



BETTER OIL TOOLS

50 Raffles Place # 15-05
Land Tower 048623
Singapore
www.betteroiltools.com

Contact Us

Better Oil Tools LTD.

Mail : sales@betteroiltools.com

www.betteroiltools.com

HYDRAULIC TOOLS

HYDRAULIC TORQUE WRENCH & TORQUE WRENCH PUMP

HYDRAULIC PUMP

CYLINDER

BOLT TENSIONER & HIGH PRESSURE PUMP

HYDRAULIC HOSE. QUICK COUPLER & SYSTEM CONNECTING ACCESSORY



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BOLT TENSIONER & HIGH PRESSURE PUMP

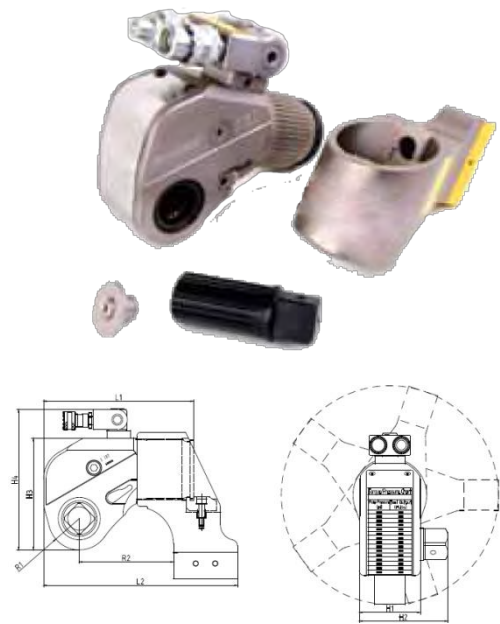
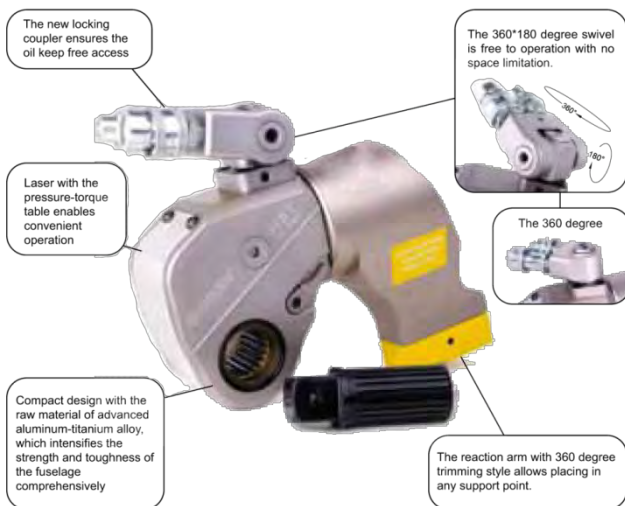
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IBT series

Square drive hydraulic torque wrench



IBT series is the professional hydraulic torque wrench which BOT 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. BOT provide after-sales service all over the world, and already got the approved by TUV certificate.

- 70Mpa Max working pressure and the accuracy keep within $\pm 3\%$
- 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*180 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.
- The new locking coupler ensures the oil keep free access.

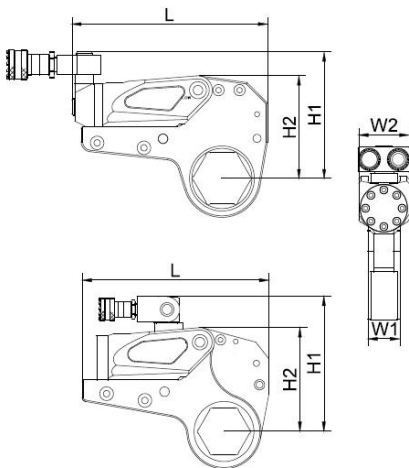
IBT Series Selection Chart

TYPE	07IBT	1IBT	3IBT	5IBT	8IBT	10IBT	20IBT	25IBT	35IBT	50IBT
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
L1	110,8	144,5	178	210,5	222	245,5	307,5	323	372,5	400
L2	139.3	173.5	229	270.5	293	317.5	383.5	401	496.5	516
H1	42	50	68	80	90	100	120	137	153	160
H2	65.8	72	95	123	134	142	183	200	216	223
H3	76.2	96	127	149	167	182	220	247	282	291
H4	108.1	131	176.5	199	217	232	270	297	332	341
R1	20,5	26	34	39	47	51	59	66	77	81
R2	68.3	85	114	137	153	154	186	199	241	259
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"

LOW series

Low Profile Hydraulic Torque Wrench

LOW series is the professional Low profile hydraulic torque wrench which BOT 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. BOT provide after-sales service all over the world, and already got the approved by TUV certificate.



- 70Mpa max working pressure; keep the accuracy $\pm 3\%$.
- 5 models with the range from 232-44593N.m
- 360*180 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.
- The new locking coupler ensures the oil keep free access.

LOW Series Selection Chart

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

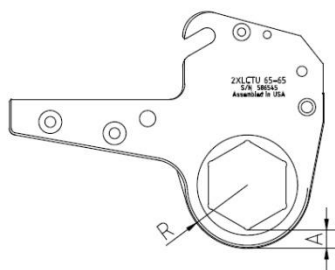
LOW series

Hexagon Cassette



Every model of LOW 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 that 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 LOW Ratchet link. One single Ratchet link is suitable for many bolts sizes.(by the reducer, please contact BOT engineer)



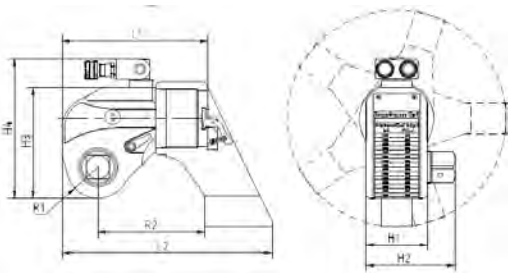
LOW Series Hexagon Cassette Selection Chart

*BOT can be customized according to customer requirements of special types of work head.

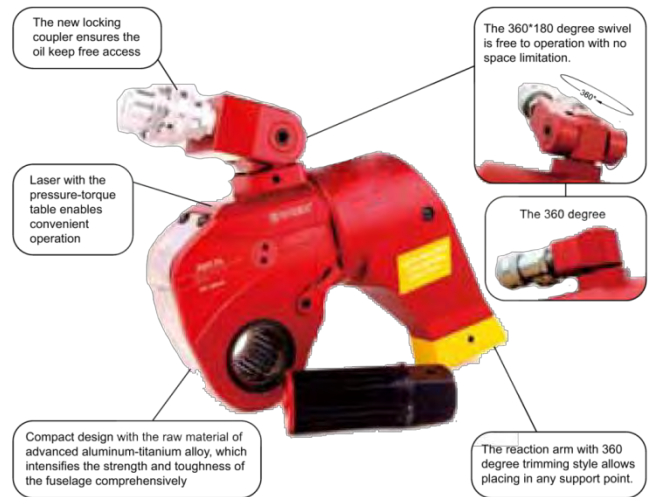
2LOW				4LOW				8LOW				14LOW				30LOW			
Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque	Type	R	A	Max Torque
2LOW-19	27	16	2328	4LOW-34	36	16	5858	8LOW-41	46	22	10941	14LOW-50	60	31	18521	30LOW-85	78	28	41882
2LOW-22	27	14	2328	4LOW-36	36	15	5858	8LOW-46	46	19	10941	14LOW-55	60	28	18521	30LOW-90	78	27	41882
2LOW-27	27	11	2328	4LOW-41	39	15	5858	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	7	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

MXTA series

Square drive hydraulic torque wrench



MXTA series is the earliest type of hydraulic torque wrench which BOT extends in domestic market. Its raw material is aluminum-titanium alloy which makes the wrench light and high intense. With Max..torque 48666N.m, MXTA accomplish both tightening and loosening successfully. BOT provides after-sale service all over the world, owns full set supporting supply capacity, and gets the TUV certificate.



- 70Mpa Max working pressure and the accuracy keep within $\pm 3\%$
- All together 8 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.
- The 360*180 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.
- The new locking coupler ensures the oil keep free access.

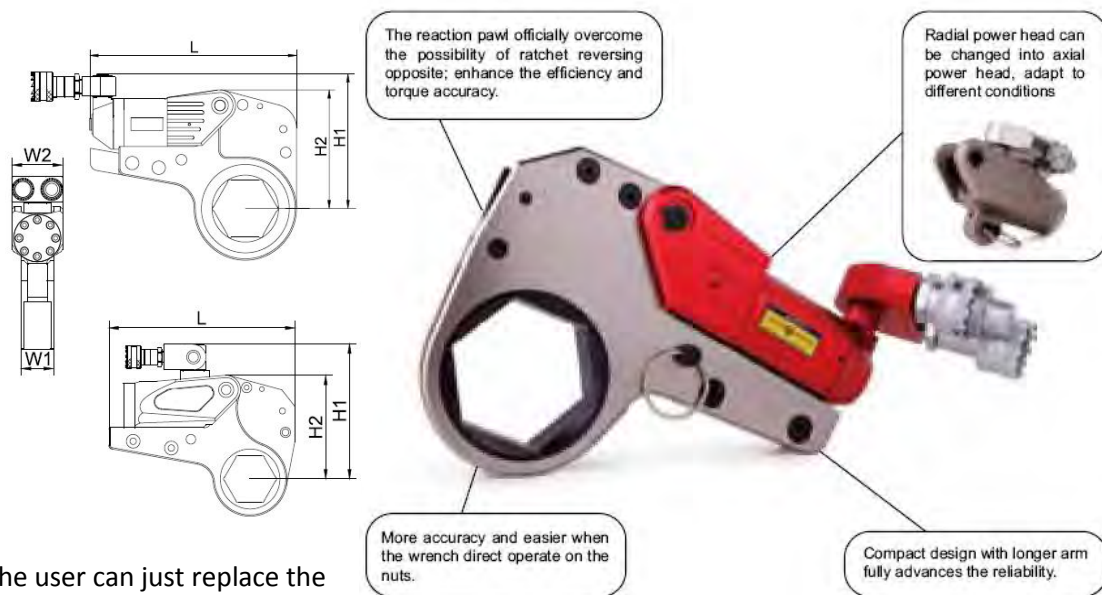
MXTA Series Selection Chart

TYPE	1MXTA	3MXTA	5MXTA	8MXTA	10MXTA	20MXTA	25MXTA	35MXTA
Torque (N.m)	183~1837	451~4512	752~7528	1078~10780	1551~15516	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	4	7	9.1	13.1	25	31	45
L1	133.5	169	202.5	216	237.5	299.5	313	361.5
L2	185.5	242	283.5	309	340.5	466.5	461	496.5
H1	50	68	80	90	100	120	137	153
H2	72	95	123	134	142	183	200	216
H3	95.5	127	149	167	182	220	247	282
H4	131	176.5	198.5	216.5	231.5	269.5	296.5	331.5
R1	26	34	39	47	51	59	66	77
R2	99	134	152	171	174	250.5	250.5	271
Square Drive	3/4"	1"	1-1/2"	1-1/2"	1-1/2"	2-1/2"	2-1/2"	2-1/2"

XLCT series

Low Profile Hydraulic Torque Wrench

XLCT series is the professional Low profile hydraulic torque wrench which BOT 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. XLCT 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. BOT provide after-sales service all over the world, and already got the approved by TUV certificate.



- 70Mpa max working pressure; keep the accuracy $\pm 3\%$.
- 5 models with the range from 232-44593N.m
- 360*180 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.
- The new locking coupler ensures the oil keep free access.

XLCT Series Selection Chart

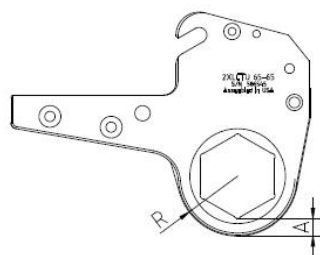
model	Torque Nm	Screw Sizes mm	Power Head	Work Head	Sizes				
			Weight Kg	Weight Kg	L	H1	H2	W1	W2
2XLCT	232 ~ 2328	19 ~ 55	0.9	1.5	196	126	102	32	51
	241 ~ 2414	60	0.9	1.5	196	129	105	32	51
4XLCT	585 ~ 5858	34 ~ 65	1.7	3.4	258	163	136	42	66
	647 ~ 6474	70 ~ 80	1.7	3.4	263	173	146	42	66
8XLCT	1094 ~ 10941	41 ~ 95	3.0	6.3	310	192	168	53	83
	1177 ~ 11774	100 ~ 105	3.0	6.3	311	201	177	53	83
14XLCT	1558 ~ 17639	50 ~ 117	4.6	11.4	360	225	204	64	99
30XLCT	4188 ~ 41882	110 ~ 155	10.4	20.5	430	303	272	85	131
	4459 ~ 44593	160 ~ 175	10.4	20.5	441	315	285	85	131

XLCT series

Hexagon Cassette



Every model of XLCT 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 LOW Ratchet link. One single Ratchet link is suitable for many bolts sizes.(by the reducer, please contact BOT engineer)



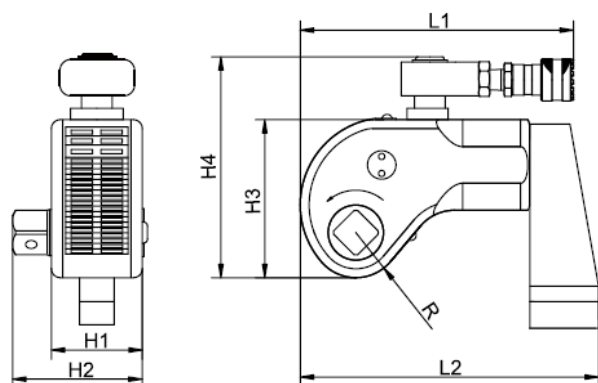
XLCT Series Hexagon Cassette Selection Chart

*BOT can be customized according to customer requirements of special types of work head.

