



# GANI

STANDARD, SPECIAL VARIABLE HYDRAULIC  
CYLINDER MANUFACTURING TECHNOLOGY



GANI  
**WORK  
CLAMPING  
SOLUTION**



ISO 9001:2015  
STD Product

## Points to be remember

### Formulae & description

- $Q = V/t$
- $V = A \cdot s$
- $F = p \cdot A$
- $p = F/A$
- $Q = A \cdot v$
- $M = V \cdot \rho / 20$
- $v = V/t$

### where,

- F: force
- p: pressure
- A: area
- Q: flow
- v: speed
- V: volume
- t: time



### Single acting hydraulic cylinder

- $V(\text{m}^3/\text{s}) = v(\text{m/s}) \cdot 1000(\text{s})$
- $A(\text{mm}^2) = \pi d^2 / 4(\text{mm})$
- $f(\text{N}) = 0.1 \cdot p_1(\text{bar}) \cdot A(\text{mm}^2)$
- $p_2(\text{bar}) = 10 \cdot f(\text{N}) / A_2(\text{mm}^2)$
- $Q_2(\text{litre}) = 0.06 \cdot A(\text{mm}^2) \cdot v(\text{m/s})$



- d: travel stroke
- d: piston diameter
- F: force
- Q: flow
- p: operating pressure
- v: piston speed

### Double acting hydraulic cylinder

#### Extending

- $A_1 = \pi d_1^2 / 4 = 0.785 d_1^2$
- $A_2 = \pi (d_1^2 - d_2^2) / 4$
- $p_1 \cdot A_1 = p_2 \cdot A_2 = F$
- $p_2 = (p_1 \cdot A_1) / (A_2)$
- $Q_1 = A_1 \cdot v$
- $Q_{out} = A_2 \cdot v$
- $p_2$ : result back of pressure from pipes & valves for  $Q_{out}$



- A1: piston area
- d1: piston
- A2: rod area
- d2: rod
- F: force
- p1, p2: pressure; piston side

#### simplified

$$p_2(\text{bar}) = \frac{0.1(\text{bar}) \cdot A_1(\text{mm}^2) \cdot 10(\text{N})}{A_2(\text{mm}^2)} \quad \text{or} \quad f(\text{N}) = \frac{p_1(\text{bar}) \cdot A_1(\text{mm}^2) \cdot 10(\text{N})}{10}$$

#### Retracting

- $Q_{in} = A_1 \cdot v$
- $Q_{out} = A_2 \cdot v$
- $p_1 \cdot A_1 = p_2 \cdot A_2 = F$
- $p_2 = (p_1 \cdot A_1) / (A_2)$
- $p_2$ : result back of pressure from pipes & valves for  $Q_{out}$

- a: piston area
- d1: piston
- A2: rod area
- d2: rod
- F: force
- p1, p2: pressure; piston side

#### simplified

$$p_2(\text{bar}) = \frac{0.1(\text{bar}) \cdot A_1(\text{mm}^2) \cdot 10(\text{N})}{A_2(\text{mm}^2)} \quad \text{or} \quad f(\text{N}) = \frac{p_1(\text{bar}) \cdot A_1(\text{mm}^2) \cdot 10(\text{N})}{10}$$

Nomenclature	Code	Unit	Factor	Unit
Pressure	P	1 bar	10	MPa
		1 MPa	10	bar
		1 MPa/cm <sup>2</sup>	1	bar
		1 bar	0.01	MPa
Flow	F	1 kg/m <sup>3</sup> /s	1	kg
		1 bar	4.45	MPa

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# Toggle Clamp Cylinder

Double Acting, Hydraulic

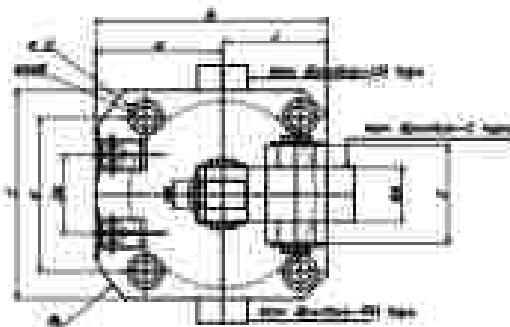
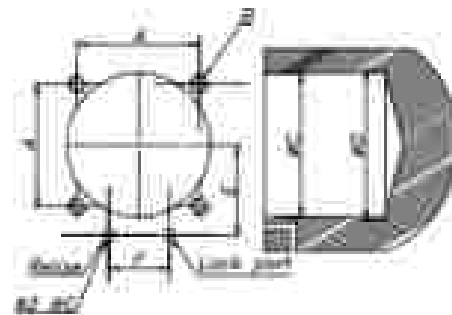
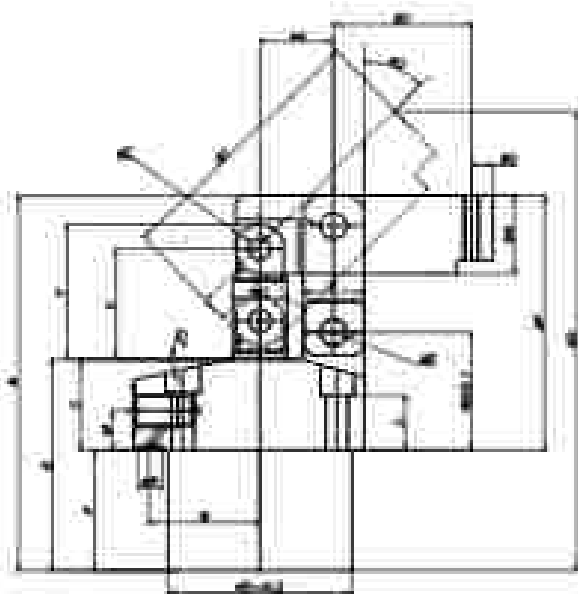


## Features:

- This is a double acting cylinder with link clamp.
- It is a Chromium plated piston rod with alloy steel body.
- It is hydraulic & centre port configuration.
- These cylinders can be used for stamping of rock wear (RH) & counter rock wear direction (HL).
- It can be used in the range of 1 MPa (minimum operating pressure) to 35 MPa (maximum operating pressure) / 70 bar (pulling force).

## Outline Dimension:

## Application Sample:



## Clamp Lever Dimension Standard

Model No.	301	401	481	511	621	711	801	1001
Stroke	30	40	48	51	62	71	80	100
Stroke	10	13	12	16	18	22	27	32
r	13	14	18	19	25	32	39	48
r	3	4	4	7	10	11	14	16
r	13	14.3	18	17	22	24	31	39
r	16	17	21	17	18	22	28	31
r	12.5	12	13	17	21	24	31	39
r	3	3	3	4	5	7	8	8
r	45	55	6	6	6	10	11	13
r	14.5	16	18.5	21	26.5	30	36	44
r	12	13	6	6	6	10	11	13
r	22	26	1.5	6	7.5	12.5	14	18
1/16"	2	3	3	4	4	6	7	9
1/8"	3	4	4	6	6	10	12	15

External Dimension Table:

All dimensions in mm

Model No	C		TC01-380-C	TC01-400-C
			Ø23	Ø25
	RM	LH	TC01-381-R	TC01-401-R
			TC01-382-L	TC01-402-L
A			75	87.5
B			51	55
C			42	45
D			36	40
E			54	54
F			25	31
G			25	25
H			30	32
J			21	23
K			11.5	14
L			70	74
M			11	11
N			23.5	28
R			3	3
Q			7.5	8.5
ØH			4.5	5.6
I			18	15
T			27	30.5
U			10	12
V			22.5	25
W			30	30.5
X			40	23
Y			10	32
Z			19	21
ZA			18	18
Fit/port			G1/0"	G1/0"
KA			14.5	15
KB			5	5
ØAC			5	5
AD				
ØAE			5	5
AF			43	44.5
AG			15.8	20.2
AH			5	5
AJ			21	21
BA			10	12
BB			12.5	14
BC			BC	BC
BD			BD	BD

Specification Table:

lock tv area (mm <sup>2</sup> )	18	42
full stroke (mm)	18.5	30
locking stroke (mm)	15.5	17
lets stroke (mm)	5	3
cp volume (cc/cm <sup>3</sup> )	5.8	8.33
release time	4.7	6.4
Max operating pressure (Mpa)	7	
Min operating pressure (Mpa)	0.5	
design pressure (Mpa)	10.5	
Temperature (°C)	0-7	
weight (kg)	0.12	1.15

Machining Dimension Table For Mounting Clamp:

Part No	Ø1	ØØ4.00	ØØ4.00
	Ø1	ØØ4.00	ØØ4.00
A		12.4	14
B		14	15
ØAD		56	40
H		30	25
F		21.5	16
I		16	16
J		25	15



# Toggle Clamp Cylinder

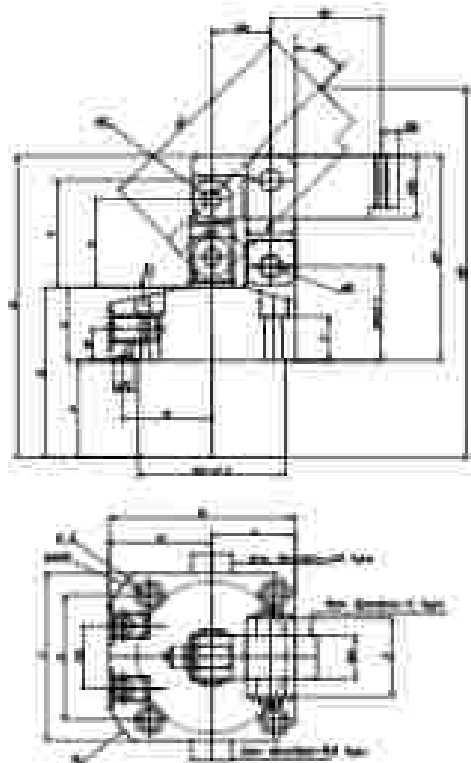
## Double Acting



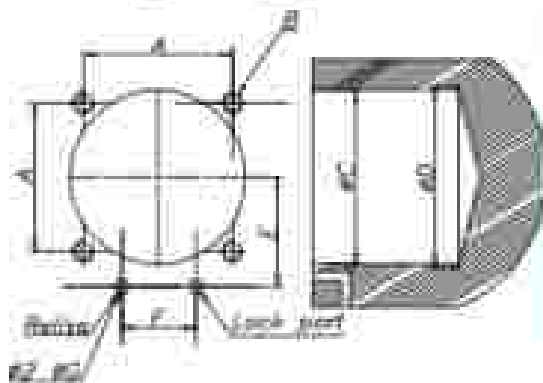
### Features:

- This is a double acting cylinder with 100 volume
- It is a Chromium plated piston rod with alloy steel body
- It is hydraulic & centre port configuration
- These cylinders can be used for damping of block wide (BW) & counter-clock wise direction (LH)
- It can be used in the range of 1 MPa (minimum operating pressure) 15 MPa (maximum operating pressure) 70 bar (pushing force)

### Outline Dimension:



### Application Sample:



### Machining Dimensions For Cylinder Mounting

MODEL NO	BH	481	501	551	711	901	1001
	IN	482	502	552	712	902	1002
F		40	41	35	63	75	88
F		115	116	118	128	1410	1412
C-D2		48	50	55	75	90	100
F		45	50	60	70	85	100
F		30	33.5	39.5	45	52.5	60
F		22	24	30	32	37	43
G		3	3	3	3	3	4

External Dimension Table:

All dimensions in mm

MODEL NO.	L	TC01-001	TC01-002	TC01-003	TC01-004	TC01-005	TC01-006
		TC01-001	TC01-002	TC01-003	TC01-004	TC01-005	TC01-006
TC01-001		80	80	80	80	80	80
1		100	112	120	130	140	150
2		80	80	80	80	110	120
3		80	80	80	80	100	110
4		80	80	80	80	80	100
5		80	80	80	80	100	110
6		80	80	80	80	100	110
7		80	80	80	80	100	110
8		80	80	80	80	100	110
9		80	80	80	80	100	110
10		80	80	80	80	100	110
11		80	80	80	80	100	110
12		80	80	80	80	100	110
13		80	80	80	80	100	110
14		80	80	80	80	100	110
15		80	80	80	80	100	110
16		80	80	80	80	100	110
17		80	80	80	80	100	110
18		80	80	80	80	100	110
19		80	80	80	80	100	110
20		80	80	80	80	100	110
21		80	80	80	80	100	110
22		80	80	80	80	100	110
23		80	80	80	80	100	110
24		80	80	80	80	100	110
25		80	80	80	80	100	110
26		80	80	80	80	100	110
27		80	80	80	80	100	110
28		80	80	80	80	100	110
29		80	80	80	80	100	110
30		80	80	80	80	100	110
31		80	80	80	80	100	110
32		80	80	80	80	100	110
33		80	80	80	80	100	110
34		80	80	80	80	100	110
35		80	80	80	80	100	110
36		80	80	80	80	100	110
37		80	80	80	80	100	110
38		80	80	80	80	100	110
39		80	80	80	80	100	110
40		80	80	80	80	100	110
41		80	80	80	80	100	110
42		80	80	80	80	100	110
43		80	80	80	80	100	110
44		80	80	80	80	100	110
45		80	80	80	80	100	110
46		80	80	80	80	100	110
47		80	80	80	80	100	110
48		80	80	80	80	100	110
49		80	80	80	80	100	110
50		80	80	80	80	100	110
51		80	80	80	80	100	110
52		80	80	80	80	100	110
53		80	80	80	80	100	110
54		80	80	80	80	100	110
55		80	80	80	80	100	110
56		80	80	80	80	100	110
57		80	80	80	80	100	110
58		80	80	80	80	100	110
59		80	80	80	80	100	110
60		80	80	80	80	100	110

Specification Table:

Lock in area (cm <sup>2</sup> )	7.07	9.62	16.3	21.7	31.2	44.2	
Full stroke (mm)	23.3	28	29.5	35	41	49	
Locking stroke (mm)	20.8	23	26.5	32	38	46	
Lock stroke (mm)	3	3	3	3	3	3	
Cylinder volume	lock	14.5	22.13	40.14	75.85	126.2	203.95
	Release	11.89	17.5	35.4	63.8	102.6	157.7
max. pressure (MPa)	0.5						
min. pressure (MPa)	0.5						
design pressure (MPa)	10.5						
max. force (kg)	0.7						
weight (kg)	1.5	1.8	2.5	4.2	6.5	10.2	

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### External Dimension Table:

All dimensions in mm

MODEL	90° RH 90° LH	SC02-361-R SC02-362-L	SC02-401-R SC02-402-L
SC02-BUA		Ø22	Ø25
A		114	129
B		50	55
C		41	46
D	Ø3	36	40
E		72	78
F		45	53
G		27	25
H		29.5	32
I		20.5	23
J		31.5	34
K		69	74
M		14	11.5
N		23.5	26
P		3	3
Q		7.5	9.5
R		4.5	5.5
S		18	17
T		21	22
U		14	16
V		9	12
W		12	15
X		M10	M12
Y (with Adaptor)		5X4	5X5
Z		16	18
HYD PART		G1/8"	G1/8"
Taper angle		6°	6°

### Specification

Lock cylinder (cm)	203	236
full stroke(90 rotation) mm	18	20
swing stroke(90 rotation) mm	10	12
locking stroke mm		
Cyl volume	lock cm <sup>3</sup>	36
	release cm <sup>3</sup>	4.9
pressure (mpa)		7
max operating pressure (mpa)		15
Design pressure (mpa)		10.5
Temperature (OC)		0.7
weight (kg)	0.8	1

### Machining Dimensions For Cylinders Mounting

MODEL No	RH	SC02-361	SC02-401
	LH	SC02-362	SC02-402
E		31.5	34
B		M4	M5
C-Ø2		36	40
D		31	35
F		21.5	26
F		16	18
G		3	3

### Clamp Lever Dimension (Without Sleeve)

MODEL No	RH	361	401	461	531	651	751	901	1051
	LH	362	402	462	532	652	752	902	1052
a		50	56.5	65.5	77	91.5	105	127	152
b		16	28	35	38	50	58	75	90
c		11	13	16	22	22	28	34	40
d		13	14	17.5	19	25	29	38	45
e		1	1	1	1	1	1.5	1.5	1.5
f		32	36.5	42	50	56.5	65	75	90
j		10	12	12	17	19	22	27	32
n		M5	M6	M6	M8	M10	M16	M16	M20
p		15	18	22	25	30	40	45	55

# Swing Cylinder (Top Mounting)

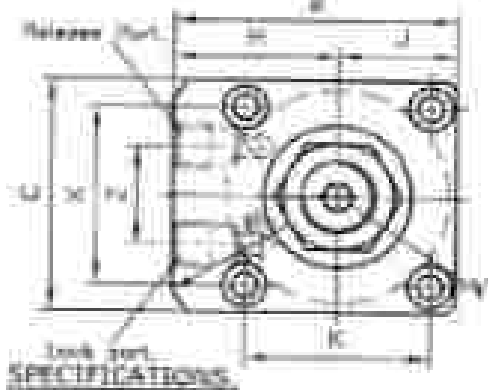
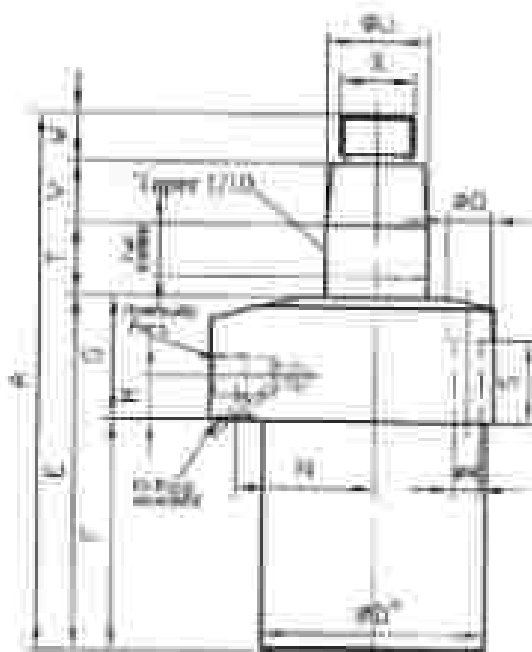
## Double Acting



