

# SKID MOUNTED BALANCED PRESSURE OR IN-LINE BALANCED PRESSURE FOAM PROPORTIONING SYSTEM

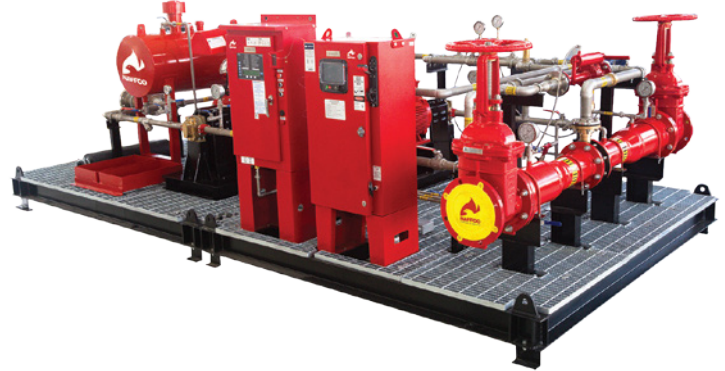
## DESCRIPTION

NAFFCO Balanced Pressure or In-line Balanced Pressure Foam Proportioning Pump Skids are designed as per NFPA 11 to precisely proportion the foam concentrate into the water stream. The systems function over a range of flow and pressures. The Balanced Pressure or In-line Balanced Pressure Pump Proportioning System functions by maintaining an equal pressure in the foam concentrate inlet and water inlets to the proportioner, which allows the proportioner to be used over a wide range of pressure and flow. The system consists of a foam pump, a diaphragm operated pressure balancing valve, and all the required piping valves and fittings assembled on a common steel base. NAFFCO also offers the deluge valve and the atmospheric storage tank as an option, on the pump skid as per request. The skid units are available in different proportioner sizes ranging from 2 ½" to 10".

## SPECIFICATION

The NAFFCO Balanced Pressure or In-line Balanced Pressure Foam Proportioning Pump Skid is a complete self-contained unit engineered to supply foam concentrate from a positive displacement pump to a venturi device like the ratio controller with the remaining excess foam re-circulating through a diaphragm operated balancing valve in the return line to the tank. The diaphragm valve senses and balances the pressure in the foam and water lines to the proportioner. All the components and piping in the skid shall be securely mounted on a welded steel base frame with lifting lugs and in addition to it, provision is provided to lift the skid unit using a fork lift. The skid unit consists of all the required piping, valves and fittings to foam a complete, compact proportioning foam pump unit. The foam pump shall have a positive displacement, vane type foam concentrate pump. The driver shall be sized with sufficient horsepower to allow operation, with relief valve full open, without overloading the motor. The motor driven pump that is provided will be either UL Listed or FM Approved, with NFPA 20 fire pump controller. All foam concentrate piping shall be of stainless steel material suitable for different types of foam concentrates to avoid corrosion. Drain valves are provided for proper flushing. The suction line piping contains of a Y-strainer and a compound gauge is provided in the suction line downstream of the strainer, to check potential blockage during operation. All pressure gauges provided in the skid will be liquid filled type. Liquid filled gauges enhance the reliability and integrity of the measuring system for long periods under extreme operating conditions. All manual ball or gate valves shall be of stainless steel, brass, or bronze type, identification tags are provided for all valves. A check valve is provided in the foam concentrate discharge line.

The pressure balancing diaphragm valve which is the heart of the balanced pressure proportioning pump skids is provided to automatically maintain the foam concentrate discharge at the preset pressure. A relief valve is provided on discharge line to prevent pressure buildup in the discharge line due to temperature fluctuations. Discharge



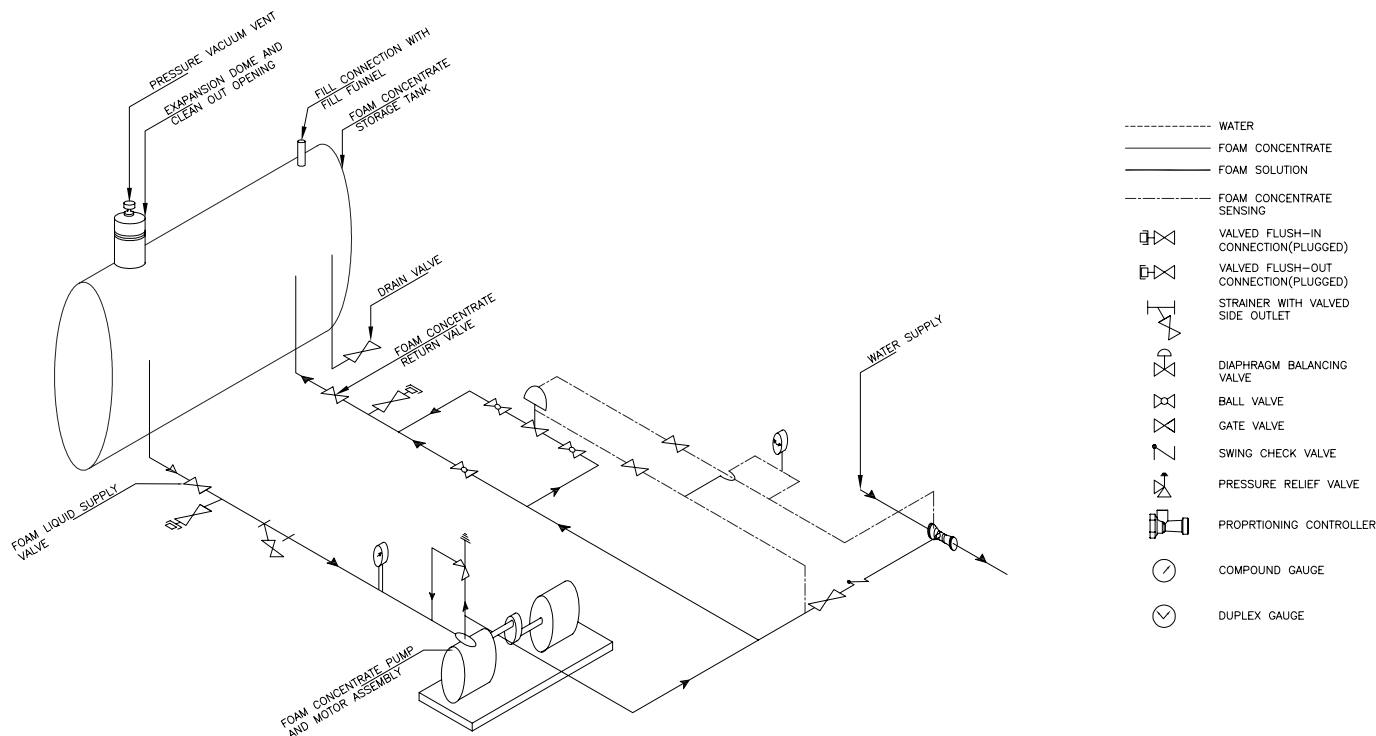
pressure is maintained by adjusting the pressure sustaining valve opening to control the excess foam concentrate flow back to the concentrate storage tank. The pressure balancing valve shall be provided with a block valve with bypass arrangement which can be manually operated in the event of malfunctioning or maintenance of the pressure balancing diaphragm valve. A gate valve shall be provided with a bypass arrangement which can be manually operated in the event of the malfunctioning of the pressure balancing diaphragm valve. A pressure gauge is provided to verify proper foam concentrate discharge pressure and also to allow the system pressure to be manually adjusted. A flush-in/ flush-out ball valve is provided for ease of service.

## APPLICATION

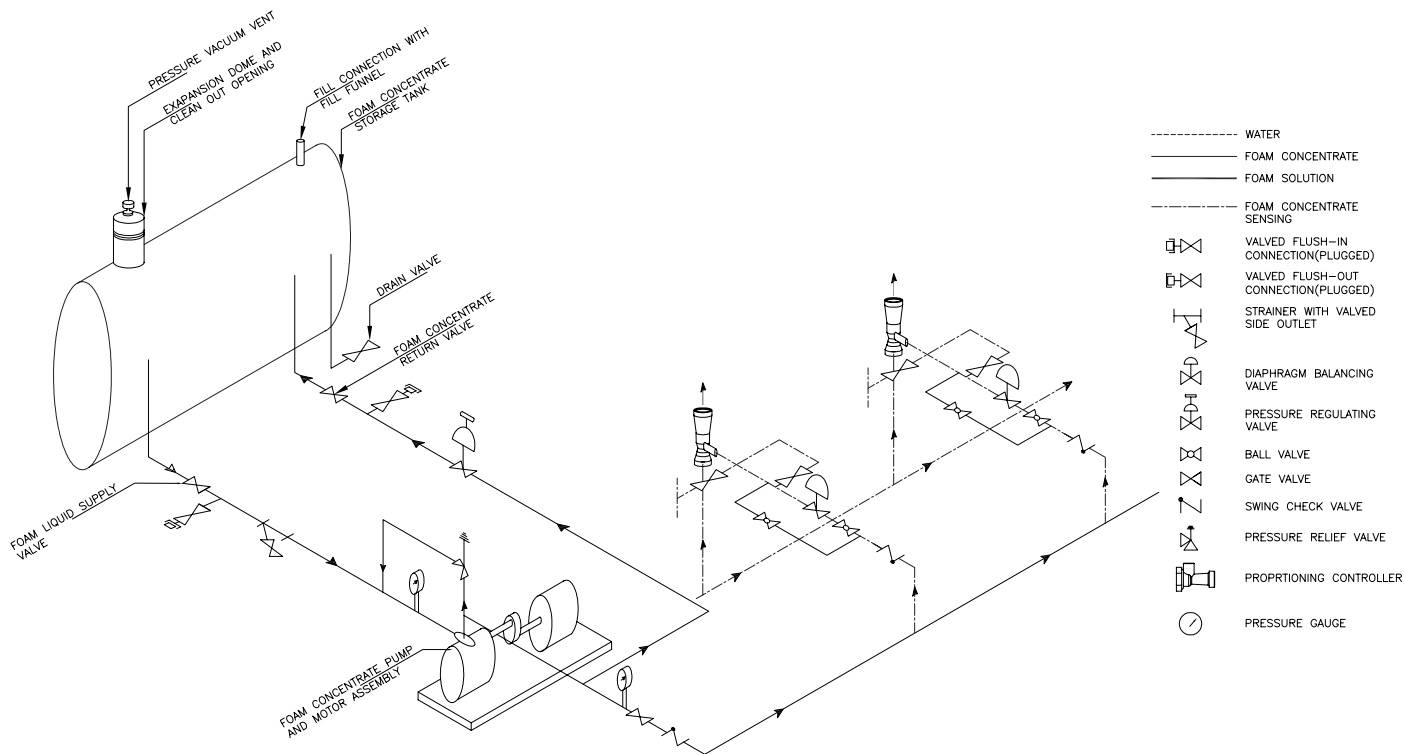
These systems are usually used to protect oil tank farms, aircraft hangars, marine docks, chemical processing plants, offshore oil platforms, loading racks, Flammable Liquid Warehouses etc.

## FEATURES

- Compact design.
- Can be used with both fresh and sea water.
- Can add in options like deluge valve and concentrate tank on the skid if required.
- All foam concentrate valves, pipe and fittings are of stainless steel or brass material for compatibility with all types of foam concentrates
- All manual valves are of brass or bronze material with identification tag.
- Four proportioner options to cover a wide range of flow requirements.
- Foam Concentrate tank can be of GRP or Stainless Steel material or Polyethylene
- Pump skid supplied with manual override capabilities.
- Compatible with all NAFFCO foam Concentrates.
- A bypass arrangement is provided for the system to function in the event of malfunctioning of pressure balancing diaphragm valve.
- Major components are UL Listed.



BALANCED PROPORTIONING (PUMP TYPE) WITH SINGLE INJECTION POINT



IN-LINE BALANCED PROPORTIONING (PUMP TYPE) WITH MULTIPLE INJECTION POINT

# FOAM PUMP

MODEL: NF-FP-30



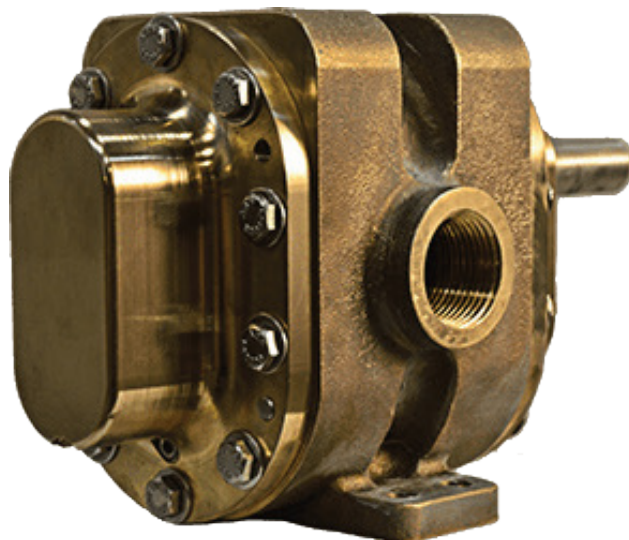
## DESCRIPTION

NF-FP-30, is specialized non-corrosive construction pumps used for Fire Protection, especially for Fire-fighting foam concentrate pumping & Water mist pumping applications. These pumps can also be used for Stationary or mobile systems applications.

NAFFCO Foam pump have 255 Duplex Stainless steel shafts to withstand seawater flush and any brand foam concentrate. Only 1 shaft seal is permitted and shaft seal shall be capable of dry operation for 10 minutes. Shaft seal shall be simple to repair and replace in the field. Shaft seal materials are 316 stainless casing with double PTFE lips that allow for hydro test pressure to 350 psig without leakage.

Pump rotor shall be spur gear design using corrosion resistant materials. Made from admiralty bronze alloy and composite materials that provide no tooth to tooth wear and no corrosion.

Foam pump connections shall be Groove or Threaded. Pump connections and end covers shall use O-ring seals for leak free operation and simple field replacement.

