

MV55 (Patent Applied)

Multi Valve Pressure Powered Pump Package Unit with IJ and CRM485R

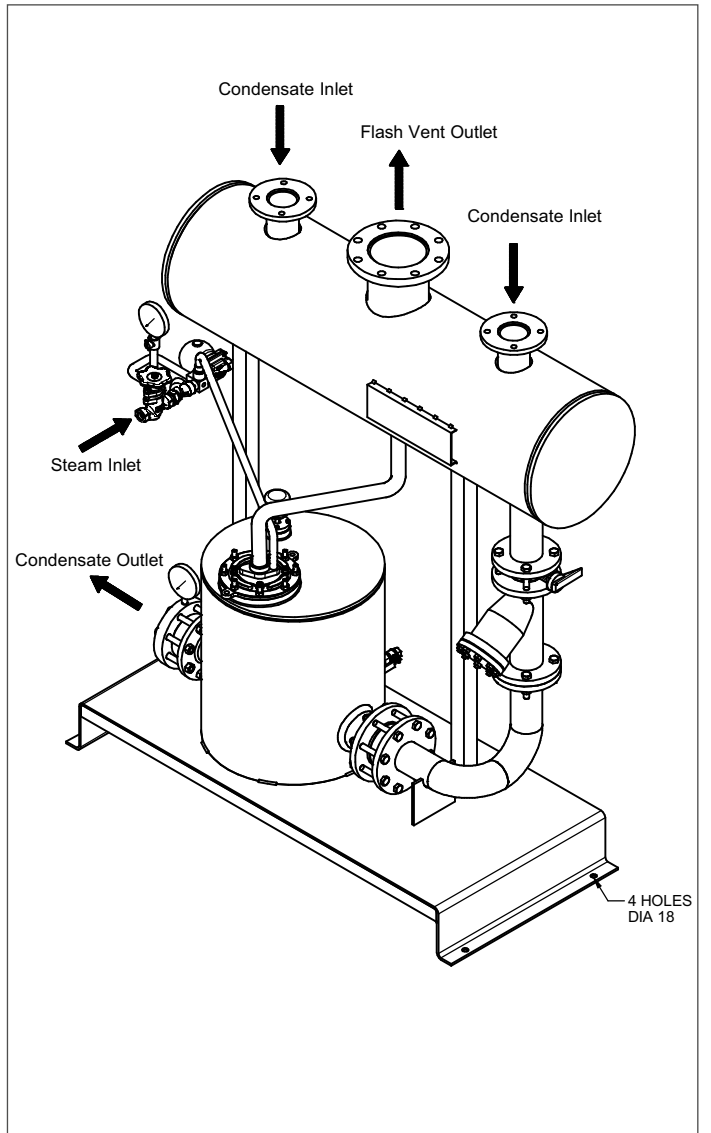
Description :

The Forbes Marshall Multi Valve Pressure Powered Pump Package Unit with IJ and CRM485R , MV55 (Patent Applied), is a positive displacement pump unit operated by steam or compressed air or pressurised gas. The unit is specifically designed to pump hot condensate. The MV55 pump has multiple inlet and exhaust valves in a mechanism assembled in a single shell which is compact in size, giving high discharge capacities.

Sizes and Pipe Connections

Size	: DN80
Condensate inlet	: DN80 Flange Class 150 / PN16
Condensate outlet	: DN80 Flange Table "F" / PN16
Vent Outlet	: DN150 Flange Class 150 /PN16
Empty Weight	: 425 kg
Motive Inlet	: 1/2" BSPT

Note: Condensate outlet - Use flange provided with pump.

