

A. PUMP FRAME

PUMP	Unit	2HS10	2HS13	3HS10	3HS13	3HS14	4HS11	4HS11L	4HS14	4HS14H	4HS15	4HS16	5HS12	5HS13	5HS15	5HS17	5HS19	6HS10	6HS12	6HS14	6HS15	6HS17	6HS21	6HS23	8HS12	8HS14
1. Discharge size	mm	50	50	80	80	80	100	100	100	100	100	100	125	125	125	125	125	150	150	150	150	150	150	150	200	200
2. Suction size	mm	65	65	100	100	100	125	125	125	125	125	125	150	150	150	150	150	150	200	200	200	200	200	200	200	250
3. Flange rating		PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16
4. Casing Material		BS 1452 Gr. FG 260 as standard. Other grades depending on application.																								
5. Casing Thickness	mm	8	10	9	13	12	10	10	12	12	10	15	10	10	11	12	20	14	12	13	15	14	15	22	12	15
6. No. of stages		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7. Split Flange Gasket	mm	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

B. IMPELLER AND ROTOR

1. Maxm Impeller Diameter	mm	242	325	242	335	356	275	293	350	345	380	410	300	334	360	440	490	255	300	360	372	438	530	580	300	360
2. Weight of Impeller	Kg	25	26	7.5	18.5	21	13	13	26	26	25	26	15	22	27	38	58	14.4	19	29	20.18	32	53	75	22	32
3. Weight of rotating Element	Kg	10	10	10	10	20	10	10	20	10	10	10	10	10	10	28	28	28	10	28	28	28	40	40	28	28
4. Wear Ring clearance dia. (max.)	mm	0.320	0.335	0.320	0.340	0.320	0.290	0.320	0.340	0.320	0.320	0.370	0.320	0.340	0.376	0.340	0.376	0.326	0.376	0.376	0.376	0.376	0.376	0.382	0.376	0.376
Wear Ring clearance dia. (min.)	mm	0.260	0.28	0.260	0.280	0.260	0.230	0.260	0.280	0.260	0.260	0.310	0.260	0.280	0.310	0.280	0.31	0.300	0.310	0.310	0.310	0.310	0.310	0.310	0.310	0.310
5. ID of Casing wear ring	mm	85	95	102	137	140	135	150	144	150	154	164	165	180	180	175	170	180	180	205	189	198	212	183	195	230
6. Impeller Eye Diameter	mm	80	89	92	108	130	114	150	123	119	130	140	144	150	158	151	140	150	154	176	168	170	183	155	172	200
7. Impeller Eye Area/ per Eye	Sq cm	23.84	35.79	40.06	53	106.3	76	150	80	85	106	128	136	150	169.5	140.5	115.5	138.2	160	204.8	183	189	201	126.5	194	276
8. GD ^2 for Maximum Diameter	Kg.m2	0.57	1.04	0.57	1.1	1.24	0.53	0.61	0.81	0.73	1	1.53	0.81	1.10	1.90	2.60	3.56	0.59	1.2	2.4	2.00	3.1	5.9	6.0	1.6	3.4

C. SHAFT AND BEARINGS

SHAFT GROUP		1	1	1	1	2	1	1	2	1	1	1	1	1	1	2	2	2	1	2	2	2	3	3	2	2
1. Shaft diameter at Impeller	mm	40	40	40	40	51	40	40	51	40	40	40	40	40	40	51	51	51	40	51	51	51	64	64	51	51
2. Shaft diameter at coupling	mm	29	29	29	29	39	29	29	39	29	29	29	29	29	29	39	39	39	29	39	39	39	54	54	39	39
3. Bearing Centres	mm	660	660	660	660	820	660	660	820	660	660	660	660	660	660	660	820	820	660	820	820	820	870	870	820	820
4. 1st Critical Speed	RPM	10000	8100	10000	4040	7140	5000	5000	3530	3530	3530	3500	4650	3820	3460	3420	2770	4200	4130	3920	4700	3730	4500	3780	6204	5140
5. Bearing size drive end		6306	6306	6306	6308	6306	6306	6306	6308	6306	6306	6306	6306	6306	6306	6308	6308	6308	6306	6308	6308	6308	6311	6311	6308	6308
6. Bearing size non-drive end		6306	6306	6306	6308	6306	6306	6306	6308	6306	6306	6306	6306	6306	6306	6308	6308	6308	6306	6308	6308	6308	6311	6311	6308	6308