2XLCT				4XLCT				8XLCT				14XLCT				30XLCT			
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
2XLCT-19	27	16	2328	4XLCT-34	36	16	5858	8XLCT-41	46	22	10941	14XLCT-50	60	31	18521	30XLCT-85	78	28	41882
2XLCT-22	27	14	2328	4XLCT-36	36	15	5858	8XLCT-46	46	19	10941	14XLCT-55	60	28	18521	30XLCT-90	78	27	41882
2XLCT-27	27	11	2328	4XLCT-41	39	15	5858	8XLCT-50	46	17	10941	14XLCT-60	60	25	18521	30XLCT-95	83	28	41882
2XLCT-30	29	12	2328	4XLCT-46	42	15	5858	8XLCT-55	50	18	10941	14XLCT-65	60	22	18521	30XLCT-100	83	25	41882
2XLCT-32	29	11	2328	4XLCT-50	44	15	5858	8XLCT-60	52	17	10941	14XLCT-70	60	19	18521	30XLCT-105	89	28	41882
2XLCT-34	31	11	2328	4XLCT-55	46	14	5858	8XLCT-65	55	17	10941	14XLCT-75	63	19	18521	30XLCT-110	89	25	41882
2XLCT-36	31	10	2328	4XLCT-60	50	15	5858	8XLCT-70	58	17	10941	14XLCT-80	66	19	18521	30XLCT-115	95	28	41882
2XLCT-41	34	10	2328	4XLCT-65	53	15	5858	8XLCT-75	60	17	10941	14XLCT-85	69	19	18521	30XLCT-117	95	27	41882
2XLCT-46	37	10	2328	4XLCT-70	56	15	6474	8XLCT-80	63	16	10941	14XLCT-90	72	20	18521	30XLCT-120	95	25	41882
2XLCT-50	40	11	2328	4XLCT-75	59	15	6474	8XLCT-85	66	16	10941	14XLCT-95	74	19	18521	30XLCT-125	101	29	41882
2XLCT-55	43	11	2328	4XLCT-80	61	15	6474	8XLCT-90	69	7	10941	14XLCT-100	77	19	18521	30XLCT-130	101	26	41882
2XLCT-60	46	11	2414					8XLCT-95	71	16	10941	14XLCT-105	80	19	18521	30XLCT-135	104	26	41882
								8XLCT-100	75	17	11774	14XLCT-110	83	19	18521	30XLCT-140	110	29	41882
								8XLCT-105	78	17	11774	14XLCT-115	87	20	18521	30XLCT-145	110	26	41882
												14XLCT-117	87	19	18521	30XLCT-150	116	29	41882
																30XLCT-155	116	26	41882
																30XLCT-160	128	36	44593
																30XLCT-165	128	33	44593
																30XLCT-170	128	30	44593
																30XLCT-175	128	27	44593

S series

Square Drive Torque Wrench



S configured with high technology, ideal for long-term usage by means of aluminum-titanium design. Besides having calibration service and support BOT S 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. BOT serves a wide range accessory for S series. These product which are designed for serving true resolutions, entitled with TUV seal result of an effort with appropriate directives.

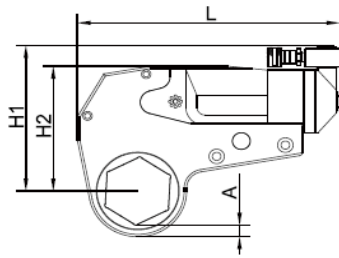
- 700 bar maximum working pressure, Repeat accuracy $\pm 3\%$
- 5 different model from 1727~36992Nm
- 360° multi-positional swivel quick release couplings
- working with the high resistance sockets, above more size of screw
- 360° Adjustable reaction arm with safety lock feature, can be used without reaction arm
- High resistance with aluminum-titanium and light body
- Replaceable square drive adapters

S Series Technical Data

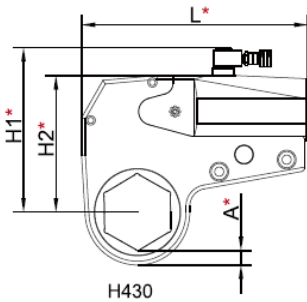
model	Torque Nm	Square drive Inches	Kg	Sizes						
				L1	L2	H1	H2	H3	H4	R
S17	172~1727	3/4"	1.9	129	167	51	73	90	131	25
S45	452~4529	1"	4.8	167	218	68	98	121	170	34
S100	1006~10064	1½"	9	223	293	92	135	163	211	46
S150	1497~14974	1½"	14.8	246	323	100	141	177	225	50
S370	3699~36992	2½"	32.5	329	432	137	104	240	288	66

H series

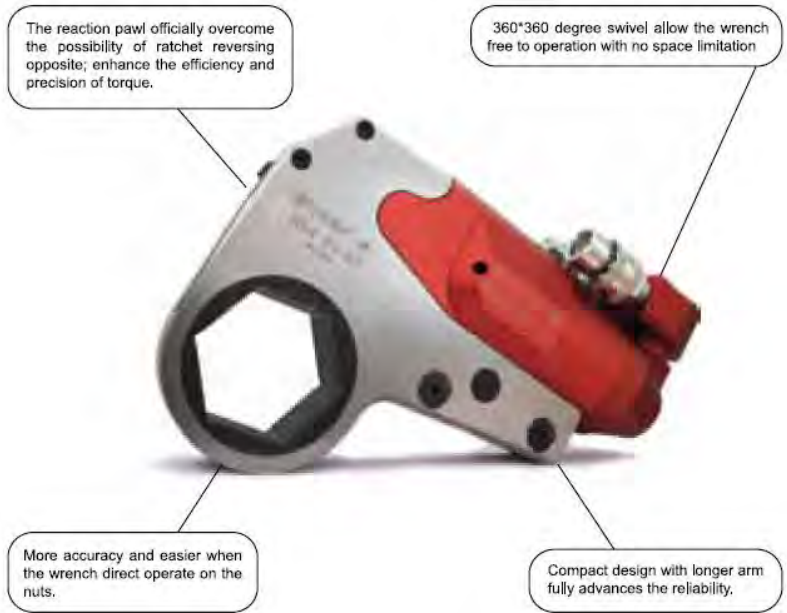
Low Profile Torque Wrench



H27 / H54 / H120 / H210



H430



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

- 700 bar maximum working pressure, Repeat accuracy $\pm 3\%$
- 5 different model from 2625~48481Nm
- Fitted with 360°x360° Uni-Swivel quick release couplings
- Low profile design to accessing limited areas
- Drivers and adaptors can be replaced easily

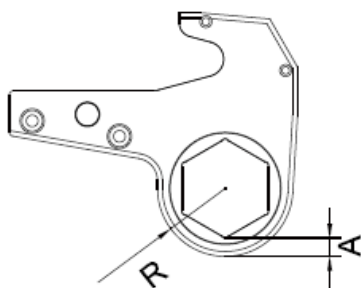
H Series Technical Data

model	Torque Nm	Screw Sizes mm	Kg	Sizes					
				L	H1	H2	W1	W2	A
H27	262 ~ 2625	19 ~ 46	1.4	193	125	97	32	51	9.5 ~ 12.2
	306 ~ 3068	50 ~ 60	1.4	193	136	108	32	51	10.1 ~ 10.5
H54	537 ~ 5372	27 ~ 65	2.3	250	158	125	41	64	10.7 ~ 13.8
	603 ~ 6037	70 ~ 80	2.3	250	169	136	41	64	11.7 ~ 14.6
H120	1173 ~ 11737	50 ~ 80	3.8	310	189	157	52	78	14.7 ~ 15.2
	1434 ~ 14349	85 ~ 105	3.8	310	214	182	52	78	15.9 ~ 18.7
H210	2121 ~ 21216	70 ~ 100	6.4	378	223	191	64	97	18.1 ~ 18.6
	2312 ~ 23124	105 ~ 115	6.4	378	236	204	64	97	18.3 ~ 20.7
H430	4379 ~ 43792	80 ~ 117	16.1	405*	291*	242*	83	93	25.6 ~ 31.3*
	4848 ~ 48481	120 ~ 175	16.1	425*	309*	260*	83	93	24.8 ~ 27.3*

H Series working head



Every model of H torque wrenches has a choice of cassette reducers that cover all nut sizes. Reducer's size varies from 10mm below the cassette unit size until the last radius wall thickness. The more distance from cassette unit size means the more radius wall thickness. You can lower the cylinders and remove the cartridges with a lower hexagon reducer by the help of subordinate mass R and A of the cassettes. It is important to pay attention this specification in confined spaces and the places where nuts are too close to each other.



Cassette Reducer

cassette reducers are available in most sizes, but it is recommended to keep a minimum wall thickness of 5mm

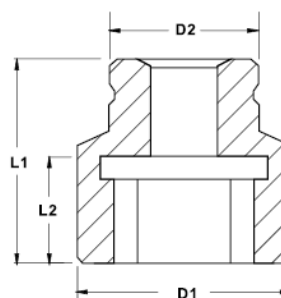


Choice of Cassettes

H27				H54				H120				H210				H430			
Cassettes Kassetten	R mm	A mm	Max Torque (Nm)	Cassettes Kassetten	R mm	A mm	Max Torque (Nm)	Cassettes Kassetten	R mm	A mm	Max Torque (Nm)	Cassettes Kassetten	R mm	A mm	Max Torque (Nm)	Cassettes Kassetten	R mm	A mm	Max Torque (Nm)
H27-19	26	15	2625	H54-27	35	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	16	5372	H120-65	53	15	11737	H210-85	68	21	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	2625	H54-41	35	11	5372	H120-75	58	15	11737	H210-95	77	21	21216	H430-105	90	28	43792
H27-36	31	10	2625	H54-46	37	11	5372	H120-80	61	15	11737	H210-100	77	18	21216	H430-110	94	31	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	3	5372	H120-90	69	16	14349	H210-110	87	24	23124	H430-117	94	28	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	22	14349					H430-125	101	28	48481
H27-60	50	10	3068	H54-70	52	12	6037	H120-105	77	19	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

IBT/MXTA/S-series sockets

Chromium molybdenum steel high strength sockets



Can be customized a variety of English or non-standard sockets

Standard sockets selection chart

Bolt Type		3/4" 07IBT/1IBT (MXTA)				1" 3IBT (MXTA)				1-1/2" 5, 8, 10IBT (MXTA)				2-1/2" 20, 25, 35, 50IBT (MXTA)			
D	N	L1	L2	D1	D2	L1	L2	D1	D2	L1	L2	D1	D2	L1	L2	D1	D2
M16	24	54	32	40	40												
M18	27	54	32	42	42												
M20	30	54	33	46	44	59	32	54	54								
M22	34	54	32	48	44	59	32	58	58								
M24	36	57	32	53	44	62	32	59	59	85	44	74	74				
M27	41	58	33	60	44	65	38	67	54	85	44	74	74				
M30	46	63	38	66	44	65	38	74	54	85	44	74	74				
M33	50	65	40	71	44	70	43	79	60	90	45	79	79				
M36	55	70	45	77	54	80	52	84	60	90	45	84	84	100	57	86	114
M39	60					85	57	89	60	100	45	94	94	100	52	119	119
M42	65					85	58	98	70	100	45	98	80	100	52	119	119
M45	70					90	62	104	70	105	50	104	80	120	67	128	128
M48	75					95	65	108	70	110	50	118	85	120	67	128	128
M52	80									115	55	118	90	130	71	128	128
M56	85									125	60	128	90	130	71	129	129
M60	90									125	60	139	90	140	73	139	139
M64	95									130	65	139	90	140	73	139	139
M68	100									135	70	144	90	140	81	148	130
M72	105									135	70	149	90	150	89	149	130
M76	110									135	70	158	90	150	90	158	130
M80	115									135	70	159	90	150	98	168	130
M85	120									135	70	168	95	150	98	178	130
M90	130									155	93	189	95	170	98	188	130
M95	135													170	114	198	130
M100	145													170	122	210	152
M105	150													190	140	216	152
M110	155													190	140	229	152
M115	165													190	140	241	152

LOW/XLCT/H-series reducer

Chromium molybdenum steel high strength reducer insert



Standard reducer inserts selection chart

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

The Choosing Of Hydraulic Torque Wrench

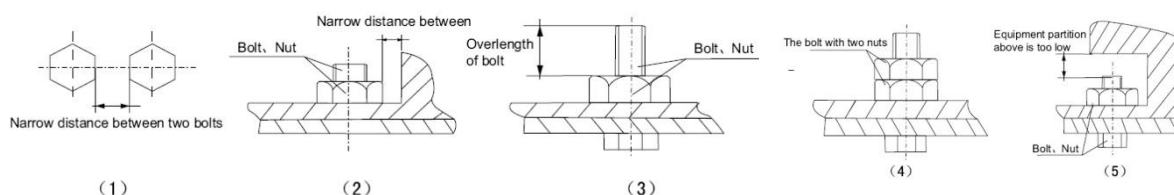
The bolt and nut pretightening force recommended chart.

Strength Grade		4.8		6.8		8.8		10.9		12.9	
Minimum 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	
		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*90%=4233.6N.m
- It is recommended that loosening torque equals about 150% of tightening torque. For instance, the tightening torque is 4233.6*(1.5~2)=6350.4~8467.2N.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.

Electric Hydraulic Pump

KLW4000 series

Parameter	
Drive	Electric
Tank capacity	8L
Flow(low-mid-High)	7-1.6-0.8 L/min
Output pressure	40~700bar
Source of power	220V/50HZ
Power	1.1KW
Weight	26.7Kg
Volume	300×375×458

Compact automatic three stage flow max efficiency.

-Applicable on both one or two wrenches simultaneously.

-Aluminum oil tank with oil gauge and thermometer.

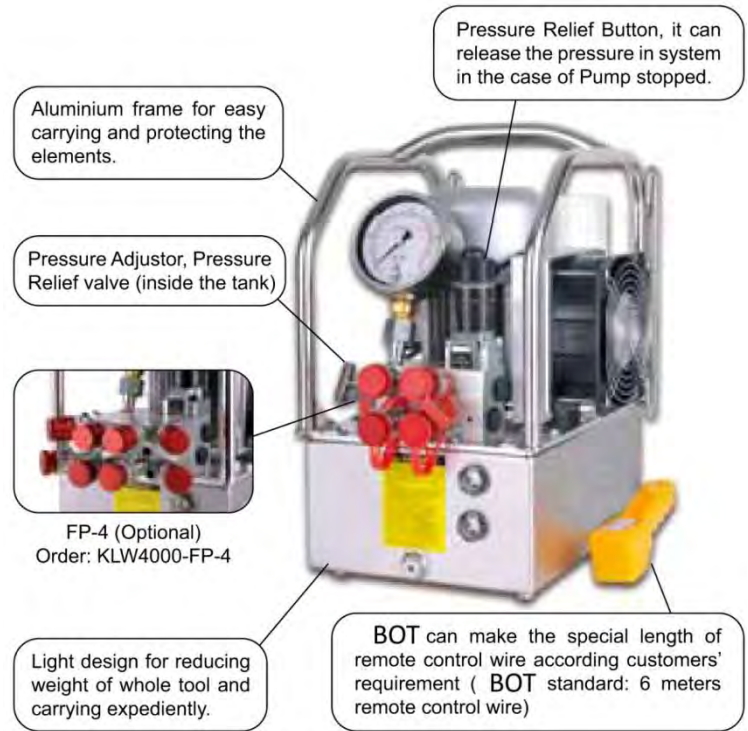
-Have 100 high pressure gauge.

-Infinitely variable pressure adjustment between 40~700 bar.

-With the high efficiency radiator the pump can work 24 dirtct hours.

