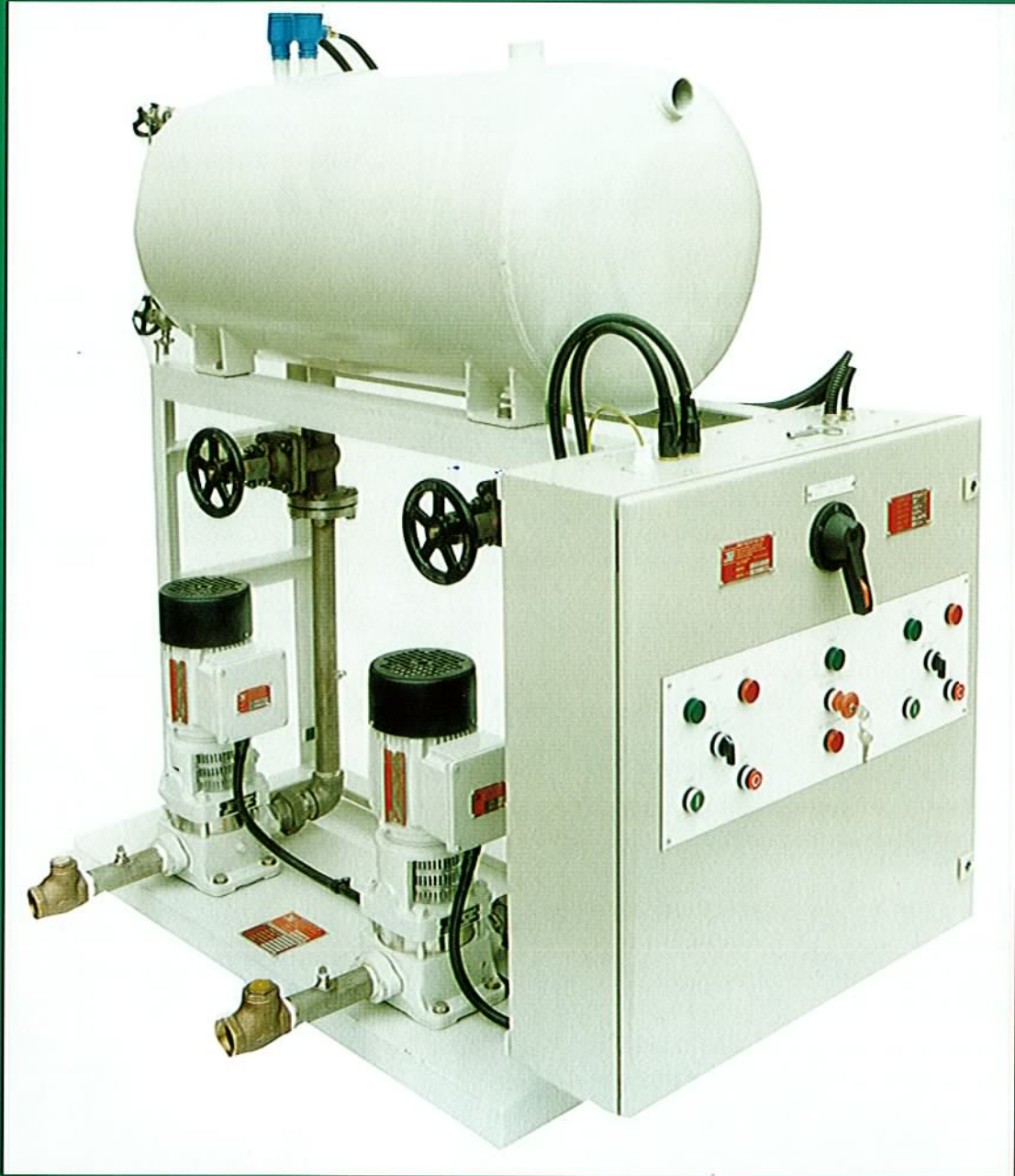


JM



PACKAGED CONDENSATE RETURN SETS

HEAP & PARTNERS LTD



DESIGN AND MANUFACTURE

John Millar (UK) Ltd Condensate Return Sets are designed by John Millar (UK) Ltd and manufactured by Heap & Partners Ltd in their Hoylake factory.

