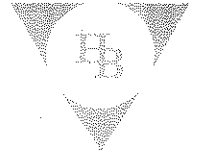
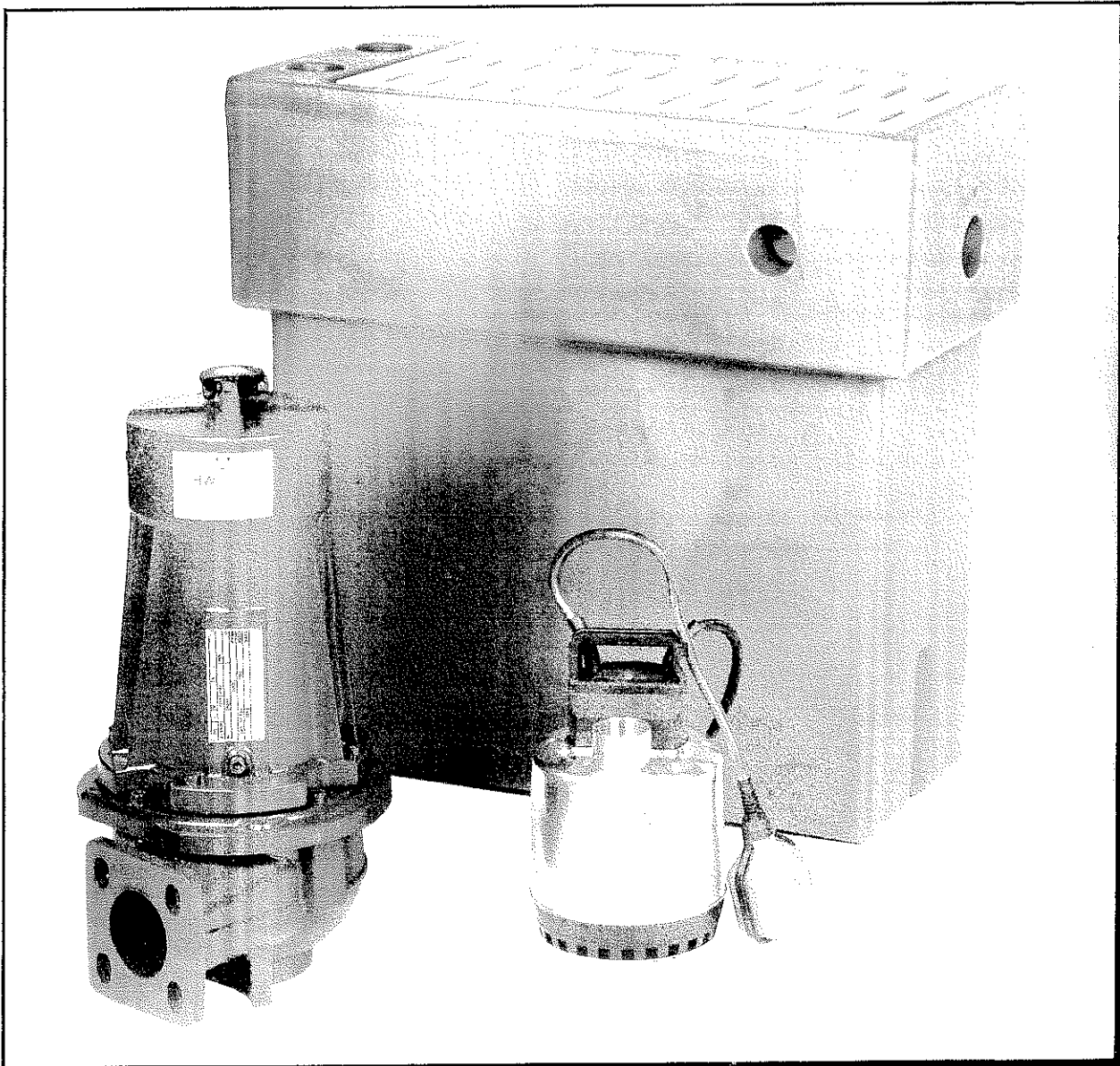


Starsub



Drainer Pumps
Surface Water Pumps
Packaged Sump Stations
Screened Sewage Pumps
Raw Sewage Pumps
Grinder Pumps



Holden and Brooke Limited

Manchester London Glasgow Belfast

Type HC Series Submersible Pumps for Surface Water and Boiler House Sumps

Applications

Emptying out sump pits, rainwater tanks; drains from washing machines, dishwashers, baths and all domestic washing in general. Emergency pumping of cellars, basements, underpasses and swimming pools. Transfer of clean and slightly dirty water with partially or totally submerged pump.

