

PACKAGED FIRE HYDRANT PUMP SETS

Publication No.

1612/J

Section

4



Holden and Brooke Limited

APRIL 1989

INTRODUCTION

Fire Hydrant sets are basically large Hose Reel sets with duties suitable for feeding hydrants on wet riser systems. They are recommended for use on buildings above 60M high, with a duty of 25-l/s to enable 3 hoses to be run simultaneously at a nozzle pressure of 4 to 5 bar.

Dual pump sets are standard with electric motor drives being supplied by different sources of power. This is simply arranged by using a single mains connection and a mains failure emergency generator. Alternatively two independent electrical supplies can be brought by different routes from the municipal mains to the set and the control panel is designed to suit. A third alternative is for one of the pumps to be fitted with a diesel engine drive complete with automatic starting equipment.

We advise clients to contact the appropriate authority to confirm that the equipment being supplied meets with their statutory requirements.

The sets are usually fitted with our Starbloc or Starnorm range of pumps, a bypass and flowswitch. For systems up to 10 bar a 100 litre vessel will be used. On systems above 10 bar a 60 litre vessel will be supplied. If specified a priming unit and/or jockey pump can be fitted. The jockey pump serves to replenish small system losses without the necessity of starting up the large pump. Copper manifolds will be used for pressures up to 13 bar, above this pressure manifolds in galvanised steel will be the normal supply.

OPERATION OF THE SET

With the system full, the pumping set stopped and all the controls set to automatic any small leakage from the system will be made up from the vessels.

This in turn, will be topped up automatically from time to time by either the main pump or the jockey pump where one is fitted.

The opening of a hydrant will cause the pressure switch to sense the drop in system pressure and start the duty pump. The flow switch closes and the pump will run for a minimum of 4 minutes due to the timer. If the demand is longer than 4 minutes the duty pump will continue to run under the control of the flow and pressure switches.

As the demand stops the flow switch opens, the system is re-pressurised, the pressure switch opens and stops the pump. The set is now ready for future use. Should the duty pump fail to run the support pump will start and run automatically in the event of a demand.



Designed and made in Britain

SPECIFICATION

Bedplate

Fabricated mild steel with support for control panel.

Manifolds Up to 13 bar pressure — copper. Above 13 bar pressure — galvanised steel.

Valves Each pump will have isolating valves on the suction and delivery and non return valves on the delivery. Water board stamped valves will be fitted when specifically ordered.

Controls

A pressure switch, flow switch and timer relay are provided along with connections for remote alarms. Prevention of dry running is controlled by either a break tank floatswitch or a suction manifold low pressure switch to suit application. A remote alarm panel with bell, lamp and muting buttons is also available.

Vessel

Steel vessel of the water in bag type.

