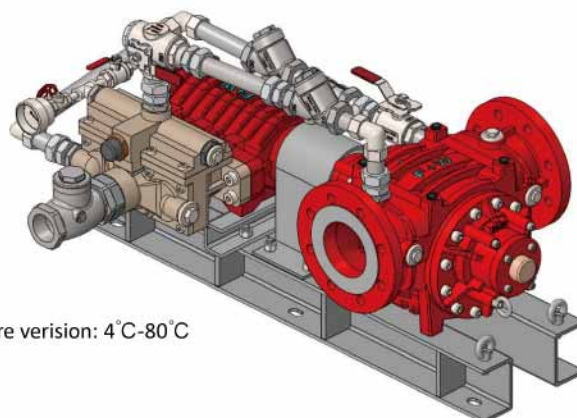


Water Motor Driven Proportioner Type X4

DS023E

1.0 Description

F+W water driven proportion 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 .

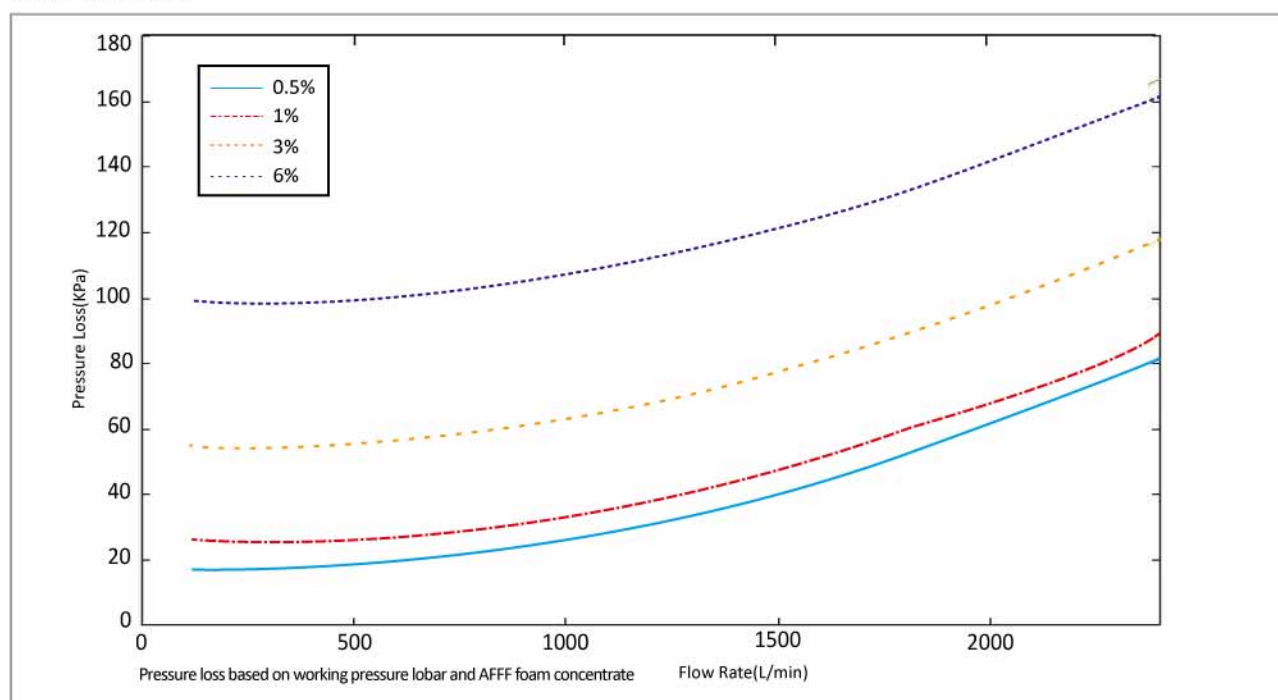
2.0 Approvals

Please Contact F+W for the details

3.0 Technical Data

Type	X4-0.5	X4-1	X4-3	X4-6
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	180L/min	180L/min	180L/min	240L/min
Max. Water Flow Rate	2400L/min	2400L/min	2400L/min	1200L/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 X4