-Can change the motor to fit the different current around the world

-You could change the export components(FP-4), driven four wrenches at the same time



Air Hydraulic Pump

KLW4000N series

Parameter	
Drive	Air
Tank capacity	8L
Flow(low-mid-High)	7-1.6-0.8 L/min
Output pressure	40~700bar
Air in	4~8bar
Power	1.1KW
Weight	20.5Kg
Volume	281×428×448

-Use where air(4~8 bar) is the preferred source of energy

-Compact automatic three stage flow, can start in high pressure

-Applicable on both one or two wrenches simultaneously

-Aluminum oil tank with oil gauge and motor. Total weight only 20.5 kg

-Have 100 high pressure gauge

-Infinitely variable pressure adjustment between 40~700 bar

-With the high efficiency cooling system makes the pump suitable in -extreme environment

-You could change the export components(FP-4),



Sino-Germany Technology KLW4100 Series Automatic Electrical Pump

KLW4100 Series Automatic Electrical Pump shared a same design with KLW4000 series standard Electrical Pump, it just was added a set of control system (import from Germany) on the basic of KLW4000 standard Pump, it inherited all the characteristics of KLW4000, some other characteristics of this Pump are as below:

-Simple Operation:

Operate with one Button, the operator just pressed down the button once time to achieve the task of tightening and losing.

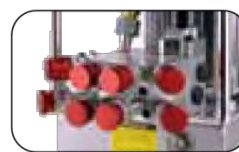
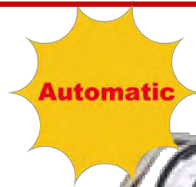
-High Efficiency:

Compare with the general Pump, KLW4100 Automatic Pump has compact operation process to reduce some needless action and increase approximate 50% of working efficiency.

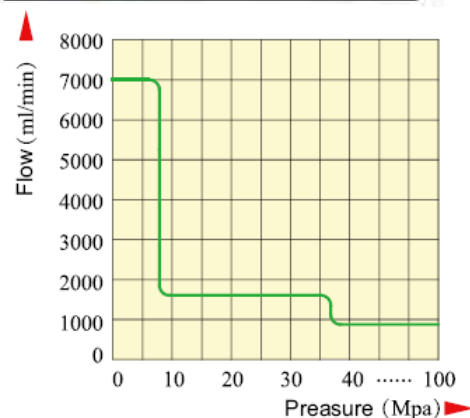
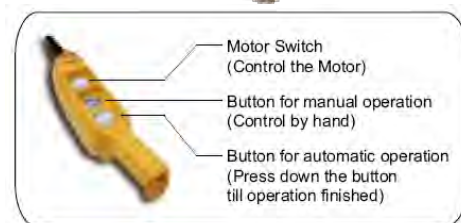
-Manual / Automatic

Besides of the automatic operation, the Pump also has the function of manual operation, for some special operation, KLW4100 also can be worked well.

Additionally the KLW4100 can work 24 hours without stop with radiator, BOT also can make the Pump with other kinds of motors according customers' requirement.

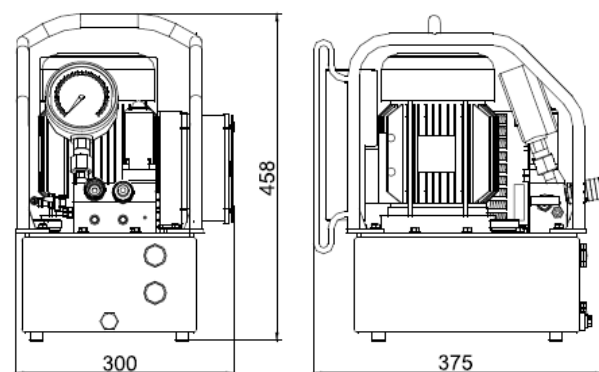
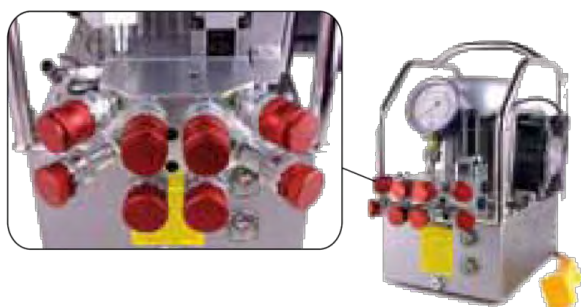


FP-4 (Optional)
Order: KLW4100-FP-4



Parameter	
Drive	Electric
Tank capacity	8L
Flow(low-mid-High)	7-1.6-0.8 L/min
Out put pressure	40~700bar
Source of power	220V/50HZ
Power	1.1KW
Weight	26.7Kg
Volume	300×375×458

FP-4



FP-4 is BOT's high-grade valve block for the electrical pump. You can plug it in all the KLW series electric pump. It allows the electric pump could drive four wrenches at the same time.

MP-Series Electric Pumps

- Double-speed designed, infinitely variable pressure adjustment between 0-700 bar.
- Modularity product, supply more than 200 kinds electric pump, and there have 5 different valves can choose, 4-56L multiple oil tank, and many different electrical machinery(100-120V, 200-240V, 350-420V).
- MP-series electric hydraulic pumps suits to a wide variety of industrial and application fields to work as lifting, pushing, pulling bending, pressing, punching and many other application. It is economical and durable power source.



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)

Selection table (1)	(19)
Selection table (1)	(20)
Outline dimension drawing of MP series pump	(21)
Universal valve block of MP series pump	(23)
Application examples of MP series pump	(24)

MP series pump selection table

200~230V/50HZ				Public property				200~230V/60HZ									
Model	Power	FlowL/min		Valve tape	Valve function	Volume	Weight	FlowL/min		Power	Model						
		Low	High					Low	High								
MP04AR56	0.37KW single phase	2	0.3	TypeA:ManualValve(double-acting)	input/lock/output	6L/4L	19										
MP04BR56		2	0.3	TypeB:Manual Valve(single-acting)	input/output		19										
MP04CR56		2	0.3	TypeC:Solenoid Valve(single-acting)	input/lock/output		19										
MP08AS12	1.0KW single phase power	5.5	0.6	TypeA:ManualValve(double-acting)	input/lock/output	10L/8L	21.5	4.5	0.7	0.9KW single phase power	MP08AT23						
MP08BS12		5.5	0.6	TypeB:Manual Valve(single-acting)	input/output		21.5	4.5	0.7		MP08BT23						
MP08CS12		5.5	0.6	TypeC:Solenoid Valve(single-acting)	input/lock/output		21.5	4.5	0.7		MP08CT23						
MP08DS12		5.5	0.6	TypeD:Solenoid Valve(single-acting)	input/output		21.5	4.5	0.7		MP08DT23						
MP08HS12		5.5	0.6	TypeH:Solenoid Valve(double-acting)	input/lock/output		21.5	4.5	0.7		MP08HT23						
MP13AT13	1.1KW single phase power	5.5	0.8	TypeA:ManualValve(double-acting)	input/lock/output	17L/13L	26	4.5	0.7	0.9KW single phase power	MP13AT23						
MP13BT13		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		26	4.5	0.7		MP13BT23						
MP13CT13		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		26	4.5	0.7		MP13CT23						
MP13DT13		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		26	4.5	0.7		MP13DT23						
MP13HT13		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	26	4.5	0.7	MP13HT23								
MP18AT13		1.1KW single phase power	5.5	0.8	TypeA:ManualValve(double-acting)	input/lock/output	20L/18L	27	4.5		0.7	0.9KW single phase power	MP18AT23				
MP18BT13			7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		27	4.5		0.7		MP18BT23				
MP18CT13			7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		27	4.5		0.7		MP18CT23				
MP18DT13			7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output	27	4.5	0.7		MP18DT23						
MP18HT13			5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	27	4.5	0.7		MP18HT23						
MP24AT13			1.1KW single phase power	5.5	0.8	TypeA:ManualValve(double-acting)	input/lock/output	27L/24L	29		4.5		0.7	0.9KW single phase power	MP24AT23		
MP24BT13				7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		29		4.5		0.7		MP24BT23		
MP24CT13				7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		29		4.5		0.7		MP24CT23		
MP24DT13				7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		29		4.5		0.7		MP24DT23		
MP24HT13				5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	29	4.5		0.7		MP24HT23				
MP32AT13				1.1KW single phase power	5.5	0.8	TypeA:ManualValve(double-acting)	input/lock/output	40L/32L		33		4.5		0.7	0.9KW single phase power	MP32AT23
MP32BT13					7.2	0.8	TypeB:Manual Valve(single-acting)	input/output			33		4.5		0.7		MP32BT23
MP32CT13		7.2			0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output	33			4.5	0.7	MP32CT23				
MP32DT13		7.2	0.8		TypeD:Solenoid Valve(single-acting)	input/output	33	4.5			0.7	MP32DT23					
MP32HT13		5.5	0.8		TypeH:Solenoid Valve(double-acting)	input/lock/output	33	4.5	0.7		MP32HT23						
MP56AT13	1.1KW single phase power	5.5	0.8		TypeA:ManualValve(double-acting)	input/lock/output	64L/56L	37	4.5	0.7	0.9KW single phase power	MP56AT23					
MP56BT13		7.2	0.8		TypeB:Manual Valve(single-acting)	input/output		37	4.5	0.7		MP56BT23					
MP56CT13		7.2	0.8		TypeC:Solenoid Valve(single-acting)	input/lock/output		37	4.5	0.7		MP56CT23					
MP56DT13		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output	37		4.5	0.7	MP56DT23							
MP56HT13		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	37		4.5	0.7	MP56HT23							

350~420V/50HZ				Public property				350~420V/60HZ							
Model	Power	FlowL/min		Valve tape	Valve function	Volume	Weight	FlowL/min		Power	Model				
		Low	High					Low	High						
MP08AT63	1.1KW three phase power	5.5	0.8	TypeA:ManualValve(double-acting)	input/lock/output	10L/8L	25	4.5	0.7	1.1KW three phase power	MP08AT83				
MP08BT63		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		25	4.5	0.7		MP08BT83				
MP08CT63		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		25	4.5	0.7		MP08CT83				
MP08DT63		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		25	4.5	0.7		MP08DT83				
MP08HT63		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output		25	4.5	0.7		MP08HT83				
MP13AT63	1.1KW three phase power	5.5	0.8	TypeA:ManualValve(double-acting)	input/lock/output	17L/13L	26	4.5	0.7	1.1KW three phase power	MP13AT83				
MP13BT63		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		26	4.5	0.7		MP13BT83				
MP13CT63		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		26	4.5	0.7		MP13CT83				
MP13DT63		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		26	4.5	0.7		MP13DT83				
MP13HT63		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	26	4.5	0.7	MP13HT83						
MP18AT63		1.1KW three phase power	5.5	0.8	TypeA:ManualValve(double-acting)	input/lock/output	20L/18L	27	4.5		0.7	1.1KW three phase power	MP18AT83		
MP18BT63			7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		27	4.5		0.7		MP18BT83		
MP18CT63			7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		27	4.5		0.7		MP18CT83		
MP18DT63	7.2		0.8	TypeD:Solenoid Valve(single-acting)	input/output	27	4.5	0.7	MP18DT83						
MP18HT63	5.5		0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	27	4.5	0.7	MP18HT83						
MP24AT63	1.1KW three phase power		5.5	0.8	TypeA:ManualValve(double-acting)	input/lock/output	27L/24L	29	4.5	0.7	1.1KW three phase power		MP24AT83		
MP24BT63			7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		29	4.5	0.7			MP24BT83		
MP24CT63			7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		29	4.5	0.7			MP24CT83		
MP24DT63			7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		29	4.5	0.7			MP24DT83		
MP24HT63			5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	29	4.5	0.7	MP24HT83					
MP32AT63			1.1KW three phase power	5.5	0.8	TypeA:ManualValve(double-acting)	input/lock/output	40L/32L	33	4.5			0.7	1.1KW three phase power	MP32AT83
MP32BT63				7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		33	4.5			0.7		MP32BT83
MP32CT63		7.2		0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output	33		4.5	0.7		MP32CT83			
MP32DT63	7.2	0.8		TypeD:Solenoid Valve(single-acting)	input/output	33	4.5		0.7	MP32DT83					
MP32HT63	5.5	0.8		TypeH:Solenoid Valve(double-acting)	input/lock/output	33	4.5	0.7	MP32HT83						
MP56AT63	1.1KW three phase power	5.5		0.8	TypeA:ManualValve(double-acting)	input/lock/output	64L/56L	37	4.5	0.7	1.1KW three phase power	MP56AT83			
MP56BT63		7.2		0.8	TypeB:Manual Valve(single-acting)	input/output		37	4.5	0.7		MP56BT83			
MP56CT63		7.2		0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		37	4.5	0.7		MP56CT83			
MP56DT63		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output	37		4.5	0.7	MP56DT83					
MP56HT63		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	37		4.5	0.7	MP56HT83					

There almost 120 countries use 200 ~ 230V power in the world

Britain, France, Germany, China, Italy, Spain, Greece, Austria, Holland, Philippines, Singapore, India, New Zealand, Australia.....

MP series pump selection table

200~240V/50HZ				Public property				200~240V/60HZ			
MP08AT73	1.1KW three phase power	5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	10L/8L	25	4.5	0.7	1.1KW three phase power	MP08AT93
MP08BT73		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		25	4.5	0.7		MP08BT93
MP08CT73		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		25	4.5	0.7		MP08CT93
MP08DT73		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		25	4.5	0.7		MP08DT93
MP08HT73		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	25	4.5	0.7	MP08HT93		
MP13AT73		5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	17L/13L	26	4.5	0.7		MP13AT93
MP13BT73		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		26	4.5	0.7		MP13BT93
MP13CT73		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		26	4.5	0.7		MP13CT93
MP13DT73		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		26	4.5	0.7		MP13DT93
MP13HT73		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	26	4.5	0.7	MP13HT93		
MP18AT73		5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	20L/18L	27	4.5	0.7		MP18AT93
MP18BT73		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		27	4.5	0.7		MP18BT93
MP18CT73		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		27	4.5	0.7		MP18CT93
MP18DT73		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		27	4.5	0.7		MP18DT93
MP18HT73		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	27	4.5	0.7	MP18HT93		
MP24AT73		5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	27L/24L	29	4.5	0.7		MP24AT93
MP24BT73		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		29	4.5	0.7		MP24BT93
MP24CT73		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		29	4.5	0.7		MP24CT93
MP24DT73		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		29	4.5	0.7		MP24DT93
MP24HT73		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	29	4.5	0.7	MP24HT93		
MP32AT73		5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	40L/32L	33	4.5	0.7		MP32AT93
MP32BT73		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		33	4.5	0.7		MP32BT93
MP32CT73		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		33	4.5	0.7		MP32CT93
MP32DT73		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		33	4.5	0.7		MP32DT93
MP32HT73		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	33	4.5	0.7	MP32HT93		
MP56AT73		5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	64L/56L	37	4.5	0.7		MP56AT93
MP56BT73		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		37	4.5	0.7		MP56BT93
MP56CT73		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		37	4.5	0.7		MP56CT93
MP56DT73		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		37	4.5	0.7		MP56DT93
MP56HT73		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	37	4.5	0.7	MP56HT93		

