

MERAJ FIRE FIGHTING PUMPS

Centrifugal, Medium and High Pressure
with Automatic Priming

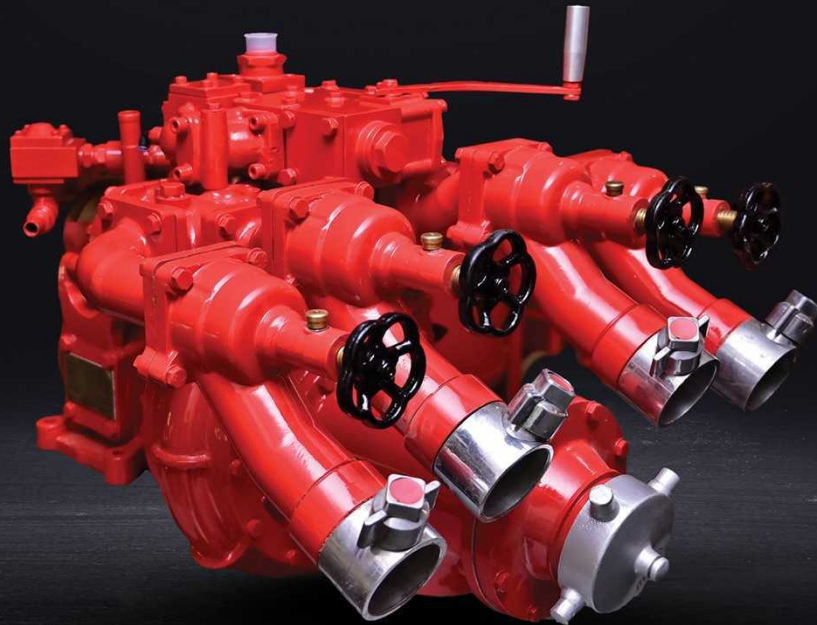


FP & FPNH Series.

Efficient. Effective. Powerful.

[EN-1028]

[NFPA-1901]



MERAJ FIRE FIGHTING PUMPS FP & FPNH SERIES

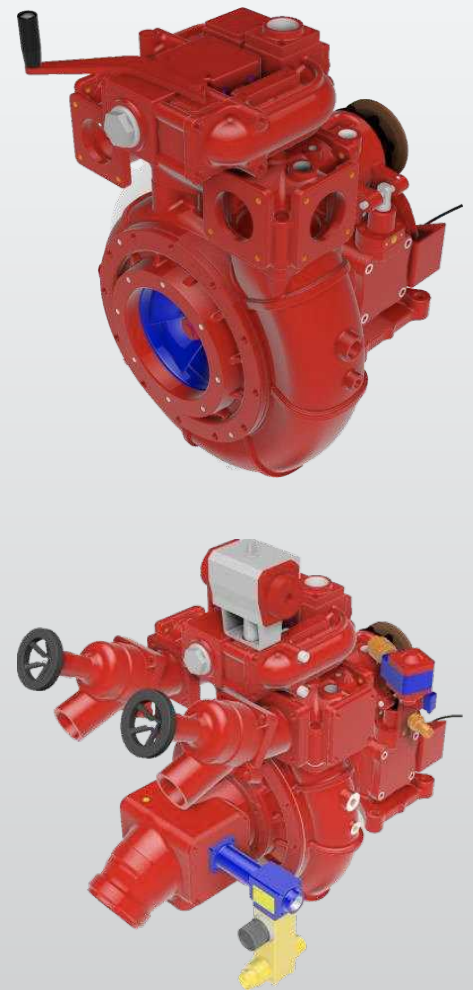
EN-1028-1 & 2 Certified

MERAJ with its new "FP & FPNH SERIES" range, creates entirely new standards for firefighting centrifugal pumps. The fire pumps FP & FPNH SERIES are at the top of their category due to their sophisticated internal fluid dynamics research, lightweight, compact design, and great performance, able to function in any setting and climate, as well as being put through rigorous testing.

The "FP & FPNH SERIES" of MERAJ pumps can be used wherever the highest efficiency in difficult working conditions is required.

