

BOSS

HYDRAULICS

HYDRAULIC TOOLS & EQUIPMENT HIGH FORCE RANGE

PUMPS, CYLINDERS & WORKSHOP TOOLS



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LET YOUR **BOSS** DO THE HARD WORK

BOSS Hydraulics was born from over 150 years of collective experience in the hydraulic pump, cylinder and tooling market and is the flagship brand of the PT Industrial range.

We understand what you need, a quality product at a competitive price.

Every day, we strive to maintain the highest quality standards for our product and provide the best technical customer service offering in the market. That's why PT Hydraulics has been successful in delivering hydraulic solutions to the Australian and New Zealand market for over 35 years.

With BOSS, you can be sure that you'll get exactly what you need to get the job done, at a good honest price. That's our promise to you, so you can...

"Let your BOSS do the hard work"

BOSS
HYDRAULICS

PT
INDUSTRIAL

PT
RESCUE

PT
RAIL

PT
HIRE

Every effort has been made to ensure the accuracy of product descriptions and technical information in this catalogue at the time of printing. PT Hydraulics reserves the right to modify or discontinue products without prior notice.

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CYLINDERS



PUMPS



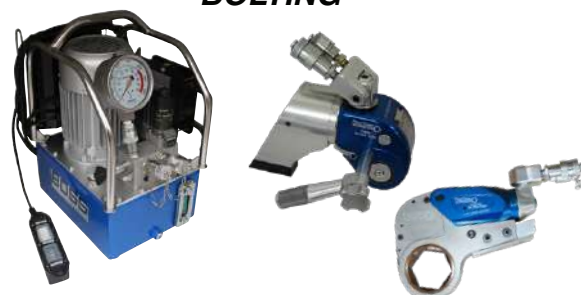
ACCESSORIES

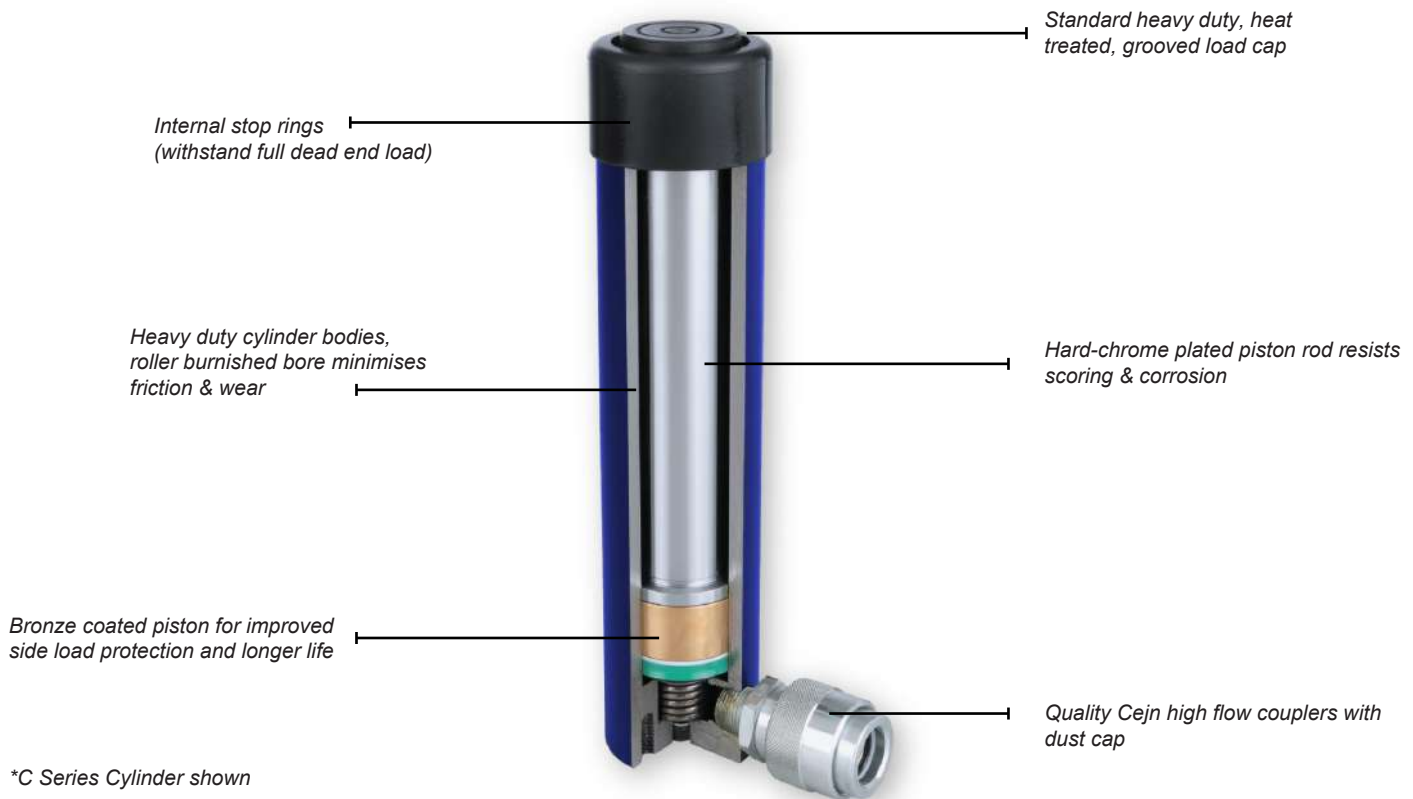


TOOLS & EQUIPMENT



BOLTING





FEATURES

- *Wide variety - vast selection of cylinders in various capacities and strokes to suit your application needs.*
- *Built for rugged industrial/construction applications*
- *Long operational life - Stop rings, bronze coated pistons and heavy duty construction provide trouble free operation and durability.*
- *Spring return - The spring return range of cylinders use a heavy duty, wound steel plated spring, which provides faster retraction and holds tension longer.*
- *Versatile fixturing - Threaded collars and internal piston threads are designed to withstand the full load of the cylinder.*
- *Piston “blow-out” protection - All cylinders¹ incorporate a positive piston stop ring to limit piston travel at the end of the stroke, and allows the cylinder to be operated at full stroke.*
- *Protection from contamination - Rod wiper cleans the rod surface during retraction which protects the inner cylinder assembly from dirt, moisture and other contaminants.*
- *Custom sizes available - A range of specialised and custom cylinders in larger sizes is also available.*

¹ Does not include cylinders with locking collars and construction style load return cylinders.

SUMMARY OF CYLINDER TYPES

Model	Function	Description	Capacity Ton	Stroke (mm)
C	Single Acting	General purpose, spring return	5-100	25-364
CP	Single Acting	Low profile, spring return	5-150	6-17
CPT	Single Acting	Low profile telescopic, load return	5-20	25
CM	Single Acting	Compact, spring return	10-100	38-63
CPL	Single Acting	Lock nut, spring return, pancake	60-520	45-50
CA	Single Acting	Aluminium spring return	20-100	51-254
CAL	Single Acting	Lock nut, spring return, aluminium	20-100	51-254
CHA	Single Acting	Spring return hollow, aluminium	30-60	50-150
CH	Single Acting	Spring return hollow	10-100	8-160
CHD	Double Acting	Hollow	30-100	76-256
CHAD	Double Acting	Hollow, aluminium	30-60	50-250
CD	Double Acting	General purpose	10-1000	57-1219
CL	Single Acting	Locking Collar	50-1000	50-300

PRODUCT OVERVIEW


PRODUCT	MODEL	CAPACITY (TON)	PAGE NUMBER
Single Acting Cylinders	C	5-100	4-5
Single Acting Low Profile Cylinders	CP	5-150	6
Single Acting Telescopic Cylinders	CPT	5-50	7
Single Acting Mid Profile Cylinders	CM	10-100	8
Single Acting Locknut Pancake Cylinders	CPL	60-520	9
Single Acting Aluminium Cylinders	CA	20-100	10
Single Acting Aluminium Locknut Cylinders	CAL	20-100	11
Single Acting Aluminium Hollow Cylinders	CHA	30-60	12
Single Acting Hollow Cylinders	CH	12-100	13
Double Acting Hollow Cylinders	CHD	30-100	14
Double Acting Aluminium Hollow Cylinders	CHAD	30-60	15
Double Acting Cylinders	CD	10-1000	16-17
Single Acting Locknut Cylinders	CL	50-1000	18



MODEL: C-SERIES

- Single Acting - Spring Return
- Capacity : 5 - 100 Ton
- Stroke : 25mm - 364mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Single Acting with spring return
- Hard chrome plated piston rod
- Cylinder bore is roller burnished for extended life

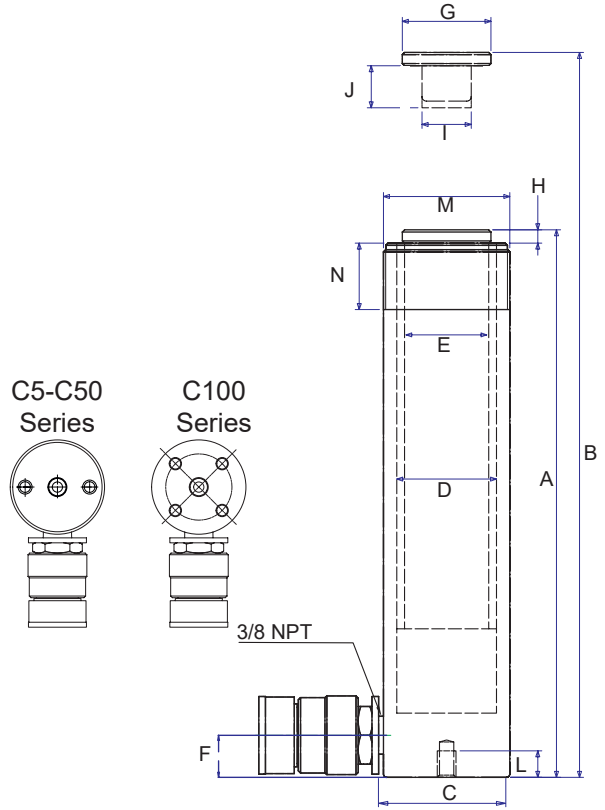
ACCESSORIES

Model	A (mm)	B (mm)	C (mm)
SC10	40	11.5	22.2
SC25	50	14	36.3
SC100	70	28.5	-

Model	A (mm)	B (mm)	C (mm)	D (mm)
BM10	9	123	230	58
BM25	16	128	280	89

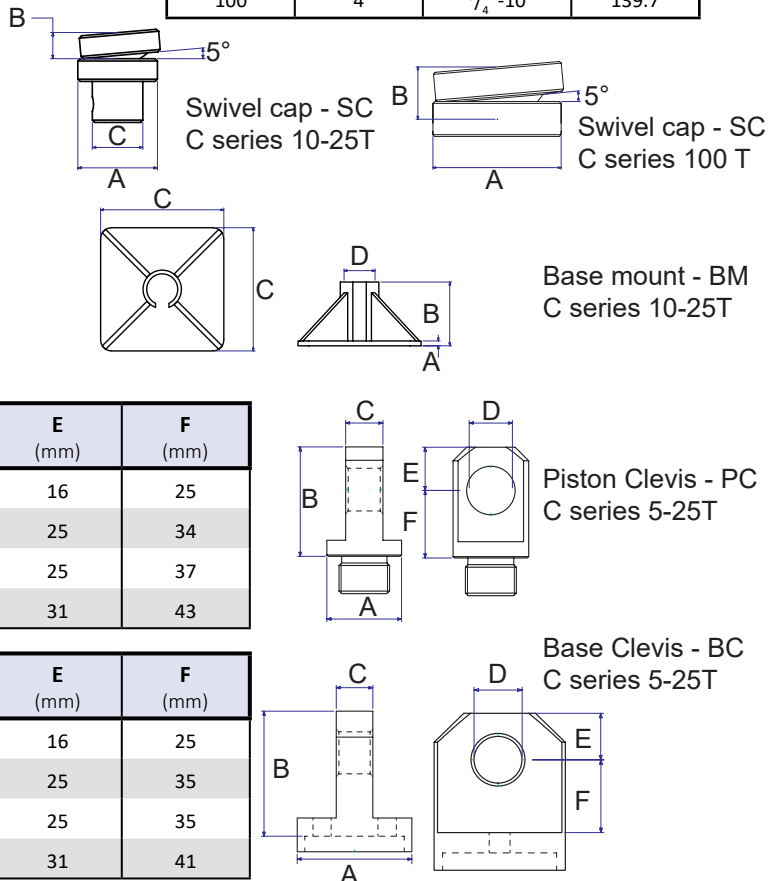
Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
PC5	28	41	14	16	16	25
PC10	43	59	25	22.3	25	34
PC15	43	62	25	22.3	25	37
PC25	57	74	38	31.8	31	43

Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
BC5	44	48	14	16	16	25
BC10	63	67	25	22.3	25	35
BC15	76	67	25	22.3	25	35
BC25	95	79	38	31.8	31	41



BASE HOLE DIMENSIONS

Cyl ton	No Holes	Thread UNC	B.C. Ø mm
5	2	1/4"-20	25.4
10	2	5/16"-18	39.6
15	2	3/8"-16	47.8
25	2	1/2"-13	58.4
50	2	1/2"-13	95.3
100	4	3/4"-10	139.7



SPECIFICATIONS

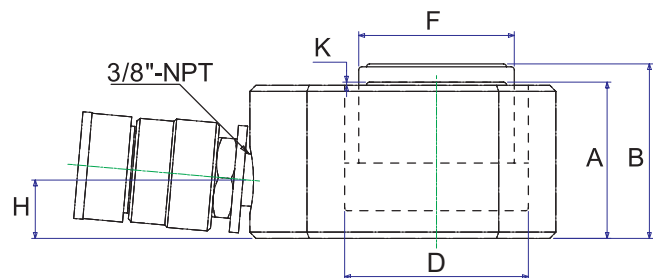
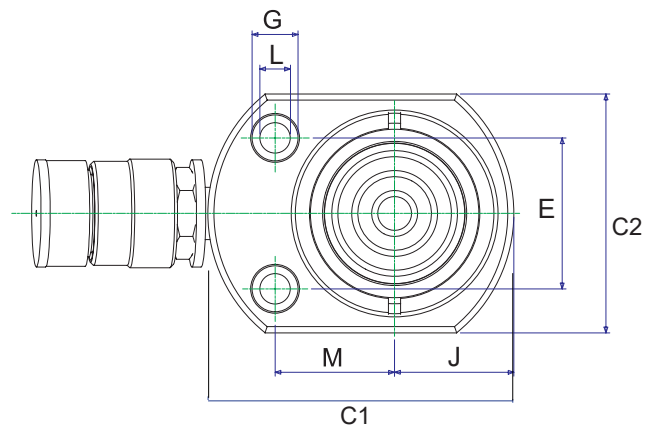
Model	Cap Ton	Stroke (mm)	Oil Cap (cm ³)	Cylinder Effective Area (cm ²)	A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. (Ømm)	D Bore Dia. (Ømm)	E (Ømm)	F (mm)	G (mm)	H (mm)	I (ØUN)	J (mm)	L (mm)	M (ØUN)	N (mm)	Weight (kgs)
C51	5	25.4	16.2	6.47	110.2	135.6	38.1	28.7	25.4	19	25.4	6	¾"-16	14.2	14.2	1½"-16	28.7	1
C53		76.2	48.8	6.47	165.1	241.3	38.1	28.7	25.4	19	25.4	6	¾"-16	14.2	14.2	1½"-16	28.7	1.5
C55		127	81.8	6.47	215.9	342.9	38.1	28.7	25.4	19	25.4	6	¾"-16	14.2	14.2	1½"-16	28.7	1.9
C57		177.8	114	6.47	273.1	450.9	38.1	28.7	25.4	19	25.4	6	¾"-16	14.2	14.2	1½"-16	28.7	2.4
C59		231.9	148.6	6.47	323.94	555.8	38.1	28.7	25.4	19	25.4	6	¾"-16	14.2	14.2	1½"-16	28.7	2.8
C101	10	25.4	36.7	14.46	91.9	117.3	57.2	42.9	38.1	19	38.1	6	1"-8	19	12.7	2¼"-14	28.7	1.8
C102		54.1	77.8	14.46	121.4	175.5	57.2	42.9	38.1	19	38.1	6	1"-8	19	12.7	2¼"-14	28.7	2.3
C104		104.9	151.2	14.46	171.5	276.4	57.2	42.9	38.1	19	38.1	6	1"-8	19	12.7	2¼"-14	28.7	3.3
C106		155.7	224.5	14.46	247.7	403.4	57.2	42.9	38.1	19	38.1	6	1"-8	19	12.7	2¼"-14	28.7	4.5
C108		203.2	323	14.46	298.5	501.7	57.2	42.9	38.1	19	38.1	6	1"-8	19	12.7	2¼"-14	28.7	5.5
C1010		257.2	371	14.46	349.3	606.6	57.2	42.9	38.1	19	38.1	6	1"-8	19	12.7	2¼"-14	28.7	6.4
C1012		305.1	439.3	14.46	403.1	708.2	57.2	42.9	38.1	19	38.1	6	1"-8	19	12.7	2¼"-14	28.7	6.8
C1014		364.7	514.6	14.46	450.1	806.5	57.2	42.9	38.1	19	38.1	6	1"-8	19	12.7	2¼"-14	28.7	7.7
C151	15	26.5	63	23.76	124	150.5	73	55	40	19	38	10	1"-8	25.4	12.7	2¾"-16	30.2	3.3
C152		50.8	102.9	20.27	149.4	200.2	69.9	50.8	41.4	24.9	39.9	10	1"-8	25.4	12.7	2¾"-16	30.2	4.1
C154		101.6	206	20.27	200.2	301.8	69.9	50.8	41.4	24.9	39.9	10	1"-8	25.4	12.7	2¾"-16	30.2	5
C156		152.4	308.9	20.27	271.5	423.9	69.9	50.8	41.4	24.9	39.9	10	1"-8	25.4	12.7	2¾"-16	30.2	6.8
C158		203.2	411.8	20.27	322.3	525.5	69.9	50.8	41.4	24.9	39.9	10	1"-8	25.4	12.7	2¾"-16	30.2	8.2
C1510		254	514.9	20.27	373.1	627.1	69.9	50.8	41.4	24.9	39.9	10	1"-8	25.4	12.7	2¾"-16	30.2	9.5
C1512		304.8	617.8	20.27	423.9	728.7	69.9	50.8	41.4	24.9	39.9	10	1"-8	25.4	12.7	2¾"-16	30.2	10.9
C1514		355.6	720.7	20.27	474.7	830.3	69.9	50.8	41.4	24.9	39.9	10	1"-8	25.4	12.7	2¾"-16	30.2	11.8
C251	25	25.4	86	33.19	143.5	168.9	85.1	65	57.2	25.4	50.8	11	1½"-16	25.4	19.1	3⅝"-12	49.3	5.5
C252		50.8	169	33.19	165.1	215.9	85.1	65	57.2	25.4	50.8	11	1½"-16	25.4	19.1	3⅝"-12	49.3	6.4
C254		101.6	338	33.19	215.9	317.5	85.1	65	57.2	25.4	50.8	11	1½"-16	25.4	19.1	3⅝"-12	49.3	8.2
C256		158.7	528.2	33.19	273.1	431.8	85.1	65	57.2	25.4	50.8	11	1½"-16	25.4	19.1	3⅝"-12	49.3	10
C258		209.5	697.3	33.19	323.9	533.4	85.1	65	57.2	25.4	50.8	11	1½"-16	25.4	19.1	3⅝"-12	49.3	12.3
C2510		260.3	866.2	33.19	374.7	635	85.1	65	57.2	25.4	50.8	11	1½"-16	25.4	19.1	3⅝"-12	49.3	14.1
C2512		311.1	1035	33.19	425.5	736.6	85.1	65	57.2	25.4	50.8	11	1½"-16	25.4	19.1	3⅝"-12	49.3	16.4
C2514		361	1204	33.19	476.3	838.2	85.1	65	57.2	25.4	50.8	11	1½"-16	25.4	19.1	3⅝"-12	49.3	17.7
C552	55	50.8	362	71.34	176.3	227.1	127	95.3	79.5	35	80	3	-	-	19.1	5"-12	44.5	15
C554		101.1	724	71.34	227.6	328.7	127	95.3	79.5	35	80	3	-	-	19.1	5"-12	44.5	19.1
C556		158.8	1130	71.34	282.7	441.5	127	95.3	79.5	35	80	3	-	-	19.1	5"-12	44.5	23.2
C5510		254	1816	71.34	383.54	638.81	127	95.3	79.5	35	80	3	-	-	19.1	5"-12	44.5	29.5
C5513		336.6	2398	71.34	460.5	797.1	127	95.3	79.5	35	80	3	-	-	19.1	5"-12	44.5	37.7
C1002	100	58.3	708	133.36	219.2	272.5	174.5	130	104.9	39.9	104.9	3	-	-	25.4	6⅞"-12	44.5	43
C1006		167.4	2240	133.36	358.1	525.5	174.5	130	104.9	39.9	104.9	3	-	-	25.4	6⅞"-12	44.5	59.1
C10010		260.1	3465	133.36	449.6	709.7	174.5	130	104.9	39.9	104.9	3	-	-	25.4	6⅞"-12	44.5	72.7


MODEL: CP-SERIES

- Single Acting - Low Profile
- Capacity : 5 - 150 Ton
- Stroke : 6mm - 17mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Single Acting with spring return
- Hard chrome plated piston rod
- Roller burnished cylinder bore
- Angled coupling for ease of connection


SPECIFICATIONS

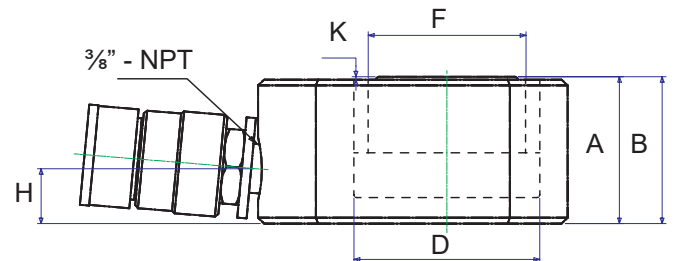
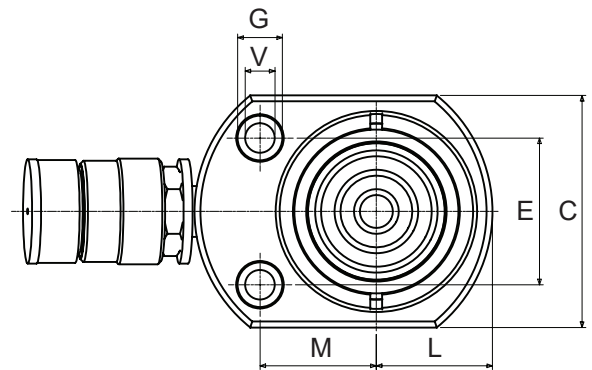
Model	Cap Ton	Stroke (mm)	Oil Cap (cc)	Cylinder Effective Area (cm ²)	A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. C1 C2 (mm)	D Bore Dia. (Ømm)	E (mm)	F (Ømm)	G (Ømm)	H (mm)	J (mm)	K (mm)	L (Ømm)	M (mm)	Weight (kg)
CP50	5	6	4.5	7.55	33	39	58.5 44	31	28.5	25.4	9.5	16	22	1	5.3	22	0.7
CP100	10	12	18	15.21	42	54	82.5 60	44	36.5	38	11	19	30	1	7.5	34	1.6
CP200	20	12	34	28.28	51	63	100 78	60	49.3	50.8	15	19	39	1	10	39	2.6
CP300	30	13	54	41.86	58	71	117.5 95	73	52.3	63.5	16	19	47.5	2	10	47.5	4.5
CP500	50	16	113	70.89	66	82	145 115	95	66.5	70	19	19	57.5	2	11	58	6.8
CP750	75	16	180	113.11	79	95	170 145	120	76.2	82.5	20.5	19	72.5	2	13.5	70	11.3
CP1000	100	16	229	143.16	85	101	185 160	135	76.2	92	20.5	19	80	2	13.5	78	14.5
CP1500	150	17	363	213.85	100	117	225 195	165	117	115	20.5	23	97.5	2	13.5	85	26.3


MODEL: CPT-SERIES

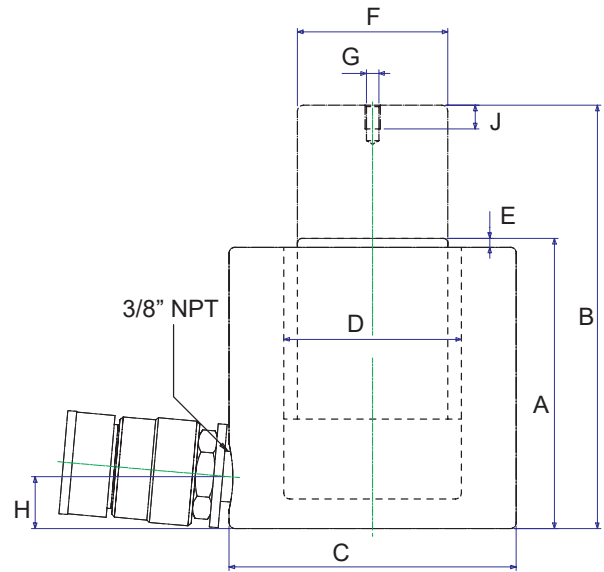
- Single Acting - Telescopic
- Capacity : 10 - 20 Ton
- Stroke : 12mm - 13mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Single Acting with load return
- Hard chrome plated piston rod
- Roller burnished cylinder bore
- Perfect for tight spaces
- Angled coupling for ease of connection


