

PRIMO[®]

HYDRAULIC BOLTING TOOLS



SHANGHAI PRIMO TOOLS CO.,LTD
www.primotorc.com

BRIEF INTRODUCTION OF THE COMPANY

General

Shanghai Primo Tools Co.,Ltd **PRIMO**[®] is a professional manufacturer of bolting tools including hydraulic torque wrenches, hydraulic pumps, hydraulic bolt tensioners, battery torque wrenches etc. The company was founded in 2001 in Shanghai, China, covers an area of 23,000 square meters. Nearly 100 CNC machines, turning machines, grinders and other equipment. ISO 9001:2015, ISO 14001, ISO 45001 and CE certified with more than 40 patents, and software copyrights. Annually outputs 5000 sets of high-quality bolting tools.

Industries

The company is committed to providing a world-class bolting tools, and is committed to becoming a leader in the field. Striving to quality first, service first, cost-effective first. Customers are all over in the field of the oil and gas, petrochemical, wind power, hydropower, nuclear power, shipbuilding, mining, heavy machinery and engineering construction industries.

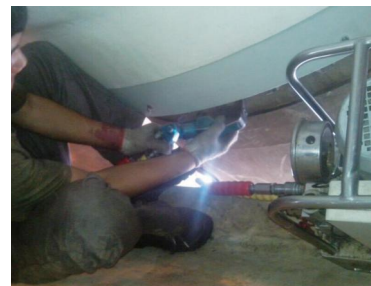
Flange Joint Integrity Management

The engineering department of the company to provide flange joint integrity management for petroleum and petrochemical plant. Nearly 60 employees and 3000 sets of hydraulic wrenches, battery torque wrenches, bolt tensioners and other professional machines to provide engineering services according to ASME PCC-1(Pressure Boundbolic Bolt Flange Connection Guide), ECITB MJ1-18(Hydraulically Tensioned Bolted Connection), MJ1-19(Hydraulic torqued bolted equipment) in the petrochemical installation and maintenance site, to ensure zero flange leakage, and long term stable operation of petrochemical equipment.



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PMU Series Square Drive Hydraulic Wrench



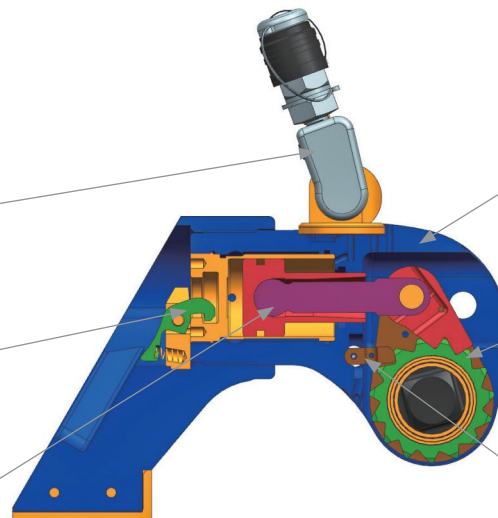
- ◉ Coarse-toothed ratchet and pawl, sufficient safe redundancy at full load
- ◉ Uni-body design, constructed from aviation Al-Ti alloy with high strength and light weight
- ◉ 360°/180° swivel, 360° reaction arm, easy to use in all kinds of complicated applications
- ◉ Reaction pawl prevents reverse caused by bolts elastic deformation
- ◉ "Click" sounds in each stroke for easy operation

Specification

360°/180° swivel, no space constraint.

360° click-on reaction arm can be positioned in solid reaction point precisely. Trigger type catch lever can be easily disassembled.

Spherical cooperated piston and drive arm, no eccentric load. High strength seal kit for long life and no leakage.

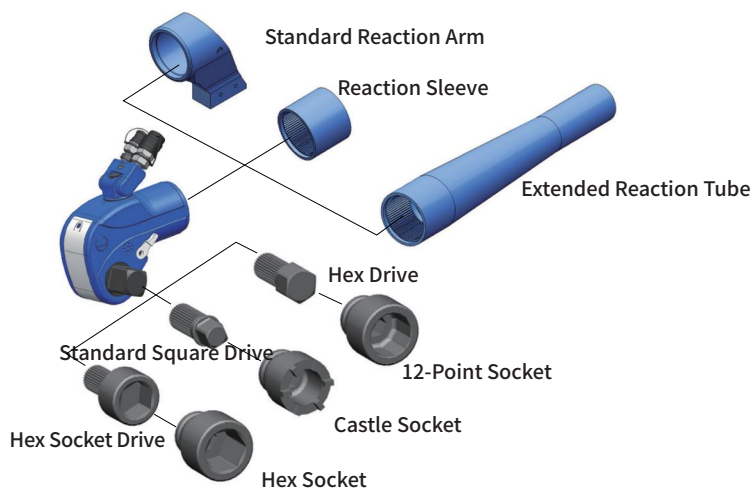


Optimized uni-body housing.

Coarse-toothed ratchet and pawl, rotate 24° each stroke.

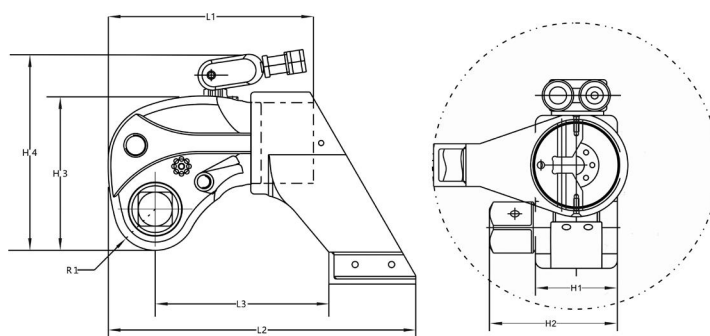
Special reaction pawl prevents reverse movement.

Accessories



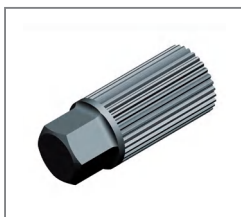
Specification

Model	Square Drive (in)	Metric Bolt	Min.Torque (Nm)	Max.Torque (Nm)	Output Accuracy	Repeat Accuracy	Weight (kg)
PMU-1	3/4	M8-M30	182	1820	±3%	2%	1.8
PMU-3	1	M16-M42	425	4250	±3%	2%	3.8
PMU-5	1-1/2	M20-M48	741	7415	±3%	2%	6.5
PMU-8	1-1/2	M22-M52	1047	10470	±3%	2%	11.8
PMU-10	1-1/2	M22-M56	1500	15000	±3%	2%	14.9
PMU-15	2-1/2	M39-M68	2135	21351	±3%	2%	16.4
PMU-20	2-1/2	M48-M80	2678	26785	±3%	2%	19.7
PMU-25	2-1/2	M52-M90	3509	35096	±3%	2%	32
PMU-35	2-1/2	M64-M120	5160	51600	±3%	2%	43



Model	L1 (mm)	L2 (mm)	L3 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	R1 (mm)
PMU-1	124	186	105	50	72	93	125	25
PMU-3	161	243	135	67	97	124	156	33
PMU-5	194	293	163	80	125	149	183	40
PMU-8	234	319	177	90	132	168	223	43
PMU-10	242	365	202	100	143	186	224	50
PMU-15	268	401	233	111	173	205	245	55
PMU-20	294	444	248	120	180	223	260	60
PMU-25	313	461	251	137	200	247	296	66
PMU-35	348	550	316	153	218	281	335	76

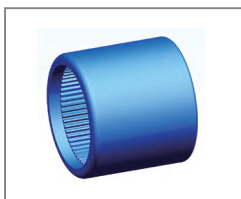
Hex Drive



Wrench Model	Hexagon Size	Part Model
PMU-1	S	1HEXD-S
PMU-3	S	3HEXD-S
PMU-5	S	5HEXD-S
PMU-8	S	8HEXD-S
PMU-10	S	10HEXD-S
PMU-15	S	15HEXD-S
PMU-20	S	20HEXD-S

* S is hex AF size,, S=17, 19, 22, 24, 27, 32, 36, 41, 46mm

Reaction Sleeve



Wrench Model	Part Model
PMU-1	PMU1-SV
PMU-3	PMU3-SV
PMU-5	PMU5-SV
PMU-8	PMU8-SV
PMU-10	PMU10-SV

PMX Series Low Clearance Hydraulic Torque Wrench



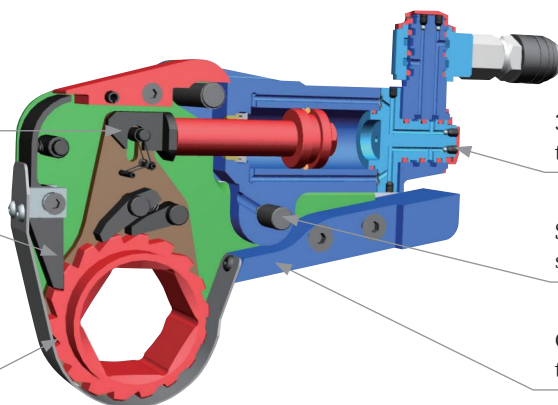
- ◉ Constructed from high strength alloy with light weight, high torque ratio
- ◉ Coarse tooth design
- ◉ Accuracy $\pm 3\%$
- ◉ Slim body design fits for various tight spaces
- ◉ Anti-corrosive treated surface applicable for harsh environment
- ◉ The wrench head is equipped with copper sleeve which makes it more wear-resistant, non-stuck and high torque precision

Specification

Power head connects to the wrench head through a hook, no risk of dislodging the wrench head.

Reaction pawl prevents ratchet reverse movement.

Coarse-toothed ratchet and pawl are robust and durable, "Click" sounds in each stroke for easy operation.



360° / 360° swivel can be connected to hose in any direction.

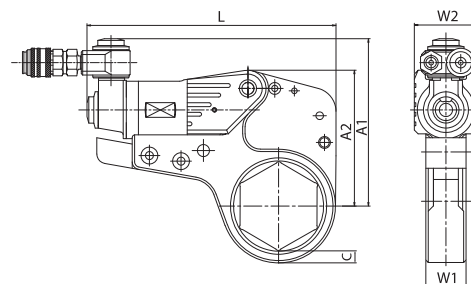
Solid single link pin makes symmetrical load of both side plates.

Coaxial Reaction arm, no bending torque.

PMX Power Head

Model	Range Of Hex A/F(in)	Range Of Hex A/F(mm)	Min.Torque (Nm)	Max.Torque (Nm)	Power Head Weight(Kg)	Wrench Head Weight(Kg)	Output Accuracy	Repeat Accuracy
PMX-2	3/4~2-3/8	19-60	228	2287	0.9	1.5	$\pm 3\%$	2%
PMX-4	1-7/16~3-1/8	36-80	522	5226	1.7	3.4	$\pm 3\%$	2%
PMX-8	1-13/16~3-11/16	46-105	1104	11049	3	6.3	$\pm 3\%$	2%
PMX-14	2-3/8~4-5/8	60-120	1816	18165	4.6	11.4	$\pm 3\%$	2%
PMX-30	3-1/2~5-3/4	90-155	4200	42005	10.4	20.5	$\pm 3\%$	2%

Model	L(mm)	A1(mm)	A2(mm)	W1(mm)	W2(mm)	C(mm)
PMX-2	194	136	103	32	50	9.8-12.6
PMX-4	258	172	137	42	66	12.5-13.1
PMX-8	312	200	170	53	83	16-16.7
PMX-14	373	242	205	63	99	17.6-18.9
PMX-30	478	312	272	83	132	24.4-26.2



Wrench Head

Metric

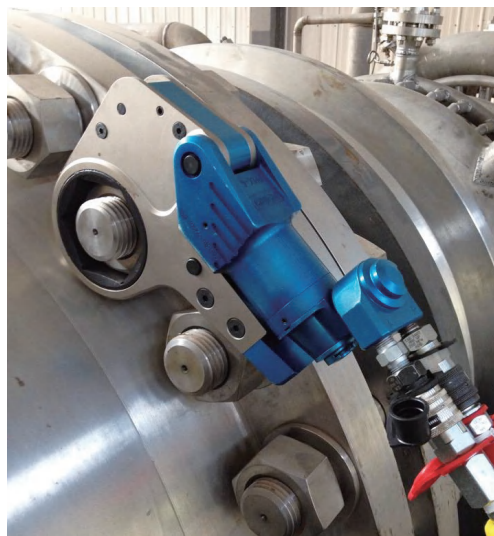
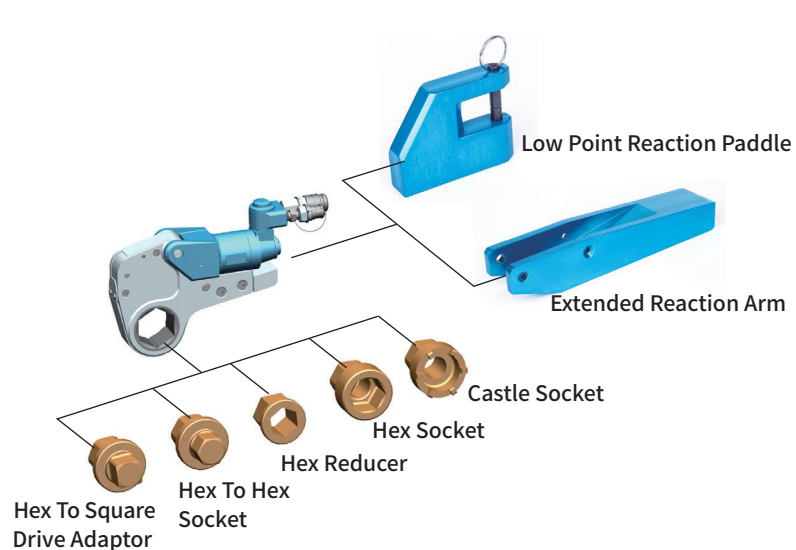
PMX-2		PMX-4		PMX-8		PMX-14		PMX-30	
Model	Hex Size A/F (mm)	Model	Hex Size A/F (mm)	Model	Hex Size A/F (mm)	Model	Hex Size A/F (mm)	Model	Hex Size A/F (mm)
PMXL2-19	19	PMXL4-36	36	PMXL8-46	46	PMXL14-60	60	PMXL30-90	90
PMXL2-22	22	PMXL4-41	41	PMXL8-50	50	PMXL14-65	65	PMXL30-95	95
PMXL2-24	24	PMXL4-46	46	PMXL8-55	55	PMXL14-70	70	PMXL30-100	100
PMXL2-27	27	PMXL4-50	50	PMXL8-60	60	PMXL14-75	75	PMXL30-105	105
PMXL2-30	30	PMXL4-55	55	PMXL8-65	65	PMXL14-80	80	PMXL30-110	110
PMXL2-32	32	PMXL4-60	60	PMXL8-70	70	PMXL14-85	85	PMXL30-115	115
PMXL2-36	36	PMXL4-65	65	PMXL8-75	75	PMXL14-90	90	PMXL30-120	120
PMXL2-41	41	PMXL4-70	70	PMXL8-80	80	PMXL14-95	95	PMXL30-130	130
PMXL2-46	46	PMXL4-75	75	PMXL8-85	85	PMXL14-100	100	PMXL30-145	145
PMXL2-50	50	PMXL4-80	80	PMXL8-90	90	PMXL14-105	105	PMXL30-150	150
PMXL2-55	55			PMXL8-95	95	PMXL14-110	110	PMXL30-155	155
PMXL2-60	60			PMXL8-100	100	PMXL14-115	115		
				PMXL8-105	105	PMXL14-120	120		

