
HSV-04	38	24	27	10	40	70	G1/2
HSV-06	45	32	34	10	45	75	G3/4

HAVKON® PNEUMATIC

2 Position 2 Way Solenoid Valves

This kind of valve widely used in wide different industry, you can find the valve with different material like brass, stainless steel, engineering plastic, and they are used for pressure range from 0 to 50 bar, temperature from -10°to 180°. If there is no current models with your meet, please contact us, we are available to provide specialized valves according to your requirement.

General Information About Solenoid Valve

Inner structure and categories of two way solenoid valves

Direct acting solenoid valves

Including normal close style (N.C.) and normal open style(N.O.). The N.C. style solenoid valve stay close at power off condition. When poweron, the coil yields electricity-magnetic force, which exceed the spring force and hence pulls active armature approaching to static armature, the valve becomes open; when power off, the electricity-magnetic force disappear and the active armature go back to its original place by the spring force, the valve close. The N.O. style is just opposite. These valve are normally simple structure, dependable action, fast resporse, high, frequency and with ≤6mm small orifice size(N.O. style ≤4mm).

Diaphragm pilot solenoid valves

This style valve makes main valve and pilot valve together, when power on, the coil yields electricity-magnetic force pulls active armature approaching to static armature, the pilot valve open and control the main valve to open; when power off, the electricity-magnetic force disappear and with the gravity and spring force, the active armature close the pilot valve, which control the main valve to close. The N.O. style is just opposite.These valve are normally with bigger orifice size and ≤10Bar working pressure and with zero differential working pressure.

Piston pilot solenoid valves

Similar with piston pilot solenoid valves, but supports for higher pressure and temperature,with ≥1 Bar differential working pressure.

Seal Features

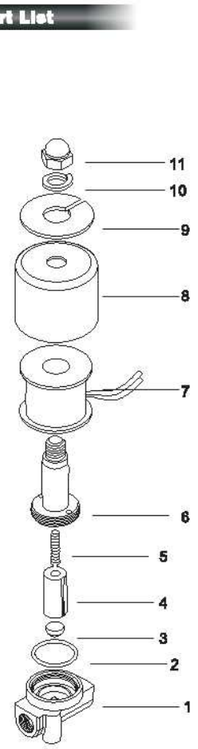
Material / Medium / Applicability	NBR	HNBR	EPDM	VMQ	FKM	PTFE	PU
Higheat working temperature	80℃	120℃	120℃	180℃	120℃	200℃	80℃
Lowest working temperature	-5℃	-10℃	-20℃	-40℃	-20℃	-50℃	-20℃
Anti-burning	×	×	×	△	◎	◎	△
Steam	×	△	◎	○	△	○	×
Oil	◎	◎	×	△	◎	◎	◎
O_3	△	◎	◎	◎	◎	◎	◎
Chemical	△	○	◎	◎	◎	◎	◎
Acid	△	○	◎	△	◎	◎	×
Alkality	○	◎	◎	△	◎	◎	×
Water	○	○	◎	○	○	◎	◎
Wearing	○	◎	○	×	○	◎	◎
Anit distortion	○	○	○	◎	○	×	×
Tension	◎	◎	◎	×	○	×	◎

Description of the symbol: ◎ Very good ○ Good △ Normal level × Not OK

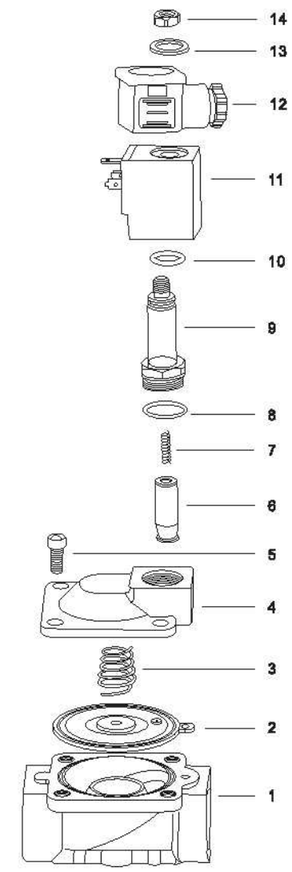
HAVKON® PNEUMATIC

General Information About Solenoid Valve

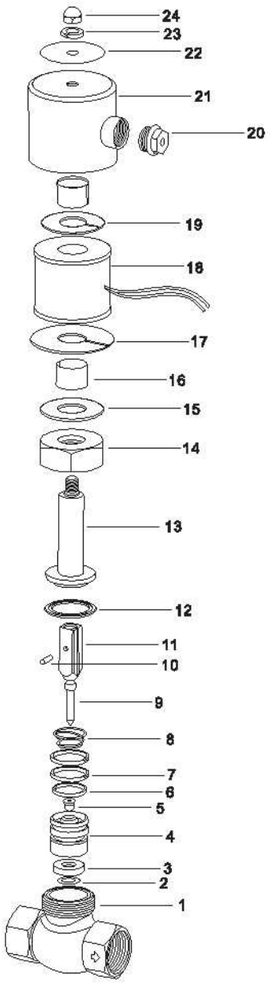
Part List



NO	Designation
1	Valve body
2	O-ring
3	Seal pad
4	Pilot
5	Spring
6	Armature
7	Coil
8	Steel washer
9	Washer
10	Spring washer
11	Nut



NO	Designation
1	Valve body
2	Diaphragm
3	Diaphragm spring
4	Valve cover
5	Hexagon screw
6	Pilot units
7	Plunger Spring
8	O-ring
9	Plunger tube assembly
10	O-ring
11	Coil
12	Connector
13	Gasket
14	Lock Nut



NO	Designation	NO	Designation
1	Valve body	13	Static armature
2	Washer	14	Nut
3	Seal pad	15	Gasket
4	Valve core	16	Bushing
5	Seal	17	Steel plate
6	Gasket	18	Coil
7	Guide ring	19	Steel plate
8	Spring	20	Nut
9	Valve needle	21	Steel cover
10	Pin	22	Min plate
11	Armature	23	Spring washer
12	Seal ring	24	Nut

HAVKON® PNEUMATIC

2V Series 2/2 Solenoid Valve

Ordering Code

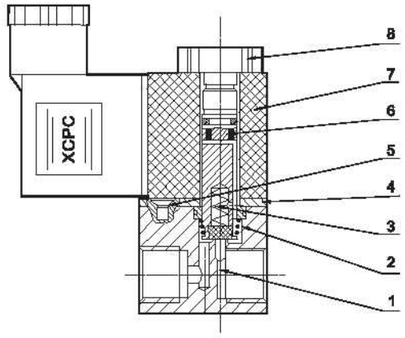
2V	025	06	—	AC110V	—	V
Specification Code 2V:Two-positionTwo-way Solenoid Valve	**Aperture of Flow Rate** 025:2.5mm 130:13mm 250:25mm	**Port Size** 06:G1/8" 08:G1/4" 10:G3/8" 15:G1/2" 20:G3/4" 25:G1"		**Standard Voltage** DC12V DC24V AC24V 50Hz/60Hz AC110V 50Hz/60Hz AC220V 50Hz/60Hz AC380V 50Hz/60Hz		**Oil Seal Code** Blank:NBR V:VITON(For High temperature)

Graphic Symbol

Specification

Model	2V025-06	2V025-08	2V130-10	2V130-15	2V250-20	2V250-25
Working Medium	Air,Water,Oil					
Motion Pattern	Direct Drive Type		Guide Type			
Type	Normal Close Type					
Aperture of Flow Rate(mm)	2.5		13		25	
CV Value	0.23		6.2		23	
Port Size	G1/8"	G1/4"	G3/8"	G1/2"	G3/4"	G1"
Operation Fluid Viscosity	20 CST (Below)					
Working-pressure	Air,Water,Oil 0~0.8MPa		Air,Water,Oil 0.05~0.7MPa			
Max. Pressure Resistance	12kgf/cm²		10.5kgf/cm²			
Operating Temperature Range	-10~+80℃					
Voltage Range	±10%					
Protect Class	IP65					
Power Consumption	AC:7VA/60Hz PC:6W					
Insulation	F Class					
Material of Body	Aluminum or Brass		Brass			
Material of Oil Seal	NBR or VITON		NBR or VITON			
Shortest Excitation Time	0.05 Second					

Internal structure

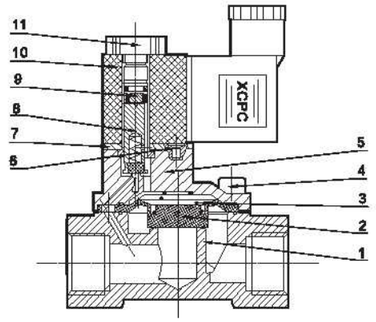


NO	Name
1	Body Of Valve
2	Spring
3	Assembly Of Iron Core
4	Assembly Of Iron Core
5	Cruciform Slot Screw
6	Platen
7	Coil
8	Nut

HAVKON® PNEUMATIC

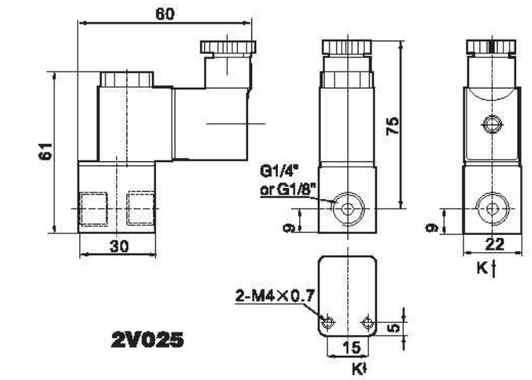
2V Series 2/2 Solenoid Valve

Internal structure

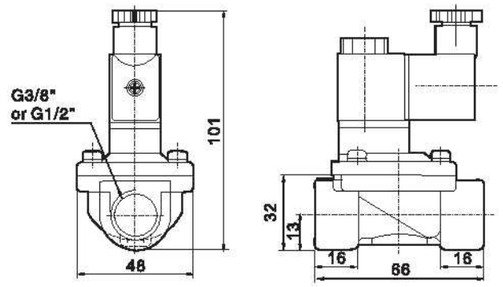


NO	Name
1	Body Of Valve
2	Diaphragm
3	Spring
4	Socket Hexagon Screws
5	Cover board
6	Cruciform Slot Screw
7	Platen
8	Assembly Of Iron Core
9	Assembly Of Iron Core
10	Coil
11	Nut

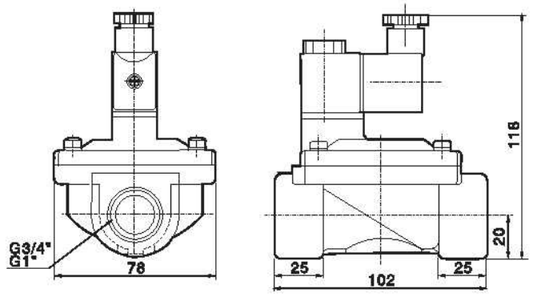
Overall Dimensions



2V025



2V130



2V250

HAVKON® PNEUMATIC

2P Series 2/2 Solenoid Valve (Plastic Steel Type)

Ordering Code

2P — 025 — 06 — AC110V — □

Specification Code
2P:Two-position Two-way Solenoid Valve (Reinforced plastic steel type)

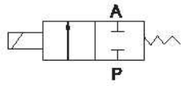
Aperture of Flow Rate
025:2.5mm

Port Size
06:G1/8"
08:G1/4"

Standard Voltage
DC12V DC24V
AC24V 50Hz/60Hz
AC110V 50Hz/60Hz
AC220V 50Hz/60Hz
AC380V 50Hz/60Hz

Wiring Form
Blank:Lead wire Type
D: Join Connector

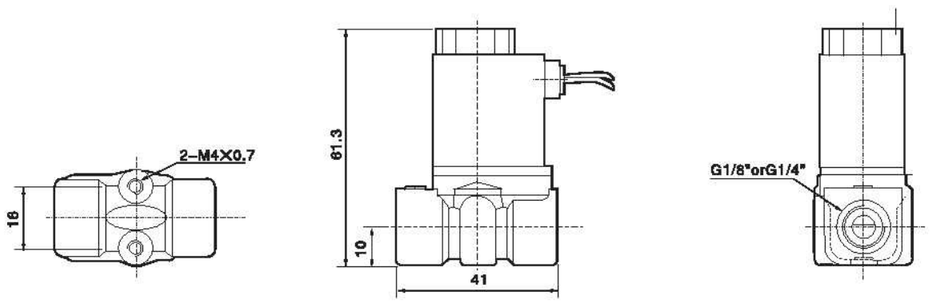
Graphic Symbol



Specification

Model	2P025-06	2P025-08
Working Medium	Air,Water,Oil,gas	
Motion Pattern	Direct Drive Type	
Type	Normal Close Type	
Aperture of Flow Rate(mm)	2.5	
CV Value	0.23	
Port Size	G1/8"	G1/4"
Operation Fluid Viscosity	20 CST (Below)	
Working-pressure	0~0.7MPa	
Max. Pressure Resistance	1.0MPa	
Operating Temperature Range	-5~+80℃	
Voltage Range	±10%	
Material of Body	Engineering Plastic Steel	
Material of Oil Seal	NBR EPDM or VITON	

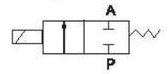
Overall Dimensions



HAVKON® PNEUMATIC

2W(UD) Series 2/2 Direct Drive Type Solenoid Valve (Small Aperture)

Graphic Symbol



Ordering Code

2W — 025 — 08 — F — AC110V — □

Specification Code
2W:Two-position Two-way solenoid valve direct drive type
2WH:Two-position Two-way solenoid valve(High pressure diect drive Type)

Aperture of Flow Rate
012:1.2mm
020:2.0mm
025:2.5mm
040:4.0mm

Port Size
06:G1/8"
08:G1/4"
10:G3/8"

Initial Estate
Blank:Pipe Jiont type
F: Flange Type

Standard Voltage
DC12V DC24V
AC24V 50Hz/60Hz
AC36V 50Hz/60Hz
AC110V 50Hz/60Hz
AC220V 50Hz/60Hz
AC380V 50Hz/60Hz

Wiring Form
Blank:Lead Wire Type
D:Join Connector
E:Blast-proof Coil
G:Water-proof Coil