SPECIFICATIONS

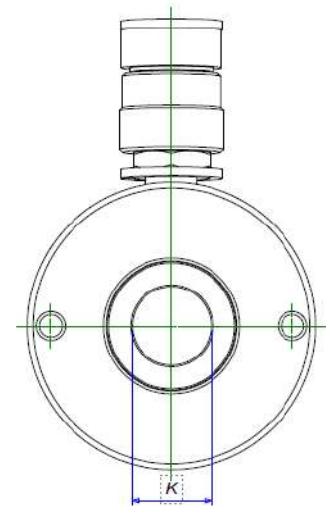
Model	Cap Ton		Stroke (mm)		Oil Cap (cm ³)	Cylinder Effective Area (cm ²)		A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. (mm)	D Bore Dia. (Ømm)	E (mm)	F (Ømm)	G (Ømm)	H (mm)	K (mm)	L (mm)	M (mm)	V (Ømm)	Weight (kg)
	1 st	2 nd	S1	S2		1st	2nd													
	CPT1005	10	5	13		12	29.0													
CPT2010	20	10	13	12	55.0	28.3	15.2	51	76	100 x 78	60	49.3	50.8	15	19	1	39	39	10	2.6


MODEL: CM-SERIES

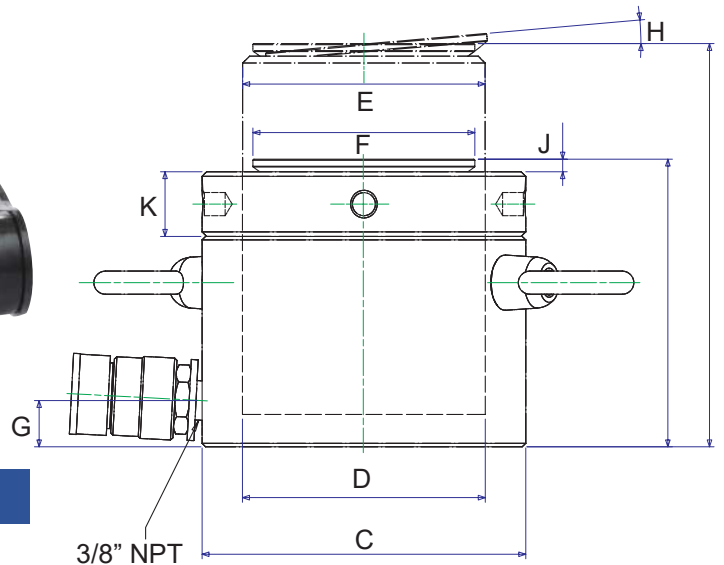
- Single Acting - Mid Profile
- Capacity : 10 - 100 Ton
- Stroke : 38mm - 63mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Single Acting with spring return
- Hard chrome plated piston rod
- Roller burnished cylinder bore
- Angled coupling for ease of connection


SPECIFICATIONS

Model	Cap Ton	Stroke (mm)	Oil Cap (cc)	Cylinder Effective Area (cm ²)	A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. (mm)	D Bore Dia. (Ømm)	E (mm)	F (Ømm)	G (mm)	H (mm)	J (mm)	K (mm)	Weight (kg)
CM101	10	38.1	55	14.46	88.9	126.2	69.9	42.9	5	38.1	M4	17.5	8	26.2	4.1
CM201	20	44.4	127	28.75	98.6	143	92.2	60.5	3	50.8	M5	17.5	9	23.9	5
CM302	30	61.9	260	42.09	117.6	179.3	101.6	73.2	3	63.5	M5	19	8	36	6.8
CM502	50	60.5	375	62.08	127.5	182.6	124.9	88.9	2	69.9	M6	19	8	39.6	10.9
CM1002	100	63.5	725	126.69	141.2	198.4	165.1	127	1.5	92.2	M8	25	10	55.6	22.7

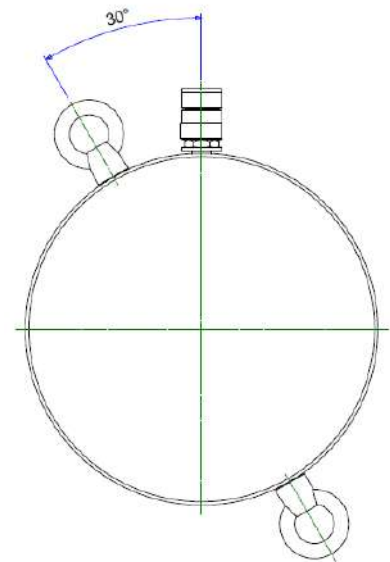


MODEL: CPL-SERIES

- Single Acting - Load Return - Locknut
- Capacity : 60 - 520 Ton
- Stroke : 45mm - 50mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Single Acting Cylinder
- Hard chrome plated piston rod
- Overflow port to prevent over extending piston
- Locknut for safe mechanical load holding
- Low retracted height for use in confined spaces
- Angled coupling for ease of connection



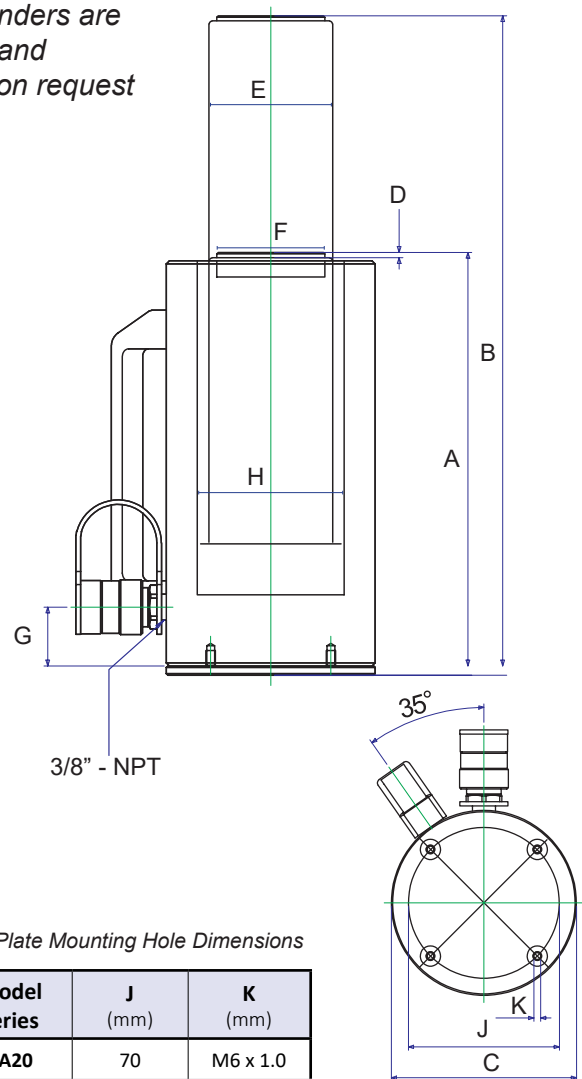
SPECIFICATIONS

Model	Cap Ton	Stroke (mm)	Oil Cap (cc)	Cylinder Effective Area (cm ²)	A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. (mm)	D Bore Dia. (Ømm)	E Lock Nut Thread (mm)	F (Ømm)	G (mm)	H °	J (mm)	K (mm)	Weight (kg)
CPL602	60	50	432	86.60	125	175	140	105	104 x 4	96	19	5	6	28	15
CPL1002	100	50	734	146.8	137	187	175	136.7	136 x 6	126	21	5	8	31	26
CPL1602	160	45	1040	231.3	148	193	220	171.6	171 x 6	160	27	5	9	40	44
CPL2002	200	45	1285	285.6	155	200	245	190.7	190 x 6	180	30	5	10	43	57
CPL2502	260	45	1650	366.8	159	204	275	216.1	216 x 6	200	32	5	11	44	74
CPL4002	400	45	2517	559.5	178	223	350	266.9	266 x 6	250	39	4	11	55	134
CPL5002	520	45	3287	730.6	192	237	400	305	305 x 6	290	48	3	10	62	189

CPL 2502-5002 and larger capacities are available to order on request



All Aluminium Cylinders are priced on request and available to order on request



MODEL: CA-SERIES

- Single Acting - Spring Return
- Capacity : 20 - 100 Ton
- Stroke : 50mm - 250mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Up to half the weight of comparative steel cylinders
- Large bearing surface for side load protection
- Carry handle standard on larger models
- Hard anodised coating reduces wear and corrosion
- Heavy duty spring for faster return
- Internal stop ring allows cylinder to withstand full dead end load
- Rod wiper protects cylinder against contamination

SPECIFICATIONS

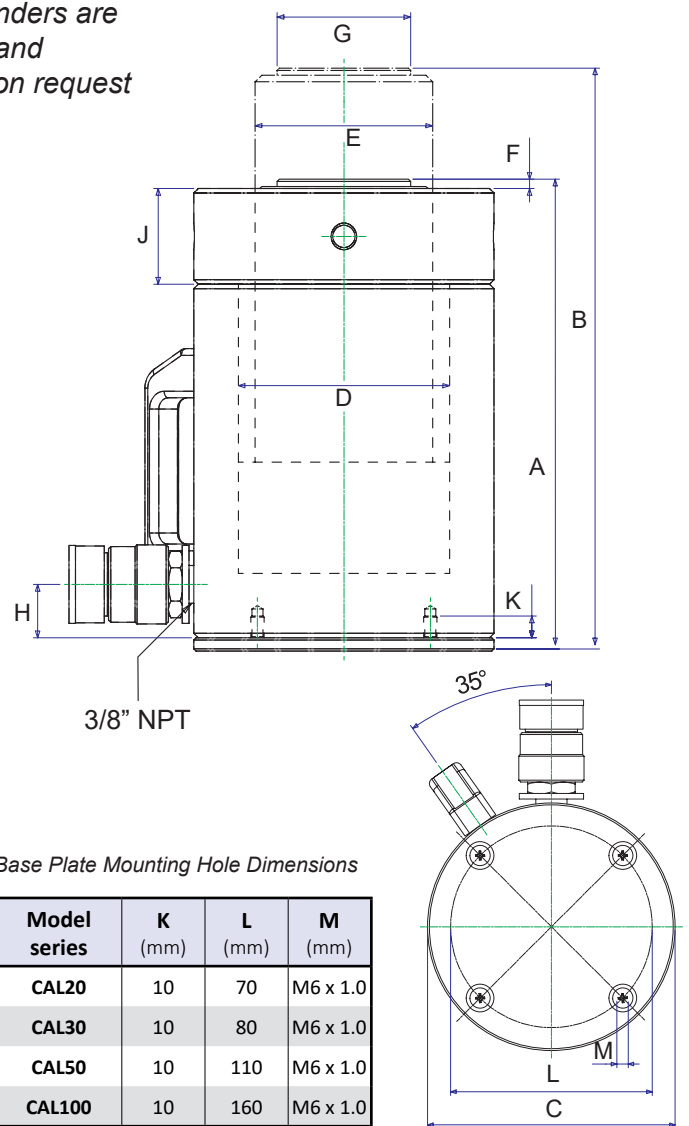
Base Plate Mounting Hole Dimensions

Model series	J (mm)	K (mm)
CA20	70	M6 x 1.0
CA30	80	M6 x 1.0
CA50	110	M6 x 1.0
CA100	160	M6 x 1.0

Model	Cap Ton	Stroke (mm)	Oil Cap (cc)	Cylinder Effective Area (cm ²)	A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. (Ømm)	D Bore Dia. (Ømm)	E (mm)	F (Ømm)	G (mm)	H (mm)	Weight (kgs)
CA202	20	50	166	30.2	168	218	92	62	40	55	25	3	4.3
CA204		100	332	30.2	218	318	92	62	40	55	25	3	5
CA206		150	498	30.2	268	418	92	62	40	55	25	3	5.7
CA208		200	664	30.2	318	518	92	62	40	55	25	3	6.5
CA302	30	50	221	44.18	175	225	110	75	40	60	25	3	6
CA304		100	442	44.18	225	325	110	75	40	60	25	3	6.9
CA306		150	663	44.18	275	425	110	75	40	60	25	3	7.9
CA308		200	884	44.18	325	525	110	75	40	60	25	3	8.8
CA502	50	50	354.5	70.89	171	221	135	95	70	80	30	6	5.9
CA504		100	709	70.89	221	321	135	95	70	80	30	6	7.7
CA506		150	1063.5	70.89	271	421	135	95	70	80	30	6	9.1
CA5010		250	1772.5	70.89	371	621	135	95	70	80	30	6	11.7
CA1002	100	50	715.5	143.16	185	235	200	135	70	105	30	6	16.4
CA1004		100	1431	143.16	235	335	200	135	70	105	30	6	17.2
CA1006		150	2145	143.16	285	435	200	135	70	105	30	6	25.1
CA1008		200	2860	143.16	335	535	200	135	70	105	30	6	28.5
CA10010		250	3575	143.16	385	635	200	135	70	105	30	6	30.7



All Aluminium Cylinders are priced on request and available to order on request



MODEL: CAL-SERIES

- Single Acting - Spring Return - Locknut
- Capacity : 20 - 100 Ton
- Stroke : 50mm - 250mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Single Acting Aluminium Cylinder
- Up to half the weight of comparable steel cylinders
- Carry handle standard on larger models
- Hard anodised coating reduces wear and corrosion
- Internal stop ring allows cylinder to withstand full dead end load
- Locknut for mechanical load holding

SPECIFICATIONS

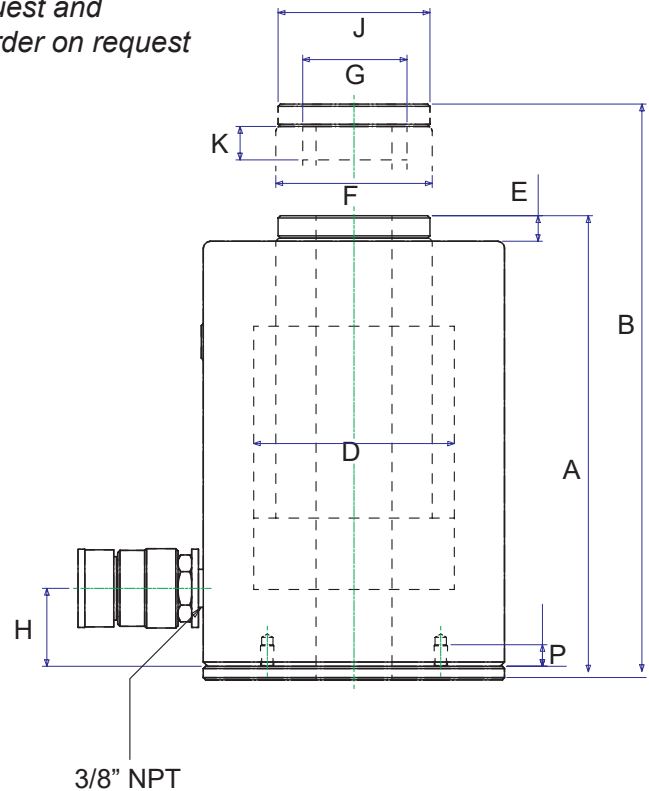
Base Plate Mounting Hole Dimensions

Model series	K (mm)	L (mm)	M (mm)
CAL20	10	70	M6 x 1.0
CAL30	10	80	M6 x 1.0
CAL50	10	110	M6 x 1.0
CAL100	10	160	M6 x 1.0

Model	Cap Ton	Stroke (mm)	Oil Cap (cc)	Cylinder Effective Area (cm ²)	A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. (Ømm)	D Bore Dia. (Ømm)	E TR Thread (mm)	F (mm)	G (Ømm)	H (mm)	J (mm)	Weight (kg)
CAL202	20	50	151	33.19	193	243	92	65	55 x 3	3	40	25	25	4.8
CAL204		100	302	33.19	243	343	92	65	55 x 3	3	40	25	25	5.7
CAL206		150	453	33.19	293	443	92	65	55 x 3	3	40	25	25	6.3
CAL208		200	604	33.19	343	543	92	65	55 x 3	3	40	25	25	6.9
CAL302	30	50	221	44.18	205	255	110	75	60 x 3	3	40	25	30	6.9
CAL304		100	442	44.18	255	355	110	75	60 x 3	3	40	25	30	7.7
CAL306		150	662	44.18	305	455	110	75	60 x 3	3	40	25	30	8.6
CAL308		200	883	44.18	355	555	110	75	60 x 3	3	40	25	30	9.6
CAL502	50	50	354	70.89	212	262	135	95	80 x 4	3	60	30	43	9.3
CAL504		100	708	70.89	262	362	135	95	80 x 4	3	60	30	43	10.7
CAL506		150	1063	70.89	312	462	135	95	80 x 4	3	60	30	43	13.7
CAL508		200	1417	70.89	362	562	135	95	80 x 4	3	60	30	43	14.5
CAL5010		250	1772	70.89	412	662	135	95	80 x 4	3	60	30	43	16.5
CAL1002	100	50	715	143.16	235	285	200	135	105 x 6	3	70	45	51	21.7
CAL1004		100	1431	143.16	285	385	200	135	105 x 6	3	70	45	51	25.2
CAL1006		150	2146	143.16	335	485	200	135	105 x 6	3	70	45	51	29.2
CAL1008		200	2861	143.16	385	585	200	135	105 x 6	3	70	45	51	33
CAL10010		250	3577	143.16	438	685	200	135	105 x 6	3	70	45	51	35.4



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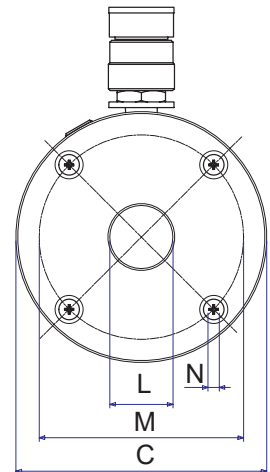


MODEL: CHA-SERIES

- Spring Return - Hollow Centre
- Capacity : 30 - 60 Ton
- Stroke : 50mm - 150mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Up to half the weight of comparable steel cylinders
- Carry handle standard on larger models
- Hard anodised coating reduces wear and corrosion
- Heavy duty spring for faster return
- Internal stop ring allows cylinder to withstand full dead end load
- Rod wiper protects cylinder against contamination
- Chrome plated centre hole for extra protection

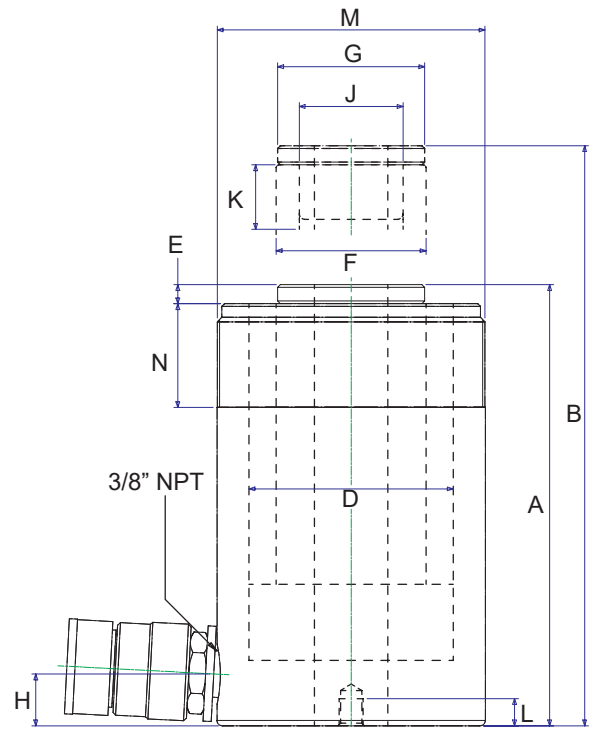


Base Plate Mounting Hole Dimensions

Model series	M (mm)	N (mm)	P (mm)
CHA20	80	M6 x 1.0	10
CHA30	110	M6 X 1.0	10
CHA60	160	M6 x 1.0	10

SPECIFICATIONS

Model	Cap Ton	Stroke (mm)	Oil Cap (cc)	Cylinder Effective Area (cm ²)	A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. (Ømm)	D Bore Dia. (Ømm)	E (mm)	F (Ømm)	G (ØUN)	H (mm)	J (Ømm)	K (mm)	L Centre Hole Ø (Ømm)	Weight (kg)
CHA302	30	50	275	55	202	252	138	95	11.5	70	1 ⁷ / ₈ -16	35	68	25	34	8.4
CHA306		150	825	55	327	477	138	95	11.5	70	1 ⁷ / ₈ -16	35	68	25	34	12.8
CHA602	60	50	447.5	89.5	250	300	200	125	14	100	2 ³ / ₄ -16	50	89	25	34	23.0
CHA604		100	895	89.5	300	400	200	125	14	100	2 ³ / ₄ -16	50	89	25	34	26.3
CHA606		150	1342	89.5	350	500	200	125	14	100	2 ³ / ₄ -16	50	89	25	34	27.0


MODEL: CH-SERIES

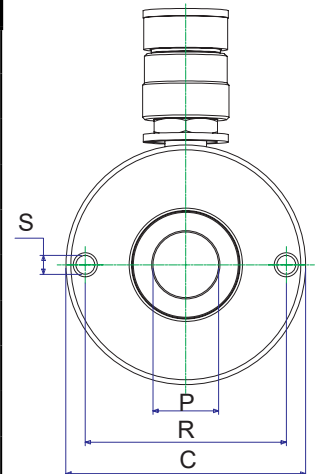
- Single Acting - Hollow Centre
- Capacity : 10 - 100 Ton
- Stroke : 8mm - 160mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Single Acting with spring return
- Hard chrome plated piston rod
- Roller burnished cylinder bore

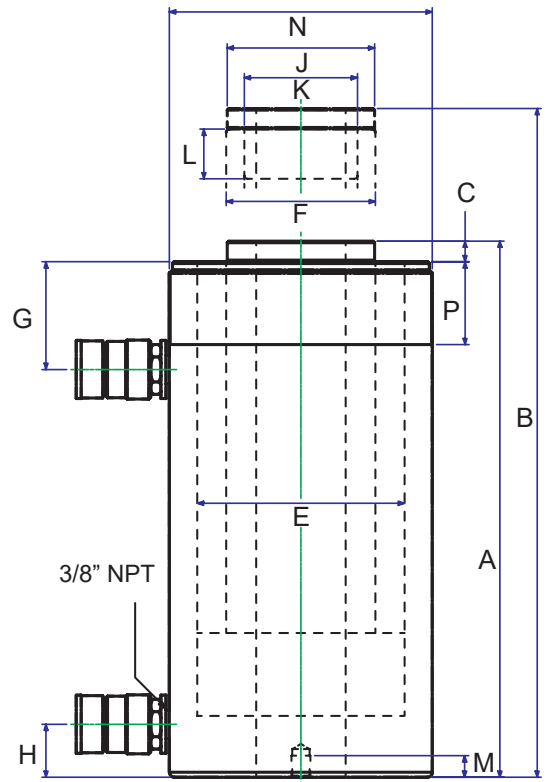
Base Plate Mounting Hole Dimensions

Model	R (mm)	S (ØUN)
CH120	50.8	5/16"-18
CH121	50.8	5/16"-18
CH1211	50.8	5/16"-18
CH123	50.8	5/16"-18
CH202	82.6	3/8"-16
CH206	82.6	3/8"-16
CH302	92	3/8"-16
CH306	92	3/8"-16
CH603	130	1/2"-13
CH606	130	1/2"-13
CH1003	178	5/8"-11


SPECIFICATIONS

Model	Cap Ton	Stroke (mm)	Oil Cap (cc)	Cylinder Effective Area (cm²)	A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. (Ømm)	D Bore Dia. (Ømm)	E (mm)	F (Ømm)	G (Ømm)	H (mm)	J (ØUN)	K (mm)	L (mm)	M (ØUN)	N (mm)	P Centre Hole (Ømm)	Weight (kg)
CH102	10	63.5	91	14.9	135.5	199	76.2	60	0.5	52	53	25.4	1 3/4"-12	15	10	-	-	19.5	4
CH120	12	8	14.8	18.5	60	68	73	54.1	-	35	-	12.5	3/4"-16	16	9	2 3/4"-16	33	19.5	1.5
CH121		42	79	18.9	120	162	73	55	-	35	-	19	-	-	12.7	2 3/4"-16	33	19.5	3
CH1211*		42	79	18.9	120	162	73	55	-	35	-	19	3/4"-16	16	12.7	2 3/4"-16	33	19.5	3
CH123	20	76	143.2	18.9	184	260	73	55	-	35	-	19	-	-	12.7	2 3/4"-16	33	19.5	4.2
CH202		51	173	34	162	213	98.5	75	7	55	54	19	9/16"-16	25	9.4	3 7/8"-12	38	27	7.5
CH206		155	527	34	306	461	98.5	75	7	55	54	19	9/16"-16	25	9.4	3 7/8"-12	38	27	13.5
CH302	30	65	310	47.8	178.5	243.5	117	90	0.5	65	59.9	21.5	1 7/8"-16	25	14	4 1/2"-12	42	34	11
CH306		160	763	47.8	330	490	117	90	0.5	65	59.9	21.5	1 7/8"-16	25	14	4 1/2"-12	42	34	20.4
CH603	60	76	680	89.6	247.5	323.5	158.6	125	12.5	90	89	32	2 3/4"-16	25	14	6 1/4"-12	50	54	26.4
CH606		152	1360	89.6	323.5	475.5	158.6	125	12.5	90	89	32	2 3/4"-16	25	14	6 1/4"-12	50	54	34
CH1003	100	76	1085	143	254	330	213	165	12	125	125	38	4"-16	30	19	8 3/8"-12	60	79	50.1

* Threaded Collar



MODEL: CHD-SERIES

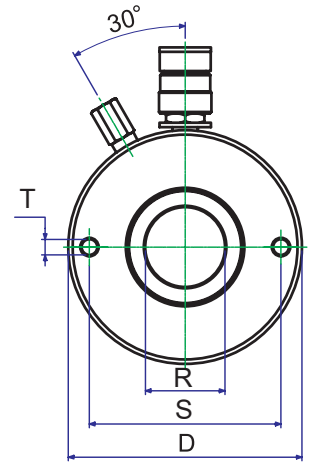
- Double Acting - Hollow Centre
- Capacity : 30 - 100 Ton
- Stroke : 76mm - 257mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Double Acting Cylinder
- Hard chrome plated piston rod
- Roller burnished cylinder bore
- Retract relief valve installed to protect against pressure intensification