Imperial

PMX-2		PMX-4		PMX-8		PMX-14		PMX-30	
Model	Hex Size A/F(in)	Model	Hex Size A/F(in)	Model	Hex Size A/F(in)	Model	Hex Size A/F(in)	Model	Hex Size A/F(in)
PMXL2-3/4	3/4	PMXL4-1-7/16	1-7/16	PMXL8-1-13/16	1-13/16	PMXL14-2-3/8	2-3/8	PMXL30-3-1/2	3-1/2
PMXL2-7/8	7/8	PMXL4-1-5/8	1-5/8	PMXL8-2	2	PMXL14-2-9/16	2-9/16	PMXL30-3-11/16	3-11/16
PMXL2-1-1/16	1-1/16	PMXL4-1-13/16	1-13/16	PMXL8-2-3/16	2-3/16	PMXL14-2-3/4	2-3/4	PMXL30-3-7/8	3-7/8
PMXL2-1-3/16	1-3/16	PMXL4-2	2	PMXL8-2-3/8	2-3/8	PMXL14-2-15/16	2-15/16	PMXL30-4-1/8	4-1/8
PMXL2-1-1/4	1-1/4	PMXL4-2-3/16	2-3/16	PMXL8-2-9/16	2-9/16	PMXL14-3-1/8	3-1/8	PMXL30-4-1/4	4-1/4
PMXL2-1-7/16	1-7/16	PMXL4-2-3/8	2-3/8	PMXL8-2-3/4	2-3/4	PMXL14-3-1/2	3-1/2	PMXL30-4-5/8	4-5/8
PMXL2-1-5/8	1-5/8	PMXL4-2-9/16	2-9/16	PMXL8-2-15/16	2-15/16	PMXL14-3-11/16	3-11/16	PMXL30-5	5
PMXL2-1-13/16	1-13/16	PMXL4-2-3/4	2-3/4	PMXL8-3-1/8	3-1/8	PMXL14-3-7/8	3-7/8	PMXL30-5-3/8	5-3/8
PMXL2-2	2	PMXL4-2-15/16	2-15/16	PMXL8-3-1/2	3-1/2	PMXL14-4-1/8	4-1/8	PMXL30-5-3/4	5-3/4
PMXL2-2-3/16	2-3/16	PMXL4-3-1/8	3-1/8	PMXL8-3-11/16	3-11/16	PMXL14-4-1/4	4-1/4		
PMXL2-2-3/8	2-3/8					PMXL14-4-5/8	4-5/8		



Accessories



Low Point Reaction Paddle

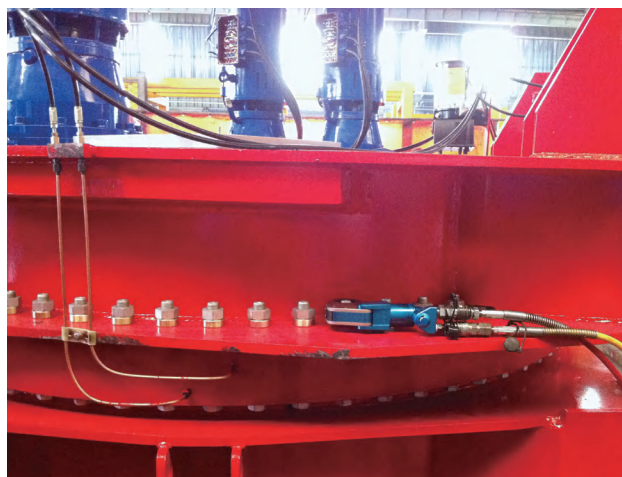


Wrench Model	Parts Model
PMX-2	PMX-2RP
PMX-4	PMX-4RP
PMX-8	PMX-8RP
PMX-14	PMX-14RP
PMX-30	PMX-30RP

Extended Reaction Arm



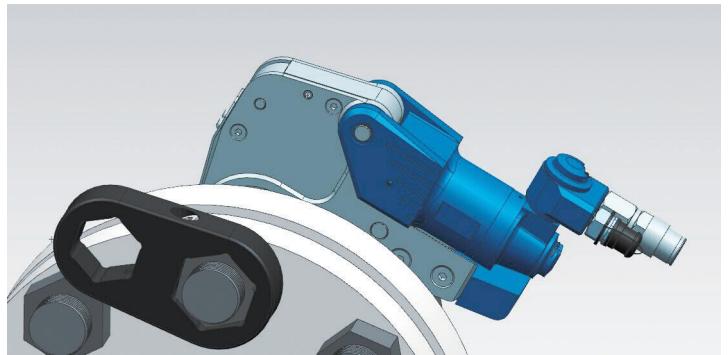
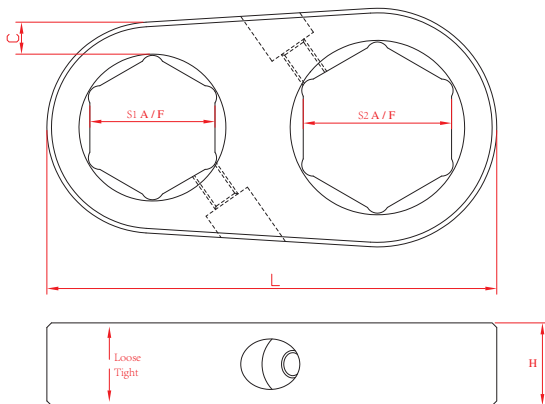
Wrench Model	Parts Model
PMX-2	PMX-2-EXT
PMX-4	PMX-4-EXT
PMX-8	PMX-8-EXT
PMX-14	PMX-14-EXT
PMX-30	PMX-30-EXT



Back-up Spanner



- Hands free
- Never trap fingers
- 2 sizes in 1
- Spark free
- No flogging hammer required
- Never lock up
- Safe and easy to use
- Easy to install and remove
- Purchase as a kit or buy one off



Specification

	Model	S1 A/F(mm)	S2 A/F(mm)	C(mm)	L(mm)	H(mm)
Metric Kit Model: PBME	PB-2732	27	32	7.5	98	18
	PB-3641	36	41	7.5	117	20
	PB-4650	46	50	7.5	158	29
	PB-5560	55	60	7.5	158	29
	PB-6570	65	70	7.5	180	32
	PB-7580	75	80	7.5	201	35
	PB-8590	85	90	11	235	40
	PB-95100	95	100	11	256	40
	PB-105110	105	110	11.5	282	45
	PB-115120	115	120	11.5	305	45
Imperial Kit Model: PBME	PB-1116114	1-1/16"	1-1/4"	7.5	98	18
	PB-1716158	1-7/16"	1-5/8"	7.5	119	20
	PB-113162	1-13/16"	2"	7.5	138	25
	PB-2316238	2-3/16"	2-3/8"	7.5	160	29
	PB-2916234	2-9/16"	2-3/4"	7.5	180	32
	PB-21516318	2-15/16"	3-1/8"	7.5	201	35
	PB-312378	3-1/2"	3-7/8"	11	249	40
	PB-414458	4-1/4"	4-5/8"	11.5	295	45

PMT Series Hydraulic Torque Wrench



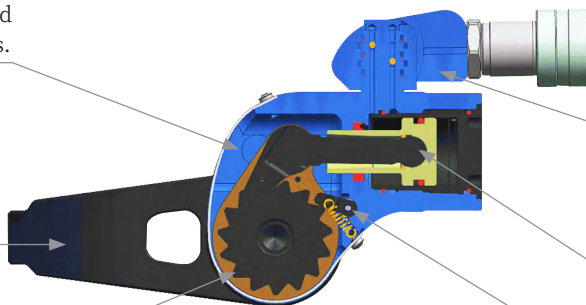
- ◉ Coarse-toothed ratchet and pawl, sufficient safe redundancy at full load
- ◉ The new coaxial reaction arm design reduces the offload bending moment, can provide more accurate actual torque
- ◉ Can be equipped with rear reaction lever for higher efficiency, compatible with standard and stretch sleeve
- ◉ Constructed from higher strength materials for stronger, more wear-resistant and highly repeatable precision performance
- ◉ Compact body with 360 °×180 ° hose swivel, applicable to a variety of applications

Specification

Strong construction, solid and durable even in harsh conditions.

Dual reaction lever function, accommodates both coaxial reaction lever and rear reaction lever.

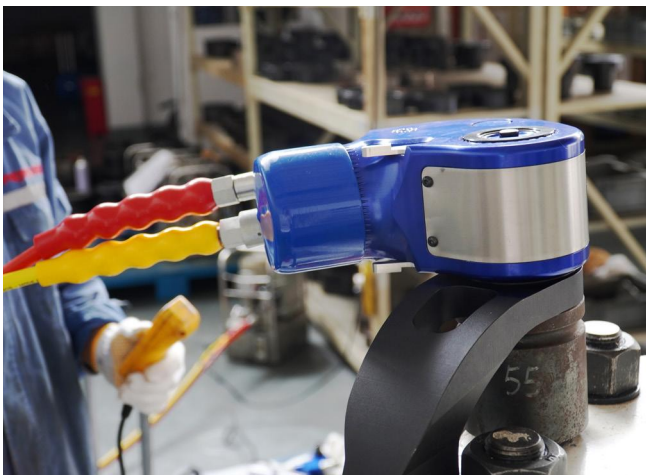
Coarse-toothed ratchet and pawl, 15 tooth, 24 ° each stroke.



360 °×180 ° hose swivel, no space constraint.

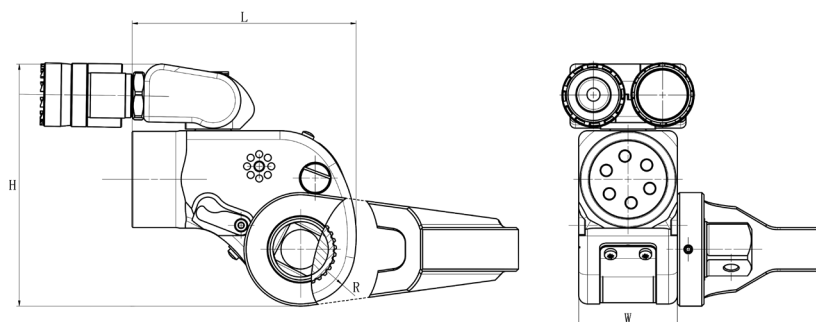
Spherical cooperated piston and drive arm, no eccentric load. High strength seal kit for long life and no leakage.

Reaction pawl prevents reverse movement.



Specification

Model	Square Drive Size (in)	Min.Torque (Nm)	Max.Torque (Nm)	Output Accuracy	Repeat Accuracy	Weight (Kg)
PMT-0.7	3/4	102	1022	±3%	2%	2.1
PMT-1	3/4	181	1816	±3%	2%	3.1
PMT-3	1	437	4377	±3%	2%	3.4
PMT-5	1-1/2	716	7165	±3%	2%	8.4
PMT-10	1-1/2	1561	15610	±3%	2%	11.3



Model	H(mm)	W(mm)	L(mm)	R(mm)
PMT-0.7	111	45.3	102.8	25
PMT-1	162	55	131	30
PMT-3	206	74	169	38
PMT-5	235	86	204	47
PMT-10	297	110	255	60

Coaxial Reaction Arm



Model	Suitable
PMT0.7-19	PMT0.7
PMT1-19	PMT1
PMT3-19	PMT3
PMT5-19	PMT5
PMT10-19	PMT10

Extended Coaxial Reaction Arm



Model	Suitable
PMT0.7-19L	PMT0.7
PMT1-19L	PMT1
PMT3-19L	PMT3
PMT5-19L	PMT5
PMT10-19L	PMT10

Standard Reaction Arm



Model	Suitable
PMT0.7.01	PMT0.7
PMT1.01	PMT1
PMT3.01	PMT3
PMT5.01	PMT5
PMT10.01	PMT10

PU Series Square Drive Hydraulic Torque Wrench



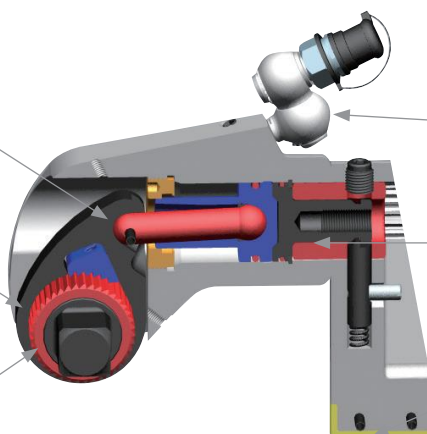
- ◉ Square drive made of high-strength alloy possesses long life
- ◉ No reaction pawl, the tools won't stuck
- ◉ 27 ° each stroke provides high performance and high speed
- ◉ Compact uni-body made of aviation material for high strength, light weight and high torque weight ratio
- ◉ Accuracy $\pm 3\%$
- ◉ Slim body design for easy operation in tight spaces
- ◉ Anti-corrosive treated surface, applicable for hash environments

Specification

Spherical cooperated piston and drive arm, no eccentric load.

Robust and durable uni-body drive plate reduces concentration of stress.

Fine-toothed ratchet increases contact surface by well distributed stress, which provides high accuracy.

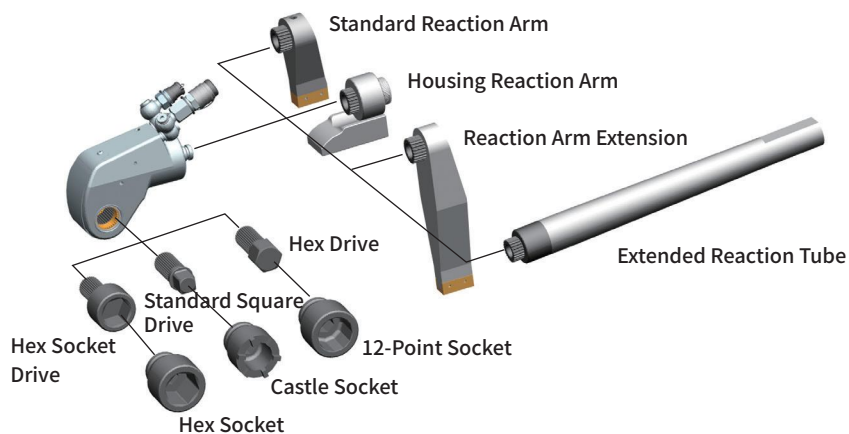


360 °×360 ° swivel can be connected to hoses in any direction, the split structure reduces maintenance cost.

Reaction arm connects to the housing with internal spline, which makes it uneasy to damage.

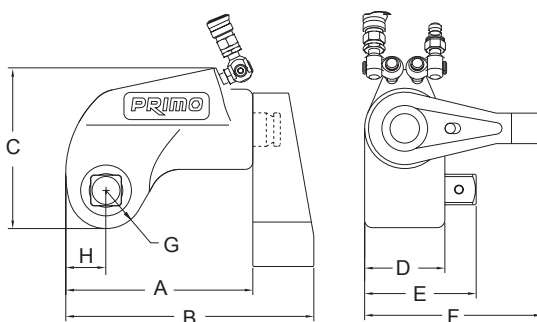
Reaction arm extension made of high hardness alloy material, which protects reaction arm efficiently.