Electrical Supply

Available in three versions:

HC1	240v /1ph /50Hz
HC2 & HC2V	415v /3ph /50Hz
	240v /1ph /50Hz

Overload Protection:

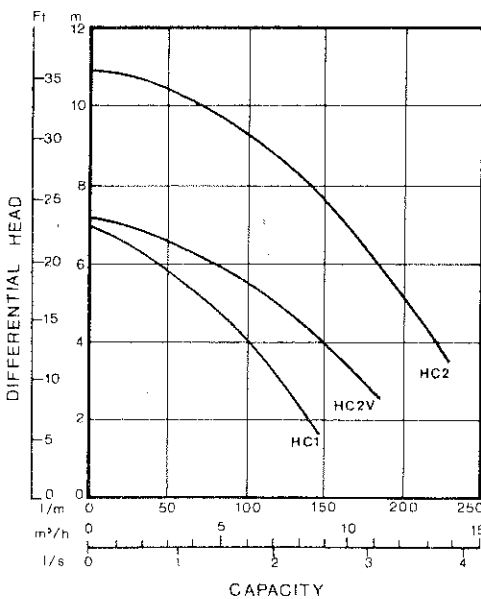
Single Phase	Automatic reset
Three Phase	External(Protection switch or control box)

Maximum Liquid Temperature	40°C
Maximum Submergence	5 metres
Minimum Sump Dimensions	400 x 400 x400 mm

Features

Corrosion resistant construction. Motor case, external case, shaft and wear plate of stainless steel. Pump body, impeller, suction grid, upper support and handle of thermoplastic. Triple shaft seal and sand protection ring. Single phase versions supplied with a float for automatic operation. 5m of power cord with plug supplied. (No plug on 3 phase version). HC2V has recessed impeller.

Operating Curves 2900 RPM



Operating Data

SINGLE PHASE 240 V 50 HZ	THREE PHASE 415 V 50 HZ	INPUT Kw		CAPACITOR		INPUT CURRENT	
		1 PH	3 PH	µF	V	AMPS 1 PH	AMPS 3 PH
HC1		0.31	-	6	450	1.5	-
HC2	HC2T	0.78	0.70	16	450	3.7	1.4
HC2V	HC2VT	0.70	0.65	16	450	3.4	1.3

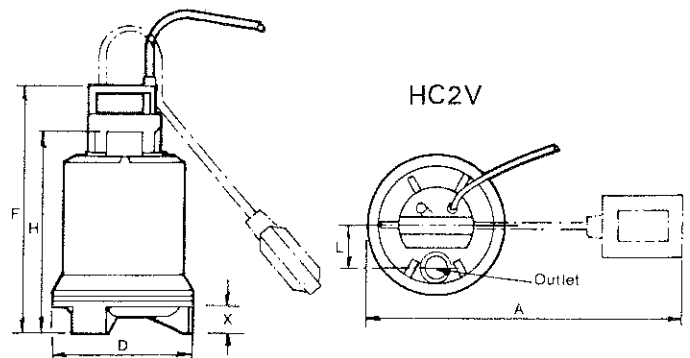
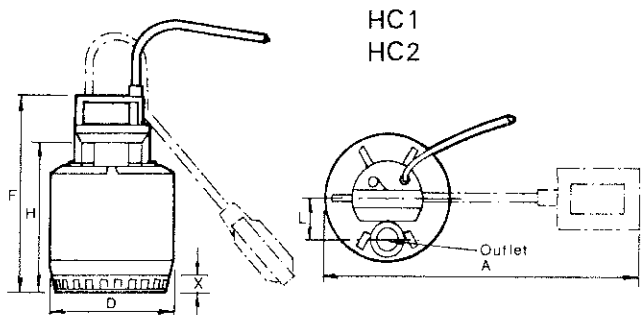
NOTE: Single phase versions without floatswitch are identified by suffix "NS"

