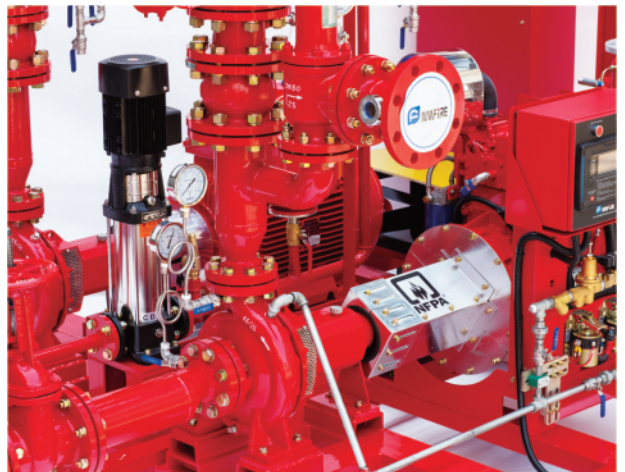
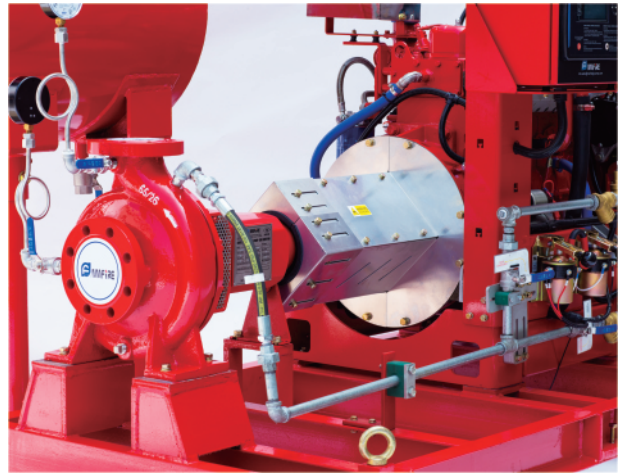
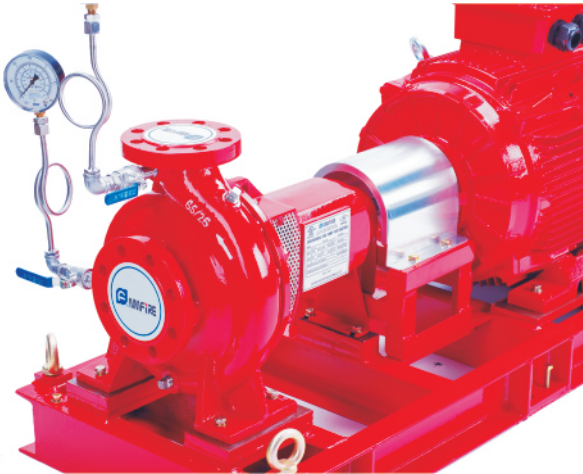


CENTRIFUGAL FIRE PUMP END SUCTION



Electric Motor Driven Pump Set
Diesel Engine Driven Pump Set
Containerised Pump Set
NFPA20 Package

AUTHORIZED DEALER

CAE ENGINEERING PTE LTD

YOUR PUMPING SYSTEMS SOLUTION PROVIDER

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The protection of life and property is not just a promise

NM FIRE SPLIT CASE PUMP STANDARD CONSTRUCTION

Fire Pumps are used to supply water for automatic sprinkler systems, standpipes or fire hydrants. NFPA No. 20 classifies fire pumps as split case, vertical turbine, end suction, or In-Line design. In-Line fire pumps have capacities of 50, 75, 100, 150, 200, 250, 300, 400, 450, 500, and 750 GPM; End Suction pumps are rated for 100, 200, 250, 300, 400, 450, 500, and 750 GPM; Split case and vertical turbine fire pumps are rated 150, 200, 300, 450, 500, 750, 1000, 1250, 1500, 2000, 3000, 3500, 4000, 4500, and 5000 GPM. All fire pumps are rated at 40 pounds per square inch or more of boost.

Fire Pumps of the type described shall meet the following basic requirements:

1. Each pump is to be tested hydrostatically for not less than 5 minutes. The test pressure is to be not less than 1.5 times the maximum working pressure of the pump, but in no case less than 250 psi (1724 kPa).

2. A pump shall develop not less than 65 percent of rated total head when discharging at 1.5 times rated capacity. The maximum net pressure for a fire pump shall not exceed 140 percent of rated head.