QUALITY APPROVAL TO ISO 9001

Both John Millar (UK) Ltd and Heap & Partners Ltd are approved by Lloyds of London to ISO 9001 and we are continuously assessed.

ENERGY AND COST SAVINGS

Energy costs are a significant overhead in many Industries and so energy conservation and recovery are of prime consideration.

For example the condensed water from a steam heating, or process, system working at 100 psig contains as much as 25 percent of the heat used to produce the steam. In too many cases this heat is thrown away down a drain and costly energy is wasted.

The **JM(UK)** range of Condensate Return Sets collect this hot water and returns it to the boiler hot well to be re-used as boiler feed.

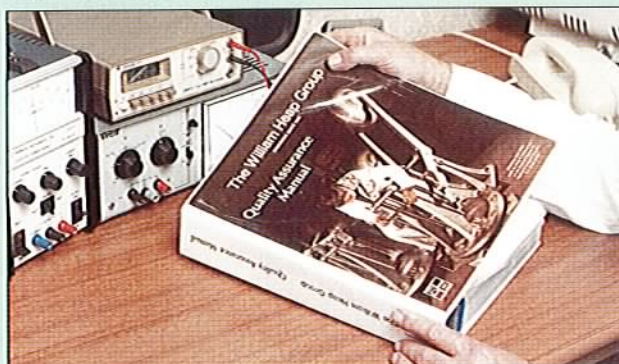
In most systems the energy savings quickly cover the Capital and running costs of the system and thereafter lead to increased profit through lower energy costs.

CONDENSATE TEMPERATURE

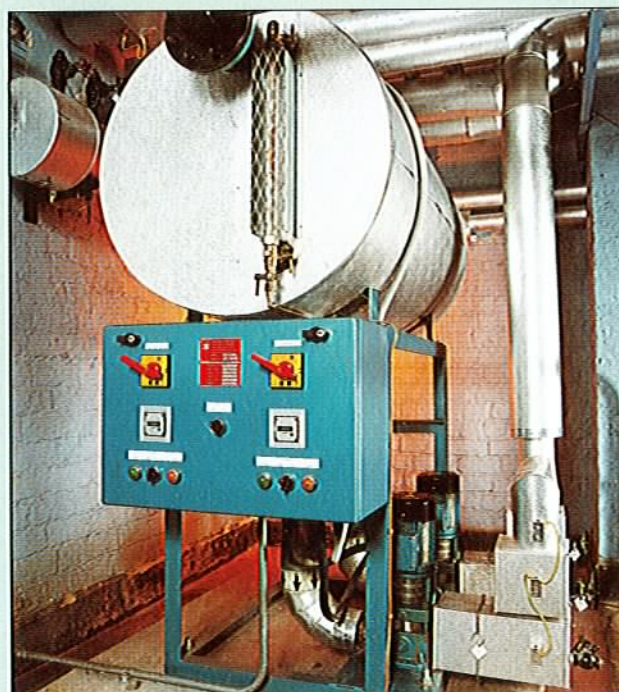
Because the boiling point of water depends on the pressure, the height of the receiver above pump suction is important. Standard **JM(UK)** Sets are designed to handle condensate at a maximum temperature of 98°C. If the water temperature is higher we must be told.



A large Condensate Return Set in Construction at our Hoylake Factory.



ISO 9001 Quality Manual.



A JM4015 set installed in Stoke City General Hospital.
Consulting engineer: S.I. Sealy – Cheadle Heating Contractor
– W. Hamilton Reid Ltd, Stoke-on-Trent.

TESTED PACKAGES

Because our Condensate Return Sets are assembled and works tested they are delivered as a package and only need piping up and the wiring connected. This eliminates costly site work and errors.

