Light Duty Tie Rod Hydraulic Cylinder Model Description

MOB – R – D – 63 X 25 X 100 LB + Y

Type	
MOB	Standard
MOD	Double Rod

Non: Without Magnet
R: With Magnet

Cushions
Non:
D:Both rods
F:Head
B:Cap

Bore
Φ32
Φ40
Φ50
Φ63
Φ80
Φ100
Φ125

Standard	Max
Φ16	-
Φ20	Φ25
Φ20	Φ30
Φ25	Φ35
Φ30	Φ40
Φ35	Φ50
Φ50	Φ60
Non: Standard	

Stroke
Standard Stroke(mm)
50,100,150,200
250,300,350,400
450,500,600,700
800,900,1000

Cylinder Mounting	
FA	Front Flange
FB	Cap Flange
LB	Side End Angles
TC	Intermediate Fixed Trunnion
TA	Front Trunnion
CA	Detachable Eye
CB	Detachable Clevis
CBP	Detachable Clevis+Pin
CAB	CA+PIN+CB

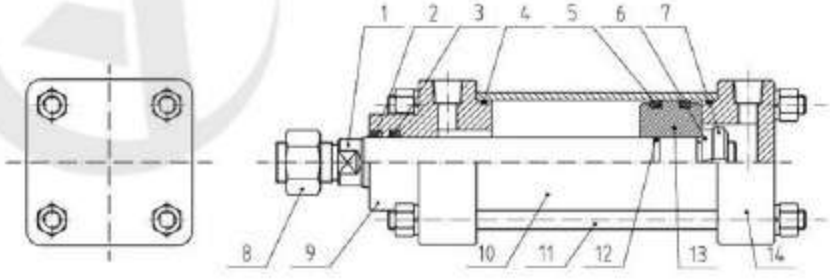
Piston rod end connecting type	
Y	Female Rod Clevis
YP	Female Rod Clevis+PIN
I	I Connecting
KG	Float Connecting
PHS	Spherical Rod Eye
T	T Connecting
H	Welded Bushing
A	Adjustable Nut

Features

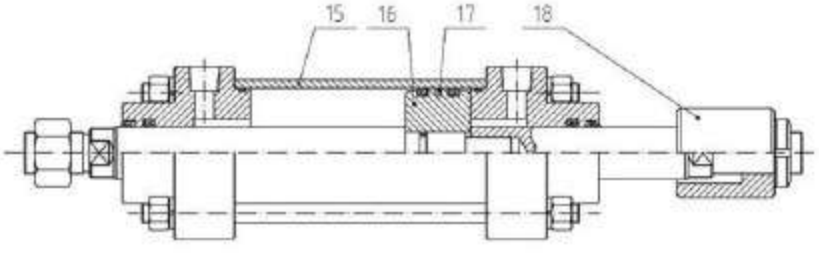
Bore Size	Φ32	Φ40	Φ50	Φ63	Φ80	Φ100	Φ125
Working Medium	Clean Standard Hydraulic Oil						
Cylinder Barrel Material	20#Carbon Steel/SUS304						
Operating Pressure Range	0.8–7.0MPa(116–1000PSI)						
Temperature Range	-10 – + 60(℃)						
Speed Range	0–300(mm/s)						
Standard Piston Length(PM)	30	30	30	35	35	50	50
Piston Length (PM)1501–2500mm	60	60	60	60	70	100	100
Piston Length (PM) 2501–4000mm	120	120	120	120	140	150	150

Construction Drawing

MOB

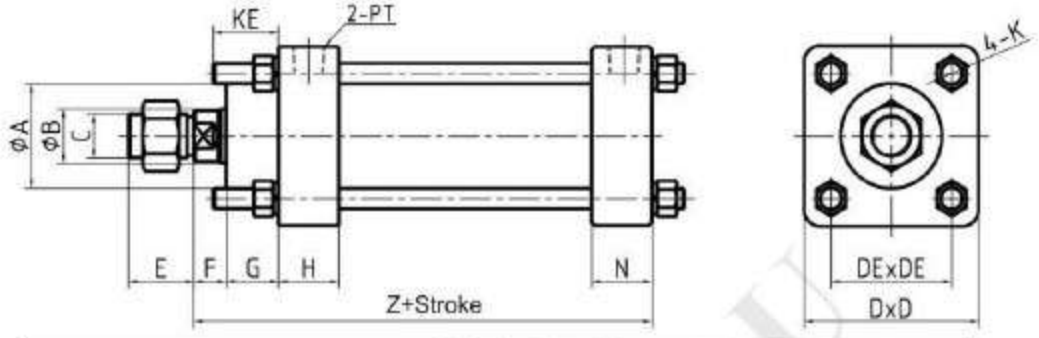


MOD



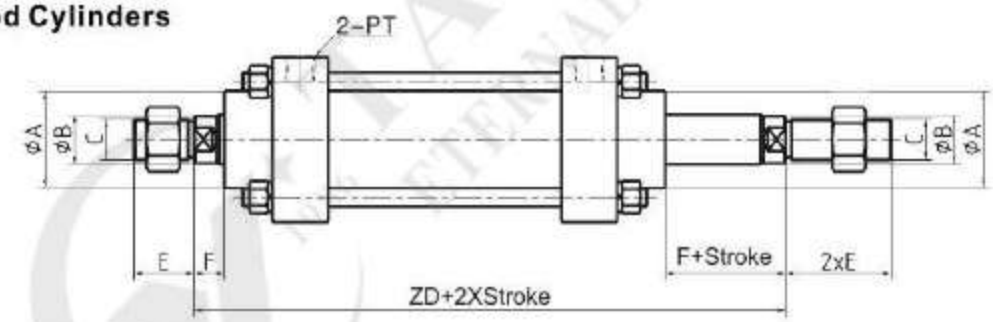
No	Part Name	Qty.	No	Part Name	Qty.	No	Part Name	Qty.
1	Piston	1	7	Nut	1	13	Piston	1
2	Dust Wipe	1	8	Rod Nut	1	14	Cap Cover	1
3	Rod Seal	1	9	Head Cover	1	15	Cylinder Barrel	1
4	O-Ring	2	10	Cylinder Barrel	1	16	Piston	1
5	Piston Seal	2	11	Tie Rod	4	17	Magnetic Ring	1
6	Spring Washer	1	12	O-Ring	1	18	Adjustable Nut	1

Tie Rods Extended

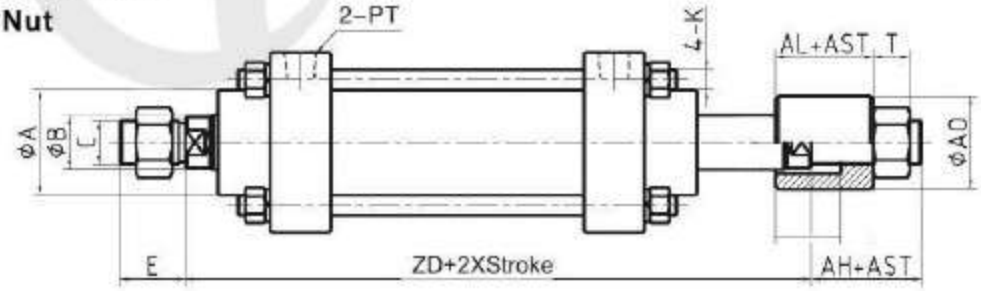


Tie Rods Extended														
Bore	ΦA	ΦB	C	D	DE	E	F	G	H	N	PT	K	KE	Z
Φ32	32	16	M14 x P1.5	50	36	28	13	15	24	24	1/4	M8	30	128
Φ40	40	20	M16 x P1.5	64	45	28	17	20	29	29	3/8	M8	30	147
Φ50	45	20	M16 x P1.5	70	50	28	17	20	29	29	3/8	M10	40	147
Φ63	55	25	M22 x P1.5	85	60	40	20	30	29	29	3/8	M10	40	167
Φ80	62	30	M26 x P1.5	106	74	40	20	32	35	33	1/2	M12	60	179
Φ100	78	35	M30 x P1.5	122	89	45	20	32	40	37	1/2	M14	60	209
Φ125	85	50	M40 x P1.5	147	110	55	25	31	40	40	1/2	M16	70	216

Double Rod Cylinders



Double Rod Cylinders+ Adjustable Nut

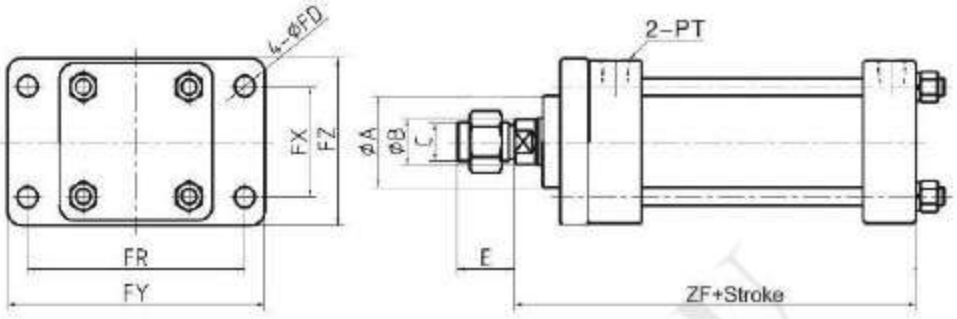


Bore	ΦA	ΦB	C	□D	□DE	E	F	PT	K	Z	AO	AH	AL	ZD
Φ32	32	16	M14 x P1.5	52	36	28	13	1/4	M8	128	30	25	30	156
Φ40	40	20	M16 x P1.5	64	45	28	17	3/8	M8	147	35	25	35	184
Φ50	45	20	M16 x P1.5	70	52	28	17	3/8	M10	147	35	25	35	184
Φ63	55	25	M22 x P1.5	85	60	40	20	3/8	M10	167	45	35	40	212
Φ80	62	30	M26 x P1.5	106	74	40	20	1/2	M12	179	50	35	40	233
Φ100	78	35	M30 x P1.5	122	89	45	20	1/2	M14	209	60	40	45	258
Φ125	85	50	M40 x P2	147	115	55	25	1/2	M16	217	80	50	55	272

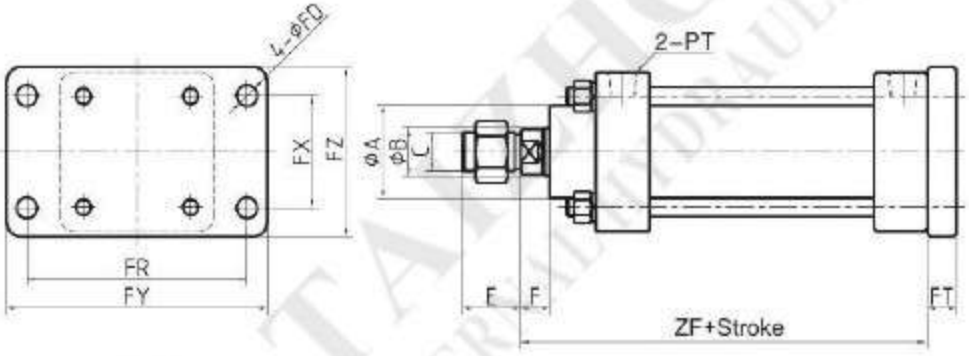
Remark:

1. If rod diameter need to be enlarged, the rod length will make according to the standard, unless otherwise specified.
2. An extra base need to fix between the head and cap when stroke≥2000mm
3. The rod screw is need to large to be M18 x P1.5 when the bore size Φ=40 or 50mm, and stroke ≥500mm
4. AST means the adjustable stroke specified by the customers

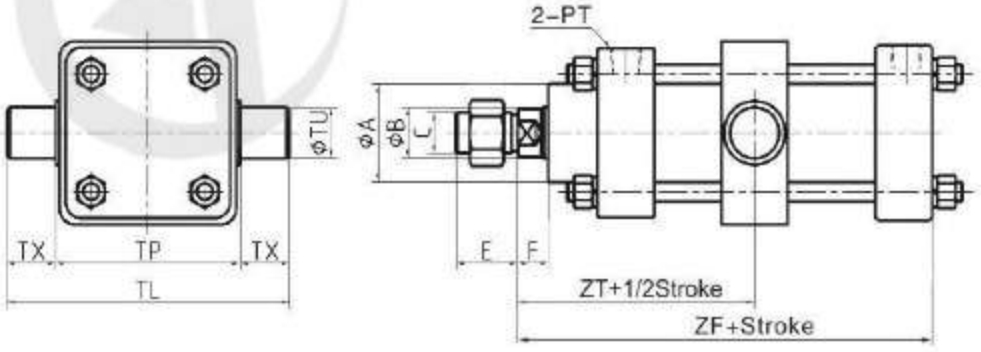
FA Head Flange



FB Cap Flange

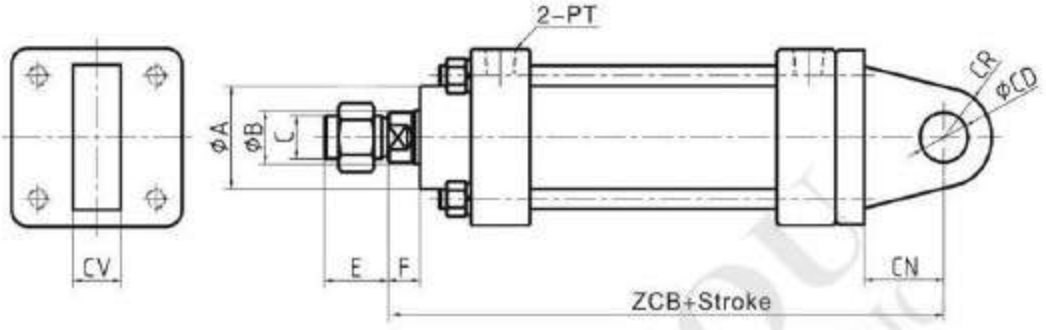


TC Intermediate Fixed Trunnion

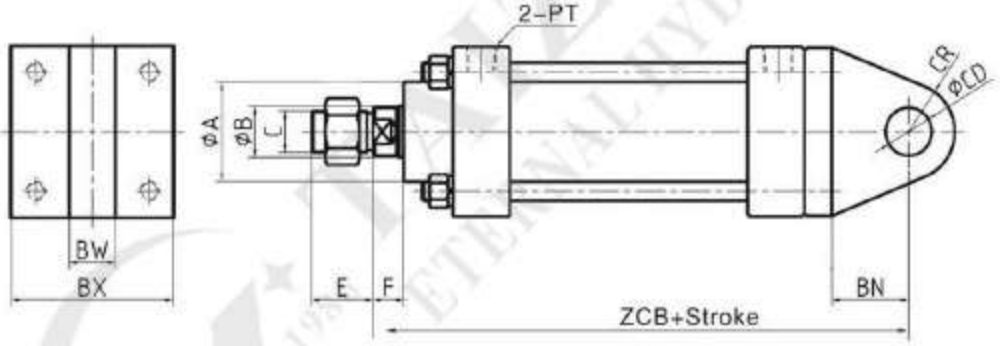


MOB Type								FA、FB Type							TC Type				
Bore	ΦA	ΦB	C	E	F	H	PT	ZF	ΦFD	FT	FR	FX	FY	FZ	ZT	TL	TP	ΦTU	TX
Φ32	32	16	M14×P1.5	28	13	24	1/4	128	9	11	80	36	105	54	80	91	59	16	16
Φ40	40	20	M16×P1.5	28	17	29	3/8	147	12	11	93	50	115	72	92	127	69	18	29
Φ50	45	20	M16×P1.5	28	17	29	3/8	147	12	11	93	52	115	72	92	153	83	20	35
Φ63	55	25	M22×P1.5	40	20	29	3/8	167	14	14	117	60	140	90	106	170	98	25	36
Φ80	62	30	M26×P1.5	40	20	35	1/2	179	14	20	152	74	180	108	119	194	124	28	35
Φ100	78	35	M30×P1.5	45	20	40	1/2	209	16	20	158	89	200	125	129	222	142	30	40
Φ125	85	50	M40×P2	55	25	40	1/2	217	18	20	184	110	225	153	136	255	175	32	40

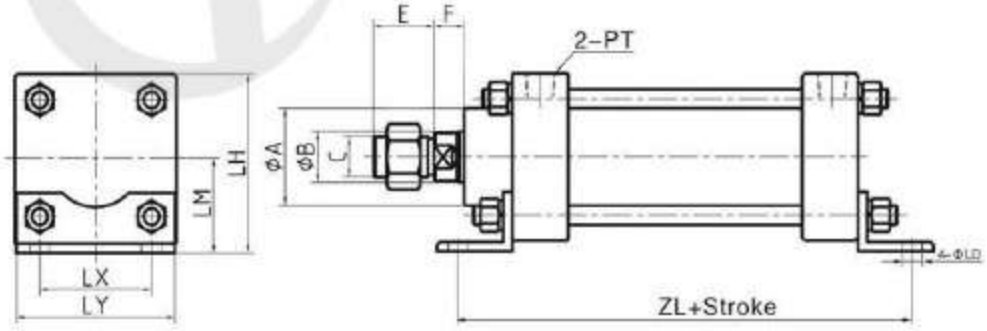
CA Cap Detachable Eye



CB Cap Detachable Clevis

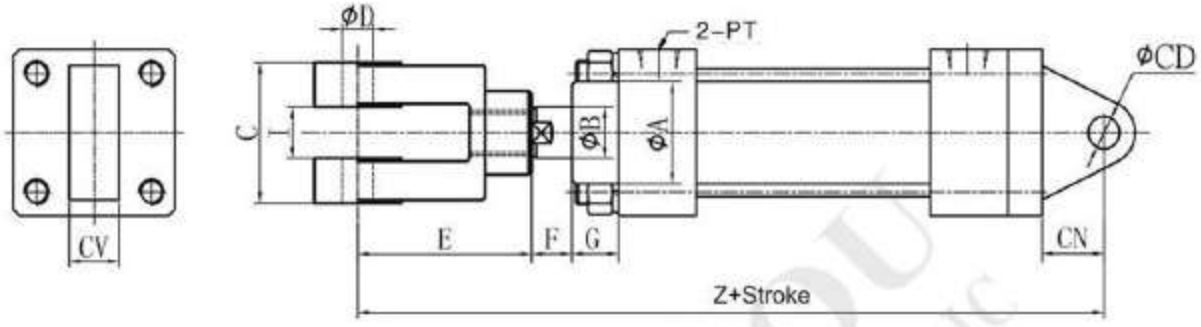


LB Side End Angles



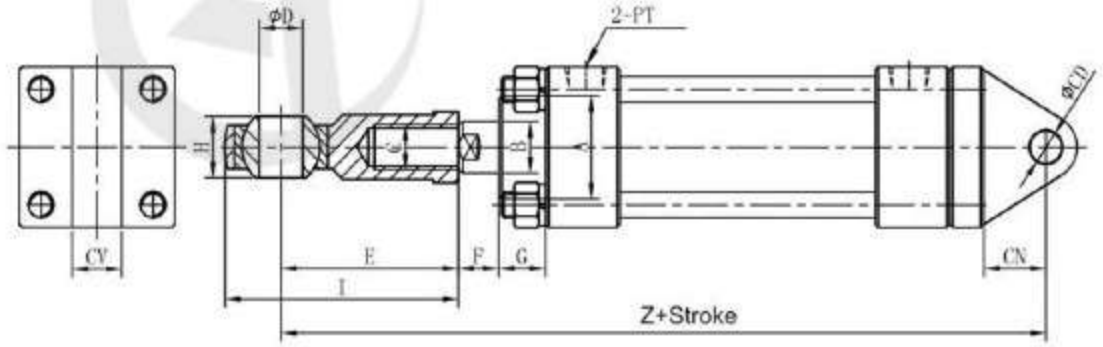
MOB Type							CA、CB Type								LB Type					
Bore	ΦA	ΦB	C	E	F	PT	ΦCD	CR	CN	CV	BN	BW	BX	ZCB	ΦLD	LH	LM	LX	LY	ZL
Φ32	32	16	M14×P1.5	28	13	1/4	10	10	20	16	20	16	52	159	10	58	32	36	52	187
Φ40	40	20	M16×P1.5	28	17	3/8	12	13	24	22	25	22	64	182	9	70	37	45	68	171
Φ50	45	20	M16×P1.5	28	17	3/8	12	13	24	22	24	22	70	183	11	81	46	52	73	170
Φ63	55	25	M22×P1.5	40	20	3/8	20	20	31	29	31	30	85	214	11	93.5	51	60	88	195
Φ80	62	30	M26×P1.5	40	20	1/2	30	30	49	30	49	30	106	246	13	114	61	74	105	209
Φ100	78	35	M30×P1.5	45	20	1/2	35	35	55	35	55	36	122	282	16	139	33.5	89	127	257
Φ125	85	50	M40×P2	55	25	1/2	35	35	55	35	55	36	96	290	18	161	32	110	150	271

CA+Y Cap Detachable Eye+Female Rod Clevis



MOB +Y													
Bore	ΦA	ΦB	C	ΦD	E	F	G	PT	Z	CN	ΦCD	I	CV
Φ32	32	16	44	12	56	13	15	1/4	215	20	10	16	16
Φ40	40	20	44	12	56	17	20	3/8	238	24	12	16	22
Φ50	45	20	44	12	56	17	20	3/8	239	24	12	16	22
Φ63	55	25	52	20	70	20	30	3/8	286	31	20	24	29
Φ80	62	30	58	20	70	20	32	1/2	316	49	30	28	30
Φ100	78	35	70	20	80	20	32	1/2	352	55	35	30	35
Φ125	85	50	70	35	93	25	31	1/2	382	55	35	30	35

CA+PHSA Cap Detachable Eye+Spherical Rod Eye PHSA Series



MOB +PHSA														
Bore	ΦA	ΦB	C	ΦD	E	F	G	NPT	Z	CN	ΦCD	H	I	CV
Φ32	32	16	M14X2	14	57	13	15	1/4	216	20	10	19	75	16
Φ40	40	20	M16X2	16	64	17	20	3/8	246	24	12	21	84	22
Φ50	45	20	M16X2	16	64	17	20	3/8	247	24	12	21	84	22
Φ63	55	25	M22X1.5	22	84	20	30	3/8	297	32	20	28	111	30
Φ80	62	30	M25X2	25	94	20	32	1/2	343	50	30	31	124	30
Φ100	78	35	M30X2	30	110	20	32	1/2	389	55	35	37	145	35
Φ125	85	50	M39X3	40	105	25	31	1/2	394	55	35	35	152	35

Heavy Duty Tie Rod Hydraulic Cylinder Model Description

HOB – **R** – **D** – **63** * **35** * **100** **LB** + **Y**

Type	
HOB	Standard
HOD	Double rod

Non:Without Magnet
R:With Magnet

Cushions
Non:
D:Both ends
F: Head
B: Cap

Bore
Φ40
Φ50
Φ63
Φ80
Φ100
Φ125
Φ150
Φ180
Φ200

Standard	Max
Φ25	–
Φ30	Φ35
Φ35	Φ40
Φ40	Φ50
Φ50	Φ60
Φ60	Φ80
Φ80	Φ100
Φ100	Φ120
Φ100	Φ120
Non:Standard	

Stroke
Standard stroke(mm)
50,100,150,200
250,300,350,400
450,500,600,700
800,900,1000

Cylinder Mounting	
FA	Head Flange
FB	Cap Flange
LB	Side End Angles
TC	Intermediate Fixed Trunnion
TA	Head Trunnion
LA	Side Lugs
CA	Detachable Eye
CB	Detachable Fixed Clevis
CBP	Detachable Fixed Clevis+PIN
CAB	CA+PIN+CB

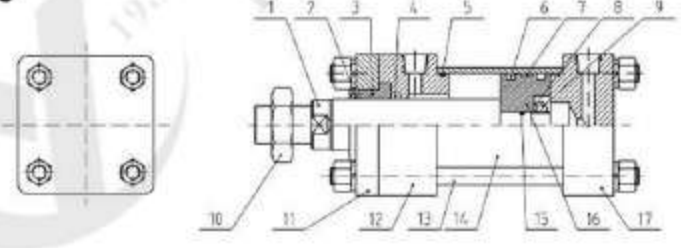
Piston rod end connecting type	
Y	Female Rod Clevis
YP	Female Rod Clevis + PIN
I	I Connecting
KG	Floating Connecting
PHS	Spherical Rod Eye
T	T Connecting
H	Welded Bushing
A	Adjustable Nut

Features

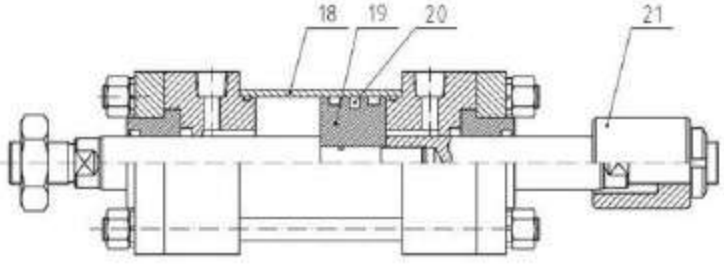
Bore size	Φ40	Φ50	Φ63	Φ80	Φ100	Φ125	Φ150	Φ180	Φ200
Working medium	Clean Standard Hydraulic Oil								
Cylinder barrel material	20#Carbon steel/SUS304								
Operating pressure rang	0.8-14MPa(116-2000PSI)								
Temprature rang	-10 — +60(℃)								
Speed rang	0-300(mm/s)								
Standard piston length(PM)	30	35	35	50	60	65	65	90	90
Piston length(PM)1501-2500mm	60	70	70	80	100	100	100	140	140
Piston length(PM)2501-4000mm	120	140	140	150	180	180	180	200	200

Construction Drawing

HOB

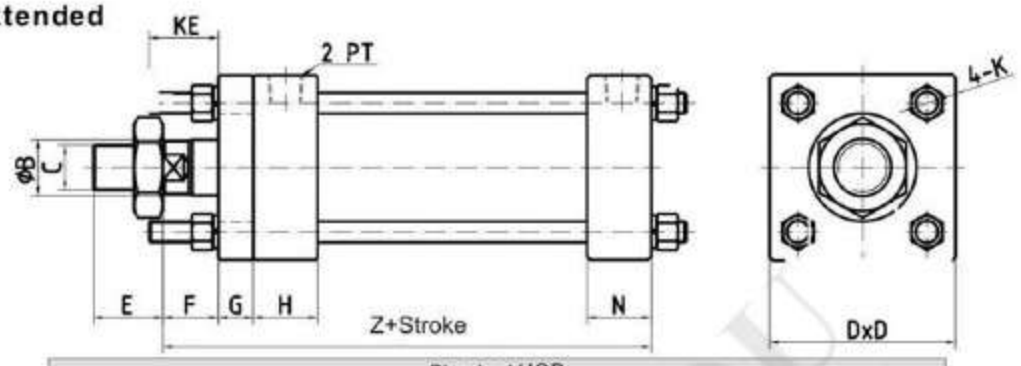


HOD



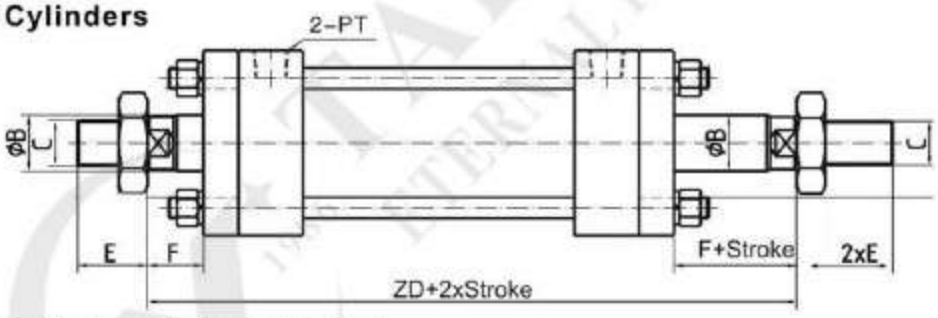
No	Part Name	Qty.	No	Part Name	Qty.	No	Part Name	Qty.
1	Piston Rod	1	8	Spring Washer Nut	1	15	O-Ring	1
2	Dust Wiper	1	9	Nut	1	16	Piston	1
3	Sleeve	1	10	Piston Rod Nut	1	17	Back Cover(Cap)	1
4	Rod Seals	1	11	Flange Cover	1	18	Cylinder Barrel	1
5	O-Ring	2	12	Head Cover	1	19	Piston	1
6	Port seals	2	13	Tie Rod	4	20	Magnetic Ring	1
7	Wear Ring	1	14	Cylinder Barrel	1	21	Adjustable Nut	1