Accessories



Specification

Model	Square Drive(in)	Metric Bolt	Min.Torqu (Nm)	Max.Torque (Nm)	Output Accuracy	Repeat Accuracy	Weight (Kg)
PU-2	3/4	M8-M30	181	1813	±3%	2%	2.1
PU-3	1	M16-M42	451	4514	±3%	2%	4.8
PU-5	1-1/2	M20-M48	733	7335	±3%	2%	7.2
PU-7	1-1/2	M22-M56	1050	10500	±3%	2%	9.3
PU-10	1-1/2	M42-M72	1481	14810	±3%	2%	13.8
PU-20	2-1/2	M48-M80	2715	27150	±3%	2%	28.1
PU-27	2-1/2	M52-M90	3745	37450	±3%	2%	31.8
PU-36	2-1/2	M64-M120	5160	51600	±3%	2%	43.7



Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
PU-2	128	167	108	51	71	117	26	28
PU-3	158	208	134	67	94	148	33	35
PU-5	190	250	163	82	128	180	40	43
PU-7	215	285	182	92	136	203	45	48
PU-10	240	316	205	103	159	228	51	54
PU-20	285	376	341	123	184	270	60	64
PU-27	323	425	265	134	193	302	66	74
PU-36	348	549	335	158	218	330	76	80



Wrench Haddle



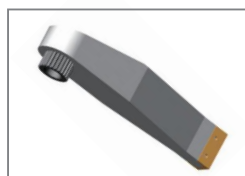
Model	Suitable
PH-1	PU-3 PU-5 PU-7 PU-10 PU-20

Extended Reaction Tube



Wrench Model	Parts Model	Length (mm)
PU-2	PU2-ALCO	457
PU-3	PU3-ALCO	533
PU-5	PU5-ALCO	558
PU-7	PU7-ALCO	575
PU-10	PU10-ALCO	597

Reaction Arm Extension



Wrench Model	Parts Model
PU-2	PU2-EX
PU-3	PU3-EX
PU-5	PU5-EX
PU-7	PU7-EX
PU-10	PU10-EX

Housing Reaction Arm



Wrench Model	Parts Model
PU-2	PU2-ARW
PU-3	PU3-ARW
PU-5	PU5-ARW
PU-7	PU7-ARW

PX Low Clearance Hydraulic Torque Wrench



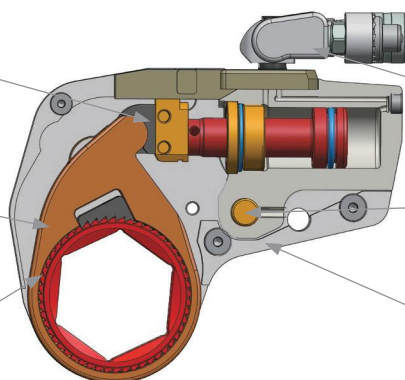
- ◉ High strength body, light weight and high torque ratio
- ◉ Floating piston connection with high strength
- ◉ Accuracy $\pm 3\%$
- ◉ Compact fillet radius for easy operation in narrow spaces
- ◉ 27° each stroke provides high performance and speed
- ◉ Fine tooth ratchet and pawl engagement for high torque accuracy

Specification

The power head is automatically connected to the hex link to avoid dislodging of the link.

Robust and durable uni-body drive plate reduces concentration of stress.

Fine-toothed ratchet increases contact surface by well distributed stress, which provides high accuracy.



$360^\circ \times 180^\circ$ swivel can be connected to hoses in any direction, the split structure reduces maintenance cost.

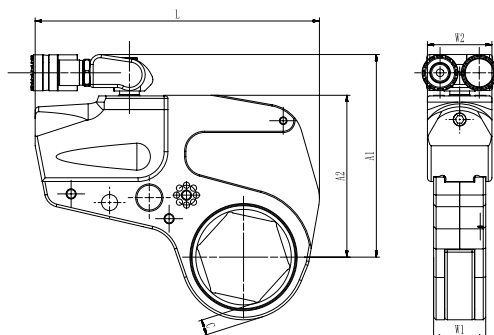
Solid single link pin makes symmetrical load of both side plates.

Coaxial Reaction arm, no bending torque.

PX Power Head

Model	Imperial Bolt (in)	Metric Bolt (mm)	Min.Torque (Nm)	Max.Torque (Nm)	Weight (Kg)	Output Accuracy	Repeat Accuracy
PX-2	1-1/4~2-3/8	32-60	281	2358	2.8	$\pm 3\%$	2%
PX-4	1-5/8~3-1/8	41-80	710	5930	5.7	$\pm 3\%$	2%
PX-8	2-3/8~3-7/8	60-100	1422	11402	10.3	$\pm 3\%$	2%
PX-16	2-3/4~4-5/8	70-115	2656	21612	16.9	$\pm 3\%$	2%
PX-32	3-1/8~6-1/8	80-155	4683	38075	35	$\pm 3\%$	2%

Model	L (mm)	A1 (mm)	A2 (mm)	The range of C (mm)	W1 (mm)	W2 (mm)
PX-2	193	137	104	9.6-15.1	33	43
PX-4	223	163	130	11.7-13.6	43	51
PX-8	264	196	158	14.4-24.1	53	69
PX-16	305	224	185	17.3-23.3	64	79
PX-32	391	277	239	24.5-30.8	81	107



PX Hex Link

Metric

PX-2		PX-4		PX-8		PX-16		PX-32	
Model	Hex Size A/F(mm)	Model	Hex Size A/F(mm)	Model	Hex Size A/F(mm)	Model	Hex Size A/F(mm)	Model	Hex Size A/F(mm)
PXL2-32	32	PXL4-41	41	PXL8-60	60	PXL16-70	70	PXL32-80	80
PXL2-36	36	PXL4-46	46	PXL8-65	65	PXL16-75	75	PXL32-85	85
PXL2-41	41	PXL4-50	50	PXL8-70	70	PXL16-80	80	PXL32-90	90
PXL2-46	46	PXL4-55	55	PXL8-75	75	PXL16-85	85	PXL32-95	95
PXL2-50	50	PXL4-60	60	PXL8-80	80	PXL16-90	90	PXL32-100	100
PXL2-55	55	PXL4-65	65	PXL8-85	85	PXL16-95	95	PXL32-105	105
PXL2-60	60	PXL4-70	70	PXL8-90	90	PXL16-100	100	PXL32-110	110
		PXL4-75	75	PXL8-95	95	PXL16-105	105	PXL32-115	115
		PXL4-80	80	PXL8-100	100	PXL16-110	110	PXL32-120	120
						PXL16-115	115	PXL32-130	130
								PXL32-145	145
								PXL32-150	150
								PXL32-155	155

Imperial

PX-2		PX-4		PX-8		PX-16		PX-32	
Model	Hex Size A/F(mm)	Model	Hex Size A/F(mm)	Model	Hex Size A/F(mm)	Model	Hex Size A/F(mm)	Model	Hex Size A/F(mm)
PXL2-1-1/4	1-1/4	PXL4-1-5/8	1-5/8	PXL8-2-3/8	2-3/8	PXL16-2-3/4	2-3/4	PXL32-3-1/8	3-1/8
PXL2-1-7/16	1-7/16	PXL4-1-3/16	1-3/16	PXL8-2-9/16	2-9/16	PXL16-2-15/16	2-15/16	PXL32-3-1/8	3-3/8
PXL2-1-5/8	1-5/8	PXL4-2	2	PXL8-2-3/4	2-3/4	PXL16-3-1/8	3-1/8	PXL32-3-1/2	3-1/2
PXL2-1-3/16	1-3/16	PXL4-2-3/16	2-3/16	PXL8-2-15/16	2-15/16	PXL16-3-3/8	3-3/8	PXL32-3-3/4	3-3/4
PXL2-2	2	PXL4-2-3/8	2-3/8	PXL8-3-1/8	3-1/8	PXL16-3-1/2	3-1/2	PXL32-3-7/8	3-7/8
PXL2-2-3/16	2-3/16	PXL4-2-9/16	2-9/16	PXL8-3-3/8	3-3/8	PXL16-3-3/4	3-3/4	PXL32-4-1/4	4-1/4
PXL2-2-3/8	2-3/8	PXL4-2-3/4	2-3/4	PXL8-3-1/2	3-1/2	PXL16-3-7/8	3-7/8	PXL32-4-5/8	4-5/8
		PXL4-2-15/16	2-15/16	PXL8-3-3/4	3-3/4	PXL16-4-1/4	4-1/4	PXL32-5	5
		PXL4-3-1/8	3-1/8	PXL8-3-7/8	3-7/8	PXL16-4-5/8	4-5/8	PXL32-5-3/8	5-3/8
								PXL32-5-3/4	5-3/4
								PXL32-6-1/8	6-1/8

How To Choose PX Low Clearance Hydraulic Wrench

1. Choosing PX power head according to the torque required by the application

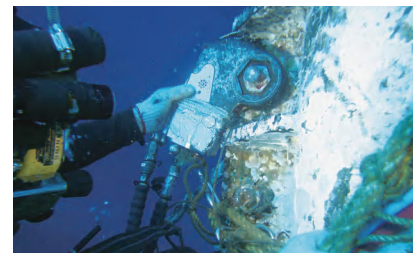


PX Power Head

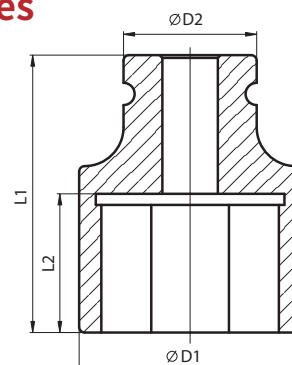
2. Choosing PXL hex link according to bolt nuts size required by the application



PXL Hex Link



Sockets For Square Drive Hydraulic Torque Wrenches



Made of Cr-Mo alloy, high strength, life-time warranty

Metric

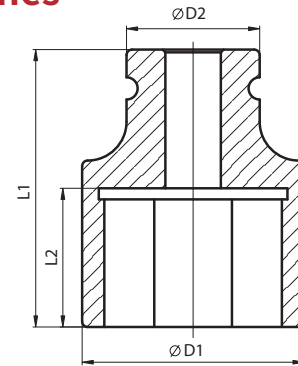
Model	Square Drive (in)	Bolt Size	Nut A/F (mm)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)
T20027	3/4	M18	27	54	32	42	42
T20030		M20	30	54	33	46	44
T20032		M22	32	54	32	48	44
T20036		M24	36	57	32	53	44
T20041		M27	41	58	33	60	44
T20046		M30	46	63	38	66	44
T20050		M33	50	65	40	71	44
T20055		M36	55	70	45	77	54
T25036	1	M24	36	62	32	59	59
T25041		M27	41	65	38	67	54
T25046		M30	46	65	38	74	54
T25050		M33	50	70	43	79	60
T25055		M36	55	80	52	84	60
T25060		M39	60	85	57	89	60
T25065		M42	65	85	58	98	70
T25070		M45	70	90	62	104	70
T25075		M48	75	95	65	108	70
T38046	1-1/2	M30	46	85	44	74	74
T38050		M33	50	90	45	79	79
T38055		M36	55	90	45	84	84
T38060		M39	60	100	45	94	94
T38065		M42	65	100	45	98	80
T38070		M45	70	105	50	104	80
T38075		M48	75	110	50	118	85
T38080		M52	80	115	55	118	90
T38085		M56	85	125	60	128	90
T38090		M60	90	125	60	139	90
T38095		M64	95	130	65	139	90
T38100		M68	100	135	70	144	90
T38105	2-1/2	M72	105	135	70	149	90
T38110		M76	110	135	70	158	90
T38115		M80	115	135	70	159	90
T38120		M85	120	135	70	168	95
T63065		M42	65	100	52	119	119
T63070		M45	70	120	67	128	128
T63075		M48	75	120	67	128	128
T63080		M52	80	130	71	128	128
T63085		M56	85	130	71	129	129
T63090		M60	90	140	73	139	139
T63095		M64	95	140	73	139	139
T63100		M68	100	140	81	148	130
T63105		M72	105	150	89	149	130
T63110		M76	110	150	90	158	130
T63115		M80	115	150	98	168	130
T63120		M85	120	150	98	178	130
T63130		M90	130	170	98	188	130
T63135		M95	135	170	114	198	130
T63145		M100	145	170	122	210	152
T63150		M105	150	190	140	216	152
T63155		M110	155	190	140	229	152

* We can provide extended sockets, thin-wall sockets. Please consult our sales engineer.

Sockets For Square Drive Hydraulic Torque Wrenches



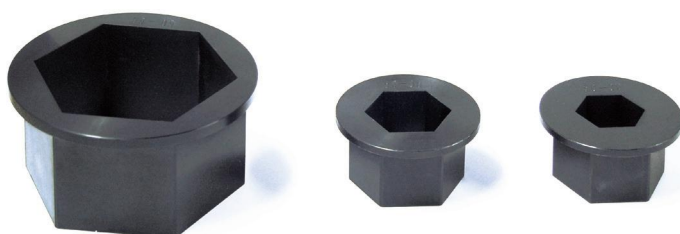
Made of Cr-Mo alloy, high strength, life-time warranty



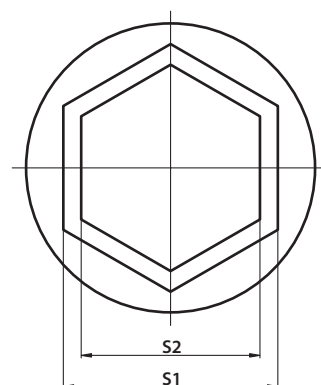
Imperial

Model	Square Drive (in)	Bolt Size (in)	Nut A/F (in)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)
T20214	3/4	1/2	7/8	54	32	42	42
T20217		5/8	1-1/16	54	33	46	44
T20220		3/4	1-1/4	54	32	48	44
T20223		7/8	1-7/16	57	32	53	44
T20226		1	1-5/8	58	33	60	44
T20229		1-1/8	1-13/16	63	38	66	44
T20232		1-1/4	2	65	40	71	44
T20235	1	1-3/8	2-3/16	70	45	77	54
T25223		7/8	1-7/16	62	32	59	59
T25226		1	1-5/8	65	38	67	54
T25229		1-1/8	1-13/16	65	38	74	54
T25232		1-1/4	2	70	43	79	60
T25235		1-3/8	2-3/16	80	52	84	60
T25238		1-1/2	2-3/8	85	57	89	60
T25241	1-1/2	1-5/8	2-9/16	85	58	98	70
T25244		1-3/4	2-3/4	90	62	104	70
T25247		1-7/8	2-15/16	95	65	108	70
T38229		1-1/8	1-13/16	85	44	74	74
T38232		1-1/4	2	90	45	79	79
T38235		1-3/8	2-3/16	90	45	84	84
T38238		1-1/2	2-3/8	100	45	94	94
T38241	2	1-5/8	2-9/16	100	45	98	80
T38244		1-3/4	2-3/4	105	50	104	80
T38247		1-7/8	2-15/16	110	50	118	85
T38250		2	3-1/8	115	55	118	90
T38256		2-1/4	3-1/2	125	60	139	90
T38259		2-3/8	3-11/16	130	65	139	90
T38262		2-1/2	3-7/8	135	70	144	90
T38268	2-1/2	2-3/4	4-1/4	135	70	158	90
T38274		3	4-5/8	135	70	168	95
T63241		1-5/8	2-9/16	100	52	119	119
T63244		1-3/4	2-3/4	120	67	128	128
T63247		1-7/8	2-15/16	120	67	128	128
T63250		2	3-1/8	130	71	128	128
T63256		2-1/4	3-1/2	140	73	139	139
T63259	3	2-3/8	3-11/16	140	73	139	139
T63262		2-1/2	3-7/8	140	81	148	130
T63268		2-3/4	4-1/4	150	90	158	130
T63274		3	4-5/8	150	98	178	130
T63280		3-1/4	5	170	98	188	130
T63286		3-1/2	5-3/8	170	122	210	152
T63292		3-3/4	5-3/4	190	140	229	152