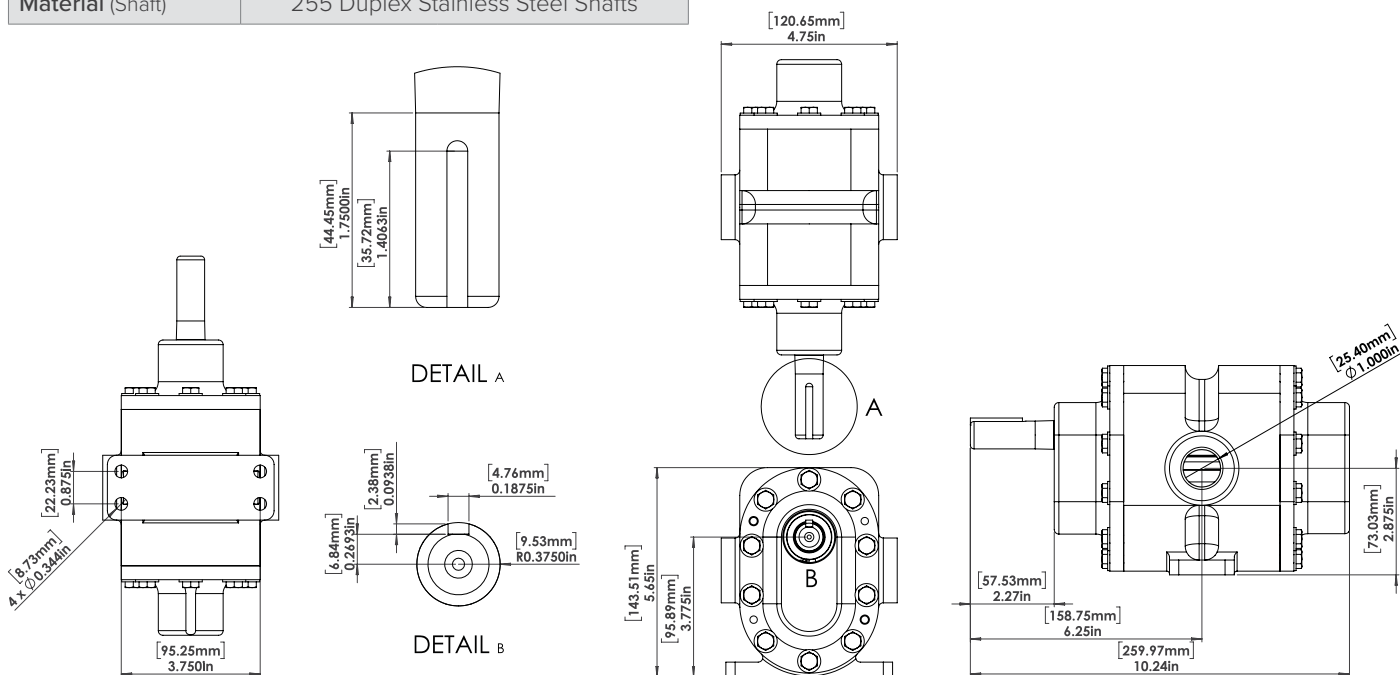


## TECHNICAL INFORMATION

RPM	1500	1800
Flow GPM (LPM)	24-36 (91-136)	40-55(152-208)
Pressure psi(kg/cm <sup>2</sup> )	261-100(18-7)	261-100(18-7)
Port Size (inch)	1x1	1x1
Material (Body)	Bronze	
Pump Rotor	Spur	
Shaft Type	Key Shaft or Splined Input Shaft	
Type of Connection	Threading, Grooved	
Material (Shaft)	255 Duplex Stainless Steel Shafts	

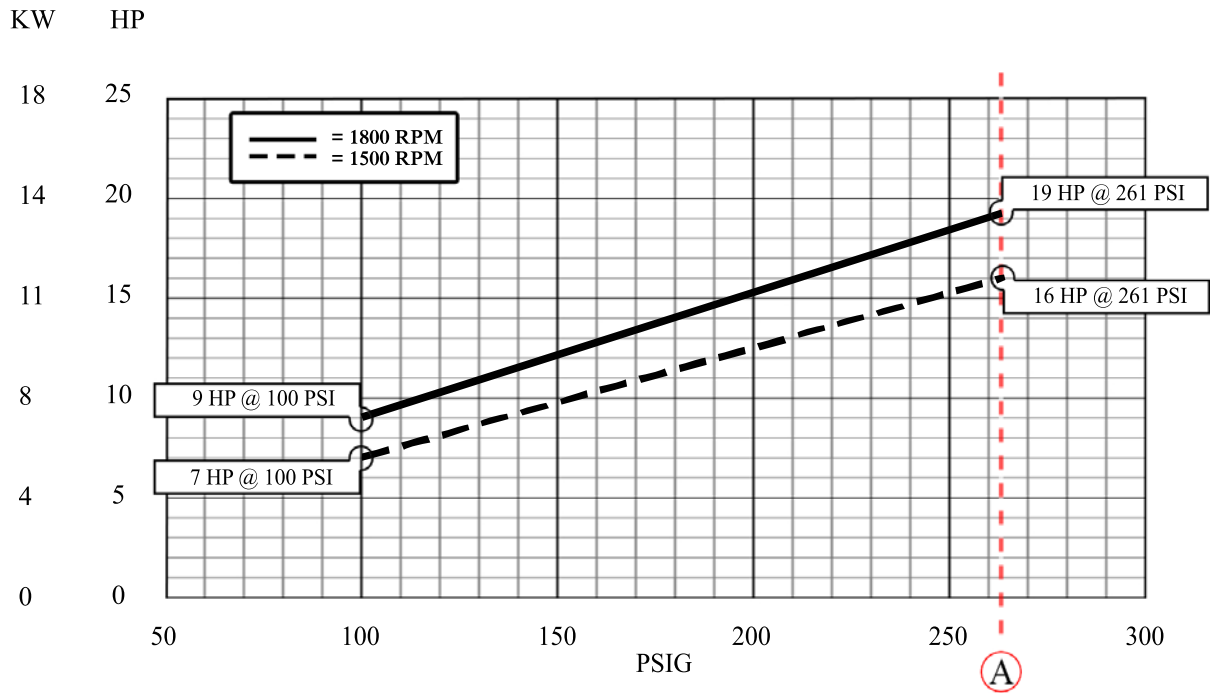
## FEATURES

- Pump is quiet and smooth operation during operation.
- Pump shafts is supported by composite bushings that are field replaceable and capable of extended operation on water or foam concentrate.
- Foam pump design is utilize replaceable casing liners, bearings or timing gears.
- Capable of rotation in either direction without modification.
- UL LISTED & capable of 261(18 bar) psig operation.

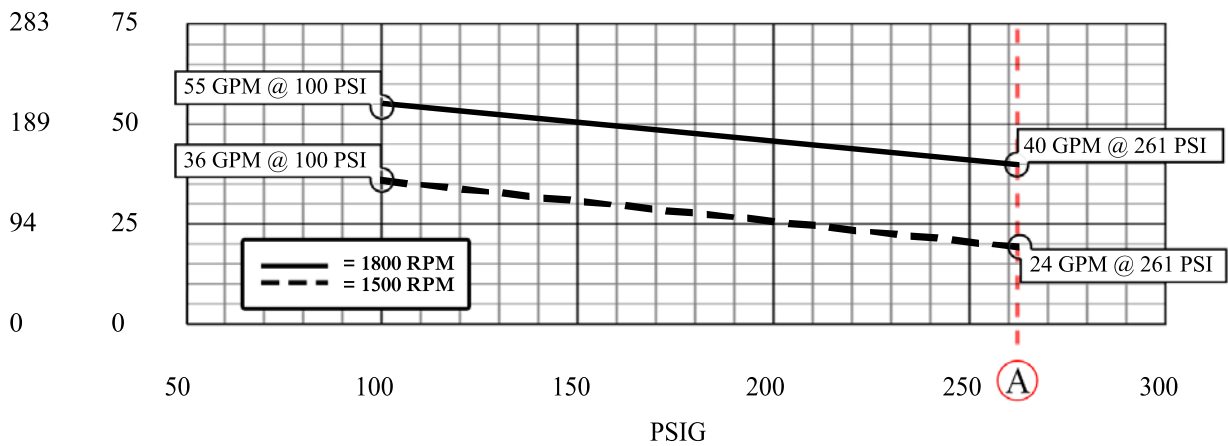


## PUMP WATER HP VS DISCHARGE PRESSURE

PORT SIZE: 1" x 1"



## PUMP WATER FLOW RATE VS DISCHARGE PRESSURE



**A** UL LISTED @ 18 BAR OR 261 PSIG

# FOAM PUMP

MODEL: NF-FP-50



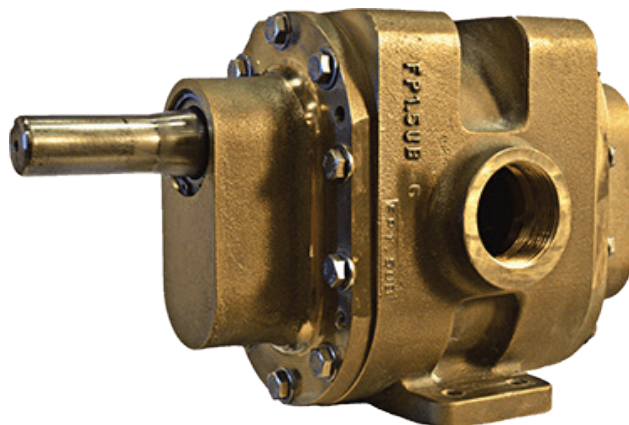
## DESCRIPTION

NF-FP-50, is specialized non-corrosive construction pumps used for Fire Protection, especially for Fire-fighting foam concentrate pumping & Water mist pumping applications. These pumps can also be used for Stationary or mobile systems applications.

NAFFCO Foam pump have 255 Duplex Stainless steel shafts to withstand seawater flush and any brand foam concentrate. Only 1 shaft seal is permitted and shaft seal shall be capable of dry operation for 10 minutes. Shaft seal shall be simple to repair and replace in the field. Shaft seal materials are 316 stainless casing with double PTFE lips that allow for hydro test pressure to 350 psig without leakage.

Pump rotor shall be spur gear design using corrosion resistant materials. Made from admiralty bronze alloy and composite materials that provide no tooth to tooth wear and no corrosion.

Foam pump connections shall be Groove or Threaded. Pump connections and end covers shall use O-ring seals for leak free operation and simple field replacement.

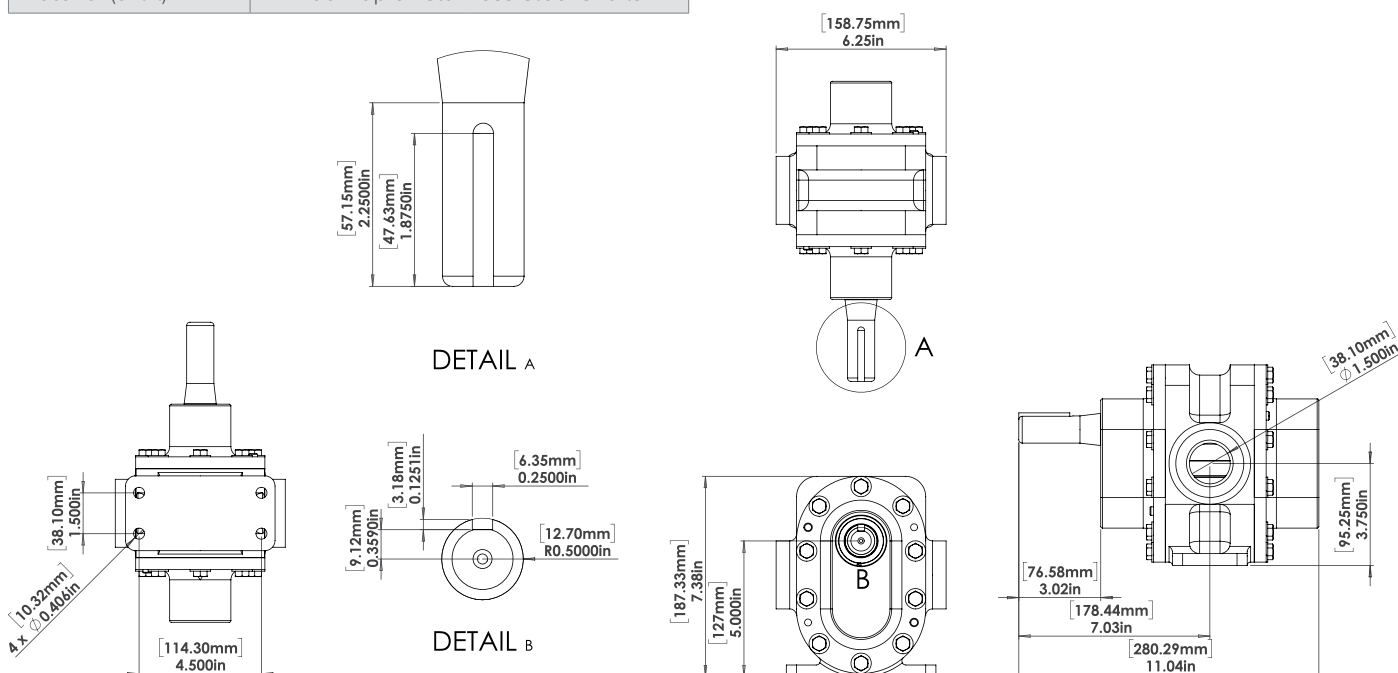


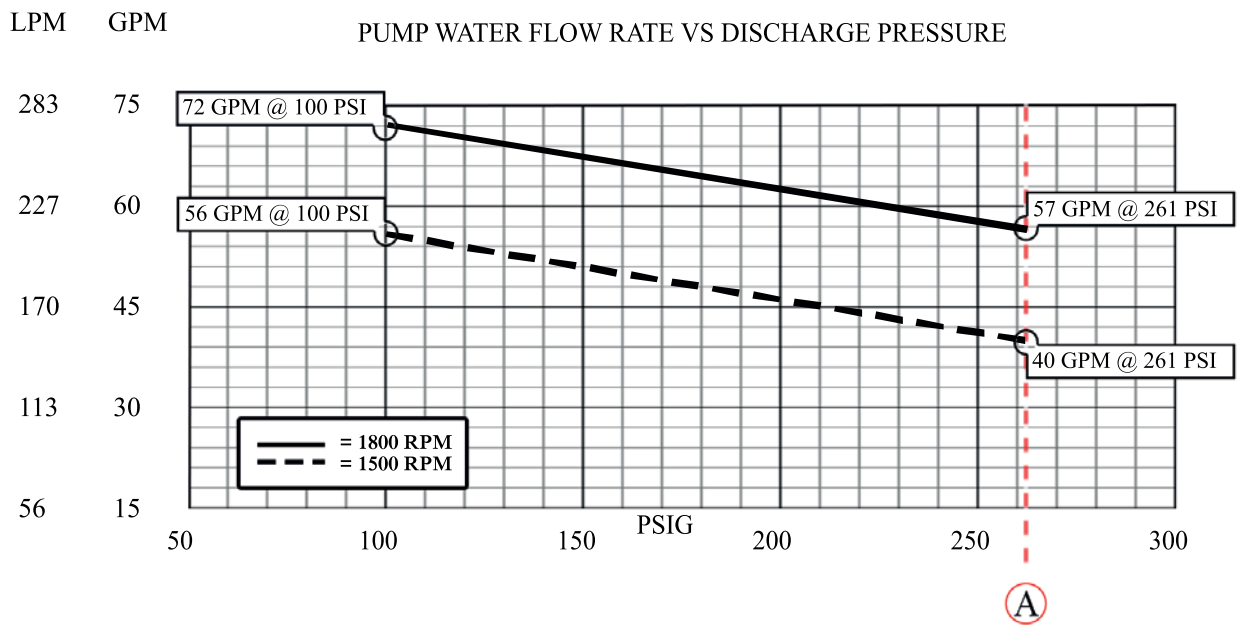
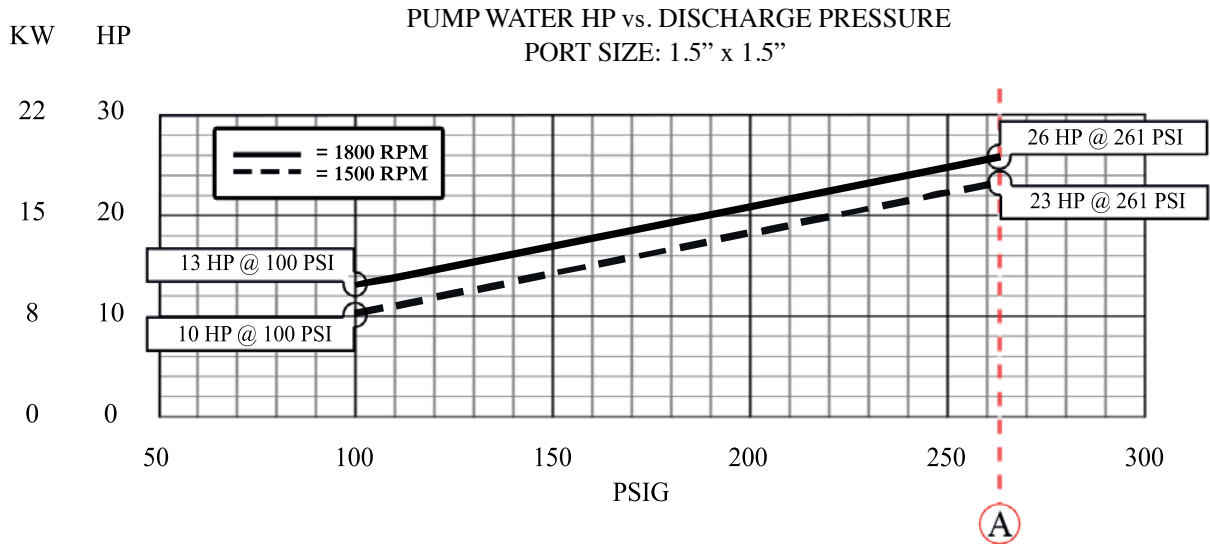
## TECHNICAL INFORMATION