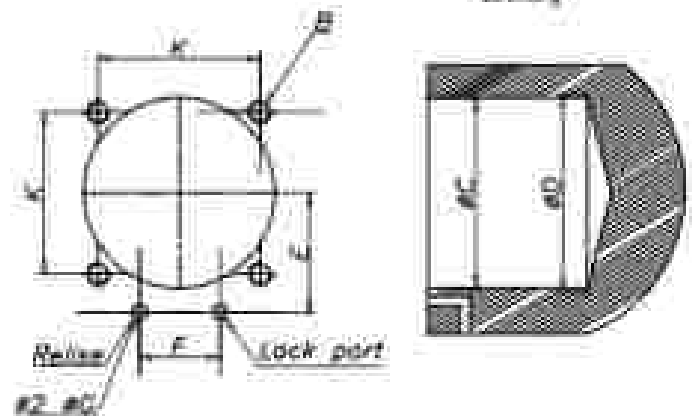
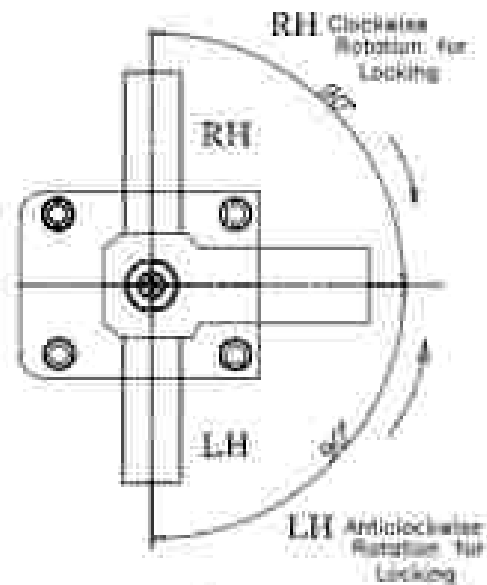
### Features:

- This is a double acting cylinder with swing clamp.
- It is a Chromium plated piston rod with alloy steel body.
- It can be used with the rotation of 90°.
- These cylinders can be used for dumping of dockable (RH) & counter clockwise direction (LH).
- It can be used in the range of : MPa (minimum operating pressure)  
150 MPa ( maximum operating pressure)  
70 bar (pumping force)

### Outline Dimension:



### Application Sample:



**External Dimension Table:**

All dimensions in mm

MODEL NO	BO° RH	SC02-481M	SC02-551M	SC02-651M	SC02-751M	SC02-901M	SC02-1051M
	BO° LH	SC02-482L	SC02-552L	SC02-652L	SC02-752L	SC02-902L	SC02-1052L
Port Dia.		Ø35	Ø40	Ø50	Ø55	Ø75	Ø85
A		143	159	169	195	215	263
B		61	69	81	92	107	127
C		52	60	70	80	95	120
D		48	55	65	75	90	105
E		87	96	97	113	129	153
F		59	68	67	78	85	102
G		28	30	30	37	40	51
H		35	39	46	52	59.5	67
I		26	30	39	40	47.5	60
J		40	47	55	63	75	88
L		83	88	106	118	138	152
M		17.5	11	12	15	28	17
N		30	33.5	39.5	45	52.5	60
P		3	3	3	3	3	4
Q		9.5	11	11	14.5	17.5	20
R		5.5	6.5	6.5	8	11	14
S		18.5	18	20	22	23	28
T		28.5	23	28	36	36	47
U		22	29	30	38	45	55
V		14	20	20	26	32	38
W		15	15	18	18	22	25
X		M16X15	M16X15	M20X15	M30X15	M36X15	M45X15
V (max Xdepth)		5X6	6X6	10X8	10X10	10X10	12X10
Z		22	24	30	32	37	45
Hyd.port		G1/8"	G1/8"	G1/8"	G1/4"	G1/4"	G3/8"
Taper angle		6°	6°	6°	6°	11°	11°

**Specification Table:**

Lock cylinder mm	5	8	14	18.7	31.2	40.7	
Full stroke mm	22	24	24	31	32	42	
90° rotation (mm) (90°rotat)	12	14	14	18	20	18	
locking stroke mm	10	10	10	12	12	18	
cyl volume (cc)	lock (cc)	7	13.2	25.2	47.3	102.6	151
	release (cc)	12.9	20.8	37.1	68.7	127.8	199.5
Max. pressure (Mpa)	7						
Min. pressure (Mpa)	1.5						
max. pressure (Mpa)	10.5						
Temperature (OC)	0.7						
Weight (kg)	1.3	1.8	2.7	4.2	5.5	9	

**Machining Dimension Table For Mounting Clamp:**

MODEL No	RH	481	551	651	751	901	1051
	LH	482	552	652	752	902	1052
A		40	47	55	63	75	88
B		M5	M6	M6	M8	M10	M12
C+0.2		48	55	65	75	90	105
D		45	50	60	70	85	100
E		30	33.5	39.5	45	52.5	60
F		22	24	30	32	37	45
G		3	3	3	3	3	4

# Swing Cylinder (Top Mounting P Type)

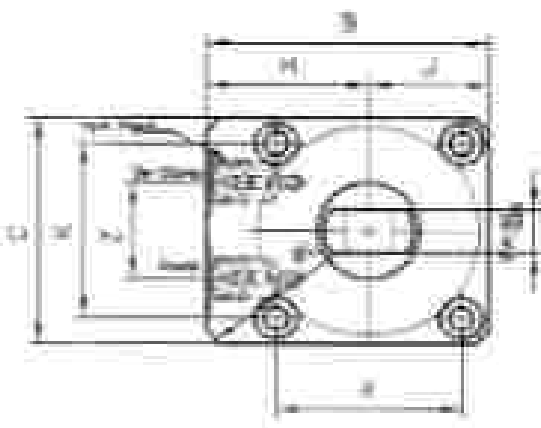
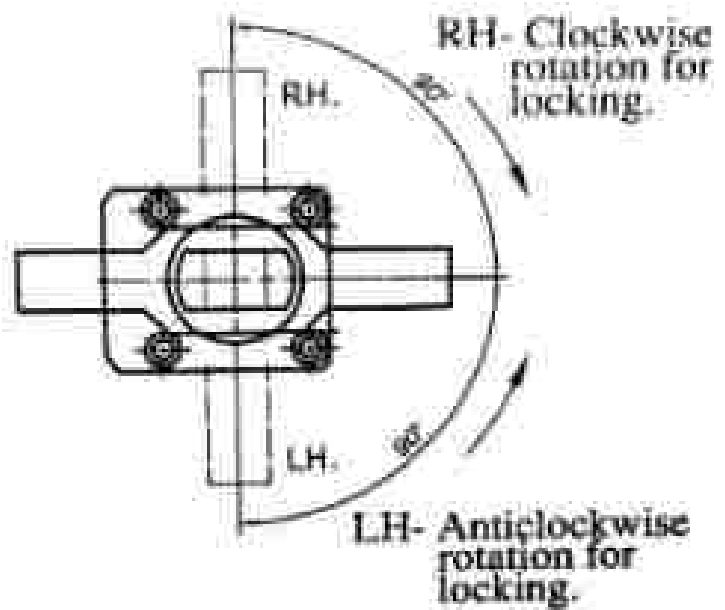
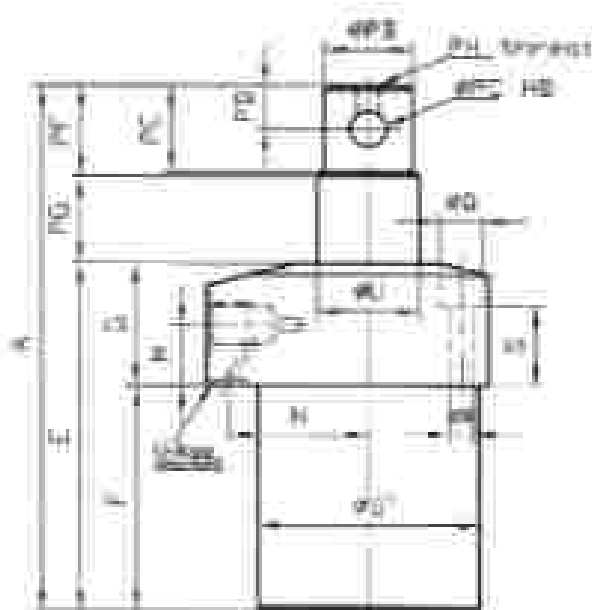
## Double Acting



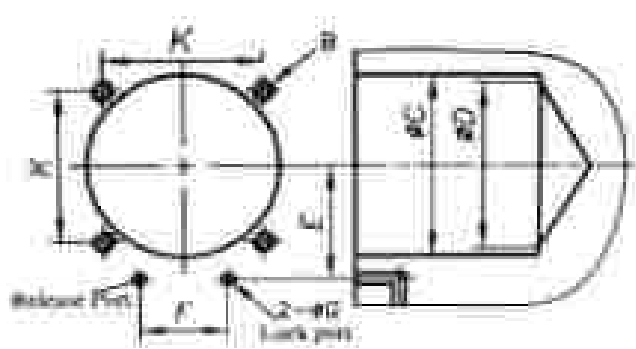
### Features:

- This is a double acting cylinder with swing clamp.
- It is a Chromium plated piston rod with alloy steel body.
- It can be used with the rotation of 90°.
- These cylinders can be used for dumping of dockable (RH) & counter clock wise direction (LH).
- It can be used in the range of: 1 MPa (minimum operating pressure)  
150 MPa (maximum operating pressure)  
70 bar (pumping force)

### Outline Dimension:



### Mounting Dimensions:



**External Dimension Table:**

All dimensions in mm

Model No.	ØD" (H) ØD" (L)	SC02-301-SP SC02-301-LP	SC02-401-SP SC02-401-LP	SC02-482-SP SC02-482-LP	SC02-551-SP SC02-551-LP	SC02-611-SP SC02-611-LP	SC02-711-SP SC02-711-LP	SC02-801-SP SC02-801-LP	SC02-1001-SP SC02-1001-LP
ØØH (UA)		Ø23	Ø23	Ø35	Ø40	Ø50	Ø55	Ø75	Ø85
A		110	119	136	141.5	158	169	205.5	254
B		30	35	51	69	81	92	107	127
C		41	46	51	60	72	80	95	120
ØD		36	40	48	55	63	75	90	105
E		71	78	87	98	117	128.5	151	181
F		85	95	98.5	111	128	145	174	200
G		27	23	28	30	30	37	40	53
H		29.5	32	35	35	45	52	59.5	67
I		20.5	23	28	30	35	40	47.5	60
J		31.4	34	40	47	55	63	75	80
K		69	74	83	98	109	116	138	157
L		14	13	12.5	18	18	24	24	31
M		24.5	26	30	32.5	39.5	45	51.5	60
N		3	3	3	3	3	3	3	4
O		13	8	9.5	11	11	14.5	17.5	20
P		4.3	5.5	5.5	6.8	6.8	9	11	14
Q		18	19	18.5	17	18	23	23	24.5
R		14	16	17	25	30	36	45	55
ØS		31	31	24	29	28	33	33.5	44.5
T		17	20	21	30.5	31	41.5	48	58.5
ØU		15	16	15.5	29	30.5	34.5	44.5	53.5
PH Thread		M7	M5	M4	M5	M6	M6	M8	M8
ØV		7	8	10	12	15	16.5	20	24
ØW		18	14.3	20	29	28	34	42	52
ØX (H)		6/19	6/19	8	10	11	13	18	20
ØY		7	8	10	12	14	18	12	28
Z		18	18	21	24	30	32	37	45
ØZ (H)		Ø1/8"	Ø1/8"	Ø1/8"	Ø1/8"	Ø1/4"	Ø1/4"	Ø1/4"	Ø3/8"

**Specification Table :**

Lock nut Size (mm)	2.8	3.07	3	4	4	4	4.7	5.3	6.7
Full stroke (mm)	18	30	33	34	34	31	33	43	43
ØØ (stroke) (mm)	30	33	33	34	34	33	35	45	48
ØØ (stroke)									
Locking stroke (mm)	8	8	10	10	10	17	12	18	18
Cylinder (mm) (ØØ) (mm)	4.8	7.3	7	14.5	25.3	42.3	102.8	151	151
Release (mm)	1.2	10.9	12.5	20.5	27.1	68.7	127.5	195.5	195.5
Max pressure (MPa)	7								
Min pressure (MPa)	1.5								
Design pressure (MPa)	10.5								
Temperature (°C)	0-70								
Weight (kg)	0.7	0.9	1.3	1.6	2.1	4.2	8.3	9	9

**Machining Dimension Table For Mounting Clamp :**

Model No.	ØD" (H) ØD" (L)	SC02-301-SP SC02-301-LP	SC02-401-SP SC02-401-LP	ØD" (H) ØD" (L)	ØS" (H) ØS" (L)	ØS" (H) ØS" (L)	ØS" (H) ØS" (L)	ØS" (H) ØS" (L)	ØS" (H) ØS" (L)
F		31.5	34	40	47	53	63	75	88
G		34	37.5	45.5	55	65	78	90	102
C-Ø2		36	40	48	55	65	75	90	105
D		31	35	43	50	60	70	85	100
E		23.5	26	30	32.5	39.5	45	52.5	60
F		16	18	21	24	30	32	37	45
G		3	3	3	3	3	3	3	4

# Swing Cylinder (Bottom Mounting)

## Double Acting



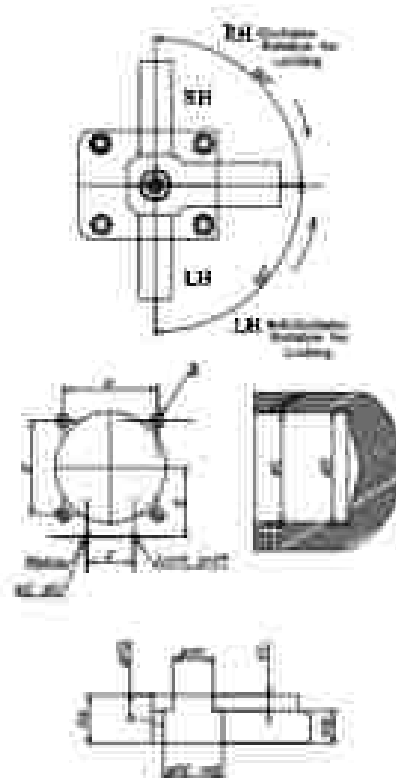
### Features:

- This is a double acting cylinder with swing clamp
- It is a Chromalloy plated piston rod with alloy steel body
- It can be used with the rotation of 90°
- These cylinders can be used for clamping of both wire (RH) & counter block wire direction (LH)
- It can be used in the range of 1 MPa (minimum operating pressure) : 150 MPa ( maximum operating pressure) 70 bar (N pushing force)

### Outline Dimension:



### Application Sample:



### Clamp lever dimension table (with sleeve):

Model No	361	401	481	551	651	751	901	1051
	362	402	482	552	652	752	902	1052
FL	12	18	19	25	25	32	38	45
FN	10	12	16	18.5	20.8	28	32	38
FC	2.5	3	4	4	4	5	5	6
FD	4.1	5.1	5.1	6.1	7.5	8.5	9.5	10.5
FE	17	20	24	28	34	40	49	60
FF	13.5	16.7	20.8	23	28	32.5	41.8	51.2
FG	4	5	5	5	6	6	6	8

External Dimension Table:

All dimensions in mm

MODEL NO	90° RH	SB03-361-R	SB03-401-R
	90° LH	SB03-362-L	SB03-402-L
Bore Dia		Ø22	Ø25
A		116	127
B		50	55
C		41	46
D		36	40
E		72	78
F		48.5	50
G		25	28
H		29.5	32
J		20.5	23
K		31.5	34
ØL		69	74
M		14	15
N		23.5	26
P		3	3
Q		7.5	9.5
R		4.5	5.5
S		18	17
T		22.5	22
ØU		14	16
V		9	12
W		7	15
X		M10	M12
Y (hex X depth)		4X5	4X5
Z		16	18
Hyd. port		G1/8"	G1/8"
Taper angle		6°	6°

Specification Table:

Unit/Type/Size	1.03	2.30
Full stroke (90 rotation) / mm	16	20
Swing stroke (90 rotation) / mm	10	12
Retring stroke / mm	8	8
Vol. volume	Lock on	3.67
	Release port	4.9
Max. operating pressure (MPa)	7	
Max. pulsating pressure (MPa)	1.5	
Design pressure (MPa)	10.5	
Temperature (°C)	0-70	
Weight (kg)	0.8	1

Machining Dimension Table For Mounting Clamp:

MODEL	90° RH	SB03-361-R	SB03-401-R
	90° LH	SB03-362-L	SB03-402-L
F		31.5	34
H		M4	M4
G-Ø1		26	40
		31	35
I		29.5	26
J		16	18
K		3	3

# Swing Cylinder (Bottom Mounting )

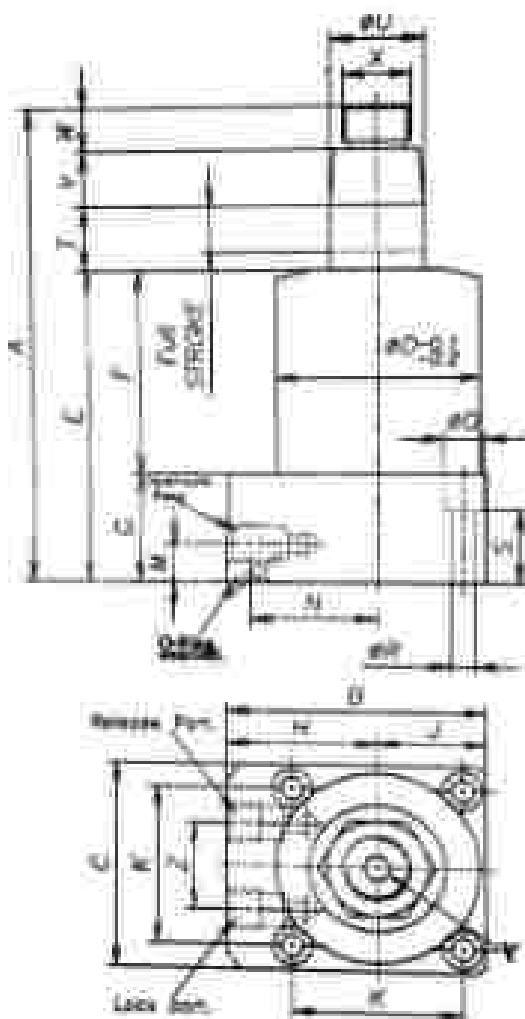
## Double Acting



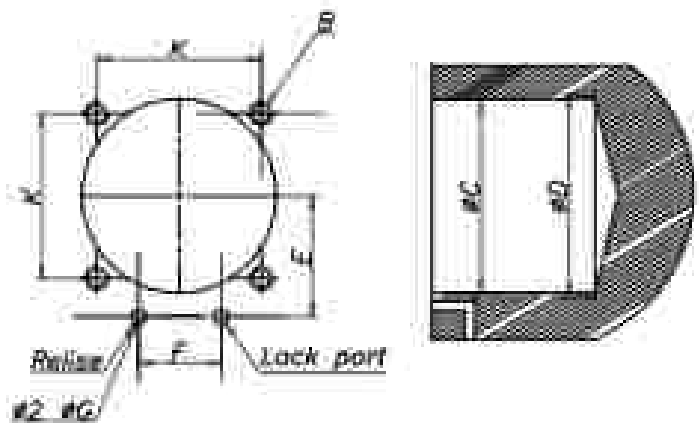
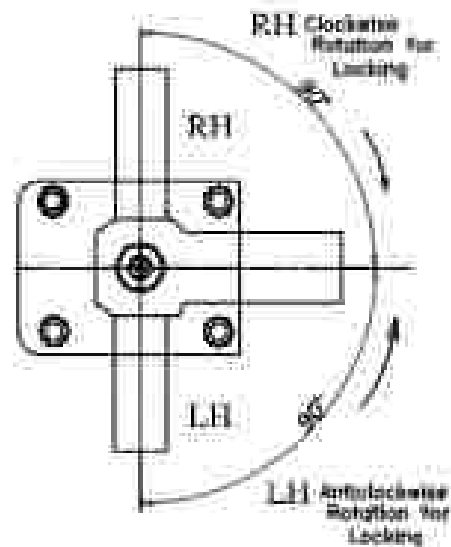
### Features:

