

Features:

- For ease of loading & unloading workpiece at restricted location.
- Body machined from extruded aluminium that mounts directly to equipment for rigid, secure mounting in a min. of space.
- Reed switches can be mounted on cylinder surfaces as input signals to controllers.



Specifications:

Action	Double acting, Magnetic Piston							
Series	MKS							
Bore size	12	16	20	25	32	40	50	63
Angle of swing	90° ± 10°							
Direction of swing	L: Anti-clockwise R: clockwise							
Swing stroke	7.5	10	13	18				
Overall stroke	10/20						20	
Allowable troque (N.mm)	1	3.8	7	13	27	47	107	182
Theoretical clamping force (N)	40	75	100	185	300	525	852	1400
Operating fluid	Compressed air / Petroleum-based hydraulic fluid							
Max. operating pressure	1.0MPa (10.2kgf/cm ²)							
Proof pressure	1.5MPa (15 kgf/cm ²)							
Piston speed	50~100 mm/sec							
Temperature range	-10°C~+70°C							
Lubrication	Not required							




* Where the operating pressure is 0.5MPa(5.1kgf/cm²)

Weight Table:

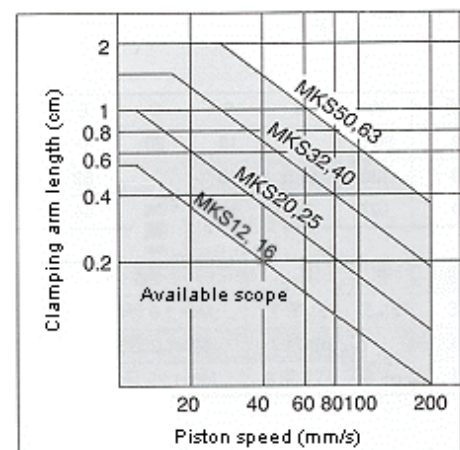
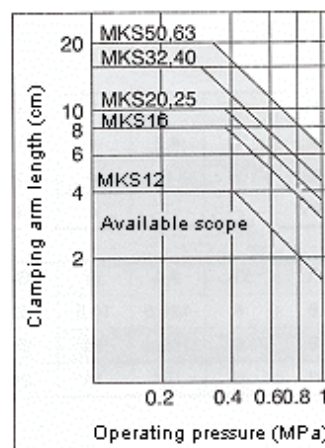
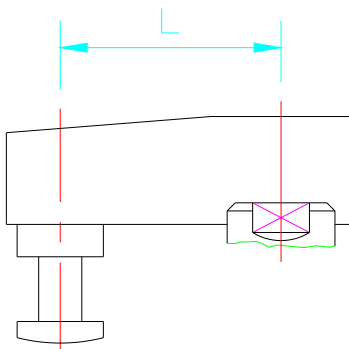
Unit: (g)

Stroke\Bore	12	16	20	25	32	40	50	63
10	70	100	250	280	500	595	-	-
20	87	123	290	320	525	640	1100	1520
50	-	-	-	-	-	-	1350	1805

How to Order:

MKS	25	x	MKS	R	TA	2
Series	Bore		Stroke	Direction of swing	Reed switch	Switch quantity
MKS Standard type 	ø12 ø16 ø20 ø25 ø32 ø40 ø50 ø63		10, 20mm	R clockwise L Anti-clockwise	TA-22:(MKS32~63) DC/AC 4~220V  TD-11:(MKS20~50) DC/AC 4~110V 	1 : 1 PC 2 : 2 PCS

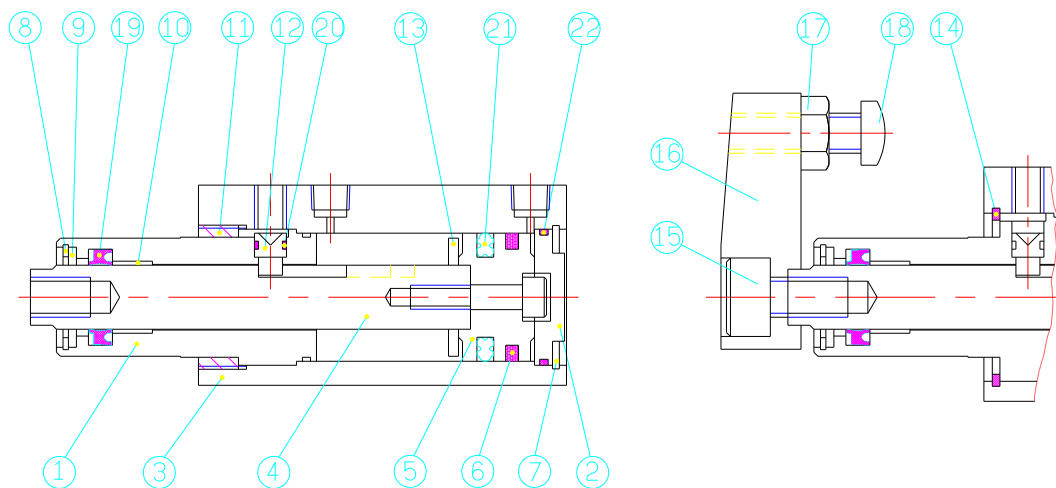
Precautions: Please refer to the following figure and diagrams when use the clamping arm.