RPM	1500	1800
Flow GPM (LPM)	40-56 (151-212)	57-72(215-273)
Pressure psi(kg/cm <sup>2</sup> )	261-100(18-7)	261-100(18-7)
Port Size (inch)	1.5x1.5	1.5x1.5
Material (Body)	Bronze	
Pump Rotor	Spur	
Shaft Type	Key Shaft or Splined Input Shaft	
Type of Connection	Threading, Grooved	
Material (Shaft)	255 Duplex Stainless Steel Shafts	

## FEATURES

- Pump is quiet and smooth operation during operation.
- Pump shafts is supported by composite bushings that are field replaceable and capable of extended operation on water or foam concentrate.
- Foam pump design is utilize replaceable casing liners, bearings or timing gears.
- Capable of rotation in either direction without modification.
- UL LISTED & capable of 261(18 bar)psig operation.





**A** UL LISTED @ 18 BAR OR 261 PSIG



# FOAM PUMP

MODEL: NF-FP-75



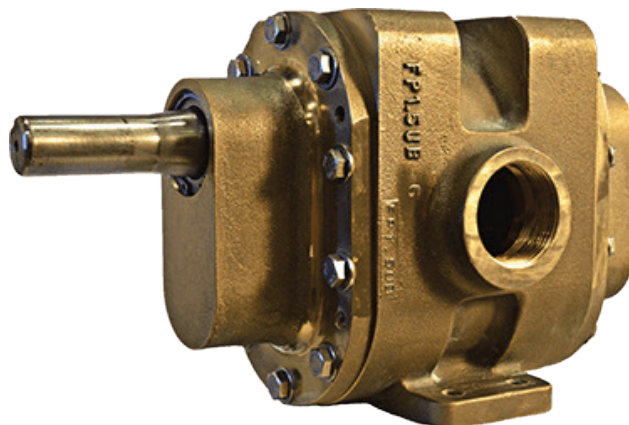
## DESCRIPTION

NF-FP-75, is specialized non-corrosive construction pumps used for Fire Protection, especially for Fire-fighting foam concentrate pumping & Water mist pumping applications. These pumps can also be used for Stationary or mobile systems applications.

NAFFCO Foam pump have 255 Duplex Stainless steel shafts to withstand seawater flush and any brand foam concentrate. Only 1 shaft seal is permitted and shaft seal shall be capable of dry operation for 10 minutes. Shaft seal shall be simple to repair and replace in the field. Shaft seal materials are 316 stainless casing with double PTFE lips that allow for hydro test pressure to 350 psig without leakage.

Pump rotors shall be spur gear design using corrosion resistant materials. Made from admiralty bronze alloy and composite materials that provide no tooth to tooth wear and no corrosion.

Foam pump connections shall be Groove or Threaded. Pump connections and end covers shall use O-ring seals for leak free operation and simple field replacement.

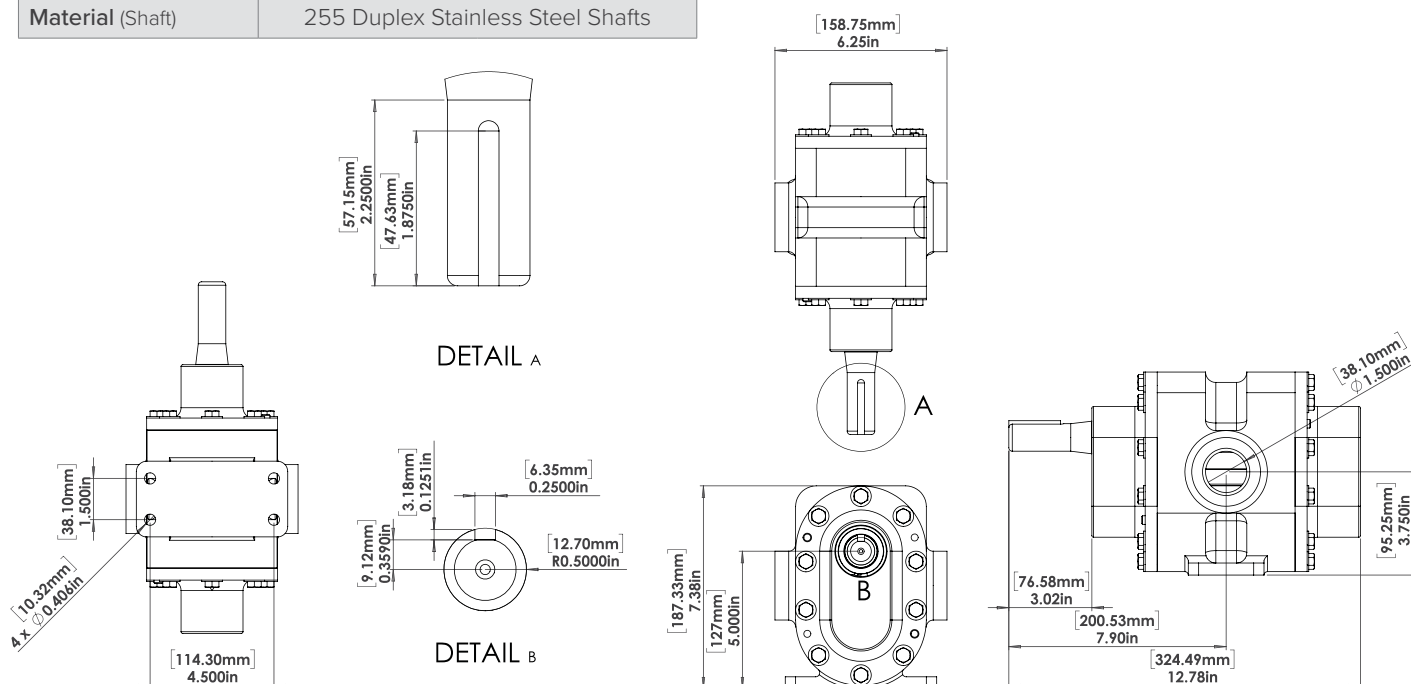


## TECHNICAL INFORMATION

RPM	1500	1800
Flow GPM (LPM)	65-90 (246-341)	90-115(341-436)
Pressure psi(kg/cm <sup>2</sup> )	261-100(18-7)	261-100(18-7)
Port Size (inch)	1.5x1.5	1.5x1.5
Material (Body)	Bronze	
Pump Rotor	Spur	
Shaft Type	Key Shaft or Splined Input Shaft	
Type of Connection	Threading, Grooved	
Material (Shaft)	255 Duplex Stainless Steel Shafts	

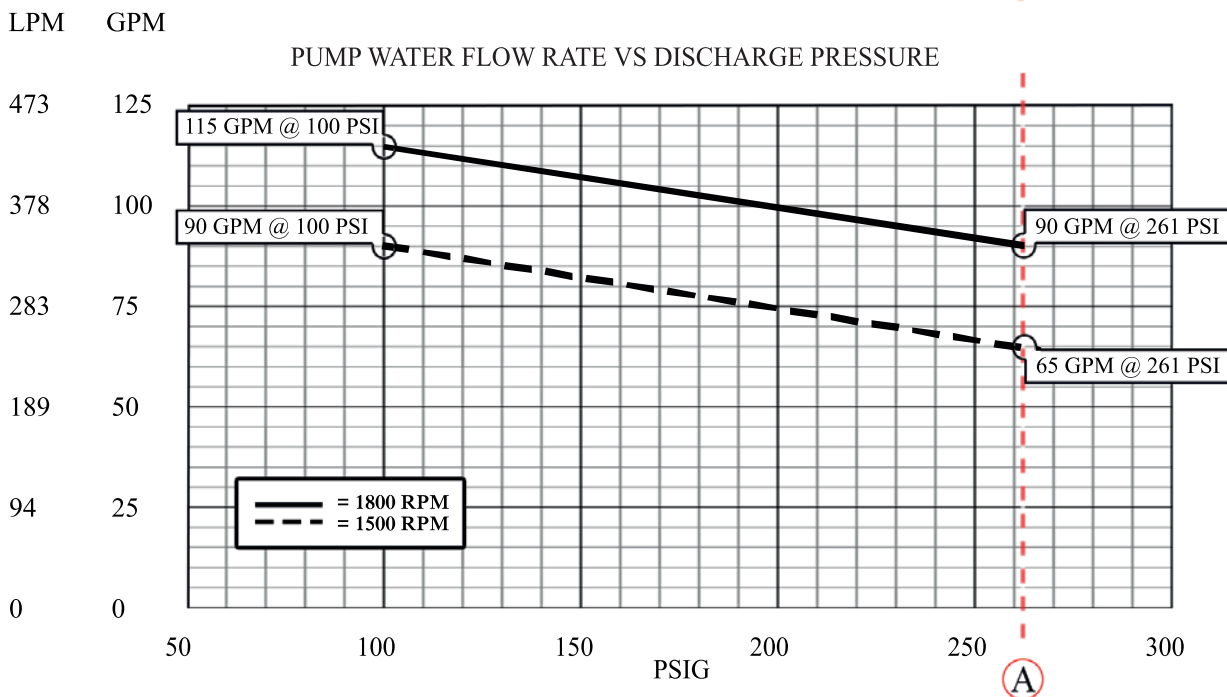
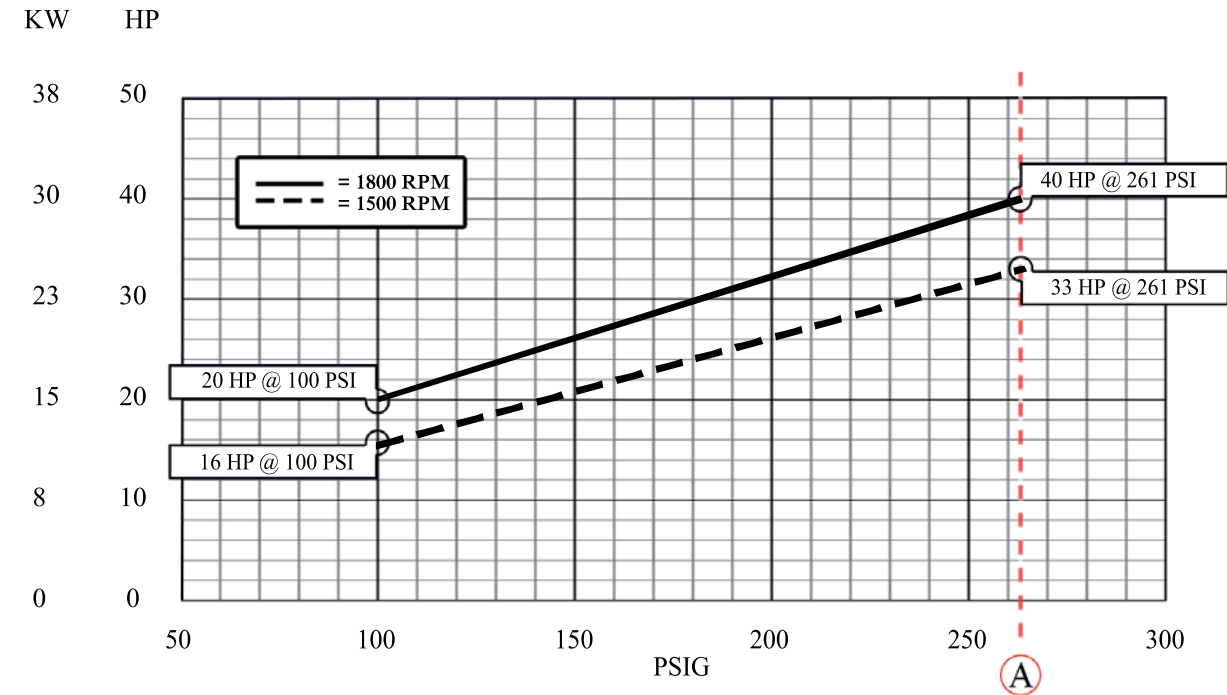
## FEATURES

- Pump is quiet and smooth operation during operation.
- Pump shafts is supported by composite bushings that are field replaceable and capable of extended operation on water or foam concentrate.
- Foam pump design is utilize replaceable casing liners, bearings or timing gears.
- Capable of rotation in either direction without modification.
- UL LISTED & capable of 261(18 bar)psig operation.



## PUMP WATER HP VS DISCHARGE PRESSURE

PORT SIZE: 1.5" x 1.5"



**A** UL LISTED @ 18 BAR or 261 PSIG



# FOAM PUMP

MODEL: NF-FP-101



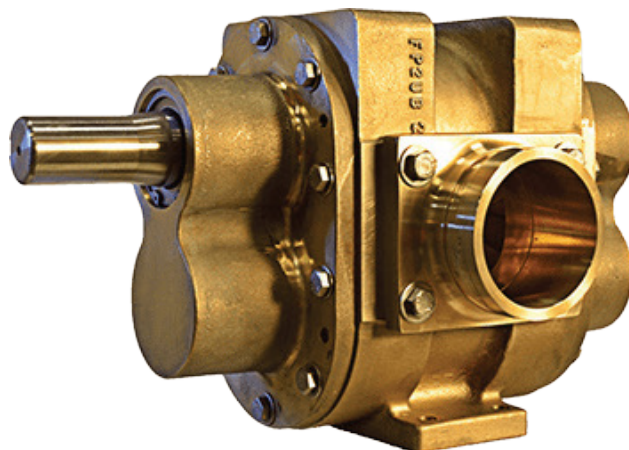
## DESCRIPTION

NF-FP-101, is specialized non-corrosive construction pumps used for Fire Protection, especially for Fire-fighting foam concentrate pumping & Water mist pumping applications. These pumps can also be used for Stationary or mobile systems applications.