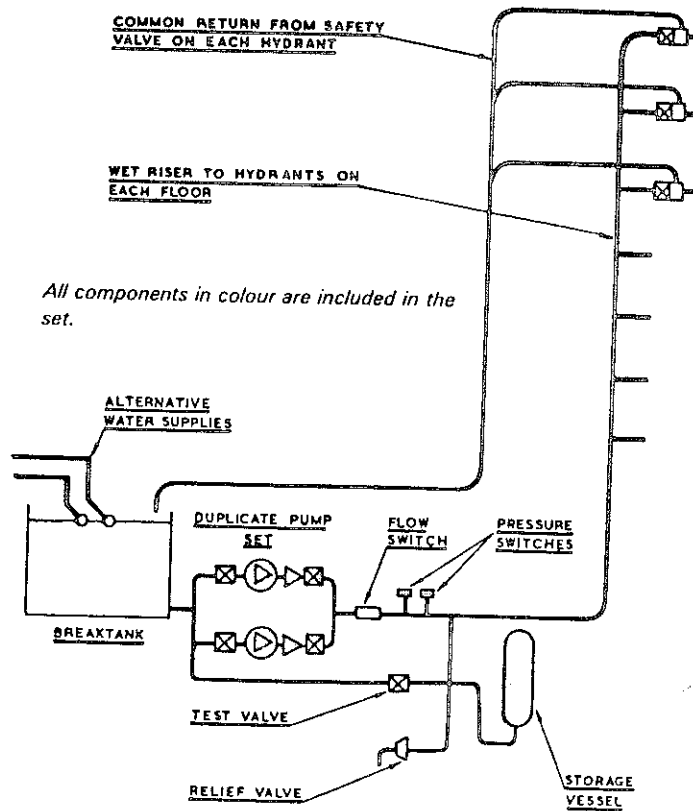
Control panel

These are pressed mild steel construction damp and dust proof to IP55. Fitted with Test/Off/Auto switches and run trip lamps for each pump, selector switch, low water and panel energised lamps, lockable door, door interlocked isolator, HRC fuses for motors and control circuit motor starters and overloads along with terminals and labels. Panels are made suitable for 35°C ambient for temperate zones and 50°C ambient for tropical and sub-tropical zones.

