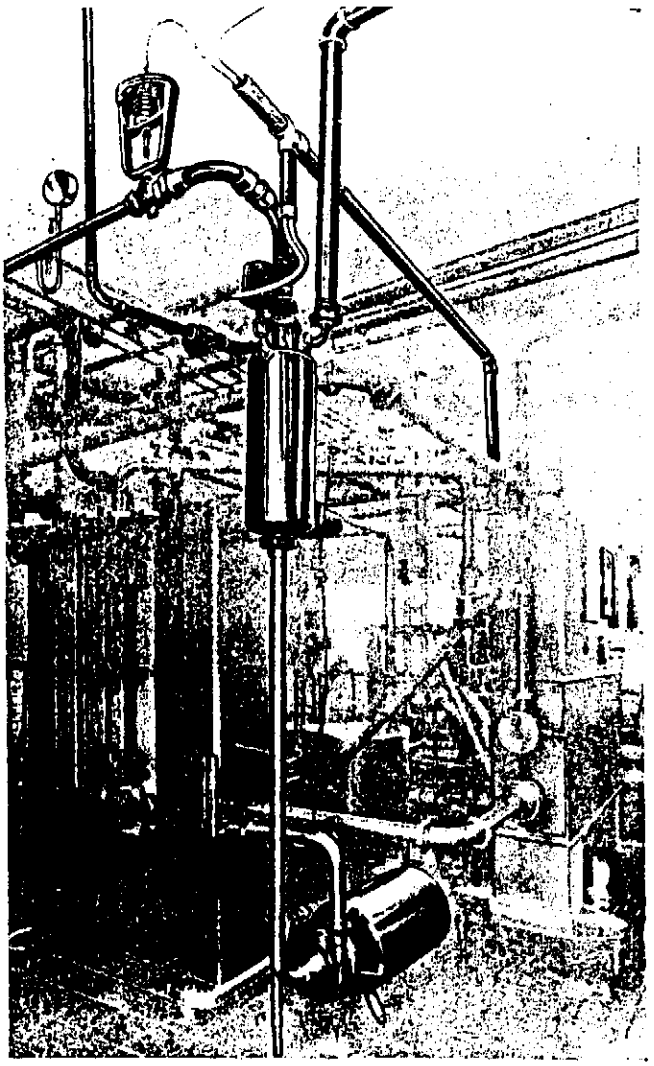
APV Hot Water Sets for Dairy Applications - Models A, B & C



APV Hot Water Set – on Milk Pasteurisation duties

Description

APV Hot Water Sets offer an efficient means of providing hot water for Paraflow heat exchanger duties. The main components of a hot water set are the hot water vessel, to generate hot water by steam injection, and a circulation pump.

The hot water vessel, which is manufactured in three sizes: A, B and C, is an all-welded stainless steel construction incorporating a steam injector and connections for: steam inlet, water make-up, overflow, hot water outlet and recirculated water inlet lines. It also includes an entry point for a thermo-sensitive bulb which is linked to a temperature controller.

The circulation pump is an APV Puma centrifugal type pump, with direct drive and compactly arranged for floor mounting. A description covering the complete range of standard APV Puma pumps will be found in APV Specification Sheets S.84 and S.85.

A series of control valves and other ancillary equipment, together with interconnecting pipework and fittings, is supplied with the hot water vessel and pump to make up the complete hot water set, as follows:—

(a) A steam supply line to carry steam from customer's steam main to the hot water vessel. Note that this pipework, together with valves and fittings, is supplied for the following steam main sizes:—

Set Model	Steam Main Size
A	1¼ in (31,8 mm) 1½ in (38,1 mm)
B	1½ in (38,1 mm) 2 in (50,8 mm) 2½ in (63,5 mm)
C	2½ in (63,5 mm) 3 in (76,2 mm)

(b) A globe valve to act as an 'ON/OFF' device for the steam supply to the hot water vessel.

(c) A steam strainer to remove scale and other foreign matter from the steam prior to entering the hot water vessel.

(d) A Negretti & Zambra 'Max-Var' temperature controller, operating via a transmitter and thermo-sensitive bulb, which is used to monitor the action of a diaphragm valve.

(e) A diaphragm valve to control the temperature of the hot water, via a control unit, by regulating continuously the amount of steam fed into the hot water vessel.

(f) A steam reducing valve to adjust the pressure of the steam supply prior to reaching the diaphragm valve.

(g) A dial gauge for setting the reducing valve to the correct pressure.

(h) A pressure relief valve in the steam supply line, to protect the system.

