Plate Cylinder/Double Acting Double Rod

Series MUW

ø20, ø32, ø40, ø50, ø63

How to Order

Standard

MUW B 25 — 30 D M

With auto switch

MDUW B 25 — 30 D M — A73 S

Built-in magnet

Double rod

Mounting

B	Basic
L	Foot
F	Flange

Size

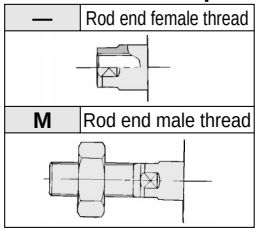
25	Equiv. ø25 piston area
32	Equiv. ø32 piston area
40	Equiv. ø40 piston area
50	Equiv. ø50 piston area
63	Equiv. ø63 piston area

Stroke(mm)

Refer to standard stroke on p.2.4-7.
Refer to p.2.4-7 when using auto switch.

Rod end shape

—	Rod end female thread
M	Rod end male thread



Auto Switch

—	Without auto switch (Built-magnet)

Number of auto switches

—	2
S	1
n	n

Applicable Auto Switches/Refer to p.5.3-2 for further information on auto switch.

Style	Special function	Electrical entry	Indicator	Wiring (output)	Load voltage DC	Load voltage AC	Auto switch model Perp.	Auto switch model In-line	Lead wire (m)* 0.5 (–)	3 (L)	5 (Z)	None (N)	Applicable load	
Reed switch	—	Grommet	Yes	3 wire (Equiv. NPN)	5V	—	—	**A76H**	●	●	—	—	IC	—
				2 wire	—	200V	**A72**	**A72H**	●	●	—	—	—	Relay, PLC
					12V	100V	**A73**	**A73H**	●	●	●	—		
			No		5V 12V	100V or less	**A80**	**A80H**	●	●	—	—	IC	
		Connector	Yes		24V	12V	—	**A73C**	—	●	●	●	●	—
			No			5V 12V	24V or less	**A80C**	—	●	●	●	●	IC
	Diagnostic indicator (2 color)	Grommet	Yes			—	—	**A79W**	—	●	●	—	—	—
Solid state switch	—	Grommet	Yes	3 wire (NPN)	24V	5V 12V	—	**F7NV**	**F79**	●	●	○	—	IC
				3 wire (PNP)				**F7PV**	**F7P**	●	●	○	—	
				2 wire		12V		**F7BV**	**J79**	●	●	○	—	—
		Connector						**J79C**	—	●	●	●	●	
	Diagnostic indicator (2 color)	Grommet		3 wire (NPN)		5V 12V		**F7NWV**	**F79W**	●	●	○	—	IC
				3 wire (PNP)				—	**F7PW**	●	●	○	—	
				2 wire		12V		**F7BWV**	**J79W**	●	●	○	—	—
	Diagnostic indicator (2 color)							—	**F7BA**	—	●	○	—	
	With timer			3 wire (NPN)		5V 12V		—	**F7NT**	—	●	○	—	IC
	With diagnostic output (2 color)			4 wire (NPN)				—	**F79F**	●	●	○	—	
	Latch with diagnostic output (2 color)					—		—	**F7LF**	●	●	○	—	—

∗ Lead wire length: 0.5m·····— (Example) A80C 5m·····Z (Example) A80CZ; 3m·····L A80CL None·····N A80CN

∗ Solid state switches marked with a "○" are manufactured upon receipt of order.

Mounting Bracket/Part No.

Bracket \ Size	25	32	40	50	63
Foot (1)	MU-L02	MU-L03	MU-L04	MU-L05	MU-L06
Flange	MU-F02	MU-F03	MU-F04	MU-F05	MU-F06

Note 1) When ordering foot brackets, 2pcs. should be ordered for each cylinder.
Note 2) Body mounting bolts are packed with the foot style and flange style.

Auto Switch Mounting Bracket/Part No.

Size	Model	Note
25, 32, 40, 50, 63	BMU1-025	• Auto switch mounting screw (M3 X 0.5 X 6.5ℓ) • Switch mounting nut

∗Mounting screw set made of stainless steel
Following stainless steel mounting screw set (included nut) is provided. Use them with accordance to environment. (Auto switch interface is available. Order it separately.)
BBA2:For D-A7/A8/F7/J7
When D-F7BAL mounted on cylinder is required,the stainless steel screw mentioned above is used when shipping. When auto switch unit is shipped, BBA2 is attached.