SIMPLEX SETS

These comprise one receiver and one pump with automatic high and low level control of the pump. Condensate from the system drains into the receiver by gravity. When the water level in the receiver rises to a pre-determined level the pump is switched on and the condensate is then pumped back into the hot well.

When the level in the receiver drops to a pre-determined level the pump is switched off. Simplex sets are suitable for small installations only.

DUPLEX SETS WITH SIMPLE CHANGEOVER

Duplex sets comprise one receiver and two pumps, one on duty and the other acting as standby.

The units can be fitted with switches which can change over the duty pump and also enable "HAND OFF, AUTO" to be selected.

DUPLEX SETS WITH "CASCADE" CONTROL

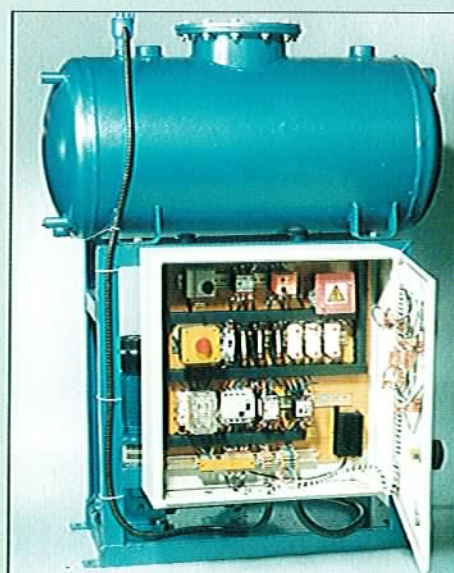
This type of control enable smaller sets to be used for a given load because if the condensate level in the tank rises above the normal high level when the duty pump is running, the standby pump automatically cuts in and helps to handle the load. When the duty pump is able to cope the standby pump automatically cuts out.

The little extra cost of Duplex sets with "CASCADE" control over a Simplex set is recommended for all but the smallest schemes.



Three **JM(UK)** sets in production for a soap factory in Indonesia. Because of the damp climate the control panels included special heaters.

A **JM 2510**
Duplex Set
installed at City
Hospital,
Stoke-on-
Strent.
Consulting
Engineer: S.I.
Sealy, Cheadle.
Heating
Contractor:
Sulza Infra,
Birmingham.



A typical **JM(UK)** control panel, robust and reliable.



RECEIVER DESIGN AND MATERIALS

JM(UK) Return Sets have vented receivers to allow the release of any flash steam which may be released into the Condensate piping by say a faulty steam trap.

It is important that the vent pipe should be open to atmosphere and should not have a valve installed because this could cause an accident.

We can manufacture tanks in the following materials:

- | | |
|-----------------|--|
| Mild Steel | – painted internally and externally |
| Mild Steel | – hot dipped galvanised with steel pipe and fittings |
| Stainless Steel | – grade 304 with stainless steel pipe and fittings. |
| Copper | – with copper pipe and fittings |

SPECIAL DESIGNS

Although we have a standard range of condensate pump sets we can provide flexibility of design by changing positions of connections or providing additional connections or by providing special sets to suit customers individual requirements.