NAFFCO Foam pump have 255 Duplex Stainless steel shafts to withstand seawater flush and any brand foam concentrate. Only 1 shaft seal is permitted and shaft seal shall be capable of dry operation for 10 minutes. Shaft seal shall be simple to repair and replace in the field. Shaft seal materials are 316 stainless casing with double PTFE lips that allow for hydro test pressure to 350 psig without leakage.

Pump rotors shall be Herringbone gear design using corrosion resistant materials. Made from admiralty bronze alloy and composite materials that provide no tooth to tooth wear and no corrosion.

Foam pump connections shall be Groove or Flanged. Pump connections and end covers shall use O-ring seals for leak free operation and simple field replacement.

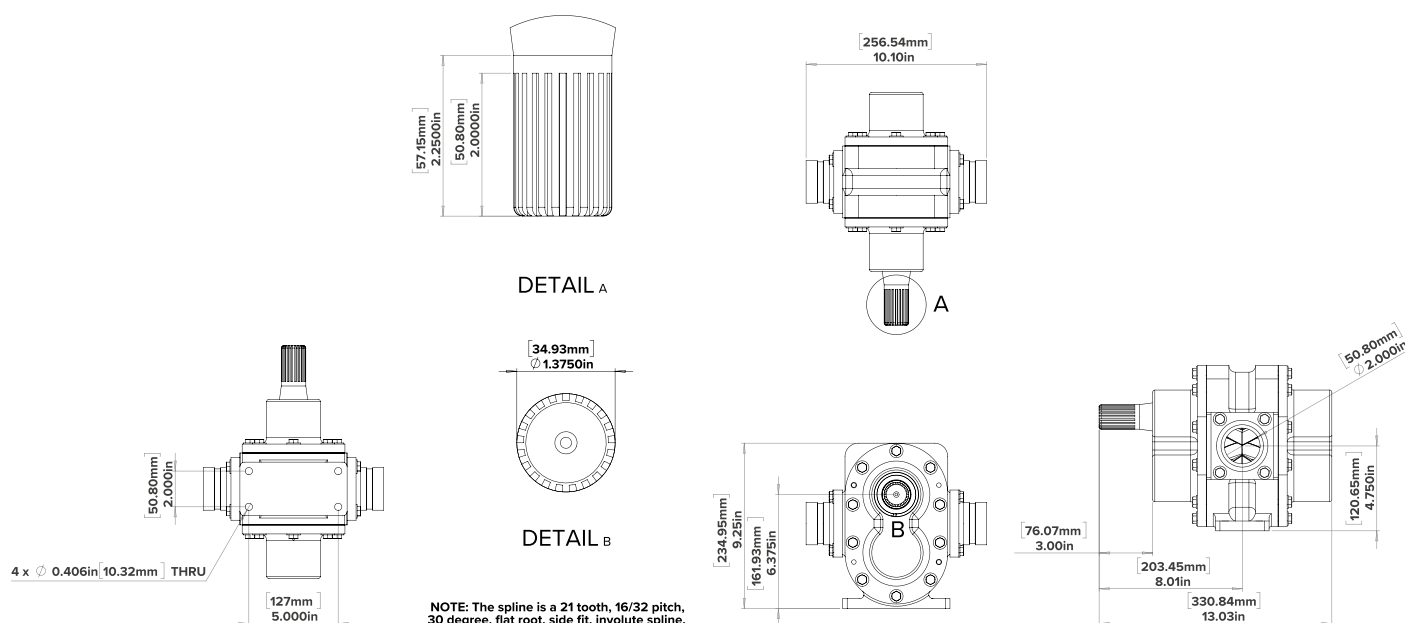


## TECHNICAL INFORMATION

RPM	1500	1800
Flow GPM (LPM)	88-119 (334-451)	121-152(459-576)
Pressure psi(kg/cm <sup>2</sup> )	261-100(18-7)	261-100(18-7)
Port Size (inch)	2x2	2x2
Material (Body)	Bronze	
Pump Rotor	Herringbone Gear	
Shaft Type	Key Shaft or Splined Input Shaft	
Type of Connection	Flanged, Grooved	
Material (Shaft)	255 Duplex Stainless Steel Shafts	

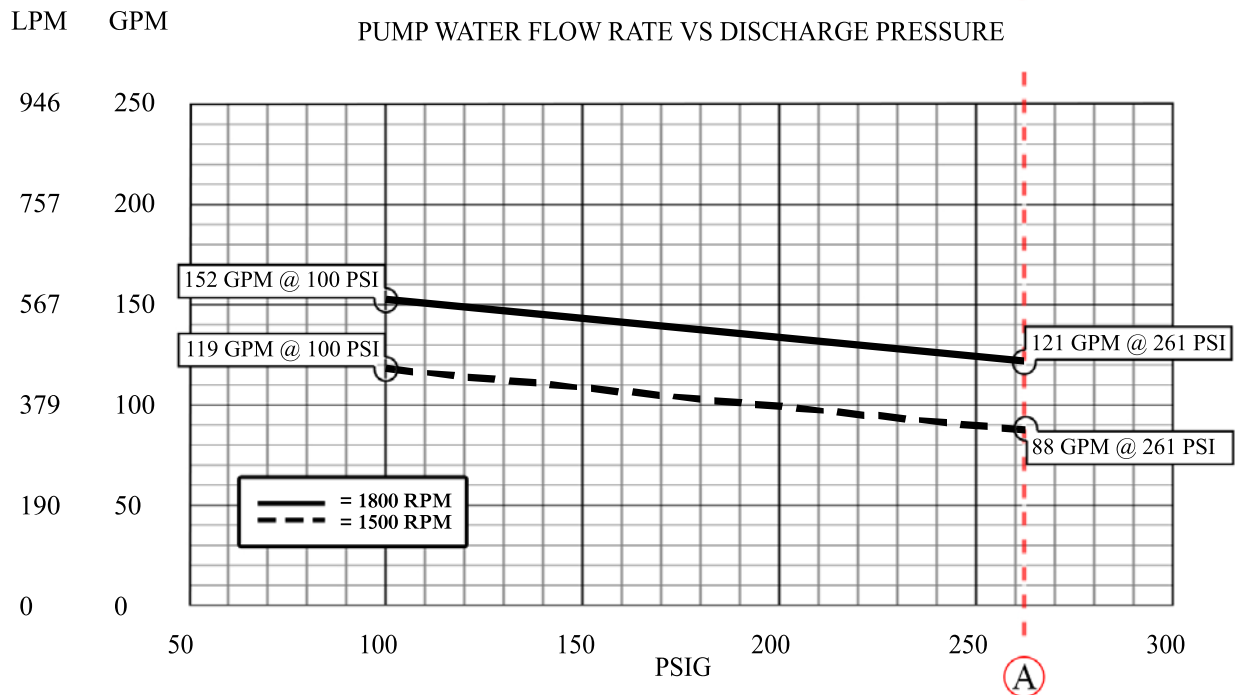
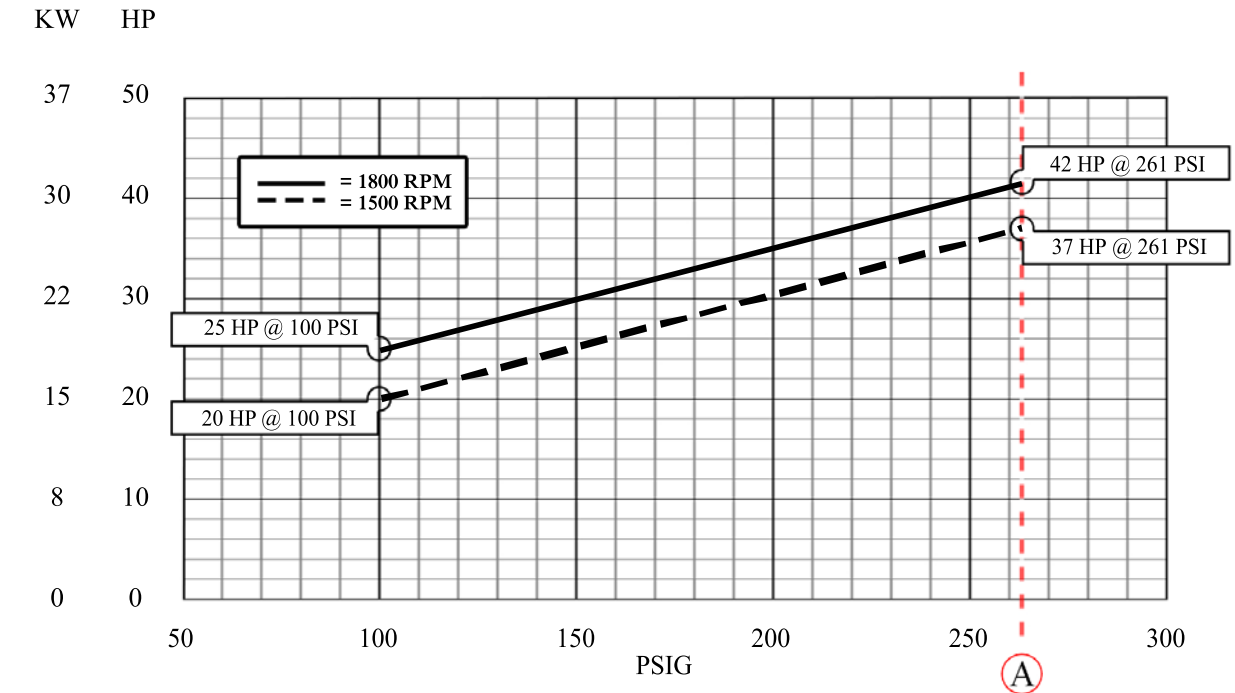
## FEATURES

- Pump is quiet and smooth operation during operation.
- Pump shafts is supported by composite bushings that are field replaceable and capable of extended operation on water or foam concentrate.
- Foam pump design is utilize replaceable casing liners, bearings or timing gears.
- Capable of rotation in either direction without modification.
- UL LISTED & capable of 261(18 bar)psig operation.



## PUMP WATER HP VS DISCHARGE PRESSURE

PORT SIZE: 2" x 2"



(A) UL LISTED @ 18 BAR OR 261 PSIG

# FOAM PUMP

MODEL: NF-FP-151



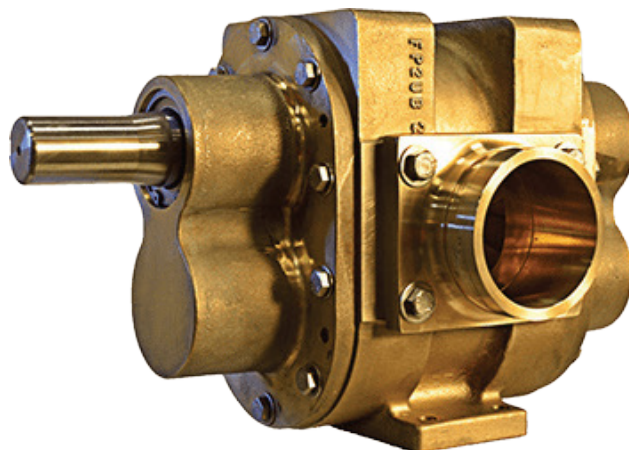
## DESCRIPTION

NF-FP-151, is specialized non-corrosive construction pumps used for Fire Protection, especially for Fire-fighting foam concentrate pumping & Water mist pumping applications. These pumps can also be used for Stationary or mobile systems applications.

NAFFCO Foam pump have 255 Duplex Stainless steel shafts to withstand seawater flush and any brand foam concentrate. Only 1 shaft seal is permitted and shaft seal shall be capable of dry operation for 10 minutes. Shaft seal shall be simple to repair and replace in the field. Shaft seal materials are 316 stainless casing with double PTFE lips that allow for hydro test pressure to 350 psig without leakage.

Pump rotors shall be Herringbone gear design using corrosion resistant materials. Made from admiralty bronze alloy and composite materials that provide no tooth to tooth wear and no corrosion.

Foam pump connections shall be Groove or Flanged. Pump connections and end covers shall use O-ring seals for leak free operation and simple field replacement.

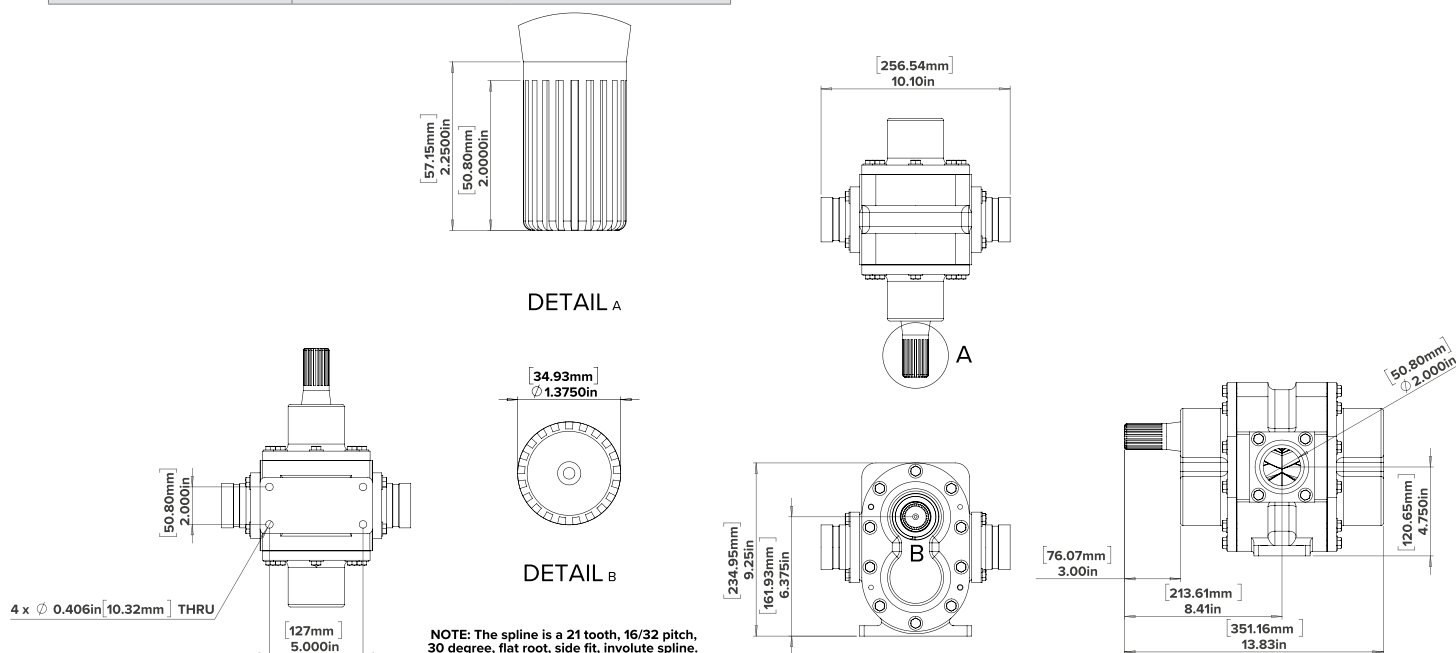


## TECHNICAL INFORMATION

RPM	1500	1800
Flow GPM (LPM)	107-140 (406-531)	152-185(387-701)
Pressure psi(kg/cm <sup>2</sup> )	261-100(18-7)	261-100(18-7)
Port Size (inch)	2x2	2x2
Material (Body)	Bronze	
Pump Rotor	Herringbone Gear	
Shaft Type	Key Shaft or Splined Input Shaft	
Type of Connection	Flanged, Grooved	
Material (Shaft)	255 Duplex Stainless Steel Shafts	

