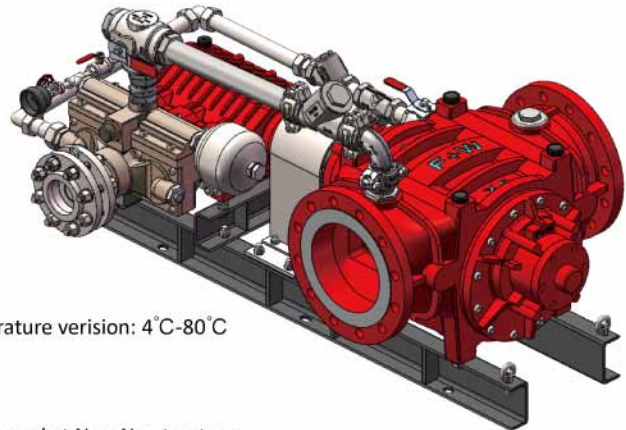


Water Motor Driven Proportioner Type X12

DS030E

1.0 Description

F+W water driven proportioner in corporate water motor, piston pump, coupling and baseplate, the piston pump driven by water motor. The water go through the water motor, have some pressure drop. The foam concentrate pressured by piston pump and injected into water after water motor to achieve the proportioning rate.



1.1 Proportioner Rate: 0.5%、1.0%、3.0%、6.0%.

1.2 Working Temperature: Standard Version: 4°C-50°C High Temperature version: 4°C-80°C

1.3 Working Pressure: 4-16 bar

1.4 Foam Concentrate: Used for all kind of Foam Concentrate in the market Non-Newton type foam Concentrate, the viscosity up to 10,000cps.

