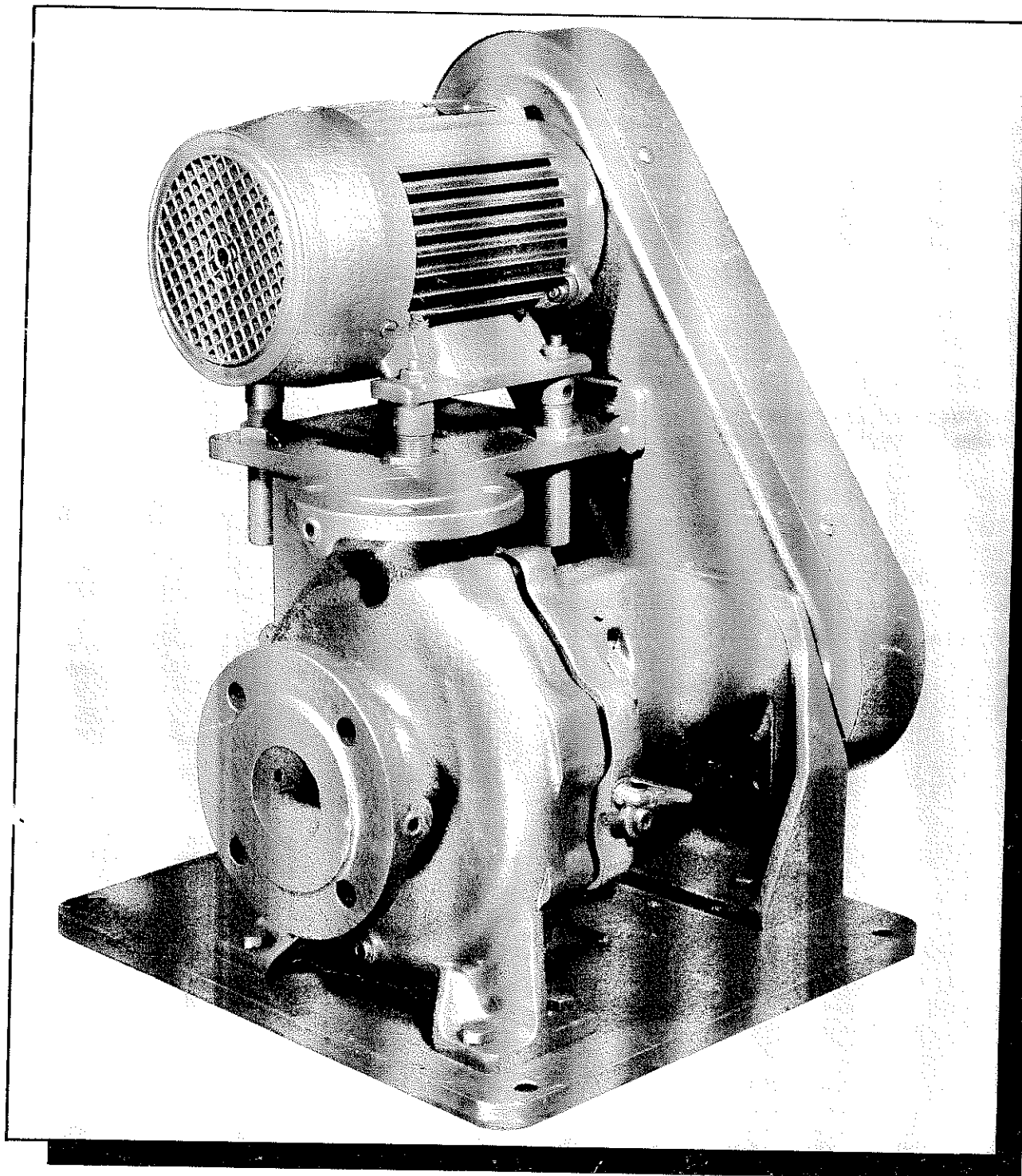


Starflex

Horizontal Belt Driven End Suction Pump



Holden and Brooke Limited

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GENERAL INFORMATION

The **STARFLEX** is a belt driven, end suction, single stage, centrifugal pump having performance, casing and seal cavity dimensions to ISO 2858 and BS 5257.