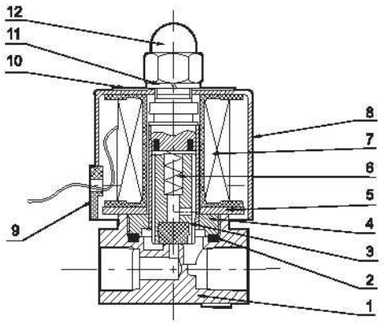
Specification

Model	2W025-06	2W025-08	2W040-10	2WH012-06	2WH012-08	2WH020-10
Working Medium	Air,Water,Oil,Gas					
Motion Pattern	Direct Drive Type					
Type	Normal Close Type					
Aperture of Flow Rate(mm)	2.5		4	1.2		2
CV Value	0.23		0.60	0.05		0.15
Port Size	G1/8"	G1/4"	G3/8"	G1/8"	G1/4"	G3/8"
Operation Fluid Viscosity	20 CST (Below)					
Working-pressure	Air,Water,Oil,Gas:0~0.7MPa			Air,Water,Oil:0~2.0MPa		
Max. Pressure Resistance	1.0			3.5		
Operating Temperature Range	-5~+80℃					
Voltage Range	±10%					
Material of Body	Brass					
Material of Oil Seal	NBR EPDM or VITON					

HAVKON® PNEUMATIC

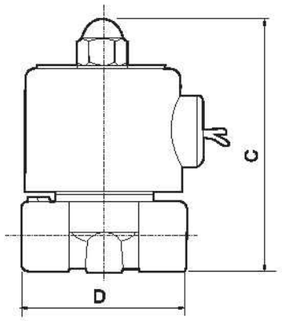
2W(UD) Aperture 2/2 Direct Drive Type Solenoid Valve(Small Aperture)

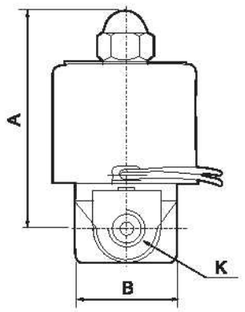
Internal structure



NO	Name
1	Body Of Valve
2	O-ring
3	Assembly Of Iron Core
4	Assembly Of Iron Core
5	Magnetic Plate
6	Spring
7	Assembly Of Coil
8	Iron Cover
9	Cord-locks
10	Name Plate
11	Gasket
12	Head Cover Nut

Overall Dimensions





Dimension Sheet

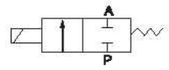
Symbol/Model	A	B	C	D	K(PT)
2W25-06	66	30.3	75	41.5	G1/8"
2W25-08	66	30.3	75	41.5	G1/4"
2W25-10	74	32.2	85.5	53	G3/8"
2WH12-06	66	30.3	75	40.5	G1/8"
2WH12-08	66	30.3	75	40.5	G1/4"
2WH12-10	74	32.3	85.5	53	G3/8"

E

HAVKON® PNEUMATIC

2W(UW) Series 2/2 Direct Drive Type Solenoid Valve(Large Aperture)

Graphic Symbol



Ordering Code

2W	160	—	15	—	F	AC110V	—	□

Specification Code
2W:Two-position two-way solenoid valve (direct drive type)

Aperture of Flow Rate
160:16mm
200:20mm
250:25mm
350:35mm
400:40mm
500:50mm

Port Size
10:G3/8"
15:G1/2"
20:G3/4"
25:G1"
35:G1¼"
40:G1½"
50:G2"

Initial Estate
Blank:Pipe Jiont type
F: Flange Type

Standard Voltage
DC12V DC24V
AC24V 50Hz/60Hz
AC36V 50Hz/60Hz
AC110V 50Hz/60Hz
AC220V 50Hz/60Hz
AC380V 50Hz/60Hz

Wiring Form
Blank:Lead wire Type
D: Join Connector

Specification

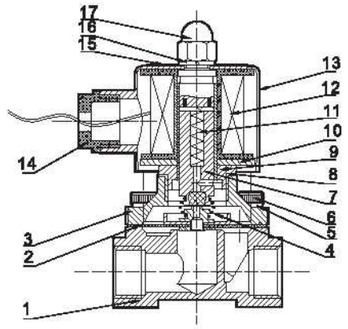
Model	2W160-10	2W160-15	2W200-20	2W250-25	2W350-35	2W400-40	2W500-50
Working Medium	Air,Water,Oil,gas						
Motion Pattern	Direct Drive Type						
Type	Normal Close Type / Normal Open Type						
Aperture of Flow Rate(mm)	16		20	25	35	40	50
CV Value	4.8		7.6	12	24	29	48
Port Size	G3/8"	G1/2"	G3/4"	G1"	G1¼"	G1½"	G2"
Operation Fluid Viscosity	20 CST (Below)						
Working-pressure	Air:0~0.7MPa Water:0~0.5MPa Oil:0~0.5MPa Gas: 0~7MPa						
Max. Pressure Resistance	1.0MPa						
Operating Temperature Range	-5~+80℃						
Voltage Range	±10%						
Material of Body	Brass						
Material of Oil Seal	NBR EPDM or VITON						

E

HAVKON® PNEUMATIC

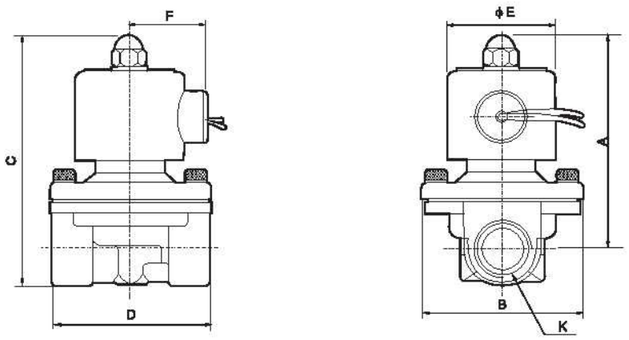
2W(UW) Series 2/2 Direct Drive Type Solenoid Valve(Large Aperture)

Internal structure



NO	Name	NO	Name
1	Body Of Valve	10	Magnetic Plate
2	Assembly Of Diaphragm	11	Spring
3	Valve Cover	12	Assembly Of Coil
4	Pull Spring	13	Iron Cover
5	Gasket	14	Cord-locks
6	Socket Hexagon Screws	15	Name Plate
7	Assembly Of Iron Core	16	Gasket
8	Seal Gasket	17	Head Cover Nut
9	Assembly Of Iron Core		

Overall Dimensions



2W(Large Aperture)

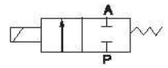
Dimension Sheet

Symbol/Model	A	B	C	D	E	F	K
2W160-10	101.5	57	117	67	50	36	G3/8"
2W160-15	101.5	57	117	67	50	36	G1/2"
2W200-20	107	57	123.5	72	50	36	G3/4"
2W250-25	111.5	73.5	134.5	92	50	36	G1"
2W350-35	142	95	172	125	70.5	56	G1 1/4"
2W400-40	142	95	172	125	70.5	56	G1 1/2"
2W500-50	172	123	209	168	70.5	56	G2"

HAVKON® PNEUMATIC

2S Series Solenoid Valve

Graphic Symbol



Ordering Code

2S	030	—	08	—	F	AC110V	—	□

Specification Code
2S:Two-position two-way solenoid valve (direct drive type)

Aperture of Flow Rate
030:3.0mm
040:4.0mm
160:16mm
200:20mm
250:25mm
350:35mm
400:40mm
500:50mm

Port Size
08:G1/4"
10:G3/8"
15:G1/2"
20:G3/4"
25:G1"
35:G1 1/4"
40:G1 1/2"
50:G2"

Initial Estate
Blank:Pipe Joint type
F: Flange Type

Standard Voltage
DC12V DC24V
AC24V 50Hz/60Hz
AC36V 50Hz/60Hz
AC110V 50Hz/60Hz
AC220V 50Hz/60Hz
AC380V 50Hz/60Hz

Wiring Form
Blank:Lead Wire Type
D : Join Connector
E : Blast-proof Coil
G : Water-proof Coil

Specification

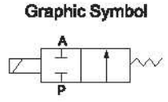
Model	2S030-06(08)	2S050-10	2S160-10(15)	2S200-20	2S250-25	2S350-35(40)	2S500-50
Working Medium	Air,Water,Oil,Gas						
Motion Pattern	Direct Drive Type						
Type	Normal Close Type						
Aperture of Flow Rate(mm)	2.5	5	16	20	35	40	50
CV Value	0.23	0.60	4.8	7.6	24	29	48
Port Size	G3/8" G1/4"	G3/8"	G3/8" G1/2"	G3/4"	G1"	G1 1/4" G1 1/2"	G2"
Operation Fluid Viscosity	20 CST (Below)						
Working-pressure	Air:0~0.7MPa		Water:0~0.5MPa Air:0~0.7MPa Oil:0~0.5MPa Gas: 0~0.7MPa				
Max. Pressure Resistance	1.05MPa						
Operating Temperature Range	-5~+80℃						
Voltage Range	±10%						
Material of Body	Stainless steel						
Material of Oil Seal	NBR EPDM or VITON						

Note:2S Series Solenoid Valve's Oevrall Dimension, Flow Chart and Inner Structure all Same as 2W Series.

HAVKON® PNEUMATIC

2W/2S Normal Open Series Solenoid Valve

Graphic Symbol



Ordering Code

2W — 160 — 10 — NO — AC110V — □

Specification Code
2W:Two-position two-way solenoid valve (direct drive type)
2S:Stainless steel two position two way solenoid valve(direct drive type)

Aperture of Flow Rate
040:4.0mm
160:16mm
200:20mm
250:25mm

Port Size
10:G3/8"
15:G1/2"
20:G3/4"
25:G1"

Initial Estate
NO: Normal Open

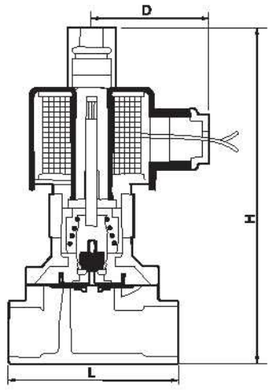
Standard Voltage
DC12V DC24V
AC24V 50Hz/60Hz
AC36V 50Hz/60Hz
AC110V 50Hz/60Hz
AC220V 50Hz/60Hz
AC380V 50Hz/60Hz

Wiring Form
Blank:Lead Wire Type
D : Join Connector
E : Blast-proof Coil
G : Water-proof Coil

Specification

Model	2W/2S(040-10NO)	2W/2S(160-10NO)	2W/2S(160-15NO)	2W/2S(200-20NO)	2W/2S(250-25NO)
Working Medium	Air,Water,Oil,Gas				
Motion Pattern	Direct Drive Type				
Type	Normal Open Type				
Aperture of Flow Rate(mm)	4	16	16	20	25
CV Value	0.6	4.8	4.8	7.6	12
Port Size	G3/8"	G3/8"	G1/2"	G3/4"	G1"
Operation Fluid Viscosity	20 CST (Below)				
Working-pressure	Water:0~0.5MPa Air:0~0.7MPa Oil:0~0.5MPa Gas: 0~0.7MPa				
Max. Pressure Resistance	1.05MPa				
Operating Temperature Range	-5~+80℃				
Voltage Range	±10%				
Material of Body	2W: Brass; 2S: Stainless steel				
Material of Oil Seal	NBR EPDM or VITON				

Overall Dimensions



Dimension Sheet

Model	L	H	D
2W040-10NO	53	105	54
2W160-10NO	69	116	62
2W160-15NO	69	116	62
2W200-20NO	73	127	62
2W250-25NO	99	135	62

HAVKON® PNEUMATIC

2L(US) Series 2/2 Solenoid Valve

Ordering Code

2L — 170 — 15 — AC110V

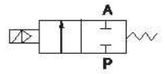
Specification Code
2L:Steam type Two-position Two-way Solenoid Valve

Aperture of Flow Rate
170:17mm
200:22mm
300:30mm
500:50mm

Port Size
10:G3/8"
15:G1/2"
20:G3/4"
25:G1"
35:G1¼"
40:G1½"
50:G2"

Standard Voltage
DC12V DC24V
AC24V 50Hz/60Hz
AC36V 50Hz/60Hz
AC110V 50Hz/60Hz
AC220V 50Hz/60Hz
AC380V 50Hz/60Hz

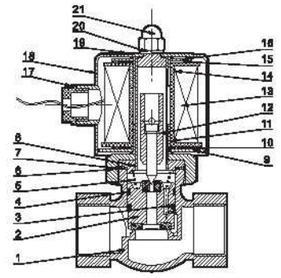
Graphic Symbol



Specification

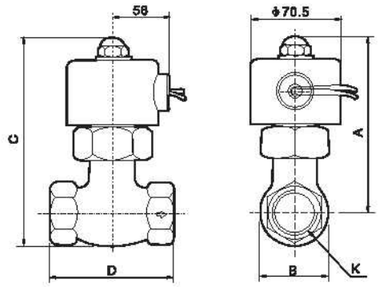
Model	2L170-10	2L170-15	2L170-20	2L200-25	2L300-35	2L300-40	2L500-50
Working Medium	Air, Water, Steam						
Motion Pattern	Guide Type						
Type	Normal Close Type						
Aperture of Flow Rate(mm)		17		22	30		50
CV Value		4.8		12	20		48
Port Size	G3/8"	G1/2"	G3/4"	G1"	G1¼"	G1½"	G2"
Operation Fluid Viscosity	20 CST(Below)						
Working-pressure	Air, Water, Steam:0.1~1.5MPa						
Max. Pressure Resistance	2.25MPa						
Operating Temperature Range	-5~+180℃						
Voltage Range	±10%						
Material of Body	Brass						
Material of Oil Seal	PTFE						

Internal structure



NO	Name	NO	Name	NO	Name
1	Body Of Valve	8	Assembly of Iron Core	15	Gasket
2	Assembly Of Piston	9	Magnetic Plate	16	Magnetic Plate
3	Springiness Spacer	10	Gasket	17	Cord-locks
4	Wear Strip	11	Bush	18	Iron Cover
5	Spring	12	Assembly Of Iron Core	19	Name Plate
6	Nut	13	Assembly Of Coil	21	Gasket
7	O-ring	14	Bush	21	Head Cover Nut