Base Plate Mounting Hole Dimensions

Model	S (mm)	T (ØUNC)
CHD307	92	3/8"-16
CHD3010	92	3/8"-16
CHD603	130	1/2"-13
CHD606	130	1/2"-13
CHD6010	130	1/2"-13
CHD1003	178	5/8"-11
CHD1006	178	5/8"-11
CHD10010	178	5/8"-11

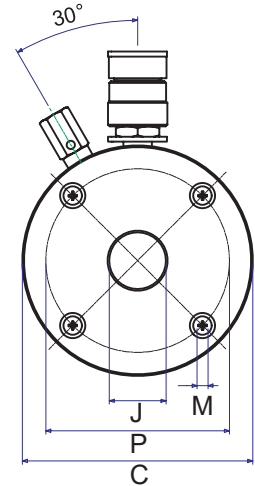
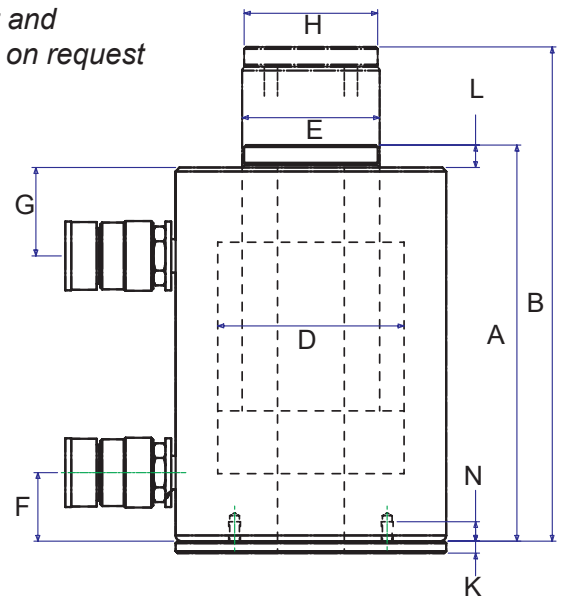


SPECIFICATIONS

Model	Cap Ton Push/Pull	Stroke (mm)	Oil Cap (cc) Push/Pull	Cyl. Effective Area (cm²)	Retract Height (mm)	Extend Height (mm)	C (mm)	D (Ømm)	E (Ømm)	F (Ømm)	G (mm)	H (mm)	J (Ømm)	K (ØUNC)	L (mm)	M (mm)	N (ØUNC)	P (mm)	R Centre Hole (Ømm)	Weight (kg)
CHD307	30 / 21	178	849 / 541	47.8	330	508	0.5	117	90	65	60.5	21.5	59.5	1 7/8"-16	25	14	4 1/2"-12	42	34	22
CHD3010		257	1226 / 782	47.8	431	688	10	117	90	65	60.5	21.5	59.5	1 7/8"-16	25	14	4 1/2"-12	42	34	27
CHD603	60 / 41	89	797 / 526	89.6	247.5	336.5	12.5	158.6	125	90	65	32	89	2 3/4"-16	25	14	6 1/4"-12	50	54	28
CHD606		165	1477 / 975	89.6	323.5	488.5	12.5	158.6	125	90	65	32	89	2 3/4"-16	25	14	6 1/4"-12	50	54	35
CHD6010		257	2300 / 1518	89.6	437.5	694.5	12.5	158.6	125	90	65	32	89	2 3/4"-16	25	14	6 1/4"-12	50	54	45
CHD1003	100 / 64	76	1086 / 692	143	254	330	12	213	165	125	82	38	125	4" - 16	30	19	8 3/8"-12	60	79	52
CHD1006		152	2172 / 1384	143	325	477	12	213	165	125	82	38	125	4" - 16	30	19	8 3/8"-12	60	79	65
CHD10010		256	3656 / 2331	143	462	718	12	213	165	125	82	38	125	4" - 16	30	19	8 3/8"-12	60	79	88



All Aluminium Cylinders are priced on request and available to order on request



MODEL: CHAD-SERIES

- Double Acting
- Capacity : 30 - 60 Ton
- Stroke : 50mm - 250mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Perfect for construction, ship yards, utilities, mining and equipment maintenance
- Hard anodised coating reduces wear and corrosion
- Rod wiper protects cylinder against contamination
- Cylinder bore is roller burnished
- Retract relief valve installed to prevent over pressurisation

SPECIFICATIONS

Base Plate Mounting Hole Dimensions

Model series	M (mm)	N (mm)	P (mm)
CHAD30	M6 x 1.0	10	110
CHAD60	M6 x 1.0	10	160

Model	Cap Ton Push/ Pull	Stroke (mm)	Oil Cap (cc)	Cylinder Effective Area (cm ²)	A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. (Ømm)	D Bore Dia. (Ømm)	E (Ømm)	F (mm)	G (mm)	H (Ømm)	J Centre Hole (Ømm)	K (mm)	L (mm)	Weight (kg)
			Push/ Pull	Push/ Pull												
CHAD302	38.5/22.7	50	275/ 162	55/ 32.4	202	252	138	95	70	35	45	68	34	6	11.5	9.6
CHAD306		150	825/ 486	55/ 32.4	327	477	138	95	70	35	45	68	34	6	11.5	14.8
CHAD3010		250	1374/ 810	55/ 32.4	430	680	138	95	70	35	45	68	34	6	11.5	16
CHAD602	62.6/31	50	448/ 221	89.5/ 44.2	250	300	200	125	100	50	50	89	54	6	14	15.5
CHAD606		150	1342/ 662	89.5/ 44.2	350	500	200	125	100	50	50	89	54	6	14	23
CHAD6010		250	2237/ 1104	89.5/ 44.2	433	683	200	125	100	50	50	89	54	6	14	30.5

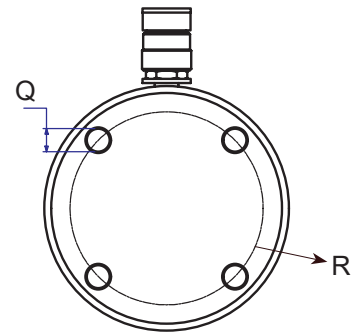
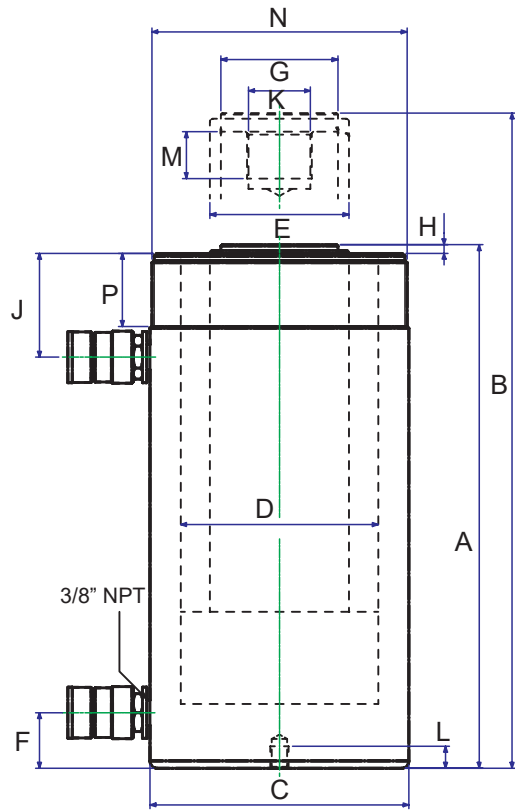


MODEL: CD-SERIES

- Double Acting
- Capacity : 10 - 556 Ton
- Stroke : 57mm - 1219mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Perfect for construction, ship yards, utilities, mining and equipment maintenance
- Rod wiper protects cylinder against contamination
- Cylinder bore is roller burnished
- Internal retract relief valve installed to prevent over pressurisation



Base Plate Mounting Hole Dimensions
*Available on cylinders 50t and over

BASE PLATE SPECIFICATIONS

Model	Q (∅ UNC)	R (mm)	Model	Q (∅ UNC)	R (mm)	Model	Q (∅ UNC)	R (mm)
CD506			CD3006			CD5006		
CD5013	½"-13	76	CD30012			CD50012		
CD5020			CD30018	1¼"-7	158	CD50018	1¾"-5	206
CD1006			CD30024			CD50024		
CD10013	¾"-10	139	CD30036			CD50036		
CD10018			CD30048			CD50048		
CD1502			CD4006					
CD1506	¾"-16	158	CD40012					
CD15013			CD40018	1½"-6	203			
CD15032			CD40024					
CD2006			CD40036					
CD20013			CD40048					
CD20018	1"-8	127						
CD20024								
CD20036								
CD20048								

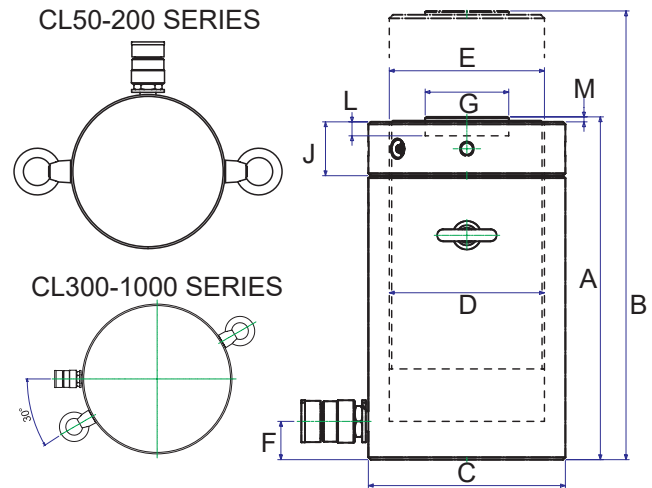
CYLINDER SPECIFICATIONS

Model	Push Capacity (KN)	Pull Capacity (KN)
CD10 -	111	31.5
CD30 -	309	77.6
CD50 -	496	119.6
CD100 -	929	433
CD150 -	1407	616
CD200 -	1985	1056
CD300 -	3167	1578
CD400 -	4311	2325
CD500 -	4948	2749

MODEL: CD-SERIES
SPECIFICATIONS


Reduced retract pressure:
 CD10 Series 500 Bar
 CD30 Series 380 Bar
 CD50 Series 580 Bar

Model	Cap Ton	Stroke (mm)	Oil Cap (cc) Push/ Pull	Cyl. Effective Area (cm ²) Push/ Pull	A Retract Height (mm)	B Extend Height (mm)	C Outside Dia. (Ømm)	D Bore Dia. (Ømm)	E Pist Dia. (Ømm)	F (mm)	G (Ømm)	H (mm)	J (mm)	K (ØUN)	L (mm)	M (mm)	N (Ø UN)	P (mm)	Weight (kg)
CD106	12	152	242/96	15.9/6.28	307	459	73	45	35	28	35	6	53	35		6	2 1/4"-14	26	10
CD1010		254	404/160	15.9/6.28	409	663	73	45	35	28	35	6	53	35		6	2 1/4"-14	26	13
CD1012		305	485/191	15.9/6.28	457	762	73	45	35	28	35	6	53	35		6	2 1/4"-14	26	14.5
CD308	35	209	923/427	44.18/20.42	395	604	101	75	55	39	50	10	74	50		10	3 5/16"-16	49	19
CD3014		368	1626/752	44.18/20.42	549	917	101	75	55	39	50	10	74	50		10	3 5/16"-16	49	31
CD506	56	156	1106/322	70.89/20.62	331	487	127	95	80	35	71	2	81	71	25	2	5"-12	44	32
CD5013		334	2368/689	70.89/20.62	509	843	127	95	80	35	71	2	81	71	25	2	5"-12	44	53
CD5020		511	3622/1054	70.89/20.62	733	1244	127	95	80	35	71	2	81	71	25	2	5"-12	44	70
CD1006	104	168	2230/1039	132.7/61.9	357	525	177	130	95	61	76	3	71	76	25	3	6 7/8"-12	50	63
CD10013		333	4420/2060	132.7/61.9	524	857	177	130	95	61	76	3	71	76	25	3	6 7/8"-12	50	96
CD10018		460	6105/2845	132.7/61.9	687	1147	177	130	95	77	76	3	71	76	25	3	6 7/8"-12	50	119
CD1502	158	57	1146/501	201/87.96	196	253	203	160	120	65	120	19	84	120	28	19	8"-12	55	51
CD1506		156	3137/1372	201/97.2	385	541	203	160	120	65	120	19	84	120	28	19	8"-12	55	94
CD15013		333	6692/2929	201/97.2	582	915	203	160	120	65	120	19	84	120	28	19	8"-12	55	126
CD15032		815	16387/7170	201/97.2	1116	1931	203	160	120	65	120	19	84	120	28	19	8"-12	55	240
CD2006	223	152	4310/2292	283.5/129.6	430	582	247	190	130	58	130	22	96	130	25	22	9 3/4"-12	54	152
CD20013		330	9356/4976	283.5/129.6	608	938	247	190	130	58	130	22	96	130	25	22	9 3/4"-12	54	203
CD20018		457	12957/6891	283.5/129.6	765	1222	247	190	130	58	130	22	96	130	25	22	9 3/4"-12	54	208
CD20024		610	17295/9199	283.5/129.6	917	1527	247	190	130	58	130	22	96	130	25	22	9 3/4"-12	54	286
CD20036		914	25915/13783	283.5/129.6	1222	2136	247	190	130	58	130	22	96	130	25	22	9 3/4"-12	54	389
CD20048		1219	34592/18382	283.5/129.6	1527	2746	247	190	130	58	130	22	96	130	25	22	9 3/4"-12	54	486
CD3006	325	153	6922/3449	452.4/225.4	485	638	311	240	170	88	165	28	114	170	44	28	12 1/4"-12	58	203
CD30012		305	13798/6875	452.4/225.4	638	943	311	240	170	88	165	28	114	170	44	28	12 1/4"-12	58	314
CD30018		457	20674/10301	452.4/225.4	790	1247	311	240	170	88	165	28	114	170	44	28	12 1/4"-12	58	386
CD30024		609	27551/13727	452.4/225.4	943	1552	311	240	170	88	165	28	114	170	44	28	12 1/4"-12	58	472
CD30036		915	41393/20625	452.4/225.4	1247	2162	311	240	170	88	165	28	114	170	44	28	12 1/4"-12	58	631
CD30048		1219	55146/27477	452.4/225.4	1552	2771	311	240	170	88	165	28	114	170	44	28	12 1/4"-12	58	781
CD4006	485	152	9259/5050	615.8/332.2	538	690	358	280	190	108	190	28	133	280	50	28	14 1/8"-8	65	308
CD40012		305	18780/10133	615.8/332.2	690	995	358	280	190	108	190	28	133	280	50	28	14 1/8"-8	65	405
CD40018		457	28140/15183	615.8/332.2	843	1300	358	280	190	108	190	28	133	280	50	28	14 1/8"-8	65	456
CD40024		610	37560/20265	615.8/332.2	995	1605	358	280	190	108	190	28	133	280	50	28	14 1/8"-8	65	599
CD40036		914	56280/30365	615.8/332.2	1300	2214	358	280	190	108	190	28	133	280	50	28	14 1/8"-8	65	794
CD40048		1219	75060/40498	615.8/332.2	1605	2824	358	280	190	108	190	28	133	280	50	28	14 1/8"-8	65	983
CD5006	556	153	10815/6008	706.9/392.7	577	730	397	300	200	120	203	28	152	300	57	28	15 5/8"-8	79	435
CD50012		305	21559/11977	706.9/392.7	730	1035	397	300	200	120	203	28	152	300	57	28	15 5/8"-8	79	592
CD50018		457	32303/17946	706.9/392.7	882	1339	397	300	200	120	203	28	152	300	57	28	15 5/8"-8	79	682
CD50024		609	43047/23915	706.9/392.7	1035	1644	397	300	200	120	203	28	152	300	57	28	15 5/8"-8	79	818
CD50036		915	64678/35932	706.9/392.7	1339	2254	397	300	200	120	203	28	152	300	57	28	15 5/8"-8	79	1004
CD50048		1219	86166/47870	706.9/392.7	1644	2863	397	300	200	120	203	28	152	300	57	28	15 5/8"-8	79	1226


MODEL: CL-SERIES

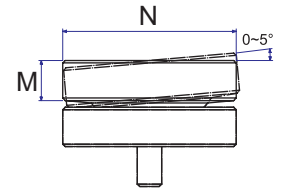
- Single acting
- Capacity : 50 - 1000 Ton
- Stroke : 50mm - 300mm
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Perfect for construction, ship yards, utilities, mining and equipment maintenance
- Optional tilt saddle available for side load protection
- Safety locknut for mechanical load holding
- Overflow port built in for piston protection

SPECIFICATIONS
OPTIONAL TILT SADDLES

Model	Cap. Ton	M (mm)	N (∅ mm)
TSA-100	50-100	22	70
TSA-200	150-200	20	125
TSA-300	300	75	195
TSA-400	400	85	225
TSA-500	500	90	250
TSA-600	600	95	275
TSA-800	800	120	320
TSA-1000	1000	135	360



Model	Cap Ton	Stroke (mm)	Oil Cap (cc)	Cylinder Effective Area (cm ²)	A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. (∅mm)	D Bore Dia. (∅mm)	E TR Thread (mm)	F (mm)	G (∅mm)	H (mm)	J (mm)	K (mm)	L (∅mm)	Weight (kg)
CL502	50	50	355	70.9	164	214	125	95	95x4	20	70	4	25	35	13	15
CL506		150	1064	70.9	264	414	125	95	95x4	20	70	4	25	35	13	25
CL5010		250	1773	70.9	364	614	125	95	95x4	20	70	4	25	35	13	35
CL1002	100	50	665	133	187	237	165	130	130x4	35	70	4	25	45	13	30
CL1006		150	1995	133	287	437	165	130	130x4	35	70	4	25	45	13	48
CL10010		250	3325	133	387	637	165	130	130x4	35	70	4	25	45	13	64
CL1502	150	50	1005	201	209	259	205	160	160x6	49	125	4	25	45	25	53
CL1506		150	3015	201	309	459	205	160	160x6	49	125	4	25	45	25	78
CL2006	200	150	4035	269	343	493	235	185	185x6	52	125	4	25	50	25	117
CL20012		300	8070	269	493	793	235	185	185x6	52	125	4	25	50	25	170
CL3006	300	150	6503	433.5	395	545	305	235	235x6	62	160	5	25	60	25	233
CL30012		300	13005	433.5	545	845	305	235	235x6	62	160	5	25	60	25	323
CL4002	400	50	2755	551	335	385	355	265	265x6	76	160	5	25	70	25	250
CL4006		150	8265	551	435	585	355	265	265x6	76	160	5	25	70	25	327
CL40012		300	16530	551	585	885	355	265	265x6	76	160	5	25	70	25	441
CL5006	500	150	10598	706.5	475	625	395	300	300x6	81	180	5	25	80	25	466
CL50012		300	21195	706.5	625	925	395	300	300x6	81	180	5	25	80	25	617
CL8006	800	150	17910	1194	555	705	505	390	390x6	105	225	5	25	100	25	870
CL80012		300	35820	1194	705	1005	505	390	390x6	105	225	5	25	100	25	1110
CL10002	1000	50	7257	1451.5	495	545	555	430	430x6	108	250	5	25	110	25	949
CL10006		150	21772	1451.5	595	745	555	430	430x6	108	250	5	25	110	25	1141
CL100012		300	43544	1451.5	745	1045	555	430	430x6	108	250	5	25	110	25	1430

HAND PUMPS



Model	Max Pressure (Bar)	Speed/Pressure	Oil disp. (cc) per Stroke	Tonnage (Based on standard 700 Bar cylinder bore)													
				5	10	15	20	25	30	55	75	100	150	200	300	500	1000
PH1035	700	Single	3.2	5	11	16	22	24	33	56	88	-	-	-	-	-	-
PH1070	700	Single	3.2	5	11	16	22	26	33	56	88	-	-	-	-	-	-
PHS series	700	Low	5.8	3	6	9	12	14	18	31	49	57	-	-	-	-	-
		High	0.9	18	40	56	79	92	116	198	314	369	-	-	-	-	-
PH2035	700	Low	7	2	5	7	10	12	15	26	40	47	-	-	-	-	-
		High	1	16	36	50	71	83	105	178	283	332	-	-	-	-	-
PHA2035	700	Low	12.9	1.3	3	4	6	6	8	14	22	26	-	-	-	-	-
		High	1	16	36	50	71	83	105	178	283	332	-	-	-	-	-
PHA2100	700	Low	12.9	1.3	3	4	6	6	8	14	22	26	-	-	-	-	-
		High	2.3	1.0	16	22	31	36	46	78	123	144	-	-	-	-	-
PHA(D)2200	700	Low	12.9	1.3	3	4	6	6	8	14	22	26	-	-	-	-	-
		High	2.3	1.0	16	22	31	36	46	78	123	144	-	-	-	-	-
PH2070	700	Low	13	1.2	3	4	5	6	8	14	22	26	-	-	-	-	-
		High	2.8	6	13	18	25	30	37	64	101	119	-	-	-	-	-
PH(D)2220	700	Low	39.5	0.4	0.9	1.3	2	2	3	5	7	8	-	-	-	-	-
		High	2.8	6	13	18	25	30	37	64	101	119	-	-	-	-	-
PH(D)2350	700	Low	30	0.5	1.2	2	3	3	4	6	9	11	-	-	-	-	-
		High	3	5	12	17	24	28	35	59	94	111	-	-	-	-	-
PH(D)2700	700	Low	113	0.1	0.3	0.5	0.6	0.7	0.9	2	3	3	-	-	-	-	-
		High	4	4	9	13	18	21	26	45	71	83	-	-	-	-	-

Standard range

Strokes / 25.4mm travel

POWER PUMPS



Model	Max Pressure (Bar)	Speed/Pressure	Oil disp. (cc) per /min	Tonnage (Based on standard 700 Bar cylinder bore)													
				5	10	15	20	25	30	55	75	100	150	200	300	500	1000
PA010	700	Single	100	10	22	31	44	51	64	109	-	-	-	-	-	-	-
PA(D)019	700	Single	193	5	11.4	17	23	26	33	56	89	105	159	224	-	-	-
PA(D)028	700	Low	4000	0.2	0.6	0.8	1	1.3	1.6	2.7	4.3	5	7.6	10.8	17	27	55
		High	280	3.5	7.9	11	16	18	23	39	62	72	109	154	246	385	790
PA(D)100	700	Low	6400	0.2	0.3	0.5	0.7	0.8	1	1.7	2.7	3.1	4.8	6.8	11	17	35
		High	1000	1	2.2	3	4.4	5	6.4	11	17	20	31	43.2	69	108	221
PE(D)026	700	Low	4000	0.2	0.6	0.8	1	1.3	1.6	2.7	4.3	5	8	11	17	27	55
		High	280	3.5	7.9	11	16	18	23	39	62	72	109	154	246	385	790
PE(D)090	700	Low	9500	0.1	0.2	0.3	0.5	0.5	0.7	1.1	1.8	2.1	3	5	7	11	23
		High	900	1.1	2.5	3.4	5.1	5.6	7.5	12	19	23	34	48	79	120	246
PE(D)180	700	Low	9500	0.1	0.2	0.3	0.5	0.5	0.7	1.1	1.8	2.1	3	5	7	11	23
		High	1800	0.6	1.2	1.7	2.6	2.8	3.7	6	9.6	11	17	24	38	60	123

Air

Electric

Seconds / 25.4mm travel

Recommended
 Consult factory
 Not Recommended

PRODUCT OVERVIEW


PRODUCT	MODEL	MAX FLOW @ 700 BAR (CC)	MAX OIL CAPACITY (CC)	PAGE NUMBER
Heavy Duty Hand Pumps	PH/ PHD	2.8	2,200	21
Large Tank Hand Pumps	PH/ PHD	4	7,000	22
Aluminium Hand Pumps	PHA	2.3	2,000	23
Air Pumps - Foot Control	PA01	193	7,200	24
Air Pumps	PA028	280	7,200	25
Air Pumps	PA100	1,000	11,000	26
Electric Pumps	PE026	280	7,200	27
Electric Pumps	PE090	900	18,000	28
Electric Pumps	PE180	1,800	18,000	29
Split Flow Pumps	PESX/ PEDX	12,000	80,000	30
Directional Valves	DVB/ DVE DVF/ DVG/ DVK	-	-	31



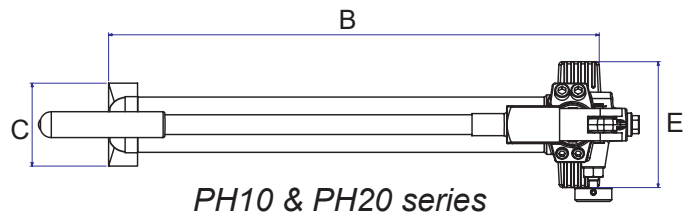
PH1035



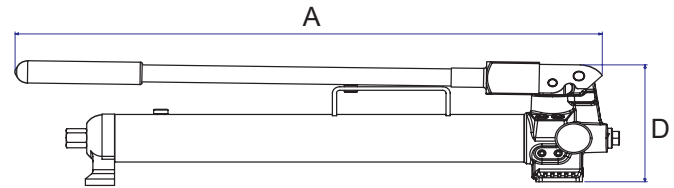
PH2070



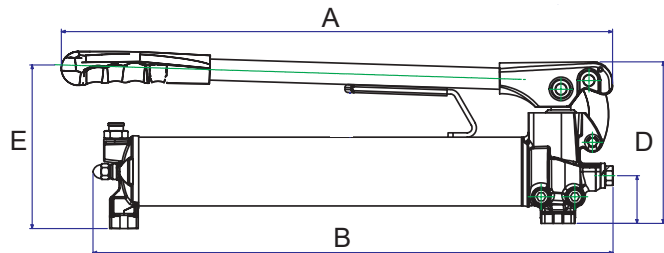
PH2220



PH10 & PH20 series



PH2220 series



MODEL: PH-SERIES

- Single & Two Speed Options
- Single and Double Acting models
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Reduced handle effort
- Vent free reservoir to eliminate oil leakage +
- Integrated reservoir over-pressurisation protection ++
- Chrome plated piston with wiper system for long life
- Internal relief valve set at 10,000 psi (700 bar)
- Larger models come with carry handle
- PHD model suitable for double acting cylinders
- Custom pressure setting available

SPECIFICATIONS

Model	Pressure Rating (bar) 1 st Stage / 2 nd Stage	Oil Cap (cc)	Oil Volume per Stroke (cc) 1 st Stage / 2 nd Stage	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Weight (kg)
PH1035 +	- / 700	350	- / 3.2	343	310	90	146	142	-	-	5
PH1070 +	- / 700	700	- / 3.2	633	526	90	146	142	-	-	6.5
PH2035 +	13.8 / 700	350	7 / 1.0	343	310	66	127	142	-	-	5.5
PH2070 +	13.8 / 700	700	13 / 2.8	633	526	90	146	142	-	-	7.3
PH2220 ++	27.5 / 700	2200	39.5 / 2.8	633	578	150	195	208	8	121	13.5
PHD2220 ++	27.5 / 700	2200	35.6 / 2.8	633	609	150	195	208	8	121	15

PHD2220 model is suitable for both single and double acting cylinders.



