





F.P.T. BOLT TIGHTENING EQUIPMENT

Versatile solutions

F.P.T. produces a wide range of equipment for bolt tightening: hydraulic bolt tensioners, hydraulic nuts, torque wrenches, hand pumps and custom hydraulic pumps.



INDEX TORQUE AND TENSIONING

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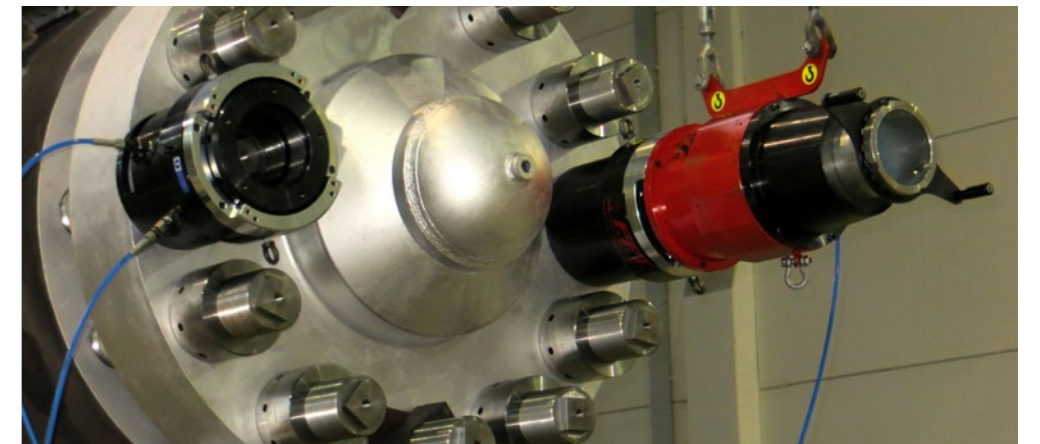
PRODUCTION OF CUSTOM HYDRAULIC BOLT TENSIONERS

F.P.T. can provide custom design bolt tightening solutions from 700 to 2.500 bar. The relevant markets more and more require hydraulic bolt tensioners built to the customer's to specifics operate within the required geometry. F.P.T. supports customers from studying the layout to the 3D model and the production of the requested tensioners. F.P.T. doesn't just produce tensioners, but also supports the customer in developing the hydraulic circuit, providing the hydraulic pumps and all the components needed to get the system running.



F.P.T. HYDRAULIC BOLT TENSIONERS

- Tensioning accuracy. The tensioner, by applying a direct force on the stud, allows very high accurate tightening, directly proportional to the pressure applied to the tensioner itself.
- Easy calculation of the force to be applied to the stud. The calculation of force is simple and F.P.T. provides all the force / pressure conversion data.
- Speed and repeatability in tightening operations. Easy to set up and fast in carrying out the tensioning operation, guaranteeing very high repetitiveness as well.
- Less stress. By this tightening method the studs are less stressed because there are no torsional forces, just axial ones.



TTS

3/4" to 4" (M20-M100)
236 kN - 2.820 kN
Stroke 10 - 15 mm
1.500 bar

Series
TTS

Standard hydraulic bolt tensioners



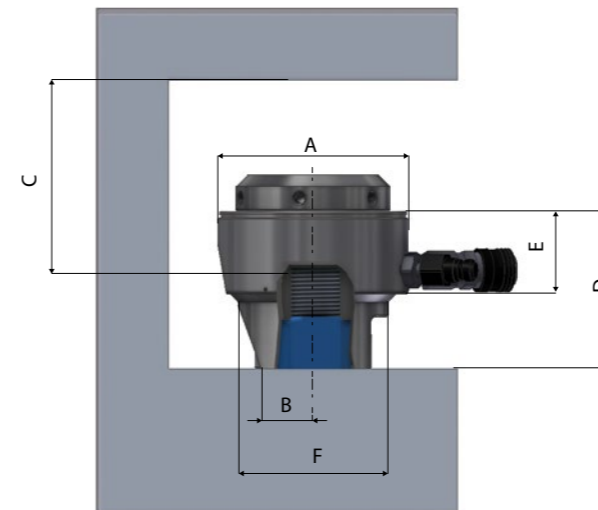
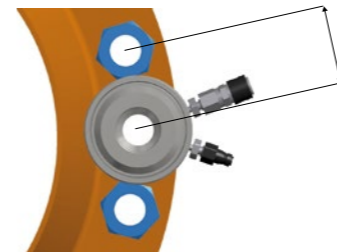
High forces – reduced dimensions: anti over-stroke device.

- TTS Series tensioners are designed to suit most flanges type: ANSI B16.5 - ANSI B16.47 - B.S.3293 - AWWA - MSS-SP44 - API-6A - API-17D - UNI EN 1092-1.
- High forces and reduced dimensions. TTS Series tensioners represent the optimal combination between the developed strength and their size.
- Extremely compact dimensions and low weight. In TTS series the spaces for the installation are reduced to a minimum level and operations are facilitated by reduced weights.
- Maximum flexibility. With only 6 hydraulic cells the operator can cover an extended range of Imperial or Metric thread sizes from 3/4" to 4" (M20 – M100).
- 15 mm stroke cover most of the tensioning application. If longer

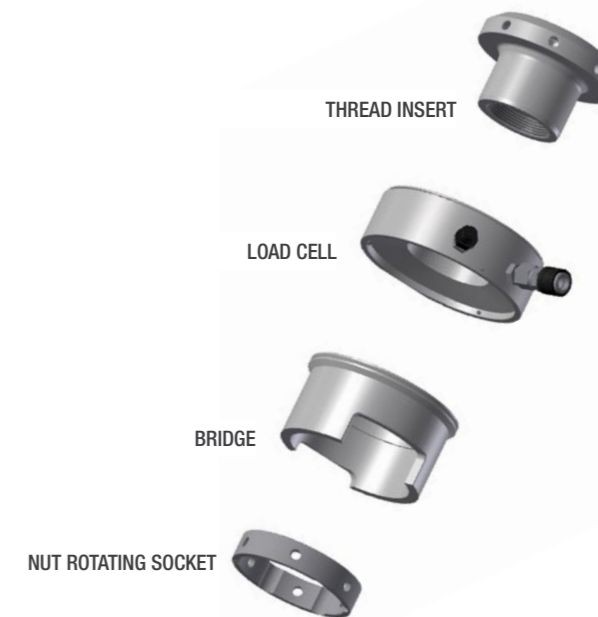
- strokes are required the tensioning operation can be carried on by steps.
- All components are manufactured with hardened high tensile strength steel.
- Special treatment to guarantee: high resistance to corrosion - high resistance to wear – extremely low friction to help during screw operations.
- Safety is a must. All size have over stroke indicators.
- All model are equipped with 2 quick couplers, male and female, for serial hydraulic connection.
- Special high quality seals for leak free operations and easy maintenance.