100~120V/50HZ				Public property				100~120V/60HZ			
Model	Power	FlowL/min		Valve tape	Valve function	Volume	Weight	FlowL/min		Power	Model
		Low	High					Low	High		
MP08AT33	1.1KW single phase power	5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	10L/8L	25	4.5	0.7	0.9KW single phase power	MP08AT43
MP08BT33		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		25	4.5	0.7		MP08BT43
MP08CT33		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		25	4.5	0.7		MP08CT43
MP08DT33		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		25	4.5	0.7		MP08DT43
MP08HT33		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	25	4.5	0.7	MP08HT43		
MP13AT33		5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	17L/13L	26	4.5	0.7		MP13AT43
MP13BT33		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		26	4.5	0.7		MP13BT43
MP13CT33		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		26	4.5	0.7		MP13CT43
MP13DT33		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		26	4.5	0.7		MP13DT43
MP13HT33		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	26	4.5	0.7	MP13HT43		
MP18AT33		5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	20L/18L	27	4.5	0.7		MP18AT43
MP18BT33		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		27	4.5	0.7		MP18BT43
MP18CT33		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		27	4.5	0.7		MP18CT43
MP18DT33		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		27	4.5	0.7		MP18DT43
MP18HT33		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	27	4.5	0.7	MP18HT43		
MP24AT33		5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	27L/24L	29	4.5	0.7		MP24AT43
MP24BT33		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		29	4.5	0.7		MP24BT43
MP24CT33		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		29	4.5	0.7		MP24CT43
MP24DT33		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		29	4.5	0.7		MP24DT43
MP24HT33		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	29	4.5	0.7	MP24HT43		
MP32AT33		5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	40L/32L	33	4.5	0.7		MP32AT43
MP32BT33		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		33	4.5	0.7		MP32BT43
MP32CT33		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		33	4.5	0.7		MP32CT43
MP32DT33		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		33	4.5	0.7		MP32DT43
MP32HT33		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	33	4.5	0.7	MP32HT43		
MP56AT33		5.5	0.8	TypeA:Manual Valve(double-acting)	input/lock/output	64L/56L	37	4.5	0.7		MP56AT43
MP56BT33		7.2	0.8	TypeB:Manual Valve(single-acting)	input/output		37	4.5	0.7		MP56BT43
MP56CT33		7.2	0.8	TypeC:Solenoid Valve(single-acting)	input/lock/output		37	4.5	0.7		MP56CT43
MP56DT33		7.2	0.8	TypeD:Solenoid Valve(single-acting)	input/output		37	4.5	0.7		MP56DT43
MP56HT33		5.5	0.8	TypeH:Solenoid Valve(double-acting)	input/lock/output	37	4.5	0.7	MP56HT43		

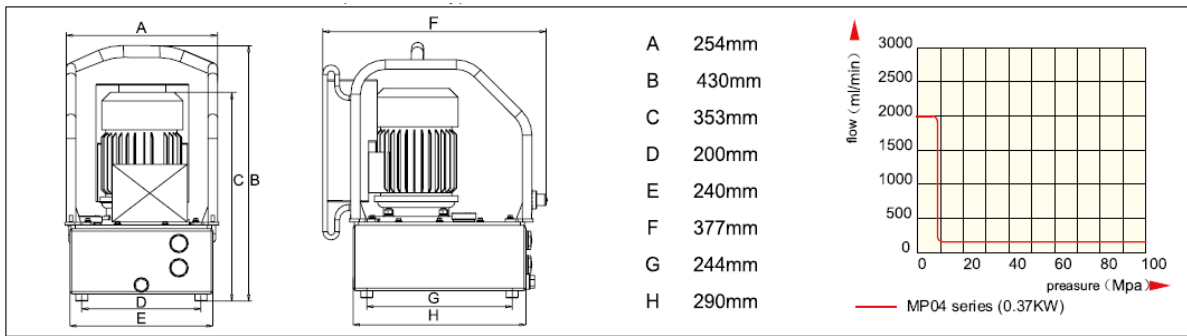
There almost 30 countries use 110 ~ 130V power in the world

Taiwan,United States of America, Canada, Panama, Lebanon, Mexico, Cuba....

Outline dimension drawing of MP series pump

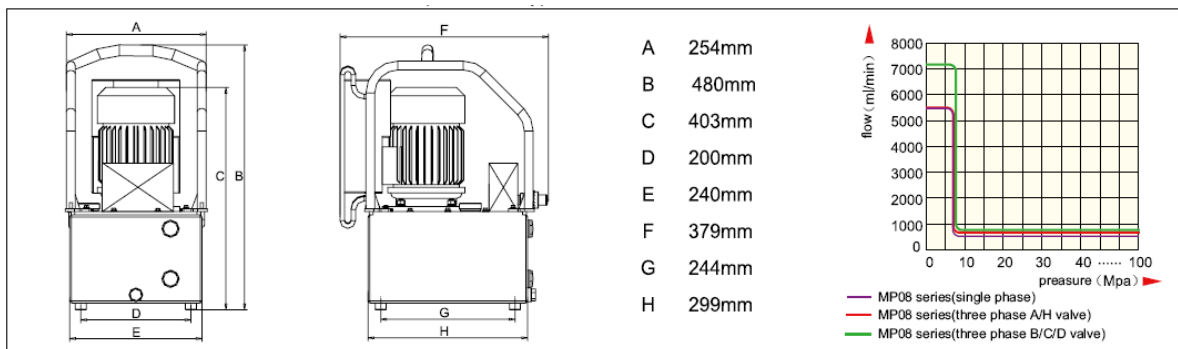
MP04 series

6L tank and 4L available, use 0.37KW power and type A/B/C valve



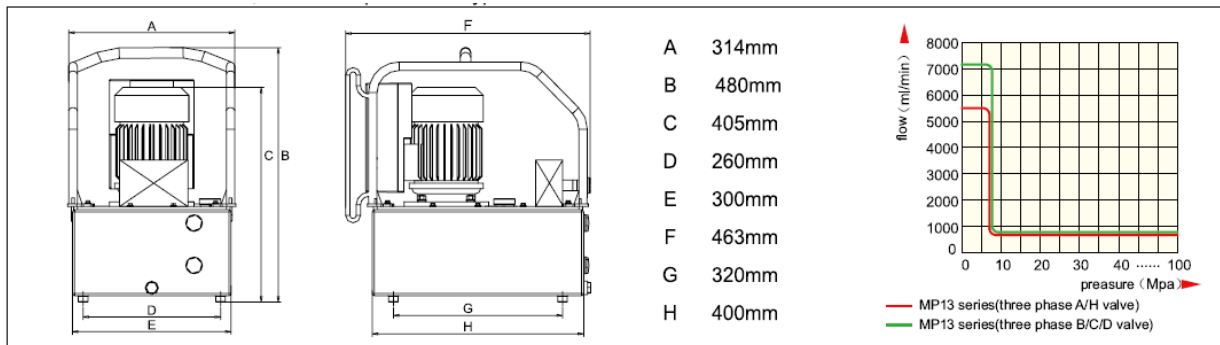
MP08 series

10L tank and 8L available, use 0.37KW&1.1KW power and type A/B/C/D/H valve



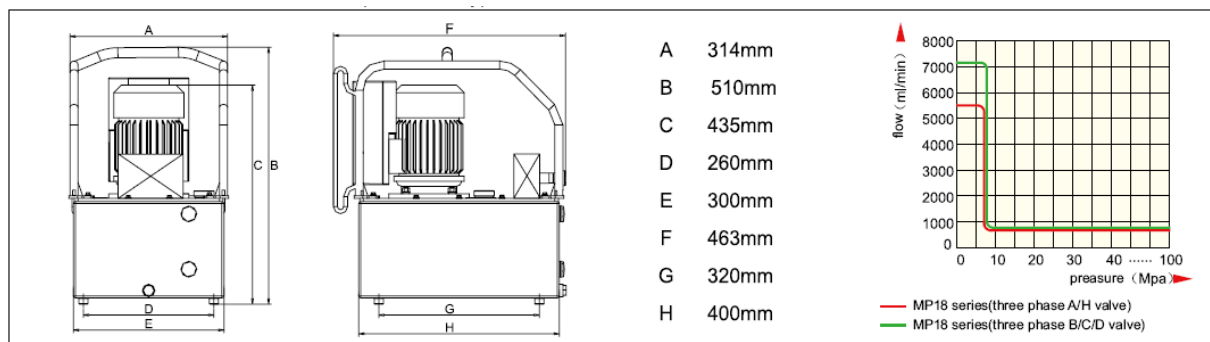
MP13 series

17L tank and 13L available, use 1.1KW power and type A/B/C/D/H valve



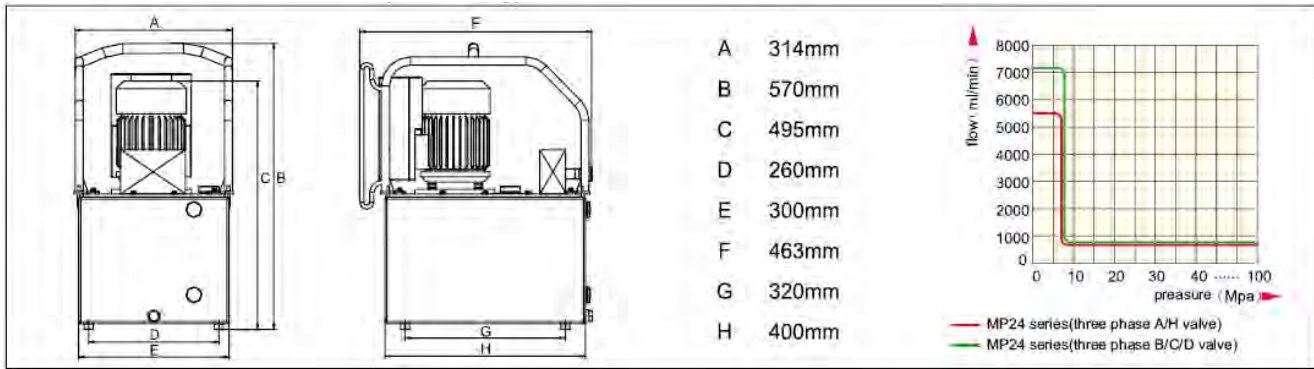
MP18 series

20L tank and 18L available, use 1.1KW power and type A/B/C/D/H valve



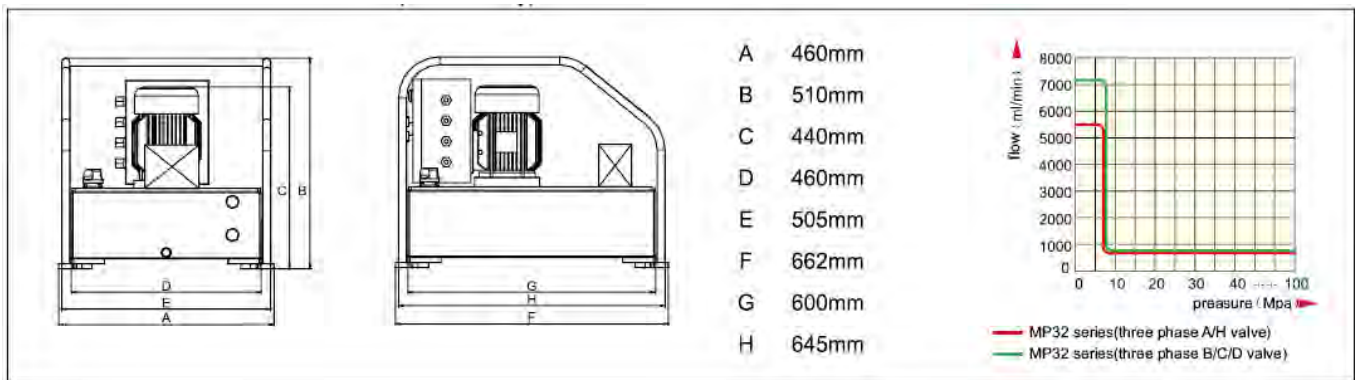
MP24 series

27L tank and 24L available, use 1.1KW power and type A/B/C/D/H valve



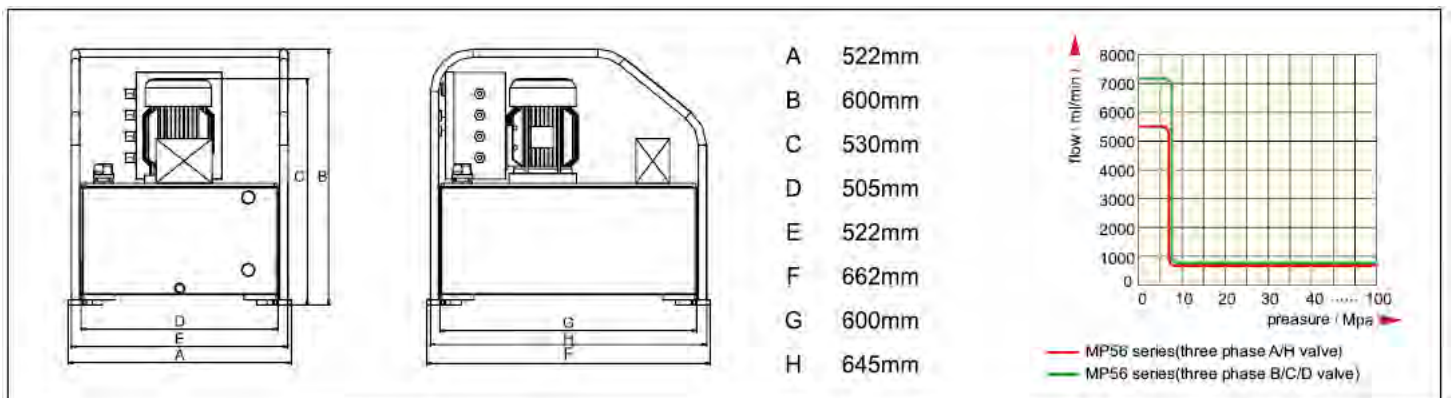
MP32 series

40L tank and 32L available, use 1.1KW power and type A/B/C/D/H valve



MP56 series

64L tank and 32L available, use 1.1KW power and type A/B/C/D/H valve

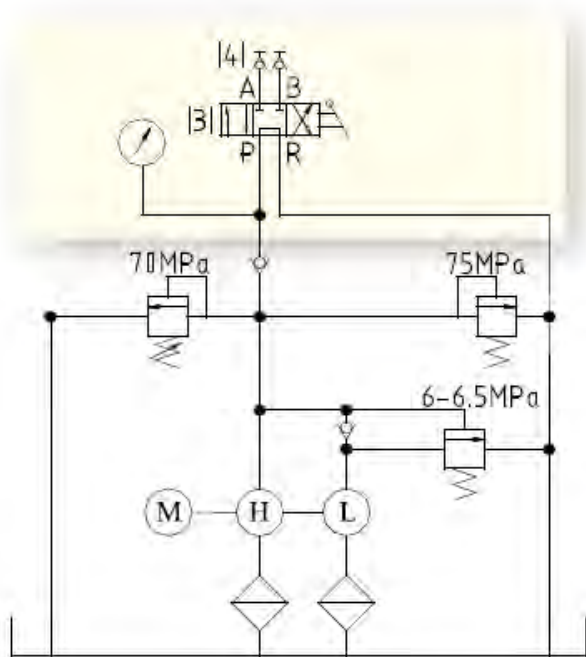


There are all the stand configuration, if you have some special requirement, please connect with BOT engineers. We will show our best serving for all the customers.

