

F.P.T. / HYDRAULIC POWER UNIT & SYNCHRONOUS LIFTING SYSTEM



03/

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HYDRAULIC POWER UNITS

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F.P.T. / HYDRAULIC POWER UNIT & SYNCHRONOUS LIFTING SYSTEM

POWER UNIT'S PART CODE

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

The 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'S 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.

| PUMP | |
|-------------|--------------|
| FPT1 | Double stage |
| FPT2 | Single stage |
| FPT5 | Double stage |
| FPT9 | Double stage |

| MOTOR | |
|-------------|-------------------------------------|
| MA | Air motor |
| ME2 | 2 poles three-phase electric motor |
| ME21 | 2 poles single-phase electric motor |
| ME4 | 4 poles three-phase electric motor |
| ME41 | 4 poles single-phase electric motor |

| OILTANK CAPACITY | |
|------------------|-------------------|
| 10 | Oiltank 10 litres |
| 20 | Oiltank 20 litres |
| 40 | Oiltank 40 litres |
| 60 | Oiltank 60 litres |

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

Series **FPT-MPU** | Portable hydraulic mini pumps



PRODUCT PAGE

Light and portable

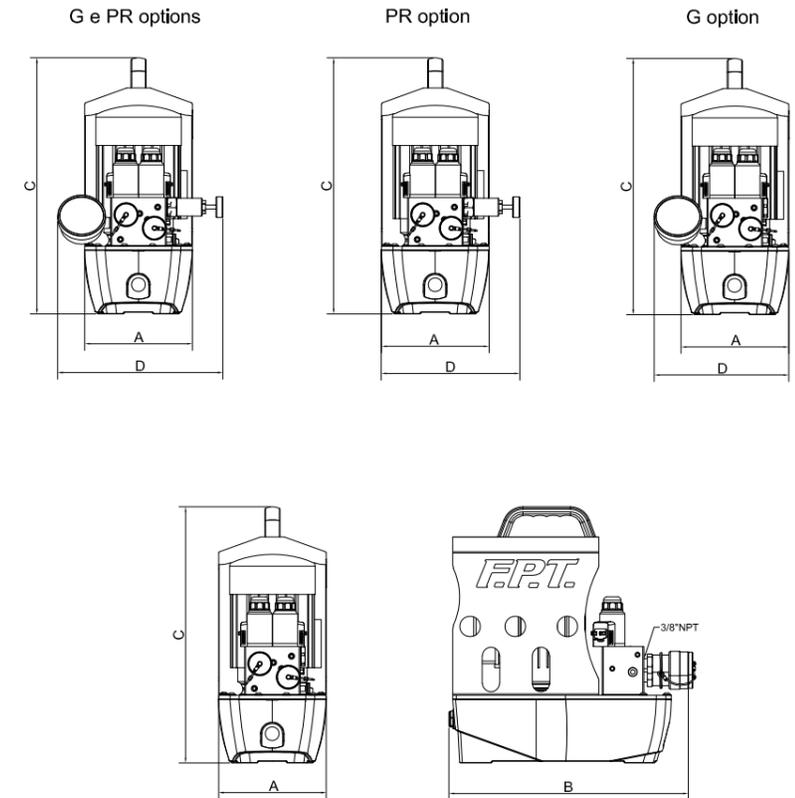
CUSTOM HYDRAULIC PUMPS ON REQUEST



- Hydraulic mini pump, extremely light and compact, suitable for all applications where easy handling is a priority.
- **Only 12 kg weight to operate in any environment.**
- Maximum working pressure 700 bar.
- Single-phase electric motor 230V-50Hz, power 0.55 kW.
- Radial piston pump, double stage, suitable for heavy-duty applications.
- Available for simple and double acting applications.
- Electrically operated valves.
- Remote control as standard on all models.
- 2.1 liters resin tank.
- Metal cage with ergonomic handle.
- Available with pressure gauge and handwheel pressure regulator.
- GR-6F female quick coupling as standard on the outlets.