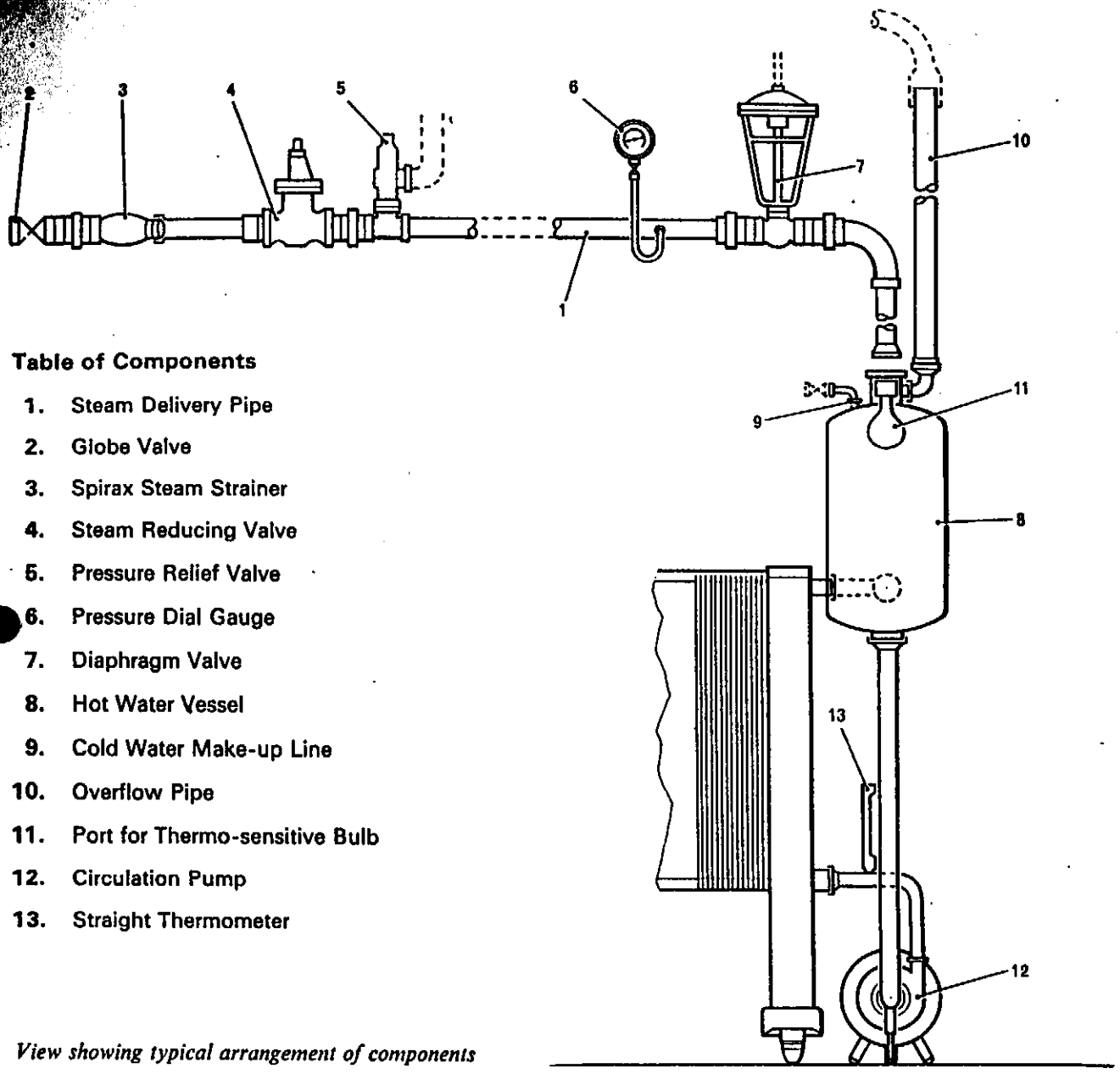
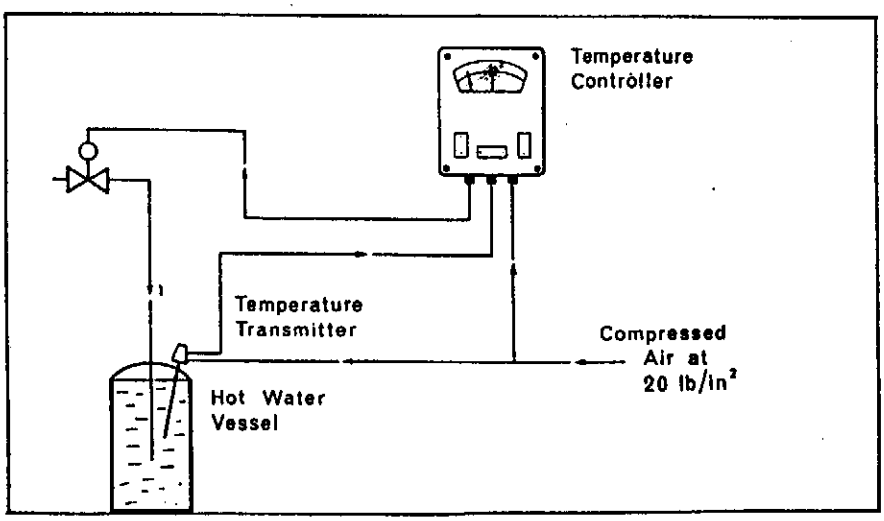


