



### Product Features

- EVERGUSH diesel engine fire pump set is composed of diesel engine, pump, control panel, water tank, pressure vessel, pipe fitting, valve and flow meter. It doesn't need electricity to power up the operation. It uses diesel engine to power the fire pump set. If emergency happens, traditional electrical driven motor will cut off power due to power failure. The diesel engine driven fire pump will start to operate and provide power by its own.

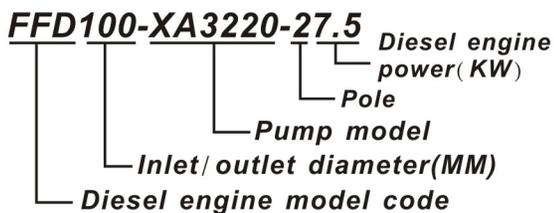
### Applications

- Auto boosting water pressure to Fire hydrant system, Fire foam system, Fire sprinkler system of factories, hotels, high rise buildings, apartments, schools, stadiums, parking lots, hotels, public facilities,...etc.

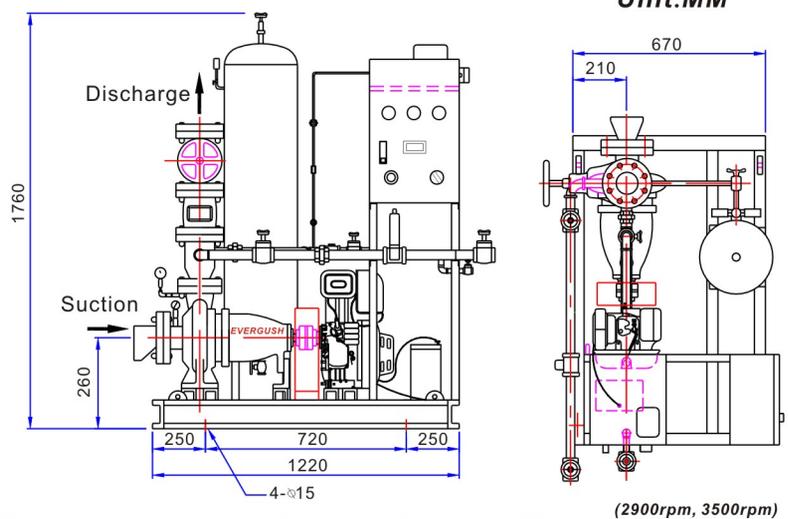
### Working conditions

- Ambient temperature: Max. 40°C.
- Water temperature: 0~60°C.
- Working pressure: Max. 10kg/cm<sup>2</sup>.
- It is suitable for clean water.

### Model Code



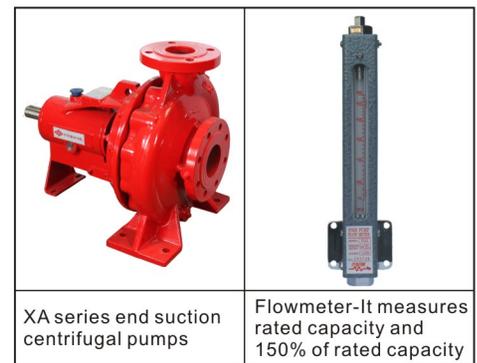
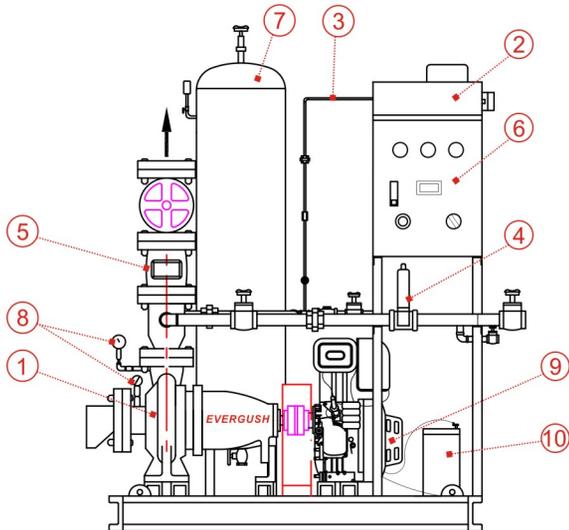
### Dimensions



### Specification Table

MODEL	Impeller Dia.	Engine Power		Pole	Inlet/outlet Diameter		Max. Head	Rated Head	Rated Capacity	Weight
	MM	KW	HP	P	INCH	MM	M	M	L/MIN	KG
FFD80-XA3216-25.5	174	5.5	7.5	2	3"	80	62	52	300	395
FFD80(100)-XA3220-27.5	192	7.5	10	2	3"(4")	80(100)	73	61	300	415
FFD80(100)-XA4016-27.5	174	7.5	10	2	3"(4")	80(100)	55	51	400	410