FPT-MPU

700 bar
Double stage
1/0,5 l/min oil flow
2,1 l oiltank capacity



FPT-MPU

| CODE | MODEL | PRESSURE | OIL FLOW | MOTOR | TENSION/ FREQUENCY | POWER/ RPM | TANK CAPACITY | DIMENSIONS mm | | | | WEI- GHT |
|-----------------|---------------------|----------------|----------|------------------------|-----------------------|---------------|------------------|---------------|-----|-----|-----|-------------|
| | | 1°/2° STAGE | l/min | | bar | kHz/rpm | litres | A | B | C | D | kg |
| 31FPTMPU2SAS | FPT-MPU-2-SA-S | 75/700 | 1/0,5 | MONO PHASE ELECTRIC | 230V-50Hz | 0,55/2800 | 2,1 | 155 | 344 | 372 | - | 12 |
| 31FPTMPU2DAS | FPT-MPU-2-DA-S | 75/700 | 1/0,5 | MONO PHASE ELECTRIC | 230V-50Hz | 0,55/2800 | 2,1 | 155 | 344 | 372 | - | 12 |
| 31FPTMPU2SASG | FPT-MPU-2-SA-S-G | 75/700 | 1/0,5 | MONO PHASE ELECTRIC | 230V-50Hz | 0,55/2800 | 2,1 | 155 | 344 | 372 | 194 | 12 |
| 31FPTMPU2DASG | FPT-MPU-2-DA-S-G | 75/700 | 1/0,5 | MONO PHASE ELECTRIC | 230V-50Hz | 0,55/2800 | 2,1 | 155 | 344 | 372 | 194 | 12 |
| 31FPTMPU2SASPR | FPT-MPU-2-SA-S-PR | 75/700 | 1/0,5 | MONO PHASE ELECTRIC | 230V-50Hz | 0,55/2800 | 2,1 | 155 | 344 | 372 | 199 | 12 |
| 31FPTMPU2DASPR | FPT-MPU-2-DA-S-PR | 75/700 | 1/0,5 | MONO PHASE ELECTRIC | 230V-50Hz | 0,55/2800 | 2,1 | 155 | 344 | 372 | 199 | 12 |
| 31FPTMPU2SASGPR | FPT-MPU-2-SA-S-G-PR | 75/700 | 1/0,5 | MONO PHASE ELECTRIC | 230V-50Hz | 0,55/2800 | 2,1 | 155 | 344 | 372 | 238 | 12 |

OPTIONS

| | |
|----|-----------------------------|
| G | PRESSURE GAUGE |
| PR | PRESSURE REGULATOR |
| SA | FOR SINGLE ACTING CYLINDERS |
| DA | FOR DOUBLE ACTING CYLINDERS |



PRODUCT PAGE

Maximum versatility and performance

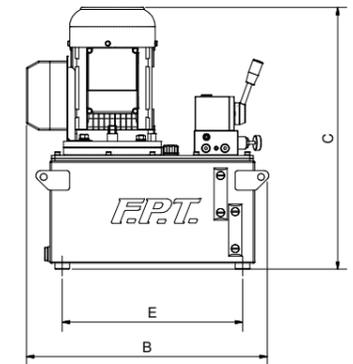
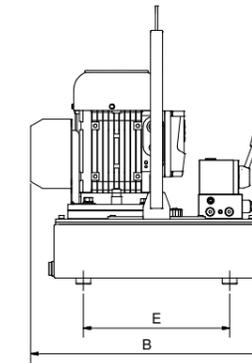
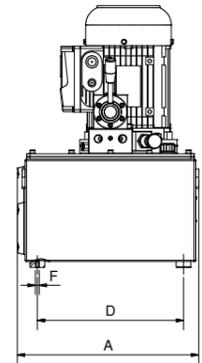
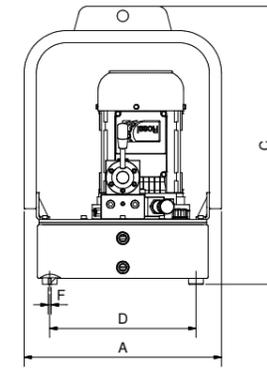
CUSTOM HYDRAULIC PUMPS ON REQUEST



- 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 100 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.
- Available models ATEX version. ▶ 

FPT

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



10L

20-40-60-100 L

| MODEL | PRESSURE RATING 1st/2nd STAGE | OIL DISPLACEMENT 1st/2nd STAGE | MOTOR | KW RPM |
|--------------|-------------------------------|--------------------------------|----------------------|---------------------|
| | 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 |
| 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 | 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 (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 |
| | 60 | 860 | 490 | 540 | 750 | 370 | M8 | 91 |
| | 100 | 935 | 580 | 610 | 670 | 470 | M10 | 152 |
| 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 |
| | 100 | 935 | 580 | 510 | 670 | 470 | M10 | 148 |

Pneumatic and Electric pump's dimensions – NO CAGE

| MOTOR | OILTANK CAPACITY | DIMENSIONS (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 |
| | 100 | 1000 | 700 | 755 |

