



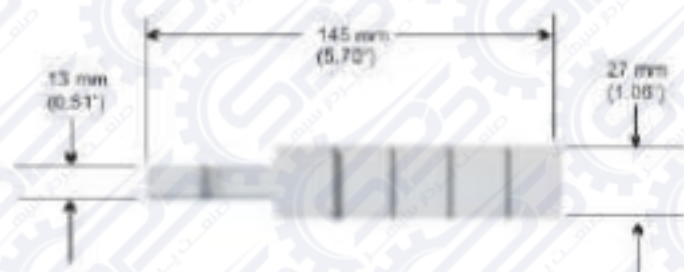
HYDRAULIC

OFFER SOLUTIONS

NOT JUST PRODUCTS

15Ton Integral Hydraulic Flange Spreader

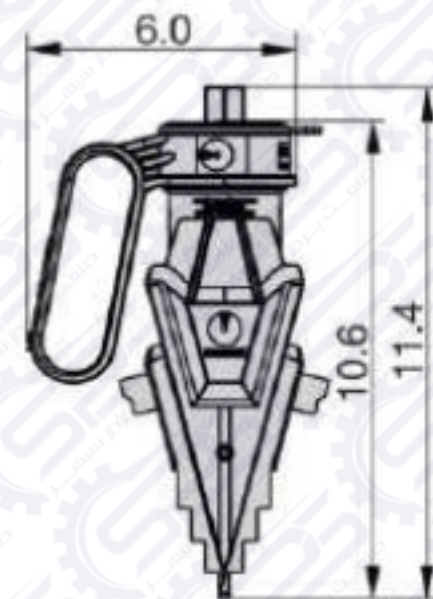
Portable and compact design
No need extra hose and pump



Max Force(ton)	Model	Max Spread (mm)	Tip Clearance (mm)	Spreader Type	Oil Cap (cm ³)	W (kg)
15	FSH-15	81	6	Hydraulic	78	10

14Ton Mechanical Flange Spreader

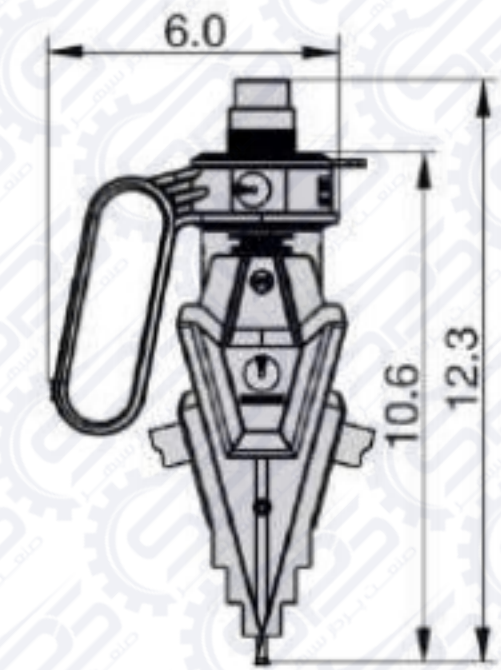
Removable handle for improved access
No finger pinch-points
Practical, portable and light in weight
Increased step depth on upper steps



Model	Capacity	Tip Clearance	Maxium Spread	Jaw Width	Power Source	N.W (kg)
FSW14TM	14Ton	6mm	103.5mm	60mm	Mechanical	13

24Ton External Hydraulic Flange Spreader

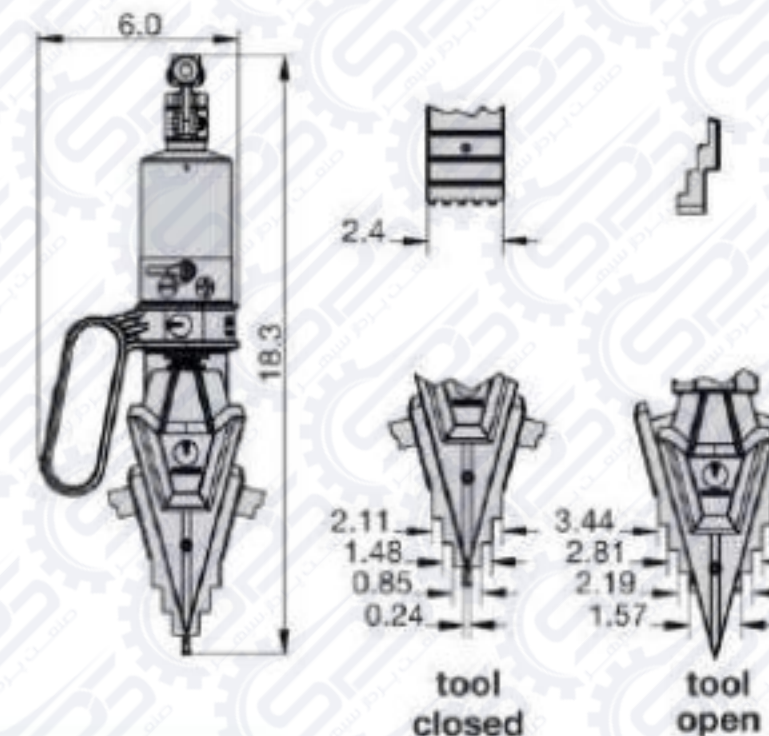
Requires access gap of only 6 mm
Increased step depth on upper steps
Rapid disassembly and assembly
Working Pressure:700 bar



Model	Capacity	Tip Clearance	Maxium Spread	Jaw Width	Power Source	N.W (kg)
FSW25TE	24Ton	6mm	103.5mm	60mm	Hydraulic	15

24Ton Integral Hydraulic Flange Spreader

Working Pressure:700 bar
Practical, portable and light in weight
Requires access gap of only 6 mm
No need extra hose and pump
Rapid disassembly and assembly

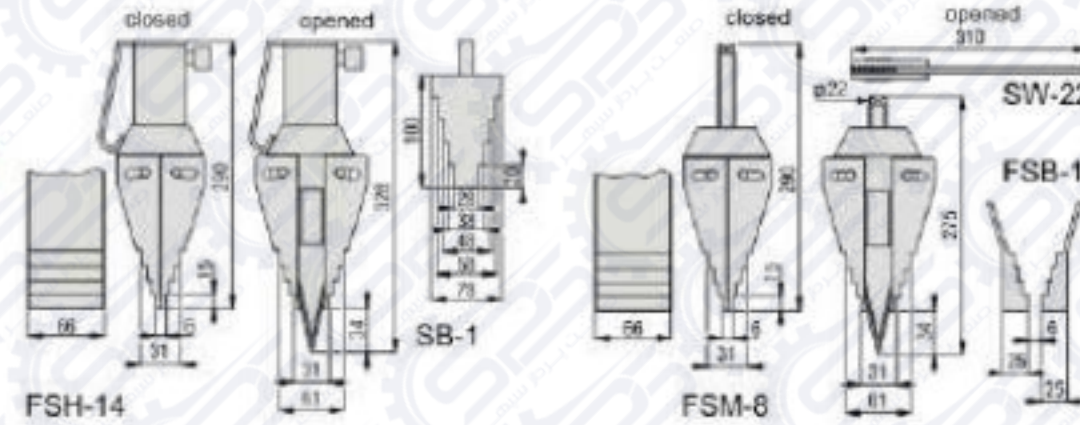


Model	Capacity	Tip Clearance	Maxium Spread	Jaw Width	Power Source	N.W (kg)
FSW25TI	24Ton	6mm	103.5mm	60mm	Hydraulic	14

Hydraulic Flange Spreader



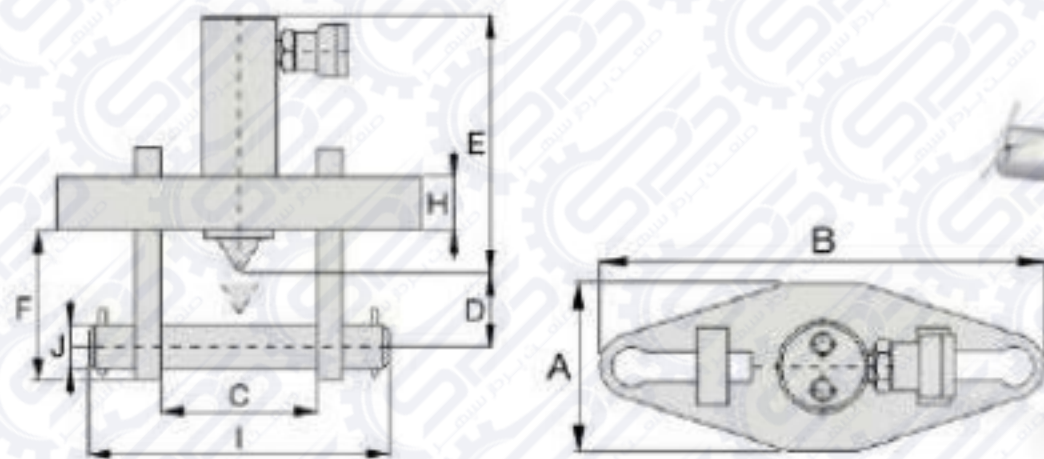
Requires access gap of only 6 mm
Portable tools to safely spread flange joints
Few moving parts mean durability and low maintenance
Available for both mechanical and hydraulic options



Max Force(ton)	Model	Max Spread (mm)	Tip Clearance (mm)	Spreader Type	Oil Cap (cm³)	W (kg)
8	FSM-8	81	6	Mechanical	/	8
14	FSH-14	81	6	Hydraulic	78	9
14	FSH-14H	81	6	Hydraulic	156	38

Hydraulic Flange Spreader

Light weight, easy to operate
Compact and ergonomic design
Adjustable jaw size from 70mm to 216mm
Single-acting, spring return



Maximum Flange Thickness (mm)	Stud Size (mm)	Standard Wedge (mm)	Capacity (ton)	Stroke (mm)	Oil (cm³)	Model Number	Dimensions (mm)										(kg)
							A	B	C Min.	C Max.	D	E	F	H	I	J	
2 x 57	19-28	3-28	5	38	24.6	FS-56	76	209	70	155	32	196	88	25	206	19	11.5
2 x 92	31-41	3-28	10	54	78.7	FS-109	108	279	104	216	50	152	114	38	273	31	18.1

18Ton Integral Vertical Lifting Wedge

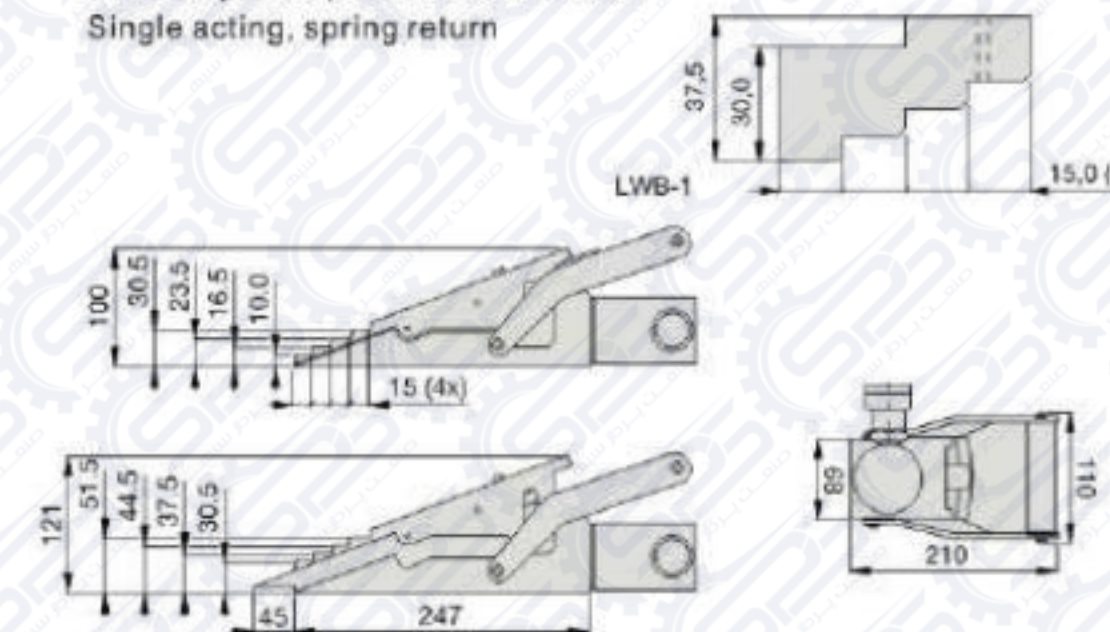
Requires very small access gap of 10mm
Each step can spread under full load
Single acting, spring return



Model	Max Force(Ton)	Tip Clearance(mm)	Stroke(mm)	Max Spread(mm)	Weight (kg)
LW-18	18	10	21	81	13

16Ton Hydraulic Vertical Lifting Wedge

Requires very small access gap of 10mm
Lifting force 16 ton at 700 bar
Each step can spread under full load
Single acting, spring return



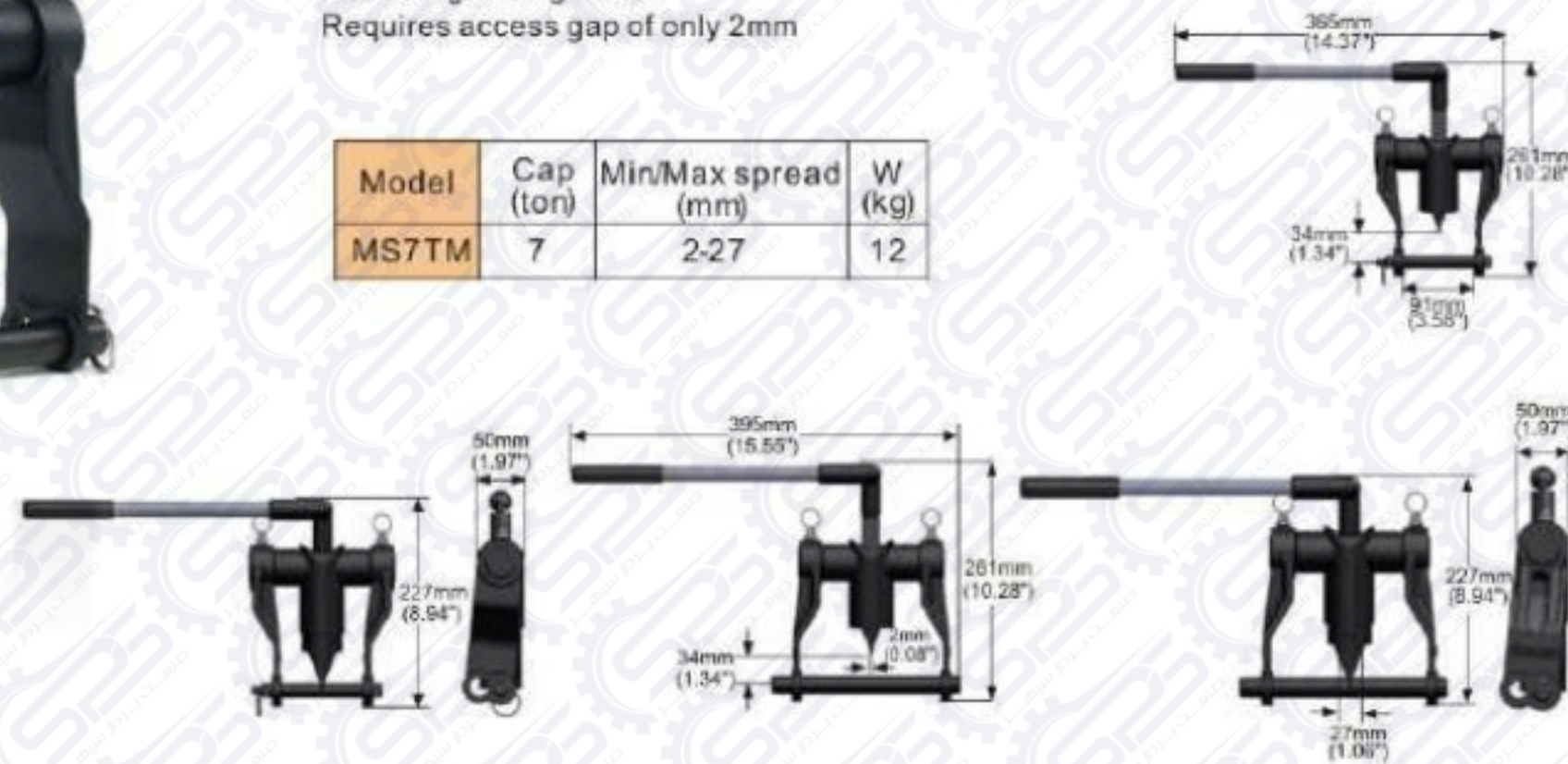
Maximum Lifting Force ton (kn)	Lifting Stroke (mm)	Model	Tip Clearance (mm)	Maximum Operating Pressure (bar)	Oil Capacity (cm³)	(kg)
16 (157)	21	LW-16	10	700	78	9.0

Mini-Gap Flange Spreader

Unique double angled wedge produces greater spreading force without reducing spreading distance
Robust light weight tool
Requires access gap of only 2mm



Model	Cap (ton)	Min/Max spread (mm)	W (kg)
MS7TM	7	2-27	12



Integral Flange Spreader

Cylinder built-in
No need extral pump and hose
Working simple and quick

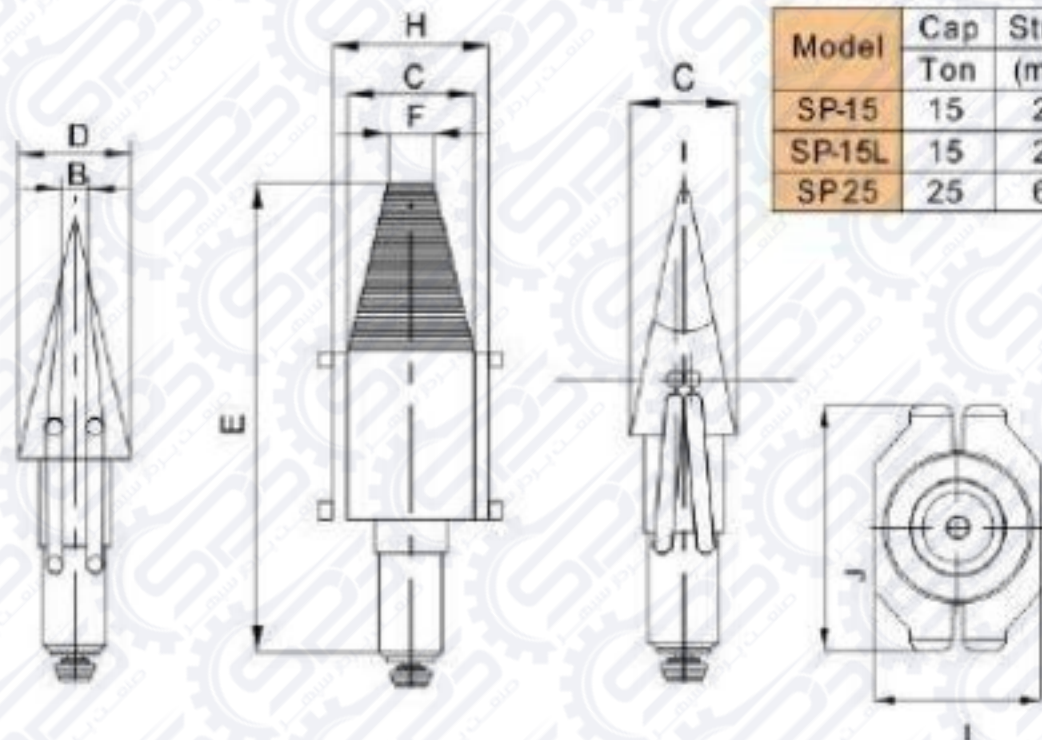
Model	Cap (ton/kN)	Tip Clearance (mm)	Min/Max Spread (mm)	Weight (kg)
FS-108	8/80	3	90-220	6



Hydraulic Spreader

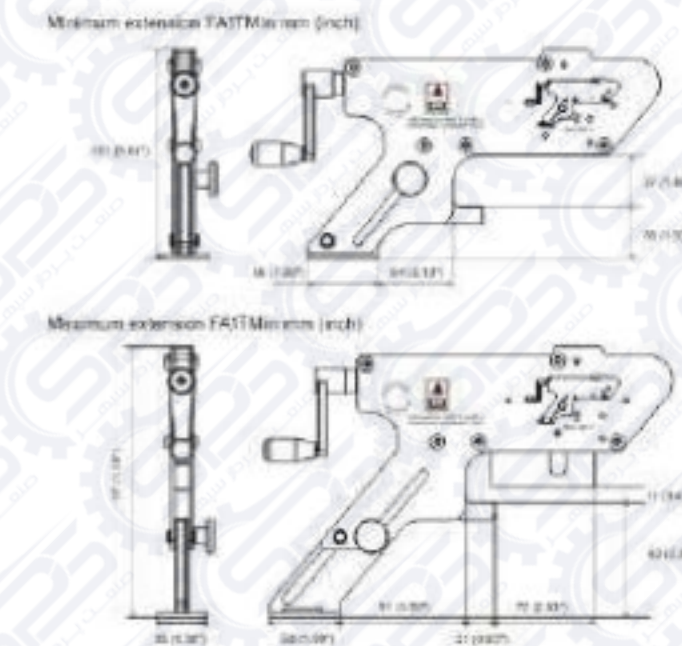
Vertical lifting Loaded
Easy for operation, light weight and much workable in limited space
Apply gap 5-40mm

Model	Cap Ton	Stroke (mm)	Spread (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)	W (kg)
SP-15	15	25	6	16	36	46	232	31	45	55	63	3.3
SP-15L	15	25	6	16	36	46	232	31	45	55	63	3.3
SP-25	25	65	8	25	43	59	342	50	70	82	70	7.8



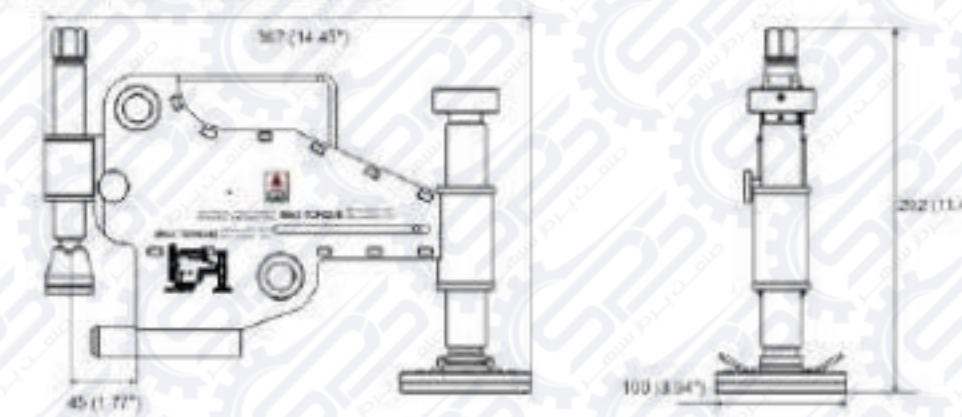
Flange Alignment Tool

Max Bolt Size: 16-31.5mm
Cap: 1-9ton (10-90kN)
Max Working Pressure: 700bar
Suitable for offshore and onshore application
Designed for large diameter high-pressure flanges
Rectifies linear or rotational misalignment

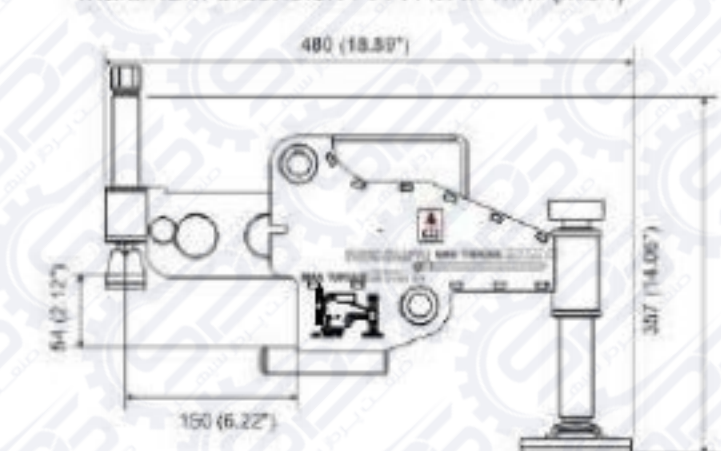


Model	Capacity (Ton/kN)	Operation Type	Min Bolt Size (in/mm)	Flange Thickness (in/mm)	Reaction Force 2 Max (Ton)	Bolt Hole Diameter Min (mm)	Misalignment Min (mm)	N.W (kg)
FA1TM	1 / 10	Mechanical	0.63 / 16	0.55-3. 29/14-82	1	16	0	3
FA4TM	4 / 10	Mechanical	0.95 / 24	1.18-5.23/30-133	4	25	0	9
FA9TM	9 / 10	Mechanical	1.24 / 31.5	3.66-9.00/93-228	9	31.5	0	16
FA9TE	9 / 10	Hydraulic	1.24 / 31.5	3.66-9.00/93-228	9	31.5	0	16

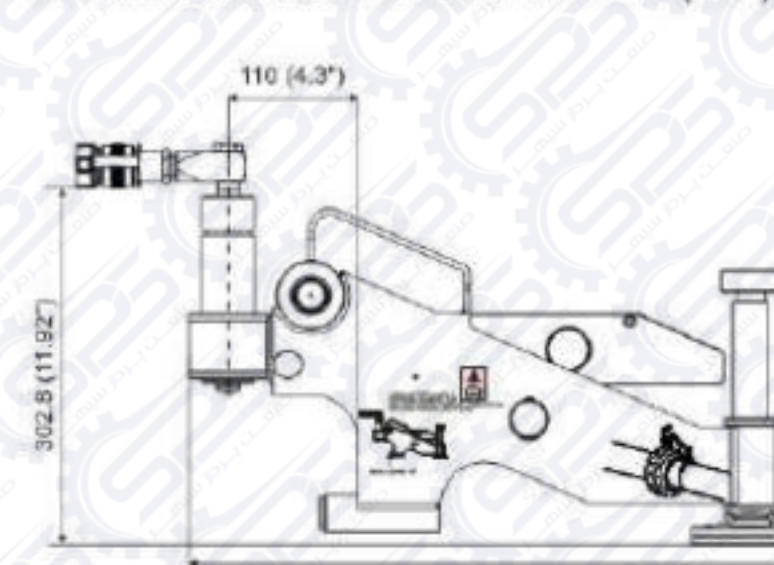
Minimum extension FA4TM in mm (inch)



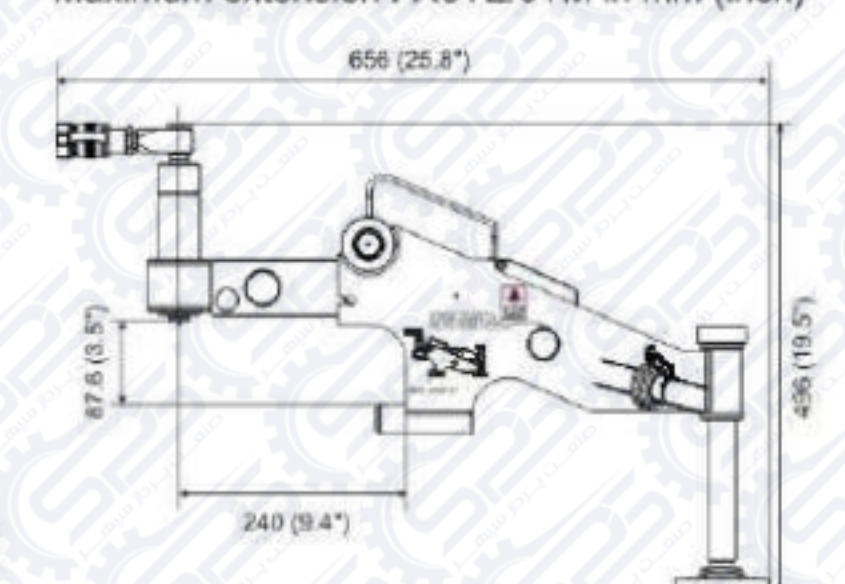
Maximum extension FA4TM in mm (inch)



Minimum extension FA9TE/9TM in mm (inch)



Maximum extension FA9TE/9TM in mm (inch)

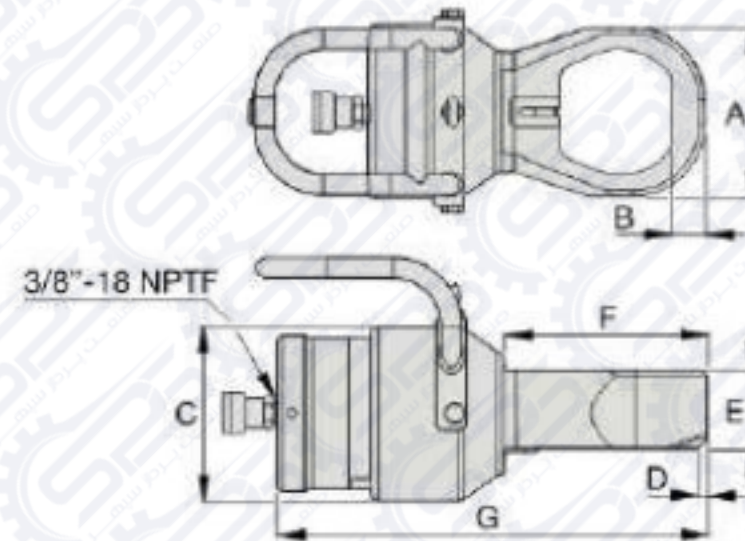


NS-Series Hydraulic Nut Splitter



Blade Cutting Depth Scale
Adjustable cutting depth scale for controlled blade extension, which avoids damage to bolt threads. The scale indicates the bolt range in metric and imperial values on each cutting head.

Capacity: 917-1711kN
Hexagon Nut Size: 70-130mm
Bolt Range: M45-M90
Maximum Operating Pressure: 700 bar



Heavily corroded and weathered nuts are quickly split and removed using a NS-Series nut splitter.

- Specially designed to suit standard ANSI B16.5 / BS1560 flanges
- Single-acting (spring return) or double-acting cylinder
- Tri-blade technology provides three cutting surfaces on a single blade
- Interchangeable heads provide maximum nut range flexibility
- Preset scale allows controlled blade extension, which avoids damage to bolt threads
- Grip tape and handle included for more secure manoeuvrability
- Nickel-plated cylinder body for excellent corrosion protection and improved durability in harsh environments
- Internal Pressure Relief Valve for overload protection

NUT SPLITTER SPECIFICATIONS													
Bolt Range (mm)	Nut Range (mm)	Capacity ton (kN)	Oil Cap (cm ³)	Model	Dimensions								Replacement Blade
					A	B	C	D	E	F	G	(kg)	
M45 - M52	70 - 80	103 (917)	377	NS-7080	132	28	180	8.0	81	186	412	37.0	NSC-70
M45 - M56	70 - 85	103 (917)	377	NS-7085	145	30	180	8.0	81	196	422	37.0	NSC-70
M45 - M64	70 - 95	103 (917)	377	NS-7095	160	32	180	8.0	81	201	432	38.5	NSC-70
M45 - M72	70 - 105	103 (917)	377	NS-70105	174	35	180	9.0	81	209	443	39.5	NSC-70
M76 - M80	110 - 115	193 (1711)	819	NS-110115	189	36	234	3.7	111	234	472	69.0	NSC-110
M76 - M90	110 - 130	193 (1711)	819	NS-110130	219	41	234	2.5	111	242	493	71.5	NSC-110

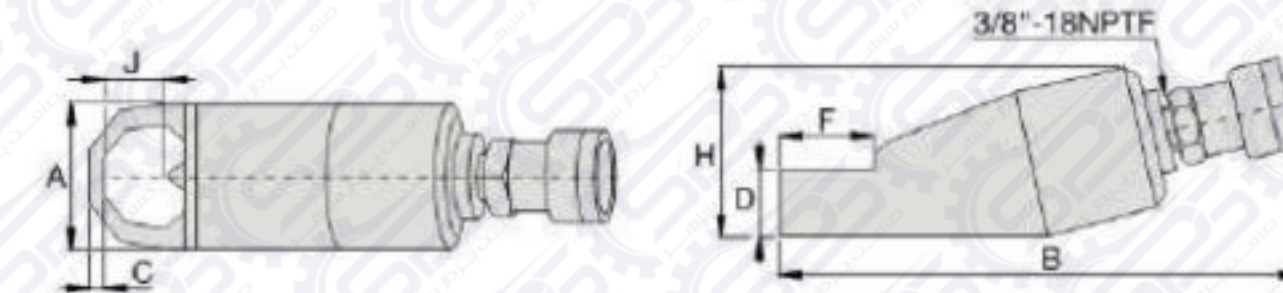


Hydraulic Nut Splitters are available as sets (pump, tool, gauge, gauge adaptor, couplers and hose) for your ordering convenience.

Capacity: 49-882kN (5-90ton)
Bolt Range: M6-M48
Maximum Operating Pressure: 700 bar



- Compact and ergonomic design, easy to use
- Unique angled head design
- Single-acting, spring return cylinder
- Heavy duty chisels can be reground
- Nut Splitters include spare chisel, spare set screw and wrench used to secure the chisel.
- Applications include service trucks, piping industry, tank cleaning, petrochemical, steel construction, mining, etc.

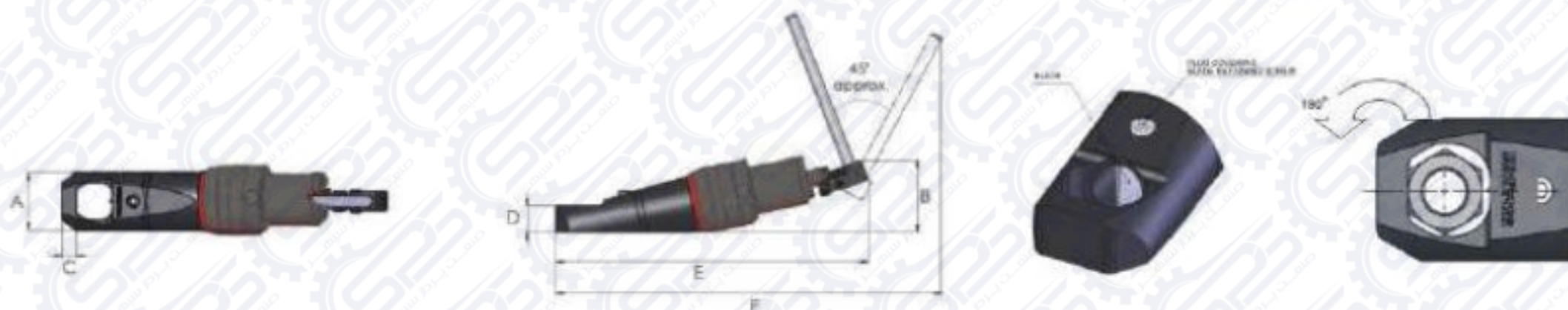


Bolt Range (mm)	Hexagon Nut (mm)	Capacity ton (kN)	Oil Capacity (cm ³)	Model	Dimensions (mm)							(kg)	Replacement Chisel Model
					A	B	C	D	F	H	J		
M6 - M12	10 - 19	5 (49)	15	NC-1319	40	170	7	19	28	48	21	1.2	NCB-1319
M12 - M16	19 - 24	10 (98)	20	NC-1924	54	191	10	26	40	62	25	2.0	NCB-1924
M16 - M22	24 - 32	15 (147)	60	NC-2432	64	222	13	29	51	72	33	3.0	NCB-2432
M22 - M27	32 - 41	20 (196)	80	NC-3241	75	244	17	36	66	88	43	4.4	NCB-3241
M27 - M33	41 - 50	35 (343)	155	NC-4150	94	288	21	45	74	105	54	8.2	NCB-4150
M33 - M39	50 - 60	50 (490)	240	NC-5060	106	318	23	54	90	128	60	11.8	NCB-5060
M39 - M48	60 - 75	90 (882)	492	NC-6075	156	393	26	72	110	181	80	34.1	NCB-6075

Intergal Hydraulic Nut Splitter

Angled body design on all models
Manufactured from high quality steel
Provides necessary clearance on flanges and flat surfaces
All models incorporate an integral hydraulic pump with multi-positional lever for even greater versatility.

Model	Hexagon AF Sizes		Bolt Sizes		W (kg)	Dimension(mm)					
	mm	inch	mm	imperial		A	B	C	D	E	F
HNS2432	17-32	1 1/16" - 1 1/4"	M10-M22	1/2" - 3/4"	5	64	88	125	30	380	455
HNS3241	32-41	1 1/4" - 1 5/8"	M22-M27	3/4" - 1"	7	78	101	20	37	440	540
HNS4150	41-50	1 5/8" - 2"	M27-M33	1" - 1 1/4"	11	94	112	21	43	471	566



Double Acting Hydraulic Nut Splitter

Working pressure 700 Bar
Double acting design
Splitting blades are easy to remove and re-install after re-sharpening or when a replacement blade is required.

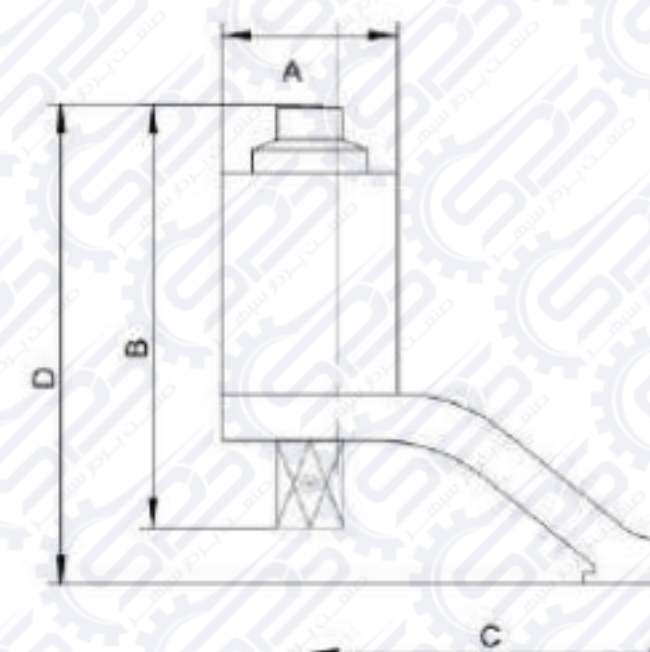
Model	Hexagon AF Sizes		Stud Bolt Thread Sizes		W(kg)	Dimension(mm)					
	mm	inch	metric	imperial		A	B	C	D	E	F
DNS75105	75-105	2 15/16" - 4 1/4"	M48-M72	1 7/8" - 2 3/4"	51	379.5	192	99.5	130.5	183	34
DNS105135	105-135	4 1/4" - 5 3/8"	M72-M95	2 3/4" - 3 1/2"	98	451	240	140	167.5	235	41



Manual Torque Multiplier(MDS)

Planetary gear train multipliers torque output
Ideal for nut dimension application in confined space, light weight and easy handling
Reaction foot can adjust to replace all types of impact sockets in 360°
Applicable to a variety of large diameter bolt nut
Customized order is available according to individual requirement

Model	Torque (N.m)	Nut Size	Bolt Size	Ratio	Input S	Output S	W (kg)
MDS-15	1500	S30-S46	M20-M30	5:1	1/2"	1"	2.6
MDS-20	2000	S32-S55	M22-M36	16:1	1/2"	1"	3.9
MDS-35	3500	S46-S70	M30-M45	18:1	1/2"	1"	5.5
MDS-42	4200	S50-S75	M33-M48	20:1	1/2"	1 1/2"	6
MDS-55	5500	S55-S80	M36-M52	22:1	1/2"	1 1/2"	7.5
MDS-75	7500	S65-S90	M42-M60	26:1	1/2"	1 1/2"	10
MDS-100	10000	S80-S105	M52-M72	60:1	1/2"	1 1/2"	17
MDS-150	15000	S90-S115	M60-M80	75:1	1/2"	2"	25
MDS-200	20000	S105-S135	M72-M95	90:1	1/2"	2"	31



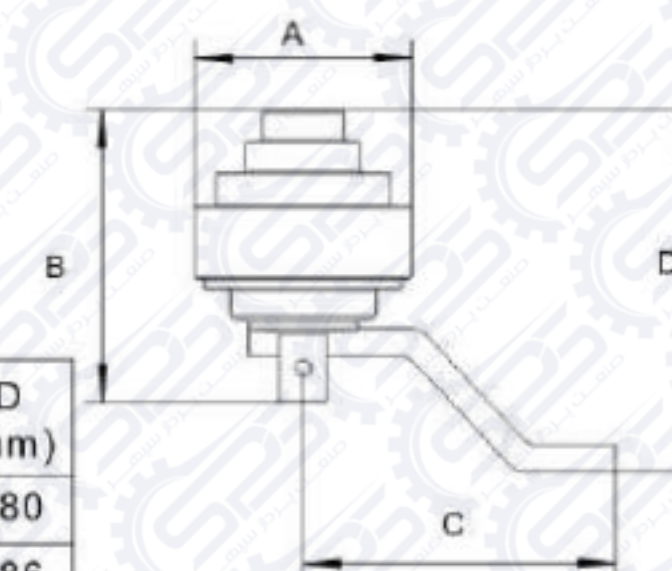
Model	A	B	C	D
MDS-15	88	125	92	150
MDS-20	88	160	123	200
MDS-35	95	175	168	220
MDS-42	105	205	200	260
MDS-55	110	210	208	268
MDS-75	127	240	210	298
MDS-100	142	270	245	345
MDS-150	152	298	266	390
MDS-200	182	320	308	410

Manual Torque Multiplier(HT3)

With 5:1 torque ratio
Repeatable accuracy of ±4%
Two stages planet gear

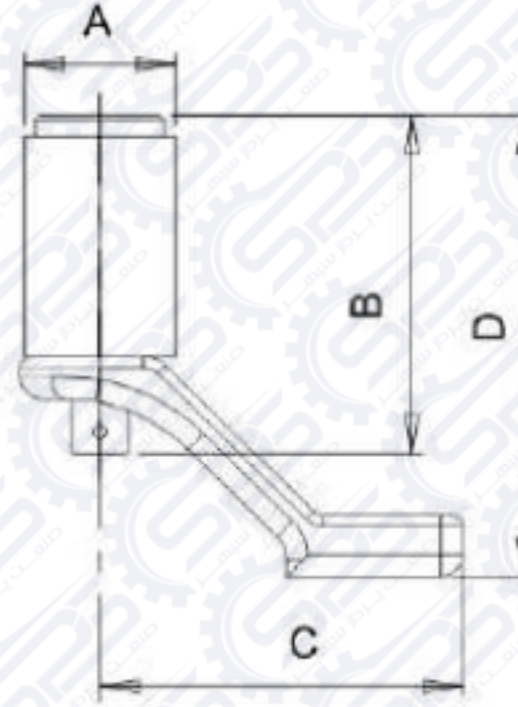


Model	Torque Range		Ratio	Input S	Output S	W (kg)	A (mm)	B (mm)	C (mm)	D (mm)
	N.m	lbfft								
HT3-1300	1300	960	5:1	1/2"	3/4"	5.1	108	126	210	180
HT3-2700	2700	2000	5:1	3/4"	1"	5.1	108	128	210	186

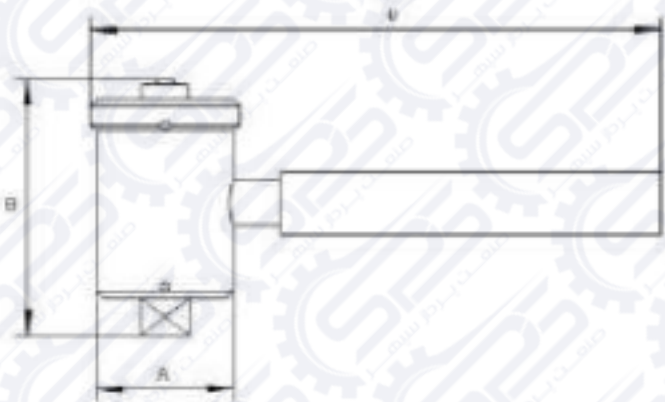


Manual Torque Multiplier(HT52&HT72)

Anti-win-up ratchet is available
Repeatable accuracy of $\pm 4\%$
Safe and easy operation



Model	Torque Range		Ratio	Input S	Output S	W (kg)	A (mm)	B (mm)	C (mm)	D (mm)
	N.m	lbf.ft								
HT52/22-01	1000	740	22:1	3/8"	3/4"	2.3	52	139	131	175
HT52/22-02	1000	740	22:1	1/2"	3/4"	2.3	52	139	131	175
HT52/22-03	1000	740	22:1	3/8"	3/4"	2.5	52	150.1	131	186.3
HT52/22-04	1000	740	22:1	1/2"	3/4"	2.5	52	150.1	131	186.3
HT52/4.5	1000	740	4.5:1	1/2"	3/4"	1.9	52	115	131	150.3
HT72/5-01	1000	740	5:1	1/2"	3/4"	3.1	72	144	165	188
HT72/5-02	1500	1100	5:1	1/2"	1"	3.1	72	144	165	188
HT72/5-03	2000	1450	5:1	3/4"	1"	3.1	72	144	165	188
HT72/25-01	1000	740	25:1	1/2"	3/4"	3.4	72	165	165	188
HT72/25-02	2000	1450	25:1	1/2"	1"	3.4	72	165	165	188
HT72/25-03	1000	740	25:1	1/2"	3/4"	3.7	72	174	165	218
HT72/25 04	2000	1450	25:1	1/2"	1"	3.7	72	174	165	218



Manual Torque Multiplier(HT4)

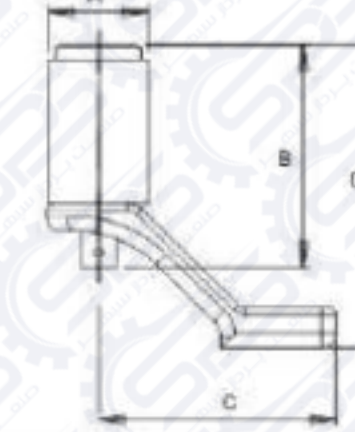
With 15.5:1 and 26:1 torque ratio
Repeatable accuracy of $\pm 4\%$
Two stages planet gear
With anti-win-up ratchet(Anti backlash)

Model	Torque Range		Ratio	Input S	Output S	W (kg)	A (mm)	B (mm)	C (mm)
	N.m	lbf.ft							
HT4-3000	3000	2200	15.5:1	1/2"	1"	8	108	156	450
HT4-4500	4500	3300	26:1	1/2"	1"	9	108	173	450



Manual Torque Multiplier(HT30&HT45&HT60)

All models supplied with an Anti Wind-Up ratchet allowing safe and more ractical
HT-45 has a corner display to see torque and point of view
Reaction foot can slide on the spline to allow for sockets of various length



Model	Torque Range		Ratio	Input S	Output S	W (kg)	A (mm)	B (mm)	C (mm)	D Min (mm)	D Max (mm)
	N.m	lbf.ft									
HT30/5	3000	2200	5:1	3/4"	1"	7	108	192	140	224.2	252.4
HT30/15	3000	2200	15:1	1/2"	1"	9	108	210.9	140	243.2	271.4
HT30/25	3000	2200	25:1	1/2"	1"	9	108	210.9	140	243.2	241.4
HT45/26	4500	3300	26:1	1/2"	1"	13	108	228.0	174	/	322
HT60/25	6000	4400	25:1	1/2"	1 1/2"	15	119	256	174	311.5	337
HT60/125	6000	4400	125:1	1/2"	1 1/2"	16.1	119	284.7	174	340.5	366

Heavy Duty Hand Torque Multiplier

Repeatable accuracy of $\pm 4\%$
Models available up to 47500Nm
Anti Wind-Up Ratchet available on models of 25:1 ratio and above

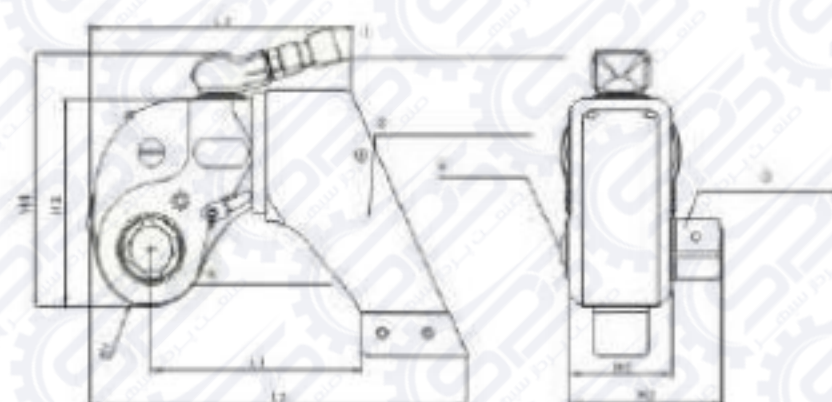
Model	Torque Range		Ratio	Input S	Output S	W (kg)	A (mm)	B (mm)	C Min (mm)	C Max (mm)
	N.m	lbf.ft								
HT1	1700	1250	5:1	1/2"	3/4"	5.2	108	106	83	217
HT2/5	1700	1250	5:1	3/4"	1"	5.2	108	126	83	217
HT2/25	1700	1250	25:1	1/2"	1"	8	119	141.5	83	264
HT5/5	3400	2500	5:1	3/4"	1"	7.2	108	142.1	86	264
HT5/25	3400	2500	25:1	1/2"	1"	10	119	167.6	86	264
HT6/5	3400	2500	5:1	3/4"	1 1/2"	8	119	144.7	86	264
HT6/25	3400	2500	25:1	1/2"	1 1/2"	10	119	172	86	264
HT7/5	6000	4500	5:1	3/4"	1 1/2"	15	144	174.8	146	333
HT7/25-1	6000	4500	25:1	1/2"	1 1/2"	17	144	201.1	146	333
HT7/25-2	6000	4500	25:1	1/2"	1 1/2"	19	144	226	146	333
HT7/125-1	6000	4500	125:1	1/2"	1 1/2"	15.5	130	201.1	163.4	337
HT7/125-2	6000	4500	125:1	1/2"	1 1/2"	17	130	226	163.4	337
HT9/25	9500	7000	25:1	3/4"	1 1/2"	26	184	200.1	171	351
HT9/125	9500	7000	125:1	1/2"	1 1/2"	28	184	220.1	171	351
HT11/25	20000	14700	25:1	3/4"	2 1/2"	44	212	265.6	/	500
HT11/125	20000	14700	125:1	1/2"	2 1/2"	46	212	293.4	/	500
HT12/875	34000	25000	87.5:1	1/2"	2 1/2"	48	240	337	/	
HT13/125	47500	35000	125:1	3/4"	2 1/2"	103	315	379	/	



Hydraulic Square Drive Torque Wrench



Square drive torque wrench are designed with accuracy, reliability and easy of use. A fully positionable, 360° rotating reaction arm allows you to put torque wrench head where you need it. The multi-port swiveling inlet keeps the hydraulic hose out of your way while you work. Oxidation treatment provides excellent corrosion protection and durability in harsh environment.

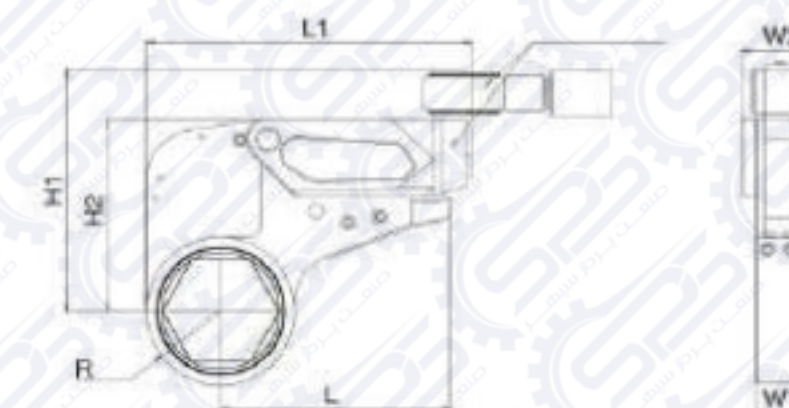


Torque Range (Nm)	Square Drive (inch)	Model	R1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	W (kg)
164 - 1760	3/4	PT1	25.8	102	130	182	52	77	96	133	2.2
433 - 4332	1	PT3	34.8	140	170	249	70	98	127	165	4.1
742 - 7420	1 1/2	PT5	39.8	160	202	286	81	125	149	184	6.9
1015 - 10430	1 1/2	PT8	46.8	184	228	326	90	134	172	207	11
1509 - 15090	1 1/2	PT10	50.8	192	237	336	100	144	181	216	13
1940 - 19409	2 1/2	PT15	56.8	223	273	391	110	164	206	241	20.2
2504 - 26447	2 1/2	PT20	59.8	248	287	433	120	187	221	256	25.3
3309 - 34626	2 1/2	PT25	70.8	256	323	464	138	206	258	293	34
4741 - 47414	2 1/2	PT35	76.8	271	351	494	153	217	279	315	44
6925 - 69247	2 1/2	PT50	78.8	295	376	528	162	226	291	326	53

Hydraulic Low Profile Torque Wrench



The low profile design is made to fit in small spaces. Interchangeable head design, no tools need for change. Ultra-light, ultra-thin makes tools completely no space restriction.



Torque (Nm)	Power Head No	Working Head No	R1 (mm)	L1 (mm)	L (mm)	H1 (mm)	H2 (mm)	W1 (mm)	W2 (mm)	W (kg)
244 - 2534	LPT2	LPT2-50	41.3	205	147	129	100	32	50	3
489 - 5392	LPT4	LPT4-65	53.8	2513	188	163	136	41	66	5.2
1017 - 10452	LPT8	LPT8-90	68.8	3025	233	191	166	53	83	10
1724 - 16245	LPT14	LPT14-115	85.3	367	283	223	198	64	99	17
2247 - 22899	LPT18	LPT18-135	98.8	400.5	308	246	224	70	110	23
4064 - 40639	LPT30	LPT30-155	115.8	457.5	364	282	265	84	132	39

Optional Hexagon Reducer Inserts

Power Head	Working Head	A/B(mm)	Reducer No	A/B(mm)	Reducer No	A/B(mm)	Reducer No
LPT2	LPT2-32	32/27	2H3227				
	LPT2-36	36/30	2H3630	36/27	2H3627		
	LPT2-41	41/32	2H4132	41/30	2H4130	41/27	2H4127
	LPT2-46	46/36	2H4636	46/32	2H4632	46/30	2H4630
	LPT2-50	50/41	2H5041	50/36	2H5036	50/32	2H5032
LPT4	LPT4-32	32/27	4H3227				
	LPT4-36	36/30	4H3630	36/27	4H3627		
	LPT4-41	41/32	4H4132	41/30	4H4130	41/27	4H4127
	LPT4-46	46/36	4H4636	46/32	4H4632	46/30	4H4630
	LPT4-50	50/41	4H5041	50/36	4H5036	50/32	4H5032
	LPT4-55	55/46	4H5546	55/41	4H5541	55/36	4H5536
LPT8	LPT8-55	55/46	8H5546	55/41	8H5541		
	LPT8-60	60/50	8H6050	60/46	8H6046		
	LPT8-65	65/55	8H6555	65/50	8H6550	65/46	8H6546
	LPT8-70	70/60	8H7060	70/55	8H7055	75/50	8H7550
	LPT8-75	75/65	8H7565	75/60	8H7560	75/55	8H7555
	LPT8-80	80/70	8H8070	80/65	8H8065	80/60	8H8060
	LPT8-85	85/75	8H8575	85/70	8H8570	85/65	8H8565
	LPT8-90	90/80	8H9080	90/75	8H9075	90/70	8H9070
	LPT14-75	75/65	14H7565				
	LPT14-80	80/70	14H8070	80/65	14H8065		
LPT14	LPT14-85	85/75	14H8575	85/70	14H8570	85/65	14H8565
	LPT14-90	90/80	14H9080	90/75	14H9075	90/70	14H9070
	LPT14-95	95/85	14H9585	95/80	14H9580	95/75	14H9575
	LPT14-100	100/90	14H10090	100/85	14H10085	100/80	14H10080
	LPT14-105	105/95	14H10595	105/90	14H10590	105/85	14H10585
	LPT14-110	110/100	14H110100	110/95	14H11095	110/90	14H11090
	LPT14-115	115/105	14H115105	115/100	14H115100	115/95	14H11595
	LPT18-85	85/75	18H8575				
LPT18	LPT18-90	90/80	18H9080	90/75	18H9075		
	LPT18-95	95/85	18H9585	95/80	18H9580	95/75	18H9575
	LPT18-100	100/90	18H10090	100/85	18H10085	100/80	18H10080
	LPT18-105	105/95	18H10595	105/90	18H10590	105/85	18H10585
	LPT18-110	110/100	18H110100	110/95	18H11095	110/90	18H11090
	LPT18-115	115/105	18H115105	115/100	18H115100	115/95	18H11595
	LPT18-120	120/110	18H120110	120/105	18H120105	120/100	18H120100
	LPT18-130	130/120	18H130120	130/115	18H130115	130/110	18H130110
	LPT30-90	90/80	30H9080				
	LPT30-95	95/85	30H9585	95/80	30H9580		
LPT30	LPT30-100	100/90	30H10090	100/85	30H10085	100/80	30H10080
	LPT30-105	105/95	30H10595	105/90	30H10590	105/85	30H10585
	LPT30-110	110/100	30H110100	110/95	30H11095	110/90	30H11090
	LPT30-115	115/105	30H115105	115/100	30H115100	115/95	30H11595
	LPT30-120	120/110	30H120110	120/105	30H120105	120/100	30H120100
	LPT30-130	130/120	30H130120	130/115	30H130115	130/110	30H130110
	LPT30-145	145/130	30H145130	145/120	30H145120	145/115	30H145115
	LPT30-155	155/145	30H155145	155/130	30H155130	155/120	30H155120

Electric Torque Pump

Ideal to work with PT&LPT series hydraulic torque wrench

Different voltage(110,220 and 380) 50/60Hz are available

Digital display is available



TWP-200D



TWP-400



TWP-200

Model	Wrench Qty	Power	Voltage	Oil flow (L/min)			Tank Oil	Net.W.
		KW	V	700 bar	320 bar	60 bar	L	KG
TWP-200-1	1	1.3	220	1.2	1.6	8	7.6	27
TWP-200-2	2	1.3	220	1.2	1.6	8	7.6	27.5
TWP-200-4	4	1.3	220	1.2	1.6	8	7.6	28
TWP-200D-1	1	1.3	220	0.9	1.6	8.2	7.6	28.5
TWP-200D-2	2	1.3	220	0.9	1.6	8.2	7.6	29

Model	Wrench Qty	Power	Voltage	Oil flow (L/min)		Tank Oil	Net.W.
		KW	V	700 bar	60 bar	L	KG
TWP-400-1	1	1.3	220	1.1	8	7.6	27
TWP-400-2	2	1.3	220	1.1	8	7.6	27.5
TWP-300-1	1	2.2	380	1.3	12	12	47
TWP-300-2	2	2.2	380	1.3	12	12	47.5



Pneumatic Torque Pump

Super light weight, easy to be moved around

Three stage manual pump, available for 2 wrenches load

Output pressure adjustable within 40-700 Bar

Reliable cooling system assures the pump adaptable in extreme environment

Durable aluminum oil tank with excellent heat dissipation

Model	Oil Flow(L/min)			Oil Cap(L)	Air Preussre Range(bar)	W (kg)
	700 bar	300 bar	70 bar			
TWP- 500P	0.8	1.6	8	7.6	4-8	21

High Pressure Twin Hose

Internal Dia(mm)	Length(m)	Working Pressure(bar)	Twin Hose Model	Quick Coupling	W(kg)
6.4	3	700	HPH3-1/4	CT-901	3
	6		HPH6-1/4	CT-901	4
	9		HPH9-1/4	CT-901	6
	12		HPH12-1/4	CT-901	9



RCH-Series Hollow Plunger Cylinder



- Hollow plunger design allows for both, pull and push forces
- Single-acting, spring return
- Nickel-plated, floating center tube on models over 20 ton increases product life
- Baked enamel finish for increased corrosion resistance
- Collar threads for easy fixturing

Optional Heat Treated Hollow Saddles					
Saddle Type	Cylinder Model Number	Saddle Model Nr.	Saddle Dimensions (mm)		
			A	B	C
Threaded Hollow	RCH-202, 206	HP-2015	53	1" - 8	9
	RCH-302, 306	HP-3015	63	1 1/4" - 7	9
	RCH-603, 606	HP-6016	91	1 3/8" - 5 1/2	12
	RCH-1003	HP-10016	126	2 1/2" - 8	13

Cylinder Capacity	Stroke	Model Number	Cyl. Effect. Area	Oil Cap.	Coll. Height	Ext. Height	Out. Dia.	Cyl. Bore Dia.	Plgr. Dia.	Cyl. Base to Advance Port	Saddle Dia.	Saddle Protrusion from Plgr.	Plunger Internal Thread	Plunger Thread Length	Collar Thread	Collar Thread Length	Center Hole Dia.	
ton (kn)	(mm)		(cm ²)	(cm ³)	A (mm)	B (mm)	D (mm)	E (mm)	F (mm)	H (mm)	J (mm)	K (mm)	O (mm)	P (mm)	W	X (mm)	Y (mm)	(kg)
13(125)	8	RCH-120	17.9	14	55	63	69	54.1	35.1	9	-	-	1/4"-16 UN	16	2 1/4"-16	30	19.6	1.5
	42	RCH-121*	17.9	75	120	162	69	54.1	35.1	25	-	-	-	-	2 1/4"-16	30	19.6	2.8
	42	RCH-1211	17.9	75	120	162	69	54.1	35.1	25	-	-	1/4"-16 UN	16	2 1/4"-16	30	19.6	2.8
20(115)	76	RCH-123	17.9	136	184	260	69	54.1	35.1	25	-	-	-	-	2 1/4"-16	30	19.6	4.4
	49	RCH-202*	30.7	150	162	211	98	73.1	54.1	19	54	9.7	1 1/8"-16 UN	19	3 1/8"-12	38	26.9	7.7
	155	RCH-206	30.7	476	306	461	98	73.1	54.1	25	54	9.7	1 1/8"-16 UN	19	3 1/8"-12	38	26.9	14.1
30(326)	64	RCH-302*	46.6	298	178	242	114	88.9	63.5	21	63	9.0	1 1/8"-16 UN	22	4 1/8"-12	42	33.3	10.9
	155	RCH-306	46.6	722	330	485	114	88.9	63.5	25	63	9.0	1 1/8"-16 UN	22	4 1/8"-12	42	33.3	21.8
60(576)	76	RCH-603*	82.3	626	247	323	159	123.9	91.9	31	91	12.0	2 1/4"-16 UN	19	6 1/4"-12	48	53.8	28.1
	153	RCH-606	82.3	1259	323	476	159	123.9	91.9	31	91	12.0	2 1/4"-16 UN	19	6 1/4"-12	48	53.8	35.4
95(931)	76	RCH-1003*	133.0	1011	254	330	212	165.1	127.0	38	126	12.0	4"-16 UN	25	8 1/8"-12	60	79.0	63.0

Base Mounting Hole Dimensions (mm)			
Model Number	Bolt Circle U	Thread V	Thread Depth Z
RCH-120	50.8	5/16"-18UNC	9.0
RCH-121	-	-	-
RCH-1211	-	-	-
RCH-123	50.8	5/16"-18UNC	12.7
RCH-202	82.6	3/8"-16UNC	9.4
RCH-206	82.6	3/8"-16UNC	9.4
RCH-302	92.2	3/8"-16UNC	14.0
RCH-306	92.2	3/8"-16UNC	14.0
RCH-603	130.3	1/2"-13UNC	14.0
RCH-606	130.3	1/2"-13UNC	14.0
RCH-1003	177.8	5/8"-11UNC	19.0

Capacity: **5-95 ton**

Stroke: **16-362mm**

Maximum Operating Pressure: **700 bar**

Cylinder Capacity ton (kN)	Stroke (mm)	Model Number	Cylinder Effective Area (cm ²)	Oil Capacity (cm ³)	Collapsed Height (mm)	
5 (45)	16	RC-50**	6.5	10	41	1.0
	25	RC-51	6.5	16	110	1.0
	76	RC-53	6.5	50	165	1.5
	127	RC-55*	6.5	83	215	1.9
	177	RC-57	6.5	115	273	2.4
10 (101)	232	RC-59	6.5	151	323	2.8
	26	RC-101	14.5	38	89	1.8
	54	RC-102*	14.5	78	121	2.3
	105	RC-104	14.5	152	171	3.3
	156	RC-106*	14.5	226	247	4.4
	203	RC-108	14.5	294	298	5.4
	257	RC-1010*	14.5	373	349	6.4
15 (142)	304	RC-1012	14.5	441	400	6.8
	356	RC-1014	14.5	516	450	8.2
	25	RC-151	20.3	51	124	3.3
	51	RC-152	20.3	104	149	4.1
	101	RC-154*	20.3	205	200	5.0
	152	RC-156*	20.3	308	271	6.8
	203	RC-158	20.3	411	322	8.2
25 (232)	254	RC-1510	20.3	516	373	9.5
	305	RC-1512	20.3	619	423	10.9
	356	RC-1514	20.3	723	474	11.8
	28	RC-251	33.2	86	139	5.9
	50	RC-252*	33.2	166	165	6.4
	102	RC-254*	33.2	339	215	8.2
	158	RC-256*	33.2	525	273	10.0
30(295)	210	RC-258	33.2	697	323	12.2
	261	RC-2510	33.2	867	374	14.1
	311	RC-2512	33.2	1033	425	16.3
	362	RC-2514*	33.2	1202	476	17.7
50 (498)	51	RC-502	71.2	362	176	15.0
	101	RC-504	71.2	719	227	19.1
	159	RC-506*	71.2	1131	282	23.1
	337	RC-5013	71.2	2399	460	37.6
75 (718)	156	RC-756	102.6	1601	285	29.5
	333	RC-7513	102.6	3417	492	59.0
95 (933)	168	RC-1006	133.3	2239	357	59.0
	260	RC-10010	133.3	3466	449	72.6

RC-50 cylinder has a non removable grooved saddle and no collar thread.