Tie Rod Extended

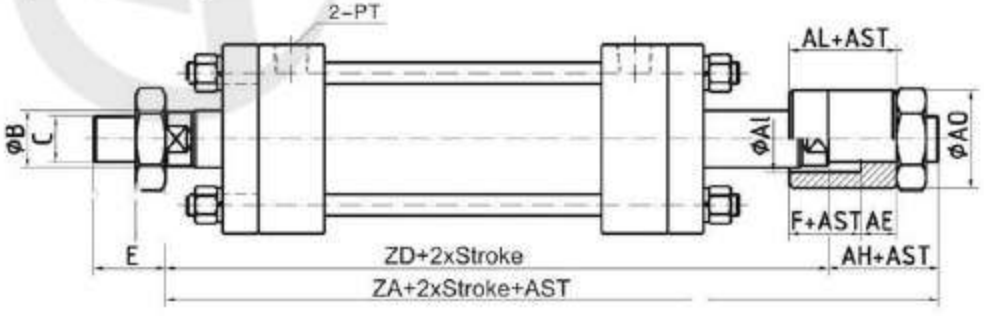


Standard HOB													
Bore	ΦB	C	D	DE	E	F	G	H	N	PT	K	KE	Z
Φ40	25	M22*P1.5	65	45	40	20	17	35	30	3/8	M10	30	156
Φ50	30	M26*P1.5	80	56	40	20	17	40	30	3/8	M12	40	166
Φ63	35	M30*P1.5	90	62	45	20	17	40	30	3/8	M12	40	166
Φ80	40	M30*P1.5	110	80	45	20	20	40	40	1/2	M16	60	194
Φ100	50	M40*P2.0	131	95	55	25	20	40	40	1/2	M18	60	209
Φ125	60	M50*P2.0	162	122	70	35	30	52	43	3/4	M22	70	255
Φ150	80	M70*P2.0	195	144	80	35	30	62	52	3/4	M24	70	274
Φ180	100	M90*P2.0	235	175	100	35	40	65	55	1	M30	70	315
Φ200	100	M90*P2.0	262	193	100	40	40	65	60	1	M33	70	325

Double Rod Cylinders



Double Rod Cylinders+Adjustable Nut

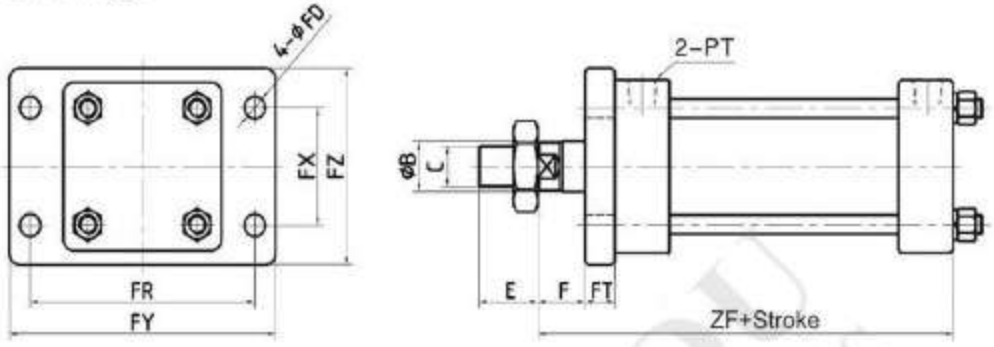


HOB,HOD								HOB,HOD		
Bore	ΦB	C	D	DE	E	F	PT	Z	ZD	K
Φ40	25	M22xP1.5	65	45	40	20	3/8	156	198	M10
Φ50	30	M26xP1.5	80	56	40	20	3/8	166	213	M12
Φ63	35	M30xP1.5	90	65	45	20	3/8	166	213	M12
Φ80	40	M30xP1.5	110	80	45	20	1/2	194	234	M14
Φ100	50	M40xP2.0	131	95	55	25	1/2	209	254	M16
Φ125	60	M50xP2.0	162	122	70	35	3/4	255	329	M22
Φ150	80	M70xP2.0	195	144	80	35	3/4	274	344	M24
Φ180	100	M90xP2.0	235	175	100	35	1	315	400	M30
Φ200	100	M90xP2.0	262	203	100	40	1	325	410	M33

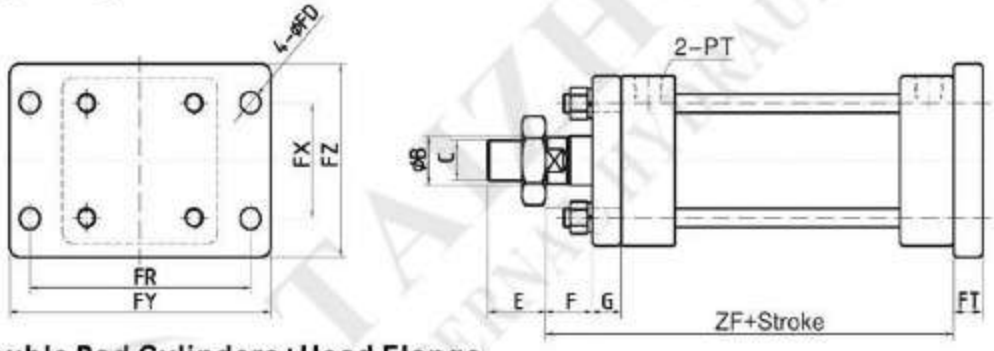
Remark:

1. If rod diameter need to be enlarged, the rod length will make according to the standard, unless otherwise specified.
2. An extra base need to fix between the head and cap when stroke≥2000mm
3. The rod screw nut outside shape is round when the size in this series over M50mm
4. AST means the adjustable stroke specified by the customers

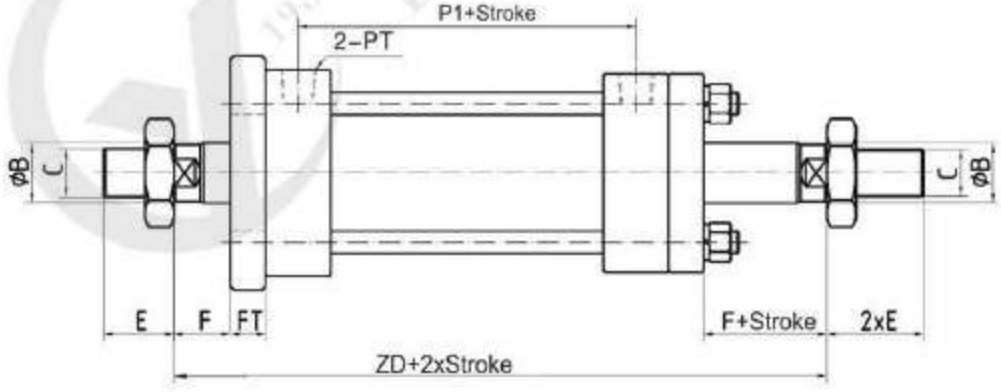
HOB+FA Head Flange



HOB+FB Cap Flange



HOD+FA Double Rod Cylinders+Head Flange

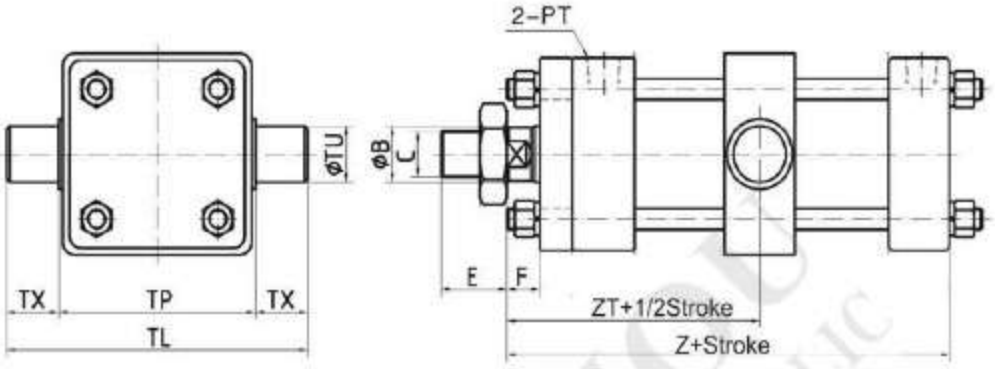


HOB-HOD							FA+FB type					
Bore	ΦB	C	E	F	PT	ZF	ΦFD	FT	FR	FX	FY	FZ
Φ40	25	M22xP1.5	40	20	3/8	156	12	17	93	50	115	75
Φ50	30	M26xP1.5	40	20	3/8	166	14	17	110	56	150	85
Φ63	35	M30xP1.5	45	20	3/8	166	14	17	126	68	155	95
Φ80	40	M30xP1.5	45	20	1/2	194	18	20	152	75	190	120
Φ100	50	M40xP2.0	55	25	1/2	209	20	20	180	100	220	140
Φ125	60	M50xP2.0	70	35	3/4	255	24	30	222	122	280	170
Φ150	80	M70xP2.0	80	35	3/4	274	28	30	260	155	310	206
Φ180	100	M90xP2.0	100	35	1	315	35	40	315	188	375	250
Φ200	100	M90xP2.0	100	40	1	325	35	40	355	207	425	272

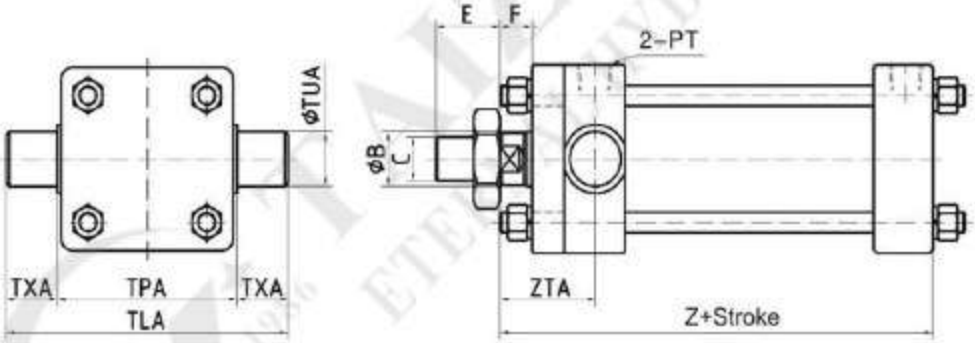
Remark:

1. If rod diameter need to be enlarged, the rod length will make according to the standard, unless otherwise specified.
2. An extra base need to fix between the head and cap when stroke≥2000mm
3. The rod screw nut outside shape is round when the size in this series over M50mm

HOB+TC Intermediate Fixed Trunnion



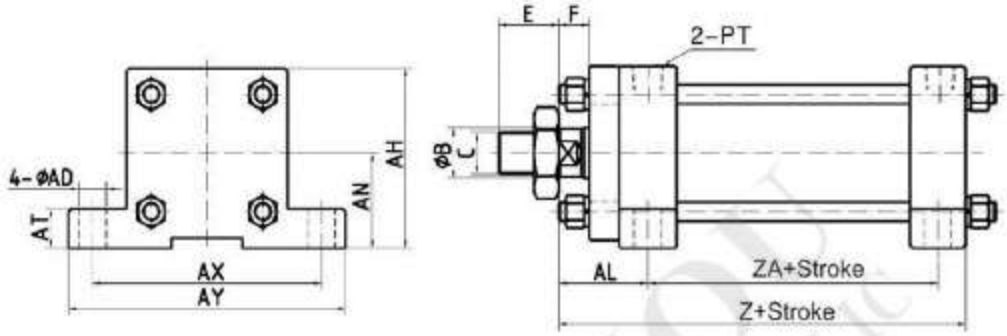
HOB+TA Head Trunnion



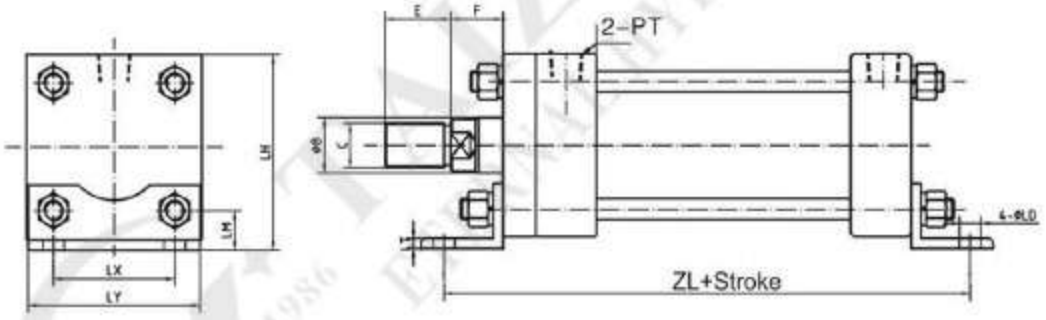
HOB						
Bore	ΦB	C	E	F	PT	Z
Φ40	25	M22×P1.5	40	20	3/8	156
Φ50	30	M26×P1.5	40	20	3/8	166
Φ63	35	M30×P1.5	45	20	3/8	166
Φ80	40	M30×P1.5	45	20	1/2	194
Φ100	50	M40×P2.0	55	25	1/2	209
Φ125	60	M50×P2.0	70	35	3/4	255
Φ150	80	M70×P2.0	80	35	3/4	274
Φ180	100	M90×P2.0	100	35	1	315
Φ200	100	M90×P2.0	100	40	1	325

	TC Type					TA Type				
Bore	ZT	ΦTU	TL	TP	TX	ZTA	ΦTUA	TLA	TPA	TXA
Φ40	98	20	115	75	20	53.5	20	109	69	20
Φ50	106	25	140	90	25	56	25	134	84	25
Φ63	109	32	166	102	32	56	30	154	94	30
Φ80	114	32	184	120	32	59	30	174	114	30
Φ100	124	40	220	140	40	66	35	205	135	35
Φ125	161	50	275	175	50	94	45	258	168	45
Φ150	179	60	326	206	60	95	50	300	200	50
Φ180	200	80	403	243	80					
Φ200	205	90	452	272	90					

HOB+LA Side Lugs



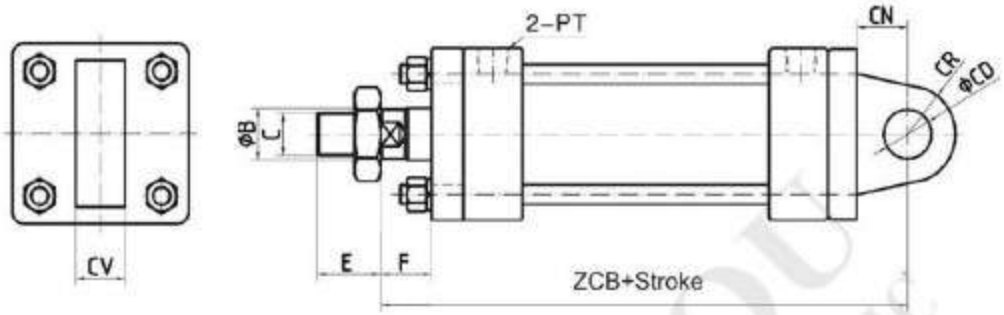
HOB+LB Side End Angles



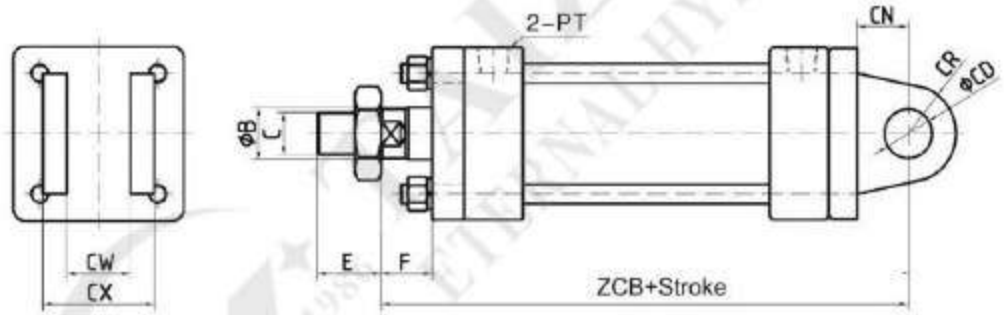
HOB					
Bore	ΦB	C	E	F	PT
Φ40	25	M22×P1.5	40	20	3/8
Φ50	30	M26×P1.5	40	20	3/8
Φ63	35	M30×P1.5	45	20	3/8
Φ80	40	M30×P1.5	45	20	1/2
Φ100	50	M40×P2.0	55	25	1/2
Φ125	60	M50×P2.0	70	35	3/4
Φ150	80	M70×P2.0	80	35	3/4
Φ180	100	M90×P2.0	100	35	1
Φ200	100	M90×P2.0	100	40	1

	LA Type									LB Type					
Bore	ZA	Z	AN	AH	AL	ΦAD	AT	AX	AY	ZL	ΦLD	LM	LX	LY	LH
Φ40	88	156	37.5	70	53	12	14	90	112	212	11	24	45	68	79
Φ50	95	166	45	85	56	14	17	115	140	230	14	26	56	85	94
Φ63	95	166	50	95	56	14	19	128	156	234	16	26	66	95	104
Φ80	115	194	60	115	59	18	25	152	184	300	18	36	80	120	131
Φ100	123	209	69.5	135	66	21	27	178	210	316	20	44	95	140	159
Φ125	139	255	90	171	94	24	30	230	280	380	24	53	122	169	195
Φ150	153	274	113	208	95	28	35	270	325	399	28	53	144	200	220
Φ180	180	315	143	260	107	35	45	330	395	460	35	63	175	240	268
Φ200	183	325	161	292	112	35	50	360	430	475	35	74	193	265	301

HOB+CA Cap Detachable Eye



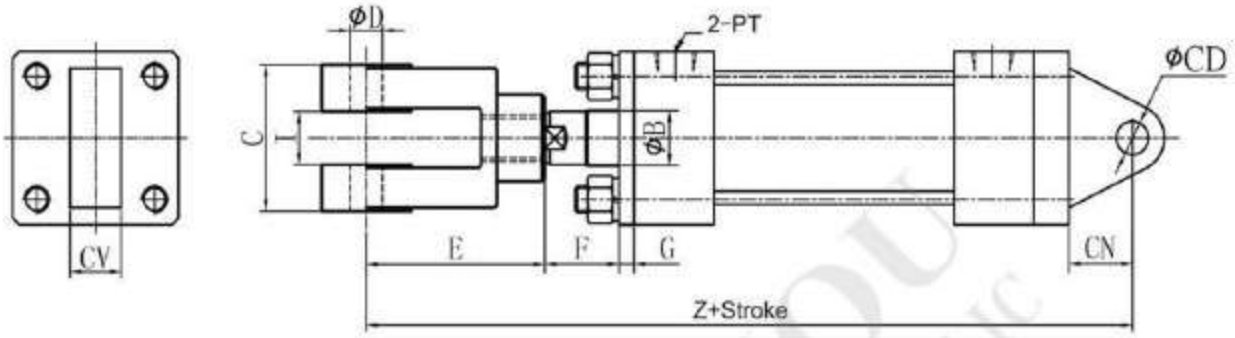
HOB+CB Cap Detachable Clevis



HOB						
Bore	ΦB	C	E	F	PT	ZCB
Φ40	25	M22×P1.5	40	20	3/8	198
Φ50	30	M26×P1.5	40	20	3/8	218
Φ63	35	M30×P1.5	45	20	3/8	228
Φ80	40	M30×P1.5	45	20	1/2	264
Φ100	50	M40×P2.0	55	25	1/2	289
Φ125	60	M50×P2.0	70	35	3/4	355
Φ150	80	M70×P2.0	80	35	3/4	384
Φ180	100	M90×P2.0	100	35	1	455
Φ200	100	M90×P2.0	100	40	1	475

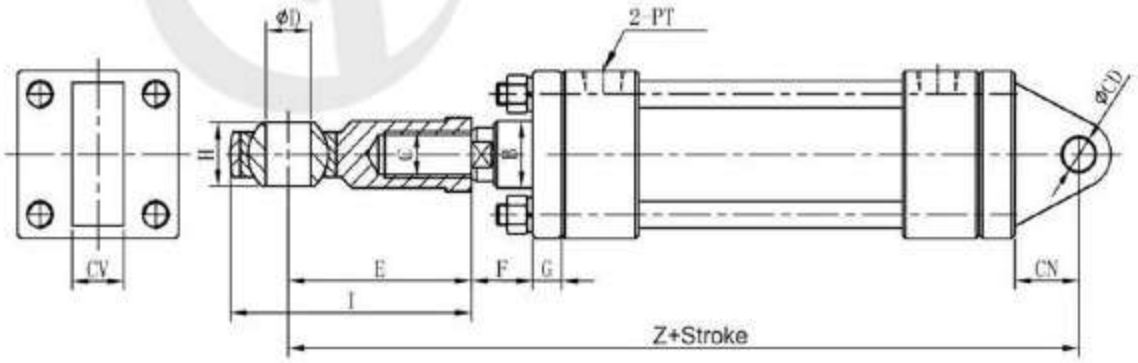
CA+CB Type						
Bore	ΦCD	CN	CR	CV	CW	CX
Φ40	16	25	15	22	23	47
Φ50	20	35	20	22	23	47
Φ63	25	45	25	30	31	59
Φ80	30	50	30	35	36	76
Φ100	35	60	35	40	41	81
Φ125	50	70	50	55	56	106
Φ150	60	80	60	60	61	121
Φ180	80	100	80	80	81	161
Φ200	90	110	90	90	91	171

HOB+CA+Y Cap Detachable Eye+Female Rod Clevis



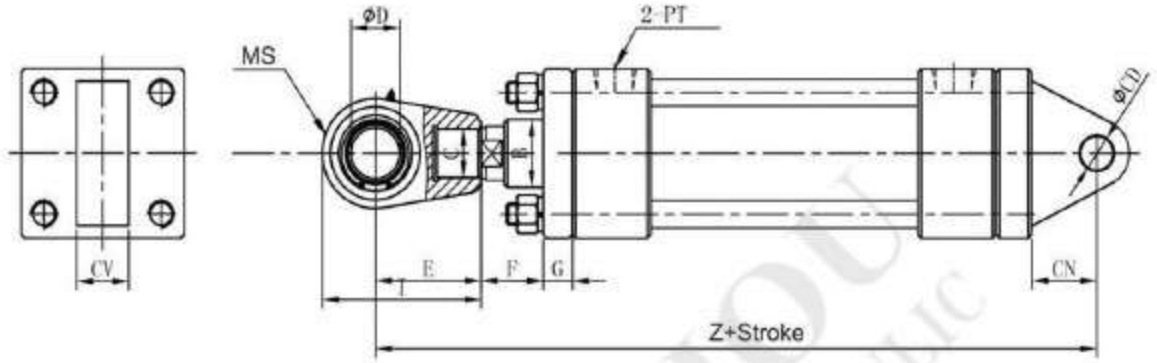
HOB +CA+Y												
Bore	ΦB	C	ΦD	E	F	G	PT	Z	CN	ΦCD	I	CV
Φ40	25	52	20	70	20	17	3/8	268	25	16	24	22
Φ50	30	58	20	70	20	17	3/8	288	35	20	28	22
Φ63	35	70	20	80	20	17	3/8	308	45	25	30	30
Φ80	40	70	20	80	20	20	1/2	344	50	30	30	35
Φ100	50	70	35	93	25	20	1/2	382	60	35	30	40
Φ125	60	80	40	100	35	30	3/4	455	70	50	35	55
Φ150	80				35	30	3/4		80	60		60
Φ180	100				35	40	1		100	80		80
Φ200	100				40	40	1		110	90		90

HOB+CA +PHS Cap Detachable Eye + Spherical Rod Eye PHS Series



HOB +CA+PHS													
Bore	ΦB	C	ΦD	E	F	G	NPT	Z	CN	ΦCD	H	I	CV
Φ40	25	M22X1.5	22	84	20	17	3/8	282	25	16	28	111	22
Φ50	30	M24X2	25	94	20	17	3/8	312	35	20	31	124	22
Φ63	35	M30X2	30	110	20	17	3/8	338	45	25	37	145	30
Φ80	40	M30X2	30	110	20	20	1/2	374	50	30	37	145	35

HOB+CA Cap Detachable Eye+Spherical Rod Eye GKSK Series



HOB+GKSK													
Bore	ΦB	C	ΦD	E	F	G	NPT	Z	CN	ΦCD	MS	I	CV
Φ40	25	M24X2	30	75	20	17	3/8	273	25	16	28	109	22
Φ50	30	M24X2	30	75	20	17	3/8	293	35	20	28	109	22
Φ63	35	M30X2	35	90	20	17	3/8	318	45	25	40	132	30
Φ80	40	M30X2	35	90	20	20	1/2	354	50	30	40	132	35
Φ100	50	M39X3	40	105	25	20	1/2	394	60	35	45	155	40
Φ125	60	M50X3	50	135	35	30	3/4	490	70	50	55	198	55
Φ150	80	M64X3	60	170	35	30	3/4	554	80	60	65	240	60
Φ180	100	M90X3	80	210	35	40	1	665	100	80	80	305	80
Φ200	100	M90X3	80	210	40	40	1	685	110	90	80	305	90

YGC-YGD Series metric Standard Tie Rod Hydraulic Cylinder are designed and manufactured based on the advanced technologies of Parker and Rexroth, with the character of light weight and simple structure, are reliable, easy to assemble and repair. Handa's YGC-YGD Series cylinders are designed to meet the requirements of ISO 6020/2(1991) and DIN24554, 12 standard mounting styles available, widely used in machinery equipment, wood cutting machine, steel processing machine, injection molding machine, die casting machine and ship equipment.

Features

1. Operating Pressure: 7Mpa-21Mpa(1000-3000PSI)
2. Bore Diameter: 40-200mm
3. Piston Rod Diameter: 12-140mm
4. Temperature Rang: -20 - +100℃
5. Maximum Speed: 0.5m/s

Extended Tie Rods

Cylinders with TB, TC and TD mountings are suitable for straight line force transfer applications, and are particularly useful where space is limited. For compression (push) applications, cap end tie rod mountings are most appropriate; where the major load places the piston rod in tension (pull applications), head end mounting styles should be specified. Cylinders with tie rods extended at both ends may be attached to the machine member from either end, allowing the free end of the cylinder to support a bracket or switch.

Flange Mounted Cylinders

These cylinders are also suitable for use on straight line force transfer applications. Two flange mounting styles are available, offering either a head flange (JJ) or a cap flange (HH). Selection of the correct flange mounting style depends on whether the major force applied to the load will result in compression (push) or tension (pull) stresses on the piston rod. For compression-type applications, the cap mounting style is most appropriate; where the major load places the piston rod in tension, a head mounting should be specified.

Foot Mounted Cylinders

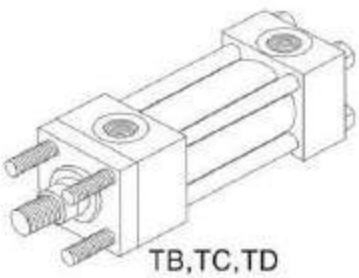
Style C, foot mounted cylinders do not absorb forces on their centerline. As a result, the application of force by the cylinder produces a moment which attempts to rotate the cylinder about its mounting bolts. It is important, therefore, that the cylinder should be firmly secured to the mounting surface and that the load should be effectively guided to avoid side loads being applied to rod gland and piston bearings. A thrust key modification may be specified to provide positive cylinder location.

Pivot Mountings

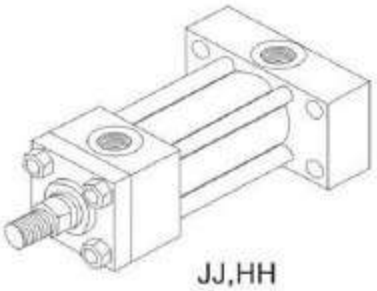
Cylinders with pivot mountings, which absorb forces on their centerlines, should be used where the machine member to be moved travels in a curved path. Pivot mountings may be used for tension (pull) or compression (push) applications. Cylinders using a fixed clevis, styles BB and B, may be used if the curved path of the piston rod travel is in a single plane; for applications where the piston rod will travel in a path on either side of the true plane of motion, a spherical bearing mounting SB is recommended.

Trunnion Mounted Cylinders

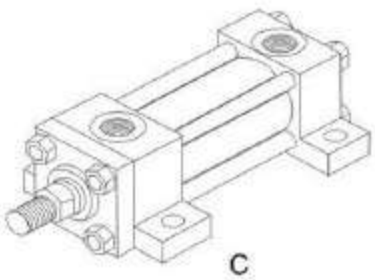
These cylinders, styles D, DB and DD, are designed to absorb force on their centerlines. They are suitable for tension (pull) or compression (push) applications, and may be used where the machine member to be moved travels in a curved path in a single plane. Trunnion pins are designed for shear loads only and should be subjected to minimum bending stresses.