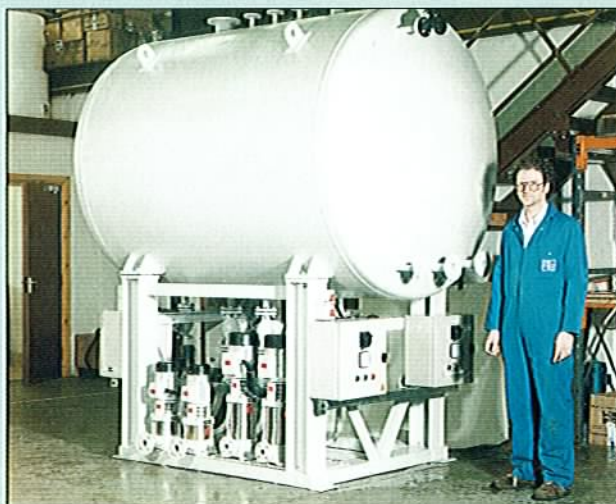
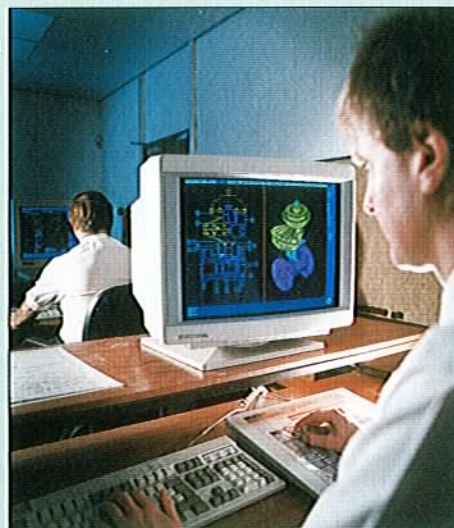
WIRING DIAGRAMS

We supply complete wiring diagrams for the various control systems and they are available at order stage.

INSTALLATION INSTRUCTIONS

Every set we supply has a full set of installation instructions in a plastic bag securely attached inside the control panel.

Our Design Office employs Computer Aided Design (CAD)



This is one of the largest and most complex Condensate Pump Sets ever built as it comprises one receiver but 4 separate control and pumping systems. Designed and built in our Hoylake factory.

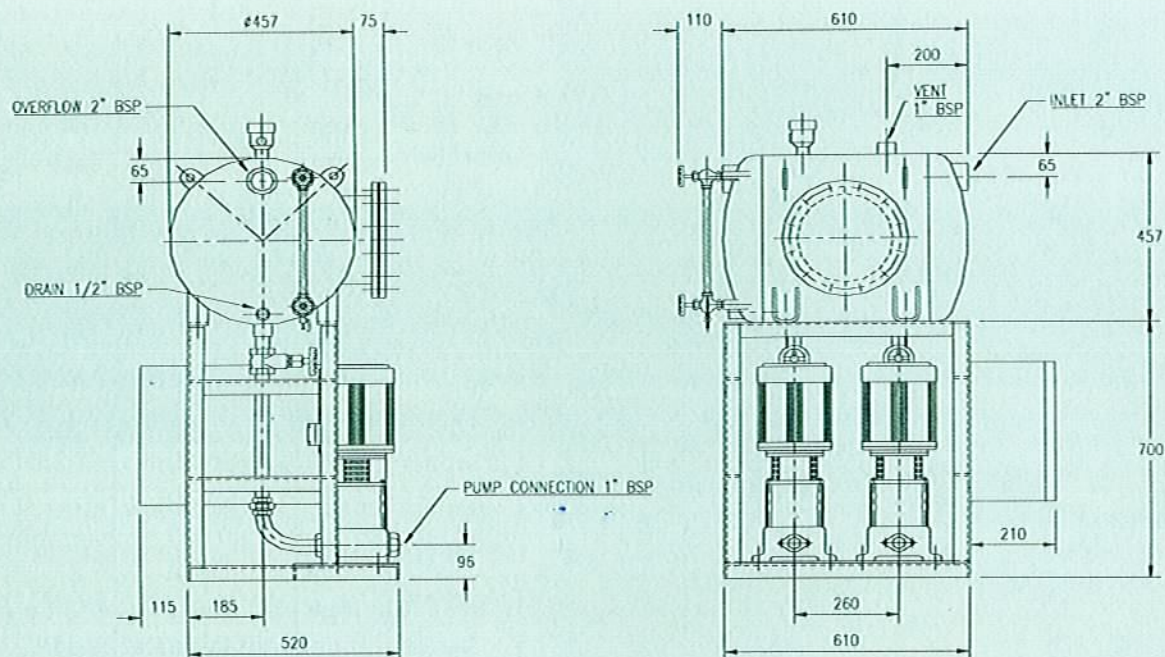


Two special "low headroom" sets ready for despatch to Warrington General Hospital Consulting Engineer: S.I. Sealy, Cheadle. Heating Contractor: Beaver Engineering Ltd, Manchester.