Overall Dimensions

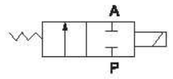


Dimension Sheet

Model	A	B	C	D	K
2L170-10	125	38	146	76	G3/8"
2L170-15	125	42	148	81	G1/2"
2L170-20	125	47	146	84	G3/4"
2L200-25	136	54	162	91.5	G1"
2L300-35	148	76	185	111	G1¼"
2L300-40	148	76	185	111	G1½"
2L500-50	176	88	223	164	G2"

HAVKON® PNEUMATIC

PU220 Series 2/2 Solenoid Valve(Direct drive type)

Graphic Symbol 

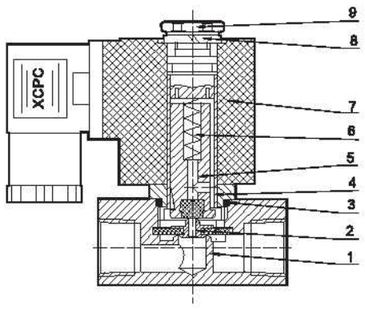
Ordering Code

PU	220	02	—	A	AC110V	—	T
Specification Code PU:Two -position Two -way solenoid valve	Motion Pattern 200:Direct drive Type	Port Size 01:G1/8" 02:G1/4" 03:G3/8" 04:G1/2" 06:G3/4" 08:G1" 12:G1 1/4" 14:G1 1/2" 20:G2"		Initial Estate A: Large Flux AR: Small Aperture Direct Drive F: Flange Type	Standard Voltage AC220V AC110V DC12V DC24V		Wiring Form Blank:Standard Coil T:Timer Coil

Specification

Model	PU220-01AR	PU220-02AR	PU220-03AR	PU220-03A	PU220-04A	PU220-06A	PU220-08A
Working Medium	Air, Water, Oil						
Motion Pattern	220:Direct Drive Type/225:Guide Type						
Type	Normal Close Type						
Aperture of Flow Rate(mm)	1.5	2.3	8	13	13	20	25
CV Value	0.10	0.18	1.00	4.00	4.00	8.60	11.00
Joint Pipe Bore	G1/8"	G1/4"	G3/8"	G3/8"	G1/2"	G3/4"	G1"
Operation Fluid Viscosity	50 CST						
Working-pressure	0~0.7MPa						
Max. Pressure Resistance	1.05MPa						
Operating Temperature Range	-5~+80℃						

Internal structure



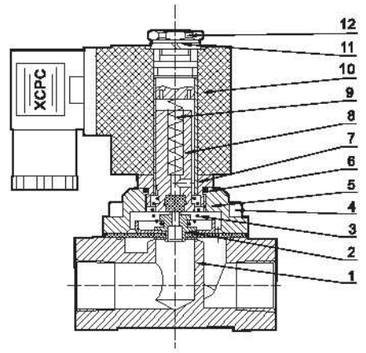
NO	Name
1	Body Of Valve
2	Assembly of Diaphragm
3	O-ring
4	Assembly Of Iron Core
5	Assembly Of Iron Core
6	Spring
7	Coil
8	Gasket
9	Nut

E

HAVKON® PNEUMATIC

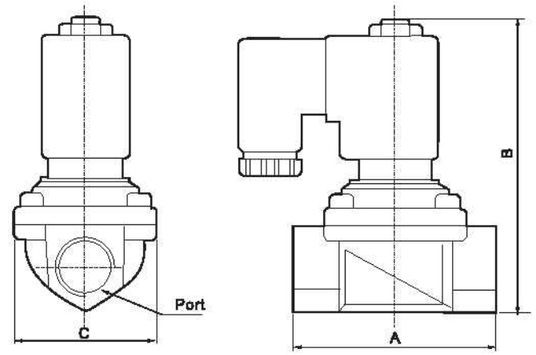
PU220 Series 2/2 Solenoid Valve(Direct drive type)

Internal structure



NO	Name	NO	Name
1	Body Of Valve	7	Assembly Of Iron Core
2	Assembly Of Diaphragm	8	Assembly Of Iron Core
3	Pull Spring	9	Spring
4	Socket Hexagon Screws	10	Coil
5	Valve Cover	11	Gasket
6	O-ring	12	Nut

Overall Dimensions



Dimension Sheet

Model	Port	A	B	C
PU220-01AR	G1/8"	22	72	22
PU220-02AR	G1/4"	35	72	25.4
PU220-03AR	G3/8"	55	79.5	30
PU220-03A	G3/8"	65.5	101	48
PU220-04A	G1/2"	65.5	101	48
PU220-06A	G3/4"	71	107	58
PU220-08A	G1"	97	120	70

E

HAVKON® PNEUMATIC

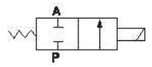
PU 225 Series 2/2 Solenoid Valve(Guide type)

Ordering Code

PU — 225 — 03 — A — AC220V — T

- **PU** — Specification Code: PU:Two-position two-way solenoid valve; SPU: Stainless steel two-position two-way solenoid valve
- **225** — Motion Pattern: 225: Guide Type
- **03** — Port Size: 03:G3/8" 04:G1/2" 06:G3/4" 08:G1" 12:G1¼" 14:G1½" 20:G2"
- **A** — Initial Estate: A: Standard Type F: Flange Type
- **AC220V** — Standard Voltage: AC220V AC110V DC12V DC24V
- **T** — Wiring Form: Blank:Standard Coil T: Timer Coil

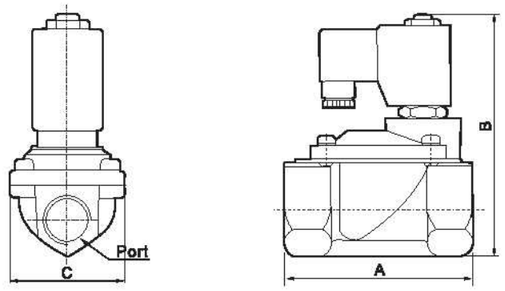
Graphic Symbol



Specification

Model	PU225-03A / SPU225-03A	PU225-04A / SPU225-04A	PU225-06A / SPU225-06A	PU225-08A / SPU225-08A	PU225-12A / SPU225-12A	PU225-14A / SPU225-14A	PU225-20A
Working Medium	Air,Water,Oil						
Motion Pattern	Guide Type						
Type	Normal Close Type						
Aperture of Flow Rate(mm)	13	13	25	25	38	38	50
CV Value	4.50	4.50	12.00	12.00	22.00	30.00	48.00
Port Size	G3/8"	G1/2"	G3/4"	G1"	G1¼"	G1½"	G2"
Operation Fluid Viscosity	50 CST (Below)						
Working-pressure	0.05~1.0MPa						
Max. Pressure Resistance	1.5MPa						
Operating Temperature Range	-5~+80℃						
Material of Body	Brass or steel						

Overall Dimensions



Dimension Sheet

Model	Bore	A	B	C
PU225-03A / SPU225-03A	G3/8"	66.5	106.5	48.0
PU225-04A / SPU225-04A	G1/2"	66.5	106.5	48.0
PU225-06A / SPU225-06A	G3/4"	72.0	113.0	58.0
PU225-08A / SPU225-08A	G1"	96.0	121.0	70.0
PU225-12A / SPU225-12A	G1¼"	128.0	145.5	96.0
PU225-14A / SPU225-14A	G1½"	128.0	145.5	96.0
PU225-20A	G2"	161.0	160.5	112.0

HAVKON® PNEUMATIC

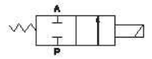
PU 225 Series Solenoid Valve(Steam Type)

Ordering Code

PU — 225 — 03 — S — AC220V

- **PU** — Specification Code: PU:Two-position two-way solenoid valve
- **225** — Motion Pattern: 225: Guide Type
- **03** — Port Size: 03:G3/8" 04:G1/2" 06:G3/4" 08:G1"
- **S** — Initial Estate: S: Steam Type
- **AC220V** — Standard Voltage: AC230V AC110V DC12V DC24V

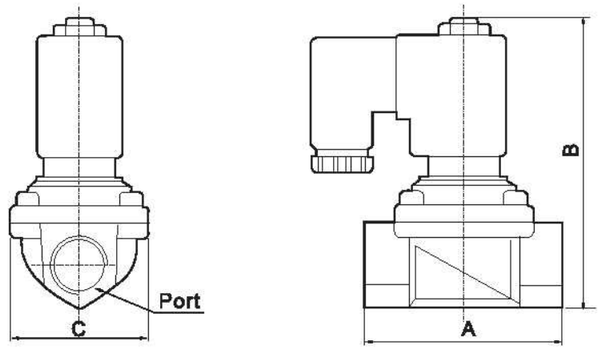
Graphic Symbol



Specification

Model	PU225-03S	PU225-04S	PU225-06S	PU225-08S
Working Medium	Air, Water, Oil			
Motion Pattern	Guide Type			
Type	Normal Close Type			
Aperture of Flow Rate(mm)	13	13	25	25
CV Value	4.5	4.50	12.00	12.00
Port Size	G3/8"	G1/2"	G3/4"	G1"
Operation Fluid Viscosity	50 CST			
Working-pressure	0.05~1.0MPa			
Max. Pressure Resistance	1.5MPa			
Operating Temperature Range	-10~+185℃			

Overall Dimensions



Dimension Sheet

Model	Port	A	B	C
PU225-03S	G3/8"	65	121	48
PU225-04S	G1/2"	65	121	48
PU225-06S	G3/4"	97	152	70
PU225-08S	G1"	97	152	70

HAVKON® PNEUMATIC

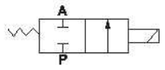
VX Series 2/2 Solenoid Valve

Ordering Code

VX2120 — 08 — A — AC220V

Specification Code	Port Size	Initial code	Standard Voltage
	06:G1/8" 08:G1/4" 10:G3/8" 15:G1/2"	Blank: Standard Type A: Large Flux	DC12V DC24V AC24V 50Hz/60Hz AC110V 50Hz/60Hz AC220V 50Hz/60Hz AC380V 50Hz/60Hz

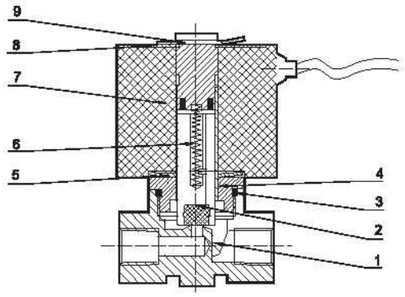
Graphic Symbol



Specification

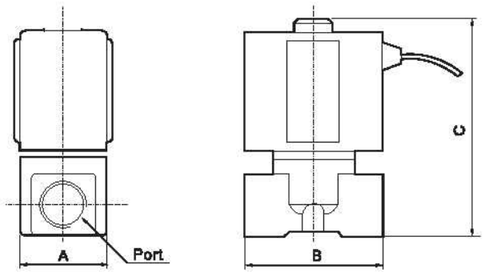
Model	VX2120-06	VX2120-08	VX2120-10	VX2120-10A	VX2120-15
Working Medium	Air, Water, Steam				
Motion Pattern	Direct Drive Type				
Type	Normal Close Type				
Working-pressure	0~1.0MPa				
Aperture of Flow Rate(mm)	3		10	13	
Port Size	G1/8"	G1/4"	G3/8"	G3/8"	G1/2"
Operating Temperature Range	-5~+150℃			-5~+80℃	
Material of Oil Seal	VITON			NBR	

Internal structure



NO	Code	Name
1	VX2120-06-01	Body Of Valve
2	VX2120-06-02	Assembly Of Iron Core
3	VX2120-06-03	O-ring
4	VX2120-06-04	Assembly Of Iron Core
5	VX2120-06-05	Spring
6	VX2120-06-06	Spring
7	VX2120-06-07	Coil
8	VX2120-06-08	Name Plate
9	VX2120-06-09	Clip

Overall Dimensions



Dimension Sheet

Model	Port	A	B	C
VX2120-06	G1/8"	26	40	66
VX2120-08	G1/4"	26	40	66
VX2120-10	G3/8"	40	48	80
VX2120-10A	G3/8"	47	66	88
VX2120-15	G1/2"	47	66	88

HAVKON® PNEUMATIC

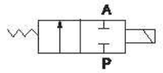
VXF Series Solenoid Valve

Ordering Code

VX2150 — 06 — AC220V — □

Specification Code	Port Size	Standard Voltage	Wiring Form
	06:G3/4" 10:G1" 14:G1'/2"	DC12V DC24V AC24V 50Hz/60Hz AC36V 50Hz/60Hz AC110V 50Hz/60Hz AC220V 50Hz/60Hz AC380V 50Hz/60Hz	Blank:Lead Wire Type D:Join Connector

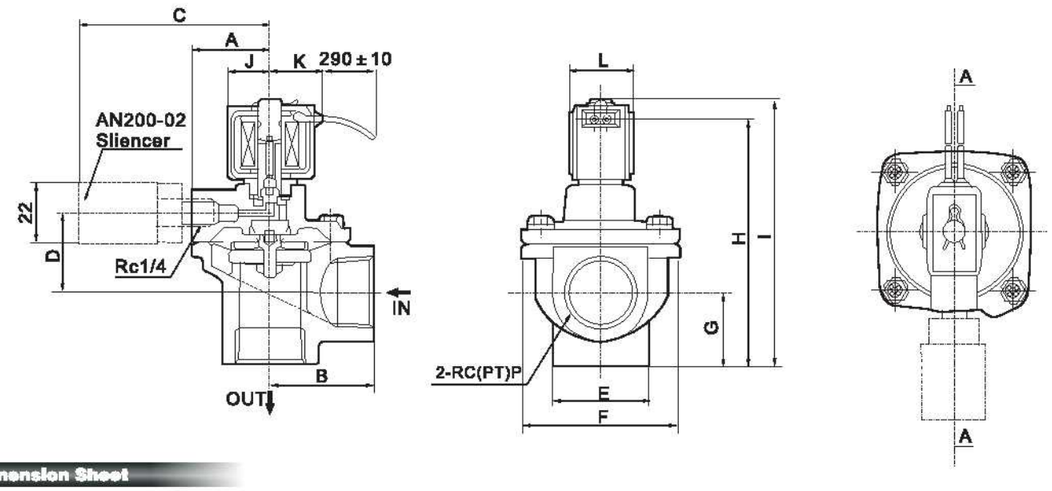
Graphic Symbol



Specification

Model	VXF2150-06	VX2160-10	VX2280-14
Port Size	G3/4"	G1"	G1'/2"
Max. Operating Differential Pressure	1.0MPa		
Min.Operating Differential Pressure	0.031MPa		
Section (mm)	20	27	40
Effective Area of Section	170	330	810
CV Value	9.5	18.5	45
Exhaust Orifice	Rc(PT)1/4		

