

F.P.T.

HYDRAULIC POWER UNITS AND SYNCHRONOUS LIFTING SYSTEMS

F.P.T. hydraulic pumps are designed and built to adapt to the various needs arising from the use of hydraulic equipment. Built with 4 different motor versions: gasoline, three-phase or single-phase electric and pneumatic. Equipped with pumps operating at different flow rates and actuated via manual, electric or pneumatic valves.

High flexibility for the most varied applications.



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POWER UNITS AND LIFTING SYSTEMS

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F.P.T. HYDRAULIC PUMPS

F.P.T. hydraulic power units are designed and produced to adapt to various customers' needs. They are available in 4 different engine configurations: three-phase or single-phase electric motor, with gasoline engine and pneumatic motor. Pressure range available from 700 bar to 4,000 bar. The power units are equipped with pumps for different flow rates, either in the single-stage version or two-stage. They can mount a wide range of, manual, electric or pneumatic valves for single or double acting cylinders. In the standard configuration are available 10 liters tanks up to 60 liters ones and a very wide range of accessories.

TOTAL FLEXIBILITY IN THE CONFIGURATION

FPT and FPT Split Flow series hydraulic pumps are designed to guarantee maximum flexibility in configurations. The customer can easily choose each single component of the power unit according to his needs and add or replace parts or accessories in a short time afterwards. Motors, pumps, valves and accessories are all modular ones and interchangeable with each other.

CUSTOM HYDRAULIC UNITS ON CUSTOMER REQUEST

On demand:

- High flow rates for advanced performance
- Larger tanks
- Hydraulic circuits for specific needs
- Custom layouts
- Custom electric panels
- PLC automation and programming
- Extreme applications:

offshore | arctic environments | desert environments | aggressive environments.



POWER UNIT'S PARTS CODE

PUMP		MOTOR		OILTANK CAPACITY	
FPT1	Double stage	MA	Air motor	10	Oiltank 10 litres
FPT2	Single stage	ME2	2 poles three-phase electric motor	20	Oiltank 20 litres
FPT5	Double stage	ME21	2 poles single-phase electric motor	40	Oiltank 40 litres
FPT9	Double stage	ME4	4 poles three-phase electric motor	60	Oiltank 60 litres
		ME41	4 poles single-phase electric motor		

VALVES			
VM32	manual valve for single acting cylinders with by-pass - 3/2 handle	VE43DRP	solenoid valve for double acting cylinders - with pilot operated check valve
VM33	manual valve for single acting cylinders - 3/3	VE43OC	solenoid valve for oil return cylinders - with overcenter
VM33RP	manual valve for single acting cylinders - 3/3 with pilot operated check-valve	VE43DOC	solenoid valve double acting cylinders - with overcenter
VM43	manual valve for oil return cylinders - 4/3	VP32	pneumatic valve for single acting cylinders - 3/2
VM43D	manual valve for double acting cylinders - 4/3	VP32A	pneumatic valve for single acting cylinders - 3/2 fit for accessories
VM43RP	manual valve for oil return cylinders - 4/3 with pilot operated check-valve	VP33	pneumatic valve for single acting cylinders - 3/3
VM43DRP	manual valve for double acting cylinders - 4/3 with pilot operated check-valve	VP33RP	pneumatic valve for single acting cylinders - 3/3 with pilot operated check-valve
VM43OC	manual valve for oil return cylinder - 4/3 with overcenter	VP43	pneumatic valve for oil return cylinders - 4/3
VM43DOC	manual valve for double acting cylinder - 4/3 with overcenter	VP43D	pneumatic valve for double acting cylinders - 4/3
VE32	solenoid valve for single acting cylinders - 3/2	VP43RP	pneumatic valve for oil return cylinders - 4/3 with pilot operated check valve
VE32A	solenoid valve for single acting cylinders - 3/2 fit for accessories	VP43DRP	pneumatic valve for double acting cylinders - 4/3 with pilot operated check-valve
VE33	solenoid valve for single acting cylinders - 3/3	VP43OC	pneumatic valve for oil return cylinders - 4/3 with overcenter
VE33RP	solenoid valve for single acting cylinders - 3/3 with pilot operated check-valve	VP43DOC	pneumatic valve for double acting cylinders - 4/3 with overcenter
VE43	solenoid valve for oil return cylinders - 4/3	PT	PT baseplate with relief valve knob
VE43D	solenoid valve for double acting cylinders - 4/3		
VE43RP	solenoid valve for oil return cylinders - 4/3 - with pilot operated check-valve		

ACCESSORIES			
DLOG	Datalogger	SC	Heat exchanger
F	Filter on oil return	2U	2 outputs manifold
CP	Remote foot control	4U	4 outputs manifold
CD	Control pendant	G	Cage
CDP	Pneumatic control pendant	GR	Cage with pivoting wheels
RF	Unidirectional flow control valve	M100	Pressure gauge
		SO	No oil
		C1	Quick coupler
		C2	Quick couplers
		C4	Quick couplers
		C8	Quick couplers
		FRL	FR+L group

FPT

700 bar
Single – Double stage
0,9/0,45 - 7,5/0,9 l/min oil flow
From 10 to 60 l capacity