PHD2700



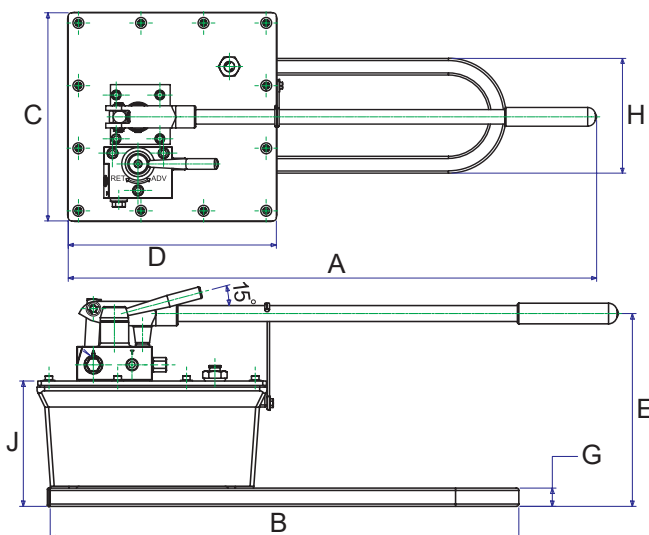
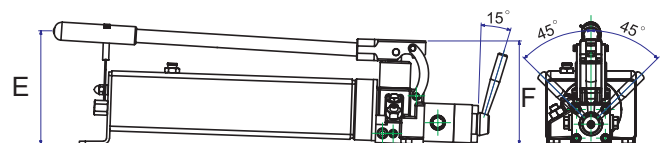
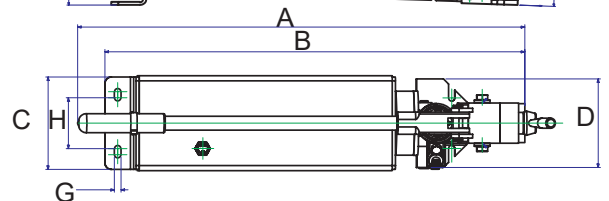
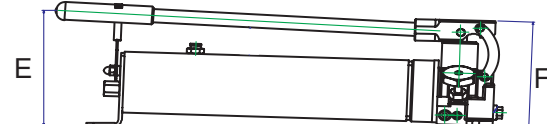
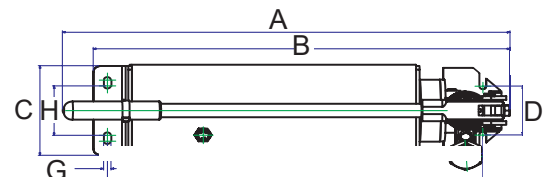
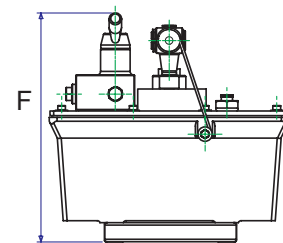
PHD2350

MODEL: PH-SERIES

- Two Speed Pump
- Single and Double Acting models
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Large tanks for use with larger cylinders
- Hi-flow two speed pump
- Integrated reservoir over-pressurisation protection
- Chrome plated piston with wiper system for long life
- Custom pressure setting available


SPECIFICATIONS

Model	Pressure Rating (bar) 1 st Stage / 2 nd Stage	Oil Cap (cc)	Oil Volume per Stroke (cc) 1 st Stage / 2 nd Stage	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	J (mm)	Weight (kg)
PH2350	28 / 700	3500	30 / 3	628	586	146	79.7	190	79.7	10.5	80.5	-	16.5
PHD2350*	28 / 700	3500	30 / 3	715	662	146	79.7	190	79.7	10.5	80.5	-	16.8
PH2700	28 / 700	7000	113 / 4	787	635	310	310	261	298	25	171	170	24
PHD2700*	28 / 700	7000	113 / 4	787	635	310	310	261	298	25	171	170	25

* Suitable for both single and double acting cylinders.



PHA2200



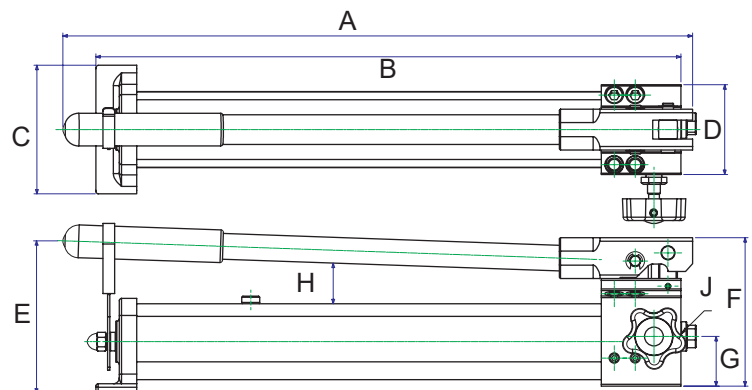
PHA2035

MODEL: PHA-SERIES

- Single and Double Acting models
- Maximum working pressure : 40,000 psi / 2800 Bar

FEATURES

- 2 speed design for maximum efficiency
- PHA models are designed to be used with standard single acting cylinders
- PHAD models are designed to be used with double acting cylinders
- Large release knob on all models
- PHA and PHAD models have internal relief valves all set at 700 bar (10,000 psi) for full circuit protection
- PHAH models have high pressures capabilities up to 2800 bar
- Aluminium reservoirs on all models
- Custom pressure setting available



SPECIFICATIONS

Model	Pressure Rating (bar) 1 st Stage / 2 nd Stage	Oil Cap (cc)	Oil Volume per Stroke (cc) 1 st Stage / 2 nd Stage	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	J	Weight (kg)
PHA2035	13.8 / 700	350	12.9 / 1	391	361	110	77	140	127	42.5	37	3/8" NPT	2.3
PHA2100	13.8 / 700	1000	12.9 / 2.3	542	513	110	77	130	127	42.5	37	3/8" NPT	3.5
PHA2200	13.8 / 700	2000	12.9 / 2.3	623	556	150	102	135	135	50	37	3/8" NPT	6
PHAD2200*	13.8 / 700	2000	12.9 / 2.3	623	556	150	102	135	135	24/37	37	3/8" NPT	7
PHAH1000	13.8 / 1000	1000	12.9 / 1.65	539	501	110	77	145	127	42.5	37	3/8" NPT	3.5
PHAH1500	13.8 / 1500	2000	12.9 / 1	699	629	150	102	152	157	50	37	3/4" -16 UNF	6.7
PHAH2800	14 / 2800	1000	12.9 / 0.5	620	488	80	140	108	157	26	37	3/4" -16 UNF	5.3

* Suitable for both single and double acting cylinders.



PA010



PA019-2



PAD019

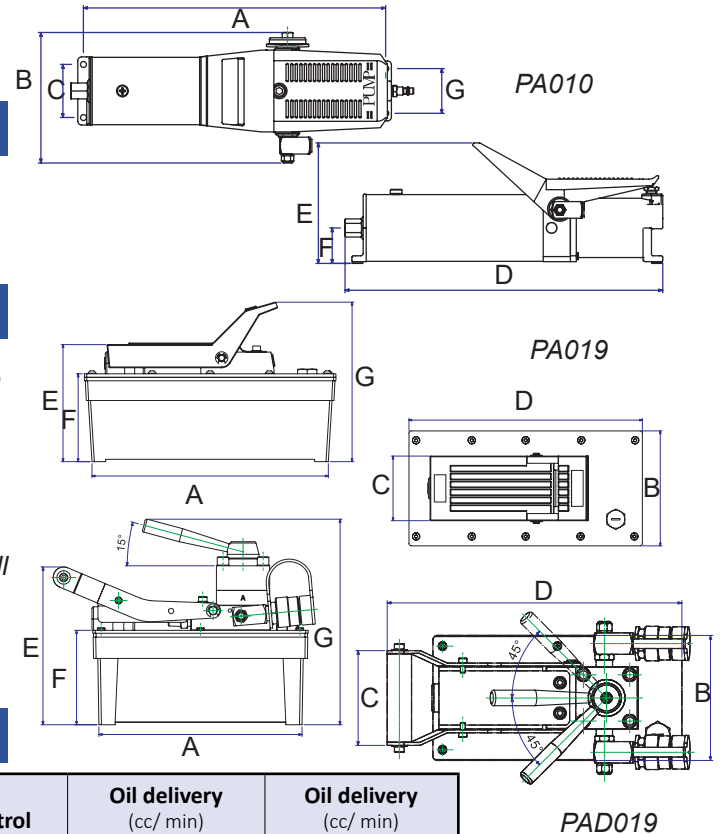
MODEL: PA01-SERIES

- Single and Double acting models
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- PA models are designed to be used with standard single acting cylinders
- PAD models are designed to be used with double acting cylinders
- Built in carry handle on PAD models
- Internal relief valves all set at 700 bar (10,000 psi) for full circuit protection
- Aluminium reservoirs on all models
- Custom pressure setting available

SPECIFICATIONS



Model	Valve type	Function	Control	Oil delivery (cc/ min) 0 bar	Oil delivery (cc/ min) 700 bar
PA010	Single Acting	2 way - Advance/Hold/Retract	Foot	700	100
PA019	Single Acting	2 way - Advance/Hold/Retract	Foot	1250	193
PAR019	Single Acting	2 way - Advance/Hold/Retract	Remote	1250	193
PA019-2	Single Acting	2 way - Advance/Hold/Retract	Foot	1250	193
PA019-3	Single Acting	2 way - Advance/Hold/Retract	Foot	1250	193
PA019-8	Single Acting	2 way - Advance/Hold/Retract	Foot	1250	193
PAD019	Double Acting	3 position 4 way Double Acting	Foot/Hand	1250	193
PAD019-3	Double Acting	3 position 4 way Double Acting	Foot/Hand	1250	193
PAD019-8	Double Acting	3 position 4 way Double Acting	Foot/Hand	1250	193

Model	Input air pressure (bar)	Air consumption (cfm)	Oil Cap (cc)	Useable Oil (cc)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Weight (kg)
PA010	7-10	9	850	750	423	170	70	399	160	47	59	5.4
PA019	7-10	9	1600	1300	242	129	90	257	151	113	205	7.3
PAR019	7-10	9	1600	1300	242	129	90	257	151	113	205	8.5
PA019-2	7-10	9	2600	2000	279	144	91	304	159	120	208	9.1
PA019-3	7-10	9	3000	2500	309	160	98	325	151	114	245	9.3
PA019-8	7-10	9	8000	7200	312	312	90	312	184	146	238	14
PAD019*	7-10	9	1600	1300	242	129	98	304	188	113	205	9.1
PAD019-3*	7-10	9	3000	2500	309	160	98	343	189	114	245	12
PAD019-8*	7-10	9	8000	7200	312	312	98	312	221	146	278	17

* Suitable for both single and double acting cylinders.



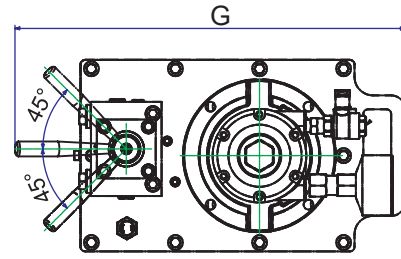
MODEL: PA028-SERIES

- Single and Double acting models
- Two speed pump
- Maximum working pressure: 10,000 psi / 700 Bar

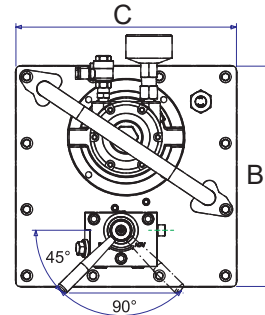
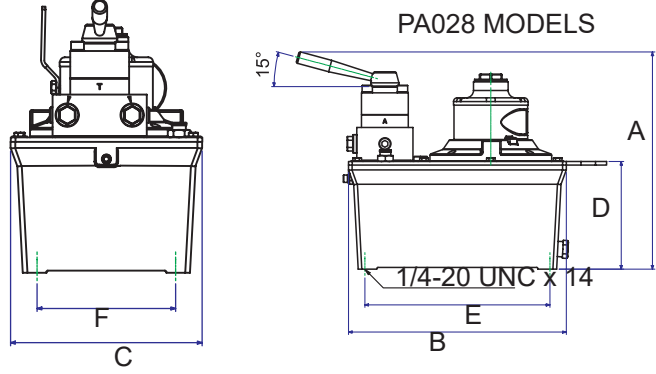
FEATURES

- PA models are designed to be used with standard single acting cylinders
- PAD models are designed to be used with double acting cylinders
- Available in 3 and 8 litre reservoirs
- Internal relief valves all set at 700 bar (10,000 psi) for full circuit protection.
- Aluminium reservoirs on all models
- European air motor
- Custom pressure setting available

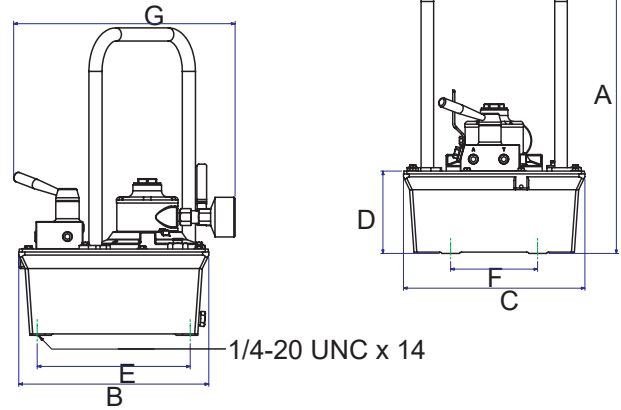
SPECIFICATIONS



PA028 MODELS



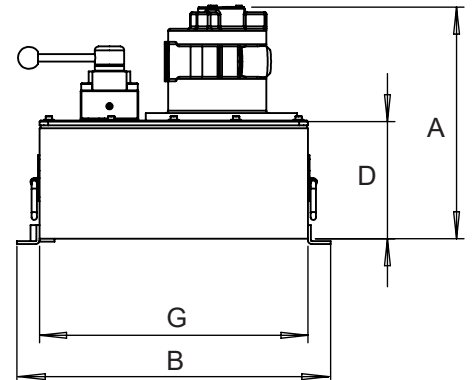
PA028-8 MODELS



Model	Reservoir Cap (cc)	Reservoir Useable (cc)	Motor	Oil delivery (cc/ min) 0 bar	Oil delivery (cc/ min) 7 bar	Oil delivery (cc/ min) 350 bar	Oil delivery (cc/ min) 700 bar
PA028 series	3000	2400	2.1kw 1/2" NPT ports	4000	2800	330	280
PA028-8 series	8000	7200	2.1kw 1/2" NPT ports	4000	2800	330	280

Model	Valve function	Valve Control	Valve Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Weight (kg)
PA028	2 Way 2 Position	Manual	DVBB	287	295.5	206.5	146.2	251	149.4	350	18.7
PA028-8	2 Way 2 Position	Manual	DVBB	504	312	312	141.5	251	149.4	363	20
PAD028*	4 Way 3 Position	Manual	DVGB	295	295.5	206.5	146.2	251	149.4	421	18.7
PAD028-8*	4 Way 3 Position	Manual	DVGB	504	312	312	141.5	251	149.4	408	20

* Suitable for both single and double acting cylinders.

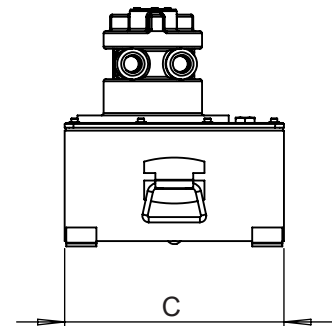
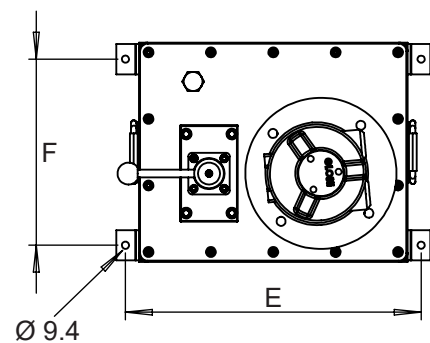


MODEL: PA100-SERIES

- Single and Double acting models
- Two speed pump
- Maximum working pressure: 10,000 psi / 700 Bar

FEATURES

- European vane air motors
- PAD models can be used for both single and double acting applications
- Mounting feet on all models
- Internal relief valves set at 700 bar (10,000 psi) for full circuit protection
- Custom pressure setting available

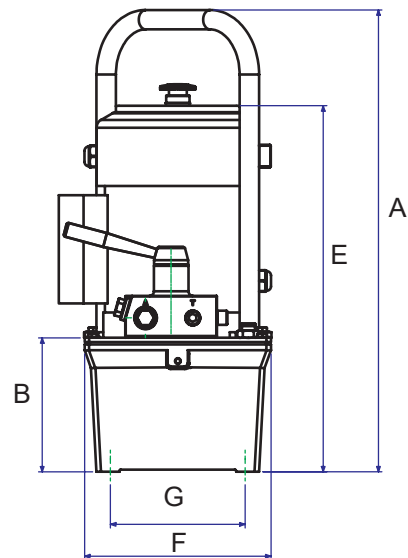


SPECIFICATIONS

Model	Reservoir Cap (cc)	Reservoir Useable (cc)	Motor	Oil delivery (cc/ min) 0 bar	Oil delivery (cc/ min) 7 bar	Oil delivery (cc/ min) 350 bar	Oil delivery (cc/ min) 700 bar
PA100 series	11000	9400	3.4kw 3/4" NPT ports	6400	3500	1400	1000

Model	Valve function	Valve Control	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Weight (kg)
PA100	3 Way 3 Position	Manual	300.5	414	287	162.6	391.2	246.4	355.6	29.5
PAD100*	4 Way 3 Position	Manual	300.5	414	287	162.6	391.2	246.4	355.6	29.5

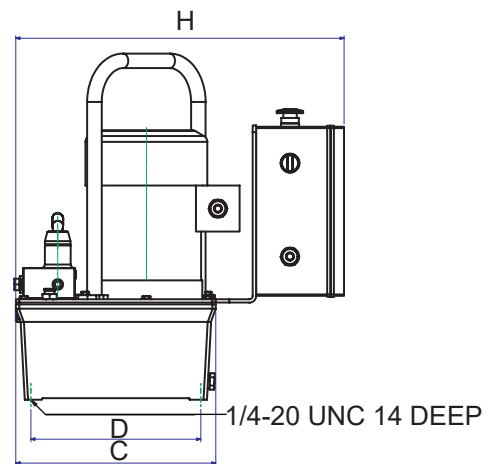
* Suitable for both single and double acting cylinders.


MODEL: PE026-SERIES

- Single and Double acting models
- Two speed pump design
- Maximum working pressure: 10,000 psi / 700 Bar

FEATURES

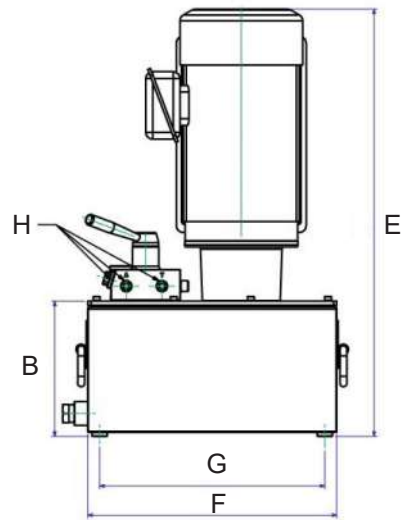
- 1/2 HP (0.37kw) brushless motor
- 3m pendant supplied with all models
- Thermal protected induction motor
- Starts under full load
- Internal relief valves all set at 700 bar (10,000 psi) for full circuit protection
- Quiet motor at only 80dBA at 700 bar
- Aluminium reservoirs on all models
- Custom pressure setting available


SPECIFICATIONS

Model	Reservoir Cap (cc)	Reservoir Useable (cc)	Motor	Oil delivery (cc/ min) 0 bar	Oil delivery (cc/ min) 7 bar	Oil delivery (cc/ min) 350 bar	Oil delivery (cc/ min) 700 bar
PE026 series	3000	2400	0.45kw 220v 50/50hz	4000	2800	330	280
PE026-8 series	8000	7200	0.45kw 220v 50/50hz	4000	2800	330	280

Model	Valve function	Valve Control	Valve Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	Weight (kg)
PE026	2 Way 2 Position	Manual	DVBB	511.5	148.5	295.5	251	406	206.5	149.4	485	25.8
PE026-8	2 Way 2 Position	Manual	DVBB	504	141.5	311.6	251	391.5	311.6	149.4	485	31.7
PES026	2 Way 2 Position	Solenoid	DVGB	511.5	148.5	295.5	251	406	206.5	149.4	485	29.8
PES026-8	2 Way 2 Position	Solenoid	DVGB	504	141.5	311.6	251	391.5	311.6	149.4	485	35.7
PED026*	4 Way 3 Position	Manual	DVE1B	511.5	148.5	295.5	251	406	206.5	149.4	485	25.8
PED026-8*	4 Way 3 Position	Manual	DVE1B	504	141.5	311.6	251	391.5	311.6	149.4	485	31.7
PEDC026	4 Way 3 Position	Manual	DVE2B	511.5	148.5	295.5	251	406	206.5	149.4	485	25.8
PEDC026-8	4 Way 3 Position	Manual	DVE2B	504	141.5	311.6	251	391.5	311.6	149.4	485	31.8
PEDH026	4 Way 3 Position	Manual	DVF1B	511.5	148.5	295.5	251	406	206.5	149.4	485	26.2
PEDH026-8	4 Way 3 Position	Manual	DVF1B	504	141.5	311.6	251	391.5	311.6	149.4	485	32.1
PEDS026*	4 Way 3 Position	Solenoid	DVK1B	511.5	148.5	295.5	251	406	206.5	149.4	485	29.8
PEDS026-8*	4 Way 3 Position	Solenoid	DVK1B	504	141.5	311.6	251	391.5	311.6	149.4	485	35.7

* Suitable for both Single and Double Acting Cylinders.

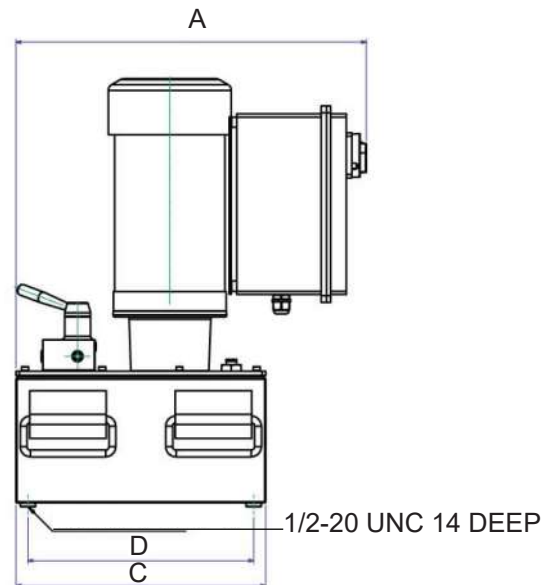


MODEL: PE090-SERIES

- Single and Double acting models
- Two speed pump design
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- 2HP (1.48kw) brushless motor
- 3m pendant supplied with all models
- Thermal protected induction motor
- Starts under full load
- Internal relief valves all set at 700 bar (10,000 psi) for full circuit protection
- Quiet motor at only 80dBA at 700 bar
- Aluminium reservoirs on all models
- Custom pressure setting available

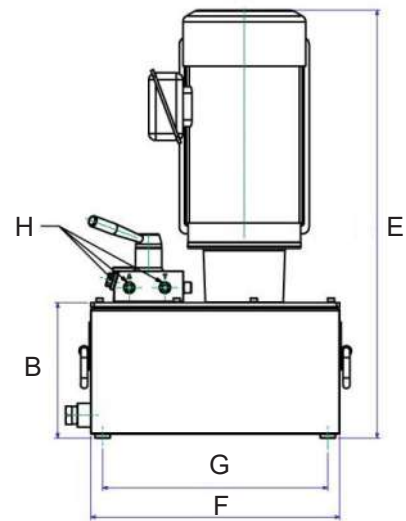


SPECIFICATIONS

Model	Reservoir Cap (cc)	Reservoir Useable (cc)	Motor	Oil delivery (cc/ min) 0 bar	Oil delivery (cc/ min) 7 bar	Oil delivery (cc/ min) 350 bar	Oil delivery (cc/ min) 700 bar
PE090 series	20,000	18,000	1.48kw 220v 50hz	9,500	1,020	980	900

Model	Valve function	Valve Control	Valve Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (NPT)	Weight (kg)
PE090	2 Way 2 Position	Manual	DVBB	512	198.5	365	330	627.5	365	330	3/8"	65
PES090	2 Way 2 Position	Solenoid	DVGB	512	198.5	365	330	627.5	365	330	3/8"	69
PED090*	4 Way 3 Position	Manual	DVE1B	512	198.5	365	330	627.5	365	330	3/8"	65
PEDC090*	4 Way 3 Position	Manual	DVE2C	512	198.5	365	330	627.5	365	330	3/8"	65
PEDH090*	4 Way 3 Position	Manual	DVF1B	512	198.5	365	330	627.5	365	330	3/8"	65
PEDS090*	4 Way 3 Position	Solenoid	DVK1B	512	198.5	365	330	627.5	365	330	3/8"	69

* Suitable for both Single and Double Acting Cylinders.