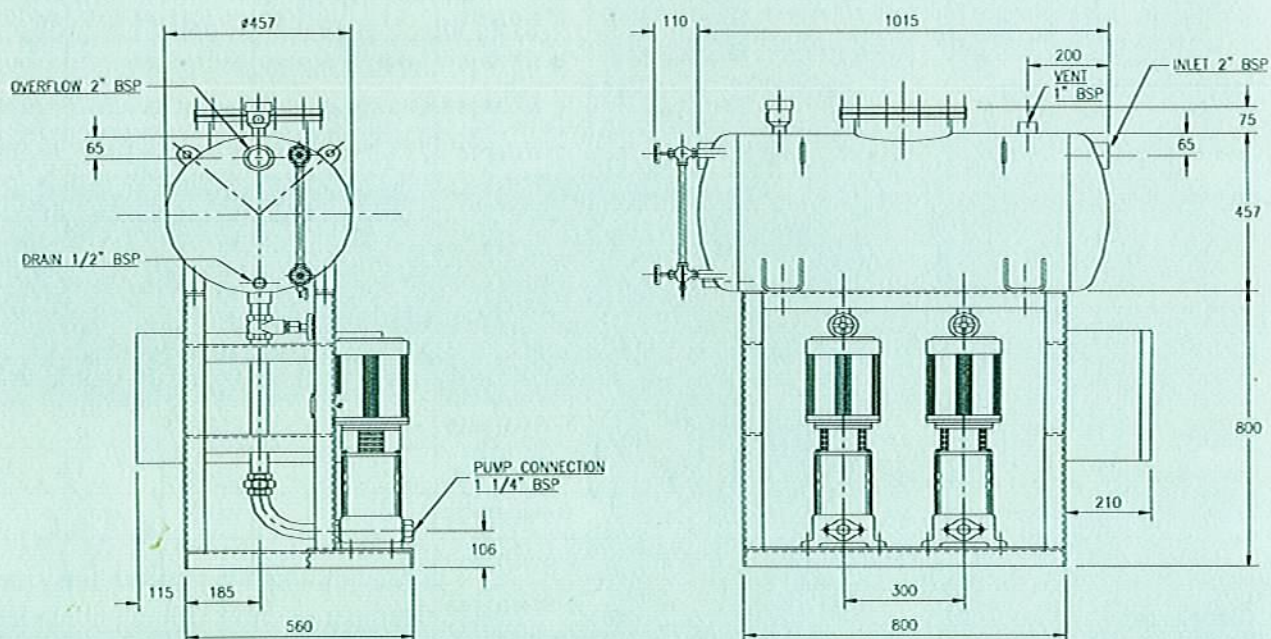


SELECTION AND TECHNICAL DATA FOR JM(UK) CONDENSATE PUMP SETS

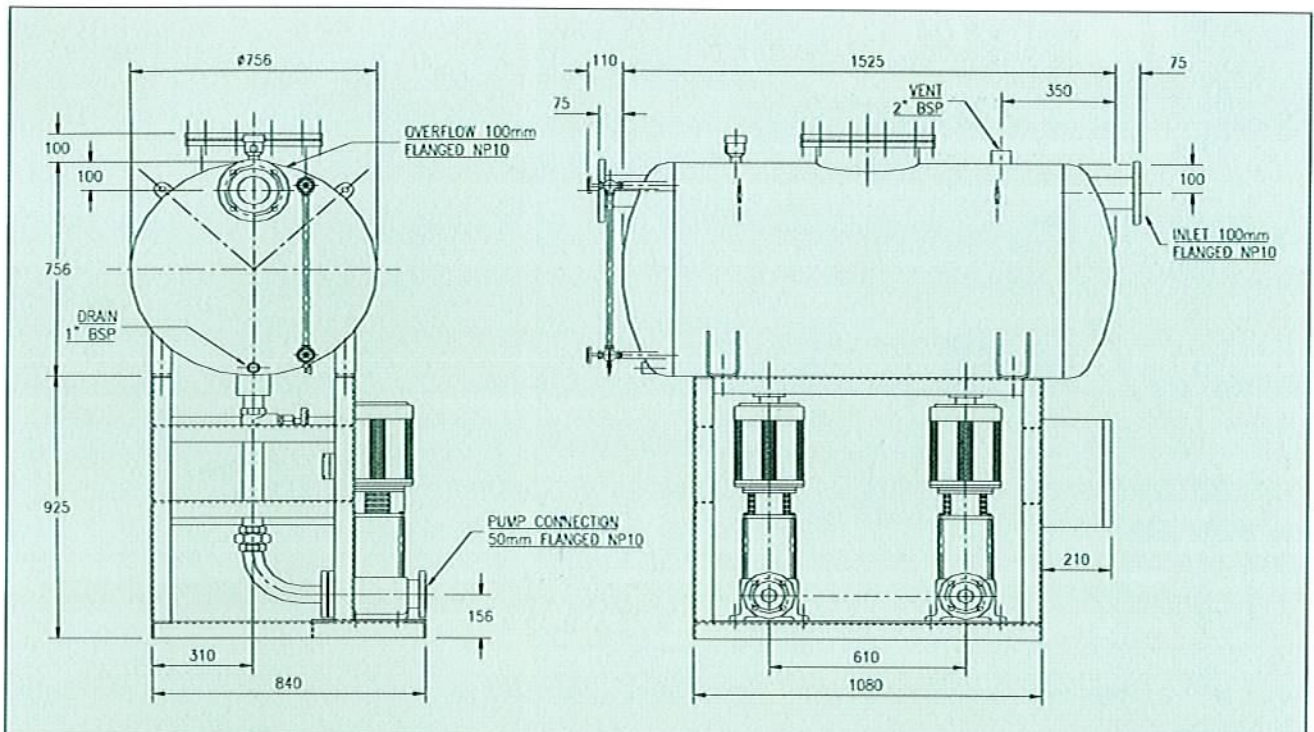
SERIES	NORMAL CAPACITY	PUMP DISCHARGE	RECEIVER SIZE	PUMP DETAILS					GENERAL ARRANGEMENT DRAWINGS			
				CODE	1Ph	3Ph	CONNECTION SIZE	MOTOR POWER KW	SIMPLEX		DUPLEX	
									MS or SS	Copper	MS or SS	Copper
JM615	1,000	15	457 x 610	615/20	A	B	1" SCD BSP	0.37	JM/1085	JM/1084	JM/1064	JM/1062
JM620	1,000	20	457 x 610	620/30	A	B	1" SCD BSP	0.37	JM/1085	JM/1084	JM/1064	JM/1062
JM630	1,000	30	457 x 610	630/40	A	B	1" SCD BSP	0.55	JM/1085	JM/1084	JM/1064	JM/1062
JM640	1,000	40	457 x 610	640/50	A	B	1" SCD BSP	0.55	JM/1085	JM/1084	JM/1064	JM/1062
JM650	1,000	50	457 x 610	650/60	A	B	1" SCD BSP	0.75	JM/1085	JM/1084	JM/1064	JM/1062
JM2515	3,000	15	457 x 1015	2515/20	A	B	1 1/4" SCD BSP	0.37	JM/1086	JM/1087	JM/1065	JM/1063
JM2520	3,000	20	457 x 1015	2520/30	A	B	1 1/4" SCD BSP	0.55	JM/1086	JM/1087	JM/1065	JM/1063
JM2530	3,000	30	457 x 1015	2530/40	A	B	1 1/4" SCD BSP	0.75	JM/1086	JM/1087	JM/1065	JM/1063