Series
FPT

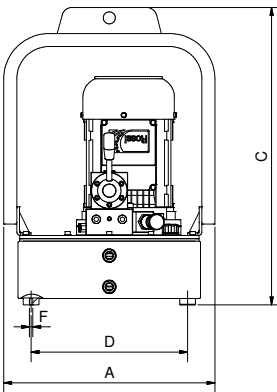
Pneumohydraulic and electric pumps

Maximum versatility and performance

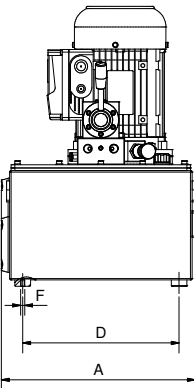
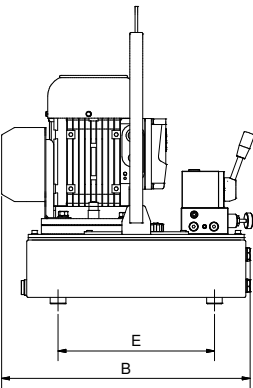


- The FPT model hydraulic pumps are the ideal solution for all industrial applications because of their extreme versatility and customization thanks to multiple configurations.
 - Available with three-phase and single-phase electric motor or pneumatic.
 - Possibility to install manual, electric or pneumatic, 3 or 4-way valves for single or double-acting cylinders and hydraulic equipment.
- With strong steel tank from 10 to 60 liters.
 - Reduced maintenance. Designed to last.
 - Wide range of accessories.
 - Possibility to design and produce custom hydraulic pumps on request, with dedicated performance and features.

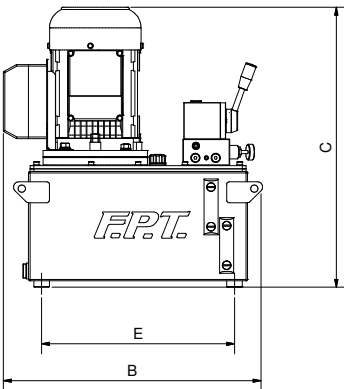
CUSTOM HYDRAULIC PUMPS ON REQUEST



10L



20 - 40 - 60L



MODEL	PRESSURE RATING	OIL DISPLACEMENT	MOTOR	KW RPM
	1st/2nd STAGE			
	bar	l/min		
FPT 1 - ME4	100 / 700	0,9 / 0,45	THREE-PHASE 4 POLES	1,1 / 1450
FPT 1 - ME41		0,9 / 0,45	SINGLE-PHASE 4 POLES	1,1 / 1450
FPT 1 - ME2		1,8 / 0,9	THREE-PHASE 2 POLES	2,2 / 2850
FPT 1 - ME21		1,8 / 0,9	SINGLE PHASE 2 POLES	2,2 / 2850
FPT 1 - MA		1,8 / 0,9	PNEUMATIC	2,6 / 3000
FPT 2 - ME4	700	0,9	THREE-PHASE 4 POLES	1,1 / 1450
FPT 2 - ME41		0,9	SINGLE-PHASE 4 POLES	1,1 / 1450
FPT 2 - ME2		1,8	THREE-PHASE 2 POLES	2,2 / 2850
FPT 2 - ME21		1,8	SINGLE PHASE 2 POLES	2,2 / 2850
FPT 2 - MA		1,8	PNEUMATIC	2,6 / 3000
FPT 5 - ME4	70 / 700	2,5 / 0,9	THREE-PHASE 4 POLES	1,1 / 1450
FPT 5 - ME41		2,5 / 0,9	SINGLE-PHASE 4 POLES	1,1 / 1450
FPT 5 - ME2		4,5 / 1,8	THREE-PHASE 2 POLES	2,2 / 2850
FPT 5 - ME21		4,5 / 1,8	SINGLE PHASE 2 POLES	2,2 / 2850
FPT 5 - MA		4,5 / 1,8	PNEUMATIC	2,6 / 3000
FPT 9 - ME4	70 / 700	3,5 / 0,45	THREE-PHASE 4 POLES	1,1 / 1450
FPT 9 - ME41		3,5 / 0,45	SINGLE-PHASE 4 POLES	1,1 / 1450
FPT 9 - ME2		7,5 / 0,9	THREE-PHASE 2 POLES	2,2 / 2850
FPT 9 - ME21		7,5 / 0,9	SINGLE PHASE 2 POLES	2,2 / 2850
FPT 9 - MA		7,5 / 0,9	PNEUMATIC	2,6 / 3000

MOTOR	OILTANK CAPACITY	DIMENSIONS in mm						WEIGHT
		A	B	C	D	E	F	kg
Electric ME	10	405	480	580	300	300	M8	36
	20	380	500	540	300	370	M8	49
	40	610	490	540	500	370	M8	69
	60	860	490	540	750	370	M8	91
Pneumatic MA	10	405	450	580	300	300	M8	33
	20	380	480	440	300	370	M8	46
	40	610	450	440	500	370	M8	56
	60	860	490	440	750	370	M8	87

Pneumatic and Electric pump's dimensions – NO CAGE

MOTOR	OILTANK CAPACITY	DIMENSIONS in mm		
		A	B	C
Electric and Pneumatic ME - MA	10	470	570	570
	20	470	620	620
	40	750	540	620
	60	1000	540	620

Pneumatic and Electric pump's dimensions – WITH CAGE

Valves for hydraulic pumps

MODEL	DRIVE	HYDRAULIC DIAGRAM	DESCRIPTION
PT	Manual		P-T Block (with pressure relief knob)
VM32	Manual		Manual valve for single acting cylinders (bypass knob) 3 way / 2 position
VM33	Manual		Manual valve for single acting cylinders 3 way / 3 position
VM43/VM43D	Manual		Manual valve for oil return cylinders 4 way / 3 position
VE32	Electric		Solenoid valve for single acting cylinders 3 way / 2 position
VE32A	Electric		Solenoid valve for single acting cylinders 3 way / 2 position for accessories