⚠ Precautions

Be sure to read before handling. Refer to p.0-39 to 0-46 for Safety Instructions and common precautions.

Specifications

Action	Double acting double rod style
Fluid	Air
Proof pressure	1.05MPa
Max. operating pressure	0.7MPa
Min. operating pressure	0.05MPa
Ambient and fluid temperature	–10 to 60°C
Lubrication	Not required (Non-lube)
Piston speed	50 to 500mm/S
Stroke length tolerance	$^{+1.4}_{0}$
Cushion	Rubber bumper
Thread tolerance	JIS Class 2
Equivalent tube bore (mm)	ø25, ø32, ø40, ø50, ø63
Mounting	Foot, Flange

Rod Non-rotating Accuracy

Model	MU25	MU32	MU40	MU50	MU63
Non-rotating accuracy	±1°	±0.8°	±0.5°	±0.5°	±0.5°

Standard Stroke

(mm)

Size	Standard stroke	Max. stroke(mm)
25, 32, 40 50, 63	5, 10, 15, 20, 25, 30, 35, 40, 45, 50 75, 100, 125, 150, 175, 200, 250, 300	300

∗ Contact SMC for any intermediate strokes that are not indicated above, as they will be produced upon receipt of order.

∗∗ Strokes longer than 300mm are not available.

Minimum Stroke for Auto Switch Mounting

(mm)

Number of auto switches	D-F7□V D-J79C	D-A7□ D-A80 D-A73C D-A80C	D-F7□WV	D-A7□H, A80H D-F7□W, J79W D-A79W D-F7□, J79 D-F7BA, F7NT D-F7□F
2 pcs.	5	10	15	15
1 pc.	5	5	10	15

Theoretical Force

OUT ← IN →

Unit: N

Size	Rod dia. (mm)	Operating direction	Piston area (mm^2)	Operating pressure (MPa) 0.2	0.3	0.4	0.5	0.6	0.7
25	**12**	IN/OUT	378	76	113	151	189	227	265
32	**14**	IN/OUT	650	130	195	260	325	390	455
40	**16**	IN/OUT	1056	211	317	422	528	634	739
50	**20**	IN/OUT	1649	330	495	660	824	989	1154
63	**20**	IN/OUT	2803	561	841	1121	1402	1682	1962

Note) Theoretical force (N) = Pressure (MPa) X Piston area (mm^2)

Weight

Unit: kg

Size		25	32	40	50	63
Standard weight	Basic	0.19	0.32	0.48	0.91	1.38
	Foot	0.26	0.46	0.69	1.25	2.01
	Flange	0.29	0.46	0.71	1.37	2.21
Additional weight per 50mm stroke		0.16	0.23	0.31	0.48	0.59
Accessories	Single knuckle joint	0.03	0.04	0.07	0.16	0.16
	Double knuckle joint (with pin)	0.05	0.09	0.14	0.29	0.29

Depends on double acting single rod

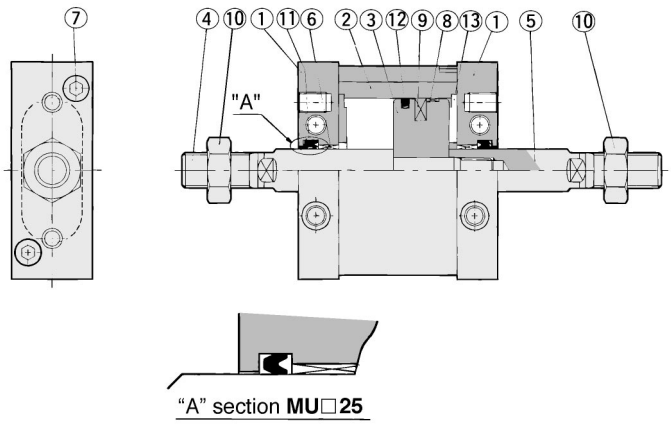
Calculation

Example: MUWL32-100

- Basic weight ····· 0.46 (Foot style ø32 equiv.)
- Additional weight ····· 0.23/50 stroke
- Stroke ····· 100 stroke