JM2540	3,000	40	457 x 1015	2540/50	A	B	1 1/4" SCD BSP	1.1	JM/1086	JM/1087	JM/1065	JM/1063
JM2550	3,000	50	457 x 1015	2550/60	A	B	1 1/4" SCD BSP	1.1	JM/1086	JM/1087	JM/1065	JM/1063
JM4015	4,500	15	610 x 1220	4015/20	A	B	1 1/2" SCD BSP	0.75	JM/1088	JM/1089	JM/1066	JM/1081
JM4020	4,500	20	610 x 1220	4020/20	A	B	1 1/2" SCD BSP	0.75	JM/1088	JM/1089	JM/1066	JM/1081
JM4030	4,500	30	610 x 1220	4030/30	A	B	1 1/2" SCD BSP	1.1	JM/1088	JM/1089	JM/1066	JM/1081
JM4040	4,500	40	610 x 1220	4040/40	A	B	1 1/2" SCD BSP	1.5	JM/1088	JM/1089	JM/1066	JM/1081
JM4050	4,500	50	610 x 1220	4050/50	A	B	1 1/2" SCD BSP	2.2	JM/1088	JM/1089	JM/1066	JM/1081
JM6015	8,000	15	756 x 1525	6015/30-2	A	B	2" FLD NP16	2.2	JM/1090	JM/1091	JM/1067	JM/1082
JM6020	8,000	20	756 x 1525	6020/30-2	A	B	2" FLD NP16	2.2	JM/1090	JM/1091	JM/1067	JM/1082
JM6030	8,000	30	756 x 1525	6030/30-2	A	B	2" FLD NP16	2.2	JM/1090	JM/1091	JM/1067	JM/1082
JM6040	8,000	40	756 x 1525	6040/30	A	B	2" FLD NP16	3	JM/1090	JM/1091	JM/1067	JM/1082
JM6050	8,000	50	756 x 1525	6050/30	A	B	2" FLD NP16	3	JM/1090	JM/1091	JM/1067	JM/1082