Hex Reducers For Low Clearance Hydraulic Torque Wrenches



Made of Cr-Mo alloy, extend the application of wrench

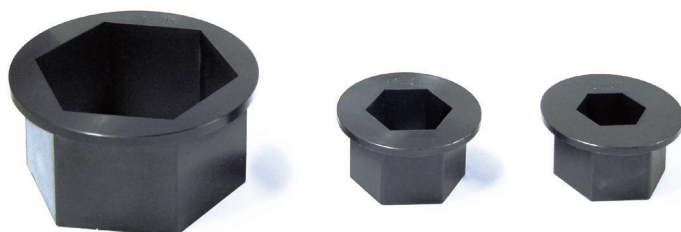


Metric

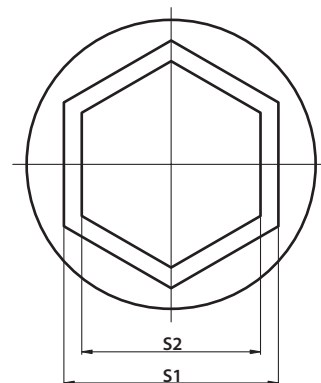
Model	Model For PMX Wrenches	Model&Specification For Hex Reducer					
		Model	S1/S2(mm)	Model	S1/S2(mm)	Model	S1/S2(mm)
PMXL2-60	PMX-2	C26050	60/50	C26046	60/46	C26041	60/41
PMXL2-55		C25546	55/46	C25541	55/41	C25536	55/36
PMXL2-50		C25041	50/41	C25036	50/36	C25032	50/32
PMXL2-46		C24636	46/36	C24632	46/32	C24630	46/30
PMXL4-80	PMX-4	C48070	80/70	C48065	80/65	C48060	80/60
PMXL4-75		C47565	75/65	C47560	75/60	C47555	75/55
PMXL4-70		C47060	70/60	C47055	70/55	C47050	70/50
PMXL4-65		C46555	65/55	C46550	65/50	C46546	65/46
PMXL4-60		C46050	60/50	C46046	60/46	C46041	60/41
PMXL4-55	PMX-8	C45546	55/46	C45541	55/41	C45536	55/36
PMXL8-105		C810595	105/95	C810590	105/90	C810585	105/85
PMXL8-95		C89585	95/85	C89580	95/80	C89575	95/75
PMXL8-90		C89080	90/80	C89075	90/75	C89070	90/70
PMXL8-85		C88575	85/75	C88570	85/70	C88565	85/65
PMXL8-80		C88070	80/70	C88065	80/65	C88060	80/60
PMXL8-75	PMX-14	C87565	75/65	C87560	75/60	C87555	75/55
PMXL14-115		C14115105	115/105	C14115100	115/100	C1411595	115/95
PMXL14-110		C14110100	110/100	C1411095	110/95	C1411090	110/90
PMXL14-105		C1410595	105/95	C1410590	105/90	C1410585	105/85
PMXL14-95		C149585	95/85	C149580	95/80	C149575	95/75
PMXL14-90		C149080	90/80	C149075	90/75	C149070	90/70
PMXL14-85	PMX-30	C148575	85/75	C148570	85/70	C148565	85/65
PMXL30-155		C30155145	155/145	C30155130	155/130	C30155120	155/120
PMXL30-145		C30145130	145/130	C30145120	145/120	C30145115	145/115
PMXL30-130		C30130120	130/120	C30130115	130/115	C30130110	130/110
PMXL30-120		C30120110	120/110	C30120105	120/105	C30120100	120/100
PMXL30-115	PMX-30	C30115105	115/105	C30115100	115/100	C3011595	115/95

* We can provide metric Hex reducer,for special Hex reducer please consult our sales engineer.

Hex Reducers for Low Clearance Hydraulic Torque Wrenches



Made of Cr-Mo alloy, extend the application of wrench



Imperial

Model	Model For PMX Wrenches	Model&Specification For Hex Reducer					
		Model	S1 – S2 (in)	Model	S1 – S2 (in)	Model	S1 – S2 (in)
PMXL2-2- 3/8	PMX-2	C23832	2-3/8 / 2	C23829	2-3/8 / 1-13/16	C23826	2-3/8 / 1-5/8
PMXL2-2-3/16		C23529	2-3/16 / 1-13/16	C23526	2-3/16 / 1-5/8	C23523	2-3/16 / 1-7/16
PMXL2-2		C23226	2 / 1-5/8	C23223	2 / 1-7/16	C23220	2 / 1-1/4
PMXL2-1-13/16		C22923	1-13/16 / 1-7/16	C22920	1-13/16 / 1-1/4	C22917	1-13/16 / 1-1/16
PMXL4-3-1/8	PMX-4	C45044	3-1/8 / 2-3/4	C45041	3-1/8 / 2-9/16	C45038	3-1/8 / 2-3/8
PMXL4-2-15/16		C44741	2-15/16 / 2-9/16	C44738	2-15/16 / 2-3/8	C44735	2-15/16 / 2-3/16
PMXL4-2-3/4		C44438	2-3/4 / 2-3/8	C44435	2-3/4 / 2-3/16	C44432	2-3/4 / 2
PMXL4-2-9/16		C44135	2-9/16 / 2-3/16	C44132	2-9/16 / 2	C44129	2-9/16 / 1-13/16
PMXL4-2-3/8		C43832	2-3/8 / 2	C43829	2-3/8 / 1-13/16	C43826	2-3/8 / 1-5/8
PMXL4-2-3/16		C43529	2-3/16 / 1-13/16	C43526	2-3/16 / 1-5/8	C43523	2-3/16 / 1-7/16
PMXL8-3-11/16	PMX-8	C85950	3-11/16 / 3-1/8	C85947	3-11/16 / 2-15/16	C85944	3-11/16 / 2-3/4
PMXL8-3-1/2		C85650	3-1/2 / 3-1/8	C85647	3-1/2 / 2-15/16	C85644	3-1/2 / 2-3/4
PMXL8-3-1/8		C85044	3-1/8 / 2-3/4	C85041	3-1/8 / 2-9/16	C85038	3-1/8 / 2-3/8
PMXL8-2-15/16		C84741	2-15/16 / 2-9/16	C84738	3-1/8 / 2-3/8	C84735	3-1/8 / 2-3/16
PMXL8-2-3/4		C84438	2-3/4 / 2-3/8	C84435	2-3/4 / 2-3/16	C84432	2-3/4 / 2
PMXL14-4-5/8	PMX-14	C147468	4-5/8 / 4-1/4	C147462	4-5/8 / 3-7/8	C147459	4-5/8 / 3-11/16
PMXL14-4-1/4		C146862	4-1/4 / 3-7/8	C146859	4-1/4 / 3-11/16	C146856	4-1/4 / 3-1/2
PMXL14-3-7/8		C146256	3-7/8 / 3-1/2	C146250	3-7/8 / 3-1/8	C146247	3-7/8 / 2-15/16
PMXL14-3-11/16		C145950	3-11/16 / 3-1/8	C145947	3-11/16 / 2-15/16	C145944	3-11/16 / 2-3/4
PMXL14-3-1/2		C145650	3-1/2 / 3-1/8	C145647	3-1/2 / 2-15/16	C145644	3-1/2 / 2-3/4
PMXL14-3-1/8		C145044	3-1/8 / 2-3/4	C145041	3-1/8 / 2-9/16	C145038	3-1/8 / 2-3/8
PMXL30-5-3/4	PMX-30	C309286	5-3/4 / 5-3/8	C309280	5-3/4 / 5	C309274	5-3/4 / 4-5/8
PMXL30-5-3/8		C308680	5-3/8 / 5	C308674	5-3/8 / 4-5/8	C308668	5-3/8 / 4-1/4
PMXL30-5		C308074	5 / 4-5/8	C308068	5 / 4-1/4	C308062	5 / 3-7/8
PMXL30-4-5/8		C307468	4-5/8 / 4-1/4	C307462	4-5/8 / 3-7/8	C307459	4-5/8 / 3-11/16
PMXL30-4-1/4		C306862	4-1/4 / 3-7/8	C306859	4-1/4 / 3-11/16	C306856	4-1/4 / 3-1/2

Electric-Hydraulic Pump

FAST 3-STAGE PUMP DESIGN, COMPACT AND LIGHTWEIGHT

1.1KW brushless motor starts up softly with no impact to ensure long time endurance.

Powerful oil cooler starts up automatically when oil temperature is up to 35 °c, making sure continuous operation.

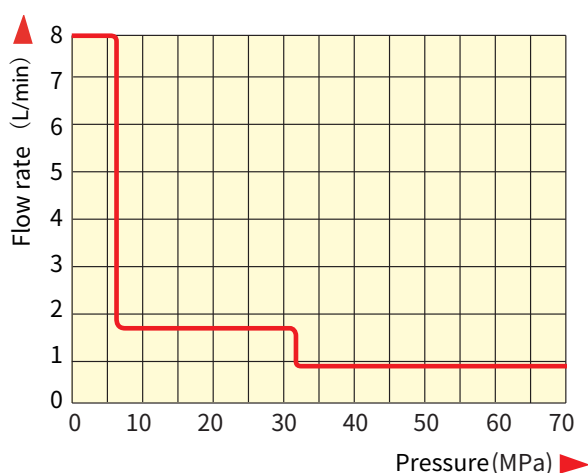
Cartridge pressure regulator is easy to maintain.



Comfortable and durable ergonomic remote pendant.

Electric cabinet with radiator to protect the circuit board from over heating. Automatically shut down in 30s when no operation. Auto pressure relief, electric motor overload protection and alarm.

Solenoid pilot valve can quickly reverse, release pressure when shut down, equipped with startup capacitance to ensure startup with pressure.



PE8042A Electric-Hydraulic Pump Flow/Pressure Chart

- ◉ Advanced 3 stage flow design
- ◉ Powerful startup, can be started at any time under pressure
- ◉ High-power brushless electric motor, maintenance-free
- ◉ Small and lightweight, easy to carry
- ◉ Capable of multi-synchronous operation
- ◉ Large flow with high speed
- ◉ One pair of quick connectors is available for standard configuration. Please specify in the order for two or four pairs of quick connectors
- ◉ Solid aluminum alloy electrical box

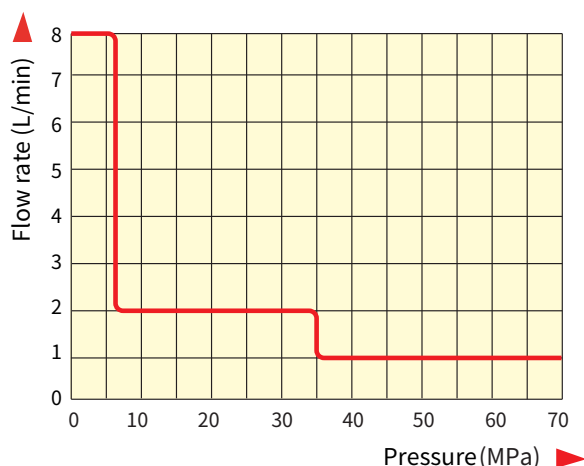
Model	Reservoir Capacity (L)	Motor Size (KW)	Supply	Output Flow (L/min)	Max.Working Pressure (MPa)	Size(mm) A×B×C×D	Control Line (m)	Weight (kg)	Port No.	Auto Heat
PE8042A1	7.6	1.1	220V/50Hz/ single-phase	8.0@0-6.5MPa, 1.8@6.5-32MPa, 0.85@32-70MPa	70	375×300×410×155	6	25	2	/
PE8042A2									2	Yes
PE8042A3									4	/
PE8042A4									4	Yes

High Performance Electric-Hydraulic Pump

1.5KW MOTOR, POWERFUL AND COMPACT



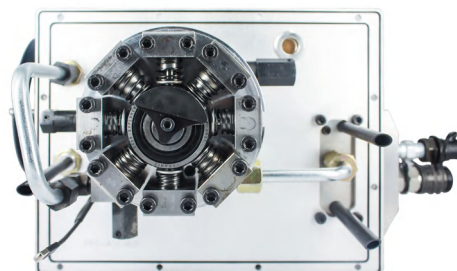
- ◉ 1.5KW brushless AC motor, high power design, maintenance-free, long life
- ◉ For large size wrench to tighten the bolt quickly, can work continuously for a long time
- ◉ Advanced three-stage flow design, medium and high pressure flow is bigger and faster
- ◉ Strong start-up, can be started at any time under pressure
- ◉ Compact motor size, smaller profile, light weight, easy to carry
- ◉ Multi-tools operation is possible
- ◉ Aluminum alloy electrical box, sturdy and non-cracking
- ◉ Chip control, automatic shutdown for 30 seconds without operation, automatic pressure relief, motor overload protection and alarm
- ◉ One pair of quick coupling as standard, please specify for 2 pairs or 4 pairs of quick couplings in the order



PE9042A High Performance Electric-Hydraulic Pump
Flow Chart



Integral pump head oil circuit system, compact and leak-free



8-plunger, three-stage flowexcellent pressure/flow curve

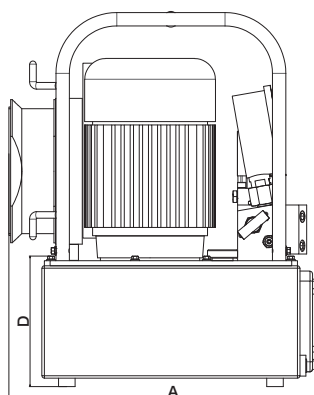
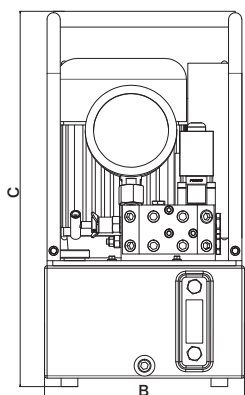
Model	Reservoir Capacity (L)	Motor Size (KW)	Supply	Output Flow (L/min)	Max.Working Pressure (MPa)	Size(mm) A×B×C×D	Control Line (m)	Weight (kg)	Port No.	Auto Heat
PE9042A1	7.6	1.5	220V/50Hz/ single-phase	8.0@0-6.5MPa, 2.0@6.5-32MPa, 1.0@32-70MPa	70	375×300×410×155	6	25	2	/
PE9042A2									2	Yes
PE9042A3									4	/
PE9042A4									4	Yes

Digital Controlled Hydraulic Pump

PROGRAM CONTROLLED AUTO-CYCLE PUMP



- The digital pressure gauge with built-in chip controls the reversing valve
- Program controlled quick reversing of different pressure output
- High speed and high efficiency, more than 50% efficiency improvement than regular automated pumps
- One button operation, only press one button to finish the tightening and loosening job
- High-power brushless electric motor, maintenance-free
- Powerful oil cooler starts up automatically when oil temperature is up to 35 °C, making sure continuous operation
- Manual or auto-cycle model can be shifted by needs, convenient for operation
- One pair of quick connectors is available for standard configuration. Please specify in the order for two or four pairs of quick connectors
- Solid aluminum alloy electrical box



Solenoid pilot valve,
anti-wear and no leak



Precise pistons, service life
up to 50,000 hours

Model	Reservoir Capacity (L)	Motor Size (KW)	Supply	Output Flow (L/min)	Max. Working Pressure (MPa)	Size (mm) A × B × C × D	Control Line (m)	Weight (kg)	Port No.	Auto Heat
PE8042K1	7.6	1.1	220V/50Hz/ single-phase	8.0@0-6.5MPa, 1.8@6.5-32MPa, 0.85@32-70MPa	70	375×300×410×155	6	25	2	/
PE8042K2									2	Yes
PE8042K3									4	/
PE8042K4									4	Yes

Explosion Proof Electric-Hydraulic Pump



PEX14042P

- ◉ EX d II BT4 three-phase motor applicable to explosion proof environment. Large torque output and high efficiency
- ◉ Electric control system adopts EXd II BT4 explosion proof electromagnetic starter
- ◉ Advanced three stage flow with different flow and transmission torque to achieve the best match
- ◉ Manual reversing valve, easy to operate
- ◉ One pair quick coupling for standard configuration
- ◉ Please specify in the order for two or four pairs of quick couplings