Overall Dimensions



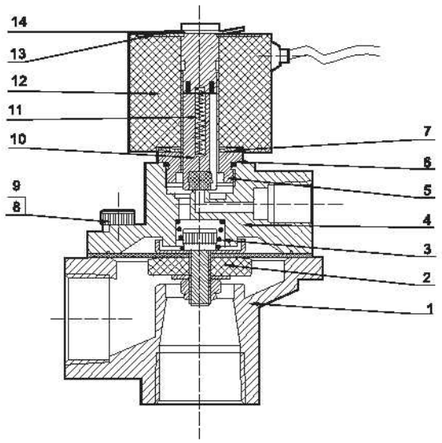
Dimension Sheet

Model	A	B	C	D	E	F	G	H	I	J	K	L	P
VXF2150	33	40	85	32.5	36	66	25	103	110	20	23	30	G3/4"
VXF2160	37	48	89	38	45	74	33.5	118	125	20	23	30	G1"
VXF2280	28	68	81	58	110	110	62.5	174	184	23	25	35	G1-1/2"

HAVKON® PNEUMATIC

VXF Series Solenoid Valve

Internal structure

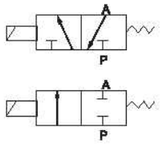


NO	Code	Name
1	VXF2150-06-01	Body of Valve
2	VXF2150-06-02	Assembly Of Diaphragm
3	VXF2150-06-03	Pull Spring
4	VXF2150-06-04	Valve Cover
5	VXF2150-06-05	Assembly Of Iron Core
6	VXF2150-06-06	O-ring
7	VXF2150-06-07	Spring
8	GB70-85	Gasket
9	GB859-87	Socket Hexagon Screws
10	VXF2150-06-08	Assembly Of Iron Core
11	VXF2150-06-09	Spring
12	VXF2150-06-10	Coil
13	VXF2150-06-11	Name Plate
14	VXF2150-06-12	Clip

HAVKON® PNEUMATIC

XC22/23 Series Solenoid Valve

Graphic Symbol



Ordering Code

XC — 23 — 06 — AC220V

Factory Code

The Position counting
22 : Two position two way
23 : Two position three way

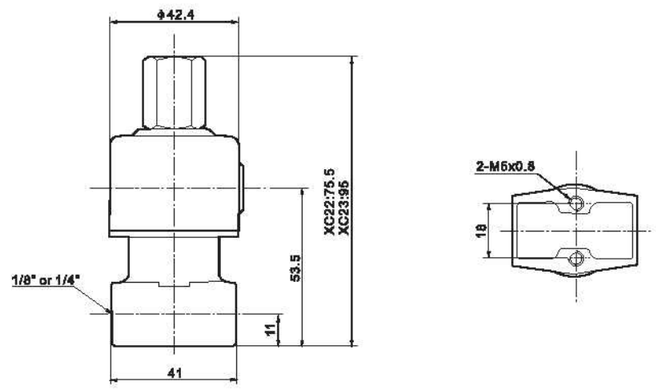
Port Size
06:G3/4"
08:G1"

Standard Voltage
DC12V DC24V
AC24V 50/60Hz
AC36V 50/60Hz
AC110V 50/60Hz
AC220V 50/60Hz
AC380V 50/60Hz

Specification

Model	XC22-06		XC22-08		XC23-06	XC23-08
Working Medium	Air, Water, Oil				Air	
Aperture of Flow Rate(mm)	1.6	2.4	3.2	4.0	1.6	
CV Value	0.10	0.21	0.33	0.43	0.1	
Port size	G1/8"		G1/4"		G1/8"	G1/4"
Working-pressure Range	0~1.5	0~1.0	0~0.7	0~0.5	0~0.9	
Voltage Range	±10%					
Material of oil seal	NBR or VITON					

Overall Dimensions



HAVKON® PNEUMATIC

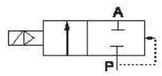
XC5404 Series High Pressure,High Temperature Solenoid Valve

Ordering Code

XC — 5404 — 04 — AC110V — □

- **Factory Code**: XC
- **Model**: 5404
- **Port Size**: 04:G1/2" 06:G3/4" 08:G1"
- **Standard Voltage**: DC12V DC24V AC24V 50/60Hz AC36V 50/60Hz AC110V 50/60Hz AC220V 50/60Hz AC380V 50/60Hz
- **Wiring Form**: Blank:Lead Wire Type D:Joint Connector

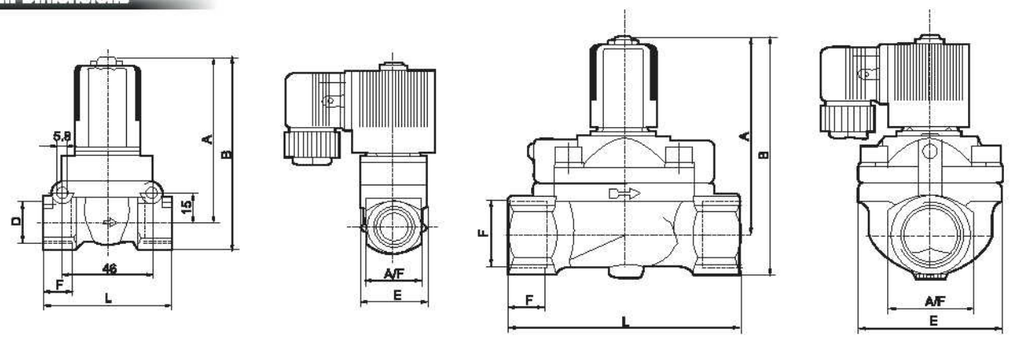
Graphic Symbol



Specification

Model	XC5404-04	XC5404-06	XC5404-08
Working Medium	Air, Water, Oil, Gas		
Motion Pattern	Guide Type		
Type	Normal Close Type		
Aperture of Flow Rate(mm)	12	25	25
KV Value	2.0	5.0	10.0
Joint Pipe Bore	G1/2"	G3/4"	G1"
Working-pressure(kgf/cm²)	Gas:1~50,Liguid:1~50	Gas:1~40,Liguid:01~25	Gas:1~40, Liguid:1~25
Max. Pressure Resistance(kgf/cm²)	75	60	
Operating Temperature Range(℃)	-5~+150℃		
Voltage Range	±10%		
Protect Class	IP65		
Power Consumption	AC:5.5VA DC:9W		
Insulation	F Class		
Material of Body	Brass		
Material of Oil Seal	PTFE		

Overall Dimensions



Dimension Sheet

Model	Bore(mm)	Port	A	B	F	E	L	A/F
XC5404-04	12.0	G1/2"	83.0	98	14	32	63	27
XC5404-06	20.0	G3/4"	99.5	125	16	60	92	40
XC5404-08	25.0	G1"	99.5	125	16	60	92	40

HAVKON® PNEUMATIC

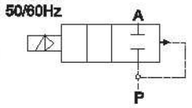
XC6213 Series Diaphragm Type Solenoid Valve

Ordering Code

XC — 6213 — 04 — AC110V — □

- **Factory Code**: XC
- **Model**: 6213
- **Port Size**: 02:G1/4" 03:G3/8" 04:G1/2" 06:G3/4" 08:G1"
- **Standard Voltage**: DC12V DC24V AC36V 50/60Hz AC24V 50/60Hz AC110V 50/60Hz AC220V 50/60Hz AC380V 50/60Hz
- **Wiring Form**: Blank:Lead Wire Type D:Joint Connector

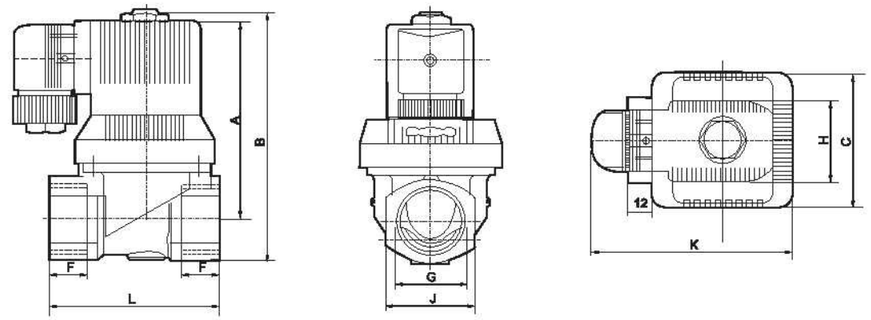
Graphic Symbol



Specification

Model		XC6213-02	XC6213-03	XC6213-04	XC6213-04	XC6213-06	XC6213-06	XC6213-08
Inside nominal diameter(mm)		10			14		25	
Port Size		G1/4"	G3/8"	G1/2"	G1/2"	G3/4"	G3/4"	G1"
Working Pressure(MPa)		0.03~1.0						
Environment Temperature(℃)		-10~+55						
Medium Temperature(℃)		-10~+90						
Kv Value(m³/h)		2		3.6	6.3	6.3	11	11
Power Consumptin	AC(VA)	14						
	DC(W)	8						
Change Frequency(Hz)		≥1				≥0.5		
Power/Voltage		AC: 50Hz 24V,36V,110V,220V, DC:24V,12V						

Overall Dimensions



Dimension Sheet

Model	G	C	F	L	J	A	B	H	K
XC6213-02	G1/4"	38	14	50	26	71	85	35	71
XC6213-03	G3/8"	38	14	50	26	71	85	35	71
XC6213-04	G1/2"	38	14	50	26	71	85	35	71
XC6213-04	G1/2"	45	16	58	31	82	96	35	80
XC6213-06	G3/4"	45	16	58	31	82	96	35	80
XC6213-06	G3/4"	65	18	80.5	41	96	117	35	90
XC6213-08	G1"	65	18	80.5	41	96	117	35	90

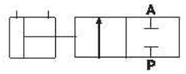
HAVKON® PNEUMATIC

2Q Series Air Contor Two-Way Valve

Ordering Code

2Q	—	200	—	25
Specification Code 2Q:Two position two way Air Control valve		**Aperture of Flow Rate** 160:16mm 200:22mm 250:25mm 350:35mm 400:40mm 500:50mm		**Port Size** 15:G1/2" 20:G3/4" 25:G1" 35:G1 1/4" 40:G1 1/2" 50:G2"

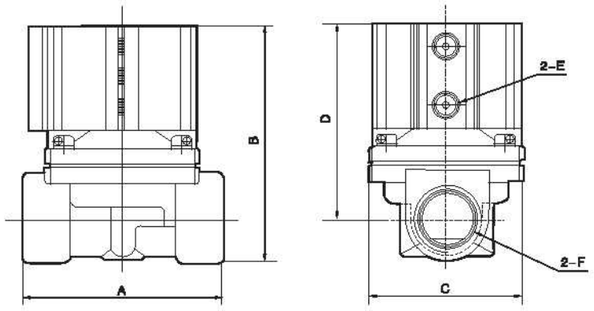
Graphic Symbol



Specification

Model	2Q160-15	2Q200-20	2Q250-25	2Q350-35	2Q400-40	2Q500-50
Working Medium	Air, Water, Oil, Gas					
Motion Pattern	Direct Drive					
Aperture of Flow Rate(mm)	16	20	25	35	40	50
CV Value	4.8	12	7.8	24	29	48
Joint Pipe Bore	G1/2"	G3/4"	G1"	G1-1/4"	G1-1/2"	G2"
Operation Fluid Viscosity	50 CST(Below)					
Working-pressure Range	0~0.7Mpa					
Max. Pressure Resistance	1.05Mpa					
Control Pressure Range	0.3~0.6Mpa					
Operating Temperature Range	-5~100℃					
Material of Body	Brass					
Material of Oil Seal	PTFE					
Control Joint Pipe Bore	2-M5	2-G1/8"	2-G1/8"	2-G1/4"	2-G1/4"	2-G1/4"

Overall Dimensions



Dimension Sheet

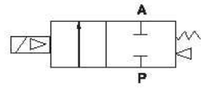
Model	A	B	C	D	E	F
2Q160-15	67	89	57	75	M5	G1/2"
2Q200-20	99	116	57	95	G1/8"	G3/4"
2Q250-25	99	116	57	95	G1/8"	G1"
2Q350-35	127	123	93	97	G1/4"	G1-1/4"
2Q400-40	123	146	95	116	G1/4"	G1-1/2"
2Q500-50	170	155	118	114	G1/4"	G2"

HAVKON® PNEUMATIC

SLP Series 2/2 Solenoid Valve(Normal Close)

NEW

Graphic Symbol



Ordering Code

SLP	06	□	—	E2	3L	S1	H
SLP Series	**Port size** 06: G1/8" 08: G1/4" 10: G3/8" 15: G1/2" 20: G3/4" 25: G1" 35: G1-1/4" 40: G1-1/2" 50: G2" F: Flange	**Seal material** Blank: NBR V: VITON E: EPDM		**Voltage** E1: AC110V E2: AC220V E3: AC380V E4: DC24V E5: DC12V E6: AC36V E7: AC24V E8: DC110V E9: DC48V E10: DC36V	**Orifice(mm)** 1L: 1.0 1.5L: 1.5 2.5L: 2.5 3L: 3.0 4L: 4.0 5L: 5.0 6L: 8.0 10L: 10.0 10.5L: 10.5 13L: 13.0 20L: 20.0 25L: 25.0 35L: 35.0 40L: 40.0 50L: 50.0 Cancel if same with port size	**Body material** Blank: Brass S1: SS316	**Control style** Blank: Normal close H: Normal open

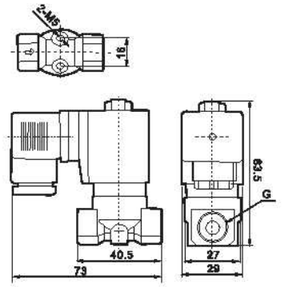
* SLP series,2 port,2 position, 1/8" port size, NBR Seal, AC110V, Orifice: 3mm, Brass valve body, normal close, model: SLP06E1-3L
* SLP series,2 port,2 position, 3/8" port size, VITON Seal, AC220V, Orifice: 13mm, SS316 valve body, normal open,model: SLP10VE2-13LS1H

Product Features

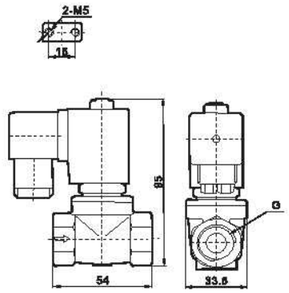
* Normal Close,available body: brass,SS316.
* Multiple seals are available for different medium.
* Wide size range from 1/8" to 2" with both thread and flange connection.
* Diaphragm pilot solenoid valve, with lower working pressure.