Anti over stroke device for the maximum safety during operations.

CUSTOM TENSIONERS ON REQUEST



TENSIONING TOOL TTS SERIES COMPONENTS



HYDRAULIC CELL	IMPERIAL ADAPTER KITS		METRIC ADAPTER KITS		FORCE		HYDRAULIC AREA		STROKE	WEIGHT	DIMENSIONS (mm)								
	Thread size	Kit code	Thread size	Kit code	kN	Ton	in ²	mm ²			A	B	C	D	E	F	G (min)		
TTS1	3/4"-10 UNC	1.KI030410UNC	M20x2,5	1.KM.020025	236,5	24,1	2,44	1576,46	10	2	73	16	64	45	52	44,50			
	7/8"-9 UNC	1.KI070809UNC	M22x2,5	1.KM.022025													58	50,50	
	1"-8 UN	1.KI100008UN	M24x3	1.KM.024030													62	55	
	1.1/8"-8 UN	1.KI110808UN	M27x3	1.KM.027030													68	61	
TTS2	1.1/8"-8 UN	2.KI110808UN	M27x3	2.KM.027030	459,5	46,8	4,75	3063,05	15	4,6	101	25	89	54	75	64,50			
	-	-	M30x3,5	2.KM.030035													75	64,50	
	1.1/4"-8 UN	2.KI110408UN	M33x3,5	2.KM.033035													80	69,50	
	1.3/8"-8 UN	2.KI130808UN	M36x4	2.KM.036040													84	74,50	
TTS3	1.1/2"-8 UN	2.KI110208UN	M39x4	2.KM.039040	831,3	84,7	8,59	5541,77	15	4,4	133	30	89	57	88	79			
	1.1/2"-8 UN	2.KI110208UN	M39x4	2.KM.039040													88	79	
	1.5/8"-8 UN	3.KI150808UN	M42x4,5	3.KM.042045													95	82,50	
	1.3/4"-8 UN	3.KI130408UN	M45x4,5	3.KM.045045													104	90	
TTS4	1.7/8"-8 UN	3.KI170808UN	M48x5	3.KM.048050	1345,5	137,2	13,90	8970,03	15	7,7	163	40	89	112	112	99,50			
	2"-8 UN	3.KI200008UN	M52x5	3.KM.052050													116	104,50	
	1.7/8"-8 UN	4.KI170808UN	M48x5	4.KM.048050													122	104,50	
	2"-8 UN	4.KI200008UN	M52x5	4.KM.052050													123	108	
TTS5	2.1/4"-8 UN	4.KI210408UN	M56x5,5	4.KM.056055	1927,3	196,5	19,91	12848,33	15	13,3	193	54	98	63	132	117,50			
	-	-	M60x5,5	4.KM.060055													140	120,50	
	2.1/2"-8 UN	4.KI210208UN	M64x6	4.KM.064060													146	128	
	2.1/2"-8 UN	5.KI210208UN	M64x6	5.KM.064060													148	131	
TTS6	2.3/4"-8 UN	5.KI230408UN	M72x6	5.KM.072060	2819,9	287,5	29,14	18799,29	15	18,9	232	59	98	63	154	141,50			
	3"-8 UN	5.KI300008UN	M76x6	5.KM.076060													158	145,50	
	3"-8 UN	6.KI300008UN	M76x6	6.KM.076060													165	150,50	
	-	-	M80x6	6.KM.080060													170	153	
	3.1/4"-8 UN	6.KI310408UN	M85x6	6.KM.085060													177	155	
	3.1/2"-8 UN	6.KI310208UN	M90x6	6.KM.090060													182	164,50	
TTS6	3.3/4"-8 UN	6.KI330408UN	M95x6	6.KM.095060	32,9	95	185	216	198	32,9	232	82	125	175	73	191	174,50		
	4"-8 UN	6.KI400008UN	M100x6	6.KM.100060														206	187,50
	-	-	M100x6	6.KM.100060														216	198

Series
CTP Hydraulic bolt tensioners with threaded insert



For big sizes

The hydraulic bolt tensioners with threaded insert are characterised by the threaded interchangeable insert which makes it possible to work on studs with various threads, using just one hydraulic cell. This configuration is extremely versatile whenever stud with different threads and similar clearance must be tensioned, all you need is a set of inserts different sockets and in some cases reaction bridges.

F.P.T. is specialized in the study and production of custom hydraulic bolt tensioners from 700 to 2,500 bar.

CUSTOM TENSIONERS ON REQUEST



Series
CTP-C Compact hydraulic bolt tensioners



To being compact

The compact hydraulic bolt tensioners have the thread integrated in the piston. This characteristic reduces the overall size at a minimum level, allowing you to have a tensioner with extremely small dimensions and to be able to operate where other tensioners could not be installed.

F.P.T. produces this model of tensioner, with threaded piston, in all those cases in which it is not possible to meet the requirements of dimensions without recurring to multistage tensioner. Spring return version or pneumatic return can be realised to speed up the return operations of the piston.

CUSTOM TENSIONERS ON REQUEST



Series
CTP-M Multi-stage hydraulic bolt tensioners

Series
CTP-W Hydraulic bolt tensioners for the wind turbine sector

High forces
low clearance



The CTP-M series is characterised by a central puller which two loading cells operate on, this construction makes it possible to double the load capacity whilst keeping the external cell dimension the same. The results obtained are very tight clearances with the load supplied remaining equal. The multistage tensioners F.P.T. are suitable for all applications where there are reduced radial dimensions available. This type of tensioner is available also in the version with gear rotation nut mechanism to accelerate tensioning operations. Also there is the possibility of shaping the bridge to best match the available space among nuts.