- This is a double acting cylinder with swing clamp.
- It is a Chromium plated piston rod with alloy steel body
- It can be used with the rotation of 90°.
- These cylinders can be used for clamping of clod. wire (RH) & counter clock wise direction (LH).
- It can be used in the range of 1 MPa (minimum operating pressure) - 130 MPa (maximum operating pressure) 70 bar K (pushing force)

### Outline Dimension:



### Application Sample:





**External Dimension Table:**

All dimensions in mm

MODEL NO.	90° RH	SB03-403-R	SB03-553-R	SB03-751-R	SB03-751-L	SB03-903-R	SB03-1053-L
	90° LH	SB03-403-L	SB03-553-L	SB03-453	SB03-752	SB03-903-L	SB03-1053-R
BORE DIA		Ø35	Ø40	Ø50	Ø55	Ø75	Ø85
A		136	159	163	194.5	215	252
B		81	88	81	92	107	127
C		52	60	70	60	58	120
D		48	55	65	75	90	105
E		86.5	98	97.5	124.5	135	159
F		58.5	67	68	77.5	84	100
G		28	30	30	37	46	53
H		35	38	46	52	59.5	67
J		25	30	35	40	47.5	60
K		40	47	55	63	75	88
L		83	88	108	113	138	152
M		18	18	18	15	24	31
N		30	33.5	34.5	45	52.5	60
P		3	3	3	3	3	4
Q		15.5	13	13	14.5	17.5	20
R		9.5	6.8	6.8	8	11	14
S		18.5	17	18	22	22	24.5
T		25	25	28	35	36	45
U		23	25	30	38	45	55
V		14	20	20	26	32	38
W		15	15	18	18	22	25
Z		M16x15	M16x15	M20x15	M20x15	M20x15	M24x15
Y (max travel)		105	128	108	110	130	100
Z		33	34	30	32	37	45
Height		61/8"	61/8"	61/8"	61/4"	61/4"	63/8"
Tap angle		8°	8°	8°	8°	11°	11°

**Specification Table :**

Lock cylinder mm	5	8	14	16.7	31.3	40.7
Full stroke mm	23	24	24	31	32	42
BB (stroke) mm (BO (stroke))	13	14	14	18	20	26
locking stroke mm	16	10	10	13	13	16
Cyl volume	lock 0.93	13.7	25.2	42.3	101.6	151
release	11.5	10.9	37.1	68.7	127.8	199.9
Max. pressure (MPa)	7					
Min. pressure (MPa)	1.5					
design pressure (MPa)	10.5					
Temperature (OC)	0.7					
weight (kg)	1.1	1.8	2.7	4.2	5.5	9

**Machining Dimension Table For Mounting Clamp:**

MODEL NO.	90° RH	481-R	531-R	651-R	751-R	911-R	1051-R
	90° LH	482-L	532-L	652-L	752-L	902-L	1052-L
B		40	47	55	63	75	88
D		M5	M6	M6	M8	M10	M12
C=Ø		48	55	65	75	90	105
D		45	50	60	70	85	100
E		30	33.5	39.5	45	52.5	60
F		22	24	30	32	37	45
G		3	3	3	3	3	4

# Swing Cylinder ( Bottom Mounting P Type)

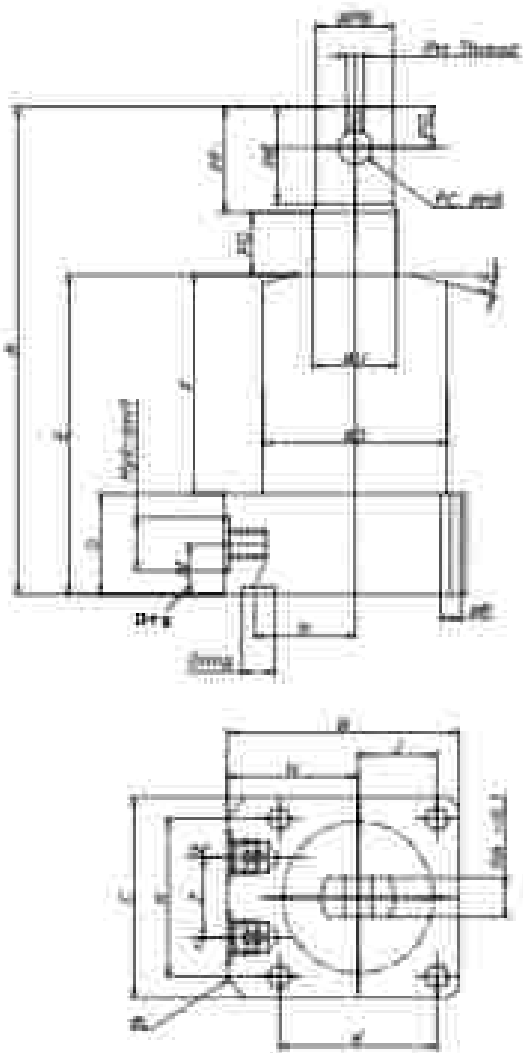
## Double Acting



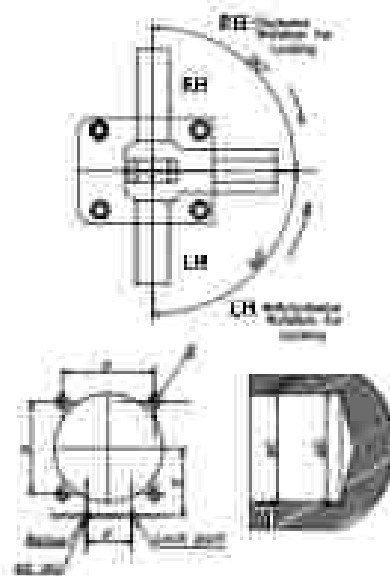
### Features:

- This is a double acting cylinder with swing damp.
- It has a Chromium plated piston rod with alloy steel body.
- It can be used with the rotation of 90°.
- These cylinders can be used for damping of dock side (RH) & counter dock side direction (LH).
- It can be used in the range of 1 MPa (minimum operating pressure) 350 kPa (maximum operating pressure) 70 bar (pumping force)

### Outline Dimension:



### Application Sample:



**External Dimension Table:**

All dimensions in mm

MODEL NO	90° RH 90° LH	SB03-161-HP SB03-161-LP	SB03-401-HP SB03-401-LP	SB03-481-HP SB03-481-LP	SB03-553-HP SB03-553-LP	SB03-751-HP SB03-751-LP	SB03-751-HP SB03-751-LP	SB03-1011-HP SB03-1011-LP	SB03-1011-HP SB03-1011-LP
SCHEMATA		Ø12	Ø24	Ø18	Ø40	Ø50	Ø24	Ø15	Ø25
A		113	118	133	141.5	150	148	201.5	254
B		50	55	71	89	91	82	107	127
C		61	60	62	60	70	69	95	120
ØD		36	40	48	55	65	71	95	105
E		73.5	78	85.5	95	97	114.5	125	151
F		48.5	50	58.5	67	68	77.5	84	100
G		25	25	28	30	30	37	40	49
H		29.5	31	35	39	46	52	55.5	67
I		20.5	21	26	30	35	40	47.5	60
J		31.4	34	40	47	55	63	75	88
ØK		68	74	83	88	100	111	126	152
M		143	15	16	18	18	24	24	31
N		23.5	26	30	35.5	38.5	45	51.5	60
O		3	5	1	1	1	1	1	4
P		7.3	8	9.5	11	11	14.5	17.5	20
Q		4.3	5.5	5.5	6.8	8.4	8	11	14
R		18	15	16.5	17	16	22	19	24.5
T		14	18	22	25	30	38	45	55
SC		21	21	25	29	29	33	41.5	48
SE		17	20	25	30.5	32	41.5	48	58.5
SE		16	18	23.5	29	30.5	38.5	44.5	53.5
Pin thread		M3	M3	M4	M5	M6	M6	M8	M8
FD		7	9	10	12	15	16.5	20	24
ØFA		13	14.5	20	27	28	34	43	51
ØFC-HL		6-8	6-8	8	10	12	12	16	20
FA		7	8	10	12	14	16	20	26
Z		18	18	22	24	30	33	47	48
Pin-Ømm		Ø1.6	Ø1.8	Ø2.8	Ø1.8	Ø1.4	Ø1.4	Ø1.4	Ø3.8

**Dimension Specification Table:**

Loop distance mm	2.5	1.07	5	8	14	10.7	11.2	40.7
Full groove mm	18	30	27	34	34	33	33	41
(ØD distance) mm (ØD distance)	10	12	19	16	14	18	20	28
Locking zone mm	8	8	10	10	10	17	12	16
External Loop mm	4.8	7.9	7	13.2	25.2	42.3	102.6	131
mm	1.2	10.8	12.5	20.9	37.5	48.7	127.8	198.5
Min. pressure kN						1.5		
Max. pressure kN						10.5		
Temperature range	0C					0-70		
	0.7	0.9	1.3	1.8	1.7	4.2	5.5	9

**Machining Dimension Table For Mounting Clamp:**

Model No	90° RH 90° LH	161-HP 161-LP	401-HP 401-LP	481-HP 481-LP	553-HP 553-LP	653-HP 653-LP	751-HP 751-LP	1011-HP 1011-LP	1011-HP 1011-LP
F		11.5	14	40	47	55	63	75	88
G		56	55	55	58	64	68	81.0	81.1
ØD/2		36	40	48	55	65	75	90	105
E		61	65	45	50	60	70	85	100
F		23.5	26	30	33.5	38.5	45	51.5	60
F		16	18	22	24	30	32	37	45
G		3	3	3	3	3	3	3	4

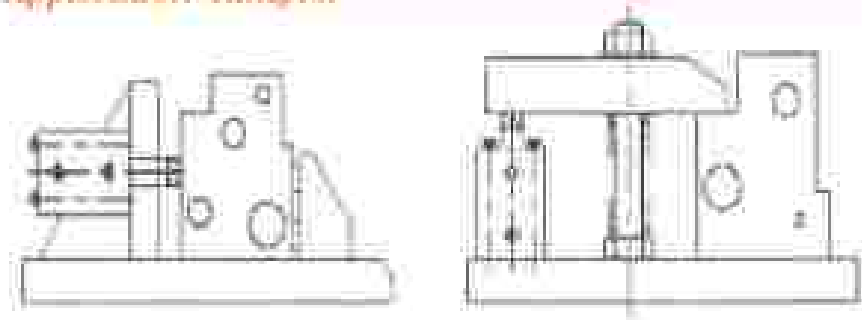
# Block Cylinder



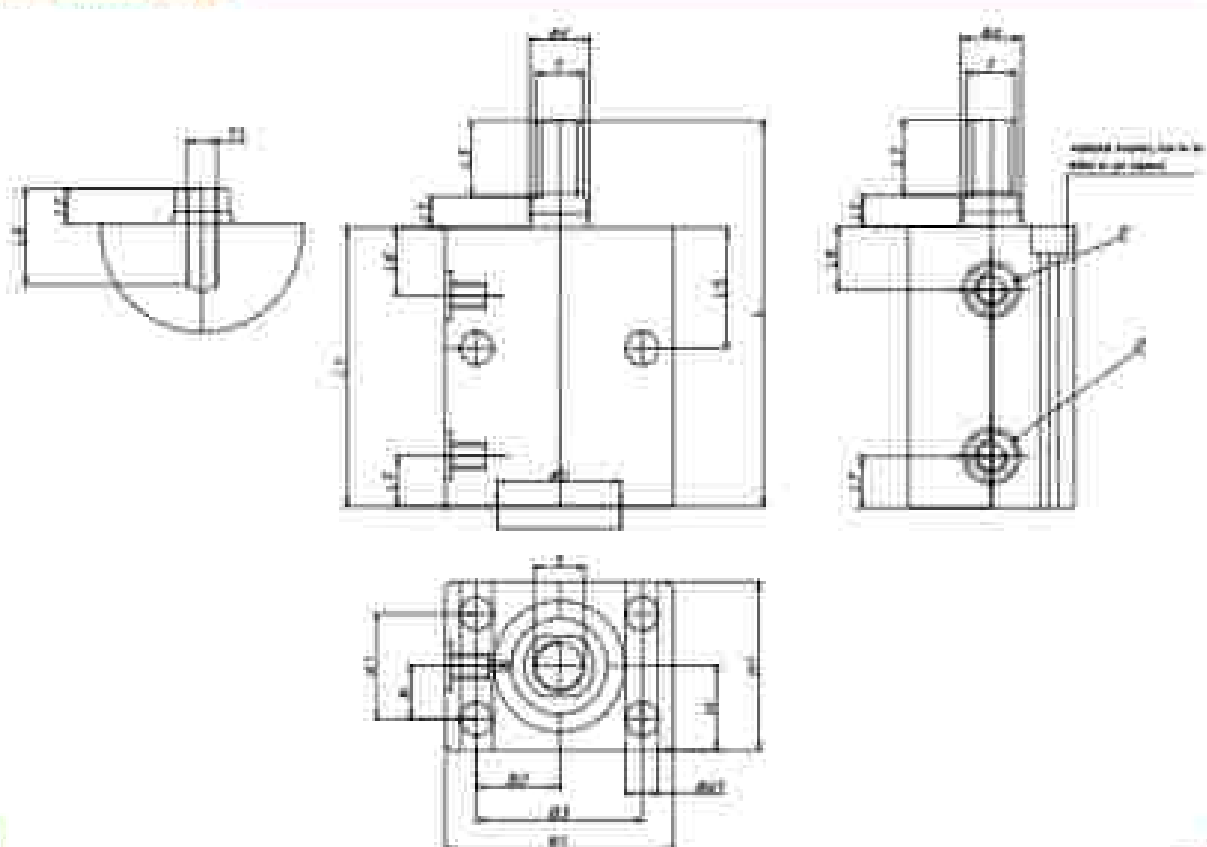
## Features:

- This is a double acting cylinder with universal mounting
- It is a Chromium plated piston alloy steel body with male & female threaded piston ends
- It can be used with the stroke range 10 /15 /25 /50 /75 /100
- It can be used in the range of 1 MPa (minimum operating pressure) to 15 MPa (maximum operating pressure) 70 bar / 10 (pushing force)

## Application Sample:



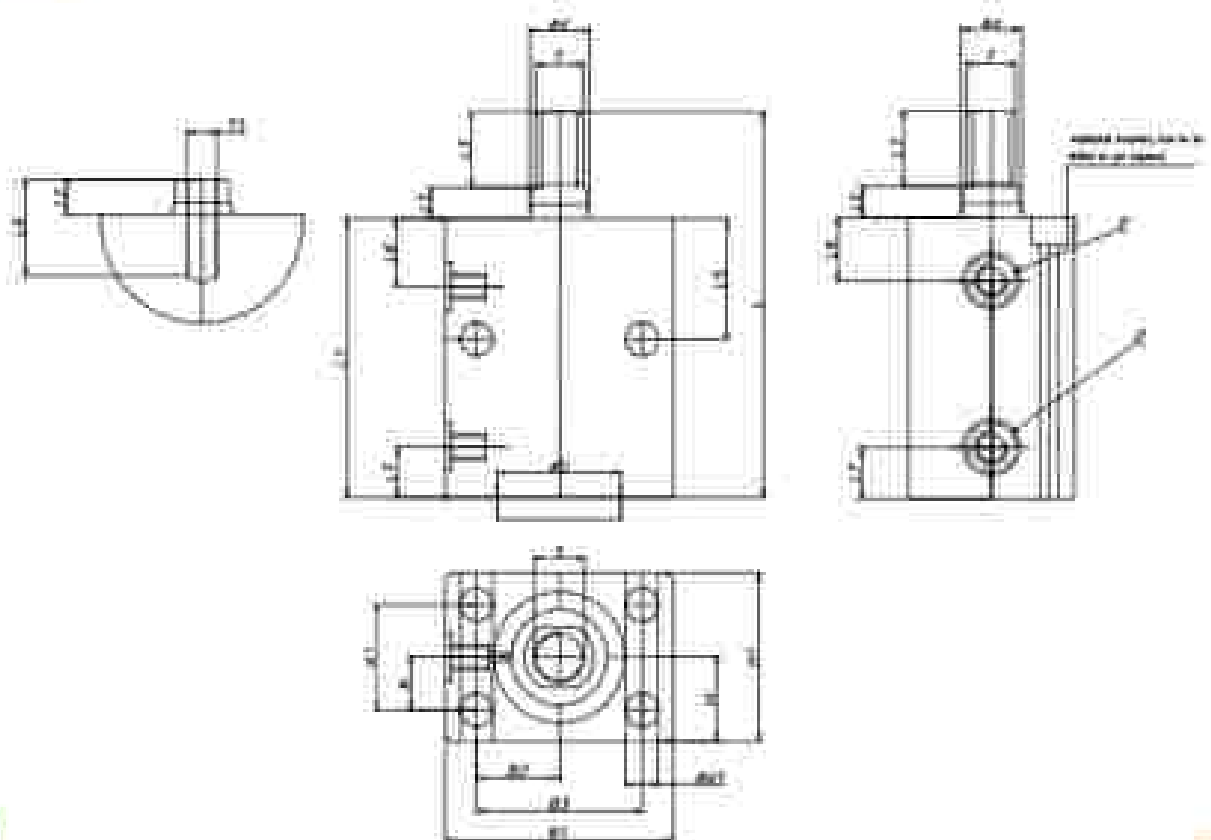
## Outline Dimension :



Dimension Tabale :

