

# 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	
<b>FPT1</b>	Double stage	<b>MA</b>	Air motor	<b>10</b>	Oiltank 10 litres
<b>FPT2</b>	Single stage	<b>ME2</b>	2 poles three-phase electric motor	<b>20</b>	Oiltank 20 litres
<b>FPT5</b>	Double stage	<b>ME21</b>	2 poles single-phase electric motor	<b>40</b>	Oiltank 40 litres
<b>FPT9</b>	Double stage	<b>ME4</b>	4 poles three-phase electric motor	<b>60</b>	Oiltank 60 litres
		<b>ME41</b>	4 poles single-phase electric motor		

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

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

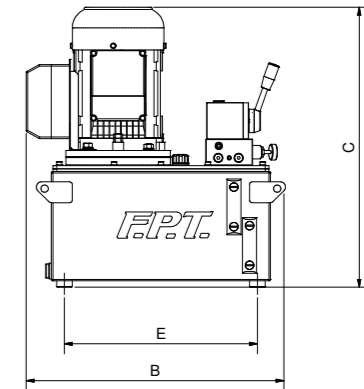
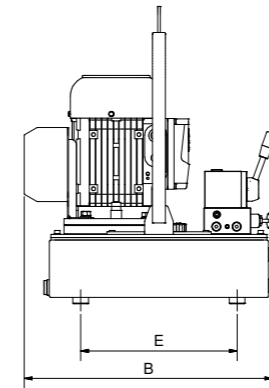
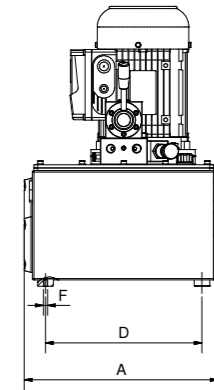
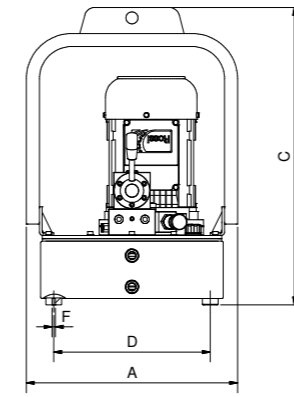
**FPT**

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**



10L

20 - 40 - 60L

- 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**



MODEL	PRESSURE RATING 1st/2nd STAGE	OIL DISPLACEMENT 1st/2nd STAGE	MOTOR	KW RPM
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
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
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
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 kg
		A	B	C	D	E	F	
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
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**

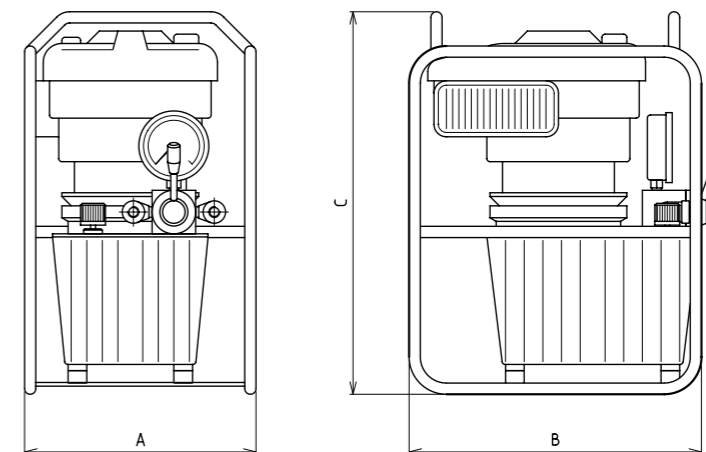
700 bar  
Single – double stage  
1,8/0,9 - 7,5/0,9 l/min oil flow  
10 to 25 l oiltank

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	OIL DISPLACEMENT	MOTOR	DISPLACEMENT	KW RPM	OILTANK CAPACITY	DIMENSIONS in mm						WEIGHT
	1st/2nd STAGE	1st/2nd STAGE					bar	l/min	Cc	litres	A	B	
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**



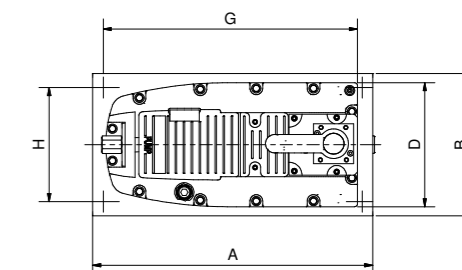
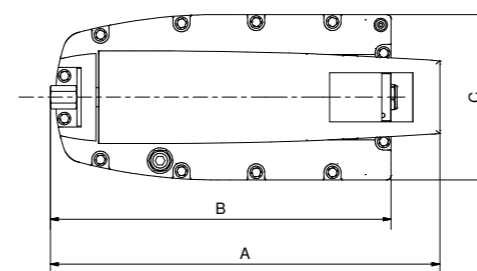
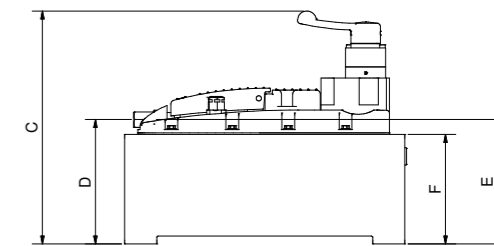
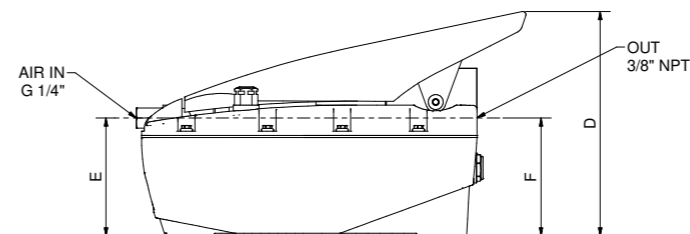
**PP-700 - PP-1.000**