F.P.T. realizes multistage hydraulic bolt tensioners according to customer specifications by carrying out a preliminary study on the existing dimensions and thus offering the most suitable solution.

For wind towers

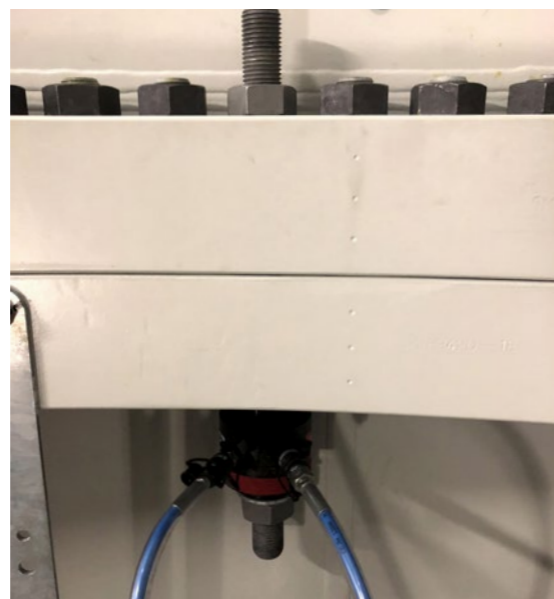


F.P.T. - Fluid Power Technology produces a wide range of wind tensioners, CTP-W series, specifically designed for the wind power sector, for bolted joints of a wind turbine. Extremely compact, they are capable of developing very high forces, designed and engineered for turbine installation and subsequent maintenance. They have a compact structure, equipped with a piston, spring return and / bush screwing / unscrewing nut device on the stud with ratchet wrench. Equipped with adjustable joint for 360° rotation to place the flexible hoses in the best possible position in order to allow the free access to tensioning tools. Automatic piston return system for maximum speed in operations, nut unscrewing/screwing system and the assisted key positioning equipped.

The wind tensioners are especially designed to tighten swivel ring, bolts, hub and blades of wind towers. They are light, easy to use, easy to handle and carefully designed for greater reliability and durability. All components are made of high resistance steel and have a special treatment to guarantee a high resistance against corrosion and a high resistance to wear during screwing operations and equipped with Long Life Time Puller.

CUSTOM TENSIONERS ON REQUEST

CUSTOM TENSIONERS ON REQUEST



PDSA

1.600 - 3.000 bar
40/1 cm³ oil displacement
Double stage
1,8 l oiltank capacity

Series
PDSA

Hand pumps for bolt tensioners and hydraulic nuts 1.600 - 3.000 bar, aluminium made

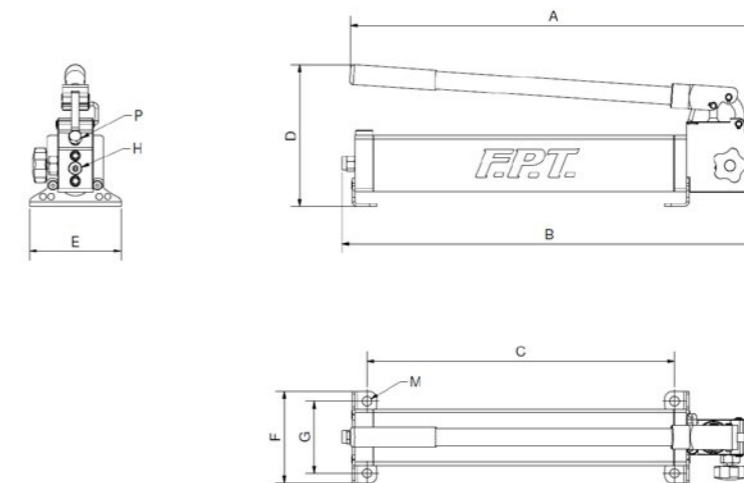


For bolt tensioners And hydraulic nuts

- Very high pressure hand pumps produced in lightweight aluminum alloy of aeronautics grade to reduce weight to a minimum level. The most flexible solution for driving hydraulic bolt tensioners and nuts.
- Two-stage versions at 1,600 bar and 3,000 bar with 40 cc displacement at the first stage for a rapid approach and 1 cc at the second stage.
- Pressure relief valve integrated in the pump body for maximum operator safety.

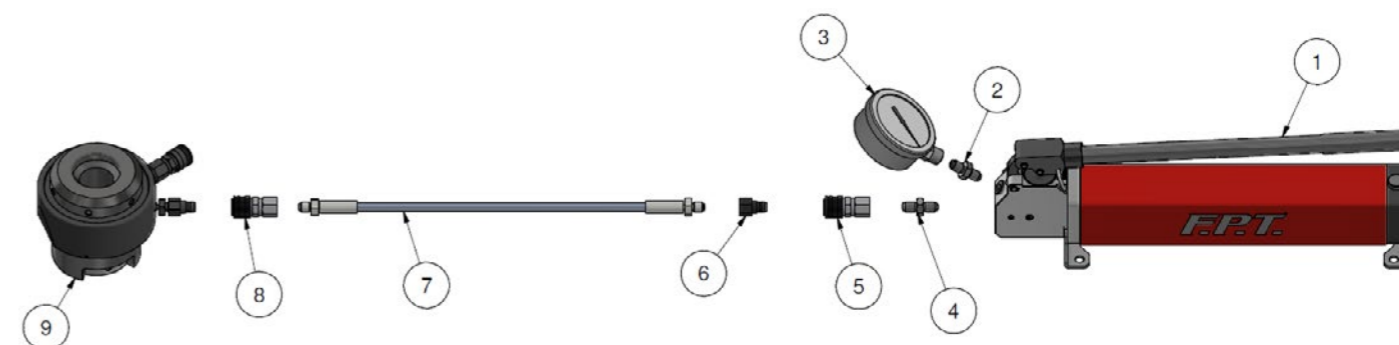
- Very high pressure, high performance, reduced effort on the handle and ergonomics.
- Integrated pressure gauge connection for direct mounting of the measuring instrument.
- Oil filler cap with integrated breather. Tough pins with trough-holes for attachment to machinery or structures.
- Surface treatments to guarantee total reliability in the most difficult environments and maximum duration.