RC-Series Single Acting Cylinder

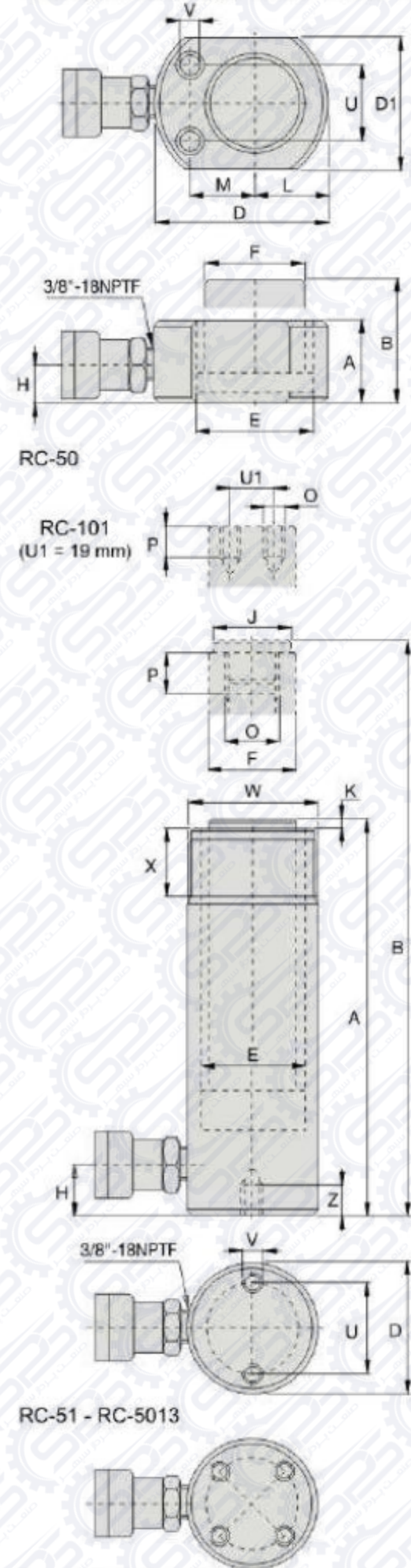


80% Think Safety
Manufacturer's rating of load and stroke are maximum safe limits. Good practice encourages using only 80% of these ratings.

Saddles
All RC cylinders are equipped with hardened removable grooved saddles. For tilt and flat saddles, see the RC-Series accessory page.

- The exclusive Golden Ring design absorbs eccentric loading without galling cylinder parts
- Collar threads, plunger threads and base mounting holes enable easy fixturing (on most models)
- Designed for use in all positions
- High strength alloy steel for durability
- Nickel plating available on most models
- Heavy duty return springs
- Baked enamel finish for increased corrosion resistance
- CR-400 coupler and dust cap included on all models
- Plunger wiper reduces contamination, extending cylinder life.

Single Acting General Purpose Cylinder



Cylinder Capacity ton (kN)	Stroke (mm)	Model Number	Cylinder Effective (cm ²)	Oil Capacity (cm ³)	Collapsed Height A (mm)	Extended Height B (mm)	Outside Dia. D (mm)
5 (45)	16	RC-50**	6.5	10	41	57	58***
	25	RC-51	6.5	16	110	135	38
	76	RC-53	6.5	50	165	241	38
	127	RC-55*	6.5	83	215	342	38
	177	RC-57	6.5	115	273	450	38
	232	RC-59	6.5	151	323	555	38
10 (101)	26	RC-101	14.5	38	89	115	57
	54	RC-102*	14.5	78	121	175	57
	105	RC-104	14.5	152	171	276	57
	156	RC-106*	14.5	226	247	403	57
	203	RC-108	14.5	294	298	501	57
	257	RC-1010*	14.5	373	349	606	57
	304	RC-1012	14.5	441	400	704	57
	356	RC-1014	14.5	516	450	806	57
15 (142)	25	RC-151	20.3	51	124	149	69
	51	RC-152	20.3	104	149	200	69
	101	RC-154*	20.3	205	200	301	69
	152	RC-156*	20.3	308	271	423	69
	203	RC-158	20.3	411	322	525	69
	254	RC-1510	20.3	516	373	627	69
	305	RC-1512	20.3	619	423	728	69
	356	RC-1514	20.3	723	474	830	69
25 (232)	26	RC-251	33.2	86	139	165	85
	50	RC-252*	33.2	166	165	215	85
	102	RC-254*	33.2	339	215	317	85
	158	RC-256*	33.2	525	273	431	85
	210	RC-258	33.2	697	323	533	85
	261	RC-2510	33.2	867	374	635	85
	311	RC-2512	33.2	1033	425	736	85
	362	RC-2514*	33.2	1202	476	838	85
30(295)	209	RC-308	42.1	880	387	596	101
	51	RC-502	71.2	362	176	227	127
	101	RC-504	71.2	719	227	328	127
	159	RC-506*	71.2	1131	282	441	127
50 (498)	337	RC-5013	71.2	2399	460	797	127
	156	RC-756	102.6	1801	285	441	146
75 (718)	333	RC-7513	102.6	3417	492	825	146
95 (933)	168	RC-1006	133.3	2239	357	525	177
	260	RC-10010	133.3	3466	449	709	177

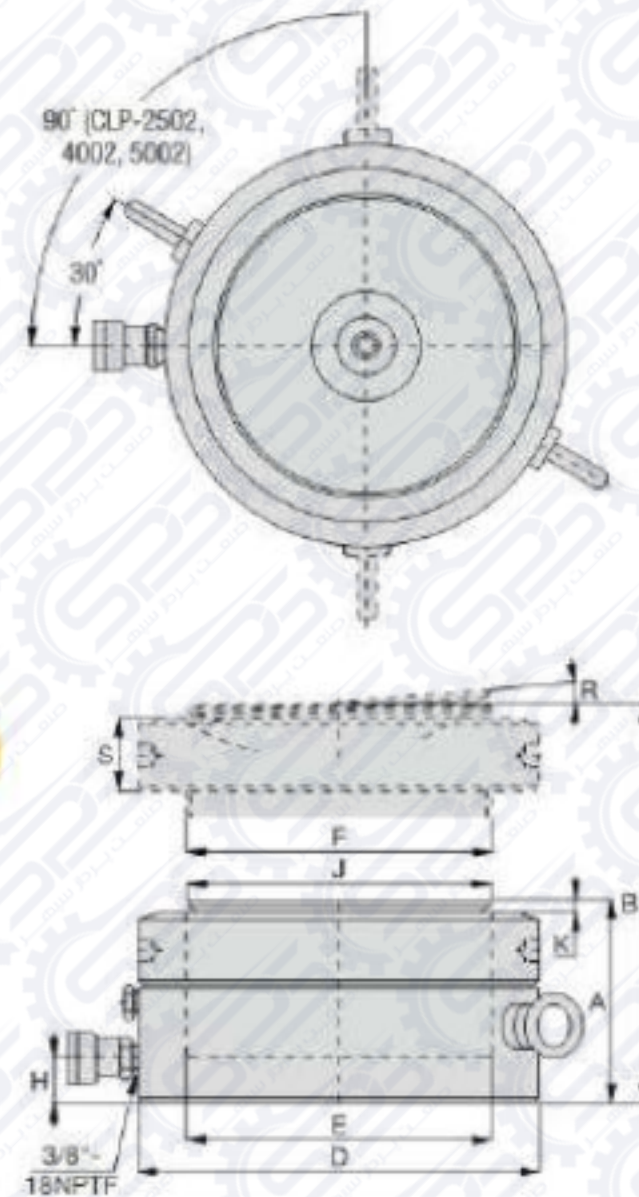
D1=41mm, L=20mm, M=25mm,

RC-50 cylinder has a non removable grooved saddle and no collar thread.

RC-Series Single Acting Cylinder

Cylinder Bore Dia. E (mm)	Plunger Dia. F (mm)	Base to Adv. Port H (mm)	Saddle Dia. J (mm)	Saddle Protr. from Plgr. K (mm)	Plunger Internal Thread O	Plunger Thread Length P (mm)	Base Mounting Holes			Collar Thread W	Collar Thread Length X (mm)	(kg)	Model Number
							Bolt Circle U (mm)	Thread V	Thd. Depth Z (mm)				
28.7	25.4	19	**	**	**	**	28	5.6 mm	—	—	—	1.0	RC-50**
28.7	25.4	19	25	6	3/4" - 16 UN	14	25	1/4" - 20 UN	14	1 1/2" - 16 UN	28	1.0	RC-51
28.7	25.4	19	25	6	3/4" - 16 UN	14	25	1/4" - 20 UN	14	1 1/2" - 16 UN	28	1.5	RC-53
28.7	25.4	19	25	6	3/4" - 16 UN	14	25	1/4" - 20 UN	14	1 1/2" - 16 UN	28	1.9	RC-55*
28.7	25.4	19	25	6	3/4" - 16 UN	16	25	1/4" - 20 UN	14	1 1/2" - 16 UN	28	2.4	RC-57
28.7	25.4	19	25	6	3/4" - 16 UN	16	25	1/4" - 20 UN	14	1 1/2" - 16 UN	28	2.8	RC-59
42.9	38.1	19	—	—	#10 - 24 UN	6	39	5/16" - 18 UN	12	2 1/4" - 14	26	1.8	RC-101
42.9	38.1	19	35	6	1" - 8 UN	19	39	5/16" - 18 UN	12	2 1/4" - 14 UN	26	2.3	RC-102*
42.9	38.1	19	35	6	1" - 8 UN	19	39	5/16" - 18 UN	12	2 1/4" - 14 UN	26	3.3	RC-104
42.9	38.1	19	35	6	1" - 8 UN	19	39	5/16" - 18 UN	12	2 1/4" - 14 UN	26	4.4	RC-106*
42.9	38.1	19	35	6	1" - 8 UN	19	39	5/16" - 18 UN	12	2 1/4" - 14 UN	26	5.4	RC-108
42.9	38.1	19	35	6	1" - 8 UN	19	39	5/16" - 18 UN	12	2 1/4" - 14 UN	26	6.4	RC-1010*
42.9	38.1	19	35	6	1" - 8 UN	19	39	5/16" - 18 UN	12	2 1/4" - 14 UN	26	6.8	RC-1012
42.9	38.1	19	35	6	1" - 8 UN	19	39	5/16" - 18 UN	12	2 1/4" - 14 UN	26	8.2	RC-1014
50.8	41.4	19	38	9	1" - 8 UN	25	48	3/8" - 16 UN	12	2 3/4" - 16 UN	30	3.3	RC-151
50.8	41.4	19	38	9	1" - 8 UN	22	48	3/8" - 16 UN	12	2 3/4" - 16 UN	30	4.1	RC-152
50.8	41.4	19	38	9	1" - 8 UN	22	48	3/8" - 16 UN	12	2 3/4" - 16 UN	30	5.0	RC-154*
50.8	41.4	25	38	9	1" - 8 UN	25	48	3/8" - 16 UN	12	2 3/4" - 16 UN	30	6.8	RC-156*
50.8	41.4	25	38	9	1" - 8 UN	25	48	3/8" - 16 UN	12	2 3/4" - 16 UN	30	8.2	RC-158
50.8	41.4	25	38	9	1" - 8 UN	25	48	3/8" - 16 UN	12	2 3/4" - 16 UN	30	9.5	RC-1510
50.8	41.4	25	38	9	1" - 8 UN	25	48	3/8" - 16 UN	12	2 3/4" - 16 UN	30	10.9	RC-1512
50.8	41.4	25	38	9	1" - 8 UN	25	48	3/8" - 16 UN	12	2 3/4" - 16 UN	30	11.8	RC-1514
65.0	57.2	25	50	10	1 1/2" - 16 UN	25	58	1/2" - 13 UN	19	3 5/16" - 12 UN	49	5.9	RC-251
65.0	57.2	25	50	10	1 1/2" - 16 UN	25	58	1/2" - 13 UN	19	3 5/16" - 12 UN	49	6.4	RC-252*
65.0	57.2	25	50	10	1 1/2" - 16 UN	25	58	1/2" - 13 UN	19	3 5/16" - 12 UN	49	8.2	RC-254*
65.0	57.2	25	50	10	1 1/2" - 16 UN	25	58	1/2" - 13 UN	19	3 5/16" - 12 UN	49	10.0	RC-256*
65.0	57.2	25	50	10	1 1/2" - 16 UN	25	58	1/2" - 13 UN	19	3 5/16" - 12 UN	49	12.2	RC-258
65.0	57.2	25	50	10	1 1/2" - 16 UN	25	58	1/2" - 13 UN	19	3 5/16" - 12 UN	49	14.1	RC-2510
65.0	57.2	25	50	10	1 1/2" - 16 UN	25	58	1/2" - 13 UN	19	3 5/16" - 12 UN	49	16.3	RC-2512
65.0	57.2	25	50	10	1 1/2" - 16 UN	25	58	1/2" - 13 UN	19	3 5/16" - 12 UN	49	17.7	RC-2514*
73.2	57.2	57	50	10	1 1/2" - 16 UN	25	—	—	—	3 5/16" - 12 UN	49	18.1	RC-308
95.2	79.5	33	71	2	—	—	95	1/2" - 13 UN	19	5" - 12 UN	55	15.0	RC-502
95.2	79.5	33	71	2	—	—	95	1/2" - 13 UN	19	5" - 12 UN	55	19.1	RC-504
95.2	79.5	35	71	2	—	—	95	1/2" - 13 UN	19	5" - 12 UN	55	23.1	RC-506*
95.2	79.5	35	71	2	—	—	95	1/2" - 13 UN	19	5" - 12 UN	55	37.6	RC-5013
114.3	95.2	30	71	5	—	—	—	—	—	5 3/4" - 12 UN	44	29.5	RC-756
114.3	95.2	30	71	5	—	—	—	—	—	5 3/4" - 12 UN	44	59.0	RC-7513
130.3	104.9	41	71	2	—	—	140	3/4" - 10 UN	25	6 7/8" - 12 UN	44	59.0	RC-1006
130.3	104.9	41	71	2	—	—	140	3/4" - 10 UN	25	6 7/8" - 12 UN	44	72.6	RC-10010

CLP-Series Pancake Lock Nut Cylinder



Capacity: **60-520 ton**

Stroke: **45-50mm**

Maximum Operating Pressure: **700 bar**



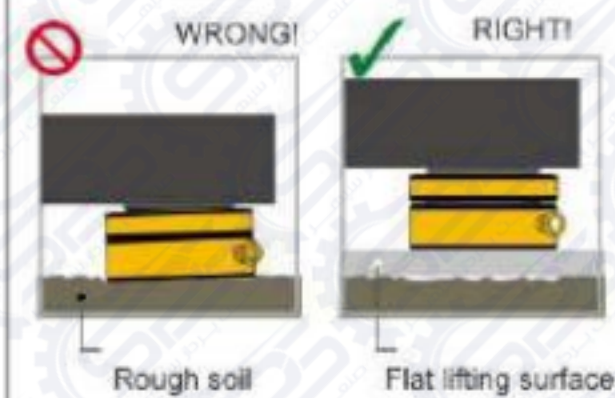
Tilt Saddles

All CLP-Series cylinders include integral tilt saddles with maximum tilt angles up to 5°.

- Extremely low height for use in confined areas
- Lock nut for positive and safe mechanical load holding over a long period of time
- Single-acting, load return
- Optional special synthetic coating for improved corrosion resistance and lower friction for smoother operation
- Overflow port functions as a stroke limiter



Cylinders Require A Solid Lifting Surface For Correct Support Use Of Pancake Cylinders On Surfaces Such As Sand, Mud Or Dirt, May Result In Cylinder Damage!



Cylinder Capacity ton (kN)	Stroke (mm)	Model Number*	Cylinder Effective Area (cm ²)	Oil Capacity (cm ³)	Collapsed Height A (mm)	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Diameter E (mm)	Piston Diameter F (mm)	Base to Advance Port H (mm)	Saddle Diameter J (mm)	Saddle Projection from Piston K (mm)	Saddle Max. Tilt Angle R	Lock Nut Height S (mm)	(kg)
60 (606)	50	CLP-602	86.8	432	125	175	140	105.0	Tr 104 x 4	19	96	8	5°	28	15
100 (1027)	50	CLP-1002	146.8	734	137	187	175	136.7	Tr 136 x 6	21	126	8	5°	31	26
160 (1619)	45	CLP-1602	231.3	1040	148	193	220	171.6	Tr 171 x 6	27	160	9	5°	40	44
200 (1999)	45	CLP-2002	285.6	1285	155	200	245	190.7	Tr 190 x 6	30	180	10	5°	43	57
260 (2567)	45	CLP-2502	366.8	1650	159	204	275	216.1	Tr 216 x 6	32	200	11	5°	44	74
400 (3916)	45	CLP-4002	559.5	2517	178	223	350	266.9	Tr 266 x 6	39	250	11	4°	55	134
520 (5114)	45	CLP-5002	730.6	3287	192	237	400	305.0	Tr 305 x 6	48	290	10	3°	62	189

Capacity: **50-1000 ton**

Stroke: **50-300mm**

Maximum Operating Pressure: **700 bar**

Cylinder Capacity ton (kN)	Stroke (mm)	Model Number	Cylinder Effective Area (cm ²)	Oil Capacity (cm ³)	Collapsed Height (mm)	(kg)
50 (496)	50	CLL-502	70.9	355	164	15
	100	CLL-504	70.9	709	214	20
	150	CLL-506	70.9	1064	264	25
	200	CLL-508	70.9	1418	314	30
	250	CLL-5010	70.9	1773	364	35
	300	CLL-5012	70.9	2127	414	40
100 (929)	50	CLL-1002	132.7	664	187	30
	100	CLL-1004	132.7	1327	237	39
	150	CLL-1006	132.7	1991	287	48
	200	CLL-1008	132.7	2654	337	56
	250	CLL-10010	132.7	3318	387	64
	300	CLL-10012	132.7	3981	437	73
150 (1390)	50	CLL-1502	198.6	993	209	53
	100	CLL-1504	198.6	1986	259	66
	150	CLL-1506	198.6	2979	309	78
	200	CLL-1508	198.6	3972	359	92
	250	CLL-15010	198.6	4965	409	104
	300	CLL-15012	198.6	5958	459	117
200 (1859)	50	CLL-2002	265.6	1330	243	83
	150	CLL-2006	265.6	3989	343	117
	300	CLL-20012	265.6	7995	493	170
250 (2562)	50	CLL-2502	366.1	1832	249	116
	150	CLL-2506	366.1	5496	349	162
	300	CLL-25012	366.1	10995	499	234
300 (3193)	50	CLL-3002	456.2	2281	295	173
	150	CLL-3006	456.2	6843	395	233
	300	CLL-30012	456.2	13740	545	323
400 (3919)	50	CLL-4002	559.9	2800	335	250
	150	CLL-4006	559.9	8399	435	327
	300	CLL-40012	559.9	16800	585	441
500 (5118)	50	CLL-5002	731.1	3653	375	367
	150	CLL-5006	731.1	10959	475	466
	300	CLL-50012	731.1	21930	625	617
600 (5983)	50	CLL-6002	854.8	4277	395	446
	150	CLL-6006	854.8	12830	495	562
	300	CLL-60012	854.8	25650	645	737
800 (8238)	50	CLL-8002	1176.9	5882	455	709
	150	CLL-8006	1176.9	17645	555	870
	300	CLL-80012	1176.9	35370	705	1110
1000 (10260)	50	CLL-10002	1466.4	7329	495	949
	150	CLL-10006	1466.4	21986	595	1141
	300	CLL-100012	1466.4	43980	745	1430

CLL-Series Lock Nut Cylinder



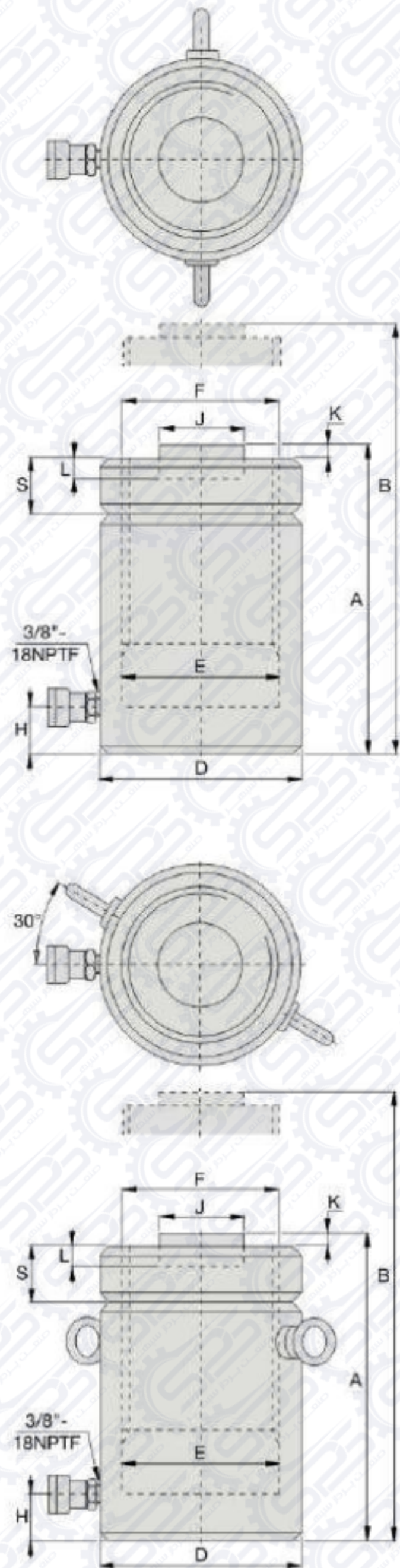
Saddles

All CLL cylinders are equipped with bolt-on removable grooved saddles. For information on optional tilt saddles, see selection chart at next page.

- Single-acting, load return
- Safety Lock Nut for mechanical load holding
- Special synthetic coating for improved corrosion resistance and lower friction for smoother operation
- Overflow port functions as a stroke limiter
- Interchangeable, hardened grooved saddles are standard To Secure Loads Mechanically

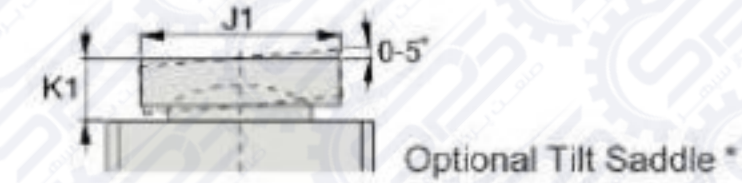


Single Acting Lock Nut Cylinder



Cylinder Capacity ton (kN)	Stroke (mm)	Model Number	Cylinder Effective Area (cm ²)	Oil Capacity (cm ³)
50 (496)	50	CLL-502	70.9	355
	100	CLL-504	70.9	709
	150	CLL-506	70.9	1064
	200	CLL-508	70.9	1418
	250	CLL-5010	70.9	1773
	300	CLL-5012	70.9	2127
100 (929)	50	CLL-1002	132.7	664
	100	CLL-1004	132.7	1327
	150	CLL-1006	132.7	1991
	200	CLL-1008	132.7	2654
	250	CLL-10010	132.7	3318
	300	CLL-10012	132.7	3981
150 (1390)	50	CLL-1502	198.6	993
	100	CLL-1504	198.6	1986
	150	CLL-1506	198.6	2979
	200	CLL-1508	198.6	3972
	250	CLL-15010	198.6	4965
	300	CLL-15012	198.6	5958
200 (1859)	50	CLL-2002	265.6	1330
	150	CLL-2006	265.6	3989
	300	CLL-20012	265.6	7995
250 (2562)	50	CLL-2502	366.1	1832
	150	CLL-2506	366.1	5496
	300	CLL-25012	366.1	10995
300 (3193)	50	CLL-3002	456.2	2281
	150	CLL-3006	456.2	6843
	300	CLL-30012	456.2	13740
400 (3919)	50	CLL-4002	559.9	2800
	150	CLL-4006	559.9	8399
	300	CLL-40012	559.9	16800
500 (5118)	50	CLL-5002	731.1	3653
	150	CLL-5006	731.1	10959
	300	CLL-50012	731.1	21930
600 (5983)	50	CLL-6002	854.8	4277
	150	CLL-6006	854.8	12830
	300	CLL-60012	854.8	25650
800 (8238)	50	CLL-8002	1176.9	5882
	150	CLL-8006	1176.9	17645
	300	CLL-80012	1176.9	35370
1000 (10260)	50	CLL-10002	1466.4	7329
	150	CLL-10006	1466.4	21986
	300	CLL-100012	1466.4	43980

CLL-Series Lock Nut Cylinder



Coll. Height	Ext. Height	Outs. Dia.	Cyl. Bore Dia.	Plunger Dia.	Base to Adv. Port	Standard Saddle Dia.	Saddle Protr. from Plgr.	Depth of Plunger Hole	Lock-nut Height		Model Number	* Optional Tilt Saddle		
												Saddle Dia.	Saddle Height	Saddle Model Number
A (mm)	B (mm)	D (mm)	E (mm)	F (mm)	H (mm)	J (mm)	K (mm)	L (mm)	S (mm)	(kg)		J1 (mm)	K1 (mm)	
164	214	125	95.0	Tr 95 x 4	30	71	2	13	36	15	CLL-502	71	24	CAT-100
214	314	125	95.0	Tr 95 x 4	30	71	2	13	36	20	CLL-504	71	24	CAT-100
264	414	125	95.0	Tr 95 x 4	30	71	2	13	36	25	CLL-506	71	24	CAT-100
314	514	125	95.0	Tr 95 x 4	30	71	2	13	36	30	CLL-508	71	24	CAT-100
364	614	125	95.0	Tr 95 x 4	30	71	2	13	36	35	CLL-5010	71	24	CAT-100
414	714	125	95.0	Tr 95 x 4	30	71	2	13	36	40	CLL-5012	71	24	CAT-100
187	237	165	130.0	Tr 130 x 6	30	71	2	13	44	30	CLL-1002	71	24	CAT-100
237	337	165	130.0	Tr 130 x 6	30	71	2	13	44	39	CLL-1004	71	24	CAT-100
287	437	165	130.0	Tr 130 x 6	30	71	2	13	44	48	CLL-1006	71	24	CAT-100
337	537	165	130.0	Tr 130 x 6	30	71	2	13	44	56	CLL-1008	71	24	CAT-100
387	637	165	130.0	Tr 130 x 6	30	71	2	13	44	64	CLL-10010	71	24	CAT-100
437	737	165	130.0	Tr 130 x 6	30	71	2	13	44	73	CLL-10012	71	24	CAT-100
209	259	205	159.0	Tr 159 x 6	39	130	2	25	44	53	CLL-1502	130	20	CAT-200
259	359	205	159.0	Tr 159 x 6	39	130	2	25	44	66	CLL-1504	130	20	CAT-200
309	459	205	159.0	Tr 159 x 6	39	130	2	25	44	78	CLL-1506	130	20	CAT-200
359	559	205	159.0	Tr 159 x 6	39	130	2	25	44	92	CLL-1508	130	20	CAT-200
409	659	205	159.0	Tr 159 x 6	39	130	2	25	44	104	CLL-15010	130	20	CAT-200
459	759	205	159.0	Tr 159 x 6	39	130	2	25	44	117	CLL-15012	130	20	CAT-200
243	293	235	184.0	Tr 184 x 6	50	130	2	25	50	83	CLL-2002	130	20	CAT-200
343	493	235	184.0	Tr 184 x 6	50	130	2	25	50	117	CLL-2006	130	20	CAT-200
493	793	235	184.0	Tr 184 x 6	50	130	2	25	50	170	CLL-20012	130	20	CAT-200
249	299	275	216.0	Tr 216 x 6	50	150	2	25	56	116	CLL-2502	150	21	CAT-250
349	499	275	216.0	Tr 216 x 6	50	150	2	25	56	162	CLL-2506	150	21	CAT-250
499	799	275	216.0	Tr 216 x 6	50	150	2	25	56	234	CLL-25012	150	21	CAT-250
295	345	310	241.0	Tr 241 x 6	59	139	5	25	60	173	CLL-3002	195	75	CAT-300
395	545	310	241.0	Tr 241 x 6	59	139	5	25	60	233	CLL-3006	195	75	CAT-300
545	845	310	241.0	Tr 241 x 6	59	139	5	25	60	323	CLL-30012	195	75	CAT-300
335	385	350	267.0	Tr 266 x 6	70	159	5	25	70	250	CLL-4002	225	85	CAT-400
435	585	350	267.0	Tr 266 x 6	70	159	5	25	70	327	CLL-4006	225	85	CAT-400
585	885	350	267.0	Tr 266 x 6	70	159	5	25	70	441	CLL-40012	225	85	CAT-400
375	425	400	305.0	Tr 305 x 6	80	179	5	25	80	367	CLL-5002	250	91	CAT-500
475	625	400	305.0	Tr 305 x 6	80	179	5	25	80	466	CLL-5006	250	91	CAT-500
625	925	400	305.0	Tr 305 x 6	80	179	5	25	80	617	CLL-50012	250	91	CAT-500
395	445	430	330.0	Tr 330 x 6	85	194	5	25	85	446	CLL-6002	275	96	CAT-600
495	645	430	330.0	Tr 330 x 6	85	194	5	25	85	562	CLL-6006	275	96	CAT-600
645	945	430	330.0	Tr 330 x 6	85	194	5	25	85	737	CLL-60012	275	96	CAT-600
455	505	505	387.0	Tr 387 x 6	100	224	5	25	100	709	CLL-8002	320	123	CAT-800
555	705	505	387.0	Tr 387 x 6	100	224	5	25	100	870	CLL-8006	320	123	CAT-800
705	1005	505	387.0	Tr 387 x 6	100	224	5	25	100	1110	CLL-80012	320	123	CAT-800
495	545	560	432.0	Tr 432 x 6	110	249	5	25	110	949	CLL-10002	360	136	CAT-1000
595	745	560	432.0	Tr 432 x 6	110	249	5	25	110	1141	CLL-10006	360	136	CAT-1000
745	1045	560	432.0	Tr 432 x 6	110	249	5	25	110	1430	CLL-100012	360	136	CAT-1000

RCS-Series Low Height Cylinder



Capacity: **10-90 ton**

Stroke: **38-57mm**

Maximum Operating Pressure: **700 bar**

Optional Bolt On Tilt Saddle Dimensions (mm)					
For Cylinder Model	Model	A	B	C*	
RCS-101	CAT-11	35	11	21	
RCS-201, -302, -502	CAT-51	50	15	29	
RCS-1002	CAT-101	71	17	35	

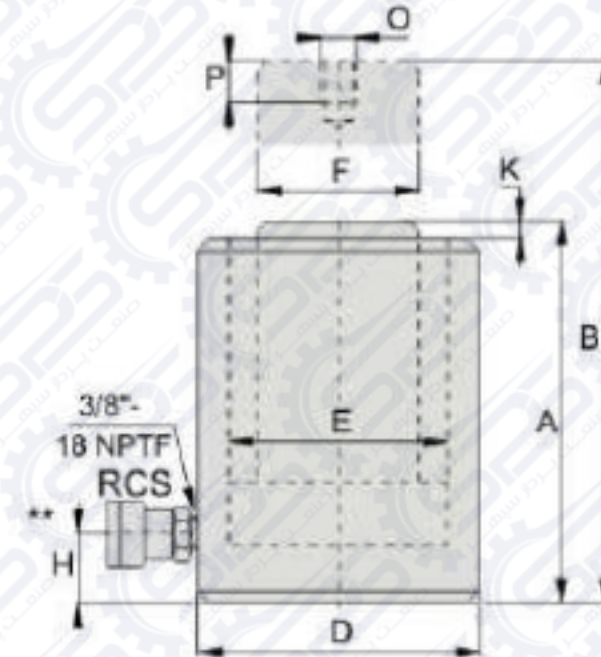
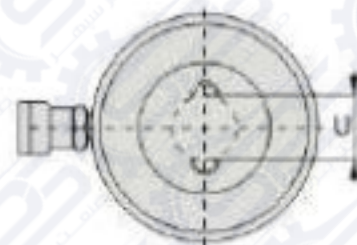
* 'C' dimension equals saddle protrusion from plunger. Mounting screws are included.

- Lightweight, low profile design for use in confined spaces
- Single-acting, spring return
- Baked enamel finish for increased corrosion resistance
- Plunger wiper reduces contamination, extending cylinder life
- Grooved plunger end with threaded holes for mounting tilt saddles
- Integral handle on RCS-1002 for easy carrying
- Steel plunger surface is chromium-plating

Cyl. Capacity ton (kn)	Stroke (mm)	Model Number	Cyl. Effect. Area (cm ²)	Oil Cap. (cm ³)
10 (101)	38	RCS-101*	14.5	55
20 (201)	45	RCS-201*	28.7	129
30 (295)	62	RCS-302*	42.1	261
45 (435)	60	RCS-502*	62.1	373
90 (887)	57	RCS-1002*	126.7	722



Saddles
All RCS-Series cylinders have plunger mounting holes for installation of tilt saddles. See table for selection and dimensional information.



Collapsed Height A (mm)	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Dia. E (mm)	Plunger Dia. F (mm)	Base to Advance Port H (mm)	Plunger Protrusion from Base K (mm)	Plunger to Base L (mm)	Plunger to Mtg. Hole M (mm)	Thread O (mm)	Thread Depth P (mm)	Bolt Circle U (mm)	(kg)	Model Number
88	126	69	42.9	38.1	17	5	-	-	M4	8	26	4.1	RCS-101*
98	143	92	60.5	50.8	17	3	-	-	M5	8	40	5.0	RCS-201*
117	179	101	73.2	66.5	19	3	-	-	M5	8	40	6.8	RCS-302*
122	182	124	88.9	69.8	23	2	-	-	M5	8	40	10.9	RCS-502*
141	198	165	127.0	92.2	31	1	-	-	M8	10	55	22.7	RCS-1002*

*5° angle position of coupler on RCS-101, 201, 302

CLSG-Series High Tonnage Cylinder



Capacity: **50-1000 ton**

Stroke: **50-300mm**

Maximum Operating Pressure: **700 bar**

Cylinder Capacity ton (kN)	Stroke (mm)	Model Number	Cylinder Effective Area (cm ²)	Oil Capacity (cm ³)	Collapsed Height (mm)	(kg)
50 (539)	50	CLSG-502	77.0	385	162	17
	100	CLSG-504	77.0	770	212	20
	150	CLSG-506	77.0	1155	262	23
	200	CLSG-508	77.0	1540	312	27
	250	CLSG-5010	77.0	1924	362	31
100 (929)	300	CLSG-5012	77.0	2309	412	34
	50	CLSG-1002	132.7	664	182	19
	100	CLSG-1004	132.7	1327	232	29
	150	CLSG-1006	132.7	1991	282	40
	200	CLSG-1008	132.7	2655	332	50
150 (1390)	250	CLSG-10010	132.7	3318	382	61
	300	CLSG-10012	132.7	3982	432	71
	50	CLSG-1502	198.6	993	196	39
	100	CLSG-1504	198.6	1986	246	52
	150	CLSG-1506	198.6	2978	296	65
200 (1861)	200	CLSG-1508	198.6	3971	346	78
	250	CLSG-15010	198.6	4964	396	92
	300	CLSG-15012	198.6	5957	446	105
	50	CLSG-2002	265.9	1330	216	55
	150	CLSG-2006	265.9	3989	316	91
250 (2565)	300	CLSG-20012	265.9	7977	466	146
	50	CLSG-2502	366.4	1832	235	102
	150	CLSG-2506	366.4	5497	335	136
300 (3193)	300	CLSG-25012	366.4	10993	485	207
	50	CLSG-3002	456.2	2281	312	184
	150	CLSG-3006	456.2	6843	412	232
400 (3919)	300	CLSG-30012	456.2	13685	562	303
	50	CLSG-4002	559.9	2800	375	270
	150	CLSG-4006	559.9	8399	475	330
500 (5114)	300	CLSG-40012	559.9	16797	625	421
	50	CLSG-5002	730.6	3653	419	401
	150	CLSG-5006	730.6	10959	519	480
600 (5987)	300	CLSG-50012	730.6	21918	669	599
	50	CLSG-6002	855.3	4276	429	474
	150	CLSG-6006	855.3	12829	529	565
800 (8234)	300	CLSG-60012	855.3	25659	679	701
	50	CLSG-8002	1176.3	5881	474	741
	150	CLSG-8006	1176.3	17644	574	880
1000 (10260)	300	CLSG-80012	1176.3	35288	724	1058
	50	CLSG-10002	1465.7	7329	564	1062
	150	CLSG-10006	1465.7	21986	664	1213
	300	CLSG-100012	1465.7	43972	814	1439

Standard Features

- Interchangeable, hardened grooved saddles
- Top and side mounted lifting eye capability
- Integral stop ring provides piston blow-out protection
- Baked enamel outside finish and plated pistons provide superior corrosion protection
- Interchangeable, hardened grooved saddles are standard
- Base mounting holes are standard on all models
- Plunger wiper reduces contamination, extending cylinder life
- Single-acting, load return

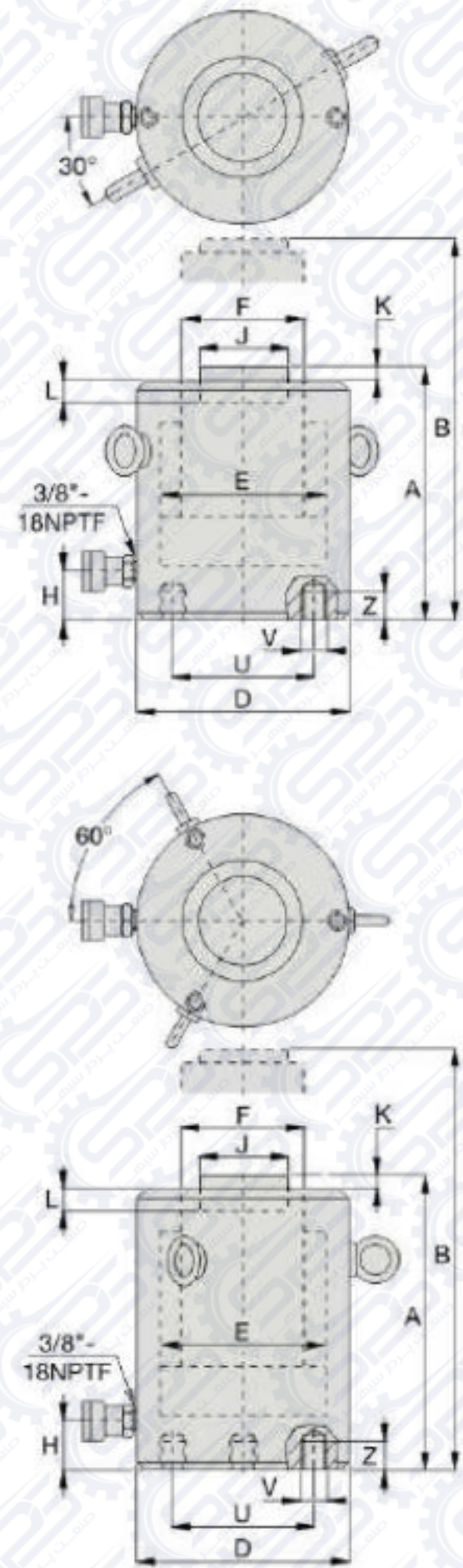
Saddles

All CLSG-Series cylinders are equipped with bolt-on removable grooved saddles. For information on optional tilt saddles, see selection chart.

Base Mounting Hole ¹/₂ Dimensions (mm)

Model / Capacity ton	Bolt Circle U	Thread Size V	Min. Thread Depth Z
CLSG-50	65	2x M12	22
CLSG-100	95	2x M12	22
CLSG-150	130	2x M12	22
CLSG-200	165	3x M12	22
CLSG-250	190	3x M12	22
CLSG-300	180	3x M16	30
CLSG-400	205	3x M16	30
CLSG-500	250	3x M24	36
CLSG-600	275	3x M24	36
CLSG-800	330	3x M24	36
CLSG-1000	375	3x M24	36

Single Acting High Tonnage Cylinder



Cylinder Capacity ton (kN)	Stroke (mm)	Model Number	Cylinder Effective Area (cm ²)	Oil Capacity (cm ³)
50 (539)	50	CLSG-502	77.0	385
	100	CLSG-504	77.0	770
	150	CLSG-506	77.0	1155
	200	CLSG-508	77.0	1540
	250	CLSG-5010	77.0	1924
	300	CLSG-5012	77.0	2309
100 (929)	50	CLSG-1002	132.7	664
	100	CLSG-1004	132.7	1327
	150	CLSG-1006	132.7	1991
	200	CLSG-1008	132.7	2655
	250	CLSG-10010	132.7	3318
	300	CLSG-10012	132.7	3982
150 (1390)	50	CLSG-1502	198.6	993
	100	CLSG-1504	198.6	1986
	150	CLSG-1506	198.6	2978
	200	CLSG-1508	198.6	3971
	250	CLSG-15010	198.6	4964
	300	CLSG-15012	198.6	5957
200 (1861)	50	CLSG-2002	265.9	1330
	150	CLSG-2006	265.9	3989
	300	CLSG-20012	265.9	7977
250 (2565)	50	CLSG-2502	366.4	1832
	150	CLSG-2506	366.4	5497
	300	CLSG-25012	366.4	10993
300 (3193)	50	CLSG-3002	456.2	2281
	150	CLSG-3006	456.2	6843
	300	CLSG-30012	456.2	13685
400 (3919)	50	CLSG-4002	559.9	2800
	150	CLSG-4006	559.9	8399
	300	CLSG-40012	559.9	16797
500 (5114)	50	CLSG-5002	730.6	3653
	150	CLSG-5006	730.6	10959
	300	CLSG-50012	730.6	21918
600 (5987)	50	CLSG-6002	855.3	4276
	150	CLSG-6006	855.3	12829
	300	CLSG-60012	855.3	25659
800 (8234)	50	CLSG-8002	1176.3	5881
	150	CLSG-8006	1176.3	17644
	300	CLSG-80012	1176.3	35288
1000 (10260)	50	CLSG-10002	1465.7	7329
	150	CLSG-10006	1465.7	21986
	300	CLSG-100012	1465.7	43972

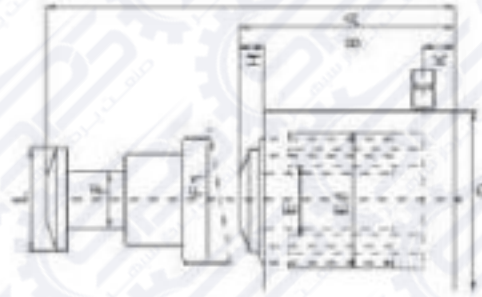
CLSG-Series High Tonnage Cylinder



Collapsed Height A (mm)	Extended Height B (mm)	Outside Dia. D (mm)	Cylinder Bore Dia. E (mm)	Plunger Dia. F (mm)	Base to Adv. Port H (mm)	Standard Saddle Dia. J (mm)	Saddle Protr. from Plgr. K (mm)	Depth of Plunger Hole L (mm)	Weight (kg)	Model Number	* Optional Tilt Saddle		
											Saddle Dia. J1 (mm)	Saddle Height K1 (mm)	Saddle Model No
162	212	130	99.0	70.0	52	50	1	19	17	CLSG-502	50	24	CATG-50
212	312	130	99.0	70.0	52	50	1	19	20	CLSG-504	50	24	CATG-50
262	412	130	99.0	70.0	52	50	1	19	23	CLSG-506	50	24	CATG-50
312	512	130	99.0	70.0	52	50	1	19	27	CLSG-508	50	24	CATG-50
362	612	130	99.0	70.0	52	50	1	19	31	CLSG-5010	50	24	CATG-50
412	712	130	99.0	70.0	52	50	1	19	34	CLSG-5012	50	24	CATG-50
182	232	165	130.0	95.0	54	75	1	19	19	CLSG-1002	73	29	CATG-100
232	332	165	130.0	95.0	54	75	1	19	29	CLSG-1004	73	29	CATG-100
282	432	165	130.0	95.0	54	75	1	19	40	CLSG-1006	73	29	CATG-100
332	532	165	130.0	95.0	54	75	1	19	50	CLSG-1008	73	29	CATG-100
382	632	165	130.0	95.0	54	75	1	19	61	CLSG-10010	73	29	CATG-100
432	732	165	130.0	95.0	54	75	1	19	71	CLSG-10012	73	29	CATG-100
196	246	205	159.0	114.0	61	94	1	19	39	CLSG-1502	91	31	CATG-150
246	346	205	159.0	114.0	61	94	1	19	52	CLSG-1504	91	31	CATG-150
296	446	205	159.0	114.0	61	94	1	19	65	CLSG-1506	91	31	CATG-150
346	546	205	159.0	114.0	61	94	1	19	78	CLSG-1508	91	31	CATG-150
396	646	205	159.0	114.0	61	94	1	19	92	CLSG-15010	91	31	CATG-150
446	746	205	159.0	114.0	61	94	1	19	105	CLSG-15012	91	31	CATG-150
216	266	235	184.0	133.0	67	113	1	24	55	CLSG-2002	118	35	CATG-200
316	466	235	184.0	133.0	67	113	1	24	91	CLSG-2006	118	35	CATG-200
466	766	235	184.0	133.0	67	113	1	24	146	CLSG-20012	118	35	CATG-200
235	285	275	216.0	165.0	73	145	1	24	102	CLSG-2502	144	46	CATG-250
335	485	275	216.0	165.0	73	145	1	24	136	CLSG-2506	144	46	CATG-250
485	785	275	216.0	165.0	73	145	1	24	207	CLSG-25012	144	46	CATG-250
312	362	310	241.0	197.0	101	177	1	19	184	CLSG-3002	160	62	CATG-300
412	562	310	241.0	197.0	101	177	1	19	232	CLSG-3006	160	62	CATG-300
562	862	310	241.0	197.0	101	177	1	19	303	CLSG-30012	160	62	CATG-300
375	425	350	267.0	216.0	114	196	3	27	270	CLSG-4002	193	51	CATG-400
475	625	350	267.0	216.0	114	196	3	27	330	CLSG-4006	193	51	CATG-400
625	925	350	267.0	216.0	114	196	3	27	421	CLSG-40012	193	51	CATG-400
419	469	400	305.0	248.0	114	228	3	27	401	CLSG-5002	228	63	CATG-500
519	669	400	305.0	248.0	114	228	3	27	480	CLSG-5006	228	63	CATG-500
669	969	400	305.0	248.0	114	228	3	27	599	CLSG-50012	228	63	CATG-500
429	479	430	330.0	267.0	114	247	3	27	474	CLSG-6002	241	76	CATG-600
529	679	430	330.0	267.0	114	247	3	27	565	CLSG-6006	241	76	CATG-600
679	979	430	330.0	267.0	114	247	3	27	701	CLSG-60012	241	76	CATG-600
474	524	505	387.0	317.0	149	297	3	27	741	CLSG-8002	287	75	CATG-800
574	724	505	387.0	317.0	149	297	3	27	880	CLSG-8006	287	75	CATG-800
724	1024	505	387.0	317.0	149	297	3	27	1058	CLSG-80012	287	75	CATG-800
564	614	560	432.0	343.0	174	323	3	27	1062	CLSG-10002	311	93	CATG-1000
664	814	560	432.0	343.0	174	323	3	27	1213	CLSG-10006	311	93	CATG-1000
814	1114	560	432.0	343.0	174	323	3	27	1439	CLSG-100012	311	93	CATG-1000

Telescopic Cylinder

Max Working Pressure: 700 Bar
Telescopic Design, single-acting



Model	Cap (ton)	Stroke (mm)	Collaps H (mm)	Effective Area (cm ²)	Oil Cap (cm ³)	B (mm)	A (mm)	W (kg)	E1 (mm)	F (mm)	F1 (mm)	L (mm)	K (mm)	H (mm)
TC10-2	10	2	270	15.9	810	250	520	18	75	36	68	50	20	26
		1	135	44.15										
		3	435	15.9										
TC10-3	10	2	290	44.15	2250	280	715	40	110	36	95	75	21	19
		1	145	95										
		3	510	23.7										
TC15-2	15	2	300	23.7	1308	280	580	28	90	50	80	66	25	16
		1	150	63.5										
		3	510	23.7										
TC15-3	15	2	340	63.5	3543	320	820	60	125	50	110	95	25	19
		1	170	122.6										
		3	510	23.7										
TC30-2	30	2	300	44.15	2088	304	604	45	110	68	100	89	27	18
		1	150	95										
		3	600	44.15										
TC30-3	30	2	400	95	6803	366	966	106	160	68	150	123	27	20
		1	200	201										
		3	600	44.15										



Mechanical Jack

Light in weight
Lifting height with precisely +/- 0.01mm
Thin, Portable and flat design, workable for any restricted places

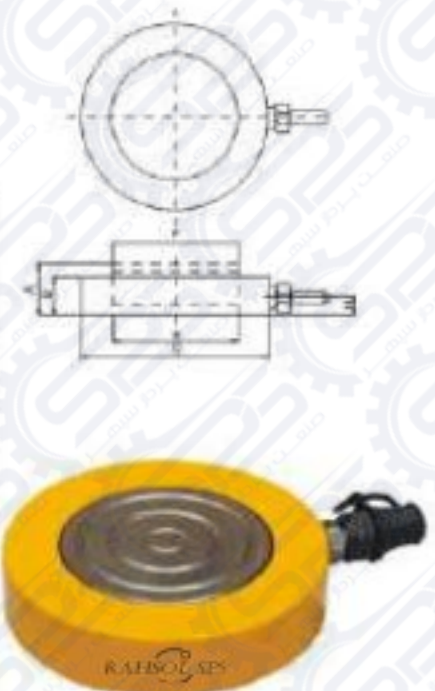


Model	Capacity (ton)	Stroke (mm)	Effective Area (mm ²)	W (kg)	Collaps H (mm)
SMC0525	5	25	8.02	2	52
SMC1025	10	25	13.85	3	54
SMC2005	20	5	28.27	2	35
SMC3005	30	5	38.49	3	36
SMC5005	50	5	66.48	4	40

Ultra Low Height Cylinder

Working pressure: 1500 Bar.
Single acting, load return. Workable for limited work space

Model No	Cap (ton)	Stroke (mm)	Volume (mm ³)	Collap H (mm)	Ext H (mm)	Outs D (mm)	W (kg)	Plunger D (mm)	Oil Input Position (mm)
LHC-00510	5	10	3.46	30	40	60	3.5	21	12
LHC-01010	10	10	7.04	30	40	70	4	30	12
LHC-02510	25	10	17.35	30	40	90	4.6	47	11.5
LHC-05510	50	10	36.32	30	40	118	4.8	68	11.5
LHC-10010	100	10	69.4	30	40	152	5.3	94	11.5
LHC-12010	120	10	78.54	33	40	160	6.1	100	11.5
LHC-15010	150	10	105.68	31	41	180	8.5	116	12.5
LHC-20010	200	10	136.58	32	42	204	9.5	132	13.5



CLRG-Series High Tonnage Cylinder

Capacity: **50-1000 ton**

Stroke: **50-300mm**

Maximum Operating Pressure: **700 bar**

Cylinder Capacity ton (kN)	Stroke (mm)	Model Number	Cylinder Effective Area (cm ²)		Oil Capacity (cm ³)		Collap Height (mm)
			Push	Pull	Push	Pull	
50 (539)	50	CLRG-502	77.0	38.5	385	192	162
	100	CLRG-504	77.0	38.5	770	385	212
	150	CLRG-506	77.0	38.5	1155	577	262
	200	CLRG-508	77.0	38.5	1540	770	312
	250	CLRG-5010	77.0	38.5	1924	962	362
100 (929)	300	CLRG-5012	77.0	38.5	2309	1155	412
	50	CLRG-1002	132.7	61.9	664	309	179
	100	CLRG-1004	132.7	61.9	1327	619	229
	150	CLRG-1006	132.7	61.9	1991	928	279
	200	CLRG-1008	132.7	61.9	2655	1237	329
150 (1390)	250	CLRG-10010	132.7	61.9	3318	1546	379
	300	CLRG-10012	132.7	61.9	3982	1856	429
	50	CLRG-1502	198.6	96.5	993	482	196
	100	CLRG-1504	198.6	96.5	1986	965	246
	150	CLRG-1506	198.6	96.5	2978	1447	296
200 (1861)	200	CLRG-1508	198.6	96.5	3971	1930	346
	250	CLRG-15010	198.6	96.5	4964	2412	396
	300	CLRG-15012	198.6	96.5	5957	2895	446
	50	CLRG-2002	265.9	127.0	1330	635	212
	150	CLRG-2006	265.9	127.0	3989	1905	312
250 (2565)	300	CLRG-20012	265.9	127.0	7977	3809	462
	50	CLRG-2502	366.4	152.6	1832	763	235
	150	CLRG-2506	366.4	152.6	5497	2289	335
	300	CLRG-25012	366.4	152.6	10993	4578	485
300 (3193)	50	CLRG-3002	456.2	151.4	2281	757	322
	150	CLRG-3006	456.2	151.4	6843	2270	422
	300	CLRG-30012	456.2	151.4	13685	4541	572
	50	CLRG-4002	559.9	193.5	2800	967	374
	150	CLRG-4006	559.9	193.5	8399	2902	474
400 (3919)	300	CLRG-40012	559.9	193.5	16797	5804	624
	50	CLRG-5002	730.6	247.6	3653	1238	419
	150	CLRG-5006	730.6	247.6	10959	3713	519
	300	CLRG-50012	730.6	247.6	21918	7427	669
600 (5987)	50	CLRG-6002	855.3	295.4	4276	1477	429
	150	CLRG-6006	855.3	295.4	12829	4431	529
	300	CLRG-60012	855.3	295.4	25659	8862	679
	50	CLRG-8002	1176.3	387.0	5881	1935	484
	150	CLRG-8006	1176.3	387.0	17644	5806	584
800 (8234)	300	CLRG-80012	1176.3	387.0	35288	11611	734
	50	CLRG-10002	1465.7	541.7	7329	2709	564
	150	CLRG-10006	1465.7	541.7	21986	8126	664
	300	CLRG-100012	1465.7	541.7	43972	16252	814



Pump Selection
A double-acting cylinder must be powered by a pump with a 4-way valve.

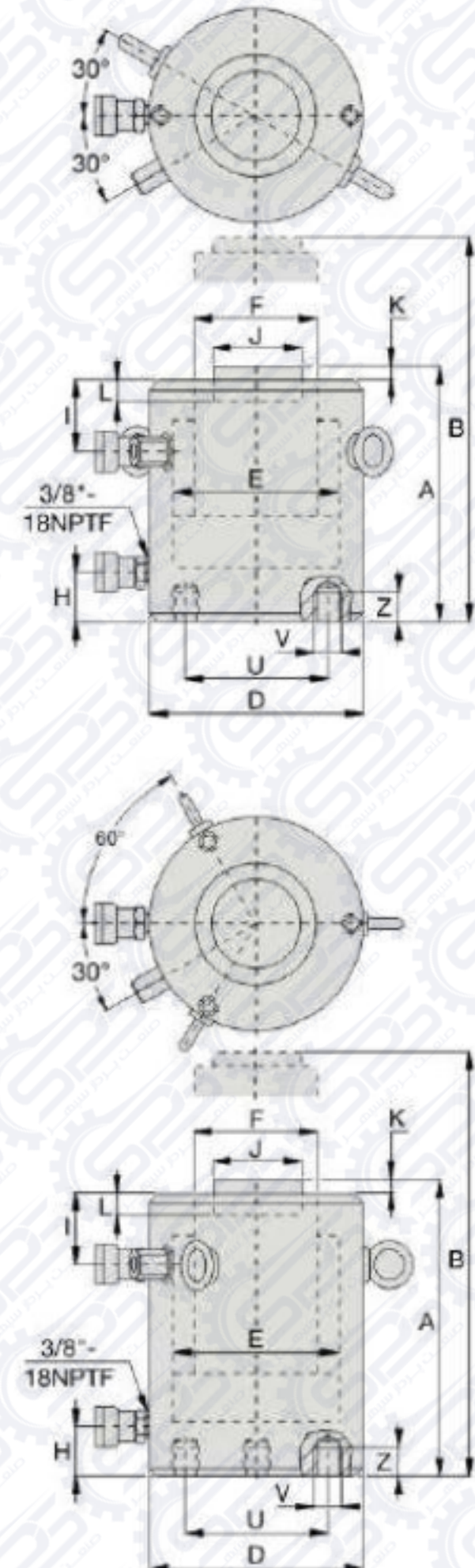
- Double-acting, for positive retraction
- Integral stop ring provides piston blow-out protection
- Safety valve in retract side of cylinder helps to prevent damage in case of accidental over-pressurization
- Plunger wiper reduces contamination, extending cylinder life
- Baked enamel finish and plated pistons provide

Saddles
All CLRG cylinders are equipped with bolt-on removable grooved saddles. For information on optional tilt saddles, see selection chart.