Theoretical Output:

Type Cyl. bore (mm)	Piston rod (mm)	Swing Direction	Effective area (cm ²)	Operating pressure (kgf/cm ²)			
				3	5	7	10
MKS12	6	R	0.8	2.4	4	5.6	8
		L	1.1	3.3	5.5	7.7	11
MKS16	8	R	1.5	4.5	7.5	10.5	15
		L	2	6	10	14	20
MKS20	12	R	2	6	10	14	20
		L	3	9	15	21	30
MKS25	12	R	3.7	11.1	18.5	25.7	37
		L	4.9	14.7	24.5	34.3	49
MKS32	16	R	6	18	30	42	60
		L	8	24	40	56	80
MKS40	16	R	10.5	31.5	52.5	73.6	105
		L	12.5	37.5	62.5	87.5	125
MKS50	20	R	16.5	49.5	82.5	115.5	165
		L	19.6	58.8	98	137.2	196
MKS63	20	R	28	84	140	196	280
		L	31.2	93.6	156	218.4	312

Internal Construction:



Parts List:

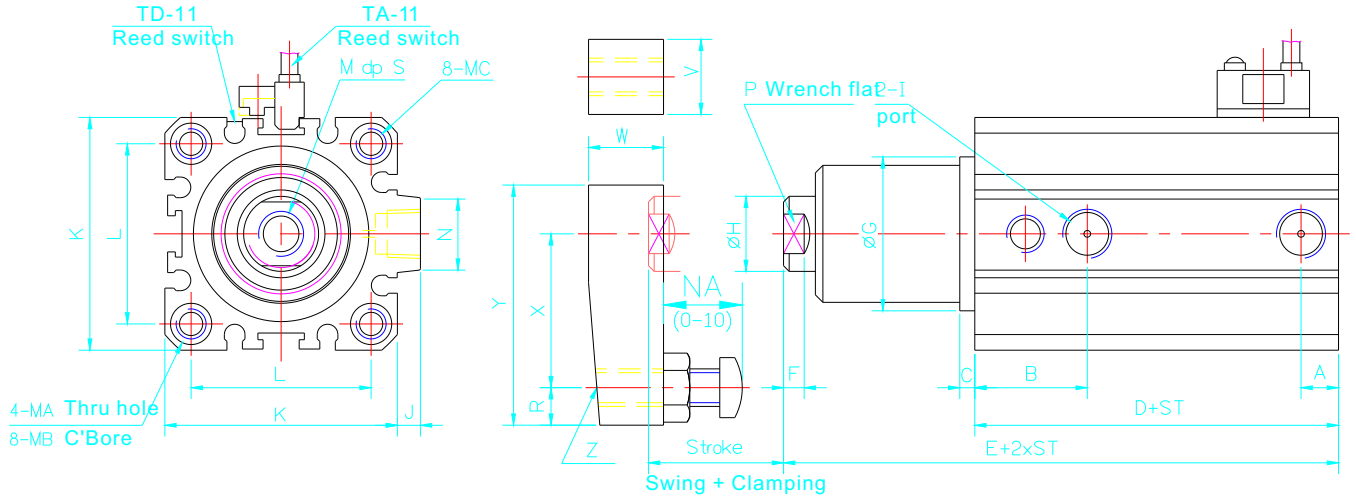
No.	Description	Material	Qty
①	Front end cover	Anodized aluminium alloy	1
②	Rear end cover	Anodized aluminium alloy	1
③	Housing	Hard anodized aluminium alloy	1
④	Piston rod	Hard chrome plated carbon steel	1
⑤	Piston	Aluminium alloy	1
⑥	Magnet	Resinous magnet	1
⑦	Snap ring	Carbon steel	1
⑧	Snap ring	Carbon steel	1
⑨	Washer	Bronze	1
⑩	Bush	Oil filled, sintered bronze	1
⑪	Fastening Nut	Carbon steel, black treated (for ø20-ø25)	1
⑫	Positioning pin	Carbon steel	1
⑬	Bumper	PU	1
⑭	Snap ring	Carbon steel (for ø40-ø63)	1
⑮	Set screw	Carbon steel	1
⑯	Arm	Carbon steel	1