CUSTOM PUMPS ON REQUEST



PDSA 1600 - 3000

TYPE OF PUMP	MODEL	PRESSURE	OIL	OIL	USABLE OIL	DIMENSIONS in mm										WEIGHT
		1°/2° STAGE	DISPLACEMENT	TANK		litres	A	B	C	D	E	F	G	H	M	
		bar	cm ³	CAPACITY	litres											
DOUBLE STAGE	PDSA-1600	25/1600	40/1	1,8	1,6	577	588,5	436	200	130	130	102	1/4" GAS	13	1/2" GAS	7,8
DOUBLE STAGE	PDSA-3000	16/3000	40/0,5	1,8	1,6	577	588,5	436	200	130	130	102	3/4"-16 UNF	13	9/16"-18 UNF	7,8



Configuration No.1 – Quick coupler on pump
Configuration No.2 – Flex hose directly assembled on the pump

	1500 Bar - Config.1	1500 Bar - Config.2	1600 Bar - Config.1	1600 Bar - Config.2	2500 Bar - Config.1	2500 Bar - Config.2	3000 Bar - Config.1	3000 Bar - Config.2
ITEM	CODE	CODE	CODE	CODE	CODE	CODE	CODE	CODE
1	01PDSA1600	01PDSA1600	01PDSA1600	01PDSA1600	01PDSA3000	01PDSA3000	01PDSA3000	01PDSA3000
2	-	-	-	-	0922225016	0922225016	0922225016	0922225016
3	01MD200G	01MD200G	01MD200G	01MD200G	01MD300G	01MD300G	01MD300G	01MD300G
4	0925613265	-	0925613265	-	09299199501611	0929112241	0922225257	09222199501606
5	07GR15F	-	07GR20F	-	07GR25F	-	07GR30F	-
6	07GR15M	-	07GR20M	-	07GR25M	-	07GR30M	-
7	01TFR#/1800	01TFR#/1800	01TFR#/1800	01TFR#/1800	01TFR#/2500	01TFR#/2500	01TFR#/3000M16D	01TFR#/3000M16G
8	07GR15F	07GR15F	07GR20F	07GR20F	07GR25F	07GR25F	07GR30F	07GR30F
9	Tool	Tool	Tool	Tool	Tool	Tool	Tool	Tool

insert length of the hose expressed in meters

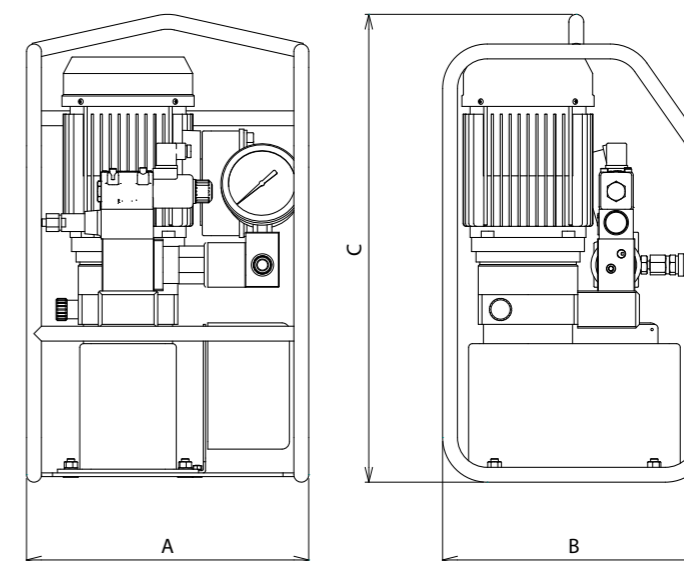
FPT C7

1.500 to 3.000 bar
40/1 cm³ oil displacement
Double stage
7 l oiltank capacity

Series
FPT C7

**Electric pump 1500 bar
for hydraulic bolt tensioners**

For bolt tensioners and hydraulic nuts



FPT C7

- Single-phase electric power pack suitable to operate hydraulic bolt tensioners and nuts.
- On request different engines, capacities and pressure are available.
- The electric pump is available in three versions: 1.500 - 2.000 and 3.000 bar.
- The pressure regulating valve allows easy output pressure setting.
- Control pendant for easy operation control.
- Data Logger option available as an option, for the download of tightening values.

CUSTOM PUMPS ON REQUEST



MODEL	PRESSURE	OIL FLOW	MOTOR	KW RPM	VALVE	OILTANK CAPACITY	DIMENSIONS			WEIGHT	ACCESSORIES
	bar	l/min					litres	A	B		
FPT-1500-EV4/3-C7	120/1500	4,5/0,35	SINGLE PHASE, 4 POLES	1,1/1400	SOLENOID VALVE	7	380	360	630	38	PENDANT
FPT-1500-EV4/3-D-C7	120/1500	4,5/0,35	SINGLE PHASE, 4 POLES	1,1/1400	SOLENOID VALVE	7	380	360	630	39	PENDANT WITH DIGITAL DISPLAY
FPT-2000-EV4/3-C7	120/2000	3,7/0,12	SINGLE PHASE, 4 POLES	1,1/1400	SOLENOID VALVE	7	380	360	630	38	PENDANT
FPT-3000-EV4/3-C7	185/3000	3,2/0,15	SINGLE PHASE, 4 POLES	1,1/1400	SOLENOID VALVE	7	380	360	630	38	PENDANT