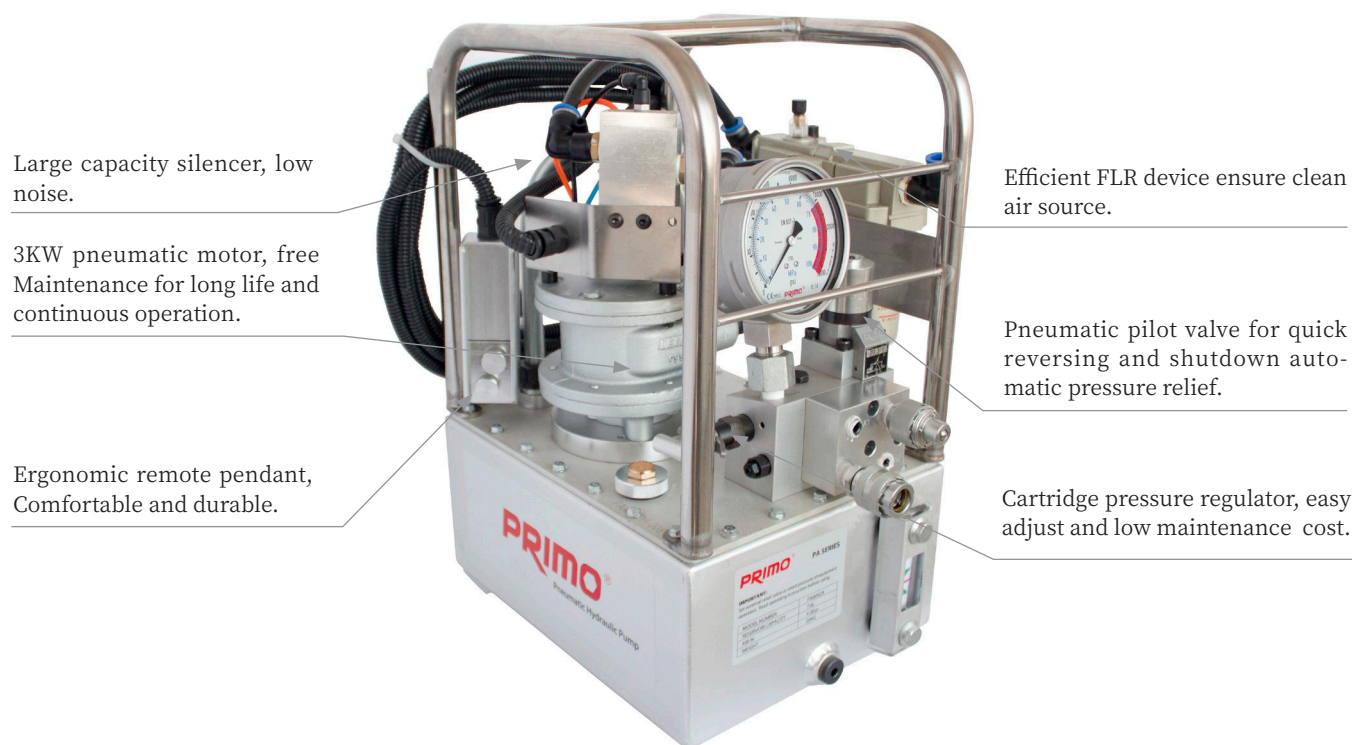
PEX14042Q (With remote control pendant)



Model	Reservoir Capacity (L)	Motor Size (KW)	Supply	Output Flow (L/min)	Max.Working Pressure (MPa)	Size(mm) A×B×C	Weight (kg)	Port No.
PEX14042P1	14	1.1	380V/50Hz/three-phase	8.0@0-6.5MPa, 1.8@6.5-32MPa, 0.85@32-70MPa	70	475×335×620	55	2
PEX14042P3								4
PEX14042Q1	14	1.1	220V/50Hz/three-phase	8.0@0-6.5MPa, 1.8@6.5-32MPa, 0.85@32-70MPa	70	475×335×620	55	2
PEX14042Q3			or 380V/50Hz/three-phase					4

Pneumatic-Hydraulic Pump

EXPLOSION-PROOF, LIGHT WEIGHT



- Powered by air, explosion proof, safe, no warming up, can operate continuously
- External release valve to protect the pump
- Operate up to 4 hydraulic torque wrenches simultaneously by multi-port manifold
- Large flow, high speed, light weight
- One pair quick coupling for standard configuration
Please specify in the order for two or four pairs of quick couplings



Aluminum explosion proof pendant, durable and reliable



Solenoid pilot valve, anti-wear and no leakage

Model	Reservoir Capacity (L)	Motor Size (KW)	Air Source	Output Flow (L/min)	Max. Working Pressure (MPa)	Size (mm) A × B × C × D	Standard Control Line (m)	Weight (kg)	Port No.
PA8042A1	7.6	3	Pressure: 0.5-0.7MPa Air Consumption: 2.2 m ³ /min	8.0@0-6.5MPa, 1.8@6.5-32MPa, 0.85@32-70MPa	70	281×428×445×155	6	21	2
PA8042A3									4

Intelligent Hydraulic Pump

DUAL PURPOSE FOR HYDRAULIC WRENCH AND BOLT TENSIONER



- ◉ Double closed-loop controlled to achieve pressure and torque controlled precisely, pressure control accuracy of 1%, torque control accuracy of 2%
- ◉ Double working mode, can be worked with hydraulic wrench or tensioner intelligently, run up to 4 tensioner simultaneously
- ◉ Digital parameter setting. The hydraulic wrench and tensioner model, parameters, the target pressure and torque can be preset
- ◉ Constantly collect hydraulic pressure and torque data. Record working data such as load and torque for each bolt
- ◉ Can be used as a single pump, but also can be connected with robot integrated system to achieve automatic bolt tightening operation
- ◉ Can be achieve batch recording and uploading of work data, long distance fault diagnosis and maintenance with smart hand held terminals
- ◉ Intelligent control servo motor speed, energy-saving and noise reduction, reduce wear and tear, extend product life
- ◉ Automatic fault detection and alarm, automatic oil level detection and alarm

Model	Reservoir Capacity (L)	Motor Size (KW)	Supply	Output Flow (L/min)	Max. Working Pressure (MPa)	Size(mm) A×B×C	Control Line (m)	Weight (kg)
PES01A	20	1.5	220V/50Hz/ single phase	1.1@70MPa	70	700×430×670	6	58



Dual-Motor Hydraulic Pump

ULTRA LARGE FLOW, ULTRA HIGH SPEED

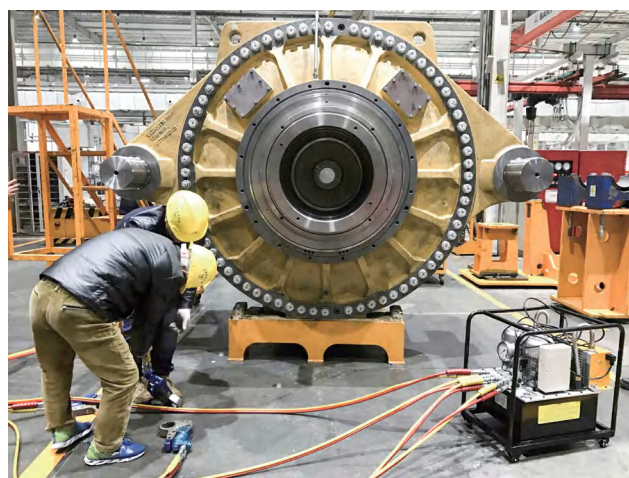
- ◉ Unique powered by double motor, high efficiency, high speed, compact
- ◉ AC motor, brushless, free maintenance, long life
- ◉ Powerful radiator can auto run when oil temperature reach 35 °c, suitable for continuous operation
- ◉ Runs up to 4 hydraulic torque wrenches simultaneously by multi-port manifold. Suitable for high load work in workshop
- ◉ Optional wheel, easy to move



Aluminum alloy electric control box with fin cooling, built-in circuit board



Ergonomic remote pendant, comfortable, durable



Model	Reservoir Capacity (L)	Motor Size (KW)	Supply	Output Flow (L/min)	Max.Working Pressure (MPa)	Size(mm) A×B×C×D	Control Line (m)	Weight (kg)	Port No.	Auto Heat
PE16042A1	20	1.1×2	220V/50Hz/ single-phase	16.0@0-6.5MPa, 3.6@6.5-32MPa, 1.7@32-70MPa	70	400×350×400×155	6	45	2	/
PE16042A2									2	yes
PE16042A3									4	/
PE16042A4									4	yes

Hydraulic Motor Pump

Powerful oil cooler start up automatically when oil temperature up to 35 °c, make sure continuous operation.

Ergonomic remote pendant, comfortable and durable.



pointer pressure gauge, easy to operate, durable.

Solenoid pilot valve can quick reversing, self-relief when shut down, equipped with startup capacitance to ensure startup with pressure.

Cartridge pressure regulator is easy to adjust and maintenance.

- Hydraulic wrench special pump, using integrated assembly, compact structure
- With hydraulic motor as the power source, no power supply needed, suitable for hydraulic energy without power operating occasions
- Remote control pendant for safety and easy operation
- Easy to set target pressure, capable of pressure retention
- Small size, light weight, simple structure
- Supply both high and low oil pressure, large output
- High performance oil cooler to ensure continuous work
- Safety protection function, pump station automatic stop when abrupt pressure loss



Hydraulic motor



Ergonomic remote pendant, comfortable, durable

Model	Reservoir Capacity (L)	Motor Size (KW)	Supply	Output Flow (L/min)	Max.Working Pressure (MPa)	Size(mm) A×B×C×D	Control Line(m)	Weight (kg)
PY8042	7	1.1	DC24V/3A	8.0@0-6.5MPa, 1.8@6.5-32MPa, 0.85@32-70MPa	70	375×300×410×155	6	18

Note: It can be customized according to other DC power supplies.

High Pressure Double Action Test Pump



- ◉ Intelligent control board, equipped with industrial PAD, touch type man-machine interaction
- ◉ Highly automated, high precision
- ◉ Remote control pendant, safe and easy to operate
- ◉ Use servo motor to provide stable high pressure flow
- ◉ High pressure safety valve is provided
- ◉ Equipped with powerful radiator, make sure continuous working
- ◉ Equipped with the intelligent control software of the hydraulic pump station, you can choose the pressure mold to set the pressure and pressure holding time within the effective range

Model	Reservoir Capacity (L)	Motor Size (KW)	Power Supply	Flow Rate (L/min)	Max. Working Pressure (Mpa)	Size (mm) A×B×C	Control Line (m)	Weight (kg)
PES2	18	1.8	220V/50HZ/ single-phase	2.2@5MPa 0.2@70MPa	70	700×430×670	6	42

Extra High Pressure Single Action Test Pump



- ◉ Intelligent control board, equipped with industrial PAD, touch type man-machine interaction
- ◉ Highly automated, high precision
- ◉ Remote control pendant, safe and easy to operate
- ◉ Easy to set target pressure, with a pressure-holding function
- ◉ Use servo motor to provide stable high pressure flow
- ◉ Provides oil for both high and low pressure pumps, can obtain a large output flow
- ◉ Equipped with powerful radiator, make sure continuous working
- ◉ Capable of safety protection, pump station automatic stop when hydraulic system instantaneous pressure loss, to avoid the deformation

Model	Reservoir Capacity (L)	Motor Size (KW)	Power Supply	Flow Rate (L/min)	Max. Working Pressure (Mpa)	Size (mm) A×B×C	Control Line (m)	Weight (kg)
PES3	18	1.8	220V/50HZ/ Single-phase	2.2@5MPa 0.2@150MPa	150	700×430×670	6	40

Quick Couplings

Photo							
Model	MMC04	FMC04	MFC04	FFC04	S1161402	S1161452	S1166402
Connector Size(in)	1/4NPT(M)	1/4NPT(F)	1/4NPT(M)	1/4NPT(F)	1/4NPT(F)	1/4NPT(F)	1/4NPT(M)
Description	Screw type male coupling with anti-loose teeth	Screw type female coupling with anti-loose teeth	Screw type male coupling with anti-loose teeth	Screw type female coupling with anti-loose teeth	Snap type female coupling	Snap type female coupling	Snap type male coupling
Max.Working Pressure (MPa)	70				80		

Torque Wrench Hoses



Model	Length (m)	Working Pressure (MPa)	Type
PH15-0	4.5	Max. working pressure 70MPa, Explosion pressure 280MPa, Safety factor 4, Hose end thread 1/4NPT	No quick coupling
PH15-1			Thread type coupling at each hose end
PH15-2			Plug type coupling at each hose end
PH20-0	6.0		No quick coupling
PH20-1			Thread type coupling at each hose end
PH20-2			Plug type coupling at each hose end
PH30-0	9.0		No quick coupling
PH30-1			Thread type coupling at each hose end
PH30-2			Plug type coupling at each hose end
PH40-0	12.0		No quick coupling
PH40-1			Thread type coupling at each hose end
PH40-2			Plug type coupling at each hose end
PH50-0	15.0		No quick coupling
PH50-1			Thread type coupling at each hose end
PH50-2			Plug type coupling at each hose end

Adapters

Photo		
Model	F15	F16
Connector Size(in)	1/4 NPT(M)	1/4 NPT(F)
Description	Male to Male	Female to Female
Nut OD (mm)	11	

Hydraulic Oil



- ◎ Grade: 46#/32# antiwear hydraulic oil
- ◎ Brand: Exxon-Mobil, Shell
- ◎ Storage: 5L
- Note: Don't fill too much to prevent oil spill over the tank cover
- ◎ Life: 500hours

Pressure Gauge

Model	Description	Connector Size(mm)	Display Unit, Pressure Range	Size(mm)
G100N		M20×1.5	MPa/psi/Lb · ft/kgf/cm ² , 0-100MPa	100
G160N			MPa/psi/Lb · ft/kgf/cm ² , 0-160MPa	
G200N			MPa/psi/Lb · ft/kgf/cm ² , 0-200MPa	
G100P		M20×1.5	MPa/psi, 0-100MPa	100
G160P			MPa/psi, 0-160MPa	
G250P			MPa/psi, 0-250MPa	

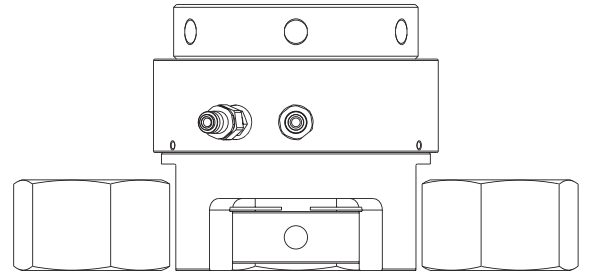
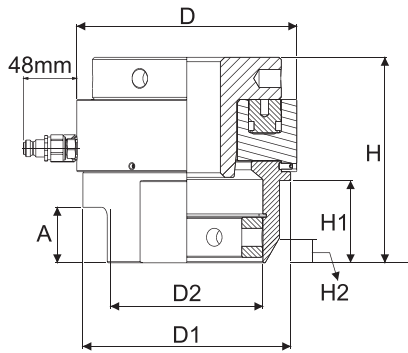
PWT Hydraulic Bolt Tensioner



- ◉ Made of high strength steel, solid and reliable
- ◉ High quality seal kit ensures no leakage
- ◉ Applicable of all international flange standards
- ◉ Over stroke safety device
- ◉ Easy operation and maintenance
- ◉ Output accuracy $\pm 2\%$, repeatable accuracy 2%