Dimensions and Weights

PUMP TYPE	DIMENSIONS IN MM						OUT LET	WGT KG	SOLID SIZE MM
	A	D	F	H	L	X			
HC1	390	155	245	188	54	20	1 1/4" F	4	10
HC2	390	155	285	228	54	20	1 1/4" F	6	10
HC2V	390	175	310	252	54	50	1 1/4" F	6	20

X= Maximum pump down level

Pump Dimensions



Type HN Series Submersible Pumps for Surface Water and Clean Water Drainage.

Applications

Wells collecting rainwater, seepage water, domestic water and dirty water. Irrigation from rainwater collection tanks, ditches, small lakes and water courses.

Electrical Supply

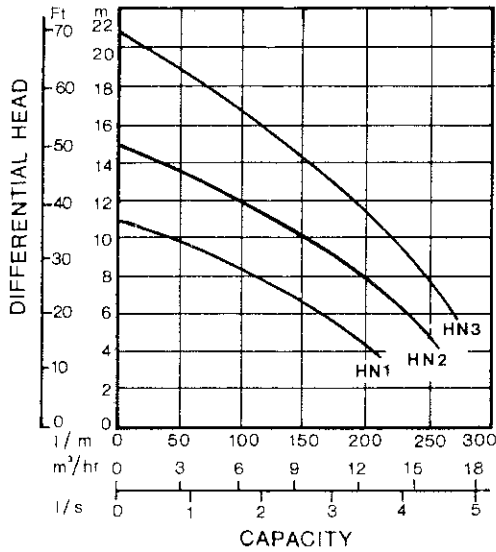
240v /1ph /50Hz Units have built-in overload protection and automatic reset.

415v /3ph /50Hz Overload protection must be provided in the control panel by the user.

Features

Cast iron body and stainless steel motor case. Open impeller with abrasion resistant coating. Mechanical seal protected by sand labyrinth and lubricated by motor coolant. Supply cable 5m long. Single phase versions supplied with capacitor and additional 1.5m cable with plug. Single phase versions can be fitted on request with a floatswitch for automatic control. Maximum immersion depth 5.0m

Operating Curve 2900RPM HN1,2,3



Startank, Sanibox and Sanibox Duo Packaged Sump Pump Stations

Applications

The tank and box range are complete lifting stations requiring only a simple installation either above or below ground level.

The Startank is suitable for dirty domestic water. This excludes WC use. The Startank is fitted with either HC1 or HC2 pumps. The Startank comprises an 85L polythene tank, drainer pump with floatswitch, grid, sand filtering tank, optional watertight cover and plug.

The Sanibox and Sanibox Duo boxes are suitable for all domestic water and waste from bathrooms and kitchens etc. The Sanibox Duo offers the extra protection of standby/assist pump. The Sanibox and Sanibox Duo use the HV1 and HL2 pumps.