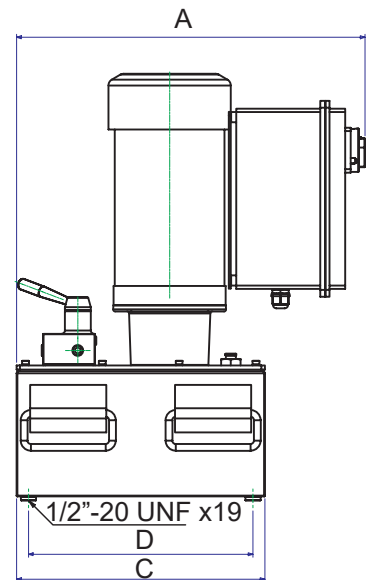


MODEL: PE180-SERIES

- Single and Double acting models
- Two speed pump design
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- 3 HP (2.2kw) brushless motor
- 3m pendant supplied with all models
- Thermal protected induction motor
- Conforms to CE standard
- Internal relief valves all set at 700 bar (10,000 psi) for full circuit protection
- Quiet operation only 80dBA at 700 bar
- Custom pressure setting available



SPECIFICATIONS

Model	Reservoir Cap (cc)	Reservoir Useable (cc)	Motor	Oil delivery (cc/ min) 0 bar	Oil delivery (cc/ min) 7 bar	Oil delivery (cc/ min) 350 bar	Oil delivery (cc/ min) 700 bar
PE180 series	20,000	18,000	2.2kw 415v 50Hz 3 phase	9500	2450	1950	1800

Model	Valve function	Valve Control	Valve Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (NPT)	Weight (kg)
PE180	2 Way 2 Position	Manual	DVBB	512	198.5	365	330	627.5	365	330	3/8"	65
PES180	2 Way 2 Position	Solenoid	DVGB	512	198.5	365	330	627.6	365	330	3/8"	69
PED180*	4 Way 3 Position	Manual	DVE1B	512	198.5	365	330	627.5	365	330	3/8"	65
PEDC180	4 Way 3 Position	Manual	DVE2C	512	198.5	365	330	627.5	365	330	3/8"	65
PEDH180	4 Way 3 Position	Manual	DVF1B	512	198.5	365	330	627.5	365	330	3/8"	65
PEDS180*	4 Way 3 Position	Solenoid	DVK1B	512	198.5	365	330	627.5	365	330	3/8"	69

* Suitable for both single and double acting cylinders.

FEATURES

- Split flow pumps provide accuracy within 3% across all outlets
- Large wired pendant allows easy control of individual outlets or all outlets together
- Lifting points for easy transportation
- Fully adjustable relief valves up to 700 bar (10,000 psi)
- All units can be fully customised
- Configurations available from 2 outlets up to 6 as standard



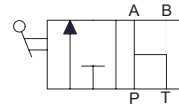
SPECIFICATIONS

Number of Outlets	Reservoir Size	Oil Flow per Outlet (L/min at 700 bar)	Model Number (Single Acting)	Model Number (Double Acting)
2	20	0.5	PES050X2	PED050X2
	20	1.0	PES100X2	PED100X2
	40	1.4	PES140X2	PED140X2
	40	2.4	PES240X2	PED240X2
	40	2.8	PES280X2	PED280X2
	60	4.0	PES400X2	PED400X2
	60	5.4	PES540X2	PED540X2
4	80	6.0	PES600X2	PED600X2
	20	0.45	PES045X4	PED045X4
	40	0.9	PES090X4	PED090X4
	60	1.4	PES140X4	PED140X4
	80	2.4	PES240X4	PED240X4
6	80	3.0	PES300X4	PED300X4
	40	0.5	PES050X6	PED050X6
	60	1.0	PES100X6	PED100X6
	80	2.0	PES200X6	PED200X6

MANUAL VALVES

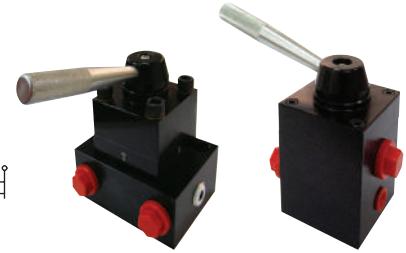
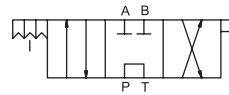
Model: DVBB

- 2 Way 2 Position for single acting applications
- Suits electric pump series PE026, PE075, PE090 & PE180
- Suits air pump series PA028



Model: DVE1B

- 4 Way 3 Position for single and double acting applications
- Tandem centre
- Suits electric pump series PED026, PED075, PED090 & PED180
- Suits air pump series PAD028
- For PHD2350 use model **DVE1A**
- For remote mounted valve order **DVE1C**

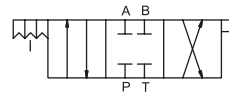


**DVE1B
DVE2B**

DVE1C

Model: DVE2B

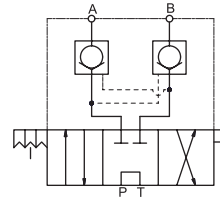
- 4 Way 3 Position for single and double acting applications
- Closed centre
- Suits electric pump series PEDC026, PEDC075, PEDC090 & PEDC180
- Suits air pump series PADC028



DVF1B

Model: DVF1B

- 4 Way 3 Position for single and double acting applications
- Tandem centre
- Built in pilot check valves for load holding
- Suits electric pump series PEDH026, PEDH075, PEDH090 & PEDH180
- Suits air pump series PADH028
- For remote mounted valve order **DVF1C**

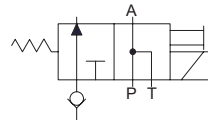


DVGB

SOLENOID VALVES

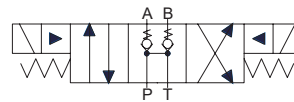
Model: DVGB

- 3 Way 2 Position for single acting applications
- Suits electric pump series PES026, PES075, PES090 & PES180



Model: DVK1B

- 4 Way 3 Position for single and double acting applications
- Tandem centre
- Built in pilot check valves for load holding
- Suits electric pump series PEDS026, PEDS075, PEDS090 & PEDS180



DVK1B

SPECIFICATIONS

MANUAL VALVES

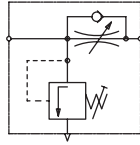
Model	Mount type	Valve Function	Weight (kg)
DVBB	Pump	2 Way 2 Position	1.7
DVE1B	Pump	4 Way 3 Position	2.4
DVE1C	In line	4 Way 3 Position	2.7
DVE2B	Pump	4 Way 3 Position	2.1
DVF1B	Pump	4 Way 3 Position	3.3
DVF1C	In line	4 way 3 Position	3.6

SOLENOID VALVES

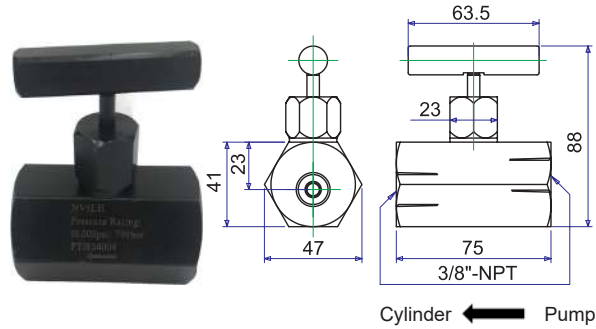
Model	Valve Function	Weight (kg)
DVGB	2 Way 2 Position	4.0
DVK1B	4 Way 3 Position	4.5

LOAD HOLDING VALVES

MODEL: NV6LH



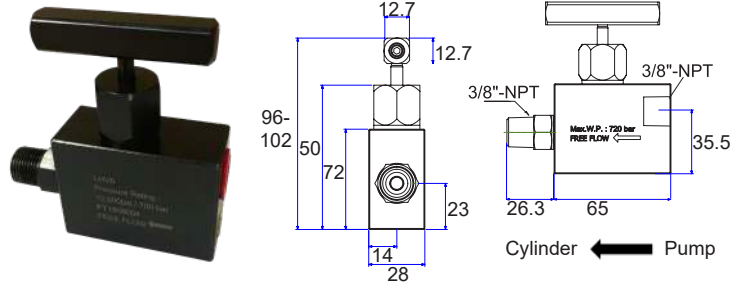
- Needle valve style load holding
- Bypass flow control in return direction
- Built in pressure relief valve (vent to atmosphere)
- Maximum working pressure : 10,000 psi / 700 Bar



Cylinder ← Pump

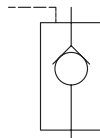
MODEL: LHV6

- Load lowering valve
- Bypass flow control in return direction
- Built in pressure relief valve (vent to atmosphere)
- Maximum working pressure : 10,000 psi / 700 Bar

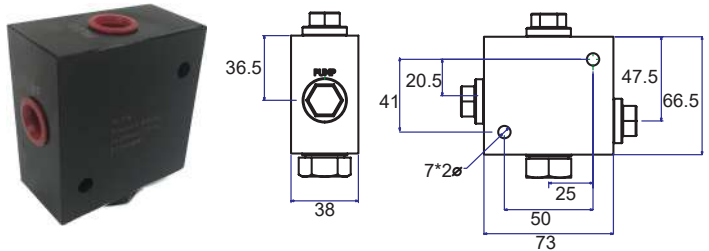


Cylinder ← Pump

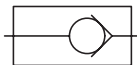
MODEL: PCV6



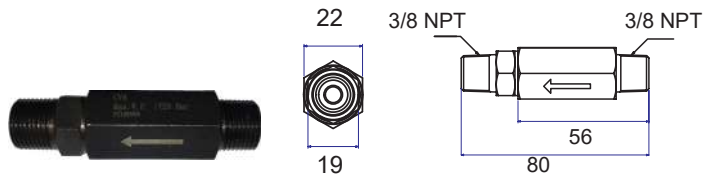
- Inline pilot operated check valve
- 3/8 NPT female threads
- Maximum working pressure : 10,000 psi / 700 Bar



MODEL: CV6



- Inline check valve
- 3/8 NPT male threads
- Maximum working pressure : 10,000 psi / 700 Bar



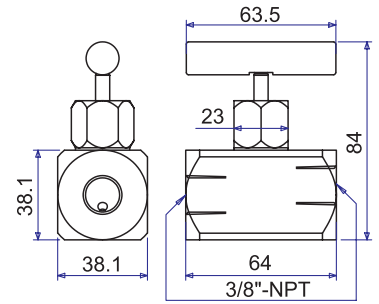
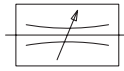
SPECIFICATIONS

Model	Thread (NPT)	Weight (kg)
NV6LH	3/8"	1.0
LHV6	3/8"	0.9
PCV6	3/8"	1.6
CV6	3/8"	0.3

SHUT OFF VALVES

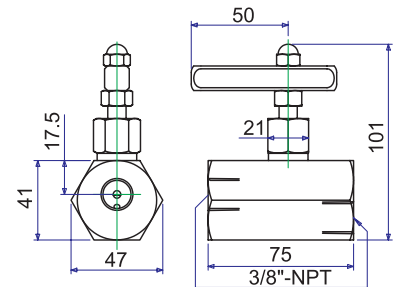
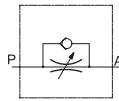
MODEL: NV6

- Used for normal flow control
- Can be used as a shut off valve
- Maximum working pressure : 10,000 psi / 700 Bar
- 1/4 NPT needle valve available on request (NV4)



MODEL: NV6F

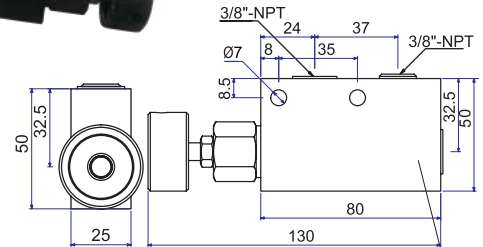
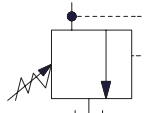
- Used for precise metering of flow
- Bypass flow control in return direction
- Temporary shut off only
- Maximum working pressure : 10,000 psi / 700 Bar



PRESSURE RELIEF VALVES

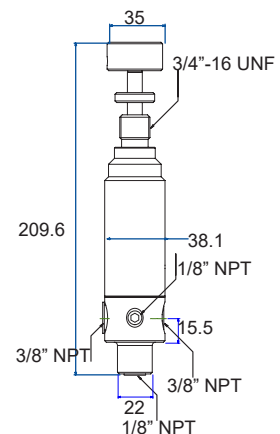
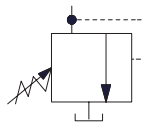
MODEL: PRV1C

- Inline pressure relief valve
- Adjustable from 7 - 700 bar
- Built in pressure relief valve
- Maximum working pressure : 10,000 psi / 700 Bar



MODEL: PRV2C

- Inline pressure regulator valve
- Adjustable from 7 - 700 bar
- Built in pressure relief valve
- Maximum working pressure : 10,000 psi / 700 Bar



SPECIFICATIONS

SHUT OFF VALVES

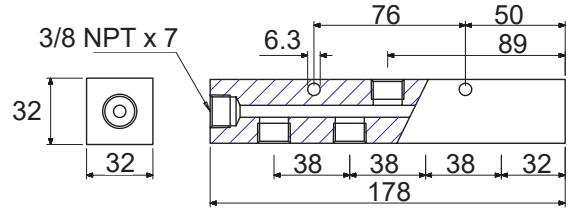
Model	Weight (kg)
NV6	0.8
NV6F	0.8

PRESSURE RELIEF VALVES

Model	Weight (kg)
PRV1C	0.8
PRV2C	0.8

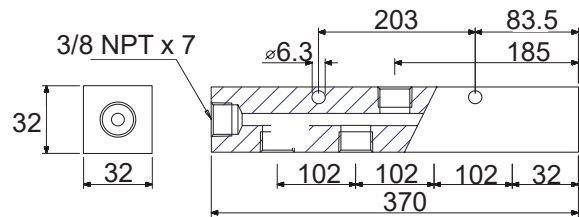
MODEL: MB7-S

- 7 x 3/8 NPT manifold block
- Ideal as return manifold or when gauges are not required
- Maximum working pressure : 10,000 psi / 700 Bar



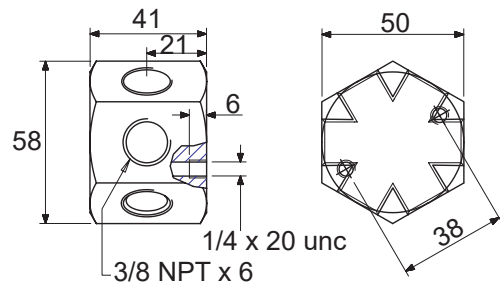
MODEL: MB7-L

- 7 x 3/8 NPT manifold block
- Larger gap between ports ideal for use with gauges
- Maximum working pressure : 10,000 psi / 700 Bar



MODEL: MB6H

- 6 x 3/8 NPT manifold block
- Hex design to allow for multiple angle connection
- Maximum working pressure : 10,000 psi / 700 Bar

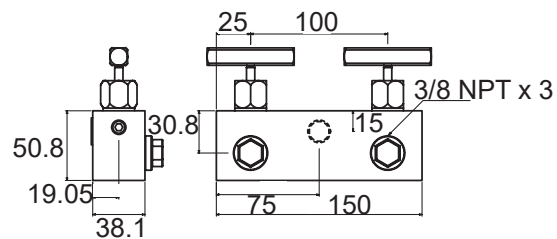


SPECIFICATIONS

Model	NPT Ports		Weight (kg)
	QTY	Thread (NPT)	
MB7-S	7	3/8"	1.2
MB7-L	7	3/8"	1.5
MB6H	6	3/8"	0.8

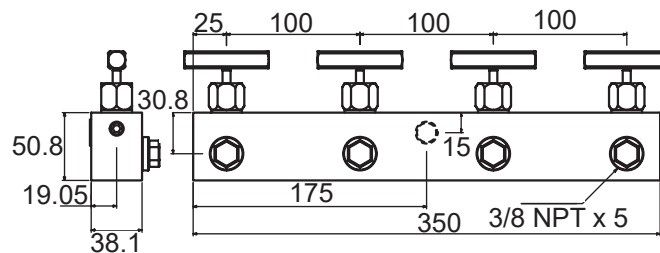
MODEL: NVB2

- 3 x 3/8 NPT ports
- Built in needle valves for 2 outlet load control
- Maximum working pressure : 10,000 psi / 700 Bar



MODEL: NVB4

- 5 x 3/8 NPT manifold block
- Built in needle valves for 4 outlet load control
- Maximum working pressure : 10,000 psi / 700 Bar

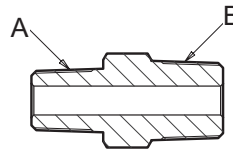


SPECIFICATIONS

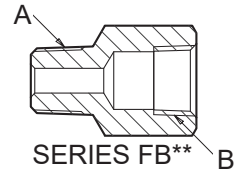
Model	NPT Ports		Weight (kg)
	QTY	Thread (NPT)	
NVB2	3	3/8"	1.7
NVB4	5	3/8"	2.2

STRAIGHT CONNECTORS

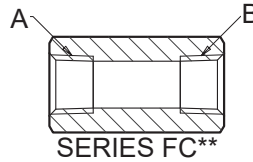
Model	(A)		(B)	
	Thread (NPT)	Type	Thread (NPT)	Type
FA66	3/8"	Male	3/8"	Male
FA44	1/4"	Male	1/4"	Male
FA46	1/4"	Male	3/8"	Male
FB46	1/4"	Male	3/8"	Female
FB64	3/8"	Male	1/4"	Female
FC66	3/8"	Female	3/8"	Female
FC44	1/4"	Female	1/4"	Female
FC46	1/4"	Female	3/8"	Female
FM66	3/8"	Male	3/8"	Female Swivel



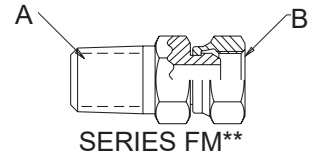
SERIES FA**



SERIES FB**



SERIES FC**

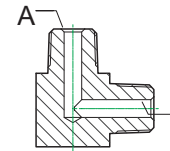


SERIES FM**

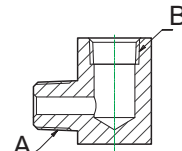


ELBOW AND TEE CONNECTORS

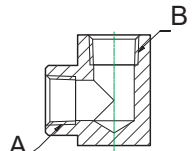
Model	(A)		(B)		(C)	
	Thread (NPT)	Type	Thread (NPT)	Type	Thread (NPT)	Type
FD66	3/8"	Male	3/8"	Male	-	-
FE66	3/8"	Male	3/8"	Female	-	-
FF66	3/8"	Female	3/8"	Female	-	-
FG666	3/8"	Male	3/8"	Female	3/8"	Female
FH444	1/4"	Female	1/4"	Female	1/4"	Female
FH666	3/8"	Female	3/8"	Female	3/8"	Female



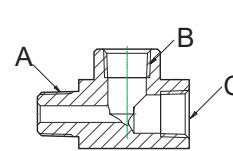
SERIES FD**



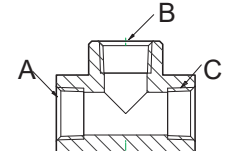
SERIES FE**



SERIES FF**



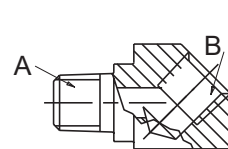
SERIES FG**



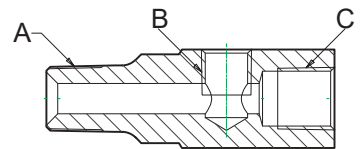
SERIES FH**

GAUGE CONNECTORS

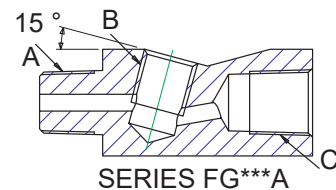
Model	(A)		(B)		(C)	
	Thread (NPT)	Type	Thread (NPT)	Type	Thread (NPT)	Type
FP44	1/4"	Male	1/4"	Female	-	-
FG646	3/8"	Male	1/4"	Female	3/8"	Female
FG646A/-L	3/8"	Male	1/4"	Female	3/8"	Female



SERIES FP**



SERIES FG**



SERIES FG**A

HIGH FLOW COUPLINGS

- Ball style
- Compatible with pin style couplings
- Coupling set comes with rubber dust caps
- Max flow : 35 lpm
- Max working pressure : 700 bar (10,000 psi)

Model	Thread (NPT)	Thread type	Female half	Male half
FMC6	3/8"	Male	✓	-
MC6	3/8"	Female	-	✓
CS6	3/8"	Male & Female	✓	✓
FMC4	1/4"	Male	✓	-
MC4	1/4"	Female	-	✓
MC4M	1/4"	Male	-	✓


Models: FMC6 / FMC4

Models: MC6 / MC4

Model: MC4M

Model: CS6
DUST CAPS

Model	Thread (NPT)	Material	Suits Coupler	
			Female half	Male half
DCS6M	3/8"	Aluminium	-	✓
DCS6F	3/8"	Aluminium	✓	-
DCR6	3/8"	Rubber	✓	✓
DCS4M	1/4"	Aluminium	-	✓
DCS4F	1/4"	Aluminium	✓	-


Models: DCS6F / DCS4F

Models: DCS6M / DCS4M

Model: DCR6

HOSE FEATURES

- 4:1 safety factor
- Rubber guards on all models for crimp and bend protection
- Rubber dust caps supplied with all male couplings
- Maximum working pressure : 10,000 psi / 700 Bar

HOSE MODEL CODES

Model	Hose length (m)	Hose ID	Hose end one	Hose end two
9765-P	0.6	6.4mm (1/4")	3/8" Npt	3/8" Npt
9755-P	0.9	6.4mm (1/4")	3/8" Npt	3/8" Npt
9756-P	1.8	6.4mm (1/4")	3/8" Npt	3/8" Npt
9757-P	2.4	6.4mm (1/4")	3/8" Npt	3/8" Npt
9758-P	3.1	6.4mm (1/4")	3/8" Npt	3/8" Npt
9759-P	3.7	6.4mm (1/4")	3/8" Npt	3/8" Npt
9760-P	6.1	6.4mm (1/4")	3/8" Npt	3/8" Npt
9761-P	9.1	6.4mm (1/4")	3/8" Npt	3/8" Npt
9762-P	15.3	6.4mm (1/4")	3/8" Npt	3/8" Npt
9750-P	22.9	6.4mm (1/4")	3/8" Npt	3/8" Npt
9751-P	30.5	6.4mm (1/4")	3/8" Npt	3/8" Npt
9765-PC	0.6	6.4mm (1/4")	3/8" Npt	MC6
9755-PC	0.9	6.4mm (1/4")	3/8" Npt	MC6
9756-PC	1.8	6.4mm (1/4")	3/8" Npt	MC6
9757-PC	2.4	6.4mm (1/4")	3/8" Npt	MC6
9758-PC	3.1	6.4mm (1/4")	3/8" Npt	MC6
9759-PC	3.7	6.4mm (1/4")	3/8" Npt	MC6
9760-PC	6.1	6.4mm (1/4")	3/8" Npt	MC6
9761-PC	9.1	6.4mm (1/4")	3/8" Npt	MC6
9762-PC	15.3	6.4mm (1/4")	3/8" Npt	MC6
9750-PC	22.9	6.4mm (1/4")	3/8" Npt	MC6
9751-PC	30.5	6.4mm (1/4")	3/8" Npt	MC6
9765-PC2	0.6	6.4mm (1/4")	MC6	MC6
9755-PC2	0.9	6.4mm (1/4")	MC6	MC6
9756-PC2	1.8	6.4mm (1/4")	MC6	MC6
9757-PC2	2.4	6.4mm (1/4")	MC6	MC6
9758-PC2	3.1	6.4mm (1/4")	MC6	MC6
9759-PC2	3.7	6.4mm (1/4")	MC6	MC6
9760-PC2	6.1	6.4mm (1/4")	MC6	MC6
9761-PC2	9.1	6.4mm (1/4")	MC6	MC6
9762-PC2	15.3	6.4mm (1/4")	MC6	MC6
9750-PC2	22.9	6.4mm (1/4")	MC6	MC6
9751-PC2	30.5	6.4mm (1/4")	MC6	MC6

3/8 Inch ID Hoses also available for larger applications


TWIN LINE WRENCH HOSE

Model	Description
TWH20-VIC	6M Twin line hose complete with 1/4" couplings
TWH20-VIC-S	6M Twin line hose complete with 1/4" couplings fitted with burst sleeve

HOSE ASSEMBLY OPTIONS

Suffix Code	Description
S	Supplied with burst protection sleeve
T	Supplied with test certificate
MDG41	Full MDG41 compliant hose assembly

Custom lengths are available on request

PRESSURE GAUGES - 1000 BAR

BOSS hydraulic pressure gauges are dual scale displaying in both Bar and PSI. The gauges "red line" between 700 Bar/ 10,000 PSI up to 1000 Bar/ 14,500 PSI to protect the gauge from pressure spikes.