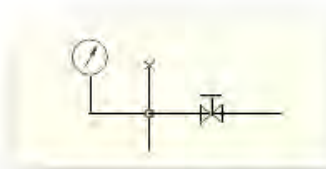
Universal valve block of MP series pump

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, responds 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, responds 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.	

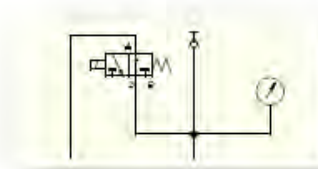
MP series pump valve block replacement circuit diagram



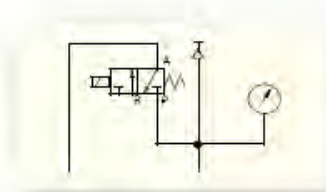
Type A: Manual Valve (double-acting)



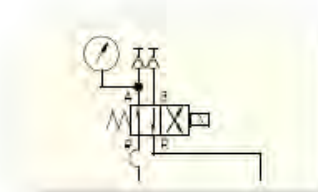
Type B: Manual Valve (single-acting)



Type D: Solenoid Valve (single-acting)



Type C: Solenoid Valve (single-acting)



Type H: Solenoid Valve (double-acting)

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

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.

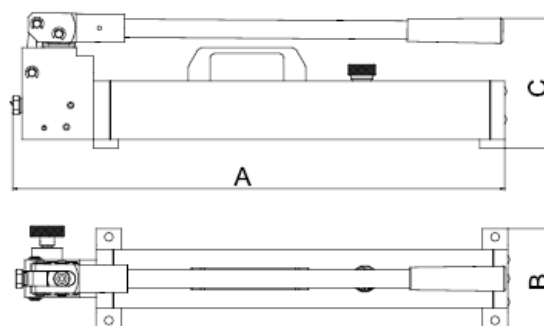
Aluminum titanium alloy, corrosion resistance, high strength, light weight, impact resistance, adapt to a variety of harsh environment.



P-series hydraulic hand pumps are designed for Clinder and hydraulic bolt tensioner. Its pressure anew to two types(70Mpa & 160Mpa), and customers can order every size of oil tank for different equipment. BOT 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.

P Series Hand Pump Table Parameters

TYPE	Max Pressure (Mpa)	Oil interface	Gauge inferface
GA-3	70	3/8"NPT	1/4"NPT
GA20	200	1/4"BSP	1/2"BSP



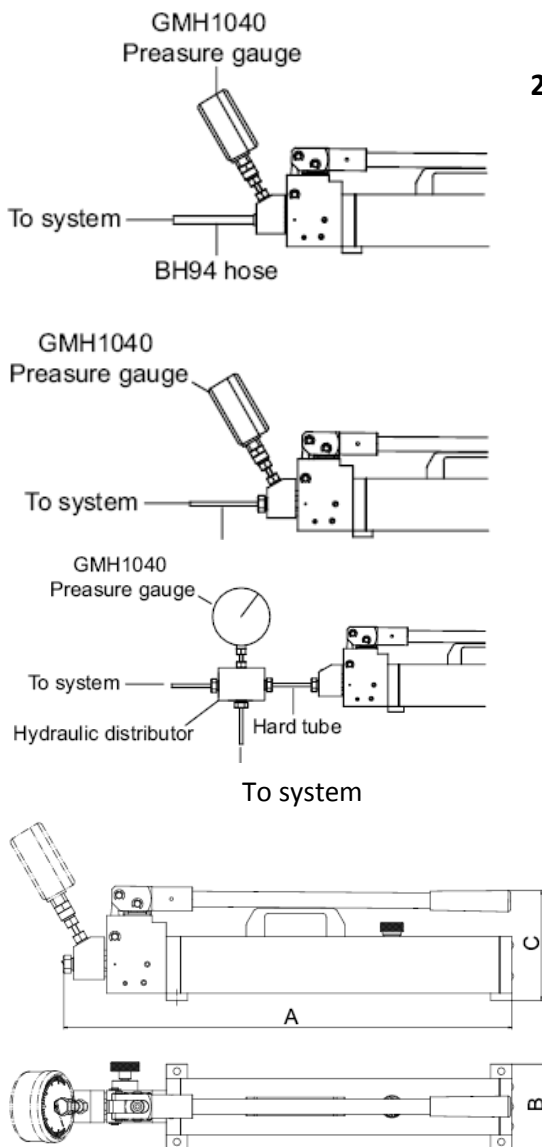
P Series Hand Pump Selection Chart

Type	Pressure Mpa		One Stroke Oil mL		Full Tank Oil L	Available Oil L	Handle Force N	SIZE mm			Oil interface	Gauge inferface	Weight Kg
	Low	HI	Low	HI				A	B	C			
P392	2.5	70	32	2.5	1.67	1.44	300	577	120	170	3/8"NPT	1/4"NPT	6.3
P80	2.5	70	32	2.5	2.25	1.98	300	577	120	170	3/8"NPT	1/4"NPT	8
P160	2.5	70	32	2.5	3.58	3.24	300	577	140	190	3/8"NPT	1/4"NPT	10
16P392	1.5	160	32	2.5	1.67	1.44	350	577	120	170	1/4"BSP	1/2"BSP	6.5
16P80	1.5	160	32	2.5	2.25	1.98	350	577	120	170	1/4"BSP	1/2"BSP	8.5
16P160	1.5	160	32	2.5	3.58	3.24	350	577	140	190	1/4"BSP	1/2"BSP	10.5

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

28P-series high hydraulic hand pumps are designed for high hydraulic equipment. Its pressure anew to 280Mpa, and customers can order every size of oil tank for different equipment. BOT 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



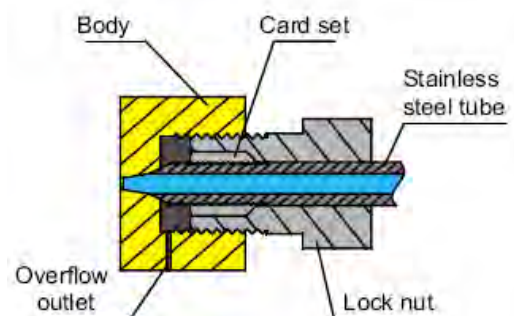
Spinal seal

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



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	3/4"-16UNF	3/4"-16UNF
Gauge interface	1/2"BSP	1/2"BSP
Weight	8.5	10.5



Hydraulic Cylinder series Selection of cylinder Hydraulic cylinder (700bar)

All the cylinders of BOT have been tested. It should be properly operated, sealed well without leaking oil, fewer than 100% set load and full stroke. For safety, all the cylinders have been tested strictly before sale. BOT is worth to rely on!

Saddle(prevent the plunger from break when the top bearing.)

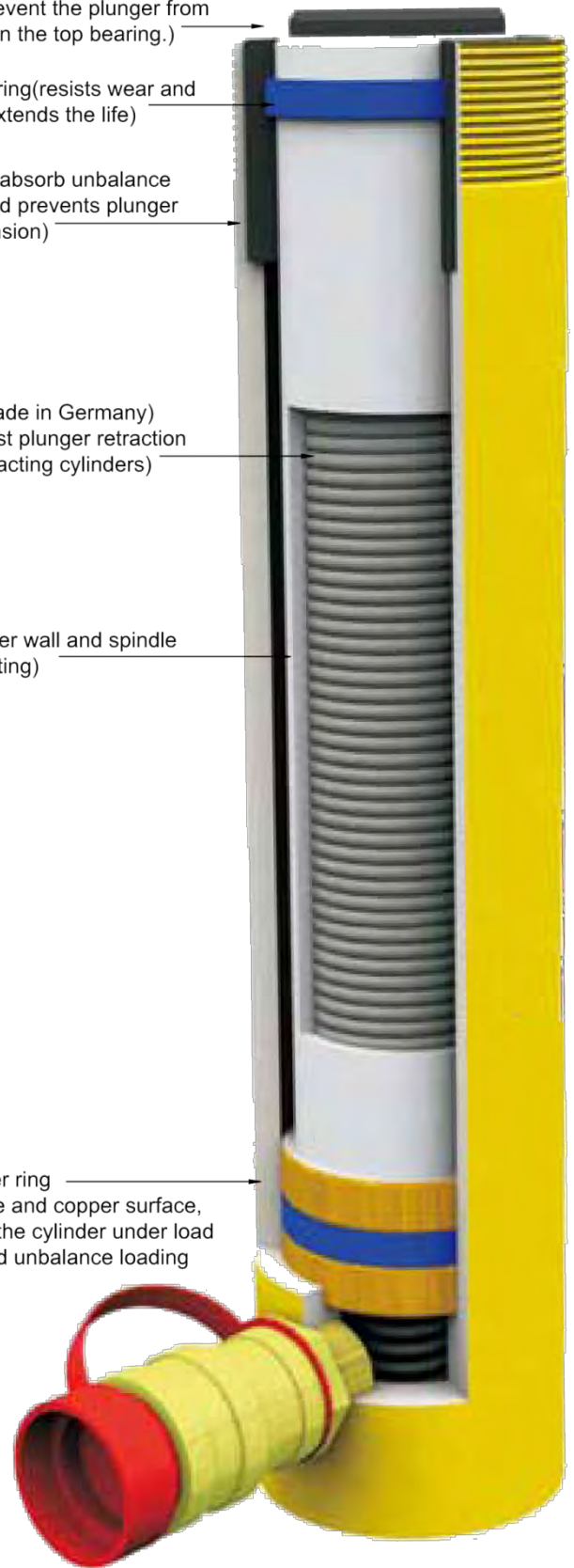
Dust seal ring(resists wear and rust and extends the life)

Stop ring (absorb unbalance loading and prevents plunger over-extension)

Spring (made in Germany)
(enable fast plunger retraction on singer-acting cylinders)

The cylinder wall and spindle
(nickel plating)

The copper ring
(steel base and copper surface,
to protect the cylinder under load
and absord unbalance loading
stresses)



Selection of cylinder

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 BOT 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.

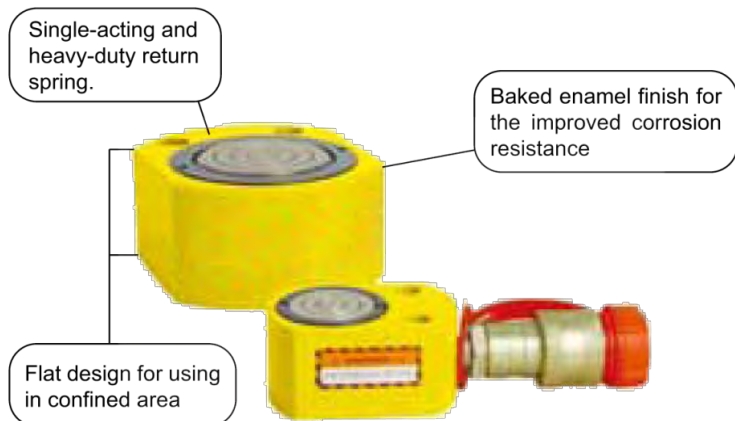
3. Whether all the threads are needed on the piston, neck or base or not?

4. The required frequency and conditions of use.

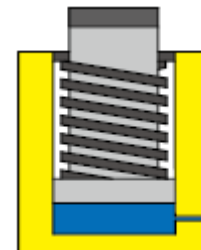
5. Any information available.

RSM series

Single-Acting Low Weight Cylinder

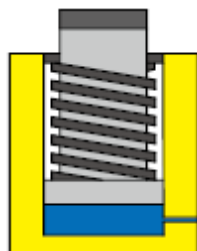


Capacity : 5~150Ton
 Stroke : 6~16mm
 Maximum Operating Pressure : 700bar



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	58 × 41	6.5	4	25.4	1.0
10	11	RSM100	42	82 × 55	14.5	18	38.1	1.4
20	11	RSM200	51	101 × 76	28.7	32	50.8	3.1
30	13	RSM300	58	117 × 95	42.1	55	63.4	4.5
50	16	RSM500	66	140 × 114	62.1	99	69.8	6.8
75	16	RSM750	79	165 × 139	102.6	164	82.6	11.3
100	16	RSM1000	85	178 × 153	126.7	203	92.2	14.5
150	16	RSM1500	100	215 × 190	198.1	317	114.3	26.3



Baked enamel finish for the improved corrosion resistance

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



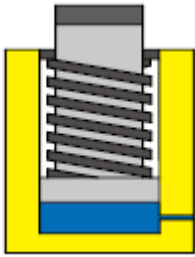
Single-acting and heavy-duty return spring.