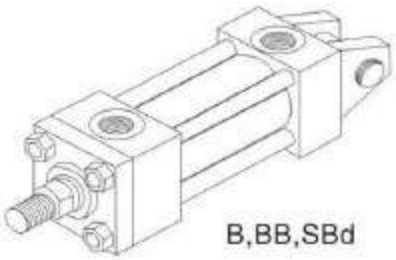
TB,TC,TD



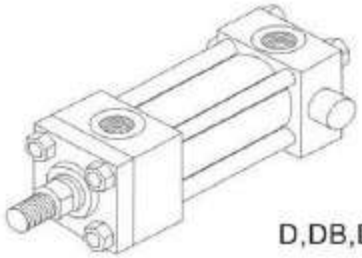
JJ,HH



C



B,BB,SBd



D,DB,DD

Piston Rod End Remark:

1. Style 9 (female) rod ends should not be used on 160mm or 200mm bore cylinders with a stroke of 50mm or less. Please consult the factory, with details of the application.
2. Non-standard piston rod ends are designated 'Style 3'. A dim-ensional sketch or description should accompany the order. Please specify dimensions KK or KF, A, rod stand out WF and thread type.

■Technical Parameters

Bore Size (mm)	Bore Acreage (mm^2)	The Push of Cylinder barrel(KN)						
		10bar	40bar	63bar	100bar	125bar	160bar	210bar
40	1257	1.3	5	7.9	12.6	15.7	20.1	26.4
50	1964	2	7.9	12.4	19.6	24.6	31.4	41.2
63	3118	3.1	12.5	19.6	31.2	39	49.9	65.5
80	5027	5	20.1	31.7	50.3	62.8	80.4	105.6
100	7855	7.9	31.4	49.5	78.6	98.2	125.7	165
125	12272	12.3	49.1	77.3	122.7	153.4	196.4	257.7
160	20106	20.1	80.4	126.7	201.1	251.3	321.7	422.2
200	31415	31.4	125.7	197.9	314.2	392.7	502.7	659.7

Piston rod Dia. (mm)	Piston Rod Acreage (mm^2)	The decrease of power(KN)						
		10bar	40bar	63bar	100bar	125bar	160bar	210bar
8	255	0.3	1	1.6	2.6	3.2	4.1	5.4
22	380	0.4	1.5	2.4	3.8	4.8	6.1	8
28	616	0.6	2.5	3.9	6.2	7.7	9.9	12.9
36	1018	1	4.1	6.4	10.2	12.7	16.3	21.4
45	1591	1.6	6.4	10	15.9	19.9	25.5	33.4
56	2463	2.5	9.9	15.6	24.6	30.8	39.4	51.7
70	3849	3.8	15.4	24.2	38.5	48.1	61.6	80.8
90	6363	6.4	25.5	40.1	63.6	79.6	101.8	133.6
110	9505	9.5	38	59.9	95.1	118.8	152.1	199.6
140	15396	15.4	61.6	97	154	192.5	264.3	323.3

Bore Dia.	Piston Rod Dia.	Mounting Type(The weight when in 0 stroke)						Please add follow weight(kg) each 10mm stroke
		TB,TC,TD kg	C kg	JJ,HH kg	B,BB,SBd kg	D,DB kg	DD kg	
40	18	3.7	4	4.7	4.2	3.9	4.6	0.09
	28	3.8	4.1	4.8	4.3	4	4.7	0.12
50	22	5.9	6.5	7.2	7	6.3	7.9	0.14
	28	6	6.6	7.3	7.1		8	0.16
	36				7.2	6.4		0.18
63	28	8.5	9.7	10.1	10.1	8.9	10.6	0.19
	36	8.6	9.8	10.2	10.2	9	10.7	0.22
	45	8.7	9.9	10.3	10.4	9.1	10.9	0.27
80	36	16	17.3	18.9	19.5	16.5	20.5	0.27
	45	16.1	17.4	19	19.6	16.6		0.32
	56	16.3	17.7	19.2	19.8	16.8	20.7	0.39
100	45	22	24	25	28	22.7	26	0.4
	56			26			27	0.47
	70	23	25		29	23.2		0.58
125	56	42	44	48	53	43	48	0.65
	70		45		54		49	0.76
	90	43		49		44	50	0.95
160	70	69	73	78	90	71	84	1
	90				91	72	85	1.2
	110	70	74	79	92			1.4
200	90	122	129	138	157	127	153	1.5
	110	123	130		158	128		1.8
	140	124	131	140	160	129	155	2.3

Modle Description

YGC-D/dE X 200-TB4111-Y※

C — Type：C=Single Piston Rod; D=Double Piston Rod

D/d — Bore size/Rod size

E — Operating Pressure：C=7Mpa；E=16Mpa；D=21Mpa

200 — Stroke(mm)

TB — Mounting Style：TB=Tie Rods Extended Head End　TC=Tie Rods Extended Cap End
TD=Tie Rods Extended Both Ends　JJ=Head Rectangular Flange
HH=Cap Rectangular Flange　C=Side Lugs
B=Cap Fixed Eye　BB=Cap Fixed Clevis
SBd=Cap Fixed Eye With Spherical Bearing　D=Head Trunnion
DB=Cap Trunnion　DD=Intermediate Fixed Trunnion

4 — Piston Rod Eye Threads Style: 3=Non Standard Piston Rod End; 4=Male Threads;
7=Male Threads　9=Female Threads

1 — Oil Port Threads: 1=BSP(ISO228)standard　2=Metric　3=NPT

1 — Port Postion(As follow)

1 — Cushions：1=Cushion both ends　2=Cushion Cap　3=Cushion Head　4=Non-cushioned

Y — Piston rod extended length,Specify the length in mm

※ — Specify here if any other requirements

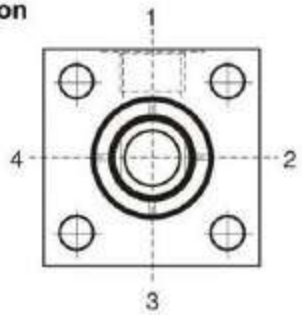
Piston Rod Wrench Flats Requirement

0-No wrench flats

1-With two wrench flats

2-With four wrench flats

Port position



Oil Port Type

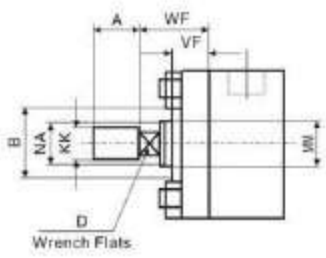
Bore Φ	Standard Port					
	Port Type			Connecting Pipe Size	Flow Rate at Cylinder Head L/min	Piston Speed m/s
	NPT	Metric	BSP			
25	Z1/4	M14x1.5	ZG1/4	7	11.5	0.39
32	Z1/4	M14x1.5	ZG1/4	7	11.5	0.24
40	Z3/8	M18x1.5	ZG3/8	10	23.5	0.31
50	Z1/2	M22x1.5	ZG1/2	13	40	0.34
63	Z1/2	M22x1.5	ZG1/2	13	40	0.21
80	Z3/4	M27x2	ZG3/4	15	53	0.18
100	Z3/4	M27x2	ZG3/4	15	53	0.11
125	Z1	M33x2	ZG1	19	85	0.12
160	Z1	M33x2	ZG1	19	85	0.07
200	Z1.1/4	M42x2	ZG1.1/4	24	136	0.07

Bore Φ	Enlarged Port					
	Port Type			Connecting Pipe Size	Flow Rate at Cylinder Head L/min	Piston Speed m/s
	NPT	Metric	BSP			
25	Z3/8	M18x1.5	ZG3/8	10	23.5	0.80
32	Z3/8	M18x1.5	ZG3/8	10	23.5	0.48
40	Z1/2	M22x1.5	ZG1/2	13	40	0.53
50	Z3/4	M27x2	ZG3/4	15	53	0.45
63	Z3/4	M27x2	ZG3/4	15	53	0.28
80	Z1	M33x2	ZG1	19	85	0.28
100	Z1	M33x2	ZG1	19	85	0.18
125	Z1-1/4	M42x2	ZG1-1/4	24	136	0.18
160	Z1-1/4	M42x2	ZG1-1/4	24	136	0.11
200	Z1-1/2	M48x2	ZG1-1/2	30	212	0.11

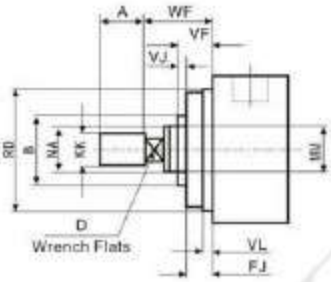
■Piston Rod End Data and Threads

■Male Thread (Style 4&7)

– All Except JJ Mount

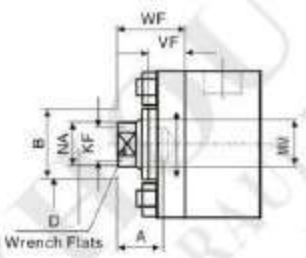


– JJ Mount

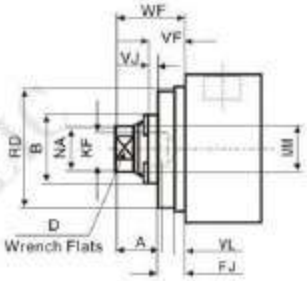


■Female Thread(Style 9)

– All Except JJ Mount



– JJ Mount



■Piston rod end dimensions

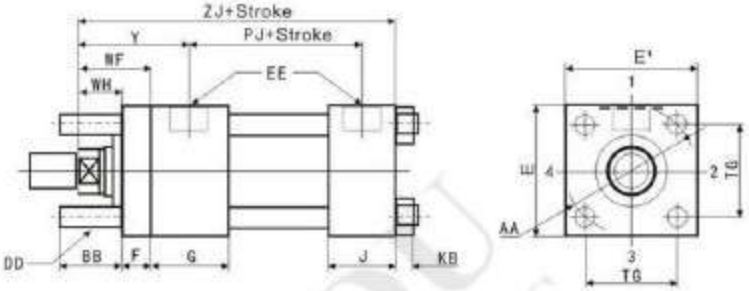
Bore ϕ	Rod No.	MM Rod ϕ	Style 4		Style 7		Style 9		B f9	D	NA	VF	WF	JJ Mount Only			
			KK	A	KK	A	KF	A						VLmin	RD f8	VJ	FJ
25	1	2	M10x1.25	14	–	–	M8x1	14	24	10	11	16		3	38	6	10
	2	18	M10x1.5	18	M14x1.25	14	M12x1.25	18	30	15	17	16	25			12	
32	1	14	M10x1.25	16	–	–	M10x1.25	16	26	12	13	22		3	42	6	10
	2	22	M10x1.5	22	M14x1.25	16	M16x1.5	22	34	18	21	22	35			12	
40	1	18	M14x15	18	–	–	M12x1.25	18	30	15	17	16		3	62	6	10
	2	28	M20x1.5	28	M14x15	18	M30x1.5	28	42	22	26	22	35			12	
50	1	22	M16x1.5	22	–	–	M16x1.5	22	34	18	21	22		4	74	6	16
	2	36	M27x2	36	M16x15	22	M27x2	36	50	30	34	25	41			9	
	3	28	M20x1.5	28	M16x15	22	M20x1.5	28	42	22	26	22				6	
63	1	28	M20x1.5	28	–	–	M20x1.5	28	42	22	26	22		4	75	6	16
	2	45	M33x2	45	M20x15	28	M33x2	45	60	39	43	29	48		88	13	
	3	36	M27x2	36	M20x15	28	M27x2	36	50	30	34	25				9	
80	1	36	M27x2	36	–	–	M27x2	36	50	30	34	25		4	82	5	20
	2	56	M42x2	56	M27x2	36	M42x2	56	72	48	54	29	51		105	9	
	3	45	M33x2	45	M27x2	36	M33x2	45	60	39	43	29					
100	1	45	M33x2	45	–	–	M33x2	45	60	39	43	29		5	92	7	22
	2	70	M48x2	63	M33x2	45	M48x2	63	88	62	68	32	57		125	10	
	3	56	M42x2	56	M33x2	45	M42x2	56	72	48	54	29				7	
125	1	56	M42x2	56	–	–	M42x2	56	72	48	54	29		5	105	9	20
	2	90	M64x2	85	M42x2	56	M64x6	85	108	80	88	32	57		150	10	20
	3	70	M48x2	63	M42x2	56	M48x2	63	88	62	68	32					
160	1	70	M48x2	63	–	–	M48x2	63	88	62	68	32		5	125	10	22
	2	110	M80x3	95	M48x2	63	M80x3	95	133	100	108	32	57		170	7	25
	3	90	M64x3	85	M48x2	63	M64x3	85	108	80	88	32					
200	1	90	M64x3	85	–	–	M64x3	85	108	80	88	32		5	150	10	22
	2	140	M100x3	112	M64x3	85	M100x3	112	163	128	138	32	57		210	7	25
	3	110	M80x3	95	M64x3	85	M80x3	95	133	100	108	32					

Remark:

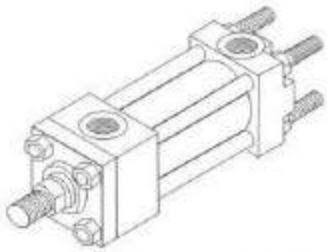
1. The smallest diameter rod end thread for each bore size is designated Style 4 when sup-plied with a No.1 rod.
2. When the same rod end thread is supplied with a No. 2 or No.3 rod, it is designated Style 7.
3. Style 9 (female) rod ends should not be used on 160mm or 200mm bore cylinders with a stroke of 50mm or less. Please consult the factory, with details of the application.

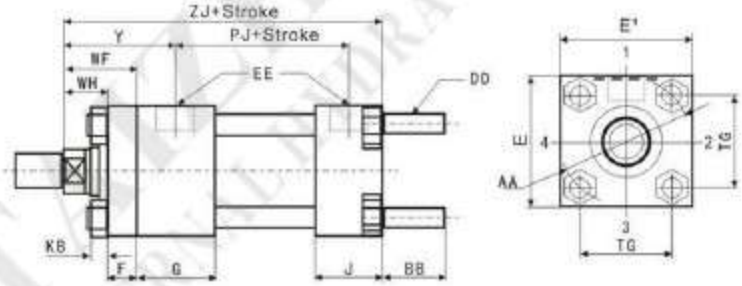
■Extended Tie Rod Mountings

Style TB
Tie Rods Extended Head End

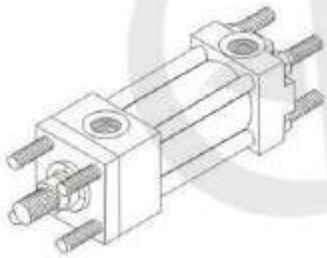


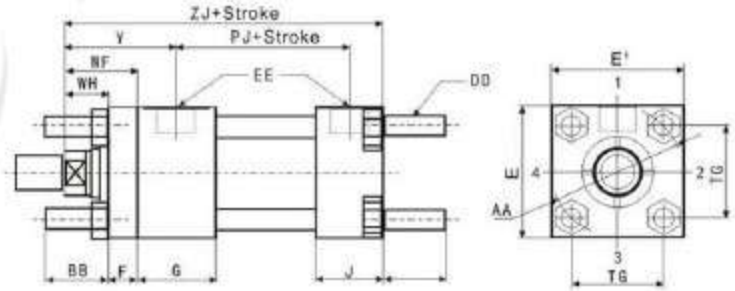
Style TC
Tie Rods Extended Cap End





Style TD
Tie Rods Extended Both Ends



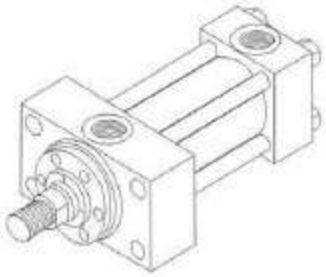


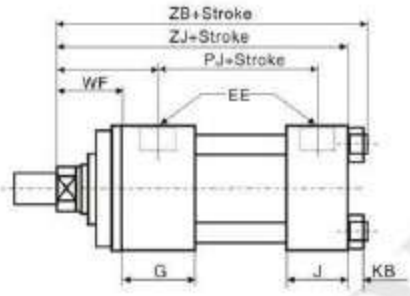
[1]Head depth increased by 5mm to accommodate port on 25mm and 32mm bore cylinders

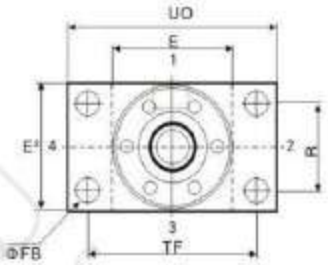
Bore ϕ	AA	BB	DD	E	EE	F	G	J	KB	TG	WF	WH	Y	+Stroke	
														PJ	ZJ
25	40	19	M5x0.8	40[1]	Z1/4	10	40	25	4	28.3	25	15	50	53	114
32	47	24	M6x1	45[1]	Z1/4	10	40	25	5	33.2	35	25	60	56	128
40	59	35	M8x1	63	Z3/8	10	45	38	6.5	41.7	35	25	62	73	153
50	74	46	M12x1.5	75	Z1/2	16	45	38	10	52.3	41	25	67	74	159
63	91	46	M12x1.5	90	Z1/2	16	45	38	10	64.3	48	32	71	80	168
80	117	59	M16x1.5	115	Z3/4	20	50	45	13	82.7	51	31	71	93	190
100	137	59	M16x1.5	130	Z3/4	22	50	45	13	96.9	57	35	82	105	203
125	178	81	M22x1.5	165	Z1	25	58	58	18	125.9	57	35	86	117	232
160	219	92	M27x2	205	Z1	25	58	58	22	154.9	57	32	86	130	245
200	269	115	M30x2	245	Z1.1/4	25	76	76	24	190.2	57	32	98	165	299

■Flange And Side Lugs Mountings

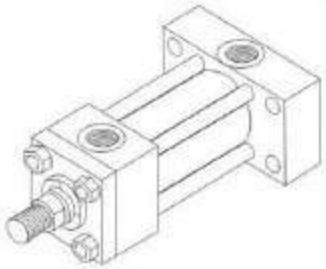
Style JJ
Head Rectangular Flange

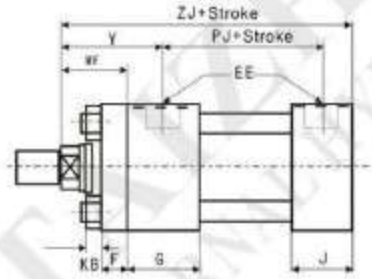


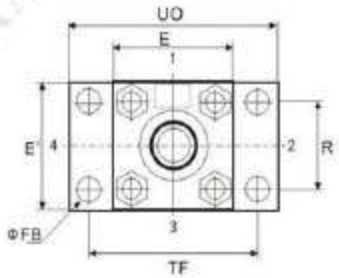




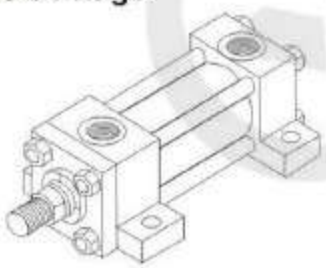
Style HH
Cap Rectangular Flange

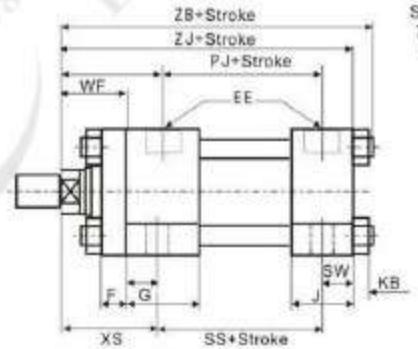


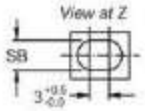




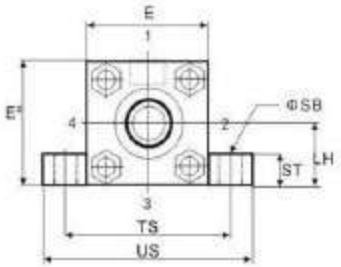
Style C
Side Lugs







A thrust key may be used with this mounting style.



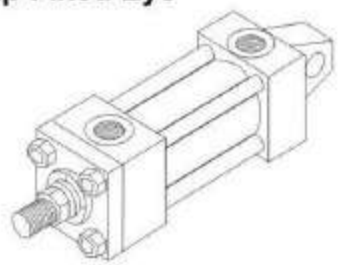
[1]Head depth increased by 5mm to accommodate port on 25mm and 32mm bore cylinders.

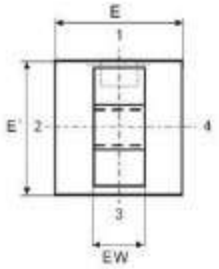
[2]On 25mm and 32 mm bore C mount and JJ mount cylinders with port in position 2 or 4, head depth E is increased by 5mm in position 1

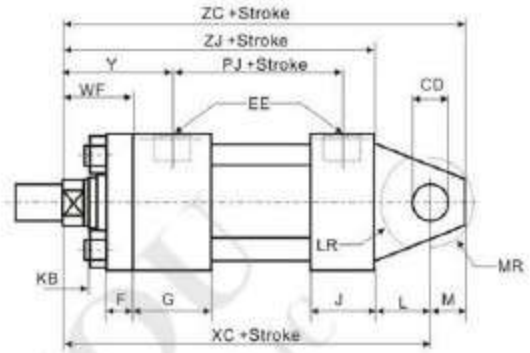
Bore ϕ	E	EE	F	FB	G	J	KB	LHh 10	R	SB	ST	SW	TF	TS	UO	US	WF	XS	Y	+Stroke			
																				PJ	SS	ZB max	ZJ
25	40[1]	Z1/4	10	5.5	40	25	4	19	27	6	9	8	51	54	65	72	25	33	50	53	72	121	114
32	45[1]	Z1/4	10	6.6	40	25	5	22	33	9	13	10	58	63	70	84	35	45	60	56	72	137	128
40	63	Z3/8	10	11	45	38	6.5	31	41	11	13	10	87	83	110	103	35	45	62	73	98	166	153
50	75	Z1/2	16	14	45	38	10	37	52	14	19	13	105	102	130	127	41	54	67	74	92	176	159
63	90	Z1/2	16	14	45	38	10	44	65	18	26	17	117	124	145	161	48	65	71	80	89	185	168
80	115	Z3/4	20	18	50	45	13	57	83	18	26	17	149	149	180	186	51	68	77	93	105	212	190
100	130	Z3/4	22	18	50	45	13	63	97	26	32	22	162	172	200	216	57	79	82	101	102	225	203
125	165	Z1	22	22	58	58	18	82	126	26	32	22	208	210	250	254	57	79	86	117	131	260	232
160	205	Z1	25	26	58	58	22	101	155	33	38	29	253	260	300	318	57	86	86	130	130	279	245
200	245	Z1.1/4	25	33	76	76	24	122	190	39	44	35	300	311	360	381	57	92	98	165	172	336	299

■Pivot Mountings

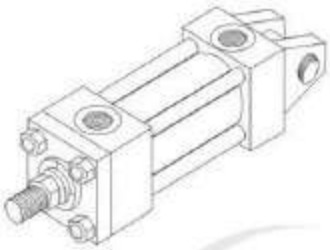
Style B
Cap Fixed Eye



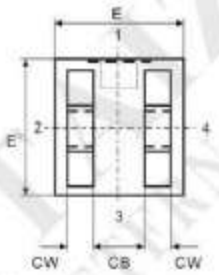


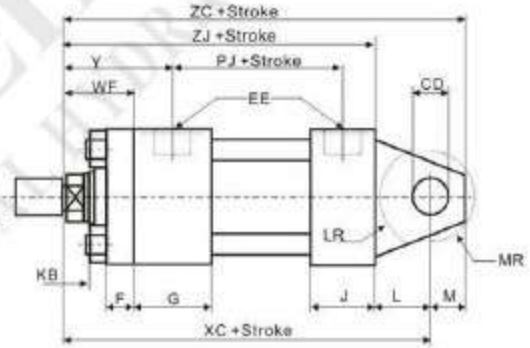


Style BB
Cap Fixed Clevis

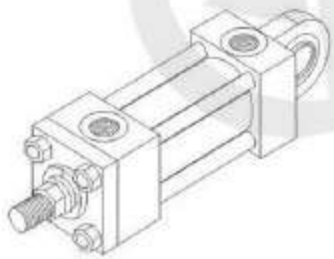


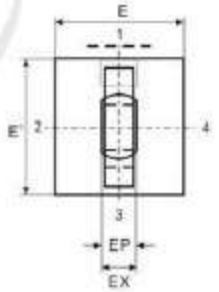
Supplied complete with pivot pin

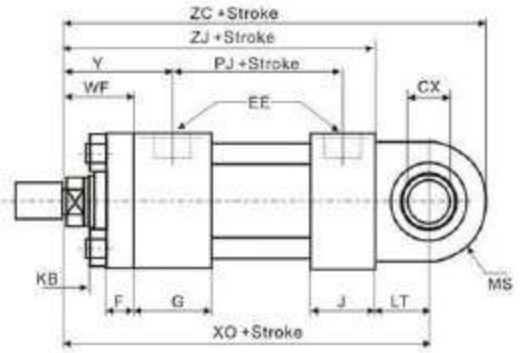




Style Sbd
Cap Fixed Eye With Spherical Bearing



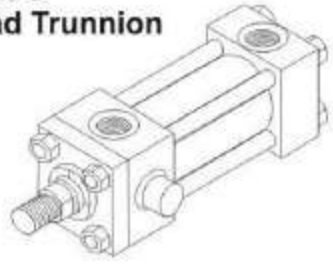


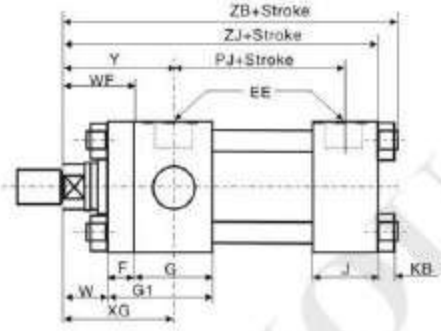


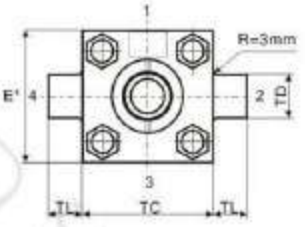
Bore	CB	CD	CW	CX	E	EE	EP	EW	EX	F	G	J	KB	L	LR	LT	M	MR	MS	Y	+Stroke				
ϕ	A16	H9						h4											max		PJ	XC	ZC	ZJ	ZO
40	20	14	10	20	63	Z3/8	13	20	16	10	45	38	6.5	19	17	25	14	16	29	62	73	172	186	153	207
50	30	20	15	25	76	Z1/2	17	30	20	16	45	38	10	32	29	31	20	25	33	67	74	191	211	159	223
63	30	20	15	30	90	Z1/2	19	30	22	16	45	38	10	32	29	38	20	25	40	71	80	200	220	168	246
80	40	28	20	40	115	Z3/4	23	40	28	20	50	45	13	39	34	48	28	34	50	77	93	229	257	190	288
100	50	36	25	50	130	Z3/4	30	50	35	22	50	45	13	54	50	58	36	44	62	82	101	257	293	203	323
125	60	45	30	60	165	Z1	38	60	44	22	58	58	18	57	53	72	45	53	80	86	117	289	334	232	384
160	70	56	35	80	205	Z1	47	70	55	25	58	58	22	63	59	92	59	59	100	86	130	308	367	245	437
200	80	70	40	100	245	Z1.1/4	57	80	70	25	76	76	24	82	78	116	70	76	120	98	165	381	451	299	535

■Trunnion Mountings

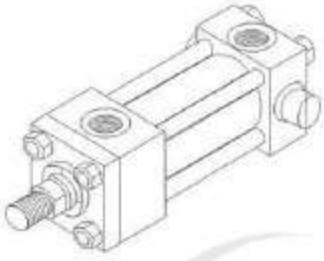
Style D
Head Trunnion

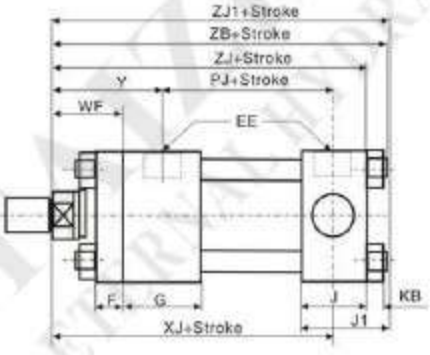


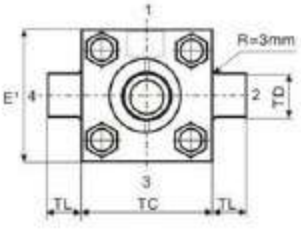




Style DB
Cap Trunnion

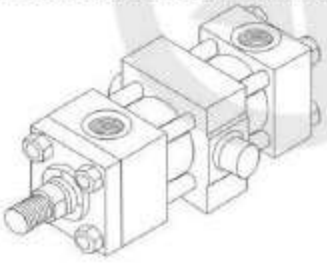


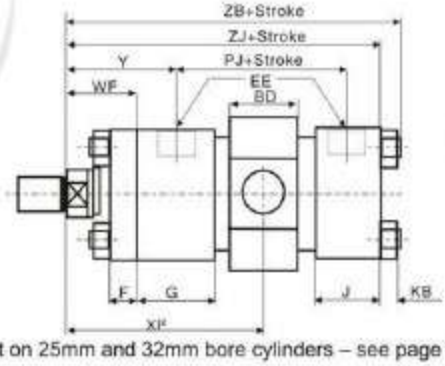


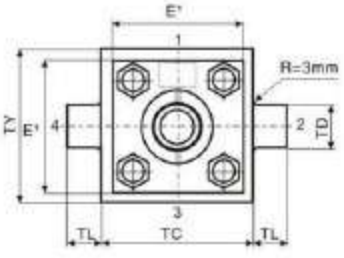


Note:
On 100-200mm bore cylinders, dimension J becomes J1.ZJ1 replaces ZB, and tie rods are screwed directly into the cap.