All dimensions in mm

Model No.	Max. Head	BC1	BC2	BC3	BC4	BC5	BC6	BC7	BC8	BC9	BC10	BC11	BC12	BC13	BC14	BC15	BC16	BC17	BC18	BC19	BC20
		10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00	55.00	60.00	65.00	70.00	75.00	80.00	85.00	90.00	95.00	100.00	105.00
H	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
W	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
D	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65
	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65
D1	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D2	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D3	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D4	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D6	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D12	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D13	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D14	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D15	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D16	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D17	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D18	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D19	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
D20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10



# Block Cylinder

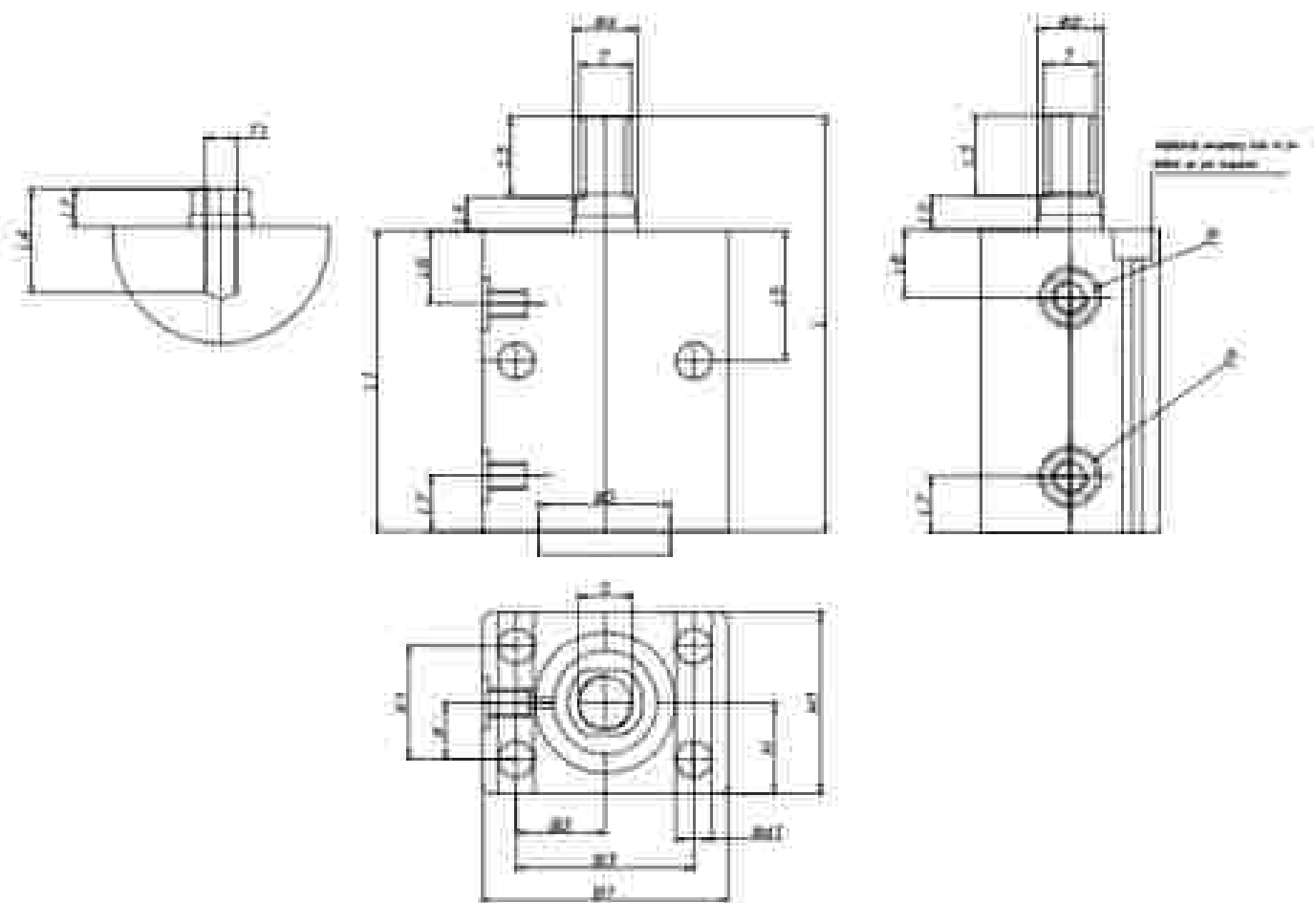
## Double Acting



### Features:

- This is a double acting cylinder with universal mounting
- It is a Chromium plated Piston eye and body with male & female threaded piston ends.
- It can be used with the stroke range 125/150/175/200
- These cylinders can be used for direct clamping as well as positioning & support.
- It can be used in the range of 1 MPa (minimum operating pressure) to 15 MPa ( maximum operating pressure) 20 bar N (pushing force)

### Outline Dimension:





# Compact Cylinder

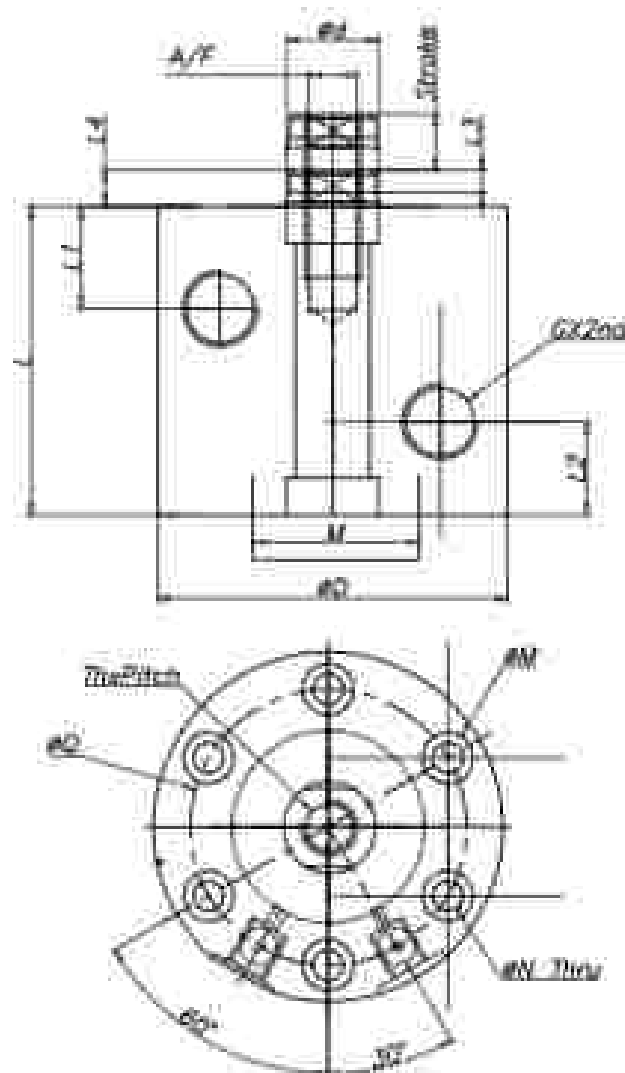
## Double Acting



### Features:

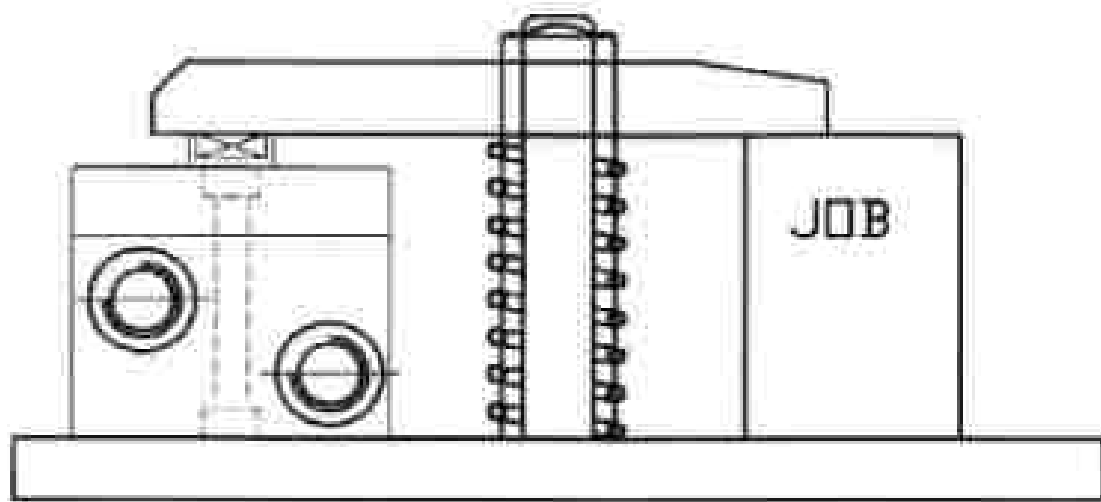
- This is a manifold mounting cylinder with compact design
- It is a easy fitting & easy mounting with male & female threaded piston ends.
- These cylinders are provided with universal mounting.
- These cylinders are threaded directly into manifold, clamping, coating, jacking, splicing & riving operations
- It can be used in the range of 1 MPa (minimum operating pressure) to 15 MPa (maximum operating pressure) 70 bar (pulling force)

### Outline Dimension:





Application Sample



Dimension Table :

All dimensions in mm

Model No	CC05 4525	CC05 6525	CC05 7625	CC05 9525
Bore $\phi$ M	$\phi 22$	$\phi 32$	$\phi 40$	$\phi 50$
Pushing force KN	3.8	8	12.5	19.63
Pulling force KN	0.8	2.1	3.1	5.3
Thread pitch	M6x10 deep	M10x18 deep	M12x20 deep	M16x25 deep
L4	7	7	8	9
d	12	16	20	25
D	45	65	76	95
G	1/8"	1/8"	1/8"	1/4"
A/F	10	14	17	22
L1	16.5	16.5	17.5	22.5
L7	12	12	12	12
L3	4	4	4	4
$\phi N$	4.5	6.6	6.6	9
$\phi M$ deep	8x5.0	11x7.0	11x7.0	14.5x9.0
$\phi Q$ (PCO)	35	50	60	75
Stroke	25	25	25	25
L	63	63	67	73
Oil volume pushing CC	8cc	20cc	31cc	49cc
Oil volume pulling CC	5cc	15cc	24cc	37cc

# Threaded Body Cylinder

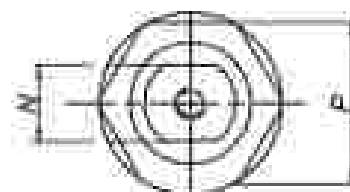
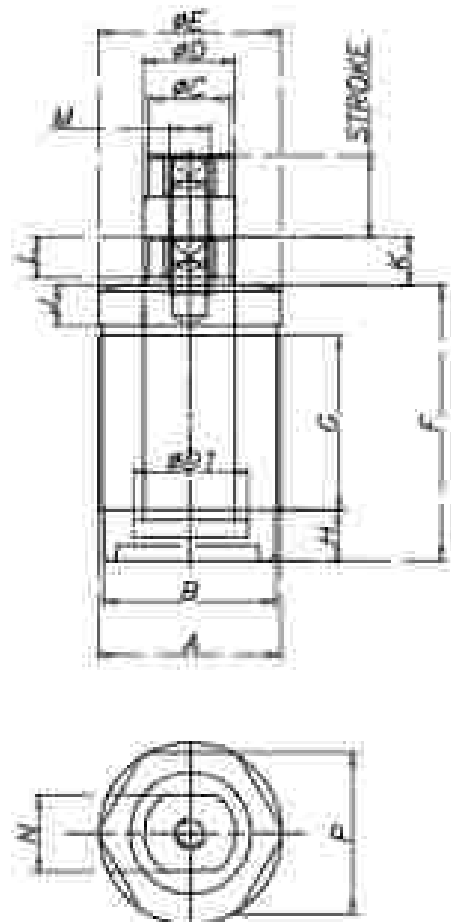
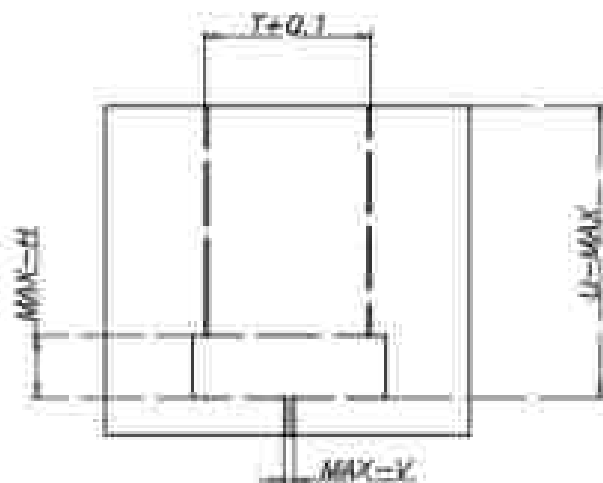
## Single Acting



### Features:

- It is a modified mounting single ended type cylinder with compact design.
- It is a space saving mounting with more & female threaded piston ends.
- These cylinders are threaded directly into manifold, pushing, pulling, cushion & reversing operations.
- It can be used for direct clamping as well as cushioning & support.
- The range of use 0.5 MPa (minimum operating pressure) - 7 MPa (maximum operating pressure) - 20 ton (pushing force).

### Application Sample:





# Threaded Body Cylinder ( Hexgaon Manifold Mount )

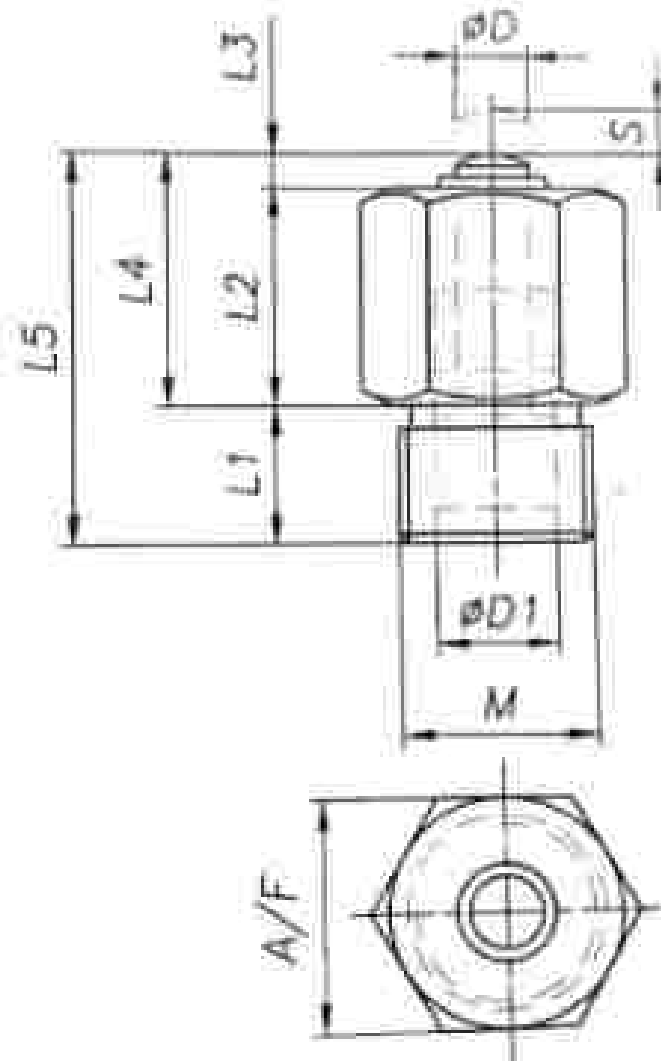
## Single Acting



### Features:

- This is a manifold mounting cylinder with compact design.
- It is a space saving mounting with male & female threaded plunger ends.
- These cylinders are threaded directly into manifold, (piping), polling, suction & return operations.
- It can be used in the range of (0.5 MPa maximum operating pressure)  
2 gpm (nominal) operating (through)  
70 psf (puffing force)

### Outline Dimension:

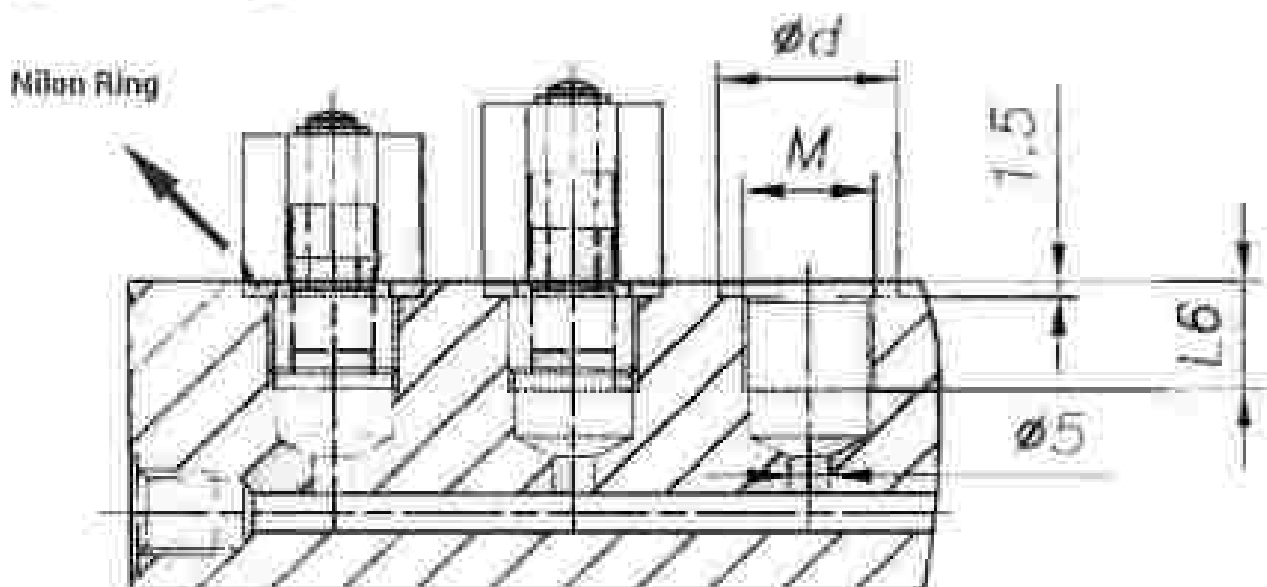


**Dimension Tabale :**

All dimensions in mm

Model No	TM07 M16-S	TM07 M16-M	TM07 M20-S	TM07 M20-M	TM07 M24-S	TM07 M24-M	TM07 M30-S	TM07 M30-M	TM07 M36-S	TM07 M36-M
rod ØD	6		8		10		12		16	
Piston ØD1	10		12		16		20		25	
Stroke-S	4	8	4	8	6	10	8	12	12	16
M	M16X1.5		M20X1.5		M24X1.5		M30X1.5		M36X1.5	
L1	12		12		14		18		21	
L2	18	23	18	23	21	25	27	31	39	47
L3	4	4	4	4	4	4	4	4	4	4
L4	22	26	22	25	24	28	30	34	35	40
L5	34	38	34	38	38	42	48	52	57	62
EE	14		14		16		23		23	
AF	19		24		27		36		41	
ØA	22		28		32		42		48	