0.46 + 100 / 50 X 0.23 = 0.92kg

Construction



"A" section **MU□25**

Component Parts

No.	Description	Material	Note
①	Rod cover	Aluminum alloy	Anodized
②	Cylinder tube	Aluminum alloy	Hard anodized
③	Piston	Aluminum alloy	Chromated
④	Piston rod A	Carbon steel	Hard chrome plated
⑤	Piston rod B	Carbon steel	Hard chrome plated
⑥	Bushing	Oil impregnated sintered alloy	
⑦	Hex. socket head cap screw	Stainless steel	
⑧	Wearing	Resin	
⑨	Magnet	Magnet material	Only built-in magnet style
⑩	Rod end nut	Rolled steel	Only male thread rod end
⑪	Rod seal	NBR	
⑫	Piston seal	NBR	
⑬	Bumper	NBR	

Replacement Parts: Seal Kits

Bore size (mm)	Kit No.	Contents
25	MUW25-PS	A set of above numbers ⑪, ⑫ and ⑬
32	MUW32-PS	
40	MUW40-PS	
50	MUW50-PS	
63	MUW63-PS	

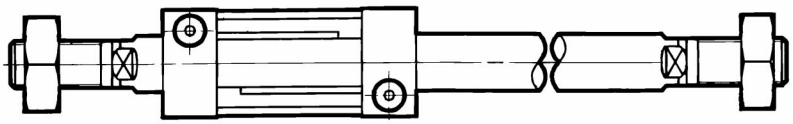
∗ Seal kits consist of items ⑪, ⑫ and ⑬ contained in one kit, and can be ordered using the kit number for each cylinder bore size.