MODEL	DESCRIPTION	HYDRAULIC DIAGRAM	ASSEMBLE ON	DESCRIPTION
RP	Pilot operated check valve		VE43/VE43D – VM43/VM43D – VP43/VP43D – VM33	Dual Pilot Operated Check Valve consists of two checkers (both on A and on B) which ensure perfect load holding. Example: With a non pilot operated manual valve when switching from position A to the central hold position, a small pressure drop occurs due to the geometry of the valve: it is a very small leakage but in some cases it is not acceptable. The check valve helps to overcome this problem. It is required in split-flow pumps when no overcenter is equipped.

MODEL	DRIVE	HYDRAULIC DIAGRAM	DESCRIPTION
VE33	Electric		Solenoid valve for single acting cylinders 3 way / 3 position
VE43/VE43D	Electric		Solenoid valve for oil return cylinders 4 way / 3 position
VP32	Pneumatic		Pneumatic valve for single acting cylinders 3 way / 2 position
VP32A	Pneumatic		Pneumatic valve for single acting cylinders 3 way / 2 position for tools
VP33	Pneumatic		Pneumatic valve for single acting cylinders 3 way / 3 position
VP43/VP43D	Pneumatic		Pneumatic valve for oil return cylinders 4 way / 3 position

MODEL	DESCRIPTION	HYDRAULIC DIAGRAM	ASSEMBLE ON	DESCRIPTION
OC	Over-center valve		VE43/VE43D – VM43/VM43D – VP43/VP43D	The over-center valve (or counter-balance) has the purpose of controlling the movement of a hydraulic cylinder subject to negative loads. This valve can only be mounted on double acting or oil return cylinders. Without this valve, the return of the cylinder (during the descent phase) would not be controlled, seriously endangering the operator and the hydraulic system integrity. The valve is pre-calibrated at factory settings and the operator must not make any type of adjustment. The most economical alternative to the over center valve is a unidirectional flow regulator (RFUA). In this case the operator must completely close it before making the lifting and then gradually open it during the descent phase, varying the opening of the valve until the ideal speed is reached. It is clear that this last system is certainly cheaper but it puts the operator at risk due to possible mistakes. Moreover, in combination with the split-flow pump, the over-center valve provides a very high precision even during the return phase.











Accessories

FPT

Accessories for FPT series hydraulic pumps

The FPT series hydraulic pumps are the ideal solution for all industrial applications because of their maximum versatility and customization thanks to the multiple configurations and the many standard accessories with which they can be equipped.

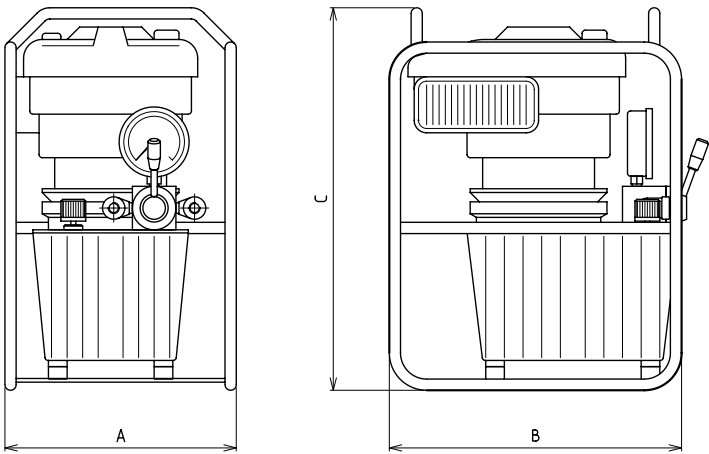
PICTURE	CODE	NAME	DESCRIPTION
	DLOG	Data-logger	Device capable of recording time / pressure values for subsequent analysis. Data that can be imported into Excel via free FPT software.
	F	Oil filter on return	Recommended for harsh environments: it is important because it increases the life of hydraulic components.
	CP	Foot remote control	To switch on / off the motor and control the valve remotely, 5 meters long electric cable, foot control.
	CD	Remote control	To switch on / off the motor and control the valve remotely, 5 meters long electric cable.
	CDP	Pneumatic remote control	To switch on / off the motor and control the valve remotely, 5 meters long electric cable.
	RF	Unidirectional flow control valve	This valve allows the free flow of oil in one direction and intercepts it in the opposite direction when completely closed. When opened the flow is free in both directions.
	SC	Heat exchanger	This accessory reduces the heating of the oil, particularly suitable for heavy applications
	2U	2 outputs manifold	Manifold to use two cylinders, with integrated needle valves to control the flow of each line

PICTURE	CODE	NAME	DESCRIPTION
	4U	4 outputs manifold	Manifold to use four cylinders, with integrated needle valves to control the flow of each branch.
	G	Cage	Protection frame with wheels to facilitate the transport of the pump and protect it from accidental impacts.
	GR	Cage with wheels	Protection frame to facilitate the transport of the pump and protect it from accidental impacts.
	M100	Pressure gauge	Pressure gauge 0/1000 bar – Ø 100 mm – thread ½" GAS
	S0	No oil	Pump supplied with no oil
	C1	Quick coupler	No.1 Female coupler mod.GR6F – 3/8" NPT
	C2	Quick couplers	No.2 female couplers mod.GR6F – 3/8" NPT
	C4	Quick couplers	No.4 female couplers mod.GR6F – 3/8" NPT
	C8	Quick couplers	No.8 female couplers mod.GR6F – 3/8" NPT
	FRL	FR+L group	Compact group consisting of a filter to retain impurities from the pneumatic circuit, a regulator to allow adjustment of the pressurized air supply, lubricator to make the hydraulic pump work properly.