**Typical Mounting:**



# Work Support (Threaded Body)

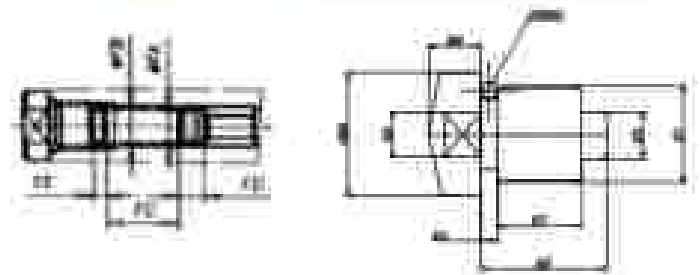
## Single Acting



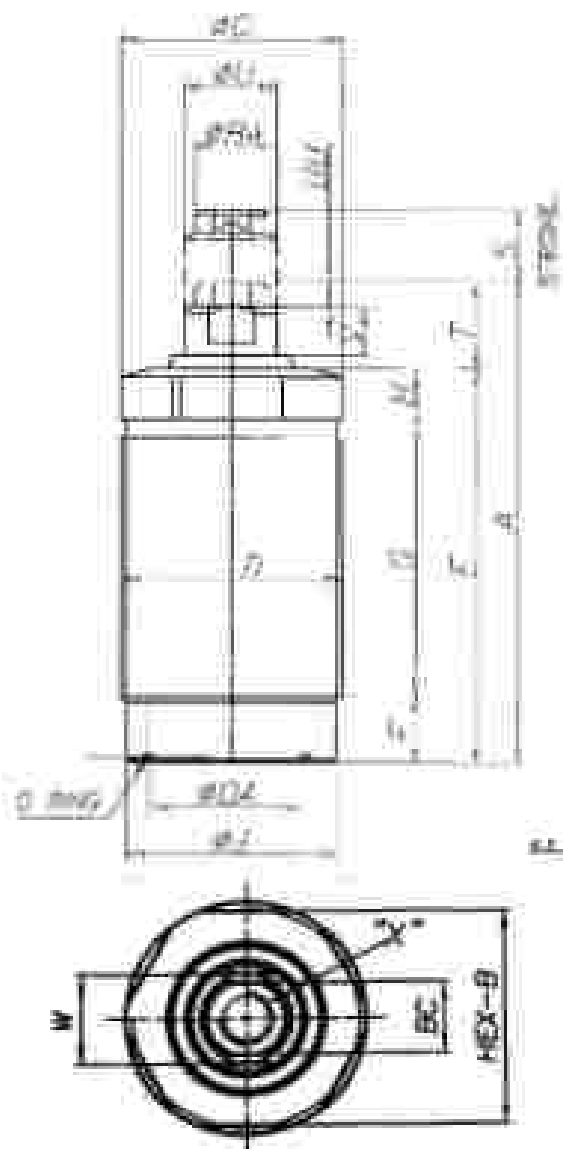
### Features:

- This is a threaded body with compact design of single acting.
- It is a wide operating pressure range.
- The work support is a hydraulic cylinder with a ball mounting & also, spring distance.
- It can be used in the range of 7 MPa.
- Maximum operating pressure: 200bar Max.

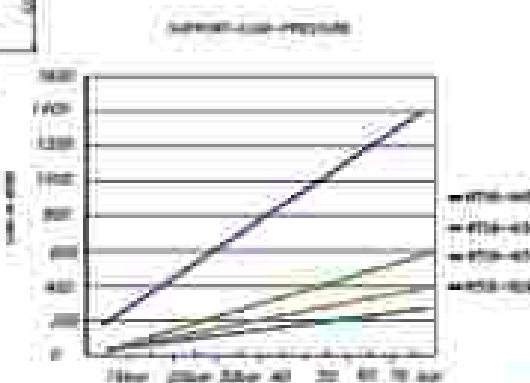
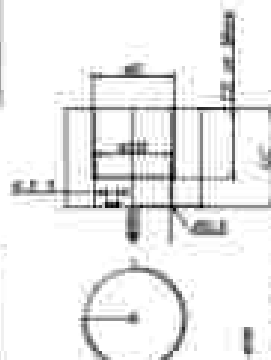
### Plunger Spring & Contact Bolt Dimensions:



### Outline Dimension:



### Application Sample:



**External Dimension Table:**

All dimensions in mm

Model NO	WT08-M26	WT08-M30	WT08-M36	WT08-M45
Support force (Max. (kg))	3	3.8	4.5	9.5
Support force formula Max	0.53HP 0.28	0.67HP 0.35	0.825HP 0.425	1.7HP 0.88
Finger strokes (mm)	8	9	8	10
Finger ring force (N)	2.8*1.1	3.2*1.2	4.1*1.5	5.8*2.2
Finger ring force (N (kg))	3.8*5.8	4.9*8	6.2*11	7.9*13.8
Cylinder volume (cm <sup>3</sup> )	0.6	0.9	1.3	2
Structure Max. pressure	2.0MPa 2.0MPa			
Weight (kg)	0.2	0.25	0.35	0.75
A	66	74	80	80
B	24	27	32	41
C	36	40	46	46
D	M16x1.5	M18x1.5	M20x1.5	M25x1.5
E	34.5	45	48	63
F	7	8	9	10
G	40	44	50	49
H	8	9	9	10
I	24.8	29.4	34	43
J	9.5	9.5	12.5	11.5
K	10	12	15	16
L	5	5	5.5	5
M	8	10	13	14
N	M6	M8	M10	M10
OC	9.5	11.5	12.5	13.5
OD	4	4	4	4
OE	8	10	12	13
OF	34.5	39.5	44.5	49.5
OG	18*47	17*50	18*48	21*58
OH	CC-T	CC-T	CC-B	CC-B
ØDA (dia)	Ø120	Ø140	Ø140	Ø200

**Part Dimensions:**

ØCH	4.9	6	8.2	10
EC	M6	M8	M10	M10
ØED	2.5	5	5	5.5
EE	9	10	10	10
EG	2	2	2	2
O-RING	5X1.5	4X2	8X1.5	8X1.5
ØFA	2.6	5	5.8	5.8
ØFB	3.6	6	8.5	8.5
FC	11.5	13	10	12
FD	4	4	8	8
FE	2	2	2	2
Mounting torque (Nm)	31.5	50	63	80

# Work Support ( Flange Body )

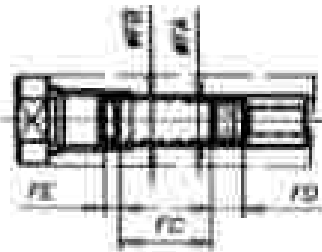
## Single Acting



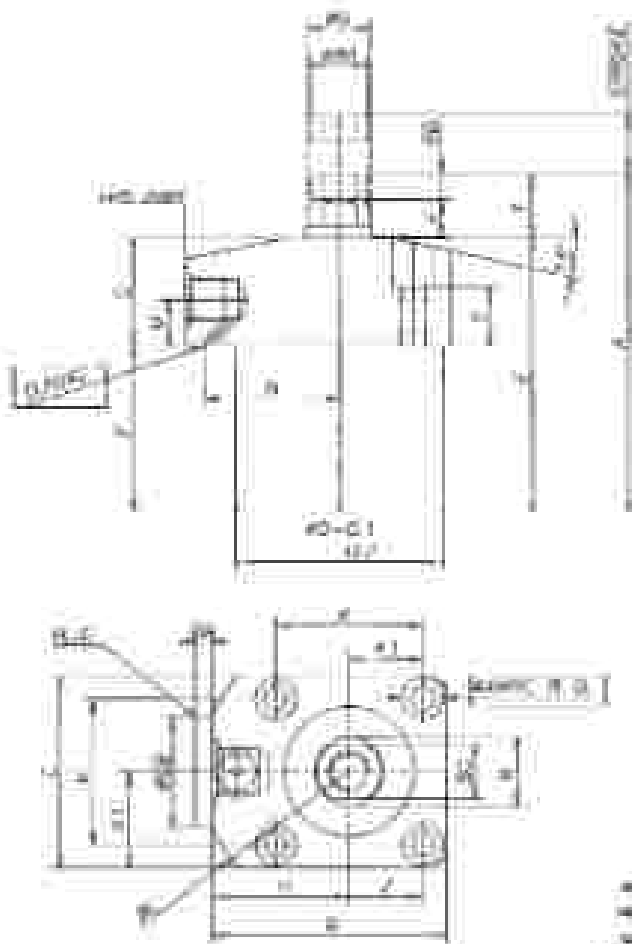
### Features:

- This is a flange body with compact design of single acting.
- It is a low operating pressure range.
- This work support is a hydraulic cylinder with flange mounting & with Spring Advance.
- It can be used in the range of 7 MPa.
- Maximum operating pressure 200bar Max.

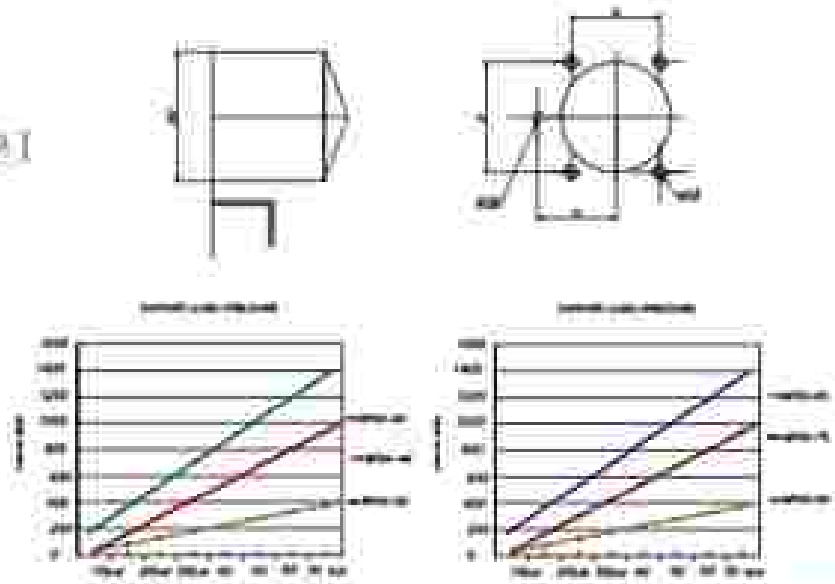
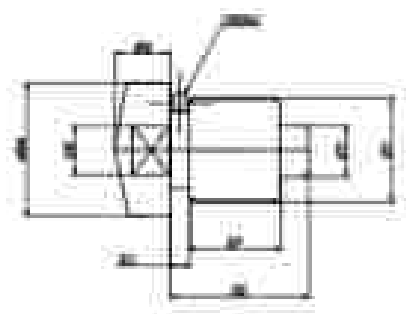
### Plunger Spring & Contact Bolt Dimensions:



### Outline Dimension:



### Application Sample:





External Dimension Table:

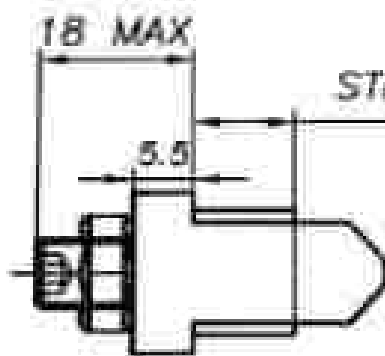
All dimensions in mm

Model ID	WF09-40	WF09-40	WF09-53	WF09-65	WF09-75	WF09-90	
Support force (MPa)	4.3	5.5	14	21	33	45	
Support force (N) 10							
Support force formula (Max (N))	0.823X <sup>2</sup> -1.29	1.554X <sup>2</sup> -1.25	2.500X <sup>2</sup> -2.28	3.833X <sup>2</sup> -2.7	5.650X <sup>2</sup> -6.15	7.533X <sup>2</sup> -6.87	
plunger stroke 3T (mm)	8	10	13	14	16	30	
Cylinder volume (cm)	13	7	5.5	4.8	6.5	18.1	
Mounting spring force	H 2.8*4.1 N 3.8*5.9	H 3.2*3.7 N 4.9*8.0	H 4.7*7.8 N 6.2*11	H 3.8*14.6 N 18.8*22.0	H 124*18.8 N 18.7*32.0	H 14.6*22.0 N 314*34.2	
Max. pressure (MPa)	7						
Min. pressure (MPa)	2						
design pressure (MPa)	10.3						
Temperature (OC)	0.7						
weight (kg)	0.8	0.8	1.4	2.2	3.0	4	
A	78	77	103	101	126	140	
B	54	61	69	61	92	107	
C	45	51	60	70	83	95	
ΦD	40	48	55	55	75	90	
E	64	64	73	85	107	129	
F	38	38	48	56	71	88	
G	25	25	30	29	35	40	
H	31.5	35.5	39	46	52	59.5	
I	22.5	25.5	30	35	40	47.5	
J	34	40	47	55	63	75	
K1	17	20	23.5	27.5	31.5	37.5	
K2	68	73	83	94	106	126	
M	12	11	11	11	13	13	
N	26	30	33.5	39.5	45	53.5	
O	9.5	9.5	11	11	14.5	17.5	
P	9.5	9.5	6.6	6.6	8	11	
Q	15	15	17	17	17	18	
T	14	12	16	16	18	22	
ΦU	15	16	20	22	25	32	
V	8	8	8	9	9	10	
W	13	14	18	18	22	24	
X	M10	M10	M12	M12	M16	M16	
Hyd.port	G1/8"	G1/8"	G1/8"	G1/8"	G1/4"	G1/4"	
ring	4X2	4X2	4X2	6X2	6X2	6X2	
Contact bolt	WBA	12.5	12.5	16.5	16.5	21.5	30
	BB	4	4	6	6	8	9
	BC		11/11	14	15	20	28
	WBA	7.5	7.5	10	10	13.5	13.5
	TC	M10	M10	M12	M12	M16	M16
	WBA	5.5	6.5	8	8	9	10
	EE	13	10	10	15	16	16
FF	2	2	2.5	2	3	3	
Mounting dimension	CA	M5	M5	M5	M6	M10	M10
	CCB	2	2.5	3.5	3	5	5
with plug	CA		3.5		3.5	4.5	4.5
	CCB		14		14	18	18
Plunger spring housing dimension	GA	3.8	5.8	6	6.4	10	10
	GBB	8.5	8.5	10.2	10.2	14	14
	GC	9.5	10	12	21	16	14
	GD	8	6	6	6	12	12
	GE	2	2	2	2	2	2
	GF	19.5	7.5	20	29.5	30	39.5



## Features

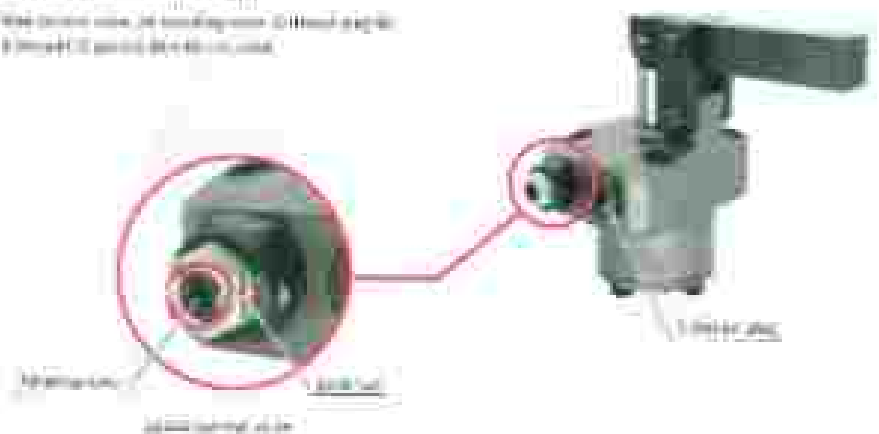
- This is a alloy steel body type with compact design.
- It can be directly mounted on to individual element type cylinders or
- Valve supports:
  - It is hydraulic & pneumatic mounting.
- These valves do not require external speed control.
- It can be individual equipment & very easy.
- It is available in G1/8, G1/4, 1/2" & 1/2" (maximum type allowed).

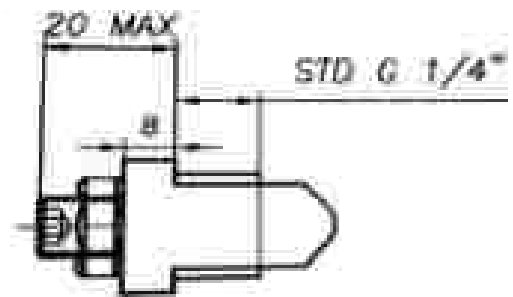


STD G 1/8" BSP

## Application Sample

- 2000psi maximum pressure
- The control valve, it working with different angle.
- It must be used the flow control.