JM8015	15,000	15	908 x 1525	8015/20	A	B	2 1/2" FLD NP16	3	JM/1092	JM/1093	JM/1068	JM/1083
JM8020	15,000	20	908 x 1525	8020/20	A	B	2 1/2" FLD NP16	3	JM/1092	JM/1093	JM/1068	JM/1083
JM8030	15,000	30	908 x 1525	8030/20	A	B	2 1/2" FLD NP16	3	JM/1092	JM/1093	JM/1068	JM/1083
JM8040	15,000	40	908 x 1525	8040/30	A	B	2 1/2" FLD NP16	4	JM/1092	JM/1093	JM/1068	JM/1083
JM8050	15,000	50	908 x 1525	8050/30	A	B	2 1/2" FLD NP16	4	JM/1092	JM/1093	JM/1068	JM/1083
JM12015	25,000	15	908 x 2150	P12015	A	B	2 1/2" FLD NP16	ON REQUEST				
JM12020	25,000	20	908 x 2150	P12020	A	B	2 1/2" FLD NP16					
JM12030	25,000	30	908 x 2150	P12030	A	B	2 1/2" FLD NP16					
JM12040	25,000	40	908 x 2150	P12040	A	B	2 1/2" FLD NP16					
JM12050	25,000	50	908 x 2150	P12050	A	B	2 1/2" FLD NP16	ON REQUEST				
JM16015	35,000	15	1070 x 2440	P16015	A	B	2 1/2" FLD NP16					
JM16020	35,000	20	1070 x 2440	P16020	A	B	2 1/2" FLD NP16					
JM16030	35,000	30	1070 x 2440	P16030	A	B	2 1/2" FLD NP16					
JM16040	35,000	40	1070 x 2440	P16040	A	B	2 1/2" FLD NP16					
JM16050	35,000	50	1070 x 2440	P16050	A	B	2" FLD NP16					