Part No.	Description	Size (mm)
G634B	Liquid filled 1/4 NPT bottom entry	63
G1004B	Liquid filled 1/4 NPT bottom entry	100

HYDRAULIC OIL

BOSS hydraulic oil gives you the reassurance your hydraulic equipment will work at a premium level. Boss hydraulic oil is an ISO46 grade oil.



Part No.	Description	Size (lt)
B01L46	Hydraulic Oil - ISO46	1
B04L46	Hydraulic Oil - ISO46	4

FEATURES

- Made from 100% recycled plastic
- Durable heavy duty construction
- 2 locking styles (“Pyramid” and “Lincoln log”)
- 3 load rating capacities (Yellow, Blue, Orange)
 - Yellow lanyard indicates light working load limit
 - Blue lanyard indicates medium working load limit
 - Orange lanyard indicates heavy working load limit
- Washable and impervious to most common industrial chemicals
- Resistant to splintering unlike timber alternatives
- Working load limit tags printed on product
- Huge range of different shapes and sizes available



Black Diamond Crib

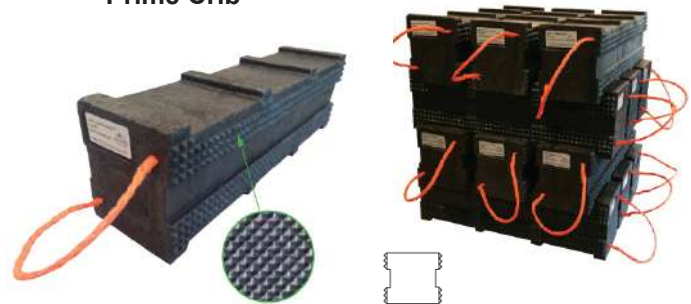


Profile Crib



102mm x 102mm

Prime Crib



152mm x 178mm

Super Crib



152mm x 178mm

Super Crib XL



152mm x 152mm

Hybrid Crib



102mm x 102mm

D SERIES CRIB LINE

- Creates a completely interlocking base
- Coloured lanyard helps identify load limits
- Pyramid design on all sides

Part No.	Description	Dimensions (mm)	Weight (kg)	Capacity (kg)
ZT-67HDC-10	Little Black Diamond Crib	152 x 178 x 254	7.25	71,600
ZT-67HDC-30	Black Diamond Crib	152 x 178 x 762	18.14	23,700
ZT-44HDC-30	Profile Crib	102 x 102 x 762	7.71	50,800

G SERIES CRIB LINE

- Two working surfaces in one block
- “Lincoln log” style locking for additional stability when multi stacking
- Colored lanyard helps identify load limits
- Pyramid design provides a non slip secondary surface

Part No.	Description	Dimensions (mm)	Weight (kg)	Capacity (kg)
ZT-67PC-24	Prime Crib	152 x 178 x 610	12.24	58,800
ZT-67SC-24	Super Crib	152 x 178 x 610	10.43	49,900
ZT-66SC-36	Super Crib XL	152 x 152 x 914	17.23	78,400
ZT-44PL-18	Hybrid Crib	102 x 102 x 457	2.72	20,500
ZT-44SC-36	Hybrid Crib XL	102 x 102 x 914	8.16	53,200

MODEL: PPK4



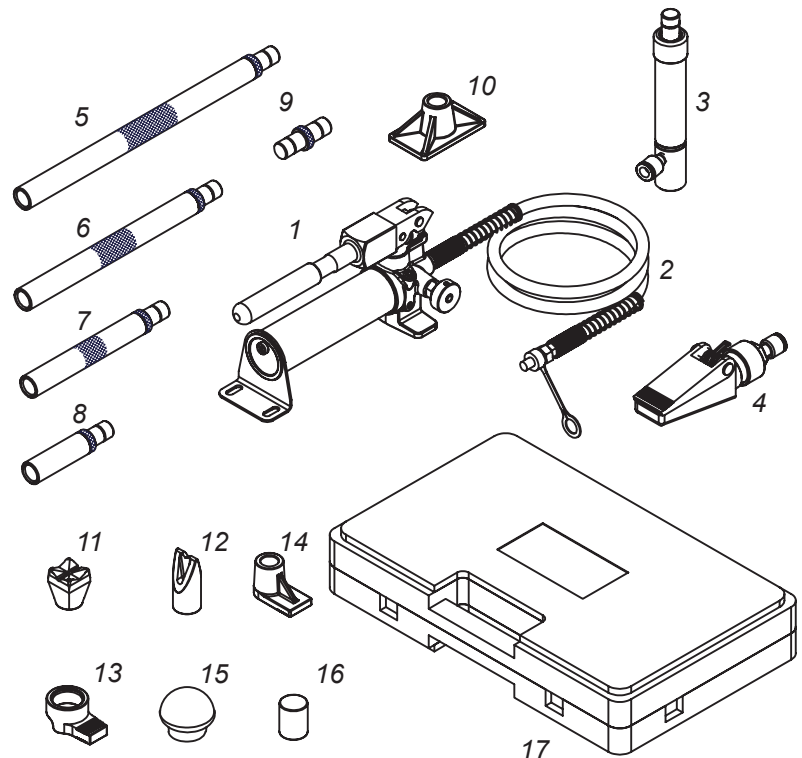
Warning:
Consult user manual for operating pressures when using attachments

- Quick “snap-together” design for fast and easy assembly and disassembly
- Extra thick extension tubes for added strength
- Blow moulded case for organised component storage and easy transport
- Single Speed Pump
- Maximum working pressure : 10,000 psi / 700 Bar
- Flexible hydraulic hose with hose guards at each end
- Pump has a forged base and rugged construction for extended life
- All components are manufactured to withstand the full force of the hydraulic cylinder
- Male coupling on hose for easy connection
- Weight: 19.6kg



PPK4 - 4 TON KIT

Item No.	Description
1	Heavy Duty Hand Pump
2	Hose - 6 Feet
3	4 Ton Cylinder - 4" Stroke
4	½ Ton Spreader
5	16" Extension Tube
6	12" Extension Tube
7	8" Extension Tube
8	4" Extension Tube
9	Male Connector
10	Flat Base
11	90° "V" Base
12	Wedge Head
13	Plunger Toe
14	Cylinder Toe
15	Rubber Flex Head
16	Serrated Saddle
17	Blow Moulded Case





Warning:
Consult user manual for operating pressures when using attachments

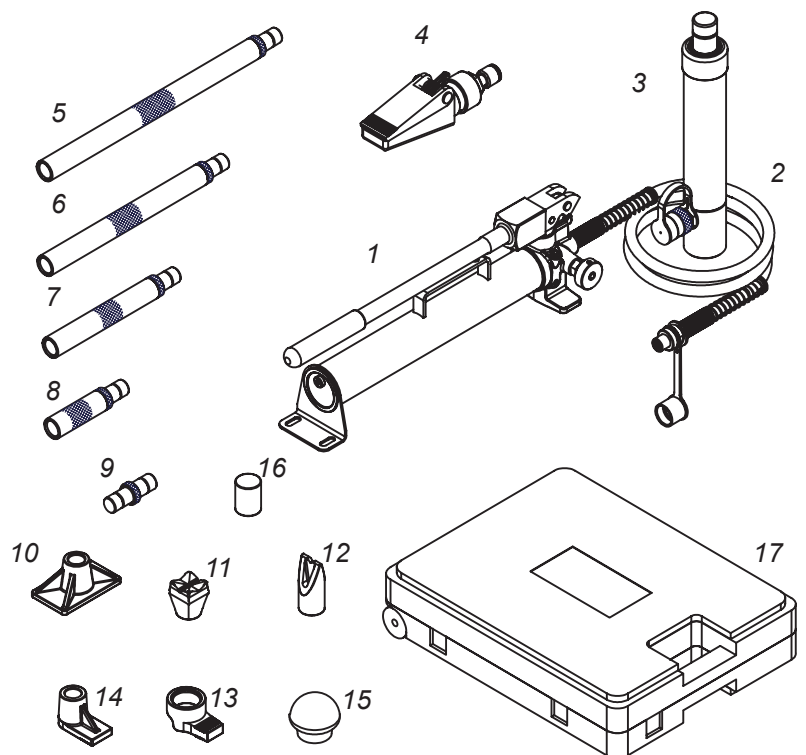
MODEL: PPK10

- Quick “snap-together” design for fast and easy assembly and disassembly
- Extra thick extension tubes for added strength
- Blow moulded case for organised component storage and easy transport
- The PPK10 case has wheels for added portability
- Single Speed Pump
- Maximum working pressure : 10,000 psi / 700 Bar
- Flexible hydraulic hose with hose guards at each end
- Pump has a forged base and rugged construction for extended life
- All components are manufactured to withstand the full force of the hydraulic cylinder
- Male coupling on hose for easy connection
- Weight: 37.6kg



PPK10 - 10 TON KIT

Item No.	Description
1	Heavy Duty Hand Pump
2	Hose - 6 Feet
3	10 Ton Cylinder - 6" Stroke
4	½ Ton Spreader
5	19" Extension Tube
6	14" Extension Tube
7	10" Extension Tube
8	5" Extension Tube
9	Male Connector
10	Flat Base
11	90° "V" Base
12	Wedge Head
13	Plunger Toe
14	Cylinder Toe
15	Rubber Flex Head
16	Serrated Saddle
17	Blow Moulded Case



MODEL: PPK20

- 2 x sturdy metal boxes for organised component storage and easy transport
- Two speed pump
- 20T cylinder with 5" stroke
- Maximum working pressure : 10,000 psi / 700 Bar
- Flexible hydraulic hose with hose guards at each end
- Pump has a forged base and rugged construction for extended life
- All components are manufactured to withstand the full force of the hydraulic cylinder
- Male coupling on hose for easy connection
- Weight: 66kg

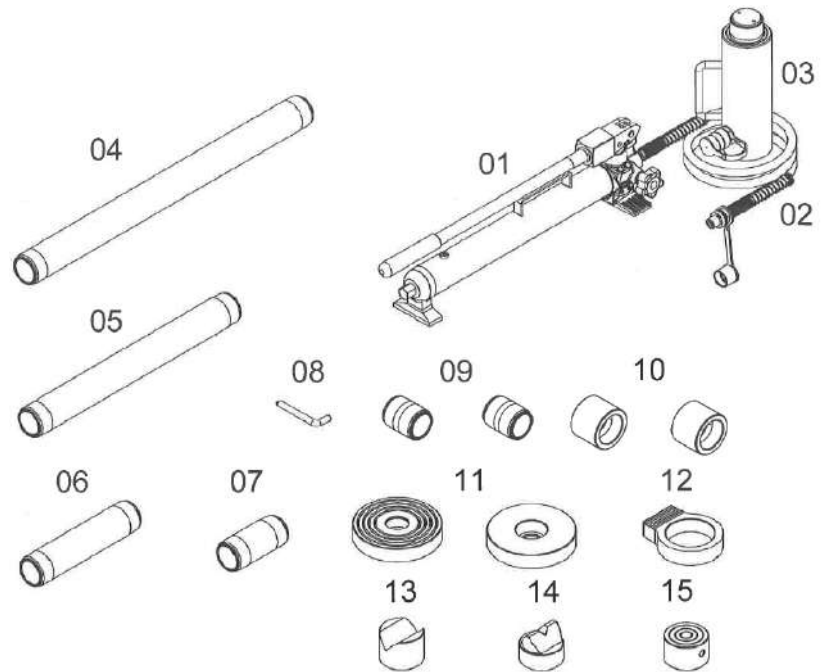


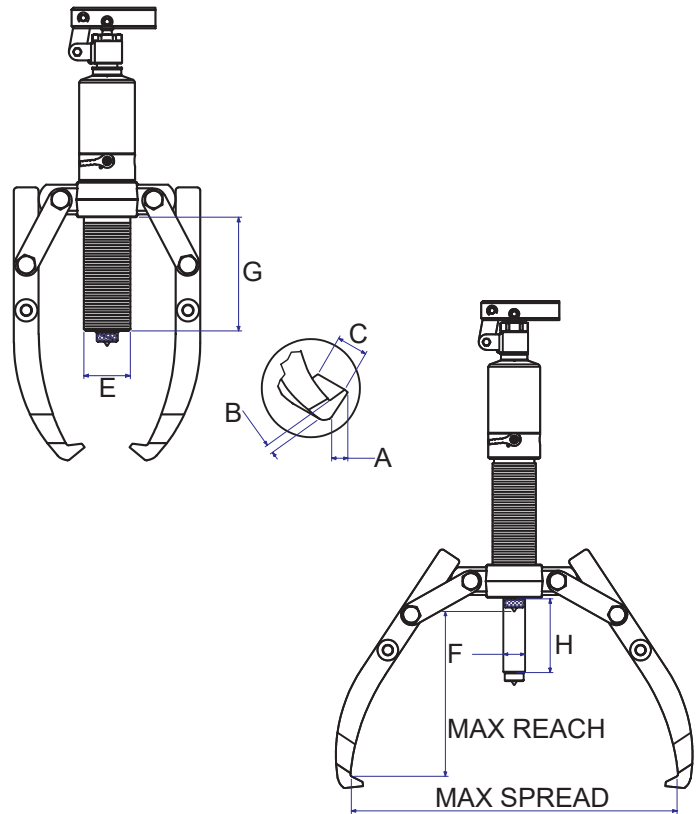
Warning:
Consult user manual for operating pressures when using attachments



PPK20 - 20 TON KIT

Item No.	Description
1	2 Speed Hand Pump
2	Hose - 5 Feet
3	20 Ton Cylinder - 5" Stroke
4	27.5" Extension Tube
5	20" Extension Tube
6	10" Extension Tube
7	5" Extension Tube
8	Lock Pin
9	Male Connector
10	Threaded Coupling
11	Plunger Base
12	Toe Lift
13	"V" Head
14	Wedge Head
15	Serrated Saddle





MODEL: HPM-SERIES

- Self contained puller and pump with built in safety valve
- Capacity: 4-30 ton

FEATURES

- Heat treated, chrome plated and alloy steel studs
- 2/3 jaw pulling head
- 360° handle rotation
- Easy access release valve
- Removable spring loaded self centering nut

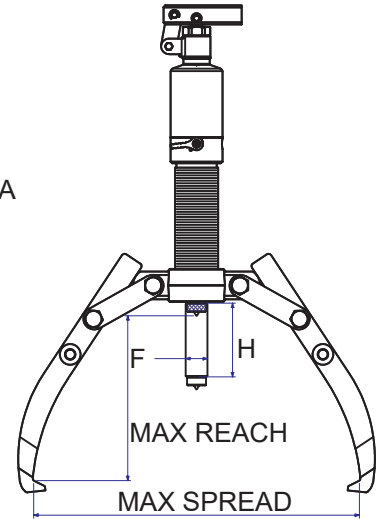
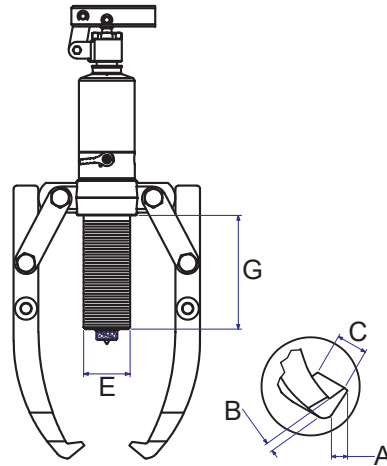
OPTIONAL LONGER JAWS

Model (Puller)	Model (Jaw)	Cap Ton	Reach Max (mm)
HPM4	1B12062	4	222
HPM6	1B12063	6	260
HPM8	1B12064	8	308
HPM12	1B12065	12	340
HPM20	1B12066	20	428
HPM30	1B12067	30	428



SPECIFICATIONS

Model	Cap Ton	Reach Max (mm)	Spread Max (mm)	Jaw Tip (mm)			Pump Tip (mm)			Stroke (mm)	Weight (kg)
				A	B	C	E	F	G		
HPM4	4	185	255	11	6	22	42	22	84	60	4.5
HPM6	6	220	330	11	10	22	45	23	94	70	5.5
HPM8	8	230	350	11	10	25	50	25	122	85	6.5
HPM12	12	270	375	14	10	29	60	28	118	85	8
HPM20	20	360	520	20	27	33	50	40	161	111	22
HPM30	30	360	550	20	27	38	42	50	155	111	32

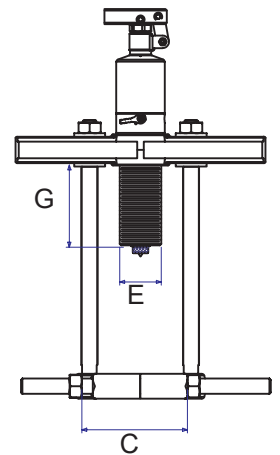
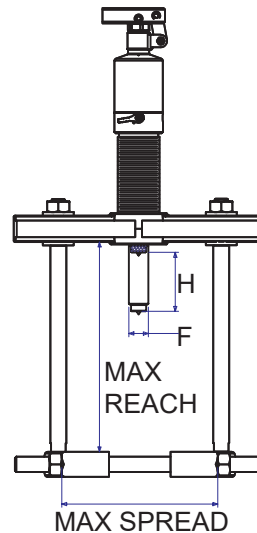


MODEL: HPM-K -SERIES

- Self contained puller and pump with built in safety valve
- Capacity: 4-12 ton
- Set includes bearing attachment and straight leg attachments

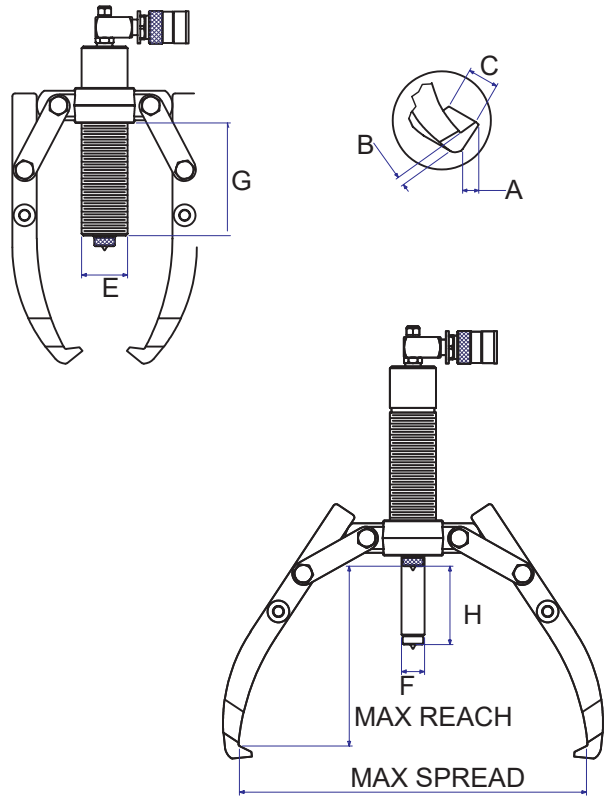
FEATURES

- Heat treated, chrome plated and alloy steel studs
- 2/3 jaw pulling head
- 360° handle rotation
- Easy access release valve
- Removable spring loaded self centering nut



SPECIFICATIONS

Model	Cap Ton	Reach Max (mm)	Spread Max (mm)	Jaw Tip (mm)			Pump Tip (mm)			Stroke (mm)	Weight (kg)
				A	B	C	E	F	G		
HPM4K	4	185/250	255/250	11	6	22	42	22	84	60	4.5/8.5
HPM6K	6	225/250	350/250	13	10	22	45	23	94	70	5.5/11.5
HPM8K	8	230/250	350/250	11	10	25	50	25	122	85	6.5/12.6
HPM12K	12	270/250	375/250	14	10	29	60	28	118	85	8.0/18.0



MODEL: HPRP-SERIES

- Hydraulic puller with separate hand pump
- Capacity : 4-30 ton
- Kit includes hose, gauge and gauge adaptor
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Separate hand pump with built in safety valve
- Heat treated, chrome plated and alloy steel studs
- 2/ 3 jaw pulling head
- 360° coupling swivel
- Easy release valve
- Removable spring loaded self centering nut

OPTIONAL LONGER JAWS

Model (Puller)	Model (Jaw)	Cap Ton	Reach Max (mm)
HPRP4	1B12062	4	222
HPRP8	1B12064	8	308
HPRP12	1B12065	12	340
HPRP20	1B12066	20	428
HPRP30	1B12067	30	428



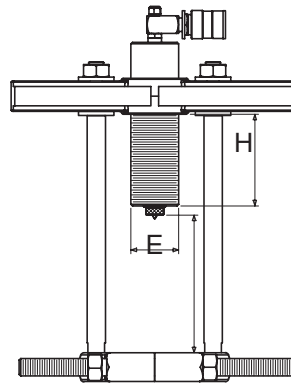
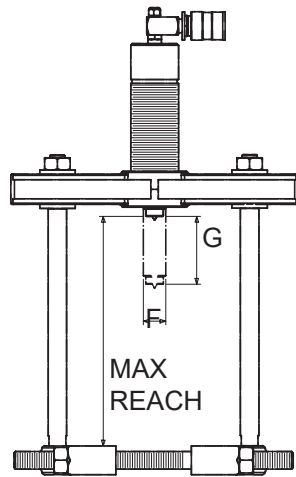
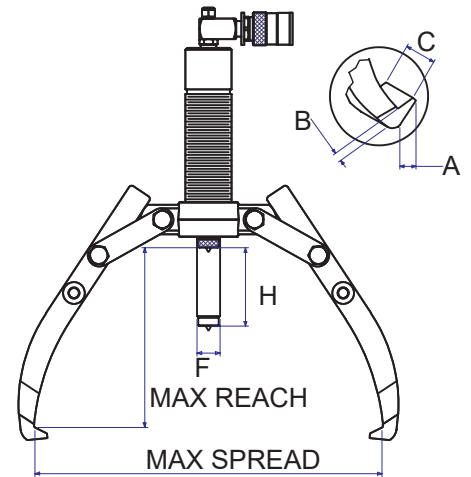
SPECIFICATIONS

Model	Cap Ton	Reach Max (mm)	Spread Max (mm)	Jaw Tip (mm)			Pump Tip (mm)			Stroke (mm) H	Weight (kg)
				A	B	C	E	F	G		
HPRP4	4	185	255	11	6	22	42	22	84	60	9.5
HPRP8	8	230	350	11	10	25	50	25	122	85	11.5
HPRP12	12	270	375	14	10	29	60	28	118	85	14
HPRP20	20	360	520	20	27	33	50	40	161	111	20
HPRP30	30	360	550	20	27	38	42	50	155	111	30



MODEL: HPRP-K -SERIES

- Hydraulic puller with separate hand pump
- Capacity : 4, 8 & 12 ton models
- Supplied with 2/ 3 jaw and straight leg attachments
- Includes cross bearing attachment
- Kit includes hose, gauge and gauge adaptor
- Maximum working pressure : 10,000 psi / 700 Bar



FEATURES

- Heat treated, chrome plated and alloy steel studs
- 2/ 3 jaw pulling head
- 360° handle rotation
- Easy access release valve
- Removable spring loaded self centering nut

OPTIONAL LONGER JAWS

Model (Puller)	Model (Jaw)	Cap Ton	Reach Max (mm)
HPRP4	1B12062	4	222
HPRP8	1B12064	8	308
HPRP12	1B12065	12	340



SPECIFICATIONS

Model	Cap Ton	Reach Max (mm)	Spread Max (mm)	Jaw Tip (mm)			Pump Tip (mm)			Stroke (mm) H	Weight (kg)
				A	B	C	E	F	G		
HPRP4K	4	185/211	255/250	11	6	22	42	22	84	60	4.5/8.5
HPRP8K	8	230/243	350/250	11	10	25	50	25	122	85	6.5/12.6
HPRP12K	12	270/288	375/250	14	10	29	60	28	115	85	8.0/18.0

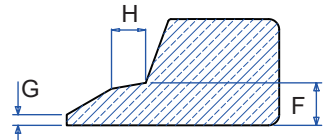
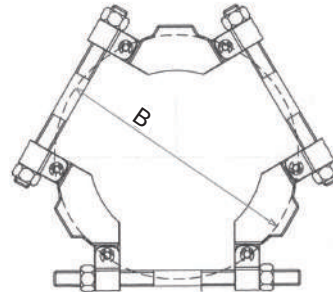
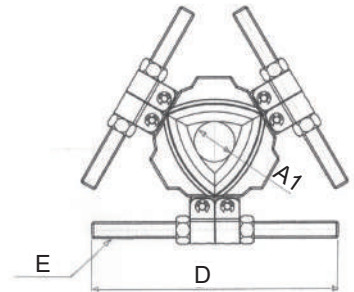
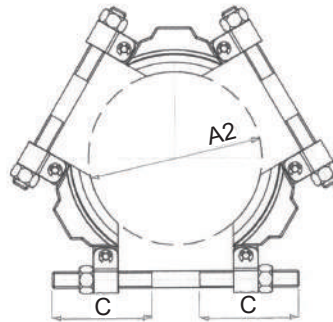


MODEL: HPA-SERIES

- Capacity : 6 - 30 Ton
- Max Spread: 216mm - 660mm

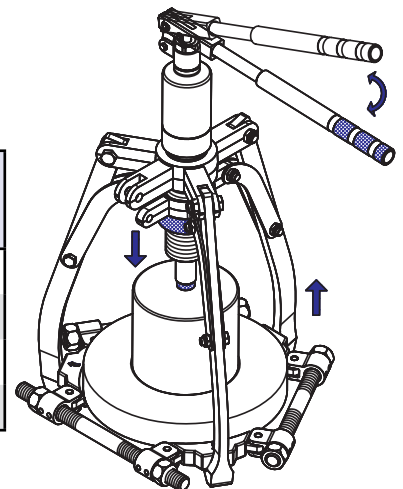
FEATURES

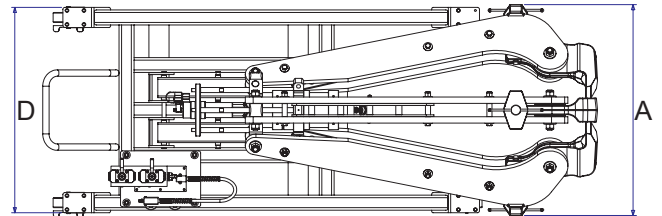
- Patented swing arm design for maximum spread
- Can be used with all 3-Jaw Pullers
- Provides force on both inner and outer ring for safe and efficient pulling
- Simple and easy setup