DS023E

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

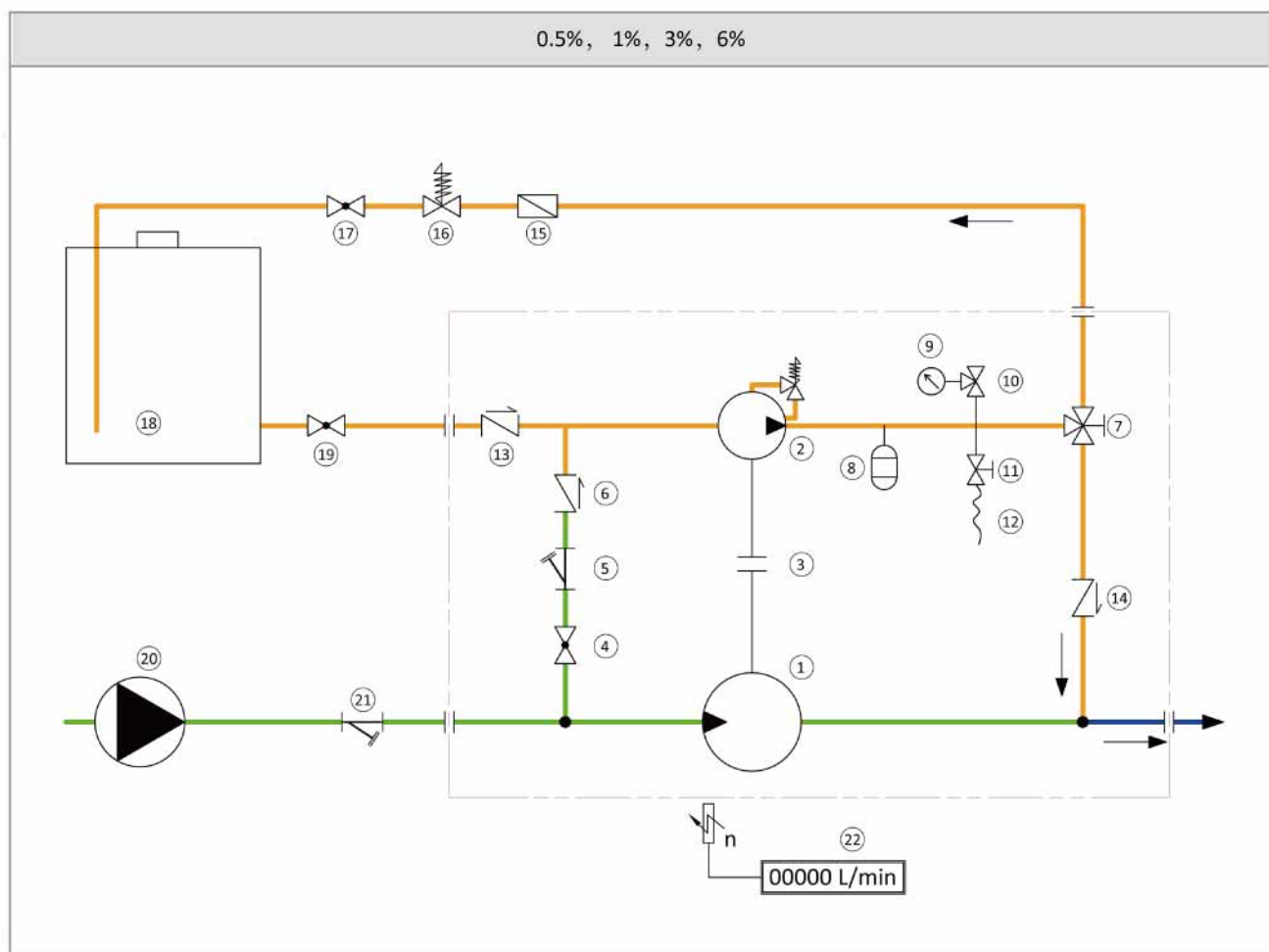
Piston Pump	
Part	Material
Casting	Cast Bronze ZCuAL9Fe4Ni4Mn2
Piston	Gun Bronze QSn10-1
Crosshead	Alloy Steel 35CrMo
linkage	Cast Bronze ZCuAL9Fe4Ni4Mn2
Crank Shaft	Alloy Steel 20CrMoTi
Crankcase	Cast Aluminum ZL101A
Seal	FKM
Fastner	S.S. 304 or 316