D. STUFFING BOX

1. Inside Diameter	mm	73	73	73	89	73	73	73	89	73	73	73	73	73	73	89	89	89	73	89	89	89	105	105	89	89
2. Depth of Box	mm	72	72	72	80	72	72	72	80	72	72	72	72	72	72	80	80	80	72	80	80	80	112	112	80	80
3. Size of Packing	mm Sq.	10	10	10	12	10	10	10	12	10	10	10	10	10	10	12	12	12	10	12	12	12	16	16	12	12
4. No. of rings per Box		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5. Sleeve Diameter at Box	mm	53	53	53	65	53	53	53	65	53	53	53	53	53	53	65	65	65	53	65	65	65	73	73	65	65
6. Mech. Seal Size(Burgmann or eqv)	mm	35	35	35	45	35	35	35	45	35	35	35	35	35	35	45	45	45	35	45	45	45	60	60	45	45

E. SERVICE LIMITS

1. Maxm working pressure	Bar	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	20	16	16
2. Maxm Hydrotest pressure	Bar	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	30	24	24
3. Maxm Suction pressure	Bar	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
4. Maxm Temp packing	°Celcius	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
5. Max Temp Mech seal	°Celcius	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
6. Maxm Speed	RPM	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800

A. PUMP FRAME

PUMP	Unit	8HS15	8HS16	8HS17	8HS18TA	8HS18TB	8HS21TA	8HS21TAK	8HS21TB	8HS22	8HS26	10HS12	10HS13	10HS13L	10HS15	10HS15L	10HS17	10HS17L	10HS20	10HS22	10HS27	12HS13	12HS15	12HS16	12HS18	12HS22	
1. Discharge size	mm	200	200	200	200	200	200	200	200	200	200	250	250	250	250	250	250	250	250	300	250	250	300	300	300	300	300
2. Suction size	mm	250	200	200	250	250	200	250	200	250	250	250	300	300	300	300	300	300	250	300	300	350	350	400	350	350	
3. Flange rating		PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 26	PN 40	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 25	PN 40	PN 16	PN 16	PN 16	PN 16	PN 25	
4. Casing Material		BS 1452 Gr. FG 260 as standard. Other grades depending on application.																									
5. Casing Thickness	mm	16	18	16	15	18	18	22	20	22	23	12	14	14	15	15	18	20	14	17	25	14	20	12	18	20	
6. No. of stages		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
7. Split Flange Gasket	mm	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	

B. IMPELLER AND ROTOR

1. Maxm Impeller Diameter	mm	375	403	440	458	400	537	575	478	556	662	305	334	325	390	390	440	460	526	568	690	325	380	396	462	555.5
2. Weight of Impeller	Kg	32.55	27	49	44	44	50.6	63.1	50.6	92	125	25	32	27	53	42	42	46	60.3	98	125	40	43	62	67	101
3. Weight of rotating Element	Kg	40	28	40	40	40	40	40	40	65	65	25	40	40	40	40	40	40	65	65	72	40	40	62	65	65
4. Wear Ring clearance dia. (max.)	mm	0.376	0.382	0.376	0.376	0.376	0.376	0.356	0.376	0.400	0.430	0.400	0.400	0.382	0.400	0.400	0.400	0.400	0.440	0.440	0.517	0.370	0.440	0.470	0.430	0.472
Wear Ring clearance dia. (min.)	mm	0.310	0.310	0.310	0.310	0.310	0.310	0.330	0.310	0.340	0.390	0.340	0.340	0.310	0.340	0.340	0.340	0.340	0.350	0.350	0.430	0.310	0.350	0.400	0.350	0.400
5. ID of Casing wear ring	mm	225	210	230	235	235	215	245	215	250	240	230	252	252	252	252	260	258	270	288	289	260	280	308	296	305
6. Impeller Eye Diameter	mm	200	197	196	208	183	186	215	186	218	212	203	219	219	222	222	230	226	230	250	246	228	248	276	256	271
7. Impeller Eye Area/ per Eye	Sq cm	255	266.5	239.5	278	278	210	299.5	209.5	278	258	285	314.5	314.5	325	325	353	338.8	320.5	396	359	344.5	421	536	419.5	480
8. GD ^2 for Maximum Diameter	Kg.m2	3.9	3.6	4.6	6.6	4.9	8.5	8.9	5.6	10.4	13.5	2.1	3.8	2.9	5.8	4.8	8.5	8.6	10.2	17.8	21.2	4.2	6.8	8	10	20.3