Operating Data

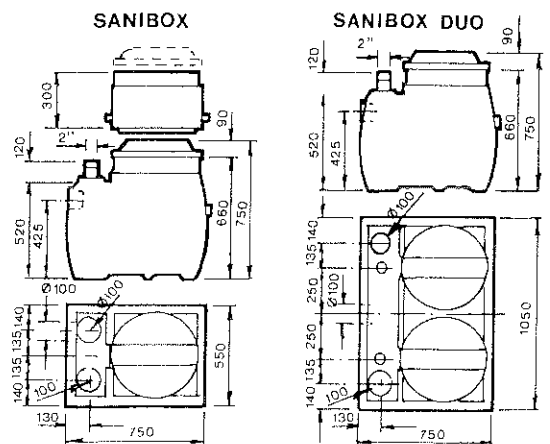
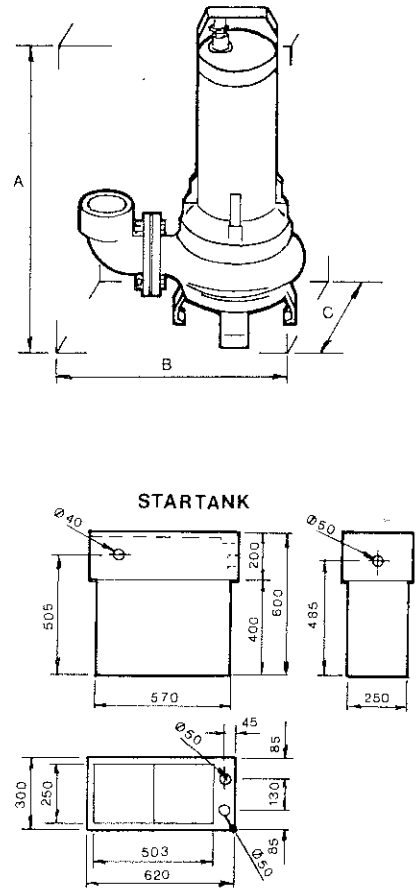
PUMP TYPE	Kw	HP	INPUT CURRENT AMPS		CAPACITOR	
			3 PHASE	1 PHASE	µF	V
HN1	0.6	0.8	1.6	4.0	20	450
HN2	0.6	0.8	1.8	4.7	20	450
HN3	0.75	1.0	2.1	5.8	25	450

Dimensions and Weights (See Fig 1)

PUMP TYPE	OVERALL DIMENSIONS IN MM			WGT KG	OUTLET
	A	B	C		
HN1	380	209	200	18.5	1 1/4" F
HN2	380	209	200	18.5	1 1/4" F
HN3	380	209	200	19.5	1 1/4" F

Figure 1

HL, HN, HV 1, 2, 3, 4, 5



Type HT/HW Series Submersible Pumps for Raw Unscreened Sewage

Applications

The HT/HW pumps are designed to handle a wide variety of solids contaminated liquids. In standard construction they are used for raw unscreened sewage and other waste-water applications.

Features

The HT range combines the best solids handling with the lowest energy consumption. The impeller leading edge is almost parallel with the direction of flow and leads into the impeller passage. Fibrous materials will not hook onto this edge, but slide along it towards the impeller passage making the pump self cleaning.

The HW range has a recessed vortex impeller suitable for solids.

Units listed in this section are capable of handling 80mm solids.

Body and motor housing

Cast Iron

Impeller

SG Iron

Oil lubricated mechanical seal.

All pumps are suitable for 415v /3ph /50Hz.

Maximum water temperature 40°C

Standard cable length 10m

Explosion proof versions are available.

Alternative materials available, also water detector in motor housing and thermostats in motor housing.

Operating Data at 1450 RPM

PUMP TYPE	SOLIDS PASSAGE (MM)	DISCHARGE DIAMETER (MM)	RATED SHAFT POWER kW
HW230DD	80	100	2.2
HT231DD	78	100	2.2
HT440DL	100	100	6.0

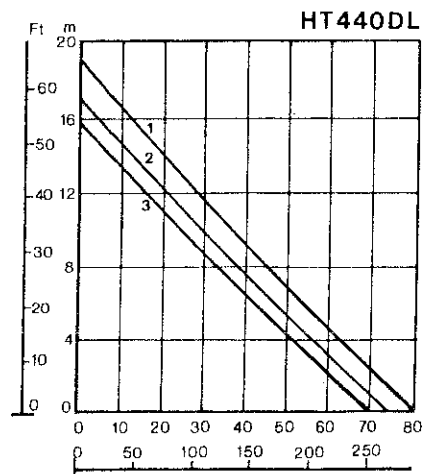
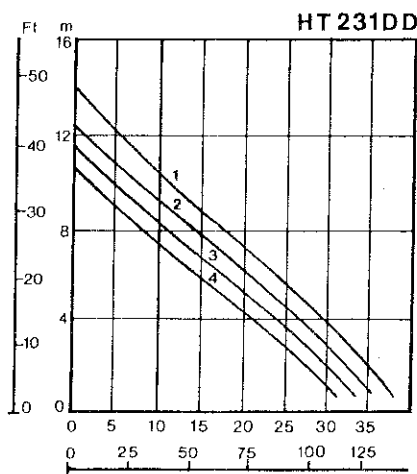
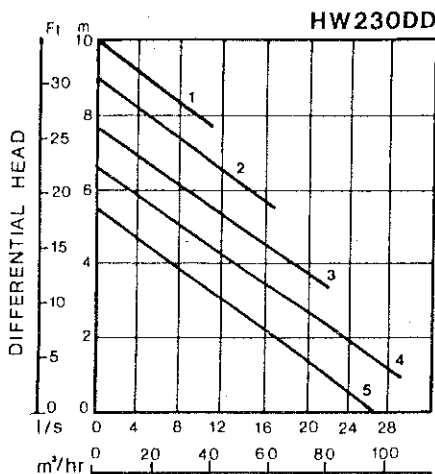
Dimensions and Weights (see Fig.3)

