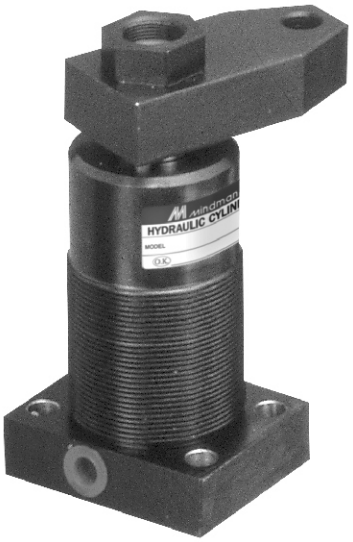
MF*/MD* series

High oil pressure Swing clamping Cylinder



Features:

- Compact body manufactured from anodised aluminium.
- Functional design with clean appearance.
- Total cylinder stroke is normally the same as the actual movement of the clamp during rotation.
- Swing clamps can be used extensively throughout machine tool applications, especially when repetitive operations are undertaken.
- Different angles of rotation are available.
- Double and single arms available.

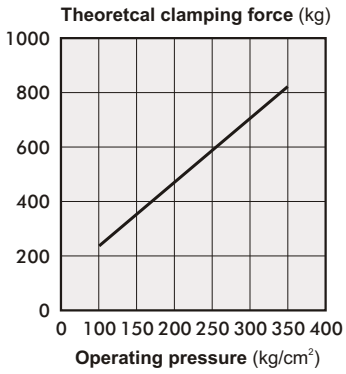
Order example:

MFS L – 32A × 90

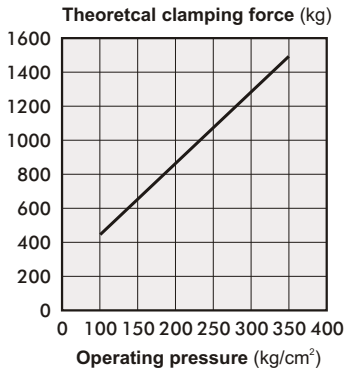
MODEL	SWIVEL DIRECTION	PISTON ϕ	ANGLE
MFS	**R**: CW	**25A, 25B**	0°
MDS	**L**: CCW	**32A, 32B**	45°
MFT	**P**: Nonswing	**40A, 40B**	60°
MDT			90°

※Customer special specification is acceptable

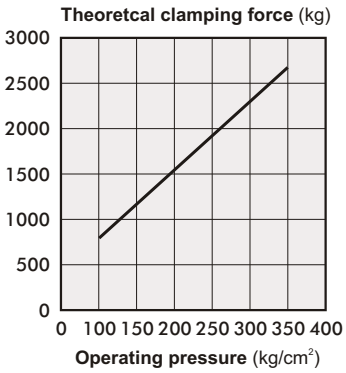
Schematic view showing a theoretical clamping force under different hydraculic pressure:



MFS-25



MFS-32



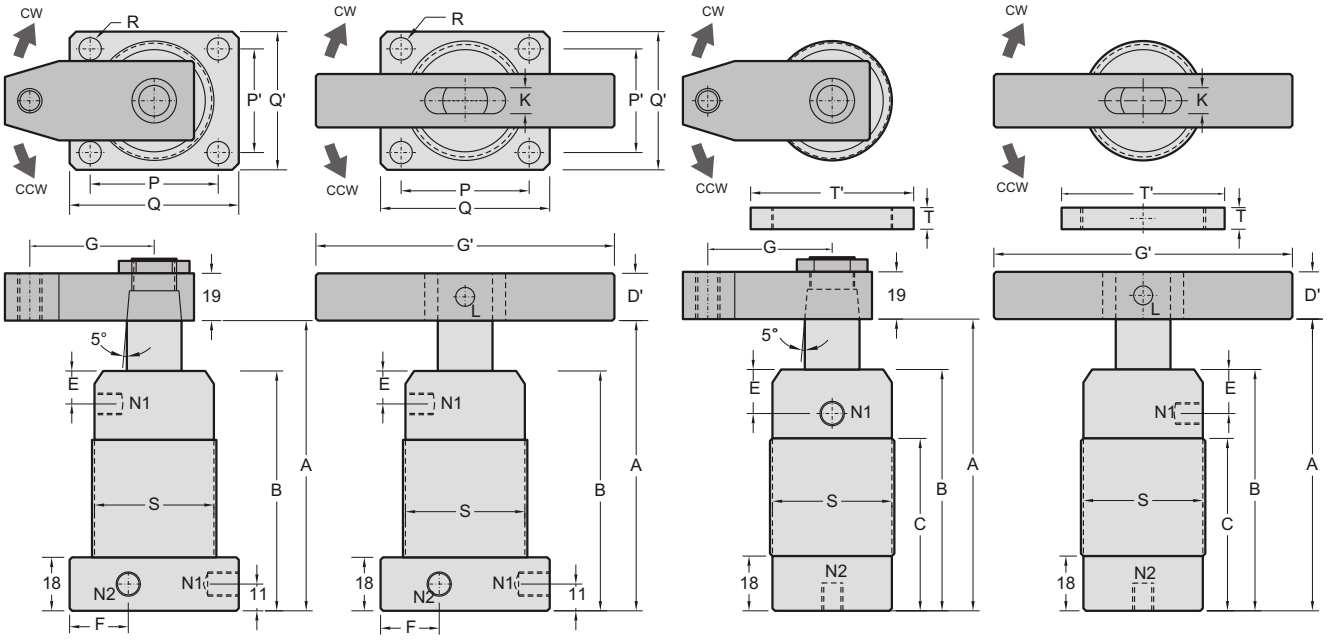
MFS-40

MF*/MD* Max. operating pressure 350kg/cm^2

High oil pressure Swing clamping Cylinder

Single-acting and double-acting
Max. operating pressure 350kg/cm^2

Mindman



MFS **MDS** **MFT** **MDT**

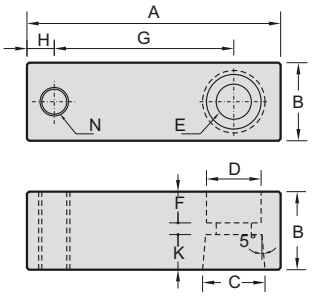
Flange type	MFS-25A MDS-25A	MFS-32A MDS-32A	MFS-40A MDS-40A	MFS-25B MDS-25B	MFS-32B MDS-32B	MFS-40B MDS-40B
Threaded type	MFT-25A MDT-25A	MFT-32A MDT-32A	MFT-40A MDT-40A	MFT-25B MDT-25B	MFT-32B MDT-32B	MFT-40B MDT-40B
Max. operating pressure	350kg/cm^2					
Normal operating pressure	50-210kg/cm^2					
Cylinder operating	Single-acting			Double-acting		
Swivel stroke (mm)	12			15		
Clamping stroke (mm)	11			18		
Swivel angle	90° (60°,45°,0°)±2°					
Piston-ϕ (mm)	25	32	40	25	32	40
Pistion rod-ϕ (mm)	18	22	25	18	22	25
Theoretcal force (210kg/cm^2)	495kg	890kg	1600kg	495kg	890kg	1600kg
A (unclamp) (mm)	127	127	127	134	133	134
B (mm)	98	97	98	98	97	98
C (mm)	66	70	72	66	70	72
D' (mm)	□19	□22	□25.4	□19	□22	□25.4
G (mm)	45	50	50	45	50	50
G' (mm)	100	120	140	100	120	140
K (mm)	9	10	12	9	10	12
L (mm)	8	8	10	8	8	10
N1 (clamp) (mm)	PT 1/8	PT 1/8	PT 1/8	PT 1/8	PT 1/8	PT 1/8
N2 (unclamp) (mm)				PT 1/8	PT 1/8	PT 1/8
P (mm)	50	54	66	50	54	66
P' (mm)	30	34	40	30	34	40
Q (mm)	64	68	84	64	68	84
Q' (mm)	46	54	64	46	54	64
R (mm)	ϕ6.5	ϕ8.5	ϕ8.5	ϕ6.5	ϕ8.5	ϕ8.5
S (mm)	M45×1.5	M50×1.5	M60×1.5	M45×1.5	M50×1.5	M60×1.5
T (×2 pcs) (mm)	10	11	11	10	11	11
T' (mm)	ϕ65	ϕ70	ϕ80	ϕ65	ϕ70	ϕ80