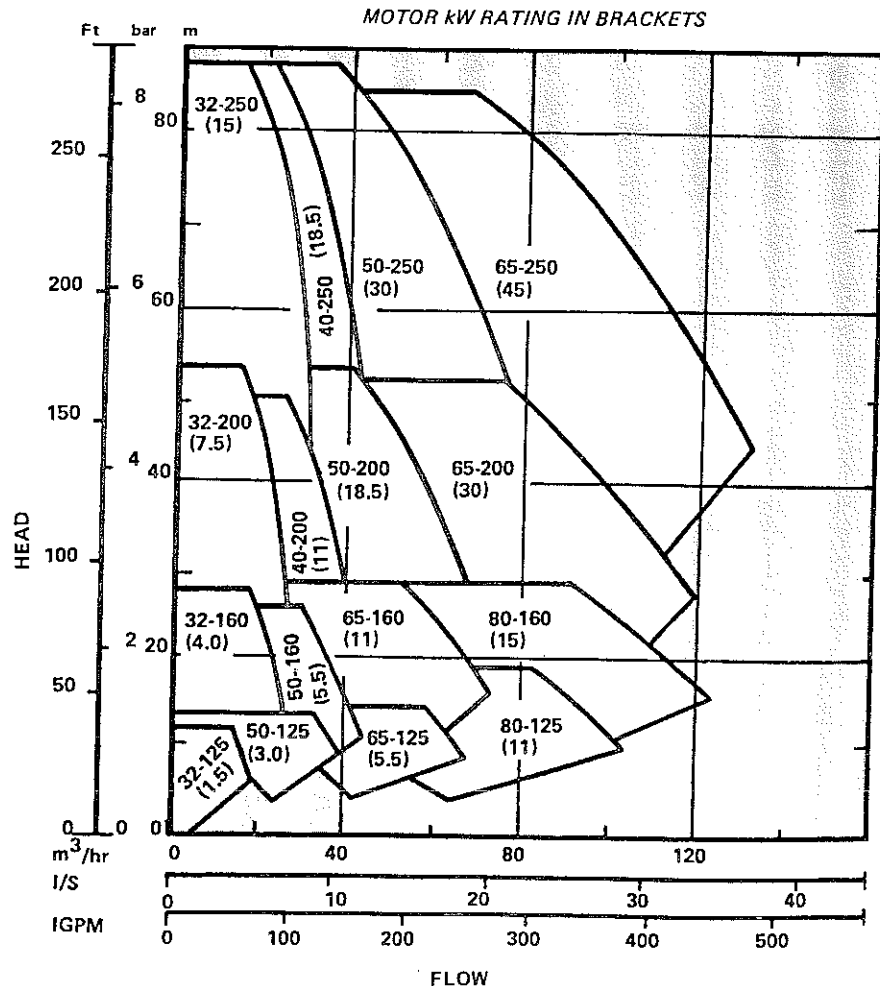
Electrical Wiring

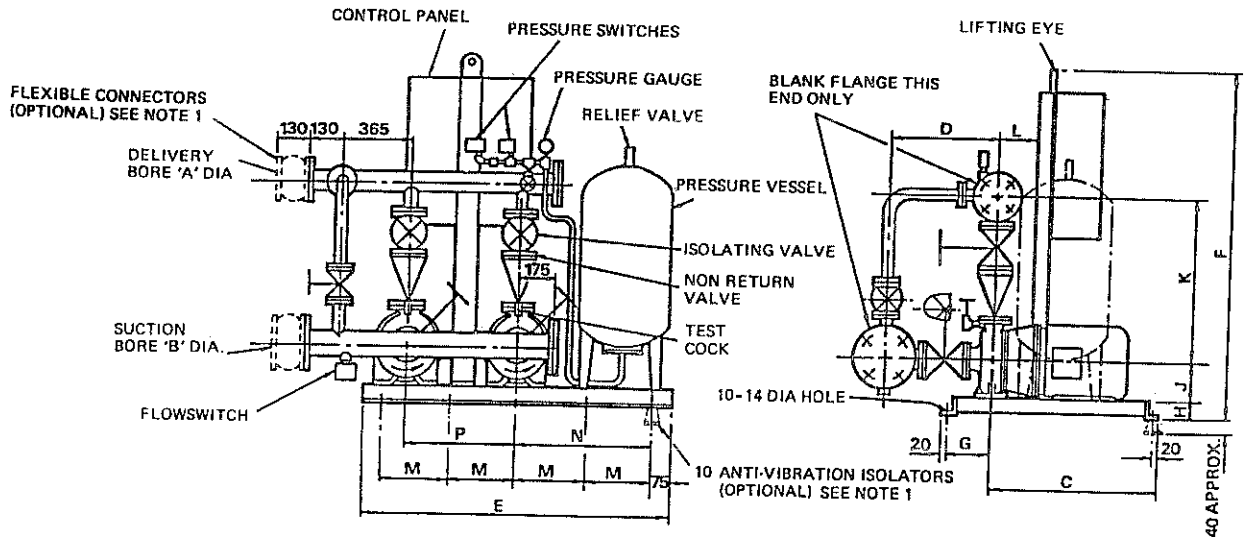
Wiring to IEE wiring regulations 15th edition 1981.

50 Hz



SELECTION CHART
STAR RANGE END SUCTION PUMPS—2900 RPM
PERFORMANCE ON WATER SG = 1.0

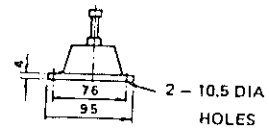




PUMP SIZE	MOTOR F.SIZE	MOTOR K.W.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	WT. Kg.												
32-125	D90	2.2, 1.5						1340			112	560			295	755	380	377											
32-160	D100	3	50	65	470	410	1500	1300	130		132	685	125	335	775	455	397												
	D112	4															447												
	D100	3															462												
32-200	D112	4									160	705					452												
	D132	7.5, 5.5			460		1625								370	805	535	551											
32-250	C160	15, 11			865	430	1770				180	750	150	405	835	620	601												
	D90	2.2					1340			210							728												
50-125	D100	3	65				1500	1300			112						410												
	D112	4											600			295	755	380	447										
50-160	D90	2.2				410	1340	1300			132						471												
	D100	3					1500										430												
	D112	4			470		1500				620	125					463												
40-200	D132	5.5	80				1625	1560	130	58	152						555												
	D112	4																					487						
	D132	7.5, 5.5												1500											485				
	D180	11											875	1770	1560				180	705					551				
40-250	C160	11									210		150	405	835	620	670												
	D132	7.5			460	430	1625				180						614												
	D160	18.5, 15, 11			865		1770				210	750	150	405	835	620	790												
65-125	D180	22			905		1815	1860			180						734												
	D90	2.2					1340										864												
	D100	3					1500	1300			132	705					503												
65-160	D112	4	80		470		1625	1560	130	152		125					548												
	D132	7.5, 5.5																											572
	D112	4																		1500	1300								
50-200	D132	7.5, 5.5			450		1625				160						582												
	D160	11										725					661												
	C160	11									180	725					770												
50-250	D160	18.5, 15, 11	100	875			1770	1560			210						726												
	C160	11																						772					
	D160	18.5, 15																	180	750	150	405	835	620	818				
50-250	C160	22, 18.5, 15, 11	65	865							210						888												
	D180	22																						834					
	C180	30											905	475	1815	1860			180						962				
80-125	D200	37, 30			975		1990				60	210		200	415	850	600	963											
	D100	3										775					1203												
	D112	4			460		1500	1300			160						582												
80-160	D132	7.5, 5.5	100		460		1625	1560	140		180						606												
	D160	11																						749					
	C160	11											865		1770				210	150	405	835	620	785					
80-200	D132	7.5	150		460	500	1625	1560	140	58	160						614												
	D160	18.5, 15, 11																						885					
	C160	18.5, 15, 11											865		1770				180	795	150	405	835	620	837				
65-200	C160	22, 18.5, 15, 11	80								210						893												
	D180	22																						863					
	C180	30											915		1815				180	770					967				
65-250	D200	37, 30			975		1990				60	210		200	415	850	600	913											
	C160	22			845		1770	1860									1223												
	D180	22			885		1815				58	200		150	405	835	620	933											
65-250	C180	37, 30															1053												
	D200	55, 45			955	525	1990				210	795		200	415	850	600	1054											
	C200	55, 45			1005		2100				230						1270												
7-D25Q	45				955		1695	1995			60	235					1385												
	55				1005		1870	2190									1476												
																	1745												