Pneumatic and Electric pump's dimensions – WITH CAGE

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



PRODUCT PAGE

Always operative

CUSTOM HYDRAULIC PUMPS ON REQUEST

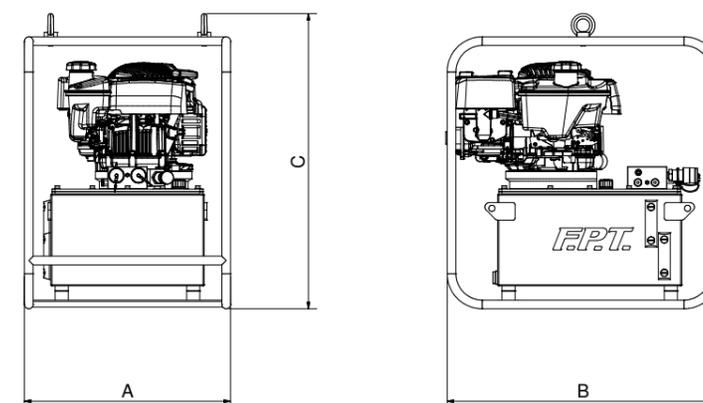


- The FPT-MS series power units are the ideal solution for all applications where it is not possible to connect electric or air supply.
- Equipped with 4-stroke petrol engine.
- Possibility to install manual, electric or pneumatic, 3 or 4-way valves for single or double-acting cylinders and hydraulic equipment.
- With strong steel tank from 10 to 100 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.

FPT-MS

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

FPT-MS



| MODEL | PRESSURE RATING 1st/2nd STAGE | OIL DISPLACEMENT 1st/2nd STAGE | MOTOR |
|---------|-------------------------------|--------------------------------|------------------------|
| | bar | l/min | |
| FPT1-MS | 100 / 700 | 1,8 / 0,9 | 4 STROKE PETROL ENGINE |
| FPT2-MS | 700 | 1,8 | 4 STROKE PETROL ENGINE |
| FPT5-MS | 70 / 700 | 4,5 / 1,8 | 4 STROKE PETROL ENGINE |
| FPT9-MS | 70 / 700 | 7,5 / 0,9 | 4 STROKE PETROL ENGINE |

| MOTOR | OILTANK CAPACITY | DIMENSIONS (mm) | | | WEIGHT kg |
|------------------------|------------------|-----------------|-----|-----|-----------|
| | | A | B | C | |
| 4 STROKE PETROL ENGINE | 10 | 470 | 600 | 625 | 39,8 |
| | 20 | 470 | 620 | 675 | 53 |
| | 40 | 750 | 555 | 675 | 65 |
| | 60 | 1000 | 555 | 675 | 97,5 |
| | 100 | 1000 | 700 | 755 | 174,5 |

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. |

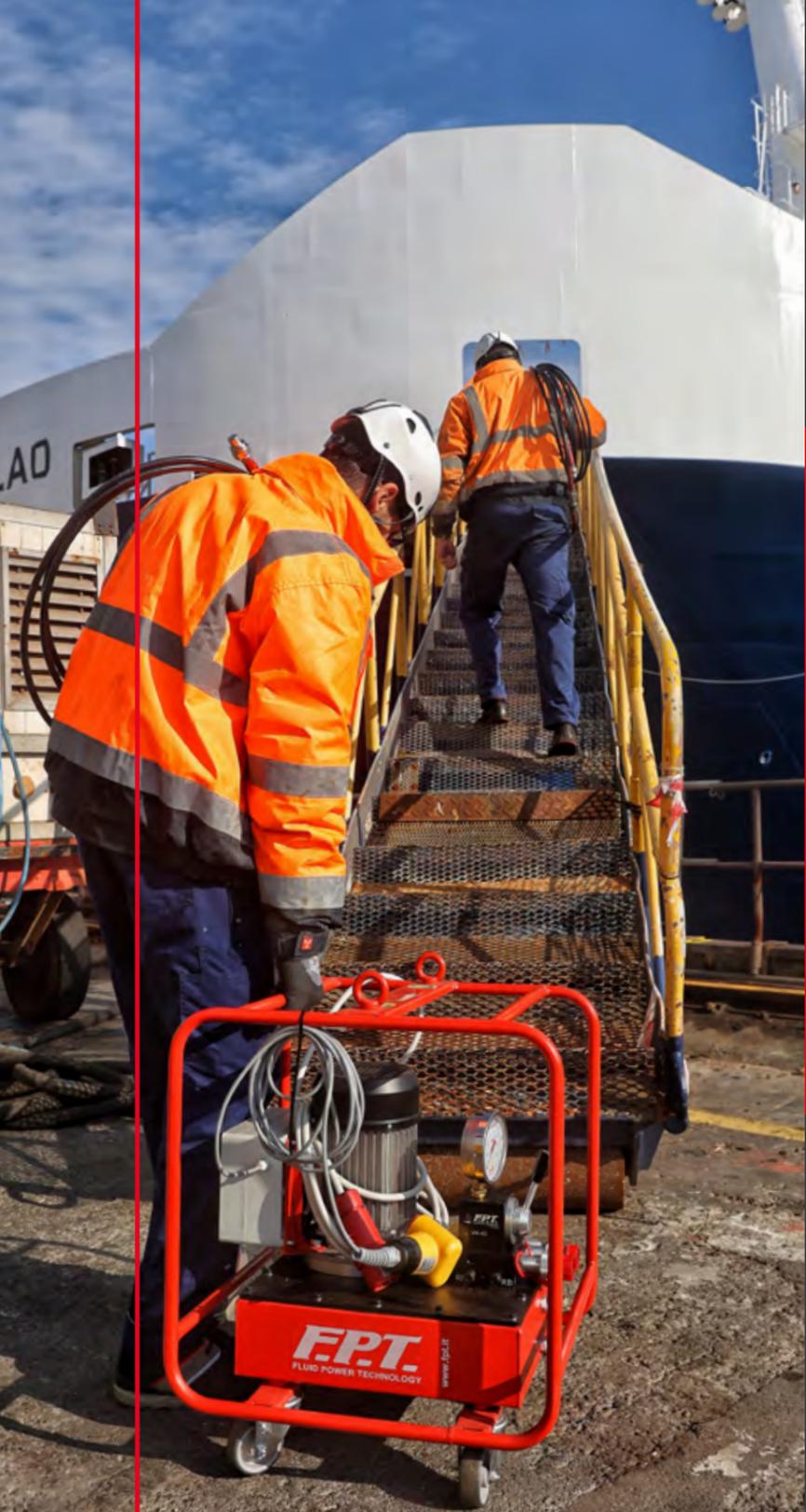
Accessories for FPT series
hydraulic pumps