PUMP TYPE	A	B	C	D	E
HW	400	200	150	235	125
230DD	G	H	K	L	M
	110	225	595	650	845
COUPLING	N	O	P	R	S
	120	480	480	195	400
V100	T	U	V	W	Wt Kg
	195	790	520	200	52

PUMP TYPE	A	B	C	D	E
HT	400	200	150	235	125
231DD	G	H	K	L	M
	110	225	730	800	960
COUPLING	N	O	P	R	S
	-	520	550	160	330
V100	T	U	V	W	Wt Kg
	160	650	550	200	68

PUMP TYPE	A	B	C	D	E
HT	400	200	150	235	125
440DL	G	H	K	L	M
	110	225	815	900	1050
COUPLING	N	O	P	R	S
	50	570	620	245	500
V100	T	U	V	W	Wt Kg
	245	1000	645	200	106

Operating Curves 1450 RPM



CAPACITY

Type HL & HV Series Submersible Pumps for Foul Drainage and Screened Sewage

Applications

Handling of dirty water and screened sewage. Draining of cesspool and tanks containing sewage, drainage and storm water. Excavation and marshy ground drainage.

Electrical Supply

240v /1ph /50Hz Units have built in overload protection and automatic reset.

415v /3ph /50Hz Up to 1.5kW. Must have overload protection installed in the control panel. From 1.5kW. As above, but a thermal sensor is built in which may be wired in series to the overload protection.

Features

Cast iron body and stainless steel motor case

Impellers

HL2, HL3 Single channel type. Stainless Steel

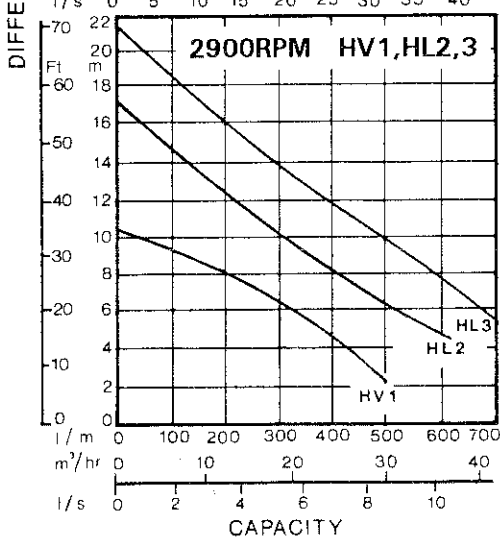
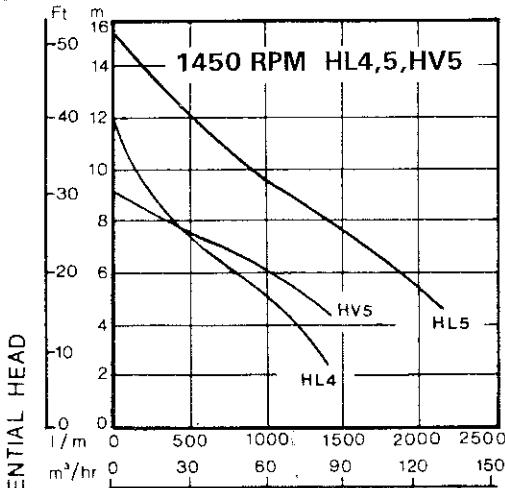
HL4, HL5 Single channel type. Cast Iron

HV1 Vortex recessed type. St. Steel

HV5 Vortex recessed type. Cast Iron

Mechanical seal protected by sand labyrinth and lubricated by motor coolant. Single phase version supplied with capacitor and 1.5m additional cable and plug.