Model	Bolting Size		Max. Load (KN)	Hyd. Area (mm ²)	Stroke (mm)	Weight (kg)
	Metric (mm)	Imperia (in)				
PWT1	M20	3/4"-10	300	2000	8	3
	M22	7/8"-9				
	M24	1"-8				
	M27					
PWT2	M27	1"-8	525	3500	8	4.8
	M30	1-1/8"-7				
	M33	1-1/4"-7				
	M36	1-3/8"-6				
PWT3	M36	1-3/8"-6	750	5000	8	7.5
	M39	1-1/2"-6				
	M42	1-3/4"-5				
	M45					
PWT4	M42	1-1/2"-6	900	6000	8	11
	M45	1-3/4"-5				
	M48	2"-4-1/2				
	M52					
PWT5	M45	1-3/4"-5	1350	9000	8	17.3
	M48	2"-4-1/2				
	M52	2-1/4"-4-1/2				
	M56					
	M60					
PWT6	M60	2-1/2"-4	1950	13000	8	25
	M64	2-3/4"-4				
	M68					
	M72					
	M76					
PWT7	M72	2-3/4"-4	2400	16000	10	33
	M76	3"-4				
	M80					
PWT8	M80	3-1/4"-4	3000	20000	10	39
	M85	3-1/2"-4				
	M90	3-3/4"-4				
	M95					
	M100					
PWT9	M100	3-3/4"-4	3750	25000	10	56
	M110	4"-4				
	M120	4-1/4"-4				
	M125	4-1/2"-4				
		4-3/4"-4				
PWT10	M125	5"-4	4650	31000	10	77
	M130	5-1/4"-4				
	M140	5-1/2"-4				
	M150	5-3/4"-4				



Model	Metric Type Model	D (mm)	H (mm)	H1 (mm)	H2 (mm)	D1 (mm)	D2 (mm)	A (mm)	C (mm)
PWT1	PWT1-M20 PWT1-M22 PWT1-M24 PWT1-M27	86	105	25	5.2	74	56	26	66
PWT2	PWT2-M27 PWT2-M30 PWT2-M33 PWT2-M36	109	116	35	5.2	97	73	31	83
PWT3	PWT3-M36 PWT3-M39 PWT3-M42 PWT3-M45	128	128	45	10.4	116	90	38	100
PWT4	PWT4-M42 PWT4-M45 PWT4-M48 PWT4-M52	144	140	54	10.4	133	102	40	118
PWT5	PWT5-M45 PWT5-M48 PWT5-M52 PWT5-M56 PWT5-M60	170	154	59	13.9	154	114	42	134
PWT6	PWT6-M60 PWT6-M64 PWT6-M68 PWT6-M72 PWT6-M76	198	185	74	22.5	187	137	50	167
PWT7	PWT7-M72 PWT7-M76 PWT7-M80	220	190	74	22.5	203	145	50	175
PWT8	PWT8-M80 PWT8-M85 PWT8-M90 PWT8-M95 PWT8-M100	244	203	97	22.5	232	180	60	210
PWT9	PWT9-M100 PWT9-M110 PWT9-M120 PWT9-M125	300	235	131	22.5	272	223	73	253
PWT10	PWT10-M125 PWT10-M130 PWT10-M140 PWT10-M150	340	268	156	32.5	313	260	86	293

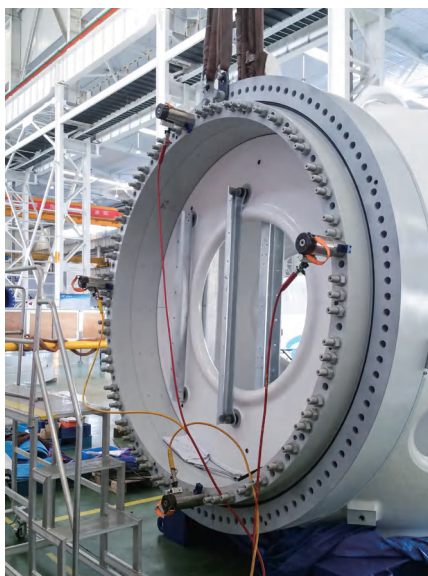
PDT Hydraulic Bolt Tensioner



- ◉ Working pressure 135MPa
- ◉ Fast, simple, accurate, reliable, it is the ideal bolting tools for wind turbine
- ◉ Suitable for tight spaces
- ◉ Small, compact, large load
- ◉ Durable composite material seal kit
- ◉ Clear over stroke alarming mark
- ◉ Optional counter, to display the tensioner operation times
- ◉ The bridge height can be customized according to the customer's site conditions
- ◉ Output accuracy $\pm 2\%$, repeatable accuracy 2%

Specification

Model	Bolt Size		Min.Thread Length (mm)	Max.Thread Length (mm)	Stroke (mm)	Bolt Distance (mm)	Max. Load (KN)	Outside Diameter (mm)	Min. Height (mm)
	Metric (mm)	Imperia (in)							
PDT-M30	M30	1-1/8	62	69	7	66	461	75	276
PDT-M33	M33	1-1/4	66	73	9	72	550	82	295
PDT-M36	M36	1-3/8	75	82	9	77	658	88.5	326
PDT-M39	M39	1-1/2	78	88	10	83	804	98	360
PDT-M42	M42	1-5/8	83	91	10	89	923	101	357
PDT-M45	M45	1-3/4	87	96	10	96	1091	105	371
PDT-M48	M48	1-7/8	93	102	10	102	1220	115	387
PDT-M52	M52	2	100	110	10	107	1655	129	428
PDT-M56	M56	2-1/4	108	119	10	120	1984	138	452



PGT Hydraulic Bolt Tensioner



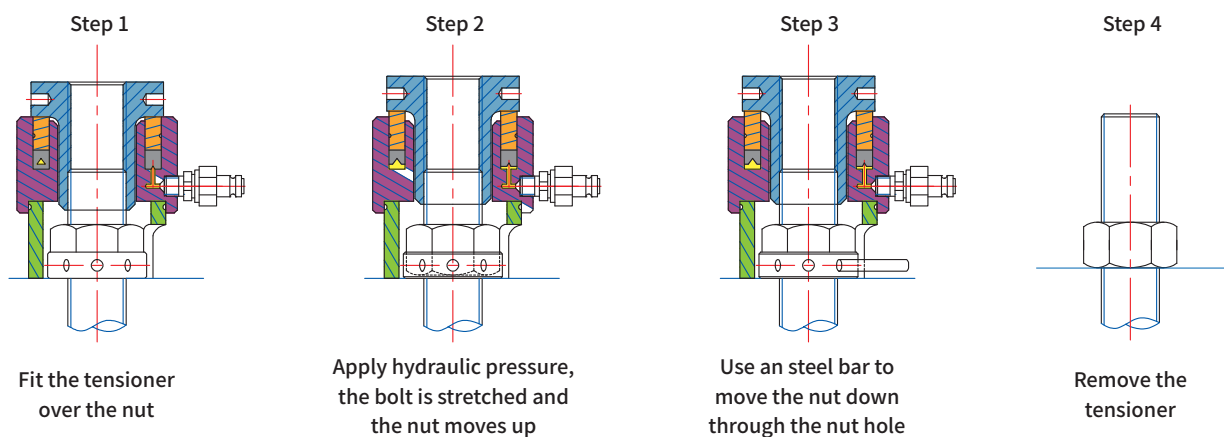
- Compact, large output
- With gearbox for quick locking nut
- Built-in safety protection device
- Durable composite material seal kit
- The bridge height can be customized according to the customer's site conditions
- Output accuracy $\pm 2\%$, repeatable accuracy 2%



Specification

Model	Bolt Size		Min.Thread Length (mm)	Max.Thread Length (mm)	Stroke (mm)	Bolt Distance (mm)	Max.Load (KN)	Outside Diameter (mm)	Min.Height (mm)
	Metric (mm)	Imperial (in)							
PGT-M30	M30	1-1/8	62	69	10	70	460	97	200
PGT-M33	M33	1-1/4	66	73	10	76	570	106	209
PGT-M36	M36	1-3/8	75	82	10	82	670	117	234
PGT-M39	M39	1-1/2	78	88	10	90	800	125	226
PGT-M42	M42	1-5/8	83	91	10	94	920	134	234
PGT-M45	M45	1-3/4	87	96	10	96	1080	148	243
PGT-M48	M48	1-7/8	93	102	10	102	1220	158	273
PGT-M52	M52	2	102	114	10	107	1450	170	277
PGT-M56	M56	2-1/4	108	123	10	115	1680	181	304

Bolt tensioner locking steps



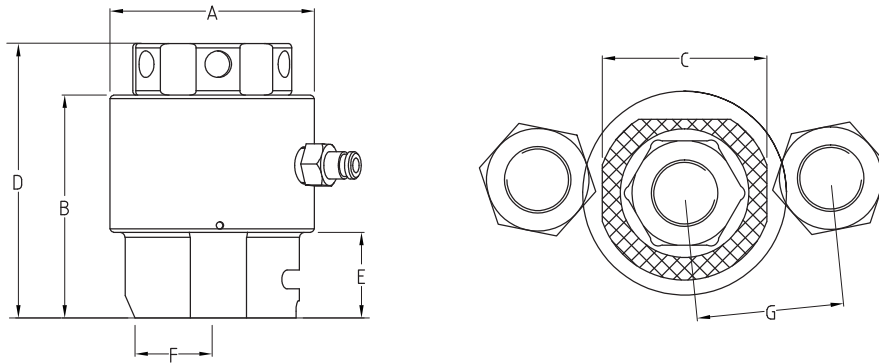
PIT Hydraulic Bolt Tensioner



- Working pressure 150MPa
- Unique seal design allows for piston and cylinder misalignment compensation
- Piston stroke of PIT1 is 8mm, for other model it is 10mm
- Built-in stroke limit valve prevents over stroke
- Fully enclosed bridge to prevent debris from entering the tensioner body
- Spring return, strong and fast, ensure safe return
- Output accuracy $\pm 2\%$, repeatable accuracy 2%

Model	Tensioner Model	Max. Load (KN)	Hyd.Area (mm ²)	Weight(kg)
PIT1	PIT1-M20 PIT1-M22	160	1067	1.4
PIT2	PIT2-M24 PIT2-M27	280	1867	2.7
PIT3	PIT3-M24 PIT3-M27 PIT3-M30 PIT3-M33 PIT3-M36	450	3001	4.1
PIT4	PIT4-M33 PIT4-M36 PIT4-M39 PIT4-M42	660	4401	5.4
PIT5	PIT5-M39 PIT5-M42 PIT5-M45 PIT5-M48	1000	6668	8.4
PIT6	PIT6-M52 PIT6-M56 PIT6-M60 PIT6-M64	1500	10003	13.8
PIT7	PIT7-M68 PIT7-M70 PIT7-M72	2000	13334	18.4
PIT8	PIT8-M76 PIT8-M80 PIT8-M85 PIT8-M90	2500	16671	23
PIT9	PIT9-M90 PIT9-M95 PIT9-M100	3200	21339	32
PIT10	PIT10-M105 PIT10-M110 PIT10-M115	4100	27340	45





Specification

Model	Tensioner Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
PIT1	PIT1-M20	66	93	63	142	36	25	49.8
	PIT1-M22		93	63	144	36	25	51
PIT2	PIT2-M24	87	117	68	175	38	28	56.5
	PIT2-M27		117	68	178	38	28	58.7
PIT3	PIT3-M24	103	117	75	175	38	30	64.5
	PIT3-M27		117	75	178	38	30	66
	PIT3-M30		120	80	184	41	30	67.6
	PIT3-M33		123	84	190	44	35	71.9
	PIT3-M36		126	89	196	47	38	77
PIT4	PIT4-M33	118	123	88	192	44	35	76.5
	PIT4-M36		126	96	198	47	38	80.8
	PIT4-M39		130	96	204	51	42	83.6
	PIT4-M42		133	105	211	54	41	91
PIT5	PIT5-M39	140.5	132	112	212	51	42	91.6
	PIT5-M42		135	114	218	54	45	95.5
	PIT5-M45		139	118	225	57	52	100
	PIT5-M48		142	114	231	60	51	101.3
PIT6	PIT6-M52	175.5	148	120	248	63	52	115
	PIT6-M56		154	138	258	70	58	119.1
	PIT6-M60		161	138	262	70	58	122
	PIT6-M64		161	153	273	76	63	132.3
PIT7	PIT7-M68	197	161	153	283	76	63	135
	PIT7-M70		161	153	287	76	63	135.2
	PIT7-M72		167	157	297	82	72	146.5
PIT8	PIT8-M76	219	174	182	308	89	80	155.5
	PIT8-M80		174	182	312	89	80	158.4
	PIT8-M85		180	190	323	95	84	165
	PIT8-M90		186	205	334	101	88	178.6
PIT9	PIT9-M90	252	186	200	341	101	88	176.1
	PIT9-M95		186	200	346	101	88	178.9
	PIT9-M100		192	200	356	107	94	184.7
PIT10	PIT10-M105	282	199	210	378	114	114	195
	PIT10-M110		199	210	383	114	114	197
	PIT10-M115		205	224	394	120	114	208

Ultra-Hydraulic Pressure Electric Pump

SINGLE-ACTING/DOUBLE-ACTING AVAILABLE, WIDE RANGE OF APPLICATIONS



Digital with three buttons



Digital with two buttons



Pointer with two buttons

Model	Reservoir (L)	Motor Size(KW)	Power	Max.Working Pressure(MPa)	Size(mm)	Control Line(m)	Flow (L/min)	Weight (kg)	Mode Of Action
EHP-8	7	1.1	220V/50Hz/ single phase	150	375×300×410	6	2.2@5MPa, 0.4@150MPa	23	Single acting
EHP-8D									Double acting

High Performance Ultra-Hydraulic Pressure Electric Pump

1.5KW MOTOR, POWERFUL, FAST BOOSTING, COMPACT STRUCTURE



- 1.5KW high power motor, powerful, fast boosting for large bolt tensioners
- Compact structure of the motor, strong and reliable, small and lightweight
- With remote control handle, safe and easy to operate
- Simple setting of target pressure value, with pressure holding function
- Single-acting and double-acting options for a wide range of applications
- The pump is equipped with a cooling device to ensure continuous operation for a long period of time
- With safety protection function, when hydraulic system instantaneous loss of pressure, the pump station automatically shut down, to avoid rupture parts flying out caused by the second pressurization

Model	Reservoir (L)	Motor Size(KW)	Power	Max.Working Pressure(MPa)	Size(mm)	Control Line(m)	Flow (L/min)	Weight (kg)	Mode Of Action
EHP-9	7.6	1.5	220V/50Hz/ single phase	150	375×300×410	6	2.6@5MPa, 0.44@150MPa	23	Single acting
EHP-9D									Double acting

Ultra-High Pressure Explosion Proof Electric Pump



- EX d II BT4 three phase motor, safety, applicable to explosive environment. Large torque output and high efficiency
- Electric control system adopts EX d II BT4 explosion-proof electromagnetic starter
- Advanced double stage piston pump with stable pressure
- Integrated pump oil circuit system, compact and durable



Model	Reservoir (L)	Motor Size (KW)	Power	Max.Working Pressure(MPa)	Size (mm)	Flow(L/min)	Weight (kg)
EXP-14	14	1.1	380V/50Hz/ three phase	150	430×330×660	2.2@5MPa, 0.4@150MPa	53

Ultra-High Pressure Air Pump



- Air pressure 2-8 bar, air consumption 0.8m³/min
- Output pressure is proportional to air supply, output pressure can be set by adjusting supply air pressure
- The pump will automatically stop when the set pressure is reached
- Explosion proof

Model	Working Pressure (MPa)	Pressure Ratio	Flow Rate (L/min)	Reservoir(L)	Air Inlet(in)	High Pressure Outlet(in)	Size (mm)	Weight (kg)
ASP150	150	240	2.8@0MPa 0.35@150MPa	7	1/2 BSP	G1/4	450×450×450	26
ASP200	200	300	2.8@0MPa 0.35@200MPa	7	1/2 BSP	G1/4	450×450×450	27
ASP300	300	400	2.8@0MPa 0.35@300MPa	7	1/2 BSP	G1/4	450×450×450	27