3. The maximum pump brake horsepower shall not exceed the HP rating its driver, including service factor.

DRIVERS

Fire Pumps are driven by either electric motors, diesel engine, or steam turbines. The basic standards for drivers are as follows:

MOTORS: NFPA 20 requires all fire pump motor drives to be rated for continuous duty and shall not be used at voltages in excess of 110% of rated voltage. At rated voltage and frequency, the full load ampere rating shall not be exceeded (except as allowed by the service factor on motor nameplate) under any pumping condition.

ENGINES: NFPA 20 requires that the engine shall have HP rating listed by a testing laboratories, (UL/FM) or be not less than 10% greater than the maximum brake HP required by the pump. A deduction of 3% of the power shall be made for each 1000 feet rise in altitude above 300 ft. and 1% for each 10 degrees F. Above 77 degrees F. Ambient temp. Minimum instrumentation and control shall include: adjustable speed governor, over speed shutdown device set approx. 20% above rated engine speed, tachometer with hour meter, oil pressure gauge and temperature gauge.

NM FIRE END SUCTION PUMP STANDARD CONSTRUCTION

ROTATION: Rotation is clockwise when viewed from the driver end

VOLUTE: The back pull out design of the volute allows the removal of the motor and integral pumping element without disturbing the piping or pump mounting. The suction and discharge flanges are 250 lb. Rated

IMPELLER AND WEAR RINGS: Closed type impellers are precision cast, carefully machined, statically and dynamically balanced. The impeller is keyed to the pump shaft and retained with a cap screw and washer. Balance holes on the back side of the impeller reduce thrust with hydraulic balancing of the pressures. Replaceable case wear rings are utilized in the casing and volute cover and held by set screws.

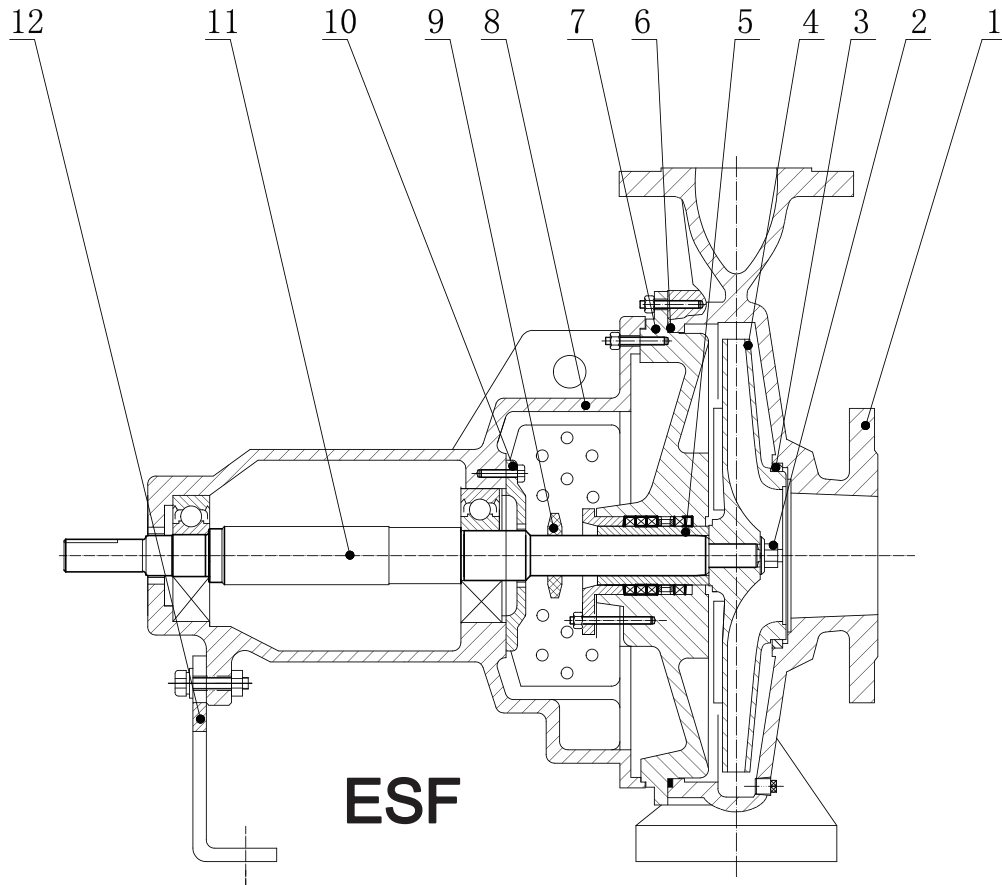
generously proportioned to insure long packing life. Each box has a water seal ring located in the approximate center of the box. Sealing water is injected via an internal, precision-drilled passage to the seal ring for distribution to the packing.