FPH-MS
700 bar
Single – double stage
1,8/0,9 - 7,5/0,9 l/min oil flow
10 to 25 l oiltank

Series
FPH-MS | **Gasoline driven
hydraulic pumps**

**Always
operative**



FPH-MS

- The FPH-MS series power units are the ideal solution for all applications where it is not possible to connect electric or air supply.
 - Equipped with 4-stroke petrol engine.
 - Possibility to install manual, electric or pneumatic, 3 or 4-way valves for single or double-acting cylinders and hydraulic equipment.
 - With strong steel tank from 10 to 60 liters.
- The whole series is equipped with a protective cage that simplifies transport and lifting and protects the hydraulic pump on construction sites.
 - Wide range of accessories, supplied without quick couplers.
 - Possibility to design and produce custom hydraulic pumps on request, with dedicated performance and features.

MODEL	PRESSURE RATING 1st/2nd STAGE	OIL DISPLACEMENT 1st/2nd STAGE	MOTOR	DISPLACEMENT Cc	KW RPM	OILTANK CAPACITY litres	DIMENSIONS in mm						WEIGHT kg
	bar	l/min					A	B	C	D	E	F	
FPH 1 - MS	100 / 700	1,8 / 0,9	4 STROKE-GASOLINE	161	3 / 3000	10	372	470	615	-	-	-	42
FPH 2 - MS		1,8	4 STROKE-GASOLINE	190	2,6 / 3000		372	470	615	-	-	-	44
FPH 5 - MS		4,5 / 1,8	4 STROKE-GASOLINE	190	2,6 / 3000		372	470	615	-	-	-	44
FPH 9 - MS		7,5 / 0,9	4 STROKE-GASOLINE	161	2,6 / 3000		372	470	615	-	-	-	42

CUSTOM HYDRAULIC PUMPS ON REQUEST



FPT-BATT

700 bar
Double stage
Battery powered
0,6 and 1 l oiltank

Series
FPT-BATT

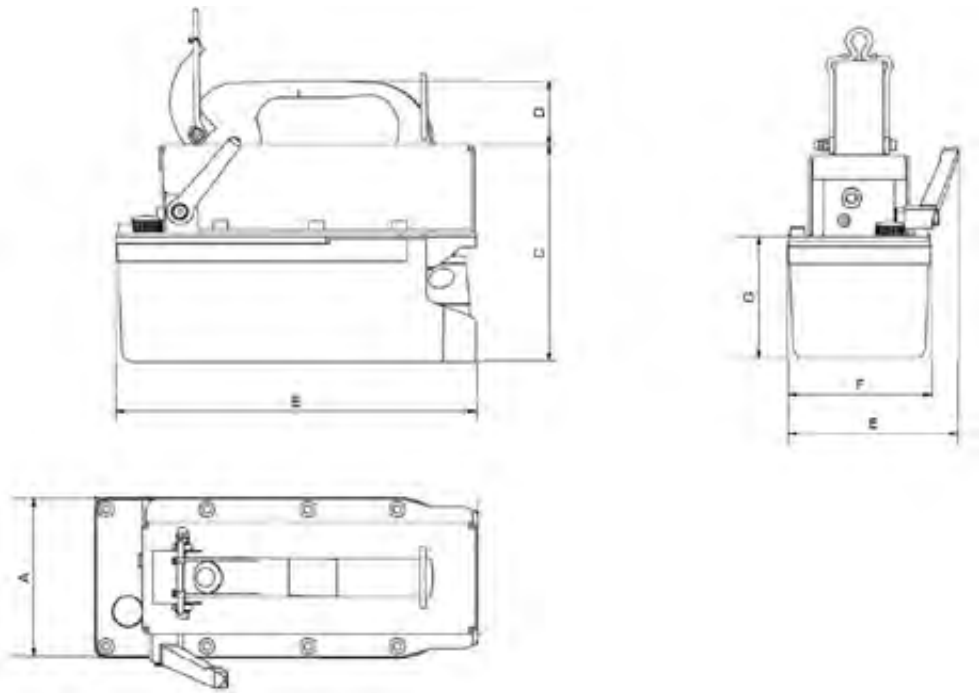
**Cordless Battery
Hydraulic Pumps**



Super light
and portable

- Battery powered pump for operating single acting cylinders and tools.
 - Cordless Battery Hydraulic Pumps with double stage configuration to maximize efficiency during operations.
 - Battery powered: light, portable and equipped with shoulder strap for maximum Handling.
- Start button is located on the handle for easy use.
 - The battery is lithium ion. Battery and battery charger are accessories that can be ordered separately.
 - The optimal temperature range is 15 ° C ÷ 40 ° C. The oil to be used is ISO VG-10 mineral hydraulic.