Series **FPT**

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. |



Configure your high pressure electric or air hydraulic pump.

Creating your own high pressure, 700 bar, electric or air hydraulic pump is extremely easy. FPT can make the model best suited to your applications. Choose the type of piston pump, the single phase or three phase electric motor, with 2 or 4 poles or pneumatic and the relative flow rate l / min.

Utilise different tank capacity, choose the type of valve that can have manual, pneumatic or electric actuation and the type of hydraulic cylinders that you want to operate. It is also available a wide range of accessories including remote control, return filter, one-way valve, quick couplings, cages, pressure gauges and manifolds.

F.P.T. / HYDRAULIC POWER UNIT

Series **FPT BATT** | Cordless battery hydraulic pumps



PRODUCT PAGE

Super light and portable

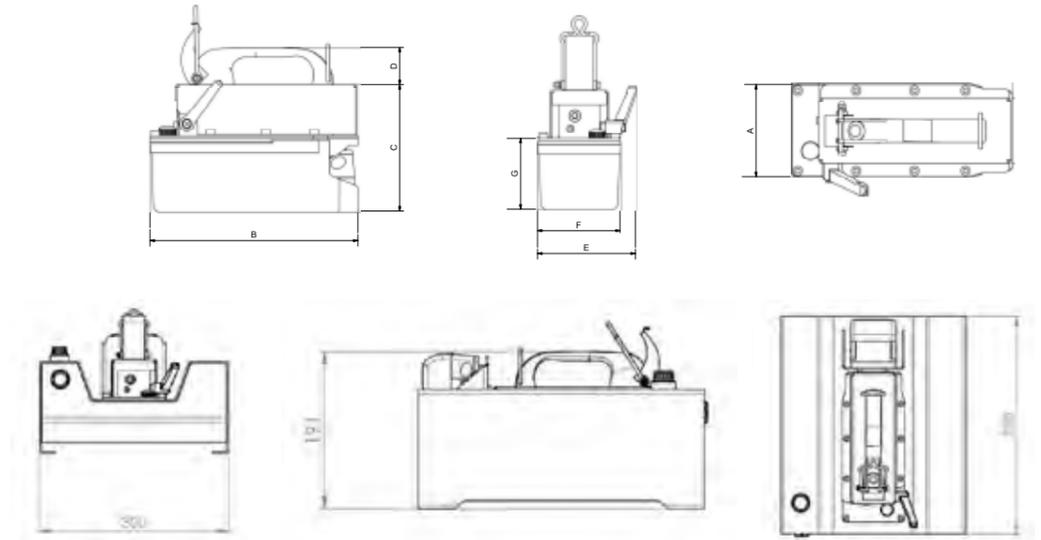
CUSTOM HYDRAULIC PUMPS ON REQUEST



- 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.