Overall Dimensions

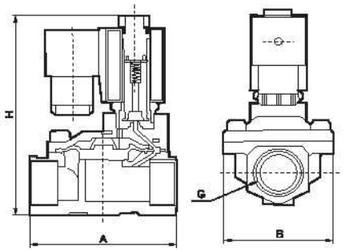
Φ3mm, Φ4mm, G1/8",G1/4",G3/8"



Φ10.5mm, G1/4",G3/8",G1/2"



big orifice



HAVKON® PNEUMATIC

SLP Series 2/2 Solenoid Valve(Normal Close)

Specification

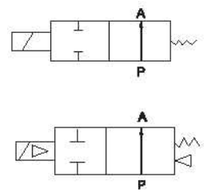
Port size (G)	Orifice (mm)	CV value	Pressure difference(Bar)				Max. temperature (℃)	Power		Model 220VAC 50/60Hz		Overall dimension
			Min. pressure	Max.working pressure				VA	W			
				Air、Gas	Water、Hot water、Liquid	Light oil ≤20CST		AC 220	DC 24V	Brass	Stainless steel	Length ×Width × Height A × B ×H(mm)
1/8"	3	0.23	0	13	13	10	80	22	13	SLP06E2-3L	SLP06E2-3LS1	
	3	0.23	0	13	13	-	130	22	13	SLP06EE2-3L	SLP06EE2-3LS1	
	3	0.23	0	13	13	10	120	22	13	SLP06VE2-3L	SLP06VE2-3LS1	
1/4"	3	0.23	0	13	13	10	80	22	13	SLP08E2-3L	SLP08E2-3LS1	
	3	0.23	0	13	13	-	130	22	13	SLP08EE2-3L	SLP08EE2-3LS1	
	3	0.23	0	13	13	10	120	22	13	SLP08VE2-3L	SLP08VE2-3LS1	
	10.5	1.47	0	10	10	10	80	22	13	SLP08E2-10.5L	—	
	10.5	1.47	0	10	10	-	130	22	13	SLP08EE2-10.5L	—	
	10.5	1.47	0	10	10	10	120	22	13	SLP08VE2-10.5L	—	
3/8"	3	0.3	0	13	13	10	80	22	13	SLP10E2-3L	SLP10E2-3LS1	
	3	0.3	0	13	13	10	130	22	13	SLP10EE2-3L	SLP10EE2-3LS1	
	3	0.3	0	13	13	10	120	22	13	SLP10VE2-3L	SLP10VE2-3LS1	
	4	0.6	0	8	8	6	80	22	13	SLP10E2-4L	SLP10E2-4LS1	
	4	0.6	0	8	8	6	130	22	13	SLP10EE2-4L	SLP10EE2-4LS1	
	4	0.6	0	8	8	6	120	22	13	SLP10VE2-4L	SLP10VE2-4LS1	
	10.5	1.68	0	10	10	10	80	22	13	SLP10E2-10.5L	-	
	10.5	1.68	0	10	10	-	130	22	13	SLP10EE2-10.5L	-	
	10.5	1.68	0	10	10	10	120	22	13	SLP10VE2-10.5L	-	
	13	4.5	0.5	16	16	13	80	22	13	SLP10E2-13L	SLP10E2-13LS1	
	13	4.5	0.5	16	16		130	22	13	SLP10EE2-13L	SLP10EE2-13LS1	
	13	4.5	0.5	16	16	13	120	22	13	SLP10VE2-13L	SLP10VE2-13LS1	
1/2"	10.5	1.75	0	10	10	10	80	22	13	SLP15E2-10.5L	-	66×48×112
	10.5	1.75	0	10	10	-	130	22	13	SLP15EE2-10.5L	-	66×48×112
	10.5	1.75	0	10	10	10	120	22	13	SLP15VE2-10.5L	-	66×48×112
	13	4.5	0.5	16	16	13	80	22	13	SLP15E2-13L	SLP15E2-13LS1	66×48×112
	13	4.5	0.5	16	16		130	22	13	SLP15EE2-13L	SLP15E2-13LS1	66×48×112
	13	4.5	0.5	16	16	13	120	22	13	SLP15VE2-13L	SLP15E2-13LS1	66×48×112
3/4"	20	7.6	0.5	16	16	13	80	22	13	SLP-20E2	SLP-20E2S1	75×58×118
	20	7.6	0.5	16	16		130	22	13	SLP-20EE2	SLP-20EE2S1	75×58×118
	20	7.6	0.5	16	16	13	120	22	13	SLP-20VE2	SLP-20VE2S1	75×58×118
1"	25	12	0.5	16	16	13	80	22	13	SLP-25E2	SLP-25E2S1	98×70×131
	25	12	0.5	16	16		130	22	13	SLP-25EE2	SLP-25EE2S1	98×70×131
	25	12	0.5	16	16	13	120	22	13	SLP-25VE2	SLP-25VE2S1	98×70×131
1-1/4"	35	22	0.5	16	16	13	80	22	13	SLP-35E2	SLP-35E2S1	131×96×146
	35	22	0.5	16	16		130	22	13	SLP-35EE2	SLP-35EE2S1	131×96×146
	35	22	0.5	16	16	13	120	22	13	SLP-35VE2	SLP-35VE2S1	131×96×146
1-1/2"	40	30	0.5	16	16	13	80	22	13	SLP-40E2	SLP-40E2S1	131×96×146
	40	30	0.5	16	16		130	22	13	SLP-40EE2	SLP-40EE2S1	131×96×146
	40	30	0.5	16	16	13	120	22	13	SLP-40VE2	SLP-40VE2S1	131×96×146
2"	50	48	0.5	16	16	13	80	22	13	SLP-50E2	SLP-50E2S1	165×120×167
	50	48	0.5	16	16		130	22	13	SLP-50EE2	SLP-50EE2S1	165×120×167
	50	48	0.5	16	16	13	120	22	13	SLP-50VE2	SLP-50VE2S1	165×120×167
Flange connection	25	12	0.5	16	16	13	80	22	13	-	SLPFE2-25LS1	134×110×160
	25	12	0.5	16	16		130	22	13	-	SLPFEE2-25LS1	134×110×160
	25	12	0.5	16	16	13	120	22	13	-	SLPPFVE-25VLS1	134×110×160
Flange connection	35	22	0.5	16	16	13	80	22	13	-	SLPFE2-35LS1	160×135×175
	35	22	0.5	16	16		130	22	13	-	SLPFEE2-35LS1	160×135×175
	35	22	0.5	16	16	13	120	22	13	-	SLPFVE2-35LS1	160×135×175
Flange connection	40	30	0.5	16	16	13	80	22	13	-	SLPFE2-40LS1	160×145×180
	40	30	0.5	16	16		130	22	13	-	SLPFEE2-40LS1	160×145×180
	40	30	0.5	16	16	13	120	22	13	-	SLPFVE2-40LS1	160×145×180
Flange connection	50	48	0.5	16	16	13	80	22	13	-	SLPFE2-50LS1	200×160×207
	50	48	0.5	16	16		130	22	13	-	SLPFEE2-50LS1	200×160×207
	50	48	0.5	16	16	13	120	22	13	-	SLPFEE2-50LS1	200×160×207

HAVKON® PNEUMATIC

SLP Series 2/2 Solenoid Valve(Normal Open)

NEW

Graphic Symbol

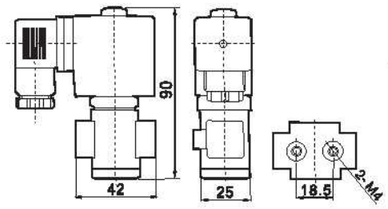


Product Features

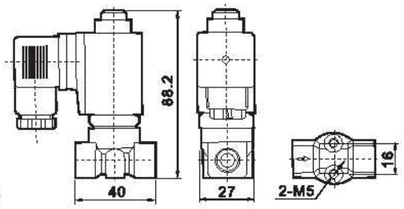
* Normal open,available body: brass,SS316
* Multiple seals are available for different medium
* Wide size range from 1/8" to 2", with both thread and flange connection
* Diaphragm pilot solenoid valve, with lower working pressure

Overall Dimensions

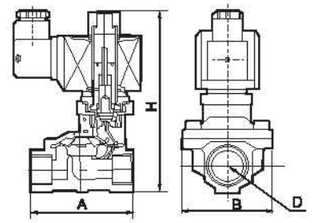
Φ1-Φ2.5mm, G1/8",G1/4"



Φ3-Φ3mm, G1/8",G1/4"



big orifice



Specification

Port size (G)	Orifice (mm)	CV value	Pressure difference(Bar)				Max. temperature (℃)	Power		Model 220VAC 50/60Hz	
			Min. pressure	Max.working pressure				VA	W		
				Air、Gas	Water、Hot water、Liquid	Light oil ≤20CST		AC 220	DC 24V	Brass	Stainless steel
1/8"	1	0.04	0	30	30	25	80	22	13	SLP06E2-1LH	SLP06E2-1LS1H
	1	0.04	0	30	30	-	130	22	13	SLP06EE2-1LH	SLP06EE2-1LS1H
	1	0.04	0	30	30	25	120	22	13	SLP06VE2-1LH	SLP06VE2-1LS1H
	1.5	0.09	0	20	20	15	80	22	13	SLP06E2-1.5LH	SLP06E2-1.5LS1H
	1.5	0.09	0	20	20	-	130	22	13	SLP06EE2-1.5LH	SLP06EE2-1.5LS1H
	1.5	0.09	0	20	20	15	120	22	13	SLP06VE2-1.5LH	SLP06VE2-1.5LS1H
	2.5	0.2	0	15	15	12	80	22	13	SLP06E2-2.5LH	SLP06E2-2.5LS1H
	2.5	0.2	0	15	15	-	130	22	13	SLP06EE2-2.5LH	SLP06EE2-2.5LS1H
	2.5	0.2	0	15	15	12	120	22	13	SLP06VE2-2.5LH	SLP06VE2-2.5LS1H
	3	0.25	0	12	12	10	80	22	13	SLP06E2-3LH	SLP06E2-3LS1H
	3	0.25	0	12	12	-	130	22	13	SLP06EE2-3LH	SLP06EE2-3LS1H
	3	0.25	0	12	12	10	120	22	13	SLP06VE2-3LH	SLP06VE2-3LS1H

HAVKON® PNEUMATIC

SLP Series 2/2 Solenoid Valve(Normal Open)

Specification

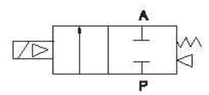
Port size (G)	Orifice (mm)	CV value	Pressure difference(Bar)				Max. temperature (℃)	Power		Model 220VAC 50/60Hz		Overall dimension
			Min. pressure	Max.working pressure				VA	W			
				Air、Gas	Water、Hot water、Liquid	Light oil ≤20CST		AC 220	DC 24V	Brass	Stainless steel	Length × Width × Height A × B × H(mm)
1/4"	1	0.04	0	30	30	25	80	22	13	SLP08E2-1LH	SLP08E2-1LS1H	
	1	0.04	0	30	30	-	130	22	13	SLP08EE2-1LH	SLP08EE2-1LS1H	
	1	0.04	0	30	30	25	120	22	13	SLP08VE2-1LH	SLP08VE2-1LS1H	
	1.5	0.09	0	20	20	15	80	22	13	SLP08E2-1.5LH	SLP08E2-1.5LS1H	
	1.5	0.09	0	20	20	-	130	22	13	SLP08EE2-1.5LH	SLP08EE2-1.5LS1H	
	1.5	0.09	0	20	20	15	120	22	13	SLP08VE2-1.5LH	SLP08VE2-1.5LS1H	
	2.5	0.2	0	15	15	12	80	22	13	SLP08E2-2.5LH	SLP08E2-2.5LS1H	
	2.5	0.2	0	15	15	-	130	22	13	SLP08EE2-2.5LH	SLP08EE2-2.5LS1H	
	2.5	0.2	0	15	15	12	120	22	13	SLP08VE2-2.5LH	SLP08VE2-2.5LS1H	
	3	0.25	0	12	12	10	80	22	13	SLP08E2-3LH	SLP08E2-3LS1H	
	3	0.25	0	12	12	-	130	22	13	SLP08EE2-3LH	SLP08EE2-3LS1H	
	3	0.25	0	12	12	10	120	22	13	SLP08VE2-3LH	SLP08VE2-3LS1H	
3/8"	13	4.5	0.5	8	8	7	80	33	32	SLP10E2-13LH	SLP10E2-13LS1H	66×48×124
	13	4.5	0.5	8	8		120	33	32	SLP10EE2-13LH	SLP10EE2-13LS1H	66×48×124
	13	4.5	0.5	8	8	7	120	33	32	SLP10VE2-13LH	SLP10VE2-13LS1H	66×48×124
1/2"	13	4.5	0.5	8	8	7	80	33	32	SLP15E2-13LH	SLP15E2-13LS1H	66×48×124
	13	4.5	0.5	8	8		120	33	32	SLP15EE2-13LH	SLP15EE2-13LS1H	66×48×124
	13	4.5	0.5	8	8	7	120	33	32	SLP15VE2-13LH	SLP15VE2-13LS1H	66×48×124
3/4"	20	7.6	0.5	8	8	7	80	33	32	SLP-20E2H	SLP-20E2S1H	75×58×130
	20	7.6	0.5	8	8		120	33	32	SLP-20EE2H	SLP-20EE2S1H	75×58×130
	20	7.6	0.5	8	8	7	120	33	32	SLP-20VE2H	SLP-20VE2S1H	75×58×130
1"	25	12	0.5	8	8	7	80	33	32	SLP-25E2H	SLP-25E2S1H	96×70×143
	25	12	0.5	8	8		120	33	32	SLP-25EE2H	SLP-25EE2S1H	96×70×143
	25	12	0.5	8	8	7	120	33	32	SLP-25VE2H	SLP-25VE2S1H	96×70×143
1-1/4"	35	22	0.5	8	8	7	80	33	32	SLP-35E2H	SLP-35E2S1H	131×96×158
	35	22	0.5	8	8		120	33	32	SLP-35EE2H	SLP-35EE2S1H	131×96×158
	35	22	0.5	8	8	7	120	33	32	SLP-35VE2H	SLP-35VE2S1H	131×96×158
1-1/2"	40	30	0.5	8	8	7	80	33	32	SLP-40E2H	SLP-40E2S1H	131×96×158
	40	30	0.5	8	8		120	33	32	SLP-40EE2H	SLP-40EE2S1H	131×96×158
	40	30	0.5	8	8	7	120	33	32	SLP-40VE2H	SLP-40VE2S1H	131×96×158
2"	50	48	0.5	8	8	7	80	33	32	SLP-50E2H	SLP-50E2S1H	165×120×179
	50	48	0.5	8	8		120	33	32	SLP-50EE2H	SLP-50EE2S1H	165×120×179
	50	48	0.5	8	8	7	120	33	32	SLP-50VE2H	SLP-50VE2S1H	165×120×179
Flange conn-ection	25	12	0.5	8	8	7	80	33	32		SLPFE2-25LS1H	134×110×172
	25	12	0.5	8	8		120	33	32		SLPFEE2-25LS1H	134×110×172
	25	12	0.5	8	8	7	120	33	32		SLPFVE2-25LS1H	134×110×172
Flange conn-ection	35	22	0.5	8	8	7	80	33	32		SLPFE2-35LS1H	160×135×187
	35	22	0.5	8	8		120	33	32		SLPFEE2-35LS1H	160×135×187
	35	22	0.5	8	8	7	120	33	32		SLPFVE2-35LS1H	160×135×187
Flange conn-ection	40	30	0.5	8	8	7	80	33	32		SLPFE2-40LS1H	160×145×192
	40	30	0.5	8	8		120	33	32		SLPFEE2-40LS1H	160×145×192
	40	30	0.5	8	8	7	120	33	32		SLPFVE2-40LS1H	160×145×192
Flange conn-ection	50	48	0.5	8	8	7	80	33	32		SLPFE2-50LS1H	200×160×219
	50	48	0.5	8	8		120	33	32		SLPFEE2-50LS1H	200×160×219
	50	48	0.5	8	8	7	120	33	32		SLPFVE2-50LS1H	200×160×219