Coupling: Disc Coupling

Pipe&Fitting: S.S. 304 or 316

Baseplate: S.S. 304

5.0 Flow Diagram | P&ID

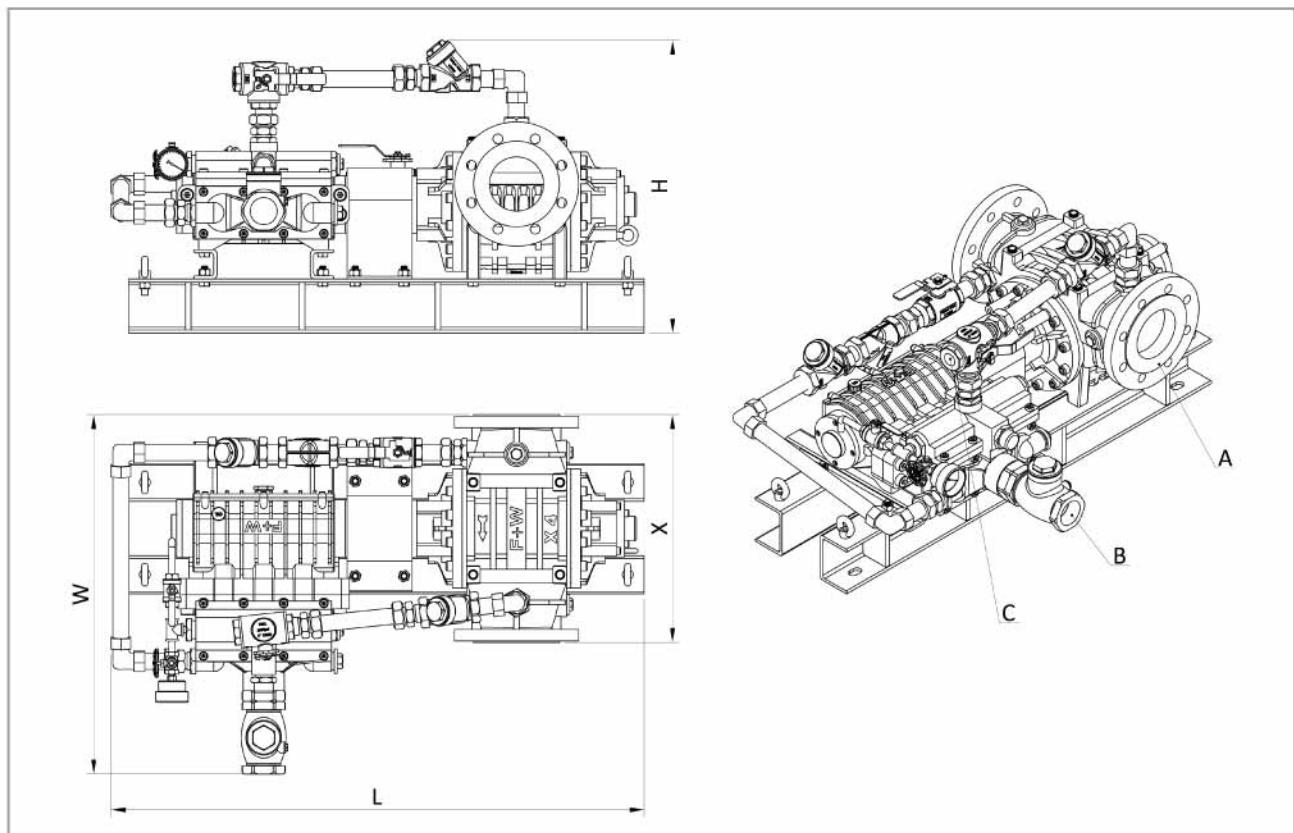


- | | | | | |
|---|---|---|---|-----------------------------------|
| 1. Water motor | 2. Piston pump | 3. Coupling | 4. 2-way ball valve "Flushing/Priming" | 5. Filter in the flushing line |
| 6. Check valve in the flushing line | 7. 3-way ball valve "Returning/Proportioning" | 8. Pulsation damper | 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 X4

DS023E

6.0 Dimensions



Type	X4-0.5	X4-1	X4-3	X4-6
Proportioning rate	0.5%	1%	3%	6%
Connection water motor A	Flange DIN EN 1092-1, DN100 PN16 RF Flange ASME B16.5, 4" Class 150			
Installation length watermotor X	420 mm			
Connection suction line B	1.1/4" FT BSP	1.1/4" FT BSP	2" FT BSP	Flange PN16 RF, DN 65
Connection return line C	1/2" FT BSP	3/4" FT BSP	1" FT BSP	1.1/4" FT BSP
Length L	+	+	1050 mm	+
Width W	+	+	660 mm	+
Height H	+	+	530 mm	+

Note: + Consult F+W