## Application Sample

- Directly mounted to clamps

Flow control valve, air feeding valve, G thread 1/4" for G thread 1/4" application results



Speed control valve

4mm

1/4"



Tapered control valve

4mm

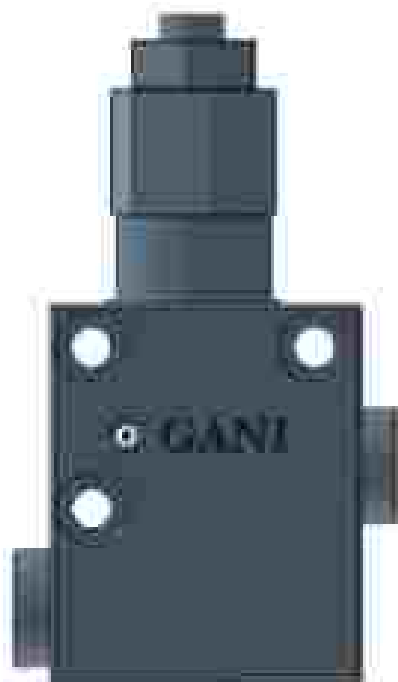
1/4"



G thread plug

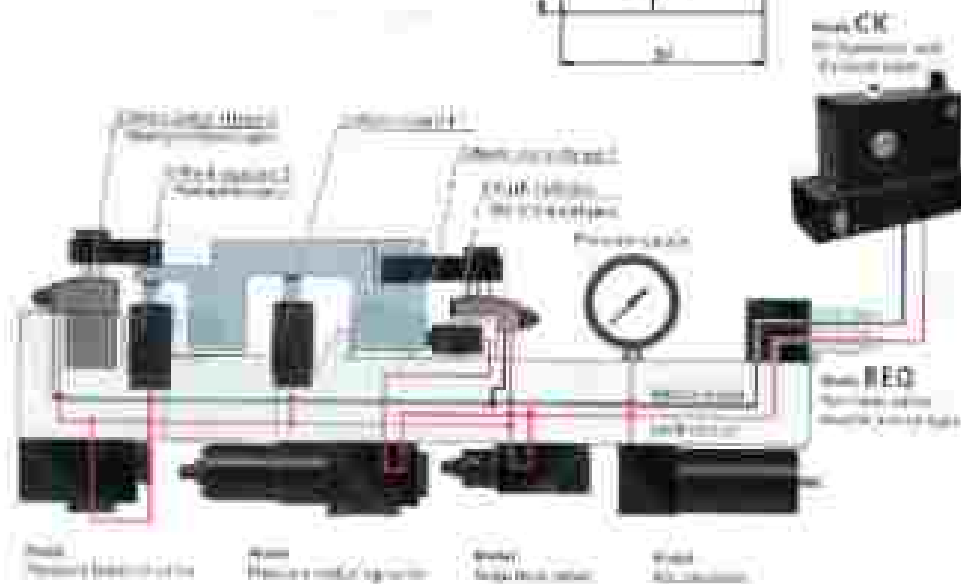
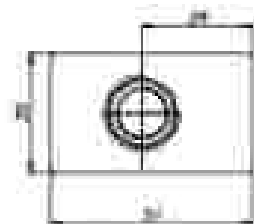
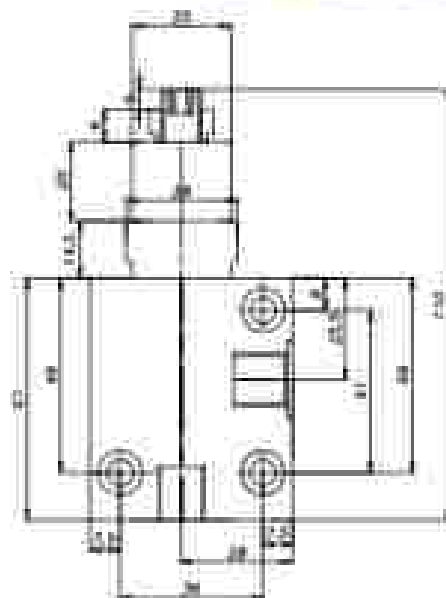
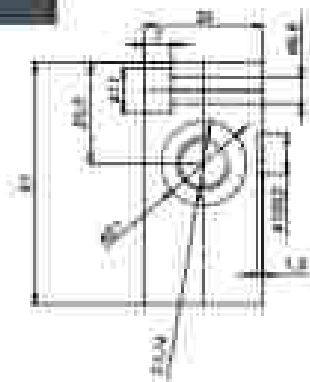
4mm

1/4"



### Features:

- This is a cartridge type with compact design.
- It has G1/4" port with alloy steel body.
- It is hydraulic 5/3 spool valve mounting.
- These valves can be used for external plating control.
- It can be used in the range of 1 MPa (minimum operating pressure)  
 10 MPa (maximum operating pressure)  
 70 bar N (pulling force)





# Tie Rod Cylinder

## Basic Cylinder



### Features:

- This is hydraulic basic cylinder with ranging from 63 mm bore onwards.
- It is used for bronze filled teflon seals with maximum speed & without sticking (50m/s/min).
- It can be used in the range of 110 bar (maximum operating pressure)
  - 12 m/min ( maximum reciprocating speed)
  - 3-5 bar (break away pressure)
  - 20mm (standard cushioning length)
  - 400m/min or less (minimum cushioning speed)

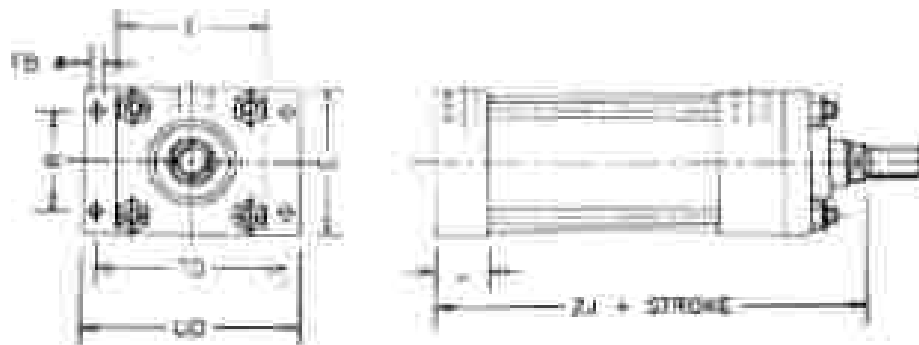






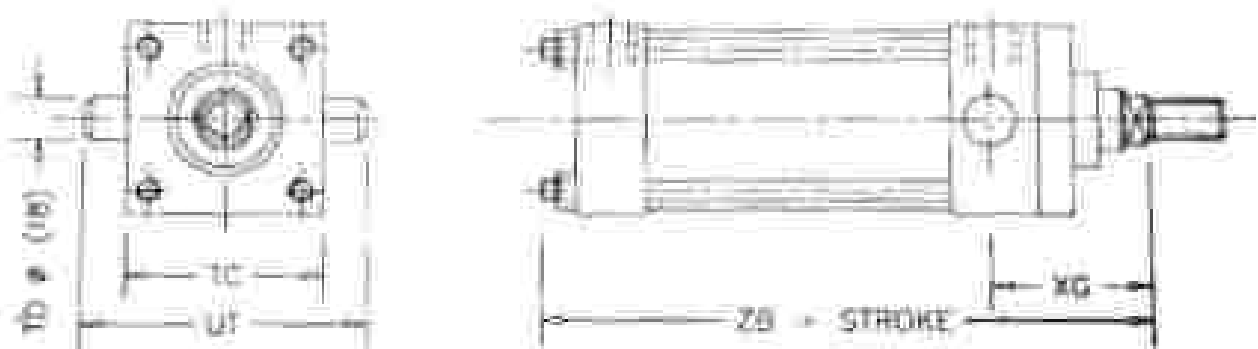


**ME6 - Cap Mounting Rectangular :**



BORE	E	FB	J	R	TD	UO	ZJ
25	40	5.5	20	27	51	65	114
40	63	11	30	41	87	110	153
50	75	14	32	52	105	130	159
63	90	14	32	65	117	145	168
80	115	18	38	83	149	180	190
100	100	18	38	97	162	200	203

**MT1 - Head Mounting integral Trunnion :**



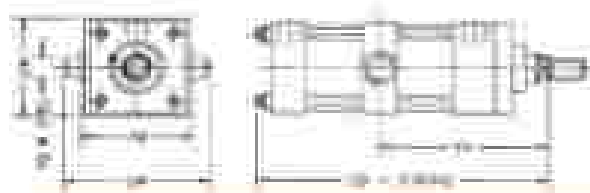
BORE	TC	TD	UT	XG	ZB
25	38	12	58	44	121
40	63	20	95	57	166
50	76	25	116	64	176
63	89	32	139	70	185
80	114	40	178	76	212
100	127	50	207	71	225

# Tie Rod Cylinder

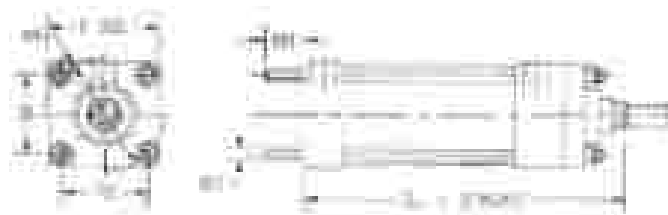
TYPE 1 - NO. 1 (ROD END) (D=50mm)



TYPE 2 - NO. 2 (ROD END) (D=50mm)



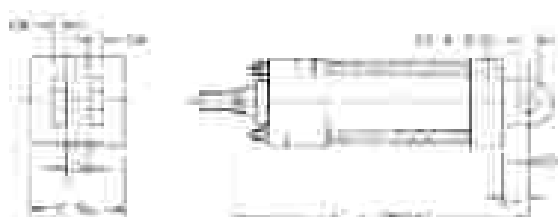
TYPE 3 - NO. 3 (D=50mm)



TYPE 4 (D=50mm) WITH EXHAUST



TYPE 5 (D=50mm)



TYPE 6 (D=50mm)



**External Dimension Table:**

All dimensions in mm

BORE	TC	TD	UT	XU	ZB
25	38	12	58	101	171
40	53	20	95	134	166
50	76	25	115	140	176
63	89	32	139	149	185
80	114	40	178	168	212
100	127	50	207	187	225

BORE	TD	TM	UM	UW	XV	ZB
25	12	48	68	63	To be specified	121
40	20	75	108	92		155
50	25	89	129	112		176
63	32	100	150	125		185
80	40	127	191	160		212
100	50	140	220	180		225

BORE	AA	BB	DD	E	TG	ZI
25	40	19	M 5X0.8	40	28.3	114
40	59	25	M 8X1.0	63	41.7	153
50	74	46	M 12X1.25	75	52.3	159
63	91	46	M 12X1.25	90	64.3	168
80	117	59	M 16X1.5	115	82.7	190
100	137	59	M 16X1.5	130	96.9	203

BORE	AA	BB	DD	E	TG	ZI
25	40	19	M 5X0.8	40	28.3	114
40	59	25	M 8X1.0	63	41.7	153
50	74	46	M 12X1.25	75	52.3	159
63	91	46	M 12X1.25	90	64.3	168
80	117	59	M 16X1.5	115	82.7	190
100	137	59	M 16X1.5	130	96.9	203

BORE	A		CB	CD	CW	F	I	MR	XC
25	14		12	10	6	40	13	12	127
40	18	28	20	14	10	63	19	17	172
50	22	36	30	20	15	75	22	29	191
63	28	45	30	20	15	90	32	29	200
80	36	56	40	28	20	115	39	34	229
100	45	63	50	36	25	130	54	50	257

BORE	A		CD	F	CW	I	MR	XC
25	14		10	40	12	13	12	127
40	18	28	14	63	20	19	17	172
50	22	36	20	75	30	32	29	191
63	28	45	20	90	10	32	29	200
80	36	56	28	115	40	39	34	229
100	45	63	36	130	50	54	50	257

## Low Rpm Hydraulic Rotary Union

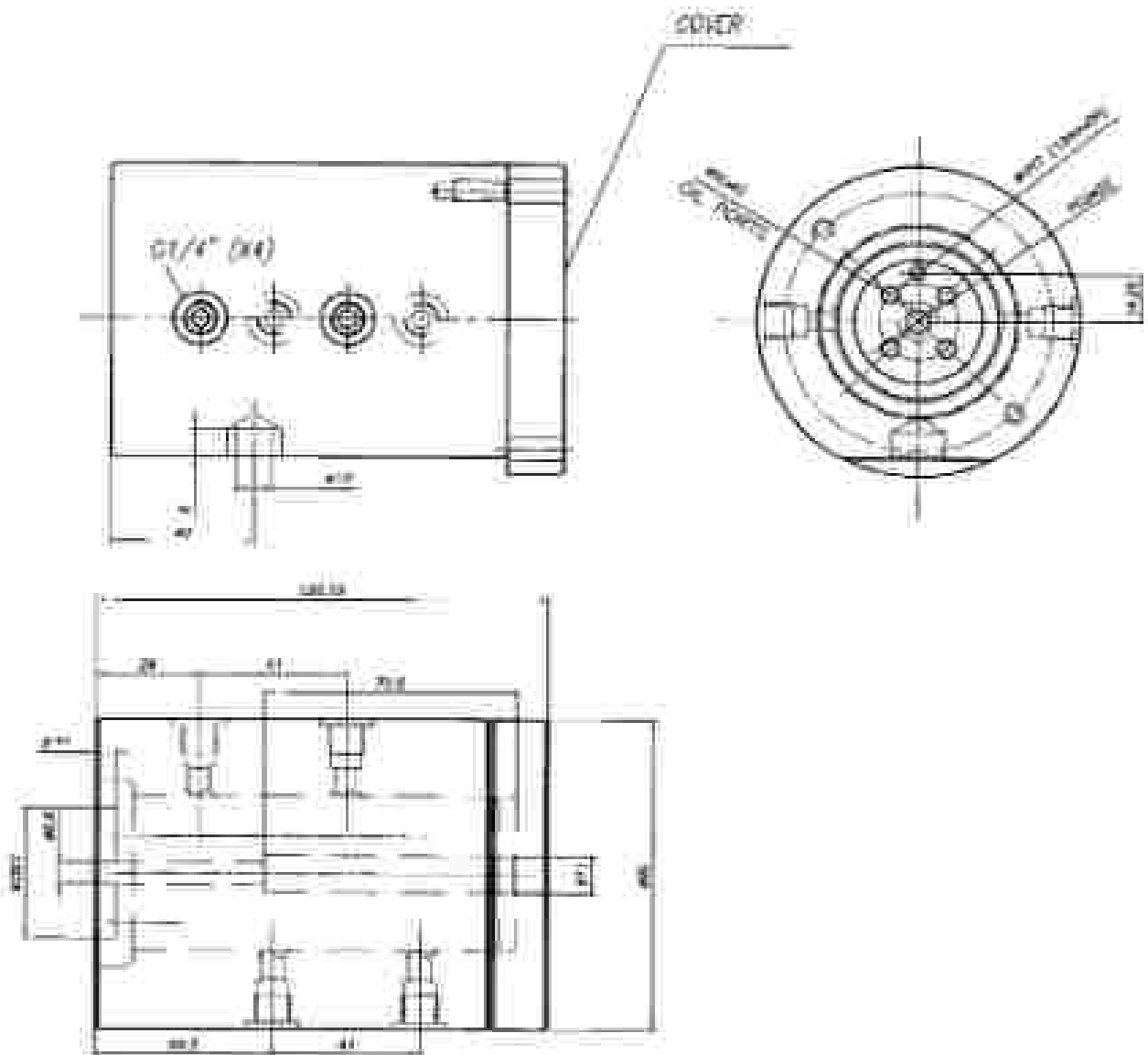


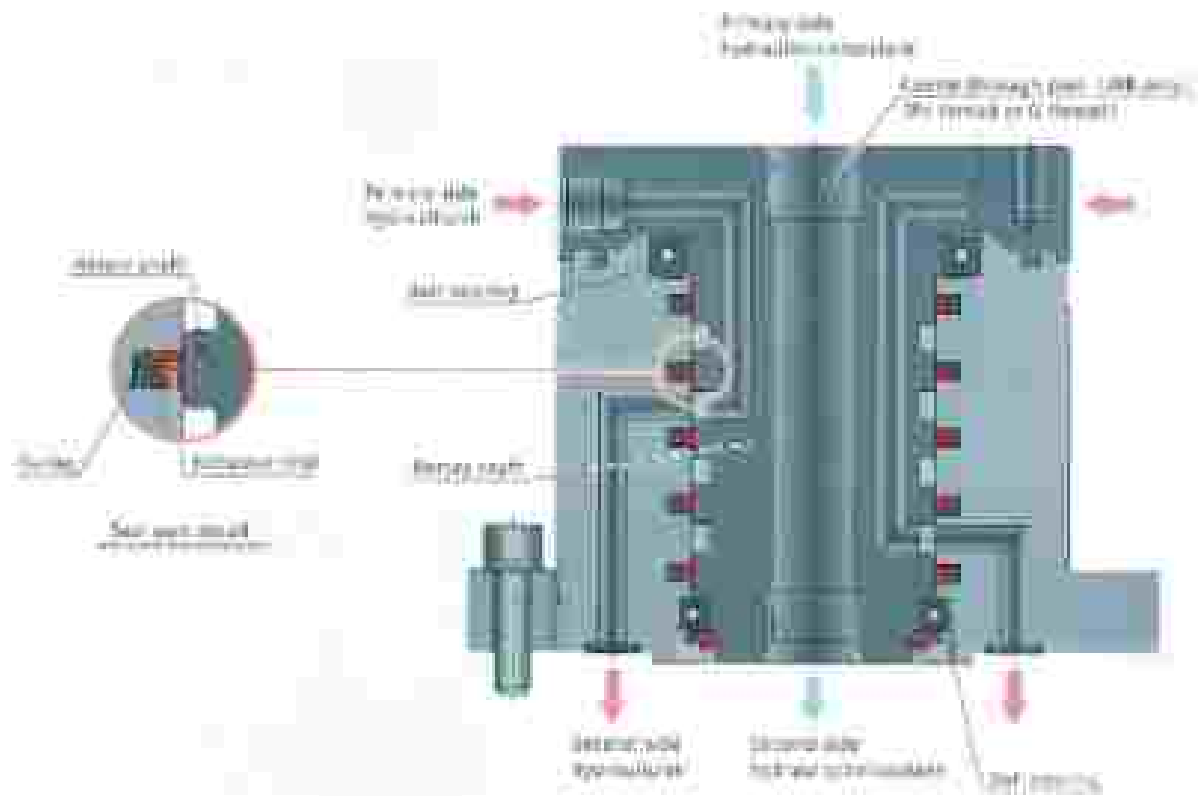
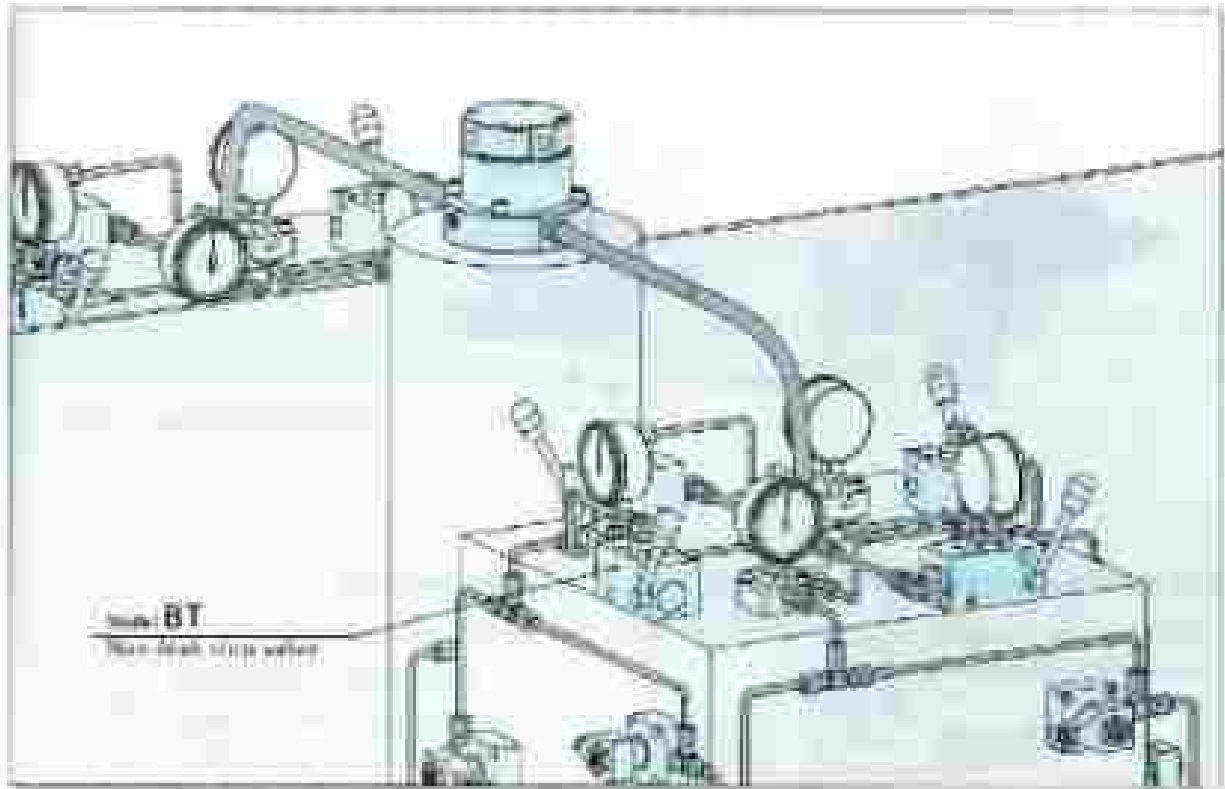
### Features:

- This is hydraulic 4 port type with contact design.
- It is a 1 1/4 port housing with alloy steel body
- These distributors can be mounted through single screw from pack side
- It can be used in the range of 1-30 MPa (maximum operating pressure)  
10 liter / maximum flow allowed  
15 rpm  
70 bar N (pushing force)

### Applications:

- It is used for carry & de-stamp of connections through rotating medium
- Used for air & oil connections (in parallel)
- It can be available in 2 port (min) to 12 port (max) design





## ⚠ Cautions

### 1. Note for design

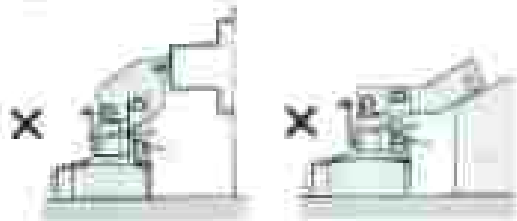
1. Check the design.
  - Make correct parts according to the specifications.