Operating Curves



Operating Data

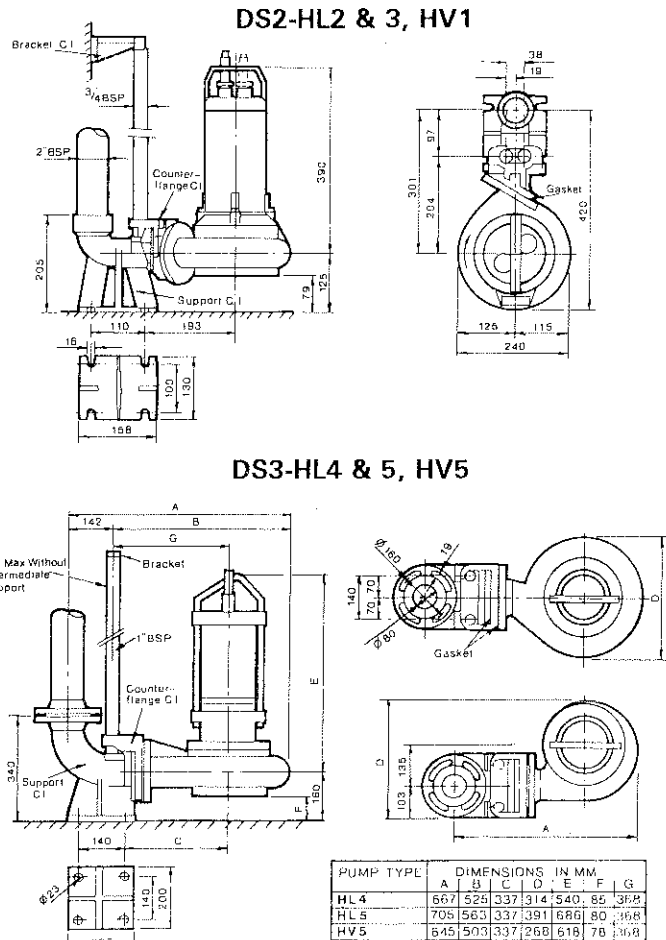
PUMP TYPE	Kw	HP	INPUT CURRENT AMPS		CAPACITOR	
			3 PHASE	1 PHASE	µF	V
HL2	1.1	1.5	3.3	8.5	30	450
HL3	1.5	2.0	3.8	-	-	-
HL4	1.85	2.5	3.5	-	-	-
HL5	4.0	5.5	8.8	-	-	-
HV1	1.1	1.5	3.2	8.3	30	450
HV5	2.75	3.75	6.5	-	-	-

Dimensions and Weights (free standing See Fig 1)

PUMP TYPE	OVERALL DIMENSIONS IN MM			WGT KG	OUTLET	SOLID SIZE MM
	A	B	C			
HL2	490	343	239	27	1 1/4" F	50
HL3	490	343	239	27	1 1/4" F	50
HL4	735	432	314	78	80mm	50
HL5	885	470	391	111	80mm	60
HV1	490	343	239	27	2" F	50
HV5	820	409	268	77	80mm	65

Single phase versions can be supplied on request with a floatswitch for automatic control. Units available with lifting/lowering device comprising a discharge foot, sliding adaptor and top bracket, (see Fig 2 for dimensions). Maximum submergence depth - 5.0m

Figure 2 Pedestal Mounting Dimensions



Type HS Series Submersible Grinder Pumps for Sewage

Applications

The HS grinder range is designed to handle small quantities of water. Large solids are effectively cut into very small particles that can be pumped through small pipes without risk of blocking

Features

Cast iron body and motor housing. SG iron impeller and hard stainless steel grinder parts.
 Maximum water temperature 40°C
 Standard cable length 10m