CUSTOM HYDRAULIC PUMPS ON REQUEST



FPT-BATT

CORDLESS BATTERY HYDRAULIC PUMPS SERIES FPT-BATT															
MODEL	DESCRIPTION	PRESSURE 1°- 2° STAGE	FLOW 1°- 2° STAGE	MOTOR	BATTERY	TANK CAPACITY	DIMENSION IN mm							OIL OUTLET	WEIGHT
		bar	l/min						liters	A	B	C	D		
31FPT-BATT0,6SE	Cordless Battery pump including battery and battery charger	20 / 700	0,7 / 0,06	14,4 V - 199 W	14,4 V - 4 Ah	0,6	102	242	148	43	122	102	88	3/8" NPT	4,5
31FPT-BATT1,0SE		20 / 700	0,7 / 0,06			1		292	168			108	5		

PRODUCTS		
MODEL	DESCRIPTION	TANK CAPACITY
		liters
31FPT-BATT0,6SE	Cordless Battery pump including battery and battery charger	0,6
31FPT-BATT1,0SE		1
31FPTBATT0,6SEN	Cordless Battery pump without battery and battery charger	0,6
31FPTBATT1,0SEN		1
31CARICBATT14V	Battery charger for 14,4 V lithium battery	/
31BATT14,4-4,0	14,4 V – 4,0 Ah lithium battery	/

PP-700 - PP-1.000

700 - 1000 bar
Single stage
2,5 to 10 l reservoir

Series
PP-700
PP-1.000

Pneumnohydraulic pumps 700 bar – 1.000 bar

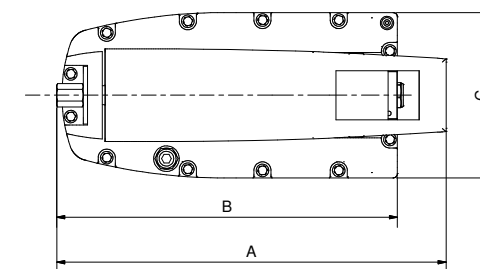
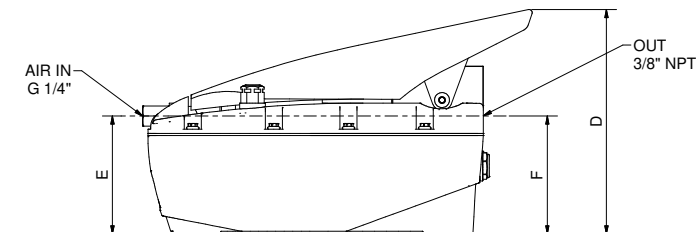
**Easy and
cheap**



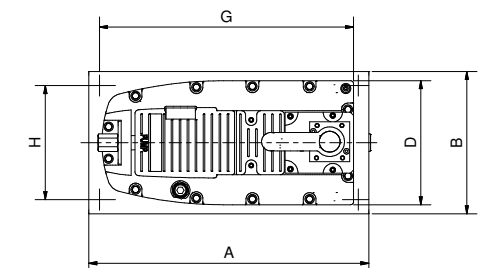
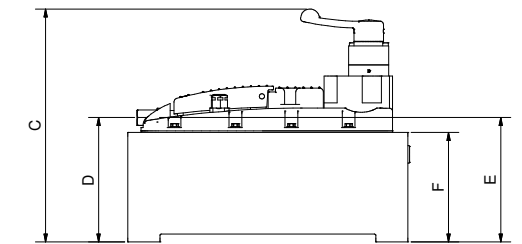
- The control units PP700 and PP1000 are characterized by very compact dimensions.
- Maximum pressure 700 or 1000 bar.
- Made of high-strength technopolymers result light and transportable.
- 5 and 10 liter tanks available.
- Easy to operate by foot or by hand.

- To be connected to the compressed air line and at an operating pressure of 6 to 8 bar.
- Available models with single or double effect with 3 or 4 way directional valves.
- For maximum flexibility, available push-button panel for remote control and a wide range of accessories.

CUSTOM HYDRAULIC PUMPS ON REQUEST



PP700



PP700TDEL5

MODEL	PRESSURE	OIL DISPLACEMENT	OILTANK CAPACITY	USABLE OIL	AIR INLET PRESSURE	DIMENSIONS in mm										WEIGHT
	bar	l/min	litres	litres	bar	A	B	C	D	E	F	G	H	L	kg	
PP 250 T	250	0,8	2,5	2,1	2,8-8	365	320	155	209	109	127	-	-	-	6,3	
PP 250 T L5		0,8	4	4	2,8-8	350	178	255	155	175	137	310	140	6	12,5	
PP 250 T L10		0,8	8	8	2,8-8	430	220	280	180	200	162	390	185	6	21	
PP 700 T	700	0,8	2,5	2,1	2,8-8	365	320	155	209	109	127	-	-	-	6,3	
PP 700 T L5		0,8	4	4	2,8-8	350	178	255	155	175	137	310	140	6	12,5	
PP 700 T L10		0,8	8	8	2,8-8	430	220	280	180	200	162	390	185	6	21	
PP 700 T DE		0,8	2,5	2,1	2,8-8	365	320	155	209	129	127	-	-	-	6,3	
PP 700 T DE L5		0,8	4	4	2,8-8	350	178	291	155	176,5	137	310	142,5	6	12,5	
PP 700 T DE L10		0,8	8	8	2,8-8	430	220	301	180	201,5	162	390	184,5	6	21	
PP 700 T RC		0,8	2,5	2,1	2,8-8	365	320	155	209	109	127	-	-	-	6,3	
PP 700 T RC L5		0,8	4	4	2,8-8	350	178	255	155	175	137	310	140	6	12,5	
PP 1000 T		0,8	2,5	2,1	2,8-8	365	320	155	209	109	127	-	-	-	6,3	
PP 1000 T L5	1000	0,8	4	4	2,8-8	350	178	255	155	175	137	310	140	6	12,5	
PP 1000 T L10		0,8	8	8	2,8-8	430	220	280	180	200	162	390	185	6	21	