C. SHAFT AND BEARINGS

SHAFT GROUP		3	2	3	3	3	3	3	3	4	4	2	3	3	3	3	3	3	4	4	5	3	3	3	4	4
1. Shaft diameter at Impeller	mm	64	51	64	64	64	64	64	64	81	81	51	64	64	64	64	64	64	81	81	90	64	64	64	81	81
2. Shaft diameter at coupling	mm	54	39	54	54	54	54	54	54	69	69	39	54	54	54	54	54	54	69	69	79	54	54	54	69	69
3. Bearing Centres	mm	870	820	870	870	870	870	870	870	985	985	820	820	870	870	870	870	870	985	985	1111	920	870	980	985	985
4. 1st Critical Speed	RPM	5740	5600	4675	4930	4930	4600	4120	4600	4490	3840	4220	5790	6300	4500	5050	5050	4820	5530	4340	4070	5170	4990	4157	5250	4280
5. Bearing size drive end		6311	6308	6311	6311	6311	6311	6311	6311	6314	6314	6308	6311	6311	6311	6311	6311	6311	6314	6314	6316	6311	6311	6311	6314	6314
6. Bearing size non-drive end		6311	6308	6311	6311	6311	6311	6311	6311	6314	6314	6308	6311	6311	6311	6311	6311	6311	6314	6314	6316	6311	6311	6311	6314	6314

D. STUFFING BOX

1. Inside Diameter	mm	105	89	105	105	105	105	105	105	89	89	89	105	105	105	105	105	105	125	125	145	105	105	105	125	125
2. Depth of Box	mm	112	80	112	112	112	112	112	112	80	80	80	112	112	112	112	112	112	115	115	140	112	112	112	115	115
3. Size of Packing	mm Sq.	16	12	16	16	16	16	16	16	12	12	12	16	16	16	16	16	16	16	16	20	16	16	16	16	16
4. No. of rings per Box		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5. Sleeve Diameter at Box	mm	73	65	73	73	73	73	73	73	65	65	65	73	73	73	73	73	73	93	93	105	73	73	73	93	93
6. Mech. Seal Size(Burgmann or eqv)	mm	60	45	60	60	60	60	60	60	45	45	45	60	60	60	60	60	60	75	75	85	60	60	60	75	75

E. SERVICE LIMITS

1. Maxm working pressure	Bar	16	16	16	16	16	20	20	16	20	25	16	16	16	16	16	16	16	20	20	27	16	16	16	16	20
2. Maxm Hydrotest pressure	Bar	24	24	24	24	24	30	30	24	30	37.5	24	24	24	24	24	24	24	30	30	40.5	24	24	24	24	30
3. Maxm Suction pressure	Bar	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
4. Maxm Temp packing	°Celcius	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
5. Max Temp Mech seal	°Celcius	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
6. Maxm Speed	RPM	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800

A. PUMP FRAME

PUMP	Unit	12HS23	12HS26	14HS16	14HS19	14HS21	14HS24	14HS25	14HS26	14HS28	14HS30	16HS21	16HS21H	16HS21L	16HS26	16HS28	16HS32	18HS18	18HS21	18HS25	18HS30	20HS19	20HS23	20HS25	20HS27	20HS31
1. Discharge size	mm	300	300	350	350	350	350	350	350	350	350	400	400	400	400	400	400	450	450	450	450	500	500	500	500	500
2. Suction size	mm	350	350	400	450	400	400	400	400	450	450	500	500	500	500	450	500	500	500	500	500	600	600	600	600	600
3. Flange rating		PN 25	PN 40	PN 16	PN 16	PN 16	PN 40	PN 25	PN 16	PN 25	PN 25	PN 16	PN 16	PN 16	PN 40	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16	PN 16
4. Casing Material		BS 1452 Gr. FG 260 as standard. Other grades depending on application.																								
5. Casing Thickness	mm	22	19	19	15	16	25	22	26	26	26	16	16	16	27	25	27	14	23	27	22	25	23	26	25	30
6. No. of stages		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7. Split Flange Gasket	mm	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