Table of Components

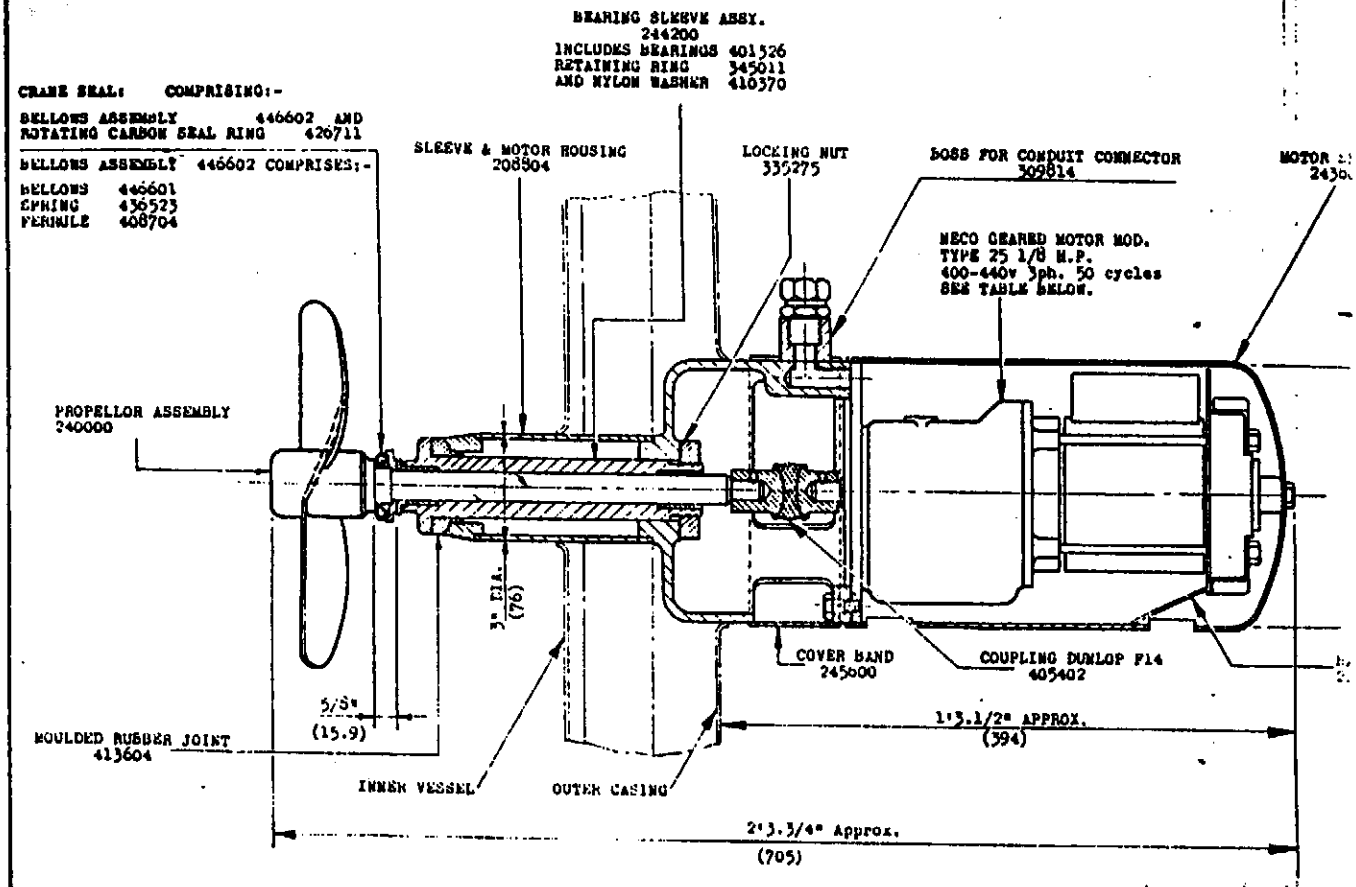
1. Steam Delivery Pipe
2. Globe Valve
3. Spirax Steam Strainer
4. Steam Reducing Valve
5. Pressure Relief Valve
6. Pressure Dial Gauge
7. Diaphragm Valve
8. Hot Water Vessel
9. Cold Water Make-up Line
10. Overflow Pipe
11. Port for Thermo-sensitive Bulb
12. Circulation Pump
13. Straight Thermometer