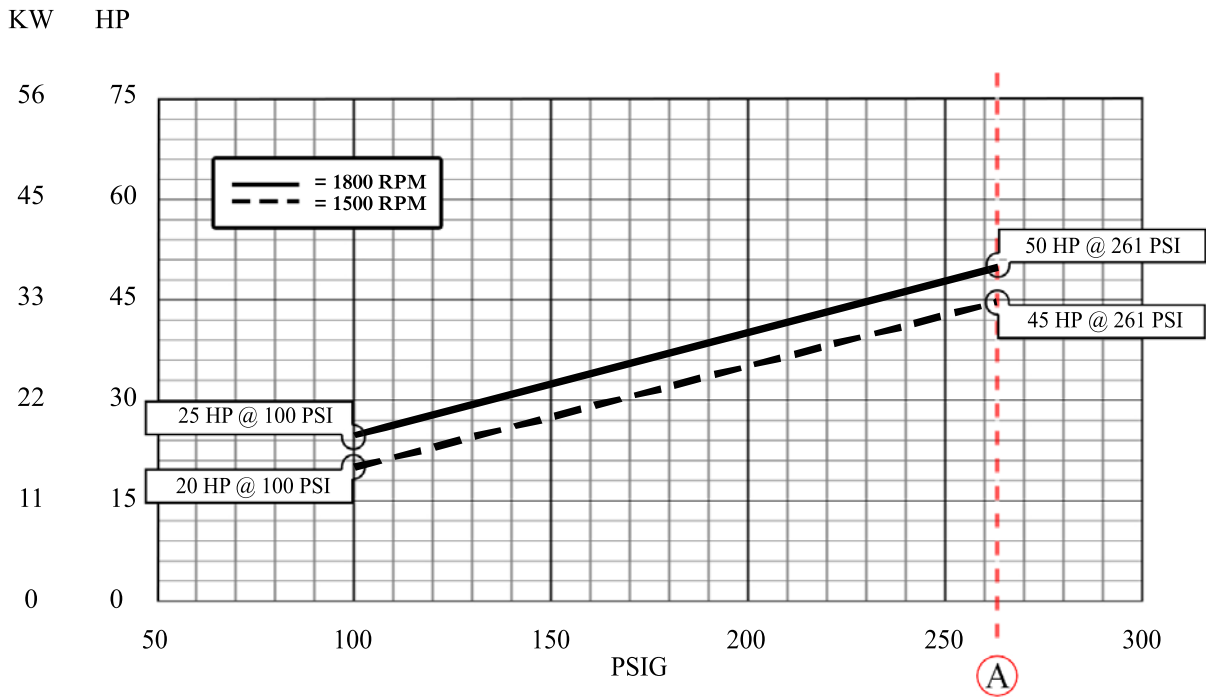
## FEATURES

- Pump is quiet and smooth operation during operation.
- Pump shafts is supported by composite bushings that are field replaceable and capable of extended operation on water or foam concentrate.
- Foam pump design is utilize replaceable casing liners, bearings or timing gears.
- Capable of rotation in either direction without modification.
- UL LISTED & capable of 261(18 bar)psig operation.

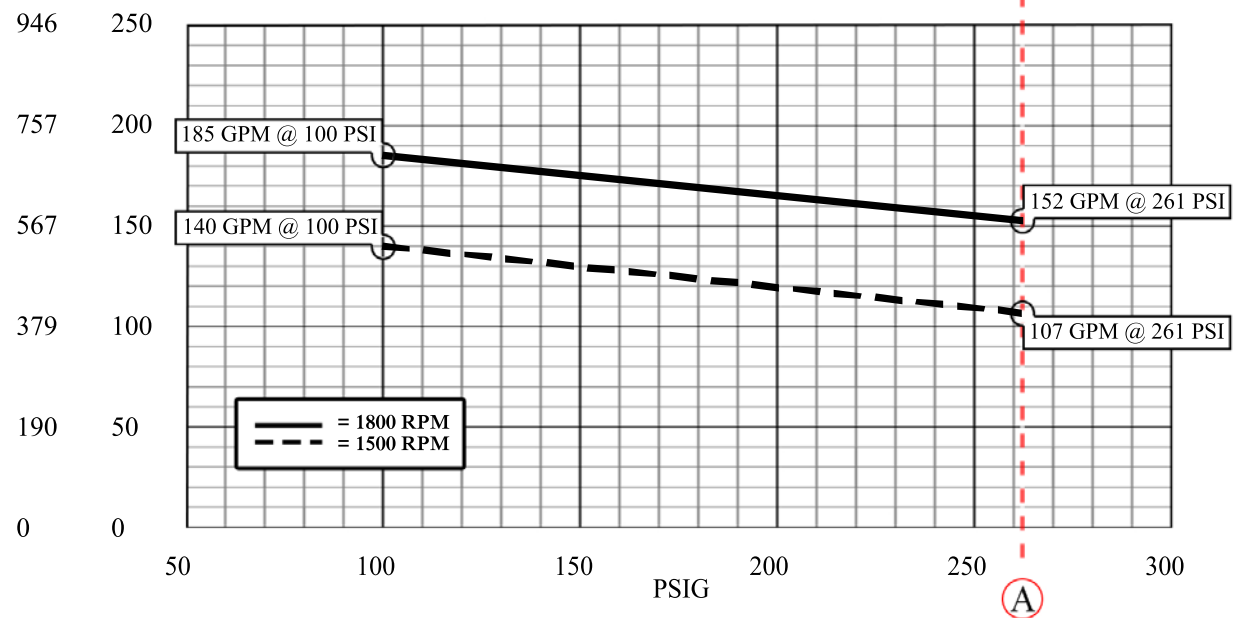


## PUMP WATER HP VS DISCHARGE PRESSURE

PORT SIZE: 2" x 2"



## PUMP WATER FLOW RATE VS DISCHARGE PRESSURE



(A) UL LISTED @ 18 BAR OR 261 PSIG

# FOAM PUMP

MODEL: NF-FP-175



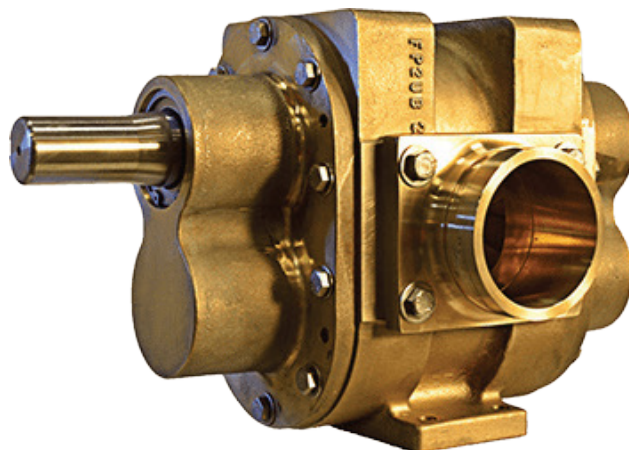
## DESCRIPTION

NF-FP-175, is specialized non-corrosive construction pumps used for Fire Protection, especially for Fire-fighting foam concentrate pumping & Water mist pumping applications. These pumps can also be used for Stationary or mobile systems applications.

NAFFCO Foam pump have 255 Duplex Stainless steel shafts to withstand seawater flush and any brand foam concentrate. Only 1 shaft seal is permitted and shaft seal shall be capable of dry operation for 10 minutes. Shaft seal shall be simple to repair and replace in the field. Shaft seal materials are 316 stainless casing with double PTFE lips that allow for hydro test pressure to 350 psig without leakage.

Pump rotors shall be Herringbone gear design using corrosion resistant materials. Made from admiralty bronze alloy and composite materials that provide no tooth to tooth wear and no corrosion.

Foam pump connections shall be Groove or Flanged. Pump connections and end covers shall use O-ring seals for leak free operation and simple field replacement.

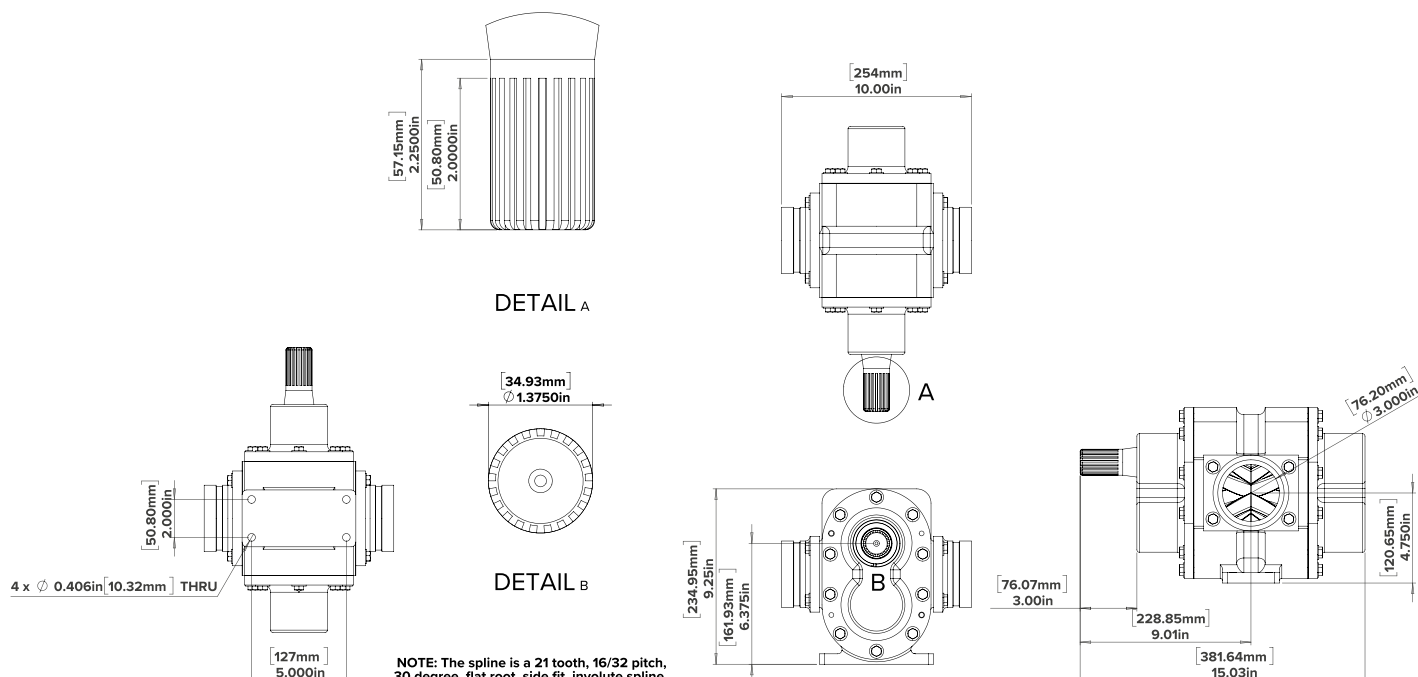


## TECHNICAL INFORMATION

RPM	1500	1800
Flow GPM (LPM)	135-180 (512-682)	185-235(701-891)
Pressure psi(kg/cm <sup>2</sup> )	261-100(18-7)	261-100(18-7)
Port Size (inch)	3 x 3	3 x 3
Material (Body)	Bronze	
Pump Rotor	Herringbone Gear	
Shaft Type	Key Shaft or Splined Input Shaft	
Type of Connection	Flanged, Grooved	
Material (Shaft)	255 Duplex Stainless Steel Shafts	

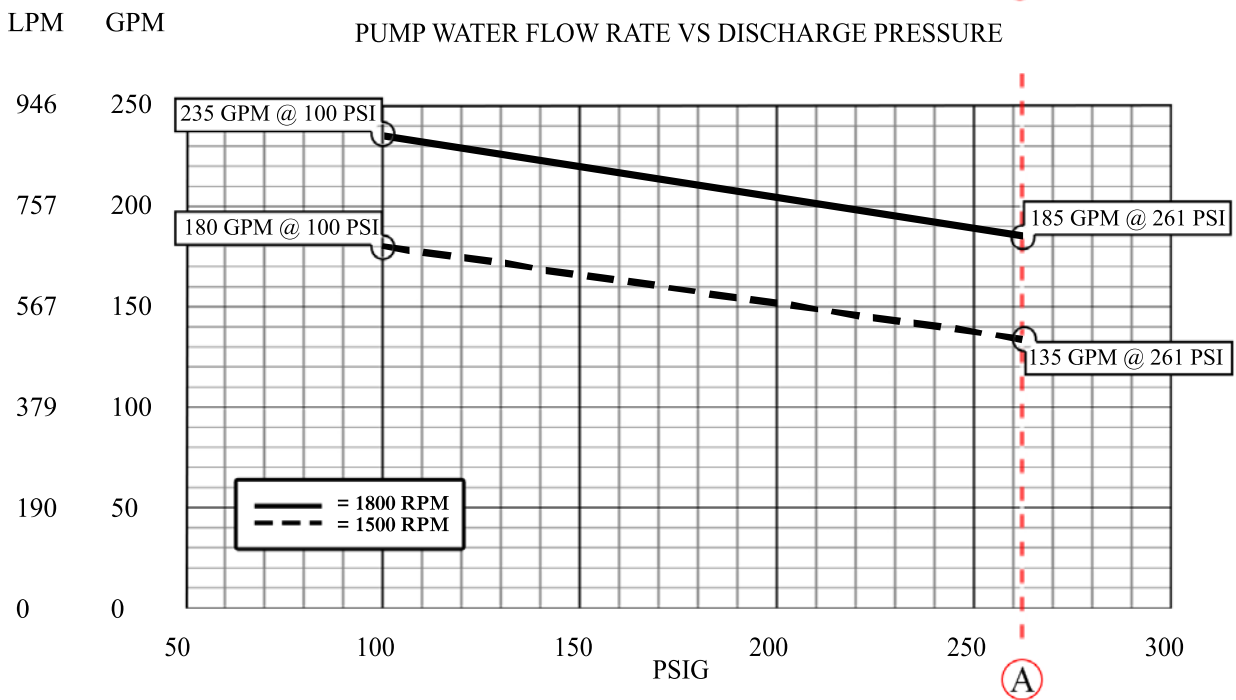
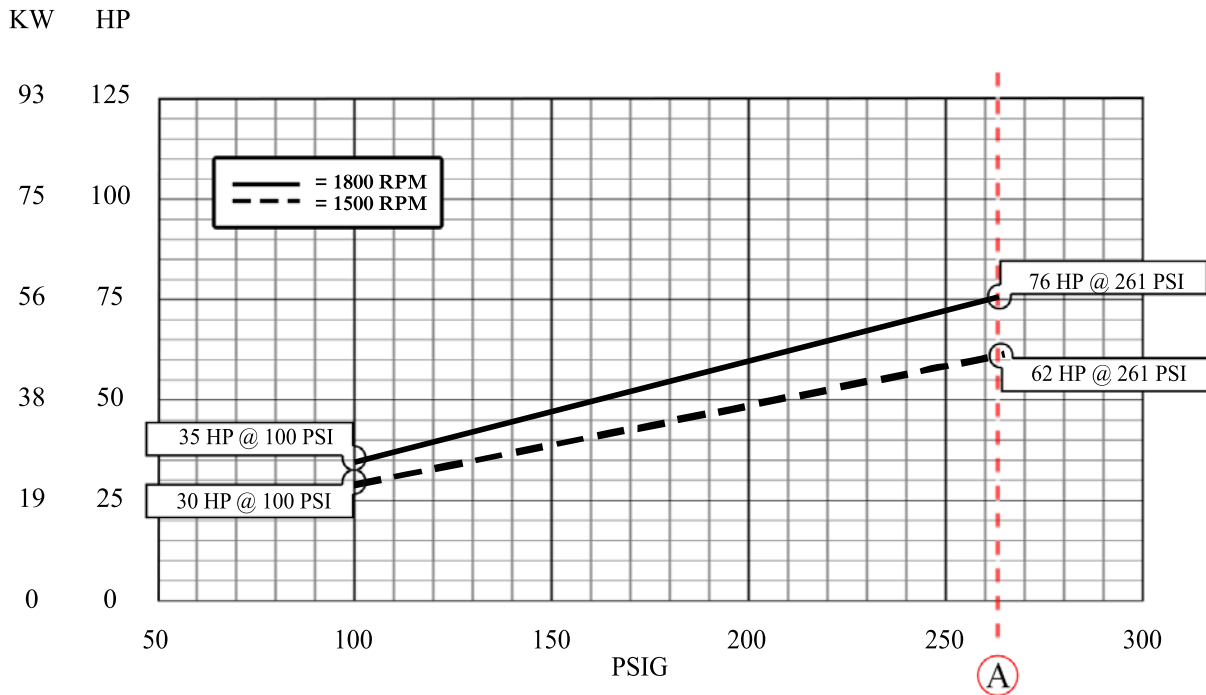
## FEATURES