PP

Single stage
5 to 10 l oiltank capacity
1500 to 3000 bar

Series
PP

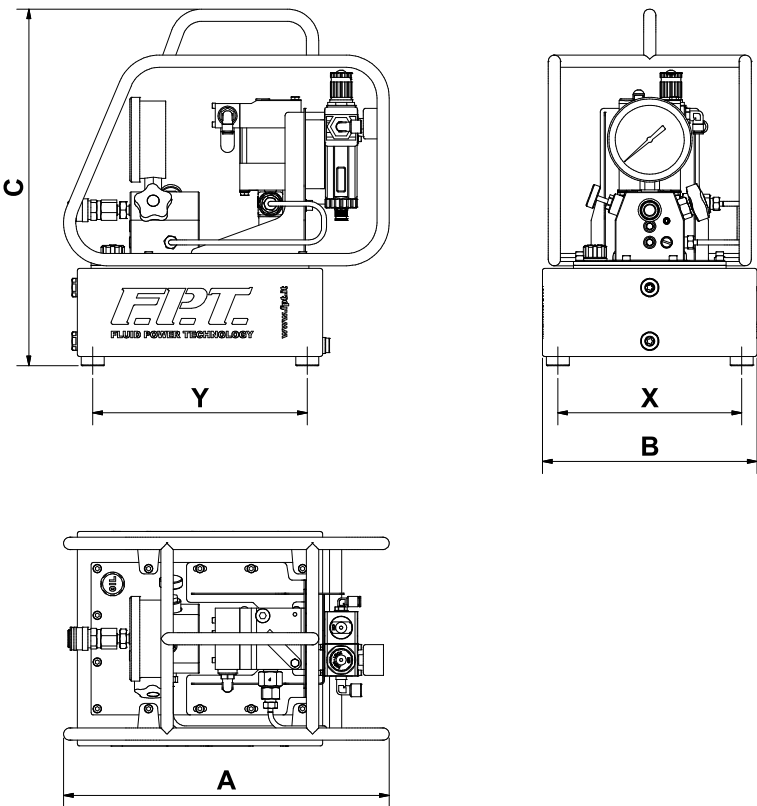
Pneumo hydraulic pumps
1.500 to 4.000 bar



For very
high pressure

- PP series power units are the ideal solution for all very high pressure applications where it is necessary to connect to the compressed air line.
- Power units for tensioning bolts, 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 operational safety.
- Handwheel pressure regulator valve.
- Pressure gauge, female quick coupler and standard pneumatic filter regulator assembly on all models.
- Models available with remote control pendant (CDP).
- Possibility to design and produce custom hydraulic power units on request, with dedicated performance and features.

CUSTOM HYDRAULIC PUMPS ON REQUEST



PP

MODEL	PRESSURE	MIN. NEEDED PRESSURE	AVG. AIR CONSUMPTION	MULTIPLICATION RATIO	OIL DISPLACEMENT NO LOAD	OIL DISPLACEMENT MAX PRESSURE	OILTANK CAPACITY	AIR PRESSURE RANGE	DIMENSIONS in mm					FIXING HOLES	MASS (OIL INCLUDED)
	bar	bar	NI/min	-	NI/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	165	250	nr.4 M8x12	19,5
PP1500C10	1500	7	500	1:220	0,28	0,01 @ 7 bar	10		425	280	466	240	280	nr.4 M8x12	25,5
PP1500C05/CDP	1500	7	500	1:220	0,28	0,01 @ 7 bar	5		425	265	466	165	250	nr.4 M8x12	21,0
PP1500C10/CDP	1500	7	500	1:220	0,28	0,01 @ 7 bar	10		425	280	466	240	280	nr.4 M8x12	27,0
PP2500C05	2500	6	600	1:440	0,21	0,03 @ 6 bar	5		425	265	466	165	250	nr.4 M8x12	20,5
PP2500C10	2500	6	600	1:440	0,21	0,03 @ 6 bar	10		425	280	466	240	280	nr.4 M8x12	26,5
PP2500C05/CDP	2500	6	600	1:440	0,21	0,03 @ 6 bar	5		425	265	466	165	250	nr.4 M8x12	22,0
PP2500C10/CDP	2500	6	600	1:440	0,21	0,03 @ 6 bar	10		425	280	466	240	280	nr.4 M8x12	27,5
PP3000C05	3000	8	700	1:440	0,21	0,06 @ 8 bar	5		425	265	466	165	250	nr.4 M8x12	20,5
PP3000C10	3000	8	700	1:440	0,21	0,06 @ 8 bar	10		425	280	466	240	280	nr.4 M8x12	26,5
PP3000C05/CDP	3000	8	700	1:440	0,21	0,06 @ 8 bar	5		425	265	466	165	250	nr.4 M8x12	22,0
PP3000C10/CDP	3000	8	700	1:440	0,21	0,06 @ 8 bar	10		425	280	466	240	280	nr.4 M8x12	27,5
PP4000C10	4000	7	800	1:660	0,19	0,05 @ 7 bar	10		425	280	475	240	280	nr.4 M8x12	26,5
PP4000C10/CDP	4000	7	800	1:660	0,19	0,05 @ 7 bar	10		425	280	475	240	280	nr.4 M8x12	29,5