FPT BATT

700 bar
Double stage
Battery powered
1 and 5 l oiltank



FPT BATT

CORDLESS BATTERY HYDRAULIC PUMPS SERIES FPT-BATT

| MODEL | DESCRIPTION | PRESSURE | FLOW | MOTOR | BATTERY | TANK CAPACITY | A | B | C | D | E | F | G | OIL OUTLET | WEIGHT |
|-----------------|---|--------------|--------------|----------------|---------------|---------------|-------------|------|------|------|------|------|------|------------|--------|
| | | 1°- 2° STAGE | 1°- 2° STAGE | | | | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | | |
| 31FPT-BATT1.0SE | Cordless Battery pump including battery and battery charger | 20 / 700 | 0,7 / 0,06 | 14,4 V - 199 W | 14,4 V - 4 Ah | 1 | 102 | 292 | 168 | 43 | 122 | 102 | 108 | 3/8" NPT | 5 |
| 31FPT-BATT5.0SE | | 20 / 700 | 0,7 / 0,06 | | | 5 | see drawing | | | | | | | | 25 |

PRODUCTS

| MODEL | DESCRIPTION | TANK CAPACITY |
|-----------------|---|---------------|
| | | liters |
| 31FPTBATT1.0SE | Cordless Battery pump including battery and battery charger | 1 |
| 31FPTBATT5.0SE | | 5 |
| 31FPTBATT1.0SEN | Cordless Battery pump without battery and battery charger | 1 |
| 31FPTBATT5.0SEN | | 5 |
| 31CARICBATT14V | Battery charger for 14,4 V lithium battery | / |
| 31BATT14.4-4.0 | 14,4 V – 4,0 Ah lithium battery | / |



Series **PP-700/1.000** | Pneumohydraulic pumps
700 bar – 1.000 bar



PRODUCT PAGE

Easy and cheap

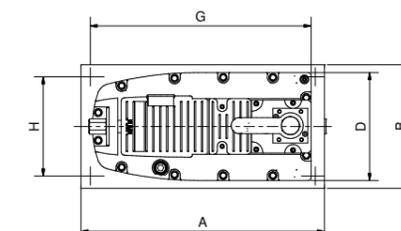
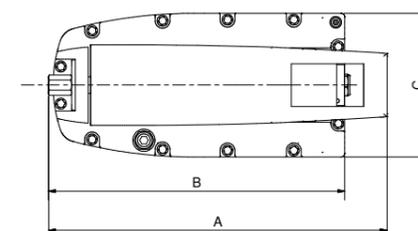
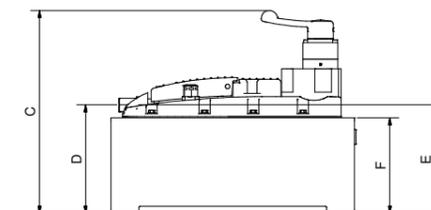
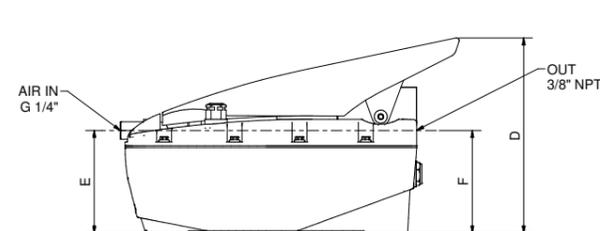
CUSTOM HYDRAULIC PUMPS ON REQUEST



- 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.

PP-700 / PP-1.000

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



PP-700

PP-700TDEL5

| MODEL | PRESSURE | OIL DISPLACEMENT l/min | OILTANK CAPACITY litres | USABLE OIL litres | AIR INLET PRESSURE bar | DIMENSIONS (mm) | | | | | | | | WEIGHT kg | |
|-----------------|----------|---------------------------|----------------------------|----------------------|---------------------------|-----------------|-----|-----|-----|-------|-----|-----|-------|--------------|------|
| | bar | | | | | 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 |

