SUTEKSAN

EGYPT

Certificates

CERTIFIED
ISO 2858:2010
End-suction centrifugal pumps (rating 16 bar)
certified by GQC ltd.
www.gqcl.co.uk

SASO

CERTIFIED
ISO 5199:2003
Technical specifications for centrifugal pumps – Class II –
certified by GQC ltd.
www.gqcl.co.uk

CERTIFIED
ISO 9001:2015
Quality Management Systems
certified by GQC ltd.
www.gqcl.co.uk

CE

CERTIFIED
ISO 9906:2012
Rotodynamic pumps, Hydraulic performance acceptance tests, – Grades 1, 2 and 3 –
certified by GQC ltd.
www.gqcl.co.uk

General Information

01 PUMPED LIQUIDS

Clean.

Thin.

non-aggressive liquids without solid particles or fibers.

The max. sand content is 50 mg/lit.

02 INTERNATIONAL CERTIFICATES

All products meet international standards.

ISO 5199:2003

ISO 2858:2010

ISO 9906:2012

ISO 9001:2015

CE

SASO

03 CURVE CONDITIONS

The performance curves show pump performance at actual speed cf. standard motor range.

The speed of the motors is approximate:

4" and 6" motors: n=2870 min-1

8" to 12" motors: n=2900 min-1

The measurements were made with airless water at a temperature of 30°C.

The colored section of the table indicates the recommended performance range.

The performance curves are inclusive of possible losses ± 5%.

Rewindable motor

Single-phase: 220 - 240V/50Hz

Three-phase: 380 - 415V/50Hz

Equip with start control box or digital auto-control box Pumps are designed by casing stressed

NEMA dimension standards.

General
Information

TYPE KEY

Suteksan Egypt

MODEL	SEP 8160 / 03 K		
H - M	59 - 35		
Q - m³/h	140 - 200		
HP	50	KW	37
Frequency	50 Hz		
Speed	2900 rpm		
S.N.	20XXXXXX-56XXX		

STAINLESS STEEL SUBMERSIBLE PUMP

MADE IN EGYPT CE

Example ———— SEP 8-160 / 03 - K

- SEP — Product Type
- 8 — Pump Diameter
- 160 — Rated Flow (m^3/h)
- 03 — Stages
- K — Material Options

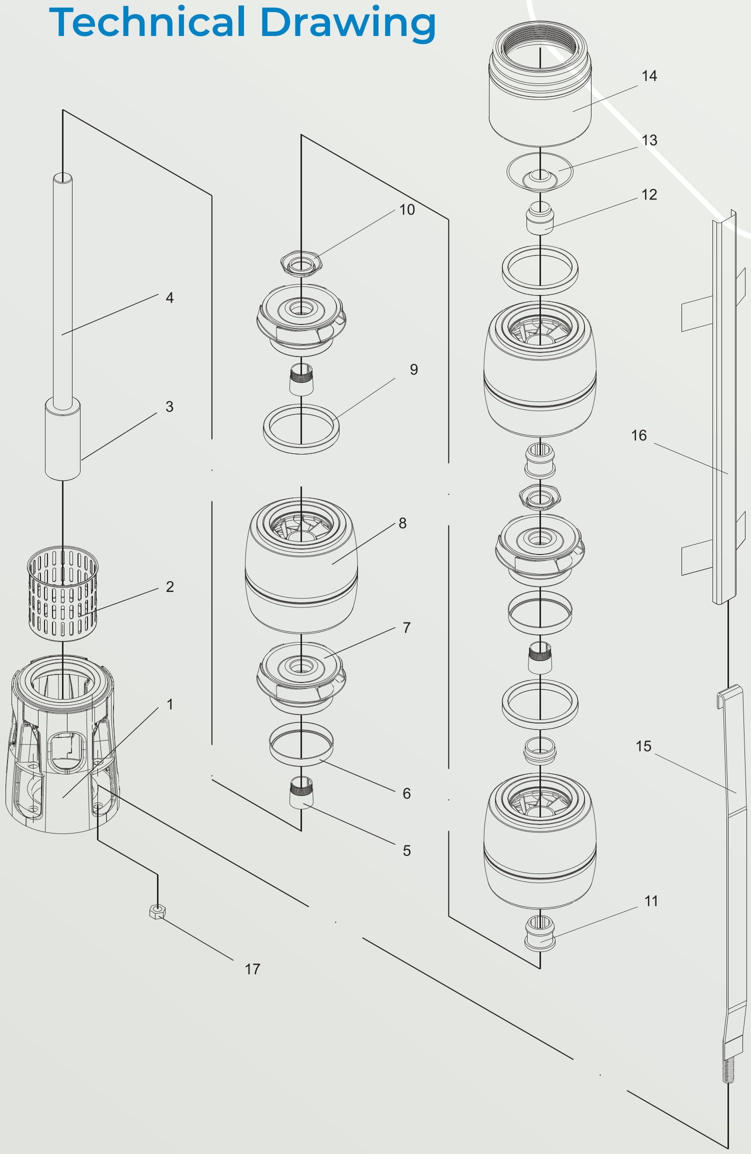
Material Data

Part List

Nº	Part Name	Material
1	Suction Stage	Stainless Steel (AISI 304L)
2	Filter	Stainless Steel (AISI 304L)
3	Coupling	Stainless Steel (AISI 304L)
4	Pump Shaft	Stainless Steel (AISI 420 - 304L)
5	Impeller Lock	Stainless Steel (AISI 304L)
6	Impeller Rings	Stainless Steel (AISI 304L)
7	Impeller	Stainless Steel (AISI 304L)
8	Diffuser	Stainless Steel (AISI 304L)
9	Diffuser Ring	Rubber