Operating Data

PUMP TYPE	DISCHARGE DIAMETER (MM)	RATED SHAFT POWER kW	SPEED (RPM)
HS210BA	40	1.8	2900
HS210BD	40	2.2	2900

Dimensions and Weights (See Fig 3)

PUMP TYPE	B	C	D	L	P	S	U	Wt Kg
HS 210 BA/BD	125	100	130	500	950	300	700	51

Operating Curves 2900 RPM

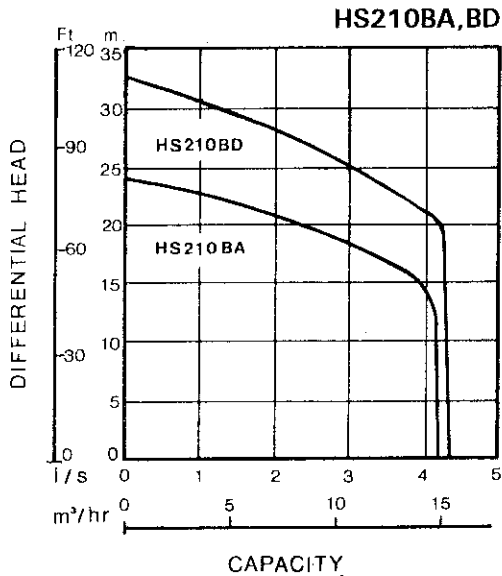
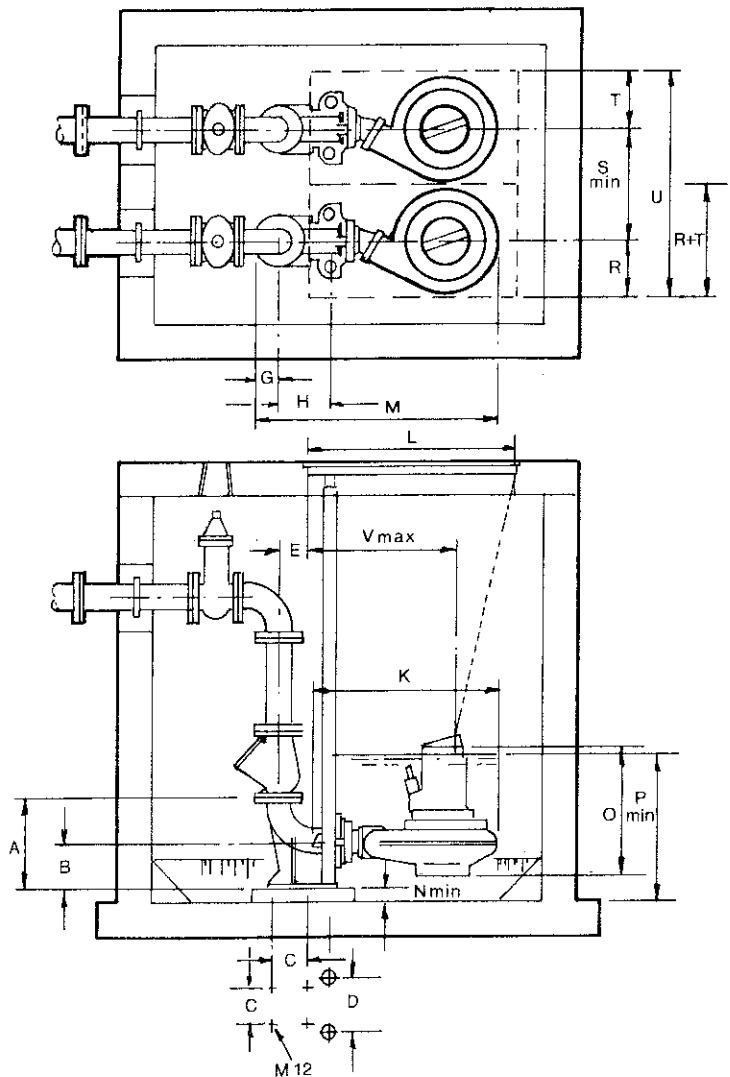


Figure 3 Sewage Station Pumps



Note: Improvements in general design and modifications in detail will be embodied for the benefit of clients as and when introduced; consequently this specification is subject to alteration, as may be necessary, without notice.

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