HAVKON® PNEUMATIC

THP Series 2/2 Solenoid Valve(Normal Close)

NEW

Graphic Symbol



Ordering Code

THP — 06 — E2 — □ — 2.5L — S2 — □ — □

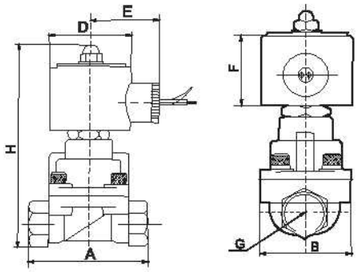
THP Series	Port size	Voltage	Seal material	Orifice(mm)	Body Material	Control style	Coil type
THP Series	06: G1/8" 08: G1/4" 10: G3/8" 15: G1/2" 20: G3/4" 25: G1" 35: G1-1/4" 40: G1-1/2" 50: G2" 25F: 1" Flange 35F: 1-1/4" Flange 40F: 1-1/2" Flange 50F: 2" Flange	E1: AC110V E2: AC220V E3: AC380V E4: DC24V E5: DC12V E6: AC36V E7: AC24V E8: DC110V E9: DC48V E10: DC36V	Blank: NBR T: Teflon V: VITON E: EPDM (N,V,E orifice ≤ Φ5.5mm optional)	2.5L: 2.5 4.5L: 4.5 15L: 15.0 20L: 20.0 25L: 25.0 35L: 35.0 40L: 40.0 50L: 50.0 Cancel if same with port size	S1: SS316 S2: SS304	Blank: Normal close H: Normal open	Blank: DIN connctor F: Flying leads

* THP series,2 port,2 position, 1/8" port size, AC110V, NBR Seal, Orifice: 2.5mm, Brass valve body, normal close, DIN coil, model:THP06E1-2.5L
* THP series,2 port,2 position, 3/8" port size, AC220V, teflon Seal, Orifice: 15mm, SS304 valve body, normal open,flying leads coil, model: THP10TE2-15LS2HF

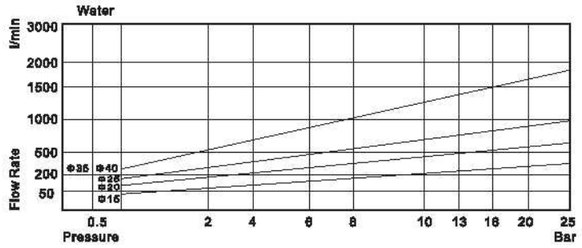
Product Features

* Normal Close,available body: brass,SS304, SS316
* Multiple seals are available for different medium
* Wide size range from 1/8" to 2"
* DIN style / flying leads coil, thread / flange connection
* Piston pilot solenoid valve with high working pressure and temperature

Overall Dimension



Flow Chart



HAVKON® PNEUMATIC

THP Series 2/2 Solenoid Valve(Normal Close)

Specification

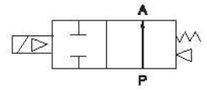
Port size (G)	Orifice (mm)	CV value	Pressure difference(Bar) Min. pressure	Max.working pressure Air、Gas AC	Air、Gas DC	Water、Hot water、Liquid AC	Water、Hot water、Liquid DC	Light oil ≤20CST AC	Light oil ≤20CST DC	Steam AC/DC	Max. temperature (℃)	Power VA	Power W	Model 220VAC 50/60Hz Brass	Model 220VAC 50/60Hz Stainless steel	Overall dimension Length× Width ×Height A×B×H(mm)
G1/8"	2.5	0.23	0	8	8	8	8	6	6	10	180	22	13	THP06T-2.5L	-	48×25×85.5
	2.5	0.23	0	13	13	13	13	7	7	10	110	22	13	THP06V-2.5L	-	48×25×85.5
	4.5	0.6	0	7	4	7	4	4	4	7	165	22	13	THP06T-4.5L	-	58×25×85.5
	4.5	0.6	0	7	4	7	4	4	4	7	110	22	13	THP06V-4.5L	-	58×25×85.5
G1/4"	2.5	0.23	0	7	4	7	4	4	4	10	180	22	13	THP08T2-2.5L	-	48×25×85.5
	2.5	0.23	0	13	13	13	4	7	7	10	110	22	13	THP08V-2.5L	-	48×25×85.5
	4.5	0.6	0	7	4	7	4	4	4	7	165	22	13	THP08T-4.5L	-	58×25×85.5
	4.5	0.6	0	7	4	7	4	4	4	7	110	22	13	THP08V-4.5L	-	58×25×85.5
G3/8"	15	4.5	0.5	25	20	25	20	20	20	10	110	33	32	THP10T-15L	THP10T-15LS2	75×52×129
	15	4.5	0.5	25	20	25	20	20	20		185	30	25	THP10T-15LF	THP10T-15LS2F	75×52×129
G1/2"	15	4.5	0.5	25	20	25	20	20	20	10	110	33	32	THP-15T	THP-15TS2	75×52×129
	15	4.5	0.5	25	20	25	20	20	20		185	30	25	THP-15TF	THP-15TS2F	75×52×129
G3/4"	20	9.0	0.5	25	20	25	20	20	20	10	110	33	32	THP-20T	THP-20TS2	85×60×141
	20	9.0	0.5	25	20	25	20	20	20		185	30	25	THP-20TF	THP-20TS2F	85×60×141
G1"	25	13	0.5	25	20	25	20	20	20	10	110	33	32	THP-25T	THP-25TS2	100×70×148
	25	13	0.5	25	20	25	20	20	20		185	30	25	THP-25TF	THP-25TS2F	100×70×148
G1-1/4"	35	26	0.5	25	20	25	20	20	20	10	110	33	32	THP-35T	THP-35TS2	120×90×168
	35	26	0.5	25	20	25	20	20	20		185	30	25	THP-35TF	THP-35TS2F	120×90×168
G1-1/2"	35	26	0.5	25	20	25	20	20	20	10	110	33	32	THP40T-35L	THP40T-35LS2	120×90×168
	35	26	0.5	25	20	25	20	20	20		185	30	25	THP40T-35LF	THP40T-35LS2F	120×90×168
G2"	50	48	0.5	25	20	25	20	20	20		110	33	32	-	THP-50TS2	150×110×190
	50	48	0.5	25	20	25	20	20	20	10	185	30	25	-	THP-50TS2F	150×110×190
G1" Flange	25	13	0.5	25	20	25	20	20	20		110	33	32	-	THPPFT-25LS2	134×110×185
	25	13	0.5	25	20	25	20	20	20	10	185	30	25	-	THPFT-25LS2F	134×110×185
G1-1/4" Flange	35	26	0.5	25	20	25	20	20	20		110	33	32	-	THPFT-35LS2	160×135×200
	35	26	0.5	25	20	25	20	20	20	10	185	30	25	-	THPFT-35LS2F	160×135×200
G1-1/2" Flange	35	26	0.5	25	20	25	20	20	20		110	33	32	-	THPFT-40LS2	160×145×205
	35	26	0.5	25	20	25	20	20	20	10	185	30	25	-	THPFT-40LS2F	160×145×205
G2" Flange	50	45	0.5	25	20	25	20	20	20	10	110	33	32	-	THPFT-50LS2	200×155×250
	50	45	0.5	25	20	25	20	20	20		185	30	25	-	THPFT-50LS2F	200×155×250

HAVKON® PNEUMATIC

THP Series 2/2 Solenoid Valve(Normal Open)

NEW

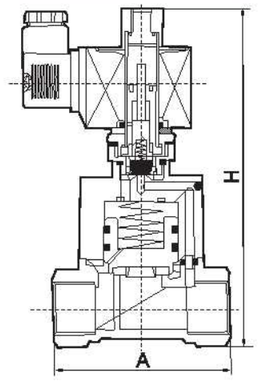
Graphic Symbol

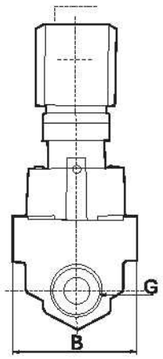


Product Features

* Normal open,available body: brass,SS304, SS316
* Multiple seals are available for different medium
* Wide size range from 1/8" to 2"
* DIN style / flying leads coil, thread / flange connection
* Piston pilot solenoid valve with high working pressure and temperature

Overall Dimensions



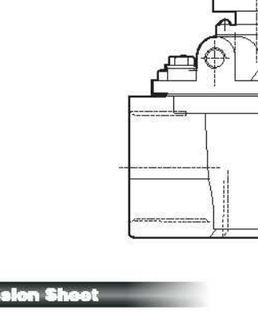


Specification

Port size (G)	Orifice (mm)	CV value	Pressure difference(Bar) Min. pressure	Max.working pressure Air、Gas	Water、Hot water、Liquid	Light oil ≤20CST	Steam	Max. temperature (℃)	Power VA AC 220	Power W DC 24V	Model 220VAC 50/60Hz Brass	Model 220VAC 50/60Hz Stainless steel 304	Overall dimension Length ×Width × Height A × b × h(mm)
3/8"	15	4.5	0.5	8	8	8	8	130	33	32	THP10T-15LH	THP10T-15LS2H	75×52×147
	15	4.5	0.5	8	8	8	8	130	33	32	THP10T-15LHF	THP10T-15LS2HF	75×52×147
1/2"	15	4.5	0.5	8	8	8	8	130	33	32	THP-15TH	THP-15TS2H	75×52×147
	15	4.5	0.5	8	8	8	8	130	33	32	THP-15THF	THP-15TS2HF	75×52×147
3/4"	20	9.0	0.5	8	8	8	8	130	33	32	THP-20TH	THP-20TS2H	85×60×159
	20	9.0	0.5	8	8	8	8	130	33	32	THP-20T2HF	THP-20TS2HF	85×60×159
1"	25	13	0.5	8	8	8	8	130	33	32	THP-25TH	THP-25TS2H	100×70×166
	25	13	0.5	8	8	8	8	130	33	32	THP-25THF	THP-25TS2HF	100×70×166
1-1/4"	35	26	0.5	6	6	6	6	130	33	32	THP-35TH	THP-35TS2H	120×90×186
	35	26	0.5	6	6	6	6	130	33	32	THP-35THF	THP-35TS2HF	120×90×186
1-1/2"	35	26	0.5	6	6	6	6	130	33	32	THP40T-35LH	THP40T-35LS2H	120×90×186
	35	26	0.5	6	6	6	6	130	33	32	THP40T-35LHF	THP40T-35LS2HF	120×90×186
1" Flange	25	25	0.5	8	8	8	8	130	33	32	-	THP-25FE2TS2H	134×110×200
	25	13	0.5	8	8	8	8	130	33	32	-	THP-25FE2TS2HF	134×110×200
1-1/4" Flange	35	26	0.5	6	6	6	6	130	33	32	-	THP-35FE2TS2H	160×134×215
	35	26	0.5	8	8	8	8	130	33	32	-	THP-35FE2TS2HF	160×134×215
1-1/2" Flange	40	26	0.5	6	6	6	6	130	33	32	-	THP-40FE2TS2H	160×145×200
	40	26	0.6	8	8	8	8	130	33	32	-	THP-40FE2TS2HF	160×145×200

HAVKON® PNEUMATIC

XMFZ Series Right Angle Pulse Valve



Ordering Code

X	MF	—	Z	—	25	—	P		EX
XCPC Product	Pulse Valve		Type Code Z:Solenoid Control Q:PneumatiC Control		Orifice Size		Thead Type Blank:Normal Thread Type A:Thread Type+ Insert pipe P:Thread Type S:Double Diaphragms J:Thread Type (Economy Type)		Wiring Form Blank:Normal Type EX:Ex-proof type

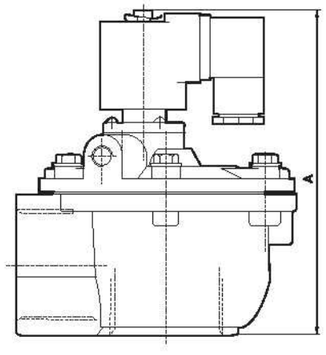
■ Speciality

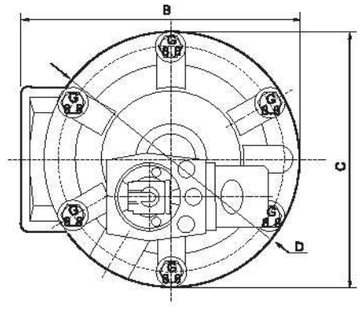
Adopt international advanced technology.
Used for dust remover.
Key parts all made of imported materials.
Pneumatic control type,solenoid control type,ex-proof solenoid control type for choose.
Female thread connection port,easy to be mounted.