1.5 Optional: Explosion proof version as required .

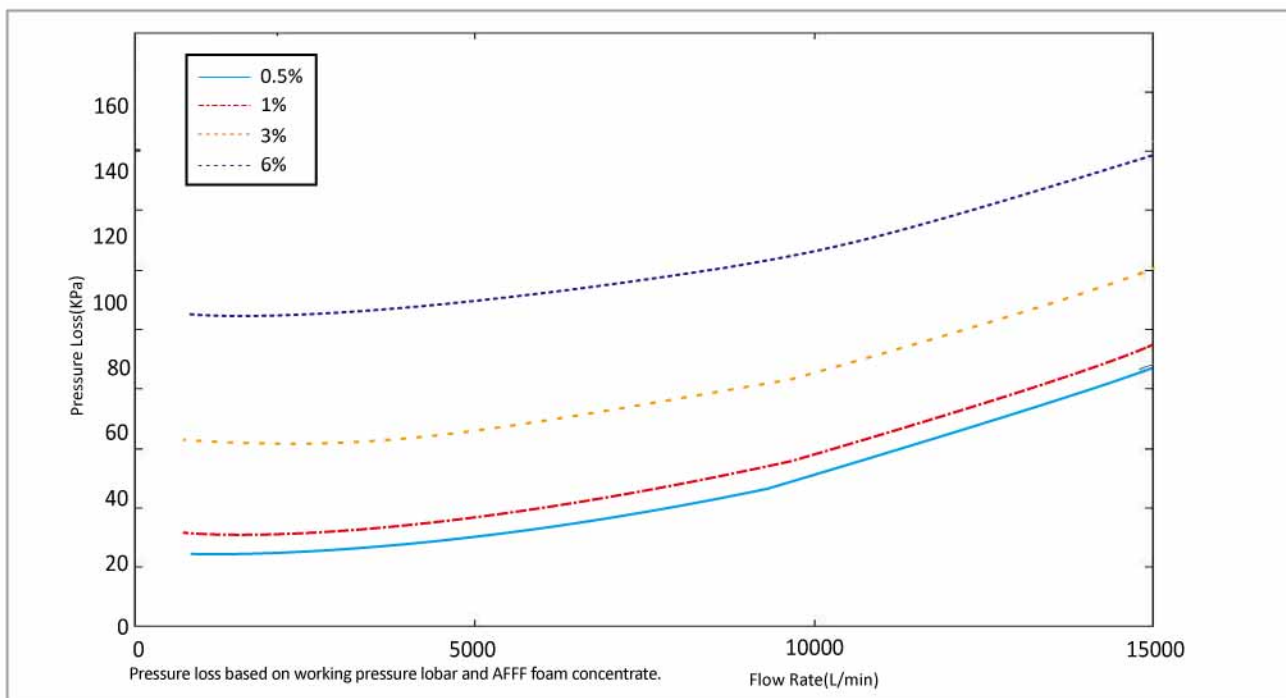
2.0 Approvals

Please Contact F+W for the details

3.0 Technical Data

| Type | X12-0.5 | X12-1 | X12-3 | X12-6 |
|--------------------------------|--|----------|----------|-----------|
| Proportioning Rate | 0.5% | 1% | 3% | 6% |
| Approvals | Contact & F+W for the approval details | | | |
| Flow Directions of Water Motor | Horizontal: "left → right" or "right → left" | | | |
| | Vertical: "top → bottom" or "bottom → top" | | | |
| Min. Water Flow Rate | 750L/min | 750L/min | 750L/min | 1200L/min |
| Max. Water Flow Rate | 15000L/min | | | |
| Storage Temperature | -20 °C to +80 °C | | | |
| Operating Pressure | 4 – 16 bar | | | |
| Weight Standard version | Consult F+W | | | |

3.1 Pressure Loss



Water Motor Driven Proportioner Type X12

DS030E

4.0 Materials

| Water Motor | | |
|---------------|----------------------|----------------------|
| Part | Material | |
| | Standard | Sea water |
| Casing | Cast Aluminum ZL101A | Cast Bronze ZCuSnPb1 |
| Cover | Cast Aluminum ZL101A | Cast Bronze ZCuSnPb1 |
| Housing | Aluminum 6061 | Cast Bronze ZCuSnPb1 |
| Rotor | Aluminum 6082 | Cast Bronze ZCuSnPb1 |
| Vane | CF Reinforced PVDF | CF Reinforced PVDF |
| Seal | FKM | FKM |
| Pipe Fittings | S.S. 304 or 316 | S.S. 316 |
| Fastner | S.S. 304 or 316 | S.S. 316 |

