

MF*/MD* series

High oil pressure Swing clamping Cylinder



Function:

This cylinder belongs to a pull cylinder of which the total stroke is equal to the sum of a swing stroke and a clamping stroke, and is usually used within the clamping stroke.

Application:

When machining a workpiece by means of a machine tool, a high oil pressure swing clamping cylinder will be your best choice if the placing and taking of the workpiece are not allowed to be interfered by the clamber and need a larger clamping force and smaller a occupied space.

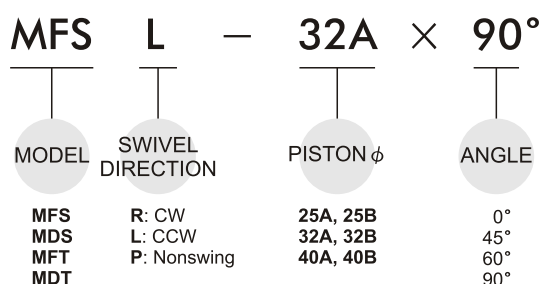
Type:

This high oil prssure swing cylinder includes two types: single-acting and double-acting type wherein the clamping force of the single-acting type is samller than that of the double-acting type and must deduct the restoring force of a spring. This cylinder operated mainly in a downward pressing manner, including clockwise swing and counterclockwise swing; standard angle is 90° , and optional angles include 0° , 45° , 60° ; clamping means includes single arm or double arms; the mounting manner includes square base type, threaded type and flange type for manifold mounting with O-ring seal.

Material:

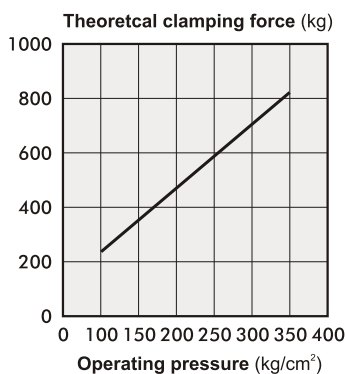
This material of the main body is medium carbon steel.

Order example:

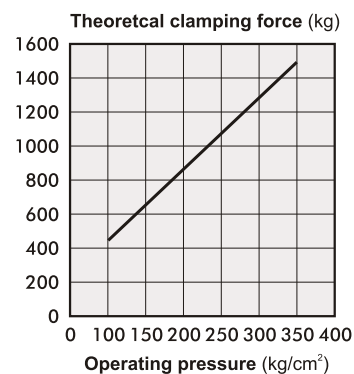


※Customer special specification is acceptable

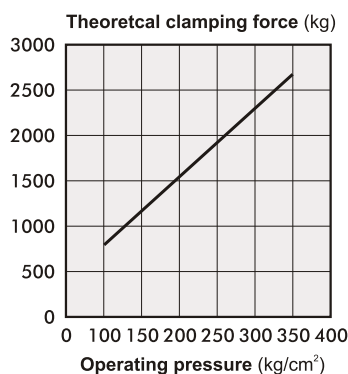
Schematic view showing a theoretical clamping force under different hydraulic pressure:



MFS-25



MFS-32



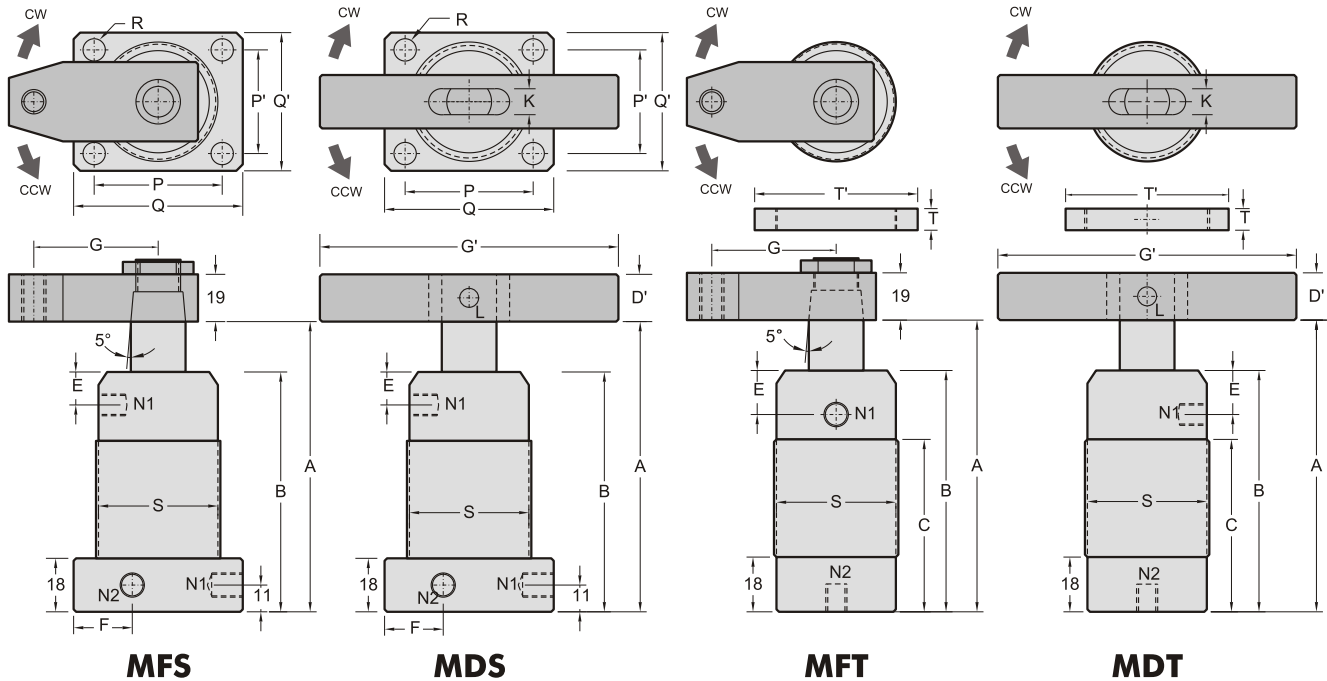
MFS-40

MF*/MD* Max. operating pressure 350kg/cm²



High oil pressure Swing clamping Cylinder Single-acting and double-acting
Max. operating pressure 350kg/cm²

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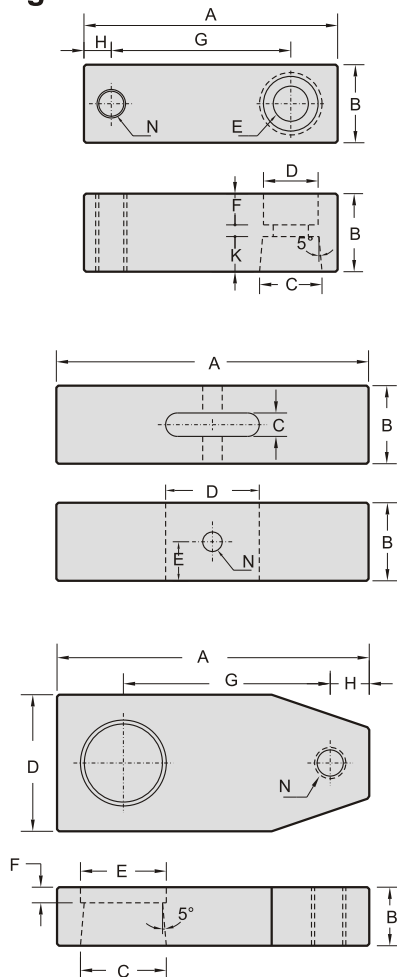
Flange type	MFS-25A MDS-25A	MFS-32A MDS-32A	MFS-40A MDS-40A	MFS-25B MDS-25B	MFS-32B MDS-32B	MFS-40B MDS-40B
Threaded type	MFT-25A MDT-25A	MFT-32A MDT-32A	MFT-40A MDT-40A	MFT-25B MDT-25B	MFT-32B MDT-32B	MFT-40B MDT-40B
Max. operating pressure	350kg/cm ²					
Normal operating pressure	50-210kg/cm ²					
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
Piston rod-φ (mm)	18	22	25	18	22	25
Theoretical 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)	φ 6.5	φ 8.5	φ 8.5	φ 6.5	φ 8.5	φ 8.5
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)	φ 65	φ 70	φ 80	φ 65	φ 70	φ 80



High oil pressure Swing clamping Cylinder

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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

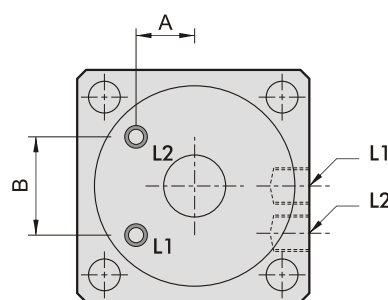
Flange type dil cavity paths are reserved on square base type of hydraulic & high pressure cylinder, contently for fixture design.

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