- Pump is quiet and smooth operation during operation.
- Pump shafts is supported by composite bushings that are field replaceable and capable of extended operation on water or foam concentrate.
- Foam pump design is utilize replaceable casing liners, bearings or timing gears.
- Capable of rotation in either direction without modification.
- UL LISTED & capable of 261(18 bar)psig operation.



## PUMP WATER HP VS DISCHARGE PRESSURE

PORT SIZE: 3" x 3"



**A** UL LISTED @ 18 BAR OR 261 PSIG



# FOAM PUMP

MODEL: NF-FP-201



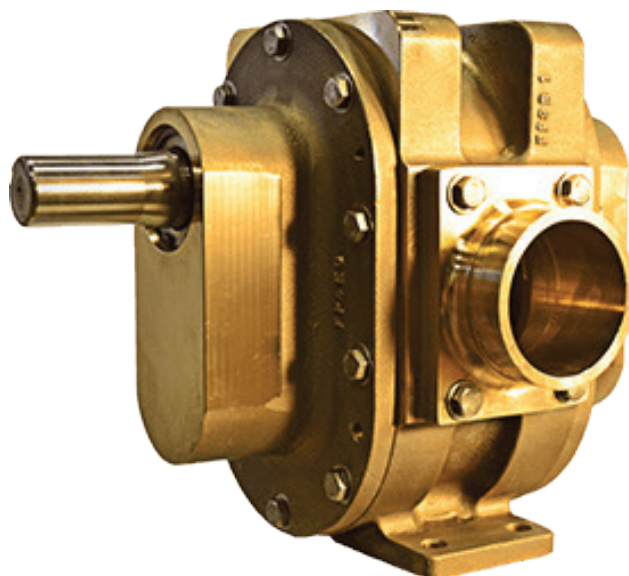
## DESCRIPTION

NF-FP-201, is specialized non-corrosive construction pumps used for Fire Protection, especially for Fire-fighting foam concentrate pumping & Water mist pumping applications. These pumps can also be used for Stationary or mobile systems applications.

NAFFCO Foam pump have 255 Duplex Stainless steel shafts to withstand seawater flush and any brand foam concentrate. Only 1 shaft seal is permitted and shaft seal shall be capable of dry operation for 10 minutes. Shaft seal shall be simple to repair and replace in the field. Shaft seal materials are 316 stainless casing with double PTFE lips that allow for hydro test pressure to 350 psig without leakage.

Pump rotors shall be Herringbone gear design using corrosion resistant materials. Made from admiralty bronze alloy and composite materials that provide no tooth to tooth wear and no corrosion.

Foam pump connections shall be Groove or Flanged. Pump connections and end covers shall use O-ring seals for leak free operation and simple field replacement.

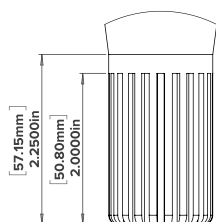


## TECHNICAL INFORMATION

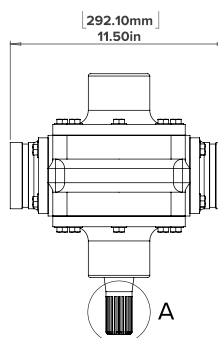
RPM	1500	1800
Flow GPM (LPM)	158-205 (599-777)	202-252(766-955)
Pressure psi(kg/cm <sup>2</sup> )	261-100(18-7)	261-100(18-7)
Port Size (inch)	3 x 3	3 x 3
Material (Body)	Bronze	
Pump Rotor	Herringbone Gear	
Shaft Type	Key Shaft or Splined Input Shaft	
Type of Connection	Flanged, Grooved	
Material (Shaft)	255 Duplex Stainless Steel Shafts	

## FEATURES

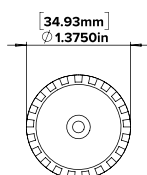
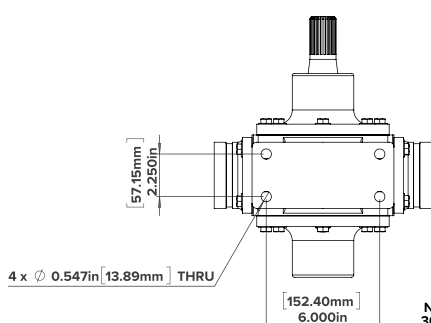
- Pump is quiet and smooth operation during operation.
- Pump shafts is supported by composite bushings that are field replaceable and capable of extended operation on water or foam concentrate.
- Foam pump design is utilize replaceable casing liners, bearings or timing gears.
- Capable of rotation in either direction without modification.
- UL LISTED & capable of 261(18 bar)psig operation.



DETAIL A

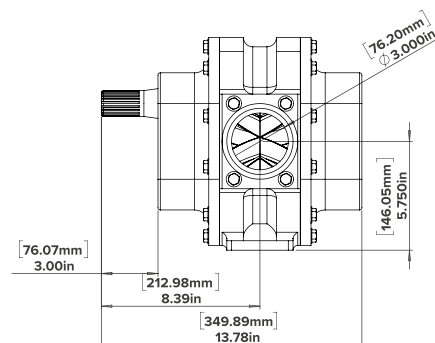
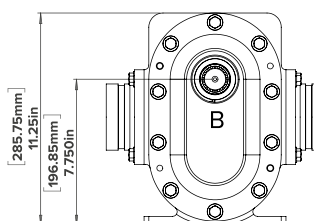


DETAIL B



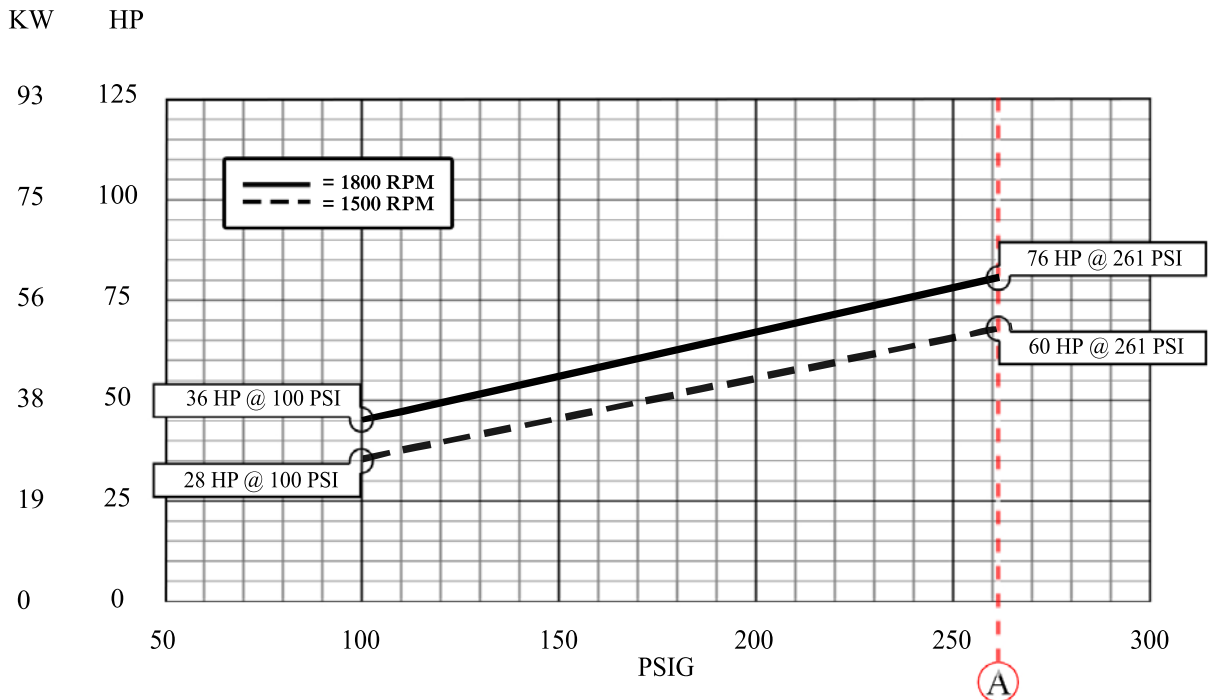
DETAIL C

NOTE: The spline is a 21 tooth, 16/32 pitch, 30 degree, flat root, side fit, involute spline.

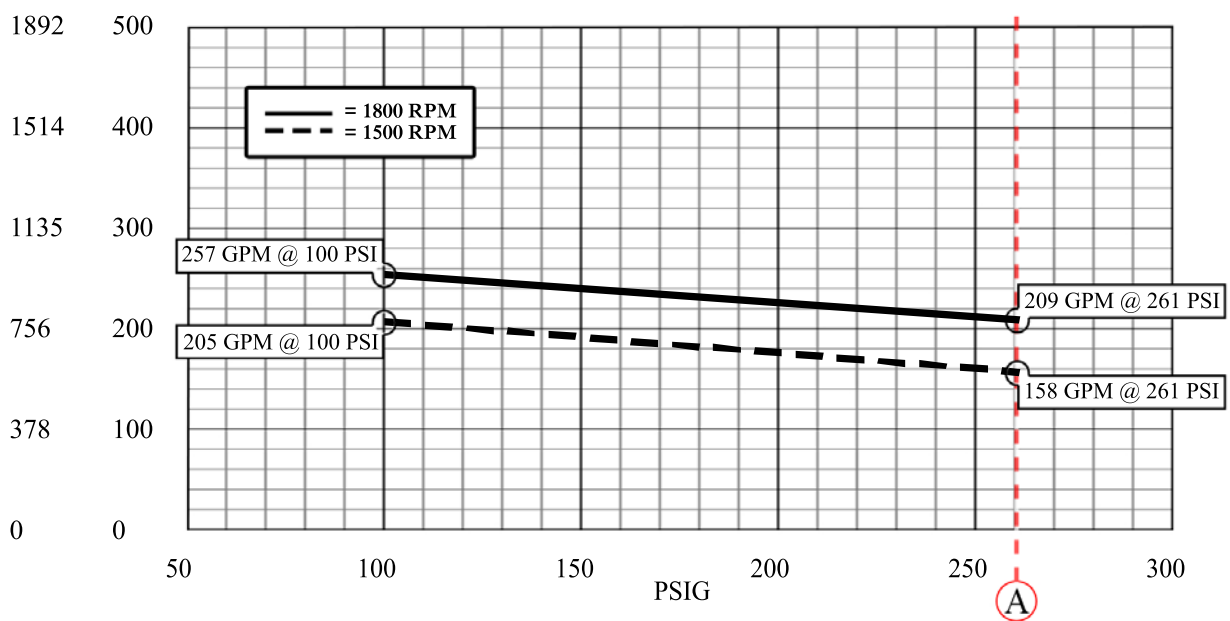


## PUMP WATER HP VS DISCHARGE PRESSURE

PORT SIZE: 3" x 3"



## PUMP WATER FLOW RATE VS DISCHARGE PRESSURE



**A** UL LISTED @ 18 BAR OR 261 PSIG

# FOAM PUMP

## MODEL: NF-FP-225



### DESCRIPTION

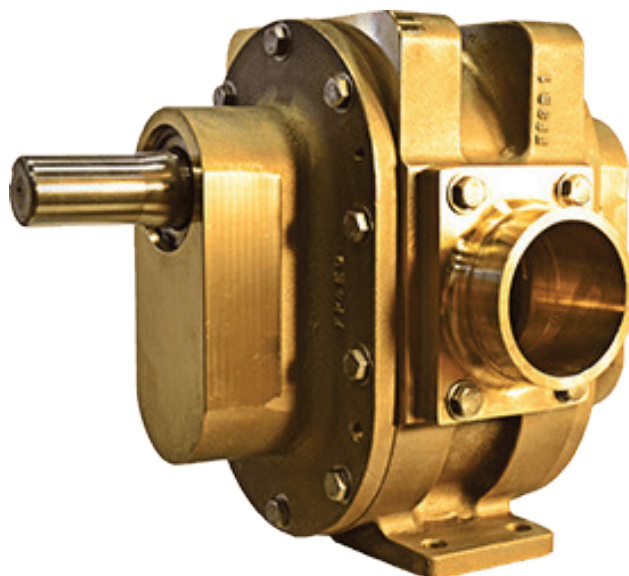
NF-FP-225, is specialized non-corrosive construction pumps used for Fire Protection, especially for Fire-fighting foam concentrate pumping & Water mist pumping applications. These pumps can also be used for Stationary or mobile systems applications.

NAFFCO Foam pump have 255 Duplex Stainless steel shafts to withstand seawater flush and any brand foam concentrate. Only 1 shaft seal is permitted and shaft seal shall be capable of dry operation for 10 minutes. Shaft seal shall be simple to repair and replace in the field. Shaft seal materials are 316 stainless casing with double PTFE lips that allow for hydro test pressure to 350 psig without leakage.

Pump rotors shall be Herringbone gear design using corrosion resistant materials. Made from admiralty bronze alloy and composite materials that provide no tooth to tooth wear and no corrosion. Foam pump connections shall be Groove or Flanged. Pump connections and end covers shall use O-ring seals for leak free operation and simple field replacement.