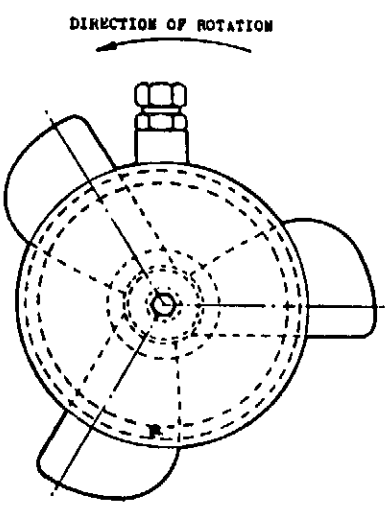
View showing typical arrangement of components

Note: Item 7 shows a VHO type diaphragm valve (i.e. designed to open on air failure) ; this is usual in dairy practice. On brewery duties a VHC type valve (designed to close on air failure) is generally employed.



Temperature Control System





TANK CAPACITY	SPEED R.P.M.	MOTOR CODE No.	AGITATOR WITH MOTOR ASSY. CODE No.	AGITATOR WITHOUT MOTOR No.
UP TO 1000 Galls (4546 Ltrs.)	117	416219	200132	200
1500 Galls. (6819 Ltrs.)	194	416218	200135	200
2000 Galls. (9092 Ltrs.)	194	416218	200133	200
3000 Galls. (13638 Ltrs.)	194	416218	200133	200

AGITATOR WITHOUT MOTOR OR HOUSING, CODE No. 200134.

NOTE:-
THE ABOVE SPEEDS AND CAPACITIES APPLY ONLY TO MILK STORAGE TANKS.