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

Series  
**PP-700**  
**PP-1.000**

**Pneumohydraulic pumps  
700 bar – 1.000 bar**

**Easy and cheap**



PP700

PP700TDEL5

- 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**



MODEL	PRESSURE bar	OIL DISPLACEMENT l/min	OILTANK CAPACITY litres	USABLE OIL litres	AIR INLET PRESSURE bar	DIMENSIONS in mm									WEIGHT kg
						A	B	C	D	E	F	G	H	L	
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		1000	0,8	2,5	2,1	2,8-8	365	320	155	209	109	127	-	-	-
PP 1000 T L5	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**

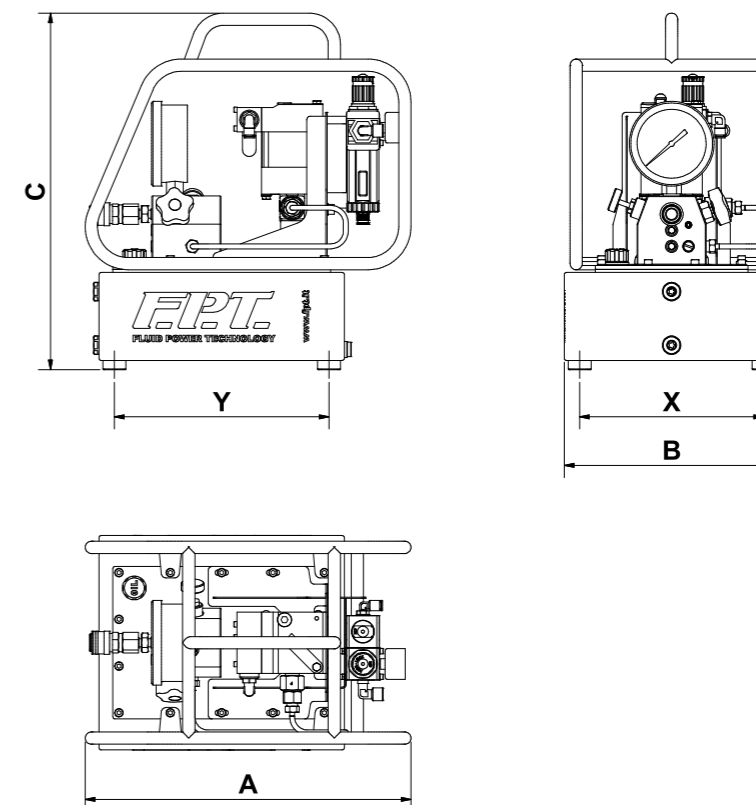


**For very high pressure**

- 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	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	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**

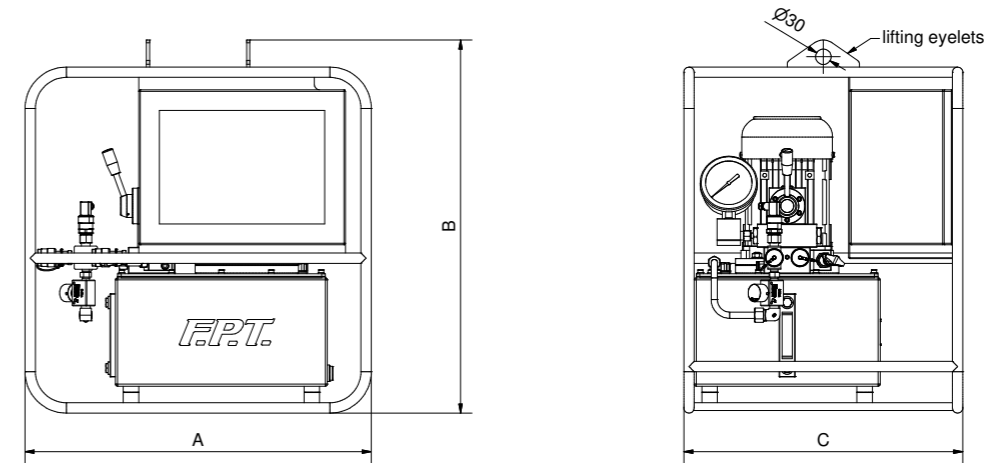
**Pump for tests and geotechnics**



**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	OIL	MOTOR	VOLTAGE/	KW/RPM	OILTANK	DIMENSIONS in mm			WEIGHT		
	1st/2nd STAGE	DISPLACEMENT		FREQUENCY			CAPACITY					
	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

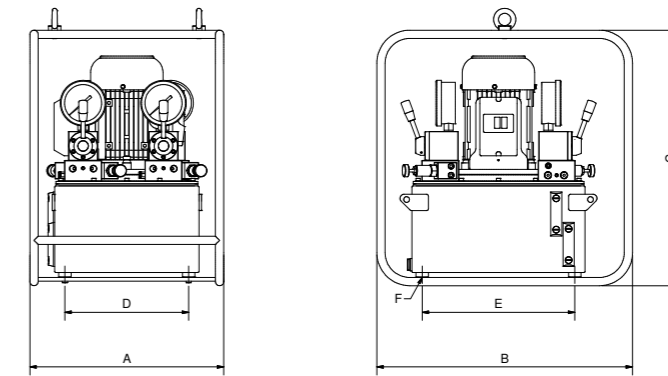


**For synchronous lifting during the lifting and lowering phases ±3% of precision on the nominal stroke**

- 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.

- ± 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 ½" 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



### 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



## 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.