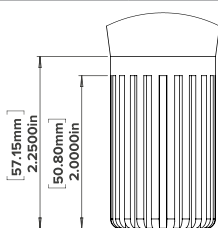
### TECHNICAL INFORMATION

RPM	1500	1800
Flow GPM (LPM)	180-240 (682-910)	240-300(910-1137)
Pressure psi(kg/cm <sup>2</sup> )	261-100(18-7)	261-100(18-7)
Port Size (inch)	3 x 3	3 x 3
Material (Body)	Bronze	
Pump Rotor	Herringbone Gear	
Shaft Type	Key Shaft or Splined Input Shaft	
Type of Connection	Flanged, Grooved	
Material (Shaft)	255 Duplex Stainless Steel Shafts	

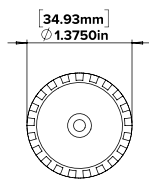
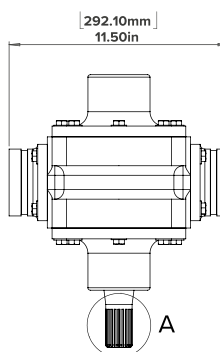


### FEATURES

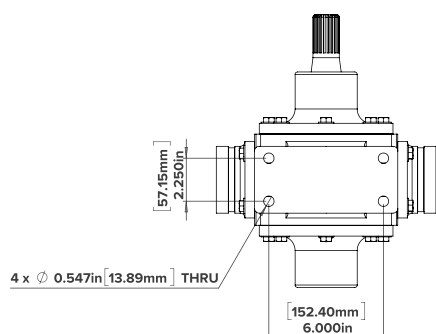
- Pump is quiet and smooth operation during operation.
- Pump shafts is supported by composite bushings that are field replaceable and capable of extended operation on water or foam concentrate.
- Foam pump design is utilize replaceable casing liners, bearings or timing gears.
- Capable of rotation in either direction without modification.
- UL LISTED & capable of 261(18 bar)psig operation.



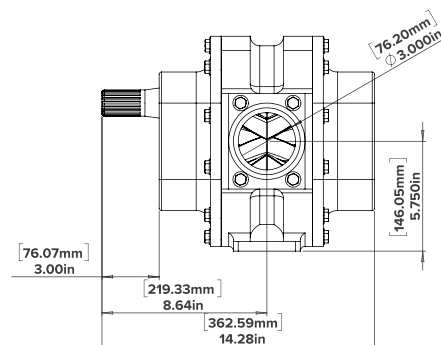
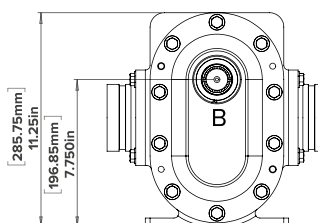
DETAIL A



DETAIL B

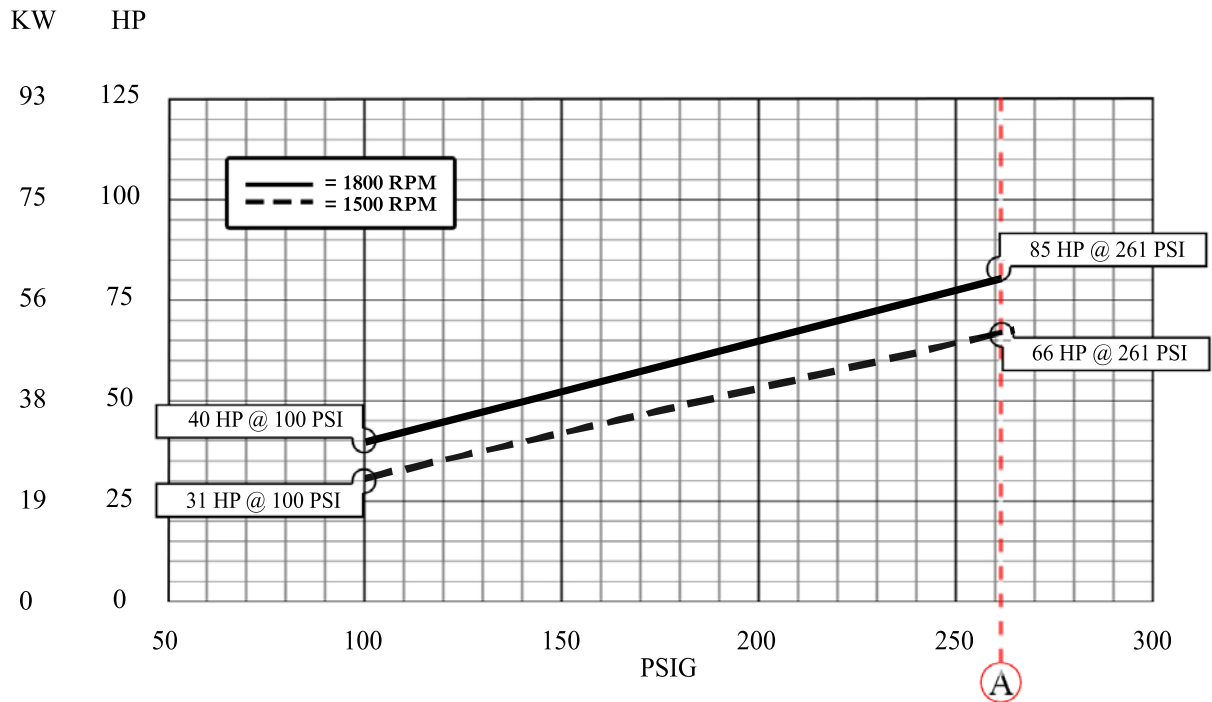


NOTE: The spline is a 21 tooth, 16/32 pitch, 30 degree, flat root, side fit, involute spline.

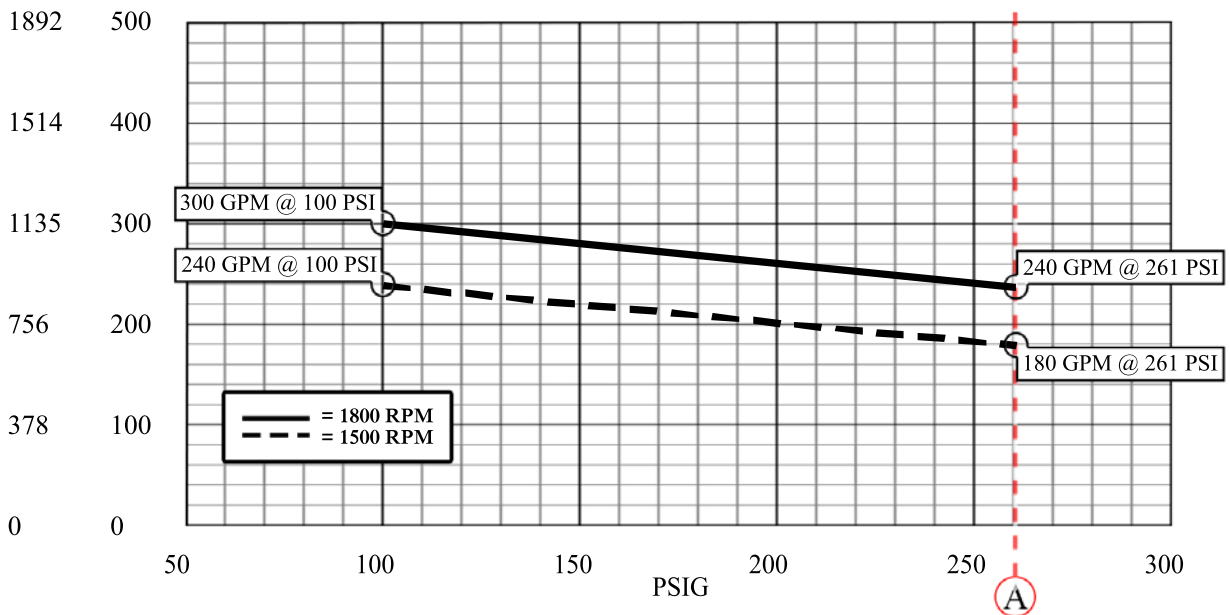


## PUMP WATER HP VS DISCHARGE PRESSURE

PORT SIZE: 3" x 3"



## PUMP WATER FLOW RATE VS DISCHARGE PRESSURE



**A** UL LISTED @ 18 BAR OR 261 PSIG

# FOAM PUMP

MODEL: NF-FP-250



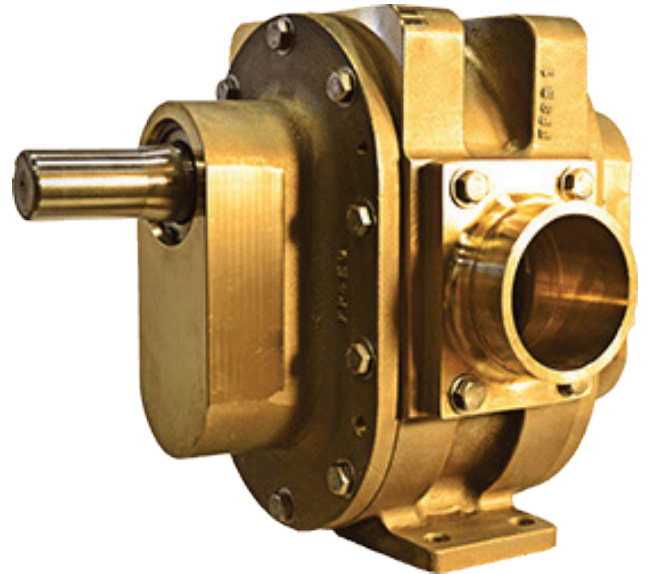
## DESCRIPTION

NF-FP-250, is specialized non-corrosive construction pumps used for Fire Protection, especially for Fire-fighting foam concentrate pumping & Water mist pumping applications. These pumps can also be used for Stationary or mobile systems applications.

NAFFCO Foam pump have 255 Duplex Stainless steel shafts to withstand seawater flush and any brand foam concentrate. Only 1 shaft seal is permitted and shaft seal shall be capable of dry operation for 10 minutes. Shaft seal shall be simple to repair and replace in the field. Shaft seal materials are 316 stainless casing with double PTFE lips that allow for hydro test pressure to 350 psig without leakage.

Pump rotors shall be Herringbone gear design using corrosion resistant materials. Made from admiralty bronze alloy and composite materials that provide no tooth to tooth wear and no corrosion.

Foam pump connections shall be Groove or Flanged. Pump connections and end covers shall use O-ring seals for leak free operation and simple field replacement.

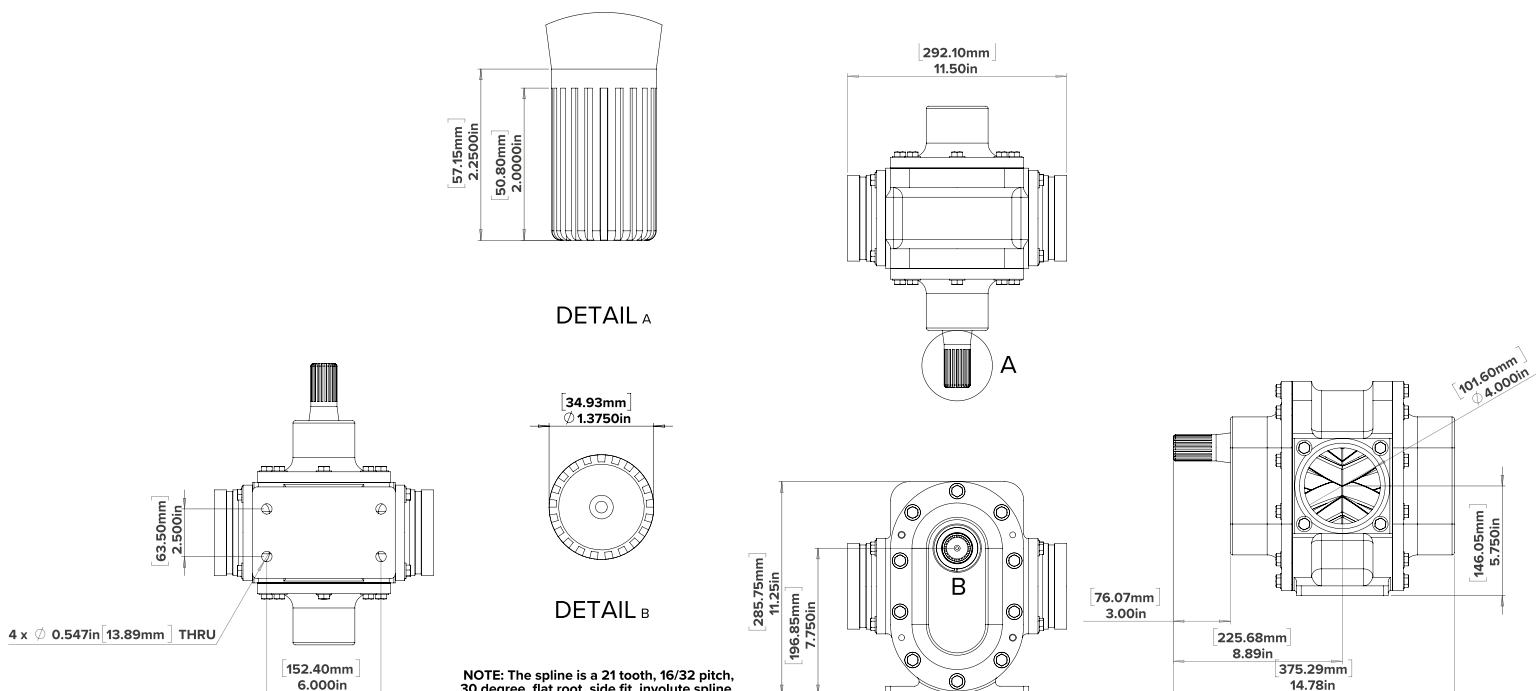


## TECHNICAL INFORMATION

RPM	1500	1800
Flow GPM (LPM)	185-245 (701-925)	250-315(948-1194)
Pressure psi(kg/cm <sup>2</sup> )	261-100(18-7)	261-100(18-7)
Port Size (inch)	4x4	4x4
Material (Body)	Bronze	
Pump Rotor	Herringbone Gear	
Shaft Type	Key Shaft or Splined Input Shaft	
Type of Connection	Flanged, Grooved	
Material (Shaft)	255 Duplex Stainless Steel Shafts	

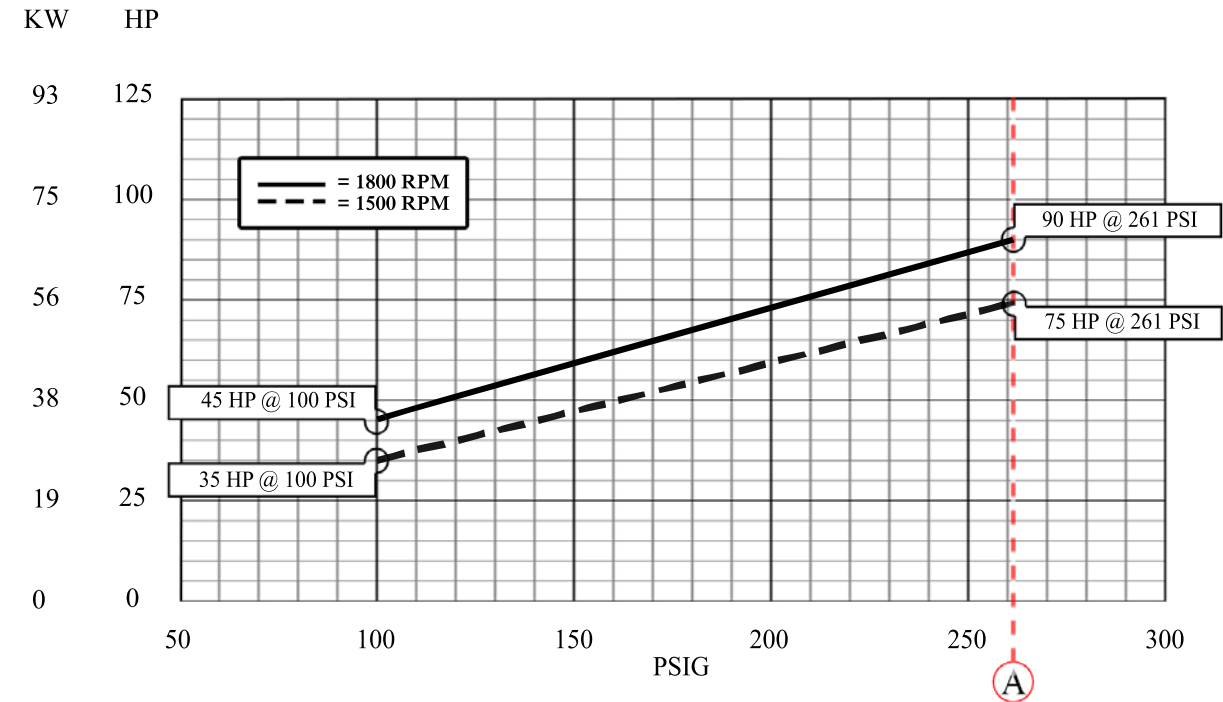
## FEATURES

- Pump is quiet and smooth operation during operation.
- Pump shafts is supported by composite bushings that are field replaceable and capable of extended operation on water or foam concentrate.
- Foam pump design is utilize replaceable casing liners, bearings or timing gears.
- Capable of rotation in either direction without modification.
- UL LISTED & capable of 261(18 bar)psig operation.