Ultra-High Pressure Manual Pump



- Constructed from aviation material, light weight and high safety
- Built-in double pressure safety valve to prevent pressure overload
- Built-in energy storage mechanism to ensure the pressure stability
- Special designed tank cap to seal or breathe to balance the pressure inside and outside the tank
- Capable of vertical working state when the pump head is down
- Two piston design, low pressure output large flow, high pressure output low flow, even at the highest working pressure, the handle force is very small

Model	Usable Oil(L)	Working Pressure(MPa)		Oil Volumes Per Stroke(ml)		Size(mm)	Oil Port Thread(in)	Weight (Kg)
		Low	High	Low	High			
PHP-161	1.2	2	160	13.5	1.1	700×130×190	G 1/4	5
PHP-162	2	2	160	13.5	1.1	640×180×220	G 1/4	6
PHP-201	1.2	2	200	13.5	1.1	700×130×190	G 1/4	5
PHP-202	2	2	200	13.5	1.1	640×180×220	G 1/4	6
PHP-251	1.2	8	250	13.5	0.56	700×130×190	G 1/4	5
PHP-252	2	8	250	13.5	0.56	640×180×220	G 1/4	6
PHP-281	1.2	8	280	13.5	0.56	700×130×190	G 1/4	5
PHP-282	2	8	280	13.5	0.56	640×180×220	G 1/4	6

Ultra-High Pressure Hoses



Model	Working Pressure (MPa)	Length (m)	Thread (in)
PHC	150	1, 2, 3, 6, 10	G1/4 (M)
PHD	200	1, 2, 3, 6, 10	

Quick Coupling

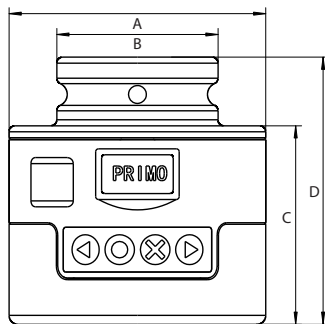


Model	Working Pressure (MPa)	Remark	Thread (in)
DQ15MFE04R028	150	Male	G1/4(F)
DQ15FFE04R028	150	Female	
1256202	200	Male	G1/4(M)
1251202	200	Female	G1/4(F)

SMART SOCKETS



- Measures the actual torque applied to the bolt, applicable to torque tools calibration
- Measures and displays peak or real-time torque values
- Full data collection, can be exported in XLS file
- Real time data could be viewed on a smartphone or tablet via bluetooth
- Accuracy $\pm 1\%$

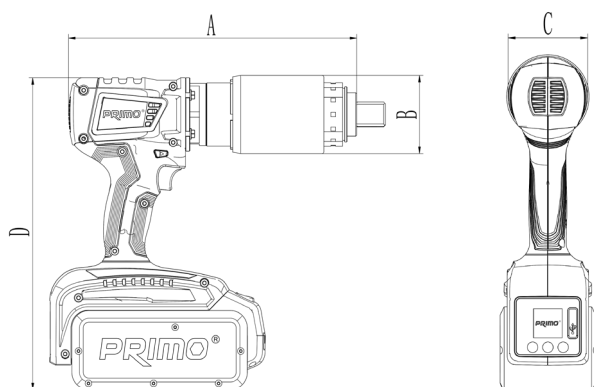


High-resolution display

Square Hole Size (in)	Model	Torque Range (Nm)	Weight (kg)	Size A × B × C × D (mm)
1	ZT25041002K	200-2000	1.1	72×54×67×88
	ZT25046002K			
	ZT25050004K	400-4000	1.5	86×54×69×90
	ZT25055004K			
	ZT25060004K			
1-1/2	ZT38065006K	600-6000	5.4	120×90×100×130
	ZT38070006K			
	ZT38075012K			
	ZT38080012K	1200-12000	5.4	120×90×100×130
	ZT38085012K			
	ZT38090016K	1600-16000	6.4	135×90×100×140
	ZT38095016K			
2-1/2	ZT38100016K	2000-20000	9	135×127×120×160
	ZT63090020K			
	ZT63095020K			
	ZT63100020K			

Lithium Electric Torque Wrench PL6000~3000

HIGH SPEED AND EFFICIENCY, LONG ENDURANCE

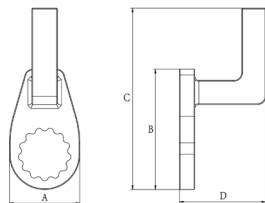


- ◉ Adopt the latest high voltage and high torque brushless DC motor
- ◉ Maximum torque up to 6000Nm
- ◉ Output torque accuracy $\pm 5\%$
- ◉ Repeatability $\pm 2\%$
- ◉ Built-in multiple working modes
- ◉ High strength planetary gear reducer, high torque and light weight
- ◉ Reaction arm automatically retracts and releases
- ◉ Output torque report export function
- ◉ High-definition LCD display
- ◉ Optional bluetooth and WIFI function, support for bluetooth
- ◉ connection to the smart socket

Model	Drive Shaft (in)	Torque Range (Nm)	Max. RPM	Weight (kg)	Dimension(mm)				Battery
					A	B	C	D	
PL6000A	1.5	1200-6000	2.0	12.2	318	99	80	323	36V/8Ah
PL6000B	1.5	1200-6000	2.0	10.5	318	99	80	294	36V/4Ah
PL5000A	1.5	1000-5000	2.0	12.2	318	99	80	323	36V/8Ah
PL5000B	1.5	1000-5000	2.0	10.5	318	99	80	294	36V/4Ah
PL4000A	1	800-4000	3.2	8.8	305	81	78	323	36V/8Ah
PL4000B	1	800-4000	3.2	7.1	305	81	78	294	36V/4Ah
PL3000A	1	600-3000	3.2	8.8	305	81	78	323	36V/8Ah
PL3000B	1	600-3000	3.2	7.1	305	81	78	294	36V/4Ah
PL2000	1	400-2000	6.0	5.3	269	70	71	288	36V/4Ah
PL1400	3/4, 1	280-1400	6.0	5.2	269	70	71	288	36V/4Ah
PL700	3/4	140-700	13.8	4.7	241	70	71	288	36V/4Ah
PL500	3/4	100-500	13.8	4.7	241	70	71	288	36V/4Ah

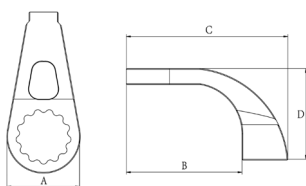
PL6000~3000 Accessories

Standard Reaction Arm



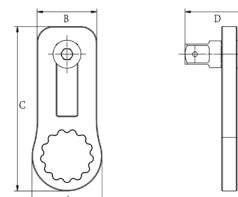
Type	Model Code	Dimension(mm) A×B×C×D	Weight (kg)
Standard Length Reaction Arm	PL4000-04-1	88×150×196×108	2.2
Extended Reaction	PL4000-04-2	88×150×226×120	2.6

Arc Reaction Arm (Optional)



Model Code	Dimension(mm) A×B×C×D	Weight (kg)
PL4000-04-3	88×138×196×108	2.0

Deep Socket Reaction Arm (Optional)



Model Code	Dimension(mm) A×B×C×D	Weight (kg)
PL4000-04-4	88×75×206×75	1.8

Battery Pack



Model Code	PL4000-24
Dimension(mm)	204×93×103
Weight (kg)	2.3

*36V/8Ah



Model Code	PL2000-15
Dimension(mm)	137×84×79
Weight (kg)	1.0

*36V/4Ah

Battery Charger



Model Code	PL4000-25
Dimension(mm)	252×181×105
Weight (kg)	1.5



Model Code	PL2000-16
Dimension(mm)	210×160×84
Weight (kg)	1.1



Lithium Electric Torque Wrench PL2000/1400

HIGH SPEED AND EFFICIENCY, LONG ENDURANCE



PL2000



PL1400

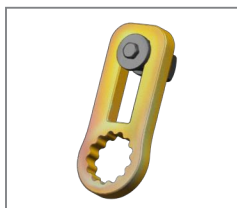


Standard Reaction Arm



Model Code	PL2000-04-1
Dimension(mm)	72×141×188×89
Weight (kg)	1.5

Deep Socket Reaction Arm (Optional)



Model Code	PL2000-04-3
Dimension(mm)	72×62×167×60
Weight (kg)	1.0

Battery Pack



Model Code	PL2000-15
Dimension(mm)	137×84×79
Weight (kg)	1.0

*36V/4Ah

Battery Charger



Model Code	PL2000-16
Dimension(mm)	210×160×84
Weight (kg)	1.1



Lithium Electric Torque Wrench PL700/500

HIGH SPEED AND EFFICIENCY, LONG ENDURANCE



PL700



PL500

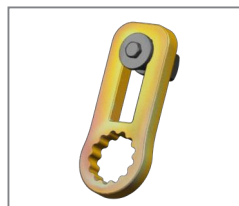


Standard Reaction Arm



Model Code	PL700-04-1
Dimension(mm)	77×125×151×75
Weight (kg)	1.0

Deep Socket Reaction Arm (Optional)

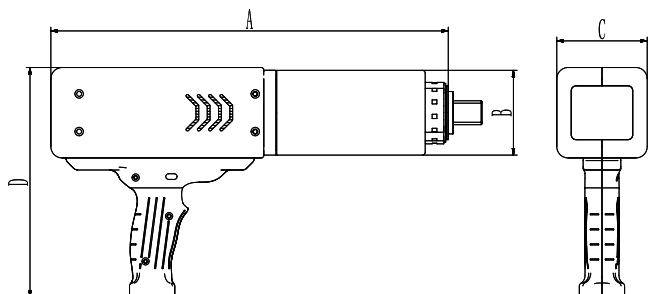


Model Code	PL700-04-3
Dimension(mm)	72×57×167×51
Weight (kg)	0.8

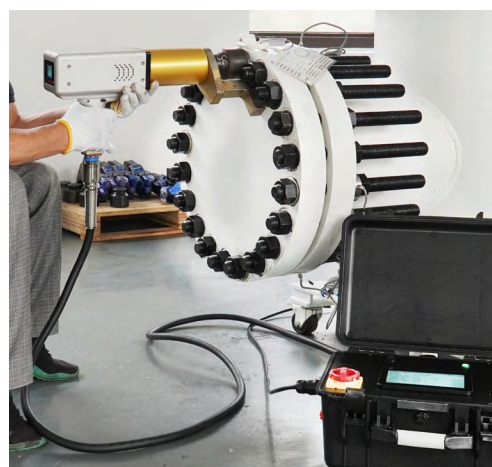


Electronic Torque Wrenches

INTELLIGENT HANDHELD SERVO TORQUE TIGHTENER

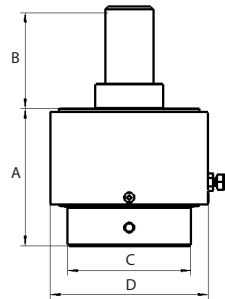


- ◎ 4-stage planetary gearbox, 7500 rpm high power servo motor, intelligent servo motor controller, humanized graphic display components
- ◎ Dual-screen control, 1.54-inch LCD screen plus 3 buttons on the body, 7-inch touch screen on the control box
- ◎ Military grade cable and aviation connector, customizable lengths are available
- ◎ Support third-party torque calibration, can be calibrated according to different working conditions, to improve the tool's working torque accuracy to $\pm 3\%$
- ◎ Tools come standard with torque mode, angle mode, output accuracy $\pm 3\%$, repeatability $\pm 2\%$
- ◎ Support USB, TCP/IP, Modbus and other communication modes, can be connected with MES management system
- ◎ Multi-level user management, real-time display, storage of a variety of curves
- ◎ Support 220Vac, 380Vac power supply
- ◎ Optional torque sensor, output accuracy $\pm 2\%$, repeatability $\pm 2\%$
- ◎ Can be customized with a variety of scenarios hanging ring



Model	Drive Shaft (in)	Torque Range (Nm)	Max. RPM	Weight (kg)	Dimension(mm)			
					A	B	C	D
JK8000	1-1/2	1600-8000	5.3	15	434	106	96	243
JK4000	1	800-4000	10.2	12	427	90	96	243

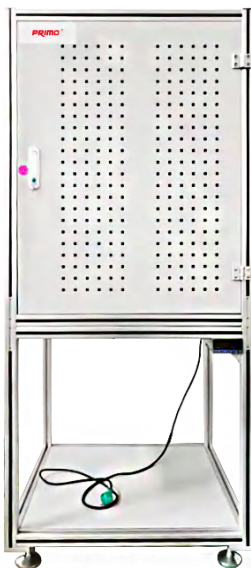
Portable Tension Test



- ◉ Suitable for the testing of most hydraulic bolt tensioners
- ◉ Portable and lightweight, can be easily carried to the site
- ◉ Wide test range, few accessories, high accuracy, friendly interface, durable
- ◉ The sensor adopts the multi-point calibration mode which has a high linear accuracy
- ◉ One-button startup detection and real-time display

Model	Weight (kg)	Strength Range (KN)	Accuracy (FS)	Size A × B × C × D (mm)
LSY-M36	8.7	0-1500	≤1.0%	112×78×100×128
LSY-M39	8.9			112×83×100×128
LSY-M42	9.2			112×88×100×128
LSY-M48	9.8			112×102×100×128

Frame Type Tension Test



- ◉ Suitable for the testing of most hydraulic bolt tensioners
- ◉ Integrated design, plug-in working mode, suitable for field fixed detection
- ◉ Wide range, friendly interface, strong and durable, safe and reliable
- ◉ One-button startup detection, real-time display, without secondary selection

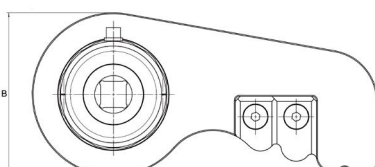
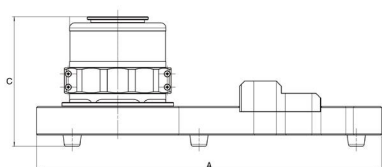


Model	Strength Range (KN)	Accuracy (FS)	Nonlinear (FS)	Repeatability (FS)	Size A × B × C (mm)
BDY1000	100-1000	≤0.5%	±0.05%	0.03%	800×720×1800
BDY3000	100-3000				

Portable Torque Test (Square Drive)



- ◉ Suitable for the testing of most hydraulic torque wrenches
 - ◉ Split type, lightweight design, aviation aluminum shell, can be easily carried to the site
 - ◉ Wide range, few accessories, friendly interface, strong and durable
 - ◉ The sensor adopts the multi-point calibration mode has a high linear accuracy
 - ◉ One-button startup detection, real-time display, without secondary selection operation
- Universal battery power supply, convenient, safe and fast

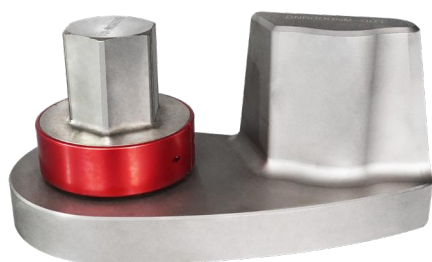


Display Unit

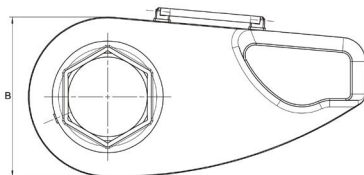
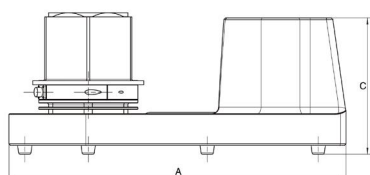


Model	Weight (kg)	Type	Torque Range (Nm)	Accuracy (FS)	Size A × B × C (mm)
BXN18000	12	Square drive	0-18000	≤0.5%	340×160×127
BXN38000	29.6		0-38000		493×200×171
BXN55000	32		0-55000		537×200×186

Portable Torque Test (Hollow)