### Structure Instruction



XA series end suction centrifugal pumps

Flowmeter-It measures rated capacity and 150% of rated capacity

1. Pump
  - ⊙ Structure(CNS8917 B4052-2-2.1~2.10) which adopts ISO international standard centrifugal pumps.
  - ⊙ Performance(CNS8917 B4052-4.1(1)~(4))
    - "150% of rated capacity at a head of 65% of the rated head"
    - "The shut off head should not exceed 140% of rated head"
    - "The shaft power should not exceed 110% of output horsepower of induction motor when it reaches 150% of rated capacity"
  - ⊙ It conforms to fire pump efficiency regulation which also conforms to DIN24255 & CNS2138 standard single stage centrifugal pumps.
  - ⊙ Pump casing: Grey cast iron. It conforms to CNS2472 G3038
  - ⊙ Impeller: Standard material is grey cast iron. It is also replaceable by bronze material. It conforms to CNS2472 G3038 or CNS4125 H3057.
  - ⊙ Shaft: Stainless steel or medium-carbon steel materials. It conforms to CNS3270 G3067 or CNS3828 G3086.
  - ⊙ The pump can withstand 150% of max. pressure within 3 minutes without any leakages.
2. Priming tank(CNS8919 B4054-3(1)-(4))
  - ⊙ Accessories: priming tank for water storage, drain pipe for overflow purpose, check valve, inlet connector (float valve), low water level alarm system and automatic water supply system(includes check valve)
  - ⊙ Priming tank material is made of steel. Its capacity is above 100Liters.
  - ⊙ Pipe diameters: main pipe: 15mm; drain pipe: 15mm; priming pipe: 40mm.
  - ⊙ Low water level alarm system: it adopts float switch or electric rod. When priming tank water level is below 1/2 of its capacity, it will set off alarm.
3. Prevent water temperature to rise device(CNS8919 B4054-3(4))
  - ⊙ Drain pipe which can prevent water temperature to rise is installed right next to the check valve that is located on top of water pump. If water temperature rises during operation, the heated water will flow through drain pipe and go into the priming tank.
  - ⊙ Drain pipe doesn't add any valves in and between. Its diameter is 15mm.
  - ⊙ Drain pipe will maintain the water temperature not exceed 30 degree Celsius if the fire pump is at shut off operation.
4. Flow meter test device(CNS8919 B4054-4(1))
  - ⊙ During regular check, it can test pump performance.
  - ⊙ It is installed on check valve which branch out to another pipeline that is used to test its capacity.
  - ⊙ It uses pressure differential type flowmeter. It can test rated capacity and 150% of rated capacity.
  - ⊙ It has vacuum gauge. Its accuracy is above class 1.5.
5. Main pipeline(CNS8919 B4054-6)
  - ⊙ Check valve: It adopts water hammer prevent type check valve.
  - ⊙ Gate valve: 10K, (16K)JIS, withstand 150% of working pressure.
  - ⊙ Expansion joint: 10K, JIS standard(Adopts stainless steel material), other connecting pipelines.
6. Control panel(CNS8919 B4054-6)
  - ⊙ Indicators: Power(green), Running(green), water shortage(red).
  - ⊙ Control switches: Auto. Stop.Man. switches.
  - ⊙ Alarm device: When motor overload or priming tank water shortage, it will set off alarm.
  - ⊙ If you want to stop alarm or reset, you need to manually operate it. The alarm won't cause the motor to stop operating.
  - ⊙ Terminals: Starting input terminal, priming tank water shortage input terminal, alarm signal output terminal, pump operation output terminal and grounding terminal.
7. Starter pressure vessel device(CNS8919 B4054-5(1)-(5))
  - ⊙ Pressure vessel capacity is above 100L.
  - ⊙ Its structure conforms to standard pressure 12 & 16 Kg/cm<sup>2</sup>.
  - ⊙ Its pipe connecting diameter is 25mm, and is connected to the check valve.
  - ⊙ Pressure gauge accuracy is above class 1.5. Its range is 0~20 kg/cm<sup>2</sup>.
  - ⊙ Pressure switch range is 1~10 kg/cm<sup>2</sup>. Its pressure difference is 1~3 kg/cm<sup>2</sup>. Water temperature is +2~+60 °C.
  - ⊙ It has pressure relief valve which prevent abnormal pressure inside the vessel. Its standard pressure is 7~13 kg/cm<sup>2</sup>.
8. Pressure gauge and Vacuum gauge(CNS8919 B4054-8)
  - ⊙ Both accuracy is above class 1.5
9. EVERGUSH diesel engine



Control panel

- 1.Charger
- 2.Starting relay
- 3.Terminal block
- 4.Fuse
- 5.Relay
- 6.Timer relay
- 7.DC voltmeter

Spec.	Bore x stroke:87x85mm	Engine speed:2900,3500rpm
	Air capacity:0.505L	Power: 5.5KW;7.5KW



Customized diesel engine with power above 15hp is available

10. Battery
  - ⊙ Brand: YUASA- Lead acid battery(totally sealed. It doesn't need maintenance); Specifications: 12V 45AH.