STUFFING BOX GLANDS: Glands are externally adjustable and can be removed without disturbing the driver

SHAFT SLEEVES: The shaft sleeve extends from the impeller through the stuffing box and is O ring sealed and locked with a key.

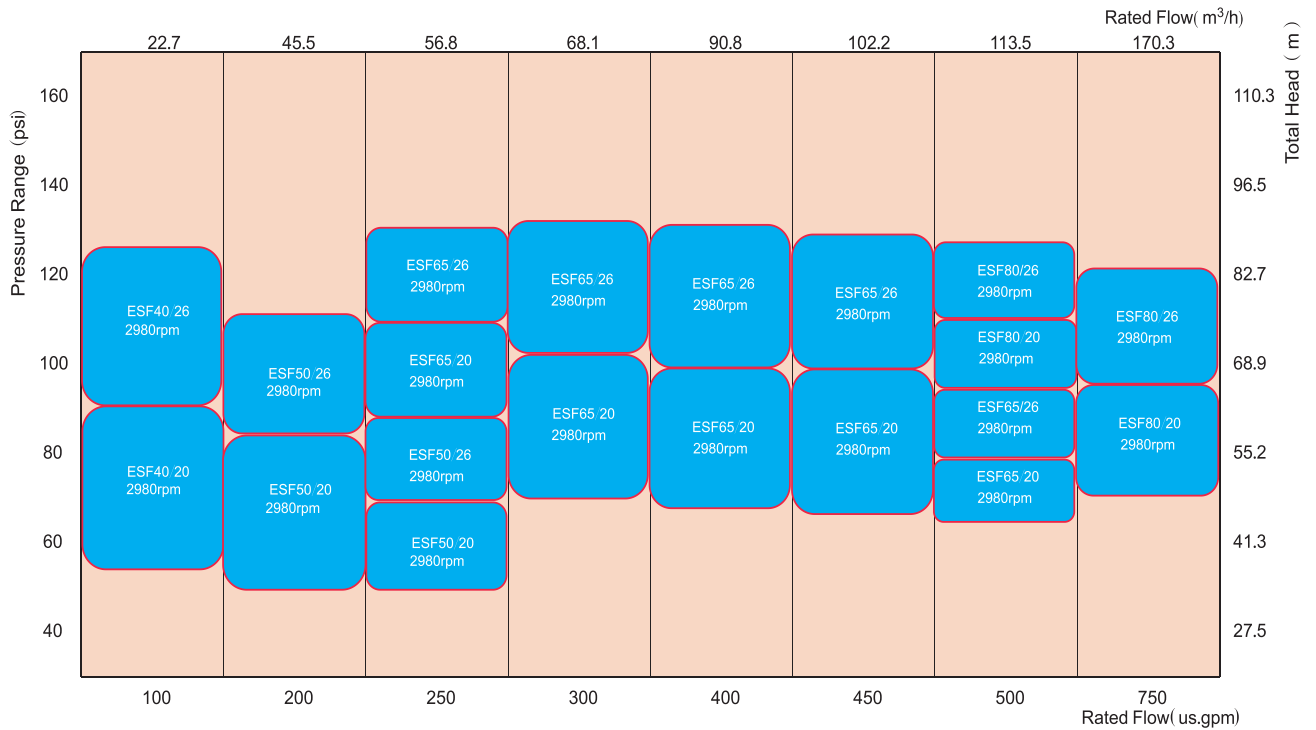


ASSEMBLY SECTION AND STANDARD MATERIAL LIST



No.	Name	Material	No.	Name	Material
1	Casing	Ductile Cast Iron	7	Casing cover	Ductile Cast Iron
2	Impeller Nut	Stainless Steel	8	Bearing Housing	Cast iron
3	Casing wear ring	Brass	9	Water-proof ring	NBR
4	Impeller	Bronze	10	Bearing cover	Cast iron
5	Packing sleeve	Stainless Steel	11	Shaft	Stainless Steel
6	O-ring	NBR	12	Bearing Bracket	Carbon steel

UL/ FM END-SUCTION FIRE PUMP PERFORMANCE RANGE (50Hz)



UL/ FM END-SUCTION FIRE PUMP PERFORMANCE RANGE (60Hz)