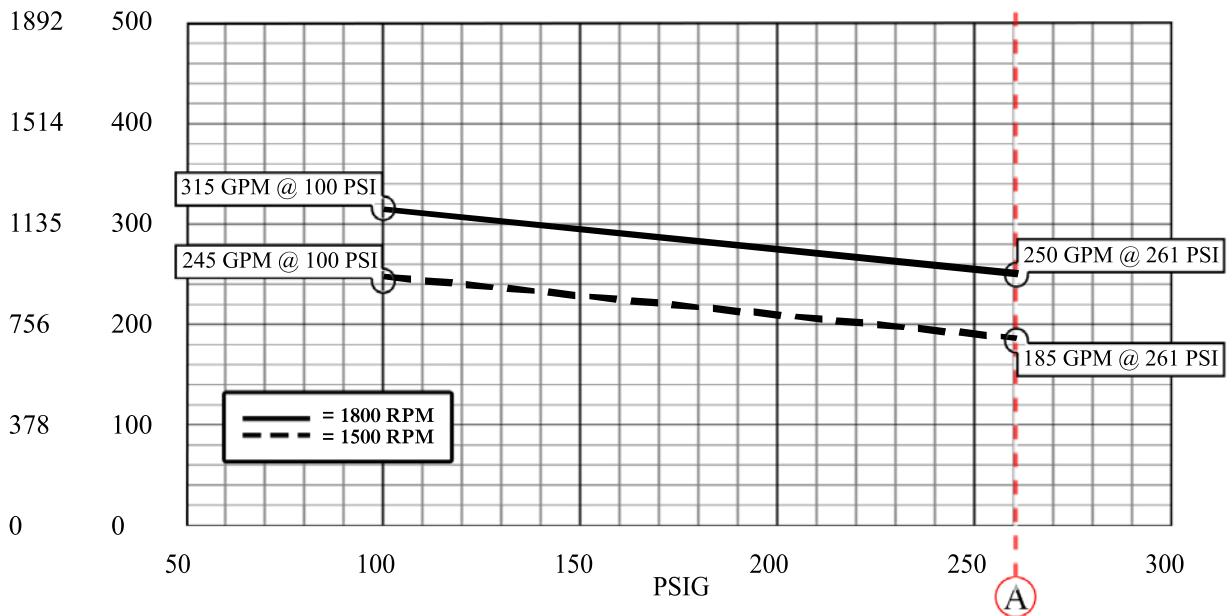


## PUMP WATER HP VS DISCHARGE PRESSURE

PORT SIZE: 4" x 4"



## PUMP WATER FLOW RATE VS DISCHARGE PRESSURE



**A** UL LISTED @ 18 BAR OR 261 PSIG



# FOAM PUMP

MODEL: NF-FP-350



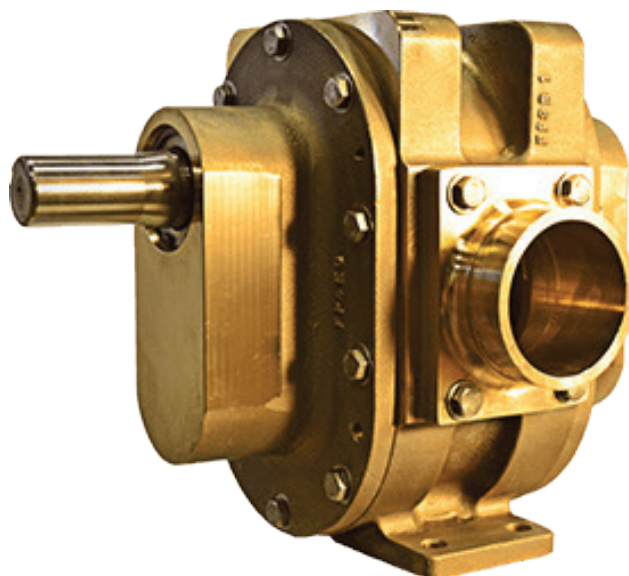
## DESCRIPTION

NF-FP-350, is specialized non-corrosive construction pumps used for Fire Protection, especially for Fire-fighting foam concentrate pumping & Water mist pumping applications. These pumps can also be used for Stationary or mobile systems applications.

NAFFCO Foam pump have 255 Duplex Stainless steel shafts to withstand seawater flush and any brand foam concentrate. Only 1 shaft seal is permitted and shaft seal shall be capable of dry operation for 10 minutes. Shaft seal shall be simple to repair and replace in the field. Shaft seal materials are 316 stainless casing with double PTFE lips that allow for hydro test pressure to 350 psig without leakage.

Pump rotors shall be Herringbone gear design using corrosion resistant materials. Made from admiralty bronze alloy and composite materials that provide no tooth to tooth wear and no corrosion.

Foam pump connections shall be Groove or Flanged. Pump connections and end covers shall use O-ring seals for leak free operation and simple field replacement.

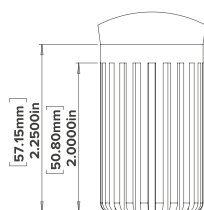


## TECHNICAL INFORMATION

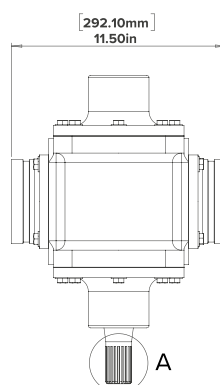
RPM	1500	1800
Flow GPM (LPM)	280-335 (1061-1270)	375-420 (1421-1592)
Pressure psi(kg/cm <sup>2</sup> )	232-100(16-7)	232-100(16-7)
Port Size (inch)	4x4	4x4
Material (Body)	Bronze	
Pump Rotor	Herringbone Gear	
Shaft Type	Key Shaft or Splined Input Shaft	
Type of Connection	Flanged, Grooved	
Material (Shaft)	255 Duplex Stainless Steel Shafts	

## FEATURES

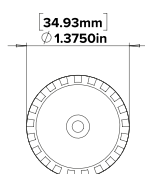
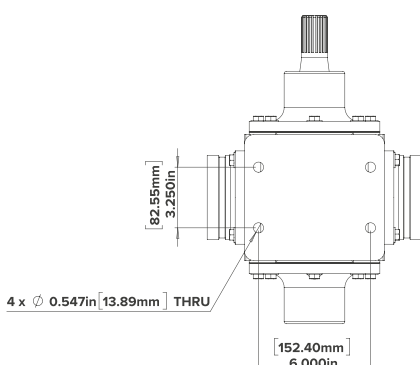
- Pump is quiet and smooth operation during operation.
- Pump shafts is supported by composite bushings that are field replaceable and capable of extended operation on water or foam concentrate.
- Foam pump design is utilize replaceable casing liners, bearings or timing gears.
- Capable of rotation in either direction without modification.
- UL LISTED & capable of 261(18 bar)psig operation.



DETAIL A

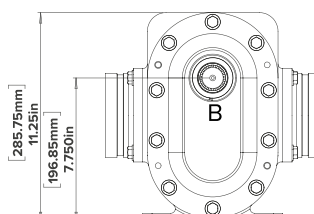


A

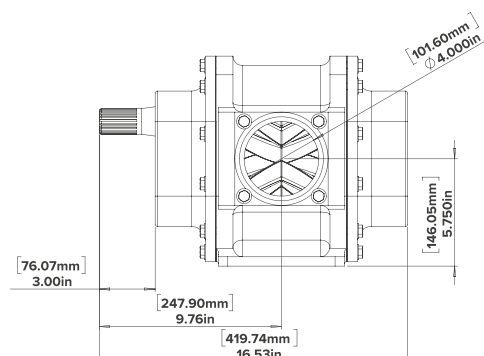


DETAIL B

NOTE: The spline is a 21 tooth, 16/32 pitch, 30 degree, flat root, side fit, involute spline.

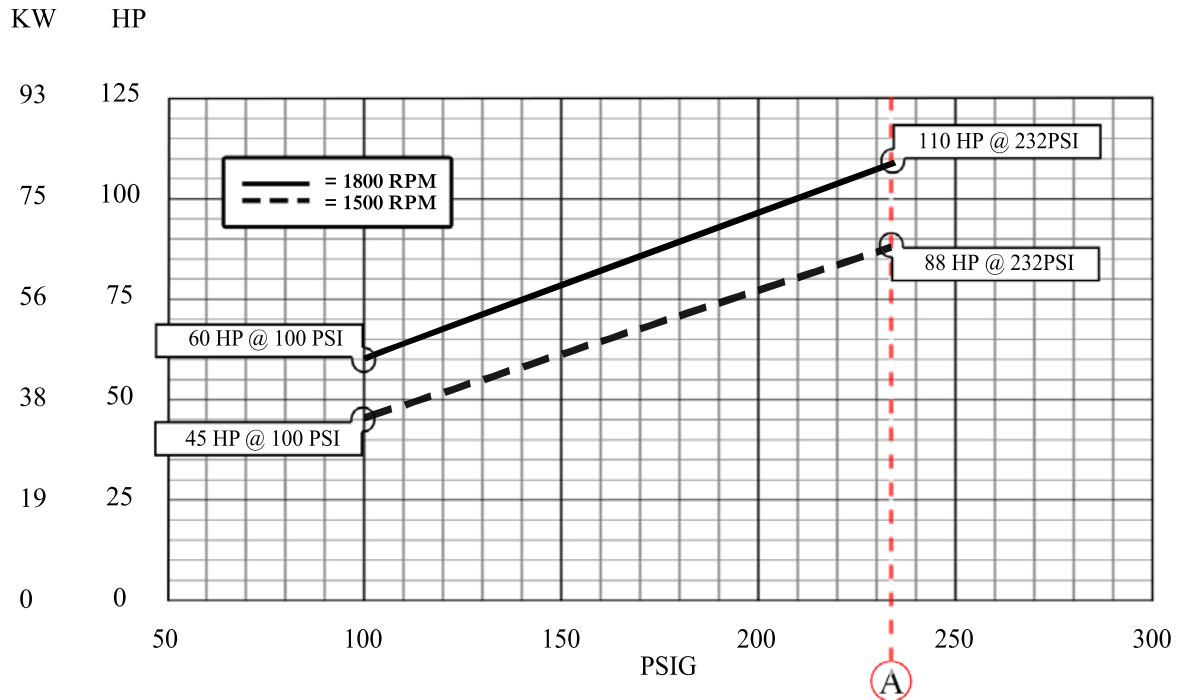


B

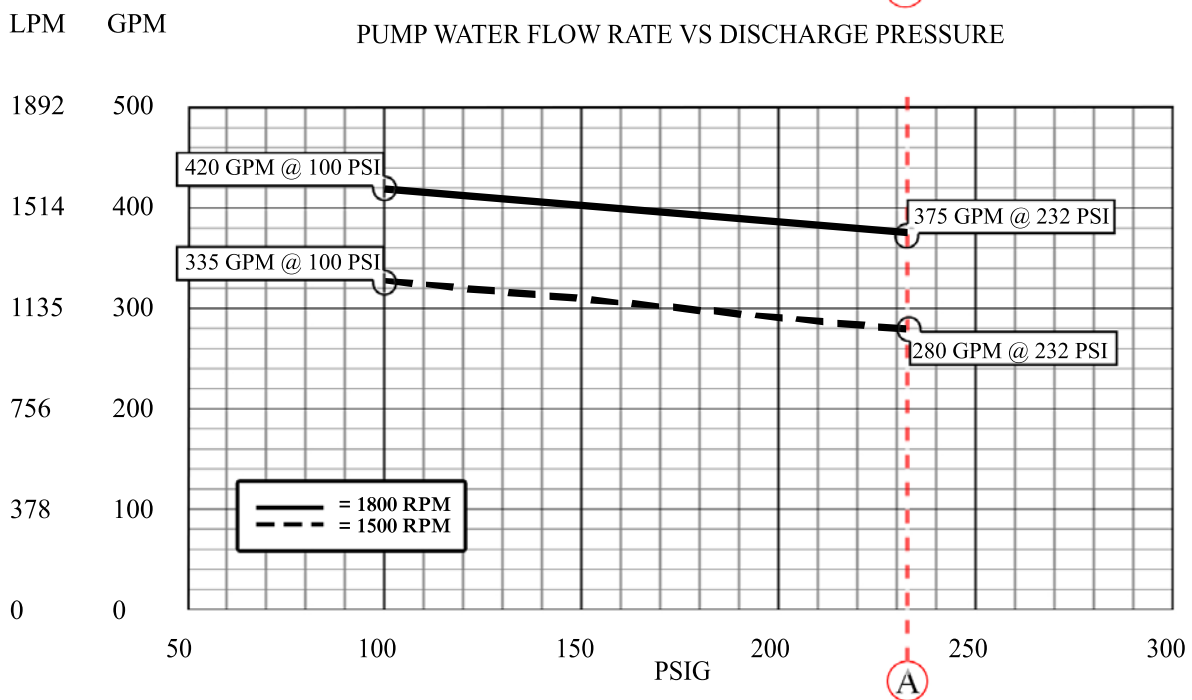


## PUMP WATER HP VS DISCHARGE PRESSURE

PORT SIZE: 4" x 4"



## PUMP WATER FLOW RATE VS DISCHARGE PRESSURE



**A** UL LISTED @ 18 BAR OR 261 PSIG