The belt drive arrangement facilitates duty changes in situ by varying the pump speed. This can be accomplished by changing the pulley and belt sizes. Motors need only be changed if the new duty exceeds the original margin of power.

The centre line discharge branches and the integral feet which are cast onto the hydraulic casing reduce the effect of and largely eliminate pipe strain being passed to the pedestals to upset the alignment of the rotating element.

Back vanes are an integral part of all the shrouded impellers which ensure hydraulic balance. Impellers are cast in one piece thereby removing stress and corrosion points.

The back pullout design enables the bearing pedestal/seal/impeller module to be withdrawn from the pump body casing without the necessity to break the pipework connections.

The robust drive arrangement is designed to minimise noise or vibration transmission to the system whilst providing ready adjustment to belt tension in a compact unit.

Where sound attenuation is advisable, anti-vibration mountings can be supplied as an optional extra. Maintenance to the unit is minimal using mechanical seals and sealed for life bearings as standard.

SPECIFICATION

Pump Body:	Cast Iron BS 1452 GR260
Impeller:	Gunmetal BS 1400 LG.2C.alternatively Cast Iron BS 1452 GR 260.
Pedestal/Seal Box:	Cast Iron BS 1452 GR 220.
Shaft:	Stainless Steel BS 970 GR 431 S29
Seal:	DIN 24960 Self Adjusting.
Bearings :	Medium series, ball, grease lubricated sealed for life.
Drive:	Belt drive to BS 3790; ISO R 460; DIN 7753.
Motor :	Totally enclosed fan ventilated-or drip proof metric sized foot mounted to BS 5000 and BS 4999.

Pumps can also be supplied with alternative materials of construction. In addition to the hydraulic pressure test to which the pump bodies and covers are subjected, each pump set is tested on our test bed to check (a) the mechanical assembly and (b) the hydraulic performance.

OPERATING CONDITIONS

Pressure:	10 Bar Maximum. Made up of system static plus developed head. Higher pressures can be accommodated-refer to local branch office for details.
Temperature:	Up to 130°C with carbon/ni-resist uncooled mechanical seal. Up to 150°C with carbon/sintered tungsten uncooled mechanical seal. Up to 175°C with water cooled packed gland.

Note: Temperature and pressure limitations are the maximum in each case, not a combination of both.

Pump Flanges:	BS 4504-10Bar rating(16 Bar rating on 150-250 pump).
Motor:	1450 RPM (50 Hz). 1750 RPM (60 Hz).
Rotation:	Anti clockwise viewed on inlet pipe flange.
Discharge:	North only.