Specification

Model	XMF-Z-20A	XMF-Z-20P	XMF-Z-20	XMF-Z-25	XMF-Z-25P	XMF-Z-35P	XMF-Z-40S	XMF-Z-50S	XMF-Z-62S	XMF-Z-76S	XMF-Z-100S
Working Pressure	0.3~0.8MPa										
Ambient Temperature	-5~55℃										
Relatively Humidity	<85%										
Working Medium	Clean Air										
Voltage	AC110V/AC220V/DC24V										
Diaphragm Life Cycles	Over 1000k Cycles										
Orifice(mm)	ϕ20	ϕ20	ϕ20	ϕ25	ϕ25	ϕ35	ϕ40	ϕ50	ϕ62	ϕ76	ϕ100
Connection Port	G3/4"	G3/4"	G3/4"	G1"	G1"	G1 1/2"	G1 1/2"	G2"	G1 1/2"	G3"	ϕ100

Overall Dimensions



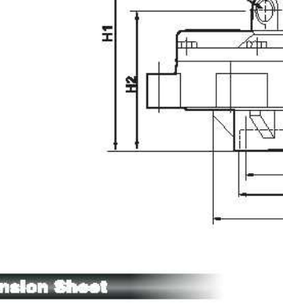


Dimension Sheet

Model	XMF-Z-20A	XMF-Z-20P	XMF-Z-20	XMF-Z-25	XMF-Z-25P	XMF-Z-35P	XMF-Z-40S	XMF-Z-50S	XMF-Z-62S	XMF-Z-76S	XMF-Z-100S
A	173	124	110	110	124	142	166	202	222	245	356.5
B	145	105	90.5	90.5	105	121	132	210	210	230.5	286.5
C	-	82.5	75	75	82.5	-	-	-	-	-	-
D	ϕ90	-	-	-	-	ϕ112	ϕ137	ϕ185	ϕ185	ϕ200	ϕ221

HAVKON® PNEUMATIC

XMFY Series In Line Pulse Valve



Ordering Code

X	MF	—	Y	—	50	—	S		EX
XCPC Product	Pulse Jet Valve		Type Code Y:Solenoid Control Q:PneumatiC Control		Orifice		Double Diaphragms		Wiring Form Blank:Normal Type EX:Ex-proof Type

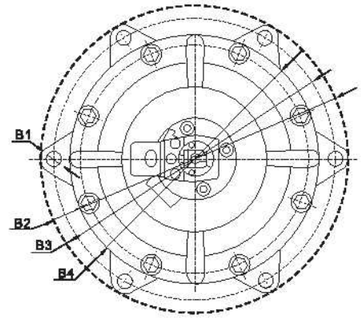
■ Speciality

Adopt international advanced technology
Used for dust remover
Key parts all made of imported materials
Pneumatic control type.solenoid control type.ex-proof solenoid control type for choose
Directing mounted to gas bag better rblowing effectand small loss of air source.

Specification

Model	XMF-Y-50S	XMF-Y-62S	XMF-Y-76S
Working Pressure	0.3~0.6MPa		
Ambient Temperature	-5~55℃		
Relatively Humidity	<85%		
Working Med ium	Clean Air		
Voltage	AC110V/AC220V/DC24V		
Diaphragm Life Cycles	Over One Million Cycles		
Orifice(mm)	ϕ50	ϕ62	ϕ76
Connection Port	ϕ62	ϕ80	ϕ90

Overall Dimensions



Dimension Sheet

Model	A1	A2	A3	B1	B2	B3	B4	H1	H2	H3	H4
XMF-Y-50S	ϕ84.5	ϕ78.5	ϕ118	6-ϕ11.5	ϕ200	ϕ180	ϕ159	187	100	25	31
XMF-Y-62S	ϕ80	ϕ93.5	ϕ145	6-ϕ11	ϕ226	ϕ204	ϕ185	197	107	34.5	35
XMF-Y-76S	ϕ90	ϕ99	ϕ141	6-ϕ11	ϕ248	ϕ227	ϕ200	205	113	27	34

HAVKON® PNEUMATIC

XMF Series Insert Pipe Type Pulse Valve

Ordering Code

X	MF	—	25	—	DD	EX
XCPC Product	Pulse Jet Valve		Orifice		Insert Pipe Type	Wiring Form Blank:Normal Type EX:Ex-proof Type

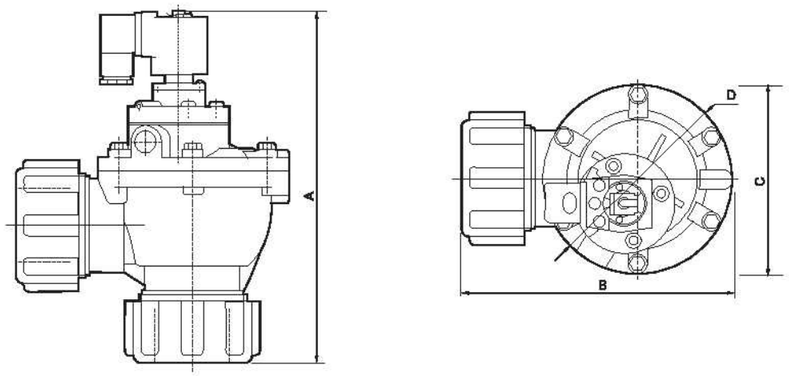
■ Speciality

Adopt international advanced technology
Used for dust remover
Key parts all made of imported materials
Pneumatic control type.solenoid control type,ex-proof solenoid control type for choose.
Inse rt pipe style,much easier to be mounted.

Specification

Model	XMF-25DD	XMF-45DD
Working Pressure	0.3~0.6MPa	
Ambient Temperature	-5~55℃	
Relatively Humidity	<85%	
Working Med ium	Clean Air	
Voltage	AC110V/AC220V/DC24V	
Diaphragm Life Cycles	Over One Million Cycles	
Orifice(mm)	ϕ25	ϕ40
Connection Port	ϕ35	ϕ50

Overall Dimensions



Dimension Sheet

Model	A	B	C	D
XMF-25DD	189	131	82.5	-
XMF-45DD	237	179.5	-	ϕ126

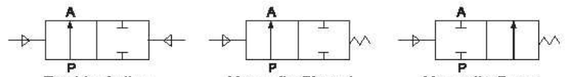
HAVKON® PNEUMATIC

XCP Series Plastic Actuator Bevel Valve

Ordering Code

XCP	—	15	□
XCP Series Plastic Bevel Valve		Port Size 15mm 20mm 25mm 32mm 40mm 50mm	Type SC:Single Action Normal Close DO:Double Action Normal Open

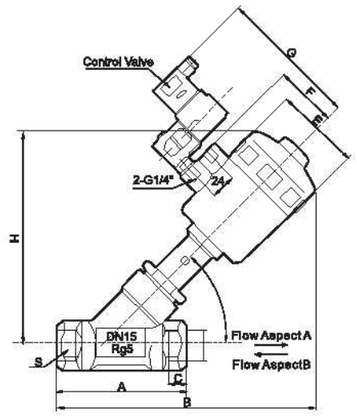
Graphic Symbol



Specification

Orifice Size	15	20	25	32	40	50
Port size	G1/2"	G3/4"	G1"	G1-1/4"	G1-1/2"	G2"
KV Value(m^3/h)	4.2	8	19	27.5	42	55
Max.Working Pressure(Mpa)	0~1.6	0~1.1	0~1.1	0~1.5	0~1.25	0~1.0
Min.Pilot Pressure(Mpa)	0.39	0.39	0.42	0.5	0.44	0.4
Polyamide	50	50	63	63	63	80
Medium Temperature	-10~+180℃					
Flow Direction	A(Flow Direction Below The Seat) or B(Flow Direction above The Seat)					

Overall Dimensions



Dimension Sheet

Orifice Size (mm)	Port size	Actuator Size(ϕ mm)		A	B		C	ϕE		F		G		H		L	S
		Polyamide	Aluminum Alloy		Polyamide	Aluminum Alloy		Polyamide	Aluminum Alloy	Polyamide	Aluminum Alloy	Polyamide	Aluminum Alloy	Polyamide	Aluminum Alloy		
15	G1/2"	50	-	85	173	-	12	64	-	44	-	112	-	137	-	33	27
20	G3/4"	50	-	95	178	-	12	64	-	44	-	112	-	145	-	35	23
25	G1"	63	-	105	212	-	14	80	-	52	-	120	-	173	-	40	41
32	G1-1/4"	63	100	118	236	278	16	80	140	52	70	120	138	189	250	35	55
40	G1-1/2"	63	100	130	230	270	18	80	140	52	70	120	138	189	250	35	55
50	G2"	80	125	150	238	300	20	100	170	52	83	120	151	250	280	38	70

XC Series Stainless Steel Bevel Valve

Ordering Code

XC — 10 — 40 — □

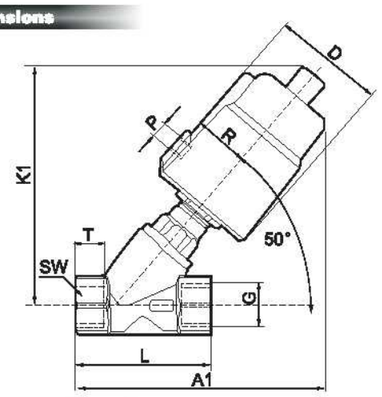
- **XC Series**: Stainless Steel Bevel Valve
- **Port Size**: 10:G3/8" 15:G1/2" 20:G3/4" 25:G1" 32:G1-1/4" 40:G1-1/2" 50:G2"
- **Actoator Size**: 40:40mm 50:50mm 63:63mm 90:90mm 100:100mm
- **Type**: SC:Single Action Normal Close SO:Single Action Normal Open DC:Double Action Normal Close DF:Double Action Free Installation

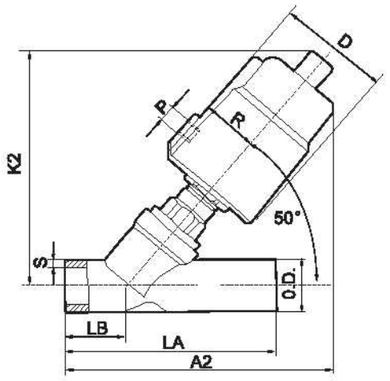
Specification

Model	XC10-50SC/SO/DC/DF		
Port size	DN10-DN50		
Thread	G3/8"-G2"		
Welded	DIN11850	2 DIN11850	3 ISO2037
Valve body	CF8M		
Actyator	CF8		
Seat seals	PTFE		
Stem seals	PTFE/FKM		
Piston seals	FKM/NBR		

Model	XC10-50SC/SO/DC/DF
Applicable medium	Water,liquid,neutral gas,water steam slight corrosive gas and liquid
Temperature range	PTFE:-10℃ to +180℃
Ambient temperature	-10℃ to +60℃
Viscosity	max. 600mm²/s
Installation	Any position
Controlling medium	Air or neutral gas
Controlling pressure range	0.3~1M

Overall Dimensions





Dimension Sheet

Specification	Actuator (mm)	D	R	P	Thread G	K1(mm)	A1(mm)	L(mm)	T(mm)	SW(mm)	Welded O.D.(mm)	K2(mm)	A2(mm)	LA(mm)	LB(mm)	S(mm)
DN15	50	60	35	G1/8"	G1/2"	126	133	88	15	26.8	21.3	126	140	110	30	2.65
DN20	50	60	35	G1/8"	G3/4"	131	137	75	16	32	26.9	131	136	108	30	3.45
DN25	50	60	35	G1/8"	G1"	140	149	90	17	39.5	33.7	140	150	112	32	3.85
DN25	63	77	43	G1/8"	G1"	165	174	90	17	39.5	33.7	165	175	112	32	3.85
DN32	63	77	43	G1/8"	G1-1/4"	175	188	116	21	50	38	175	193	136	40	3.35
DN40	63	77	43	G1/8"	G1-1/2"	178	190	116	21	55.3	42	178	193	146	40	3.2
DN50	63	77	43	G1/8"	G2"	184	203	138	22	70	54	184	206	160	45	2.7
DN50	90	98	52	G1/4"	G2"	195	218	138	22	70	54	195	220	160	45	2.7

XQ22HD Series (Right angle valve)

NEW

Ordering Code

X — Q — 22 — HD — □ — □ — □

- **XCPC Product**
- **Right angle valve code**
- **Two way two position**
- **Air control liquid valve**
- **Connection size**: 15:G1/2" 20:G3/4" 25:G1" 40:G1¼" 50:G2"
- **S:Single acting type** D:Double acting type K:Normally open
- **Material**: Blank: Normal type H: High temperature type

Features

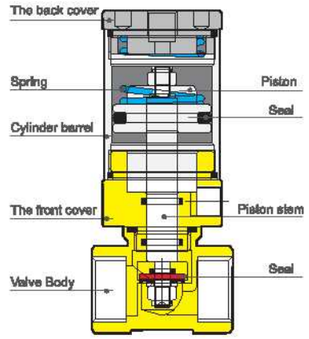
Classical design, durable Air control design, energy saving and environmental protection Big flow rate, safety and Precision

Can work at low pressure, smartness for on and off, good seal performance. There are two kinds of structure single acting type and double acting type.