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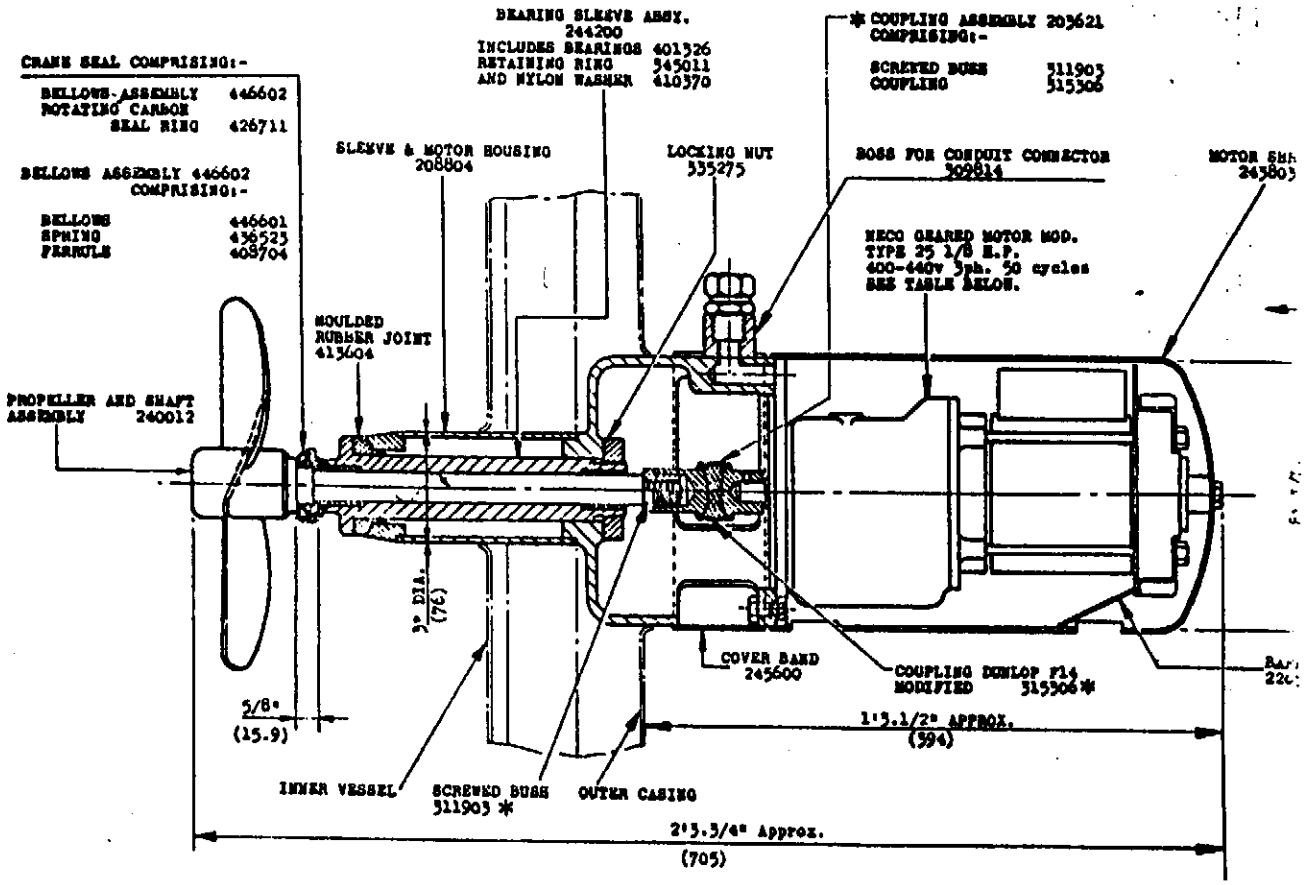
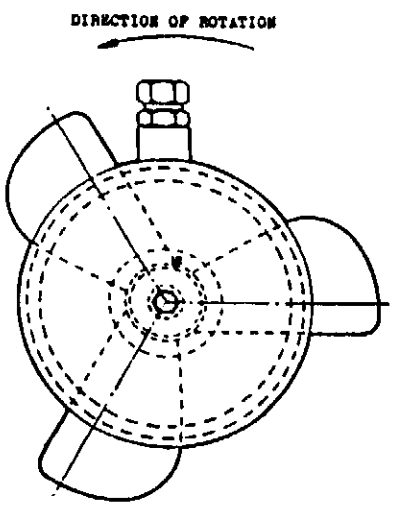
FIGURES IN BRACKETS ARE METRIC EQUIVALENT IN MILLIMETRES

ORG. No. M





VIEW ON ARROW 'A'

TANK CAPACITY	SPEED R.P.M.	MOTOR CODE No.	AGITATOR WITH MOTOR ASSY. CODE No.	AGITATOR W. WITHOUT M. MOTOR HO.
UP TO 1000 Galls (4546 Ltrs.)	117	416219	200155	2001
1500 Galls. (6819 Ltrs.)	194	416218	200156	2001
2000 Galls. (9092 Ltrs.)	194	416218	200156	2001
3000 Galls. (13638 Ltrs.)	194	416218	200156	2001