CERTIFIED DRAWINGS WILL BE SUPPLIED ON APPLICATION

Specifications subject to change without notice.



ANTI-VIBRATION ISOLATORS

Note
1. ANTI-VIBRATION ISOLATORS AND FLEXIBLE CONNECTORS ARE ONLY SUPPLIED WHEN ORDERED:

FLANGED TO BS 4504 10 bar

MAXIMUM WORKING PRESSURE OF STANDARD SET:-

LOW PRESSURE VESSEL

10 bar. (102m)

HIGH PRESSURE VESSEL

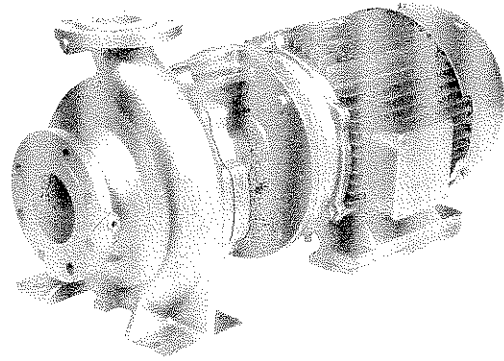
13.8 bar (141m)

STARBLOC

The STARBLOC is a single stage, close coupled end suction centrifugal pump having performance, casing and seal cavity dimensions to ISO 2858 and BS 5257.

The robust construction assures trouble free operation and minimal maintenance even on the most arduous of operations.

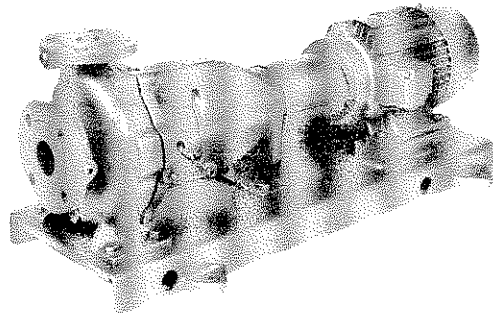
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STARNORM

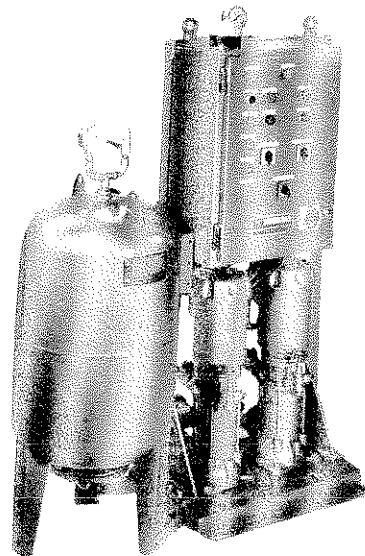
The STARNORM is a horizontal, single stage, direct coupled end suction pump, having performance, casing, seal cavity and foundation dimensions to ISO 2858 and BS 5257. The generously sized shaft runs in grease lubricated, sealed for life bearings and the robust construction of the pump ensures trouble free operation with minimal maintenance even on the most arduous of operations.

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PACKAGE SETS

A wide selection of package set equipment is available covering Hose Reel, Fire Hydrant, Direct Transfer, Constant Run, Booster, Modupress, Nitropress and Pressmatic Pressurisation sets. These sets are designed to current accepted standards using a minimum of space whilst providing ease of installation and maintenance. Specific details will be provided on request.



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