Flat design for using in confined area

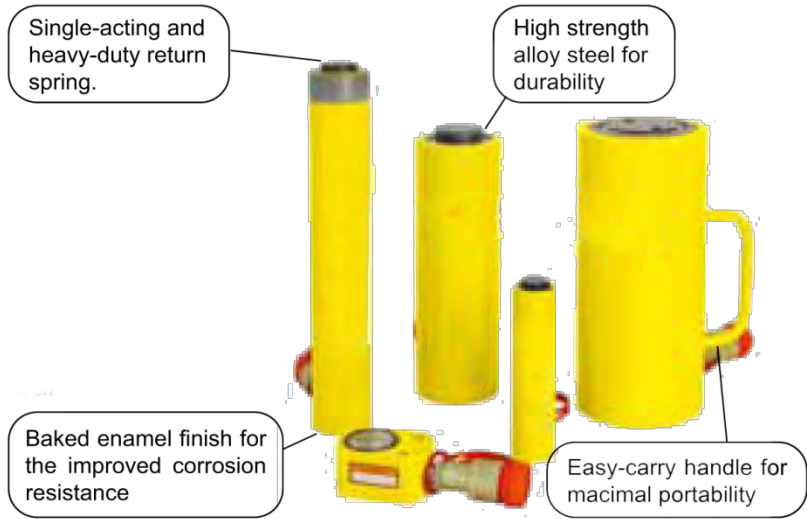
RCS Series Selection Chart

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	69	14.5	55	38.1	4.1
20	45	RCS201	98	92	28.7	129	50.8	5.0
30	62	RCS302	117	101	42.1	261	66.5	6.8
50	60	RCS502	122	124	62.1	373	69.8	10.9
100	57	RCS1002	141	165	126.7	722	92.2	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



RC Series Selection Chart

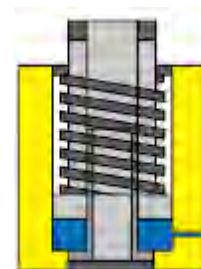
Capacity (Ton)	Stroke (mm)	Model	Min Height (mm)	Outside Diameter (mm)	Effective Area (cm ²)	Oil Capacity (cm ³)	Saddle Diameter (mm)	Thread Size	Thread Length (mm)	Weight (Kg)
5	16	RC50	41	42× 59	6.5	10	25.4	1 1/2"-16	28	1.1
5	25	RC51	110	38	6.5	16	25.4	1 1/2"-16	28	1.1
5	76	RC53	165	38	6.5	50	25.4	1 1/2"-16	28	1.5
5	127	RC55	215	40	6.5	83	25.4	1 1/2"-16	28	1.9
5	177	RC57	273	40	6.5	115	25.4	1 1/2"-16	28	2.4
5	232	RC59	323	40	6.5	151	25.4	1 1/2"-16	28	2.8
10	26	RC101	89	57	14.5	38	38.1	2 1/4"-14	27	1.8
10	54	RC102	121	57	14.5	78	38.1	2 1/4"-14	27	2.3
10	105	RC104	171	57	14.5	152	38.1	2 1/4"-14	27	3.3
10	156	RC106	247	57	14.5	226	38.1	2 1/4"-14	27	4.4
10	203	RC108	298	57	14.5	294	38.1	2 1/4"-14	27	5.4
10	257	RC1010	349	57	14.5	373	38.1	2 1/4"-14	27	6.4
10	304	RC1012	400	57	14.5	441	38.1	2 1/4"-14	27	6.8
10	356	RC1014	450	57	14.5	516	38.1	2 1/4"-14	27	8.2
15	25	RC151	124	69	20.3	51	41.4	2 3/4"-16	30	3.3
15	51	RC152	149	69	20.3	104	41.4	2 3/4"-16	30	4.1
15	101	RC154	200	69	20.3	205	41.4	2 3/4"-16	30	5.0
15	152	RC156	271	69	20.3	308	41.4	2 3/4"-16	30	6.8
15	203	RC158	322	69	20.3	411	41.4	2 3/4"-16	30	8.2
15	254	RC1510*	373	69	20.3	516	41.4	2 3/4"-16	30	9.5
15	305	RC1512*	423	69	20.3	619	41.4	2 3/4"-16	30	10.9
15	356	RC1514*	474	69	20.3	723	41.4	2 3/4"-16	30	11.8
25	26	RC251	139	85	33.2	86	57.2	3 5/16"-12	49	5.9
25	50	RC252	165	85	33.2	166	57.2	3 5/16"-12	49	6.4
25	102	RC254	215	85	33.2	339	57.2	3 5/16"-12	49	8.2
25	158	RC256	273	85	33.2	525	57.2	3 5/16"-12	49	10.0
25	210	RC258	323	85	33.2	697	57.2	3 5/16"-12	49	12.2
25	261	RC2510*	374	85	33.2	867	57.2	3 5/16"-12	49	14.1
25	311	RC2512*	425	85	33.2	1033	57.2	3 5/16"-12	49	16.3
25	362	RC2514	476	85	33.2	1202	57.2	3 5/16"-12	49	17.7
30	209	RC308	387	101	42.1	880	57.2			18.1
50	51	RC502	176	127	71.2	362	79.5	5"-12	55	15.0
50	101	RC504	227	127	71.2	719	79.5	5"-12	55	19.1
50	159	RC506	282	127	71.2	1131	79.5	5"-12	55	23.1
50	337	RC5013	460	127	102.6	2399	79.5	5"-12	55	37.6
75	156	RC756	285	146	71.2	1601	95.2			29.5
75	333	RC7513*	492	146	102.6	3417	95.2			59.0
100	168	RC1006	357	177	133.3	2239	104.9			59.0
100	260	RC10010	449	177	133.3	3466	104.9			72.6

RCH series

Single-Acting Hollow Plunger Cylinder



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

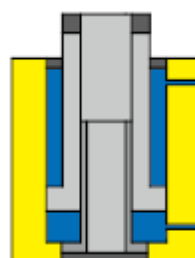
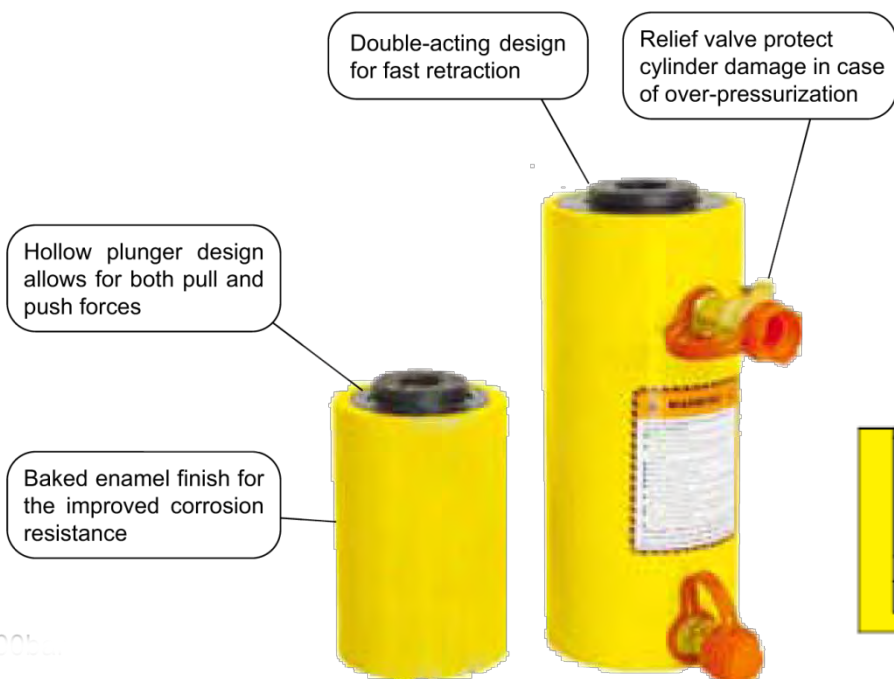


RCH Series Selection Chart

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	35.1	19.6	1.5
12	42	RCH121	120	69	17.9	75	35.1	19.6	2.8
12	42	RCH1211	120	69	17.9	75	35.1	19.6	2.8
12	76	RCH123	184	69	17.9	136	35.1	19.6	4.4
20	49	RCH202	162	98	30.7	150	54.1	26.9	7.7
20	155	RCH206	306	98	30.7	476	54.1	26.9	14.1
30	64	RCH302	178	114	46.6	298	63.5	33.3	10.9
30	155	RCH306	330	114	46.6	722	63.5	33.3	21.8
60	76	RCH603	247	159	82.3	626	91.9	53.8	28.1
60	153	RCH606	332	159	82.3	1259	91.9	53.8	35.4
100	76	RCH1003	254	212	133.0	1011	127.0	79.0	63.0

RRH series

Double-Acting Hollow Plunger Cylinder



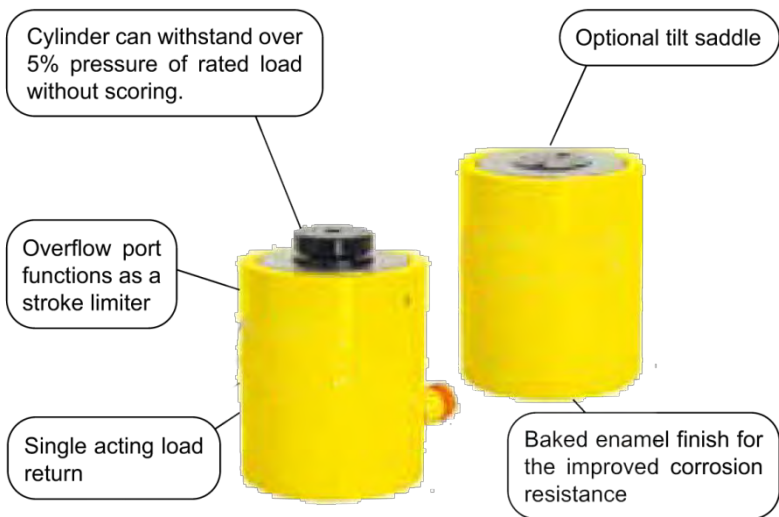
Capacity:30~150Ton
Stroke:38~258mm
Maximum Operating Pressure:700bar

RRH Series Selection Chart

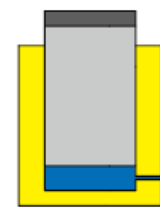
Capacity (Ton)		Stroke (mm)	Model	Min Height (mm)	Outside Diameter (mm)	Effective Area (cm ²)		Oil Capacity (cm ³)		Plunger Diameter (mm)	Hollow Diameter (mm)	Weight (Kg)
Push	Pull					Push	Pull	Push	Pull			
30	23	178	RRH307*	330	114	46.6	30.4	829	541	63.5	33.3	21
30	23	258	RRH3010*	431	114	46.6	30.4	1202	784	63.5	33.3	27
60	42	89	RRH603*	247	159	82.3	54.2	733	482	91.9	53.8	28
60	42	166	RRH606*	323	159	82.3	54.2	1366	900	91.9	53.8	35
60	42	257	RRH6010	438	159	82.3	54.2	2115	1393	91.9	53.8	45
100	68	38	RRH1001*	165	212	133.0	87.4	505	333	127.0	79.2	33
100	68	76	RRH1003*	254	212	133.0	87.4	1011	666	127.0	79.2	61
100	68	153	RRH1006*	342	212	133.0	87.4	2035	1337	127.0	79.2	79
100	68	257	RRH10010*	460	212	133.0	87.4	3420	2246	127.0	79.2	106
150	75	203	RRH1508	349	247	204.1	102.6	4144	2083	152.4	79.2	111

CLS series

Single-Acting High Tonnage Cylinder



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

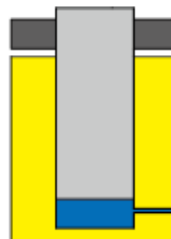
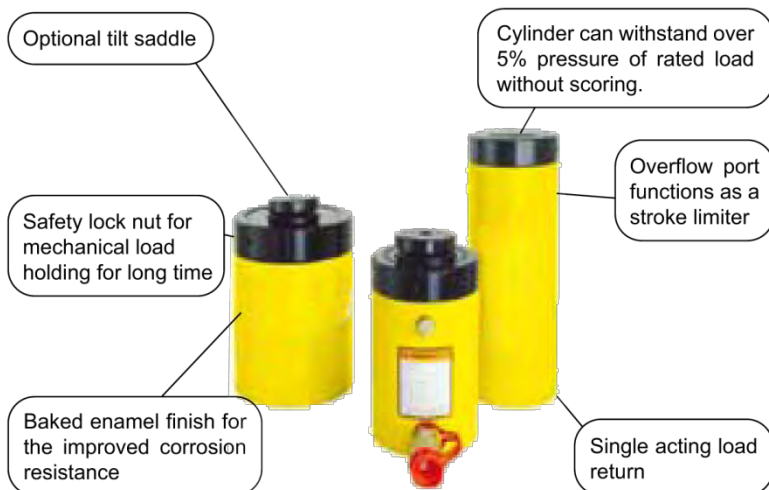


CLS Series Selection Chart

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	CLS502*	128	125	77.0	355	95	4
50	100	CLS504*	178	125	77.0	709	95	18
50	150	CLS506	228	125	77.0	1064	95	23
50	200	CLS508*	278	125	77.0	1418	95	28
50	250	CLS5010*	328	125	77.0	1773	95	33
50	300	CLS5012*	378	125	77.0	2127	95	38
100	50	CLS1002*	143	165	132.7	664	130	24
100	100	CLS1004	193	165	132.7	1327	130	32
100	150	CLS1006	243	165	132.7	1991	130	40
100	200	CLS1008*	293	165	132.7	2654	130	49
100	250	CLS10010	343	165	132.7	3318	130	58
100	300	CLS10012	393	165	132.7	3981	130	66
150	50	CLS1502	165	205	198.6	993	159	43
150	100	CLS1504	215	205	198.6	1986	159	55
150	150	CLS1506	265	205	198.6	2979	159	69
150	200	CLS1508	315	205	198.6	3972	159	82
150	250	CLS15010	365	205	198.6	4965	159	95
150	300	CLS15012	415	205	198.6	5958	159	108
200	50	CLS2002	193	235	265.9	1330	184	66
200	150	CLS2006	293	235	265.9	3989	184	101
200	250	CLS20010*	393	235	265.9	6648	184	136
250	50	CLS2502	193	275	366.4	1832	216	90
250	150	CLS2506	293	275	366.4	5496	216	137
250	250	CLS25010	393	275	366.4	9160	216	184
300	50	CLS3002	235	310	456.2	2281	241	137
300	150	CLS3006	335	310	456.2	6843	241	198
300	250	CLS30010	435	310	456.2	11405	241	258
400	50	CLS4002	265	350	559.9	2800	267	200
400	150	CLS4006	365	350	559.9	8399	267	275
400	250	CLS40010	465	350	559.9	13998	267	352
500	50	CLS5002	295	400	730.6	3656	305	289
500	150	CLS5006	395	400	730.6	10967	305	390
500	250	CLS50010	495	400	730.6	18278	305	489
600	50	CLS6002	310	430	855.3	4277	330	350
600	150	CLS6006	410	430	855.3	12830	330	465
600	250	CLS60010	510	430	855.3	21383	330	582
800	50	CLS8002	355	505	1176.3	5882	387	549
800	150	CLS8006	455	505	1176.3	17645	387	709
800	250	CLS80010	555	505	1176.3	29408	387	870
1000	50	CLS10002	385	560	1465.7	7329	432	729
1000	150	CLS10006	485	560	1465.7	21986	432	921
1000	250	CLS100010	585	560	1465.7	36643	432	1113

CLL series

Single-Acting Lock Nut Cylinder



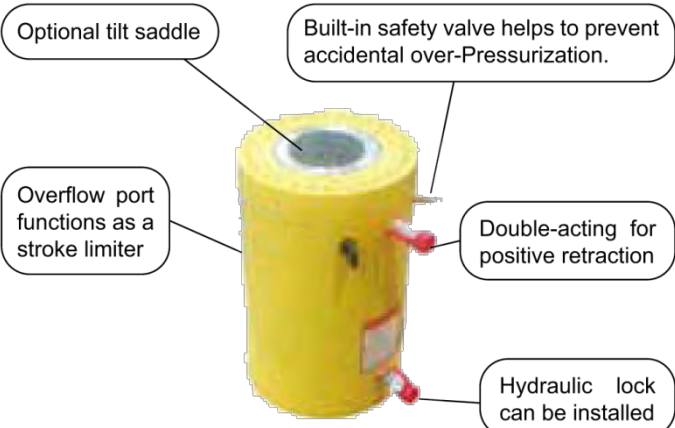
Capacity:50~1000Ton
Stroke:50~300mm
Maximum Operating Pressure:700bar