AGITATOR WITHOUT MOTOR OR HOUSING, CODE No. 200157

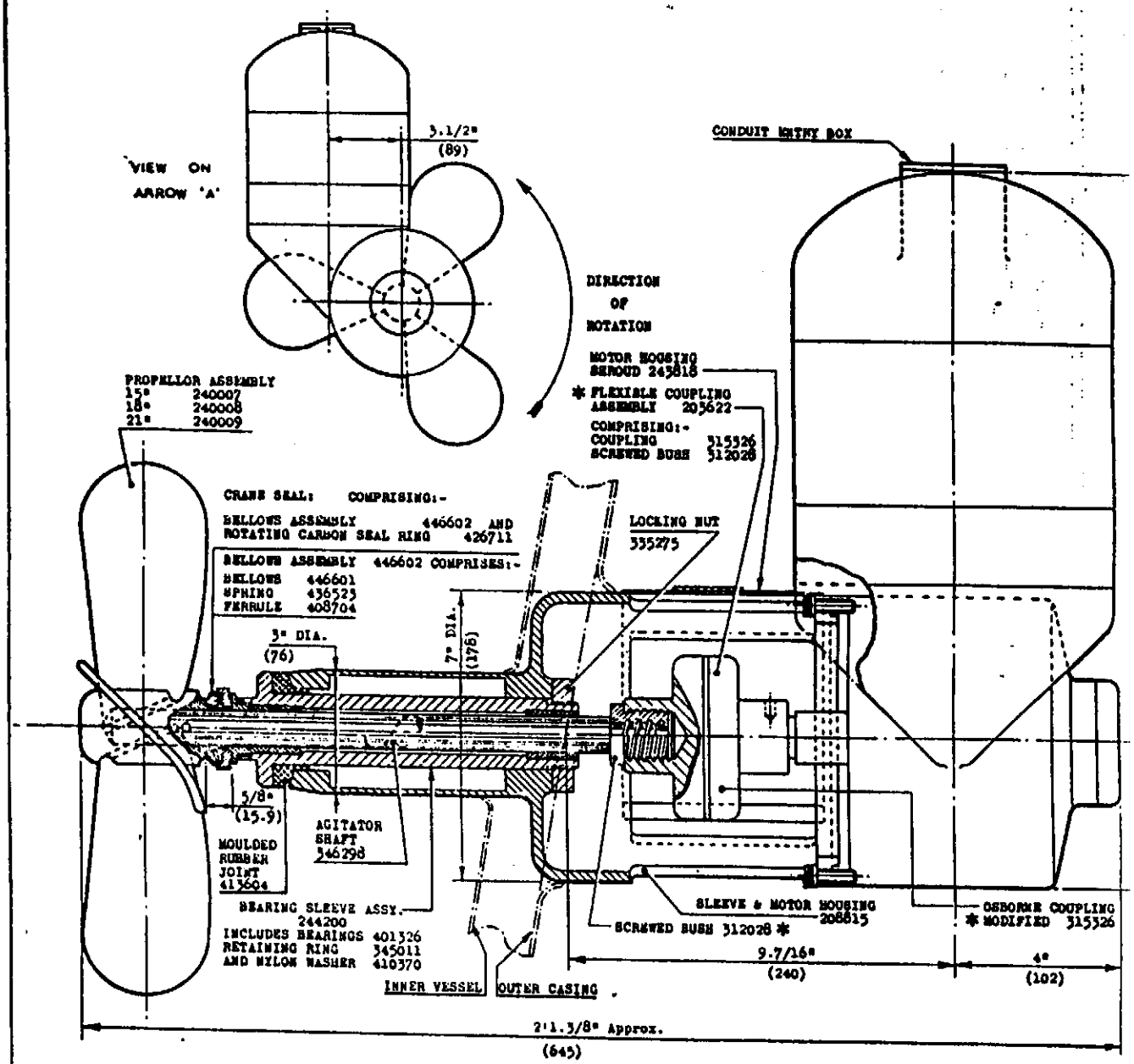
NOTE:-
THE ABOVE SPEEDS AND CAPACITIES APPLY ONLY TO MILK STORAGE TANKS.