### 2. Caution for installation

- **Rotation** : Speed motor should be fully stopped every 10 min to prevent motor overheating and damage.
- **Load** : Do not exceed 1/3 of maximum load of gears of the belt and motor part (refer to manual).

### 3. Steps for installation

- **Make sure the correct installation position** : Make sure the correct installation position on the ceiling (see page 11). Then the installation in the floor hole will be easy. A safe bearing structure must be prepared and must be secured.

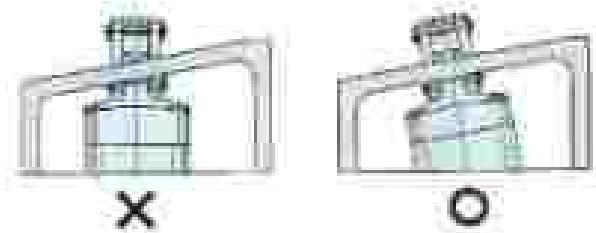
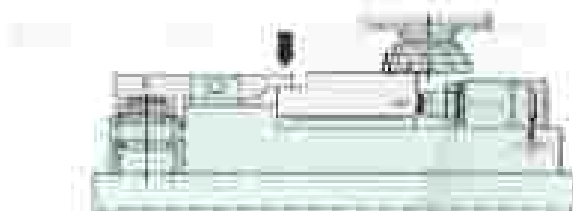


- **Remove the offset distance** : Push down the fan blower if required, and the offset distance provided by the motor is up.

- 1) **Steps for wiring from a wall** : An offset amount must be given to the ceiling.
  - If you cut the hole, make a cut with a utility knife and a utility knife.

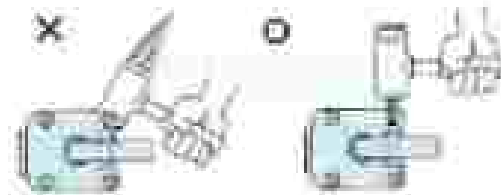
### 2) After connecting a 3-phase system on the motor

- Make sure the correct phase of the wiring surface on the motor is correct.



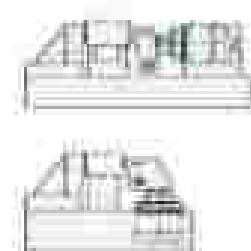
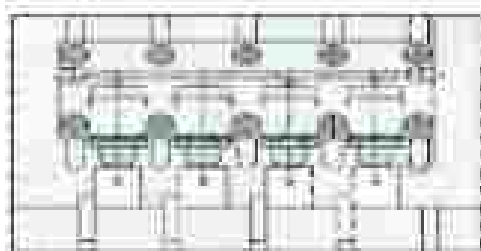
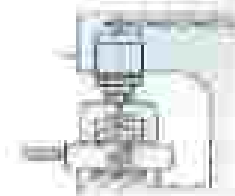
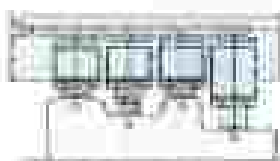
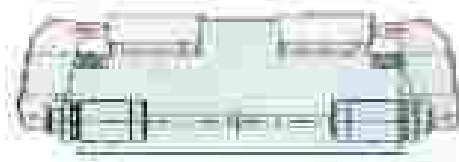
### 2. After using as a dry cleaning unit

- The unit must dry out before it is put into use as a special job. Contact us for the specifications for special jobs.



### 3. Speed adjustment

- **Check the speed of the W and L on the motor** : When the motor is running, check the speed of the W and L on the motor. Because the fan speed is high, it may be dangerous.
  - **Precaution** : Be careful when touching the fan. The motor fan is hot. Do not touch the fan when the motor is running.
  - **Use the correct speed value of the fan** : The correct speed value of the fan is 1500 rpm (1/2) and 3000 rpm (1/4) when the motor is running.



## D. Coupler Unit

Product Code - DCU-14



## Pull Down Cylinder

Product Code - PDSC-15





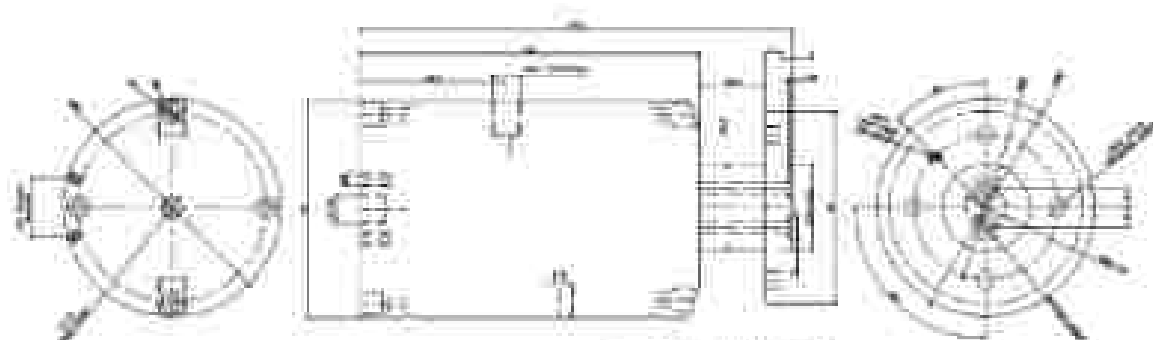
## Rotary

Rotary Joints Rotary Joints convey Fluid Under Pressure fro a stationary source to a rotating system or vice versa. They are also referenda Rotating unions, Rotary couplings, Swivel Joints etc.

We also provide Customised solutions for individual applications based on the specific operating parameters demanded by each customer designs / application.

## Applications

- Earth moving Equipments
- Material Handling Equipments
- Machine Tools
- Hydro Electric Turbines
- Special Purpose Machines
- Robotics & Automation
- Mobile Cranes
- Wagon Tiplers
- Test Rigs & Simulators
- Automation
- Mining Equipments.



1. High pressure inlet
2. High pressure outlet
3. Low pressure inlet
4. Low pressure outlet
5. Seal and bearing tracks





## Rotary

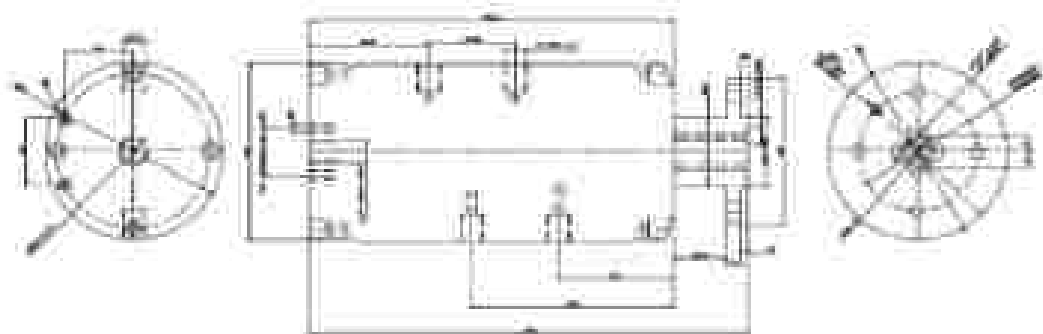
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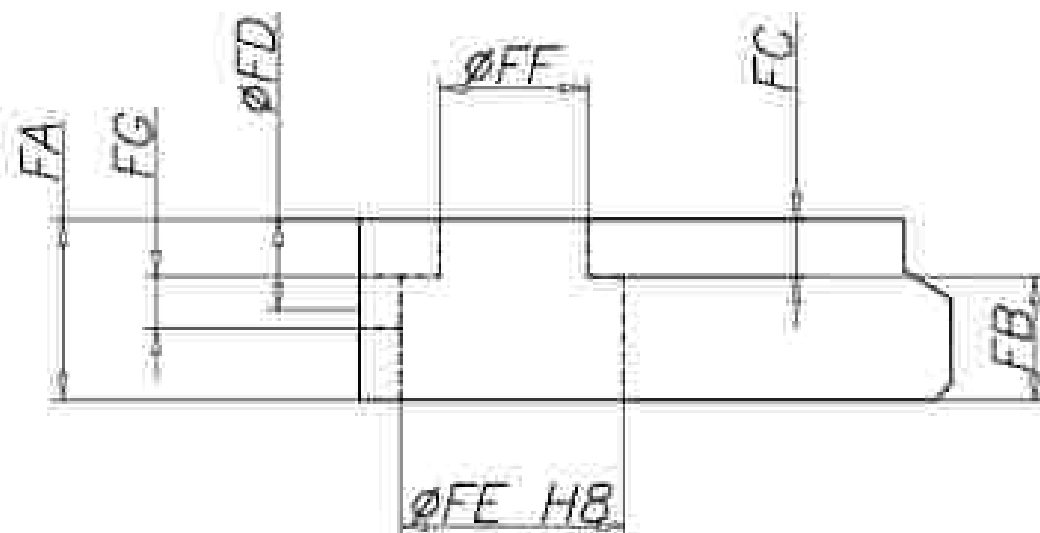
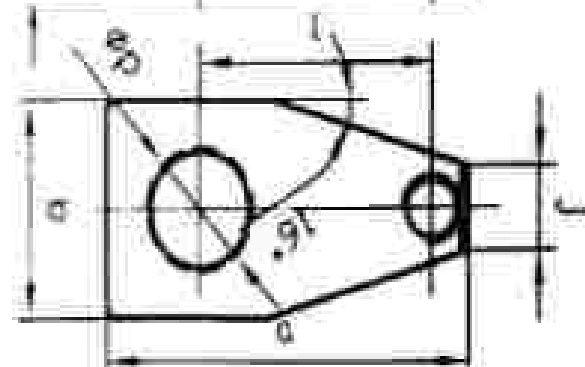
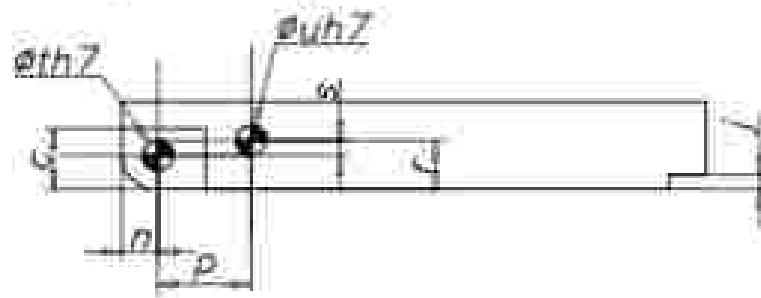
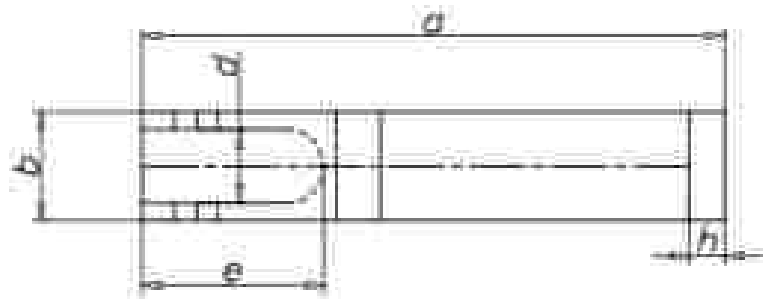
## Applications

- Earth moving Equipments
- Material Handling Equipments
- Machine Tools
- Hydro Electric Turbines
- Special Purpose Machines
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- Mobile Cranes
- Wagon Tiplers
- Test Rigs & Simulators
- Automation
- Mining Equipments

FIGURE 10.16 HRU-17



# ACCESSORIES



### Clamp Arm table Standard:

Model	90RH	TC01-360	TC01-400	TC01-460	TC01-550	TC01-650	TC01-750	TC01-900	TC01-135
	90LH								
a		70	75	85	90	105	110	150	200
b		10	12	12	16	19	22	25	32
c		13	14	16	20	25	32	38	45
d		5	6	6	8	10	11	13	16
e		13	14.5	16	17	22	26	31	36
f		10	12	13	17	18	21	26	31
h		10.5	13	13	17	22	25	31	38
j		3	3	3	4	5	5	6	8
n		4.5	5.5	6	6	8	10	11	13
p		14.5	16	18.5	21	24.5	30	36	44
r		4.5	5.5	6	6	8	10	11	13
s		2.5	2.5	3.5	6	7.5	9.5	13	16
pt		5	6	6	6	8	10	12	15
pu		5	6	6	6	10	12	15	18

### Clamp arm table without sleeve Standard:

Model	90RH	SC02-361 R	SC02-401 R	SC02-461 R	SC02-552 R	SC02-651 R	SC02-751 R	SC02-901 R	SC02-1351 R
	90LH	SC02-361 L	SC02-401 L	SC02-461 L	SC02-552 L	SC02-651 L	SC02-751 L	SC02-901 L	SC02-1351 L
a		50	56.5	65.5	77	91.5	105	127	152
b		26	28	35	38	50	58	75	90
c		11	11	16	22	27	38	44	60
d		13	14	17.5	19	25	26	38	45
e		3	3	3	3	3	5.5	5.5	5.5
i		32	36.5	42	50	56.5	65	75	90
j		10	12	12	17	19	22	27	32
n		M5	M6	M6	M8	M8	M10	M12	M18
pu		15	18	22	25	30	35	45	55

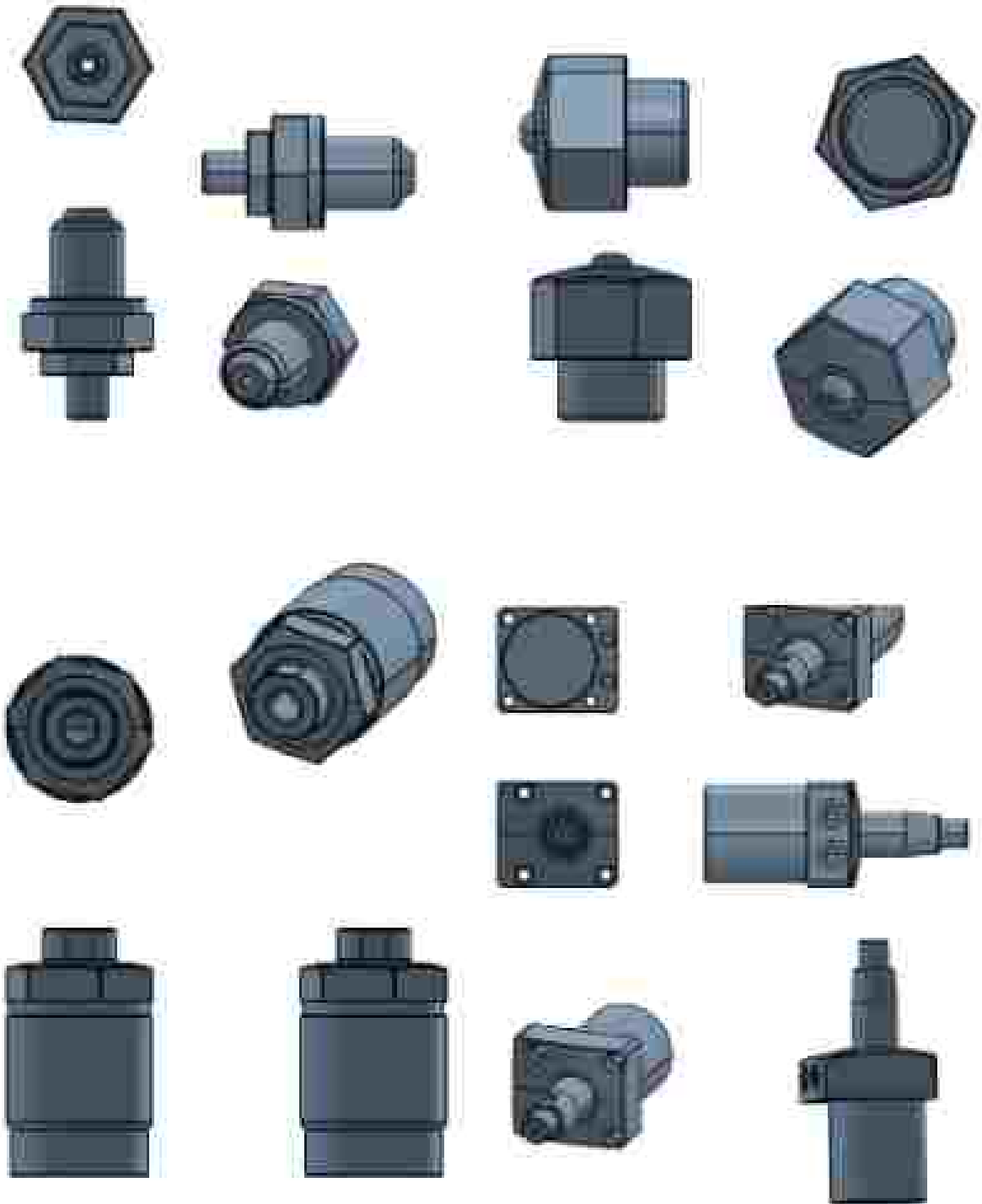
### Clamp arm table with sleeve Standard:

Model	90RH	SR03-361 R	SR03-401 R	SR03-461 R	SR03-551 R	SR03-651 R	SR03-751 R	SR03-901 R	SR03-1351 R
	90LH	SR03-361 L	SR03-401 L	SR03-461 L	SR03-551 L	SR03-651 L	SR03-751 L	SR03-901 L	SR03-1351 L
FA		12	16	19	25	25	32	38	45
FB		9.5	13	15	21	21	27	33	39
FC		2.5	3	4	4	4	5	5	6
FD		4.3	5.3	6.3	8.3	7.5	11.5	9.5	10.5
FE		17	20	25	28	34	40	48	60
FF		13.9	16.7	20.6	23	28	32.9	44.8	51.7
FG		4	5	5	6	6	8	8	8

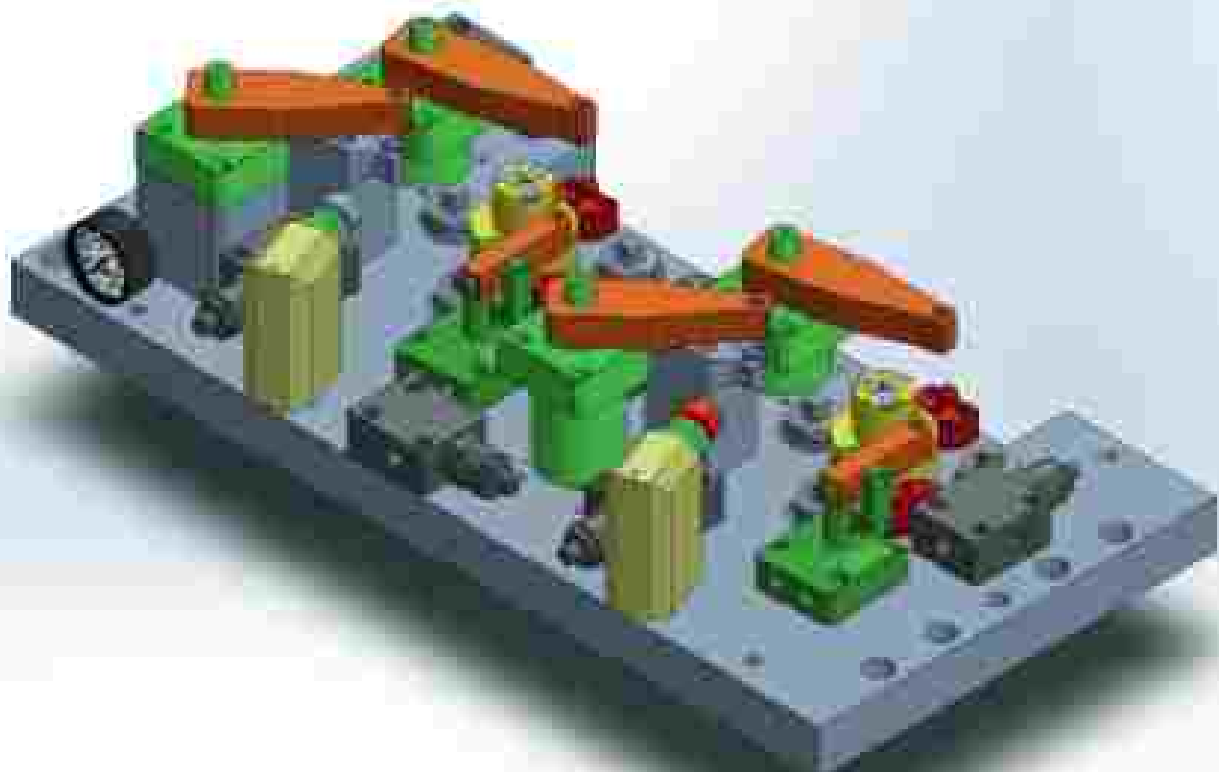
# SPECIAL ROTARY



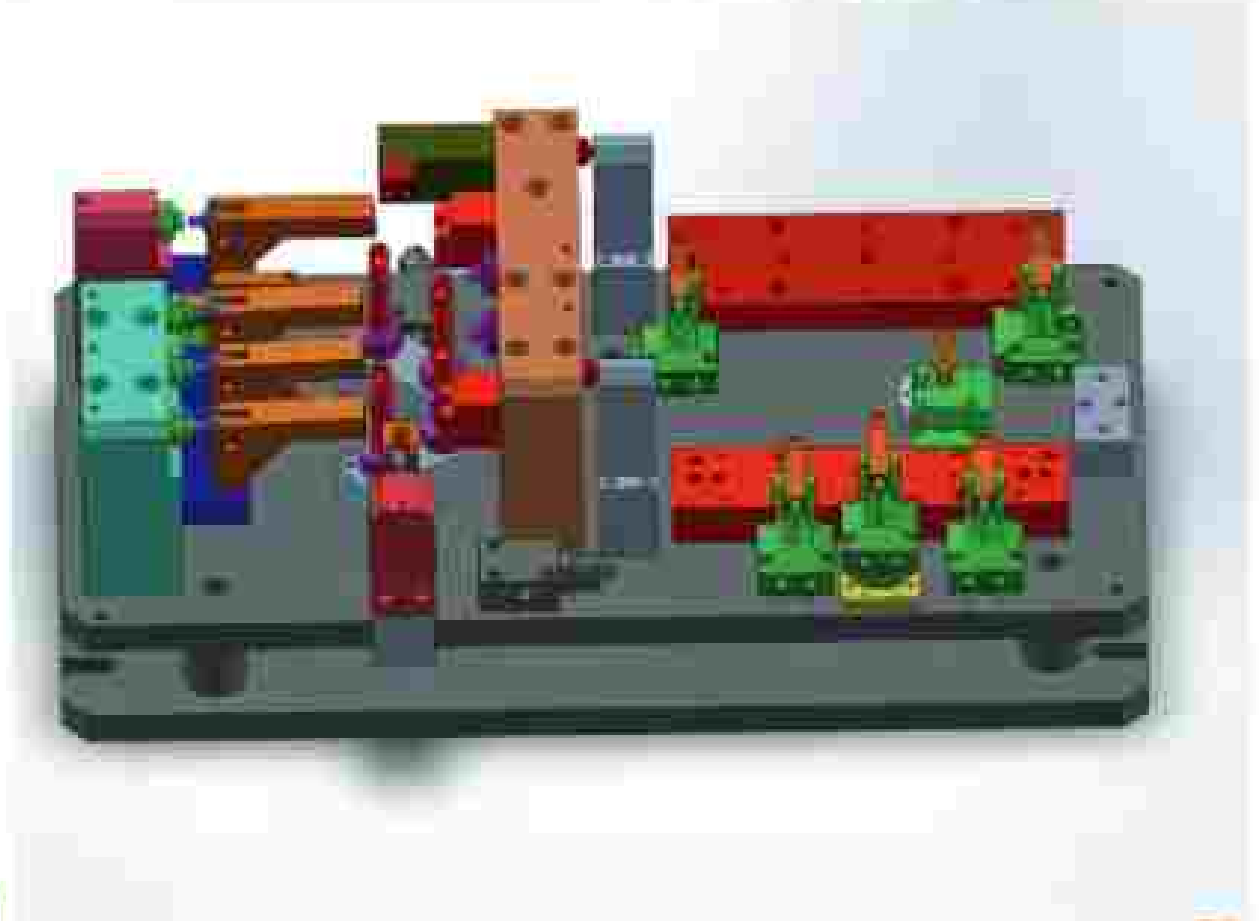
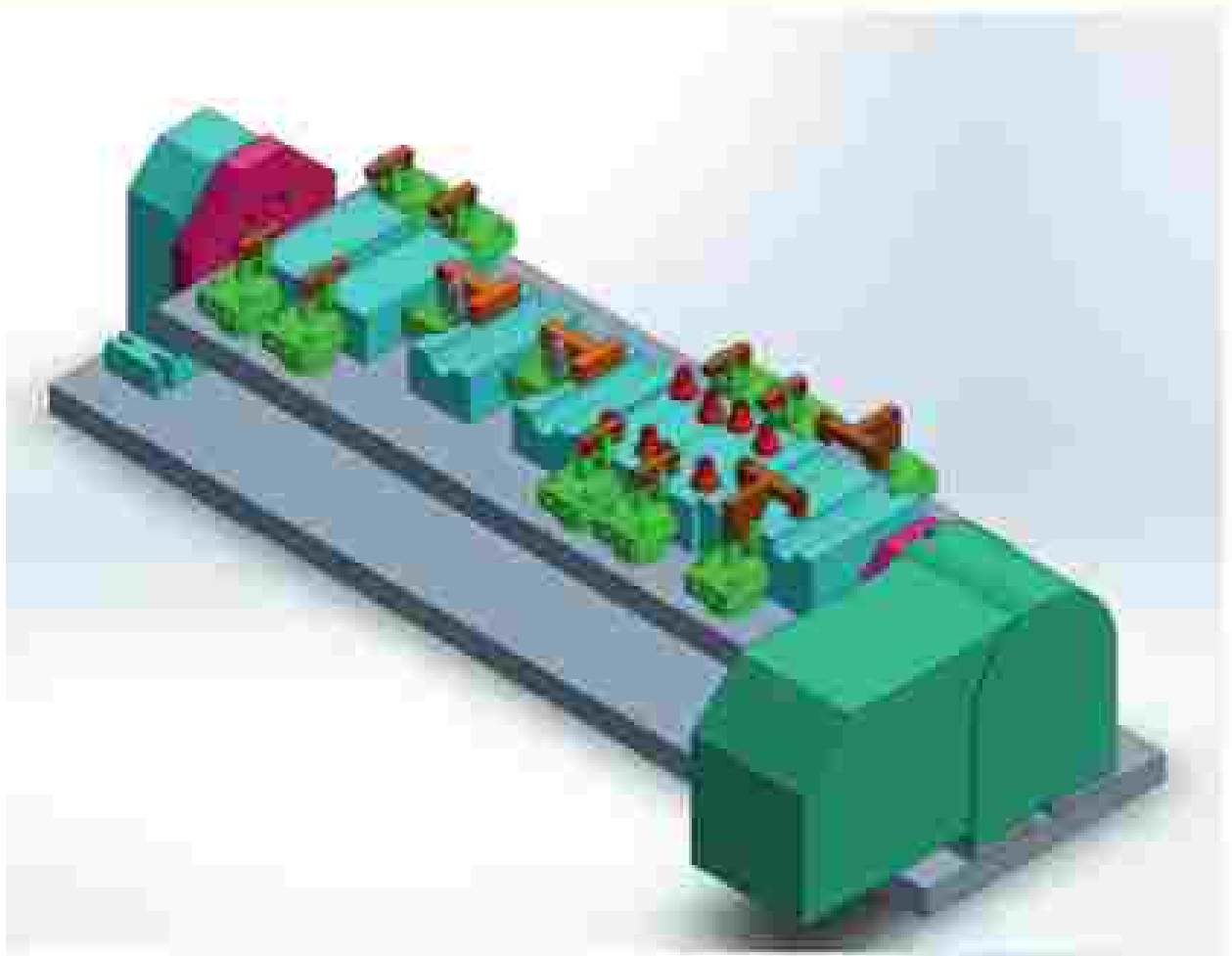
# PRODUCTS



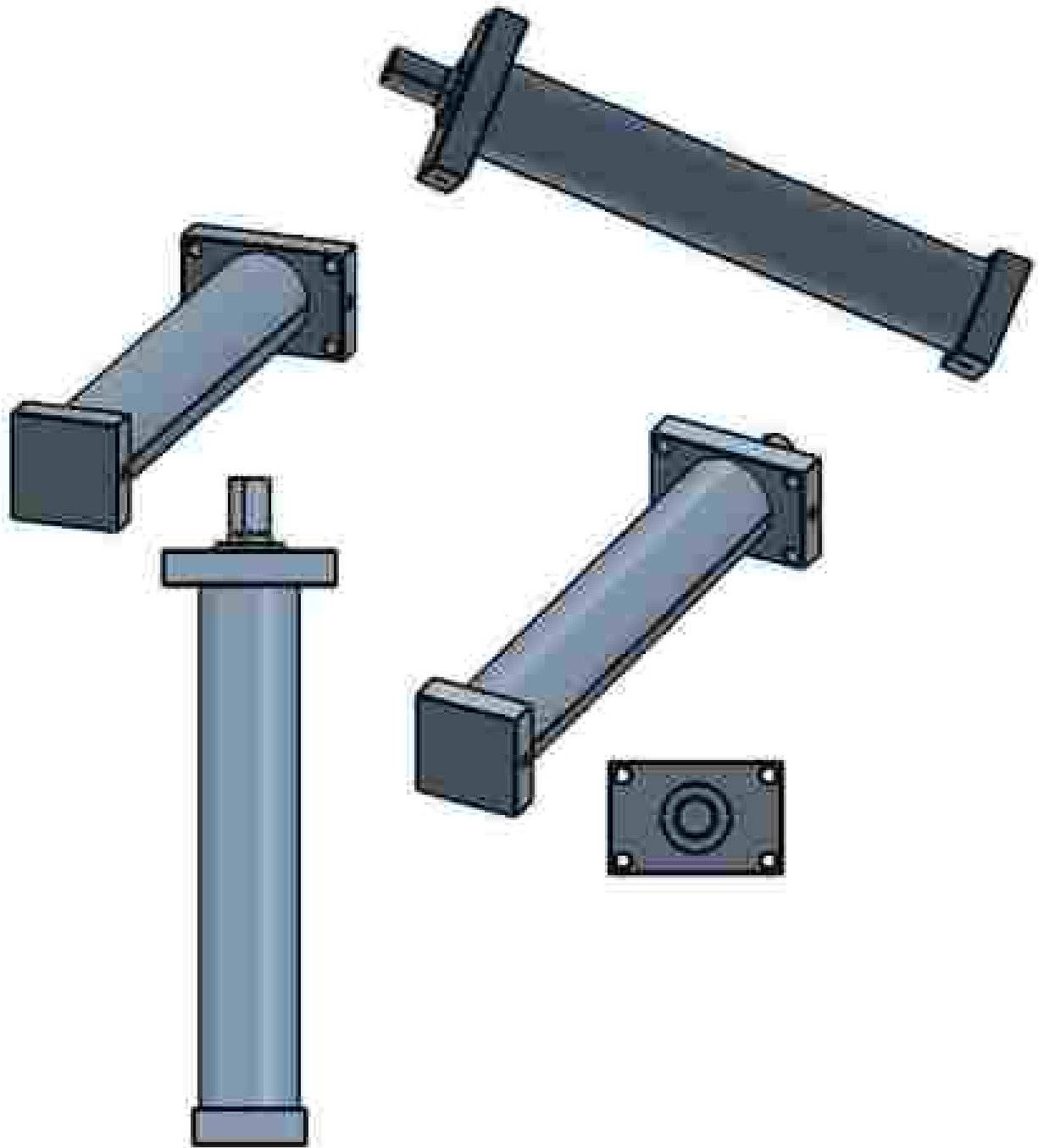
# APPLICATIONS



## APPLICATIONS

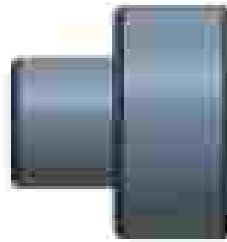
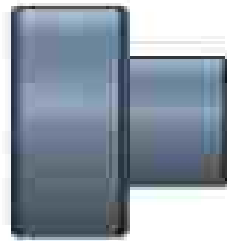
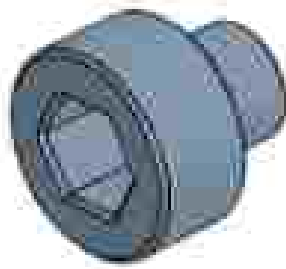


## TIEROD CYLINDERS

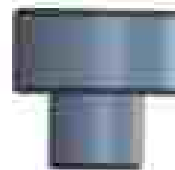
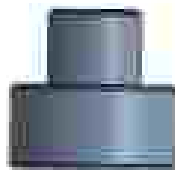




## CALLER PLUGS 1/4



## CALLER PLUGS 1/8



- 3D modelling and Design analysis before Prototyping for reduced development cycle;
- Specially designed and Made to order cylinders with Specific strokes and sizes on customer request.
- Extremely Compact design and space saving mountings !
- Hydraulic Testing of all clamping cylinders between 15 to 120 N/m to assess reliability and performance.
- Use of high quality seals ensures long Operating life & Leak Proof, Sustained operation.
- Hydraulic units, capable of lifting, rotating, tilting and moving of work pieces.
- Pressing devices for riveting
- A selective range of Work Supports with a range of mountings to enhance the solutions that can be offered to the customer.
- Any type of linear motion or actuation is possible.
- Spares & Accessories are standardised and easily available
- Highly efficient Applications, Sales & Service teams



## High Speed Rotary:

There is no filter provided with this product to prevent foreign materials & contaminants from getting into the hydraulic system & pipes.

## Cautions for Use:

1. The product should be operated by persons with the necessary knowledge & experience.
2. Do not take the equipment apart or modify it. If the equipment is taken apart or modified the warranty will be void, even within the warranty period.

## Warranty:

### Warranty period.

The product warranty period is for 1.5 years after shipment from our plant or 1 year of use, whichever is shorter.

### Warranty scope.

Defects or failures caused by the following are not covered.

1. Proper maintenance & inspections were not performed.
2. The product was used in an imperfect state at the decision of the user.
3. The user did not use or handle the product properly. (including damages caused by a third party)
4. The cause was due to some factor other than our product.
5. The product was modified or repaired by another company or was modified or repaired without our approval or confirmation.
6. The damage or defect was caused by natural disaster or accident through no fault of our own.
7. Parts & replacements necessary due to wear & tear. (rubber, plastic, sealant, ceratin electrical components, etc.)



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[sales@ganimarketing.com](mailto:sales@ganimarketing.com) | [gani.marketing1@gmail.com](mailto:gani.marketing1@gmail.com)

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