Style DD
Intermediate Fixed Trunnion





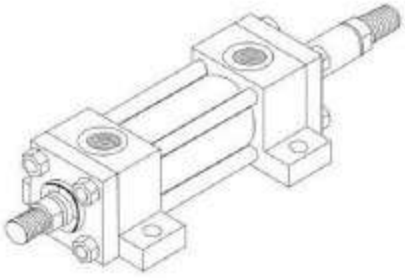


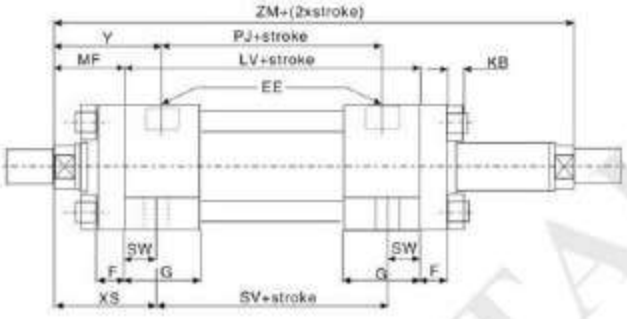
¹ Head depth increased by 5mm to accommodate port on 25mm and 32mm bore cylinders – see page 111

² Dimensions to be specified by customer

Bore ϕ	BD	E	EE	F	G	G1	J	J1	KB	TC	TD f8	TL	TM	TY	W	WF	XG	Y	+Stroke PJ	+Stroke XJ	+Stroke ZJ	+Stroke ZJ1	+Stroke ZB max	Style DD Min.stroke	Min.X1 Dim'n
25	20	40¹	Z1/4	10	40	–	25	–	4	38	12	10	48	45	–	25	44	50	53	101	114	–	121	10	78
32	25	45¹	Z1/4	10	40	–	35	–	5	44	16	12	55	54	–	35	54	60	56	115	128	–	137	10	90
40	30	30	Z3/8	10	45	–	38	–	6.5	63	20	16	76	76	–	35	57	62	73	134	153	–	166	15	97
50	40	40	Z1/2	16	45	–	38	–	10	76	25	20	89	89	–	41	64	67	74	140	159	–	176	15	107
63	40	40	Z1/2	16	45	–	38	–	10	89	32	25	100	100	–	48	70	71	80	149	168	–	185	15	114
80	50	50	Z3/4	20	50	–	45	50	13	114	40	32	127	127	–	51	76	77	93	168	190	194	212	20	127
100	60	60	Z3/4	22	50	72	45	58	13	127	50	40	140	140	–	57	71	82	101	187	203	216	225	20	138
125	73	73	Z1	22	58	80	58	71	18	165	63	50	178	178	–	57	75	86	117	209	232	245	260	25	153
160	90	90	Z1	25	58	88	58	88	22	203	80	63	215	216	–	57	75	86	130	230	245	275	279	30	161
200	110	110	Z1.1/4	25	76	108	76	108	24	241	100	80	279	280	–	57	85	98	165	276	299	330	336	30	190

■YGD Double Rod Cylinders





Available with Styles TB, TD, JJ, C, D, DD(Style C illustrated)

Bore Φ	Rod No.	RodΦ mm	LV	PJ	SV	2xstroke ZM
25	1	12	104	53	88	154
	2	18				
32	1	14	108	56	88	178
	2	22				
40	1	18	125	73	105	195
	2	28				
50	1	22	125	74	99	207
	2	36				
	3	28				
63	1	28	127	80	93	223
	2	45				
	3	36				
80	1	36	144	93	110	246
	2	56				
	3	45				
100	1	45	151	101	107	265
	2	70				
	3	56				
125	1	56	175	117	131	289
	2	90				
	3	70				
160	1	70	188	130	130	302
	2	110				
	3	90				
200	1	90	242	160	172	356
	2	140				
	3	110				

■Accessory Selection

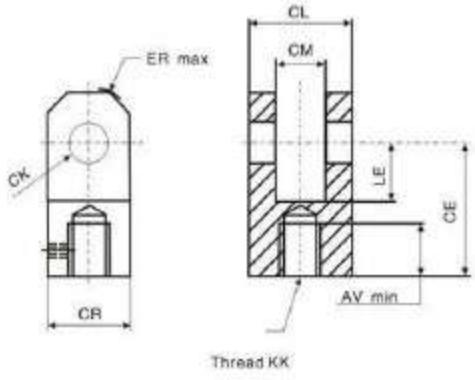
☐Accessories for the rod end of a cylinder are selected by reference to the rod end thread

☐While the same accessories,When used at the cap end,are selected by cylinder bore size.

■Rod Clevis,Eye Bracket,Pivot Pin

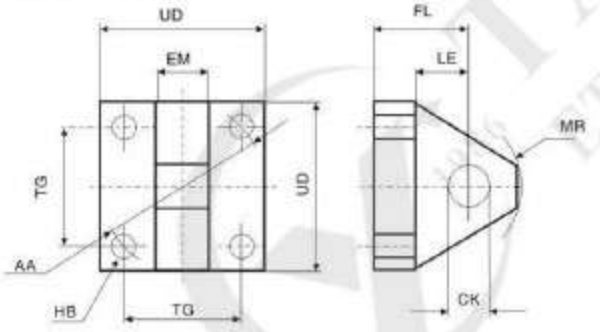
Thread KK	Rod Clevis	Eye Bracket	Pivot Pin	Nominal Force KN	Weight KG
M10 × 1.25	447	808	477	10.3	0.3
M12 × 1.25	448	809	478	16.9	0.6
M14 × 1.5	449	810	479	26.4	0.8
M16 × 1.5	450	811	480	41.2	2.2
M20 × 1.5	451	812	480	65.5	2.7
M27 × 2	452	813	481	106	5.9
M33 × 2	453	814	482	165	9.2
M42 × 2	454	815	483	258	18
M48 × 2	455	816	484	422	27
M64 × 3	456	817	485	660	39

Rod Clevis Dimension



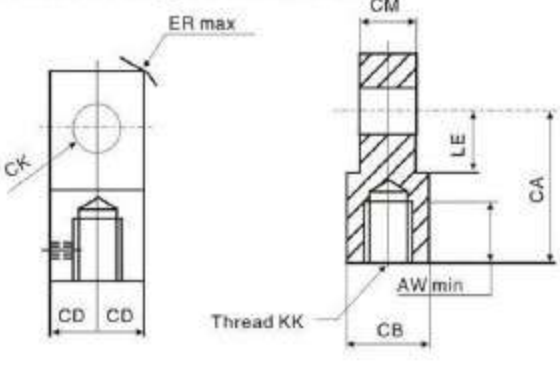
Part NO.	AV	CE	CK h9	CL	CW A16	CR	ER	KK	LE	Nominal Force KN	Weight Kg
447	14	32	10	25	12	20	12	M10 × 1.25	14	10.3	0.08
448	16	36	12	32	16	32	17	M14 × 1.5	19	16.9	0.25
449	18	38	14	40	20	30	17	M14 × 1.5	19	26.4	0.32
450	22	54	20	60	30	50	29	M16 × 1.5	32	41.2	1.0
451	28	60	20	60	30	50	29	M20 × 1.5	32	65.5	1.1
452	36	75	28	83	40	60	34	M27 × 2	39	106	2.3
453	45	99	36	103	50	80	50	M33 × 2	54	165	2.6
454	56	113	45	123	60	102	53	M42 × 2	57	258	5.5
455	63	126	56	143	70	112	59	M48 × 2	63	422	7.6
456	85	168	70	163	80	146	78	M64 × 3	83	660	13.0

Eye Bracket



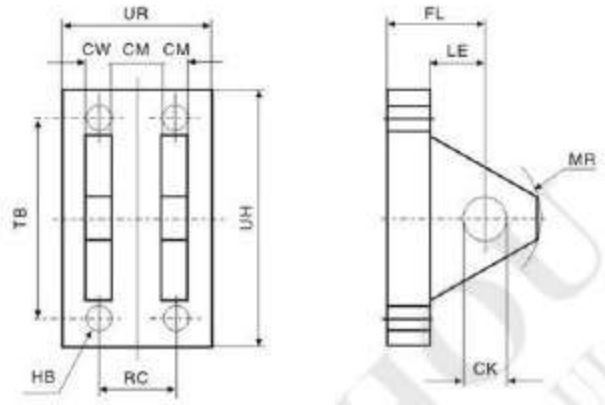
Part No.	CK H9	EM h13	FL	MR max	LE min	AA	HB	TG	UD	Nominal Force KN	Weight Kg
808	10	12	23	12	13	40	5.5	28.3	40	10.3	0.2
809	12	16	29	17	19	47	6.6	33.2	45	16.9	0.3
810	14	20	29	17	19	59	9	41.7	65	26.4	0.4
811	20	30	48	29	32	74	13.5	52.3	75	41.2	1.0
812	20	30	48	29	32	91	13.5	64.3	90	65.5	1.4
813	28	40	59	34	39	117	17.5	82.7	115	106	3.2
814	36	50	79	50	54	137	17.5	96.9	130	165	5.6
815	45	60	87	53	57	178	26	125.9	165	258	10.5
816	56	70	103	59	63	219	30	154.9	205	422	15.0
817	70	80	132	78	82	269	33	190.2	205	660	20.0

Plain Rod Eye / Knuckle



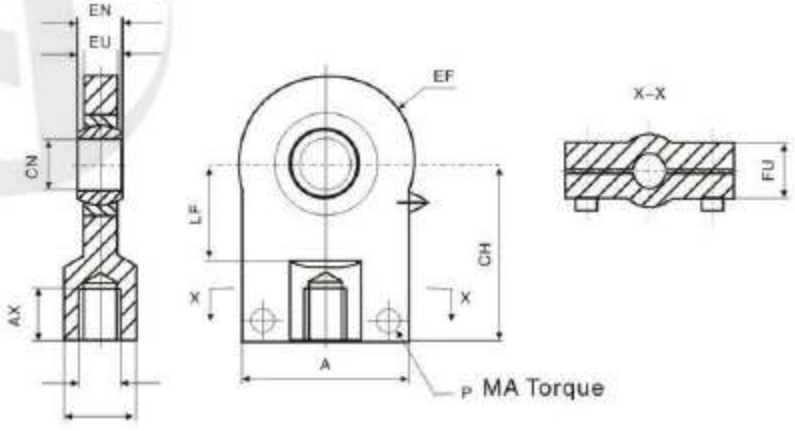
Part No.	AW	CA	CB	CD	CK H9	EM h13	ER	KK	LE	Nominal Force KN	Weight kg
457	14	32	18	9	10	12	12	M10 × 1.25	13	10.3	0.08
458	16	36	22	11	12	16	17	M12 × 1.25	19	16.9	0.15
459	18	38	20	12.5	14	20	17	M14 × 1.5	19	26.4	0.22
460	22	54	30	17.5	20	30	29	M16 × 1.5	32	41.2	0.5
461	28	60	30	20	20	30	29	M20 × 1.5	32	65.5	1.1
462	36	75	40	25	28	40	34	M27 × 2	39	106	1.5
463	45	99	50	35	36	50	50	M33 × 2	54	165	2.5
464	56	113	65	50	45	60	53	M42 × 2	57	258	4.2
465	63	126	90	56	56	70	59	M48 × 2	63	422	11.8
466	85	168	110	70	70	80	78	M64 × 3	83	660	17

Clevis Bracket



Part NO.	CK H9	CM A16	CW	FL	MR max	HB	LE min	RC	TB	UR	UH	Nominal Force KN	Weight Kg
646	10	12	6	23	12	5.5	13	18	47	35	60	10.3	0.4
647	12	16	8	29	17	6.6	19	24	57	45	70	16.9	0.8
648	14	20	10	29	17	9	19	30	68	55	85	26.4	1.0
649	20	30	15	48	29	13.5	32	45	102	80	125	65.5	2.5
650	28	40	20	59	34	17.5	39	60	135	100	170	106	5.0
651	36	50	25	79	50	17.5	54	75	157	130	200	165	9.0
652	45	60	30	87	53	26	57	90	183	150	230	258	20.0
653	56	70	35	103	59	30	63	105	242	180	300	422	31.0
654	70	80	40	132	78	33	82	120	300	200	360	660	41.0

Rod Eye With Spherical Bearing



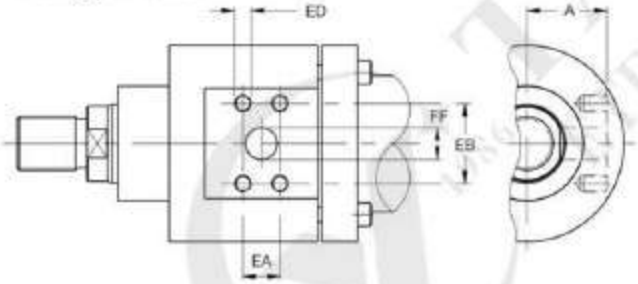
Part NO.	A max	AX min	EF max	CH	CN	EN	EU	FU	KK	LF min	N min	MA max Nm	P	Weight.Kg
145254	40	15	20	42	12	10	8	13	M10 × 1.25	16	17	10	M6	0.7
145255	45	17	22.5	48	16	14	11	13	M14 × 1.5	20	25	10	M6	1.3
145256	55	19	27.5	58	20	16	13	17	M14 × 1.5	25	25	25	M8	2.3
145257	62	23	32.5	68	25	20	17	17	M16 × 1.5	30	30	25	M8	3.7
145258	80	29	40	85	30	22	19	19	M20 × 1.5	35	38	45	M10	6.5
145259	90	37	50	105	40	28	23	23	M27 × 2	45	45	45	M10	11.6
145260	105	46	62.5	130	50	35	30	30	M33 × 2	55	55	80	M12	23
145261	134	57	80	150	60	44	38	38	M42 × 2	68	68	160	M16	46
145262	156	64	102.5	185	80	55	47	47	M48 × 2	92	90	310	M20	95
145263	190	86	120	240	100	70	57	57	M64 × 3	116	110	530	M24	168

Modle Description

Y– HG1– □ D / d X □ □ □ □ – □ □

- Working Fluid: Q=Hydraulic Oil; W=Abundant Water (Mixed Water) emulsion
- Piston Rod End: L1=Male Thread; L2=Female Thread▲
- Stroke(mm)
- Accessories: H=With Cushion B=With Balance Valve Default=No Cushion
- Rod Size(mm)
- Bore Size(mm)
- Operating Pressure: C=6.3Mpa; E=16Mpa; G=25Mpa▲
- Mounting Styles: J=Basic Style; F1=Head Rectangular Flange(D≤125); F2=Cap Rectangular Flange(D≤125); F3=Head Round Flange; F4=Cap Round Flange; F5=Head Square Flange (D≤125); F6=Cap Square Flange(D≤125); E1=Cap Fixed Eye with Spherical Bearing; E2=Cap Fixed Eye With Bushing; Z1=Head Trunnion; Z2=Intermediate Fixed Trunnion; Z3=Cap Trunnion; J1=Side End Lug; J2=Side Lugs
- Double Acting Hydraulic Cylinder, First Type
- Port Connection Code: L=Female threads(For Bore size D≤220); F=Flange(For Bore size D≤220)
- Standard Metallurgy Hydraulic Cylinder

Flange Ports

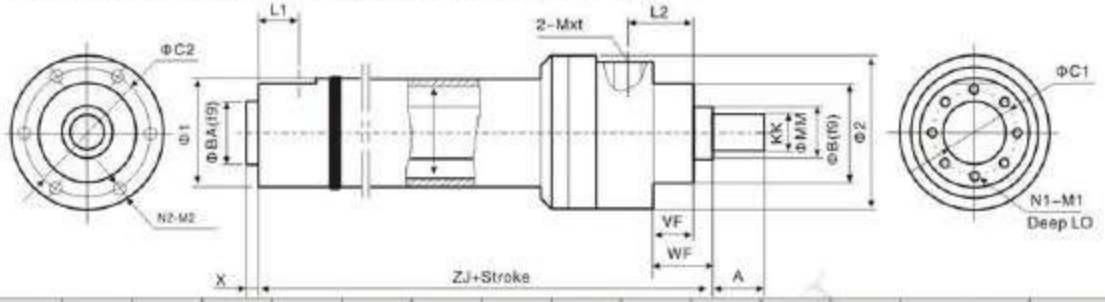


Style	BoreØ	DN Flange	A	EA	EB	ED	FfØ
Standard Flange Port	250	32	177	30.2	58.7	M10x1.5	32
	320		220				
Oversize Flange Port	250	38	173	36.5	79.3	M16x2	38
	320		217				

Bore Size	Rod Size d(mm)		Push(N)	Pull(N)		KK		A		Mxt
D(mm)	φ=1.46	φ=2		φ=1.46	φ=2	φ=1.46	φ=2	φ=1.46	φ=2	
40	22	28	20110	14020	10250	M16×1.5	M20×1.5	22	28	M18×1.5
50	28	35	31420	21560	15130	M20×1.5	M27×2	28	36	M18×1.5
63	35	45	49880	33590	24430	M27×2	M33×2	36	45	M27×2
80	45	55	80420	54980	41020	M33×2	M42×2	45	56	M27×2
(90)	50	63	101790	70370	51910	M42×2	M48×2	56	63	M27×2
100	55	70	125600	86260	64080	M42×2	M48×2	56	63	M33×2
(110)	63	80	152050	102180	71630	M48×2	M48×2	63	63	M33×2
125	70	90	196350	134770	94560	M48×2	M64×3	63	85	M33×2
(140)	80	100	246300	165880	120640	M48×2	M80×3	63	95	M42×2
150**	85**	105**	282740	191950	144200	M64×3	M80×3	85	95	M42×2
160	90	110	321700	219910	169650	M64×3	M80×3	85	95	M42×2
(180)	100	125	407150	281490	210800	M80×3	M80×3	95	95	M48×2
200	110	140	502650	350600	256350	M80×3	M100×3	95	112	M48×2
(220)	125	160	608210	411860	286510	M100×3	M100×3	112	112	M48×2
250	140	180	785400	539100	378250	M100×3	M125×4	112	125	--
(280)	160	200	985200	663500	482550	M125×4	M125×4	125	125	--
320	180	220	128680	879650	678580	M125×4	M160×4	125	160	--

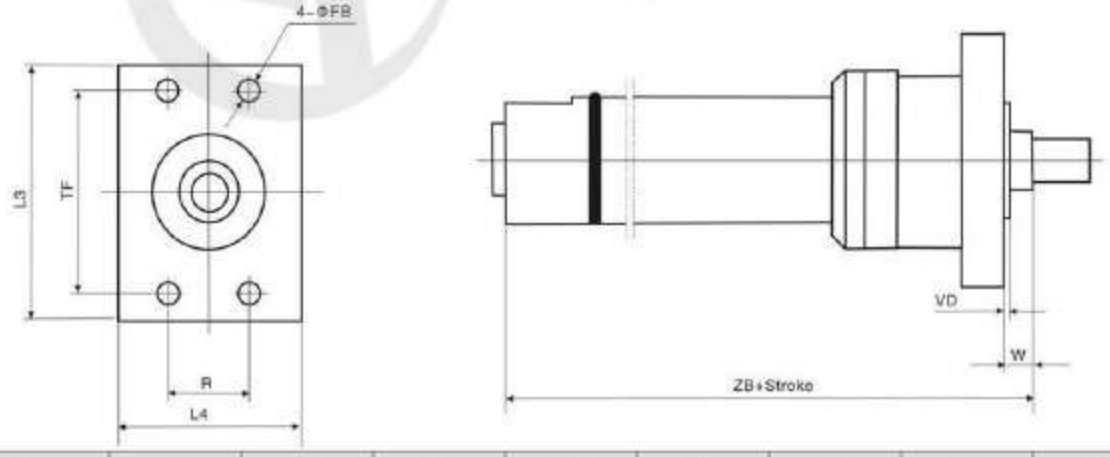
Remark:1.The bore size with() are supplied to GB/T2348-1993, but should not be selected priority.
The bore size with ** is not a recommended optional, as this size is not in the list of GB/T2348-1993.
2.When deciding the actual cylinder output, the resistance in the cylinder slipping part and the pressure loss in piping and machines must be considered.

Standard Construct Dimension(YHG1-**/*X**J-*L1)



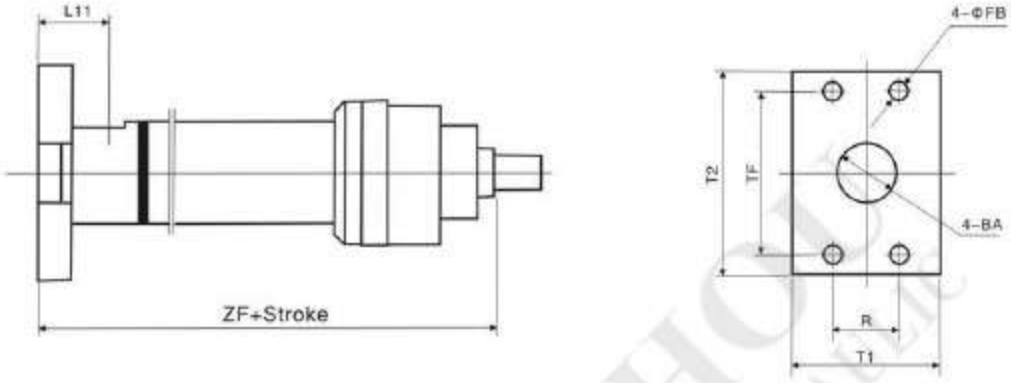
BoreΦ	B	BA	C1	C2	Φ1	Φ2	VF	WF	ZJ	X	L1	L2	L0	N1-M1	N2-M2
40	48	20	42	66	54	80	19	32	190	8	26	44	12	8-M6	8-M8
50	55	30	50	75	63.5	90	24	38	205	8	18	61	12	8-M6	8-M8
63	70	38	60	90	76	108	29	45	224	10	25	52	12	8-M8	8-M10
80	86	55	75	112	95	134	36	54	250	10	36	58	13	8-M10	8-M12
90	100	55	80	132	108	158	36	55	270	10	43	63	17	8-M12	8-M16
100	118	68	95	150	121	175	37	57	300	10	47	69	18	8-M12	8-M16
110	132	60	95	165	133	195	37	57	310	10	50	76	22	8-M16	8-M16
125	150	80	115	184	152	212	37	60	325	10	50	85	22	8-M16	8-M16
140	165	95	132	200	168	230	37	62	335	10	53	74	22	8-M16	8-M16
150	175	105	140	215	180	245	41	64	350	10	54	85	22	8-M16	8-M16
160	190	110	150	230	194	265	41	66	370	10	59	91	26	8-M20	8-M20
180	200	110	160	250	219	280	41	70	420	15	65	98	27	8-M20	8-M20
200	215	120	170	280	245	310	45	75	450	15	65	115	27	8-M20	8-M20
220	240	140	200	310	273	340	45	80	490	20	75	123	36	8-M24	8-M24
250	280	160	220	340	299	380	64	96	550	25	80	145	36	8-M24	8-M24
280	300	180	240	370	325	410	64	100	600	30	80	162	36	8-M24	8-M24
320	360	200	280	430	377	470	71	108	660	35	80	190	36	8-M24	8-M24

Head Rectangular Flange(YHG1-**/*X**F1-*L1*)



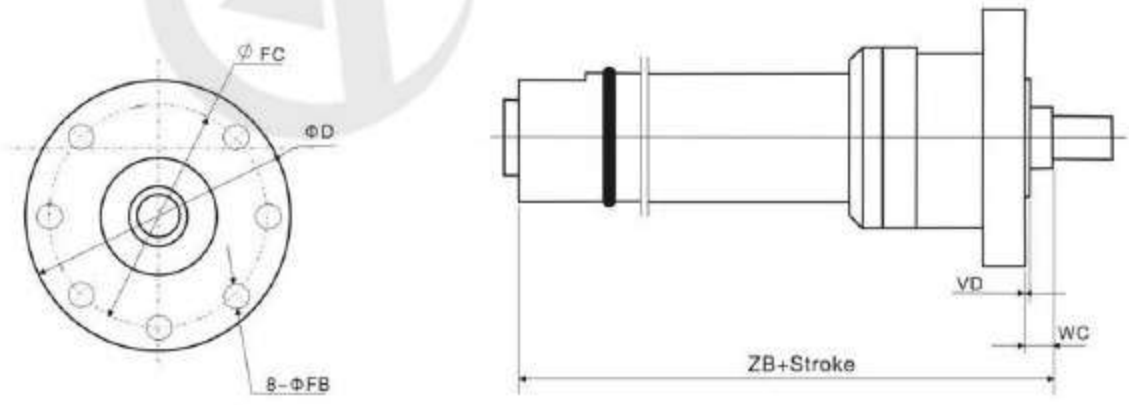
BoreΦ	W	ZB	R	TF	VD	L4	L3	FB
40	16	198	41	98	3	86	120	9
50	18	213	48	116.4	4	95	140	12
63	20	234	56	134	4	115	165	14
80	22	260	63	152.5	4	140	190	18
90	23	280	70	168	4	170	210	22
100	25	310	77	184.8	5	185	230	22
110	25	320	83	200	5	205	245	22
125	28	335	90	217.1	5	225	260	22

Cap Rectangular Flange (YHG1-**/*X**F2-*L1*)



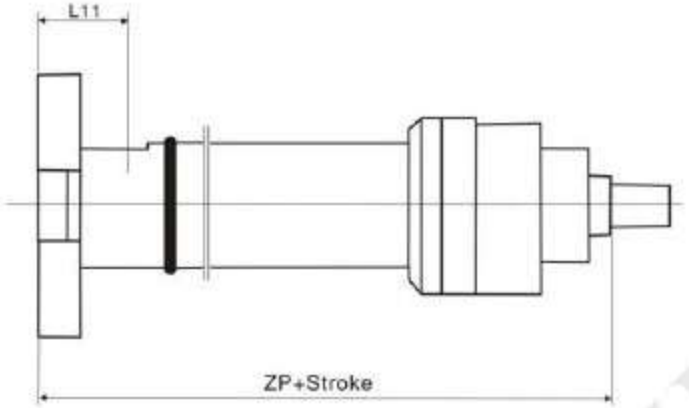
Bore Φ	ZF	FB	R	T1	TF	T2	BA	L11
40	206	9	41	65	98	120	20	38
50	225	12	48	75	116	140	30	42
63	249	14	56	85	134	164	38	50
80	282	18	63	100	153	200	55	68
90	302	22	70	115	168	210	55	75
100	332	22	77	120	185	230	60	79
110	342	22	83	130	200	245	68	82
125	357	22	90	155	217	260	80	82

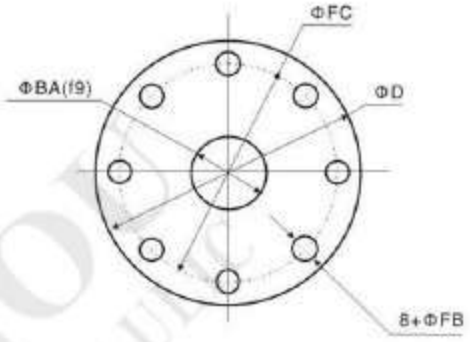
Head Round Flange (YHG1-**/*X**F3-*L1*)



BoreΦ	40	50	63	80	90	100	110	125	140	150	160	180	200	220	250	280	320
VD	3	4	4	4	5	5	5	5	5	5	5	5	5	5	8	8	8
ZB	198	213	234	260	280	310	320	335	345	360	380	425	465	510	575	630	695
FC	106	126	145	165	195	210	230	250	265	280	300	325	355	390	430	470	530
FB	9	11.5	13.5	17.5	22	22	22	22	22	22	22	26	26	33	33	39	39
ΦD	126	150	175	200	240	255	275	295	310	325	345	375	405	445	485	525	595
WC	16	18	20	22	23	25	25	28	30	28	30	34	35	40	40	44	45