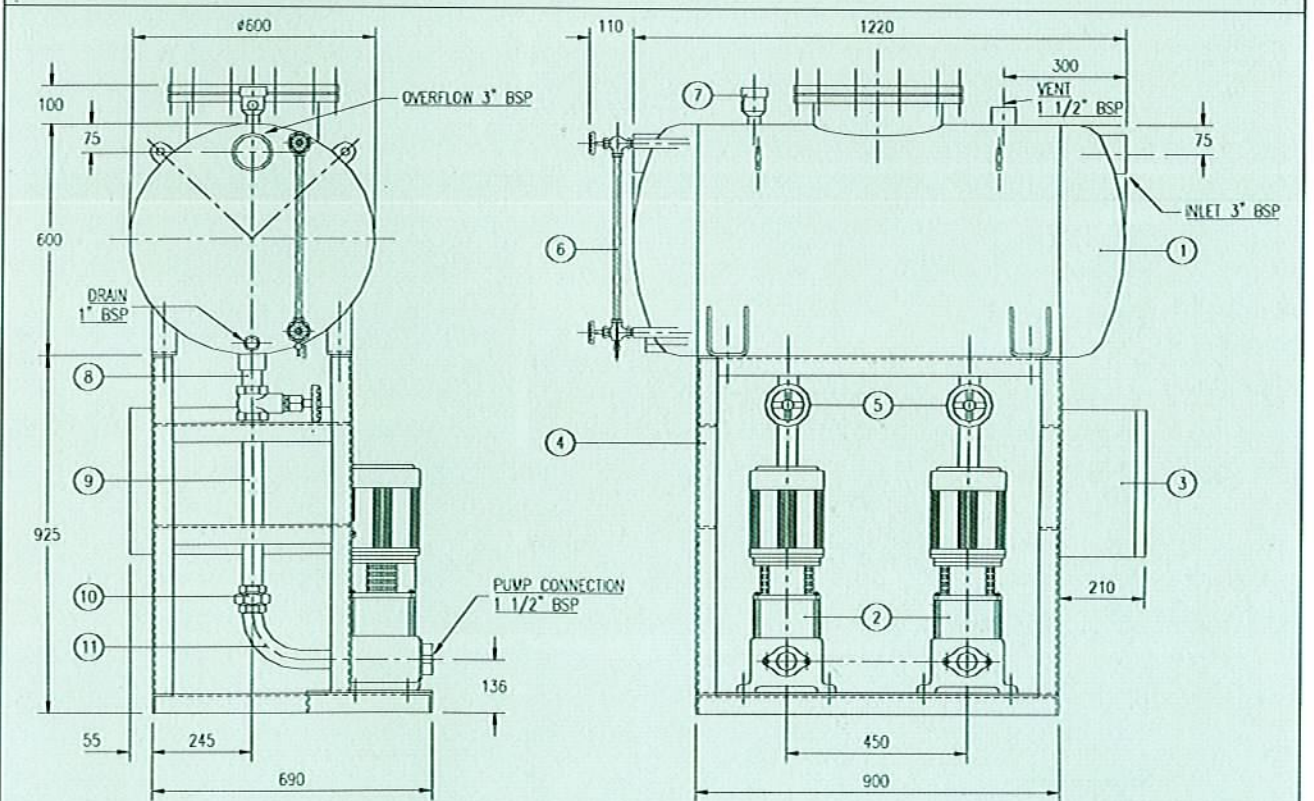
General arrangement drawing JM/1064/1 for Duplex Series JM600 Sets, with M.S. or S.S. Tanks.



General arrangement drawing JM/1065/1 for Duplex Series JM2500 Sets with M.S. or S.S. Tanks.



General arrangement drawing JM/1066/1 for Duplex Series JM4000 Sets, with M.S. or S.S. Tanks.



General arrangement drawing JM/1067/1 for Duplex Series JM6000 Sets with M.S. or S.S. Tanks.