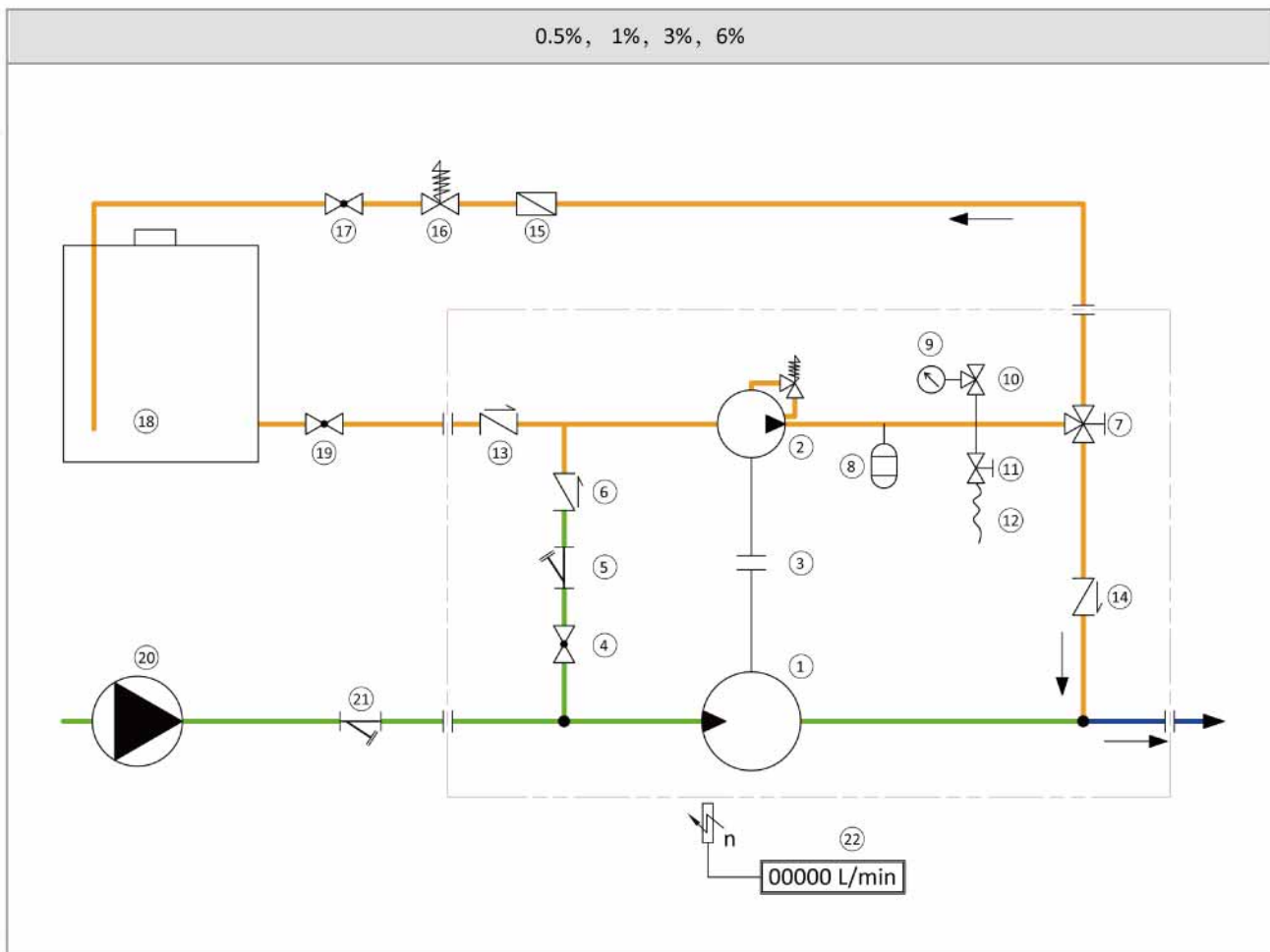
| Piston Pump | |
|-------------|-----------------------------|
| Part | Material |
| Casting | Cast Bronze ZCuAL9Fe4Ni4Mn2 |
| Piston | Gun Bronze QSn10-1 |
| Crosshead | Alloy Steel 35CrMo |
| linkage | Cast Bronze ZCuAL9Fe4Ni4Mn2 |
| Crank Shaft | Alloy Steel 20CrMoTi |
| Crankcase | Cast Aluminum ZL101A |
| Seal | FKM |
| Fastner | S.S. 304 or 316 |