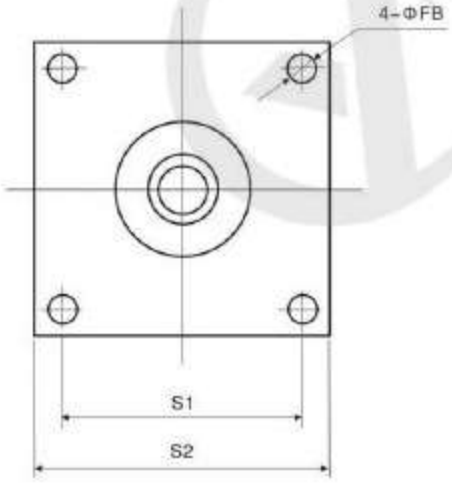
Cap Round Flange (YHG1-**/*X**F4-*L1*)

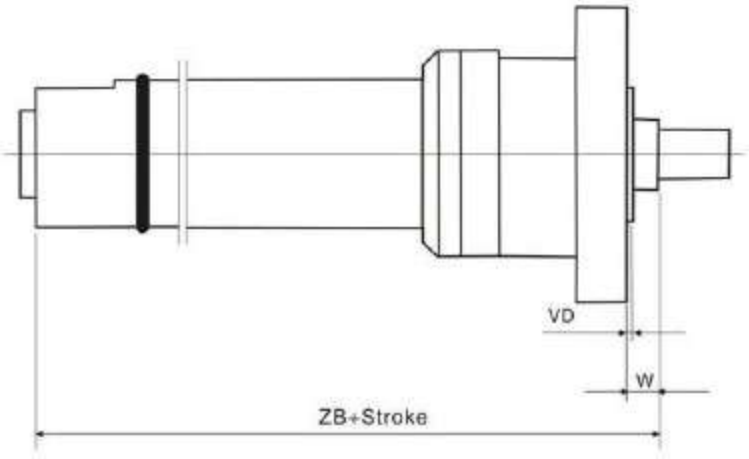




BoreΦ	40	50	63	80	90	100	110	125	140	150	160	180	200	220	250	280	320
FC	106	126	145	165	195	210	230	250	265	280	300	325	355	390	430	470	530
ΦD	126	150	175	200	240	255	275	295	310	325	345	375	405	445	485	525	595
L11	42	38	50	68	75	79	82	82	88	90	95	105	105	120	136	140	143
BA	20	30	38	55	55	68	60	80	95	105	110	110	120	140	160	180	200
ZP	206	225	249	282	302	332	342	357	370	386	406	450	490	535	606	660	723
FB	9	11.5	13.5	17.5	22	22	22	22	22	22	22	26	26	33	33	39	39

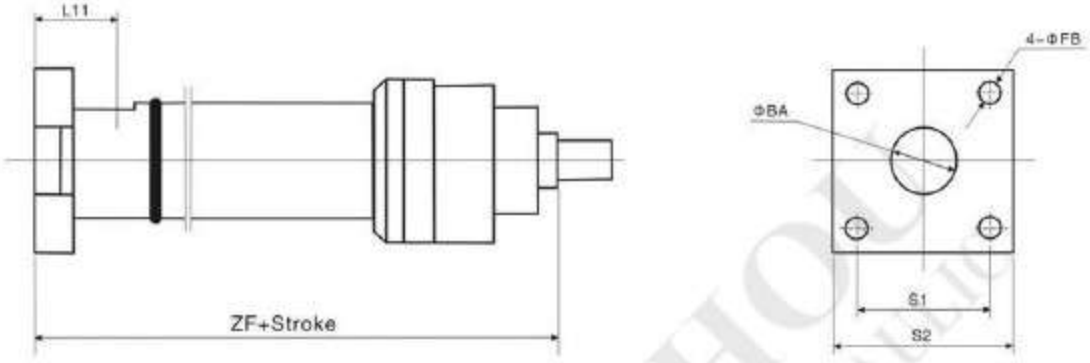
Head Square Flange (YHG1-**/*X**F5-*L1*)





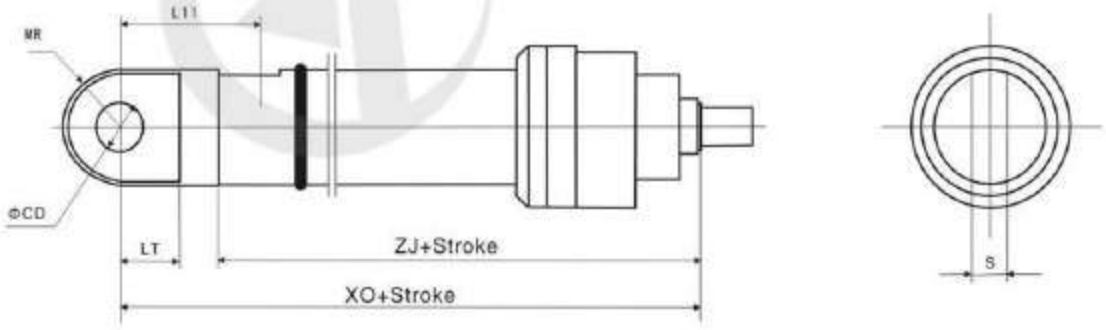
Bore Φ	40	50	63	80	90	100	110	125
ZB	198	213	234	260	280	310	320	335
VD	3	4	4	4	4	5	5	5
W	16	18	20	22	23	25	25	28
FB	9	11.5	13.5	17.5	22	22	22	22
S1	95	115	132	155	170	190	215	224
S2	115	140	160	190	210	230	255	265

Cap Square Flange (YHG1-**/*X**F6-*L1*)



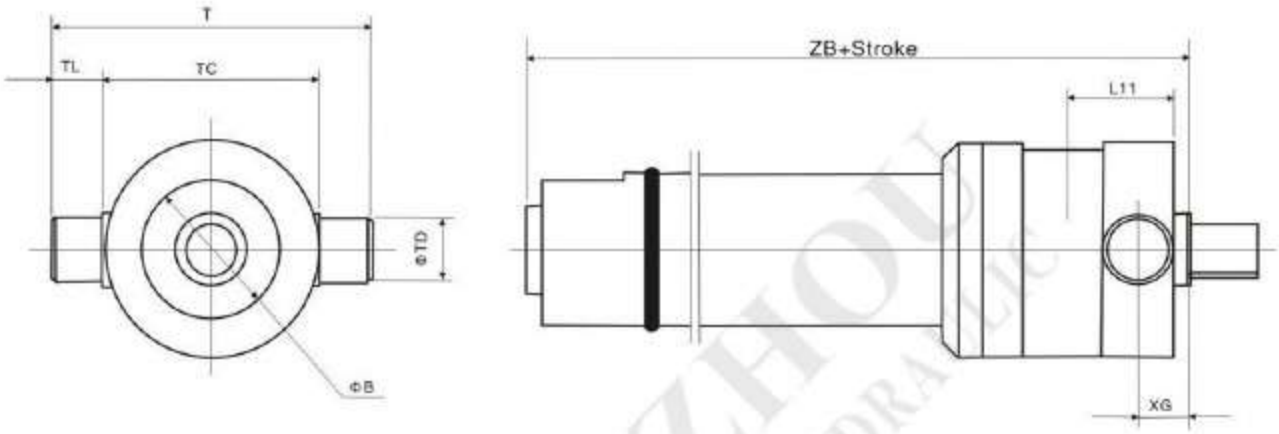
Bore Φ	40	50	63	80	90	100	110	125
ZF	206	225	249	282	302	332	342	357
BA	20	30	38	55	55	68	60	80
L11	42	38	50	68	75	79	82	82
FB	9	11.5	13.5	17.5	22	22	22	22
S1	65	80	95	110	120	135	145	160
S2	90	110	130	150	165	180	190	205

Cap Fixed Eye (YHG1-**/*X**E1,E2-*L1*)



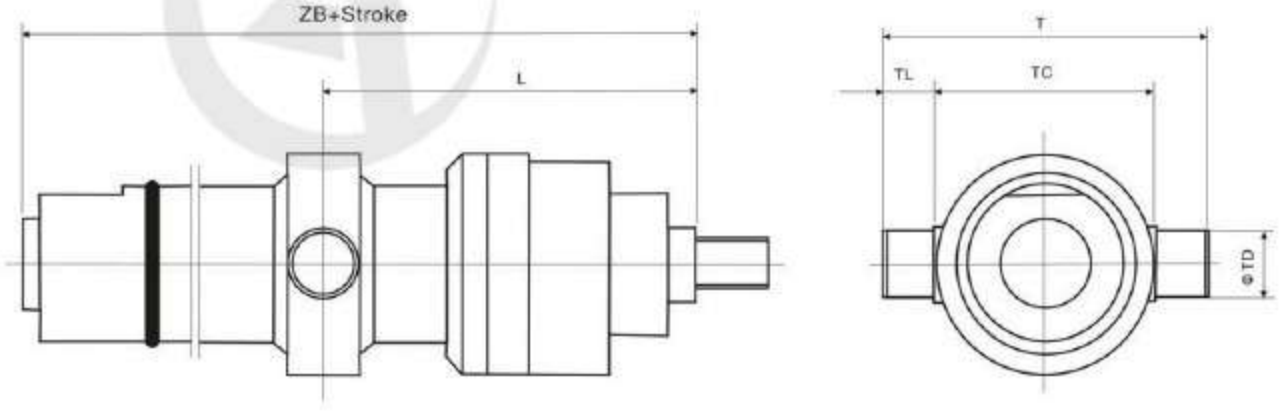
BoreΦ	40	50	63	80	90	100	110	125	140	150	160	180	200	220	250	280	320
CD	20	25	30	40	45	50	50	60	70	70	80	90	100	110	120	140	160
MR	27	32	38	47.5	54	60.5	66.5	75	84	90	97	110	123	137	150	163	189
LT	25	32	40	50	58	63	67	71	78	84	90	100	112	140	160	175	200
ZJ	190	205	224	250	270	300	310	325	335	350	370	410	450	490	550	600	660
S	18	22	27	30	35	38	38	50	58	58	62	68	72	72	88	90	92
L11	67	70	90	118	133	142	145	153	163	179	194	205	230	255	303	325	350
X0	231	257	289	332	360	395	405	428	445	475	505	550	615	670	773	845	930

Head Trunnion (YHG1-**/*X**Z1-*L1*)



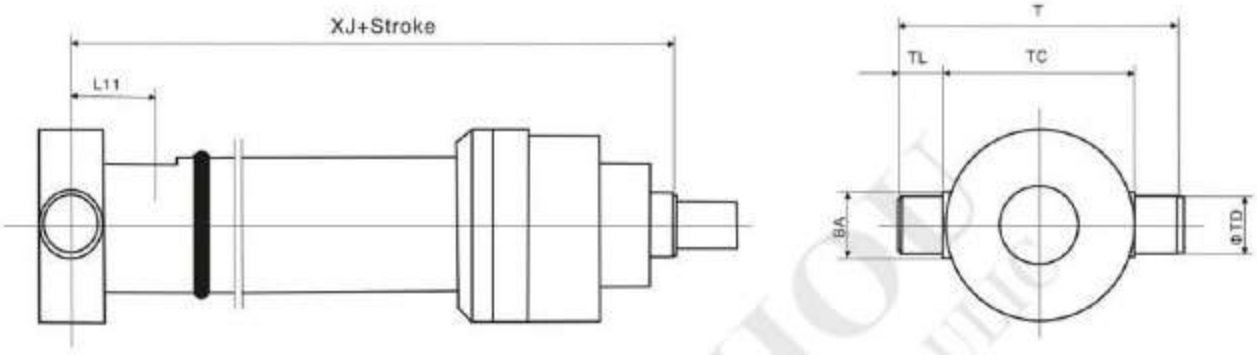
BoreΦ	B	XG	ZB	TD	TL	TC	T	L11
40	48	20	198	20	16	90	122	50
50	55	23	213	25	20	105	145	59
63	70	27	234	32	25	120	170	67
80	86	30	260	40	32	135	199	67
90	100	30	280	45	36	145	217	77
100	118	32	310	50	40	160	240	87

Intermediate Fixed Trunnion (YHG1-**/*X**Z2-*L1*)



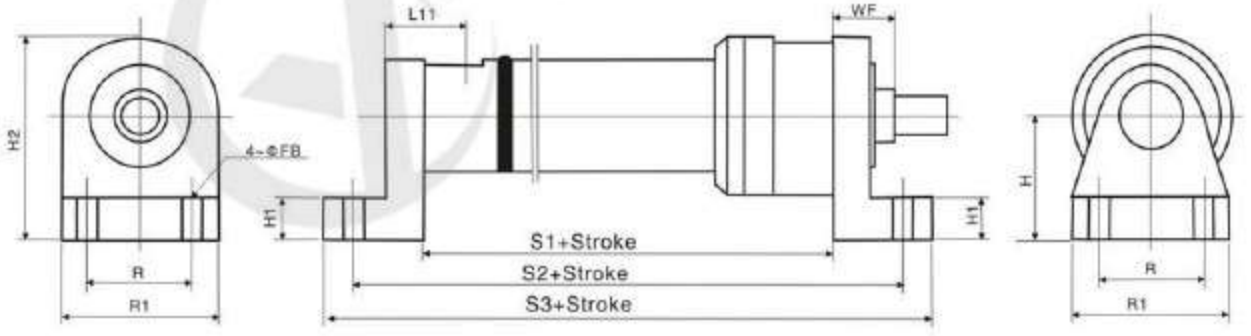
BoreΦ	40	50	63	80	90	100	110	125	140	150	160	180	200	220	250	280	320
ZB	198	213	234	260	280	310	320	335	345	360	380	425	465	510	575	630	695
TD	20	25	32	40	45	50	55	63	70	75	80	90	100	110	125	140	160
TL	16	20	25	32	36	40	45	50	55	60	63	70	80	90	100	110	125
TC	90	105	120	135	145	160	176	195	210	225	245	265	295	330	370	420	470
T	122	145	170	199	217	240	265	295	320	345	366	405	455	510	570	640	720
L	>135	>160	>165	>180	>195	>220	>230	>245	>250	>265	>285	>315	>350	>370	>430	>470	>525
	<130+L	<125+L	<125+L	<140+L	<145+L	<165+L	<165+L	<180+L	<175+L	<180+L	<190+L	<210+L	<240+L	<265+L	<295+L	<340+L	<385+L

Cap Trunnion(YHG1-**/*X**Z3-*L1*)



Bore Φ	40	50	63	80	90	100	110	125	140	150	160	180	200	220	250	280	320
XJ	203	220	242	273	295	328	340	350	373	390	413	458	503	548	615	673	743
TD	20	25	32	40	45	50	55	63	70	75	80	90	100	110	125	140	160
TL	16	20	25	32	36	40	45	50	55	60	63	70	80	90	100	110	125
TC	90	105	120	135	145	160	175	195	210	335	240	265	295	330	370	420	470
T	122	145	170	199	217	240	265	295	320	345	366	405	455	510	570	640	720
BA	20	30	38	55	55	68	60	80	95	105	110	110	120	140	160	180	200
L11	39	33	43	59	68	75	80	84	91	94	102	113	118	133	145	153	163

Side End Lug(YHG1-**/*X**ZJ1-*L1*)



Bore Φ	40	50	63	80	90	100	110	125	140	150	160	180	200	220	250
S1	158	176	179	196	215	243	253	265	273	286	304	340	375	410	454
S2	228	247	279	316	345	373	383	415	433	446	484	530	565	620	684
S3	268	285	329	366	405	443	443	485	503	516	564	610	645	710	774
WF	32	38	45	54	55	57	57	60	62	64	66	70	75	80	96
H	60	70	85	105	116	125	135	150	155	165	175	190	205	225	255
H1	18	22	28	35	35	35	35	35	40	40	40	45	45	50	60
H2	100	115	140	172	195	213	233	256	270	290	305	330	360	395	445
R	45	55	70	90	100	125	145	155	170	185	190	200	220	250	300
R1	80	90	110	134	158	175	195	212	230	245	260	280	310	340	380
FB	13.5	13.5	17.5	17.5	22	22	22	26	26	26	33	33	33	39	39
L11	38	42	50	68	75	79	82	82	88	90	95	105	105	120	136

Model Description

HSG | L | 01 | D/d | 100 | E | 2 | 5 | 0 | 1 | L1 | Q

- HSG: Double acting hydraulic cylinder
- L: Cylinder head connecting type — L=Thread, K=Key type
- 01: Design number
- D/d: Bore size/Piston rod size
- 100: Stroke
- E: Operating pressure range — E=16MPa, G=21MPa
- 2: Connection mode of cylinder barrel and cylinder head
  1=Head fixed eye with bushing
  2=Head fixed eye with spherical bearing
  3=Trunnion(Bore≥Φ80 key type)
  4=Head flange(Bore≥Φ80 key type)
  5=Intermediate flange(Bore≥Φ80 key type)
  6=Cap flange(Bore≥Φ80key type)
- 5: Piston rod end connecting style
  1=Male thread 2=Female thread(Bore≥Φ63)
  3=Male thread rod+fixed eye with bushing
  4=Female thread+fixed eye with bushing(Bore≥Φ63)
  5=Male thread+fixed eye with spherical bearing
  6=Female thread+fixed eye with spherical bearing(Bore≥Φ63)
  7=Welded fixed eye with bushing(Bore=Φ40, Φ50)
  8=Welded fixed eye with spherical bearing(Bore=Φ40, Φ50)
- 0: Cushions — 0=without cushion 1=Cushioned both ends 2=Head cushioned 3=Cap cushioned
- 1: Port connecting code — 1=Female thread 2=BSP female thread
- L1: Piston rod end connecting code — L1=Male thread, L2=Female thread▲
- Q: Working fluid — Q=Hydraulic oil, W=Abundant water

Mark:▲ means Nonstandard

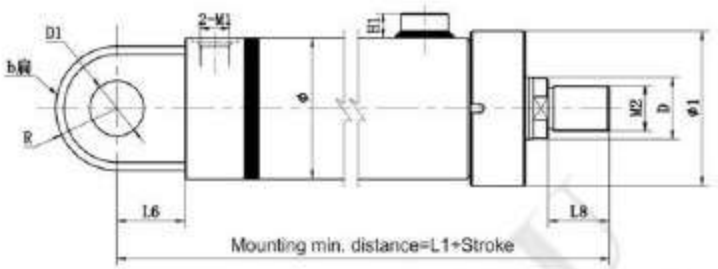
Basic Parameter

Model	Work Pressure (MPa)	Bore Size D(mm)	Ψ=1.33		Ψ=1.46		Ψ=2		Min. Stroke S1(mm)	Ψ=1.46	
			Rod Size d(mm)	Max. Stroke S(mm)	Rod Size d(mm)	Max. Stroke S(mm)	Rod Size d(mm)	Max. Stroke S(mm)		Push Force (N)	Pull Force (N)
HSGL01-40/dE	16	40	20	320	22	400	25	480	_	20090	14020
HSGL01-50/dE		50	25	400	28	500	32	600	_	31400	21550
HSGL01-63/dE		63	32	500	35	630	45	750	_	49870	34480
HSGL01-80/dE		80	40	640	45	800	55	950	_	19870	54980
HSGL01-80/dE		80	40	640	45	800	_	_	30	80420	54980
HSGL01-90/dE		90	45	720	50	900	63	1080	40	101790	70360
HSGL01-100/dE		100	50	800	55	1000	70	1200	40	125660	87650
HSGL01-110/dE		110	55	880	63	1100	80	1320	45	152050	102180
HSGL01-125/dE		125	63	1000	70	1250	90	1500	35	196350	134770
HSGL01-140/dE		140	70	1120	80	1400	100	1680	50	246300	165880
HSGL01-150/dE		150	75	1200	85	1500	105	1800	55	282600	191850
HSGL01-160/dE		160	80	1280	90	1600	110	1900	45	321700	219910
HSGL01-180/dE		180	90	1450	100	1800	125	2150	45	407150	281500
HSGL01-200/dE		200	100	1600	110	2000	140	2400	50	502660	350600
HSGL01-220/dE		220	110	1760	125	2200	160	2640	60	608200	411860
HSGL01-250/dE		250	125	2000	140	2500	180	3000	60	785600	539100

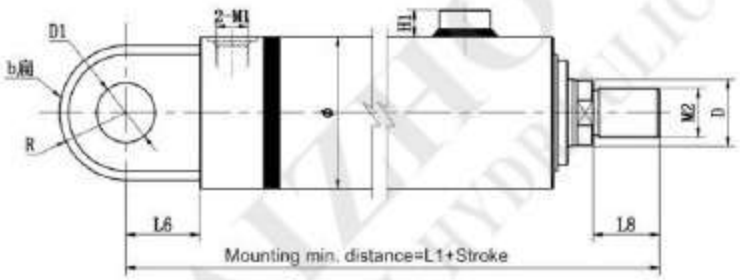
Remark:1.ψ is the ratio of piston chamber effective area and piston rod chamber effective area.
2.The maximum stroke: S=3D when ψ=1.33 ; S=10D when ψ=1.46; S=12D when ψ=2.
3."s1" means the minimum stroke expect for trunnion and intermediate flange mountings.

Piston Rod End Is Male Thread Connecting

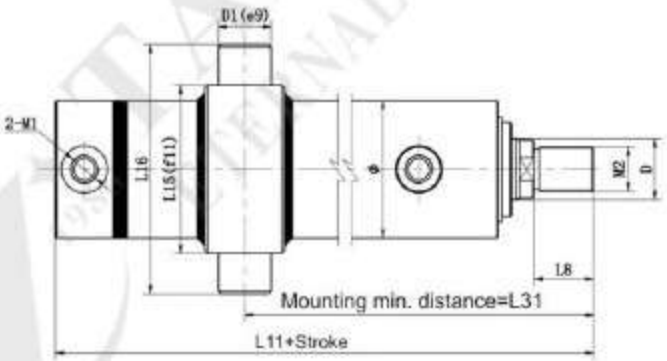
1.Fixed Eye(Kep Type)



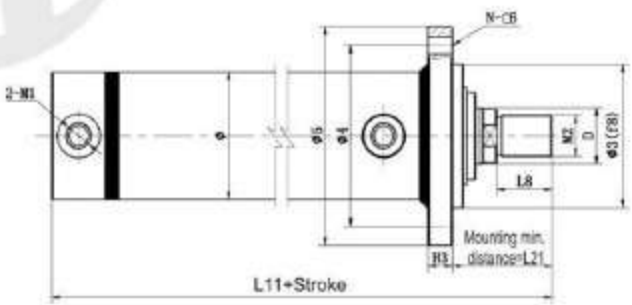
2.Fixed Eye(Thread)



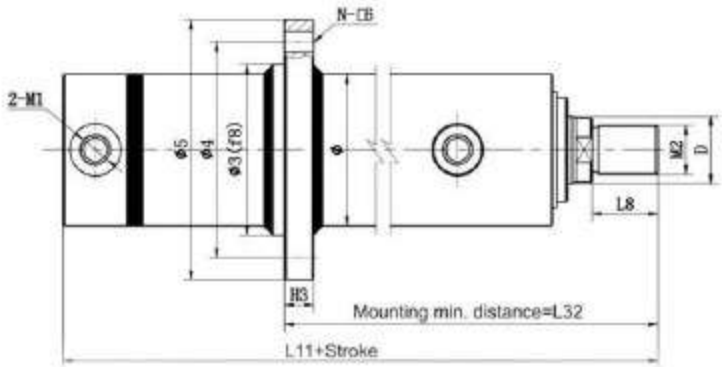
3.Trunnion



4.Head Flange



5.Intermediate Flange



Bore	φ	d			D1	R/b	L6	M2	L8	L1	2-M1	H1	Φ1
		Dψ=1.33	Dψ=1.46	Dψ=2									
40	55	20	22	25	20 / GE20ES	25	30	M18x2	25	230	M14 x 1.5	15	65
50	65	25	28	32	30 / GE30ES	35	40	M24x2	30	250	M18 x 1.5	15	75
63	80	32	35	45	30 / GE30ES	35	40	M24x2	30	260	M18 x 1.5	15	90
80	100	40	45	55	40 / GE40ES	45	50	M39x3	50	317	M22 x 1.5	18	110
90	114	45	50	63	40 / GE40ES	45	50	M39x3	50	312	M22 x 1.5	18	_
100	125	50	55	70	50 / GE50ES	60	65	M50x3	60	352	M27 x 2	20	_
110	140	55	63	80	50 / GE50ES	60	65	M50x3	60	367	M27 x 2	20	_
125	152	63	70	90	50 / GE50ES	60	65	M50x3	60	372	M27 x 2	20	_
140	166	70	80	100	60 / GE60ES	70	75	M64x3	75	418	M27 x 2	20	_
150	178	75	85	105	60 / GE60ES	70	75	M64x3	75	428	M33 x 2	22	_
160	194	80	90	110	60 / GE60ES	70	75	M64x3	75	438	M33 x 2	22	_
180	219	90	100	125	70 / GE70ES	80	85	M80x3	85	483	M42 x 2	25	_
200	245	100	110	140	80 / GE80ES	95	95	M90x3	95	513	M42 x 2	25	_
220	273	110	125	160	90 / GE90ES	102	105	M100x3	105	565	M42 x 2	25	_
250	299	125	140	180	100 / GE100ES	120	120	M110x4	115	619	M42 x 2	25	_

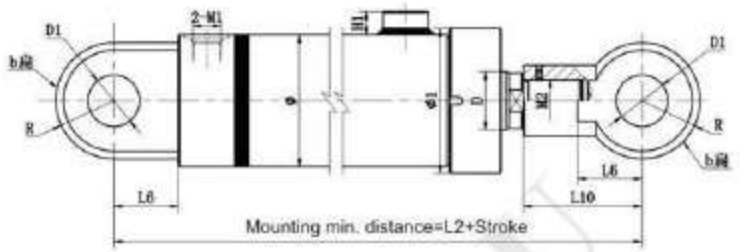
Bore Φ	L15	L16	L11	Φ3	Φ4	Φ5	H3	L21	N-Φ6	L31	L32	S1
80	125	185	292	115	145	175	20	98	8-Φ13.5	>230<175+S	>215<205+S	55
90	140	200	275	130	160	190	20	89	8-Φ13.5	>230<170+S	>215<200+S	60
100	155	230	322	145	180	210	20	100	8-Φ18	>260<180+S	>240<220+S	80
110	170	245	337	160	195	225	22	102	8-Φ18	>265<195+S	>245<230+S	70
125	185	260	342	175	210	240	22	100	10-Φ18	>255<200+S	>235<240+S	55
140	200	290	383	190	225	260	24	121	10-Φ20	>305<225+S	>291<276+S	80
150	215	305	393	205	245	285	26	122	10-Φ22	>315<235+S	>295<275+S	80
160	230	320	403	220	260	300	28	122	10-Φ22	>315<245+S	>295<285+S	70
180	255	360	443	245	285	325	30	133	10-Φ24	>350<260+S	>325<305+S	90
200	285	405	463	275	320	365	32	146	10-Φ26	>370<250+S	>345<320+S	100
220	320	466	508	305	355	405	34	160	10-Φ29	-	-	100
250	350	500	552	330	390	450	36	176	12-Φ32	-	-	105

Remark:

The stroke must be more than the minimum "S1" number when the trunnion and intermediate flange mounting is selected.