** On request it is possible to have control pendant with digital pressure indicator even for pressures > 1500 bar

PP

Single stage
5 to 10 l reservoir
1.500 to 3.000 bar

Series
PP

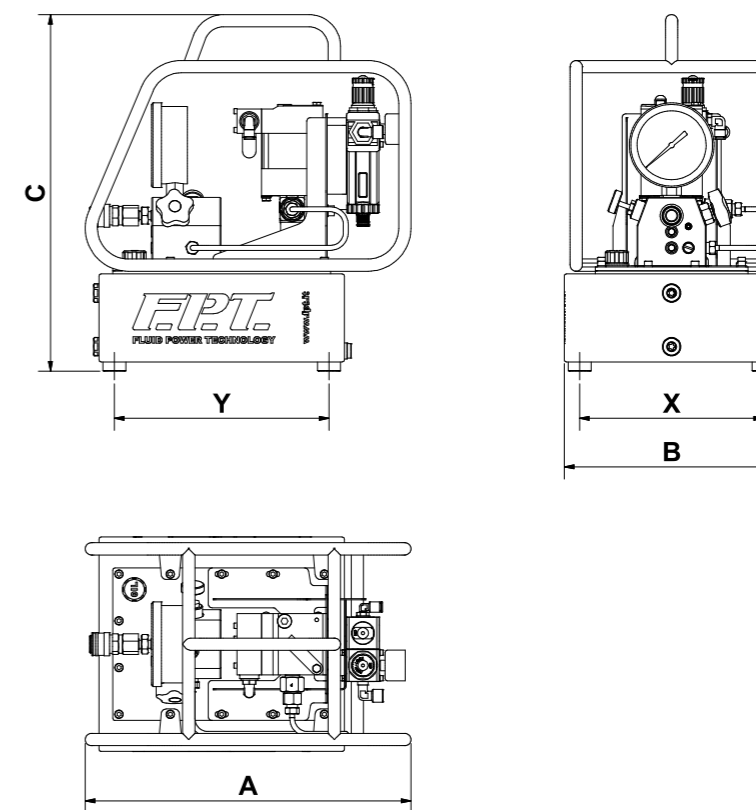
Pneumohydraulic pumps for bolt tensioners and hydraulic nuts



For bolt tensioners and hydraulic nuts

- PP series power packs are the ideal solution for all very high pressure applications when compressed air line connection is needed.
- Hydraulic pumps for stud tensioning, burst tests, laboratory tests, scaling or keying of bearings, actuation of hydraulic bolt tensioners or hydraulic nuts and wherever high pressure is required.
- Standard versions with pressure 1500 bar - 2500 bar - 3000 bar and 4000 bar.
- Equipped with pressure relief valve for maximum operative safety.
- Handwheel pressure regulator valve.
- Pressure gauge, female quick coupler and standard assembly pneumatic regulator filter on all models.
- Models available with remote control pendant.
- Possibility to design and produce custom hydraulic power units on request, with dedicated performance and features.

CUSTOM PUMPS ON REQUEST



PP

MODEL	HYDRAULIC PRESSURE	MIN. AIR INLET PRESSURE	AVG. AIR CONSUMPTION	MULTIPLICATION RATIO	NO LOAD OIL DISPLACEMENT	OIL DISPLACEMENT AT MAX OIL PRESSURE	OILTANK CAPACITY	AIR PRESSURE RANGE	LENGTH	WIDTH	HEIGHT	FIXING HOLES	SIDE INTERAXIS	FRONT INTERAXIS	WEIGHT (WITH OIL)
	bar	bar	l/min	-	l/min	l/min	litres	bar	A	B	C	-	X	Y	kg
PP1500C05	1500	7	500	1:220	0,28	0,01 @ 7 bar	5	1 - 10 bar	425	265	466	nr.4 M8x12	165	250	19,5
PP1500C10	1500	7	500	1:220	0,28	0,01 @ 7 bar	10		425	280	466	nr.4 M8x12	240	280	25,5
PP1500C05/CDP	1500	7	500	1:220	0,28	0,01 @ 7 bar	5		425	265	466	nr.4 M8x12	165	250	21,0
PP1500C10/CDP	1500	7	500	1:220	0,28	0,01 @ 7 bar	10		425	280	466	nr.4 M8x12	240	280	27,0
PP2500C05	2500	6	600	1:440	0,21	0,03 @ 6 bar	5		425	265	466	nr.4 M8x12	165	250	20,5
PP2500C10	2500	6	600	1:440	0,21	0,03 @ 6 bar	10		425	280	466	nr.4 M8x12	240	280	26,5
PP2500C05/CDP	2500	6	600	1:440	0,21	0,03 @ 6 bar	5		425	265	466	nr.4 M8x12	165	250	22,0
PP2500C10/CDP	2500	6	600	1:440	0,21	0,03 @ 6 bar	10		425	280	466	nr.4 M8x12	240	280	27,5
PP3000C05	3000	8	700	1:440	0,21	0,06 @ 8 bar	5		425	265	466	nr.4 M8x12	165	250	20,5
PP3000C10	3000	8	700	1:440	0,21	0,06 @ 8 bar	10		425	280	466	nr.4 M8x12	240	280	26,5
PP3000C05/CDP	3000	8	700	1:440	0,21	0,06 @ 8 bar	5		425	265	466	nr.4 M8x12	165	250	22,0
PP3000C10/CDP	3000	8	700	1:440	0,21	0,06 @ 8 bar	10		425	280	466	nr.4 M8x12	240	280	27,5

F.P.T.

SQUARE DRIVE TORQUE WRENCHES, LOW CLEARANCE TORQUE WRENCHES, HYDRAULIC PUMPS AND ACCESSORIES

F.P.T. offers a wide variety of products for controlled tightening to better meet the customer's specific needs and applications. Including hydraulic torque wrenches, compact and high-flow power packs, twin flex hoses, quick couplers and all the accessories required to complete the system. Any tightening can be executed with F.P.T.'s torque wrenches. Handy and compact models, square drive and low clearance.