Nº	Part Name	Material
10	Nut For Impeller Lock	Stainless Steel (AISI 304L)
11	Shaft Bearing	Rubber
12	Shaft Stopper	Stainless Steel (AISI 304L)
13	Valve	Stainless Steel (AISI 304L)
14	Outlet	Stainless Steel (AISI 304L)
15	Strap	Stainless Steel (AISI 304L)
16	Cable Guard	Stainless Steel (AISI 304L)
17	Strap Nut	Stainless Steel (AISI 304L)

Technical Drawing

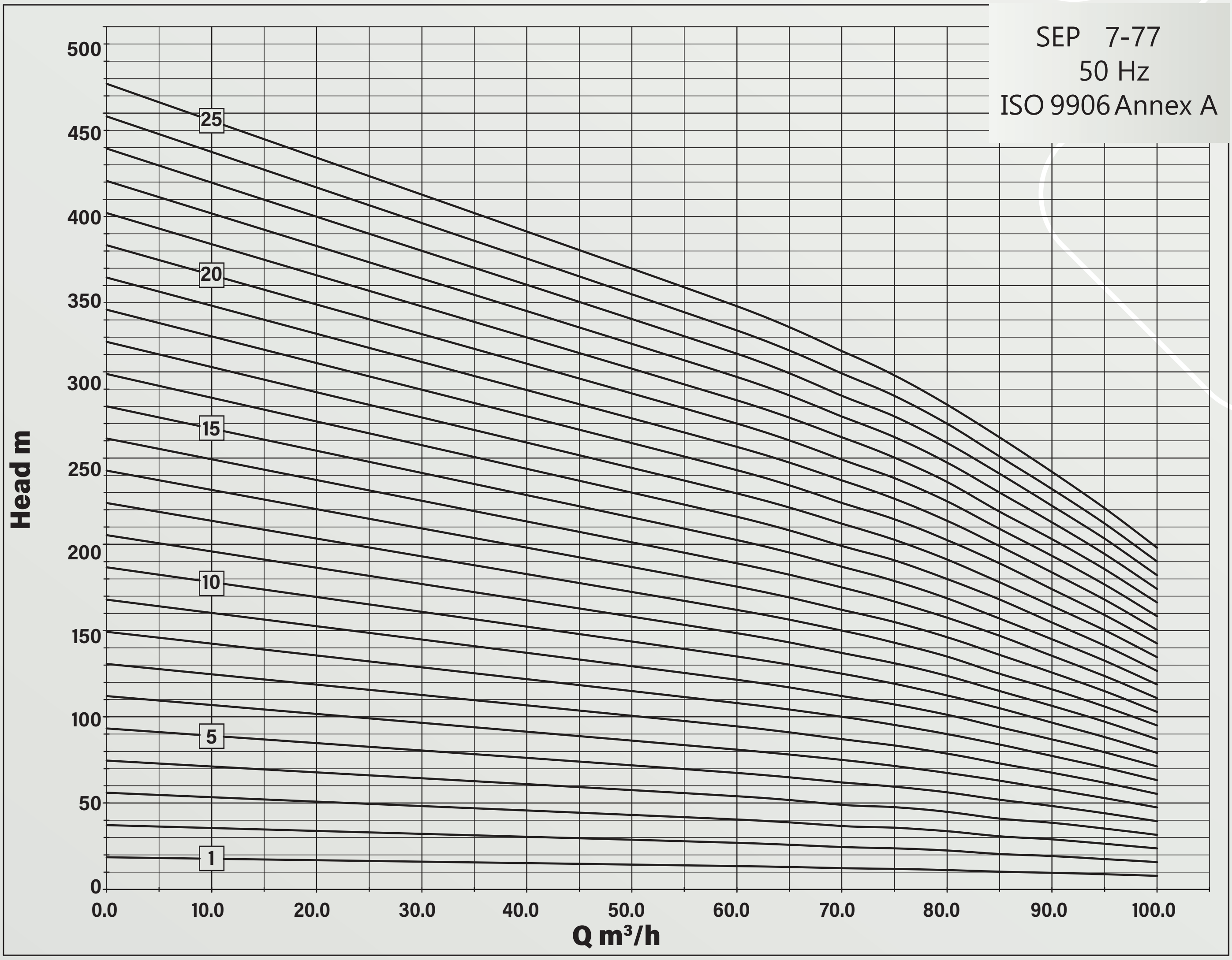


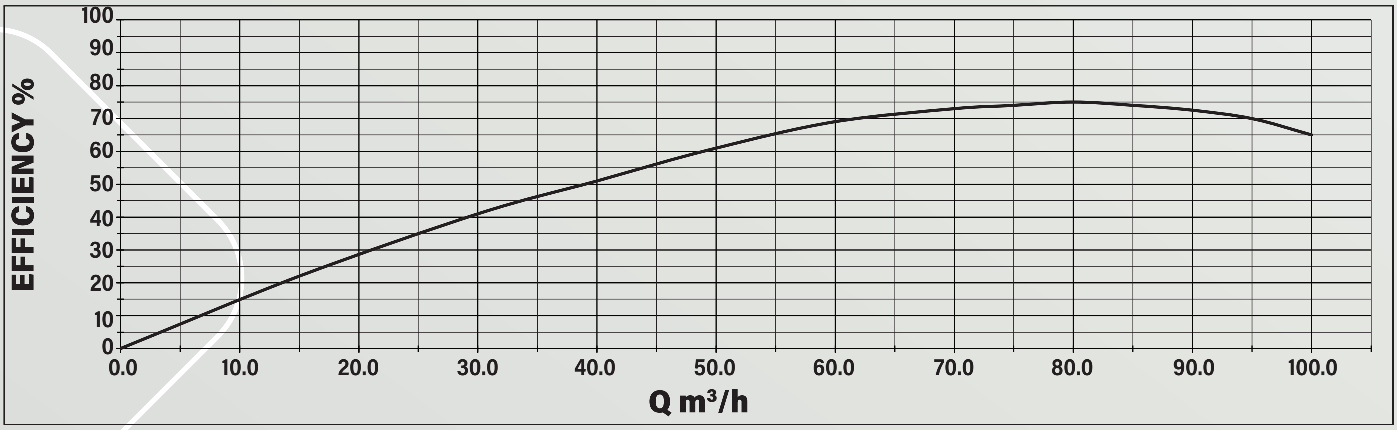
SEP 7”
Pump Series

STAINLESS STEEL SUBMERSIBLE
SEP 7-77 SERIES

Stainless Steel Submersible Pumps / SEP 7-77 Series															50 Hz
Pump Type	power		Flow										Pump Weight	Pump length	Outlet
			m³/h	0.0	60.0	70.0	75.0	80.0	85.0	90.0	95.0	100.0			
	Kw	Hp	l/s	0.00	16.67	19.44	20.83	22.22	23.61	25.00	26.39	27.78	Kg	cm	Inch
SEP 7-77/ 01	3	4		19	14	12	12	11	10	10	9	8	19	55	
SEP 7-77/ 02	5.5	7.5		37	27	25	24	23	21	19	18	16	23	68	
SEP 7-77/ 03	9.2	12.5		56	41	37	36	34	31	29	26	24	27	81	
SEP 7-77/ 04	11	15		75	54	49	48	45	41	39	35	32	31	94	
SEP 7-77/ 05	15	20		93	68	62	60	56	52	48	44	40	35	107	
SEP 7-77/ 06	18.5	25		112	81	75	71	68	63	58	53	47	38	119	
SEP 7-77/ 07	22	30		131	95	87	83	79	73	68	62	55	42	132	