APPLICATIONS

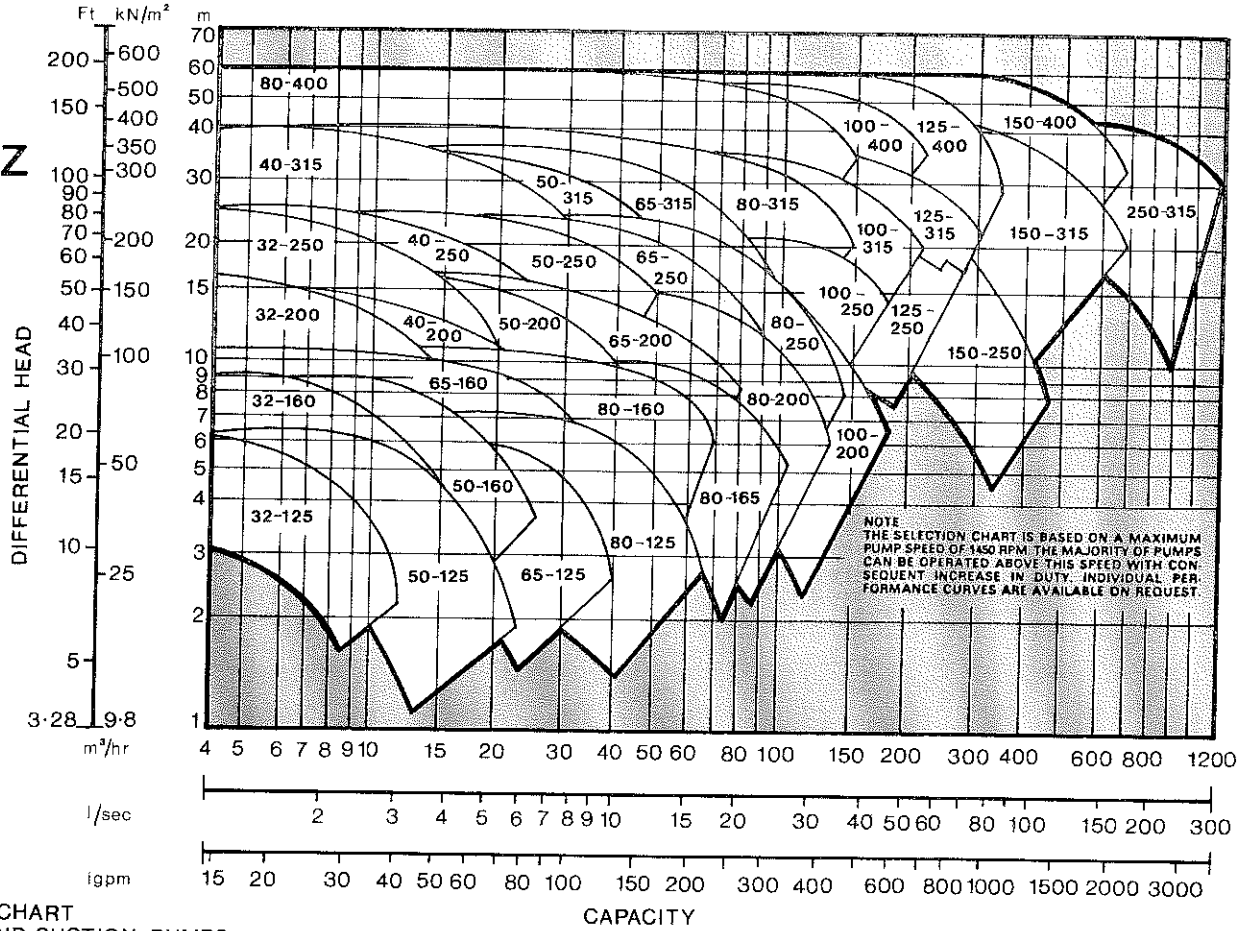
Hot and cold water circulation, process liquid transfer, industrial liquid transfer, boosting and pressurisation installations.

NOTE:-Now Available Uncooled Mechanical Seal Up To 160°C.

Designed and made in Britain to International Standards Organisation(ISO) and British Standards Specifications.