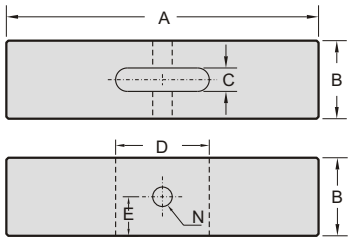
MF*/MD* Clamping arm and flange type for manifold mounting with o-ring seal

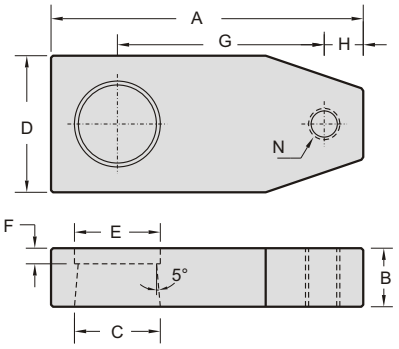
High oil pressure Swing clamping Cylinder

mindman

Clamping arm







unit: mm

Dim. / Modle	A	B	C	D	E	F	G	H	K	N
MAS-25	50	□16	14	11	7	6	30	8	6	M6
MAS-32 MATS-32 MAS-40 MATS-40	70	□19	16	14	9	7	50	9	9	M8
MHS-32 MHTS-32 MHS-40 MHTS-40 MHS-50 MHTS-50	80	□25	20	17	11	9	55	10	12	M10
MAS-50 MATS-50 MAS-63	95	□25	20	17	11	9	70	10	12	M10
MHS-25	74	□25	18	17	11	9	50	10	12	M10
MHS-63	103	□32	25	19	13	12	75	11	14	M12

unit: mm

Dim. / Modle	A	B	C	D	E	N
MASD-32 MATSD-32 MHSD-25 MDS-25 MASD-40 MATSD-40 MDT-25	100	□19	9	30	9.5	8
MASD-50 MATSD-50 MHSD-32 MHTSD-32 MDS-32 MASD-63 MHSD-40 MHTSD-40 MDT-32 MHSD-50 MHTSD-50	120	□22	10	35	11	8
MHSD-63 MDS-40 MDT-40	140	□25	12	42	12.5	10

unit: mm

Dim. / Modle	A	B	C	D	E	F	G	H	N
MFS-25, MFT-25	70	19	18	38	23	7	45	10	M12
MFS-32, MFT-32	78	19	22	38	25	7	50	10	M12
MFS-40, MFT-40	78	19	25	38	27	7	50	10	M12

Flange type for manifold mounting with o-ring seal

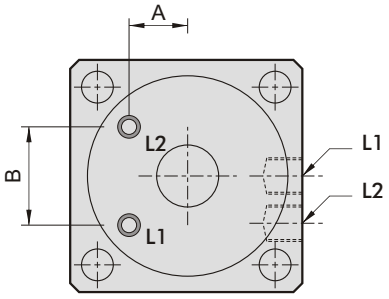
Flange type dil cavity paths are reserved on square base type of hydraulic & high pressure cylinder, contently for fixture design.

unit: mm

Dim. / Modle	A	B	O-ring
MHS-25	15	18	S4
MHS-32	17	24	S4
MHS-40	20	26	S4
MHS-50	25	30	S4
MHS-63	30	40	S4

unit: mm

Dim. / Modle	X	Y	O-ring
MFS-25, MDS-25	35	23	S4
MFS-32, MDS-32	40	27	S4
MFS-40, MDS-40	50	32	S4



Top view