SPECIFICATIONS

Model	Cap Ton	Available Shaft Ø A1 / A2	B Max Spread (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	Weight (kg)
HPA3-160	6	26 / 160	216	105	240	5/8"-11 UNC	8	2	6.5	3.5
HPA3-210	8	50 / 210	280	117	285	7/8"-14 UNF	10	2	9	5.5
HPA3-340	20	90 / 340	460	175	430	1 1/4"-12 UNF	14	2	8	18
HPA3-495	30	140 / 495	660	235	610	1 3/4"-12 UNF	20	2	12	45



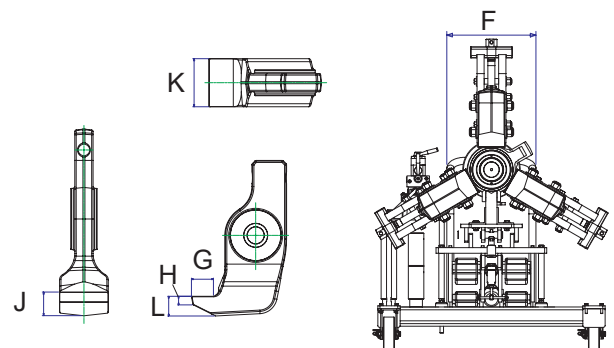
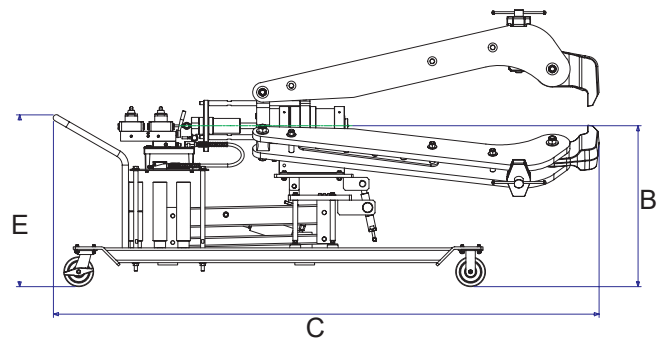


MODEL: HP-SERIES

- 100T pulling capacity
- Trolley mounted
- Single and 3 phase available

FEATURES

- Metered flow for precise speed control
- Double acting system for safe opening and closing of jaws
- Self centering design
- 2 or 3 jaw capabilities
- 5° up/ down swivel adjustment for precise positioning

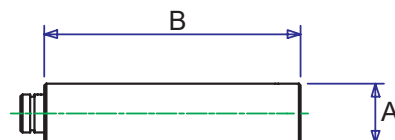


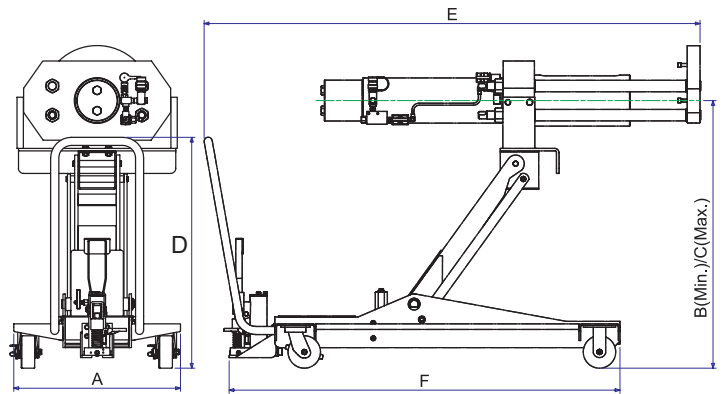
SPECIFICATIONS

Model	Stroke (mm)	Cap Ton	A Min/Max (mm)	B Min/Max (mm)	C Min/Max (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	J (mm)	K (mm)	L (mm)	Weight (kg)	Pump
HP1003-220	270	100	1030-1980	817-1330	2390-2790	1025	873	402	65	25	58	120	58	1150	PED075
HP1003-380	270	100	1030-1980	817-1330	2390-2790	1025	873	402	65	25	58	120	58	1185	PED180

PULLER EXTENSIONS

Model	A (mm)	B (mm)	QTY
1B12020	70	150	2
1B12021	70	300	2

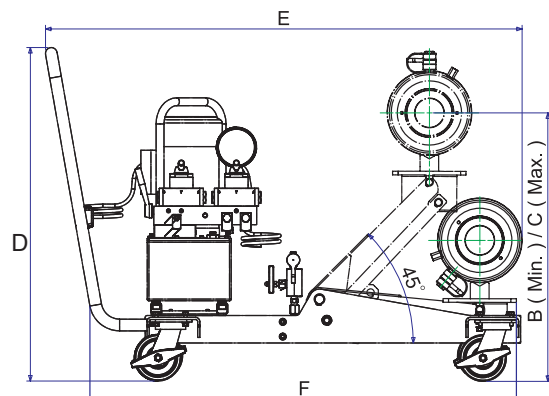
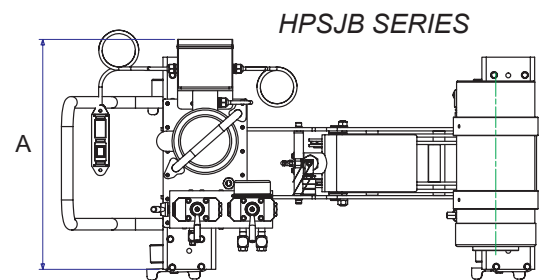



HPJB SERIES

MODEL: HPJB-SERIES

- Rail Bearing Puller / Installer
- Capacity : 100 Ton
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Designed for easy dismantling and installing of Rail axle bearings
- Simple, efficient and easy operation providing pulling force up to 100 ton
- Portable unit for easy manoeuvring and storage
- Available with side mount for tight spaces

SPECIFICATIONS


Model	Stroke (mm)	Cap Ton Pull / Install	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (kg)	Pump
HPJB100-220	392	100 / 68	652	370	1047	900	1940-2209	1530	775	PED075
HPJB100-380	392	100 / 68	652	370	1047	900	1940-2209	1530	805	PED180
HPSJB100-220	254	100 / 68	627	384	731	909	1299	1175	370	PED075
HPSJB100-380	254	100 / 68	627	384	731	909	1299	1175	410	PED180

Imperial Accessories	Class B 108 x 203	Class C 127 x 229	Class D 140 x 254	Class E 152 x 279	Class EE 140 axle	Class EE 152 axle	Class F 165 x 305	Class G 178 x 305	Class G 165 axle	Class GG 165 axle
Pulling Shoe	1B11916 - Included as part of basic machine							1B11917	1B11917	1B11917
Pulling shoe insert adaptor	1B11914	1B11911	1B11912	1B11913	1B11913	1B11915	1B11915	-	-	-
Guide tube & cap screw assembly	1B11908	1B11909	1B11900	1B11901	1B11902	1B11903	1B11904	1B11906	1B11905	1B11907
Cap Screw **	1B11920	1B11921	1B11922	1B11923	1B11924	1B11922	1B11925	1B11927	1B11926	1B11926
Guide tube adaptor	1B11882	1B11881	1B11881	1B11883	1B11883	1B11883	1B11883	1B11883	1B11883	1B11883
Installing tube	1B11894 - Included as part of basic machine							1B11895	1B11895	1B11895
Installing tube adaptor ring	1B11880	1B11888	1B11889	1B11890	1B11890	1B11891	1B11891	1B11893	1B11892	1B11892

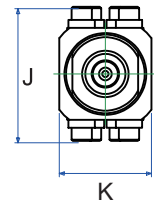
Metric Accessories	120	130	140	150
Pulling shoe insert adaptor	1B11910	1B11911	1B11912	1B11913
Guide tube & cap screw assembly	1B11896	1B11897	1B11898	1B11899
Cap Screw **	1B11918	1B11918	1B11918	1B11919
Guide tube adaptor	1B11883	1B11883	1B11883	1B11883
Installing tube adaptor ring	1B11884	1B11885	1B11886	1B11887

** Screws are supplied with the guide tube and should be ordered as replacements only

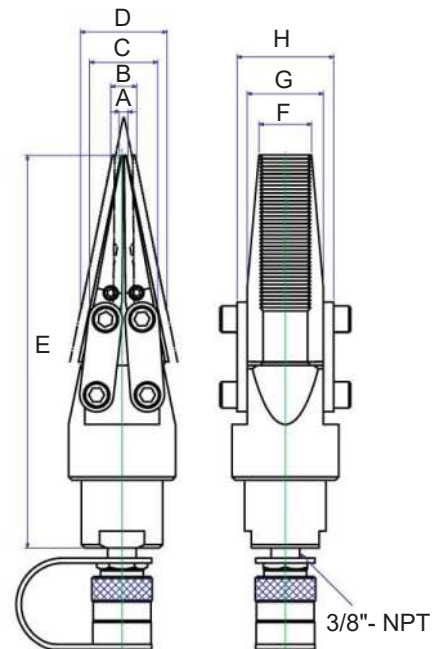



MODEL: SH-SERIES

- Capacity : 15 - 25 Ton
- Maximum working pressure : 10,000 psi / 700 Bar


FEATURES

- Compact design will optimise use in low clearance applications
- Lightweight for increased portability
- Manufactured from high quality hardened steel


SPECIFICATIONS

Model	Cap Ton	Spread (mm) A / B	Stroke (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	J (mm)	K (mm)	Weight (kg)
SH15	15	5 / 15	25	40	50	232	31	45	57	63	63	3.3
SH15-S	15	5 / 15	25	36	46	232	31	45	57	63	63	3.3
SH25	25	7 / 23	65	42.5	59	342	50.5	70	82	102	70	7.8

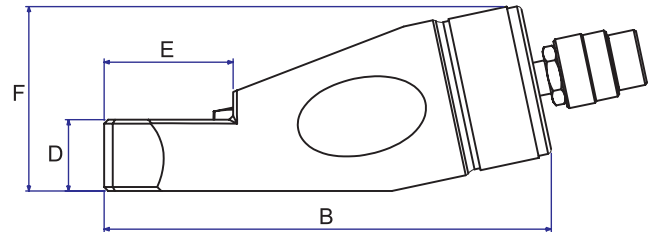
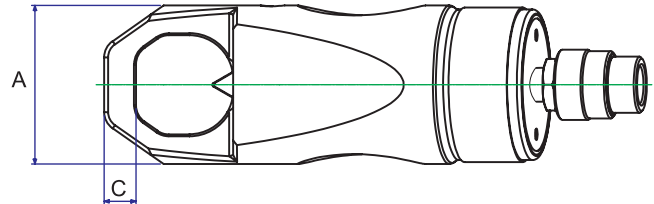


MODEL: NSH-SERIES

- Hydraulic Nut Splitter
- Capacity : 10 - 50 Ton
- Bolt Range: M12 - M39
- Maximum working pressure : 10,000 psi / 700 Bar

FEATURES

- Compact design optimises use in confined spaces
- All models have a one piece cutting frame coupled to a heavy duty hydraulic cylinder
- Cutter blade designed with added strength
- Angle head design keeps the tool in full contact with the nut
- Replacement blades available



SPECIFICATIONS

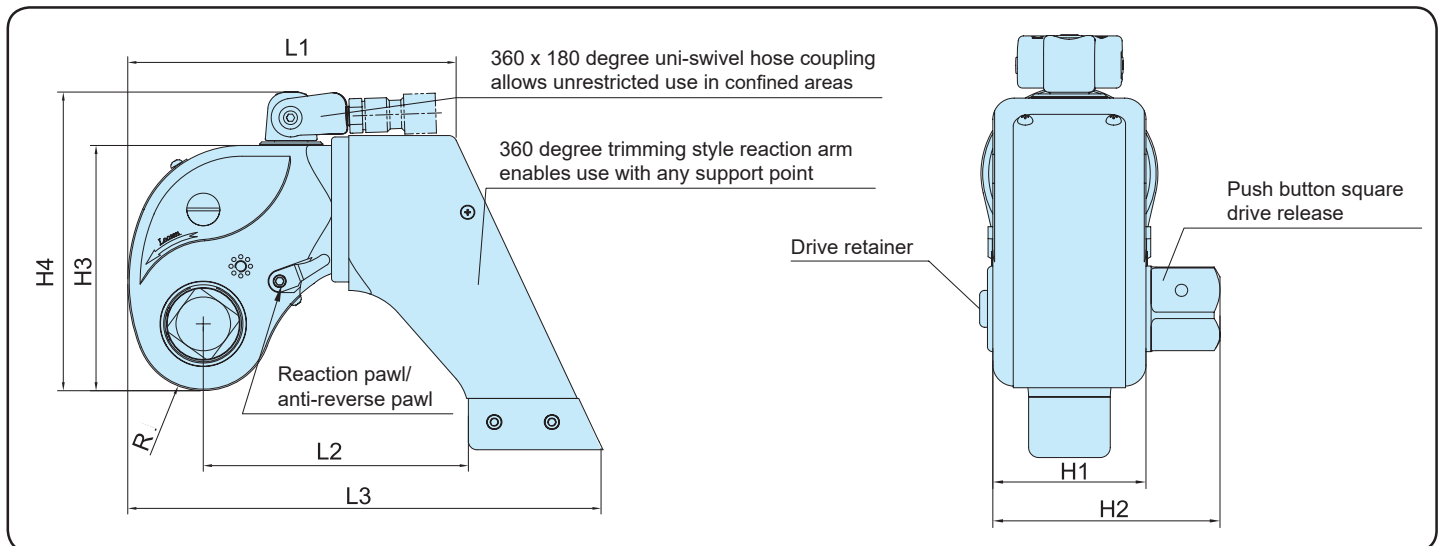
Model	Hex Nut Range (mm)	Bolt Range (mm)	Cap Ton	Oil Cap (cc)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (kg)
NSH1924	19-24	M12-M16	10	20	60	167	10	25	40	68	2.1
NSH2432	24-32	M16-M22	15	60	70	178	13	30	52	76	3.1
NSH3241	32-41	M22-M27	20	80	80	226	15	36	65	93	4.2
NSH4150	41-50	M27-M33	35	155	95	244	21	45	76	106	8
NSH5060	50-60	M33-M39	50	240	106	269	24	55	92	125	11.5

MODEL: PTSD-SERIES

- ProTorc PTSD Hydraulic Square Drive Torque Wrenches are manufactured using high grade aluminium-titanium alloy and high strength alloy steel
- High repeatability can be achieved due to the precise design with an accuracy of +/- 3%
- The 360 x 180 degree uni-swivel hose coupling enables the tool to be used unrestricted in confined areas and eliminates hose kinking
- Torsion resistant housing and torsion free operation
- 360 degree positioning of reaction arm
- Anti-reverse pawl design
- Support handle supplied with models PTSD05 and above
- Comes with convenient carry case
- Two Year Manufacturers Warranty*



		PTSD02	PTSD05	PTSD08	PTSD10	PTSD16	PTSD20	PTSD28	PTSD36	PTSD50	PTSD70
Max. Torque	Nm	1760	4332	7420	10430	15090	19409	26447	34626	47414	69247
	ft/lbs	1299	3197	5476	7697	11137	14324	19518	25554	34992	51105
Min. Torque	Nm	164	433	742	1015	1509	1940	2504	3309	4741	6925
	ft/lbs	121	320	548	749	1114	1432	1848	2442	3499	5111
Sqr. Drive		3/4"	1"	1 1/2"	1 1/2"	1 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
L1 (mm)		130	170	202	228	237	273	287	323	351	376
L2 (mm)		102	140	160	184	192	223	248	256	271	295
L3 (mm)		182	249	286	326	336	391	433	464	494	528
H1 (mm)		52	70	81	90	100	110	120	138	153	162
H2 (mm)		77	98	125	134	144	164	187	206	217	226
H3 (mm)		96	127	149	172	181	206	221	258	279	291
H4 (mm)		133	165	184	207	216	241	256	293	315	326
R (mm)		25.8	34.8	39.8	46.8	50.8	56.8	59.8	70.8	76.8	78.8
Weight (kg)		2	4	7	10.6	12.9	20	25	33.8	43	52



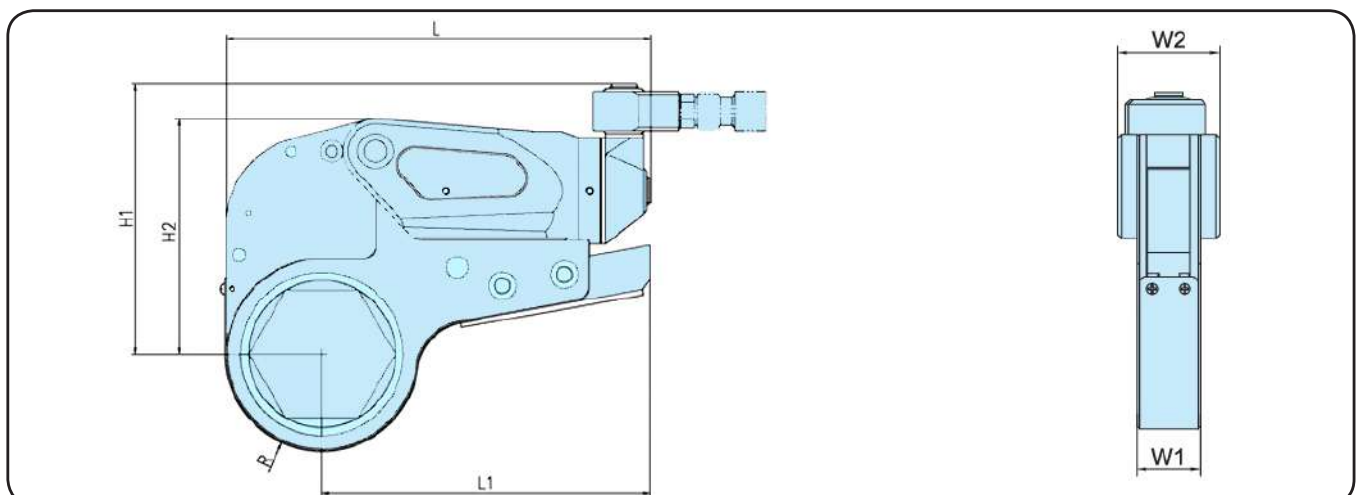
* Conditions apply - contact us for more information

MODEL: PTLC - SERIES

- ProTorc PTLC Low Clearance Hydraulic Torque Wrenches are manufactured using high grade aluminium-titanium alloy and high strength alloy
- Equipped with a 360 x 270 degree uni-swivel coupling eradicating hose kinking
- The tools ultra-thin profile and light weight enables it to be used in confined areas where access may be restricted
- Required torque is maintained due to the anti-reverse pawl design which prevents the ratchet returning
- Torsion resistant housing and torsion free operation
- Quick-Torc lever design enables rapid cycle
- User friendly design enables fast switching of cassette links
- Comes with convenient carry case
- Two Year Manufacturers Warranty*



		PTLC02	PTLC05	PTLC10	PTLC20	PTLC25	PTLC40
Max. Torque	Nm	2534	5392	10452	16245	22899	40639
	ft/lbs	1870	3979	7714	11989	16900	29992
Min. Torque	Nm	244	489	1017	1724	2247	4064
	ft/lbs	180	361	751	1272	1658	2999
Hex Size (mm)		27 - 50	27 - 65	50 - 90	85 - 115	95 - 135	100 - 155
Head Part No.		PTLCH02	PTLCH05	PTLCH10	PTLCH20	PTLCH25	PTLCH40
Link Part No.		PTLCL02-***	PTLCL05-***	PTLCL10-***	PTLCL20-***	PTLCL25-***	PTLCL40-***
L (mm)		205	251.3	302.5	367	400.5	457.5
L1 (mm)		147	188	233	283	308	364
H1 (mm)		129	163	191	223	246	282
H2 (mm)		100	136	166.5	198	224	265
W1 (mm)		32	41	53	64	70	84
W2 (mm)		50	66	83	99	110	132
R (mm)		41.3	53.8	68.8	85.3	98.8	115.8
Weight (kg)		2.2	5	9.6	16.9	22.9	38



MODEL: PTLCL - SERIES

- Manufactured from high strength alloy steel
- Reducers comply with DIN Standard 3121 and 3129
- Contact us for availability of custom and non-standard Hex Links and Reducers



Wrench Model	Hex Link	Hex Size (mm)	Reducer Model					
			Part No.	A/B (mm)	Part No.	A/B (mm)	Part No.	A/B (mm)
PTLCL02	PTLCL02-27	27	-	-	-	-	-	-
	PTLCL02-30	30	-	-	-	-	-	-
	PTLCL02-32	32	PTLCR02-3227	32/27	-	-	-	-
	PTLCL02-36	36	PTLCR02-3627	36/27	PTLCR02-3630	36/30	-	-
	PTLCL02-41	41	PTLCR02-4127	41/27	PTLCR02-4130	41/30	PTLCR02-4132	41/32
	PTLCL02-46	46	PTLCR02-4630	46/30	PTLCR02-4632	46/32	PTLCR02-4636	46/36
	PTLCL02-50	50	PTLCR02-5032	50/32	PTLCR02-5036	50/36	PTLCR02-5041	50/41

Wrench Model	Hex Link	Hex Size (mm)	Reducer Model					
			Part No.	A/B (mm)	Part No.	A/B (mm)	Part No.	A/B (mm)
PTLCL05	PTLCL05-27	27	-	-	-	-	-	-
	PTLCL05-30	30	-	-	-	-	-	-
	PTLCL05-32	32	PTLCR05-3227	32/27	-	-	-	-
	PTLCL05-36	36	PTLCR05-3627	36/27	PTLCR05-3630	36/30	-	-
	PTLCL05-41	41	PTLCR05-4127	41/27	PTLCR05-4130	41/30	PTLCR05-4132	41/32
	PTLCL05-46	46	PTLCR05-4630	46/30	PTLCR05-4632	46/32	PTLCR05-4636	46/36
	PTLCL05-50	50	PTLCR05-5032	50/32	PTLCR05-5036	50/36	PTLCR05-5041	50/41
	PTLCL05-55	55	PTLCR05-5536	55/36	PTLCR05-5541	55/41	PTLCR05-5546	55/46
	PTLCL05-60	60	PTLCR05-6041	60/41	PTLCR05-6046	60/46	PTLCR05-6050	60/50
	PTLCL05-65	65	PTLCR05-6546	65/46	PTLCR05-6550	65/50	PTLCR05-6555	65/55

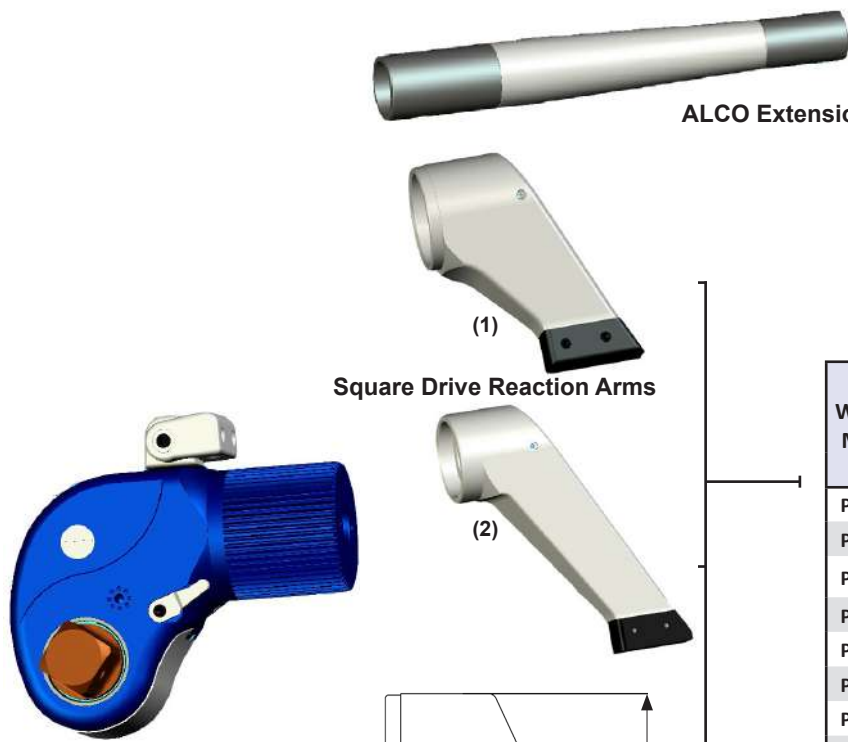
Wrench Model	Hex Link	Hex Size (mm)	Reducer Model					
			Part No.	A/B (mm)	Part No.	A/B (mm)	Part No.	A/B (mm)
PTLCL10	PTLCL10-50	50	-	-	-	-	-	-
	PTLCL10-55	55	PTLCR10-5541	55/41	PTLCR10-5546	55/46	-	-
	PTLCL10-60	60	PTLCR10-6046	60/46	PTLCR10-6050	60/50	-	-
	PTLCL10-65	65	PTLCR10-6546	65/46	PTLCR10-6550	65/50	PTLCR10-6555	65/55
	PTLCL10-70	70	PTLCR10-7050	70/50	PTLCR10-7055	70/55	PTLCR10-7060	70/60
	PTLCL10-75	75	PTLCR10-7555	75/55	PTLCR10-7560	75/60	PTLCR10-7565	75/65
	PTLCL10-80	80	PTLCR10-8060	80/60	PTLCR10-8065	80/65	PTLCR10-8070	80/70
	PTLCL10-85	85	PTLCR10-8565	85/65	PTLCR10-8570	85/70	PTLCR10-8575	85/75
	PTLCL10-90	90	PTLCR10-9070	90/70	PTLCR10-9075	90/75	PTLCR10-9080	90/80