Base Mounting Hole Dimensions (mm)

Model / Capacity ton	Bolt Circle U	Thread Size V	Min. Thread Depth Z
CLRG-50	65	2x M12	22
CLRG-100	95	2x M12	22
CLRG-150	130	2x M12	22
CLRG-200	165	3x M12	22
CLRG-250	190	3x M12	22
CLRG-300	180	3x M16	30
CLRG-400	205	3x M16	30
CLRG-500	250	3x M24	36
CLRG-600	275	3x M24	36
CLRG-800	330	3x M24	36
CLRG-1000	375	3x M24	36

Double Acting High Tonnage Cylinder



Cylinder Capacity ton (kn)	Stroke (mm)	Model	Maximum Cylinder Capacity (kn)		Cylinder Effective Area (cm ²)		Oil Capacity (cm ³)	
			Push	Pull	Push	Pull	Push	Pull
50	50	CLRG-502	539	269	77.0	38.5	385	192
	100	CLRG-504	539	269	77.0	38.5	770	385
	150	CLRG-506	539	269	77.0	38.5	1155	577
	200	CLRG-508	539	269	77.0	38.5	1540	770
	250	CLRG-5010	539	269	77.0	38.5	1924	962
	300	CLRG-5012	539	269	77.0	38.5	2309	1155
100	50	CLRG-1002	929	433	132.7	61.9	664	309
	100	CLRG-1004	929	433	132.7	61.9	1327	619
	150	CLRG-1006	929	433	132.7	61.9	1991	928
	200	CLRG-1008	929	433	132.7	61.9	2655	1237
	250	CLRG-10010	929	433	132.7	61.9	3318	1546
	300	CLRG-10012	929	433	132.7	61.9	3982	1856
150	50	CLRG-1502	1390	675	198.6	96.5	993	482
	100	CLRG-1504	1390	675	198.6	96.5	1986	965
	150	CLRG-1506	1390	675	198.6	96.5	2978	1447
	200	CLRG-1508	1390	675	198.6	96.5	3971	1930
	250	CLRG-15010	1390	675	198.6	96.5	4964	2412
	300	CLRG-15012	1390	675	198.6	96.5	5957	2895
200	50	CLRG-2002	1861	889	265.9	127.0	1330	635
	150	CLRG-2006	1861	889	265.9	127.0	3989	1905
	300	CLRG-20012	1861	889	265.9	127.0	7977	3809
250	50	CLRG-2502	2565	1068	366.4	152.6	1832	763
	150	CLRG-2506	2565	1068	366.4	152.6	5497	2289
	300	CLRG-25012	2565	1068	366.4	152.6	10993	4578
300	50	CLRG-3002	3193	1060	456.2	151.4	2281	757
	150	CLRG-3006	3193	1060	456.2	151.4	6843	2270
	300	CLRG-30012	3193	1060	456.2	151.4	13685	4541
400	50	CLRG-4002	3919	1354	559.9	193.5	2800	967
	150	CLRG-4006	3919	1354	559.9	193.5	8399	2902
	300	CLRG-40012	3919	1354	559.9	193.5	16797	5804
500	50	CLRG-5002	5114	1733	730.6	247.6	3653	1238
	150	CLRG-5006	5114	1733	730.6	247.6	10959	3713
	300	CLRG-50012	5114	1733	730.6	247.6	21918	7427
600	50	CLRG-6002	5987	2068	855.3	295.4	4276	1477
	150	CLRG-6006	5987	2068	855.3	295.4	12829	4431
	300	CLRG-60012	5987	2068	855.3	295.4	25659	8862
800	50	CLRG-8002	8234	2709	1176.3	387.0	5881	1935
	150	CLRG-8006	8234	2709	1176.3	387.0	17644	5806
	300	CLRG-80012	8234	2709	1176.3	387.0	35288	11611
1000	50	CLRG-10002	10260	3792	1465.7	541.7	7329	2709
	150	CLRG-10006	10260	3792	1465.7	541.7	21986	8126
	300	CLRG-100012	10260	3792	1465.7	541.7	43972	16252



CLRG-Series High Tonnage Cylinder

Collaps. Height A (mm)	Extend. Height B (mm)	Outside Dia. D (mm)	Cyl. Bore Dia. E (mm)	Plunger Dia. F (mm)	Base to Advance Port H (mm)	Top to Retract Port I (mm)	Standard Saddle Dia. J (mm)	Saddle Protr. from Plgr. K (mm)	Depth of Plunger Hole L (mm)	Weight (kg)	Model	Optional Tilt Saddle *		
												Saddle Dia. J1 (mm)	Saddle Height K1 (mm)	Saddle Model Number
162	212	130	99	70	52	33	50	1	19	17	CLRG-502	50	24	CATG-50
212	312	130	99	70	52	33	50	1	19	20	CLRG-504	50	24	CATG-50
262	412	130	99	70	52	33	50	1	19	23	CLRG-506	50	24	CATG-50
312	512	130	99	70	52	33	50	1	19	27	CLRG-508	50	24	CATG-50
362	612	130	99	70	52	33	50	1	19	31	CLRG-5010	50	24	CATG-50
412	712	130	99	70	52	33	50	1	19	34	CLRG-5012	50	24	CATG-50
179	229	165	130	95	54	48	75	1	19	29	CLRG-1002	73	29	CATG-100
229	329	165	130	95	54	48	75	1	19	34	CLRG-1004	73	29	CATG-100
279	429	165	130	95	54	48	75	1	19	40	CLRG-1006	73	29	CATG-100
329	529	165	130	95	54	48	75	1	19	46	CLRG-1008	73	29	CATG-100
379	629	165	130	95	54	48	75	1	19	52	CLRG-10010	73	29	CATG-100
429	729	165	130	95	54	48	75	1	19	58	CLRG-10012	73	29	CATG-100
196	246	205	159	114	61	56	94	1	19	39	CLRG-1502	91	31	CATG-150
246	346	205	159	114	61	56	94	1	19	52	CLRG-1504	91	31	CATG-150
296	446	205	159	114	61	56	94	1	19	65	CLRG-1506	91	31	CATG-150
346	546	205	159	114	61	56	94	1	19	78	CLRG-1508	91	31	CATG-150
396	646	205	159	114	61	56	94	1	19	92	CLRG-15010	91	31	CATG-150
446	746	205	159	114	61	56	94	1	19	105	CLRG-15012	91	31	CATG-150
212	262	235	184	133	67	66	113	1	24	55	CLRG-2002	118	35	CATG-200
312	462	235	184	133	67	66	113	1	24	91	CLRG-2006	118	35	CATG-200
462	762	235	184	133	67	66	113	1	24	146	CLRG-20012	118	35	CATG-200
235	285	275	216	165	73	78	145	1	24	89	CLRG-2502	144	46	CATG-250
335	485	275	216	165	73	78	145	1	24	136	CLRG-2506	144	46	CATG-250
485	785	275	216	165	73	78	145	1	24	207	CLRG-25012	144	46	CATG-250
322	372	310	241	197	101	75	177	1	19	184	CLRG-3002	160	62	CATG-300
422	572	310	241	197	101	75	177	1	19	232	CLRG-3006	160	62	CATG-300
572	872	310	241	197	101	75	177	1	19	303	CLRG-30012	160	62	CATG-300
374	424	350	267	216	114	105	196	3	27	270	CLRG-4002	193	51	CATG-400
474	624	350	267	216	114	105	196	3	27	330	CLRG-4006	193	51	CATG-400
624	924	350	267	216	114	105	196	3	27	421	CLRG-40012	193	51	CATG-400
419	469	400	305	248	114	135	228	3	27	401	CLRG-5002	228	63	CATG-500
519	669	400	305	248	114	135	228	3	27	480	CLRG-5006	228	63	CATG-500
669	969	400	305	248	114	135	228	3	27	599	CLRG-50012	228	63	CATG-500
429	479	430	330	267	114	135	247	3	27	474	CLRG-6002	241	76	CATG-600
529	679	430	330	267	114	135	247	3	27	565	CLRG-6006	241	76	CATG-600
679	979	430	330	267	114	135	247	3	27	701	CLRG-60012	241	76	CATG-600
484	534	505	387	317	149	135	297	3	27	741	CLRG-8002	287	75	CATG-800
584	734	505	387	317	149	135	297	3	27	868	CLRG-8006	287	75	CATG-800
734	1034	505	387	317	149	135	297	3	27	1058	CLRG-80012	287	75	CATG-800
564	614	560	432	343	174	170	323	3	27	1062	CLRG-10002	311	93	CATG-1000
664	814	560	432	343	174	170	323	3	27	1213	CLRG-10006	311	93	CATG-1000
814	1114	560	432	343	174	170	323	3	27	1439	CLRG-100012	311	93	CATG-1000

RRH-Series Hollow Plunger Cylinder

Capacity: **30-145 ton**

Stroke: **38-258 mm**

Center Hole Diameter: **33.3-79.2 mm**

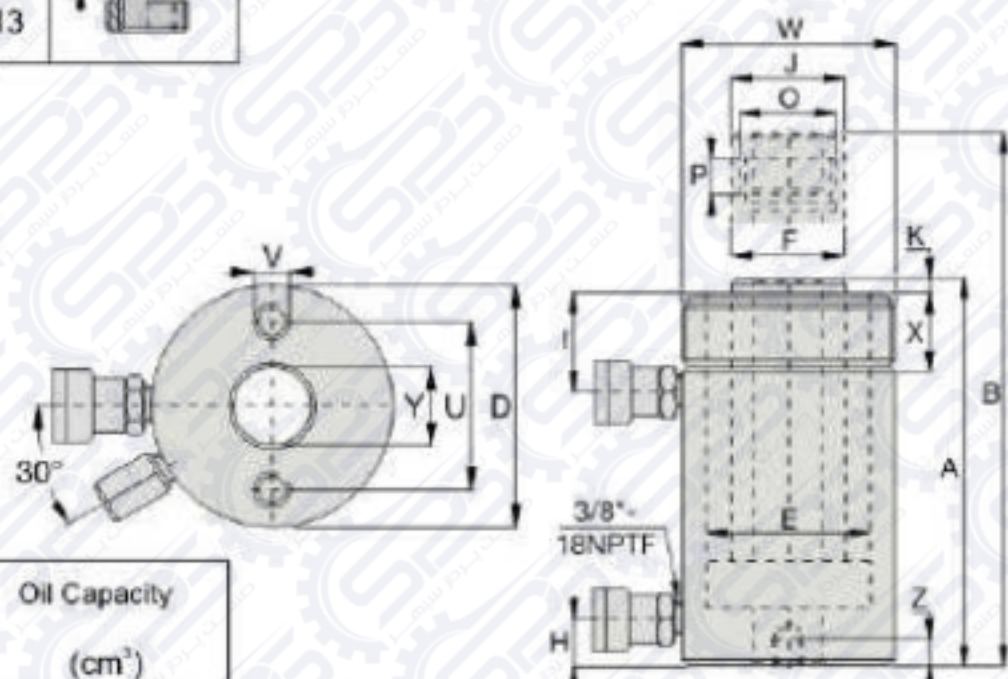
Maximum Operating Pressure: **700 bar**

Optional Heat Treated Hollow Saddles					
Saddle Type	Cylinder Model Number	Saddle Model Nr.	Saddle Dimensions		
			A	B	C
Threaded Hollow	RRH-307, 3010	HP-3015	63	1 1/4" - 7	9
	RRH-603, 606, 6010	HP-5016	91	1 5/8" - 5 1/2	12
	RRH-1001, 1003, 1006, 10010	HP-10016	126	2 1/2" - 8	13

- Relief valves prevent damage in case of over-pressurisation
- Baked enamel finish for increased corrosion resistance
- Collar threads enable easy fixturing(except RRH-1001 and RRH-1508)
- Double-acting version for fast retraction
- Nickel-plated, floating center tube increases product life
- Hollow plunger allows for both pull and push forces
- CR-400 coupler and dust cap included on all models
- Plunger wiper reduces contamination,extending cylinder life.

Cylinder ton	Stroke (mm)	Model Number	Max. Cylinder Capacity (kn)		Cylinder Effective Area (cm ²)		Oil Capacity (cm ³)	
			Advance	Retract	Advance	Retract	Advance	Retract
30	178	RRH-307	326	213	46.6	30.4	829	541
	258	RRH-3010	326	213	46.6	30.4	1202	784
60	89	RRH-603	576	380	82.3	54.2	733	482
	166	RRH-606	576	380	82.3	54.2	1366	900
	257	RRH-6010	576	380	82.3	54.2	2115	1393
95	38	RRH-1001	931	612	133.0	87.4	505	333
	76	RRH-1003	931	612	133.0	87.4	1011	666
	153	RRH-1006	931	612	133.0	87.4	2035	1337
	257	RRH-10010	931	612	133.0	87.4	3420	2246
145	203	RRH-1508	1429	718	204.1	102.6	4144	2083

Coll. Height A (mm)	Ext. Height B (mm)	Out. Dia. D (mm)	Cyl. Bore Dia. E (mm)	Plgr. Dia. F (mm)	Cyl. Base to Adv. Port H (mm)	Cyl. Top to Return Port I (mm)	Saddle Dia. J (mm)	Saddle Protr. fr. Plgr. K (mm)	Thread O	Plunger Thread Length P (mm)	Collar Thread W	Collar Thread Length X (mm)	Center Hole Dia. Y (mm)	Weight (kg)	Model
330	508	114	88.9	63.5	25	60	63	9	1 1/16"-16	22	4 1/2"-12	42	33.3	21	RRH-307
431	689	114	88.9	63.5	25	60	63	9	1 1/16"-16	22	4 1/2"-12	42	33.3	27	RRH-3010
247	336	159	123.9	91.9	31	66	91	12	2 3/4"-16	19	6 1/4"-12	48	53.8	28	RRH-603
323	489	159	123.9	91.9	31	66	91	12	2 3/4"-16	19	6 1/4"-12	48	53.8	35	RRH-606
438	695	159	123.9	91.9	31	66	91	12	2 3/4"-16	19	6 1/4"-12	48	53.8	45	RRH-6010
165	203	212	165.1	127.0	38	44	126	12	4"-16	25	-	-	79.2	33	RRH-1001
254	330	212	165.1	127.0	38	85	126	12	4"-16	25	8 3/8"-12	60	79.2	61	RRH-1003
342	495	212	165.1	127.0	38	85	126	12	4"-16	25	8 3/8"-12	60	79.2	79	RRH-1006
460	717	212	165.1	127.0	38	85	126	12	4"-16	25	8 3/8"-12	60	79.2	106	RRH-10010
349	552	247	190.5	152.4	38	60	127	4	4 1/4"-12	25	-	-	79.2	111	RRH-1508



Base Mounting Hole Dimensions(mm)			
Model Number	Bolt Circle U	Thread V	Thread Depth Z
RRH-307	92.2	3/8" - 16	15.7
RRH-3010	92.2	3/8" - 16	15.7
RRH-603	130.0	1/2" - 13	14.0
RRH-606	130.0	1/2" - 13	14.0
RRH-6010	130.0	1/2" - 13	14.0
RRH-1001	177.8	3/4" - 11	19.0
RRH-1003	177.8	3/4" - 11	19.0
RRH-1006	177.8	3/4" - 11	19.0
RRH-10010	177.8	3/4" - 11	19.0
RRH-1508	-	-	-



- Collar threads, plunger threads and base mounting holes for easy fixturing (on most models)
- Baked enamel finish for increased corrosion resistance
- Removable hardened saddles protect plunger during lifting and pressing
- Built-in safety valve prevents accidental over-pressurization
- CR-400 couplers included on all models
- Plunger wiper reduces contamination,extending cylinder life.

Optional Snap-in Saddles
Optional snap-in saddles for RR-Series double-acting cylinders:

Saddle Type	Cylinder Model Number	Saddle Model
Flat	RR-1010, 1012	A-102F
	RR-1010, 1012	CAT-10
Tilt	RR-308, 3014	CAT-50
	RR-506, 5013	CAT-100
	RR-5020, 756	RR-7513

Standard Saddles:

Grooved	RR-1010, 1012	A-102G
	RR-308, 3014	A-252G

RR-Series Double Acting Cylinder

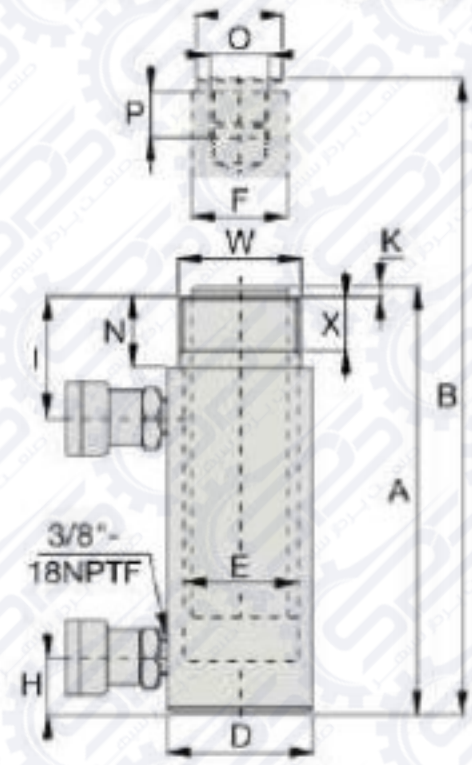
Capacity: **10-520 ton**

Stroke: **57-1219 mm**

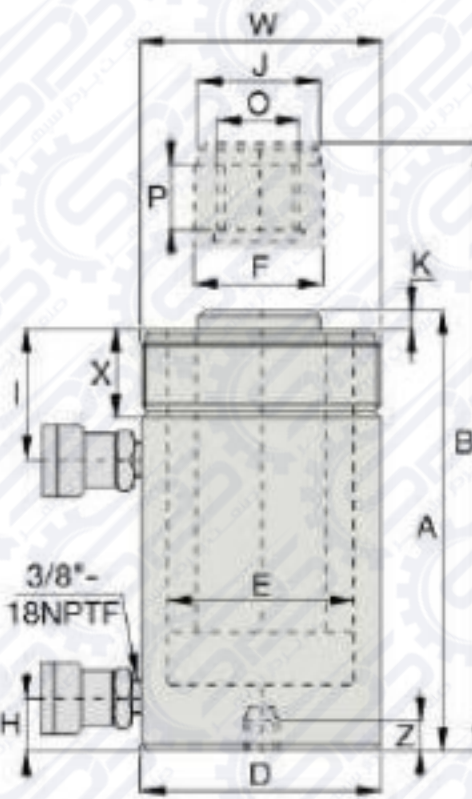
Maximum Operating Pressure: **700 bar**

Cylinder Capacity ton (kn)	Stroke (mm)	Model	Cylinder Effective Area (cm ²)		Oil Capacity (cm ³)		Coll. Height (mm)
			Push	Pull	Push	Pull	
10 (101)	254	RR-1010	14.5	4.8	368	122	409
	305	RR-1012	14.5	4.8	442	147	457
30 (295)	209	RR-308	42.1	19.1	879	400	395
	368	RR-3014	42.1	19.1	1549	703	549
50 (498)	156	RR-506	71.2	21.5	1111	335	331
	334	RR-5013	71.2	21.5	2378	718	509
	511	RR-5020	71.2	21.5	3638	1099	733
75 (718)	156	RR-756	102.6	31.4	1601	490	347
	333	RR-7513	102.6	31.4	3417	1046	525
95 (933)	168	RR-1006	133.3	62.2	2238	1045	357
	333	RR-10013	133.3	62.2	4439	2071	524
	460	RR-10018	133.3	62.2	6132	2861	687
140 (1386)	57	RR-1502	198.1	95.4	1129	544	196
	156	RR-1506	198.1	95.4	3090	1488	385
	333	RR-15013	198.1	95.4	6597	3177	582
	815	RR-15032	198.1	95.4	16145	7775	1116
200 (1995)	152	RR-2006	285.0	145.3	4332	2209	430
	330	RR-20013	285.0	145.3	9405	4795	608
	457	RR-20018	285.0	145.3	13025	6640	765
	610	RR-20024	285.0	145.3	17385	8863	917
	914	RR-20036	285.0	145.3	26049	13280	1222
	1219	RR-20048	285.0	145.3	34741	17712	1527
325 (3201)	153	RR-3006	457.3	243.2	6997	3721	485
	305	RR-30012	457.3	243.2	13947	7418	638
	457	RR-30018	457.3	243.2	20889	11114	790
	609	RR-30024	457.3	243.2	27850	14811	943
	915	RR-30036	457.3	243.2	41843	22253	1247
440 (4292)	1219	RR-30048	457.3	243.2	55745	29646	1552
	152	RR-4006	613.1	328.1	9319	4987	538
	305	RR-40012	613.1	328.1	18700	10007	690
	457	RR-40018	613.1	328.1	28018	14995	843
	610	RR-40024	613.1	328.1	37400	20014	995
520 (5108)	914	RR-40036	613.1	328.1	56037	29988	1300
	1219	RR-40048	613.1	328.1	74737	39996	1605
	153	RR-5006	729.7	405.4	11164	6203	577
	305	RR-50012	729.7	405.4	22256	12365	730
	457	RR-50018	729.7	405.4	33347	18526	882
520 (5108)	609	RR-50024	729.7	405.4	44440	24689	1035
	915	RR-50036	729.7	405.4	66768	36973	1339
	1219	RR-50048	729.7	405.4	88951	49418	1644

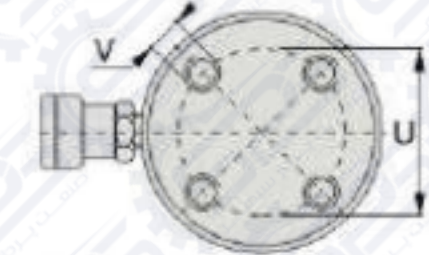
Double Acting Cylinder



RR-1010 - RR-3014

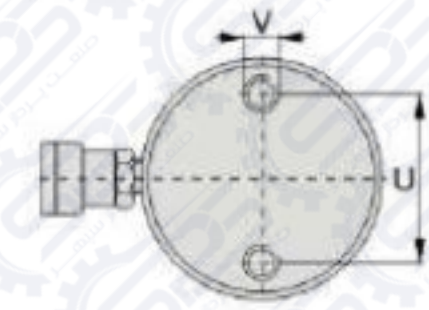


RR-506 - RR-50048



RR-1006 - RR-30048

No mounting holes on:
RR-506, 5013
RR-756, 7513
RR-1502, 15013



RR-4006 - RR-50048

Cylinder Capacity ton	Stroke (mm)	Model Number	Max. Cylinder Capacity (kN)		Cylinder Effective Area (cm ²)		Oil Capacity (cm ³)		Coll. Height A (mm)	Ext. Height B (mm)	Outside Dia. D (mm)
			Push	Pull	Push	Pull	Push	Pull			
10	254	RR-1010 *	101	33	14.5	4.8	368	122	409	663	73
	305	RR-1012 *	101	33	14.5	4.8	442	147	457	762	73
30	209	RR-308 *	295	53	42.1	19.1	879	400	395	604	101
	368	RR-3014 *	295	53	42.1	19.1	1549	703	549	917	101
50	156	RR-506	498	103	71.2	21.5	1111	335	331	487	127
	334	RR-5013	498	103	71.2	21.5	2378	718	509	843	127
	511	RR-5020	498	103	71.2	21.5	3638	1099	733	1244	127
75	156	RR-756	718	156	102.6	31.4	1601	490	347	503	146
	333	RR-7513	718	156	102.6	31.4	3417	1046	525	858	146
95	168	RR-1006	933	435	133.3	62.2	2238	1045	357	525	177
	333	RR-10013	933	435	133.3	62.2	4439	2071	524	857	177
	460	RR-10018	933	435	133.3	62.2	6132	2861	687	1147	177
140	57	RR-1502	1386	668	198.1	95.4	1129	544	196	253	203
	156	RR-1506	1386	668	198.1	95.4	3090	1488	385	541	203
	333	RR-15013	1386	668	198.1	95.4	6597	3177	582	915	203
	815	RR-15032	1386	668	198.1	95.4	16145	7775	1116	1931	203
200	152	RR-2006	1995	1017	285.0	145.3	4332	2209	430	582	247
	330	RR-20013	1995	1017	285.0	145.3	9405	4795	608	938	247
	457	RR-20018	1995	1017	285.0	145.3	13025	6640	765	1222	247
	610	RR-20024	1995	1017	285.0	145.3	17385	8863	917	1527	247
	914	RR-20036	1995	1017	285.0	145.3	26049	13280	1222	2136	247
325	1219	RR-20048	1995	1017	285.0	145.3	34741	17712	1527	2746	247
	153	RR-3006	3201	1703	457.3	243.2	6997	3721	485	638	311
	305	RR-30012	3201	1703	457.3	243.2	13947	7418	638	943	311
	457	RR-30018	3201	1703	457.3	243.2	20889	11114	790	1247	311
	609	RR-30024	3201	1703	457.3	243.2	27850	14811	943	1552	311
	915	RR-30036	3201	1703	457.3	243.2	41843	22253	1247	2162	311
440	1219	RR-30048	3201	1703	457.3	243.2	55745	29646	1552	2771	311
	152	RR-4006	4292	2297	613.1	328.1	9319	4987	538	690	358
	305	RR-40012	4292	2297	613.1	328.1	18700	10007	690	995	358
	457	RR-40018	4292	2297	613.1	328.1	28018	14995	843	1300	358
	610	RR-40024	4292	2297	613.1	328.1	37400	20014	995	1605	358
	914	RR-40036	4292	2297	613.1	328.1	56037	29988	1300	2214	358
	1219	RR-40048	4292	2297	613.1	328.1	74737	39996	1605	2824	358
520	153	RR-5006	5108	2838	729.7	405.4	11164	6203	577	730	397
	305	RR-50012	5108	2838	729.7	405.4	22256	12365	730	1035	397
	457	RR-50018	5108	2838	729.7	405.4	33347	18526	882	1339	397
	609	RR-50024	5108	2838	729.7	405.4	44440	24689	1035	1644	397
	915	RR-50036	5108	2838	729.7	405.4	66768	36973	1339	2254	397
	1219	RR-50048	5108	2838	729.7	405.4	88951	49418	1644	2863	397

* RR-1010 and RR-1012: N=32mm RR-308 and RR-3014: N=55mm

RR-Series Double Acting Cylinder



safety valve pressure setting

RR-308/3014: 275 bar
RR-506/5013/5020: 480 bar
RR-756/7513: 495 bar

Cyl. Bore Dia. E (mm)	Plgr. Dia. F (mm)	Base to Adv. Port H (mm)	Top to Ref. Port I (mm)	Saddle Dia. J (mm)	Saddle Protr. fr. Plgr. K (mm)	Plunger Internal Thread O	Plunger Thread Length P (mm)	Base Mounting Holes			Collar Thread W	Collar Thread Length X (mm)	Weight (kg)	Model Number
								Bolt C. Dia. U (mm)	Thread V	Thd. Depth Z (mm)				
42.9	34.9	36	57	35	6	1"- 8	25	-	-	-	2 1/4"- 14	26	12	RR-1010*
42.9	34.9	36	57	35	6	1"- 8	25	-	-	-	2 1/4"- 14	26	14	RR-1012*
73.2	54.1	39	81	50	10	1 1/2"- 16	25	-	-	-	3 5/8"- 12	49	18	RR-308*
73.2	54.1	39	81	50	10	1 1/2"- 16	25	-	-	-	3 5/8"- 12	49	29	RR-3014*
95.2	79.5	28	76	71	2	1"- 12	25	-	-	-	5"- 12	44	30	RR-506
95.2	79.5	28	76	71	2	1"- 12	25	-	-	-	5"- 12	44	52	RR-5013
95.2	79.5	57	76	71	2	1"- 12	25	76	1/2"- 13	25	5"- 12	44	68	RR-5020
114.3	95.2	30	76	71	6	1"- 12	38	-	-	-	5 1/4"- 12	38	41	RR-756
114.3	95.2	30	81	71	6	1"- 12	38	-	-	-	5 1/4"- 12	38	68	RR-7513
130.3	95.2	38	71	76	3	1 1/4"- 12	35	139	3/4"- 10	25	6 7/8"- 12	50	61	RR-1006
130.3	95.2	38	71	76	3	1 1/4"- 12	35	139	3/4"- 10	25	6 7/8"- 12	50	93	RR-10013
130.3	95.2	41	92	76	3	1 1/4"- 12	35	139	3/4"- 10	25	6 7/8"- 12	50	117	RR-10018
158.8	114.3	22	66	95	19	-	-	-	-	-	-	-	49	RR-1502
158.8	114.3	49	84	114	19	3 3/8"- 16	35	158	3/4"- 16	28	8"- 12	55	93	RR-1506
158.8	114.3	49	84	114	19	3 3/8"- 16	35	158	3/4"- 16	28	8"- 12	55	124	RR-15013
158.8	114.3	76	88	114	19	3 3/8"- 16	35	-	-	-	8"- 12	55	238	RR-15032
190.5	133.4	57	96	133	22	-	-	127	1"- 8	25	-	-	147	RR-2006
190.5	133.4	57	96	133	22	2 1/2"- 12	63	127	1"- 8	25	9 3/4"- 12	54	199	RR-20013
190.5	133.4	85	101	133	22	2 1/2"- 12	63	127	1"- 8	25	9 3/4"- 12	54	204	RR-20018
190.5	133.4	85	101	133	22	2 1/2"- 12	63	127	1"- 8	25	9 3/4"- 12	54	279	RR-20024
190.5	133.4	85	101	133	22	2 1/2"- 12	63	127	1"- 8	25	9 3/4"- 12	54	383	RR-20036
190.5	133.4	85	101	133	22	2 1/2"- 12	63	127	1"- 8	25	9 3/4"- 12	54	483	RR-20048
241.3	165.1	88	114	165	28	2 1/2"- 12	82	158	1 1/4"- 7	44	12 1/4"- 12	58	200	RR-3006
241.3	165.1	88	114	165	28	2 1/2"- 12	82	158	1 1/4"- 7	44	12 1/4"- 12	58	312	RR-30012
241.3	165.1	88	114	165	28	2 1/2"- 12	82	158	1 1/4"- 7	44	12 1/4"- 12	58	385	RR-30018
241.3	165.1	88	114	165	28	2 1/2"- 12	82	158	1 1/4"- 7	44	12 1/4"- 12	58	469	RR-30024
241.3	165.1	88	114	165	28	2 1/2"- 12	82	158	1 1/4"- 7	44	12 1/4"- 12	58	628	RR-30036
241.3	165.1	88	114	165	28	2 1/2"- 12	82	158	1 1/4"- 7	44	12 1/4"- 12	58	780	RR-30048
279.4	190.5	108	133	190	28	3"- 12	95	203	1 1/2"- 6	50	14 1/8"- 8	65	303	RR-4006
279.4	190.5	108	133	190	28	3"- 12	95	203	1 1/2"- 6	50	14 1/8"- 8	65	399	RR-40012
279.4	190.5	108	133	190	28	3"- 12	95	203	1 1/2"- 6	50	14 1/8"- 8	65	453	RR-40018
279.4	190.5	108	133	190	28	3"- 12	95	203	1 1/2"- 6	50	14 1/8"- 8	65	597	RR-40024
279.4	190.5	108	133	190	28	3"- 12	95	203	1 1/2"- 6	50	14 1/8"- 8	65	792	RR-40036
279.4	190.5	108	133	190	28	3"- 12	95	203	1 1/2"- 6	50	14 1/8"- 8	65	980	RR-40048
304.8	203.2	120	152	203	28	3 1/4"- 12	108	203	1 3/4"- 5	57	15 5/8"- 8	79	432	RR-5006
304.8	203.2	120	152	203	28	3 1/4"- 12	108	203	1 3/4"- 5	57	15 5/8"- 8	79	589	RR-50012
304.8	203.2	120	152	203	28	3 1/4"- 12	108	203	1 3/4"- 5	57	15 5/8"- 8	79	680	RR-50018
304.8	203.2	120	152	203	28	3 1/4"- 12	108	203	1 3/4"- 5	57	15 5/8"- 8	79	816	RR-50024
304.8	203.2	120	152	203	28	3 1/4"- 12	108	203	1 3/4"- 5	57	15 5/8"- 8	79	1002	RR-50036
304.8	203.2	120	152	203	28	3 1/4"- 12	108	203	1 3/4"- 5	57	15 5/8"- 8	79	1224	RR-50048

BRC, BRP-Series Pulling Cylinder



Capacity: **2.5-50 ton**

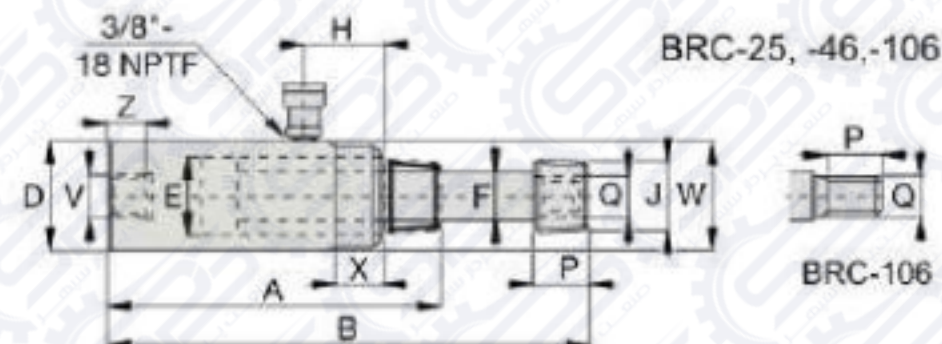
Stroke: **127-155 mm**

Maximum Operating Pressure: **700 bar**

- High strength alloy steel construction
- Plunger blow-out protection to prevent rod over-extension
- Hard chrome-plated plunger for long life
- Replaceable links on BRP-models
- Baked enamel finish for increased corrosion resistance
- CR-400 coupler and dust cap included on all models
- Plunger wiper reduces contamination, extending cylinder life
- Single-acting, spring return.

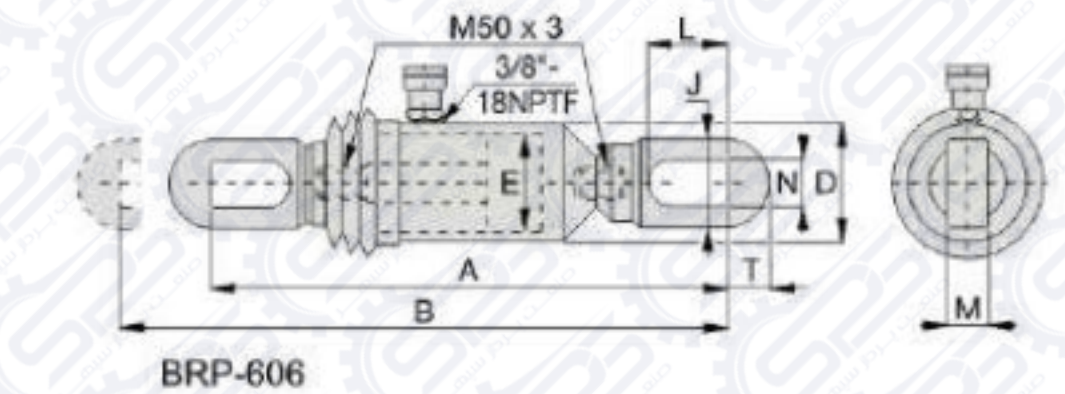
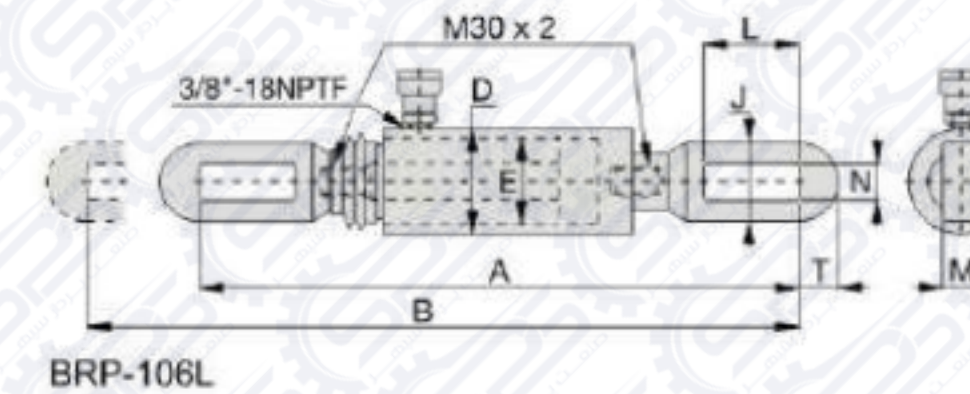
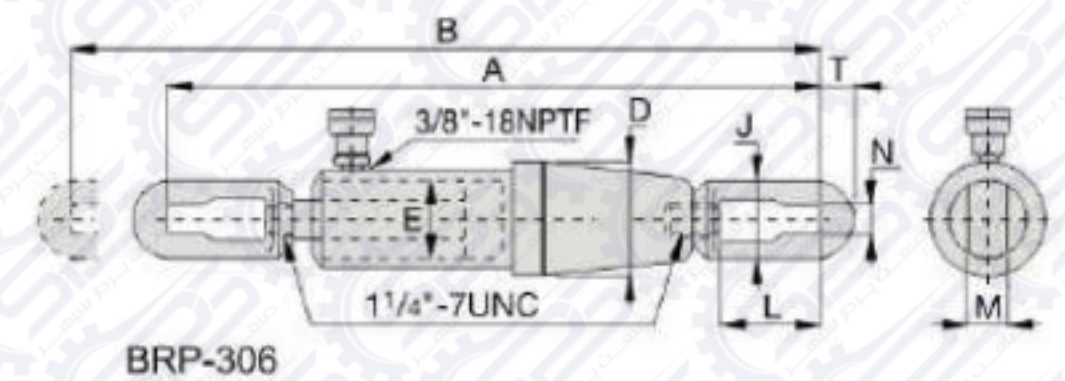
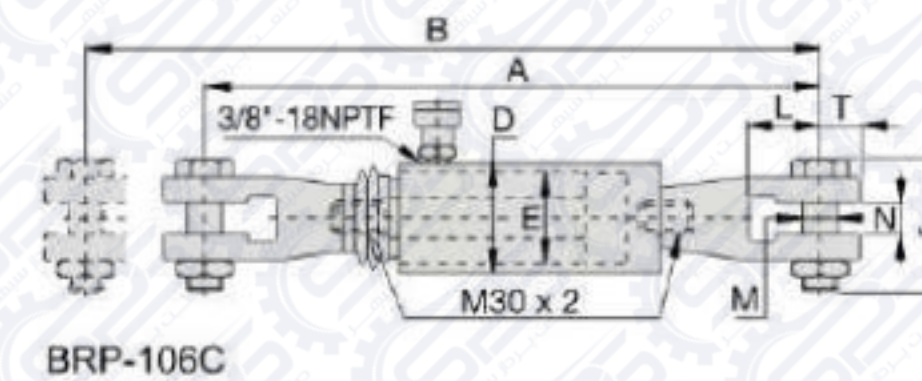
BRC Cylinder Mounting Dimensions (mm)

Model Number	Base Mounting Hole	Collar Thread	Collar Thd. Lgth.	Mtg. Thd. Lgth.
	V	W	X	Z
BRC-25	3/4"-14 NPT	1 1/2"-16 UN	24	17
BRC-46	1 1/4"-11 1/2 NPT	2 1/4"-14 UN	26	24
BRC-106	M30 x 2	M85 x 2	25	24



Single Acting Pulling Cylinder

Cylinder Capacity	Stroke	Model Number	Cyl. Effect. Area	Oil Cap.	Coll. Height	Ext. Height	Outs. Dia.	Cyl. Bore Dia.	Plgr. Dia.	Top to Inlet Port	Saddle Diameter	Plgr. Thd. Lgth.	Plunger Outside Thread	
ton (kn)	(mm)		(cm ²)	(cm ³)	A (mm)	B (mm)	D (mm)	E (mm)	F (mm)	H (mm)	J (NPT)	P (mm)	Q	(kg)
2.5 (24)	127	BRC-25	3.5	45	264	391	48	28.4	19.0	45	3/4"-14	28	1 1/16"-24	1.8
5 (51)	140	BRC-46	7.3	101	301	441	57	42.9	30.2	42	1 1/4"-11 1/2	32	1 3/16"-16	4.5
10 (105)	151	BRC-106	15.0	228	289	440	85	54.1	31.8	39	-	25	M30x2	9.5



Cylinder Capacity	Stroke	Model	Cyl. Effect. Area	Oil Cap.	Coll. Height	Ext. Height	Outside Dia.	Cyl. Bore Dia.	Link Height	Link Opening	Link Thickness	Link Width	Slot to Link End	
ton (kn)	(mm)		(cm ²)	(cm ³)	A (mm)	B (mm)	D (mm)	E (mm)	J (mm)	L (mm)	M (mm)	N (mm)	T (mm)	(kg)
10 (105)	151	BRP-106C*	15.0	227	587	738	85	54.1	119	62	30	35	32	15.9
	151	BRP-106L*	15.0	227	541	692	85	54.1	67	115	22	30	32	13.2
30 (326)	155	BRP-306*	46.6	722	1085	1240	136	88.9	114	145	35	39	50	48.1
50 (505)	152	BRP-606*	72.1	1096	719	871	140	110.0	130	149	39	50	70	53.5

* Available as set, see note on previous page. NOTE: BRP-106C, BRP-106L and BRP-606 are fitted with rubber bellows for rod protection.

RSM-Series Low Height Cylinder



Capacity: **5-150 ton**

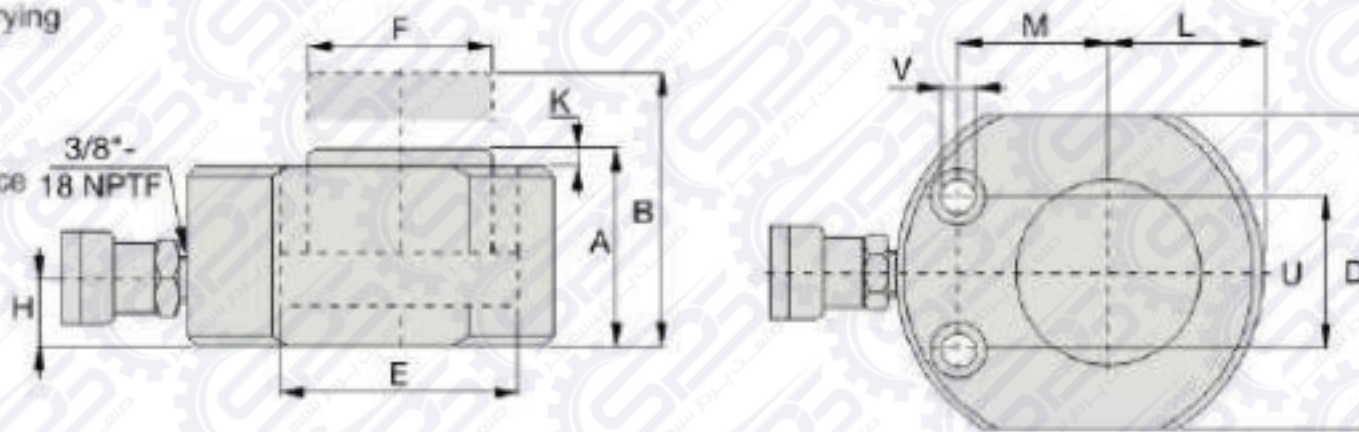
Stroke: **6-16mm**

Maximum Operating Pressure: **700 bar**

RSM Cylinder Mounting Hole Dimensions(mm)

Model	Bolt Circle U	Hole Dia. V	Counter Bore Dia.	Counter Bore Depth
RSM-50	28.5	5.5	9.1	4.3
RSM-100	36.6	7.1	10.7	7.9
RSM-200	49.3	10.0	15.1	9.9
RSM-300	52.3	10.0	15.9	11.2
RSM-500	66.5	11.0	19.0	12.7
RSM-750	76.2	13.5	20.6	14.2
RSM-1000	76.2	13.5	20.6	14.2
RSM-1500	117.3	13.5	20.6	14.2

- Compact, flat design for use where most other cylinders will not fit
- Single-acting, spring return
- RSM-750, 1000 and 1500 have handles for easy carrying
- Mounting holes permit easy fixturing
- Baked enamel finish for increased corrosion resistance
- Hard chrome plated high quality steel plungers
- Grooved plunger ends require no saddle.



Cyl. Capacity ton (kn)	Stroke (mm)	Model	Cyl. Effect. Area (cm ²)	Oil Cap. (cm ³)	Collapsed Height A (mm)	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Dia. E (mm)	Plunger Dia. F (mm)	Base to Advance Port H (mm)	Plunger Protrusion from Base K (mm)	Plunger to Base L (mm)	Plunger to Mtg. Hole M (mm)	Thread O (mm)	Thread Depth P (mm)	Bolt Circle U (mm)	Weight (kg)
5 (45)	6	RSM-50	6.5	4	32	38	58 x 41	28.7	25.4	16	1	20	22	-	-	-	1.0
10 (101)	12	RSM-100	14.5	18	42	54	82 x 55	42.9	38.1	19	1	27	34	-	-	-	1.4
20 (201)	11	RSM-200	28.7	32	51	62	101 x 76	60.5	50.8	19	1	39	39	-	-	-	3.1
30 (295)	13	RSM-300	42.1	55	58	71	117 x 95	73.2	63.4	19	2	47	44	-	-	-	4.5
45 (435)	16	RSM-500	82.1	99	66	82	140 x 114	88.9	69.8	19	2	57	53	-	-	-	6.8
75 (718)	16	RSM-750	102.6	164	79	95	165 x 139	114.3	82.6	19	2	69	66	-	-	-	11.3
90 (887)	16	RSM-1000	126.7	203	85	101	178 x 153	127.0	92.2	19	2	76	74	-	-	-	14.5
150 (1386)	16	RSM-1500	198.1	317	100	116	215 x 190	158.8	114.3	23	2	95	82	-	-	-	26.3

RSMB-Series Low Height Cylinder



Capacity: **10-50 ton**

Stroke: **25-64mm**

Maximum Operating Pressure: **700 bar**

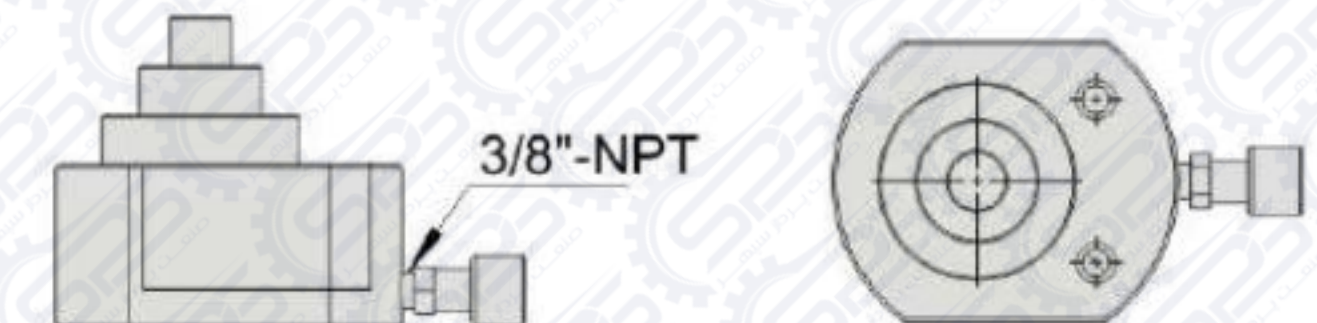
The RSMB series multi-section jacks are suitable for using in a limited space, in the effective body height, increase the stroke of the jack, so that the weight rises higher and the usage is more convenient. The products are widely used in the installation and maintenance of large and medium-sized machinery and equipment in petroleum, chemical, electric power, pharmaceutical, metallurgy, steel, automobile, ship and bridge industries. It is an ideal tool for installation and maintenance workers.

In addition to the quality characteristics and jacking ability of the standard jack, the multi-section jack also has an extra long journey. Can avoid the jacking up, padding. This process is repeated to save time and improve work efficiency. In most applications. The user only needs to place a multi-stage jack at a time to complete the jacking work.

- Compact, flat design to use the place of most other cylinders will not fit
- Mounting holes permit easy fixturing
- Baked enamel finish for increased corrosion resistance
- Hard chrome plated high quality steel plungers
- Grooved plunger ends require no saddle.
- Single-acting, gravity retraction

RSMB Series It's designed recently to be multi-section hydraulic jack, which is very suitable for narrow space as well as the place needs longer trip. It is already applied to power, communication, machinery, bridges, steel industries, etc.

Cylinder-Pump Sets All cylinders marked with an * are available as sets (cylinder, gauge, couplers, hose and pump) for your ordering convenience.

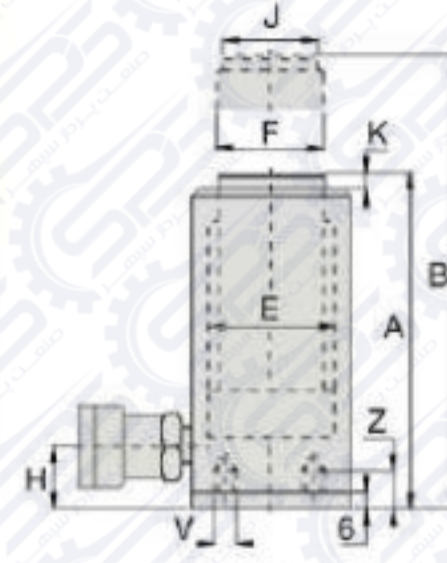


Model	Output (T)	Stroke (mm)	Collapsed Height (mm)	Oil Cap. (cc)	Extended Height (mm)	Outside Diameter X Flat side (mm)	Weight (kg)
RSMB-100	10	25	42	22	67	∅82×55	1.5
RSMB-200	20	26	51	41	77	∅101×76	2.4
RSMB-300	30	53	58	58	111	∅117×95	4.5
RSMB-500	50	64	66	113	130	∅140×114	7.0

RAC-Series Single Acting Aluminium Cylinder



- Composite bearings prevent metal-to-metal contact, increasing cylinder life and resistance to side-loads of up to 10%
- Hard-Coat finish on all surfaces resists damage and extends cylinder life
- Handles included on all models
- Steel base plate and saddle for protection against load-induced damage
- Integral stop ring prevents plunger over-travel and is capable of withstanding the full cylinder capacity

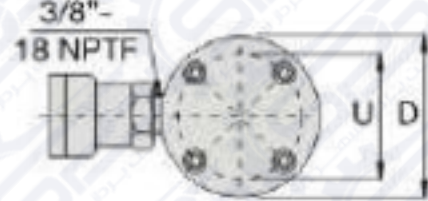


Steel Base Plate Mounting Holes			
Cylinder Model / Capacity ton	Bolt Circle U (mm)	Thread V (mm)	Thread Depth Z (mm)
RAC-20	70	M6	12
RAC-30	80	M6	12
RAC-50	110	M6	12
RAC-100	150	M6	12
RAC-150	200	M6	12

Including Base Plate Height of 6 mm

Optional Bolt-on Tilt Saddle Dimensions (mm)

For Cylinder Model / Capacity ton	Tilt Saddle Model Number	Tilt Saddle Diameter J1	Saddle Protrusion from Plunger K1
RAC-50	CATG-50	50	24
RAC-100	CATG-150	91	31
RAC-150	CATG-200	118	35



Cylinder Capacity ton (kn)	Stroke (mm)	Model	Cylinder Effective Area (cm ²)	Oil Capacity (cm ³)	Height A (mm)	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Diameter E (mm)	Plunger Diameter F (mm)	Bottom to Advance Port H (mm)	Saddle Diameter J (mm)	Saddle Protrusion from Plunger K (mm)	Weight (kg)
20 (218)	50	RAC-202	31.2	156	174	224	85	63	50	27	40	3	3.6
	100	RAC-204	31.2	312	224	324	85	63	50	27	40	3	4.1
	150	RAC-206	31.2	468	274	424	85	63	50	27	40	3	4.6
	200	RAC-208	31.2	624	324	524	85	63	50	27	40	3	5.1
	250	RAC-2010	31.2	780	374	624	85	63	50	27	40	3	5.6
30 (309)	50	RAC-302	44.2	221	181	231	100	75	60	32	40	3	4.5
	100	RAC-304	44.2	442	231	331	100	75	60	32	40	3	5.2
	150	RAC-306	44.2	663	281	431	100	75	60	32	40	3	5.9
	200	RAC-308	44.2	884	331	531	100	75	60	32	40	3	6.6
	250	RAC-3010	44.2	1105	381	631	100	75	60	32	40	3	7.3
50 (496)	50	RAC-502	70.9	354	186	236	130	95	80	30	50	3	8.5
	100	RAC-504	70.9	709	236	336	130	95	80	30	50	3	9.8
	150	RAC-506	70.9	1063	286	436	130	95	80	30	50	3	11.1
	200	RAC-508	70.9	1417	336	536	130	95	80	30	50	3	12.4
	250	RAC-5010	70.9	1771	386	636	130	95	80	30	50	3	13.7
100 (1002)	50	RAC-1002	143.1	715	221	271	180	135	110	46	94	3	17.3
	100	RAC-1004	143.1	1431	271	371	180	135	110	46	94	3	19.6
	150	RAC-1006	143.1	2147	321	471	180	135	110	46	94	3	21.9
	200	RAC-1008	143.1	2863	371	571	180	135	110	46	94	3	24.2
	250	RAC-10010	143.1	3578	421	671	180	135	110	46	94	3	26.5
150 (1589)	50	RAC-1502	227.0	1135	243	293	230	170	140	51	113	3	25.3
	100	RAC-1504	227.0	2270	293	393	230	170	140	51	113	3	29.3
	150	RAC-1506	227.0	3405	343	493	230	170	140	51	113	3	33.3
	200	RAC-1508	227.0	4540	393	593	230	170	140	51	113	3	37.3
	250	RAC-15010	227.0	5675	443	693	230	170	140	51	113	3	41.3

RAR-Series Double Acting Aluminium Cylinder



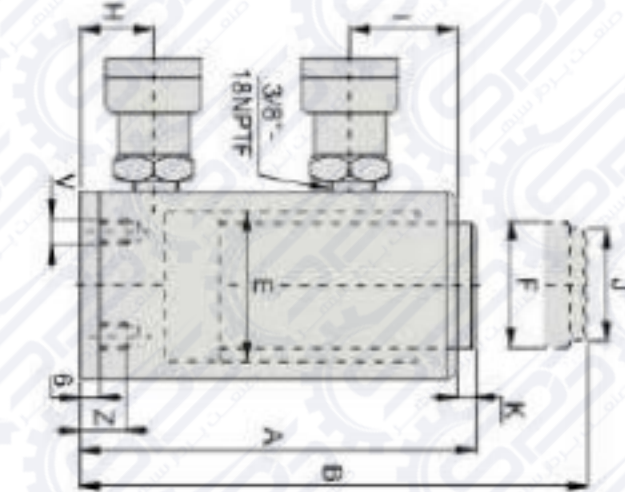
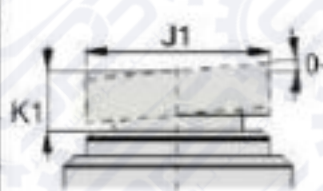
- Double-acting for rapid retraction, regardless of hose lengths or system losses
- Composite bearings increase cylinder life and sideload resistance
- Hard-Coat finish on all surfaces resists damage and extends cylinder life
- Handles included on all models
- Steel base plate and saddle for protection against load-induced damage
- Integral stop ring prevents plunger over-travel and is capable of withstanding the full cylinder capacity
- Built-in safety valve prevents accidental over-pressurization.