Coupling: Disc Coupling

Pipe&Fitting: S.S. 304 or 316

Baseplate: S.S. 304

5.0 Flow Diagram | P&ID

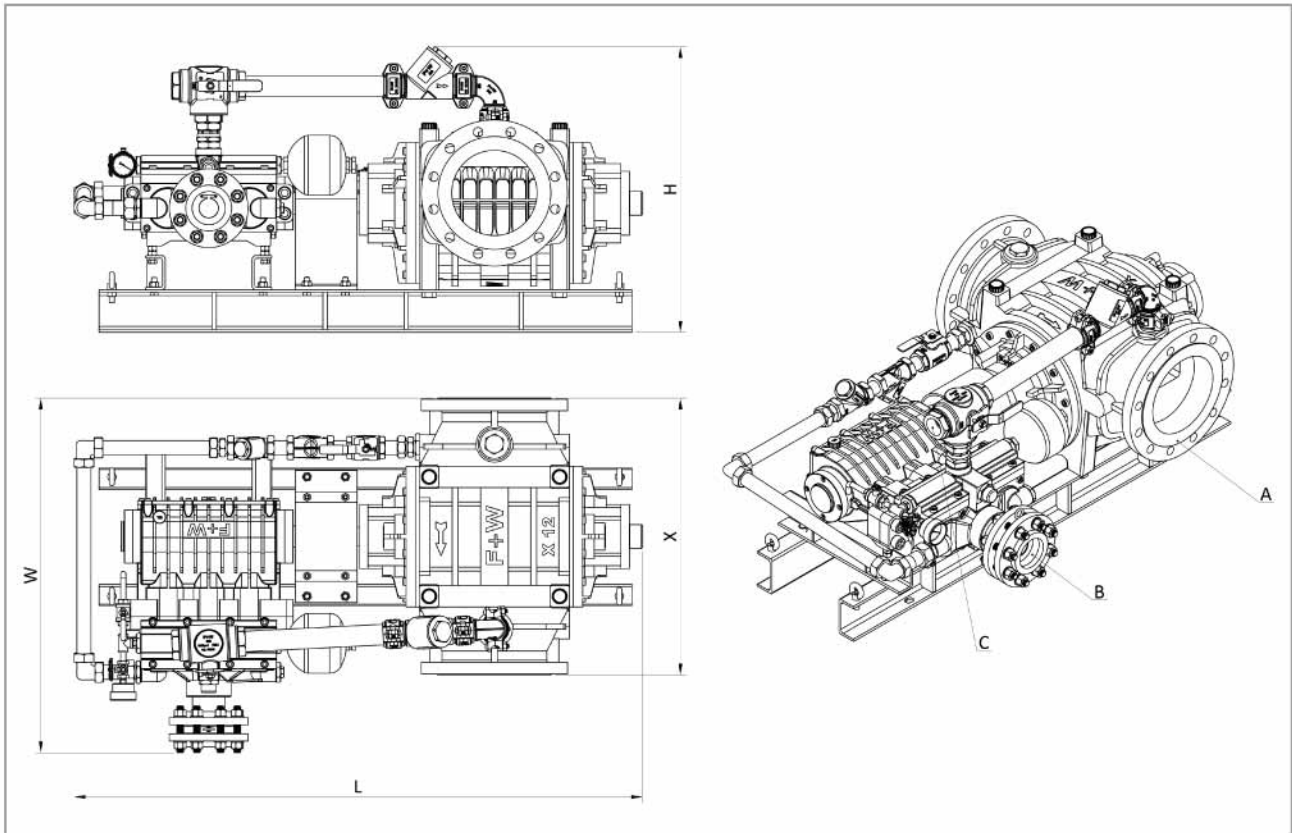


- | | | | | |
|---|---|---|---|-----------------------------------|
| 1. Water motor | 2. Piston pump | 3. Coupling | 4. 2-way ball valve "Flushing/Priming" | 5. Filter in the flushing line |
| 6. Check valve in the flushing line | 7. 3-way ball valve "Returning/Proportioning" | 8. Pulsation damper | 9. Pressure gauge | 10. Shut-off valve pressure gauge |
| 11. Air bleed valve | 12. Air bleed hose | 13. Non-return flap in the suction line | 14. Check valve in the proportioning line | 15. Flow meter for return line |
| 16. Pressure sustaining valve for return Line | 17. 2-way ball valve in return line | 18. Foam agent supply | 19. Shut-off valve in the suction line | 20. Extinguishing water supply |
| 21. Water filter | 22. Revolution counter with flowrate display | | | |

Water Motor Driven Proportioner Type X12

DS030E

6.0 Dimensions



| Type | X12-0.5 | X12-1 | X12-3 | X12-6 |
|----------------------------------|--|-----------------------|------------------------|------------------------|
| Proportioning rate | 0.5% | 1% | 3% | 6% |
| Connection water motor A | Flange DIN EN 1092-1, DN300 PN16 RF Flange ASME B16.5 12" Class 150 | | | |
| Installation length watermotor X | 850 mm | | | |
| Connection suction line B | Flange PN16 RF, DN 65 | Flange PN16 RF, DN 80 | Flange PN16 RF, DN 125 | Flange PN16 RF, DN 150 |
| Connection return line C | 1.1/4" FT BSP | 1.1/2" FT BSP | 2.1/2" FT BSP | 3" FT BSP |
| Length L | + | + | 1900 mm | + |
| Width W | + | + | 1150mm | + |
| Height H | + | + | 900 mm | + |

Note: + Consult F+W