Series **PP** | Pneumo hydraulic pumps
1.500 to 4.000 bar



PRODUCT PAGE

For very high pressure

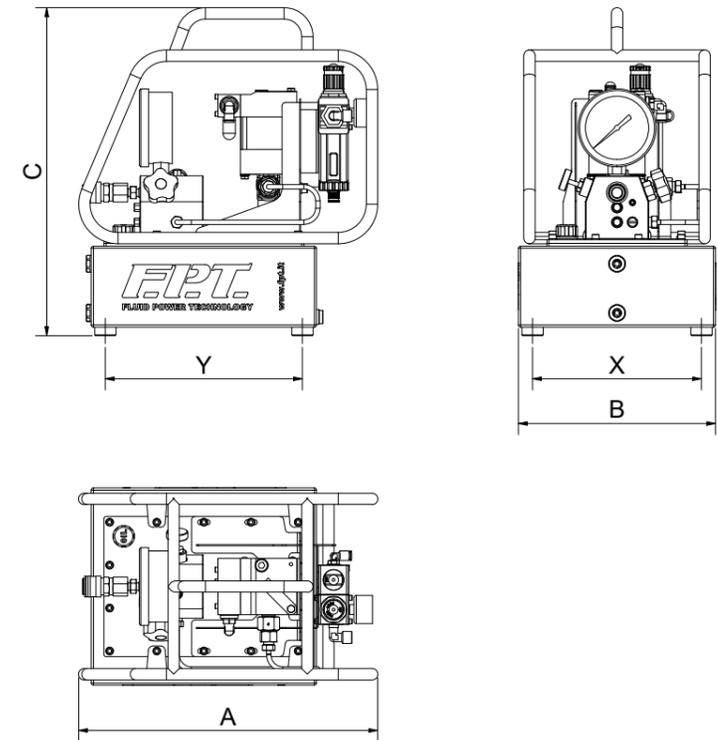
CUSTOM HYDRAULIC PUMPS ON REQUEST



- 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.

PP

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



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 (mm) | | | | | FIXING HOLES | MASS (OIL INCLUDED) |
|---------------|----------|----------------------|----------------------|----------------------|--------------------------|-------------------------------|------------------|--------------------|-----------------|-----|-----|-----|-----|--------------|---------------------|
| | | | | | | | | | A | B | C | X | Y | | |
| 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 |

Series **FPT GEO** | Pump for tests and geotechnics



PRODUCT PAGE

For automatic pressure recovery

CUSTOM HYDRAULIC PUMPS ON REQUEST

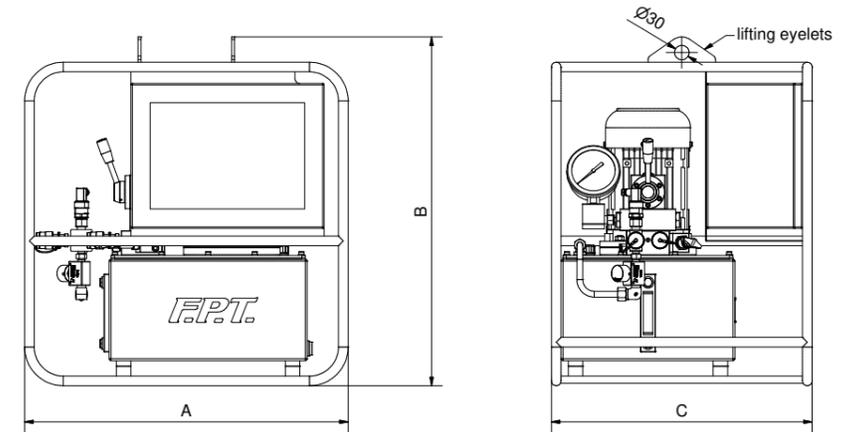


- The most reliable method for determining bearing capacity of a pole is to subject it to a load test. This means planting the pile to the project depth and applying a succession of loads to it.
- FPT GEO series power units perfectly accomplish this task ensuring the maintenance of the pre-set load.
- 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

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



FPT GEO

| MODEL | PRESSURE | OIL | MOTOR | VOLTAGE/ FREQUENCY | KW/RPM | OILTANK CAPACITY | DIMENSIONS (mm) | | | WEIGHT |
|------------------|---------------|--------------|----------------------|-----------------------|----------|---------------------|-----------------|-----|-----|--------|
| | 1st/2nd STAGE | DISPLACEMENT | | | | | litres | | | |
| 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 | 20 | | | | 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 | 40 | | | | 94 |

**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.



Series **FPT SPLIT FLOW** | Hydraulic pump with independent outlets



PRODUCT PAGE

For synchronous lifting

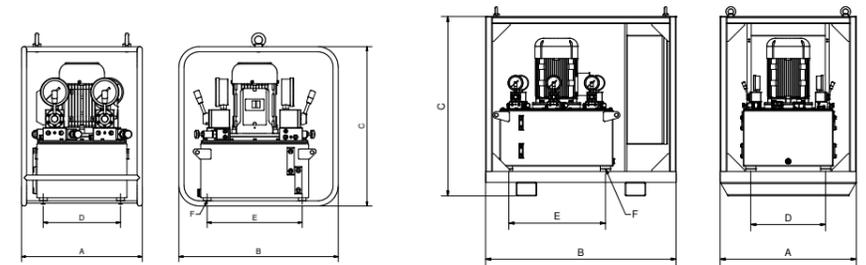
CUSTOM HYDRAULIC PUMPS ON REQUEST



- Split Flow power units allow to perform synchronous lifting and lowering operations of irregular and unbalanced loads.
- Can handle 2 - 4 - 6 and 8 single or double effect cylinders.
- Piston pump with independent outputs ideal for carrying on lifting operations where high accuracy load leveling is required.
- $\pm 3\%$ accuracy on the nominal stroke when lifting with 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.
- The split flow hydraulic pumps have tanks from 10 to 150 liters and allow to operate a wide range of medium and high tonnage cylinders. It finds its ideal use in large lifts, in infrastructural construction, heavy carpentry and in industry and in all sectors where there is a need to manage a load.