Steel Base Plate Mounting Holes			
Cylinder Model / Capacity ton	Bolt Circle U (mm)	Thread V (mm)	Thread Depth Z (mm)
RAR-20	93	M6	12
RAR-30	105	M6	12
RAR-50	110	M6	12
RAR-100	165	M6	12
RAR-150	200	M6	12

Including Base Plate Height of 6 mm

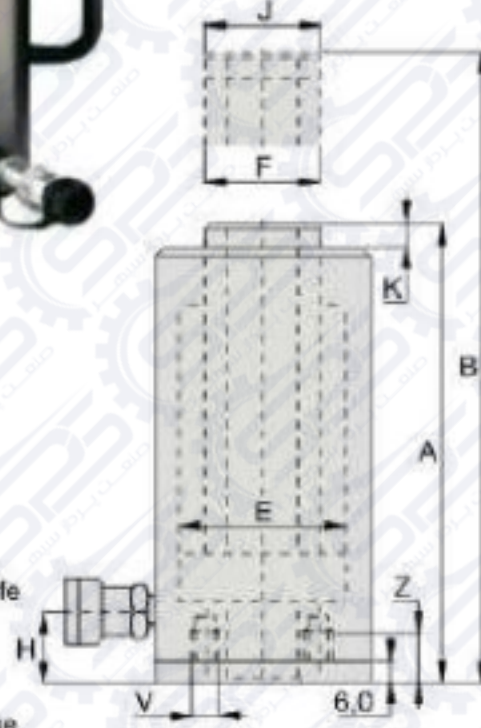
Optional Bolt-on Tilt Saddle Dimensions (mm)

For Cylinder Model / Capacity ton	Tilt Saddle Model Number	Tilt Saddle Diameter J1	Saddle Protrusion from Plunger K1
RAR-50	CATG-50	50	24
RAR-100	CATG-150	73	29
RAR-150	CATG-200	91	31



Cyl Cap ton	Stroke (mm)	Model	Max Cylinder Cap (kn)		Cylinder Effective Area (cm ²)		Oil Capacity (cm ³)		H A (mm)	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Diameter E (mm)	Plunger Diameter F (mm)	Bottom to Advance Port H (mm)	Top to Retract Port I (mm)	Saddle Diameter J (mm)	Saddle Protrusion from Plunger K (mm)	Weight (kg)
20	50	RAR-202	218	130	31.2	18.6	156	93	189	239	113	63	40	30	50	30	3	7.4
	100	RAR-204	218	130	31.2	18.6	312	186	239	339	113	63	40	30	50	30	3	8.0
	150	RAR-206	218	130	31.2	18.6	468	279	289	439	113	63	40	30	50	30	3	8.6
	200	RAR-208	218	130	31.2	18.6	624	372	339	539	113	63	40	30	50	30	3	9.2
	250	RAR-2010	218	130	31.2	18.6	780	465	389	639	113	63	40	30	50	30	3	9.8
30	50	RAR-302	309	179	44.2	24.5	221	123	201	251	125	75	50	30	55	40	3	8.6
	100	RAR-304	309	179	44.2	24.5	442	245	251	351	125	75	50	30	55	40	3	9.5
	150	RAR-306	309	179	44.2	24.5	663	368	301	451	125	75	50	30	55	40	3	10.4
	200	RAR-308	309	179	44.2	24.5	884	490	351	551	125	75	50	30	55	40	3	11.3
	250	RAR-3010	309	179	44.2	24.5	1105	613	401	651	125	75	50	30	55	40	3	12.2
50	50	RAR-502	496	187	70.9	26.7	354	134	201	251	145	95	75	30	56	50	3	11.1
	100	RAR-504	496	187	70.9	26.7	709	267	251	351	145	95	75	30	56	50	3	12.7
	150	RAR-506	496	187	70.9	26.7	1063	401	301	451	145	95	75	30	56	50	3	14.3
	200	RAR-508	496	187	70.9	26.7	1417	534	351	551	145	95	75	30	56	50	3	15.9
	250	RAR-5010	496	187	70.9	26.7	1771	668	401	651	145	95	75	30	56	50	3	17.5
100	50	RAR-1002	1002	557	143.1	79.5	715	398	251	301	185	135	90	43	80	75	3	16.4
	100	RAR-1004	1002	557	143.1	79.5	1431	795	301	401	185	135	90	43	80	75	3	19.3
	150	RAR-1006	1002	557	143.1	79.5	2147	1193	351	501	185	135	90	43	80	75	3	22.2
	200	RAR-1008	1002	557	143.1	79.5	2863	1590	401	601	185	135	90	43	80	75	3	25.1
	250	RAR-10010	1002	557	143.1	79.5	3578	1988	451	701	185	135	90	43	80	75	3	28.0
150	50	RAR-1502	1589	924	227.0	132.0	1135	660	248	298	230	170	110	38	75	113	3	24.2
	100	RAR-1504	1589	924	227.0	132.0	2270	1320	298	398	230	170	110	38	75	113	3	28.9
	150	RAR-1506	1589	924	227.0	132.0	3405	1980	348	498	230	170	110	38	75	113	3	33.2
	200	RAR-1508	1589	924	227.0	132.0	4540	2640	398	598	230	170	110	38	75	113	3	37.9
	250	RAR-15010	1589	924	227.0	132.0	5675	3300	448	698	230	170	110	38	75	113	3	42.6

RACH-Series Single Acting Aluminium Hollow Cylinder



Capacity: **20-150 ton**

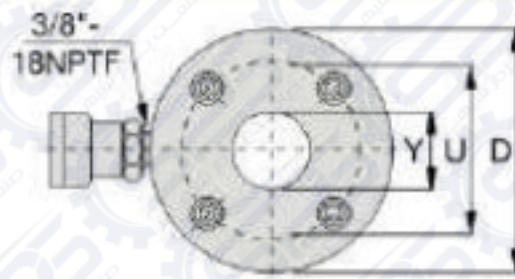
Stroke: **50-250 mm**

Center Hole Diameter: **27-79 mm**

Maximum Operating Pressure: **700 bar**

Steel Base Plate Mounting Holes			
Cylinder Model / Capacity ton	Bolt Circle U (mm)	Thread V (mm)	Thread Depth Z (mm)
RACH-20	80	M6	12
RACH-30	110	M6	12
RACH-60	160	M6	12
RACH-100	230	M6	12
RACH-150	245	M6	12

Including Base Plate Height of 6 mm



- All RACH-cylinders are equipped with bolt-on hollow removable saddles of hardened steel
- Hollow plunger design allows for both pull and push forces
- Composite bearings increase cylinder life and sideload resistance
- Hard-Coat finish on all surfaces resists damage and extends cylinder life
- Floating center tube increases seal and product life
- Handles standard on all models
- Steel base plate and saddle for protection against load-induced damage

Cyl Cap ton (kn)	Stroke (mm)	Model	Cylinder Effective Area (cm²)	Oil Capacity (cm³)	Height A (mm)	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Diameter E (mm)	Plunger Diameter F (mm)	Bottom to Advance Port H (mm)	Saddle Diameter J (mm)	Saddle Protrusion from Plunger K (mm)	Center Hole Dia Y (mm)	Weight (kg)
20 (229)	50	RACH-202	32.7	164	188	238	100	75	55	29	55	10	27	5.2
	100	RACH-204	32.7	327	251	351	100	75	55	29	55	10	27	6.1
	150	RACH-206	32.7	491	315	465	100	75	55	29	55	10	27	7.1
	200	RACH-208	32.7	654	378	578	100	75	55	29	55	10	27	8.0
	250	RACH-2010	32.7	818	442	692	100	75	55	29	55	10	27	9.0
30 (358)	50	RACH-302	51.1	256	208	258	130	95	70	29	70	10	34	8.0
	100	RACH-304	51.1	511	267	367	130	95	70	29	70	10	34	9.5
	150	RACH-306	51.1	766	333	483	130	95	70	29	70	10	34	11.2
	200	RACH-308	51.1	1022	395	595	130	95	70	29	70	10	34	12.9
	250	RACH-3010	51.1	1277	458	708	130	95	70	29	70	10	34	14.5
60 (596)	50	RACH-602	84.7	423	251	301	180	130	100	61	100	12	54	16.2
	100	RACH-604	84.7	847	315	415	180	130	100	61	100	12	54	19.5
	150	RACH-606	84.7	1270	380	530	180	130	100	61	100	12	54	25.6
	200	RACH-608	84.7	1694	445	645	180	130	100	61	100	12	54	26.0
	250	RACH-6010	84.7	2117	510	760	180	130	100	61	100	12	54	29.6
100 (1157)	50	RACH-1002	164.6	823	258	308	250	185	145	61	145	14	79	33.8
	100	RACH-1004	164.6	1646	325	425	250	185	145	61	145	14	79	39.8
	150	RACH-1006	164.6	2487	391	541	250	185	145	61	145	14	79	46.2
	200	RACH-1008	164.6	3291	459	659	250	185	145	61	145	14	79	52.2
	250	RACH-10010	164.6	4114	527	777	250	185	145	61	145	14	79	58.8
150 (1588)	50	RACH-1502	225.8	1129	280	330	275	205	150	61	145	14	79	48.9
	100	RACH-1504	225.8	2258	360	460	275	205	150	61	145	14	79	55.7
	150	RACH-1506	225.8	3387	430	580	275	205	150	61	145	14	79	63.0
	200	RACH-1508	225.8	4517	500	700	275	205	150	61	145	14	79	70.1
	250	RACH-15010	225.8	5646	570	820	275	205	150	61	145	14	79	77.2

RACL-Series Aluminium Lock Nut Cylinder

Capacity: **20-150 ton**

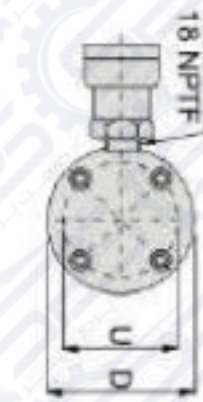
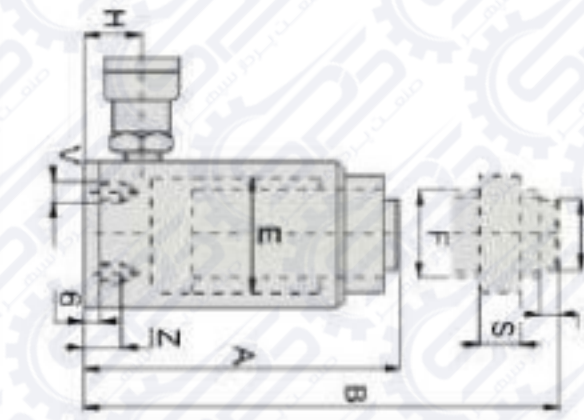
Stroke: **50-250 mm**

Maximum Operating Pressure: **700 bar**

Steel Base Plate Mounting Holes			
Cylinder Model / Capacity ton	Bolt Circle U (mm)	Thread V (mm)	Thread Depth Z (mm)
RACL-20	70	M6	12
RACL-30	80	M6	12
RACL-50	110	M6	12
RACL-100	150	M10	12
RACL-150	200	M10	12

Including Base Plate Height of 6 mm

Optional Bolt-on Tilt Saddle Dimensions (mm)			
Cylinder Model ton	Tilt Saddle Model Number	Tilt Saddle Diameter J1	Saddle Protrusion from Plunger K1
RACL-50	CATG-50	50	24
RACL-100	CATG-150	91	31
RACL-150	CATG-200	118	35

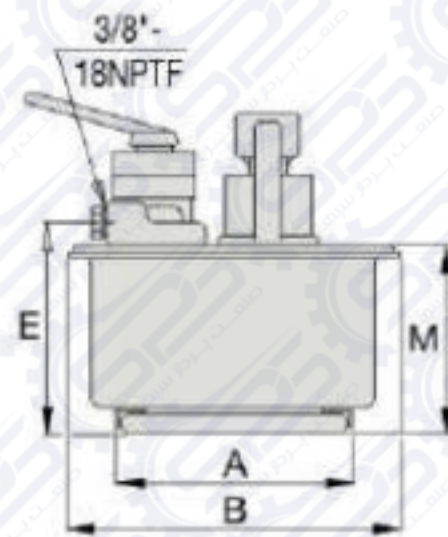


- Aluminium Lock Nut provides mechanical load holding for extended periods
- Composite bearings increase cylinder life and side load resistance
- Steel base plate and saddle for protection against load-induced damage
- Integral stop ring prevents plunger over-travel and is capable of withstanding the full cylinder capacity
- Hardened steel stop ring increasing cylinder life and resistance to side-loads of up to 5%

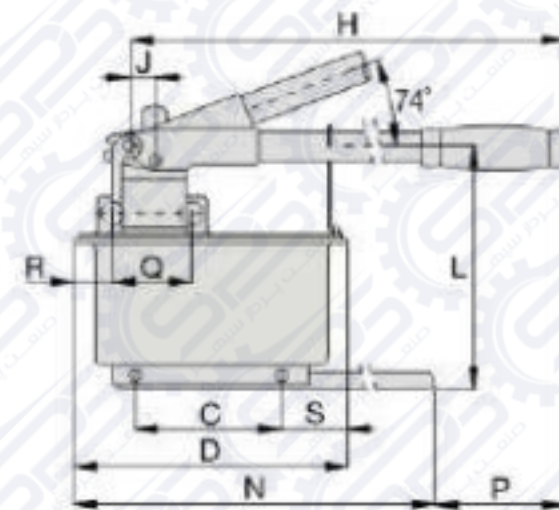
Cyl Cap ton (kn)	Stroke (mm)	Model	Cylinder Effective Area (cm²)	Oil Capacity (cm³)	Height A (mm)	Extended Height B (mm)	Outside Diameter D (mm)	Cylinder Bore Diameter E (mm)	Plunger Diameter F (mm)	Bottom to Advance Port H (mm)	Saddle Diameter J (mm)	Saddle Protrusion from Plunger K (mm)	Lock Nut H S (mm)	Weight (kg)
20 (218)	50	RACL-202	31.2	156	224	274	85	63	Tr 55 x 4	27	40	3	50	4.0
	100	RACL-204	31.2	312	274	374	85	63	Tr 55 x 4	27	40	3	50	4.6
	150	RACL-206	31.2	468	324	474	85	63	Tr 55 x 4	27	40	3	50	5.2
	200	RACL-208	31.2	624	374	574	85	63	Tr 55 x 4	27	40	3	50	5.8
	250	RACL-2010	31.2	780	424	674	85	63	Tr 55 x 4	27	40	3	50	6.4
30 (309)	50	RACL-302	44.2	221	231	281	100	75	Tr 60 x 4	33	40	3	50	5.4
	100	RACL-304	44.2	442	281	381	100	75	Tr 60 x 4	33	40	3	50	6.1
	150	RACL-306	44.2	663	331	481	100	75	Tr 60 x 4	33	40	3	50	6.8
	200	RACL-308	44.2	883	381	581	100	75	Tr 60 x 4	33	40	3	50	7.5
	250	RACL-3010	44.2	1105	431	681	100	75	Tr 60 x 4	33	40	3	50	8.2
50 (496)	50	RACL-502	70.9	354	236	286	130	95	Tr 80 x 4	30	50	3	50	9.3
	100	RACL-504	70.9	709	286	386	130	95	Tr 80 x 4	30	50	3	50	10.6
	150	RACL-506	70.9	1063	336	486	130	95	Tr 80 x 4	30	50	3	50	11.9
	200	RACL-508	70.9	1417	386	586	130	95	Tr 80 x 4	30	50	3	50	13.2
	250	RACL-5010	70.9	1771	436	686	130	95	Tr 80 x 4	30	50	3	50	14.5
100 (1002)	50	RACL-1002	143.1	716	296	346	180	135	Tr 110 x 6	46	94	3	75	21.9
	100	RACL-1004	143.1	1431	346	446	180	135	Tr 110 x 6	46	94	3	75	24.2
	150	RACL-1006	143.1	2147	396	546	180	135	Tr 110 x 6	46	94	3	75	26.5
	200	RACL-1008	143.1	2863	446	646	180	135	Tr 110 x 6	46	94	3	75	28.8
	250	RACL-10010	143.1	3578	496	746	180	135	Tr 110 x 6	46	94	3	75	31.1
150 (1589)	50	RACL-1502	227.0	1135	323	373	230	170	Tr 140 x 6	51	113	3	80	32.2
	100	RACL-1504	227.0	2270	373	473	230	170	Tr 140 x 6	51	113	3	80	36.2
	150	RACL-1506	227.0	3405	423	573	230	170	Tr 140 x 6	51	113	3	80	40.2
	200	RACL-1508	227.0	4540	473	673	230	170	Tr 140 x 6	51	113	3	80	44.2
	250	RACL-15010	227.0	5675	523	773	230	170	Tr 140 x 6	51	113	3	80	48.2

Hydraulic Hand Pump

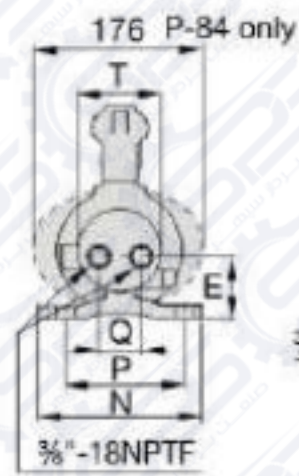
Reduced handle effort and ergonomic grip for less operator fatigue
Quick grip handle allows for easy transport
Hand pump by foot operated is available
Two-speed operation for fast and easy operation
4-way valving on the P-84 and P-464 for operation of double-acting cylinders
Light weight and compact design



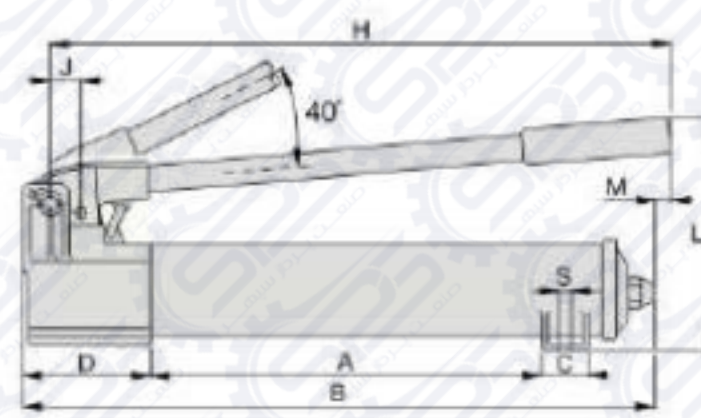
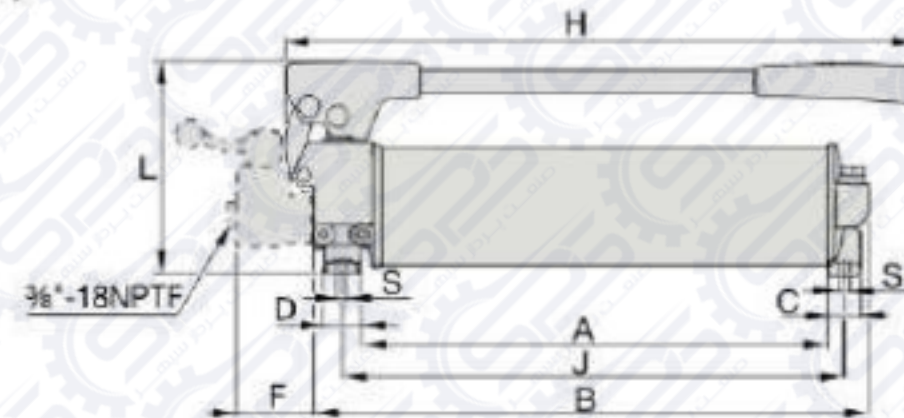
P-462, P-464



P-392



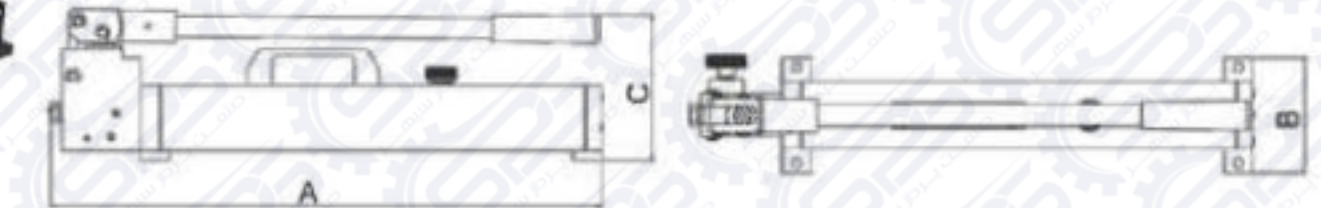
P-80, P-84



Model	Usable Oil (cm ³)	Type	Pressure (bar)		Oil Cap (cm ³)		Dimensions (mm)			Weight (kg)	Oil Port (NPT)
			1st Stage	2nd Stage	1st Stage	2nd Stage	A	D	H		
P-142	500	Single Acting	10	700	3.5	0.7	340	160	110	2	3/8
P-392	1000		12	700	11.4	2.3	540	190	120	3.15	3/8
P-400	3000		15	700	11.4	2.3	660	190	150	7	3/8
P-462	7423		14	700	12622	4.75	650	308	280	28	3/8
P-462XL	10000		14	700	12622	4.75	650	308	280	35.8	3/8
P-80	2200	Double Acting	25	700	16.22	2.46	545	170	148	11	3/8
P-801	4080		25	700	16.22	2.46	659	174	146	15	3/8
P-84	2200		25	700	16.22	2.46	545	170	148	11.8	3/8
P-841	4080		25	700	16.22	2.46	675	174	146	14.9	3/8
P-464	7423		14	700	12622	4.75	650	308	280	28	3/8
P-464XL	10000		14	700	12622	4.65	650	308	280	36.8	3/8

High Pressure Hand Pump

Two speeds operation, increasing the work efficiency
Light weight and compact design
With safety valve inside, providing safe dual protection



Model No	Usable Oil (cm ³)	Pressure Rating (Bar)		Oil capacity (cm ³)		Dimension (mm)			Oil Port	W (kg)
		1st Stage	2nd Stage	1st Stage	2nd Stage	A	B	C		
HPP-1000	2000	30	1000	31	1.65	700	150	190	G1/4"	8
HPP-1500	2000	20	1500	16	1	700	150	190		10
HPP-2000	3000	20	2000	31	1.2	720	130	240		12
HPP-2800	2000	20	2800	18	2.6	730	150	190		14

Air Hydraulic Foot Pump

All air pumps are designed to be used with single acting cylinders
High pressure air hydraulic foot pumps feature rugged construction built for long life and easy service
Built-in safety valve ensuring operating safety against overloading



Model	Usable Oil cm ³	Pneumatic Output kg/psi	Air Pressure bar/psi	Packing Size mm	Weight kg
AFP-700A	690	700/1000	8/120	370-180-190	10
AFP-700B	1700	700/1000	8/120	280-150-200	12

Electric Pump

Model	Valve	Cylinder Optional	Max Flow	Oil Cap	Voltage	Power
			(L/min)	(L)	(V)	(KW)
MD112-1	Manual Valve	Double Acting	1	12	1-220V	1.5
MD220-1			2	20	1-220V	3
MS112-1	Manual Valve	Single Acting	1	12	1-220V	1.5
MS220-1			2	20	1-220V	3
SS112-1	Solenoid Valve		1	12	1-220V	1.5
SS112-3			1	12	3-380V	1.5
SS212-1			2	12	1-220V	3
SS212-3			2	12	3-380V	2.2
SS120-1			1	20	1-220V	1.5
SS120-3			1	20	3-380V	1.5
SS220-1			2	20	1-220V	3
SS220-3			2	20	3-380V	2.2
SD112-1	Solenoid Valve	Double Acting	1	12	1-220V	1.5
SD112-3			1	12	3-380V	1.5
SD212-1			2	12	1-220V	3
SD212-3			2	12	3-380V	2.2
SD120-1			1	20	1-220V	1.5
SD120-3			1	20	3-380V	1.5
SD220-1			2	20	1-220V	3
SD220-3			2	20	3-380V	2.2



110V/220V/380V are available

Lasteko electric pump is specially for hydraulic cylinder of max. pressure 700 Bar

Lasteko electric pump is assembled using Germany components fitted with various size of oil reservoirs

Both single-acting & double-acting are possible

Below is just standard specification for reference. Cylinder pump customized is available, please advise LASTEKO details if needed

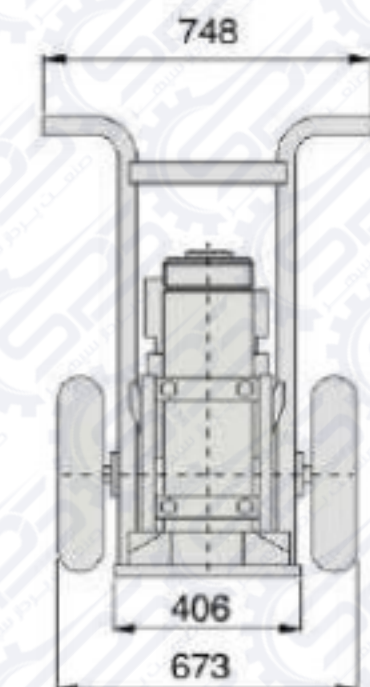
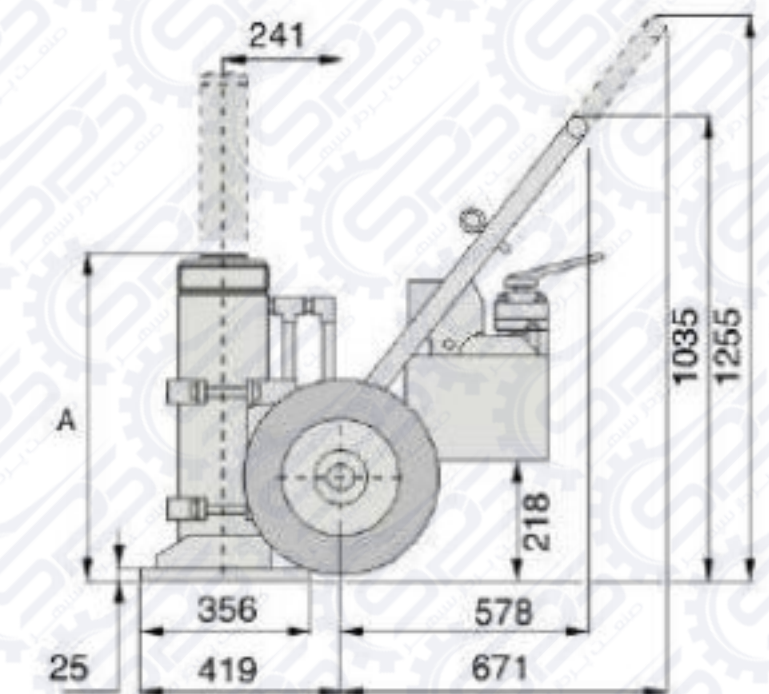
Hydraulic Toughlift Jacking System



Capacity: 50-100 ton

Stroke: 330-508mm

Maximum Operating Pressure: 700 bar



- The strong and heavy-duty structure makes the machine have a long service life.
- Large base pad supports oil cylinder.
- Omni-directional wheels are convenient for transportation and placement.
- Hydraulic control check valve provides pressure self-locking in case of emergency.
- The cylinder and pump are easy to disassemble and can be easily used in other occasions or for maintenance.

Pump type	Capacity ton (kn)	Stroke (mm)	Model	Collapsed Height (mm)	Speed mm/sec		Weight (kg)
Electric pump	50 (498)	330	RJI-5013	535	0.05	0.51	270
		508	RJI-5020	759	0.05	0.51	283
	100 (933)	330	RJI-10013	549	0.08	0.95	295
		457	RJI-10018	713	0.08	0.95	327

H-Series, Hydraulic Workshop Presses



Capacity: 10-200 ton

Maximum Daylight×Width: 1384×1219mm

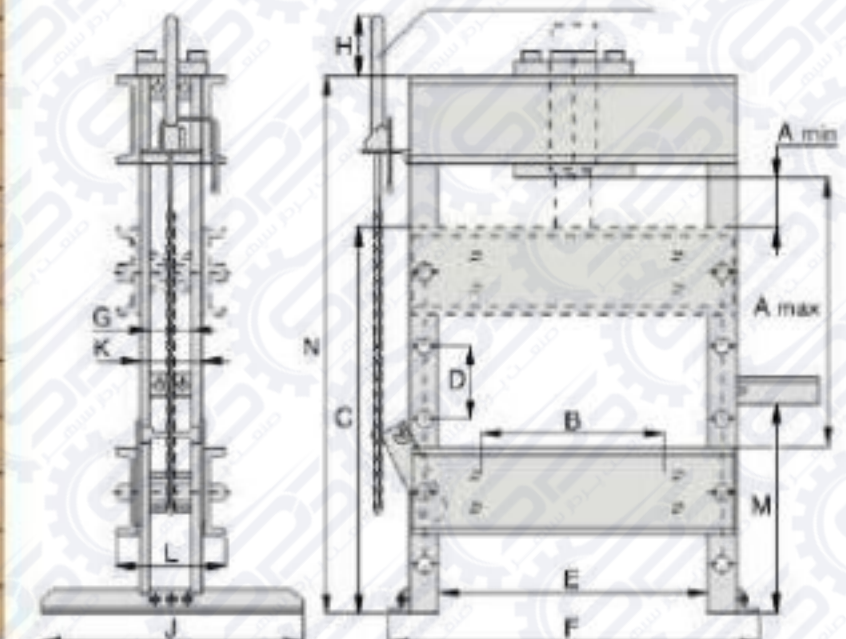
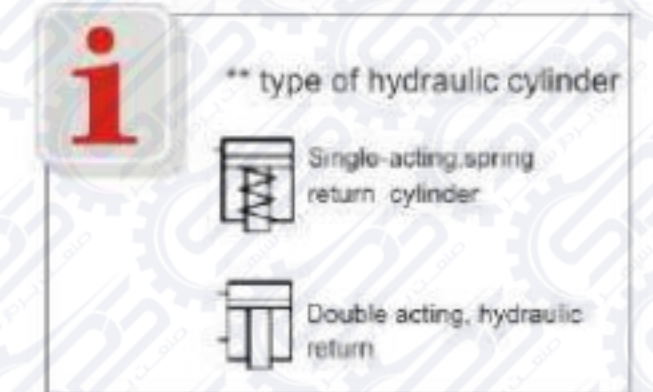
Maximum Operating Pressure: 700 bar

Capacity (tons)	Model	Pump Model	Cylinder Model	Hydraulic Cutterheads size					
				A Maximum	A Minimum	B	C	D	E
10	IPE-1215	IPE-220	RC-1010	1016	62	-	1187	127	473
	IPH-1240	P-392	RC-1010	1016	62	-	1187	127	473
	IPH-1234	P-84	RR-1010	1016	62	-	1187	127	473
25	IPE-2505	IPE-220	RC-256	1384	177	-	1447	301	736
	IPE-2510	IPE-220	RC-2514	1384	177	-	1447	301	736
	IPH-2531	P-80	RC-2514	1384	177	-	1447	301	736
30	IPE-3060	IPE-220	RR-3014	1384	177	-	1447	301	736
	IPH-3080	P-84	RR-3014	1384	177	-	1447	301	736
50	IPE-5010	IPE-220	RC-5013	1233	179	476	1371	263	730
	IPH-5030	P-462	RC-506	1233	179	476	1371	263	730
	IPH-5031	P-80	RC-506	1233	179	476	1371	263	730
	IPE-5005	IPE-220	RC-506	1233	179	476	1371	263	730
	IPE-5060	IPE-220	RR-5013	1233	179	476	1371	263	730
	IPH-5080	P-464	RR-5013	1233	179	476	1371	263	730
	IPH-5080	P-464	RR-5013	1233	179	476	1371	263	730
100	IPE-10010	IPE-220	RC-10010	1079	177	508	1295	296	889
	IPH-10030	P-462	RC-10010	1079	177	508	1295	296	889
	IPE-10060	IPE-220	RR-10013	1079	177	508	1295	296	889
	IPH-10080	P-464	RR-1006	1079	177	508	1295	296	889
150	IPE-15065	IPE-220	RR-15013	1231	317	711	1384	254	1219
200	IPE-20065	IPE-220	RR-20013	1231	317	711	1384	254	1219

Hydraulic Workshop Presses

Capacity tons(kn)	Maximum Vertical Daylight (mm)	Maximum Bed Width (mm)	Power Type				Model	Hydraulic pump model			Speed mm/sec.*	
			Type		Valve					stroke (mm)	Tool Feed Speed	Punching Speed
			Hand	Electric	Hand	Electric						
10 (89)	1016	473		●	●		IPE-1215	●		254	28	3.8
	1016	473	●		●		IPH-1240	●		254	{7.8}	{1.7}
	1016	473	●		●		IPH-1234		●	254	{11}	{1.7}
25 (223)	1384	736		●	●		IPE-2505	●		152	16	1.6
	1384	736		●		●	IPE-2510	●		355	23	3.6
	1384	736	●		●		IPH-2531	●		355	{4.9}	{0.7}
30 (267)	1384	736		●		●	IPE-3060		●	355	18	2.8
	1384	736	●		●		IPH-3080		●	355	{3.6}	{0.7}
	1233	730		●		●	IPE-5010	●		330	20	1.9
50 (445)	1233	730	●		●		IPH-5030	●		152	{19}	{0.7}
	1233	730	●		●		IPH-5031	●		152	{2.3}	{0.3}
	1233	730		●	●		IPE-5005	●		152	7.7	0.8
	1233	730		●		●	IPE-5060		●	330	20	1.9
	1233	730	●		●		IPH-5080		●	330	{19}	{0.7}
100 (890)	1079	889		●		●	IPE-10010	●		254	14	1.0
	1079	889	●		●		IPH-10030	●		254	{10}	{0.4}
	1079	889		●		●	IPE-10060		●	330	11	1.0
	1079	889	●		●		IPH-10080		●	152	{10}	{0.4}
150 (1335)	1231	1219		●		●	IPE-15065			330	9	1.4
200 (1780)	1231	1219		●		●	IPE-20056			330	6.7	1.0

Hydraulic Cutterheads size									Model
F	G	H	J	K	L	M	N	(kg)	
632	-	-	755	108	189	889	1320	135	IPE-1215
632	-	-	755	108	189	889	1320	71	IPH-1240
632	-	-	755	108	189	889	1320	85	IPH-1234
1028	101	336	762	133	271	673	1930	274	IPE-2505
1028	101	336	762	133	271	673	1930	313	IPE-2510
1028	101	336	762	133	271	673	1930	281	IPH-2531
1028	101	336	762	133	271	673	1930	325	IPE-3060
1028	101	336	762	133	271	673	1930	301	IPH-3080
1085	127	222	914	184	333	781	1930	495	IPE-5010
1085	127	222	914	184	333	781	1930	439	IPH-5030
1085	127	222	914	184	333	781	1930	420	IPH-5031
1085	127	222	914	184	333	781	1930	421	IPE-5005
1085	127	222	914	184	333	781	1930	499	IPE-5060
1085	127	222	914	184	333	781	1930	455	IPH-5080
1295	171	222	914	222	395	841	1930	776	IPE-10010
1295	171	222	914	222	395	841	1930	751	IPH-10030
1295	171	222	914	222	395	841	1930	816	IPE-10060
1295	171	222	914	222	395	841	1930	755	IPH-10080
1706	231	333	1117	333	555	1212	2286	1794	IPE-15065
1706	231	333	1117	333	555	1212	2286	1794	IPE-20065



Hydraulic Hose

Inner Dia: 6.4mm
Length: 2-15m (or per request)
Max Operation pressure: 700 bar
Ratio: 1:4

Model	Length(m)	Couplers		w(kg)
		End1	End2	
H-7206	2	3/8" NPTF	3/8" NPTF	0.9
H-7210	3			1.4
H-7220	6			2.8
H-7230	9			4.5
H-7240	12			6.3
H-7250	15			7.9
HC-7206	2	CH-604	3/8" NPTF	1.3
HC-7210	3			1.8
HC-7220	6			3.2
HC-7230	9			5.0
HC-7240	12			6.9
HC-7250	15			8.5
HC-7206C	2	CH-604	CH-604	1.7
HC-7210C	3			2.3
HC-7220C	6			3.7
HC-7230C	9			5.5
HC-7240C	12			7.4
HC-7250C	15			9.0



Quick Coupling

Max Operation pressure: 700 bar
Thread: 1/4" NPT 3/8" NPT

Model	Female	Male	Thread
C604	CR604	CH604	3/8"NPT
CT901	C901	T901	1/4"NPT



Simple Manifold

Type	Model	QuickCoupler
one for two	M-2-3/8"	NPT-3/8"
	M-2-1/4"	NPT-1/4"
one for four	M-4-3/8"	NPT-3/8"
	M-4-1/4"	NPT-1/4"
one for six	M-6-3/8"	NPT-3/8"
	M-6-1/4"	NPT-1/4"
one for eight	M-8-3/8"	NPT-3/8"
	M-8-1/4"	NPT-1/4"
one for ten	M-10-3/8"	NPT-3/8"
	M-10-1/4"	NPT-1/4"



Hydraulic Gauge

Model	Dia(mm)	Thread	Pressure
HG-63-70	63	NPT1/4"	0-700bar
HG-100-70	100	G1/2	0-700bar



Gauge Accessory



Gauge Adaptors (GA-Series)

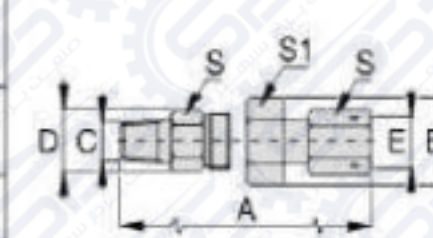
For easy mounting of a pressure gauge onto your system

Male end screws into pump or cylinder port, female end accepts hose or coupler, 3rd port is for gauge connection GA-918 provides for swivel connection

Model Number	Gauge Port (NPTF)	Male End (NPTF)	Female End (NPTF)	Dimensions(mm)					
				A	B	C	D	E	F
GA-1	1/2"	3/8"	3/8"	71	31	1/2" NPTF	3/8" NPTF	3/8" NPTF	32
GA-2	1/2"	3/8"		155	35	1/2" NPTF	3/8" NPTF	3/8" NPTF	32
GA-3	1/4"	3/8"		133	48	1/4" NPTF	3/8" NPTF	3/8" NPTF	32
GA-4	1/2"	1/4"		111	35	1/2" NPTF	1/4" NPTF	3/8" NPTF	32

GA-1

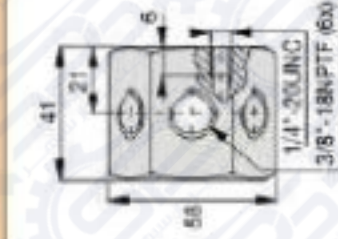
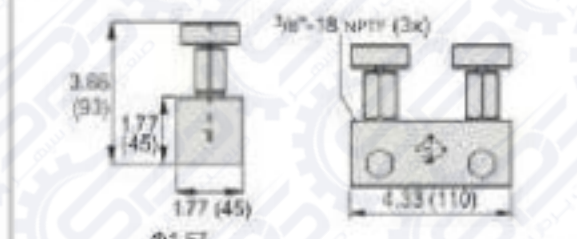
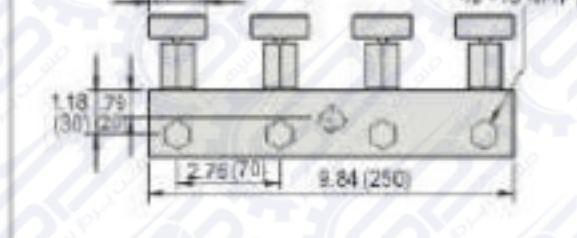
GA-2, GA-3, GA-4

	Swivel Adaptor (GA-918) Simplifies gauge installation and reading								
	Model Number	Dimensions (mm)							
		A	B	C	D	E	S		S1
GA-918	117	43	½" NPTF	28.5	½" NPTF	29	38		

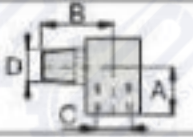
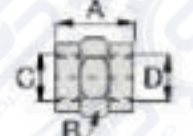
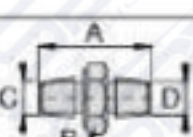
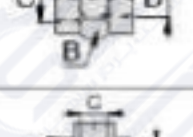
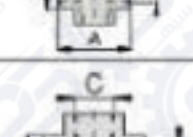
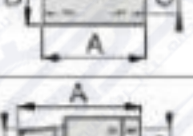
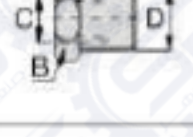
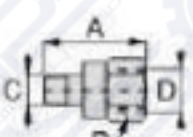
Needle Valves (V- and NV-Series)
Both NV-251 and V-91 provide positive shut-off
303 stainless steel stem, 16 threads/in (NV-251)

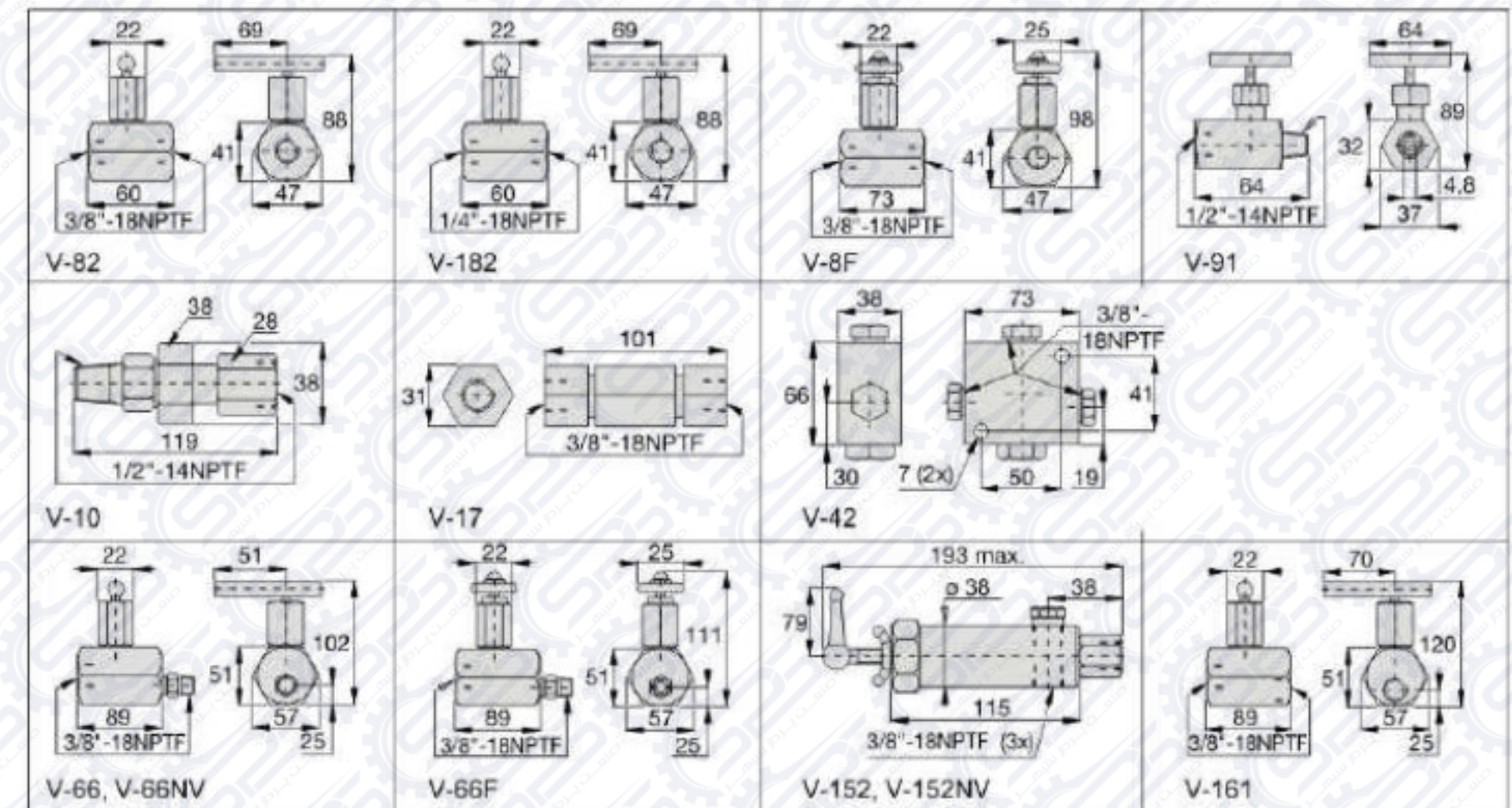
Model Number	Orifice (mm)	Thread Size	Dimensions (mm)							
			A	B	C	D	E	F	H	
NV-251	4.3	¼" NPTF	57	29	¼" NPTF	57	46	19	19	
V-91	4.8	½" NPTF	89	32	½" NPTF	64	32	37	37	

Manifolds

Description	Model	Dimensions (mm)	
6-port Manifold, hexagon Plugs furnished for all ports 3/8"-18 NPTF	A-66		
Control Manifolds For control of two or four single-acting cylinders simultaneously. AM-2 with 5 ports 3/8"NPTF AM-4 with 7 ports 3/8"NPTF	AM-2 AM-4		

FZ Fittings Series

Fittings 700 bar		Model	Dimensions (mm)				
From:	To:		A	B	C	D	
From: 3/8"-NPTF Male To: 3/8"-NPTF Female		FZ-1616	23	33	3/8"-18 NPTF	3/8"-18 NPTF	
Reducing Connector							
From: 3/8"-NPTF Female To: 1/2"-NPTF Female		FZ-1615	28	25	3/8"-18 NPTF	1/2"-18 NPTF	
From: 1/2"-NPTF Female To: 3/8"-NPTF Female		FZ-1625	47	29	1/2"-14 NPTF	3/8"-18 NPTF	
Hexagon Nipple							
From: 1/4"-NPTF To: 1/4"-NPTF		FZ-1608	38	16	1/4"-18 NPTF	1/4"-18 NPTF	
From: 3/8"-NPTF To: 3/8"-NPTF		FZ-1619	51	19	3/8"-18 NPTF	3/8"-18 NPTF	
From: 3/8"-NPTF To: 3/8"-NPTF		FZ-1617	37	19	3/8"-18 NPTF	3/8"-18 NPTF	
Coupling							
From: 3/8"-NPTF To: 3/8"-NPTF		FZ-1614	29	23	3/8"-18 NPTF	3/8"-18 NPTF	
From: 1/4"-NPTF To: 1/4"-NPTF		FZ-1605	29	19	1/4"-18 NPTF	1/4"-18 NPTF	
Cross							
From: 3/8"-NPTF Female To: 3/8"-NPTF Female		FZ-1613	45	25	3/8"-18 NPTF	-	
Tee							
From: 3/8"-NPTF To: 3/8"-NPTF		FZ-1612	45	25	3/8"-18 NPTF	-	
From: 1/4"-NPTF To: 1/4"-NPTF		FZ-1637	45	24	1/4"-18 NPTF	-	
Street Tee							
From: 3/8"-NPTF Female To: 3/8"-NPTF Male		BFZ-16312	56	26	3/8"-18 NPTF	3/8"-18 NPTF	
Elbow							
From: 3/8"-NPTF To: 3/8"-NPTF		FZ-1610	33	20	3/8"-18 NPTF	-	
From: 1/4"-NPTF To: 1/4"-NPTF		FZ-1638	36	24	1/4"-18 NPTF	-	
Reducer							
From: 3/8"-NPTF To: 1/2"-NPTF		FZ-1630	19	19	1/2"-18 NPTF	3/8"-18 NPTF	
From: 1/2"-NPTF To: 1/2"-NPTF		BFZ-1630	28	22	1/2"-18 NPTF	1/2"-14 NPTF	
From: 3/8"-NPTF To: G 1/4"		BFZ-16301	19	19	G 1/4"	3/8"-18 NPTF	
Adaptor							
From: G 1/4" To: 1/4"-NPTF		BFZ-16411	35	19	1/4"-18 NPTF	G 1/4"	
From: G 1/2" To: 1/2"-NPTF		BFZ-16421	31	19	1/2"-27 NPTF	G 1/2"	
From: G 3/4" To: 3/4"-NPTF		BFZ-16323	43	24	3/4"-18 NPTF	G 3/4"	
From: G 1/2" To: 1/2"-NPTF		BFZ-16324	43	24	3/4"-18 NPTF	G 1/2"	
Adaptor							
From: 1/2"-NPTF To: 3/8"-NPTF		FZ-1055	44	23	1/2"-18 NPTF	3/8"-18 NPTF	
From: 1/2"-NPTF To: 1/2"-NPTF		FZ-1642	30	19	1/2"-27 NPTF	1/2"-18 NPTF	
From: 1/2"-NPTF To: 1/2"-NPTF		FZ-1634	42	28	3/8"-18 NPTF	1/2"-18 NPTF	
Swivel Fitting							
From: 3/8"-NPTF Male To: 3/8"-NPTF Female		FZ-1660	40	22	3/8"-18 NPTF	3/8"-18 NPTF	



Valve Type and Model Number	Description	Hydraulic Symbol
Needle Valve V-82 V-182 V-8F	V-82: To control cylinder speed. Can also be used as shut-off valve for temporary load holding. 3/8" NPTF female ports. V-182: Same as V-82, but with 1/4" NPTF female ports. Also suitable for gauge snubbing (also V-82). V-8F: Like V-82, but with very fine metering for precise flow control. Not recommended as shut-off valve.	
Snubber Valve V-91	V-91: Infinitely adjustable for metering oil out of a gauge to prevent snapping of gauge pointer when load or pressure is suddenly released. Also suitable as shut-off valve to protect the gauge during high cycling applications. 1/2" NPTF male and female threads for use with GA-1, GA-2 or GA-4 gauge adaptors.	
Auto Damper Valve V-10	V-10: To be used when gauge pressure must be monitored during high cycle applications. Creates a flow resistance when load is released suddenly. No adjustments are necessary. 1/2" NPTF for use with GA-1, GA-2 or GA-4 gauge adaptors. male and female threads	
Check Valve V-17	V-17: Ruggedly built to resist shock and operate with low pressure drop. Closes smoothly without pounding. 3/8" NPTF female port.	
Pilot Operated Check Valve V-42	V-42: Can be mounted at the cylinder to hold the load in case of system pressure loss. Normally used with double-acting cylinders where pilot port receives pressure from a Tee-fitting in the cylinder retract line. 3/8" NPTF female ports. Pilot pressure ratio 14% (6.5:1).	
Manually Operated Check Valve V-66, V-66NV * V-66F	V-66, V-66NV: For load holding applications with single and double acting cylinders. Valves allow oil to flow back to tank when cylinder retracts. V-66NV with Viton seals, nickel-plated. V-66F: Similar to V-66, but with very fine metering capability for precise flow control. V-66F is not designed for load holding.	
Pressure Relief Valve V-152 V-152NV *	V-152: Limits pressure developed by the pump in hydraulic circuit, thus limiting the force imposed on other components. Valve opens whenever preset pressure is reached. To increase pressure setting, turn handle clockwise. Includes: • 0.9 m return line hose kit • ± 3% repeatability • 55-700 bar adjustment range.	
Sequence Valve V-161	V-161: To control oil flow to a secondary circuit. Flow is blocked until system pressure rises to the V-161 setting. When this pressure level is reached, the V-161 opens to allow flow to the secondary circuit. A pressure differential is always maintained between the primary and secondary circuit. Min. operating pressure: 140 bar.	

Integral Puller with Separator

Bearing puller design it can be put in small gap

A wide variety of thread and adapters

Bearing pulling attachments and internal pulling attachments can be used in combination with our Push-pullers



Model	Ton	Reach(mm)	Spread(mm)	Stroke(mm)	W(kg)
UPM-4	4	250	110	60	9
UPM-6	6	270	180	70	10.5
UPM-8	8	270	220	85	13
UPM-12	12	381	290	85	18

Integral Puller Set with Separator

Grip puller combine bearing puller easy to dismantle bearing and wheel

Universal Bearing Attachments: Forged of high strength steel alloy

Heat treated, Chrome plated for rust proof and durable life



Model	Ton	Reach (mm)	Spread(mm)		Stroke (mm)	W(kg)
			C	D		
UKM-4	4	185/250	55	225/110	60	5/9
UKM-6	6	220/270	95	330/180	70	6/12
UKM-8	8	230/270	95	350/220	85	7/13
UKM-12	12	270/380	225	375/290	85	8/18

Integral Screw/Orthogonal Claw Hydraulic Puller

Pulling no damage to Bearings and working piece

Available for both screw claw and orthogonal claw work with separator

2/3 claws combination puller head for optional



Model	Ton	Reach(mm)	Spread(mm)	Stroke(mm)	Diagram			W (kg)
					A	B	C	
UK-601	6	300	90-210	82	15	7	24	8.5
UK-601E	10							
UK-801	8	300	90-220	82	15	7	24	9
UK-801E	12							
UK-602	6	190	90-210	82	15	7	24	8
UK-602E	10							
UK-802	8	245	90-220	82	15	7	24	9
UK-802E	12							
UK-603	6	190	90-210	82	15	7	24	12
UK-603E	10							
UK-803	8	245	90-220	82	15	7	24	14
UK-803E	12							
UK-605	6	190/300	90-210	82	15	7	24	15
UK-605E	10	190/300	90-210	82	15	7	24	15
UK-805	8	245/300	90-210	82	15	7	24	16.5
UK-805E	12	245/300	90-210	82	15	7	24	18

Integral Puller Combination Set

New combination puller set

To use triple bearing separator to avoid bearing, draft or article injury.



Model	Ton	Reach(mm)	Spread(mm)	Stroke(mm)				W (kg)
					A	B	C	
UKS-6IN	6	165	30-200/260	82-130	15	7	22	13
UKS-10INC	10	195	30-250/310	82-130	13	5	22	14
UKS-8IN	8	210	30-300/355	82-160	20	7	26	19
UKS-12INC	12	240	30-300/370	82-160	15	8	22	23
UKS-15IN	15	240	50-280/380	82-180	20	9	30	20
UKS-20INC	10	275	50-360/430	82-180	18	8	29	25



Adjustable Integral Hydraulic Gear Puller

360° rotatory pump handle, chrome vanadium plated with spring draw back
Both 2&3 jaws are available

Model	Ton	Reach(mm)	Spread(mm)	Stroke(mm)				W (kg)
					A	B	C	
UKA-3	3	145	150	60	10	9	17	3.5
UKA-5	5	190	200	60	12	11	21	7
UKA-10	10	250	250	80	15	14	29	12
UKA-15	15	285	350	80	21	17	35	18
UKA-20	20	305	400	80	25	20	36	24
UKA-30	30	310	450	90	26	21	27	28
UKA-40	40	320	500	100	31	23	43	35
UKA-50	50	330	600	100	33	25	44	45
UKA-60	60	350	700	120	35	28	54	100
UKA-80	80	520	800	120	37	30	58	120

Integral Hydraulic Puller

2 jaws and 3 jaws are both available

Anti-overloading valve installed



Model	Ton	Reach(mm)	Spread(mm)	Stroke(mm)				W (kg)
					A	B	C	
UK-4in	4	165	30-200/260	55-105	15	7	22	7.2
UK-6in	6	165	30-200/260	82-130	15	7	22	7.5
UK-6inL		195	30-200/300	82-180	20	7	26	9
UK-8in	8	210	30-250/355	82-160	20	7	26	9.7
UK-8inL		240	30-300/380	82-240	20	9	30	11.1
UK-15in	15	240	50-280/380	82-180	20	9	30	11.1
UK-15inL		320	50-350/410	82-280	28	11	33	26.5



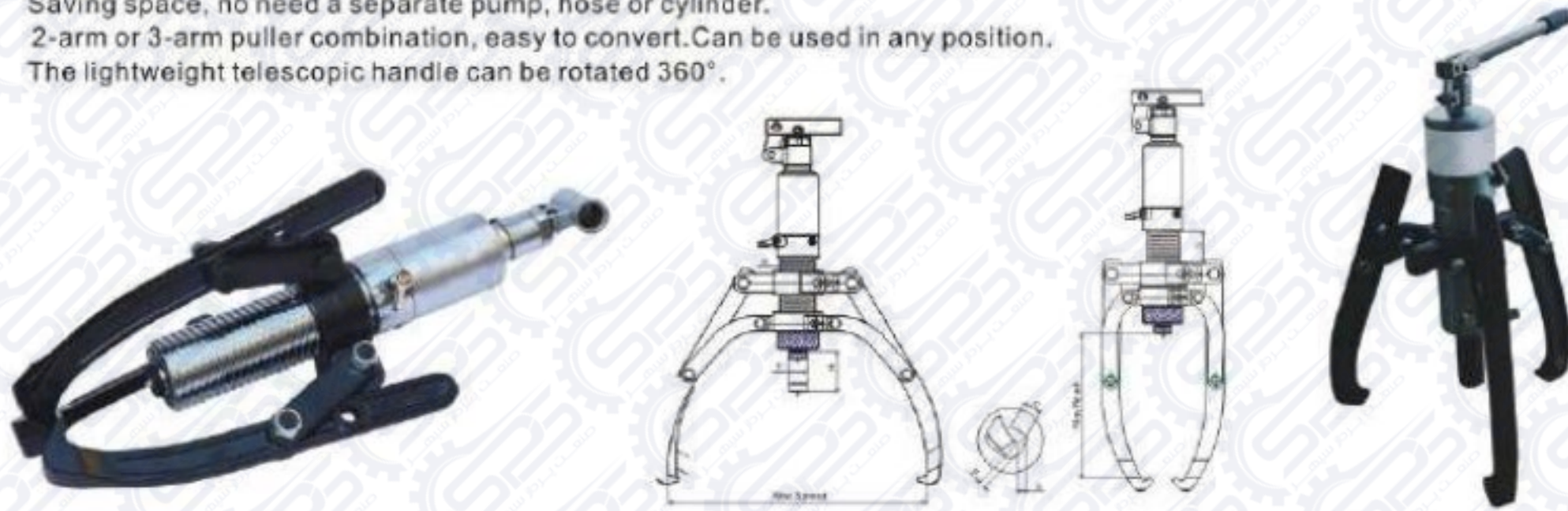
Integral Cobra Puller

The jaw hook and hook shelf are made of forged alloy steel with high strength and it can be used durably all through its life
The unique inner relief safety valve can prolong the life of cylinder

Model	Ton	Reach(mm)	Spread(mm)	Stroke(mm)				W (kg)
					A	B	C	
UK-10inC	10	195	30-250/310	82-130	13	5	22	10.7
UK-10inCL		250	30-280/340	82-180	15	8	25	18.3
UK-12inC	12	240	30-300/370	82-160	15	8	25	19
UK-12inCL		280	30-330/400	82-240	18	8	29	23.3
UK-20inC	20	275	50-360/430	82-180	18	8	29	24.7
UK-20inCL		330	50-380/450	82-280	28	11	33	29.3
UK-25inC	25	315	50-410/480	110-220	28	11	33	34.8
UK-25inCL		380	50-440/540	110-330	30	14	40	43.8
UK-30inC	30	405	100-540/610	110-260	30	14	40	53

2/3-arms Integrated Puller with Pump & Cylinder

Compact pullers for dismounting components such as bearings, bushings, wheels, couplings and pulleys. The stronger the pulling force, the tighter the jaws grip around the workpiece. Bending or deflecting is impossible. Integral safety release valve prevents overload and ensures that you never exceed the maximum force. Saving space, no need a separate pump, hose or cylinder. 2-arm or 3-arm puller combination, easy to convert. Can be used in any position. The lightweight telescopic handle can be rotated 360°.



Model	Ton	Reach(mm)	Spread(mm)	Stroke H (mm)	A (mm)	B (mm)	C (mm)	E (mm)	F (mm)	G (mm)	Weight (kg)
UK-4	4	185	255	60	11	6	22	42	22	84	4.5
UK-6	6	220	330	70	13	10	22	45	23	94	5.5
UK-8	8	230	350	85	11	10	25	50	25	122	6.5
UK-12	12	270	375	85	14	10	29	60	28	118	8.0
UK-20	20	360	520	111	20	27	33	80	40	160	22
UK-30	30	360	550	111	20	27	38	98	50	155	32



Integrated Self-Centering Puller

The arms slide inwards or outwards simultaneously. Prevents damage to shaft and object being pulled. Work efficiently and save time.

UA pullers are self-centering

Model	Ton	Reach(mm)	Spread(mm)	Stroke H (mm)	A (mm)	B (mm)	C (mm)	E (mm)	F (mm)	G (mm)	Weight (kg)
UA-4	4	190	315	60	13	10	22	42	22	40	8.0
UA-6	6	230	390	70	13	10	22	45	23	50	10.0
UA-8	8	280	460	85	13	13	27.5	50	25	70	12.0
UA-12	12	300	515	85	15	16.5	29	60	28	70	15.0
UA-20	20	325	520	111	18	20	33	80	40	62	26.0
UA-30	30	415	620	111	18	20	38	98	50	85	36.0

Separating Hydraulic Puller

The stronger the pulling force, the tighter the jaws grip around the workpiece. Bending or deflecting is impossible. Separate 2-stage hand pump available. 2 jaws or 3 jaws both available.



Model	Ton	Reach(mm)	Spread(mm)	Stroke H (mm)	B (mm)	C (mm)	D (mm)	A1 (mm)	B1 (mm)	C1 (mm)	Weight (kg)
UR-4	4	185	255	60	42	22	84	11	6	22	4.5
UR-6	6	245	330	70	45	23	91	13	10	22	5.4
UR-8	8	230	350	85	55	26	112	11	10	25	7.4
UR-12	12	260	375	85	60	28	118	14	10	29	9.5
UR-20	20	350	520	111	80	40	162	20	27	33	23.0
UR-30	30	435	550	111	98	50	155	20	27	38	35.3
UR-50	50	635	1000	143	127	79.5	235	43	16	32	110.0

2/3-arm Hydraulic Self-Centering Puller

Self-centering 2-arm or 3-arm puller, easy to convert. The arms slide inwards or outwards simultaneously.



Model	Ton	Reach(mm)	Spread(mm)	Stroke H (mm)	A (mm)	B (mm)	C (mm)	E (mm)	F (mm)	G (mm)	Weight (kg)
US-4	4	190	315	60	13	10	22	42	22	40	8.0
US-6	6	230	390	70	13	10	22	45	23	50	10.0
US-8	8	280	460	85	13	13	27.5	50	25	70	12.0
US-12	12	300	515	85	15	16.5	29	60	28	70	15.0
US-20	20	325	520	111	18	20	33	80	40	62	26.0
US-30	30	415	620	111	18	20	38	98	50	85	36.0
US-50	50	455	860	159	28	30	58	127	80	200	140
US-75	75	455	1000	159	35	44	62	145	85	210	175

Separated Hydraulic Puller

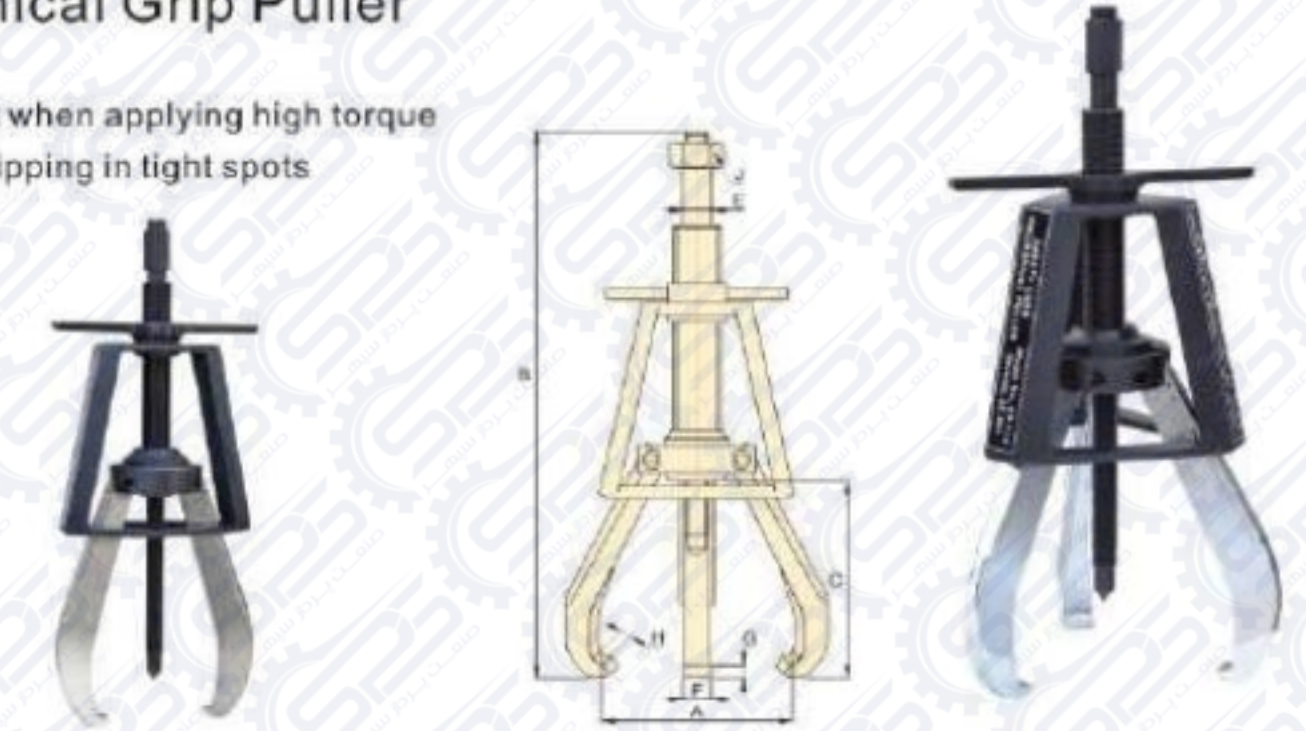
Separated hydraulic gear puller
The claws are made of one piece of solid steel.
Life span is ensured.
The surface is well electroplated to resist rust and abrasion.