- ◉ Suitable for the testing of most hydraulic torque wrenches
 - ◉ Split type, lightweight design, aviation aluminum shell, can be easily carried to the site
 - ◉ Wide range, few accessories, friendly interface, strong and durable
 - ◉ The sensor adopts the multi-point calibration mode has a high linear accuracy
 - ◉ One-button startup detection, real-time display, without secondary selection operation
- Universal battery power supply, convenient, safe and fast



Display Unit



Model	Weight (kg)	Type	Torque Range (Nm)	Accuracy (FS)	Size A × B × C (mm)
ZKBXN6000	6.6	Hollow	0-6000	≤0.5%	215×110×111
ZKBXN20000	20.5		0-20000		335×170×141
ZKBXN45000	39		0-45000		425×200×171

Portable Hydraulic Wrench Torque Test



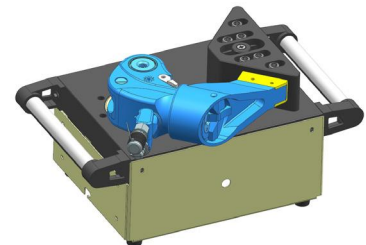
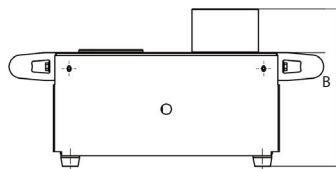
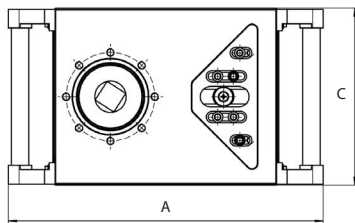
- ◉ Suitable for the testing of most hydraulic torque wrenches
- ◉ Portable, lightweight design, more than 70% of the parts are made by aviation aluminum
- ◉ Wide range, few accessories, high precision, friendly interface, strong and durable
- ◉ The torque sensor adopts the multi-point calibration mode has high linear accuracy
- ◉ Floating torque transfer structure, to eliminate the influence of the partial load bending, with high calibration precision and long life
- ◉ One-button startup detection, real-time display, without secondary selection operation
- ◉ Universal 9V battery power supply, convenient, safe, fast, can be easily carried to the site for verification

Model	Measuring Range (N.M)	Accuracy (FS)	Weight (kg)	Repeatability (FS)	Size A × B × C (mm)
NJY15000	500-±15000	≤0.05%	13	0.05%	480×145×195

Bench-Top Torque Test



- ◉ Suitable for testing most hydraulic torque wrenches
- ◉ Split design, plug-in working mode, suitable for field fixed detection
- ◉ Wide range, friendly interface, solid and durable
- ◉ One-button startup detection, real-time display, no secondary selection operation

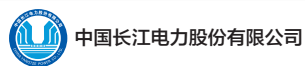


Model	Measuring Range (N.M)	Accuracy (FS)	Nonlinear (FS)	Repeatability (FS)	Size A × B × C (mm)
NJY500	0-±5000	≤0.5%	±0.05%	0.03%	540×304×270
NJY1000	0-±10000				
NJY2000	0-±20000				
NJY3000	0-±30000				

REFERENCE CUSTOMERS



REFERENCE CUSTOMERS



FLANGE JOINT INTEGRITY MANAGEMENT

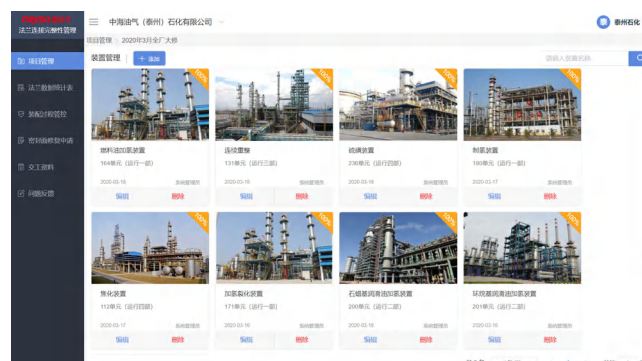
Training



Service Team



Management Software

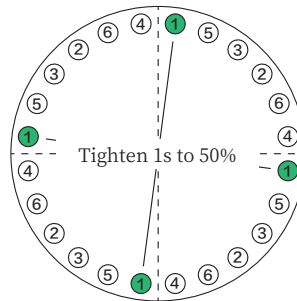


Simultaneous Multibolt Pattern (Four Tools) Procedure

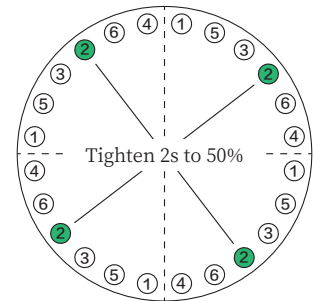
To eliminate key flanges leakage, ASME PCC-1 "Guidelines For Pressure Boundary Bolted Flange Joint Assembly" stipulates the method of simultaneous multibolt pattern (four tools) procedure.



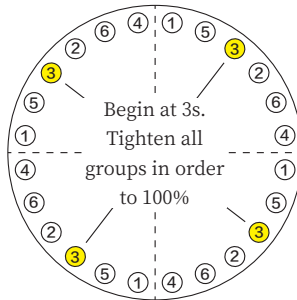
Step 1a: 50% target torque (simultaneous)



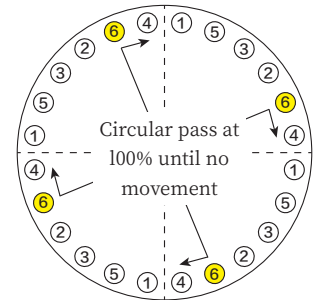
Step 1b: 50% target torque (simultaneous)



Step 1c: 100% target torque (simultaneous)



Step 2: 100% target torque (simultaneous)



China National Petroleum Corporation(CNPC) "Flange Gasket Fastener Management Rules"

Rule 21st Key areas with high temperature, high pressure media, medium and high pressure hydrogen media, extreme or highly dangerous media, or equipment or flange size of DN800 or more, to follow the principles:

1. Before tightening bolts, the fastening company shall prepare the fastening operation instructions (principles of four synchronous fastening methods, multi-step fastening and sequential fastening), and confirm by the production company. Follow the prescribed fastening steps to achieve the predetermined preload, the preload calculation should refer to the torque table and the actual working conditions.

2. Use torque wrench or other control bolt load device to improve the reliability of fastening.



Torque Recommendation Table For Bolts And Nuts (For hydraulic wrench selection)

Strength Grade		4.8		6.8		8.8		10.9		12.9	
Min Breaking Strength		392MPa		588MPa		784MPa		941MPa		1176MPa	
Material		General Structural Steel		Mechanical Structural Steel		CrMo Alloy		NiCrMo Alloy		NiCrMo Alloy	
Bolt,M (mm)	Nut,S (mm)	Torque		Torque		Torque		Torque		Torque	
		(KGM)	(Nm)	(KGM)	(Nm)	(KGM)	(Nm)	(KGM)	(Nm)	(KGM)	(Nm)
14	22	7	69	10	98	14	137	17	165	23	225
16	24	10	98	14	137	21	206	25	247	36	353
18	27	14	137	21	206	29	284	35	341	49	480
20	30	18	176	28	296	41	402	58	569	69	676
22	32	23	225	34	333	55	539	78	765	93	911
24	36	32	314	48	470	70	686	100	981	120	1176
27	41	45	441	65	637	105	1029	150	1472	180	1764
30	46	60	588	90	882	125	1225	200	1962	240	2352
33	50	75	735	115	1127	150	1470	210	2060	250	2450
36	55	100	980	150	1470	180	1764	250	2453	300	2940
39	60	120	1176	180	1764	220	2156	300	2943	370	3626
42	65	155	1519	240	2352	280	2744	390	3826	470	4606
45	70	180	1764	280	2744	320	3136	450	4415	550	5390
48	75	230	2254	350	3430	400	3920	570	5592	680	6664
52	80	280	2744	420	4116	480	4704	670	6573	850	8330
56	85	360	3528	530	5149	610	5978	860	8437	1050	10290
60	90	410	4018	610	5978	790	7742	1100	10791	1350	13230
64	95	510	4998	760	7448	900	8820	1350	13230	1650	16170
68	100	580	5684	870	8526	1100	10780	1650	16170	2020	19796
72	105	660	6468	1000	9800	1290	12642	2020	19796	2450	24000
76	110	750	7350	1100	10780	1500	14700	2400	23520	2900	28420
80	115	830	8134	1250	12250	1850	18130	2820	27636	3420	33516
85	120	900	8820	1400	13720	2250	22050	3280	32144	4000	39200
90	130	1080	10584	1650	16170	2500	24500	3900	38220	4750	46550
100	145	1400	13720	2050	20090	2980	29204	4580	44884	5680	55664
110	155	1670	16366	2550	24990	3500	34300	5480	53704	6820	66836
120	175	2030	19894	3050	29890	4150	40670	6620	64876	8150	79870

Remark:

1、The table refers to the German industrial standard, and the torque value in the table is measured when the bolt reaches 70% of the yield limit.

2、The recommended locking torque value is: data in the table $\times 80\%$.

For example : M48, grade 8.8 bolt, then the locking torque is: $400 \times 80\% = 320\text{KGM}$.

3、The unlocking torque value is 1.5~2 times of the locking torque.

For example : the locking torque of the above example is 320KGM, then the unlocking torque is about $320 \times (1.5 \sim 2) = 480 \sim 640\text{KGM}$.

Hexagon Nut And Bolt Diameter Table

Metric						Imperial		
								
Bolt Diameter D(mm)	Outer Width S*(mm)	Inner Width J(mm)	Bolt Diameter D(mm)	Outer Width S*(mm)	Inner Side To Side J(mm)	Bolt Diameter D(in)	Outer Width S*(in)	Inner Width J(in)
M 10	17	8	M 60	90	46	5/8	1-1/16	1/2
M 12	19	10	M 64	95	46	3/4	1-1/4	5/8
M 14	22	12	M 68	100	50	7/8	1-7/16	3/4
M 16	24	14	M 72	105	55	1	1-5/8	3/4
M 18	27	14	M 76	110	60	1-1/8	1-13/16	7/8
M 20	30	17	M 80	115	65	1-1/4	2	7/8
M 22	32	17	M 85	120	70	1-3/8	2-3/16	1
M 24	36	19	M 90	130	70 (75)	1-1/2	2-3/8	1
M 27	41	19	M 95	135	-	1-5/8	2-9/16	-
M 30	46	22	M 100	145	85	1-3/4	2-3/4	1-1/4
M 33	50	24	M 105	150	-	1-7/8	2-15/16	1-3/8
M 36	55	27	M 110	155	-	2	3-1/8	1-5/8
M 39	60	27 (30)	M 115	165	-	2-1/4	3-1/2	1-3/4
M 42	65	32	M 120	175 (170)	-	2-1/2	3-7/8	1-7/8
M 45	70	-	M 125	180	-	2-3/4	4-1/4	2
M 48	75	36	M 130	185	-	3	4-5/8	2-1/4
M 52	80	36	M 140	200	-	3-1/4	5	2-1/4
M 56	85	41	M 150	210	-			

Remark:

1、Determine the maximum torque of the wrench according to the size and strength level of bolts and nuts. Parameters of the manufacturer should be confirmed when dealing with specific connections.

2、Important note: The hexagonal dimensions listed in the table are for reference only. Special dimensions in a particular system should be checked separately.

* Heavy duty hexagon nut

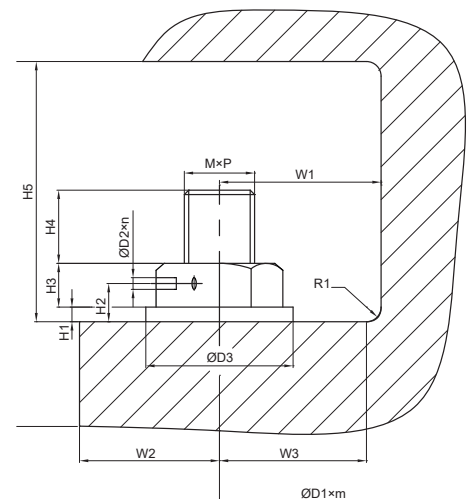
Recommended Bolt Pretension Force Table (For tensioner selection)

Strength Grade		3.6	4.6	4.8	5.6	5.8	6.8	8.8	9.8	10.9	12.9
Bolt Diameter (mm)	Nut Opposite Edge (mm)	Tensile Strength (KN)									
M12	19	8.66	11.5	15.4	14.4	19.2	23.1	30.8	34.6	43.3	52.0
M14	22	11.9	15.9	21.2	19.8	26.4	31.7	42.3	47.6	59.5	71.4
M16	24	16.2	21.6	28.8	27.0	36.0	43.2	57.6	64.8	81.0	97.2
M18	27	19.8	26.4	35.2	33.0	44.0	52.8	70.4	79.2	99.0	118.0
M20	30	25.4	33.9	45.2	42.4	56.4	67.7	90.3	101.6	127.0	152.4
M22	32	31.6	42.1	56.2	52.7	70.2	84.3	112.4	126.4	158.0	189.6
M24	36	36.5	48.6	64.9	60.8	81.1	97.3	129.8	146.0	182.5	219.0
M27	41	47.8	63.7	85.0	79.7	106.2	127.5	170.0	191.2	239.0	286.8
M30	46	58.3	77.7	103.6	97.1	129.6	155.5	207.3	233.2	291.5	349.8
M33	50	72.4	96.5	128.7	120.7	160.9	193.1	257.4	289.6	362.0	434.4
M36	55	85.1	113.5	151.3	141.8	189.1	226.9	302.6	340.4	425.5	510.6
M39	60	102.0	136.0	181.3	170.0	226.7	272.0	362.7	408.0	510.0	612.0
M42	65	116.9	155.9	207.8	194.8	259.8	311.7	415.6	467.6	584.5	701.4
M45	70	136.6	182.1	242.8	227.6	303.6	364.3	485.7	546.4	683.0	819.6
M48	75	153.9	205.2	273.6	256.5	342.0	410.4	547.2	615.6	769.5	923.4
M52	80	184.1	245.5	327.2	306.8	409.1	490.9	654.6	736.4	920.5	1105.0
M56	85	212.5	283.3	377.8	354.2	472.2	566.7	755.6	850.0	1063.0	1275.0
M60	90	247.8	330.4	440.5	413.0	550.7	660.8	881.1	991.2	1239.0	1487.0
M64	95	280.5	374.0	498.7	467.5	623.3	748.0	997.3	1122.0	1403.0	1683.0
M68	100	320.9	427.9	570.5	534.8	713.1	855.7	1141.0	1284.0	1605.0	1925.0
M72	105	364.0	485.3	647.1	606.7	808.9	970.7	1294.0	1456.0	1820.0	2184.0
M76	110	409.8	546.4	728.5	683.0	910.7	1093.0	1457.0	1639.0	2049.0	2459.0
M80	115	458.4	611.2	814.9	764.0	1019.0	1222.0	1630.0	1834.0	2292.0	2750.0
M85	120	522.8	697.1	929.4	871.3	1162.0	1394.0	1859.0	2091.0	2614.0	3137.0
M90	130	687.1	916.1	1221.0	1145.0	1527.0	1832.0	2443.0	2748.0	3436.0	4123.0

Data Acquisition Table

If you are not sure of the model, please fill out the form below and let us help you determine the model.

Description	Parameter	Value(mm)
Thread and pitch	M×P	
Limit height	H5	
Bolt protrusion	H4	
Nut thickness	H3	
Hole height	H2	
Washer thickness	H1	
Nut AF	S	
Round nut diameter		
Round nut hole diameter and number	D2 × n	
Bolt distribution diameter and number	D1 × m	
Distance between bolt center and chamfer	W3	
Distance between bolt center and the edge	W2	
Distance between bolt center and equipment	W1	
Non-circular distribution minimum bolt center distance		





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