FPT SPLIT FLOW

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



SPLIT FLOW

SPLIT FLOW-HF

FPT SPLIT FLOW-HF

700 bar
Single stage
1,3 - 2 l/min oil flow
150 l oiltank capacity

| MODEL | OUTPUTS | MAX WORKING PRESSURE bar | OIL DISPLACEMENT PER OUTPUT l/min | MOTOR | KW RPM |
|--------------------|---------|-----------------------------|--------------------------------------|----------------------|------------|
| FPT 2x0,9 - ME2 | 2 | 700 | 0,9 | THREE-PHASE 2 POLES | 2,2 / 2850 |
| FPT 2x0,9 - ME21 | 2 | | 0,9 | SINGLE-PHASE 2 POLES | |
| FPT 4x0,4 - ME2 | 4 | | 0,4 | THREE-PHASE 2 POLES | |
| FPT 4x0,4 - ME21 | 4 | | 0,4 | SINGLE-PHASE 2 POLES | |
| FPT 4X2 - ME4-HF | 4 | | 2 | THREE-PHASE 4 POLES | 11 / 1450 |
| FPT 6X1,3 - ME4-HF | 6 | | 1,3 | THREE-PHASE 4 POLES | 11 / 1450 |
| FPT 8X1,3 - ME4-HF | 8 | | 1,3 | THREE-PHASE 4 POLES | 15 / 1450 |

| OILTANK CAPACITY | DIMENSIONS (mm) | | | WEIGHT kg |
|------------------|-----------------|------|------|--------------|
| | A | B | C | |
| 10 | 870 | 600 | 600 | 51 |
| 20 | 870 | 600 | 600 | 64 |
| 40 | 935 | 580 | 740 | 91,8 |
| 60 | 1085 | 580 | 740 | 113,8 |
| 150 | 1000 | 1400 | 1320 | 438 |

| OILTANK CAPACITY | DIMENSIONS (mm) | | | | | | WEIGHT Kg |
|------------------|-----------------|-----|-----|-----|-----|----|--------------|
| | A | B | C | D | E | F | |
| 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 | Split flow pump's weight are consider - WITHOUT OIL

| 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
F.P.T. SYNCHRO | Synchronous lifting system



PRODUCT
PAGE

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.



For fully automatic and safe operations in handling a load.

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,

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.