Model	Ton	Reach(mm)	Spread(mm)	Stroke(mm)				W (kg)
					A	B	C	
UK-105	15	240	50-280/380	82-180	20	9	30	14
UK-105L		320	50-350/410	82-280	28	11	33	17.5
UK-107C	17.5	275	50-360/430	82-180	18	8	29	16.5
UK-107CL		330	50-380/450	82-280	28	11	33	19
UK-203C	22.5	315	50-410/480	110-220	28	11	33	27
UK-203CL		380	50-440/540	110-330	30	14	40	29
UK-205C	27.5	31	50-540/610	110-260	30	14	40	32
UK-500CA	50	465/635	580-1000	125-425	40	29	48	90
UK-500CS		465	580-750	125-275	40	29	48	58
UK-500CL		635	580-1000	125-425	40	29	48	72
SP-5	5	190	200	60	12	11	21	14
SP-10	10	250	250	60	15	14	29	18
SP-15	15	285	300	60	21	17	35	22
SP-20	20	290	350	60	22	18	36	29
SP-30	30	300	450	90	26	21	37	38
SP-40	40	320	500	100	31	23	43	52
SP-50	50	330	600	100	33	25	44	58
SP-60	60	350	700	100	35	28	54	69
SP-80	80	520	800	150	37	30	58	99
SP-100	100	600	1000	200	40	38	68	128

Safety Cage Mechanical Grip Puller

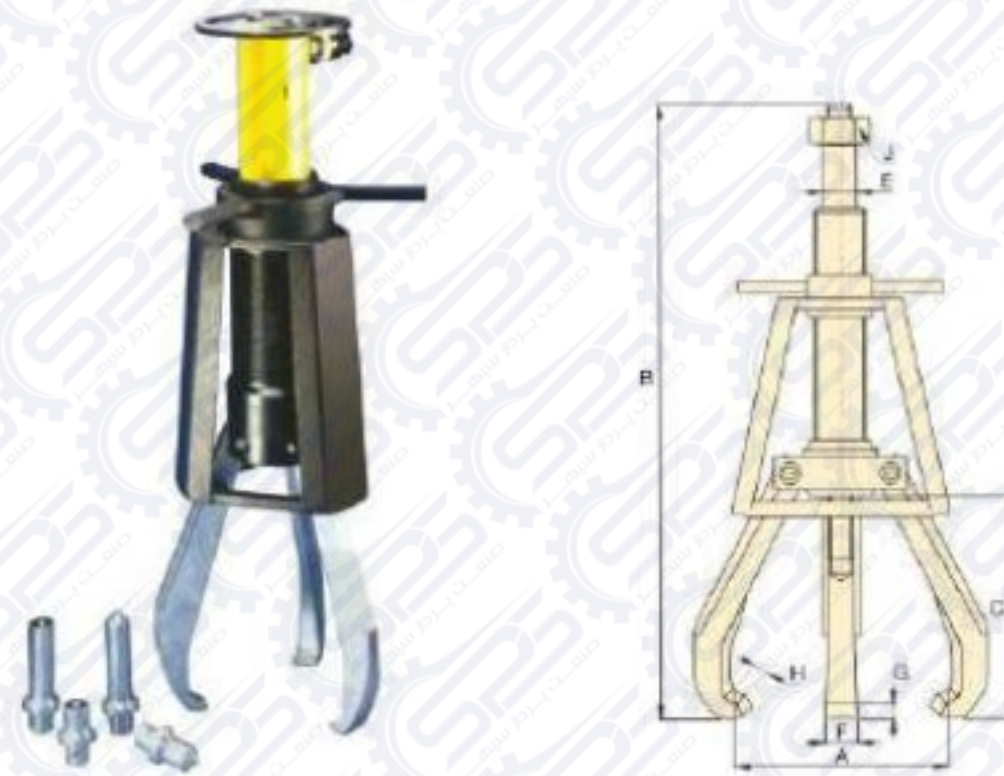
Roll threaded shafts for less effort when applying high torque
Slim tapered jaws for improved gripping in tight spots
Safety cage jaw retention system
Available for 2 and 3 jaws



	Jaw	Ton	Max Torque (Nm)	Spread A(mm)	Overall Length B(mm)	Max Reach C(mm)	Center Bolt Dia E (mm)	Jaw Width F (mm)	Tip Clearance G(mm)	Tip Depth H (mm)	Hex Socket Size J (inch)
EP-204	2	2	27	12-127	245-323	101	14	15	4.1	4.6	7/8
EP-104	3	5	54	12-127	245-323	101	14	15	4.1	4.6	7/8
EP-206	2	6	102	12-178	323-476	152	16	19	8.1	6.1	1-1/16
EP-106	3	10	176	12-178	323-476	152	16	19	8.1	6.1	1-1/16
EP-208	2	12	203	19-304	412-615	203	20	22	6.4	9.1	1-1/4
EP-108	3	17	298	19-304	412-615	203	20	22	6.4	9.1	1-1/4
EP-210	2	14	237	25-381	489-736	245	20	25	6.4	9.1	1-1/4
EP-110	3	20	373	25-381	489-736	245	20	25	6.4	9.1	1-1/4
EP-213	2	25	644	63-457	660-965	304	29	31	12.7	9.7	1-11/16
EP-113	3	30	814	63-457	660-965	304	29	31	12.7	9.7	1-11/16
EP-216	2	35	1085	76-635	800-1155	355	31	36	13.5	11.7	1-13/16
EP-116	3	40	1153	76-635	800-1155	355	31	36	13.5	11.7	1-13/16

Safety Cage Hydraulic Grip Puller

Roll threaded shafts for less effort when applying high torque
Slim tapered jaws for improved gripping in tight spots
Safety cage jaw retention system
High force hydraulic system for effortless pulling of large components
Available for 2 and 3 jaws



Model	Jaw	Ton	Cylinder	Spread A(mm)	Overall Length B(mm)	Max Reach C(mm)	Weight (kg)	Jaw Length D (mm)	Jaw Width E (mm)	Tip Clearance G(mm)	Tip Depth H (mm)	Stroke (mm)
EPH-208	2	10	RC-106	19-304	498	203	10	237	22	7.4	6.9	152
EPH-208*	2	10	RC-106	19-304	498	203	27	237	22	7.4	6.9	152
EPH-210	2	15	RC-1510	25-381	665	245	22	270	25	11.2	9.1	254
EPH-210*	2	15	RC-1510	25-381	665	245	38	270	25	11.2	9.1	254
EPH-213	2	25	RC-2514	63-457	846	304	44	348	31	12.9	9.7	362
EPH-213*	2	25	RC-2514	63-457	846	304	53	348	31	12.9	9.7	362
EPH-216	2	50	RC-5013	76-635	919	355	87	413	36	15.0	11.7	336
EPH-216*	2	50	RC-5013	76-635	919	355	123	413	36	15.0	11.7	336
EPH-108	3	10	RC-106	19-304	498	203	11	237	22	7.4	6.9	152
EPH-108*	3	10	RC-106	19-304	498	203	28	237	22	7.4	6.9	152
EPH-110	3	15	RC-1510	25-381	665	245	23	270	25	11.2	9.1	254
EPH-110*	3	15	RC-1510	25-381	665	245	39	270	25	11.2	9.1	254
EPH-113	3	25	RC-2514	63-457	846	304	48	348	31	12.9	9.7	362
EPH-113*	3	25	RC-2514	63-457	846	304	57	348	31	12.9	9.7	362
EPH-116	3	50	RC-5013	76-635	919	355	91	413	36	15.0	11.7	336
EPH-116*	3	50	RC-5013	76-635	919	355	127	413	36	15.0	11.7	336

Skid-Resistance Hydraulic Puller

Fast, safe and easy for one person operation
Knurled adjusting nut allows precise closing and opening of jaws



Model	Capacity (Ton)	Spread (mm)	Reach (mm)	Stroke (mm)	Jaw	Weight (kg)
SEP-10	10	20-250	185	105	2/3	16
SEP-20	20	30-350	265	101	2/3	34
SEP-30	30	50-450	330	102	2/3	40
SEP-50	50	70-600	385	159	2/3	92
IEP-5	5	15-150	210	127	2/3	14
IEP-10	10	20-250	250	203	2/3	16
IEP-20	20	30-350	265	152	2/3	34
IEP-30	30	50-450	320	310	2/3	40
IEP-50	50	75-650	425	336	2/3	92

Mechanical / Hydraulic Self-Centering Puller

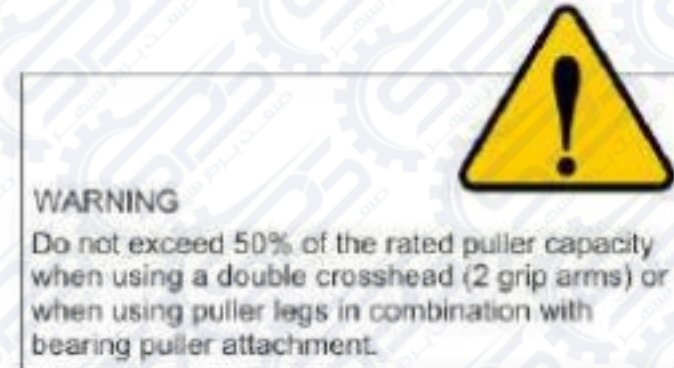
Max Working Pressure: 700bar
3-arm union, self-centering, easy operation
Claws of pullers are forged of high-strength alloy steel
Both mechanical and hydraulic are available



Model	Capacity (Ton)	Reach (mm)	Spread (mm)	Optional Hose	Optional Pump	Cylinder Model	Weight (kg)
KL-7	7	225	60-280	—	—	—	6
KL-10	10	385	60-430	—	—	—	11
KL-30	30	480	60-500	—	—	—	26
KL-60	60	585	60-600	—	—	—	58
KY-10	10	296	60-430	HC-7210	P-392	RCH-123	12
KY-20	20	340	600-500	HC-7210	P-392	RCH-202	34
KY-30	30	420	60-600	HC-7210	P-80	RCH-302	60
KY-60	60	727	60-920	HC-7210	P-80	RCH-603	90

BHP-Series, Master Puller Sets

- Supplied with a full hydraulic set including pump, hose, cylinder, gauge, gauge adaptor and wooden case
- High quality, forged steel components provide superior reliability and service
- Sets include speed crank and adjusting screw for fast contact to work before hydraulics are applied
- All Master Puller Sets include a Grip Puller, a Cross Bearing Puller, a Bearing Cup Puller and a Bearing Puller Attachment, which can be ordered separately, see items nr. 10, 20, 30 and 50.



WARNING
Do not exceed 50% of the rated puller capacity when using a double crosshead (2 grip arms) or when using puller legs in combination with bearing puller attachment.

Master Puller Set Capacity	8 ton	20 ton	30 ton	50 ton
Model Number	BHP-1752	BHP-2751G	BHP-3751G	BHP-5751G
Included Hydraulics/Set W	37 kg	90 kg	172 kg	298 kg
Hand Pump	P-392	P-392	P-392	P-80
Cylinder	RCH-1211	RCH-202	RCH-302	RCH-603
Saddle	-	HP-2015	HP-3015	HP-5016
Hose	HB-7206QB	HC-7206	HC-7206	HC-7206
Gauge	GF-120B	GF-813B	GF-813B	GF-813B
Gauge Adaptor	GA-3	GA-3	GA-3	GA-3
Included Pullers	BHP-1762	BHP-252	BHP-352	BHP-552
	BHP-1772	BHP-262	BHP-362	BHP-562
	BHP-180	BHP-280	BHP-380	BHP-580
	BHP-181	BHP-282	BHP-382	BHP-582
Case	CM-6	CW-350	CW-350	CW-750



Grip Puller Sets

- Precise hydraulic control allows fast, efficient and safe pulling
- High quality, forged steel components provide superior reliability and service
- Available with and without full hydraulic set.

Grip Puller Set Capacity		8 ton	20 ton	30 ton	50 ton
Model Number		BHP-152	BHP-251G	BHP-351G	BHP-551G
Included Hydraulics/Set W		22 kg	56 kg	91 kg	160 kg
Hand Pump		P-392	P-392	P-392	P-80
Cylinder		RCH-1211	RCH-202	RCH-302	RCH-603
Saddle		-	HP-2015	HP-3015	HP-5016
Hose		HB-7206QB	HC-7206	HC-7206	HC-7206
Gauge		GF-120B	GF-813B	GF-813B	GF-813B
Gauge Adaptor		GA-3	GA-3	GA-3	GA-3
Grip Puller	Model Number ▶	BHP-1762*	BHP-252*	BHP-352*	BHP-552*
Maximum Spread (mm)	2-jaw	249	400	593	899
	3-jaw	249	499	800	1100
Maximum Reach (mm)	2-jaw	252	300	387	700
	3-jaw	252	300	387	700
Jaw (mm)	Thickness	15	20	24	30
	Width	23	27	38	39
Adjusting Screw (mm)	Thread	¾"- 16 UNF	1"- 8 UNC	1¼"- 7 UNC	1½"- 5.5 UNC
	Length	400	675	795	975
Case		CW-166	CW-166	CW-350	CW-750



Cross Bearing Puller Sets

Precise hydraulic control allows fast, efficient and safe pulling
High quality, forged steel components provide superior reliability and service.



Cross Bearing Puller Set Capacity		8 ton	20 ton	30 ton	50 ton
Model Number		BHP-162	BHP-261G	BHP-361G	BHP-561G
Included Hydraulics/Set W		26 kg	62 kg	121 kg	185 kg
Hand Pump		P-392	P-392	P-392	P-80
Cylinder		RCH-1211	RCH-202	RCH-302	RCH-603
Saddle		–	HP-2015	HP-3015	HP-5016
Hose		HB-7206QB	HC-7206	HC-7206	HC-7206
Gauge		GF-120B	GF-813B	GF-813B	GF-813B
Gauge Adaptor		GA-3	GA-3	GA-3	GA-3
Cross Bearing Puller		BHP-1772	BHP-262	BHP-362	BHP-562
Spread (mm)	Maximum	266	351	454	570
	Minimum	106	139	179	220
Reach (mm)	Maximum	462	571	711	863
Adjusting Screw (mm)	Diameter	¾" - 16UNF	1" - 8 UNC	1¼" - 7 UNC	1½" - 5.5 UNS
	Length	400	675	795	975
Leg (mm)	Length	105	239	203	609
	Length	354	419	457	863
	Length	–	571	711	–
	Length	–	114	–	–
Upper Leg Ends	Thread	¾" - 16 x 25	¾" - 16 x 25	1-14 x 35	1¼" - 12 x 38
Lower Leg Ends	Thread	¾" - 18 x 25	¾" - 18 x 25	1-14 x 27	1¼" - 12 x 38
Bearing Cup Puller Model		BHP-180	BHP-280	BHP-380	BHP-580
Bearing Puller Model		BHP-181	BHP-282	BHP-382	BHP-582
Case		CM-6	CW-187	CW-350	MK-05

Automatic Vehicle Hydraulic Puller

Double-acting designed to disassemble heavy bearings, gears and so on
Fully automatic operation design, automatically up and down, grip and pull
Possible for two claws or three claws
Roller cart to change workplace



Model	Stroke (mm)	Cap (Ton)	Min Open / Pulling Depth (mm)	Max Open / Pulling Depth (mm)	Voltage (V)	Center Height Range (mm)	Overall Length (m)	Weight (kg)
LA50337	337	50	100/381	1220/178	380	450-1120	2286	620
LA50L337	337	50	64/651	1150/559	380	450-1120	2590	660
LA100320	320	100	120/580	1400/425	380	500-1250	2300	680
LA200320	320	200	28/680	150/520	380	720-1500	2500	1040

Movable Hydraulic Puller

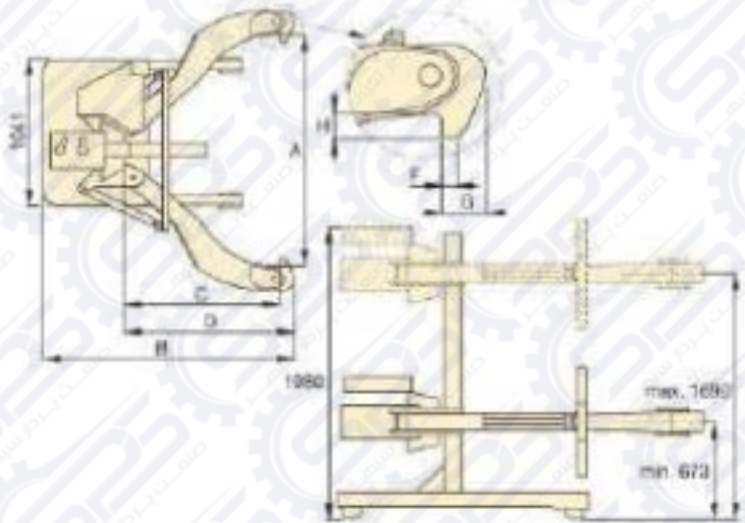
Double-acting hydraulic design
Using for dismantling large shafts and perforating work pieces
Available for 2 and 3 jaws design allows a pulling disc to pull bearing.

Model	Capacity (Ton)	Stroke (mm)	Spread (mm)	Reach (mm)	Working Pressure	Weight (kg)
13MP50	50	160	350	300	70Mpa	450
13MP100	100	160	450	340	70Mpa	540
13MP200	200	160	500	380	70Mpa	820
13MP300	300	200	550	450	70Mpa	953
13MP500	500	200	600	480	70Mpa	1800



100T Hydraulic Grip Puller

Roller cart with power lift
Hydraulically actuated lift cylinder on cart extends puller from ground to a height of 1.7m
Adjustable jaw tips
Puller height range 673 to 1690mm
Multiple pushing adaptors included



Model	Jaw	Spread Range A (mm)	Capacity (ton)	Overall Length B (mm)	Reach C (mm)	Jaw Length D (mm)	Jaw Width F (mm)	Tip Clearance G (mm)	Tip Depth H (mm)	Weight (kg)
PH-102T	2	191-1778	100	1956	1219	1346	32	89	89	771
PH-103T	3	191-1778	100	1956	1219	1346	32	89	89	907
PH-123T	2/3	191-1778	100	1956	1219	1346	32	89	89	816
PH-200T	4	165-1778	200	1994	1219	1346	32	89	89	1882

Automatic Vehicle Hydraulic Puller

Fully automatic operation design
With trolley, it can easily move around
Double acting design



Model	Capacity (Ton)	Stroke (mm)	Spread (mm)	Pulling Depth@Min Open (mm)	Pulling Depth@Max Open (mm)	Weight (kg)
14AMP100	100	200	200-1000	450	375	720
14AMP200	200	250	300-1500	680	550	1300
14AMP300	300	300	400-1800	980	750	1820
14AMP500	500	350	500-2000	1050	920	2100
14AMP630	630	350	500-2000	1250	1000	2500



Vehicle Hydraulic Puller

Working Pressure: 700bar
Used for dismantling large shafts and performance work pieces
Double-acting designed
Two jaws design easy to operate

Model	Capacity (Ton)	Stroke (mm)	Min Spread (mm)	Max Spread (mm)	Working Pressure (Mpa)	Weight (kg)
14CMP80	80	280	130	370	70	550
14CMP100	100	350	170	420	70	780
14CMP150	150	400	210	450	70	1080
14CMP200	200	500	450	650	70	1250

Vehicle Hydraulic Puller

Made of alloy steel with super-high strength
Double-acting hydraulic design
Two jaws design easy to operate
With safety lock unit



Model	Stroke (mm)	Capacity (mm)	Min Open/Pulling Depth (mm)	Max Open/Pulling Depth (mm)	Voltage (V)	Center Height Range (mm)	Overall Length (mm)	Weight (kg)
LA25100	250	100	318/1066	1219/863	380	305-915	3015	520
LA2560	250	60	140/790	100/650	380	305-915	2885	700
LA25200	250	200	450/1200	1450/995	380	450-1050	3500	1020



Hydraulic Tools For Industrial Applications



Catalog

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IBT series Square drive hydraulic torque wrench

The new locking coupler ensures the oil keep free access

The 360°185 degree swivel is free to operation with no space limitation.

-700bar Max working pressure and the accuracy keep within ±3%
 -All together 10 models with the range from 112N.m to 72000N.m, which covers the most bolts size, and be the most comprehensive available in the market.
 -The 360°185 degree swivel is free to operation with no space limitation.
 -The square drive operate with the high intense socket and suitable with large range of bolts
 -360 degree adjustable reaction arm allows placing in any support point.
 -Compact design with the raw material of advanced aluminum-titanium alloy, high intense.

Laser with the pressure-torque table enables convenient operation

The reaction arm with 360 degree trimming style allows placing in any support point.

Compact design with the raw material of advanced aluminum-titanium alloy, which intensifies the strength and toughness of the fuselage comprehensively

IBT Series Selection Chart

TYPE	07IBT	11BT	31BT	51BT	81BT	101BT	201BT	251BT	351BT	501BT
Torque (N.m)	112~1120	183~1837	451~4512	752~7528	1078~10780	1551~15516	2666~26664	3472~34725	4866~48666	7200~72000
Bolt size (M)	14~30	16~36	22~48	27~56	30~64	36~72	42~90	48~100	64~120	72~125
Weight(Kg)	1.8	2.5	5	8	11	15	26.5	35	50	87
Square Drive	3/4"	3/4"	1"	1-1/2"	1-1/2"	1-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"

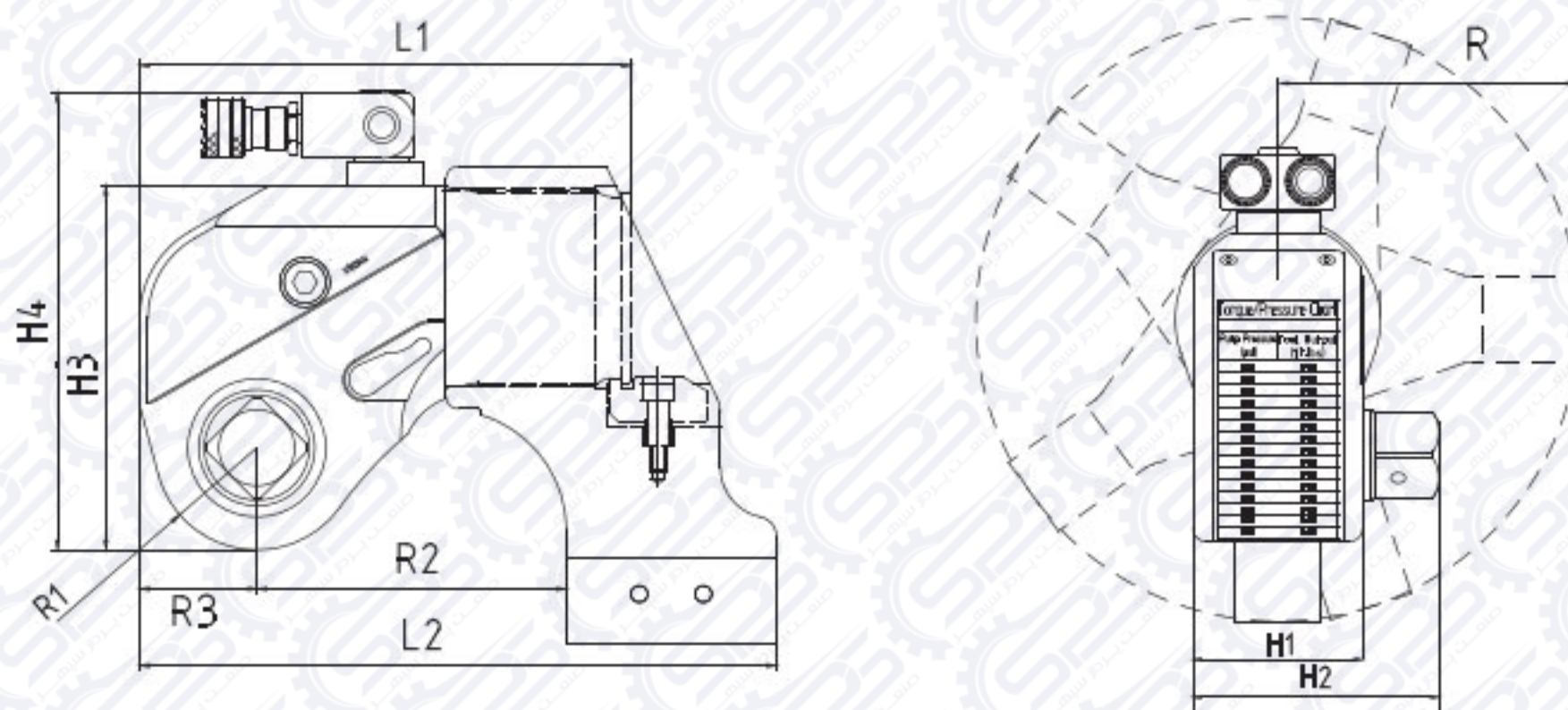
Industrial Applications:



IBT series

Square drive hydraulic torque wrench

IBT series is the professional hydraulic torque wrench which RAHSOL SPS vigorously extends in international market. Its raw material is aluminum-titanium alloy which makes the wrench light and high intense. IBT series has 10 models with the range from 112N.m to 72000N.m; covers the most of bolts size, and be the most comprehensive available in the market. RAHSOL SPS provide after-sales service all over the world, and already got the approved by CE certificate.

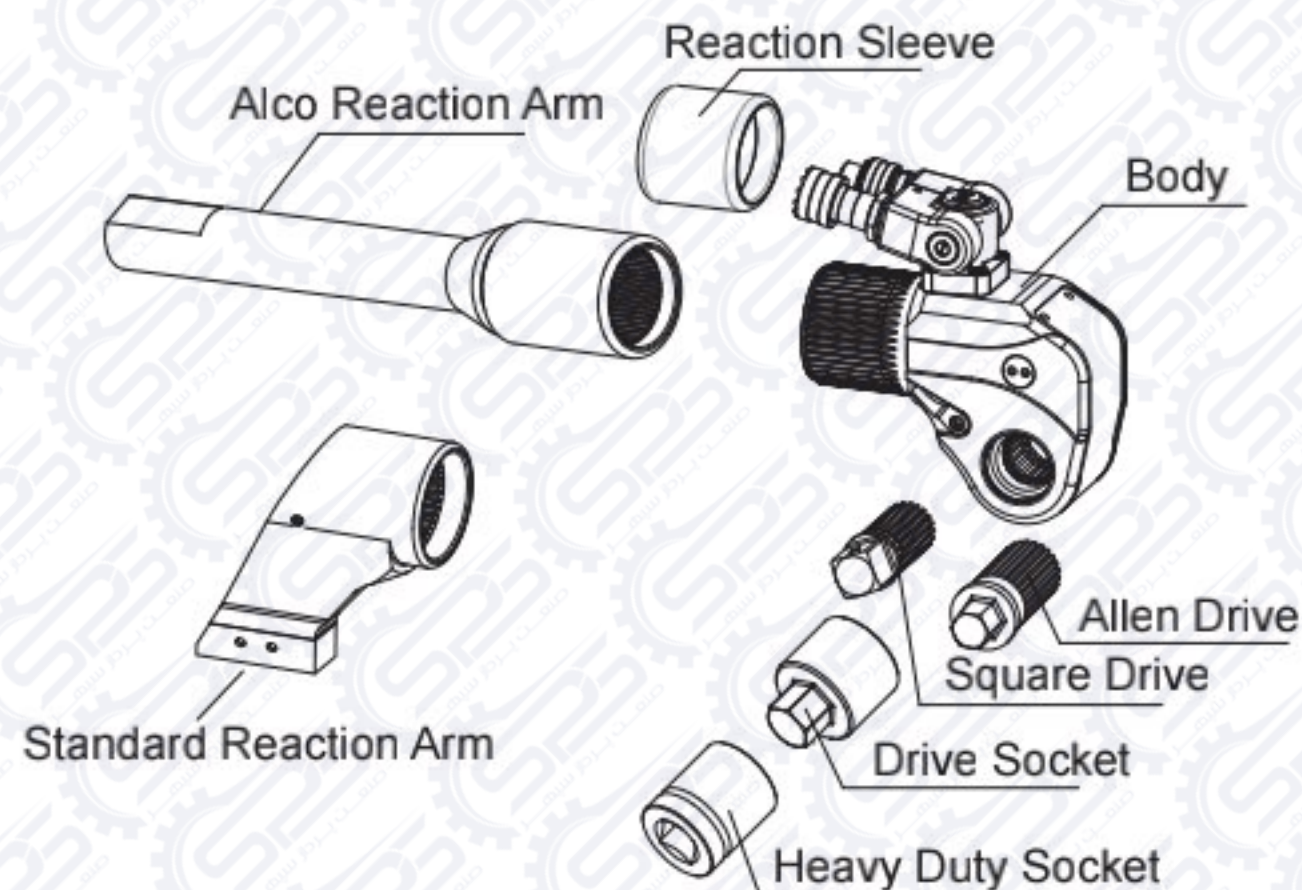


IBT Dimension Chart

TYPE	L1 (mm)	L2 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	R (mm)	R1 (mm)	R2 (mm)	R3 (mm)
07IBT	110.8	139.3	42	65.8	76.2	108.1	75	20.5	68.3	25
11IBT	144.5	173.5	50	72	96	131	91.5	26	85	29
31BT	178	229	68	95	127	176.5	123.5	34	114	40
51BT	210.5	270.5	80	123	149	199	140	39	137	46.5
81BT	222	293	90	134	167	217	165	47	153	47
101BT	245.5	317.5	100	142	182	232	178	51	154	58.5
201BT	307.5	383.5	120	183	220	270	213	59	186	71
251BT	323	401	137	200	247	297	228	66	199	66
351BT	372.5	496.5	153	216	282	332	243.5	77	241	79
501BT	400	516	160	223	291	341	258	81	259	97.5

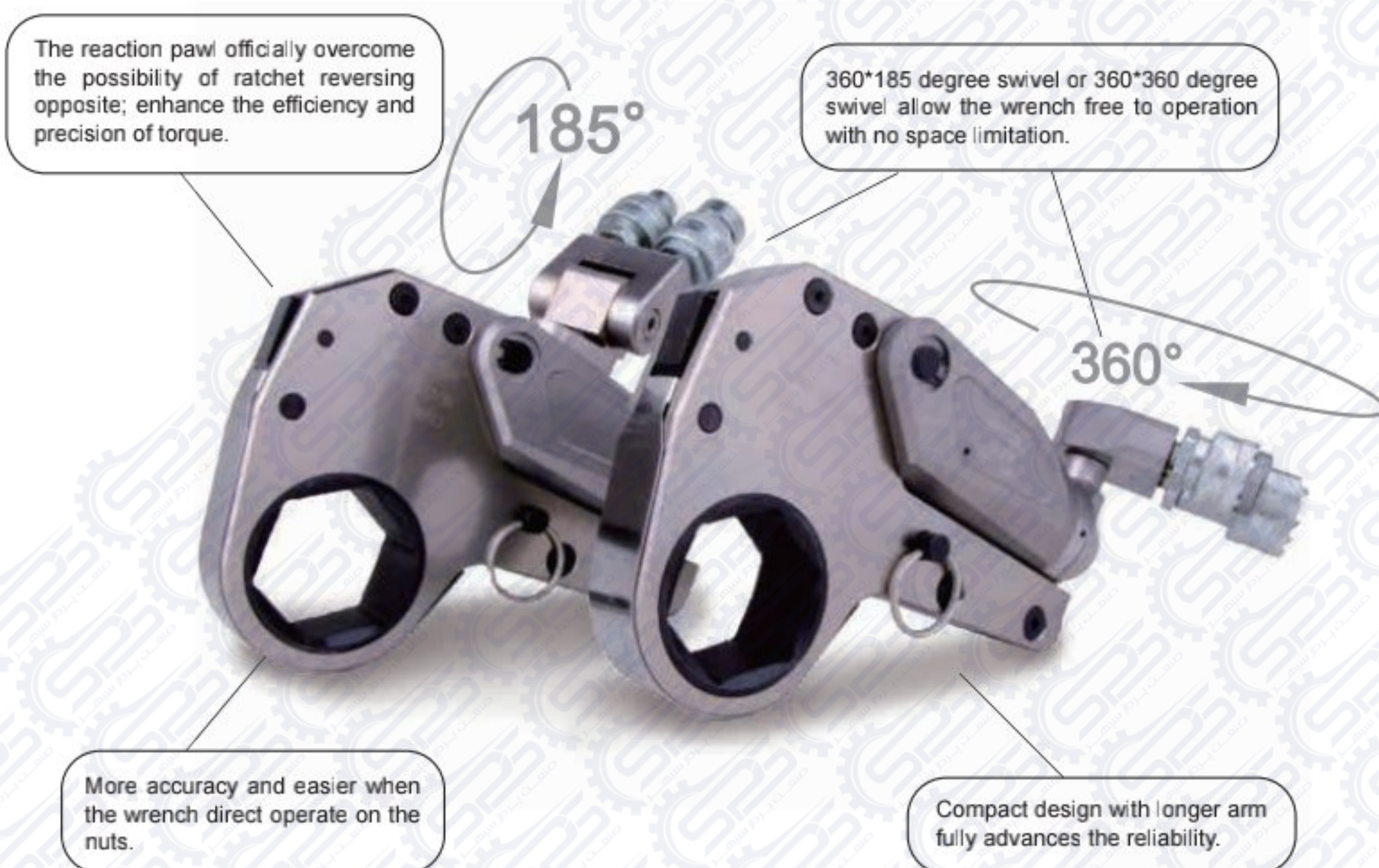
Accessory:

For Special Reaction Arm, consult to RAHSOL SPS



LOW series

Low Profile Hydraulic Torque Wrench

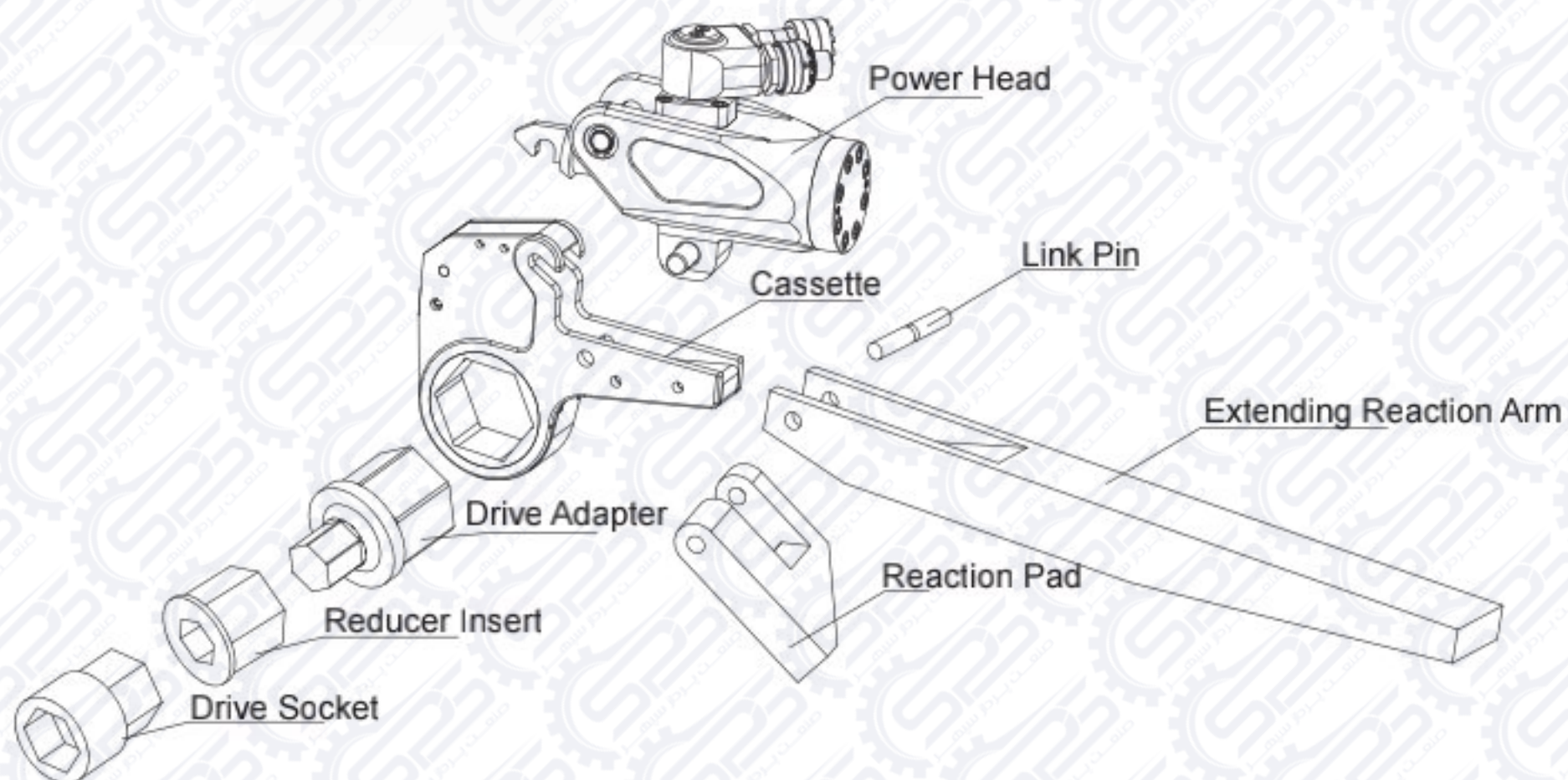


- 700bar max working pressure; keep the accuracy $\pm 3\%$.
- 5 models with the range from 232-44593N.m
- 360°185 degree swivel & 360°360 degree swivel allow the wrench free to operation with no space limitation.
- More accuracy and easier when the wrench direct operate on the nuts.
- Compact design with longer arm fully advances the reliability.
- Compact design with the raw material of advanced aluminum-titanium alloy, high intense.

LOW series is the professional Low profile hydraulic torque wrench which RAHSOLSPS vigorously extends in international market. Compare with the square drive hydraulic torque wrench, this series work directly on the nuts, and its body suits well in the narrow space. LOW covers the nuts from S19 to S175. To fulfill all different working situations, the user can just replace the hexagon cassette because the hexagon cassette is changeable, or add the reducer. RAHSOLSPS provide after-sales service all over the world, and already got the approved by CE certificate.

Accessory:

Reaction Pad	
Extending Reaction Arm	

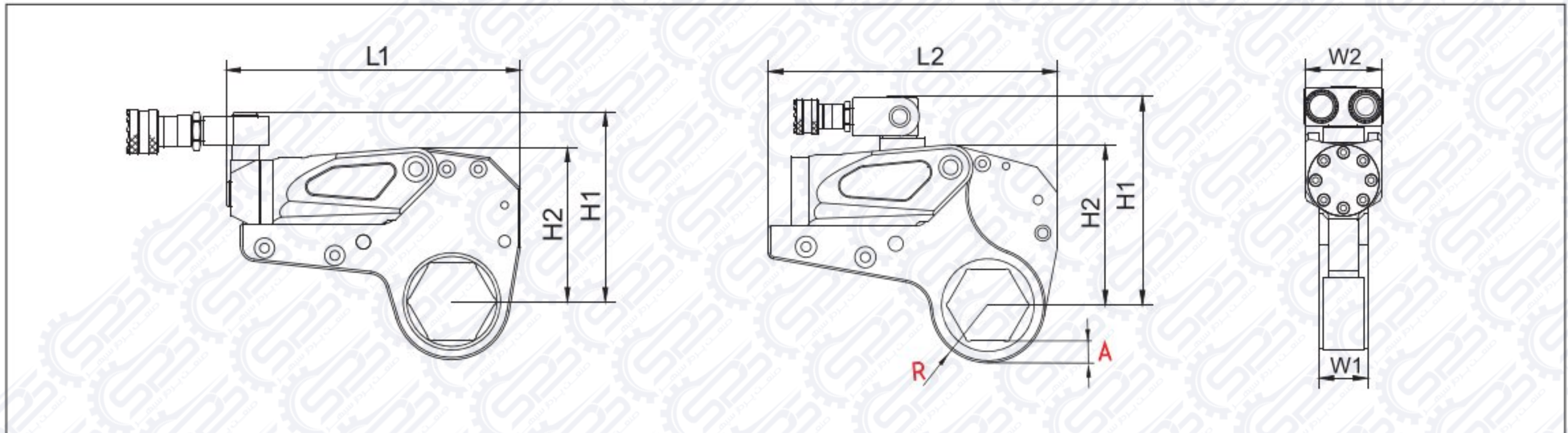


LOW Paramete Chart

TYPE	Torque (N.m)	Nut Sizes (mm)	Power Head Weight (Kg)	Cassette Weight (Kg)	Sizes (mm)					
					L1	L2	H1	H2	W1	W2
2LOW	232~2328	19~55	1	1.6	196.4	196.4	125.9	102.3	32	51
	241~2414	60	1	1.7			128.5	105	32	51
4LOW	585~2510	34~36	2	4.4	245	246	177	135.7	42	66
	585~5021	41	2	4.6			187	145.7	42	66
	585~5858	46~65	2	4.6			187	145.7	42	66
	647~6474	70~80	2	4.6			187	145.7	42	66
8LOW	1094~10941	41~95	3.3	8	300	301	207	169	53	83
	1177~11774	100~105	3.3	8.4			216	178	53	83
14LOW	1852~18521	50~117	5.5	11.6	361	361	239	204	64	99
30LOW	4188~41882	110~155	11.4	29	430	441	303	272	85	131
	4459~44593	160~175	11.4	30			315	285	85	131

LOW series Low Profile Hydraulic Torque Wrench

LOW Dimension Drawing



LOW Series Hexagon Cassette Selection Chart

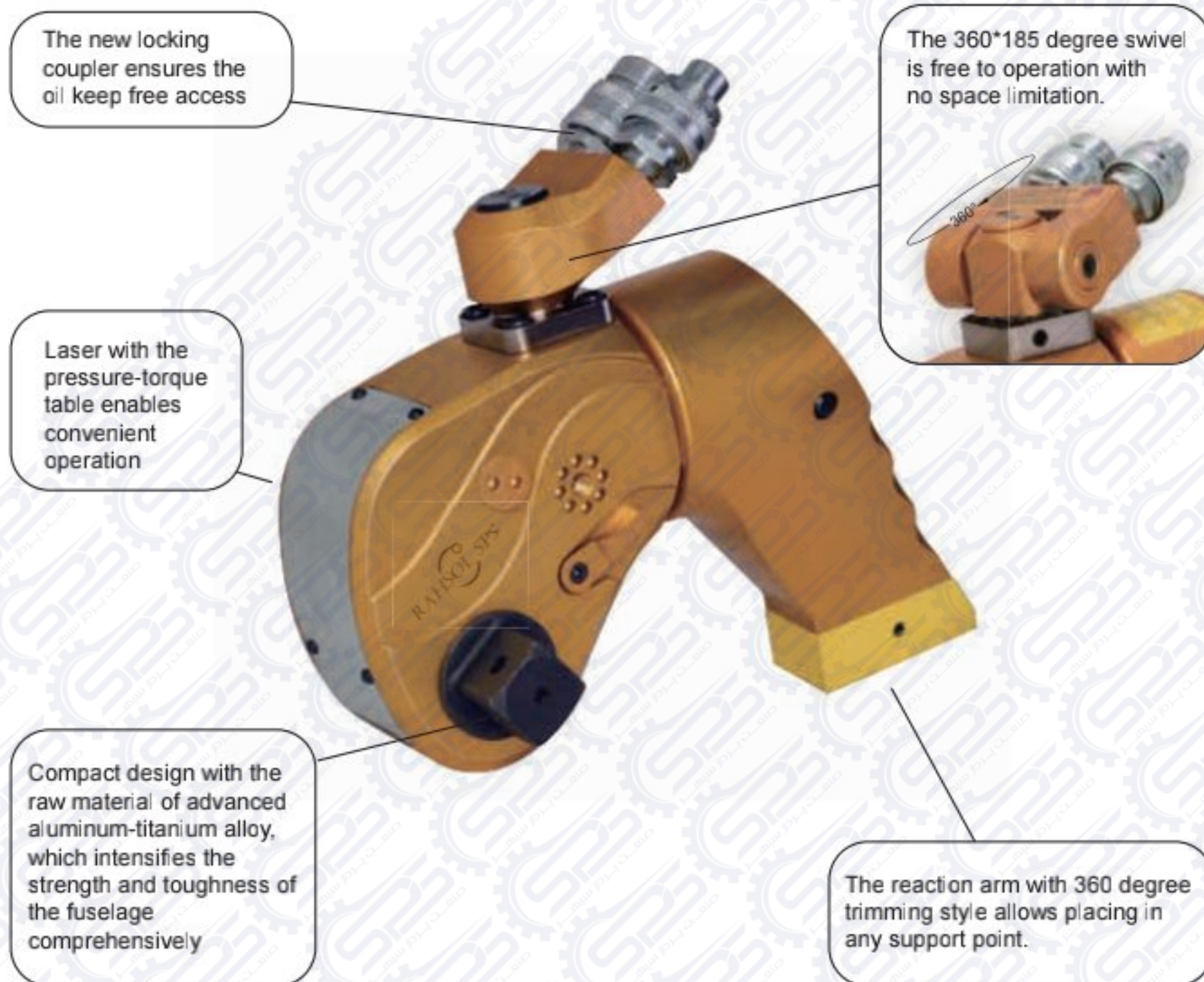
2LOW				4LOW				8LOW				14LOW				30LOW			
Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque
2LOW-19	27	16	2328	4LOW-34	36	16	2510	8LOW-41	46	22	10941	14LOW-50	60	31	18521	30LOW-85	78	28	41882
2LOW-22	27	14	2328	4LOW-36	36	15	2510	8LOW-46	46	19	10941	14LOW-55	60	28	18521	30LOW-90	78	27	41882
2LOW-27	27	11	2328	4LOW-41	39	15	5021	8LOW-50	46	17	10941	14LOW-60	60	25	18521	30LOW-95	83	28	41882
2LOW-30	29	12	2328	4LOW-46	42	15	5858	8LOW-55	50	18	10941	14LOW-65	60	22	18521	30LOW-100	83	25	41882
2LOW-32	29	11	2328	4LOW-50	44	15	5858	8LOW-60	52	17	10941	14LOW-70	60	19	18521	30LOW-105	89	28	41882
2LOW-34	31	11	2328	4LOW-55	46	14	5858	8LOW-65	55	17	10941	14LOW-75	63	19	18521	30LOW-110	89	25	41882
2LOW-36	31	10	2328	4LOW-60	50	15	5858	8LOW-70	58	17	10941	14LOW-80	66	19	18521	30LOW-115	95	28	41882
2LOW-41	34	10	2328	4LOW-65	53	15	5858	8LOW-75	60	17	10941	14LOW-85	69	19	18521	30LOW-117	95	27	41882
2LOW-46	37	10	2328	4LOW-70	56	15	6474	8LOW-80	63	16	10941	14LOW-90	72	20	18521	30LOW-120	95	25	41882
2LOW-50	40	11	2328	4LOW-75	59	15	6474	8LOW-85	66	16	10941	14LOW-95	74	19	18521	30LOW-125	101	29	41882
2LOW-55	43	11	2328	4LOW-80	61	15	6474	8LOW-90	69	17	10941	14LOW-100	77	19	18521	30LOW-130	101	26	41882
2LOW-60	46	11	2414					8LOW-95	71	16	10941	14LOW-105	80	19	18521	30LOW-135	104	26	41882
								8LOW-100	75	17	11774	14LOW-110	83	19	18521	30LOW-140	110	29	41882
								8LOW-105	78	17	11774	14LOW-115	87	20	18521	30LOW-145	110	26	41882
												14LOW-117	87	19	18521	30LOW-150	116	29	41882
																30LOW-155	116	26	41882
																30LOW-160	128	36	44593
																30LOW-165	128	33	44593
																30LOW-170	128	30	44593
																30LOW-175	128	27	44593

WREN can be customized according to customer requirements of special types of cassette.

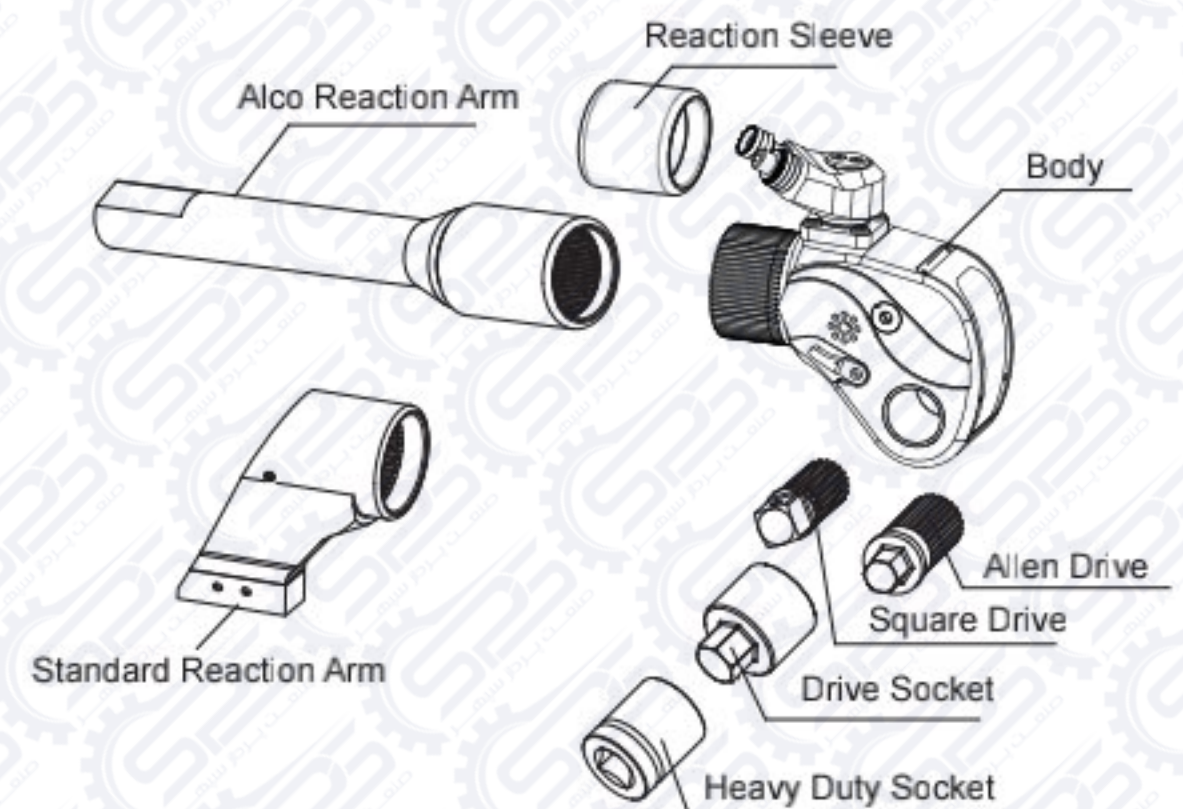
Industrial Applications:



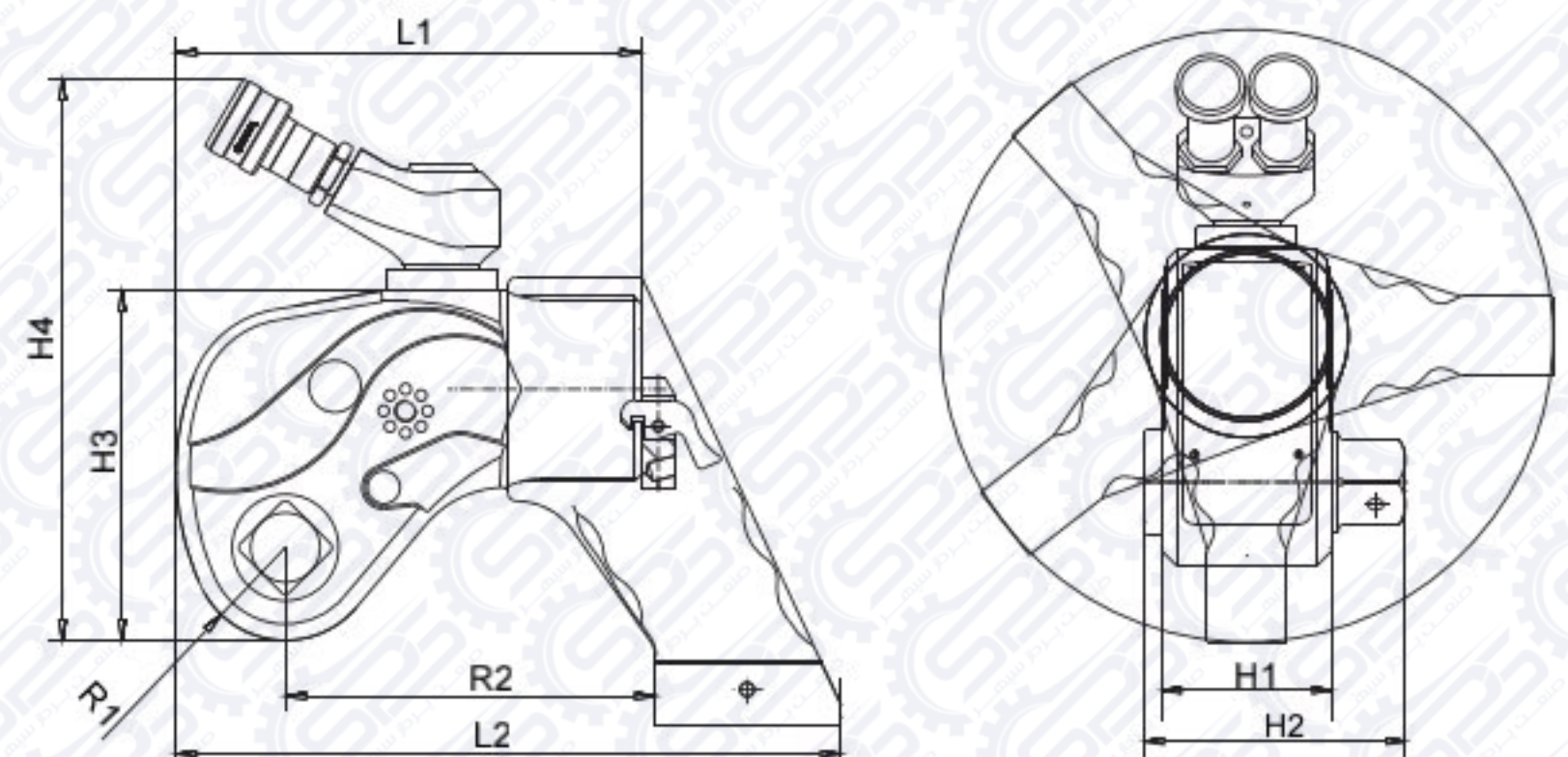
ATWS series Square drive hydraulic torque wrench



- 700bar Max working pressure and the accuracy keep within $\pm 3\%$
- All together 6 models with the range from 183N.m to 48666N.m, which covers the most bolts size, and be the most comprehensive available in the market.
- 360 degree or 360 X 185 degree swivel coupling.
- The square drive operate with the high intense socket and suitable with large range of bolts
- 360 degree adjustable reaction arm allows placing in any support point.
- Compact design with the raw material of advanced aluminum-titanium alloy, high intense.



ATWS series is the professional hydraulic torque wrench which RAHSOL SPS vigorously extends in international market. Its raw material is aluminum-titanium alloy which makes the wrench light and high intense. ATWS series has 6 models with the range from 183N.m to 48666N.m; covers the most of bolts size, and be the most comprehensive available in the market. RAHSOL SPS provide after-sales service all over the world, and already got the approved by CE certificate.



ATWS Series Selection Chart

TYPE	1ATWS	3ATWS	5ATWS	8ATWS	10ATWS	20ATWS	25ATWS	35ATWS
Torque (N.m)	183~1837	455~4553	758~7580	1096~10952	1456~14560	2666~26664	3472~34725	4866~48666
Bolt size (M)	16~36	22~48	27~56	30~64	36~72	42~90	48~100	64~120
Weight Kg	2.5	5	8	11	15	26.5	35Kg	50Kg
L1 (mm)	135	170	204	220	245	303	315	495
L2 (mm)	186	244	285	313	352	451	463	495
H1 (mm)	50	68	80	90	101	120	137	153
H2 (mm)	80	105	132	143	153	189	208	228
H3 (mm)	98	128	152	167	182	223	248	282
H4 (mm)	175	206	230	244	260	300	325	360
R1 (mm)	28	34	41	47	51	62	67	77
R2 (mm)	100	136	150	175	183	255	251	271
Square Drive	3/4"	1"	1-1/2"	1-1/2"	1-1/2"	2-1/2"	2-1/2"	2-1/2"

ATWH series Low Profile Hydraulic Torque Wrench

The reaction pawl officially overcome the possibility of ratchet reversing opposite; enhance the efficiency and torque accuracy.

Radial power head can be changed into axial power head, adapt to different conditions

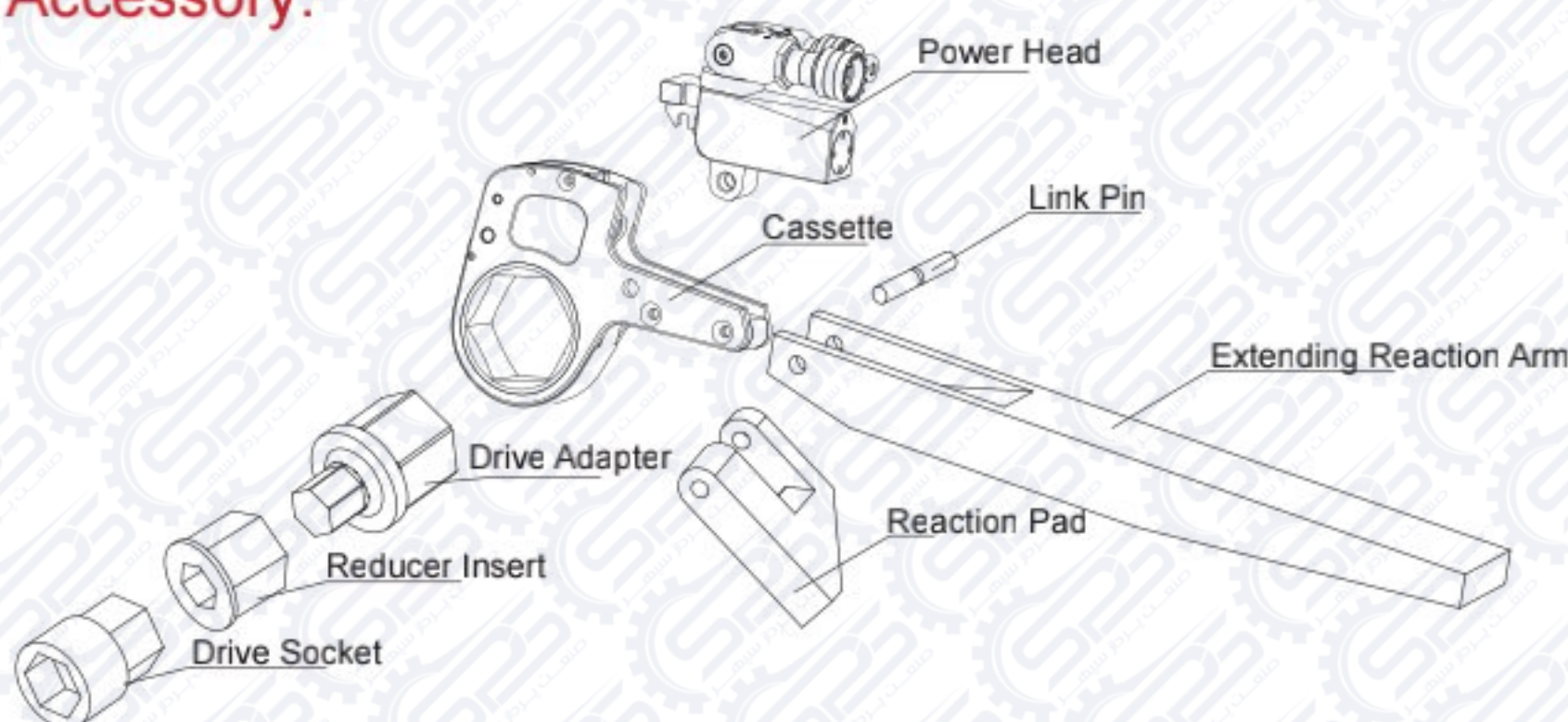
More accuracy and easier when the wrench direct operate on the nuts.

Compact design with longer arm fully advances the reliability.

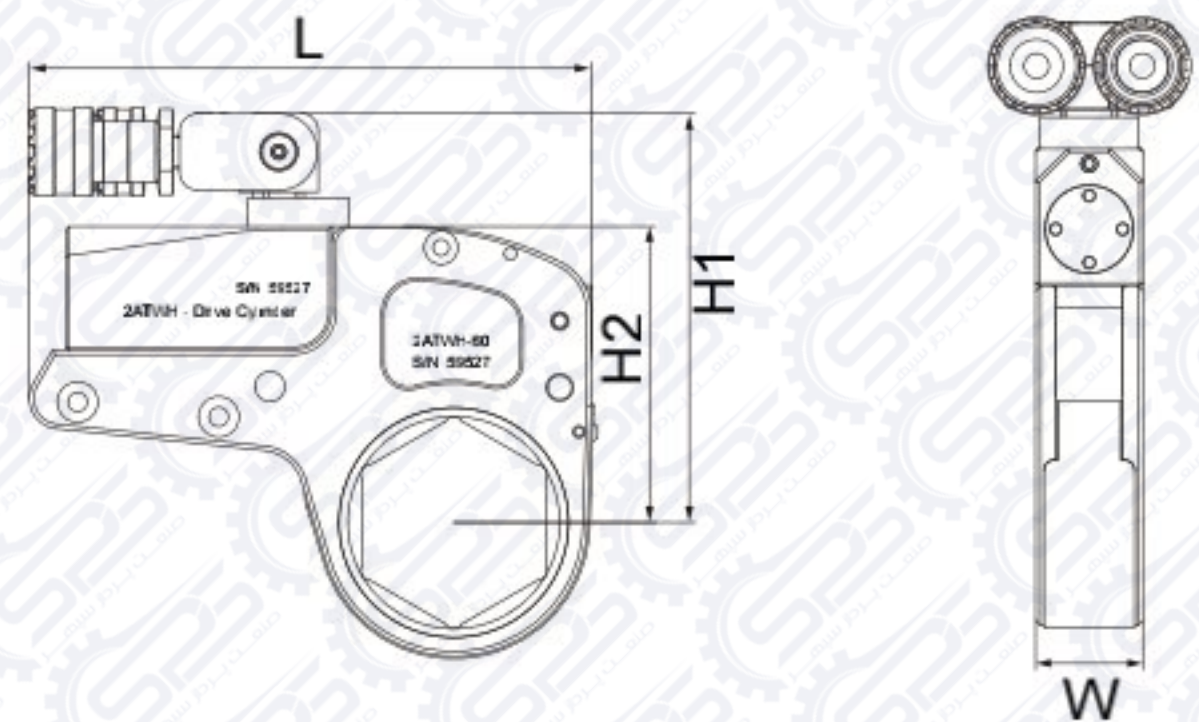
- 700bar max working pressure; keep the accuracy $\pm 3\%$.
- 5 models with the range from 225-44593N.m
- 360°185 degree swivel allow the wrench free to operation with no space limitation.
- More accuracy and easier when the wrench direct operate on the nuts.
- Compact design with longer arm fully advances the reliability.
- Compact design with the raw material of advanced aluminum-titanium alloy, high intense.

ATWH series is the professional Low profile hydraulic torque wrench which RAHSOL SPS extends in international market. Compared with the square drive hydraulic torque wrench, this series work directly on the nuts, and its body suits well in the narrow space. ATWH covers the nuts from S19 to S175. To fulfill all different working situations, the user can just replace the hexagon cassette because the hexagon cassette is changeable, or add the reducer. RAHSOL SPS provide after-sales service all over the world, and already got the approved by CE certificate.

Accessory:



Reaction Pad	
Extending Reaction Arm	



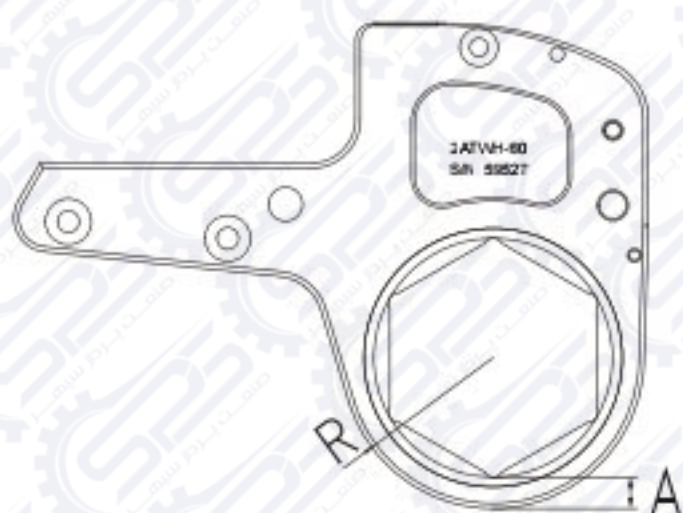
Parameter Chart

TYPE	Torque (N.m)	Nut Sizes (mm)	Power Head Weight (Kg)	Cassette Weight (Kg)	Sizes (mm)			
					L	H1	H2	W
08ATWH	113~1128	30~36	0.7	0.8	150	115	77	26
2ATWH	225~2255	19~55	0.9	1.5	186	132	95	32
	233~2338	60	0.9	1.5	186	135	98	32
4ATWH	520~5208	34~65	1.6	3.4	251	176	127	42
	575~5755	70~80	1.6	3.4	256	186	137	42
8ATWH	1043~10438	41~95	3.1	6.3	308	211	154	53
	1123~11233	100~105	3.1	6.3	308	220	163	53
14ATWH	1852~18521	50~117	4.8	11.4	378	252	200	64
30ATWH	4188~41882	110~155	10.5	20.5	460	300	253	85
	4459~44593	160~175	10.5	20.5	460	313	266	85

ATWH series Low Profile Hydraulic Torque Wrench



Every model of ATWH power head covers a complete set of hexagon cassette, combines all the bolt size within its torque range. When choosing the correct hexagon cassette, ensure the distance between bolt and equipment partition must larger than the distance of “A”. Pay attention that there is enough space between bolts. The “A” and “R” in below table will be helpful.