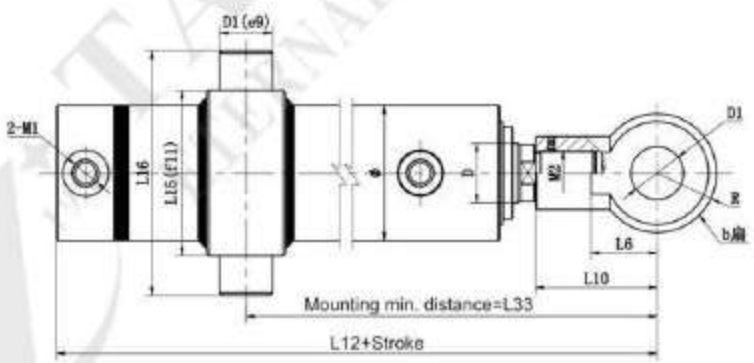
Piston Rod End Is Male Thread Connecting+Fixed eye

1.Fixed Eye(Kep Type)

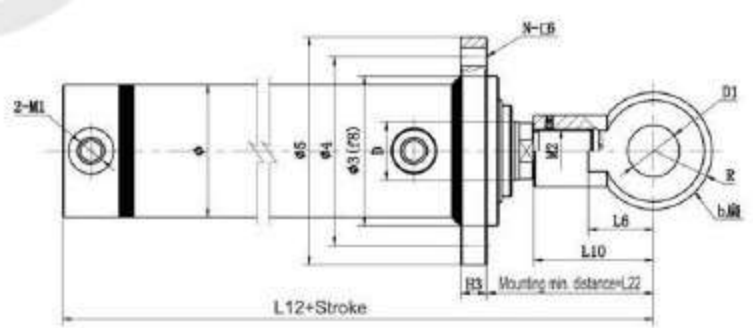


2.Fixed Eye(Thread)

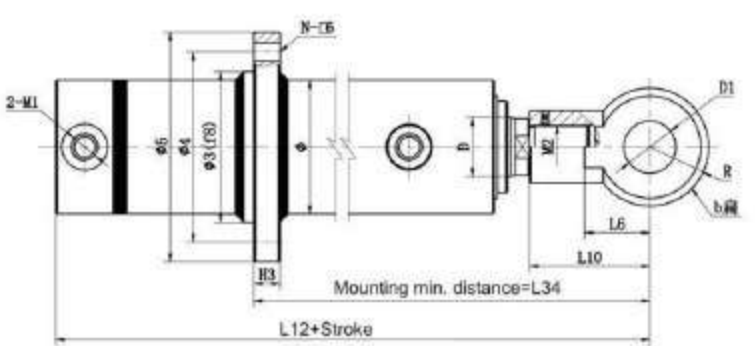
3.Trunnion



4.Head Flange



5.Intermediate Flange



Bore	φ	d			D1	R/b	L6	M2	L10	L2	2-M1	H1	Φ1
		Dψ=1.33	Dψ=1.46	Dψ=2									
40	55	20	22	25	20/GE20ES	25	30	M18x2	65	270+S	M14×1.5	15	65
50	65	25	28	32	30/GE30ES	35	40	M24x2	75	295+S	M18×1.5	15	75
63	80	32	35	45	30/GE30ES	35	40	M24x2	75	305+S	M18×1.5	15	90
80	100	40	45	55	40/GE40ES	45	50	M39x3	105	372+S	M22×1.5	18	110
90	114	45	50	63	40/GE40ES	45	50	M39x3	105	367+S	M22×1.5	18	_
100	125	50	55	70	50/GE50ES	60	65	M50x3	135	427+S	M27×2	20	_
110	140	55	63	80	50/GE50ES	60	65	M50x3	135	442+S	M27×2	20	_
125	152	63	70	90	50/GE50ES	60	65	M50x3	135	447+S	M27×2	20	_
140	166	70	80	100	60/GE60ES	70	75	M64x3	170	513+S	M27×2	20	_
150	178	75	85	105	60/GE60ES	70	75	M64x3	170	523+S	M33×2	22	_
160	194	80	90	110	60/GE60ES	70	75	M64x3	170	533+S	M33×2	22	_
180	219	90	100	125	70/GE70ES	80	85	M80x3	195	593+S	M42×2	25	_
200	245	100	110	140	80/GE80ES	90	95	M90x3	210	628+S	M42×2	25	_
220	273	110	125	160	90/GE90ES	100	105	M100x3	250	710+S	M42×2	25	_
250	299	125	170	180	100/GE100ES	110	120	M110x4	275	779+S	M42×2	25	_

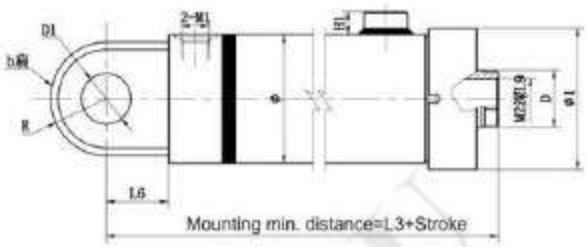
Bore Φ	L15	L16	L12	Φ3	Φ4	Φ5	H3	L22	N-Φ6	L33	L34	S1
80	125	185	347	115	145	175	20	153	8-Φ13.5	>285<230+S	>265<260+S	55
90	140	200	330	130	160	190	20	144	8-Φ13.5	>285<225+S	>270<255+S	60
100	155	230	397	145	180	210	20	175	8-Φ18	>335<255+S	>315<295+S	80
110	170	245	412	160	195	225	22	177	8-Φ18	>340<270+S	>320<305+S	70
125	185	260	417	175	210	240	22	175	10-Φ18	>330<275+S	>320<315+S	55
140	200	290	478	190	225	260	24	216	10-Φ20	>400<320+S	>375<371+S	80
150	215	305	488	205	245	285	26	217	10-Φ22	>410<330+S	>390<370+S	80
160	230	320	498	220	260	300	28	217	10-Φ22	>410<340+S	>390<380+S	70
180	255	360	553	245	285	325	30	243	10-Φ24	>460<370+S	>435<415+S	90
200	285	405	578	275	320	365	32	261	10-Φ26	>485<365+S	>460<435+S	100
220	320	466	653	305	355	405	34	305	10-Φ29	By custom		100
250	350	500	712	330	390	450	36	336	12-Φ32			105

Remark:

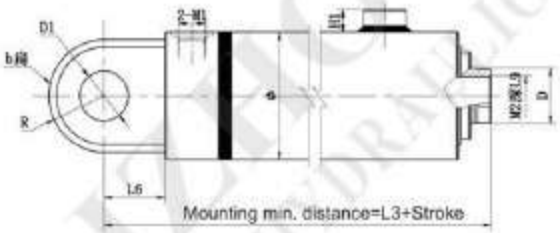
The stroke must be more than the minimum "S1" number when the trunnion and intermediate flange mounting is selected.

Piston Rod End Is Female Thread Connecting

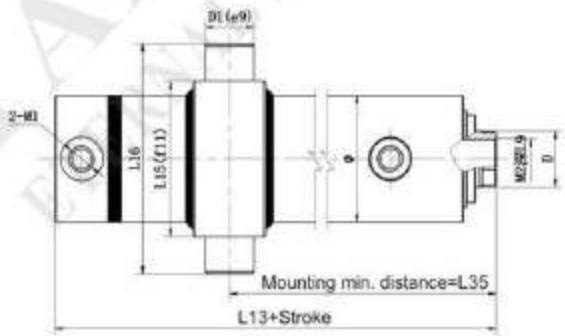
1.Fixed Eye(Kep Type)



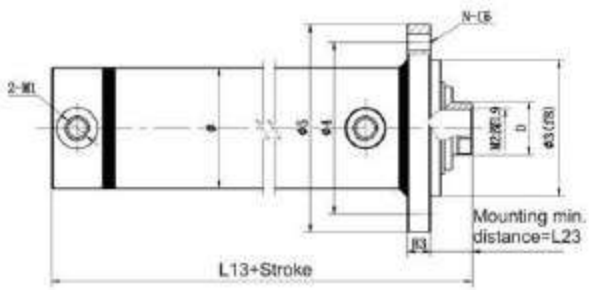
2.Fixed Eye(Thread)



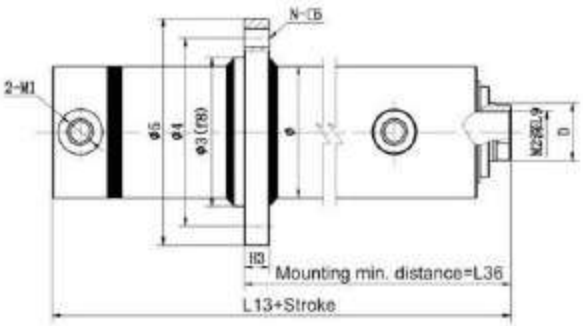
3.Trunnion



4.Head Flange



5.Intermediate Flange



Bore	φ	d			D1	R/b	L6	M2	M3	L9	L3	2-M1	H1	Φ1
		Dψ=1.33	Dψ=1.46	Dψ=2										
40	55		22	25	20/GE20ES	25	30	M16x1.5		30	205	M14x1.5	15	65
50	65		28	32	30/GE30ES	35	40	M22x1.5		35	220	M18x1.5	15	75
63	80	32	35	45	30/GE30ES	35	40	M27x1.5	M24x1.5	40	230	M18x1.5	15	90
80	100	40	45	55	40/GE40ES	45	50	M33x1.5	M30X1.5	45	267	M22x1.5	18	110
90	114	45	50	63	40/GE40ES	45	50	M36x2	M33X1.5	45	262	M22x1.5	18	_
100	125	50	55	70	50/GE50ES	60	65	M42x2	M36X2	50	292	M27x2	20	_
110	140	55	63	80	50/GE50ES	60	65	M48x2	M42X2	55	307	M27x2	20	_
125	152	63	70	90	50/GE50ES	60	65	M52x2	M48X2	60	312	M27x2	20	_
140	166	70	80	100	60/GE60ES	70	75	M60x2	M52X2	65	343	M27x2	20	_
150	178	75	85	105	60/GE60ES	70	75	M64x2	M60X2	70	353	M33x2	22	_
160	194	80	90	110	60/GE60ES	70	75	M68x2	M64X2	75	363	M33x2	22	_
180	219	90	100	125	70/GE70ES	80	85	M76x3	M68X2	85	398	M42x2	25	_
200	245	100	110	140	80/GE80ES	90	95	M85x3	M76X2	95	418	M42x2	25	_
220	273	110	125	160	90/GE90ES	100	105	M95x3	M85X3	105	460	M42x2	25	_
250	299	125	170	180	100/GE100ES	110	120	M105x3	M95X3	115	504	M42x2	25	_

Bore Φ	L15	L16	L13	Φ3	Φ4	Φ5	H3	L23	N-Φ6	L35	L36	S1
80	125	185	242	115	145	175	20	48	8-Φ13.5	>180<125+S	>165<155+S	55
90	140	200	225	130	160	190	20	39	8-Φ13.5	>180<120+S	>165<150+S	60
100	155	230	262	145	180	210	20	40	8-Φ18	>200<120+S	>180<160+S	80
110	170	245	277	160	195	225	22	42	8-Φ18	>205<135+S	>185<170+S	70
125	185	260	282	175	210	240	22	40	10-Φ18	>195<140+S	>185<180+S	55
140	200	290	308	190	225	260	24	46	10-Φ20	>230<150+S	>216<201+S	80
150	215	305	318	205	245	285	26	47	10-Φ22	>240<160+S	>220<200+S	80
160	230	320	328	220	260	300	28	47	10-Φ22	>240<170+S	>220<210+S	70
180	255	360	358	245	285	325	30	48	10-Φ24	>265<175+S	>240<220+S	90
200	285	405	368	275	320	365	32	51	10-Φ26	>275<155+S	>250<225+S	100
220	320	466	403	305	355	405	34	55	10-Φ29	As request		100
250	350	500	437	330	390	450	36	61	12-Φ32			105

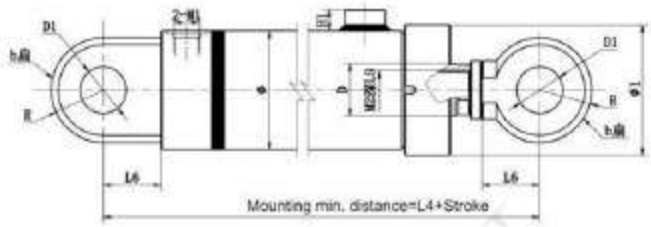
Remark:

1.The stroke must be more than the minimum "S1" number when the trunnion and intermediate flange mounting is selected.

2.The rod thread is M2 when ψ=1.46 or ψ=2; M3 when ψ=1.33

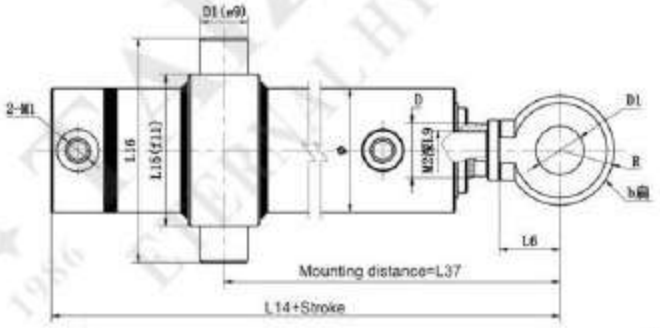
Piston Rod End Is Female Thread Connecting+ Fixed eye

1.Fixed Eye(Kep Type)



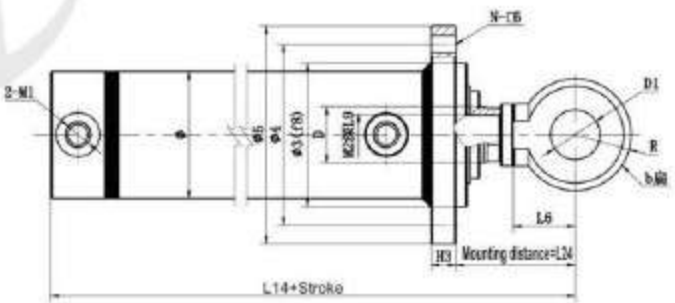
2.Fixed Eye(Thread)

3.Trunnion

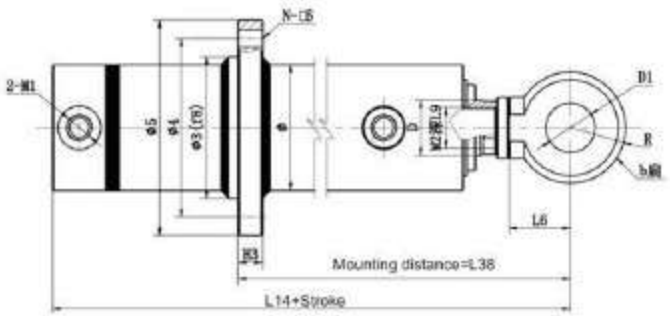


H3

4.Head Flange



5.Intermediate Flange



Bore	Φ	d			D1	R/b	L6	M2	M3	L9	L4	2-M1	H1	Φ1
		Dψ=1.33	Dψ=1.46	Dψ=2										
40	55	_	22	25	20/GE20ES	25	30	Welded fixed eye			235	M14x1.5	15	65
50	65	_	28	32	30/GE30ES	35	40				260	M18x1.5	15	75
63	80	32	35	45	30/GE30ES	35	40	M27x1.5	M24x1.5	35	280	M18x1.5	15	90
80	100	40	45	55	40/GE40ES	45	50	M33x1.5	M30x1.5	40	327	M22x1.5	18	110
90	114	45	50	63	40/GE40ES	45	50	M36x2	M33x1.5	50	322	M22x1.5	18	–
100	125	50	55	70	50/GE50ES	60	65	M42x2	M36x2	55	367	M27x2	20	–
110	140	55	63	80	50/GE50ES	60	65	M48x2	M42x2	60	382	M27x2	20	–
125	152	63	70	90	50/GE50ES	60	65	M52x2	M48x2	65	387	M27x2	20	–
140	166	70	80	100	60/GE60ES	70	75	M60x2	M52x2	70	428	M27x2	20	–
150	178	75	85	105	60/GE60ES	70	75	M64x2	M60x2	75	438	M33x2	22	–
160	194	80	90	110	60/GE60ES	70	75	M68x2	M64x2	80	448	M33x2	22	–
180	219	90	100	125	70/GE70ES	80	85	M76x3	M68x2	90	493	M42x2	25	–
200	245	100	110	140	80/GE80ES	90	95	M85x3	M76x3	100	523	M42x2	25	–
220	273	110	125	160	90/GE90ES	100	105	M95x3	M85x3	110	575	M42x2	25	–
250	299	125	170	180	100/GE100ES	110	120	M105x3	M95x3	120	634	M42x2	25	–

Bore Φ	L15	L16	L14	Φ3	Φ4	Φ5	H3	L24	N-Φ6	L37	L38	S1
80	125	185	292	115	145	175	20	98	8-Φ13.5	>230<175+S	>215<205+S	55
90	140	200	275	130	160	190	20	89	8-Φ13.5	>230<170+S	>215<200+S	60
100	155	230	327	145	180	210	20	105	8-Φ18	>265<185+S	>245<225+S	80
110	170	245	342	160	195	225	22	107	8-Φ18	>270<200+S	>250<235+S	70
125	185	260	347	175	210	240	22	105	10-Φ18	>260<205+S	>240<245+S	55
140	200	290	383	190	225	260	24	121	10-Φ20	>305<225+S	>280<265+S	80
150	215	305	393	205	245	285	26	122	10-Φ22	>315<235+S	>295<275+S	80
160	230	320	403	220	260	300	28	122	10-Φ22	>315<245+S	>295<285+S	70
180	255	360	443	245	285	325	30	133	10-Φ24	>350<260+S	>325<305+S	90
200	285	405	463	275	320	365	32	146	10-Φ26	>370<220+S	>245<320+S	100
220	320	466	508	305	355	405	34	160	10-Φ29	As request		100
250	350	500	557	330	390	450	36	181	12-Φ32			105

Remark:

1.The stroke must be more than the minimum "S1" number when the trunnion and intermediate flange mounting is selected.

2.The rod thread is M2 when ψ=1.46 or ψ=2; M3 when ψ=1.33

Round Hydraulic Cylinder Model Description

ROB - R - D - 63 X 35 X 100 LB + Y

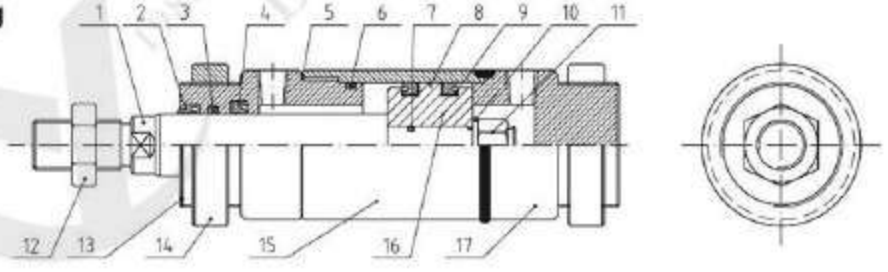
Type	Non: Without Magnet	Cushions	Bore	Standard	Max	Stroke	Cylinder Mounting		Piston Rod Connecting Type		
ROA Flat Tail Type	R: With Magnet	Non:	Φ40	Φ20	Φ25	Standard Stroke(mm)	FA	Head Flange	Y	Female Rod Clevis	
ROB LB Type		D:Both Ends	Φ50	Φ25	Φ30	50,100,150,200 250,300,350,400 450,500,600,700 800,900,1000	FB	Cap Flange	YP	Female Rod Clevis + PIN	
ROC CA Type		F: Head	Φ63	Φ35	Φ40		LB	Side End Angles	I	I Connecting	
ROD Double Rod Type		B: Cap	Φ80	Φ40	Φ50		TC	Intermediate Fixed Trunnion	KG	Floating Connecting	
			Φ100	Φ50	Φ70		CA	Fixed Eye	PHS	Spherical Rod Eye	
			Φ125	Φ60	Φ80		CB	Fixed Clevis	T	T Connecting	
				Non: Standard					H	Welded Bushing	
									A	Adjustable Nut	

Features

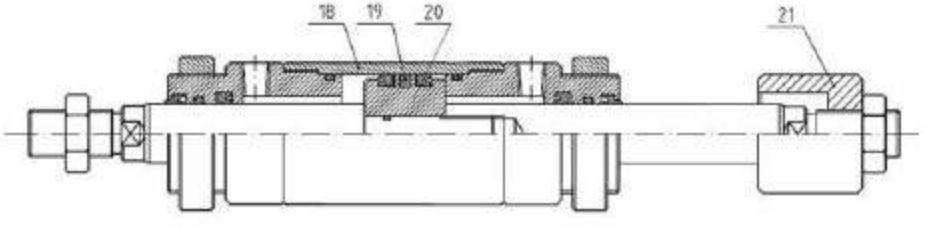
Bore size	Φ40	Φ50	Φ63	Φ80	Φ100	Φ125
Working medium	Clean Standard Hydraulic Oil					
Cylinder barrel material	20#Carbon Steel/SUS304					
Operating pressure rang	0.3~14MPa(45~2000PSI)					
Temprature rang	-10~+60(°C)					
Speed rang	8~300(mm/sec)					
Standard piston length (PM)	30	35	35	50	60	70
Piston length (PM) 1501~2500mm	60	70	70	100	100	120
Piston length (PM) 2501~4000mm	90	100	100	150	180	200

Construction Drawing

ROB

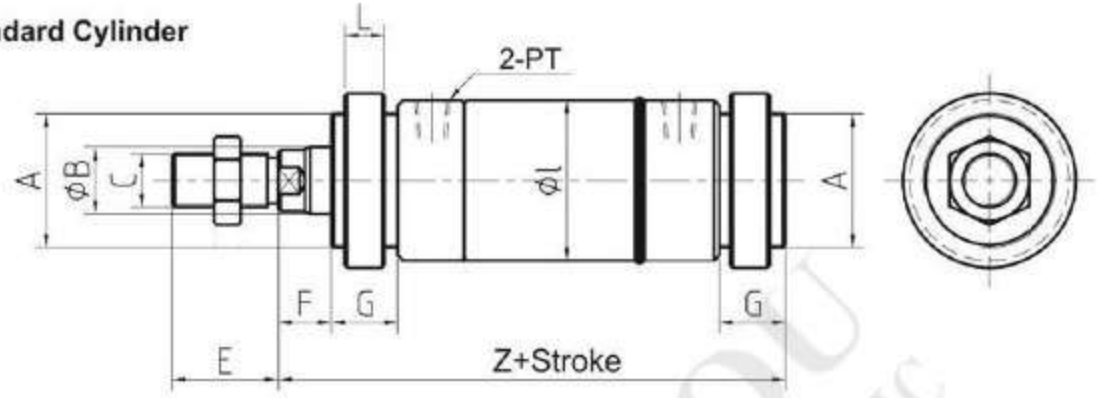


ROD

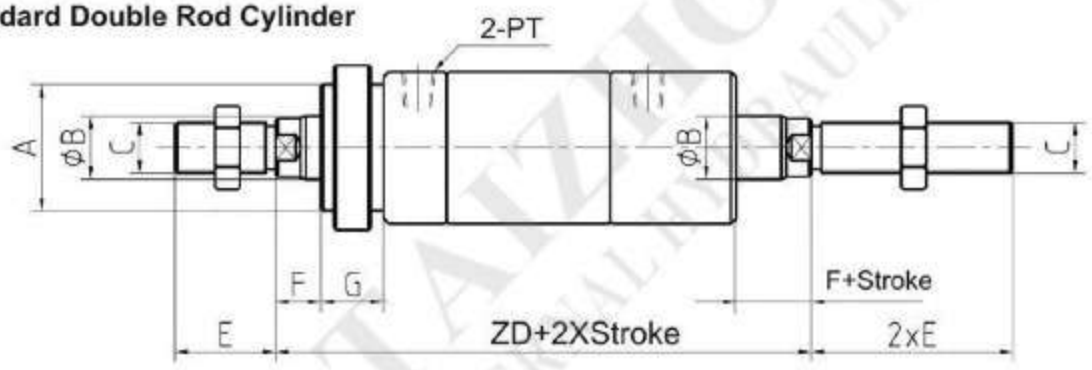


No	Part Name	Qty.	No	Part Name	Qty.	No	Part Name	Qty.
1	Piston Rod	1	8	Wear Ring	2	15	Cylinder Barrel	1
2	Dust Wiper	1	9	Piston Seals	1	16	Piston	1
3	O-Ring	1	10	Spring Washer	1	17	Cap Cover	1
4	Rod Seals	1	11	Nut	1	18	Cylinder Barrel	1
5	O-Ring	1	12	Rod Nut	1	19	Magnetic Ring	1
6	O-Ring	1	13	Head Cover	1	20	Piston	1
7	O-Ring	1	14	Head Cover Nut	1	21	Adjustable Nut	1

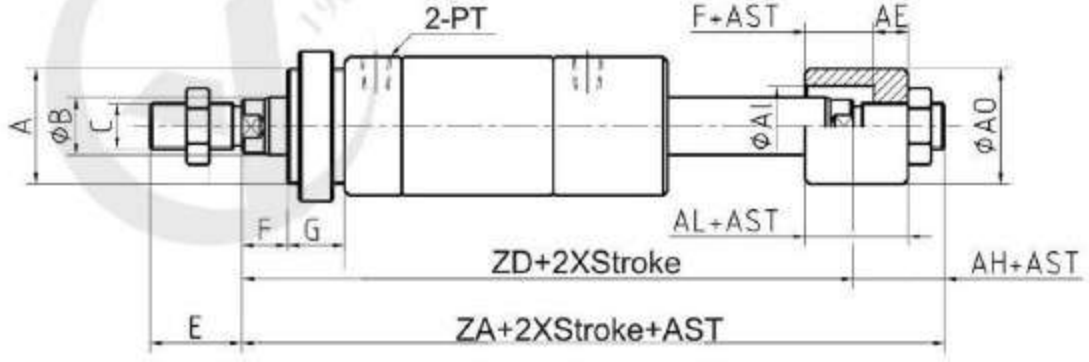
ROB Standard Cylinder



ROD Standard Double Rod Cylinder



ROD+A Double Rod Cylinder+Adjustable Nut

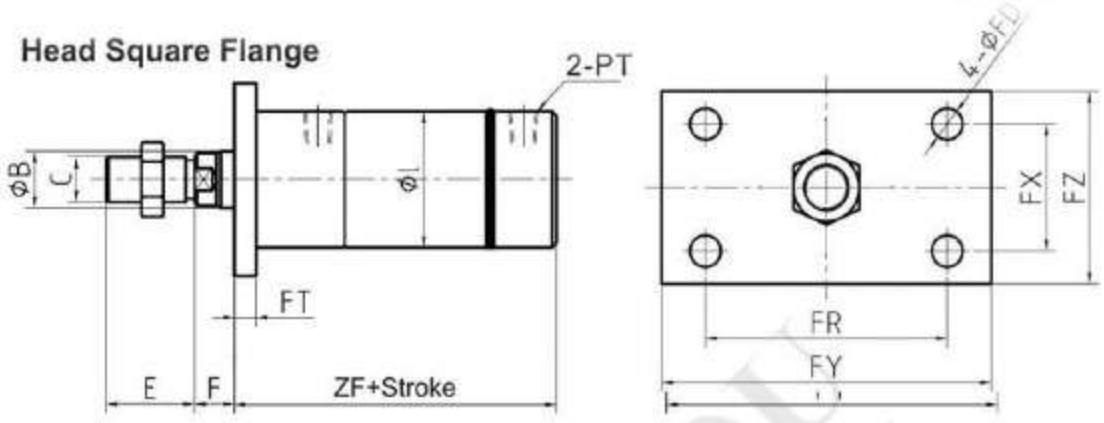


ROB-ROD Type													A Type			
Bore	A	ΦB	C	E	F	G	ΦI	PT	Z	ZA	ZD	AH	AE	ΦAI	ΦAO	AL
Φ20	M27xP1.5	12	M10	20	14	19	32	1/8	146	-	-	-	-	-	-	-
Φ25	M30xP1.5	14	M12	20	14	19	35	1/8	146	-	-	-	-	-	-	-
Φ32	M33xP2.0	16	M14xP1.5	25	17	23	42	1/4	173	-	-	-	-	-	-	-
Φ40	M40xP2.0	20	M16xP1.5	28	17	25	50	3/8	178	248	218	30	20	25	40	37
Φ50	M50xP2.0	25	M22xP1.5	40	20	25	60	3/8	191	267	227	40	25	35	50	45
Φ63	M60xP2.0	35	M30xP1.5	45	20	30	76	3/8	215	295	255	40	25	45	60	45
Φ80	M70xP2.0	40	M30xP1.5	45	20	30	95	1/2	244	329	284	45	30	50	70	50
Φ100	M90xP2.0	50	M40xP2.0	55	25	34	114	1/2	269	359	314	45	30	60	90	55
Φ125	M120xP2.0	60	M50xP2.0	70	30	38	145	3/4	310	409	359	50	35	70	100	65

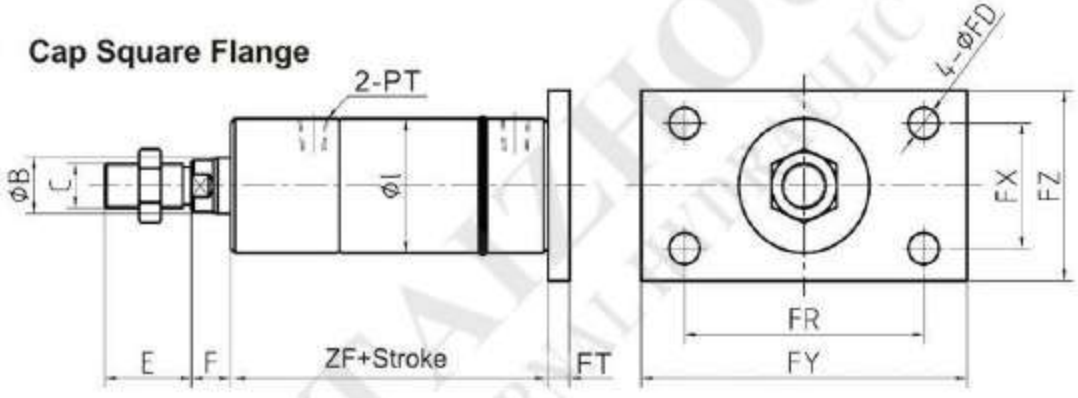
Remark:

1. If rod diameter need to be enlarged, the rod length will make according to the standard, unless otherwise specified.
2. The rod thread should be M18 × P1.5 when the bore size Φ=40mm with the stroke ≥500mm
3. The rod screw nut outside shape is round when the size in this series over M50mm
4. AST means the adjustable stroke specified by the customers

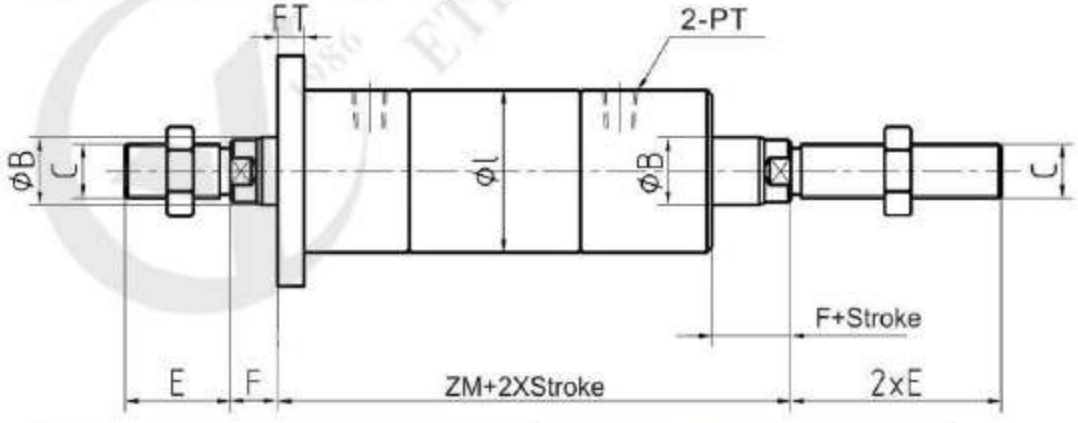
ROA+FA Head Square Flange



ROB+FB Cap Square Flange



ROD+FA Double Rods With Head Flange

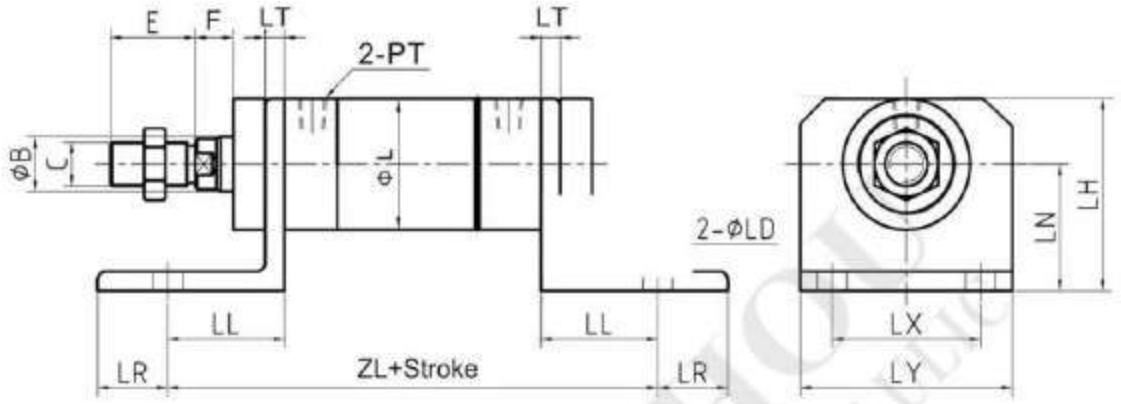


ROA,ROB,ROD Type									FA,FB Type					
Bore	ΦB	C	E	F	Φl	PT	ZF	ZM	ΦFD	FT	FR	FX	FY	FZ
Φ20	12	M10	20	14	32	1/8	113	–	9	10	60	35	80	55
Φ25	14	M12	20	14	35	1/8	113	–	9	10	60	35	80	55
Φ32	16	M14xP1.5	25	17	42	1/4	134	–	9	10	70	40	90	60
Φ40	20	M16xP1.5	28	17	50	3/8	136	201	12	11	93	50	115	72
Φ50	25	M22xP1.5	40	20	50	3/8	146	207	14	17	110	56	150	85
Φ63	35	M30xP1.5	45	20	76	3/8	165	235	14	17	126	68	155	95
Φ80	40	M30xP1.5	45	20	95	1/2	200	264	18	20	152	75	190	120
Φ100	50	M40xP2.0	55	25	114	1/2	222	289	20	20	180	100	220	140
Φ125	60	M50xP2.0	70	30	145	3/4	245	329	24	30	222	122	280	170

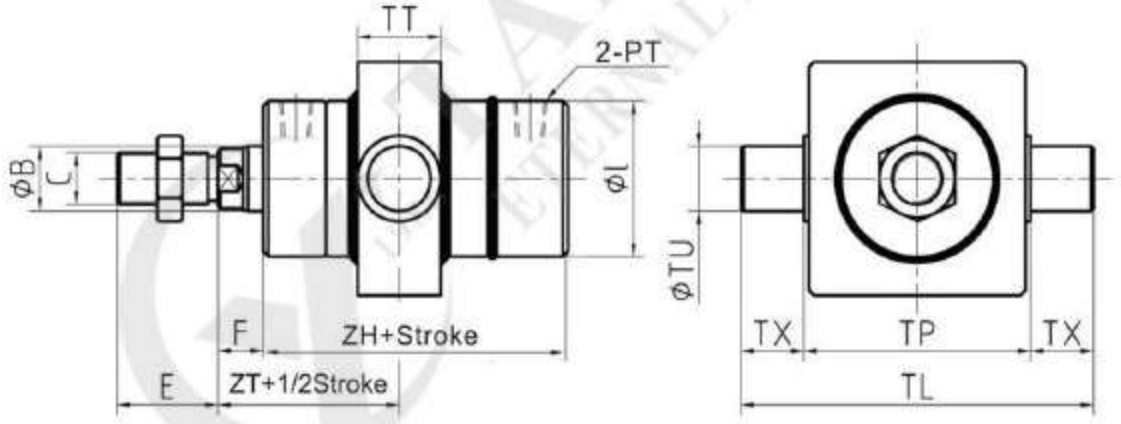
Remark:

1. If rod diameter need to be enlarged, the rod length will make according to the standard, unless otherwise specified.
2. The rod screw is need to large to be M18 x P1.5 when the bore size Φ=40mm, and stroke ≥500mm
3. The rod screw nut outside shape is round when the size in this series over M50mm

ROB+LB Side End Angles



ROB+TC Intermediate Trunnion

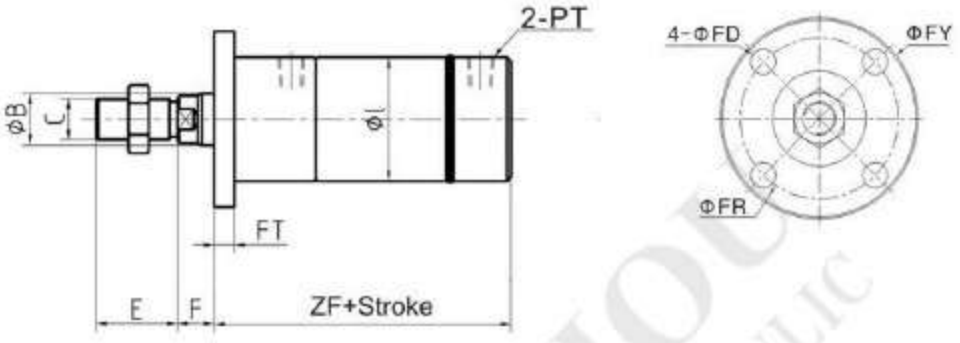


ROB Type							LB Type								TC Type							
Bore	ΦB	C	E	F	PT	ZL	ΦLD	LH	LN	LL	LR	LT	LX	LY	ZT	ΦI	ΦTU	TL	TP	TT	TX	ZH
Φ20	12	M10	20	14	1/8	164	9	52	33	35	17	8	50	70	85	32	12	78	54	20	12	113
Φ25	14	M12	20	14	1/8	164	9	55	35	35	20	8	50	70	85	35	14	83	55	20	14	113
Φ32	16	M14xP1.5	25	17	1/4	191	9	61	40	40	21	8	58	80	95	42	16	97	65	24	16	134
Φ40	20	M16xP1.5	28	17	3/8	201	12	75	47	45	30	9	60	88	98	50	20	115	75	28	20	136
Φ50	25	M22xP1.5	40	20	3/8	231	14	81	50	55	33	9	70	100	103	60	25	140	90	33	25	146
Φ63	35	M30xP1.5	45	20	3/8	271	16	101	63	68	33	13	90	124	115	76	32	166	102	40	32	165
Φ80	40	M30xP1.5	45	20	1/2	300	18	116	68	68	33	13	100	140	125	95	32	184	120	43	32	200
Φ100	50	M40xP2.0	55	25	1/2	322	18	132	75	73	35	15	100	144	145	114	40	220	140	53	40	222
Φ125	60	M50xP2.0	70	30	3/4	364	22	190	110	80	40	20	130	180	163	145	50	275	175	58	50	245

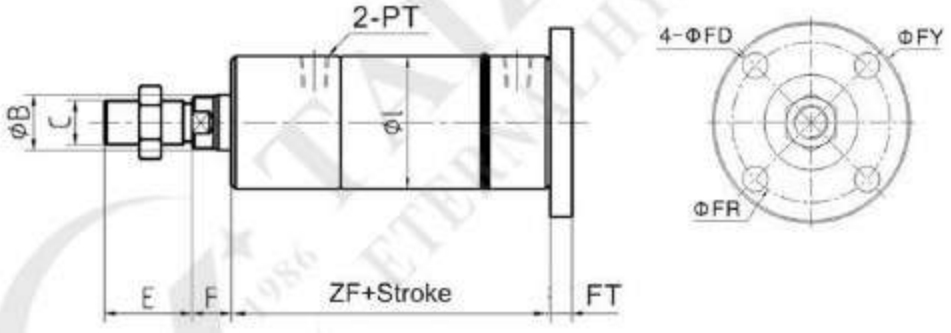
Remark:

1. If rod diameter need to be enlarged, the rod length will make according to the standard, unless otherwise specified.
2. The rod thread should be M18 × P1.5 when the bore size Φ=40mm with the stroke ⩾500mm
3. The rod screw nut outside shape is round when the size in this series over M50mm

ROA+FA Head Round Flange



ROB+FB Cap Round Flange

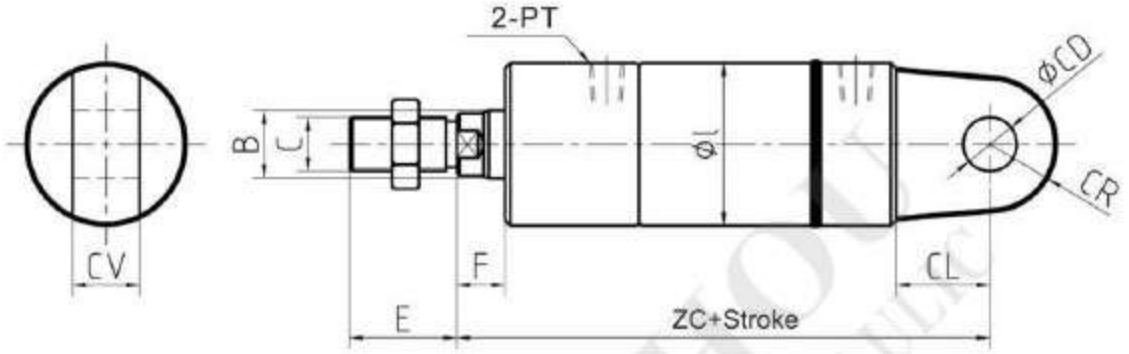


ROA-ROB									FA,FB Type		
Bore	ΦB	C	E	F	ΦI	PT	ZF	FT	ΦFD	FR	FY
Φ20	12	M10	20	14	32	1/8	113	10	9	58	75
Φ25	14	M12	20	14	35	1/8	113	10	9	58	75
Φ32	16	M14xP1.5	25	17	42	1/4	134	10	9	68	85
Φ40	20	M16xP1.5	28	17	50	3/8	136	11	12	76	95
Φ50	25	M22xP1.5	40	20	60	3/8	146	17	14	90	112
Φ63	35	M30xP1.5	45	20	76	3/8	165	17	14	102	125
Φ80	40	M30xP1.5	45	20	95	1/2	200	20	18	130	160
Φ100	50	M40xP2.0	55	25	114	1/2	222	20	20	155	190
Φ125	60	M50xP2.0	70	30	145	3/4	245	30	24	198	240

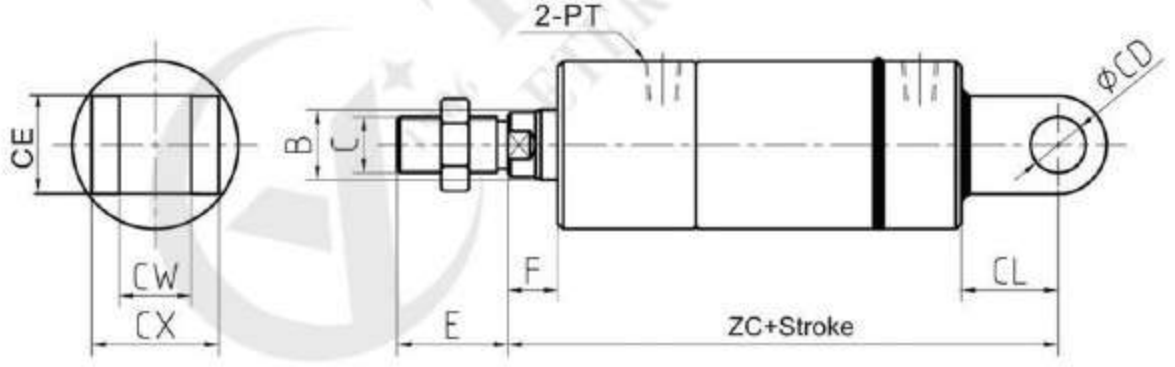
Remark:

1. If rod diameter need to be enlarged, the rod length will make according to the standard, unless otherwise specified.
2. The rod screw is need to large to be M18 x P1.5 when the bore size Φ=40mm, and stroke ≥500mm
3. The rod screw nut outside shape is round when the size in this series over M50mm

Standard RO+CA Fixed Eye



Standard RO+CB Fixed Clevis

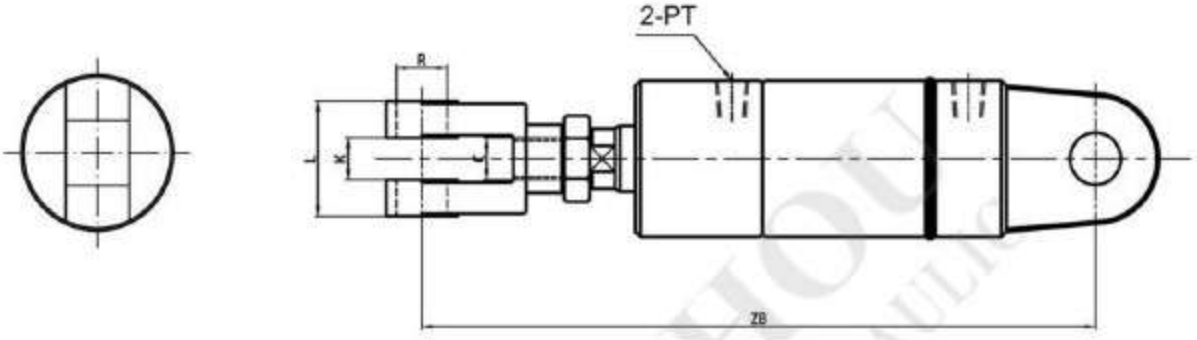


RO Type								CA CB Type						
Bore	ΦB	C	E	F	Φl	PT	ZC	CE	ΦCD	CL	CR	CV	CW	CX
Φ20	12	M10	20	14	32	1/8	146	21	10	18	12	12	13	25
Φ25	14	M12	20	14	35	1/8	146	21	12	18	12	12	13	25
Φ32	16	M14xP1.5	25	17	42	1/4	171	28	14	20	16	16	17	31
Φ40	20	M16xP1.5	28	17	50	3/8	178	30	16	25	18	25	26	41
Φ50	25	M22xP1.5	40	20	60	3/8	201	40	20	35	25	25	26	46
Φ63	35	M30xP1.5	45	20	76	3/8	230	48	25	45	30	30	31	56
Φ80	40	M30xP1.5	45	20	95	1/2	270	60	30	50	30	35	36	66
Φ100	50	M40xP2.0	55	25	114	1/2	307	70	35	60	35	40	41	81
Φ125	60	M50xP2.0	70	30	145	3/4	345	100	50	70	50	55	56	106

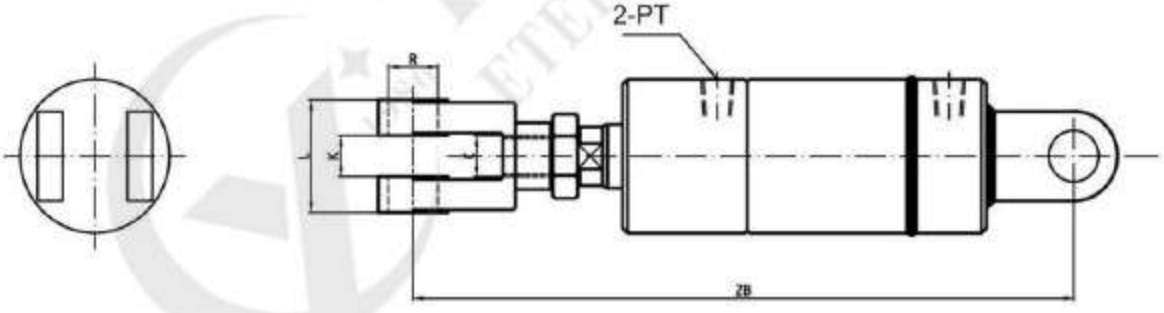
Remark:

1. If rod diameter need to be enlarged, the rod length will make according to the standard, unless otherwise specified.
2. The rod thread should be M18 × P1.5 when the bore size Φ=40mm with the stroke ⩾500mm
3. The rod screw nut outside shape is round when the size in this series over M50mm

Standard ROC Fixed Eye+Y(Female Rod Clevis)

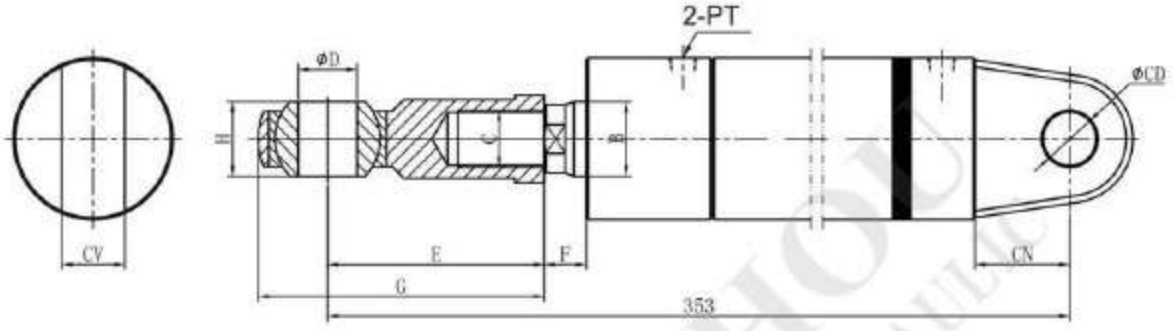


Standard ROCB Fixed Clevis+Y(Female Rod Clevis)



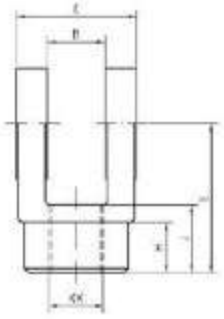
Bore	C	k	L	R	PT	≥ZB
25	M12X1.5	15	32	12.7	1/8	204
32	M14X1.5	16	44	12	1/4	237
40	M16X1.5	16	44	12	3/8	244
50	M22X1.5	24	52	20	3/8	281
63	M30X1.5	30	70	20	3/8	320
80	M30X1.5	30	70	20	1/2	360

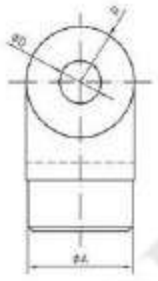
Standard ROC Fixed Eye+PHSA(Spherical Rod Eye)



RO+PHSA												
Bore	ΦB	C	ΦD	E	F	G	PT	Z	CN	ΦCD	H	CV
Φ20	12	M10X1.5	10	43	14	57	1/8	189	18	10	14	12
Φ25	14	M12X1.75	12	50	14	66	1/8	196	18	12	16	12
Φ32	16	M14X2	14	57	17	75	1/4	228	20	14	19	16
Φ40	20	M16X2	16	64	17	84	3/8	242	25	16	21	25
Φ50	25	M22X1.5	22	84	20	111	3/8	285	35	20	28	25
Φ63	35	M30X2	30	110	20	145	3/8	340	45	25	37	30
Φ80	40	M30X2	30	110	20	145	1/2	380	50	30	37	35
Φ100	50	M39X3	40	105	25	152	1/2	412	60	35	35	40
Φ125	60	M50X3	50	135	30	193	3/4	480	70	50	40	55

Female Rod Clevis

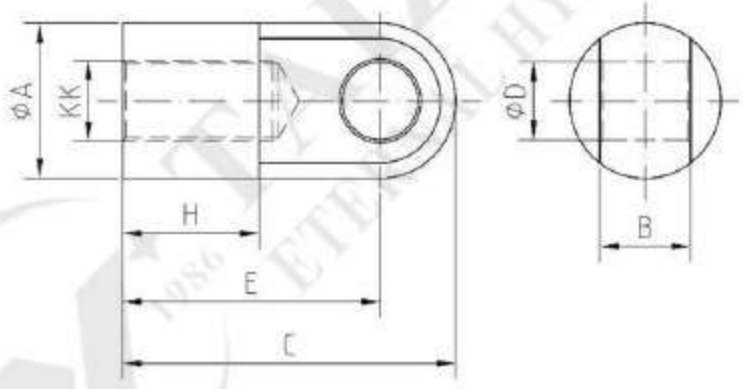




KK	A	B	C	D	E	J	H	R
M10*1.5	20	14	17	9	41	12	10	9
M12*1.5	25	15	32	12.7	47.5	19	10	12.5
M14*1.5	30	16	44	12	56	20	15	14
M16*1.5	30	16	44	12	56	20	15	14
M22*1.5	42	24	52	20	70	38	24	23

KK	A	B	C	D	E	J	H	R
M30*1.5	53	30	70	25	80	42	24	27
M40*2	70	30	70	35	93	48	32	35
M50*3	80	35	80	40	100	50	32	40

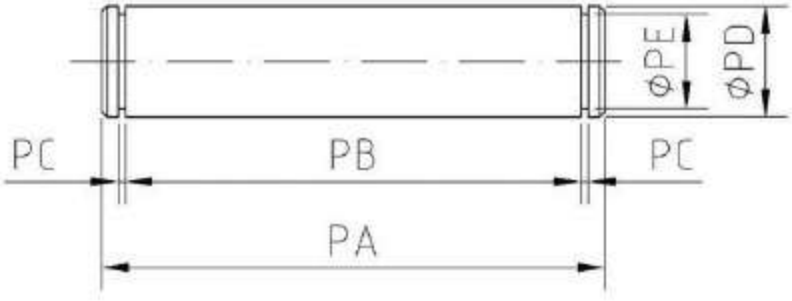
T Connecting



KK	ΦA	B	C	ΦD	E	H
M14*1.5	30	25.4	69	12	57	–
M16*1.5	30	25.4	69	12	59	–
M22*1.5	38	30	76	16	60	–

KK	ΦA	B	C	ΦD	E	H
M30*1.5	55	25.4	110	25	83	45
M40*2	75	25.4	127	35	90	40
M50*2	90	30	155	50	105	50
M70*2	100	32	205	60	145	75

Pin



Y	PA	PB	PC	ΦPD	ΦPE
M14*1.5	52	44.2	1.15	12	11.5
M16*1.5	52	44.2	1.15	12	11.5
M22*1.5	60	55.2	1.35	20	19
M30*1.5	80	71.5	1.35	20	19
M30*1.5	93	84.2	1.35	20	23.9

CB	PA	PB	PC	ΦPD	ΦPE
Φ40	40	32.4	1.15	12	11.5
Φ50	52	44.2	1.15	12	11.5
Φ63	56	48.2	1.15	16	15.2
Φ80	70	62.2	1.35	20	19
Φ100	83	74.2	1.35	25	23.9

Heavy Duty Round Hydraulic Cylinder Model Description

HROA | 125 | X | 60 | X | 100 | + | Y

HROA	Oil port in front of flange
HROB	Oil port at the back of flange
HROC	CA Type
HROD	Double Rod
HROE	Cap Flange

Bore
Φ125
Φ150
Φ180
Φ200
Φ225
Φ250
Φ280
Φ300

ROD	
Standard	Max.
Φ60	Φ80
Φ80	Φ100
Φ100	Φ120
Φ125	Φ140
Φ140	Φ160
Φ160	Φ200
Φ180	Φ220
Φ200	Φ250

Stroke
Standard Max.4M

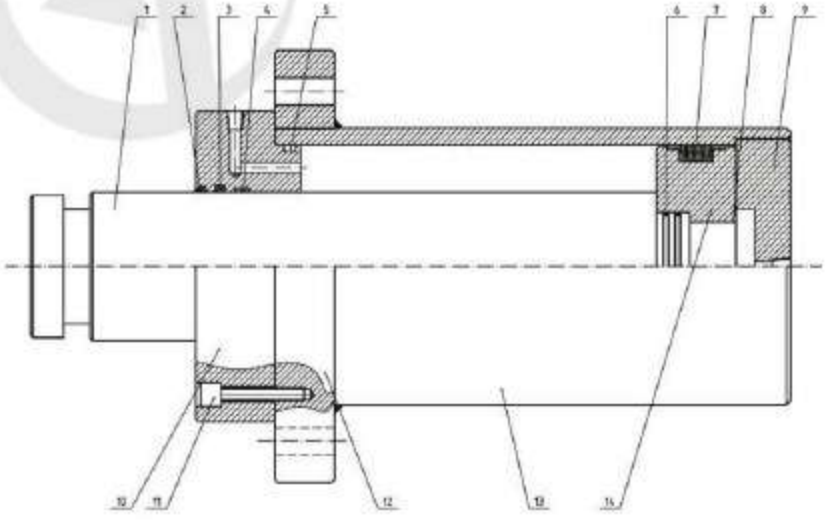
Cylinder Mounting	
YP	Female Rod Clevis + PIN
I	I Connecting
TW	Semilune Sleeve
TH	Semilune Sleeve Welding Sleeve
A	Adjustable Nut

Technical Parameters

Bore size	Φ125	Φ150	Φ180	Φ200	Φ225	Φ250	Φ280	Φ300
Working medium	Clean Standard Hydraulic Oil							
Cylinder barrel material	Carbon Steel STK-13C							
Operating pressure rang	1-21MPa(145-3000PSI)							
Temprature rang	-30 - +100(℃)							
Speed rang	8-500(mm/s)							
Standard piston length (PM)	60	60	70	70	70	70	70	90
Piston length (PM)1501-2500mm	120	120	140	140	140	140	140	150
Piston length (PM)2501-4000mm	200	200	200	200	200	200	200	200