Wrench Model	Hex Link	Hex Size (mm)	Reducer Model					
			Part No.	A/B (mm)	Part No.	A/B (mm)	Model	A/B (mm)
PTLCL20	PTLCL20-65	65	-	-	-	-	-	-
	PTLCL20-70	70	-	-	-	-	-	-
	PTLCL20-75	75	PTLCR20-7565	75/65	-	-	-	-
	PTLCL20-80	80	PTLCR20-8065	80/65	PTLCR20-8070	80/70	-	-
	PTLCL20-85	85	PTLCR20-8565	85/65	PTLCR20-8570	85/70	PTLCR20-8575	85/75
	PTLCL20-90	90	PTLCR20-9070	90/70	PTLCR20-9075	90/75	PTLCR20-9080	90/80
	PTLCL20-95	95	PTLCR20-9575	95/75	PTLCR20-9580	95/80	PTLCR20-9585	95/85
	PTLCL20-100	100	PTLCR20-10080	100/80	PTLCR20-10085	100/85	PTLCR20-10090	100/90
	PTLCL20-105	105	PTLCR20-10585	105/85	PTLCR20-10590	105/90	PTLCR20-10595	105/95
	PTLCL20-110	110	PTLCR20-11090	110/90	PTLCR20-11095	110/95	PTLCR20-110100	110/100
	PTLCL20-115	115	PTLCR20-11595	115/95	PTLCR20-115100	115/100	PTLCR20-115105	115/105

Wrench Model	Hex Link	Hex Size (mm)	Reducer Model					
			Part No.	A/B (mm)	Part No.	A/B (mm)	Part No.	A/B (mm)
PTLCL25	PTLCL25-75	75	-	-	-	-	-	-
	PTLCL25-80	80	-	-	-	-	-	-
	PTLCL25-85	85	PTLCR25-8575	85/75	-	-	-	-
	PTLCL25-90	90	PTLCR25-9075	90/75	PTLCR25-9080	90/80	-	-
	PTLCL25-95	95	PTLCR25-9575	95/75	PTLCR25-9580	95/80	PTLCR25-9585	95/85
	PTLCL25-100	100	PTLCR25-10080	100/80	PTLCR25-10085	100/85	PTLCR25-10090	100/90
	PTLCL25-105	105	PTLCR25-10585	105/85	PTLCR25-10590	105/90	PTLCR25-10595	105/95
	PTLCL25-110	110	PTLCR25-11090	110/90	PTLCR25-11095	110/95	PTLCR25-110100	110/100
	PTLCL25-115	115	PTLCR25-11595	115/95	PTLCR25-115100	115/100	PTLCR25-115105	115/105
	PTLCL25-120	120	PTLCR25-120100	120/100	PTLCR25-120105	120/105	PTLCR25-120110	120/110
	PTLCL25-130	130	PTLCR25-130110	130/110	PTLCR25-130115	130/115	PTLCR25-130120	130/120
	PTLCL25-135	135	PTLCR25-135115	135/115	PTLCR25-135120	135/120	PTLCR25-135130	135/130

Wrench Model	Hex Link	Hex Size (mm)	Reducer Model					
			Part No.	A/B (mm)	Part No.	A/B (mm)	Part No.	A/B (mm)
PTLCL40	PTLCL40-80	80	-	-	-	-	-	-
	PTLCL40-85	85	-	-	-	-	-	-
	PTLCL40-90	90	PTLCR40-9080	90/80	-	-	-	-
	PTLCL40-95	95	PTLCR40-9580	95/80	PTLCR40-9585	95/85	-	-
	PTLCL40-100	100	PTLCR40-10080	100/80	PTLCR40-10085	100/85	PTLCR40-10090	100/90
	PTLCL40-105	105	PTLCR40-10590	105/90	PTLCR40-10595	105/95	PTLCR40-105100	105/100
	PTLCL40-110	110	PTLCR40-11090	110/90	PTLCR40-11095	110/95	PTLCR40-110100	110/100
	PTLCL40-115	115	PTLCR40-11595	115/95	PTLCR40-115100	115/100	PTLCR40-115105	115/105
	PTLCL40-120	120	PTLCR40-120100	120/100	PTLCR40-120105	120/105	PTLCR40-120110	120/110
	PTLCL40-130	130	PTLCR40-130110	130/110	PTLCR40-130115	130/115	PTLCR40-130120	130/120
	PTLCL40-145	145	PTLCR40-145115	145/115	PTLCR40-145120	145/120	PTLCR40-145130	145/130
	PTLCL40-155	155	PTLCR40-155120	155/120	PTLCR40-155130	155/130	PTLCR40-155145	155/145

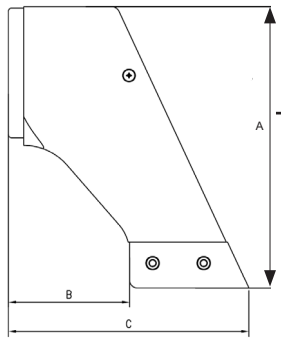
SUIT SERIES PTSD



ALCO Extension Arms

Square Drive Reaction Arms

Square Drive Reaction Sleeve with Foot

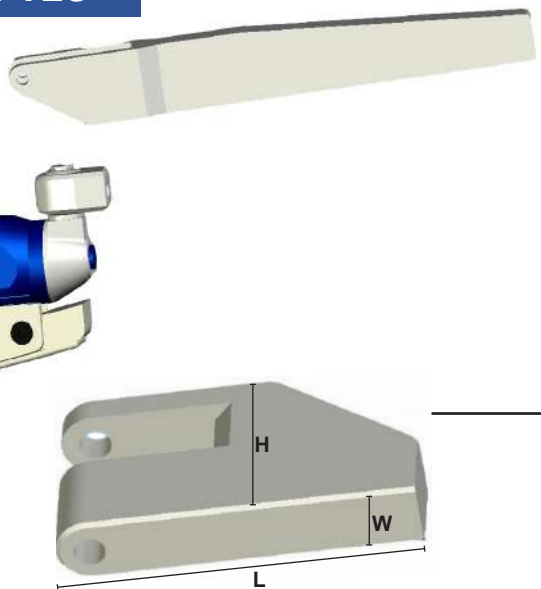


Wrench Model	Part No.		
	300mm	400mm	550mm
PTSD02	162001	162002	162003
PTSD05	162004	162005	162006
PTSD08	162007	162008	162009
PTSD10	162010	062011	162012
PTSD16	162013	162014	162015
PTSD20	162016	162017	162018
PTSD28	162019	162020	162021
PTSD36	162022	162023	162024
PTSD50	162025	162026	162027
PTSD70	162028	162029	162030

Wrench Model	Standard Reaction Arm (1) Part No.	Standard Reaction Arm (1) - mm			Extended Reaction Arm (2) Part No.	Extended Reaction Arm (2) - mm		
		A	B	C		A	B	C
PTSD02	162071	129	47	97	163258	199	75	125
PTSD05	162124	166	73	143	163259	236	106	176
PTSD08	162178	192	83	163	163260	262	114	194
PTSD10	162231	222	95	185	163261	292	126	216
PTSD16	162284	235	94	184	163262	305	124	214
PTSD20	162337	273	94	184	163263	343	142	247
PTSD28	162390	285	130	250	163264	355	166	286
PTSD36	162443	322	118	248	163265	392	149	279
PTSD50	162496	330	128	266	163266	400	158	296
PTSD70	162549	349	140	283	163267	419	170	313

Wrench Model	Part No.
PTSD02	163268
PTSD05	163269
PTSD08	163270
PTSD10	163271
PTSD16	163272
PTSD20	163273
PTSD28	163274
PTSD36	163275
PTSD50	163276
PTSD70	163277

SUIT SERIES PTLC



Low Clearance Extended Reaction Arms

Low Clearance Reaction Pad

Wrench Model	Part No. (Length 550mm)
PTLC02	163246
PTLC05	163247
PTLC10	163248
PTLC20	163249
PTLC25	163250
PTLC40	163251

Wrench Model	Part No.	Dimension (mm)		
		L	W	H
PTLC02	163252	110	26	38
PTLC05	163253	143	32	51
PTLC10	163254	181	45	64
PTLC20	163255	229	64	76
PTLC25	163256	284	83	100
PTLC40	163257	361	111	127

MODEL: PE08TW8

- Efficient three-stage pump design
- Heavy duty pendent with 6.4m cable
- External adjustable pressure regulator
- Aluminium titanium pump body for light weight portability
- Adjustable output pressure range of 40-700 bar
- Brushless high power motor for easy maintenance
- Starts under load
- Built in cooler comes standard and is automatically activated at 35 degrees Celsius
- Internal relief valve for retract side to protect tool
- Fitted with heavy duty roll frame
- Available with NATA traceable and certified gauges



MODEL: PA08TW8-4

- Efficient three-stage pump design
- Use where air is the preferred power source
- Powerful 1.3Kw motor starts under load
- External adjustable pressure regulator
- Retract side internal relief valve protects tool
- Safe to use in hazardous or explosive environments
- Four tool manifold
- Comes with filter regulator/ lubricator
- Available with NATA traceable and certified gauges
- Reduced air consumption (134 m3/h or 79 cfm)
- Fitted with heavy duty roll frame
- Built in cooler comes standard and is automatically activated at 35 degrees Celsius



Part No	Manifold	Oil Delivery (L/min)	Oil Reservoir (L)	Usable Oil (L)	Overall Width (mm)	Overall Length (mm)	Overall Height (mm)	Weight w/oil (kg)
PE08TW8	Two tool	8 @ 7 bar 1.6 @ 320 bar 0.8 @ 700 bar	8.2	7.6	310	400	440	27.5
PA08TW8-4	Four Tool	8 @ 7 bar 1.6 @ 320 bar 0.8 @ 700 bar	8.2	7.6	281	428	448	26



TWH20-VIC



TWH20-VIC-S

700 BAR TWIN LINE HYDRAULIC HOSE

- 1/4" high pressure polyurethane hydraulic hose with polyimide core reinforced by two spiral layers and two open spiral layers of high tensile steel
- 4:1 Safety Factor
- 20' (6m) length as standard - custom lengths available upon request
- Fitted with zinc plated 1/4" NPT Male couplings and dust caps
- Equipped with hose guards to increase user safety
- Available with MDG41 compliant burst sleeves (TWH20-VIC-S)

Model	Description
TWH20-VIC	6M Twin line hose complete with 1/4" couplings
TWH20-VIC-S	6M Twin line hose complete with 1/4" couplings fitted with burst sleeve

Pressure (Bar)	Pressure (PSI)	PTSD02 Torque (Nm)	PTSD05 Torque (Nm)	PTSD08 Torque (Nm)	PTSD10 Torque (Nm)	PTSD16 Torque (Nm)	PTSD20 Torque (Nm)	PTSD28 Torque (Nm)	PTSD36 Torque (Nm)	PTSD50 Torque (Nm)	PTSD70 Torque (Nm)
70	1015	164	433	742	1015	1509	1940	2504	3309	4741	6925
80	1160	187	495	848	1160	1724	2218	2862	3782	5419	7914
90	1305	211	557	954	1305	1940	2495	3219	4254	6096	8903
100	1450	234	619	1060	1450	2155	2772	3577	4727	6773	9892
110	1595	258	681	1166	1584	2373	3040	3938	5245	7451	10882
120	1740	282	743	1272	1728	2591	3307	4299	5763	8128	11871
130	1885	305	805	1378	1872	2810	3575	4661	6282	8806	12860
140	2031	329	866	1484	2016	3028	3842	5022	6800	9483	13849
150	2176	353	928	1590	2160	3246	4110	5383	7318	10160	14839
160	2321	378	990	1696	2304	3468	4378	5778	7817	10838	15828
170	2466	402	1052	1802	2448	3690	4645	6173	8315	11515	16817
180	2611	427	1114	1908	2592	3913	4913	6567	8814	12192	17806
190	2756	451	1176	2014	2736	4135	5180	6962	9312	12870	18796
200	2901	476	1238	2120	2880	4357	5448	7357	9811	13547	19785
210	3046	503	1300	2226	3045	4576	5739	7737	10319	14224	20774
220	3191	530	1361	2332	3190	4796	6030	8118	10827	14902	21763
230	3336	558	1423	2438	3335	5015	6320	8498	11334	15579	22753
240	3481	585	1485	2544	3480	5235	6611	8879	11842	16256	23742
250	3626	612	1547	2650	3625	5454	6902	9259	12350	16934	24731
260	3771	638	1609	2756	3770	5675	7164	9656	12879	17611	25720
270	3916	664	1671	2862	3915	5896	7427	10054	13407	18288	26709
280	4061	690	1733	2968	4060	6116	7689	10451	13936	18966	27699
290	4206	716	1795	3074	4205	6337	7952	10849	14464	19643	28688
300	4351	742	1857	3180	4350	6558	8214	11246	14993	20320	29677
310	4496	768	1918	3286	4549	6776	8481	11604	15464	20998	30666
320	4641	793	1980	3392	4696	6994	8749	11963	15936	21675	31656
330	4786	819	2042	3498	4843	7213	9016	12321	16407	22352	32645
340	4931	844	2104	3604	4990	7431	9284	12680	16879	23030	33634
350	5076	870	2166	3710	5136	7649	9551	13038	17350	23707	34623
360	5221	896	2228	3816	5283	7868	9798	13429	17844	24384	35613
370	5366	922	2290	3922	5430	8088	10045	13820	18337	25062	36602
380	5511	948	2352	4028	5577	8307	10291	14211	18831	25739	37591
390	5656	974	2414	4134	5723	8527	10538	14602	19324	26417	38580
400	5801	1000	2475	4240	5870	8746	10785	14993	19818	27094	39570
410	5947	1026	2537	4346	6050	8964	11064	15362	20312	27771	40559
420	6092	1052	2599	4452	6197	9182	11343	15731	20805	28449	41548
430	6237	1077	2661	4558	6345	9401	11623	16099	21299	29126	42537
440	6382	1103	2723	4664	6492	9619	11902	16468	21792	29803	43527
450	6527	1129	2785	4770	6640	9837	12181	16837	22286	30481	44516
460	6672	1154	2847	4876	6787	10054	12527	17221	22780	31158	45505
470	6817	1180	2909	4982	6935	10271	12872	17606	23273	31835	46494
480	6962	1205	2971	5088	7082	10488	13218	17990	23767	32513	47484
490	7107	1231	3032	5194	7230	10705	13563	18375	24260	33190	48473
500	7252	1256	3094	5300	7378	10922	13909	18759	24754	33867	49462
510	7397	1282	3156	5406	7599	11134	14158	19143	25248	34545	50451
520	7542	1308	3218	5512	7748	11345	14407	19528	25741	35222	51440
530	7687	1333	3280	5618	7897	11557	14657	19912	26235	35899	52430
540	7832	1359	3342	5724	8046	11768	14906	20297	26728	36577	53419
550	7977	1385	3404	5830	8195	11980	15155	20681	27222	37254	54408
560	8122	1411	3466	5936	8344	12189	15414	21065	27716	37931	55397
570	8267	1437	3527	6042	8493	12398	15672	21450	28209	38609	56387
580	8412	1462	3589	6148	8642	12607	15931	21834	28703	39286	57376
590	8557	1488	3651	6254	8791	12816	16189	22219	29196	39963	58365
600	8702	1514	3713	6360	8940	13025	16448	22603	29690	40641	59354
610	8847	1539	3775	6466	9089	13237	16726	22987	30184	41318	60344
620	8992	1564	3837	6572	9238	13449	17004	23372	30677	41995	61333
630	9137	1590	3899	6678	9387	13660	17281	23756	31171	42673	62322
640	9282	1615	3961	6784	9536	13872	17559	24141	31664	43350	63311
650	9427	1640	4023	6890	9685	14084	17837	24525	32158	44028	64301
660	9572	1664	4084	6996	9834	14285	18151	24909	32652	44705	65290
670	9718	1688	4146	7102	9983	14486	18466	25294	33145	45382	66279
680	9863	1712	4208	7208	10132	14688	18780	25678	33639	46060	67268
690	10008	1736	4270	7314	10281	14889	19095	26063	34132	46737	68258
700	10153	1760	4332	7420	10430	15090	19409	26447	34626	47414	69247

Pressure (Bar)	Pressure (PSI)	PTLC02 Torque (Nm)	PTLC05 Torque (Nm)	PTLC10 Torque (Nm)	PTLC20 Torque (Nm)	PTLC25 Torque (Nm)	PTLC40 Torque (Nm)
70	1015	244	489	1017	1724	2247	4064
80	1160	278	558	1162	1991	2568	4645
90	1305	313	628	1308	2257	2889	5225
100	1450	348	698	1453	2523	3210	5806
110	1595	384	774	1595	2789	3544	6386
120	1740	421	851	1738	3055	3878	6967
130	1885	457	927	1880	3322	4212	7547
140	2031	494	1004	2023	3588	4546	8128
150	2176	530	1080	2165	3854	4880	8709
160	2321	567	1162	2314	4091	5212	9289
170	2466	604	1244	2463	4328	5544	9870
180	2611	641	1326	2612	4566	5876	10450
190	2756	678	1408	2761	4803	6208	11031
200	2901	715	1490	2910	5040	6540	11611
210	3046	749	1568	3052	5284	6871	12192
220	3191	784	1646	3194	5528	7202	12773
230	3336	818	1724	3336	5772	7532	13353
240	3481	853	1802	3478	6016	7863	13934
250	3626	887	1880	3620	6260	8194	14514
260	3771	923	1957	3758	6504	8517	15095
270	3916	958	2034	3896	6748	8841	15675
280	4061	994	2110	4033	6992	9164	16256
290	4206	1029	2187	4171	7236	9488	16837
300	4351	1065	2264	4309	7480	9811	17417
310	4496	1103	2343	4467	7622	10153	17998
320	4641	1141	2422	4625	7763	10494	18578
330	4786	1179	2502	4784	7905	10836	19159
340	4931	1217	2581	4942	8046	11177	19739
350	5076	1255	2660	5100	8188	11519	20320
360	5221	1292	2735	5246	8418	11867	20901
370	5366	1329	2810	5392	8648	12215	21481
380	5511	1366	2885	5538	8879	12563	22062
390	5656	1403	2960	5684	9109	12911	22642
400	5802	1440	3035	5830	9339	13259	23223
410	5947	1478	3123	6004	9569	13577	23803
420	6092	1517	3211	6178	9799	13895	24384
430	6237	1555	3299	6353	10030	14214	24965
440	6382	1594	3387	6527	10260	14532	25545
450	6527	1632	3475	6701	10490	14850	26126
460	6672	1669	3570	6846	10720	15186	26706
470	6817	1706	3665	6991	10950	15523	27287
480	6962	1744	3761	7135	11181	15859	27867
490	7107	1781	3856	7280	11411	16196	28448
500	7252	1818	3951	7425	11641	16532	29029
510	7397	1855	4017	7588	11871	16863	29609
520	7542	1891	4083	7751	12101	17194	30190
530	7687	1928	4148	7914	12332	17526	30770
540	7832	1964	4214	8077	12562	17857	31351
550	7977	2001	4280	8240	12792	18188	31931
560	8122	2032	4354	8378	13022	18476	32512
570	8267	2063	4428	8516	13252	18764	33093
580	8412	2094	4502	8654	13483	19053	33673
590	8557	2125	4576	8792	13713	19341	34254
600	8702	2156	4650	8930	13943	19629	34834
610	8847	2194	4721	9085	14173	19956	35415
620	8992	2232	4792	9240	14403	20283	35995
630	9137	2270	4863	9396	14634	20610	36576
640	9282	2308	4934	9551	14864	20937	37157
650	9427	2346	5005	9706	15094	21264	37737
660	9572	2384	5082	9855	15324	21591	38318
670	9718	2421	5160	10004	15554	21918	38898
680	9863	2459	5237	10154	15785	22245	39479
690	10008	2496	5315	10303	16015	22572	40059
700	10153	2534	5392	10452	16245	22899	40639

Hexagon Size (A/F) S (mm)	Thread Size D (mm)	Int. Hexagon Size J (mm)
17	M10	8
19	M12	10
22	M14	12
24	M16	14
27	M18	14
30	M20	17
34	M22	17
36	M24	19
41	M27	19
46	M30	22
50	M33	24
55	M36	27
60	M39	27 (30)
65	M42	32
70	M45	-
75	M48	36
80	M52	36
85	M56	41
90	M60	46
95	M64	50
100	M68	55
105	M72	60
110	M76	65
115	M80	70
120	M85	70 (75)
130	M90	-
135	M95	80
145	M100	-
150	M105	-
155	M110	-
165	M115	-
170	M120	-
180	M125	-
185	M130	-
200	M140	-
210	M150	-

Hexagon Size (A/F) S (inch)	Thread Size D (inch)	Int. Hexagon Size J (inch)
1 ¹ / ₁₆ "	1/2"	1/2"
1 ¹ / ₄ "	1/2"	1/2"
1 ⁷ / ₁₆ "	7/8"	3/4"
1 ⁵ / ₈ "	1"	3/4"
1 ¹³ / ₁₆ "	1 ¹ / ₈ "	7/8"
2"	1 ¹ / ₄ "	7/8"
2 ³ / ₁₆ "	1 ³ / ₈ "	1"
2 ³ / ₈ "	1 ¹ / ₂ "	1"
2 ⁹ / ₁₆ "	1 ⁵ / ₈ "	-
2 ³ / ₄ "	1 ³ / ₄ "	1 ¹ / ₄ "
2 ¹⁵ / ₁₆ "	1 ⁷ / ₈ "	1 ³ / ₈ "
3"	2"	1 ¹ / ₂ "
3 ¹ / ₈ "	2"	1 ⁵ / ₈ "
3 ³ / ₈ "	2 ¹ / ₂ "	1 ³ / ₄ "
3 ¹ / ₂ "	2 ¹ / ₂ "	1 ³ / ₄ "
3 ³ / ₄ "	2 ¹ / ₂ "	1 ³ / ₄ "
3 ⁷ / ₈ "	2 ¹ / ₂ "	1 ⁷ / ₈ "
4 ¹ / ₈ "	2 ³ / ₄ "	2"
4 ¹ / ₄ "	2 ³ / ₄ "	2"
4 ⁵ / ₈ "	3"	2 ¹ / ₄ "
5"	3 ¹ / ₄ "	2 ¹ / ₄ "

- Use values as a guide only. Always check with the manufacturer of the bolt or equipment before use
- Refer to "Bolt & Nut Pre-tightening Force Chart" to determine the max torque of wrench required

Strength Grade		8.8		10.9		12.9	
Bolt	A/F (mm)	Torque		Torque		Torque	
		lbs.ft	Nm	lbs.ft	Nm	lbs.ft	Nm
M14	22	101	137	122	165	166	225
M16	24	152	206	182	247	268	363
M18	27	210	284	252	341	354	480
M20	30	297	402	420	569	499	677
M22	34	398	539	565	765	672	911
M24	36	506	686	724	981	868	1176
M27	41	759	1029	1086	1472	1302	1764
M30	46	904	1225	1448	1962	1736	2352
M33	50	1085	1470	1520	2060	1808	2450
M36	55	1302	1764	1810	2453	2170	2940
M39	60	1591	2156	2172	2943	2676	3626
M42	65	2025	2744	2824	3826	3399	4606
M45	70	2314	3136	3258	4415	3978	5390
M48	75	2893	3920	4127	5592	4918	6664
M52	80	3472	4704	4851	6573	6148	8330
M56	85	4412	5978	6227	8437	7594	10290
M60	90	5714	7742	7964	10791	9764	13230
M64	95	6509	8820	8855	11998	11066	14994
M68	100	7956	10780	10070	13645	12585	17053
M72	105	9330	12642	11459	15527	14321	19405
M76	110	10849	14700	13021	17644	16273	22050
M80	115	13380	18130	14426	19547	18029	24429
M85	120	16273	22050	15625	21172	19527	26459
M90	130	18081	24500	18751	25407	23433	31752
M100	145	20251	27440	24306	32935	30376	41160
M110	155	24156	32732	28994	39287	36235	49098
M120	170	29364	39788	35244	47756	44046	59682

- Use values as a guide only. Always check with the manufacturer of the bolt or equipment before use
- Figures represent the max torque of the bolt - the tightening torque is 80-90% of chart figures
- The recommended loosening torque is up to 150% of the tightening torque
- Load Sockets must comply with the appropriate standards e.g., DIN3121, DIN3129
- The above table shows German Standard (DIN) figures

WARRANTY POLICY

Boss Hydraulics offers lifetime warranty¹ (lifetime is defined by when the product is no longer fit for purpose due to standard wear) on the over 350 bar range of products against manufacturer's defects and workmanship. This warranty does not cover parts that have been misused or used for a purpose other than which it was intended. General wear and tear of any products is also not covered under this warranty. Motors and batteries are warranted separately according to the original manufacturer's warranty.

Warranty may also be void if:

- Modifications are made to the product
- The product has been repaired by an unauthorised repair centre
- Non recommended fluids are used

¹ Lifetime Warranty excludes ProTorc Bolting Range. This range offers a 2 year warranty.

LIABILITY OF SUPPLIER

Total liability held by Boss Hydraulics with regards to the warranty of products against defects is limited. Boss Hydraulics will have the option to either repair, replace or refund the product at their sole discretion. Boss Hydraulics will not be liable for any direct, indirect, consequential or economic loss or incidental damages of any kind as a result of any act or omission by Boss Hydraulics. All transport costs to/from Boss Hydraulics or an authorised agent will be at the product owner's expense.

HOW TO CLAIM

If you believe your BOSS Hydraulics product is defective and warranty applies please contact Boss Hydraulics or an authorised agent. To fully determine the validity of a warranty claim the product will/may be required to be returned to BOSS Hydraulics or an authorised agent. All products returned must be accompanied by both return authorisation and proof of purchase.