Reducer

Reducer work together with the ATWH Ratchet link. One single Ratchet link is suitable for many bolts sizes.(by the reducer, please contact RAHSOL SPS engineer)



Series Hexagon Cassette Selection Chart

08ATWH				2ATWH				4ATWH				8ATWH				14ATWH				30ATWH			
Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque
08ATWH-30	26	8	1128	2ATWH-19	27	16	2328	4ATWH-34	36	16	2510	8ATWH-41	46	22	10941	14ATWH-50	60	31	18521	30ATWH-85	78	28	41882
08ATWH-36	29	8	1128	2ATWH-22	27	14	2328	4ATWH-36	36	15	2510	8ATWH-46	46	19	10941	14ATWH-55	60	28	18521	30ATWH-90	78	27	41882
				2ATWH-27	27	11	2328	4ATWH-41	39	15	5021	8ATWH-50	46	17	10941	14ATWH-60	60	25	18521	30ATWH-95	83	28	41882
				2ATWH-30	29	12	2328	4ATWH-46	42	15	5858	8ATWH-55	50	18	10941	14ATWH-65	60	22	18521	30ATWH-100	83	25	41882
				2ATWH-32	29	11	2328	4ATWH-50	44	15	5858	8ATWH-60	52	17	10941	14ATWH-70	60	19	18521	30ATWH-105	89	28	41882
				2ATWH-34	31	11	2328	4ATWH-55	46	14	5858	8ATWH-65	55	17	10941	14ATWH-75	63	19	18521	30ATWH-110	89	25	41882
				2ATWH-36	31	10	2328	4ATWH-60	50	15	5858	8ATWH-70	58	17	10941	14ATWH-80	66	19	18521	30ATWH-115	95	28	41882
				2ATWH-41	34	10	2328	4ATWH-65	53	15	5858	8ATWH-75	60	17	10941	14ATWH-85	69	19	18521	30ATWH-117	95	27	41882
				2ATWH-46	37	10	2328	4ATWH-70	56	15	6474	8ATWH-80	63	16	10941	14ATWH-90	72	20	18521	30ATWH-120	95	25	41882
				2ATWH-50	40	11	2328	4ATWH-75	59	15	6474	8ATWH-85	66	16	10941	14ATWH-95	74	19	18521	30ATWH-125	101	29	41882
				2ATWH-55	43	11	2328	4ATWH-80	61	15	6474	8ATWH-90	69	17	10941	14ATWH-100	77	19	18521	30ATWH-130	101	26	41882
				2ATWH-60	46	11	2414					8ATWH-95	71	16	10941	14ATWH-105	80	19	18521	30ATWH-135	104	26	41882
												8ATWH-100	75	17	11774	14ATWH-110	83	19	18521	30ATWH-140	110	29	41882
												8ATWH-105	78	17	11774	14ATWH-115	87	20	18521	30ATWH-145	110	26	41882
																14ATWH-117	87	19	18521	30ATWH-150	116	29	41882
																				30ATWH-155	116	26	41882
																				30ATWH-160	128	36	44593
																				30ATWH-165	128	33	44593
																				30ATWH-170	128	30	44593
																				30ATWH-175	128	27	44593

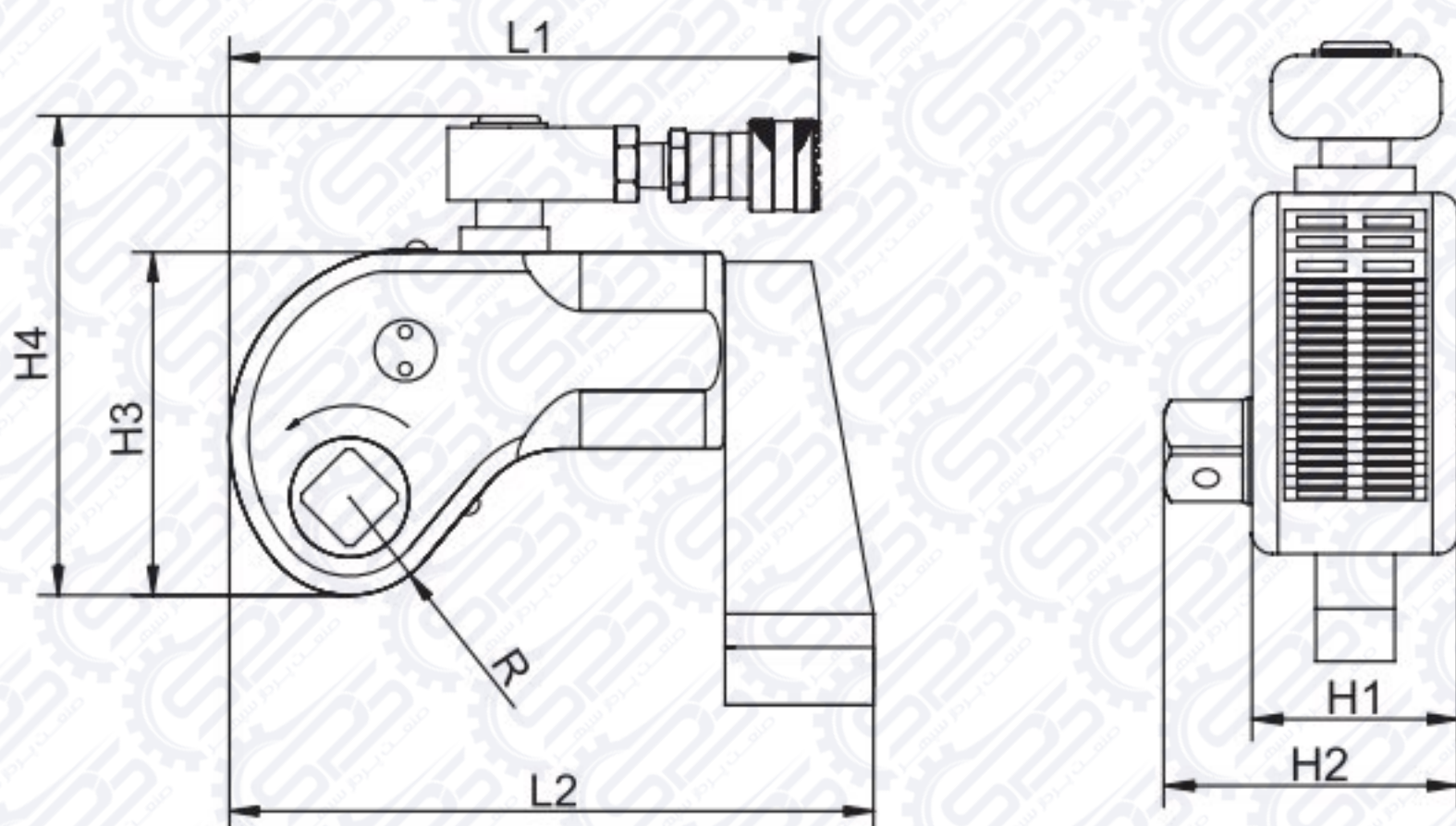
WREN can be customized according to customer requirements of special types of cassette.

S series Square Drive Torque Wrench



- 700bar maximum working pressure; Repeat accuracy $\pm 3\%$.
- 5 different model from 1727-36992N.m
- 360 degree or 360 X 185 degree swivel coupling.
- Working with the high resistance sockets, above more size of screw
- 360° Adjustable reaction arm with safely lock feature, can be used without reaction arm
- High resistance with aluminum-titanium and light body
- Replaceable square drive adapters

S configured with high technology, ideal for long-term usage by means of aluminum-titanium design. Besides having calibration service and support RAHSOLSPS is one of the important brands that can accomplish big missions even its small body. Almost every tightening & loosening problems can be accomplished with these series that have a torque capacity up to 3.6992 Nm. RAHSOLSPS serves a wide range accessory for S series. These products which are designed for serving true resolutions, entitled with CE seal result of an effort with appropriate directives.



S Series Technical Data

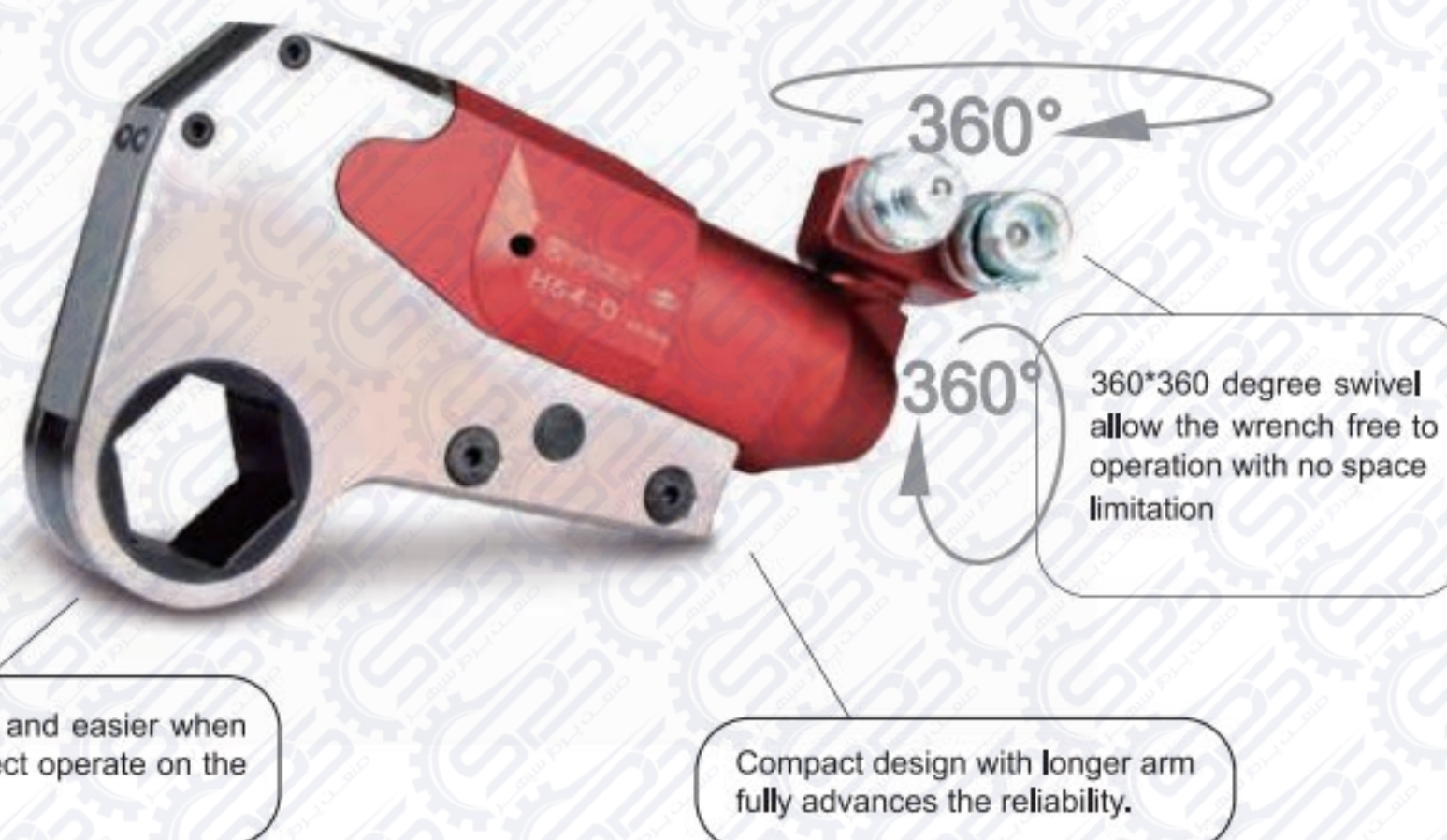
model	Torque (N.m)	Bolt size (M)	Square drive inches	Weight (Kg)	Sizes (mm)						
					L1	L2	H1	H2	H3	H4	R
S17	172~1727	16~36	3/4 "	2	129	167	51	73	90	131	25
S45	452~4529	22~48	1 "	4.6	167	218	68	98	121	170	34
S100	1006~10064	30~64	1 1/2 "	10	223	293	92	135	163	211	46
S150	1497~14974	36~72	1 1/2 "	14.8	264	323	100	141	177	225	50
S370	3699~36992	48~100	2 1/2 "	32.5	329	432	137	104	240	288	66

H series

Low Profile Torque Wrench

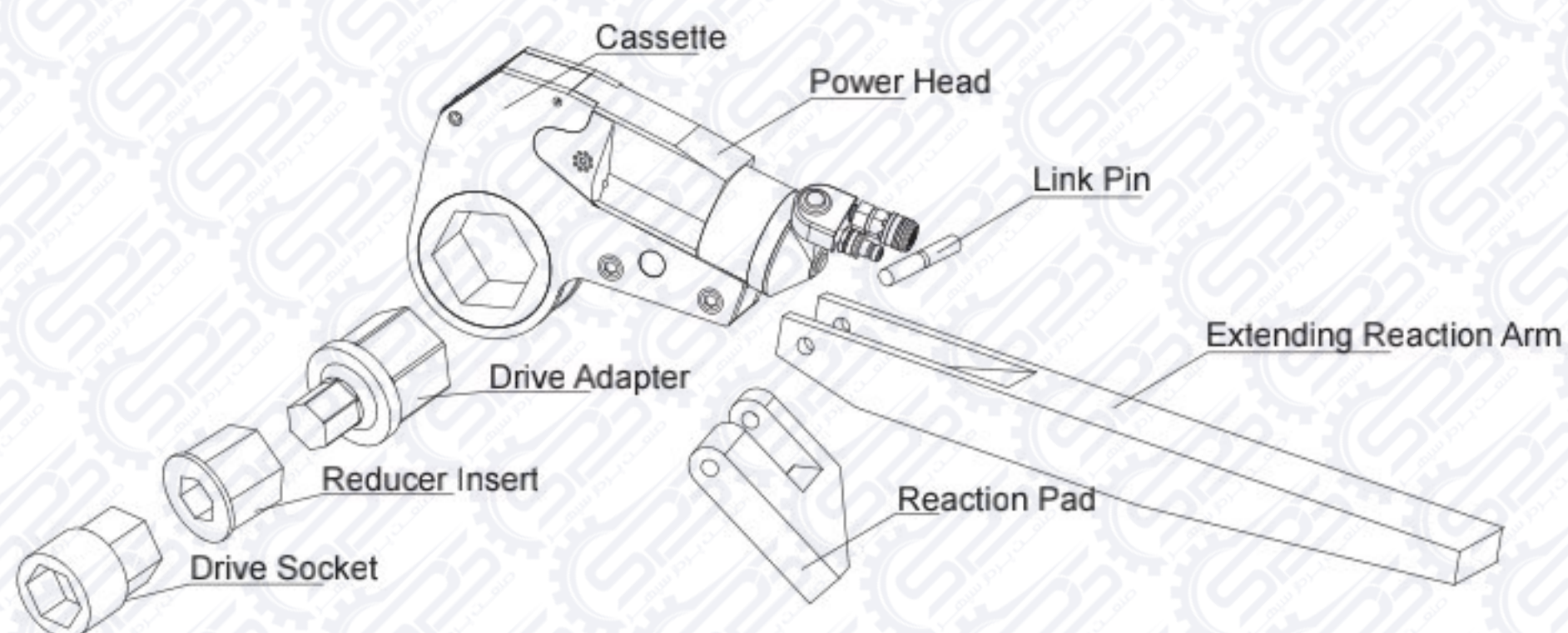
- 700bar maximum working pressure; Repeat accuracy $\pm 3\%$.
- 5 different model from 2625-48481N.m
- Fitted with 360°x360° uni-swivel quick release couplings
- Low profile design to accessing limited areas
- Drivers and adaptors can be replaced easily

H low profile torque wrenches designed for accessing limited areas and serves goog solutions with numbers of replaceable cassettes and adaptors. Drivers can be replaced easily and fast without using any tolls. Saves time by means of easy replacement of attachments. Light weight aluminum design allows easy operations even in robust conditions.



Accessory:

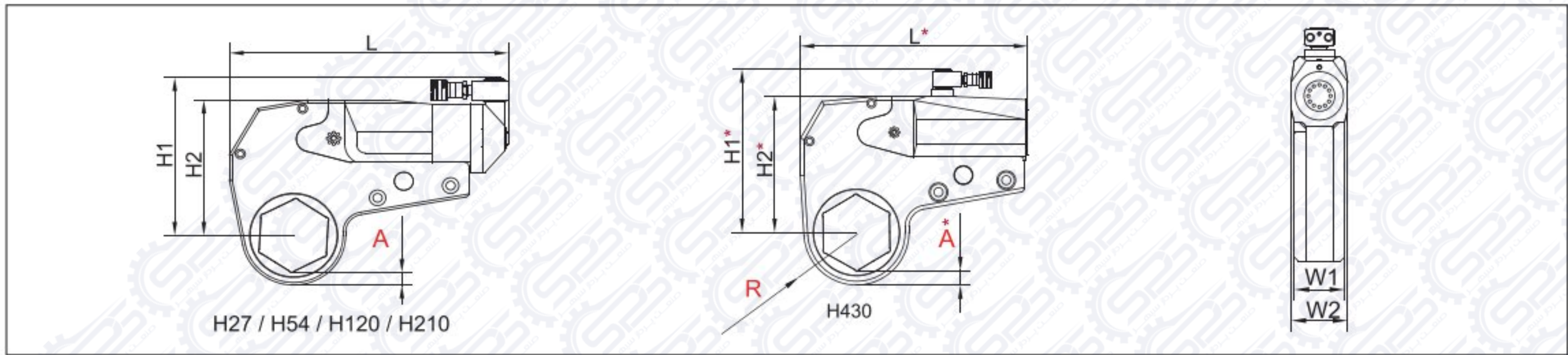
Reaction Pad	
Extending Reaction Arm	



H Series Technical Data

model	Torque (N.m)	Bolt size (mm)	Weight (Kg)	Cassette Weight (Kg)	Sizes (mm)					
					L	H1	H2	W1	W2	A
H27	262~2625	19~46	0.9		193	125	97	32	51	10~15
	306~3068	50~60			193	136	108	32	51	10~11
H54	537~5372	27~65	1.9		250	158	125	41	64	11~19
	603~6037	70~80			250	169	136	41	64	11.7~12
H120	1173~11737	50~80	3.4		310	189	157	52	78	15~15.2
	1434~14349	85~105			310	214	182	52	78	16~22
H210	2121~21216	70~100	5.9		378	223	191	64	97	8~21
	2312~23124	105~115			378	236	204	64	97	18~24
H430	4379~43792	80~117	16.1		405 *	291 *	242 *	83	93	25~31 *
	4848~48481	120~175			425 *	309 *	260 *	83	93	25~34 *

H Dimension Drawing



Choice of Cassettes

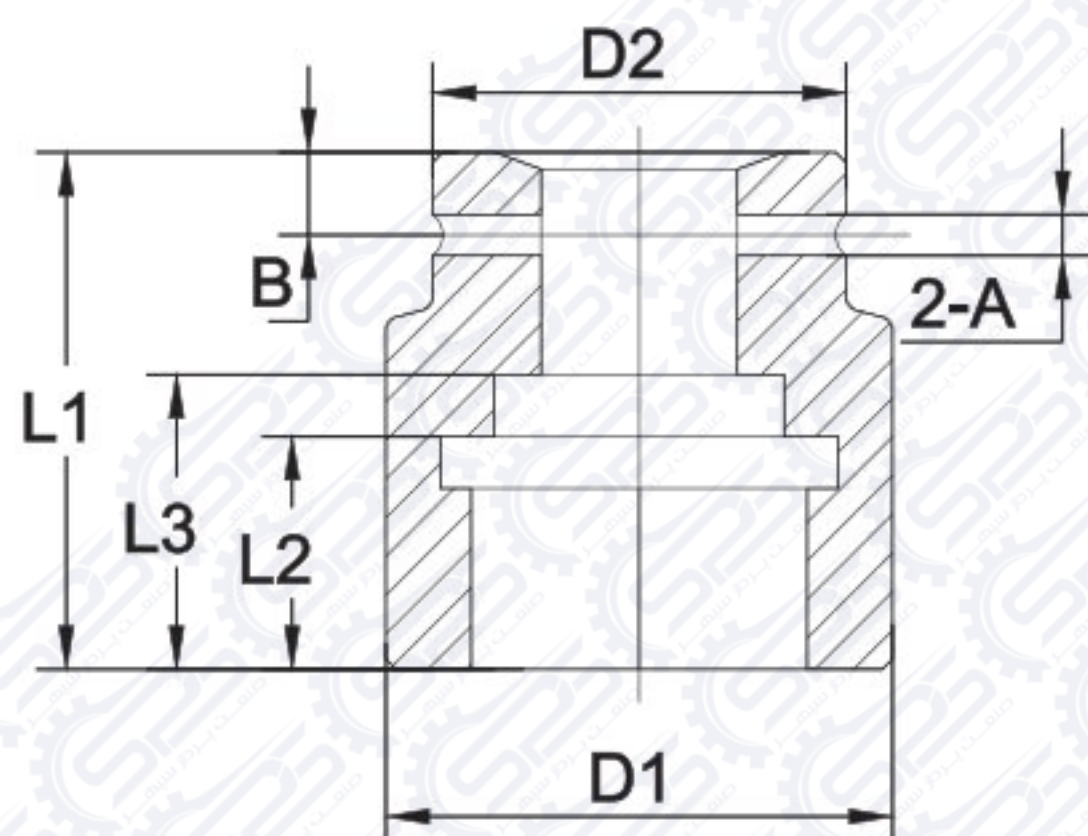
H27				H54				H120				H210				H430			
Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque
H27-19	26	15	2625	H54-27	36	19	5372	H120-50	44	15	11737	H210-70	59	18	21216	H430-80	72	25	43792
H27-22	26	14	2625	H54-30	35	17	5372	H120-55	47	15	11737	H210-75	62	18	21216	H430-85	78	28	43792
H27-27	26	11	2625	H54-32	35	16	5372	H120-60	50	15	11737	H210-80	65	18	21216	H430-90	78	25	43792
H27-30	28	11	2625	H54-34	35	15	5372	H120-65	53	15	11737	H210-85	68	18	21216	H430-95	84	28	43792
H27-32	28	10	2625	H54-36	35	14	5372	H120-70	56	15	11737	H210-90	71	18	21216	H430-100	84	26	43792
H27-34	31	11	2328	H54-41	35	11	5372	H120-75	58	15	11737	H210-95	74	18	21216	H430-105	90	28	43792
H27-36	31	10	2625	H54-46	37	11	5858	H120-80	61	15	11737	H210-100	77	18	21216	H430-110	90	26	43792
H27-41	34	10	2625	H54-50	41	12	5372	H120-85	66	16	14349	H210-105	79	18	23124	H430-115	94	28	43792
H27-46	37	10	2625	H54-55	44	12	5372	H120-90	69	16	14349	H210-110	82	18	23124	H430-117	94	26	43792
H27-50	40	11	3068	H54-60	47	12	5372	H120-95	71	16	14349	H210-115	87	21	23124	H430-120	101	31	48481
H27-55	42	11	3068	H54-65	50	12	5372	H120-100	77	19	14349					H430-125	101	28	48481
H27-60	45	10	3068	H54-70	52	12	6037	H120-105	77	16	14349					H430-130	101	25	48481
				H54-75	56	12	6037									H430-135	105	26	48481
				H54-80	58	12	6037									H430-140	110	29	48481
																H430-145	110	26	48481
																H430-150	115	29	48481
																H430-155	115	26	48481
																H430-160	121	29	48481
																H430-165	121	26	48481
																H430-170	128	30	48481
																H430-175	128	27	48481

RAHSOL SPS can be customized according to customer requirements of special types of cassette.

Industrial Applications:



Sockets

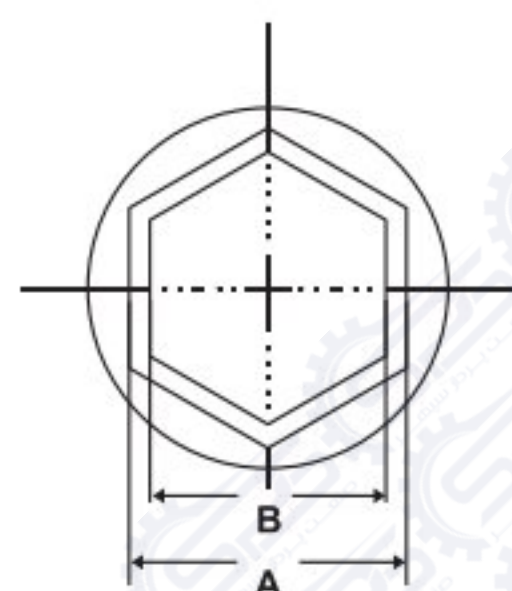


Can order imperial and non-standard socket

Standard sockets selection chart

Bolt Type		3/4" 07IBT/1IBT								1" 3IBT								1-1/2" 5,8,10IBT								2-1/2" 20,25,35,50IBT							
D	N	A	B	L1	L2	L3	D1	D2	A	B	L1	L2	L3	D1	D2	A	B	L1	L2	L3	D1	D2	A	B	L1	L2	L3	D1	D2				
M16	24	6.3	10	54	32	32	40	40																									
M18	27	6.3	10	54	32	32	42	42																									
M20	30	6.3	10	54	33	33	46	44	8	14	59	32	32	54	54																		
M22	34	6.3	10	54	33	33	52	44	8	14	59	32	32	58	58																		
M24	36	6.3	10	57	33	33	54	44	8	14	62	32	32	59	59	8	16	85	44	44	74	74											
M27	41	6.3	10	58	33	33	60	44	8	14	65	38	38	67	54	8	16	85	44	44	74	74											
M30	46	6.3	10	63	38	38	66	44	8	14	65	38	38	74	54	8	16	85	44	44	74	74											
M33	50	6.3	10	65	40	40	71	44	8	14	70	43	43	79	60	8	16	90	45	45	79	79											
M36	55	6.3	10	70	45	45	77	54	8	14	80	42	52	84	60	8	16	90	45	45	84	84	8	18	100	57	57	86	114				
M39	60								8	14	85	45	57	89	60	8	16	100	45	57	94	75	8	18	100	52	52	119	119				
M42	65								8	14	85	45	57	98	70	8	16	100	45	57	98	80	8	18	100	52	52	119	119				
M45	70								8	14	90	50	62	104	70	8	16	105	50	62	104	80	8	18	120	67	67	128	128				
M48	75								8	14	95	50	65	108	70	8	16	110	50	65	118	85	8	18	120	67	67	128	128				
M52	80															8	16	115	55	72	118	90	8	18	130	71	71	128	128				
M56	85															8	16	125	60	77	128	90	8	18	130	71	71	129	129				
M60	90															8	16	125	60	77	139	90	8	18	140	61	73	139	139				
M64	95															8	16	130	65	82	139	90	8	18	140	66	73	139	139				
M68	100															8	16	135	70	87	144	90	8	18	140	71	81	148	130				
M72	105															8	16	135	70	87	149	90	8	18	150	77	89	156	130				
M76	110															8	16	135	70	87	158	90	8	18	150	72	90	158	130				
M80	115															8	16	135	70	87	159	95	8	18	150	82	98	168	130				
M85	120															8	16	135	70	87	168	95	8	18	150	82	98	178	130				
M90	130															8	16	155	93	105	189	95	8	18	170	93	114	189	130				
M95	135																						8	18	170	93	114	198	130				
M100	145																						8	18	170	98	122	210	152				
M105	150																						8	18	190	100	140	216	152				
M110	155																						8	18	190	100	140	229	152				
M115	165																						8	18	190	100	140	241	152				

Reducer Insert



Standard reducer inserts selection chart

Can order imperial and non-standard Reducer Inserts

Wrench Model	Cassette	Nut Size (S)	Reducer Insert						Locking ring
			Type	A/B (mm)	Type	A/B (mm)	Type	A/B (mm)	
2LOW	2LOW-50	50	2G5041	50/41	2G5036	50/36	2G5032	50/32	H-50
	2LOW-46	46	2G4636	46/36	2G4632	46/32	2G4630	46/30	H-46
	2LOW-41	41	2G4132	41/32	2G4130	41/30	2G4127	41/27	H-41
	2LOW-36	36	2G3630	36/30	2G3627	36/27			H-36
	2LOW-32	32	2G3227	32/27					H-32
	2LOW-30	30							
	2LOW-27	27							
4LOW	4LOW-65	65	4G6555	65/55	4G6550	65/50	4G6546	65/46	H-56
	4LOW-60	60	4G6050	60/50	4G6046	60/46	4G6041	60/41	H-60
	4LOW-55	55	4G5546	55/46	4G5541	55/41	4G5536	55/36	H-55
	4LOW-50	50	4G5041	50/41	4G5036	50/36	4G5032	50/32	H-50
	4LOW-46	46	4G4636	46/36	4G4632	46/32	4G4630	46/30	H-46
	4LOW-41	41	4G4132	41/32	4G4130	41/30	4G4127	41/27	H-41
	4LOW-36	36	4G3630	36/30	4G3627	36/27			H-36
	4LOW-32	32	4G3227	32/27					H-32
	4LOW-30	30							
	4LOW-27	27							
8LOW	8LOW-90	90	8G9080	90/80	8G9075	90/75	8G9070	90/70	H-90
	8LOW-85	85	8G8575	85/75	8G8570	85/70	8G8565	85/65	H-85
	8LOW-80	80	8G8070	80/70	8G8065	80/65	8G8060	80/60	H-80
	8LOW-75	75	8G7565	75/65	8G7560	75/60	8G7555	75/55	H-75
	8LOW-70	70	8G7060	70/60	8G7055	70/55	8G7050	70/50	H-70
	8LOW-65	65	8G6555	65/55	8G6550	65/50	8G6545	65/45	H-65
	8LOW-60	60	8G6050	60/50	8G6046	60/46			H-60
	8LOW-55	55	8G5546	55/46	8G5541	55/41			H-55
	8LOW-50	50							
14LOW	14LOW-115	115	14G115105	115/105	14G115100	115/100	14G11595	115/95	H-115
	14LOW-110	110	14G110100	110/100	14G11095	110/95	14G11090	110/90	H-110
	14LOW-105	105	14G10595	105/95	14G10590	105/90	14G10585	105/85	H-105
	14LOW-100	100	14G10090	100/90	14G10085	100/85	14G10080	100/80	H-100
	14LOW-95	95	14G9585	95/85	14G9580	95/80	14G9575	95/75	H-95
	14LOW-90	90	14G9080	90/80	14G9075	90/75	14G9070	90/70	H-90
	14LOW-85	85	14G8575	85/75	14G8570	85/70	14G8565	85/65	H-85
	14LOW-80	80	14G8070	80/70	14G8065	80/65			H-80
	14LOW-75	75	14G7565	75/65					H-75
	14LOW-70	70							
	14LOW-65	65							
30LOW	30LOW-155	155	30G155145	155/145	30G155130	155/130	30G155120	155/120	H-155
	30LOW-145	145	30G145130	145/130	30G145120	145/120	30G145115	145/115	H-145
	30LOW-130	130	30G130120	130/120	30G130115	130/115	30G130110	130/110	H-130
	30LOW-120	120	30G120110	120/110	30G120105	120/105	30G120100	120/100	H-120
	30LOW-115	115	30G115105	115/105	30G115100	115/100	30G11595	115/95	H-115
	30LOW-110	110	30G110100	110/100	30G11095	110/95	30G11090	110/90	H-110
	30LOW-105	105	30G10595	105/95	30G10590	105/90	30G10590	105/90	H-105
	30LOW-100	100	30G10090	100/90	30G10085	100/85	30G10080	100/80	H-100
	30LOW-95	95	30G9585	95/85	30G9580	95/80			H-95
	30LOW-90	90	30G9080	90/80					H-90
	30LOW-85	85							
	30LOW-80	80							

The Choosing Of Hydraulic Torque Wrench

The bolt and nut pretightening force recommended chart.

Strength Grade		4.8		6.8		8.8		10.9		12.9	
Minmum Breaking Strength		392Mpa		588Mpa		784Mpa		941Mpa		1176Mpa	
Material		Q235(SS41)		35(S35C)		35CrMo(SCM3)		42CMo(SCM4)		40GrNiMoA(SNCM)	
Bolt	Diameter	Torque		Torque		Torque		Torque		Torque	
M(mm)	S(mm)	KGM	N.m	KGM	N.m	KGM	N.m	KGM	N.m	KGM	N.m
14	22	7	69	10	98	14	137	17	165	23	225
16	24	10	98	14	137	21	206	25	247	36	363
18	27	14	137	21	206	39	284	35	341	49	480
20	30	18	176	28	296	41	402	58	569	69	680
22	32	23	225	34	333	55	539	78	765	93	911
24	36	32	314	48	470	70	686	100	981	120	1176
27	41	45	441	65	637	105	1029	150	1472	180	1764
30	46	60	588	90	882	125	1225	200	1962	240	2352
33	50	75	735	115	1127	150	1470	210	2060	250	2450
36	55	100	980	150	1470	180	1764	250	2453	300	2940
39	60	120	1176	180	1764	220	2156	300	2943	370	3626
42	65	155	1519	240	2352	280	2744	390	3826	470	4606
45	70	180	1764	280	2744	320	3136	450	4415	550	5390
48	75	230	2254	350	3430	400	3920	570	5592	680	6664
52	80	280	2744	420	4116	480	4704	670	6573	850	8330
56	85	360	3528	530	5149	610	5978	860	8437	1050	10290
60	90	410	4018	610	5978	790	7742	1100	10791	1350	13230
64	95	510	4998	760	7448	900	8820				
68	100	580	5684	870	8526	1100	10780				
72	105	660	6468	1000	9800	1290	12642				
76	110	750	7350	1100	10780	1500	14701				
80	115	830	8143	1250	12250	1850	18130				
85	120	900	8820	1400	13720	2250	22050				
90	130	1080	10584	1650	16170	2500	24500				
100	145	1400	13720	2050	20090						
110	155	1670	16366	2550	24990						
120	175	2030	19894	3050	29890						

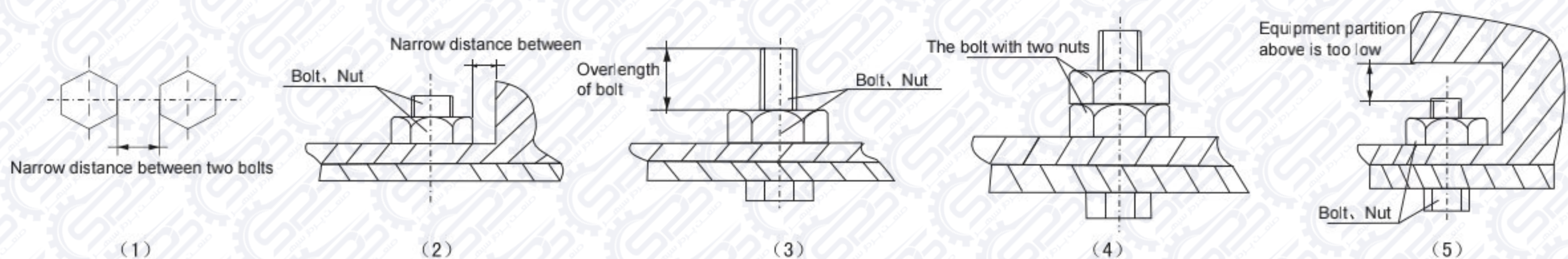
▲ This is Germany standard (DIN) above, the figure in the form is the max torque of the bolt, and the recommended torque is 80% of chart figure

▲ The recommended tightening torque equals the figure in the form*(80~90%). For instance: M52, strength grade is 8.8, the torque is $4704 \times 90\% = 4233.6 \text{ N.m}$

▲ It is recommended that loosening torque equals about 150% of tightening torque. For instance, the tightening torque is $4233.6 \times (1.5 \sim 2) = 6350.4 \sim 8467.2 \text{ N.m}$

The Space

Because of the space restriction, please notice the location. For example:



If you meet the above conditions, the square driven Torque Wrench cannot be used, you may use the Low Profile Wrench.

THE BW-SERIES MAGNETIC BACKUP WRENCHES SIMPLEST WAY TO STOP A NUT ROTATION. EASY TO USE AND VERSATILE

When torquing or loosening nuts, the thin profile of the MBW Backup wrench prevents the nut on the opposite side of the stud from turning.

No hydraulic, just mechanical & HANDS FREE OPERATION Eliminate injuries on hand and fingers.

Eliminate sparks cause from the use of slugging / striker wrenches.
Reduce time of operation and improve in productivity.



BOLTING SOLUTIONS

MAGNETS EMBEDDED
creates a magnetic field and force that attracts on other ferromagnetic materials.

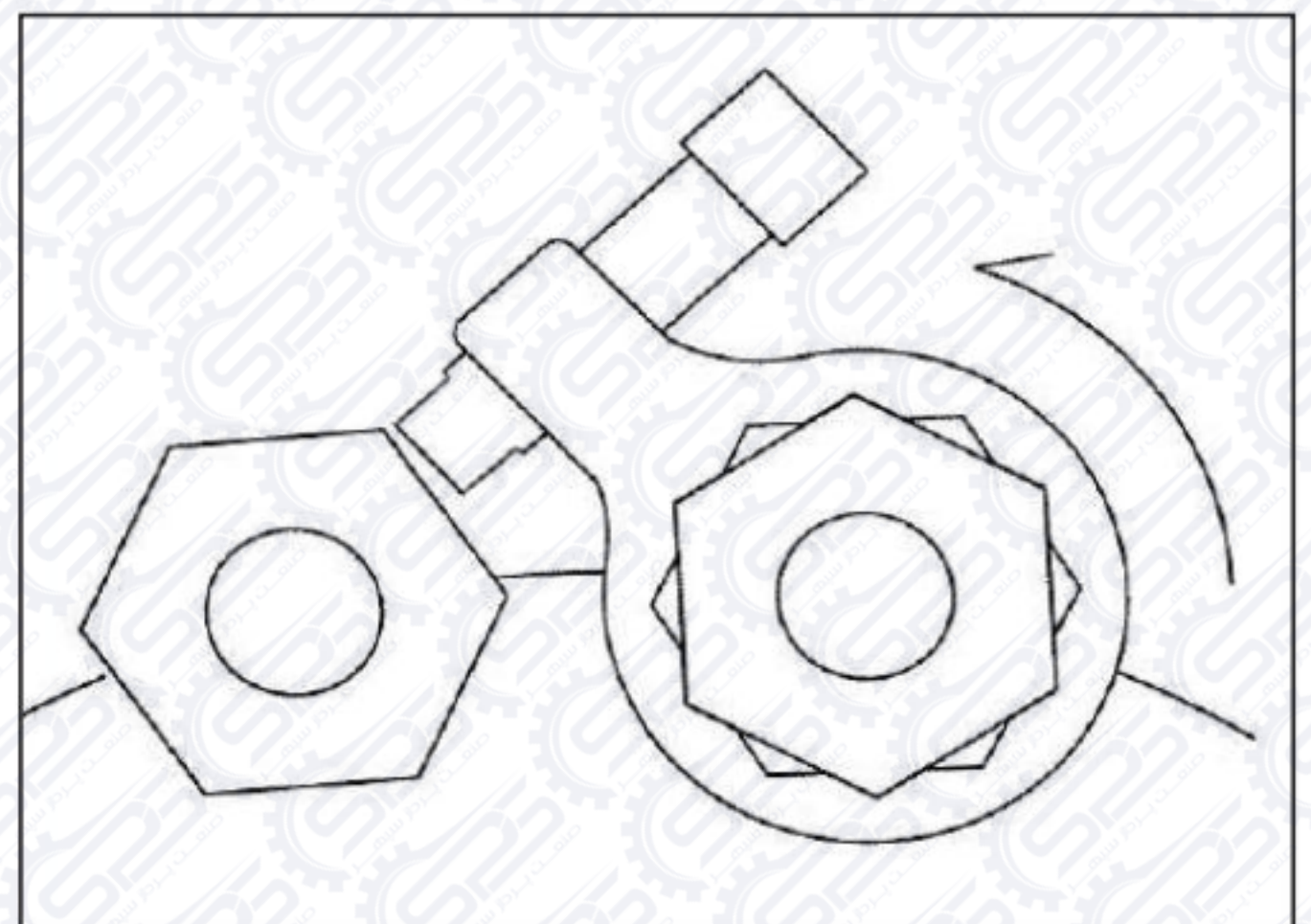
BI-HEXAGONAL DESIGN
provides the ultimate mixture of versatility and durability

HIGH STRENGTH
heat treated material
heavy duty.



Usually set release bolt approximate 1/2\" length extension, user can be proper to adjust the length extension in case of special space.

Place Backup Wrench on operated Nut, rotates Backup Wrench in counter-clockwise side until release bolt touching reaction points, by this operation, if the release bolt is impossible to close the reaction points after rotation, user also can run release bolt a little out to make it to touch reaction points, after finishing torque operation by hydraulic torque wrench, please loose release bolt with a manual wrench (or other similar wrench), then take backup wrench off and proceed to next operated nut.



BW series Low Profile Torque Wrench

WIDE RANGE OF METRIC AND IMPERIAL SIZES AVAILABLE

Nut Across Flat Range

30 mm - 145 mm

1 1/4" - 5 3/4"

Model	Across Flat (mm)	Across Flat (in)	Load Limits (Ft.lbs)	Load Limits (Nm)
BW104	30	1-1/4"	2400	3254
BW107	36	1-7/16"	2500	3390
BW110	41	1-5/8"	3500	4745
BW113	46	1-13/16"	3500	4745
BW200	50	2"	4100	5559
BW203	55	2-3/16	4200	5694
BW204	57	2-1/4"	4300	5830
BW206	60	2-3/8"	4300	5830
BW209	65	2-9/16"	4550	6169
BW212	70	2-3/4"	5600	7592
BW215	75	2-15/16"	6300	8542
BW302	80	3-1/8"	7000	9491
BW308	85	3-1/2"	7200	9762
BW311	90	3-11/16"	7300	9897
BW314	95	3-7/8"	9000	12202
BW400	100	4"	24000	32539
BW402	105	4-1/8"	24000	32539
BW404	110	4-1/4"	24000	32539
BW408	115	4-1/2"	25000	33895
BW410	120	4-5/8"	27000	36607
BW500	130	5"	27000	36607
BW506	135	5-3/8"	27000	36607
BW512	145	5-3/4"	28000	37962

Examples of system connection

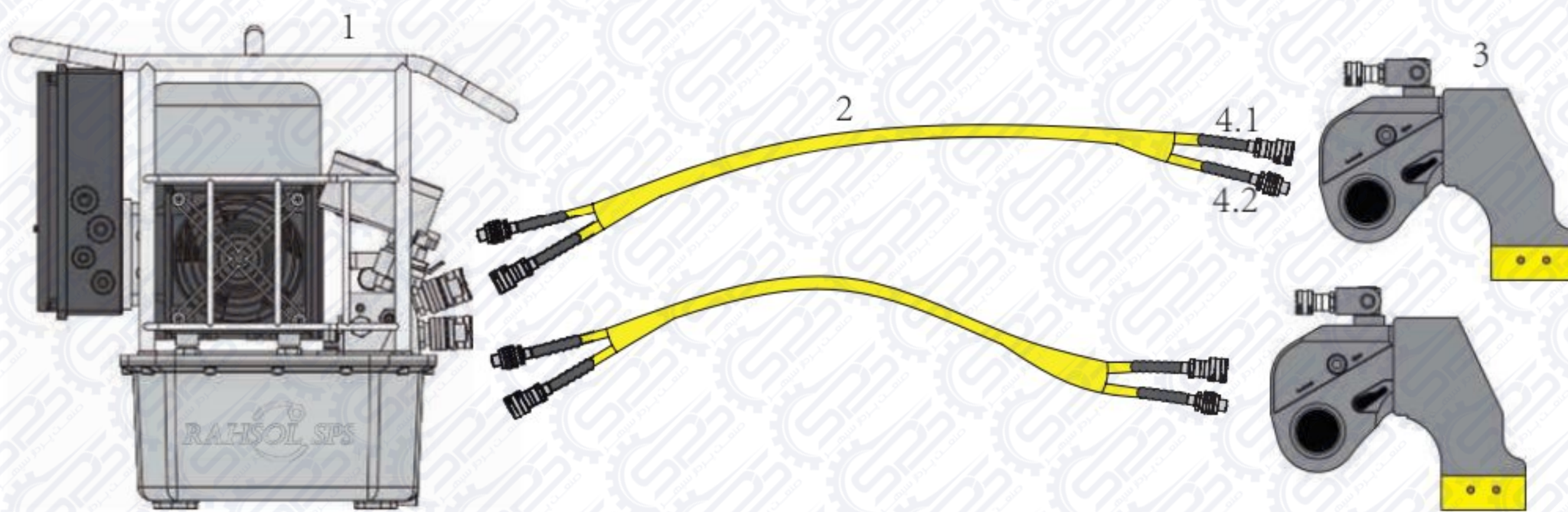
The existing M42 (S65) strength grade level 8.8 flange bolt with a two drive type hydraulic torque wrench.

Each type of hydraulic torque wrench has its own torque range.

If known to the locking torque value X N.m. As with the torque wrench maximum output torque value should be at least 2X N.m (bolt torque to remove loose locking torque of 1.5 ~ 2 times). As is the case with M42 (S65) bolt, if the technical requirements of the locking torque values for 2600N.m, it should in principle for the configuration of the torque wrench torque value should be greater than 5200N.m (such as field conditions, without removing the loose bolts, can be served with relatively little torque models). Check table selection of most suitable torque wrench torque wrench is 5 IBT type hydraulic torque wrench.

If you are on the site requirements of the locking torque values are unknown, RAHSOL SPS engineer will recommend you use. You can also follow the steps below to his own projections. From the bolt and nut torque value for recommendation, in accordance with the bolt size, strength check table to derive a closer to the real value of torque. As is the case with M42 (S65) look bolt locking torque of $2744 \times 90\% = 2470\text{N.m}$, due to remove loose bolt torque for locking of 1.5 ~ 2 times, matching hydraulic wrench torque value should be greater than 4940N.m. Check table selection of most suitable torque wrench torque wrench is 5 IBT type hydraulic torque wrench.

Configure:



- 1 LP3 Electric Pump
- 2 2JH6460Twin Hose
- 3 5IBT square driveTorque Wrench

- 4.1 C9013Quick Coupler (M)
- 4.2 C9014Quick Coupler (F)

one pump for two torque wrenches

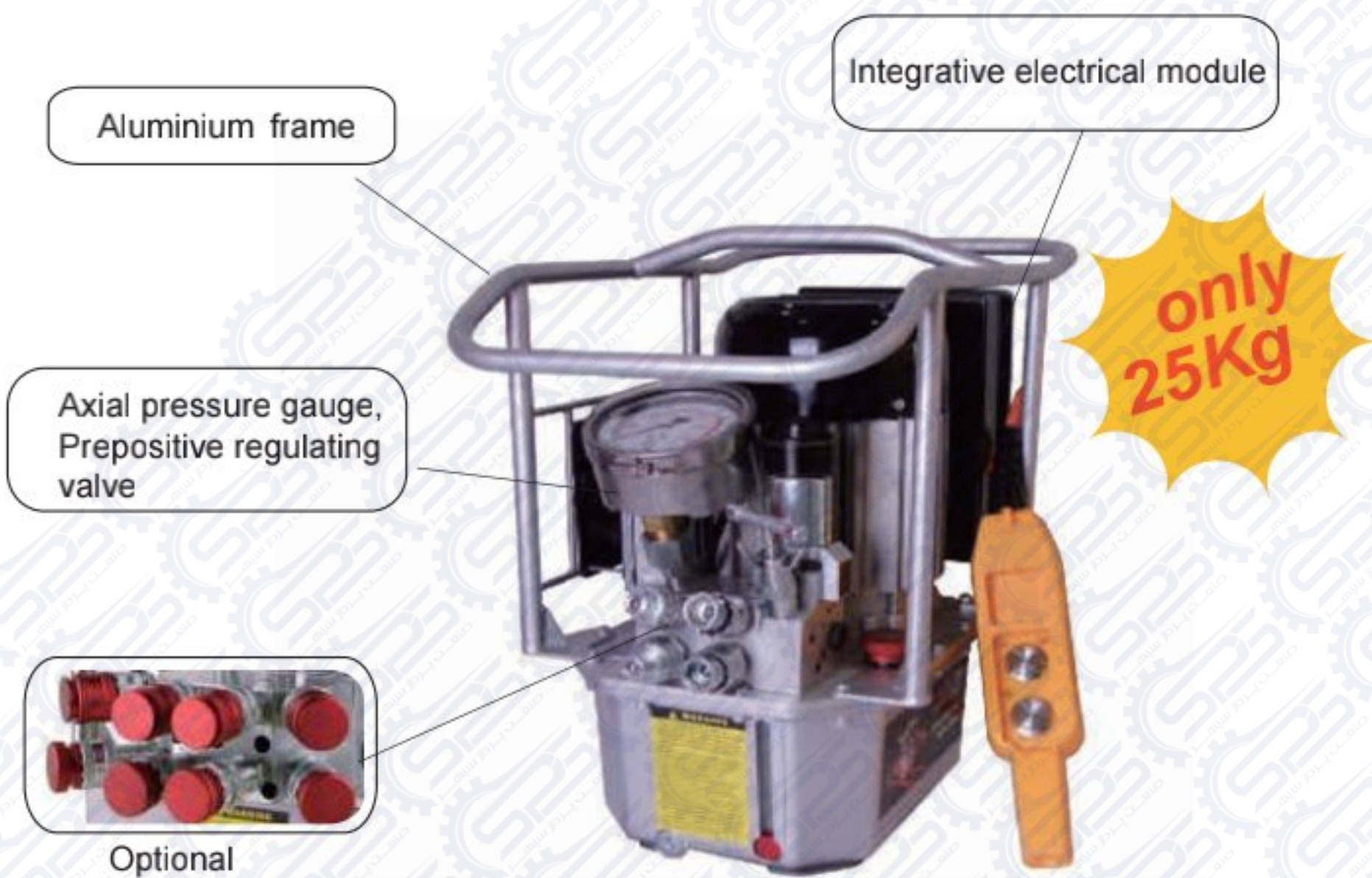
Type	Number	Note
LP3	1	220V/50HZ/700bar
5IBT	2	Torque 752~7528N.m
2JH6460	2	6M
C901Quick coupler	4	C9013 and C9014

one for one torque wrench

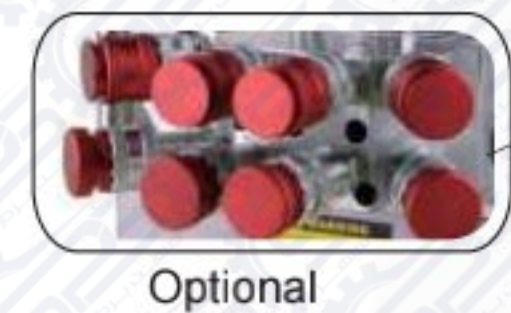
Type	Number	Note
LP3	1	220V/50HZ/700bar
5IBT	1	Torque 752~7528N.m
2JH6460	1	6M
C901Quick coupler	2	C9013 and C9014

Hydraulic Torque Wrench Pump

Electric Pump LP3 series



Parameter		
Model	LP3-2	LP3-4
Operating wrench	2	4
Tank capacity	5.5L	5.5L
Flow(low-mid-High)	7-1.6-0.8 L/min	7-1.6-0.8 L/min
Output preasure	70~700bar	70~700bar
Source of power	220V/50HZ	220V/50HZ
Power	1.1KW	1.1KW
Weight	25Kg	27Kg
Volume	305x445x426mm	305x465x426mm

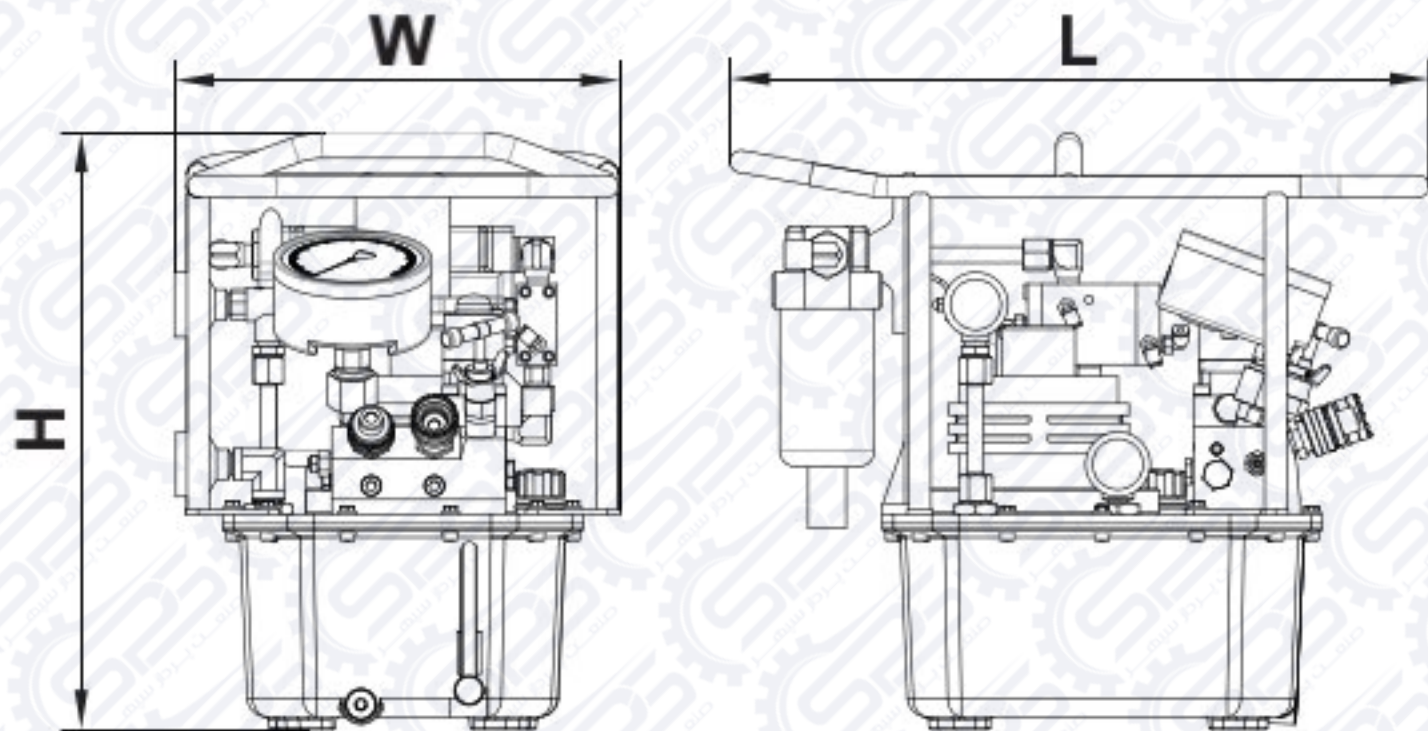


RAHSOLSPS can make the special length of remote control wire according customers' requirement RAHSOLSPS standard: 6 meters).

- Compact automatic three stage design.
- Applicable on one or two wrenches simultaneously.
- Aluminum oil tank with gauge.
- Have Φ100 high pressure gauge.
- Infinitely variable pressure adjustment between 70~700 bar.
- With the high efficiency radiator the pump can work 24 hours continuously.
- Can change the motor to fit the different voltage.
- Optional components(FP4), can operate four wrenches at the same time

Air Pump LP3-N series

Parameter		
Model	LP3-N2	LP3-N4
Operating wrench	2	4
WorkIng pressure	700 bar	700 bar
Air pressure(Input)	4-8 bar	4-8 bar
Power	3.0 KW	3.0 KW
Tank capacity	5.5L	5.5L
Flow rate (low-mid-high)	8.6-2.2-1.1 L/min	8.6-2.2-1.1 L/min
Oil cooler	N/A	N/A
Weight	22Kg	24Kg
Oil outputs	4x1/4" NPT	8x1/4" NPT
LxWxH(mm)	442×282×377mm	460×282×377mm



- Compact three-stage pump
- The Single valve block can be replaceb by component FP4,there by allowing 2or 4 Tools to be driven simultaneously.
- Three stage with air drive.
- Supporting continuous operation with steel frame.
- 4" diameter gauge,aluminium oil tank with oil level indicator
- Variable pressure adjustment between 70~700 bar
- Designed for continuous operation

Hydraulic Torque Wrench Pump

Electric Pump KLW4010 series

Parameter

Model	KLW4010-2	KLW4010-4
Operating wrench	2	4
Tank capacity	8L	8L
Flow(low-mid-High)	7-1.6-0.8L/min	7-1.6-0.8L/min
Output pressure	70~700bar	70~700bar
Source of power	220V/50HZ	220V/50HZ
Power	1.1KW	1.1KW
Weight	27.7Kg	29.9Kg
Volume	307x407x450mm	307x407x470mm

- Compact automatic three stage design.
- Applicable on one or two wrenches simultaneously.
- Aluminum oil tank with gauge.
- Have $\Phi 100$ high pressure gauge.
- Infinitely variable pressure adjustment between 70~700 bar.
- With the high efficiency radiator the pump can work 24 hours continuously.
- Can change the motor to fit the different voltage.
- Optional components, can operate four wrenches at the same time

Aluminium frame

Pressure Relief Button, it can release the pressure in system in the case of Pump stopped.

Pressure Adjustor, Pressure Relief valve (inside the tank)



* Optional

RAHSOLSPS can make the special length of remote control wire according customers' requirement RAHSOLSPS standard: 6 meters)



Air Pump KLW4010N series

Parameter

Model	KLW4010N-2	KLW4010N-4
Operating wrench	2	4
Tank capacity	8L	8L
Flow(low-mid-High)	8.6-2.2-1.1 L/min	8.6-2.2-1.1 L/min
Output pressure	70~700 bar	70~700 bar
Air in	4~8 bar	4~8 bar
Power	3 KW	3 KW
Weight	21.5Kg	23.5Kg
Volume	289x407x450mm	289x407x470mm

- Input air(4~8 bar).
- Compact automatic three stage flow, can start in high pressure
- Applicable on one or two wrenches simultaneously
- Aluminum oil tank with oil gauge. Total weight only 21.5 kg
- Have $\Phi 100$ high pressure gauge
- Infinitely variable pressure adjustment between 70~700 bar
- With the high efficiency cooling system makes the pump suitable in extreme environment
- Optional components(FP4),can operate four wrenches at the same time

Pressure Relief Button, it can release the pressure in system in the case of Pump stopped.

Pressure Adjustor, Pressure Relief valve (inside the tank)

only 21.5kg



* Optional



Left is standard FRL
Right is for option

Hydraulic Pump

Semi-automatic Electric Pump

KLW4120 Series Semi-automatic Electrical Pump shared a same design with KLW4010 series standard Electric Pump, it just was added a set of control system on the basic of KLW4010 standard Pump, it inherits all the characteristics of KLW4010, other characteristics are as below.

-Simple Operation:

Operate with one Button, the operator just press the button once time to achieve the task of tightening and loosening.

-High Efficiency:

Compare with the general Pump, KLW4120 Semi-automatic Pump has compact operation process to reduce some needless action and increase approximate 50% of working efficiency.

-Manual / Automatic

Besides of the semi-automatic operation, the Pump also has the function of manual operation.

KLW4120 can work 24 hours continuously.

RAHSOL SPS also can make the Pump with other kinds of motors according customers' requirement.