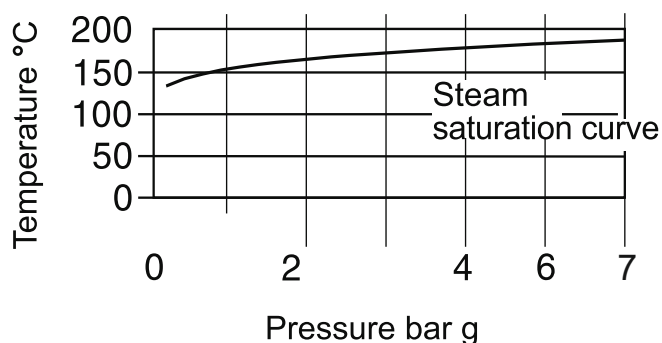


Limiting Conditions

PMA Maximum design pressure	7 bar g
TMA Maximum design temperature	180°C
Operating Inlet Motive Pressure	Steam / Compressed Air / Pressurised gas 3 to 7 bar g (Max)
Pump discharge per cycle	55 kg
Steam Consumption	3 Kg of steam per 1000 kg condensate pumped
Air consumption	22 SCF per 1000 Kg condensate pumped
Minimum operating temperature	0°C
Maximum Allowable back temperature	4 bar g

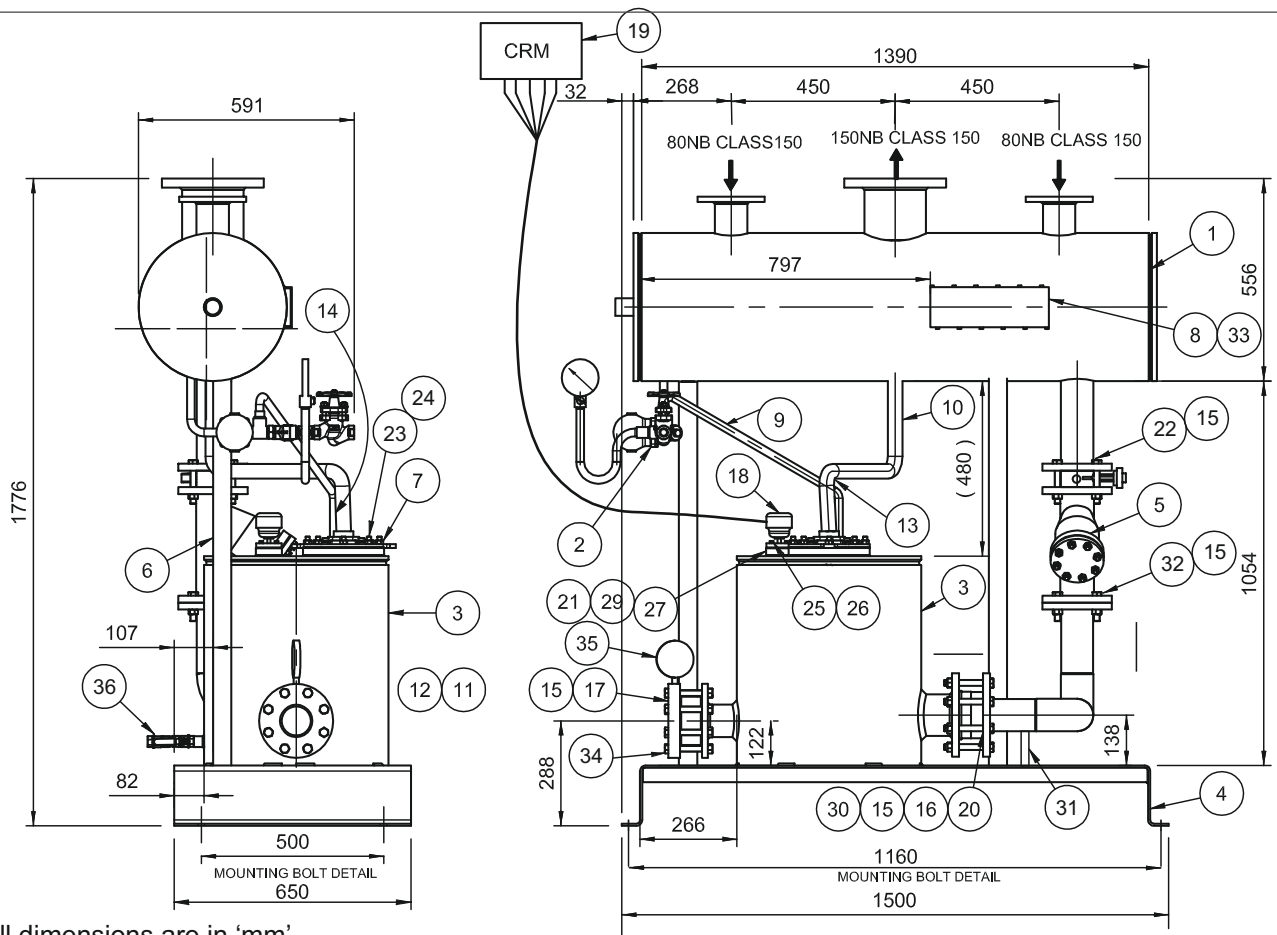
Note: Receiver not to be pressurised.