FPT-GEO

700 bar
Double stage
2,5 - 0,9 l/min oil flow
10 to 60 l oiltank capacity

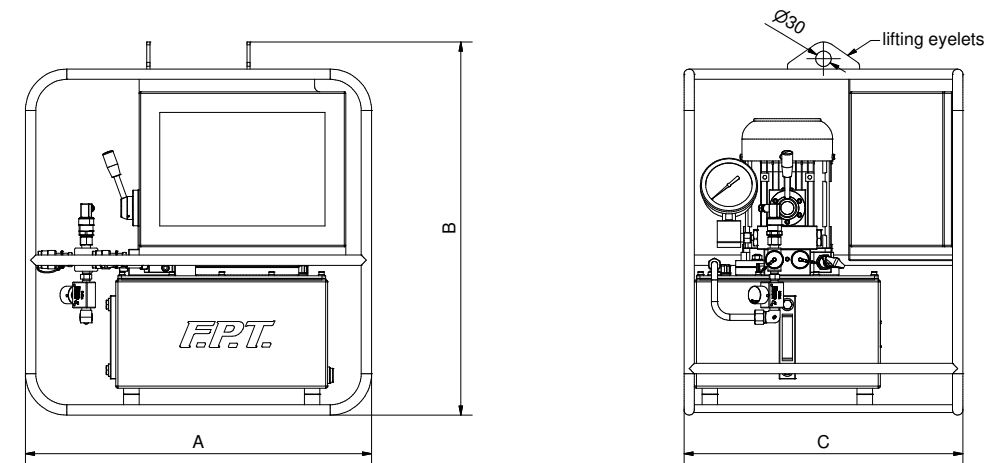
Series
FPT-GEO

Pump for tests and geotechnics



For automatic pressure recovery

- The most reliable method for determining bearing capacity of a pole is to subject it to a load test. This means planting the pile to the project depth and applying a succession of loads to it.
- FPT GEO series power units perfectly accomplish this task ensuring the maintenance of the pre-set load.
- With the practical microprocessor display it is possible to set the desired pressure. The pump will maintain this value, restoring it in case of leaks or yielding.
- Available with three-phase or single-phase electric motor.
- Protective cage with integrated electrical panel and eyelets for lifting, 20 and 40 liters tank capacity.
- Possibility to design and produce custom hydraulic pumps on request, with dedicated performance and features.
- For years F.P.T. cares of the environment and its protection. It has in fact various products suitable for use with water or fluids 100% biodegradable.



FPT GEO

MODEL	PRESSURE 1st/2nd STAGE	OIL DISPLACEMENT	MOTOR	VOLTAGE/ FREQUENCY	KW/RPM	OILTANK CAPACITY	DIMENSIONS in mm			WEIGHT
	bar	bar		V/Hz		litres				kg
FPT5-ME4-20-GEO	100/700	2,5/0,9	THREE PHASE ELECTRIC	400V-50Hz	1,1/1440	20	670	772	540	75
FPT5-ME41-20-GEO	100/700	2,5/0,9	MONO PHASE ELECTRIC	230V-50Hz	1,1/1440					75
FPT5-ME4-40-GEO	100/700	2,5/0,9	THREE PHASE ELECTRIC	400V-50Hz	1,1/1440	40				94
FPT5-ME41-40-GEO	100/700	2,5/0,9	MONO PHASE ELECTRIC	230V-50Hz	1,1/1440					94

CUSTOM HYDRAULIC PUMPS ON REQUEST



FPT – TECH Series HYDRAULIC PUMPS FOR TESTS AND PRESSING TESTS

More and more customers need to have a technologically advanced product to perform pressure tests. F.P.T. realizes for this specific sector those power units suitable for operations with water or biodegradable fluids, able of perform pressure tests, record data and be remotely controlled.

Equipped with PLC and dedicated FPT software, they are the ideal tool for all testing and product validation and are completely customizable based on specific customer needs.

FPT SPLIT FLOW

700 bar
Single stage
0,4 - 0,9 l/min oil flow
10 to 60 l oiltank capacity

Series
FPT
SPLIT FLOW

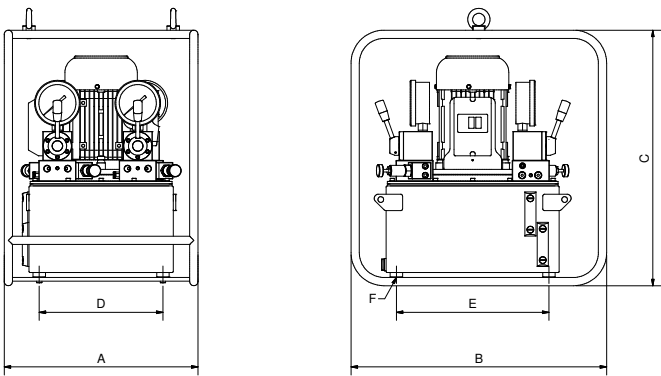
Hydraulic pump with independent outlets

For synchronous lifting during the lifting and lowering phases $\pm 3\%$ of precision on the nominal stroke



- Split Flow power units allow to perform synchronous lifting and lowering operations of irregular and unbalanced loads.
 - Can handle 2 or 4 single or double effect cylinders.
 - Piston pump with independent outputs ideal for carrying out lifting operations where high accuracy load leveling is required.
- $\pm 3\%$ accuracy on the nominal stroke when lifting with of single-acting cylinders and during lifting and lowering with double-acting cylinders.
 - Available manual or electric valves with related control pendant and counter-balance valves for load control during descent.