Features of FP & FPNH Series Pumps

- ▶ The "FP & FPNH" pumps' specific dimensional analysis has made it possible to obtain pumps with reduced dimensions, making them practically adaptable to all classes of trucks, from airport crash tender vehicles to lightweight fire fighting vehicles.
- ▶ Whether installed in Mid-Ship pattern or at back of the vehicle, the pump's unique design makes mounting and positioning absolutely simple.
- ▶ The simplicity and the quality of the materials used allows a reduced assistance and longer intervals of maintenance.
- ▶ The unique design that was used makes the pump's operations quick and simple: replacing the mechanical seal can be done quickly without the need to disassemble the pump from the vehicle.
- ▶ Due to the high degree of modularity, only one type of mechanical seal is required for both the medium pressure and combined medium/high pressure versions. This simplifies and speeds up the process of defining the sense of rotation for the "FP & FPNH" range of pumps, which can rotate both clockwise and counter clockwise.
- ▶ The self-compensating mechanical seal was specially developed for the FP & FPNH series pumps and features an innovative compact design. Among the technical features, the load spring is in a protected position without contact with the working medium. The new single-spring concept used is sinusoidal and results in less residue contamination than multi-spring systems. In addition, they are placed in static parts to reduce the number of rotating masses, which are more important for balance. Load dynamics elements are integrated into the stationary part and can restore axial play and reduce vibration automatically. We also achieved a significant reduction in rotating mass and successfully integrated the dynamic part of the seal into the medium pressure impeller. The part of the mechanical seal incorporated in the impeller is made of special material that ensures higher hardness, allows for longer maintenance intervals, and extends the life of the item.
- ▶ The conformation of the hydraulic part of the pump allows you to deliver water at low pressure also from reels



Drive Options

- ◆ PTO Direct Driven – No Gear Box
- ◆ PTO Gear Box with Multiple Drive Ratios
- ◆ Quiet & Efficient Operations

Range of FP & FPNH Series Pumps

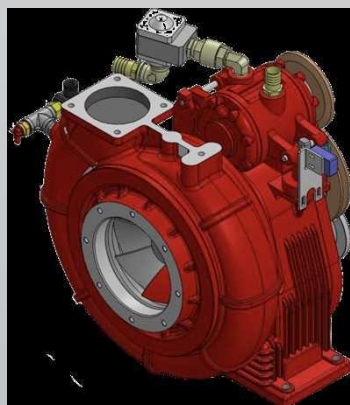
				SUCTION		MED1E27.P. Stage		H.P. Stage	
SINGLE STAGE MEDIUM PRESSURE	PUMP MODEL	MATERIAL		Suction (in)	Suction Height (in)	Suction (in) (lpm)	Pressure (bar)	Suction (in) (lpm)	Pressure (bar)
	FP-2000	ALU	BRO	4"	3	2000	10	N/A	N/A
	FP-3000	ALU	BRO	5"	3	3000	10	N/A	N/A
	FP-4000	ALU	BRO	6"	3	4000	10	N/A	N/A
	FP-5000	ALU	BRO	8"	3	5000	10	N/A	N/A
	FP-6000	ALU	BRO	8"	3	6000	10	N/A	N/A
				SUCTION		MED1E27.P. Stage		H.P. Stage	
DOUBLE STAGE HIGH / MEDIUM PRESSURE	PUMP MODEL	MATERIAL		Suction (in)	Suction Height (in)	Suction (in) (lpm)	Pressure (bar)	Suction (in) (lpm)	Pressure (bar)
	FP-20.40	ALU	BRO	4"	3	2000	10	400	40
	FP-30.40	ALU	BRO	5"	3	3000	10	400	40
	FP-40.40	ALU	BRO	6"	3	4000	10	400	40
	FP-50.40	ALU	BRO	8"	3	5000	10	400	40
	FP-60.40	ALU	BRO	8"	3	6000	10	400	40

Normal Pressure FP Series Pumps

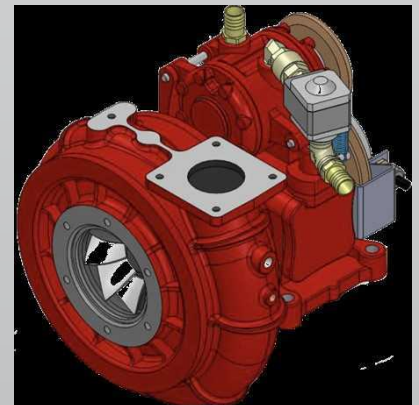
Type	:	Centrifugal pump, single stage
Suitability	:	Suitable for pumpers, fire hydrants, air crash tenders, portable pumps and trailer
Casing Options	:	Bronze or Aluminum Light Alloy with anti-corrosion treatment
Impeller Option	:	Impeller made of Bronze or Aluminum Light Alloy with anti-corrosion treatment
Ball Bearing Box	:	Ball bearing box made of Cast Iron
Shaft : Stainless	:	Steel shaft supported by ball-bearings
Priming System	:	Water ring priming system integrated in the water pump, made of Bronze or Aluminum Light Alloy with anti-corrosion treatment