Operating range



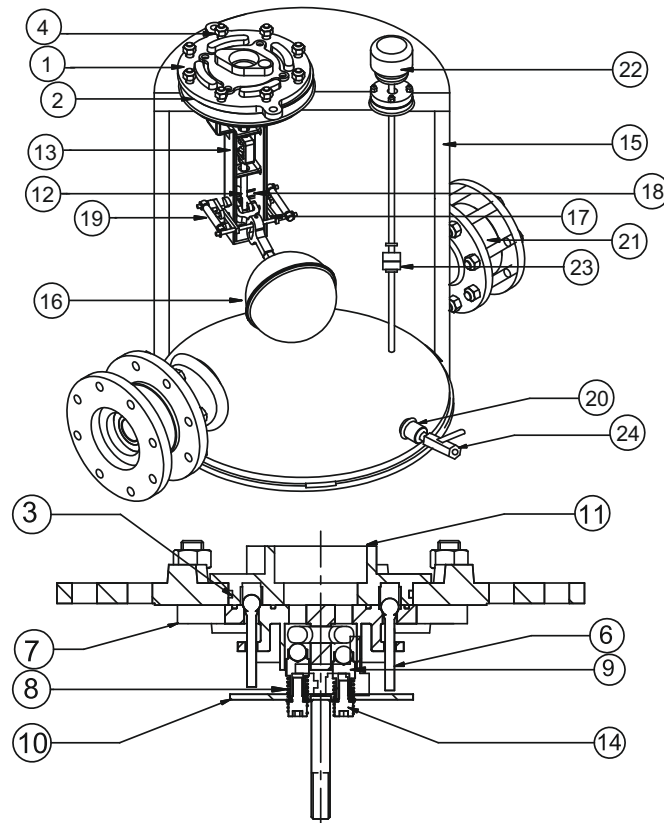
Standard Accessories

- Condensate Recovery Meter - 485 (CRM485R)
- Insulation Jacket (IJ-MV55)



All dimensions are in 'mm'

Sr.No.	Part	Material	Sr.No.	Part	Material
1	Receiver Pipe	Carbon steel, IS3589	19	Condensate Recovery Meter (CRM)
2	Stem inlet connection assembly (1/2" BSPT)	Carbon steel	20	DN100 Check valve	Stainless steel
3	Shell pipe	Carbon steel, IS3589	21	Reed sensor flange	Carbon steel, IS 2062
4	Frame assembly	Carbon steel, IS 2062	22	Valve Hex head bolts	Mild Steel
5	Condensate inlet strainer	Cast Iron, IS210 Gr FG260	23	Mechanism Studs	Carbon steel, EN9
6	Support assembly	Carbon steel	24	Mechanism Nuts	Mild Steel
7	Actuator mechanism assembly	Stainless steel	25	CRM flange Studs	ASTM A 193 GR B7
8	Name plate	Stainless steel	26	CRM flange Nuts	SS304
9	1/2" Steam inlet hose 500 mm long	Stainless steel SS304	27	Sensor mounting flange	Carbon steel, IS 2062
10	1-1/2" Exhaust hose 750 mm long	Stainless steel SS304	28	Mechanism gasket (Not shown in figure)	AF 154
11	DN80 Check valve	Stainless steel	29	Reed gasket	SS304 Exfoliated Graphite
12	DN80 Tab F / Class 150 Outlet flange	Carbon steel, SA 516 Gr 70	30	DN100 Check valve Hex head bolts	Mild Steel
13	1-1/2" BSPT Exhaust bend	Carbon steel	31	Condensate line support	Mild Steel
14	Threaded pipe nipple	Carbon steel	32	Strainer Hex head bolts	Mild Steel
15	M16 Nut	Mild Steel	33	Name plate screw	SS304
16	DN100 Check valve gasket	SS304 Exfoliated Graphite	34	DN80 TAB F / Class 150 special flange	Carbon steel, IS 2062
17	DN80 Check valve gasket	SS304 Exfoliated Graphite	35	Outlet Pressure gauge	Stainless steel
18	Reed sensor assembly	Stainless steel	36	Drain valve (1/2" BSPT)	Cast Steel