CUSTOM HYDRAULIC PUMPS ON REQUEST



SPLIT FLOW

MODEL	OUTPUTS	MAX WORKING PRESSURE	OIL DISPLACEMENT PER OUTPUT	MOTOR	KW RPM
		bar	l/min		
FPT 2x0,9 - ME2	2	700	0,9	THREE PHASE 2 POLES	2,2 / 2850
FPT 2x0,9 - ME21	2		0,9	MONO PHASE 2 POLES	
FPT 4x0,4 - ME2	4		0,4	THREE PHASE 4 POLES	
FPT 4x0,4 - ME21	4		0,4	MONO PHASE 2 POLES	

OILTANK CAPACITY	DIMENSIONS in mm						WEIGHT
	A	B	C	D	E	F	kg
10	405	480	580	300	300	M8	36
20	380	500	540	300	370	M8	49
40	610	490	540	500	370	M8	69
60	860	490	540	750	370	M8	91

Split flow pump's dimensions – WITHOUT PROTECTION CAGE

OILTANK CAPACITY	DIMENSIONS in mm		
	A	B	C
10	870	600	620
20	870	600	620
40	935	580	740
60	1085	580	740

Split flow pump's dimensions – WITH PROTECTION CAGE

PICTURE	CODE	NAME	DESCRIPTION
	CD	Remote control	To switch on / off the motor and control the valve remotely, 5 meters long electric cable.
	RF	Unidirectional flow control valve	This valve allows the free flow of oil in one direction and intercepts it in the opposite direction when completely closed. When opened the flow is free in both directions.
	G	Cage	Protection frame with wheels to facilitate the transport of the pump and protect it from accidental impacts.
	GR	Cage with wheels	Protection frame to facilitate the transport of the pump and protect it from accidental impacts.
	M100	Pressure gauge	Pressure gauge 0/1000 bar – Ø 100 mm – thread 1/2" GAS
	SO	No oil	Pump supplied with no oil

Series
FPT SYNCHRO

Synchronous lifting system

**1mm precision
in the operations of
lifting and lowering**



Lifting with a precision of 1 mm

F.P.T. manufactures integrated lifting systems controlled by PLC. The F.P.T. SYNCHRO allows the operator to carry out each step of the lifting and descending process synchronously through integrated management of the hydraulic and control part. Unbalanced loads are kept levelled during the up or down phases, with leveling accuracy equal to 1 mm.

The system was developed to adapt to customer lifting needs and can be totally customizable with a series of optional. It is the ideal tool for operations of lifting or weighing that need accurate control's systems functions. The F.P.T. system is user friendly, safe and modular.

Typical application of synchronous lifting from 4 to 48 points:

Thanks to stroke and pressure transducers feedbacks, the system allows lifting and lowering in a synchronous way with the precision of 1 mm, reducing the risk of excessive stress due to unbalanced distribution of the loads between the lifting points.

The operator can set on the PC screen the parameters of the operation to be performed, decide the number of cylinders to use, the stroke, the accuracy and the speed to operate. All data during operations are always monitored by the system increasing productivity and safety during operations. All data are stored and can be downloaded later.

Basic system composition:

- 700 bar hydraulic pump with radial piston pump, three-phase motor inverter controlled
- laptop or touch screen panel
- wire transducers for stroke control
- armored cables complete with industrial connectors

For use with single or double acting hydraulic cylinders.

Controls - Operator panel:

- Monitoring from 4 to 48 lifting points.
- Controlled movement for lifting / lowering.
- Possibility to select the cylinders to be operated.
- 2 modes available: automatic or manual.
- Possibility to set the maximum lag permitted.
- Accuracy on synchronism of 1 mm.
- Load and stroke alarm display for maximum safety during operations.
- Display of the maximum relative error between various cylinders.
- Download and storage of data related to lifting.

Speed optimization

The system is able to optimize the speed of load lifting / lowering regardless of number and size of cylinders maintaining the error within the set limit. The operator panel also allows the approach of the cylinders to the structure/formwork to lift, thus allowing a considerable saving of time.

The information displayed for each cylinder are:

- relative and absolute position
- pressure
- force
- direction (upward / downward)
- information relating to errors



CUSTOM HYDRAULIC PUMPS

When standard production fails to meet the requirements of the customer F.P.T. designs and produces hydraulic pumps according to customer specifications. The power units can be designed with operative pressure up to 4,000 bar, have extremely compact 2 or 5 liters tanks, larger tanks to operate multiple cylinders reaching up to 400 or 500 liters. The pumps can be axial or radial type, single-stage, double-stage, combined and capable of oil displacement suitable for the customer's application.

Wide selection of motors available and the operation can be done by manual, electric or pneumatic valves and hydraulic system to customer specification. The range of accessories that can be equipped on the hydraulic pump is very wide and the entire unit can be completely designed on the specific needs of the customer and the sector in which he operates.

Typical synchronized applications lifting:

- Handling of heavy structures.
- Maintenance, launch or construction of bridges
- Load transfer operations
- Installation or maintenance of heavy systems
- Positioning of offshore platforms
- Weighing operations