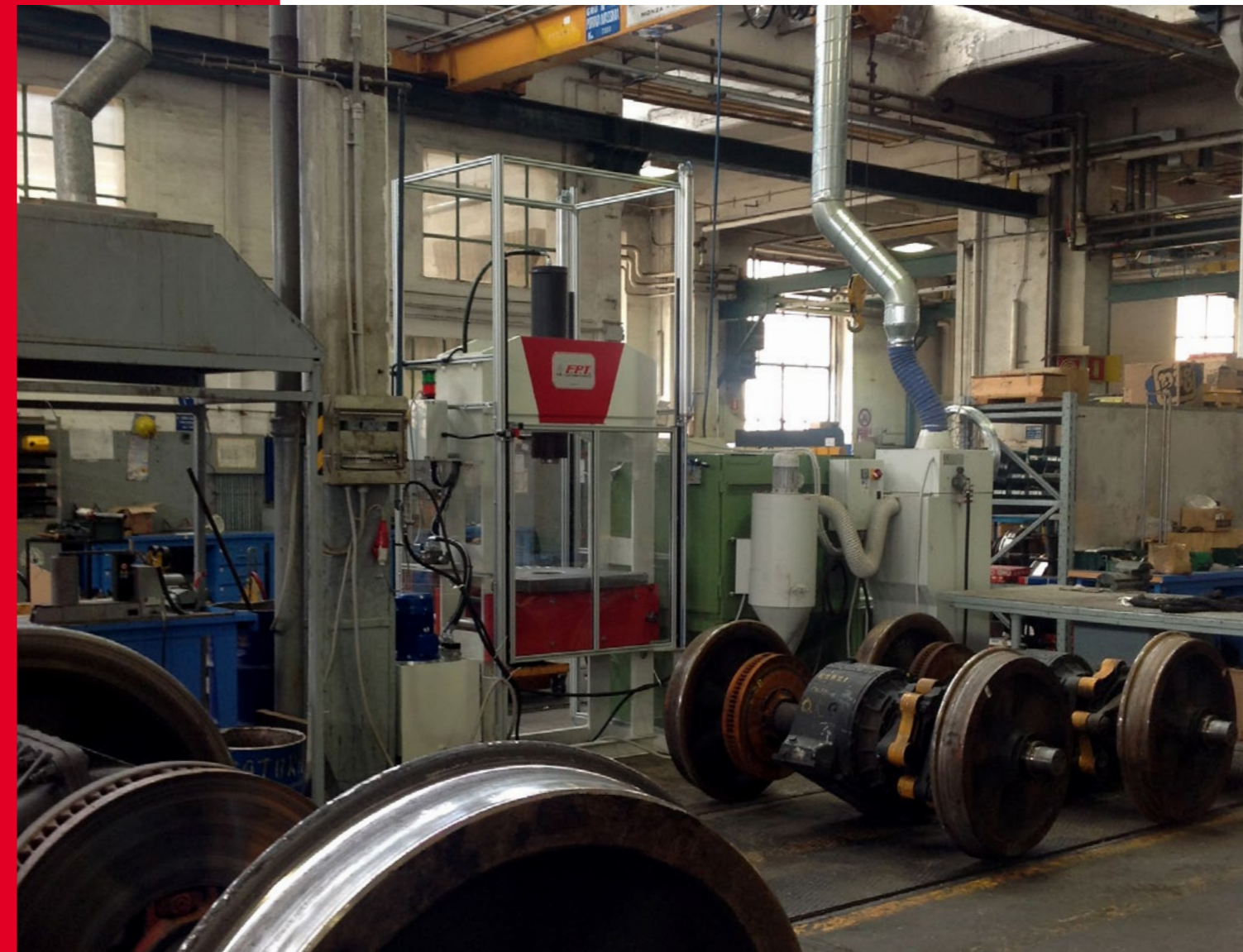
- Accuracy
- Reliability
- Low weight
- Excellent performance

[Contact F.P.T. to receive the complete catalog of hydraulic torque wrenches](#)



F.P.T.

SQUARE DRIVE TORQUE WRENCHES, LOW CLEARANCE TORQUE WRENCHES, HYDRAULIC PUMPS AND ACCESSORIES



FPT-HTW-C

700 bar
Two speed
3,5/0,45 - 7,9/0,9 l/m
5 to 10 l capacity

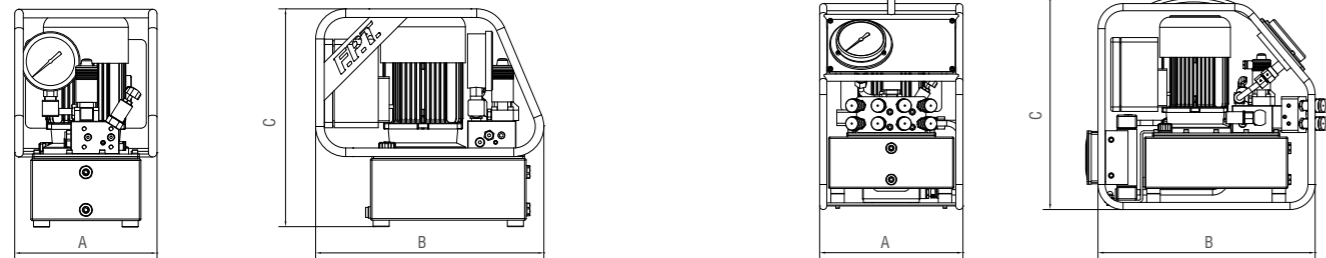
Series
FPT-HTW-C

Compact pumps electric and pneumatic for hydraulic torque wrenches



- The FPT-HTW-C is a compact pump that provide the power for your torque wrenches.
- The FPT-HTW-C10 Series is available in both single port models for single tool operation and quad port models for running up to four tools simultaneously.
- The sight glasses enable operator to monitor reservoir oil levels and the transport cage for all around protection and easy handling.

- The hydraulic pump is available in electric or pneumatic version, with different 2-Stage delivery.
- For this model are available different accessories. For both version the heat exchanger, quick couplers and twin hoses, for FPT9-HTW-C10 the quad block and the auto cycle - for automatic operation. It is also possible totally customize the pump up to the customers' needs.
- See option on page 119