B. IMPELLER AND ROTOR

1. Maxm Impeller Diameter	mm	595	660	420	475	550	610	640	642	710	770	540	540	540	662	700	813	446	530	632	750	480	580	630	675	780
2. Weight of Impeller	Kg	125	116	60	76	95	138	152	160	165	170	82	105	112	185	200	220	79	115	145	155	170	185	192	195	230
3. Weight of rotating Element	Kg	140	110	65	65	72	72	72	110	110	140	65	65	65	140	72	110	125	110	110	140	110	140	140	140	140
4. Wear Ring clearance dia. (max.)	mm	0.507	0.512	0.472	0.472	0.577	0.577	0.537	0.577	0.577	0.587	0.607	0.577	0.577	0.577	0.537	0.577	0.457	0.577	0.577	0.577	0.577	0.577	0.577	0.587	0.587
Wear Ring clearance dia. (min.)	mm	0.430	0.430	0.400	0.400	0.470	0.470	0.430	0.520	0.520	0.510	0.510	0.470	0.470	0.470	0.430	0.520	0.420	0.520	0.520	0.470	0.520	0.470	0.470	0.510	0.510
5. ID of Casing wear ring	mm	360	312	316	312	360	340	380	322	330	345	335	340	340	360	400	360	388	414.5	424	418	420	420	445	440	477
6. Impeller Eye Diameter	mm	315	260	304	280	320	300	316	290	332	383	300	300	270	310	345	416	342	363	361	368	372	375	400	390	460
7. Impeller Eye Area/ per Eye	Sq cm	636	394	319.5	521	687.5	590	667.5	523.5	729	1010	612	612	477.5	612	818	1223	823.6	898	886.5	920.5	950	961.5	1356	1051.5	1519
8. GD ^2 for Maximum Diameter	Kg.m2	24.8	27.5	11.2	12.2	37.2	23.2	39.2	29	39.2	52	35.5	34.7	28.1	32.7	57.4	77	13.2	32.4	52.7	72.4	35.3	46.7	67.6	75.7	112.6

C. SHAFT AND BEARINGS

SHAFT GROUP		7	6	4	4	5	5	5	6	6	7	4	4	4	7	5	6	4	6	6	7	6	7	7	7	7
1. Shaft diameter at Impeller	mm	111	101	81	81	90	90	90	101	101	111	81	81	81	111	90	101	80	101	101	111	101	111	111	111	111
2. Shaft diameter at coupling	mm	94	89	69	69	79	79	79	89	89	94	69	69	69	94	79	89	69	89	89	94	89	94	94	94	94
3. Bearing Centres	mm	1383	1120	985	985	1111	1111	1111	1120	1120	1383	985	985	985	1383	1111	1120	1120	1120	1383	1383	1120	1383	1383	1383	1383
4. 1st Critical Speed	RPM	4570	4880	5390	4790	4090	3670	3490	3400	3600	3500	4080	3020	2900	3486	2820	3770	4040	3900	3600	3700	3010	2910	3020	2890	2840
5. Bearing size drive end		6319	6318	6314	6314	6316	6316	6316	6318	6318	6319	6314	6314	6314	6319	6316	6318	6314	6318	6318	6319	6318	6319	6319	6319	6319
6. Bearing size non-drive end		6319	6318	6314	6314	6316	6316	6316	6318	6318	6319	6314	6314	6314	6319	6316	6318	6314	6318	6318	6319	6318	6319	6319	6319	6319

D. STUFFING BOX

1. Inside Diameter	mm	170	155	125	125	145	145	145	155	155	170	125	125	125	170	145	155	125	155	155	170	155	170	170	170	170
2. Depth of Box	mm	145	140	115	115	140	140	140	140	140	145	115	115	115	140	140	140	160	140	140	145	140	145	145	145	145
3. Size of Packing	mm Sq.	20	20	16	16	20	20	20	20	20	20	16	16	16	20	20	20	16	20	20	20	20	20	20	20	20
4. No. of rings per Box		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5. Sleeve Diameter at Box	mm	130	115	93	93	105	105	105	115	115	130	93	93	93	130	105	115	93	115	115	130	115	130	130	130	130
6. Mech. Seal Size(Burgmann or eqv)	mm	100	95	75	75	85	85	85	95	95	100	75	75	75	100	85	95	79	95	95	100	95	100	100	100	100

E. SERVICE LIMITS

1. Maxm working pressure	Bar	20	25	16	16	16	25	20	16	20	20	16	16	16	25	16	16	16	16	16	16	16	16	16	16	16
2. Maxm Hydrotest pressure	Bar	30	37.5	24	24	24	37.5	30	24	30	30	24	24	24	37.5	24	24	24	24	24	24	24	24	24	24	24
3. Maxm Suction pressure	Bar	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
4. Maxm Temp packing	°Celcius	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
5. Max Temp Mech seal	°Celcius	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
6. Maxm Speed	RPM	1800	1800	1500	1800	1500	1800	1500	1500	1500	1500	1200	1200	1200	1800	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000