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	95	15
50	100	CLL504	214	125	70.9	709	95	20
50	150	CLL506	264	125	70.9	1064	95	25
50	200	CLL508	314	125	70.9	1418	95	30
50	250	CLL5010	364	125	70.9	1773	95	35
50	300	CLL5012	414	125	70.9	2127	95	40
100	50	CLL1002	187	165	132.7	664	130	30
100	100	CLL1004	237	165	132.7	1327	130	39
100	150	CLL1006	287	165	132.7	1991	130	48
100	200	CLL1008	337	165	132.7	2654	130	56
100	250	CLL10010	387	165	132.7	3318	130	64
100	300	CLL10012	437	165	132.7	3981	130	73
150	50	CLL1502	209	205	198.6	993	159	53
150	100	CLL1504	259	205	198.6	1986	159	66
150	150	CLL1506	309	205	198.6	2979	159	78
150	200	CLL1508	359	205	198.6	3972	159	92
150	250	CLL15010	409	205	198.6	4965	159	104
150	300	CLL15012	459	205	198.6	5958	159	117
200	50	CLL2002	243	235	265.6	1330	184	83
200	150	CLL2006	343	235	265.6	3989	184	117
200	250	CLL20010	443	235	265.6	6648	184	152
250	50	CLL2502	249	275	265.6	1832	216	116
250	150	CLL2506	349	275	265.6	5496	216	162
250	250	CLL25010	449	275	265.6	9160	216	210
300	50	CLL3002	295	310	456.2	2281	241	173
300	150	CLL3006	395	310	456.2	6843	241	233
300	250	CLL30010	495	310	456.2	11405	241	293
400	50	CLL4002	335	350	559.9	2800	267	250
400	150	CLL4006	435	350	559.9	8399	267	327
400	250	CLL40010	535	350	559.9	13998	267	402
500	50	CLL5002	375	400	731.1	3656	305	367
500	150	CLL5006	475	400	731.1	10967	305	466
500	250	CLL50010	575	400	731.1	18278	305	567
600	50	CLL6002	395	430	854.8	4277	330	446
600	150	CLL6006	495	430	854.8	12830	330	562
600	250	CLL60010	595	430	854.8	21383	330	679
800	50	CLL8002	455	505	1176.9	5882	387	709
800	150	CLL8006	555	505	1176.9	17645	387	870
800	250	CLL80010	655	505	1176.9	29408	387	1029
1000	50	CLL10002	495	560	1466.4	7329	432	949
1000	150	CLL10006	595	560	1466.4	21986	432	1141
1000	250	CLL100010	695	560	1466.4	36643	432	1333

CLRG series

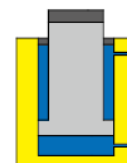
Double-Acting High Tonnage Cylinder



Optional Tilt Saddle

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

Capacity:10~1000Ton
Stroke:50~511mm
Maximum Operating Pressure:700bar

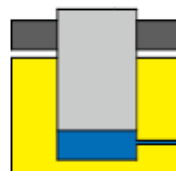
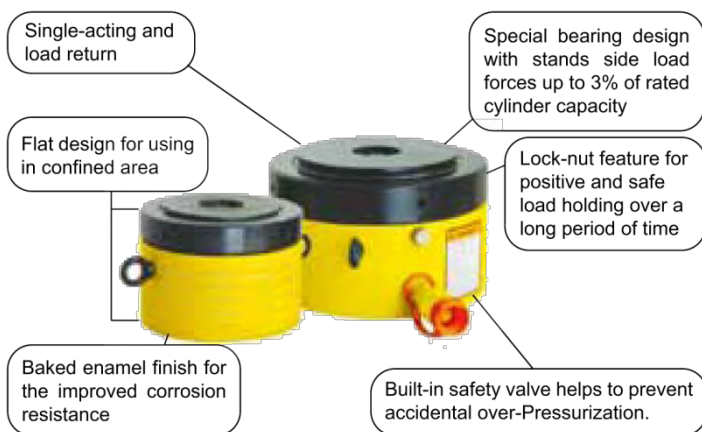


CLR Series Selection Chart

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	3.4	254	CLR1010	409	72	14.5	4.8	368	122	35	12
10	3.4	305	CLR1012	457	73	14.5	4.8	442	147	35	14
30	5.4	209	CLR308	387	101	42.1	19.1	879	400	54	18
30	5.4	368	CLR3014	549	101	42.1	19.1	1549	703	80	29
50	10.5	156	CLR506	331	127	71.2	21.5	1111	335	80	30
50	10.5	334	CLR5013	509	127	71.2	21.5	2378	718	80	52
50	10.5	511	CLR5020	733	127	71.2	21.5	3638	1099	95	68
75	16	156	CLR756	347	146	102.6	31.4	1601	490	95	41
75	16	333	CLR7513	525	146	102.6	31.4	3417	1046	95	68
100	44	50	CLR1002	182	165	132.7	61.9	664	310	95	27
100	44	100	CLR1004	232	165	132.7	61.9	1327	619	95	33
100	44	150	CLR1006	282	165	132.7	61.9	1991	929	95	37
100	44	200	CLR1008	332	165	132.7	61.9	2654	1238	95	44
100	44	250	CLR10010	382	165	132.7	61.9	3318	1548	95	50
100	44	300	CLR10012	432	165	132.7	61.9	3981	1857	95	57
150	69	50	CLR1502	196	216	198.6	96.5	993	483	114	47
150	69	100	CLR1504	246	216	198.6	96.5	1986	965	114	57
150	69	150	CLR1506	296	216	198.6	96.5	2979	1448	114	67
150	69	200	CLR1508	346	216	198.6	96.5	3972	1930	114	77
150	69	250	CLR15010	396	216	198.6	96.5	4965	2413	114	87
150	69	300	CLR15012	446	216	198.6	96.5	5958	2895	114	97
200	90	50	CLR2002	216	240	265.9	127.0	1328	633	133	67
200	90	150	CLR2006	316	240	265.9	127.0	3984	1898	133	92
200	90	250	CLR20010	416	240	265.9	127.0	6640	3163	133	117
250	109	50	CLR2502	237	285	366.4	152.6	1831	760	165	105
250	109	150	CLR2506	337	285	366.4	152.6	5492	2280	165	141
250	109	250	CLR25010	437	285	366.4	152.6	9153	3800	165	176
300	108	50	CLR3002	350	325	456.2	151.4	2281	756	197	204
300	108	150	CLR3006	450	325	456.2	151.4	6843	2267	197	252
300	108	250	CLR30010	550	325	456.2	151.4	11405	3778	197	299
400	138	50	CLR4002	380	367	559.9	193.5	2800	969	216	281
400	138	150	CLR4006	480	367	559.9	193.5	8399	2907	216	342
400	138	250	CLR40010	580	367	559.9	193.5	13998	4845	216	405
500	177	50	CLR5002	425	405	730.6	247.6	3656	1242	248	411
500	177	150	CLR5006	525	405	730.6	247.6	10967	3726	248	493
500	177	250	CLR50010	625	405	730.6	247.6	18278	6210	248	575
600	211	50	CLR6002	445	440	855.3	295.4	4274	1475	267	494
600	211	150	CLR6006	545	440	855.3	295.4	12822	4424	267	586
600	211	250	CLR60010	645	440	855.3	295.4	21370	7373	267	678
800	277	50	CLR8002	695	515	1176.3	387.0	885	1939	317	759
800	277	150	CLR8006	595	515	1176.3	387.0	17654	5816	317	885
800	277	250	CLR80010	695	515	1176.3	387.0	29423	9693	317	1019
1000	388	50	CLR10002	535	570	1465.7	541.7	7332	2715	342	1012
1000	388	150	CLR10006	635	570	1465.7	541.7	21996	8144	342	1168
1000	388	250	CLR100010	735	570	1465.7	541.7	36660	13573	342	1325

CLP series

Single-Acting Pancake Lock Nut Cylinder



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

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	104	15
100	50	CLP1002	137	175	146.8	734	136	26
160	45	CLP1602	148	220	231.3	1040	171	44
200	45	CLP2002	155	245	285.6	1285	190	57
260	45	CLP2502	159	275	366.8	1650	216	74
400	45	CLP4002	178	350	559.5	2517	266	134
520	45	CLP5002	192	400	730.6	3287	305	189

SMC series

Mechanical Cylinder

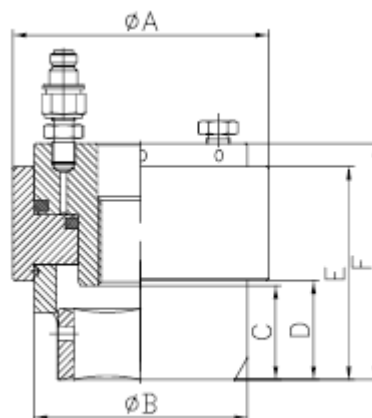
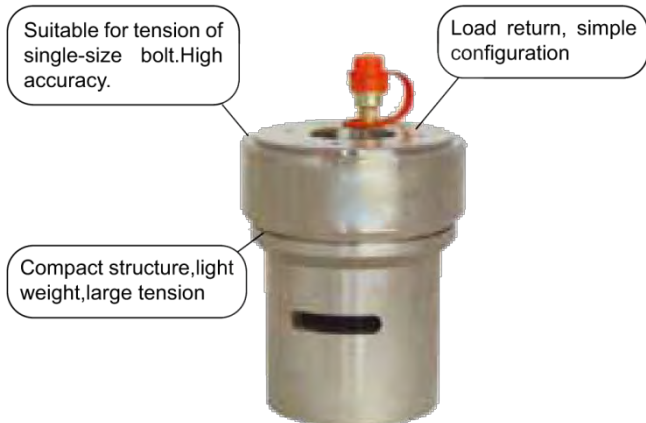


Capacity:5~50Ton
Stroke:5~25mm
Maximum Operating Pressure: 700bar

SMC Series Selection Chart

Capacity (Ton)	Stroke (mm)	Model	Effective Area (mm)	Coll.Height (mm)	Ext.Hight (mm)	Outside Diameter (mm)	Max Length (mm)	Min Length (mm)	Weight (Kg)
5	25	SMC0525	8.02	52	77	52	275	195	1.5
10	25	SMC1025	13.85	54	79	62	348	237	2.2
20	5	SMC2005	28.27	35	40	84	289	218	1.9
30	5	SMC3005	38.49	36	41	95	314	236	2.3
50	5	SMC5005	66.48	40	45	120	401	293	3.7

HTA series Hydraulic Bolt Tensioner



Capacity: 179~4476KN
Available Bolt: M16~M100
Maximum Operating Pressure: 1500bar

HTA Series Selection Chart

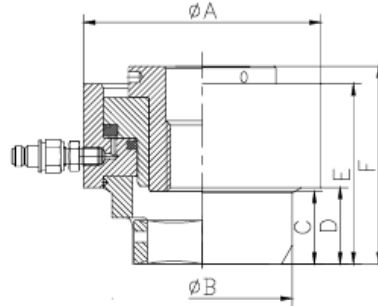
Model	Bolt Range (mm)	Maximum Loading (KN)	Size (mm)						Stroke (mm)	Weight (kg)
			A	B	C	D	E	F		
HTA16*	M16	179	62	48	23	21	67	76	10	1.1
HTA18*	M18	202	64	50	21	23	69	78		1.3
HTA20*	M20	212	66	55	23	25	71	80		1.5
HTA22*	M22	279	72	59	25	27	75	86		1.7
HTA24	M24	327	78	66	27	29	77	88		2.1
HTA27	M27	388	84	72	30	31	83	93		2.5
HTA30	M30	454	90	73	33	34	86	96		3
HTA33	M33	512	102	80	36	37	91	102		4
HTA36	M36	768	114	84	43	40	98	109		5
HTA39	M39	821	120	98	42	43	101	112		5.5
HTA42	M42	874	126	105	45	46	104	116	6.5	
HTA45	M45	957	132	110	48	49	112	124	7.5	
HTA48	M48	1119	114	125	51	52	116	129	9.5	
HTA52	M52	1328	156	130	55	56	120	134	11	
HTA56	M56	1393	162	135	59	60	129	145	13	
HTA60	M60	1457	168	144	64	64	136	154	15	
HTA64	M64	1696	180	155	67	61	133	151	17	
HTA68	M68	1837	192	170	72	72	144	162	19.5	
HTA72	M72	2226	204	165	76	76	148	166	22.5	
HTA76	M76	2518	216	172	80	80	156	174	25.5	
HTA80	M80	2827	228	183	81	81	157	175	28.5	
HTA85	M85	3254	246	188	90	90	166	189	35	
HTA90	M90	3604	258	208	95	95	175	198	42	
HTA95	M95	3973	270	220	100	100	190	218	52	
HTA100	M100	4476	288	238	105	105	195	223	15	60

HTB series Hydraulic Bolt Tensioner

Widely application, simple and convenient

Widely application, one model suits to several specifications.

High accuracy, quick velocity, and safe applications.



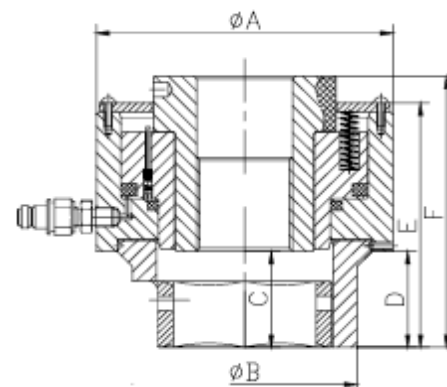
Capacity: 338~3793KN
Available Bolt: M20~M115
Maximum Operating Pressure: 1500bar

HTB Series Selection Chart

Model	Bolt Range (mm)	Maximum Loading (KN)	Size (mm)						Stroke (mm)	Weight (kg)
			A	B	C	D	E	F		
HTB1	M20	338	85	55	23	25	74	86	8	3.5
	M22			59	25	27	76	88		
	M24			66	27	29	78	90		
HTB2	M24	486	109	66	27	29	90	105	10	5.5
	M27			72	30	32	93	108		
	M30			78	33	35	96	111		
	M33			85	36	38	99	114		
HTB3	M36	814	133	90	39	41	102	117	12	7.0
	M33			85	36	44	111	127		
	M36			94	39	47	116	130		
HTB4	M39	989	150	98	41	51	122	135	14	10.0
	M42			105	45	53	122	136		
	M45			110	47	57	128	141		
	M48			125	50	60	131	144		
HTB5	M52	1413	174	132	53	56	132	145	16	15.0
	M56			135	59	60	136	149		
HTB6	M56	1649	198	135	59	60	138	154	18	17.0
	M60			144	63	65	143	159		
	M64			150	67	69	147	163		
	M68			158	71	74	152	168		
HTB7	M72	2131	222	165	75	77	167	185	20	26.0
	M76			170	79	81	175	193		
HTB8	M76	2544	252	170	79	81	167	197	22	29.5
	M80			175	83	85	172	201		
	M85			185	88	90	176	206		
	M90			205	93	95	181	211		
HTB9	M95	3101	282	215	98	100	189	224	24	38.0
	M100			235	103	105	194	229		
HTB10	M105	3793	318	240	108	110	203	238	26	49.0
	M110			250	113	115	208	243		
	M115			260	118	120	213	248		

HTS series

Hydraulic Bolt Tensioner



Capacity: 307~8432KN
 Available Bolt: M20~M160
 Maximum Operating Pressure: 1500bar