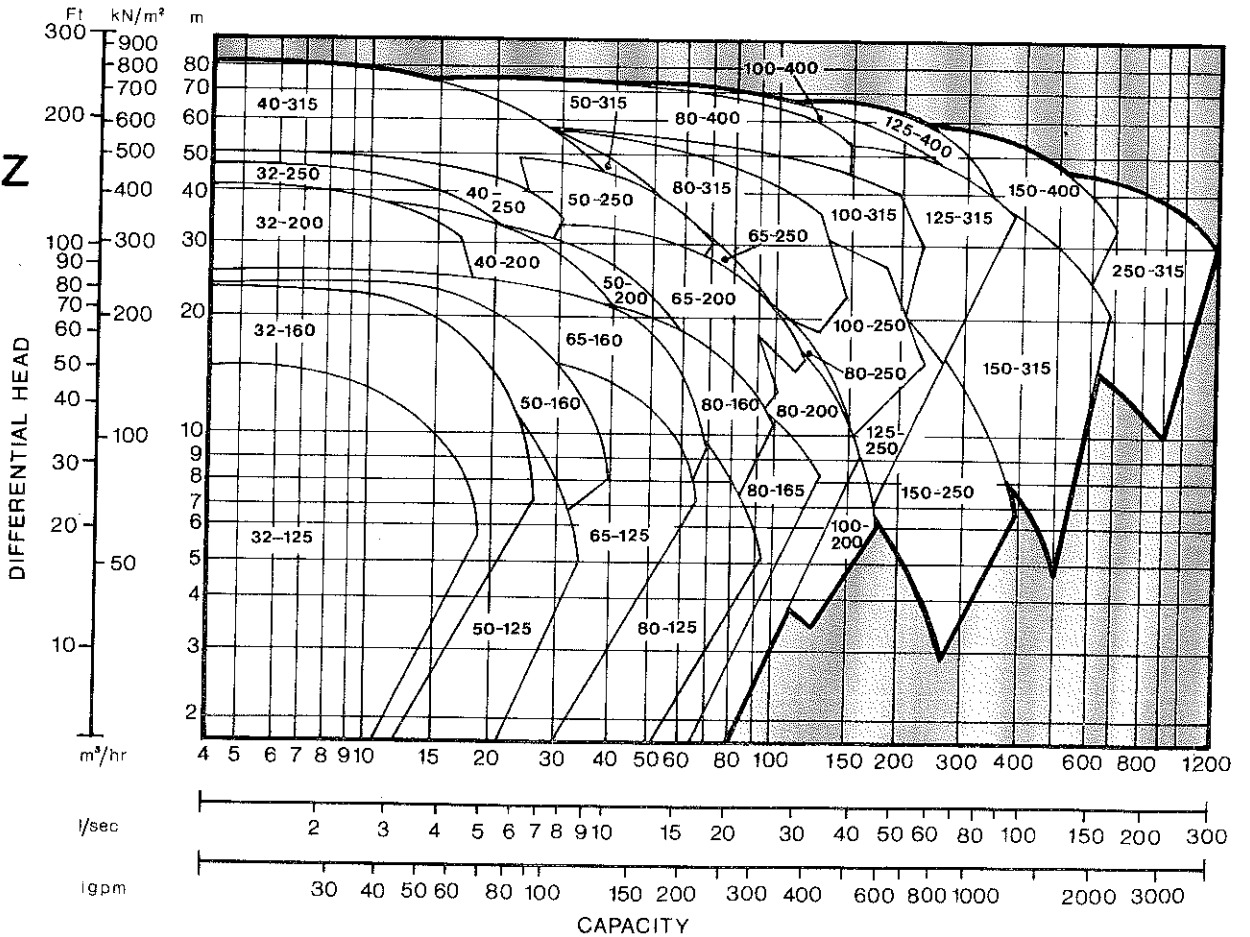
SELECTION CHART
 STARFLEX END SUCTION PUMPS 1450 RPM
 PERFORMANCE ON WATER SG=1.0