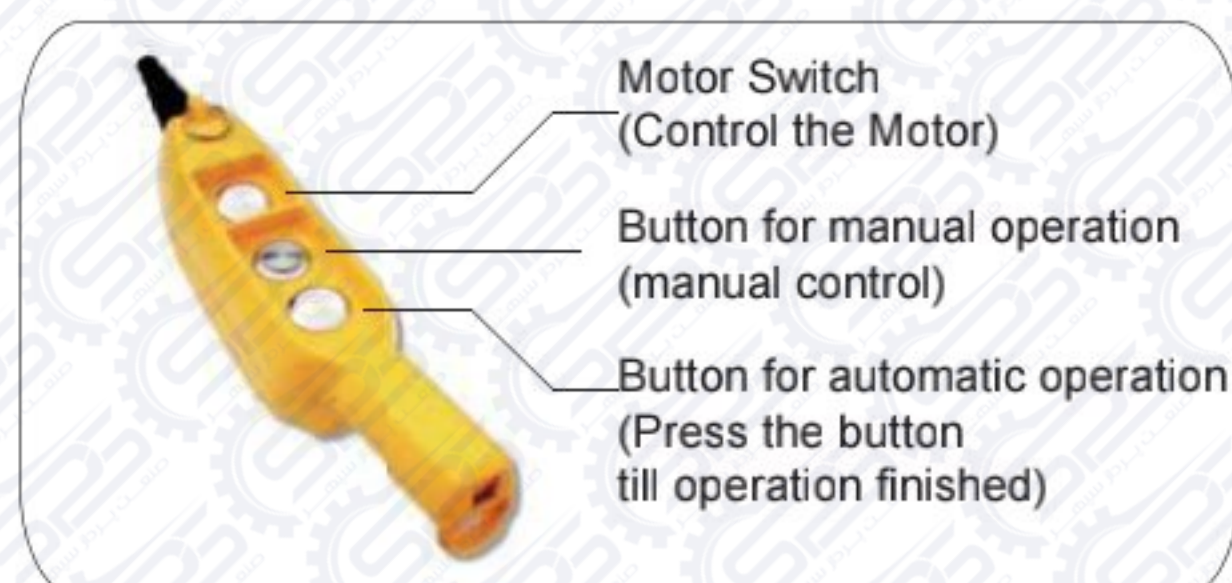
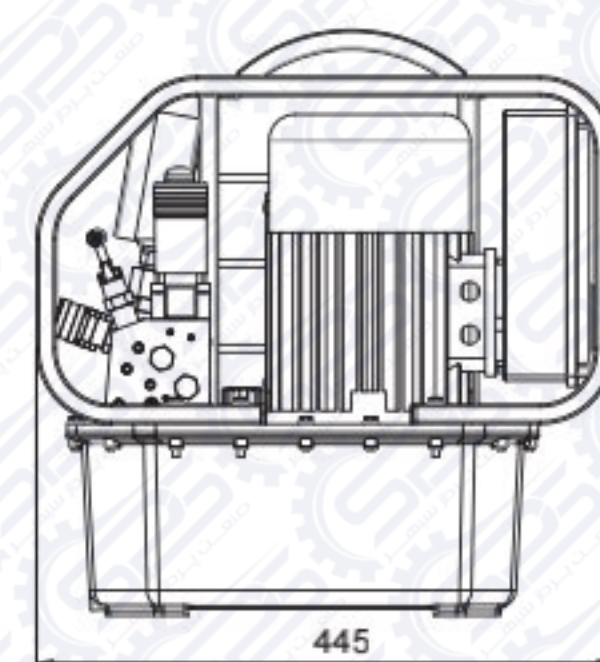
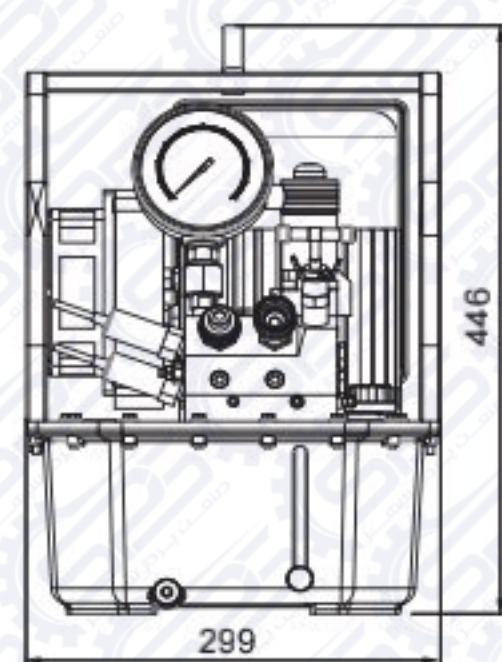
* Optional

Model: KLW4120

Parameter

Model	KLW4120-2	KLW4120-4
Operating wrench	2	4
Tank capacity	8L	8L
Flow(low-mid-High)	7-1.6-0.8 L/min	7-1.6-0.8 L/min
Out put preasure	70~700bar	70~700bar
Source of power	220V/50HZ	220V/50HZ
Power	1.1KW	1.1KW
Weight	27.7Kg	29.7Kg
Volume	299×445×446mm	299×465×446mm

Drawing of Flow Description for KLW4120



Hydraulic Torque Wrench Pump

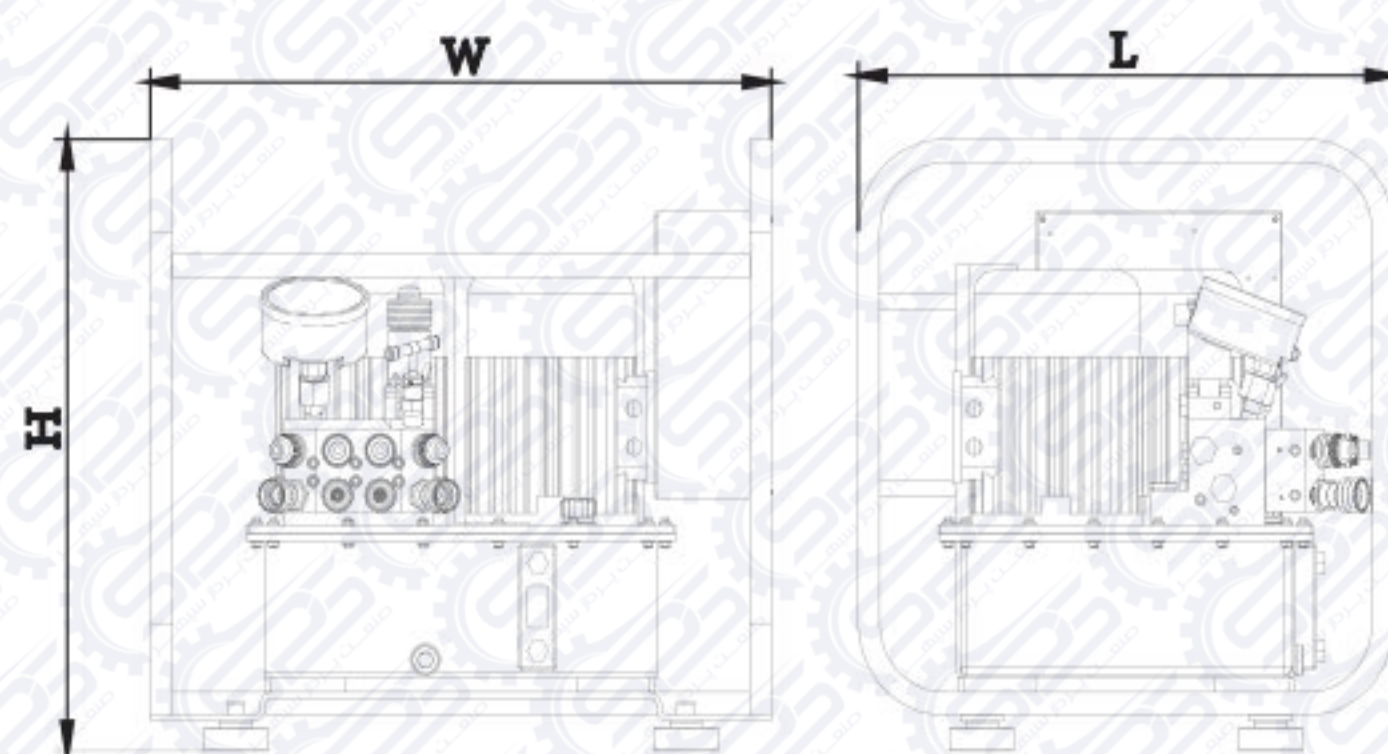


Double Engine High Speed Hydraulic Pump

- Compact automatic three stage flow, can start in high pressure
- Applicable on one or two wrenches simultaneously
- Aluminum oil tank with gauge
- Have $\Phi 100$ high pressure gauge
- Infinitely variable pressure adjustment between 70~700 bar
- With the high efficiency cooling system makes the pump suitable in extreme environment
- Optional components(FP4), can operate four wrenches at the same time

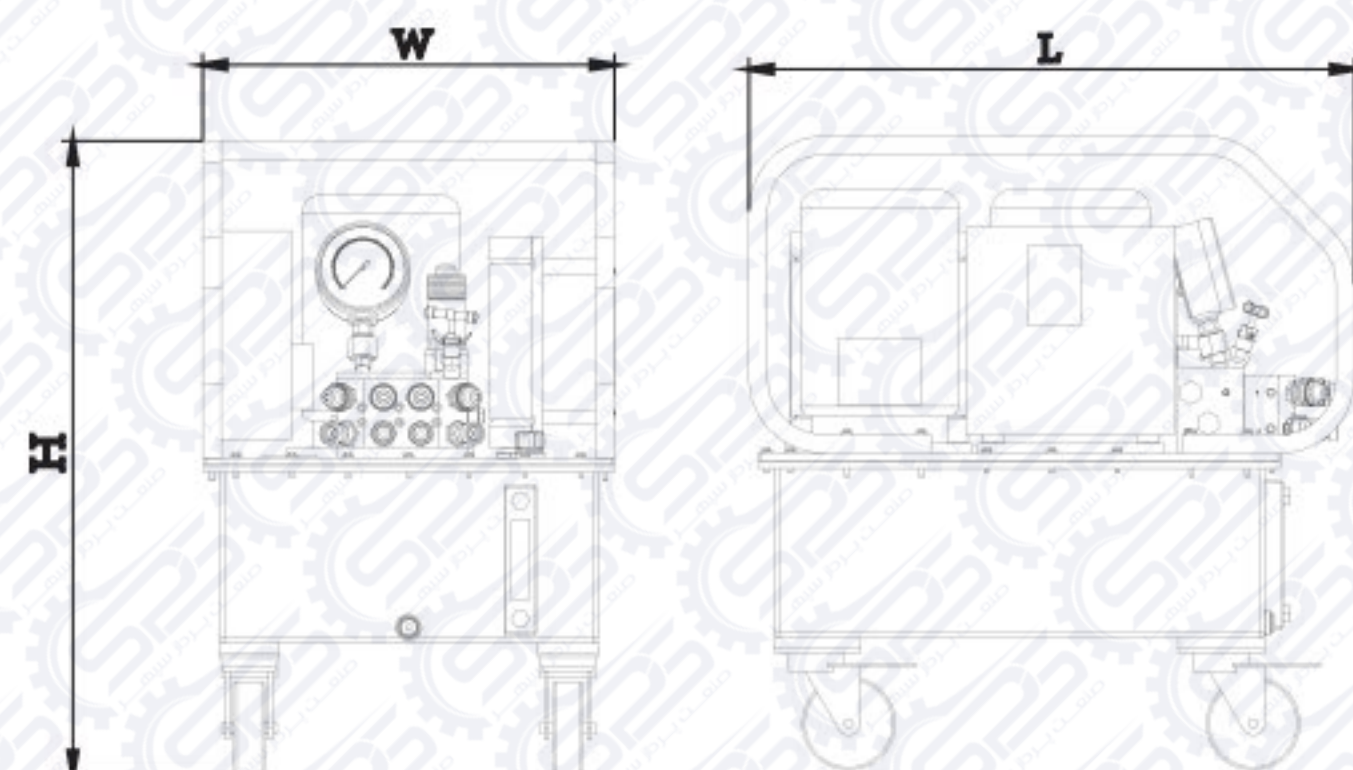
DHP 1.1KW x 2 (220v)

Model	DHP-220x4	DHP-220x8
Operating wrench	4	8
Work Preasure	700 bar	700 bar
Voltage/Frequency	220V / 50Hz	220V / 50Hz
Power	1.1 KW x 2	1.1 KW x 2
Tank capacity	13 L	13 L
Flow(low-mid-High)	14 - 3.2 - 1.6 L/min	14 - 3.2 - 1.6 L/min
Cooler	Yes	Yes
Weight	59.6	63.5
Output Port Size	8 x 1/4" NPT	16 x 1/4" NPT
Volume	500 x 580 x 531mm	500 x 620 x 531mm



DHP 2.2KW x 2 (380v)

Model	DHP-380x4	DHP-380x8
Operating wrench	4	8
Work Preasure	700 bar	700 bar
Voltage/Frequency	380V / 50Hz	380V / 50Hz
Power	2.2 KW x 2	2.2 KW x 2
Tank capacity	40 L	40 L
Flow(low-mid-High)	20 - 8.2 - 2.8 L/min	20 - 8.2 - 2.8 L/min
Cooler	Yes	Yes
Weight	63.5	68.5
Output Port Size	8 x 1/4" NPT	16 x 1/4" NPT
Volume	650 x 442 x 680 mm	650 x 442 x 680 mm

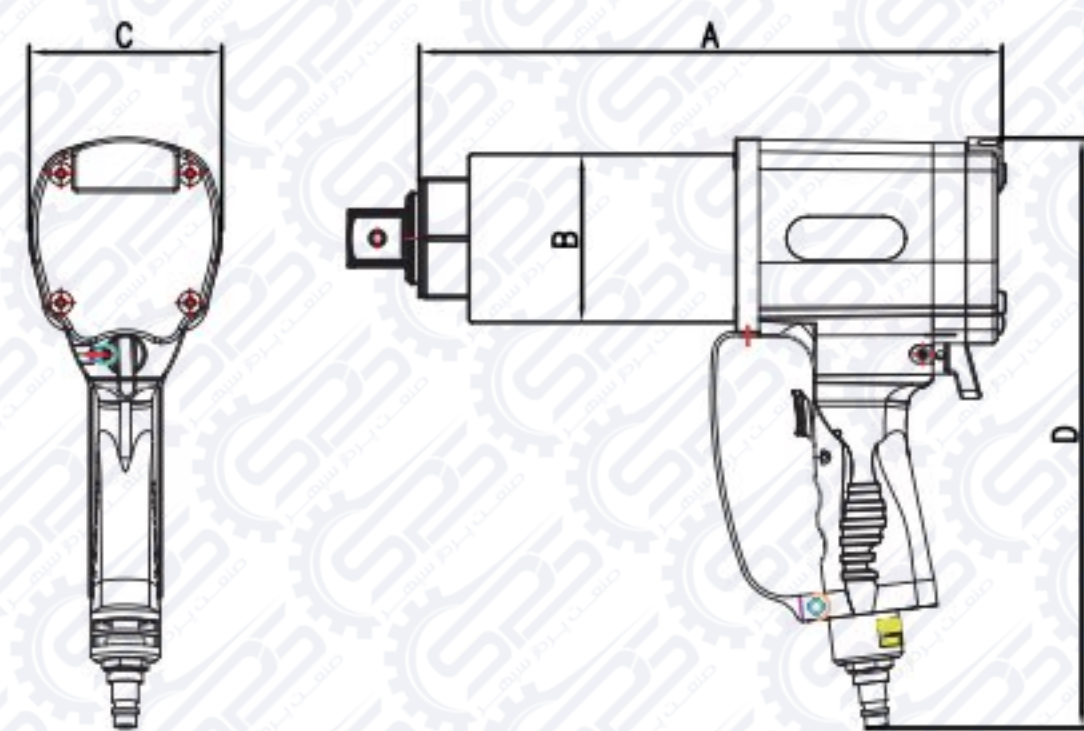


Pneumatic Torque Wrench-WPD Series

- Design for maximize efficiency
- Wide torque range suits different applications
- Advanced star-gearbox design basic on reliable quality
- Precision+/-4%, Repeat Precision+/-2%



Special reaction arm can be ordered according your operation.



Model	Square Drive	Torque	Speed Rpm	Weight	Noise Level Db	A	Dimension B	C	D
WPD14	0.75 in.	275-1350 Nm	15	3.5 kg	80 db	207mm	70mm	261mm	31.5mm
WPD20	1.0 in.	400-2000 Nm	10	3.9 kg	80 db	201mm	70mm	261mm	34.5mm
WPD34	1.0 in.	700-3400 Nm	4.8	7.0 kg	85 db	269mm	89mm	272mm	38.5mm
WPD80	1.5 in.	2700-8000 Nm	4.2	12.2 kg	85 db	317mm	93mm	293mm	51mm

Precision+/-4%, Repeat Precision+/-2%

Standard Accessories :

- Reaction Arm
- Lock Circlip
- Air Hose, G1/2"
- Air Gauge, Filter, Regulator
- Carry Case
- Air-Torque chart
- Operating Manual



Hydraulic Cylinder series

Hydraulic cylinder (700bar)

1. Force selection:

Considering the impedance loss of the seal ring and the supporting impedance loss of the cylinder with the piston, the force of RAHSOL SPS cylinder is 94%~95% of the set force. When the cylinder needs to work strictly and continuously, it is recommended to choose a cylinder whose tonnage is higher than the load itself, usually calculated by 70%~80% of the cylinder.

2. Stroke selection:

If the space permitted, please choose a cylinder whose stroke is longer than the practical need to add the system expandable capacity.

3. Type selection:

There are basically two types of cylinders: single-acting cylinder (spring or load returning) and double-acting cylinders. CLS-series and CLL-series single-acting cylinders have no set of spring and can only be returned by load or gravity. What do you need cylinders? To pull or lift or both?

(Under the hydraulic reaction, single-acting one can just lift, but double-acting one can both lift and pull).

4. Quantity selection:

Whether you need several cylinders to work synchronously or not?

5. Warning when install and operate:

Make sure that the load is located in the centre of the cylinder and the load direction is in accordance with the cylinder.

The allowable eccentric loads must be within 2.5% of the technical requirements of cylinders.

By fitting the flange on the neck threads to install the cylinder.

Eliminate the air in the system.

It is forbidden to remove the hydraulic pump connection when the cylinder is under load.

To avoid the cylinder piston over extended.

When there is some omen of oil leaking, please check it immediately.

Keep the hydraulic system clean.

Please keep away from heat, fire, rain, seawater, and moisture and so forth.

Keep the hydraulic system clean.

Please keep away from heat, fire, rain, seawater, and moisture and so forth.

Please maintain and inspect the cylinder on time.

The piston screw and base accessories must be connected to the piston end completely.

Please use standard cylinder oil.

Cylinder fitted with hose quick coupler can't be used for applications of releasing pressure urgently and forming shock pressure. When the quick coupler in the pulling end is blocked completely, it is forbidden to operating double-acting cylinder. Make sure the quick coupler is firmly tightened. If the cylinder fitted with self-conditioned quick coupler stops working suddenly, the most possible case is that the fluid flow is blocked due to the loosening of the quick coupler.

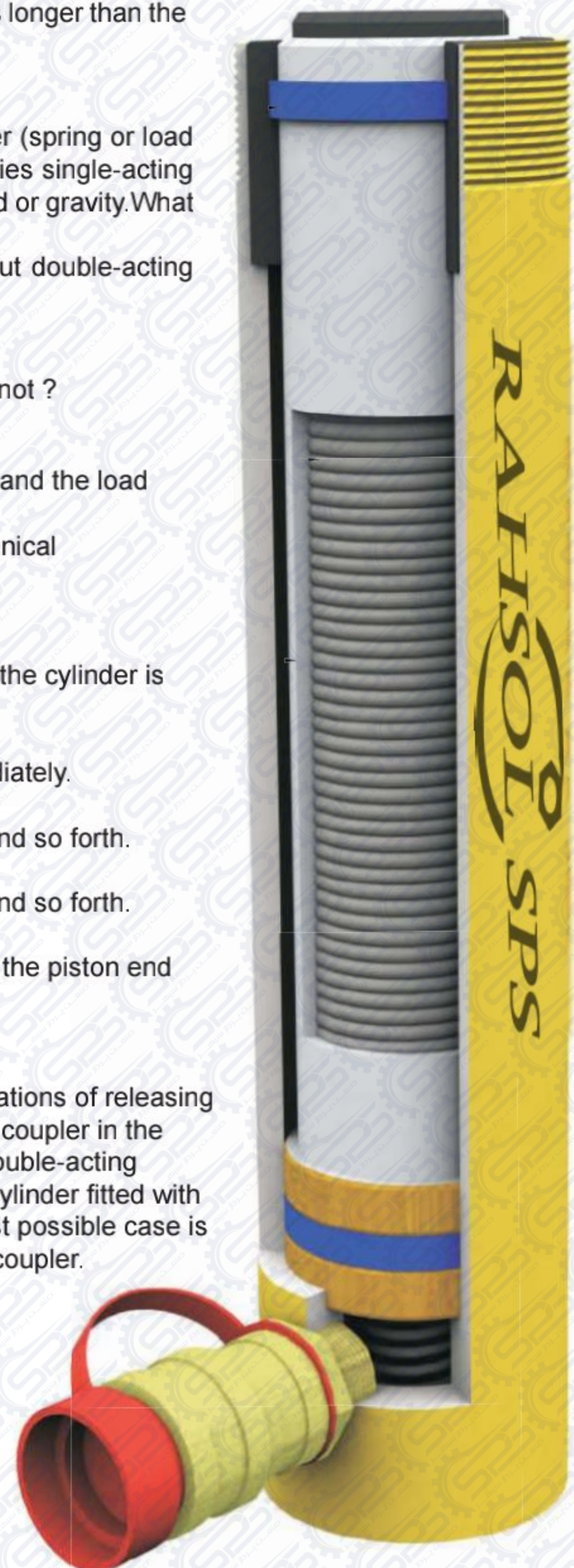
Nonstandard cylinder and special cylinders

We can customize nonstandard cylinders or ones over 5000KN(500Tons) on your requirements.

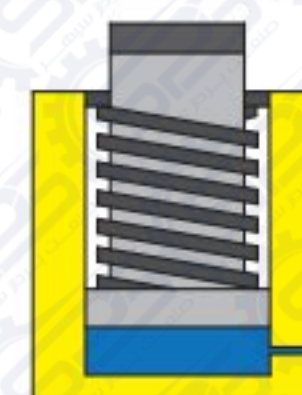
1. How much a tonnage force is needed?

2. You should consider both the stroke and the height after retraction.

3. Whether all the threads are needed on the piston, neck or base or not?



RSM series Single-Acting Low Weight Cylinder



Capacity: 5~150Ton
Stroke: 6~16mm
Maximum Operating Pressure: 700bar

RSM Series Selection Chart

Capacity (Ton)	Stroke (mm)	Model	Min Height (mm)	Outside Diameter (mm)	Effective Area (cm ²)	Oil Capacity (cm ³)	Saddle Diameter (mm)	Weight (Kg)
5	6	RSM50	32	59 × 42	7	4	26	1.0
10	11	RSM100	42	83 × 56	14.5	16	38	1.4
20	11	RSM200	51	100 × 75	28.2	31	50	3.1
30	13	RSM300	58	118 × 95	41.8	54	63	4.5
50	16	RSM500	66	140 × 115	63.6	101	70	6.8
75	16	RSM750	79	166 × 140	103.8	166	63	11.3
100	16	RSM1000	85	178 × 153	132.7	212	75	14.5
150	16	RSM1500	100	216 × 191	201	321	112	26.3

RCS series Single-Acting Low Weight Cylinder

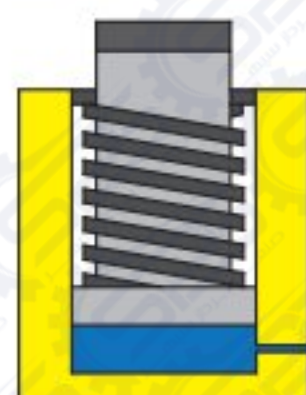


Capacity: 10~150Ton
Stroke: 38~62mm
Maximum Operating Pressure: 700bar

RCS Series Selection Chart

Capacity (Ton)	Stroke (mm)	Model	Min Height (mm)	Outside Diameter (mm)	Effective Area (cm ²)	Oil Capacity (cm ³)	Saddle Diameter (mm)	Weight (Kg)
10	38	RCS101	88	70	14.5	55	38	4.1
20	45	RCS201	98	92	28.2	127	50	5.0
30	61	RCS302	117	102	41.8	255	65	6.8
50	60	RCS502	122	127	63.6	381	70	10.9
100	57	RCS1002	141	167	132.7	756	90	22.7
150	51	RCS1502	206	205	201.1	1025	138	42.1

RC series Single-Acting General Purpose Cylinder



Capacity: 5~100Ton
Stroke: 16~362mm
Maximum Operating Pressure: 700bar

Single-acting and heavy-duty return spring.

High strength alloy steel for durability

Baked enamel finish for the improved corrosion resistance

Easy-carry handle for macimal portability



RC Series Selection Chart

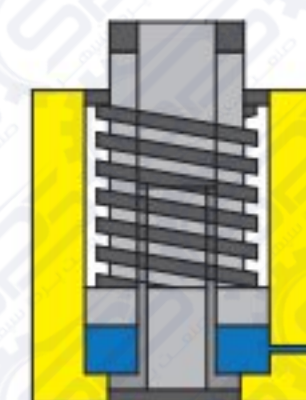
Capacity (Ton)	Stroke (mm)	Model	Min Height (mm)	Outside Diameter (mm)	Effective Area (cm ²)	Oil Capacity (cm ³)	Saddle Diameter (mm)	Thread Size	Thread Length (mm)	Weight (Kg)
5	16	RC50	42	42 × 59	7	11	26	1 1/2"-16	28	1.1
5	25	RC51	110	38	6.5	16	25.5	1 1/2"-16	28	1.1
5	76	RC53	165	38	6.5	50	25.5	1 1/2"-16	28	1.5
5	127	RC55	215	38	6.5	83	25.5	1 1/2"-16	28	1.9
5	177	RC57	273	38	6.5	115	25.5	1 1/2"-16	28	2.4
5	232	RC59	323	38	6.5	151	25.5	1 1/2"-16	28	2.8
10	26	RC101	89	57	14.5	38	35	2 1/4"-14	27	1.8
10	54	RC102	121	57	14.5	78	35	2 1/4"-14	27	2.3
10	105	RC104	171	57	14.5	152	35	2 1/4"-14	27	3.3
10	156	RC106	247	57	14.5	226	35	2 1/4"-14	27	4.4
10	203	RC108	298	57	14.5	294	35	2 1/4"-14	27	5.4
10	257	RC1010	349	57	14.5	373	35	2 1/4"-14	27	6.4
10	304	RC1012	400	57	14.5	441	35	2 1/4"-14	27	6.8
10	356	RC1014	450	57	14.5	516	35	2 1/4"-14	27	8.2
15	25	RC151	124	70	19.6	49	38	2 3/4"-16	30	3.3
15	51	RC152	149	70	19.6	100	38	2 3/4"-16	30	4.1
15	101	RC154	200	70	19.6	198	38	2 3/4"-16	30	5.0
15	152	RC156	271	70	19.6	298	38	2 3/4"-16	30	6.8
15	203	RC158	322	70	19.6	398	38	2 3/4"-16	30	8.2
15	254	RC1510A	373	70	19.6	498	38	2 3/4"-16	30	9.5
15	305	RC1512A	423	70	19.6	598	38	2 3/4"-16	30	10.9
15	356	RC1514A	474	70	19.6	697	38	2 3/4"-16	30	11.8
25	26	RC251	139	85	33.2	86	50	3 5/16"-12	49	5.9
25	50	RC252	165	85	33.2	166	50	3 5/16"-12	49	6.4
25	102	RC254	215	85	33.2	339	50	3 5/16"-12	49	8.2
25	158	RC256	273	85	33.2	525	50	3 5/16"-12	49	10.0
25	210	RC258	323	85	33.2	697	50	3 5/16"-12	49	12.2
25	261	RC2510A	374	85	33.2	867	50	3 5/16"-12	49	14.1
25	311	RC2512A	425	85	33.2	1033	50	3 5/16"-12	49	16.3
25	362	RC2514	476	85	33.2	1202	50	3 5/16"-12	49	17.7
30	209	RC308	387	102	44.2	923	50			18.1
50	51	RC502	176	127	70.8	361	71	5"-12	55	15.0
50	101	RC504	227	127	70.8	715	71	5"-12	55	19.1
50	159	RC506	282	127	70.8	1125	71	5"-12	55	23.1
50	337	RC5013	460	127	70.8	2386	71	5"-12	55	37.6
75	156	RC756	285	147	103.8	1619	71	5 3/4"-12	44	29.5
75	333	RC7513A	492	147	103.8	3456	71	5 3/4"-12	44	59.0
100	168	RC1006	357	177	132.7	2229	71	6 7/8"-12	44	59.0
100	260	RC10010	449	177	133.3	3450	71	6 7/8"-12	44	72.6

RCH series

Single-Acting Hollow Plunger Cylinder



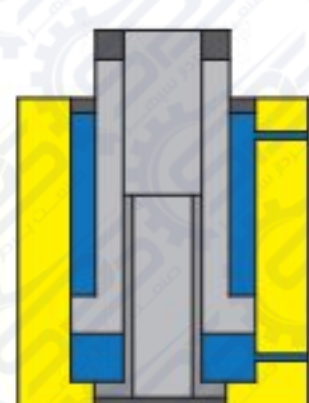
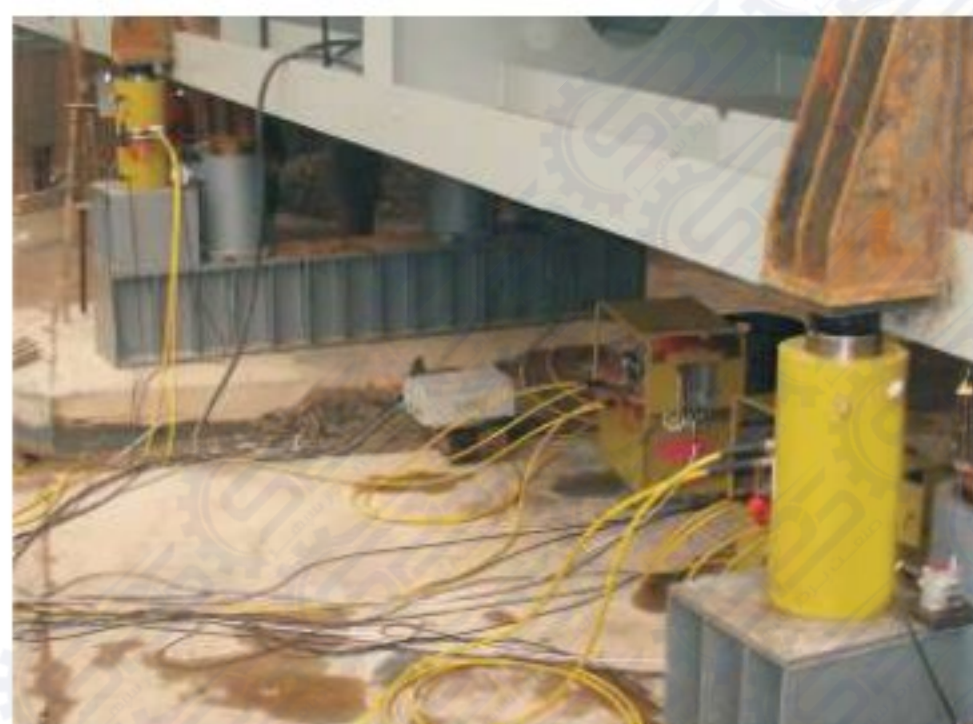
Capacity: 12~100Ton
Stroke: 8~155mm
Maximum Operating Pressure: 700bar



RCH Series Selection Chart

Capacity (Ton)	Stroke (mm)	Model	Min Height (mm)	Outside Diameter (mm)	Effective Area (cm ²)	Oil Capacity (cm ³)	Plunger Diameter (mm)	Hollow Diameter (mm)	Weight (Kg)
12	8	RCH120	55	69	17.9	14	35	19	1.5
12	42	RCH121	120	69	17.9	75	35	19	2.8
12	76	RCH123	184	69	17.9	136	35	19	4.4
20	50	RCH202	162	99	30.5	152	55	26.9	7.7
20	155	RCH206	306	99	30.5	473	55	28	14.1
30	64	RCH302	179	115	47.7	305	63	34	10.9
30	155	RCH306	331	115	47.7	739	63.5	34	21.8
60	77	RCH603	248	160	84.2	648	92	53	28.1
60	152	RCH606	325	160	84.2	1280	92	53	35.4
100	76	RCH1003	254	212	135.3	1028	127.0	78	63.0

RRH series Double-Acting Hollow Plunger Cylinder



Capacity:30~150Ton
Stroke:38~258mm
Maximum Operating Pressure:700bar

Hollow plunger design allows for both pull and push forces

Baked enamel finish for the improved corrosion resistance

Double-acting design for fast retraction

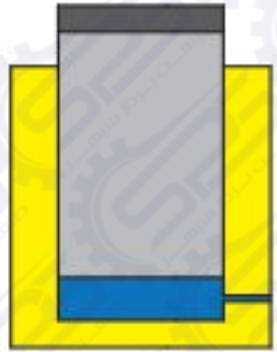
Relief valve protect cylinder damage in case of over-pressurization



RRH Series Selection Chart

Capacity (Ton)		Stroke (mm)	Model	Min Height (mm)	Outside Diameter (mm)	Effective Area (cm ²)		Oil Capacity (cm ³)		Plunger Diameter (mm)	Hollow Diameter (mm)	Weight (Kg)
Push	Pull					Push	Pull	Push	Pull			
34	23	178	RRH307A	331	115	47.7	32.4	849	576	63	34	21
30	23	258	RRH3010A	431	115	47.7	32.4	1230	836	63	34	27
60	42	89	RRH603A	248	160	84.2	56.2	749	500	95	53	28
60	42	165	RRH606A	324	160	84.2	56.2	1389	927	95	53	35
60	42	257	RRH6010	438	160	84.2	56.2	2164	1444	95	53	45
100	68	38	RRH1001A	166	212	135.2	87.1	513	331	127	79	33
100	68	76	RRH1003A	255	212	135.2	87	1027	661	127	78	61
100	68	153	RRH1006A	343	212	135.2	87	2068	1331	127	78	79
100	68	253	RRH10010A	443	212	135.2	87	3420	2201	127	78	106
150	75	200	RRH1508	349	247	205	106.8	4100	2136	152	78	111

CLS series Single-Acting High Tonnage Cylinder



Capacity: 50~1000Ton
Stroke: 50~300mm
Maximum Operating Pressure:
700bar

Cylinder can withstand over 5% pressure of rated load without scoring.

Overflow port functions as a stroke limiter

Single acting load return

Optional tilt saddle

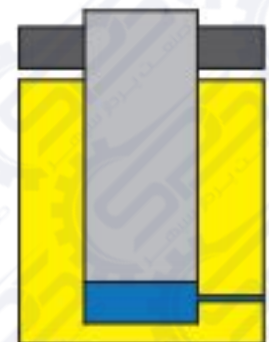


Baked enamel finish for the improved corrosion resistance

CLS Series Selection Chart

Capacity (Ton)	Stroke (mm)	Model	Min Height (mm)	Outside Diameter (mm)	Effective Area (cm ²)	Oil Capacity (cm ³)	Saddle Diameter (mm)	Weight (Kg)
50	50	CLS502A	128	125	70.9	355	71	4
50	100	CLS504A	178	125	70.9	709	71	18
50	150	CLS506	228	125	70.9	1064	71	23
50	200	CLS508A	278	125	70.9	1418	71	28
50	250	CLS5010A	328	125	70.9	1773	71	33
50	300	CLS5012A	378	125	70.9	2127	71	38
100	50	CLS1002A	143	164	132.7	664	71	24
100	100	CLS1004	193	164	132.7	1327	71	32
100	150	CLS1006	243	164	132.7	1991	71	40
100	200	CLS1008A	293	164	132.7	2654	71	49
100	250	CLS10010	343	164	132.7	3318	71	58
100	300	CLS10012	393	164	132.7	3981	71	66
150	50	CLS1502	165	209	201	1005	130	43
150	100	CLS1504	215	209	201	2010	130	55
150	150	CLS1506	265	209	201	3015	130	69
150	200	CLS1508	315	209	201	4020	130	82
150	250	CLS15010	365	209	201	5025	130	95
150	300	CLS15012	415	209	201	6030	130	108
200	50	CLS2002	193	235	265.9	1330	130	66
200	150	CLS2006	293	235	265.9	3989	130	101
200	250	CLS20010A	393	235	265.9	6648	130	136
250	50	CLS2502	193	275	366.4	1832	150	90
250	150	CLS2506	293	275	366.4	5496	150	137
250	250	CLS25010	393	275	366.4	9160	150	184
300	50	CLS3002	235	310	456.2	2281	139	137
300	150	CLS3006	335	310	456.2	6843	139	198
300	250	CLS30010	435	310	456.2	11405	139	258
400	50	CLS4002	265	350	559.9	2800	159	200
400	150	CLS4006	365	350	559.9	8399	159	275
400	250	CLS40010	465	350	559.9	13998	159	352
500	50	CLS5002	295	400	730.6	3656	228	289
500	150	CLS5006	395	400	730.6	10967	228	390
500	250	CLS50010	495	400	730.6	18278	228	489
600	50	CLS6002	310	430	855.3	4277	194	350
600	150	CLS6006	410	430	855.3	12830	194	465
600	250	CLS60010	510	430	855.3	21383	194	582
800	50	CLS8002	355	505	1176.3	5882	224	549
800	150	CLS8006	455	505	1176.3	17645	224	709
800	250	CLS80010	555	505	1176.3	29408	224	870
1000	50	CLS10002	385	560	1465.7	7329	360	729
1000	150	CLS10006	485	560	1465.7	21986	360	921
1000	250	CLS100010	585	560	1465.7	36643	360	1113

CLL series Single-Acting Lock Nut Cylinder



Capacity: 50~1000Ton
Stroke: 50~300mm
Maximum Operating Pressure:
700bar

Optional tilt saddle

Safety lock nut for
mechanical load
holding for long time

Baked enamel finish for
the improved corrosion
resistance



Cylinder can withstand over
5% pressure of rated load
without scoring.

Overflow port
functions as a
stroke limiter

Single acting load
return

CLL Series Selection Chart

Capacity (Ton)	Stroke (mm)	Model	Min Height (mm)	Outside Diameter (mm)	Effective Area (cm ²)	Oil Capacity (cm ³)	Saddle Diameter (mm)	Weight (Kg)
50	50	CLL502	164	125	70.9	355	71	15
50	100	CLL504	214	125	70.9	709	71	20
50	150	CLL506	264	125	70.9	1064	71	25
50	200	CLL508	314	125	70.9	1418	71	30
50	250	CLL5010	364	125	70.9	1773	71	35
50	300	CLL5012	414	125	70.9	2127	71	40
100	50	CLL1002	187	165	132.7	664	71	30
100	100	CLL1004	237	165	132.7	1327	71	39
100	150	CLL1006	287	165	132.7	1991	71	48
100	200	CLL1008	337	165	132.7	2654	71	56
100	250	CLL10010	387	165	132.7	3318	71	64
100	300	CLL10012	437	165	132.7	3981	71	73
150	50	CLL1502	209	205	201	1005	130	53
150	100	CLL1504	259	205	201	2010	130	66
150	150	CLL1506	309	205	201	3015	130	78
150	200	CLL1508	359	205	201	4020	130	92
150	250	CLL15010	409	205	201	5025	130	104
150	300	CLL15012	459	205	201	6030	130	117
200	50	CLL2002	243	235	265.6	1330	130	83
200	150	CLL2006	343	235	265.6	3989	130	117
200	250	CLL20010	443	235	265.6	6648	130	152
250	50	CLL2502	249	275	366.4	1832	150	116
250	150	CLL2506	349	275	366.4	5496	150	162
250	250	CLL25010	449	275	366.4	9160	150	210
300	50	CLL3002	295	310	456.2	2281	139	173
300	150	CLL3006	395	310	456.2	6843	139	233
300	250	CLL30010	495	310	456.2	11405	139	293
400	50	CLL4002	335	350	559.9	2800	159	250
400	150	CLL4006	435	350	559.9	8399	159	327
400	250	CLL40010	535	350	559.9	13998	159	402
500	50	CLL5002	375	400	730.6	3656	228	367
500	150	CLL5006	475	400	730.6	10967	228	466
500	250	CLL50010	575	400	730.6	18278	228	567
600	50	CLL6002	395	430	855.3	4277	194	446
600	150	CLL6006	495	430	855.3	12830	194	562
600	250	CLL60010	595	430	855.3	21383	194	679
800	50	CLL8002	455	505	1176.9	5882	224	709
800	150	CLL8006	555	505	1176.9	17645	224	870
800	250	CLL80010	655	505	1176.9	29408	224	1029
1000	50	CLL10002	495	560	1466.4	7329	360	949
1000	150	CLL10006	595	560	1466.4	21986	360	1141
1000	250	CLL100010	695	560	1466.4	36643	360	1333

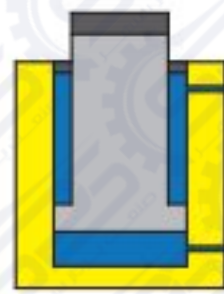
CLR series Double-Acting High Tonnage Cylinder

Optional Tilt Saddle

Model	Dimension A/B	Graph	Application
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CAT100	71/24		CLL 50T CLS 75T CLR 100T
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CAT200	130/27		CLL 100T CLS 200T CLR 200T
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Optional tilt saddle

Built-in safety valve helps to prevent accidental over-Pressurization.

Double-acting for positive retraction

Overflow port functions as a stroke limiter

Hydraulic lock can be installed

Capacity: 10~1000Ton

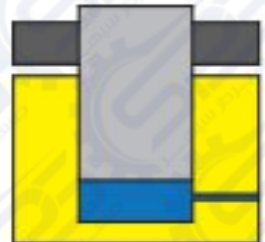
Stroke: 50~305mm

Maximum Operating Pressure: 700bar

CLR Series Selection Chart

Capacity (Ton)		Stroke (mm)	Model	Min Height (mm)	Outside Diameter (mm)	Effective Area (cm ²)		Oil Capacity (cm ³)		Saddle Diameter (mm)	Weight (Kg)
Push	Pull					Push	Pull	Push	Pull		
10	4.1	254	CLR1010	409	76	14.5	5.9	368	149	33	12
10	4.1	305	CLR1012	457	76	14.5	5.9	442	180	33	14
50	22.6	150	CLR506	325	127	70.8	32.3	1062	484	70	30
50	22.6	300	CLR5012	475	127	70.8	32.3	2124	969	70	52
100	44	50	CLR1002	182	188	132.7	61.9	664	310	95	27
100	44	100	CLR1004	232	188	132.7	61.9	1327	619	95	33
100	44	150	CLR1006	282	188	132.7	61.9	1991	929	95	37
100	44	200	CLR1008	332	188	132.7	61.9	2654	1238	95	44
100	44	250	CLR10010	382	188	132.7	61.9	3318	1548	95	50
100	44	300	CLR10012	432	188	132.7	61.9	3981	1857	95	57
150	67.9	50	CLR1502	196	216	201	97	1005	485	115	47
150	67.9	100	CLR1504	246	216	201	97	2010	970	115	57
150	67.9	150	CLR1506	296	216	201	97	3015	1455	115	67
150	67.9	200	CLR1508	346	216	201	97	4020	1940	115	77
150	67.9	250	CLR15010	396	216	201	97	5025	2425	115	87
150	67.9	300	CLR15012	446	216	201	97	6030	2910	115	97
200	93	50	CLR2002	235	242	265.9	133.1	1329	665	130	67
200	93	150	CLR2006	335	242	265.9	133.1	3988	1996	130	92
200	93	250	CLR20010	435	242	265.9	133.1	6647	3327	130	117
250	107	50	CLR2502	236	288	366.4	152.6	1832	763	165	105
250	107	150	CLR2506	336	288	366.4	152.6	5496	2289	165	141
250	107	250	CLR25010	436	288	366.4	152.6	9160	3815	165	176
300	121	50	CLR3002	350	325	456.2	172.6	2281	863	190	204
300	121	150	CLR3006	412	325	456.2	172.6	6843	2589	190	252
300	121	250	CLR30010	512	325	456.2	172.6	11405	4315	190	299
400	138	50	CLR4002	370	367	559.9	196.8	2799	984	215	281
400	138	150	CLR4006	470	367	559.9	196.8	8399	2952	215	342
400	138	250	CLR40010	570	367	559.9	196.8	13998	4920	215	405
500	168	50	CLR5002	400	405	730.6	239.7	3653	1198	250	411
500	168	150	CLR5006	500	405	730.6	239.7	10959	3595	250	493
500	168	250	CLR50010	600	405	730.6	239.7	18265	5992	250	575
600	207	50	CLR6002	445	450	855.3	295.4	4277	1477	267	494
600	207	150	CLR6006	545	450	855.3	295.4	12830	4431	267	586
600	207	250	CLR60010	645	450	855.3	295.4	21383	7385	267	678
800	252	50	CLR8002	695	515	1164	360	5820	1800	320	759
800	252	150	CLR8006	595	515	1164	360	17460	5400	320	885
800	252	250	CLR80010	695	515	1164	360	29100	9000	320	1019
1000	380	50	CLR10002	535	580	1465.7	541.7	7328	2708	342	1012
1000	380	150	CLR10006	635	580	1465.7	541.7	21985	8125	342	1168
1000	380	250	CLR100010	735	580	1465.7	541.7	36418	13543	342	1325

CLP series Single-Acting Pancake Lock Nut Cylinder



Capacity: 60~520 Ton
Stroke: 45~50 mm
Maximum Operating Pressure: 700 bar

Single-acting and load return

Flat design for using in confined area

Flat design for using in confined area

Special bearing design with stands side load forces up to 3% of rated cylinder capacity

Lock-nut feature for positive and safe load holding over a long period of time

Built-in safety valve helps to prevent accidental over-Pressurization.

CLP Series Selection Chart

Capacity (Ton)	Stroke (mm)	Model	Min Height (mm)	Outside Diameter (mm)	Effective Area (cm ²)	Oil Capacity (cm ³)	Saddle Diameter (mm)	Weight (Kg)
60	50	CLP602	125	140	86.6	432	96	15
100	50	CLP1002	137	175	143.1	716	126	26
160	45	CLP1602	148	220	227	1022	160	44
200	45	CLP2002	155	245	283.5	1276	180	57
260	45	CLP2502	159	275	366.4	1649	200	74
400	45	CLP4002	178	350	559.9	2519	250	134
520	45	CLP5002	192	400	730.6	3287	290	189

SMC series Mechanical Cylinder

Light, thin, short and small version for easy carrying and designed for use in all positions

Flat design for using in confined areas where standard cylinders will not fit.

Rising and retracting height can be controlled precisely and its accuracy is up to 0.01 mm.

Made in high strength alloy steel to extend strength and life.

Integral screw-rod designed hydraulic configuration without extra oil pumps and hoses



Capacity: 5~50 Ton
Stroke: 5~25 mm
Maximum Operating Pressure: 700 bar

SMC Series Selection Chart

Capacity (Ton)	Stroke (mm)	Model	Effective Area (mm)	Coll. Height (mm)	Ext. Height (mm)	Outside Diameter (mm)	Max Length (mm)	Min Length (mm)	Weight (Kg)
5	25	SMC0525	8.02	52	77	52	279	199	1.5
10	25	SMC1025	13.85	54	79	62	351	240	2.2
20	5	SMC2005	28.27	35	40	84	295	224	1.9
30	5	SMC3005	38.49	36	41	95	323	243	2.3
50	5	SMC5005	66.48	40	45	120	410	299	3.7

P series Hydraulic Hand Pump(700~1600Bar)

Equipped with a pressure regulating valve, to adjust the output pressure

The built-in high and low pressure switching valve, low pressure high flow rate output.

Aluminum titanium alloy, corrosion resistance, high strength, light weight, impact resistance, adaptv to a variety of harsh environment.

P-series hydraulic hand pumps are designed for Clinder and hydraulic bolt tensioner. Its pressure anew to two types(700bar & 1600bar), and customers can order every size of oil tank for different equipment RAHSOL SPS serves a wide range accessory for this series, entitled with TUV seal result of an effort with appropriate directives.



P Series Hand Pump Table Parameters



GA-3

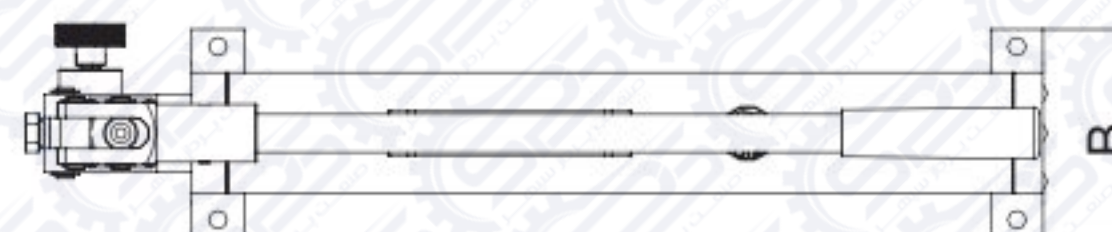
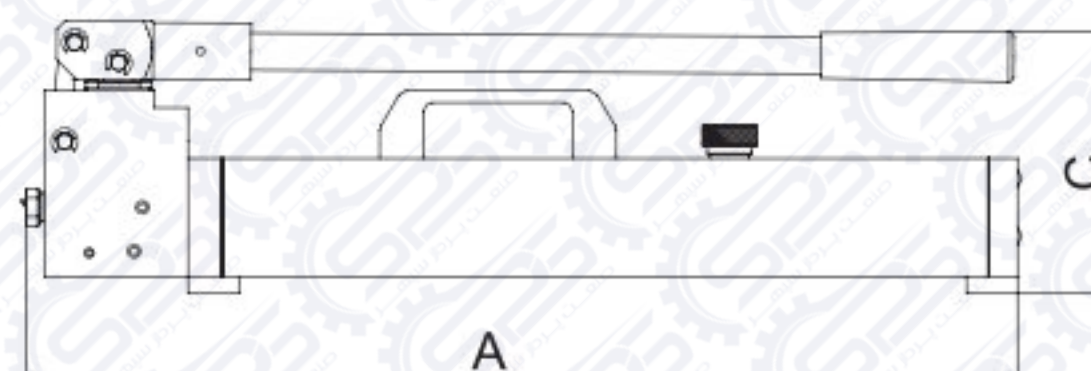


GA20



GA23

TYPE	Max Pressure (bar)	Oil interface	Gauge interface
GA-3	700	3/8"NPT	1/4"NPT
GA20	2000	1/4"BSP	1/2"BSP
GA23	2500	M16×1.5	M16×1.5



P Series Hand Pump Selection Char

Type	Preasure bar		One Stroke Oil mL		Full Tank Oil L	Available Oil L	Handle Force N	SIZE mm			Oil interface	Gauge interface	Weight Kg
	Low	HI	Low	HI				A	B	C			
P392	2.5	700	32	2.5	1.67	1.44	300	590	120	160	3/8" NPT	1/4" NPT	6.3
P80	2.5	700	32	2.5	2.25	1.98	300	590	120	170	3/8" NPT	1/4" NPT	8
P160	2.5	700	32	2.5	3.58	3.24	300	590	140	180	3/8" NPT	1/4" NPT	10
16P392	1.5	1600	32	2.5	1.67	1.44	350	636	120	170	1/4" BSP	1/2" BSP	6.5
16P80	1.5	1600	32	2.5	2.25	1.98	350	636	120	170	1/4" BSP	1/2" BSP	8.5
16P160	1.5	1600	32	2.5	3.58	3.24	350	636	140	190	1/4" BSP	1/2" BSP	10.5

28P series High Pressure Hydraulic Hand Pump(2800Bar)

28P Series Hand Pump Selection Chart

Type	28P80	28P160
Work Pressure Mpa (Low/Hi)	2.0/280	2.0/280
One Stroke Oil ml (Low/Hi)	32/0.9	32/0.9
Full Tank Oil L	2.26	3.58
Available Oil L	1.98	3.24
Size (A-B-C)	636/120/170	636/140/190
Oil interface	1/4"BSP	1/4"BSP
Gauge interface	1/2"BSP	1/2"BSP
Weight	8.5	10.5



Equipped with a pressure regulating valve, to adjust the output pressure.(Max Pressure 2800bar)

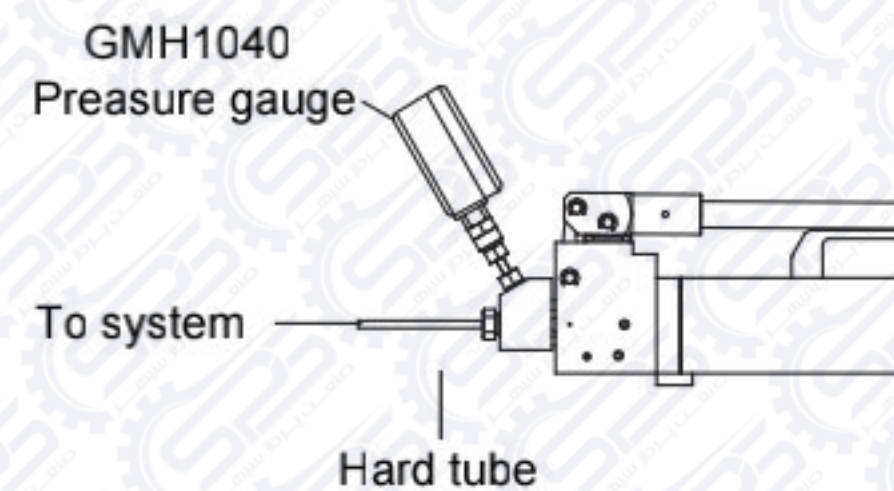
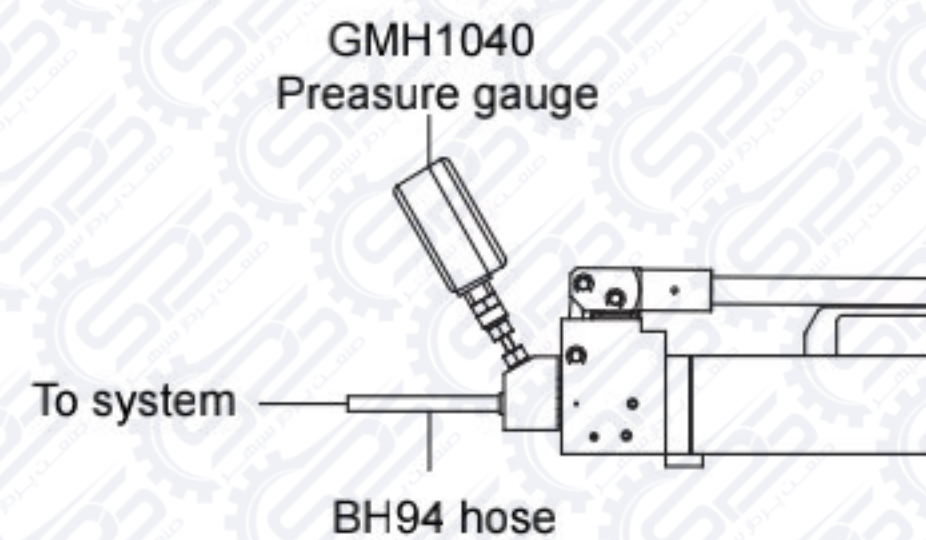
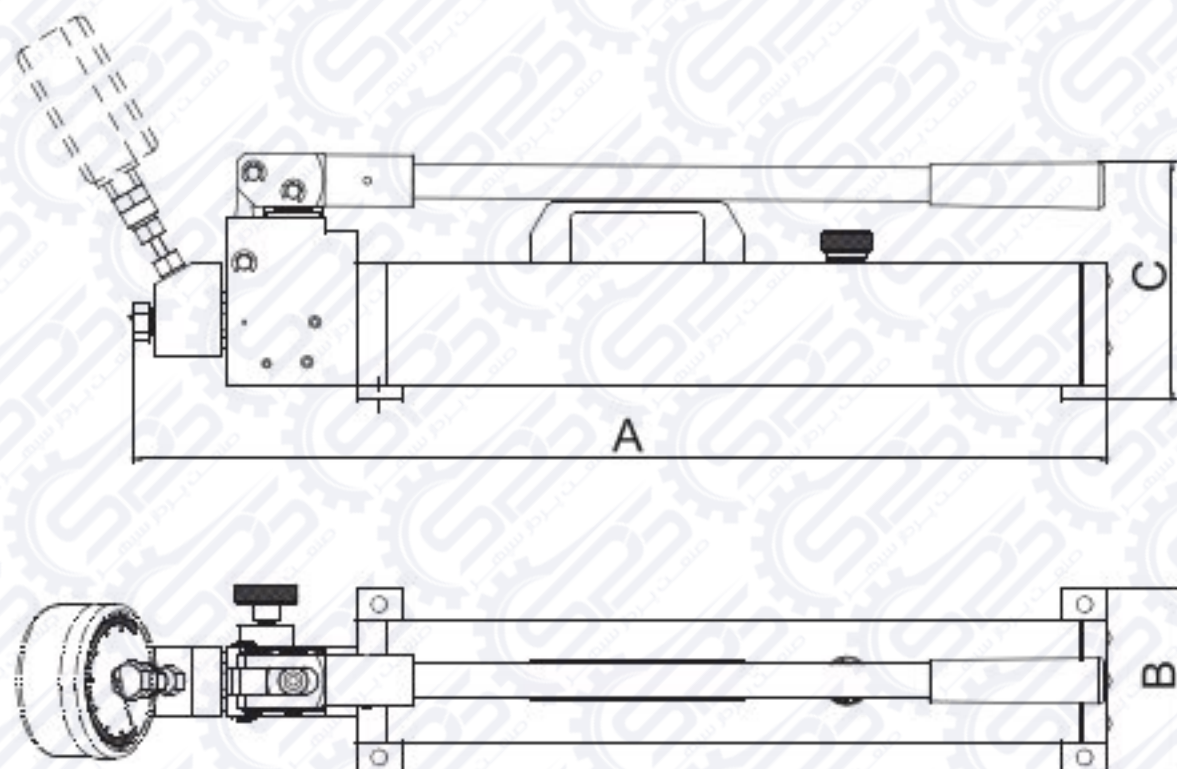
Aluminum titanium alloy corrosion resistance, high strength, light weight, impact resistance, adapt to a variety of harsh environment.

The built-in high and low pressure switching valve, low pressure high flow rate output.

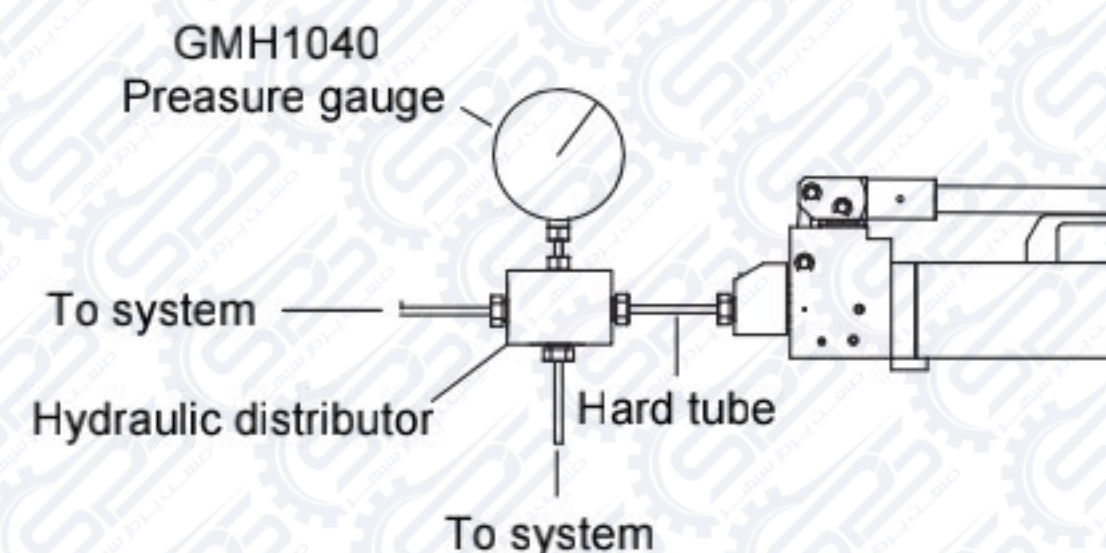
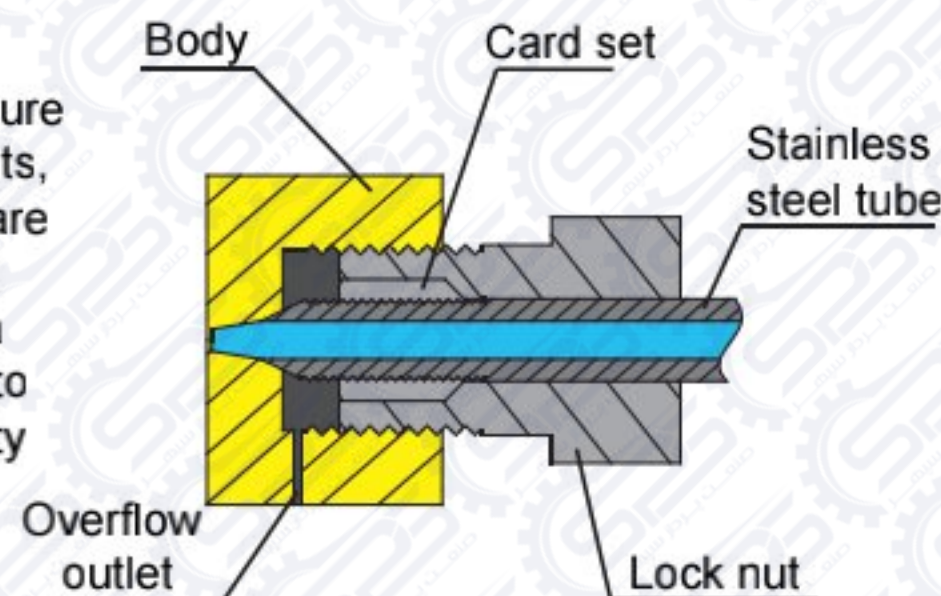


28P-series high hydraulic hand pumps are designed for high hydraulic equipment. Its pressure anew to 2800bar, and customers can order every size of oil tank for different equipment. RAHSOL SPS serves a wide range accessory for this series. These products which are designed for serving true resolutions, entitled with TUV seal result of an effort with appropriate directives.