Application: food, medicine, industry, abstersion, landification, printing, etc.

Remark: Normally open: Flow comes under the piston seal, against arrow on body.

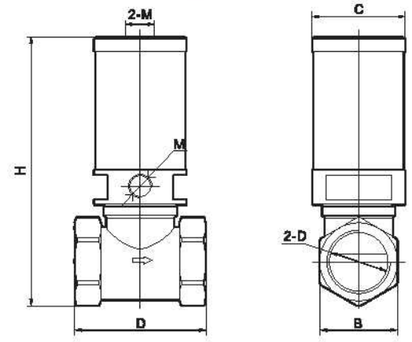
Internal structure



Specification

Model	Orifice	Media	Working pressure	Control pressure	Temp range	Kv value (m³/h)
XQ22HD-15	13mm	Compress Air Water Oil	0~0.8MPa	0.4~0.8MPa	0.5-60℃	4
XQ22HD-20	16mm					5
XQ22HD-25	22mm				0.5-150℃ (High temp)	10
XQ22HD-40	35mm					25
XQ22HD-50	45mm					40

Overall Dimensions



Dimension Sheet

Model	A	B	C
XQ22HD-15	46	26	30
XQ22HD-20	54	32	37
XQ22HD-25	66	34	37
XQ22HD-40	80	53	65
XQ22HD-50	105	66	78

Model	D	H	M
XQ22HD-15	G1/2"	96	G1/8"
XQ22HD-20	G3/4"	107	G1/8"
XQ22HD-25	G1"	118	G1/8"
XQ22HD-40	G1-1/2"	162	G1/8"
XQ22HD-50	G1/8"	180	G1/4"

HAVKON® PNEUMATIC

HLP Series Pressure Controller

Descriptions

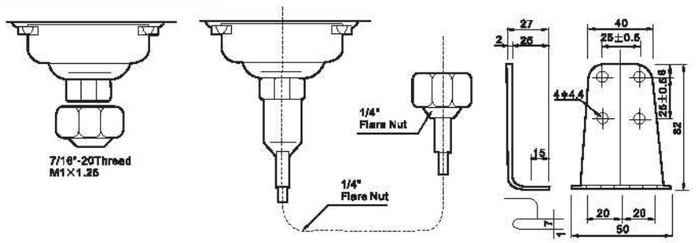
For use with fluorinated refrigerants as well as with a air and water.
(Allowable Fluid Temp.: -10℃~+110℃)
Various contact functions available,
With SPDT contact mechanism,
Renovated micro-switch stucture ensures the reliable switch function,
Manual-controlled and no use of other instruments to have a function test,
Flexible mounting plate suits various kinds of application.
Our products can substitute for congeneric import products, such as JOHNSON、DANFOSS、SAGINOMIYA、3S、RANCO and so on

Specification

Model	Range(bar)		Differential(bar)		Factory Setting(bar)		Max. Bellows Press(bar)
	Min.	Max.	Min.	Max.	OFF	ON	
HLP503	-0.7	3	0.2	1.5	2	1	16.5
HLP506	-0.7	6	0.6	4	3	2	16.5
HLP506M	-0.7	6	Duplicate voltage disparity≤1		3	Manual Reset	16.5
HLP110	1	10	1	3	6	5	16.5
HLP516	5	16	1	4	10	8	35
HLP520	5	24	2	5	16	13	35
HLP530D	5	30	5	10	20	15	35
HLP530	8	30	Fixed3-5		20	15-17	35
HLP530M	8	30	Duplicate voltage disparity≤4		20	Manual Reset	35

Model	Press Side	Range(bar)		Differential(bar)		Factory Setting(bar)		Max. Bellows Press(bar)
		Min.	Max.	Min.	Max.	OFF	ON	
HLP830	Low Side	-0.7	6	0.6	4	3	2	16.5
	High Side	8	30	Fixed 3~5		2	15	35
HLP830HM	Low Side	-0.7	6	0.6	4	3	2	16.5
	High Side	8	30	Duplicate voltage disparity≤4		20	Manual Reset	35
HLP830HLM	Low Side	-0.7	6	Duplicate voltage disparity≤4		3	Manual Reset	16.5
	High Side	8	30	Duplicate voltage disparity≤4		20	Manual Reset	35

Way of Connection



Slight Moring Swith's Date

Specified Voltage(V) / Specified Electric Current(A)	A.C. 125	A.C. 125
Non-Inductive Current	48	12
Maximum Load	48	12
Twinking Electric Current	288	72

HAVKON® PNEUMATIC

Special Solenoid Valve

Model	Product	Specification	Model	Product	Specification
4VXC-08		Valve type:5 port 2 way Orifice size:25mm2(CV=1.40) Fluid Air(to be filtered by 40μ filter element) Acting Inner guide type Pressure range:0.25~1.0MPa Proof pressure:1.2MPa Temperature:5~50oC Voltage range:-10%~+10% Power consumption:AC:5.5VA DC:4.8W Insulation&Protection:F Class & IP65 Max frequency:5 cyclec Min activating time:0.05 secretary	XR2 Valve Group		Fluid medium:Compress Air Motion pattern:Direct acting Type:Normal Close,(2/2,3/2) Orifice:1.2mm Connection port:G1/8" Working pressure:0~0.8Mpa Working temperature:-20℃~80℃ Voltage Range:DC6~220V, AC24~220V,50/60Hz:±10% Material of Body:Aluminum alloy Seal:NBR
XCZ-110-10-A Small Valve Group		Fluid medium:Compress Air Pattern:Direct acting Type:Normal Close,Two-position Three-way Orifice:0.7mm Connection port:M5 Working pressure:0~0.8Mpa Working temperature:0~60℃ Voltage Range:DC12V~DC24V,±10% Power:≤3W Material of Body:Aluminum Seal:FPM	DL-6A DL-6B DL-6K DL Orifice Adjustable Steam Solenoid Valve		Medium:Water,Steam Pattern:Direct acting Type:Normal Close Orifice:2.5mm(DL-6A,DL-6B)0~2.5mm(DL-6K) Connection port:G1/4",G1/8" Working pressure:0~0.8Mpa Ambient temperature:0.1~180℃ Voltage:AC24,AC110V,AC220-240V, 50/60Hz,±10% Material of Body:Stainless Steel+Brass Seal:PTFE
Q22XD-2L Q23XD-2L		Port size: M10×1,G1/8" Use Pressure:0.15 to 0.8Mpa Apply Temperature:-5℃~50℃	XC114 Medical Solenoid Valve		Fluid medium:Water,Gas Motion Pattern:Direct acting Type:Normal Close,Two-position Two-way Orifice:1mm Connection port:M4,M5(Female),or Φ3 hose Working pressure:0~0.8Mpa Working temperature:0~90℃ Voltage Range:AC110V,220V,50Hz, DC6-24V,±10% Material of Body:Brass Seal:NBR,Si
F17 Petrol Solenoid Valve		Fluid medium:Petrol and solvents Motion Pattern:Direct acting Type:Normal Close,Two-position Two-way Orifice: Φ1.8mm, Φ3mm Connection port: Φ4 hose Working pressure:0~0.35Mpa Working temperature:-40℃~80℃ Voltage Range:DC12V DC24V Material of Body:POM Seal:VITON	3VKZF-15/10~25/20 3AKZF-15/10~25/20		Working Medium:Air Motion Pattern:Stop Type Aperture of Flow Rate:3V:16mm/25mm 3A:16mm/25mm Port Size,G1/2" / G3/8",G1" / G3/4", Working-pressure:0~1.0MPa Max. Pressure Resistance:1.5MPa Voltage Range:-10%~+10% Material of Body:Aluminum
XC 21106		Valve Type:2/2 Guide Type Solenoid Valve, Normal Close Type Material of Valve Body:Brass Seal Material:EPDM Joint Pipe Bore:Φ6 Bore:11 Fluid Temperature: -40℃~120℃ Environment Temperature: -40℃~85℃	RSC-1 RSC-2		Medium:Water,Gas Medium Temperature:0~100℃ Environment Temperature:0~40℃ Action method:Direct drive Pressure:Normally close 0~8bar Boby material:PP 1/8" black 1/4" white Sealing material:EPDM Heat resistance grade:class B 130℃ Continuous Service:100% Wire Length:30cm(12")
SH-402 SH-403 SH-402S SH-403S		Working Medium:Air Working pressure Range: 0.15~0.9MPa Working temperature Range:0~70℃ Port Size:1/4 PT ,3/8PT Position Number: Two-position Five-way Blank:Immobility Type S:Spring Reset Type	SF-402 SF-403 SF-402S SF-403S		Working Medium:Air Working pressure Range: 0.15~0.9MPa Working temperature Range:0~70℃ Port Size:1/4 PT ,3/8PT Position Number: Two-position Five-way Blank:Immobility Type S:Spring Reset Type

HAVKON® PNEUMATIC

Solenoid Valve Accessories

Model	Product	Specification	Model	Product	Specification
XC601 3/2 XC602 2/2 (Armature)		Often used for 4V110 etc and small-sized specia electromagetism valves.	XC603 3/2 XC604 2/2 (Armature)		Often used for 4V210, 4V310,4V410 etc valves.
XC605 3/2 XC606 2/2 (Armature)		Often used for matching small-sized 3/2 and 2/2 electromagnetism valves.	DIN 43650A (Connectors)		Distance:18mm Form:2+1 GND Protection Class:IP65(60529 Situation of IEC) Working Voltage:AC250V DC300V Nominal Current:10A Contact Resistance:≤5m Ω Max.Conductor Section:3×1.5mm² Fixing Screw:M3×26
DIN 43650B (Connectors)		Distance:11mm Form:2+1 GND Protection Class:IP65 (60529 Situation of IEC) Working Voltage:AC250V DC300V Nominal Current:10A Contact Resistance:≤5m Ω Max.Conductor Section:3×1.5mm² Fixing Screw:M3×30	DIN 43650C (Connectors)		Distance:9.4mm Form:2+1 GND Protection Class:IP65 (60529 Situation of IEC) Working Voltage:AC250V DC300V Nominal Current:10A Contact Resistance:≤5 Ω Max.Conductor Section:3×0.75mm² Fixing Screw:M3×25
Coil		Coil apertu re,Height: Φ8×31 Applicable power and Voltage AC 6VA 12V-220V DC 3W 6V-110V	Coil		Coil apertu re,Height: Φ9×29 5 Applicable power and Voltage AC 6VA 12V-220V DC 3W 6V-110V
2W (UD) Series Coil UD-08		Coil Aperture,height: Φ14X31 Applicable Power And Voltage: AC 28VA 24-380V DC 12 W 6-380V	2W (UD) Coil UD-15		Coil apertu re,Height: Φ16×37 Applicable power and Voltage AC 18VA 24V-380V DC 16W 12V-380V
2W (UW) Series Coil		Coil Aperture,height: Φ16x17 Applicable Power And Voltage: AC 28VA 24-380V DC 24 W 24-380V	2W (2L,US) Large Aperture Coil US-H		Coil Aperture,height: Φ23X55 Applicable Power And Voltage: AC 28VA 24-380V DC 24 W 24-380V
2W(2L,US) Large Aperture Plastic Capsulation Coil		Coil Aperture,height: Φ22x55 Applicable Power And Voltage: AC 28VA 24-380V DC 24 W 24-380V	AB410A		Coil Aperture,height: Φ16X38 Applicable Power And Voltage: AC 28VA 24-380V DC 18 W 12-220V
PU Series Coil		Coil Aperture,height: Φ14.5x42 Applicable Power And Voltage: AC 15VA 24-380V DC 12.5 W 12-110V	VX Series Coil		Coil ape rtu re,Height: Φ11×35 Applicable power and Voltage AC 13VA 12V-380V DC 8W 6V-380V

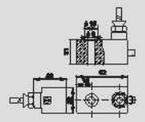
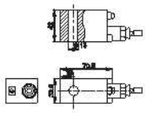
E

HAVKON® PNEUMATIC

Solenoid Valve Accessories

Model	Product	Specification	Model	Product	Specification
2V,2P Series Coil		Coil Aperture,height: Φ9x29.5 Applicable Power And Voltage: AC 8VA 12-220V DC 6 W 6V-110V	Coil		Coil aperture: ϕ 8 Applicable power and Voltage AC 8VA 12V-220V DC 6W 6V-110V
PU220 Series Diaphragm		PU220-03A PU220-04A PU220-06A PU220-08A	PU225 Series Diaphragm		PU225-03A PU225-04A PU225-06A PU225-08A
2W Series Diaphragm		2W-160-15 2W-200-20 2W-250-25 2W-350-35 2W-400-40 2W-500-50	2L(US) Series Piston		2L-170-10/15/20 2L-200-25 2L-350-35/40 2L-500-50

Explosion-proof Coil& Timmer

Model	Product	Overall Dimension	Specification	
Product No. XC280 Product Type 0980,0981			Normal Voltage	AC220V,AC110V,AV24V,DC24V,DV12 Other Voltage can be customizd
			Normal Power	AC5.5VA,DC5W Other Power can be customizd
			Explosion-proof level	Exm Ⅰ/Ⅱ T4
			Connection Type	Connector Type
			Applicablity	EX-proof Solenoid Valve
Product No. XC281 Product Type 1380,1381		 Supply voltag	Normal Voltage	AC220V,AC110V,AV24V,DC24V,DV12V Other Voltage can be customizd
			Normal Power	AC5.5VA,DC5W Other Power can be customizd
			Explosion-proof level	Exm Ⅰ/Ⅱ T4
			Connection Type	Connector Type Cable
			Applicablity	EX-proof Solenoid Valve
Valver Timmer-1			Supply voltage Absorption current Operationg temperature Class protection Switch holding voltage Switch capacity Inrush current Duty cycle Switch Life Time ON Time OFF Indicators Manual override Termination	24..240V AC/DC-50Hz/60Hz for"CE"marked Timer 4 mA max -10℃+50℃ IP65-EN60529 400V Max 1A 10A for 10ms 100% ED 3×10^4 Form 0.5 to 10s. Form 0.5 to 45s. Yellow LED Test DIN43650A

E