50Hz

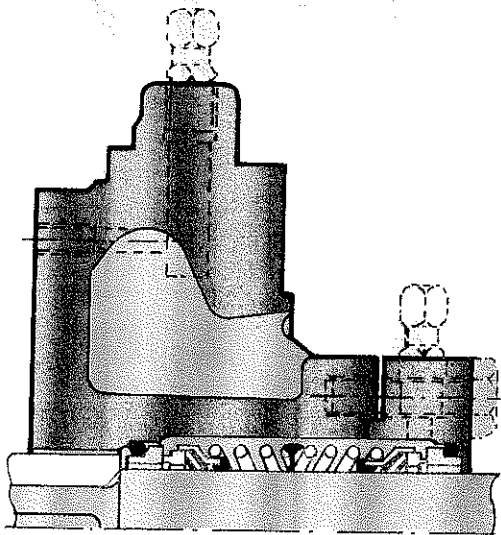
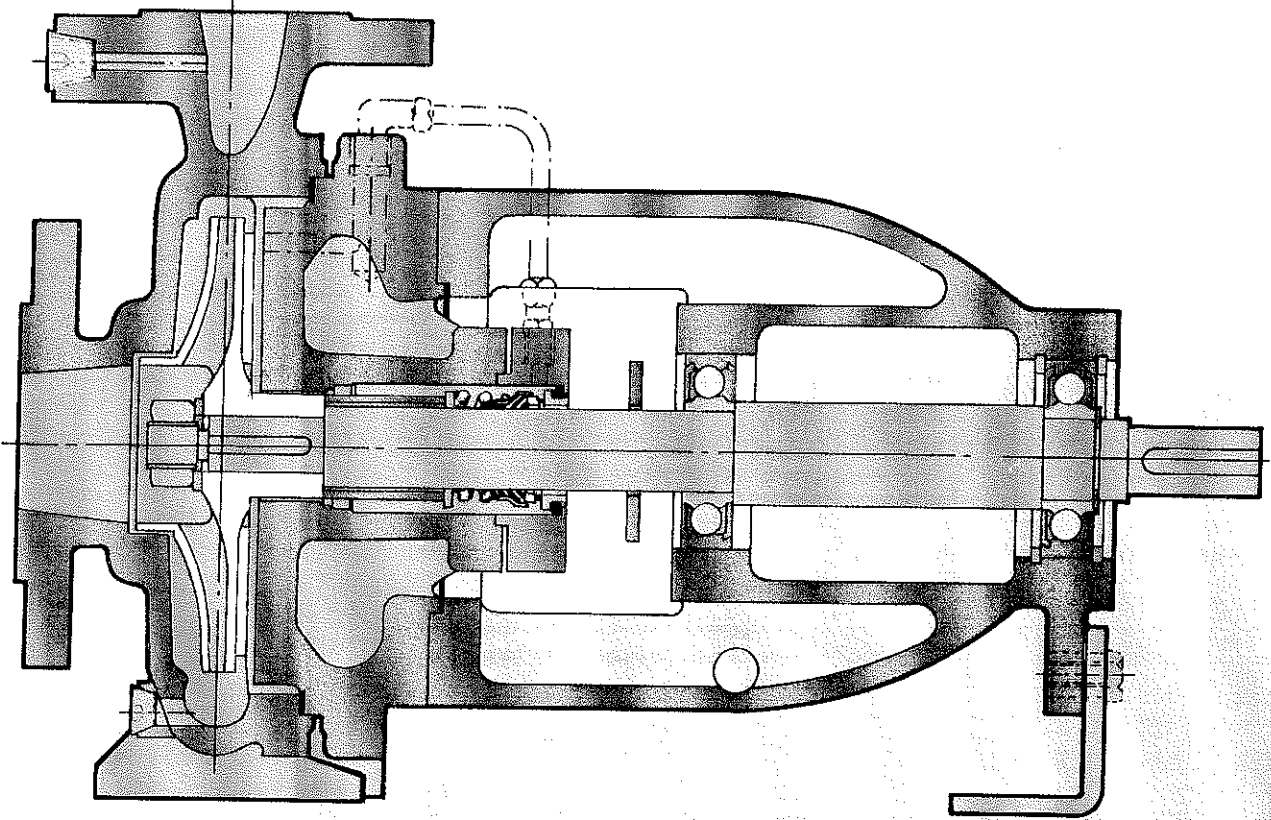