No.	Description	Material	Qty
⑰	Nut	Carbon steel	1
⑱	Adjustable screw	Carbon steel	1

Seals List:

Bore/Desc.	⑱ Piston rod seal	⑳ Positioning pin seal	㉑ Piston seal	㉒ Cover seal
ø12	DYR6	SM3	APA12	-
ø16	DYR8	SM3	APA16	-
ø20	DRP12	SM4	APA20	SM18
ø25	DRP12	SM4	APA25	SM22
ø32	DRP16	SM6	APA32	SM28
ø40	DRP16	SM6	APA40	SM36
ø50	DRP20	SM8	APA50	SM46
ø63	DRP20	SM8	APA63	SM60

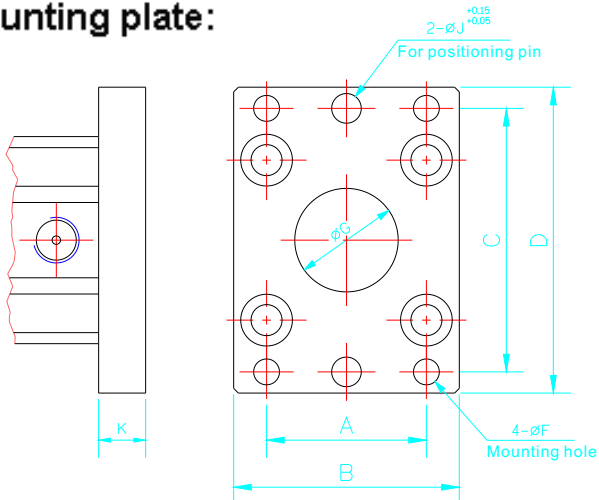
External Dimensions:



Bore	A	B	C	D	E	F	G	H	I	J	K	L	M	S
MKS12	5	16	2	35.5	48	2.5	-	6	M5x0.8	-	25	15.5	M3x0.5	5.5
MKS16	5	16	2	35.5	48	2.5	-	8	M5x0.8	-	29	20	M5x0.8	6.5
MKS20	7.5	27	3	62	72.5	3	20	12	M5x0.8	-	36	25.5	M8x1.25	12
MKS25	8	28	3	68	73.5	3	23	12	M5x0.8	-	40	28	M8x1.25	12
MKS32	9	33	4	72	94	5.5	30	16	RC(PT)1/8	4.5	45	34	M10x1.5	15
MKS40	10	26	4	65	94	5.5	30	16	RC(PT)1/8	5	52	40	M10x1.5	15
MKS50	10	30	4	77	112	5.5	37	20	RC(PT)1/4	7	64	50	M12x1.75	20
MKS63	12	31	4	80	114	5.5	48	20	RC(PT)1/4	7	77	60	M12x1.75	20

Bore	MA	MB	MC	N	NA	P	R	V	W	X	Y	Z
MKS12	ø3.4	ø6.5 dp 4	M4x0.7 Thread dp 7	-	18	5	4	8	8	20	29	M3x0.5
MKS16	ø3.4	ø6.5 dp 4	M4x0.7 Thread dp 7	-	18	7	5	11	11	25	36	M4x0.7
MKS20	ø5.5	ø9 dp 7	M6x1.0 Thread dp 10	-	22	10	7.5	16	16	35	51	M6x1.0
MKS25	ø5.5	ø9 dp 7	M6x1.0 Thread dp 10	-	22	10	7.5	16	16	35	51	M6x1.0
MKS32	ø5.5	ø9 dp 7	M6x1.0 Thread dp 10	14	25	14	10	19	19	45	67	M8x1.25
MKS40	ø5.5	ø9 dp 7	M6x1.0 Thread dp 10	15	25	14	10	19	19	45	67	M8x1.25
MKS50	ø6.6	ø11 dp 8	M8x1.25 Thread dp 14	19	40	17	10	22	22	65	88	M10x1.5
MKS63	ø9	ø14 dp 10.5	M10x1.5 Thread dp 18	22	40	17	10	22	22	65	88	M10x1.5

F Mounting plate:



Bore	A	B	C	D	F	G	J	K
MKS20	25.5	38	48	60	6.3	13	6.6	8
MKS25	28	42	52	64	6.3	15	6.6	8
MKS32	34	48	56	65	5.5	21	6.3	10
MKS40	40	56	62	72	5.5	28	6.3	10
MKS50	50	67	76	89	6.6	35	6.3	10
MKS63	60	80	92	108	9	35	6.3	10