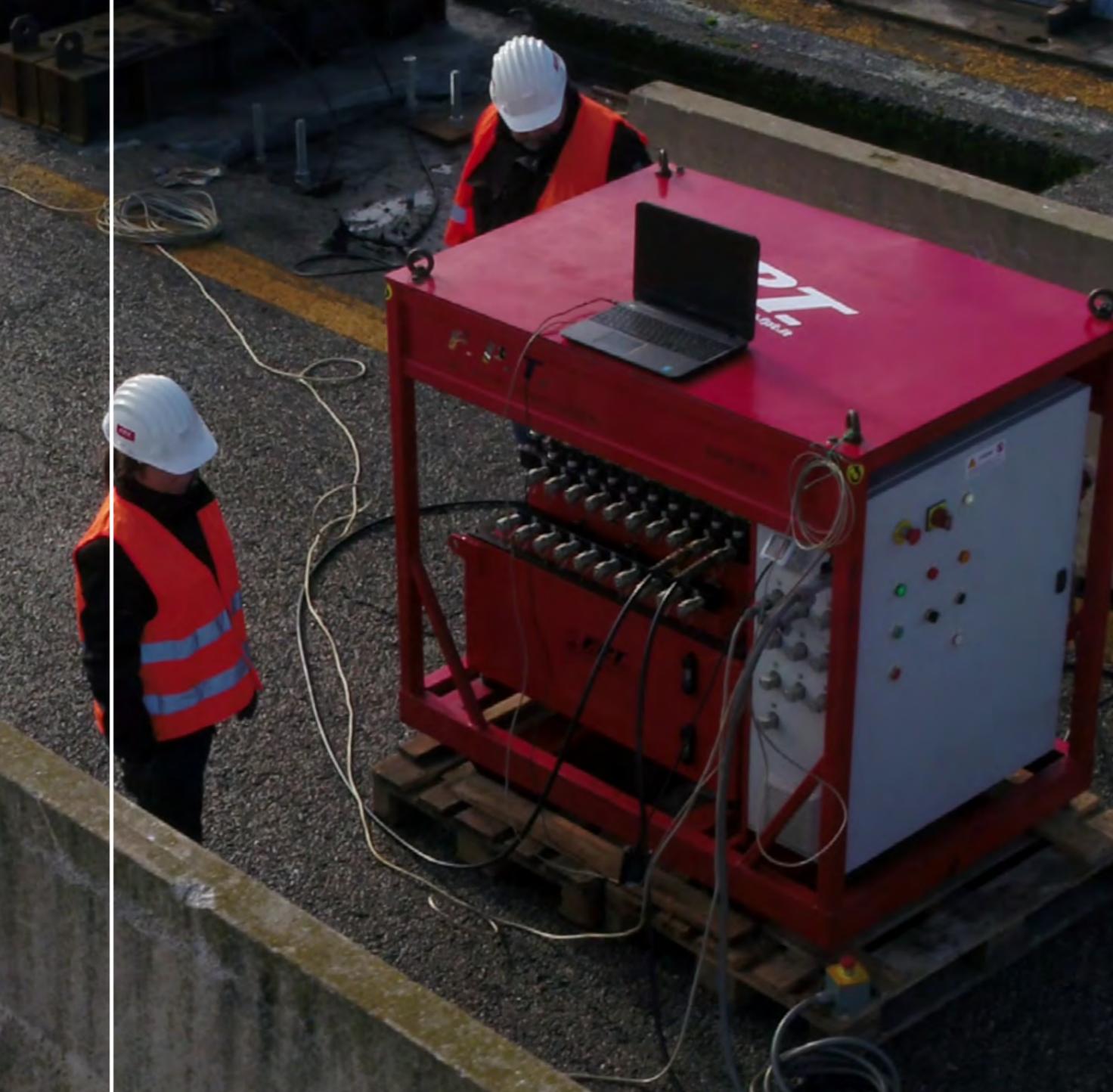
Speed optimization

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



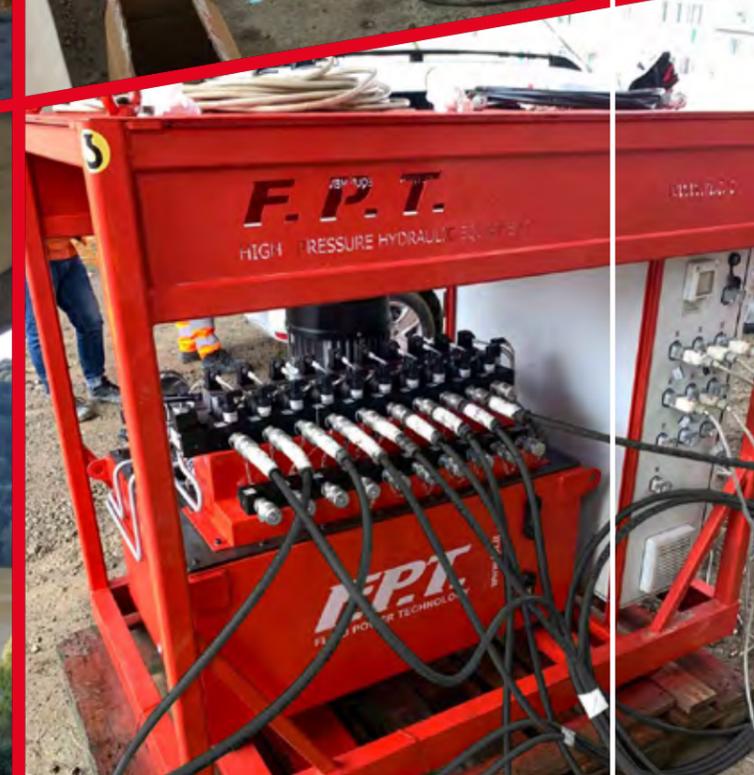


Optionals available:

- Rotation on synchro
- Center of gravity - COG

Typical synchronized applications:

- 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



The ideal system for heavy and critical lifting jobs and for weighing operations – where are needed delicate control operations without manual control. Unbalanced loads are automatically kept leveled during the lifting or the lowering phases, with an accuracy of 1 mm.

- Easy and intuitive interface
- All operations can be performed automatically from the PC - no manual operation
- Siemens PLC
- Errors and alarms in case of anomalies or out-of-parameter operations