SELECTION CHART
 STARFLEX END SUCTION PUMPS
 PERFORMANCE ON WATER SG=1.0
 MAXIMUM PERMISSIBLE PUMP SPEED

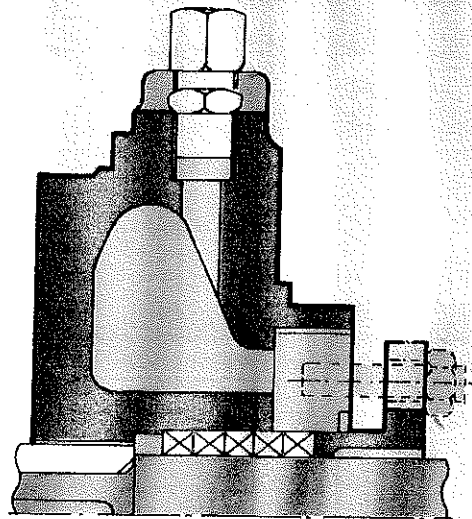
50Hz



TYPICAL SECTION



DOUBLE MECHANICAL SEALS



WATER COOLED PACKED GLAND

DIAGRAM No. 1

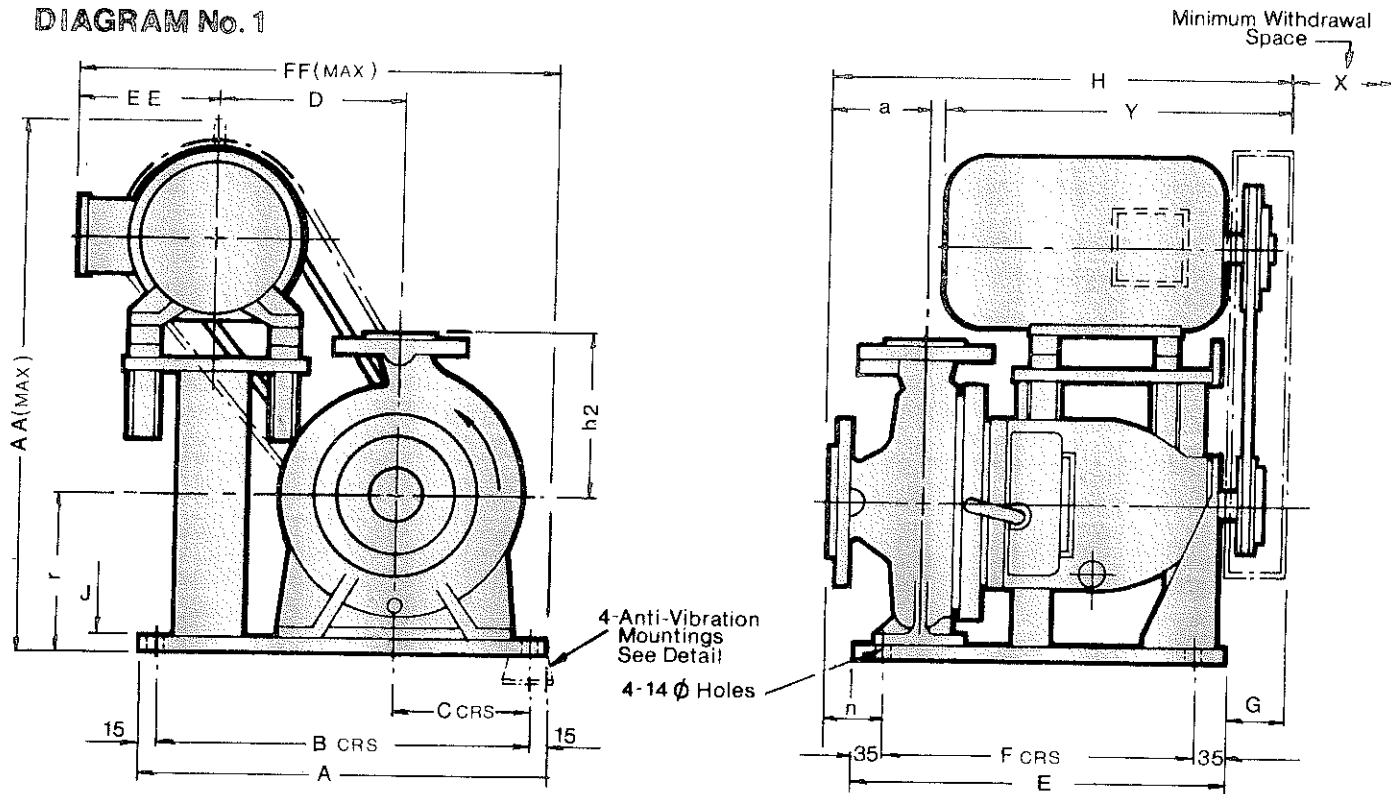
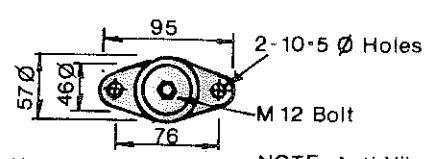
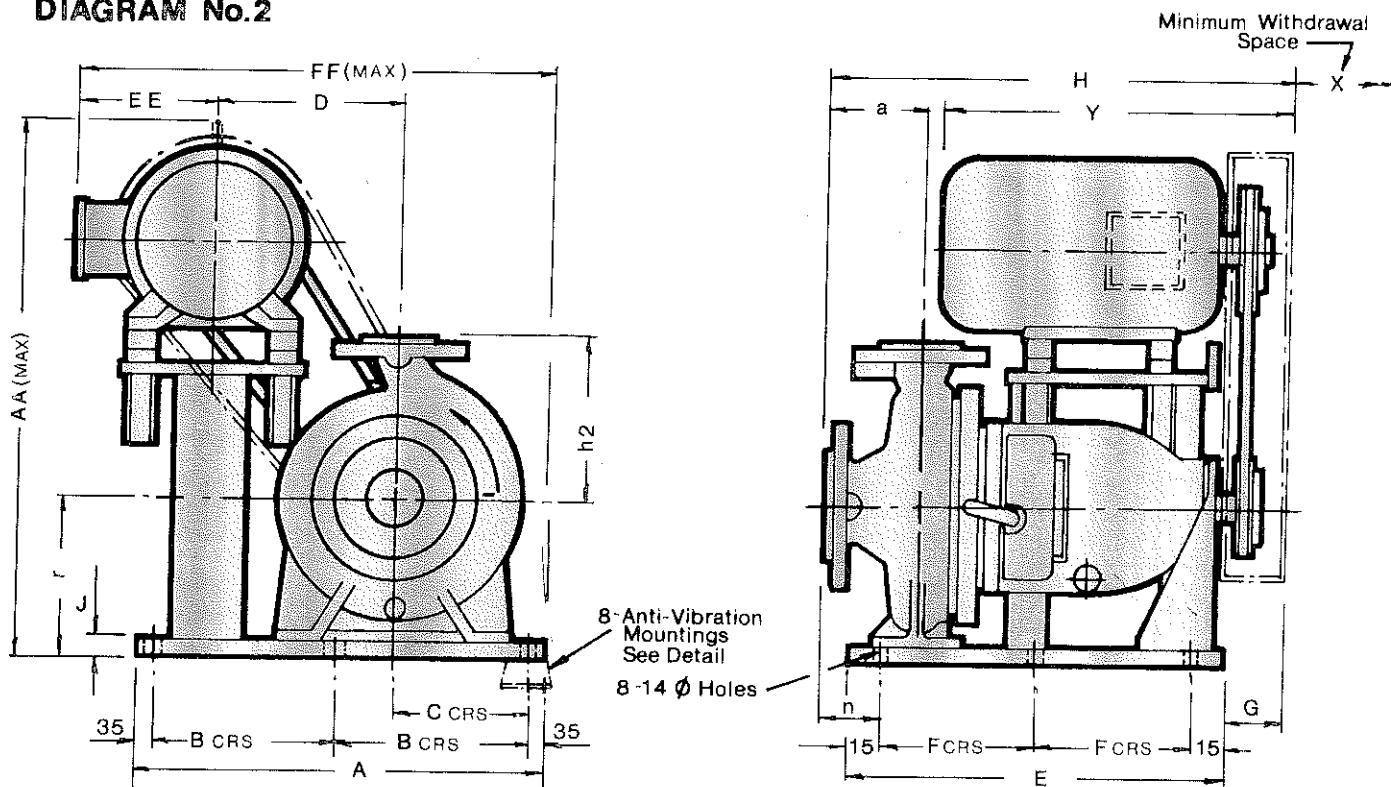
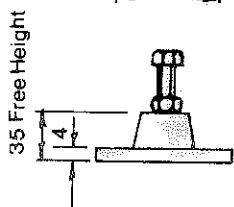