Materials

Sr. No.	Part	Material	Standard
1	Mounting Flange	Stainless Steel	ASTM A 351 CF8
2	Cover Gasket	Synthetic Fibre	AF 154
3	O Ring	Viton	IS 9975
4	Stud & Nut M-12	Stainless Steel	
5	Inlet Valve Stem*	Stainless Steel Type 304	ASTM A 276
6	Inlet Valve Head	Stainless Steel	AISI A 440C
7	Valve Seat	Stainless Steel	ASTM A 351 CF8
8	Exhaust Valve Spring	Stainless Steel Type 304	ASTM A 276
9	Exhaust Valve	Stainless Steel Type 304	ASTM A 276
10	Actuating Disc	Stainless Steel Type 304	ASTM A 240
11	Motive Inlet Manifold	Stainless Steel	ASTM A 351 CF8
12	Push Rod Bottom	Stainless Steel Type 304	ASTM A 276
13	Mechanism Support	Stainless Steel	ASTM A 351 CF8
14	Exhaust Valve Screw	Stainless Steel	SS 304
15	Shell	Carbon Steel	IS 2062
16	Float	Stainless Steel	
17	Linkage Mechanism	Stainless Steel	ASTM A 351 CF8
18	Push Rod Actuator	Stainless Steel	ASTM A 351 CF8
19	Spring	Inconel	
20	½" BSPT Pipe Nipple	Forged Carbon Steel	ASTM A 105
21	Check Valve	Stainless Steel	
22	Flow-Temp Sensor	Stainless Steel	
23	Sensor Float	Stainless Steel Type 304	ASTM A 240
24	½"BSPT Ball Valve	Forged Carbon Steel	ASTM A 105

* Items Not Shown

Capacity chart

Motive Pressure	Back Pressure	Capacity	Air Capacity
		Motive Fluid - Steam	Motive Fluid - Air
barg	barg	kg/hr	kg/hr
7.00	1.00	10548	
7.00	2.00	7960	
7.00	3.00	6119	
7.00	4.00	5048	
6.00	1.00	8358	10556
6.00	2.00	6870	7896
6.00	3.00	5480	5587
6.00	4.00	3583	4118
5.00	1.00	7997	10690
5.00	2.00	6006	7410
5.00	3.00	4983	5099
4.00	0.50	8429	11136
4.00	1.00	7437	9586
4.00	2.00	4649	6806
3.00	0.50	7379	10723
3.00	1.00	6039	9498

How to Order

Example : Multi Valve Pressure Powered Pump Package
Unit model MV55 with insulation jacket and Condensate Recovery
Meter - 485

How to Order Spares

Always order spares by using the description given
in the column headed "Available Spares" for this product.

Available Spares

Spare kit for MV Internals
Spare kit for MV Gasket Set (set of 2)
Spare kit for MV Valve Seat
Spare kit for MV O-ring Set (set of 3)
Spare kit for MV Inlet Valve Seat And Head Assembly
Spare kit for MV Exhaust Valve Seat And Head Assembly
Spare kit for MV Spring Assembly



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