Series MUW

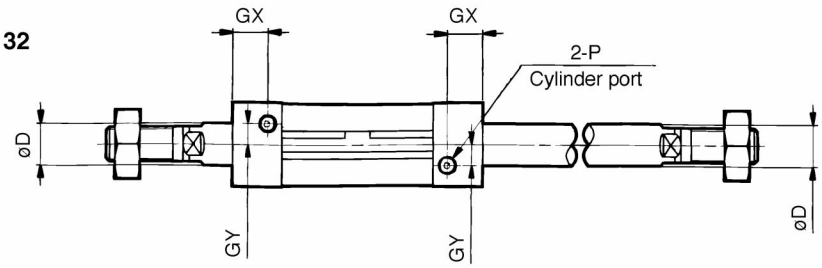
Basic: MUWB

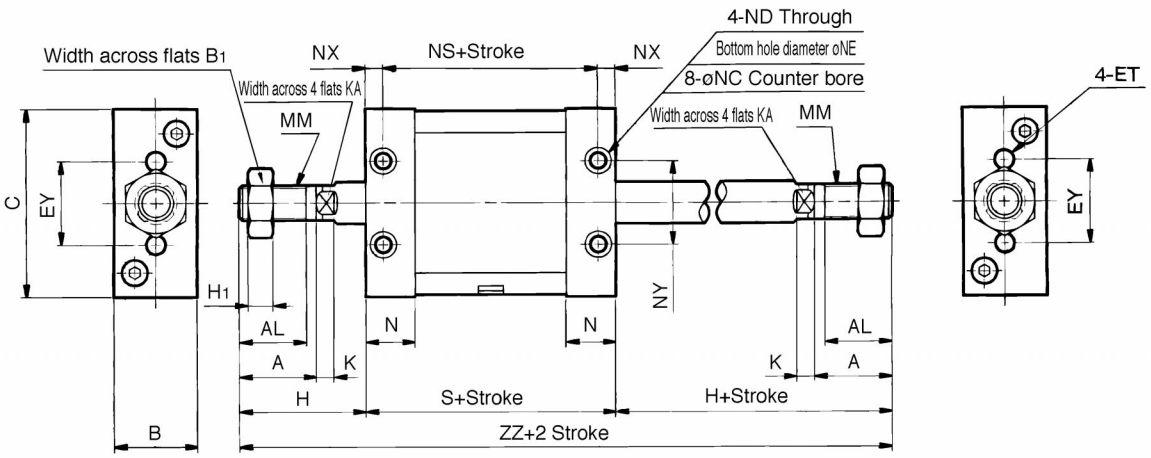
Rod end male thread

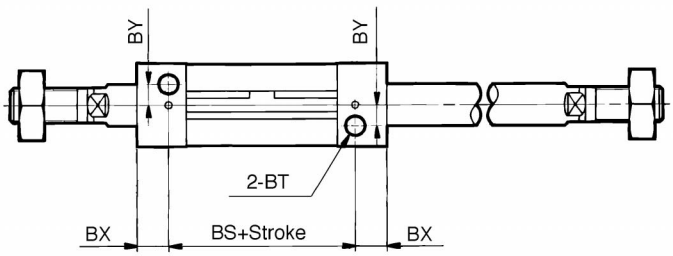
MUW40, 50, 63



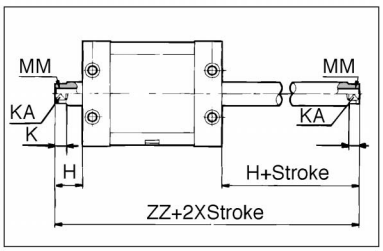
MUW25, 32







Rod end female thread



∗ Dimensions except mentioned above are same as male thread style.
However, K and KA dimensions are same as male thread style.

(mm)

Model	Stroke range (mm)	A	AL	B	B1	BS	BT	BX	BY	C	D	ET	EY	GX	GY	H	H1	K
MUWB25	5 to 300	22	19.5	24	17	37	M5 X 0.8 Depth 7.5	9	7	54	12	M5 X 0.8 Depth 11	26	10	5	36	6	5.5
MUWB32	5 to 300	26	23.5	28	19	45	M6 X 1 Depth 12	6.5	8	68	14	M6 X 1 Depth 11	42	8.5	5.5	40	7	5.5
MUWB40	5 to 300	30	27	32	22	44	M8 X 1.25 Depth 13	8	9	86	16	M8 X 1.25 Depth 11	54	9	7	45	8	6
MUWB50	5 to 300	35	32	39	27	54	M10 X 1.5 Depth 14.5	10	9	104	20	M10 X 1.5 Depth 15	64	11.5	8	53	11	7
MUWB63	5 to 300	35	32	50	27	53	M12 X 1.75 Depth 18	11	12	124	20	M12 X 1.75 Depth 15	72	11.5	10	56	11	7

(mm)

Model	KA	MM	N	NC	ND	NE	NS	NX	NY	P	S	ZZ
MUWB25	10	M10 X 1.25	14	7.5 Depth 4.5	M5 X 0.8	4.3	43	6	26	M5 X 0.8	55	127
MUWB32	12	M12 X 1.25	15.5	9 Depth 5.5	M6 X 1	5.1	45	6.5	28	Rc(PT)⅛	58	138
MUWB40	14	M14 X 1.5	16	10.5 Depth 6.5	M8 X 1.25	6.9	44	8	36	Rc(PT)⅛	60	150
MUWB50	18	M18 X 1.5	21.5	13.5 Depth 8.5	M10 X 1.5	8.7	54	10	42	Rc(PT)¼	74	180
MUWB63	18	M18 X 1.5	21.5	17 Depth 10.5	M12 X 1.75	10.5	53	11	46	Rc(PT)¼	75	187