DIAGRAM No. 2



NOTE- Anti Vibration Mountings Only Supplied When Ordered



ANTI-VIBRATION MOUNTING

PUMP DATA						MOTOR & BASEPLATE DATA (BASED ON MAXIMUM FRAME SIZE)																															
PUMP TYPE	Inlet Size	Outlet Size	r	a	h2	No Of Poles	Max Motor Frame	kW Rating	D/Tag No	A	B	C	D	E	F	G	H	J	AA	EE	FF	n	X	Y	Approx Weight Kg												
32-125	50	32	175	80	140	4	D90L	1.5	1	460	430	155	210	420	350	65	490	15	600	140	520	40	120	368	112												
32-160					160		D100L	3.0											615	155	535			388	129												
32-200					180		D132S	5.5											510	480	290			745	690	480	198										
32-250					225		D132M	7.5											650	620	215			340	520	450	125	655	20	900	230	800	45	160	555	297	
40-200	65	40	175	100	180	4	D132S	5.5	1	510	480	155	290	420	350	90	535	15	745	230	690	60	130	480	203												
40-250					225		C160M	11.0											925	255	825			600	291												
40-315					250		C160L	18.5											650	620	215			340	520	450	125	680	20	950	260	830	45	160	630	298	
																														925	255	825	70	645	323		
50-125	65	50	175	80	140	4	D100L	2.2	1	460	430	155	210	420	350	65	490	15	615	155	535	40	120	388	127												
50-160					160		D100L	3.0											615	155	535			135													
50-200					180		D132M	7.5											510	480	290			730	230	690	60	140	520	220							
50-250					225		C160L	15.0											650	620	215			340	520	450	125	680	20	925	255	825	70	160	645	318	
50-315	80	50	245	125	280	4	D160L	15.0	1	650	620	215	340	520	450	125	680	20	950	260	830	70	160	675	361												
50-315					280		C160L												11.0	2	780			320	225	410	580	275	105	25	925	255	825	70	160	645	325
50-315					280		D160L																								1065	255	970	70	160	645	325
50-315					280		D160L																								1090	260	975	70	160	675	368
65-125	80	50	175	100	132	4	D112M	4.0	1	510	480	155	290	420	350	90	535	15				690	205								665	60	140	440	163		
65-160					160		D132S	5.5											745	230	690	480	193														
65-200					225		C160L	15.0											1	650	620	215	340	520	450	125	655	20	925	255	825			45	180	645	292
65-250					250		D160L																						950	260	830			70	160	645	313
65-315	280	C160L	925	255	825	70	160		645	313																											
65-315	280	D160L	950	260	830	70	160		675	356																											
65-315	100	65	245	125	280	4	C160M	11.0	2	780	320	225	410	580	275	105	25	25	1065	255	970	70	200	600	375												
65-315					280		D160M	11.0											1090	260	975			70	200	630	407										
65-315					280		C160M	11.0											1065	255	970			70	200	600	375										
65-315					280		D160M	11.0											1090	260	975			70	200	630	407										
80-125	100	80	175	100	180	4	D112M	4.0	1	510	480	155	290	420	350	90	535	15	690	205	665	60	165	440	165												
80-160					200		D132M	7.5											745	230	690			480	193												
80-165					225		D132M	7.5											745	230	690			480	193												
80-200					250		C160M	11.0											650	620	215			340	520	450	125	680	20	925	255	825	70	170	600	291	
80-250	125	80	245	125	280	4	D160L	15.0	1	650	620	215	340	520	450	125	680	20	950	260	830	70	170	630	323												
80-250					280		C160L	15.0											925	255	825			70	170	645	328										
80-315					315		D160L	15.0											950	260	830			70	170	675	371										
80-315					315		C180M	22.0											720	325	410			105	25	1120	270	985	210	665	404						
80-400	125	80	305	355	355	4	D180L	22.0	2	750	340	225	470	580	275	140	715	25	1140	280	995	10	220	735	476												
80-400					355		C200M												37.0	1230	380			1165	220	750	635										
80-400					355		D225S												37.0	1260	365			1160	220	840	690										
80-400					355		D225S												37.0	1260	365			1160	220	840	690										
100-200	125	100	245	125	280	4	D160M	11.0	1	650	620	215	340	520	450	125	680	20	950	260	830	70	190	630	331												
100-250					315		C160L	18.5											1065	255	970			200	645	371											
100-315					355		D180M	18.5											1140	280	995			200	695	414											
100-400					355		C180L	30.0											1120	270	985			25	220	705	435										
125-250	150	125	305	140	315	4	D200L	30.0	2	750	340	225	580	275	140	730	25	25	1230	360	1145	25	220	820	645												
125-250					355		C250S	75.0											1340	415	1200			220	820	672											
125-315					355		D250M	75.0											1350	410	1195			220	930	754											
125-315					355		C180M	22.0											1120	270	985			210	665	448											
125-400	150	125	340	400	375	4	D180L	22.0	2	750	340	225	470	580	275	140	730	25	1140	280	995	25	220	735	506												
125-400					375		C200M												37.0	1230	380			1165	220	750	616										
125-400					375		D225S												37.0	1260	365			1150	220	840	671										
125-400					375		C250S												75.0	1340	415			1200	230	820	847										
150-250	200	150	305	160	375	4	C180L	30.0	2	720	325	410	580	275	105	715	25	1120	270	985	45	230	705	480													
150-250	200	150	305	160	375	4	D200L	30.0	2	750	340	470	580	275	140	750	25	1230	360	1145	45	230	820	626													

NOTE:

'C' Frame Motors Are Drip Proof Enclosure
'D' Frame Motors Are Totally Enclosed Fan Ventilated

Certified Drawings Will Be Supplied On Application

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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