Ahead Pump Configure



Spinal seal
Stainless steel high pressure joint seal in the spinal joints, with nut casing and pipe are tightly locked in the spinal canal surface to provide a 2800bar sealed. In order to achieve safety and stability requirements



MP series Electric Pumps

Please choose the pump allording to the below parameters

▼ Example for the discription of pump model:

M	P	04	A	S	220
1	2	3	4	5	6
Drive type	Model	Available oil	Valve type	Motor power	Voltage



Pump Oil tank=4L or 8L



Pump Oil tank>8L

1 Drive Model

M =Electric drive

2 Model

P = Pump

3 Oil Capacity

04 = 4L

08 = 8L

13 = 13L

20 = 20L

30 = 30L

56 = 56L

4 Valve Type

A =double-acting(pressure hold)

B =single-acting(pressure hold)

C =single-acting(pressure hold)

D =single-acting

H =double-acting(pressure hold)

5 Motor Power

S = 1.0KW

T = 1.1KW,

6 Voltage

220=220V,

Single phase, 50Hz

380=380V,

Three phase, 50Hz

Example :

Model:MP08HT220

Max Pressure: 700bar

Power: 1.1KW

Valve type: Type H,solenoid valve (double acting,pressure hold)

Oil Available: 8L

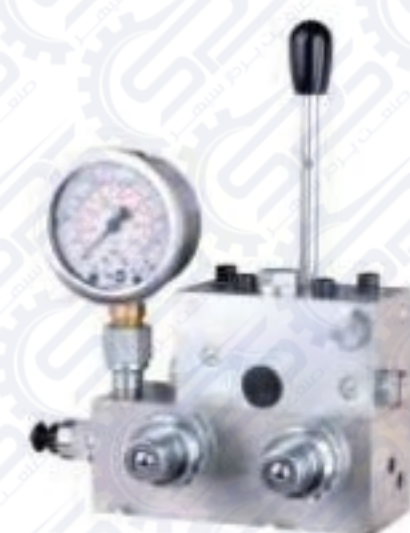
voltage: 220V

Frequency: 50Hz

Parameters

Oil Capacity	Motor Power (KW)	Rated Pressure (bar)		Flow (L/min)		Voltage/Frequency Source of power	Max Pressure (bar)
		Low	High	Low	High		
4L	1.0	650	700	4	0.6	220V, 50Hz 380V, 50Hz;	700
≥8L	1.1			5.5/7.2	0.8		

Valve models



Type A: Manual Valve (double-acting)



Type B: Manual Valve (single-acting)



Type C: Solenoid Valve (single-acting)

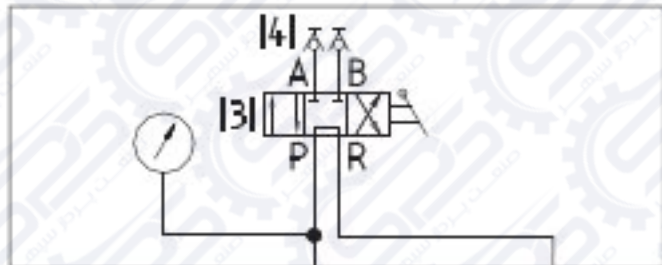
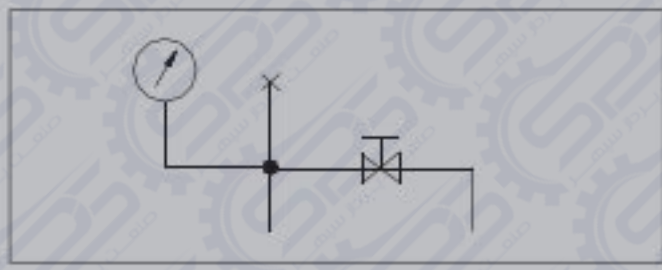
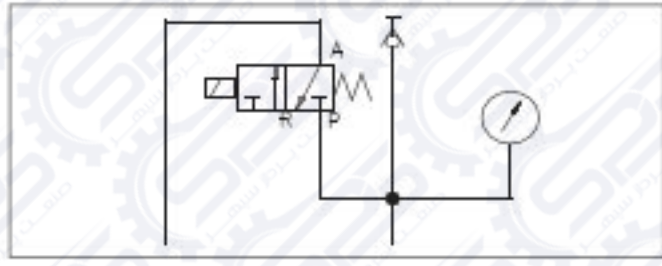
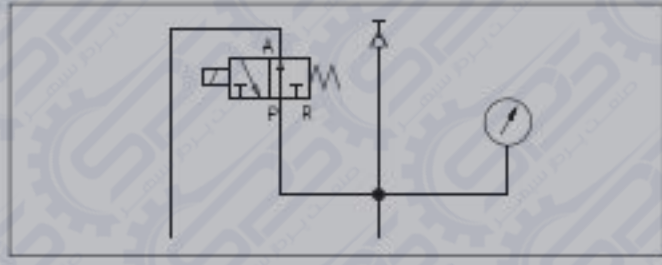
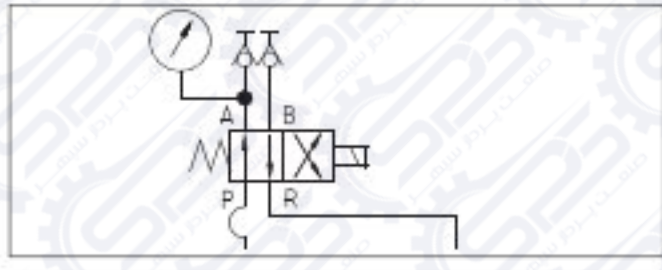


Type D: Solenoid Valve (single-acting)

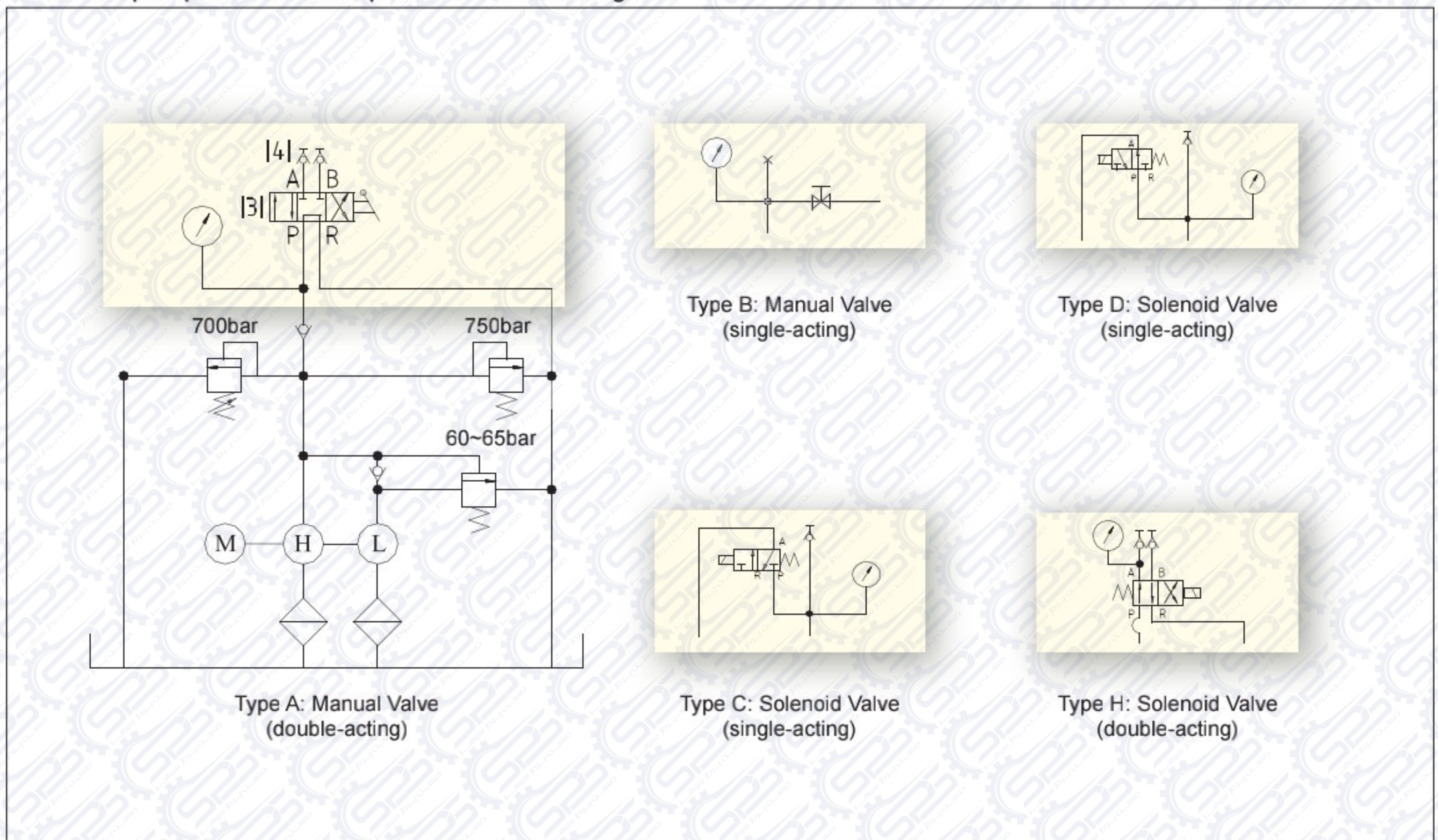


Type H: Solenoid Valve (double-acting)

Universal valve block of MP series pump

Valve Block		Introduction To Basic Functions	Circuit Diagram
Type A: Manual Valve (double-acting)		By the manual valve to operate the double acting tank, it responds quickly, and the reservoir piston will stop at once and keep the pressure for long period.	
Type B: Manual Valve (single-acting)		By the manual valve to operate the single acting tank, easy control, responses quickly, and keep the pressure for long period.	
Type C: Solenoid Valve (single-acting)		By the solenoid valve to operate the single acting tank, easy control, responses quickly, and keep the pressure for long period.	
Type D: Solenoid Valve (single-acting)		Press a button on the solenoid valve to control the outputting and inputting oil of the oil pump.	
Type H: Solenoid Valve (double-acting)		By the solenoid valve to operate the double acting tank, it responds quickly, and the reservoir piston will stop at once and keep the pressure for long period.	

MP series pump valve block replacement circuit diagram



Above the valve block can be installed in any size of oil tank

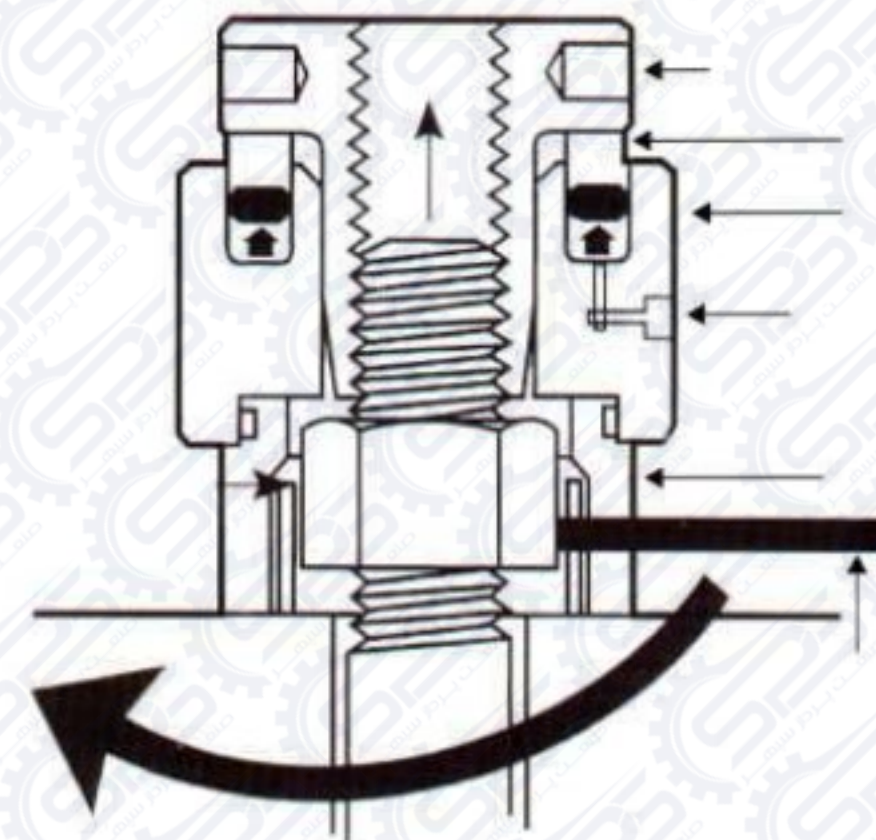
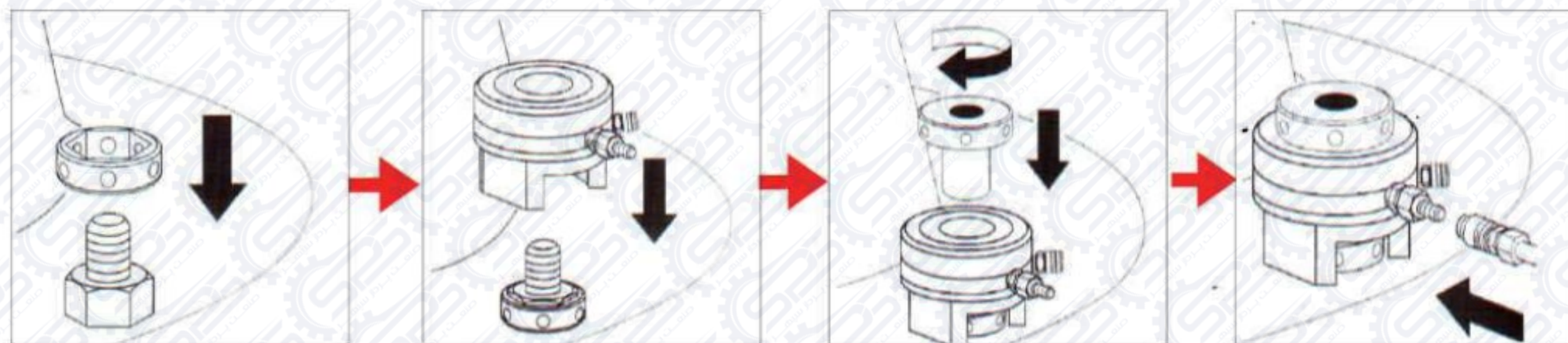
Synchronous Tensioning System

RAHSOL SPS bolt tensioner conforms to the technical standard, has been widely used in chemical industry, Power, steel, mechanics Military industry. RAHSOL SPS also providing customize production to suit all working condition, Any requirement, Please contact RAHSOL SPS Engineer.

Warranty: 12 months

Caution: Warranty is only available for RAHSOL SPS original product.

Assembling Drawing:



HTE series Multi-stage Cylinder

Aforesaid models are just the samples, RAHSOL SPS can make according to the requirement of customers.

- Multi-stage Cylinder Design, Increase the Tension Length
- Strong capacity with small outside diameter, it is suit for the operation at narrow space.
- Spring return, Protect for the stroke over the maximum value, it is suit for operation frequently.
- 700-1500bar operation pressure
- Operate by Super High Pressure Hand Pumps and Electrical Pump

Technical Data

Model	HTE30	HTE36	HTE39	HTE42	HTE48
Maximum Operation Pressure	1350bar	1350bar	1350bar	1350bar	1250bar
Maximum Output Capacity	465KN	678KN	915KN	915KN	1202KN
Maximum Stroke	7mm	10mm	10mm	10mm	7mm
Cylinder Effective Area	3448mm ²	5027mm ²	6830mm ²	6830mm ²	9621mm ²
Quantity of Cylinder Step	2	2	2	2	2
Outside Diameter	72mm	84.5mm	98.5mm	98.5mm	129mm
Bolt Size	M30X3.5	M36X4	M39X4	M42X4.5	M48X5



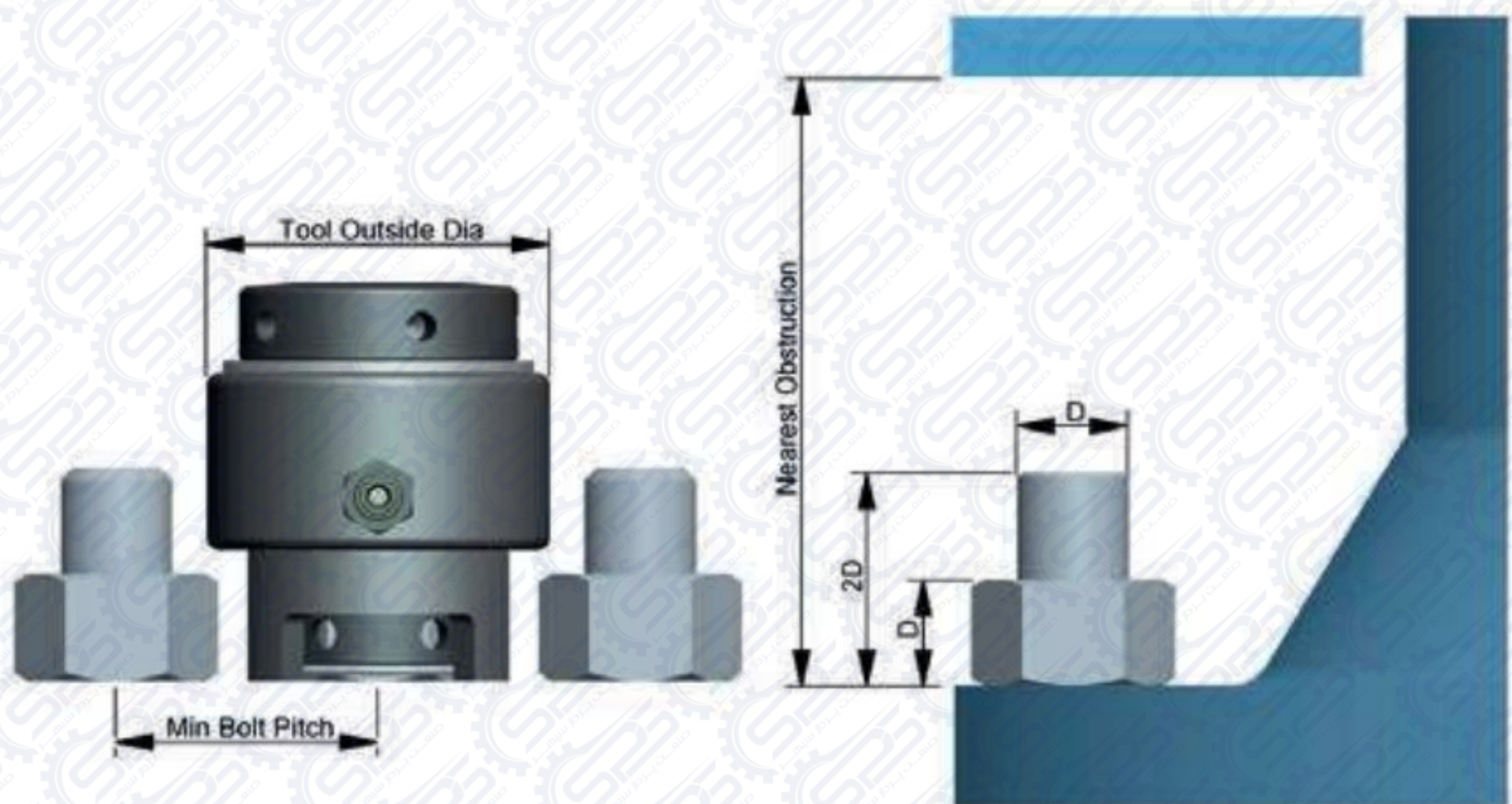


HSR BOLT TENSIONER Spring Return Bolt Tensioner

- Unique quick release bridge adaptation
- Piston overstroke prevention
- Piston stroke indication
- Piston / cylinder misalignment compensation
- Bolt coverage from 1" to 3 1/2" with just 4 tools
- Designed to fit BS1560 / ANSI B16.5 / API flanges
- Fully enclosed load cell design eliminates entry of debris into piston retraction mechanism

The Spring Return design dramatically increases productivity and safety on the job site when compared to older technology manual return tensioners.

topside.



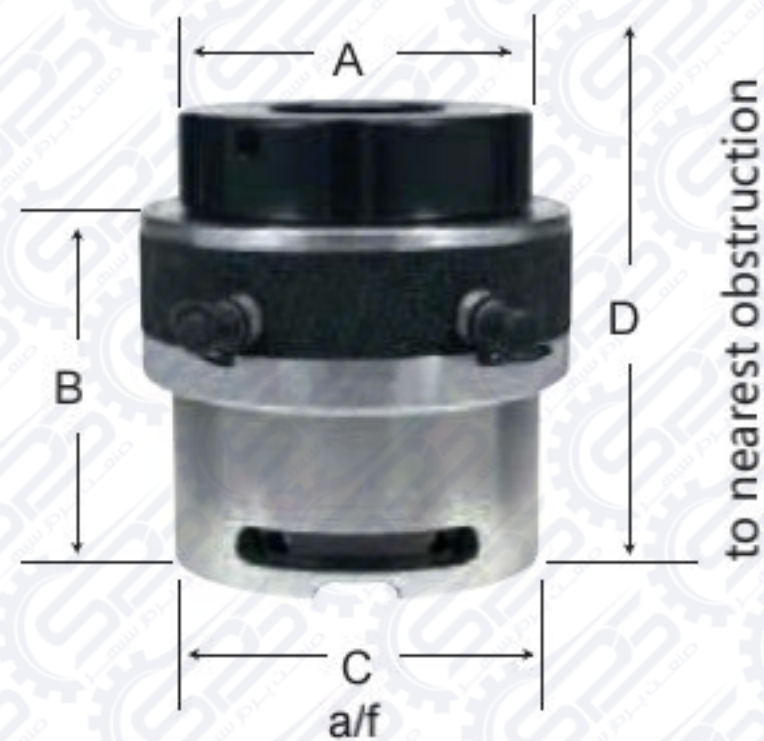
SPRING RETURN BOLT TENSIONER

Our spring return bolt tensioner reduces operator fatigue, saving time and improving safety and productivity.



Order a load cell and an adaptor kit to make a complete tensioner. each are sold separately.

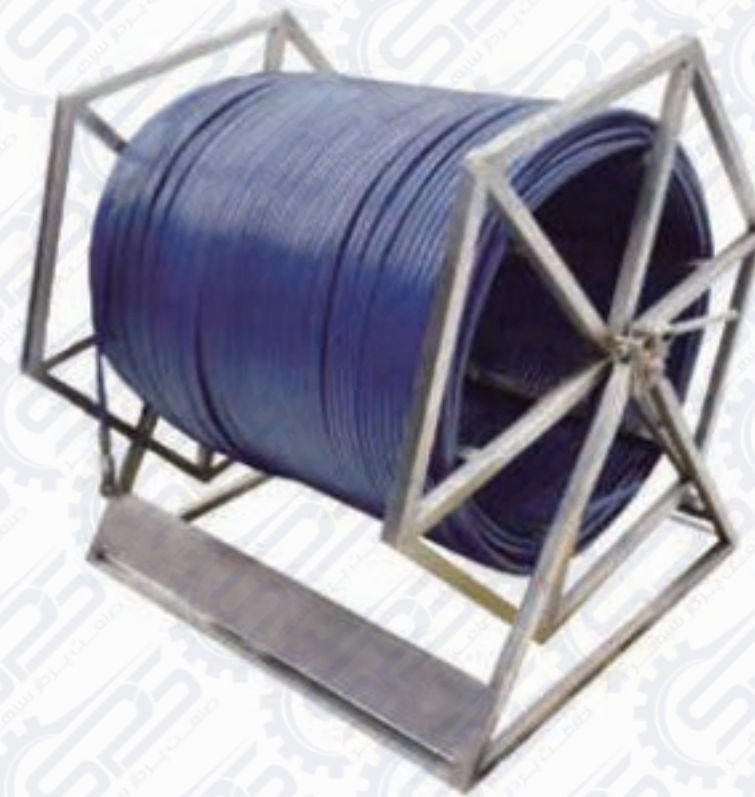
Specifications and Dimensional Data



- Piston stroke - 10mm except for HS 0-8mm
- Max tool pressure - 21750psi(1500bar)
- Bolt protrusion above nut=1xbolt diameter
- "D" includes an allowance for tool removal after bolt tightening with 10mm tlls stroke
- Weight excludes puller sleeve
- Product development is constantly taking place and deimensions may change without notice

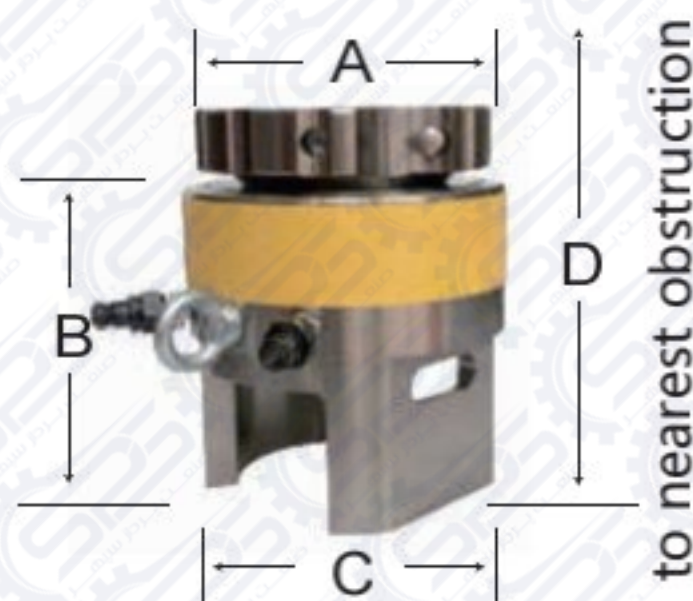
Load Cell	Stud Diameter	Stud	Tool Load		Hydraulic Area		A		B		C		D			
			Lbs	KN	in ²	mm ²	in	mm	in	mm	in	mm	Imp	mm	Metric	mm
HSR 0	3/4"	M20	35500	160	1.65	1067	2.6	66	3.7	93	2.5	63	5.4	136	5.5	142
	7/8"	M22							3.7	93	2.5	63	5.6	142	5.6	144
		M24							4.6	117	2.7	68	6.9	175	6.9	175
HSR 1	1 1/8"	M27	61950	280	2.89	1867	3.4	87	4.6	117	2.7	68			7.0	178
											2.8	72	7.1	181		
HSR 2	1"	M24	99700	450	4.65	3001	4.1	103	4.6	117	3.0	75	6.9	175	6.9	175
		M27							4.6	117	3.0	75			7.0	178
	1 1/8"	M30							4.7	120	3.2	80	7.1	181	7.2	184
		M33							4.8	123	3.3	84	7.4	188	7.5	190
	1 3/8"	M36							5.0	126	3.5	89	7.7	195	7.7	196
HSR 3	1 1/4"	M33	145950	660	6.82	4401	4.7	118	4.8	123	3.5	88	7.5	190	7.6	192
		M36							5.0	126	3.8	96	7.8	197	7.8	198
	1 1/2"	M39							5.1	130	3.8	96	8.0	203	8.0	204
	1 5/8"	M42							5.2	133	4.1	105	8.2	209	8.3	211
HSR 4	1 1/2"	M39	223550	1000	10.34	6668	5.5	140.5	5.2	132	4.4	112	8.3	211	8.4	212
		M42							5.3	135	4.5	114	8.5	217	8.6	218
	1 3/4"	M45							5.5	139	4.7	118	8.8	223	8.9	225
	1 7/8"	M48							5.6	142	4.5	114	9.1	230	9.1	231
	2"								5.7	145	4.7	120	9.3	236		
HSR 5	2"	M52	331400	1500	15.50	10003	6.9	175.5	5.8	148	4.7	120	9.7	246	9.8	248
	2 1/4"	M56							6.1	154	5.4	138	10.2	259	10.2	258
		M60							6.3	161	5.4	138	10.2	259	10.3	262
	2 1/2"	M64							6.3	161	6.0	153	10.7	272	10.8	273
	2 3/4"	M68							6.6	167	6.1	156	11.2	284	11.1	283
HSR 6	2 3/4"	M72	553200	2500	25.84	16671	8.6	219	6.6	167	6.2	157	11.6	294	11.7	297
	3"	M76							6.9	171	7.2	182	12.1	307	12.1	308
		M80							7.1	180	7.5	190			12.3	312
	3 1/4"	M85							7.1	180	7.5	190	12.6	320	12.7	323
	3 1/2"	M90							7.3	186	8.1	205	13.1	332	13.2	334
HSR 7	3 1/2"	M90	708200	3200	33.06	21339	9.9	252	7.3	186	7.9	200	13.2	339	13.3	341
		M95							7.3	186	7.9	200			13.5	346
	3 3/4"	M100							7.6	192	7.9	200	13.7	352	13.9	356
	4"								7.8	199	8.3	210	14.2	363		

Our Subsea bolt tensioner incorporating the quick resction nut feature reduces diver fatigue,improving diver safety and productivity.



Used to twine super high pressure hose from 5 meter to 210 meter.

Specifications and Dimensional Data



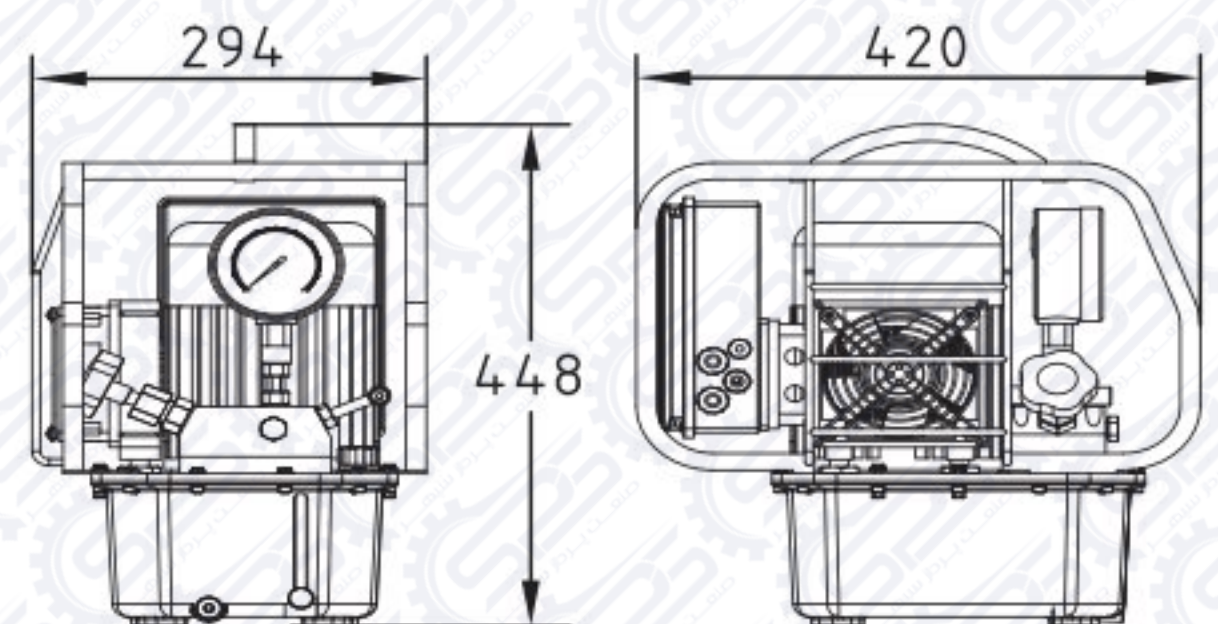
- Piston stroke - 1.1/18inch(Except WST1 - 0.79inch)
- Max tool pressure - 21,750psi
- "D" includes an allowance for tool removal after bolt tightening with 30mm tool stroke
- Product development is constantly taking place and dimensions may change without notice

Tool Ref	Bolt Diameter		Tool Load KN	Hydraulic Area		'A' in/mm	'B' in/mm	'C' A/F in/mm	Minmum Bolt Protrusion (Above Nut)		'D' in/mm	Stroke in/mm
	Imperial	Metric		in ²	mm ²				in Imp bolts	mm Met bolts		
WST1	3/4"	M20	141	1.96	943	2.60/66	3.82/97	1.89/48	4.09	107	8.98/228	0.79/20
	7/8"	M22							3.98	105		
WST2	1"	M24	237	2.45	1585	3.23/82	5.02/127.5	2.36/60	5.24	139	11.65/296	1.82/30
	1-1/8"	M27							5.12	136		
		M30								134		
WST3	1-1/4"	M33	379	3.92	2532	3.82/97	5.39/137	3.03/77	5.35	142	12.17/309	1.82/30
	1-3/8"	M36							5.24	139		
WST4	1-1/2"	M39	551	5.69	3676	4.37/111	5.75/146	3.54/90	5.51	147	12.68/322	1.82/30
	1-5/8"	M42							5.35	144		
WST5	1-3/4"	M45	880	9.10	5868	5.35/136	6.22/158	4.49/114	5.94	160	13.46/342	1.82/30
	1-7/8"	M48							5.83	158		
	2"	M52							5.71	154		
WST6	2-1/4"	M56	1564	16.17	10433	6.97/177	7.11/180.5	5.51/140	6.54	178	14.72/374	1.82/30
	2-1/2"	M60							6.30	175		
	2-3/4"	M64							6.08	172		
		M68								169		
		M70								165		
WST7	3"	M76	2419	26.63	16128	8.54/217	7.95/202	7.09/180	7.13	195	15.10/409	1.82/30
	3-1/4"	M80							6.89	192		
	3-1/2"	M85							6.65	188		
		M90								184		

HMP series Super High Pressure Electrical Pump

- Single-Acting high performance
- Can be used for bolt tensioning and other HP equipments in shipping vessel & wind power industry
- Convenient adjustable pressure regulator with a high precision pressure gauge
- Easy to adjust the pressure in the range of 700~2000 bar
- Simple and quick operation with the high performance quick connect couplings
- Very user friendly for site work due to its light weight compact design
- Higher operating pressure of pump can be ordered

Parameter		
Model	HMP06BWT18-L16	HMP06BWT18-L20
Voltage/Frequency	220V/50HZ	220V/50HZ
Tank capacity	5.5L	5.5L
Flow(low-High)	4.2-0.20 L/min	4.2-0.20 L/min
Max Output Pressure	1600 bar	2000 bar
Output Port Size	1/4"BSP	1/4"BSP
Power	1.1KW	1.1KW
Weight	24KG	24KG



SHNSP series Super High Pressure Air Pump

Parameter		
Model	SHNSP06BZQ5-16	SHNSP06BZQ5-20
Tank capacity	5.5L	5.5L
Flow(low-High)	5.4-0.15 L/min	5.4-0.15 L/min
Max Output pressure	1600 bar	2000 bar
Air in	4~8 bar	4~8 bar
Power	1.1KW	1.1KW
Weight	20KG	20KG
Volume	272x416x446mm	272x416x446mm

BH series Hydraulic Hose	BH84 series	BH94 series
Maximum Operation Pressure /Safety Parameter	1800bar/2.5	2800bar/2.5
Inside Diameter	5.0X11.2	5.0X13.4
Outside Diameter		
Minimum Bending Radius	150	200
Available Quick Coupler	C116	C125



-Single-Acting and high performance

-To be operated for Bolt Tensioners and other equipments in shipping vessel and wind power industry.

-To be convenient to adjust the pressure with the High precision Pressure Gauge

-Easy to adjust the pressure in the range of 83—3320bar

-Simple and quick operation with the High performance Quick Coupler

-Convenient to bring with its light weight



Technical Parameter

Model	Max output pressure Bar	Oil output port	Compression Rate	Standard Tank capacity	Pressure output (Bar) 1Mpa=10Bar≈10Kg/cm²																		
					0	20	40	70	100	150	200	300	400	450	500	550	600	700	900	1200	1700	2350	2850
					Flow (L/min)																		
SHNP16	83	G1/2"	16:1	10L	24.8	18.5	14.7	11.2	9.05	0													
SHNP20	166	G1/2"	20:1		16.2	13.9	12.8	10.9	8.63	0													
SHNP28	232.4	G1/2"	28:1		12.8	11.9	9.4	8.9	7.1	6.4	0												
SHNP40	332	G1/2"	40:1		10.7	9.37	8.03	6.53	5.22	4.98	4.12	0											
SHNP64	498	G3/8"	64:1		5.51	5.17	4.74	3.53	3.34	2.82	2.51	2.15	1.91										
SHNP80	664	G3/8"	80:1		4.44	3.95	3.26	3.23	2.82	2.62	2.32	2.13	1.8	1.71	1.62	1.56	0						
SHNP100	830	G3/8"	100:1		3.93	3.7	3.01	2.73	2.65	2.51	2.3	2.01	1.75	1.62	1.51	1.37	1.25	0					
SHNP130	1079	G3/8"	130:1		2.48	2.44	2.41	2.36	2.31	2.18	2.04	1.9	1.7	1.6	1.5	1.3	1.2	1.12	0				
SHNP170	1411	G3/8"	170:1		1.82	1.8	1.78	1.78	1.73	1.71	1.68	1.61	1.5	1.48	1.35	1.2	0.97	0.85	0.79	0			
SHNP240	1992	G3/8"	240:1		1.57	1.55	1.54	1.51	1.48	1.45	1.43	1.42	1.38	1.37	1.14	0.92	0.81	0.73	0.57	0.34	0		
SHNP300	2490	G3/8"	300:1		1.23	1.12	1.05	0.98	0.81	0.76	0.64	0.61	0.58	0.55	0.52	0.48	0.45	0.41	0.37	0.22	0.18	0	
SHNP400	3320	G3/8"	400:1		0.98	0.85	0.63	0.63	0.52	0.41	0.3	0.29	0.28	0.27	0.25	0.25	0.25	0.24	0.21	0.18	0.1	0.05	0

1. Air consumption 1 M /min at 7Bar

2. Staple model with marked *

3. Max air input: 8.3Bar, Suggest to use air pressure under 7Bar

4. To order different size of oil tank, please consult to RAHSOL SPS

HYNC series Hydranlic Nut Splitters

Capacity : 5-90 Ton

Bolt Size : M6 - M48

Max Working Pressure : 700bar

- Compact and ergonomic design, easy to use.
- Unique angled head design.
- Single-acting, spring return cylinder.
- Heavy duty chisels can be reground.
- Applications include service trucks, industry, tank cheaning, petrochemical, piping steel contruction, mining...etc.



HYNC Series Hydranlic Nut Splitter Selection Chart

Model	Capacity (Tons)	Nut Size (mm)	Bolt Size (mm)	Oil Capacity (cm ³)	Length (mm)	Width (mm)	Height (mm)	Weight Kg
HYNC-1319	5	10-19	M6-M12	15	170	40	48	1.2
HYNC-1924	10	19-24	M12-M16	20	191	54	62	2.0
HYNC-2432	15	24-32	M16-M22	60	222	64	72	3.0
HYNC-3241	20	32-41	M22-M27	80	224	75	88	4.4
HYNC-4150	35	41-50	M27-M33	155	288	94	105	8.2
HYNC-5060	50	50-60	M33-M39	240	318	106	128	11.8
HYNC-6075	90	60-75	M39-M48	492	393	156	181	34.1

* The hardness of the nut should not exceed HRC-44.

LA Automatic Series Selection Table

Model	LA50L337
Capacity (T)	50
Min open (mm)	64
Pulling depth of Min.open	651
Max.open (mm)	1150
Depth of max. open	559
Overall length (mm)	2590
Regulation of puller center height (mm)	450~1120
Cylinder stroke (mm)	337
Source of power (single phase)	220V/380V

Fully automatic hydraulic design-automatically up and down, grip and pull.

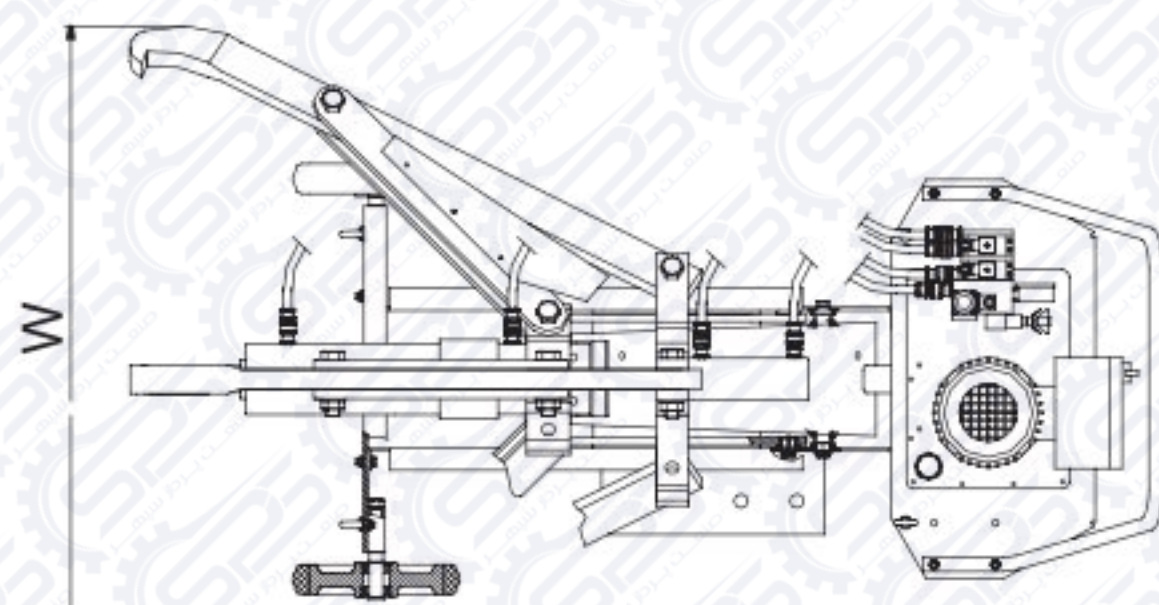
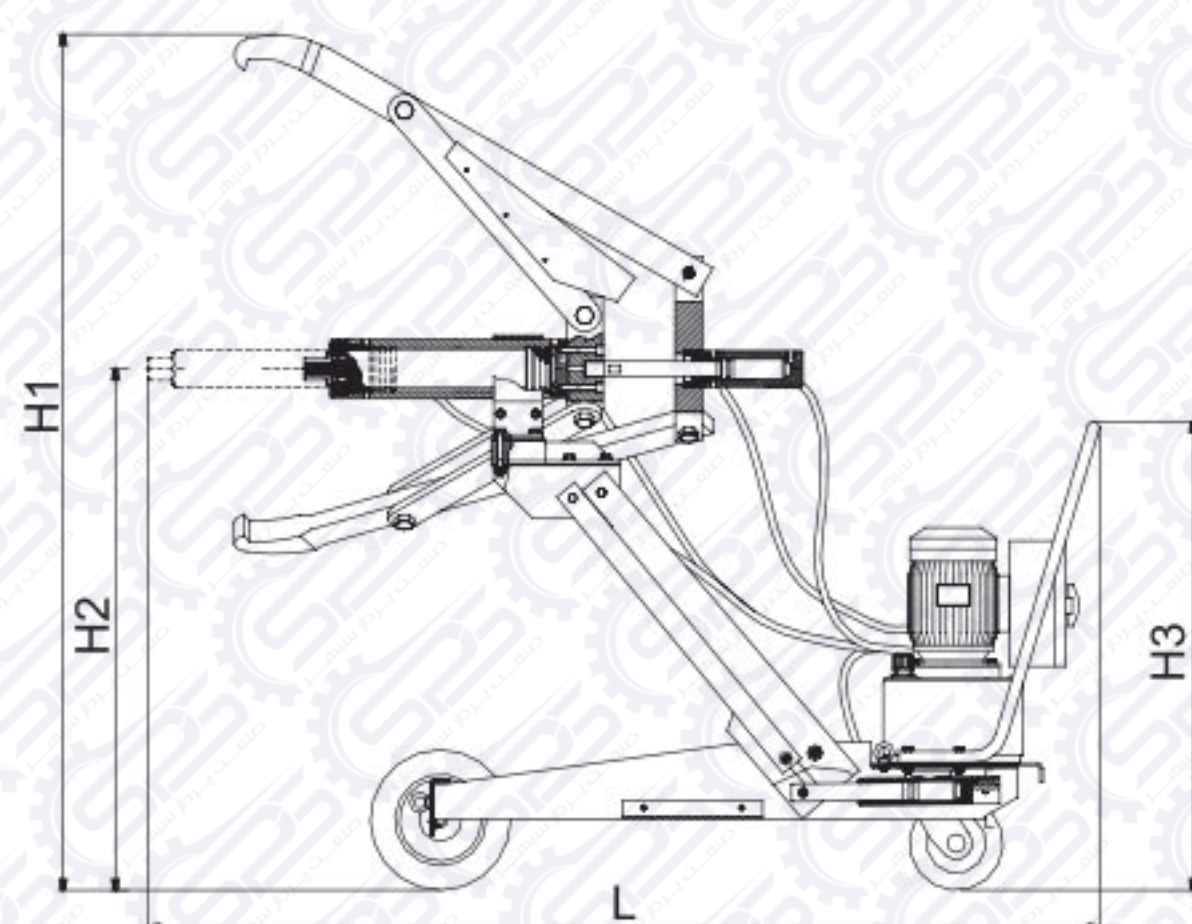
Made of alloy steel with super-high strength; double-acting hydraulic design. Used for dismantling large shafts and perforating work pieces.

Available in 2 and 3 jaws design allows adding a pulling disc to pull bearings.

Roller cart makes it available to change workplace.

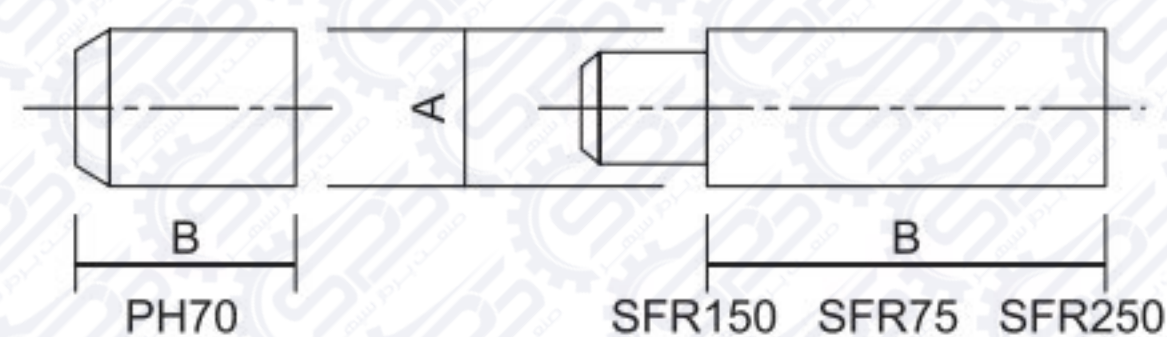


LA Automatic Series Dimension



Model	LA50L337
L (mm)	2590
W (mm)	1264
H1 (mm)	1829
H2 (mm)	1114
H3 (mm)	1002

LA Automatic Series Affix



Model	A (mm)	B (mm)	Quantity
PH70	70	70	1
SFR150	70	150	1
SFR75	70	75	1
SFR250	70	250	1

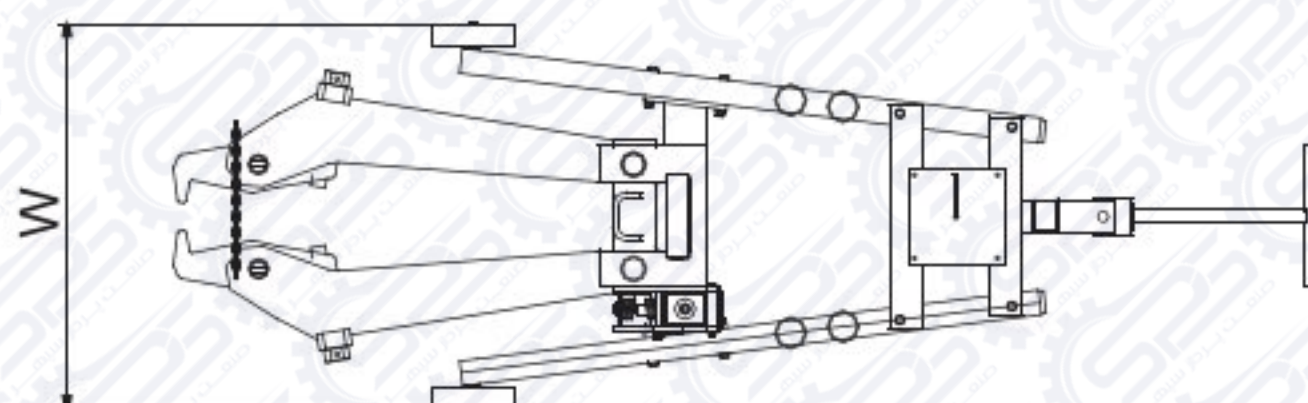
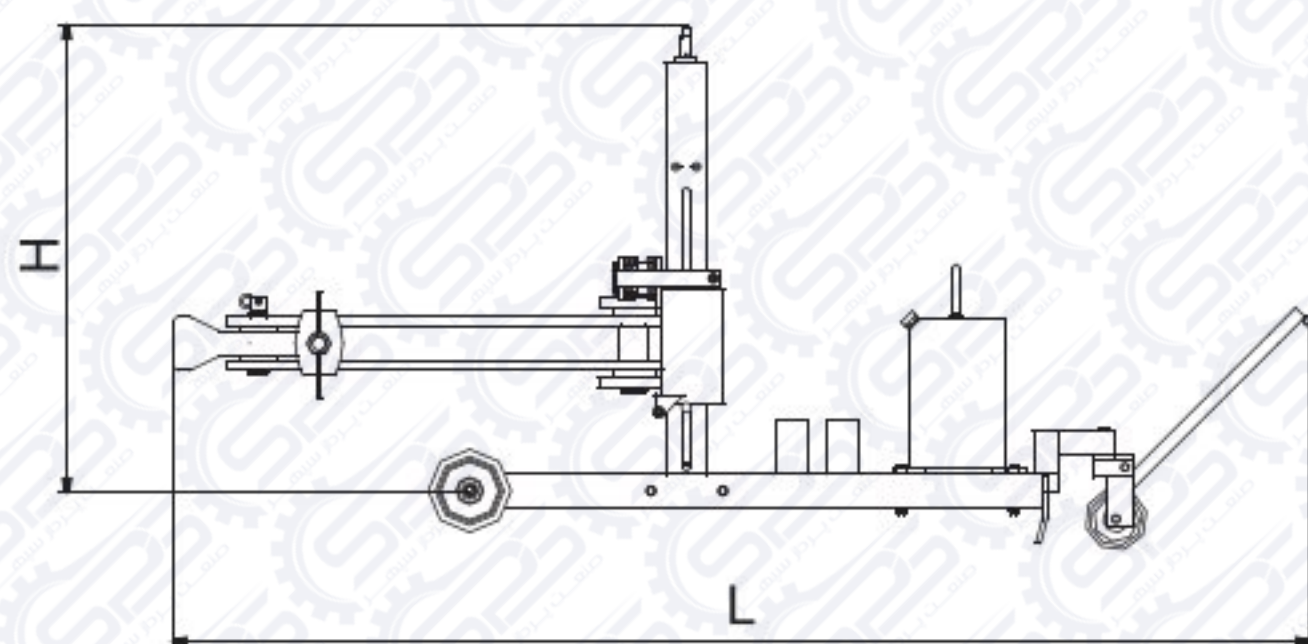


LA series Vehicle Hydraulic Puller

LA Series Selection Table

Model	LA25100	LA2560
Capacity (T)	100	60
Min open (mm)	381	140
Pulling depth of Min.open (mm)	1066	790
Max.open (mm)	1219	1000
Depth of max. open (mm)	863	650
Overall length (mm)	3015	2885
Regulation of puller center height (mm)	305~915	305~915
Cylinder stroke (mm)	250	250
Source of power (single phase)	220V/380V	220V/380V

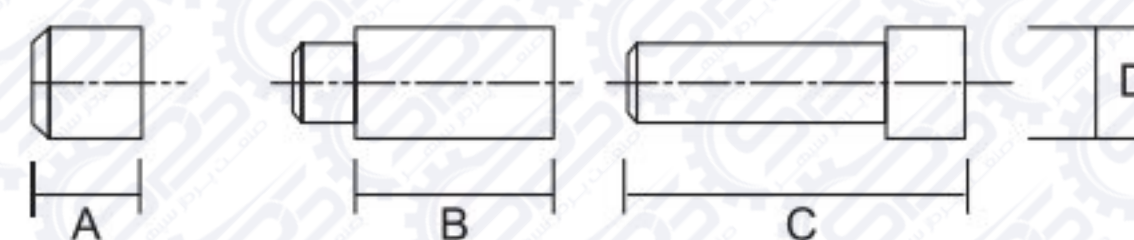
LA Series Dimension



Model	LA25100	LA2560
L (mm)	3015	2885
H (mm)	1276	1276
W (mm)	930	930



LA Series Affix



PHA105

SFR105

PHD105

Model A (mm) B (mm) C (mm) D (mm)

PHA105 80 105

SFR105 205 105

PHD105 245 105



- ▲ Four layers nylon design. Two layers of high strength steel wire braids and plastic coating.
- ▲ Twins hoses supplied for Hydraulic Torque Wrench.
- ▲ Used in strict occasion, 4:1 design factor.
- ▲ Light weight, small size and high bending radius.
- ▲ Exhibits low volumetric expansion under pressure.

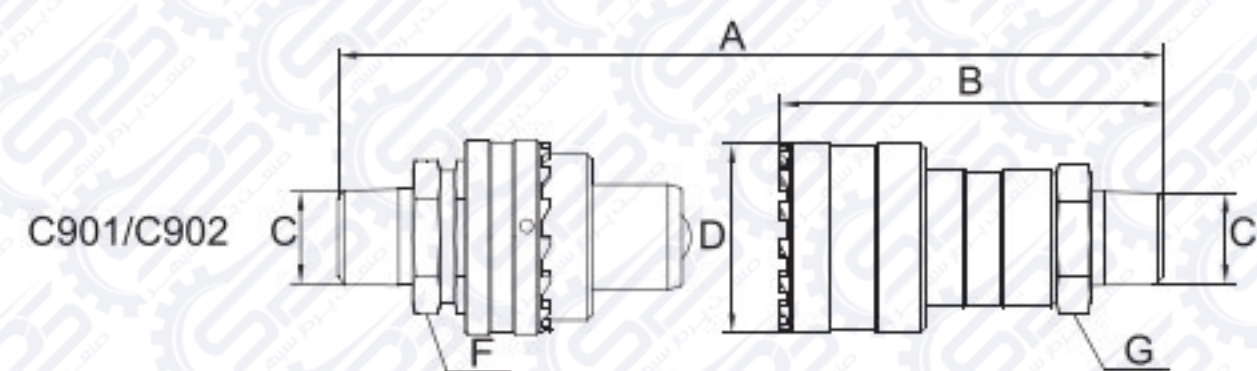
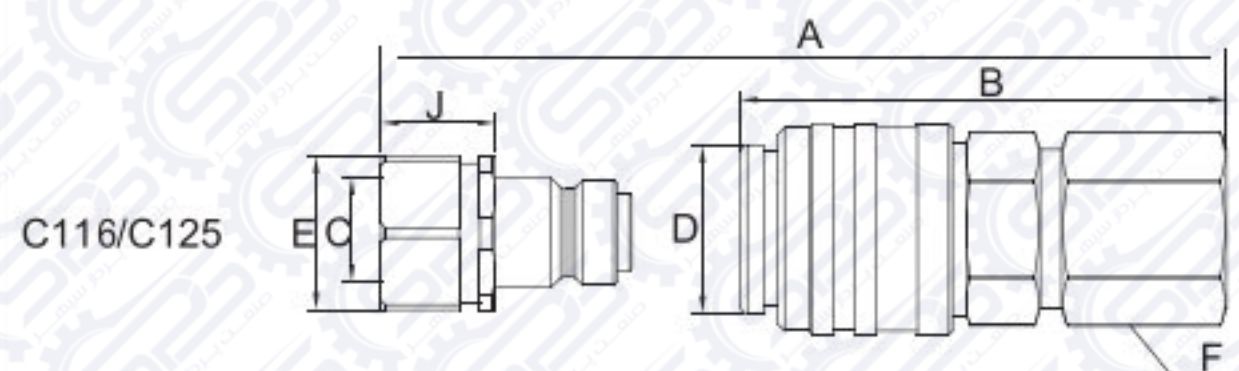
Model & photograph		max operating pressure (bar)	hose end		Type	hose length (M)
			end one	end two		
2JH64Series twin hydraulic hose		720	1/4"NPT	1/4"NPT	2JH6445-1	4.5
					2JH6460-1	6
					2JH6490-1	9
					2JH64100-1	10
JH74 Series hydraulic hose		720	1/4"NPT	1/4"NPT	JH7445	4.5
					JH7460	6
					JH7490	9
					JH74100	10
JH78 Series hydraulic hose		1000	3/8"NPT	3/8"NPT	JH7818	1.8
					JH7845	4.5
					JH7890	9
					JH78120	12
BH84 Series superhigh pressure hydraulic hose		1800	1/4"BSP	1/4"BSP	BH8420	2
					BH8460	6
					BH8490	9
					BH84120	12
BH94 Series superhigh pressure hydraulic hose		2500	1/4"BSP	1/4"BSP	BH9430	3
					BH9460	6
					BH9490	9

Above are the standard length, can be customized according to customer requirements of various length

C series Quick Coupler

Model & photograph		Max Operating Pressure	Male half	Femal half	connecting	Dimensions							
						A	B	C	D	E	F	G	J
C901		700bar	C9014	C9013	Spiral lock	97	61	1/4"NPT	29		22	22	
						97	61	1/4"NPT	29		22	22	
C902		700bar	C9022	C9021	Spiral lock	108	71	3/8"NPT	35		24	24	
						108	71	3/8"NPT	35		24	24	
C116		1500bar	C1162	C1161	Card set	81		1/4"BSP		27.5			18.5
						81	61.5	1/4"BSP	28		24		
C125		2000bar	C1252	C1251	Card set	82		1/4"BSP		27.5			17.7
						82	64.5	1/4"BSP	30		24		

C Series Quick Coupler Dimension



- ▲ 3/8"NPT high flow couplers,.
- ▲ It is standard component on most RAHSOLSPS cylinders.
- ▲ featuring 'push-to-connect' operation.
- ▲ 1/4" regular coupler.

G series Glycerin Filled Hydraulic Pressure Gauge

- ▲ Standard calibration with dual scale reading for psi and bar.
- ▲ All the pressure sensing components are sealed with glycerin and dampened proof to guarantee durability.
- ▲ Including a safety seal ring and pressure equalling membrane.

Model & photograph	Port	Face Diameter (mm) and pressure range(Mpa)	Gauge adaptor
GN0610 	1/4" NPT External screw thread	Psi/Bar Double scale 0-700bar	 GA-3
		Psi/Bar Double scale 0-1000bar	
GG1010	1/2" BSP External screw thread 	Psi/Bar Double scale 0-1000bar	 GA20
GG1010-B		Psi/Bar Single scale 0-1000bar	
GG1020-G		Psi/Bar Double scale 0-2000ar	
GG1025-G		Psi/Bar Double scale 0-2500bar	
GG1030-G		Psi/Bar Double scale 0-3000bar	

J series Connecting Accessory

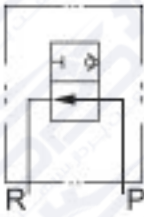
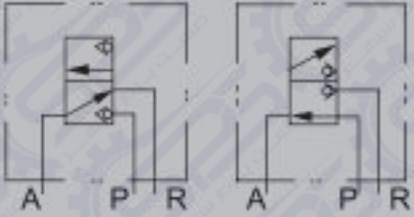
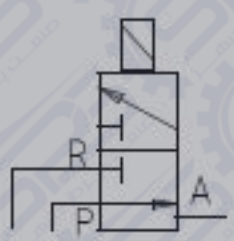
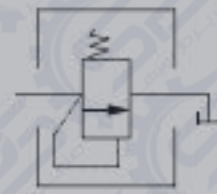
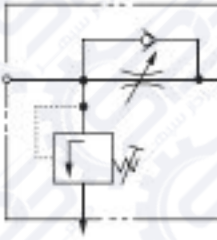
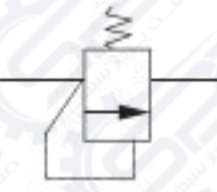
- ▲ Hundreds of connection
- ▲ Kinds of screw thread, apply for any systems
- ▲ All bear superhigh pressure working condition

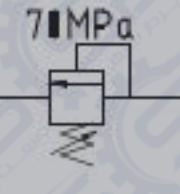
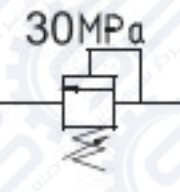
J01 Series	J02 Series	J03 Series
		
J01-01 NPT1/4" (F)-NPT1/4"(F)	J02-06 NPT1/4" (M)-NPT1/4"(M)	J03-01 NPT1/4" (M)-G1/4"(F)
J01-02 NPT3/8" (F)-NPT1/4"(F)	J02-07 NPT1/4" (M)-NPT3/8"(M)	J03-06 NPT1/4" (F)-G1/4"(M)
J01-03 NPT3/8" (F)-NPT3/8"(F)	J02-10 NPT3/8" (M)-NPT3/8"(M)	J03-07 NPT1/4" (F)-NPT3/8"(M)
J01-04 NPT1/4" (F)-M10X1.5 (F)	J02-23 G1/4" (M)-G1/4"(M)	J03-11 NPT3/8" (F)-G3/8"(M)
J01-05 NPT3/8" (F)-M16X1.5(F)	J02-25 G1/4" (M)-NPT3/8"(M)	J03-14 NPT3/8" (F)-NPT1/4"(M)

Above as the standard model, other 300 kinds of models, please contact RAHSOLSPS Engineer.

Superhigh pressure series (made by RAHSOL SPS)

Hydraulic Component(in common use)

Photograph and Model	Description	Application	Hydraulic Symbol
	solenoid (operated)valve VGS2	single-acting hydraulic pump	
	solenoid (operated)valve VGZ3	double-acting hydraulic pump	
	solenoid (operated)valve VGZ4	double-acting hydraulic pump	
	air (operated)valve VPZ3-1B	double-acting hydraulic pump	
	Directional control valve VH1	Double-acting hydraulic pump	
	Shut-off Valve IV4	single-acting hydraulic pump & Double-acting hydraulic pump	
	needle valve V-82	single-acting hydraulic pump & Double-acting hydraulic pump	
	limited valve TYC01	electric pump (limit the pressure and adjust the pressure)	
	Manually operated check valve V-66	single-acting hydraulic pump & Double-acting hydraulic pump	
	Pilot operated check valve V-42	Double-acting hydraulic pump	
	safe valve BF2	single-acting hydraulic pump & Double-acting hydraulic pump	

Photograph and Model		Description	Application	Hydraulic Symbol
	Piston	Basic hydraulic unit	Piston pump	
	Adjust Valve TYC02	Apply to adjust the work pressure of the hydraulic system.	adjust pressure for hydraulic pump or hydraulic system	
	Directional Valve HXC02	Do reverse of direction by a little oil discharge	single-acting hydraulic pump & Double-acting hydraulic pump	
	Directional control Valve DXC01	Ensure the liquid do single-flow, opposite direction holding the pressure.	single-flow , holding the pressure	
	Directional control Valve DXC02	Ensure the liquid do single-flow, opposite direction holding the pressure.	single-flow , holding the pressure	
	Relief Valve XHC02 XHC03	Control the oil loading to release the pump's loading.	hydraulic pump	