CODE	MODEL	PRESSURE	OIL FLOW	MOTOR	TENSION/ FREQUENCY	POWER/ RPM	TANK CAPACITY	DIMENSIONS in mm			WEIGHT
		1°/ 2° STAGE	l/min					A	B	C	
51001	FPT9-ME41-HTW-C05	80/700	3,5/0,45	MONO PHASE ELECTRIC	230V-50Hz	0,75/1370	5	265	425	405	29
51002	FPT9-ME41-HTW-C05-SC	80/700	3,5/0,45	MONO PHASE ELECTRIC	230V-50Hz	0,75/1370	5	265	425	405	34
51088	FPT9-ME21-HTW-C05-SC	80/700	7,5/0,9	MONO PHASE ELECTRIC	230V-50Hz	1,5/2850	5	265	425	405	34
51003	FPT9-MA-HTW-C05	80/700	5,6/0,65	PNEUMATIC	-	1,3/3000	5	265	425	405	27
51004	FPT9-ME21-HTW-C10	80/700	7,5/0,9	MONO PHASE ELECTRIC	230V-50Hz	1,5/2850	10	320	485	480	36
51005	FPT9-ME21-HTW-C10-SC	80/700	7,5/0,9	MONO PHASE ELECTRIC	230V-50Hz	1,5/2850	10	320	485	480	40
51006	FPT9-ME21-HTW-C10-Q	80/700	7,5/0,9	MONO PHASE ELECTRIC	230V-50Hz	1,5/2850	10	320	485	480	38
51008	FPT9-ME21-HTW-C10-SC-Q	80/700	7,5/0,9	MONO PHASE ELECTRIC	230V-50Hz	1,5/2850	10	320	485	480	43
51009	FPT9-ME21-HTW-C10-SC-Q-AC	80/700	7,5/0,9	MONO PHASE ELECTRIC	230V-50Hz	1,5/2850	10	320	485	480	44
51011	FPT9-ME21-HTW-C10-AC-SC	80/700	7,5/0,9	MONO PHASE ELECTRIC	230V-50Hz	1,5/2850	10	320	485	480	42
51012	FPT9-MA-HTW-C10	80/700	7,9/0,9	PNEUMATIC	-	3/3000	10	320	485	480	34
51013	FPT9-MA-HTW-C10-Q	80/700	7,9/0,9	PNEUMATIC	-	3/3000	10	320	485	480	36

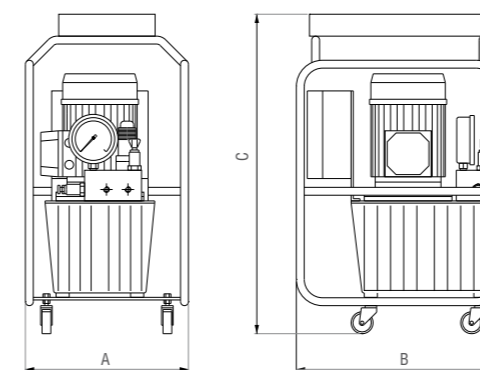
Series
FPH-HTW

Electric and pneumatic pumps for hydraulic torque wrenches



- The FPH-HTW pump is the most used pump for torque operations and provide the power for your torque wrenches.
- The hydraulic pump is available in electric or pneumatic version, with different 2-Stage delivery.
- The transport cage guarantee all-round protection and easy handling.

- For this model are available different accessories: heat exchanger, quad block, automatic cycle, quick couplers and twin hoses.
- This pump model can moreover be totally personalized:
 - ATEX
 - hour counter
 - different cages
 - timer
 - multiple switches
 - different tanks
 - different tension and frequency



CODE	MODEL	PRESSURE	OIL FLOW	MOTOR	TENSION/ FREQUENCY	POWER/ RPM	TANK CAPACITY	DIMENSIONS in mm			WEIGHT
		1°/ 2° STAGE	l/min					A	B	C	
51014	FPH5-ME21-HTW	80/700	4/1,6	MONO PHASE ELECTRIC	230V-50Hz	2,2/2850	10	372	470	725	42
51015	FPH5-ME2-HTW	80/700	4,5/1,8	THREE PHASE ELECTRIC	400V-50Hz	2,2/2850	10	372	470	725	40
51016	FPH5-MA-HTW	80/700	5,4/1,8	PNEUMATIC	-	3/3000	10	372	470	725	34
51017	FPH9-ME21-HTW	80/700	7,2/0,9	MONO PHASE ELECTRIC	230V-50Hz	1,5/2850	10	350	460	610	38
51018	FPH9-ME2-HTW	80/700	7,2/0,9	THREE PHASE ELECTRIC	400V-50Hz	1,1/2850	10	350	460	610	37
51019	FPH9-MA-HTW	80/700	7,9/0,9	PNEUMATIC	-	1,3/3000	10	350	460	610	33

OPZIONI	
SC	HEAT EXCHANGER
Q	QUAD BLOCK
AC	AUTO CYCLING
T	TIMER
HC	HOUR COUNTER

FPT-HTW-HF

700 bar
15/3 l/min
Two speed
40 l capacity

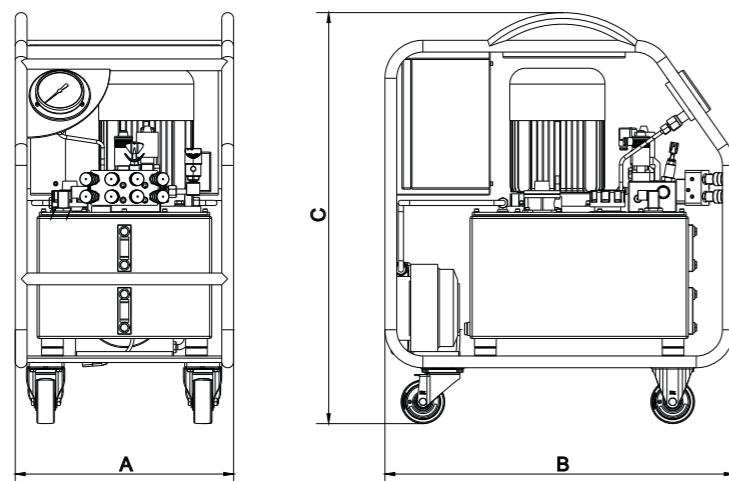
Series
FPT-HTW-HF

High flow pumps for torque wrenches



- The pump FPT-HTW-HF is a high flow version typically used for intensive job with multiple tools.
- The pump is available on three-phase version with 15 l/min at 100 bar and 3 l/min at 700 bar.
- The pump is equipped with protection cage and wheels for easy handling.
- Standard for this model are: heater exchanger, quad block manifold and oil return filter.