FIGURES IN BRACKETS ARE METRIC EQUIVALENT IN MILLIMETRES

DRG. No. ME

Supersedes issues prior to 18 . 9 . 69

Issue 6

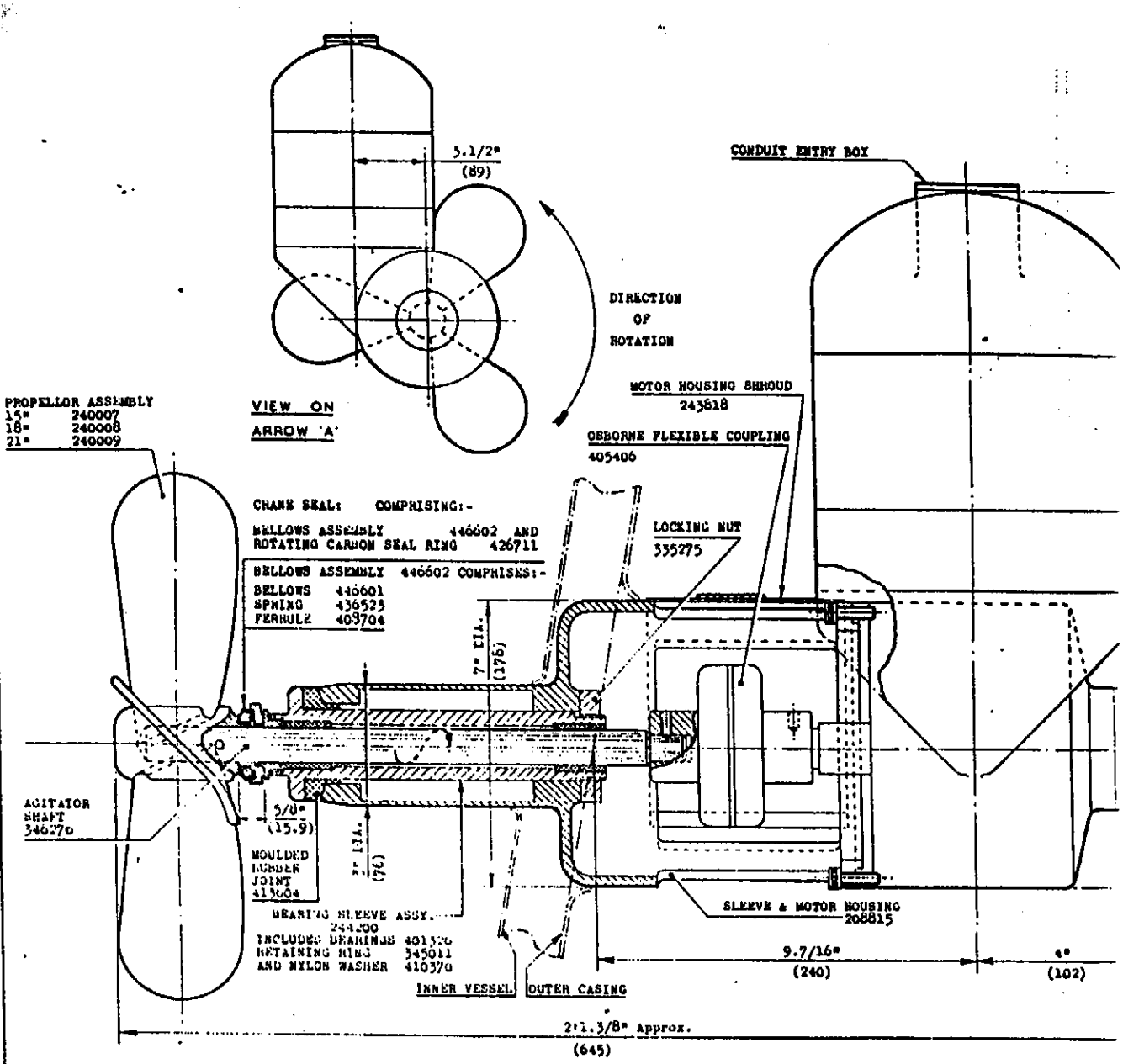


TANK CAPACITY	AGITATOR ASSEMBLY CODE No.	SPEED RPM	SET OF COMMON PARTS	OSBORNE GEARED MOTOR TYPE III						PROPELLOR ASSEMBLY	
				CODE No.	H.P.	MODEL	VOLTAGE	PHASE	CY.	DIA.	CODE No.
UP TO 1000 Galls. (4546 Ltrs.)	200152	96	226768	416273	3/4	GDW 75	400/440	3	50	15" (381)	240007
1500 Galls. (6819 Ltrs.)	200153	144	226768	416274	1	GDW 100	400/440	3	50	18" (457)	240008
2000 Galls. (9092 Ltrs.)	200153	144	226768	416274	1	GDW 100	400/440	3	50	18" (457)	240008
3000 Galls. (13638 Ltrs.)	200154	144	226768	416274	1	GDW 100	400/440	3	50	21" (533)	240009

NOTE: COMPLETE AGITATOR COMPRISES:-
ONE SET OF COMMON PARTS
ONE PROPELLOR ASSEMBLY
ONE OSBORNE GEARED MOTOR

DRAWING No. ME 131-

FIGURES IN BRACKETS ARE METRIC EQUIVALENT IN MILLIMETRES



RETAINED FOR REFERENCE ONLY. (N.S. 19-8-70)

TANK CAPACITY	AGITATOR ASSEMBLY CODE No.	SPEED RPM	AGITATOR W/O MOTOR, HOUSING OR PROPELLOR	OSBORNE GEARED MOTOR TYPE III						PROPELLOR ASSEMBLY	
				CODE No.	H.P.	MODEL	VOLTAGE	PHASE	CY.	DIA.	CODE No.
UP TO 1000 Galls. (4546 Ltrs.)	200157	96	226700	416275	3/4	GDW 75	400/440	3	50	15" (381)	240007
1500 Galls. (6829 Ltrs.)	200158	144	226700	416274	1	GDW 100	400/440	3	50	18" (457)	240008
2000 Galls. (9092 Ltrs.)	200158	144	226700	416274	1	GDW 100	400/440	3	50	18" (457)	240008
3000 Galls. (13638 Ltrs.)	200159	144	226700	416274	1	GDW 100	400/440	3	50	21" (533)	240009