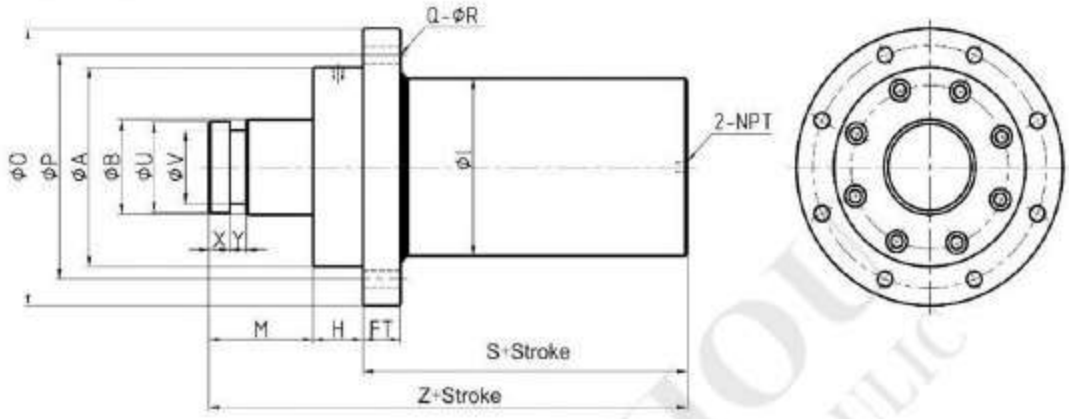
Constructure Dimension

HROA

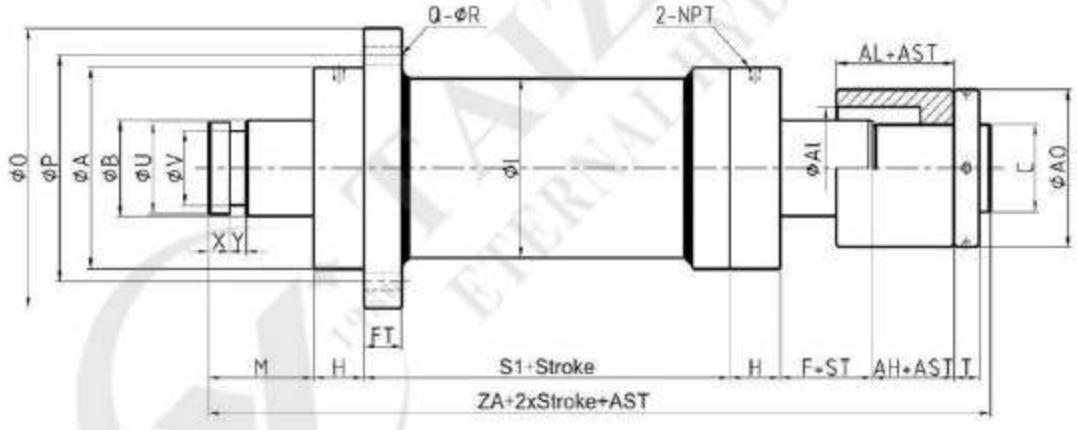


No	Part Name	QTY.	No	Part Name	QTY.	No	Part Name	QTY.
1	Piston Rod	1	6	O-Ring	1	11	Head Cover Nut	N
2	Dust Wiper	1	7	Piston Seals	1	12	Flange	1
3	Rod Seals	1	8	Stop Screw	2	13	Cylinder Barrel	1
4	Wear Ring	1	9	Cap Cover	1	14	Piston	1
5	O-Ring	1	10	Head Cover	1			

Standard HROA



Standard HROD Double Rod With Adjustable Nut



Bore Size	A	B	C	F	FT	H	I	M	O	P	PM	NPT	Q	R
Φ125	175	60	M50 × P2.0	25	45	50	152	80	240	210	60	3/4	6	18
Φ150	200	80	M70 × P2.0	25	50	50	175	80	280	240	60	1	6	18
Φ180	240	100	M90 × P2.0	30	60	60	216	100	320	280	70	1	6	18
Φ200	260	125	M100 × P2.0	30	65	70	242	100	350	310	70	1.1/4	6	20
Φ225	290	140	M120 × P3.0	30	70	70	270	120	380	340	70	1.1/4	8	20
Φ250	330	160	M140 × P3.0	30	75	75	299	120	440	380	70	1.1/4	8	24
Φ280	360	180	M160 × P3.0	30	80	80	330	150	500	430	70	1.1/2	10	26
Φ300	380	200	M180 × P3.0	35	85	90	350	150	550	460	90	1.1/2	10	28

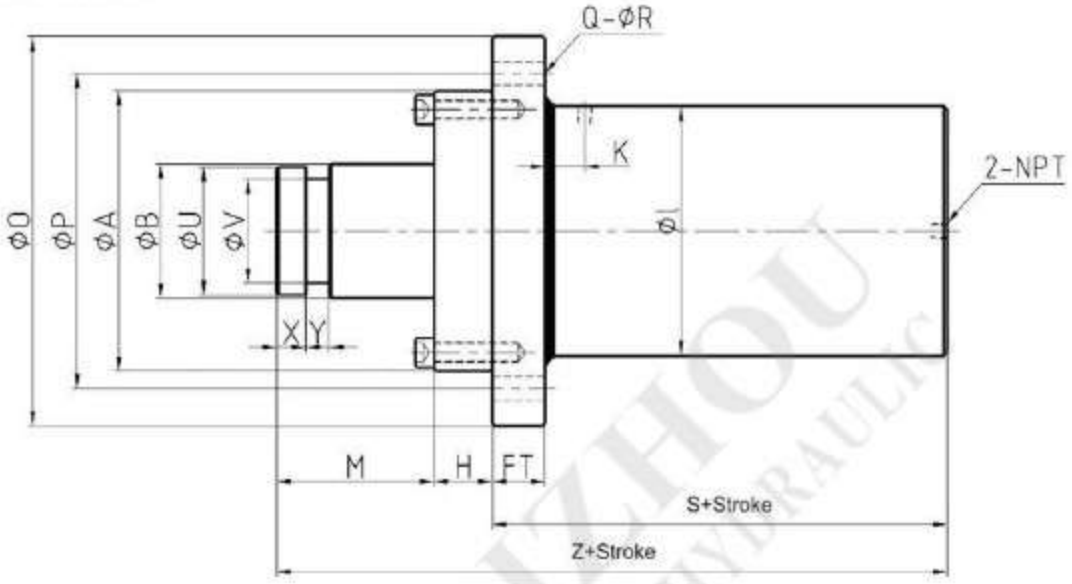
	HROA-HROD									A(Adjustable Nut)				
Bore Size	S	S1	T	U	V	X	Y	Z	ZA	AH	AE	AI	AO	AL
Φ125	125	100	15	60	50	15	15	255	355	50	35	70	100	60
Φ150	130	100	20	80	70	15	15	260	365	60	40	95	120	65
Φ180	150	110	30	95	85	20	20	310	430	70	40	120	150	70
Φ200	155	110	30	115	100	25	25	325	450	70	40	140	180	70
Φ225	160	110	30	135	120	25	25	350	475	75	45	160	200	75
Φ250	170	120	35	155	140	30	30	365	505	85	50	190	240	80
Φ280	175	120	40	175	150	30	30	405	550	90	50	210	260	80
Φ300	200	140	40	195	170	35	35	440	605	100	60	230	290	95

Remark:

If piston rod diameter required to be enlarged, the related size will scale up.

2.AST means the adjustable stroke specified by the customers

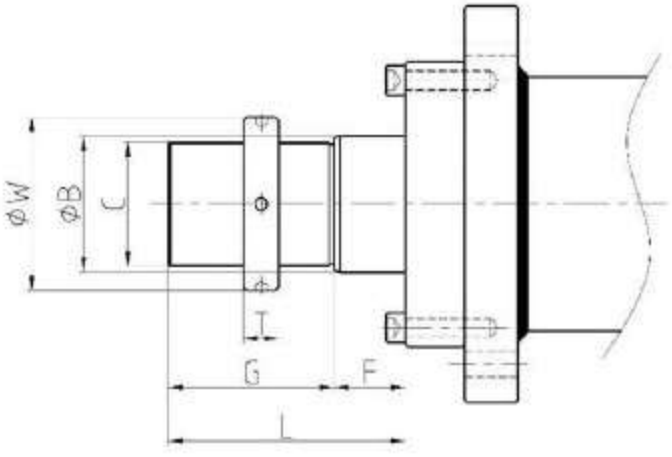
Standard HROB



Bore Size	A	B	FT	H	I	K	M	O	P	PM	NPT	Q	R	S	U	V	X	Y	Z
Φ125	180	60	45	20	152	30	80	240	210	60	3/4	6	18	190	60	50	15	15	290
Φ150	205	80	50	20	175	30	80	280	240	60	1	6	18	200	80	70	15	15	300
Φ180	245	100	60	30	216	30	100	320	280	70	1	6	18	230	95	85	20	20	360
Φ200	265	125	65	30	242	35	100	350	310	70	1.1/4	6	20	250	115	100	25	25	380
Φ225	295	140	70	35	270	35	120	380	340	70	1.1/4	8	20	260	135	120	25	25	415
Φ250	335	160	75	35	298	40	120	440	380	70	1.1/4	8	24	275	155	140	30	30	430
Φ280	365	180	80	40	330	40	150	500	430	70	1.1/2	10	26	290	175	150	30	30	480
Φ300	385	200	85	40	350	45	150	550	460	90	1.1/2	10	28	320	195	170	35	35	510

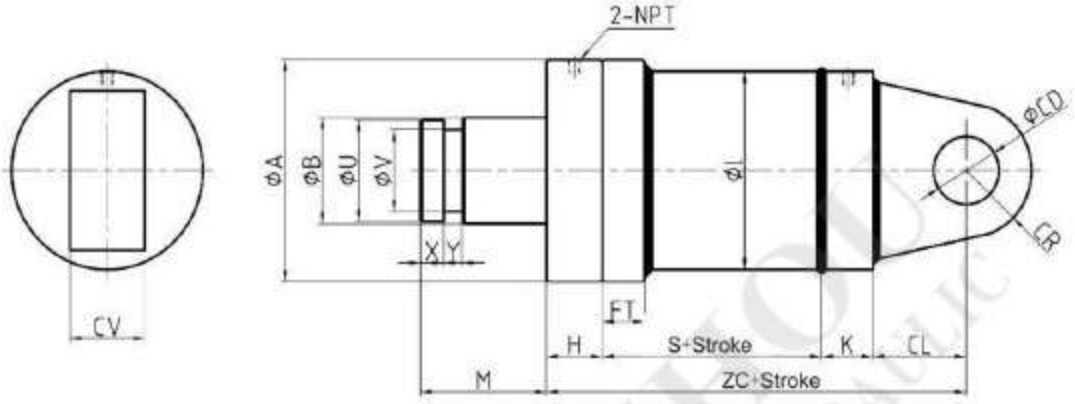
Remark:
If piston rod diameter required to be enlarged, the related size will scale up.

Outer Thread Specification



Bore Size	B	C	F	G	L	T	W
Φ125	60	M50 × P2.0	25	70	95	15	65
Φ150	80	M70 × P2.0	25	80	105	20	95
Φ180	100	M90 × P2.0	30	100	130	30	120
Φ200	125	M100 × P2.0	30	120	150	30	140
Φ225	140	M120 × P3.0	30	140	170	30	160
Φ250	160	M140 × P3.0	30	150	180	35	190
Φ280	180	M160 × P4.0	30	160	190	40	210
Φ300	200	M180 × P4.0	35	160	195	40	230

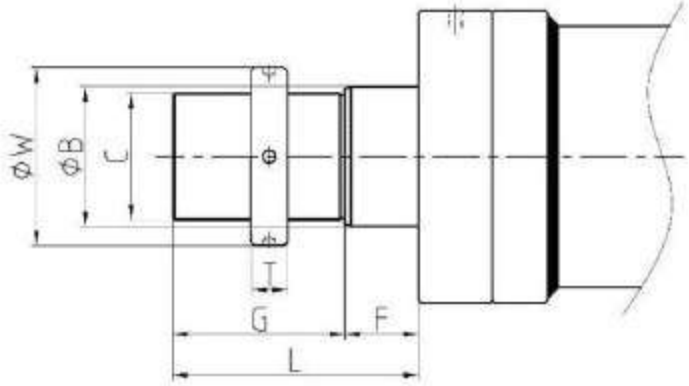
Standard HROC Cap Fixed Eye



	HROB—HROD														CA (Cap Fixed Eye)				
Bore Size	A	B	H	I	FT	K	M	PM	NPT	S	U	V	X	Y	ZC	CD	CL	CR	CV
Φ125	175	60	50	152	45	50	80	60	3/4	100	60	50	15	15	270	50	70	50	55
Φ150	200	80	50	175	50	55	80	60	1	100	80	70	15	15	285	60	80	60	60
Φ180	240	100	60	216	60	55	100	70	1	110	95	85	20	20	325	70	100	70	80
Φ200	260	125	70	242	65	65	100	70	1.1/4	110	115	100	25	25	355	80	110	80	90
Φ225	290	140	70	270	70	65	120	70	1.1/4	110	135	120	25	25	365	90	120	90	100
Φ250	330	160	75	298	75	70	120	70	1.1/4	115	155	140	30	30	410	100	150	100	120
Φ280	360	180	80	330	80	80	150	70	1.1/2	115	175	150	30	30	425	100	150	100	120
Φ300	380	200	90	350	85	80	150	90	1.1/2	135	195	170	35	35	465	120	160	120	140

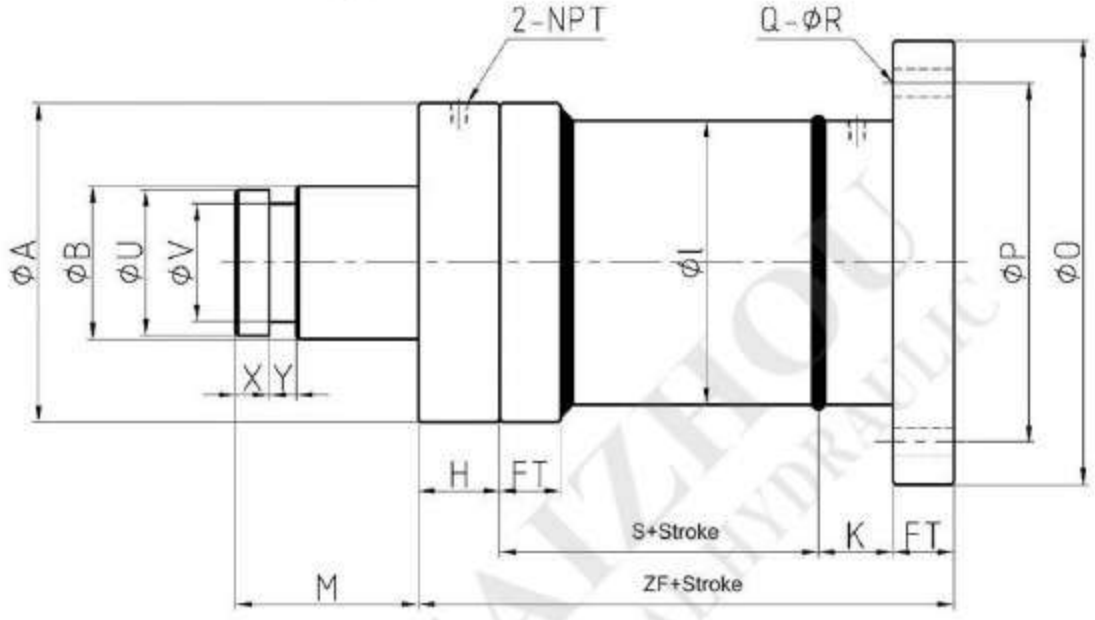
Remark:
If piston rod diameter required to be enlarged, the related size will scale up.

Outer Thread Specification



Bore Size	B	C	F	G	L	T	W
Φ125	60	M50 × P2.0	25	70	95	15	65
Φ150	80	M70 × P2.0	25	80	105	20	95
Φ180	100	M90 × P2.0	30	100	130	30	120
Φ200	125	M100 × P2.0	30	120	150	30	140
Φ225	140	M120 × P3.0	30	140	170	30	160
Φ250	160	M140 × P3.0	30	150	180	35	190
Φ280	180	M160 × P4.0	30	160	190	40	210
Φ300	200	M180 × P4.0	35	160	195	40	230

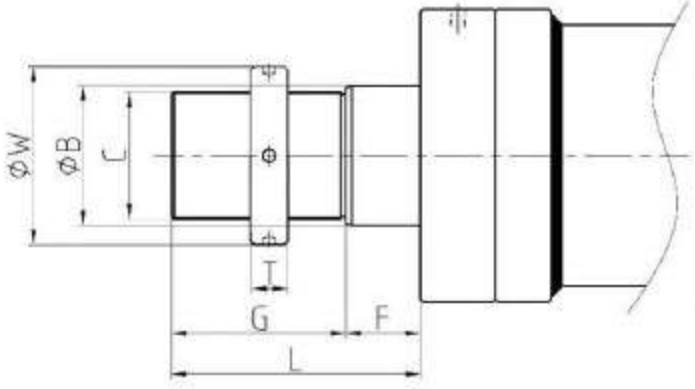
Standard HROE Cap Flange



Bore Size	A	B	FT	H	I	K	M	O	P	PM	NPT	Q	R	S	U	V	X	Y	ZF
Φ125	175	60	45	50	152	50	80	240	190	60	3/4	6	18	100	60	50	15	15	245
Φ150	200	80	50	50	175	55	80	280	240	60	1	6	18	100	80	70	15	15	255
Φ180	240	100	60	60	216	55	100	320	280	70	1	6	18	110	95	85	20	20	285
Φ200	260	125	65	70	242	65	100	350	310	70	1.1/4	6	20	110	115	100	25	25	310
Φ225	290	140	70	70	270	65	120	380	340	70	1.1/4	8	20	110	135	120	25	25	315
Φ250	330	160	75	75	298	70	120	440	380	70	1.1/4	8	24	115	155	140	30	30	335
Φ280	360	180	80	80	330	80	150	500	430	70	1.1/2	10	26	115	175	150	30	30	355
Φ300	380	200	85	90	350	80	150	550	460	90	1.1/2	10	28	135	195	170	35	35	390

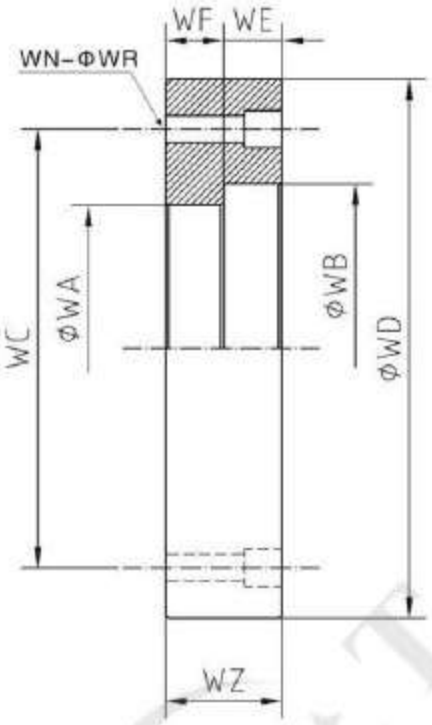
Remark:
If piston rod diameter required to be enlarged, the related size will scale up.

Outer Thread Specification



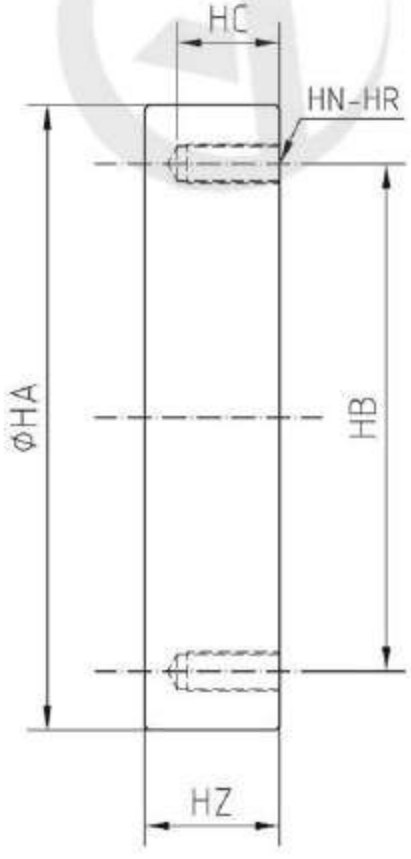
Bore Size	B	C	F	G	L	T	W
Φ125	60	M50 × P2.0	25	70	95	15	65
Φ150	80	M70 × P2.0	25	80	105	20	95
Φ180	100	M90 × P2.0	30	100	130	30	120
Φ200	125	M100 × P2.0	30	120	150	30	140
Φ225	140	M120 × P3.0	30	140	170	30	160
Φ250	160	M140 × P3.0	30	150	180	35	190
Φ280	180	M160 × P4.0	30	160	190	40	210
Φ300	200	M180 × P4.0	35	160	195	40	230

HRO Series Rod Accessaries Dimension



TW Semilune Sleeve

Model	WA	WB	WC	WD	WE	WF	WN	WR	WZ
TW-125	50	60	90	120	15	15	6	12	30
TW-150	70	80	110	140	15	15	6	12	30
TW-180	85	95	140	180	20	20	6	14	40
TW-200	100	115	160	200	25	25	6	14	50
TW-225	120	135	180	220	25	25	8	18	50
TW-250	140	155	210	260	30	30	8	18	60
TW-280	150	175	240	300	30	30	8	22	60
TW-300	170	195	260	320	35	35	8	22	70



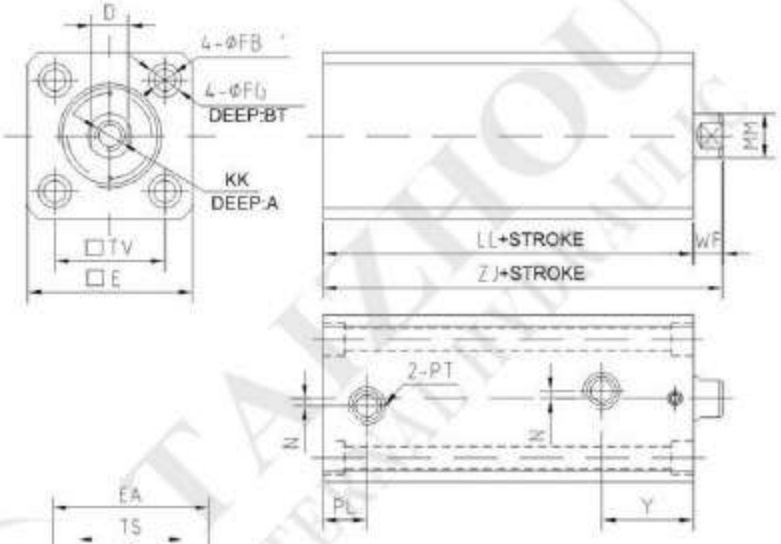
TH Welding Round Plate

Model	HA	HB	HC	HN	HR	HZ
TH-125	120	90	30	6	M10 × P1.5	40
TH-150	140	110	30	6	M10 × P1.5	40
TH-180	180	140	35	6	M12 × P1.75	45
TH-200	200	160	35	6	M12 × P1.75	45
TH-225	220	180	40	8	M16 × P2.0	50
TH-250	260	210	40	8	M16 × P2.0	50
TH-280	300	240	45	8	M20 × P2.5	55
TH-300	320	260	50	8	M20 × P2.5	60

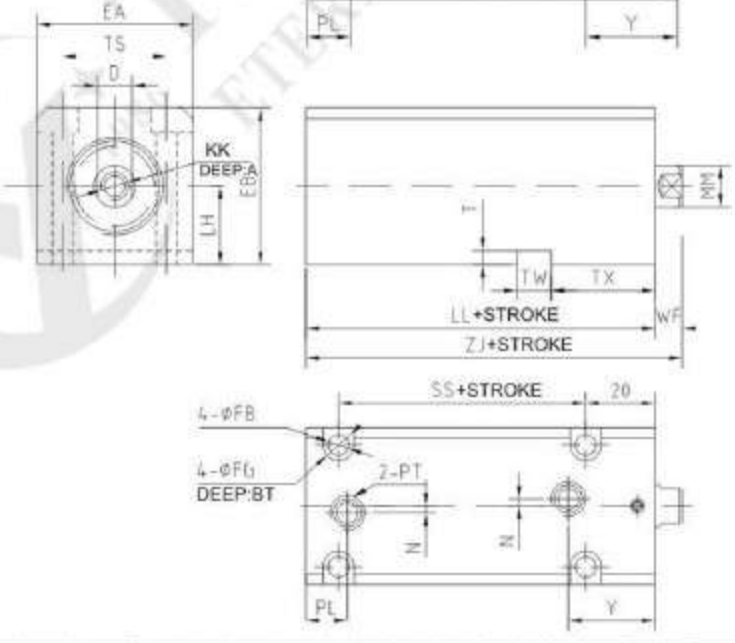
Compact Hydraulic Cylinder Moldel Description

CX	-	R	-	SD	-	32	X	50
Compact Hydraulic Cylinder		Non: Without Magnet R: With Magnet		Mounting SD: Axial LA: Radial		Bore Size Φ32, Φ40 Φ50, Φ63 Φ80		Stroke Standard Stroke: 5、10、15、20、 25、30、40、50

SD Axial Direction Mounting



LA Radial Direction Mounting



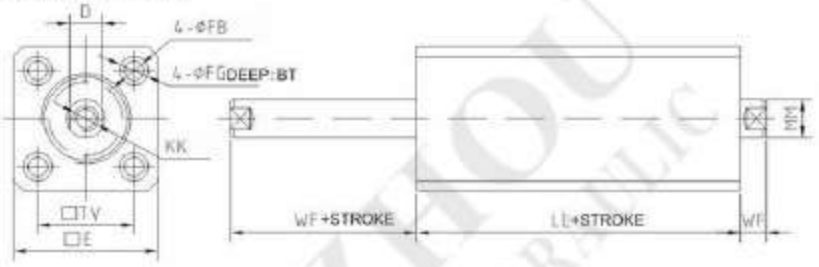
Bore Size	A	BT		D	E	EA	EB	PT	FB		FG		KK	LL	LH	MM	N	PL	SS	T	TS	TV	TW	TX	WF	Y	ZJ
		SD	LA						SD	LA	SD	LA															
Φ20	10	5.4	–	10	44	–	–	1/8	5.5	–	9.5	–	M8x1.25	43	–	12	0	10	–	–	–	30	–	–	8	21	51
Φ25	12	5.4	–	12	50	–	–	1/8	5.5	–	9.5	–	M10x1.5	45	–	14	0	10	–	–	–	36	–	–	8	23	53
Φ32	15	6.5	8.6	18	62	70	56	1/4	7	9	11	14	M12x1.75	54	25	20	10	12	24	4	56	47	12	28	10	28	64
Φ40	20	8.6	10.8	22	70	80	64	1/4	9	11	14	17.5	M16x2.0	55	29	25	10	12	23	4	62	52	12	28	10	28	65
Φ50	24	10.8	13	27	80	94	74	1/4	11	14	17.5	20	M20x2.5	60	34	30	10	13	27	4	74	58	14	29	11	30	71
Φ63	33	13	15.2	33	94	114	89	1/4	14	16	20	24	M27x3.0	67	42	35	15	13	32	4	90	69	16	31	13	30	80
Φ80	33	15.2	15	37	114	134	109	3/8	16	16	23	23	M30x3.5	78	52	40	15	18	41	4	110	86	16	34	17	35	95
Φ100	40	17.5	17	50	134	160	129	3/8	18	18	26	26	M36x4.0	88	62	55	15	18	44	5	134	102	16	34	17	39	105

Features

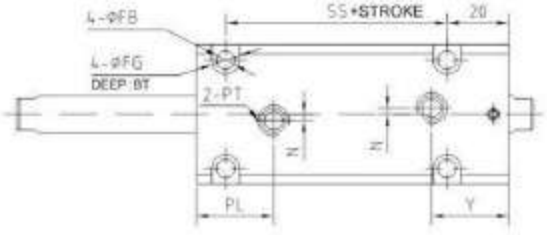
Working medium	Clean Standard Hydraulic Oil
Cylinder barrel material	QT500–7/45# / SUS304
Operating pressure rang	0.3 –14MPa (45-2000PSI)
Temprature Rang	–10– +60(℃)
Speed rang	8–300(mm/s)

Construction Drawing (Double Rod)

SD Axial Direction Mounting



LA Radial Direction Mounting



BORE SIZE	A	BT		D	E	EA	EB	PT	FB		FG		KK	LH	LL	MM	N	SS	T	TS	TV	TW	TX	WF	Y	PL
		SD	LA						SD	LA		LA														
Φ20	10	5.4	–	10	44	–	–	1/8	5.5	–	9.5	–	M8x1.25	–	54	12	0	–	–	–	30	–	–	8	21	21
Φ25	12	5.4	–	12	50	–	–	1/8	5.5	–	9.5	–	M10x1.5	–	56	14	0	–	–	–	36	–	–	8	23	21
Φ32	15	6.5	8.6	18	62	70	56	1/4	7	9	11	14	M12x1.75	25	69	20	10	24	4	56	47	12	28	10	28	27
Φ40	20	8.6	10.8	22	70	80	64	1/4	9	11	14	17.5	M16x2.0	29	71	25	10	23	4	62	52	12	29	10	28	28
Φ50	24	10.8	13	27	80	94	74	1/4	11	14	17.5	20	M20x2.5	34	77	30	10	27	4	74	58	14	28	11	30	30
Φ63	33	13	15.2	33	94	114	89	1/4	14	16	20	24	M27x3.0	42	83	35	10	32	4	90	69	16	31	13	30	30
Φ80	33	15.2	15	37	114	134	109	3/8	16	16	23	23	M30x3.5	52	95	40	15	41	4	110	86	16	34	17	35	35
Φ100	40	17.5	17	50	134	160	129	3/8	18	18	26	26	M36x4.0	62	106	55	15	44	5	134	102	16	34	17	39	39