- There are also available different accessories: automatic cycle, quick couplers and twin hoses.
- The FPT-HTW-HF can also be equipped with different pumps and flow related to the torque specifications.
- Automatic cycle available for heavy duty operations



CODE	MODEL	PRESSURE	OIL FLOW	MOTOR	TENSION/FREQUENCY	POWER/RPM	TANK CAPACITY	DIMENSIONS in mm			WEIGHT
		1°/ 2° STAGE						litres	A	B	
51086	FPT15-ME4-HTW-HF40	100/700	15/3	THREE PHASE	400V-50Hz	4/1450	40	500	800	940	100
51087	FPT15-ME4-HTW-HF40-AC	100/700	12/3	THREE PHASE	400V-50Hz	4/1450	40	500	800	940	100

ACCESSORIES AND CUSTOM MADE

Accessories and custom made pumps for hydraulic torque wrenches

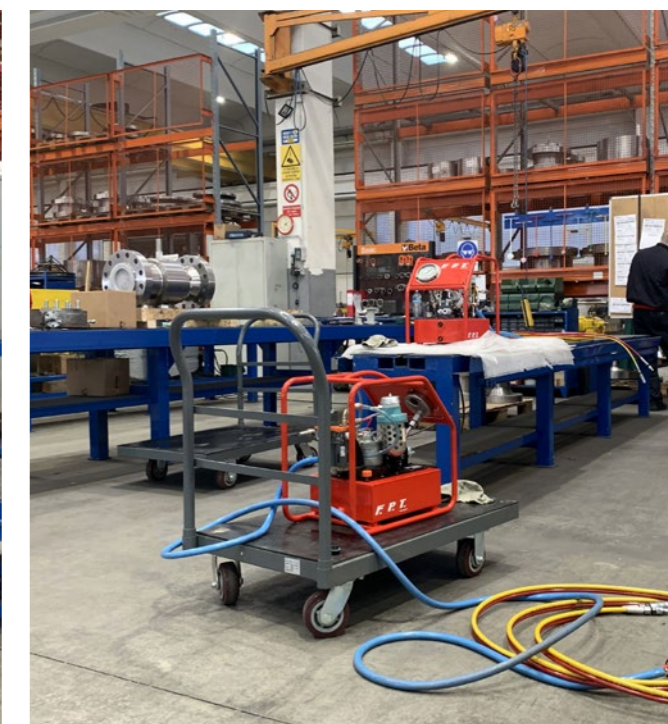
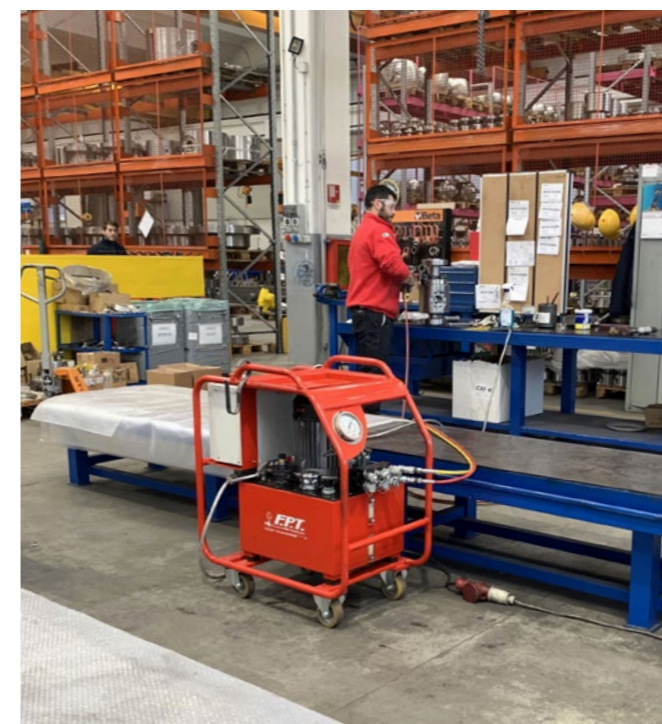
MODEL	HOSE AND COUPLERS ASSEMBLY		LENGHT	PRESSURE
	PUMP END	WRENCH END		
TTFG-5-HTW	N°2 NIPPLI 1/4"	GR1M + GR1F	5	700
TTFG-6-HTW	N°2 NIPPLI 1/4"	GR1M + GR1F	6	700
TTFG-10-HTW	N°2 NIPPLI 1/4"	GR1M + GR1F	10	700
TTFG-5-HTW-C	N°2 NIPPLI 1/4"	GR5M + GR5F	5	700
TTFG-6-HTW-C	N°2 NIPPLI 1/4"	GR5M + GR5F	6	700
TTFG-10-HTW-C	N°2 NIPPLI 1/4"	GR5M + GR5F	10	700
TTFGG-5-HTW	GR1M + GR1F	GR1M + GR1F	5	700
TTFGG-6-HTW	GR1M + GR1F	GR1M + GR1F	6	700
TTFGG-10-HTW	GR1M + GR1F	GR1M + GR1F	10	700
TTFGG-5-HTW-C	GR5M + GR5F	GR5M + GR5F	5	700
TTFGG-6-HTW-C	GR5M + GR5F	GR5M + GR5F	6	700
TTFGG-10-HTW-C	GR5M + GR5F	GR5M + GR5F	10	700

Available different types of hoses length and quick couplers.



Custom pumps for torque wrenches

FPT is specialized in the study and production of hydraulic pumps for custom hydraulic torque wrenches. High flow versions, compact and lightweight, for simultaneous use of multiple tools, atex certified, with heat exchangers and many other customizations based on the characteristics of the customer's application.



Series
GH-DI Hydraulic nuts

Hydraulic nuts



- **Hydraulic nuts** are used in all those applications where is not possible to use a mechanical nut because of continuous maintenance operations, heat, vibrations or others factors.
- Replace existing hex nuts to provide an accurate and uniform load at every bolted connection.
- Allow to tighten large diameter bolts, with high and precise preloads easily.
- They can have upper or lower clamping collar and they are extremely compact, it is also possible to connect any number of hydraulic nuts for simultaneous operation, ensuring a uniform tensioning.

- The **hydraulic nuts** are used for installation and removal of components such as couplings, gears and ship propellers, rudder blades, rudder blade shaft coupling or large pieces on conical seats and for bearings assembling and disassembling.
- The hydraulic nuts can have various threads and dimensions, they are operated by a handpump or high pressure hydraulic pump. Customized solutions produced on request.
- They find application in the naval, iron and steel, mechanical sector.

Very high pressure hand pumps and pneumo-hydraulic power units up to 3000 bar and manifold, high-pressure manifold and fittings are supplied with the hydraulic system both for the hydraulic nuts and hydraulic rings.