FIGURES IN BRACKETS ARE METRIC EQUIVALENT IN MILLIMETRES

DRAWING No. MD

JUNIOR HOT WATER SET HEATER VESSEL

DATA SHEET
14/0401 D5

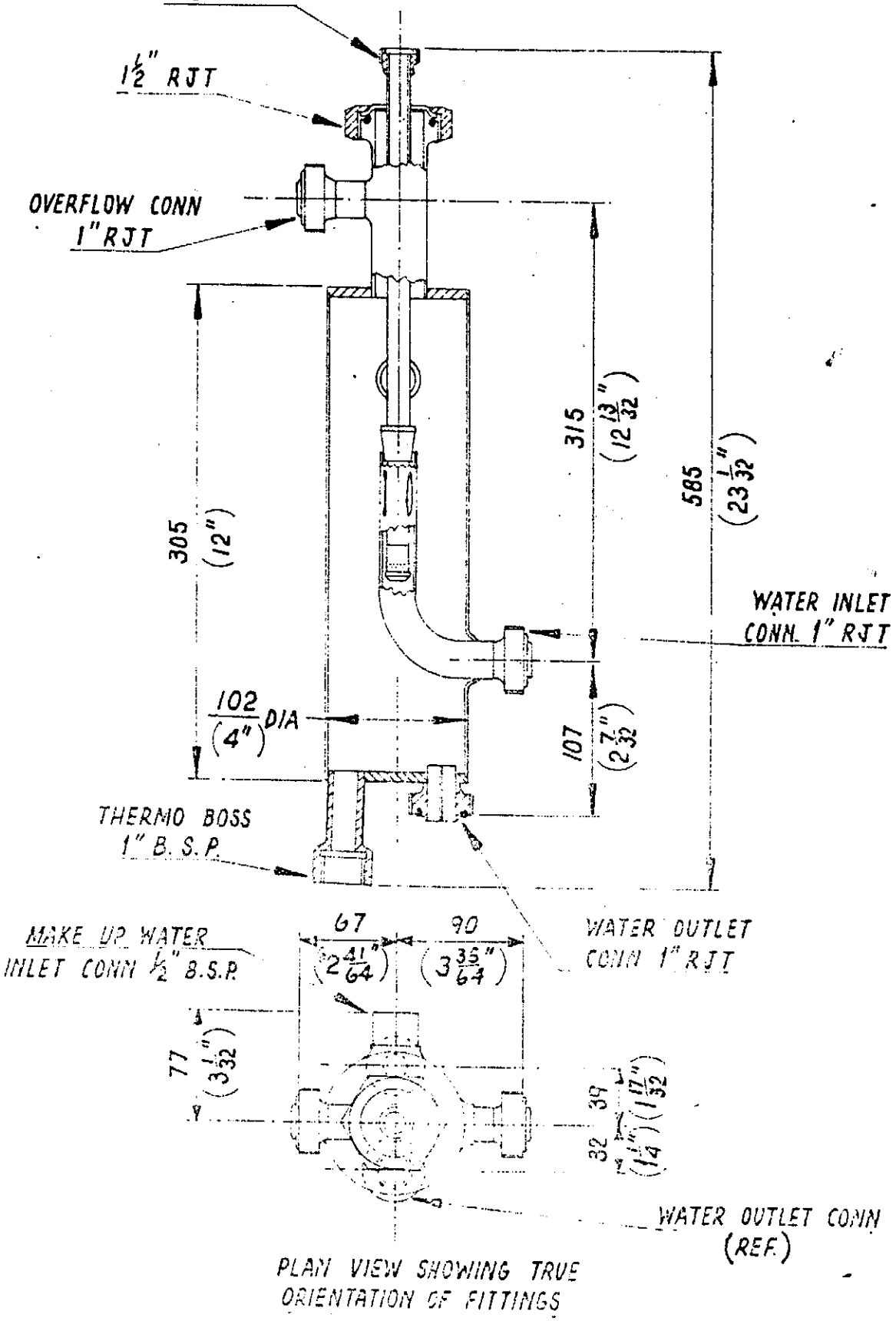
ERAL

Supersedes issues prior to 7. 8. 72.

APV

Issue 1 TEMPOR.

DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED



PLAN VIEW SHOWING TRUE ORIENTATION OF FITTINGS