HTS Series Selection Chart

Model	Bolt Range (mm)	Maximum Loading (KN)	Size (mm)						Stroke (mm)	Weight (kg)
			A	B	C	D	E	F		
HTS0	M20	307	109	55	23	25	111	128	8	5
	M22			60	25	27	113	130		
	M24			66	27	29	115	132		
	M27			72	30	32	118	135		
HTS1	M30	486	109	80	33	35	126	144	10	7
	M33			85	36	38	129	147		
	M36			90	39	41	132	150		
HTS2	M33	814	132	85	36	44	135	150	12	10
	M36			96	43	43	134	149		
	M39			98	42	50	141	156		
	M42			105	45	53	144	159		
HTS3	M39	989	150	110	42	42	136	150	15	15
	M42			113	53	56	150	164		
	M45			114	50	50	144	161		
	M48			118	52	52	146	163		
HTS4	M52	1413	174	132	55	56	154	174	20	20
	M56			135	59	60	158	178		
HTS5	M56	1649	198	135	59	60	161	179	25	25
	M60			143	64	64	165	183		
	M64			150	68	68	169	187		
	M68			158	72	72	173	191		
HTS6	M72	2131	222	165	76	76	184	207	35	35
	M76			170	80	80	188	211		
HTS7	M76	2544	252	170	80	80	194	221	50	50
	M80			175	85	85	199	226		
	M85			190	76	85	199	226		
	M90			205	95	95	209	236		
HTS8	M95	3101	282	215	100	100	214	243	65	65
	M100			235	105	105	219	248		
HTS9	M105	3792	318	240	110	110	224	254	85	85
	M110			235	115	120	234	264		
	M115			260	120	120	234	264		
	M115			260	120	120	261	297		
HTS10	M120	4900	360	270	125	125	266	302	110	110
	M125			286	140	130	271	307		
	M130			285	135	135	276	312		
HTS11	M135	6255	408	292	140	140	281	317	130	130
	M140			300	145	145	286	322		
	M145			312	165	155	296	332		
	M145			312	150	150	301	337		
HTS12	M150	8423	456	320	155	155	306	342	150	150
	M160			340	160	165	316	352		

HTE Series Multiple Cylinder Tensioner



Technical Data	Model		
	HTE36-00	HTE42-00	HTE42A-00
Maximum Operation Pressure	1035bar	1050bar	1305bar
Maximum Output Capacity	800KN	1039KN	800KN
Maximum Stroke	10mm	10mm	10mm
Cylinder Effective Area	6126mm ²	9896mm ²	6126mm ²
Quantity of Cylinder Step	3	3	3
Outside Diameter	100mm	105mm	111mm
Bolt Size	M36×4	M42×4.5	M42×4.5

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

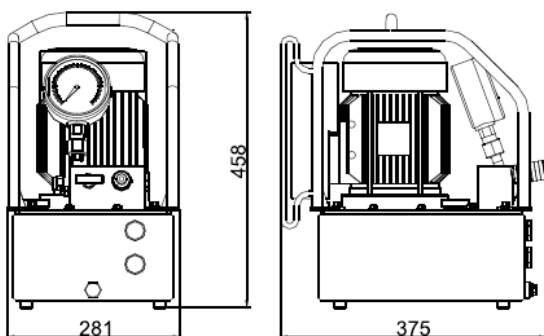
- Multigrade Cylinder Design, Increase the Tension Length
- Strong capacity with small outside diameter, it is suitable for the operation at narrow space.
- Spring return, Protect for the stroke over the maximum value, it is suitable for operation frequently.
- 700-1500bar operation pressure
- Operate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

HNP08B series Super High Pressure Electrical Pump



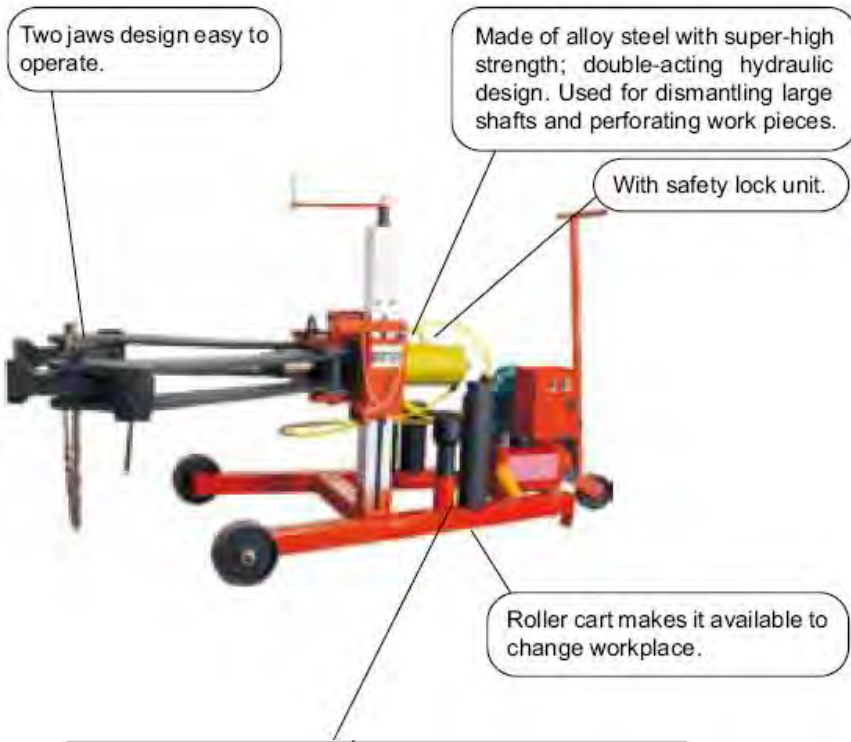
Technical Data			
Voltage / Frequency	220V/50HZ	220V/50HZ	220V/50HZ
Oil Capacity	8L	8L	8L
Flow	0,8 L/min	0,8 L/min	0,8 L/min
Output Pressure	1600bar	2000bar	2500bar
Output Port Size	1/4" BSP	1/4" BSP	1/4" BSP
Power	1KW	1KW	1KW
Weight	26.5Kg	26.5Kg	26.5Kg

- 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 700—2500bar
- Simple and quick operation with the High performance Quick Coupler
- Convenient to bring with its light weight



BH series Hydraulic Hose	BH84 series	BH94 series
Maximum Operation Pressure / Safety Parameter	1800bar/2.5	2800bar/2.5
Inside Diameter / Outside Diameter	5.0×11.2	5.0×13.4
Minimum Bending Radius	150	200
Available Quick Coupler	C116	C125

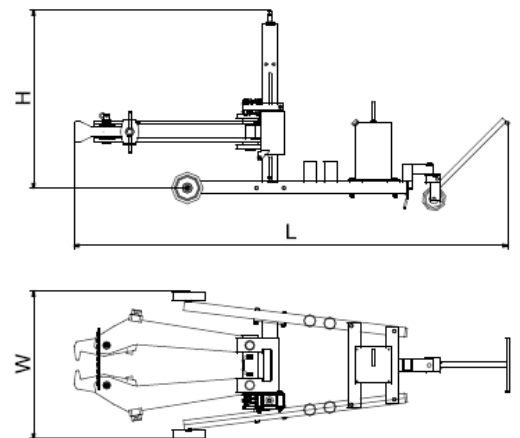
LA series Vehicle Hydraulic Puller



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



LA Series Affix

	A (mm)	B (mm)	C (mm)	D (mm)
PHA105	80			105
SFR105		205		105
PHD105			245	105

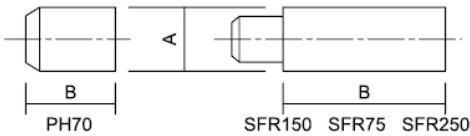
Model	LA25100	LA2560
L (mm)	3015	2885
H (mm)	1276	1276
W (mm)	930	930



LA series Automatic Vehicle Hydraulic Puller



LA Automatic Series Affix



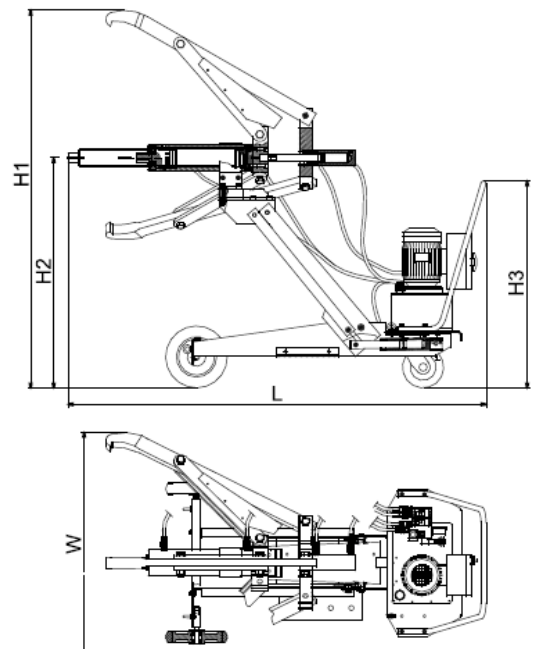
	A (mm)	B (mm)	Quantity
PH70	70	70	1
SFR150	70	150	2
SFR75	70	75	1
SFR250	70	250	1



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

LA Automatic Series Dimension



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

JH series Hydraulic Hoses

- 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.

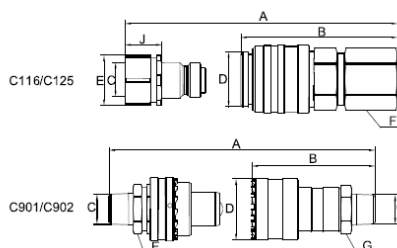
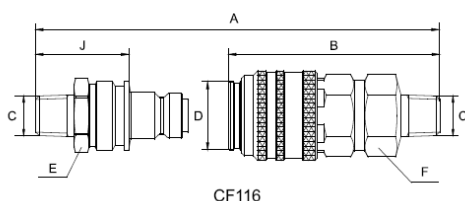
Model & photograph		max operating pressure (MPa)	hose end		Type	hose length (M)
			end one	end two		
2JH64Series twin hydraulic hose		72	1/4"NPT	1/4"NPT	2JH6445-1	4,5
					2JH6460-1	6
					2JH6490-1	9
					2JH64100-1	10
JH74 Series hydraulic hose		72	1/4"NPT	1/4"NPT	JH7445	4,5
					JH7460	6
					JH7490	9
					JH74100	10
JH78 Series hydraulic hose		100	3/8"NPT	3/8"NPT	JH7818	1,8
					JH7845	4,5
					JH7890	9
					JH78120	12
BH84 Series superhigh pressure hydraulic hose		180	1/4"BSP	1/4"BSP	BH8420	2
					BH8460	6
					BH8490	9
					BH84120	12
BH94 Series superhigh pressure hydraulic hose		280	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	
CF116	70MPa	CF1162	CF1161	Card set with lock	104		1/4"NPT		22			31	
					104	72	1/4"NPT	23		24			
C901	70MPa	C9014	C9013	Spiral lock	97	61	1/4"NPT	29		22	22		
					97	61	1/4"NPT	29		22	22		
C902	70MPa	C9022	C9021	Spiral lock	108	71	3/8"NPT	35		24	24		
					108	71	3/8"NPT	35		24	24		
C116	150MPa	C1162	C1161	Card set	81		1/4"BSP		27,5			18,5	
					81	61,5	1/4"BSP	28		24			
C125	200MPa	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,.
- featuring 'push-to-connect' operation.
- It is standard component on most BOT cylinders.
- 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 equaling membrane.

Model & photograph		Port	Face Diameter (mm) and pressure range(Mpa)	Gauge adaptor
GN0607-S		1/4"NPT External screw thread	MPa/Bar Double scale 0-70MPa(Digital display)	 GA-3
GN0610			MPa/Bar Double scale 0-100MPa	
GG1010		1/2"BSP External screw thread	MPa/Bar Double scale 0-100MPa	 GA20
GG1010-B			Bar Single scale 0-100MPa	
GG1020-G			MPa/Bar Double scale 0-200MPa	
GG1025-G			MPa/Bar Double scale 0-250MPa	
GG1030-G			MPa/Bar Double scale 0-300MPa	
GMH1025-P		M16×1.5 Internal thread	MPa/Bar Double scale 0-250MPa	
GMH1040			MPa/Bar Double scale 0-400MPa	
GMH1040-G			MPa/Bar Double scale 0-400MPa	

J series

















Connecting Accessory






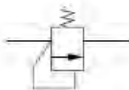
- Hundreds of connection
- Kinds of screw thread, apply for any systems
- All bear superhigh pressure working condition






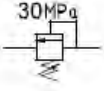





J01 Series		J02 Series		J03 Series	
J01-01	NPT1/4" (F)-NPT1/4"(F)	J02-06	NPT1/4" (M)-NPT1/4"(M)	J03-01	NPT1/4" (M)-G1/4"(F)
J01-02	NPT3/8" (F)-NPT1/4"(F)	J02-07	NPT1/4" (M)-NPT3/8"(M)	J03-06	NPT1/4" (F)-G1/4"(M)
J01-03	NPT3/8" (F)-NPT3/8"(F)	J02-10	NPT3/8" (M)-NPT3/8"(M)	J03-07	NPT1/4" (F)-NPT3/8"(M)
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 BOT Engineer

**Superhigh pressure series(made by BOT)
Hydraulic Component(in common use)**

Photograph and Model		Description	Application	Hydraulic Symbol
	solenoid (operated)valve VG2	These valve maybe directly installed in pipe systems, when equipped with sub plates enabling pipe connection. Many optional functions can be incorporated in these sub-plates.	single-acting hydraulic pump	
	solenoid (operated)valve VG3		double-acting hydraulic pump	
	solenoid (operated)valve VG4		double-acting hydraulic pump	
	air (operated)valve VP23-1B		double-acting hydraulic pump	
	Directional control valve VH1	The directional-seated valesl types operate leakage free. They are operated via a hand lever on an eccentric shaft transferring the switching moment to an actuation pin acting on the valve elements(balls), for oil outlet, shut-off, retraction.	Double-acting hydraulic pump	
	Shut-off Valve V4	Operated in the pump with model to use for shut-off, reaction	single-acting hydraulic pump & Double-acting hydraulic pump	
	needle valve V-82	The control cylinder speed,can also be used as shut-off valve for temporary load holding. 3/8NPT Female ports.	single-acting hydraulic pump & Double-acting hydraulic pump	
	limited valve TYC01	Safeguarding the system against excessive pressure or for the limitation of working pressure.	electric pump(limite the pressure and adjust the pressure)	

	Manually operated check valve V-66	Used for load holding applications with single and double acting cylinders. Valve is manually opened to allow oil to flow back to tank when cylinder retracts.	single-acting hydraulic pump & Double-acting hydraulic pump	
	Pilot operated check valve V-42	To hold the load in case of system pressure loss	Double-acting hydraulic pump	
	safe valve BF2	For the limitation of working pressure	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	