SPECIAL FEATURES

- ◇ Impeller's wear rings replaceable
- ◇ Self-balanced mechanical seal
- ◇ Flanged suction inlet on the pump body
- ◇ Flanged delivery outlet on the pump body
- ◇ Thermal relief valve
- ◇ Fully certified to EN 1028-1 and EN 1028-2



Gearbox Version



Ball Bearing Version

Normal and High Pressure FPNH Series Pumps

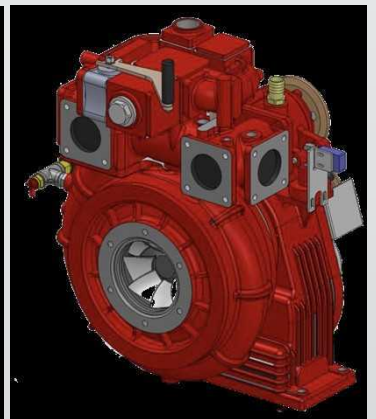
Type	:	Centrifugal pump, double stage
Suitability	:	Suitable for water pumpers, fire hydrants, air crash tenders, portable pumps and trailer
Casing Options	:	Bronze or Aluminum Light Alloy with anti-corrosion treatment
Impeller Option	:	Impeller made of Bronze or Aluminum Light Alloy with anti-corrosion treatment
High Pres. Impeller	:	CNC machined Bronze only
Ball Bearing Box	:	Ball bearing box made of Cast Iron
Shaft	:	Stainless Steel shaft supported by ball-bearings
Priming System	:	Water ring priming system integrated in the water pump, made of Bronze or Aluminum Light Alloy with anti-corrosion treatment

SPECIAL FEATURES

- ◇ Impeller's wear rings replaceable
- ◇ Self-balanced mechanical seal
- ◇ Flanged suction inlet on the pump body
- ◇ Flanged delivery outlet on the pump body
- ◇ Thermal relief valve
- ◇ Fully certified to EN 1028-1 and EN 1028-2



Ball Bearing Version



Gearbox Version

Foam Proportioners

- ◇ Lateral displacement foam mixer
- ◇ 3. N° model available "M-180", "M-240" and "M320"
- ◇ "Venturimetric" type suction
- ◇ In-built "Round the pump"
- ◇ "M-180" version – flow rate 180 lt/min
- ◇ "M-240" version – flow rate 240 lt/min
- ◇ "M-320" version – flow rate 320 lt/min
- ◇ Measuring valve with mixing rate from 0 to 8%
- ◇ Tank vehicle foam with screwed connection
- ◇ External tank threaded foam suction connection
- ◇ Brass or Aluminium construction
- ◇ Possibility to be applied on the left side or right side of the inlet pump connection...



Gearbox Cooler

- Cooling kit for gearbox
- Stainless Steel internal exchanger
- Stainless Steel supply pipes and fittings

MERAJ Fire Pump Gearbox

All **MERAJ** firefighting pumps can be equipped with a gearbox. This optional gearbox permits the fire pumps to be applied directly to an **internal combustion engine** or **electric motor** in case of utilization like motor pump or in case of insufficient rpm number in exit from the vehicle's PTO.

The main technical features are:

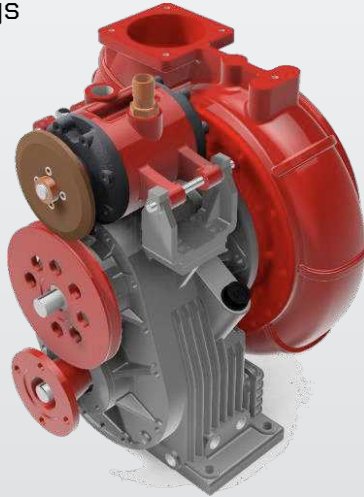
- Aluminium light alloy construction
- Primary Steel shaft supported by ball-bearings

Various ratio available:

- 1:1.18
- 1:1.66
- 1:2
- 1:2.43

Various drive flange available:

- SAE1410 [standard]
- DIN120
- DIN100



FP Series Pumps NFPA 1901

In addition to our EN certified range pumps, Meraj also offers NFPA 1901 compliant fire pump range. The firefighting system requires such type of pump which should be sufficient enough to work in the changing situation and discharge the water at maximum discharge head possible with the maximum flow rate and should withstand in high temperature and works smoothly.

MERAJ manufactured and engineered firefighting extinguishing pumps are capable to work in challenging and drastically changing situations and the performance of the pumps is tested and tried throughout the years.

FP series pumps are the single stage, centrifugal pumps with PTO technology to meet the high pressure flow rate which range from 325 to 1500 GPM needed for major high-pressure application.

The FP series pumps are our highest selling pumps. It is available with 2 or 3 gears transmission and allows for the addition of a high-pressure booster pump or CAFS.





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