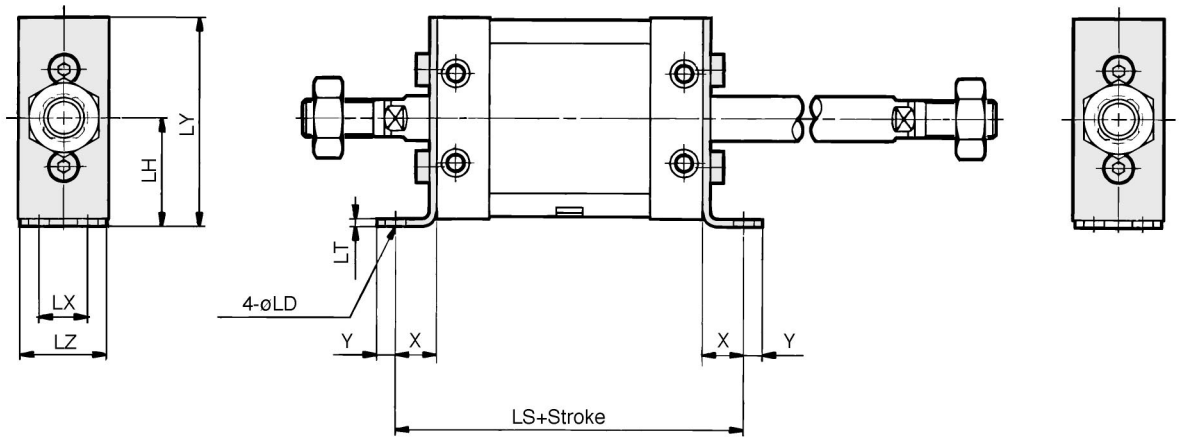
∗ The position of piston across 4 flats are different from above drawing. Position of piston across 4 flats of double rod is not same.

Rod end female thread (mm)

Model	H	MM	ZZ
MUWB25	14	M6 X 1 Depth 12	83
MUWB32	14	M8 X 1.25 Depth 13	86
MUWB40	15	M8 X 1.25 Depth 13	90
MUWB50	18	M10 X 1.5 Depth 15	110
MUWB63	21	M10 X 1.5 Depth 15	117

Dimensions

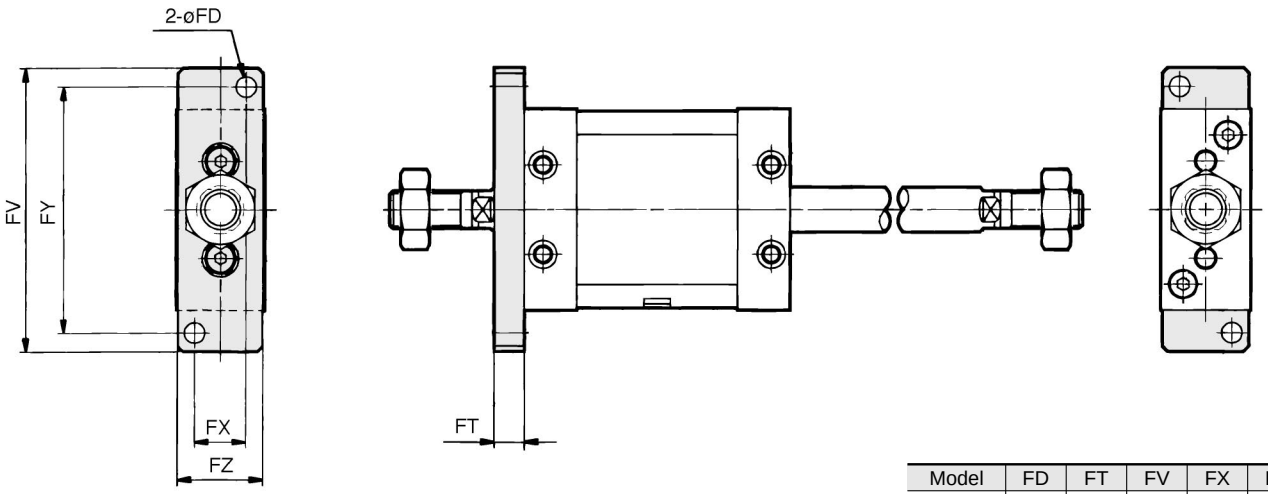
Foot



(mm)

Model	LD	LH	LS	LT	LX	LY	LZ	X	Y
MUWL25	5.5	29	79	3.2	11	56	23	12	6
MUWL32	6.6	37	90	4.5	12	71	27	16	8
MUWL40	9	46	96	4.5	15	89	31	18	10
MUWL50	11	57	116	5	18	109	37	21	11
MUWL63	13.5	67	123	6	22	129	48	24	14

Flange



(mm)

Model	FD	FT	FV	FX	FY	FZ
MUWF25	5.5	8	76	14	66	24
MUWF32	7	8	94	16	82	28
MUWF40	9	9	118	18	102	32
MUWF50	11	12	144	22	126	39
MUWF63	13	14	168	30	148	50