SEP 7-77/ 08	26	35		149	108	100	95	90	84	77	71	63	46	145	
SEP 7-77/ 09	30	40		168	122	112	107	101	94	87	79	71	50	158	
SEP 7-77/ 10	37	50		187	135	125	119	113	105	97	88	79	54	171	
SEP 7-77/ 11	37	50		205	149	137	131	124	115	106	97	87	57	183	
SEP 7-77/ 12	45	60		224	162	150	143	135	125	116	106	95	61	196	
SEP 7-77/ 13	45	60	Head m	243	176	162	155	146	136	126	115	103	65	209	5"
SEP 7-77/ 14	45	60		261	189	175	167	158	147	135	124	111	69	222	
SEP 7-77/ 15	52	70		280	203	187	179	169	157	145	133	119	73	235	
SEP 7-77/ 16	52	70		299	216	199	191	180	168	155	141	127	76	247	
SEP 7-77/ 17	55	75		317	230	212	203	191	178	164	150	135	80	260	
SEP 7-77/ 18	59	80		336	243	224	215	203	189	174	159	143	84	273	
SEP 7-77/ 19	59	80		355	257	237	226	214	199	184	168	150	88	286	
SEP 7-77/ 20	66	90		373	270	249	238	225	209	193	177	158	92	299	
SEP 7-77/ 21	75	100		392	284	262	250	236	219	203	186	166	95	311	
SEP 7-77/ 22	75	100		411	297	274	262	248	230	213	194	174	99	324	
SEP 7-77/ 23	75	100		429	311	286	274	259	241	222	203	182	103	337	
SEP 7-77/ 24	81	110		448	324	299	286	270	251	232	212	190	107	350	
SEP 7-77/ 25	92	125		467	338	312	298	281	262	242	221	198	111	363	

STAINLESS STEEL SUBMERSIBLE
SEP 7-77 SERIES



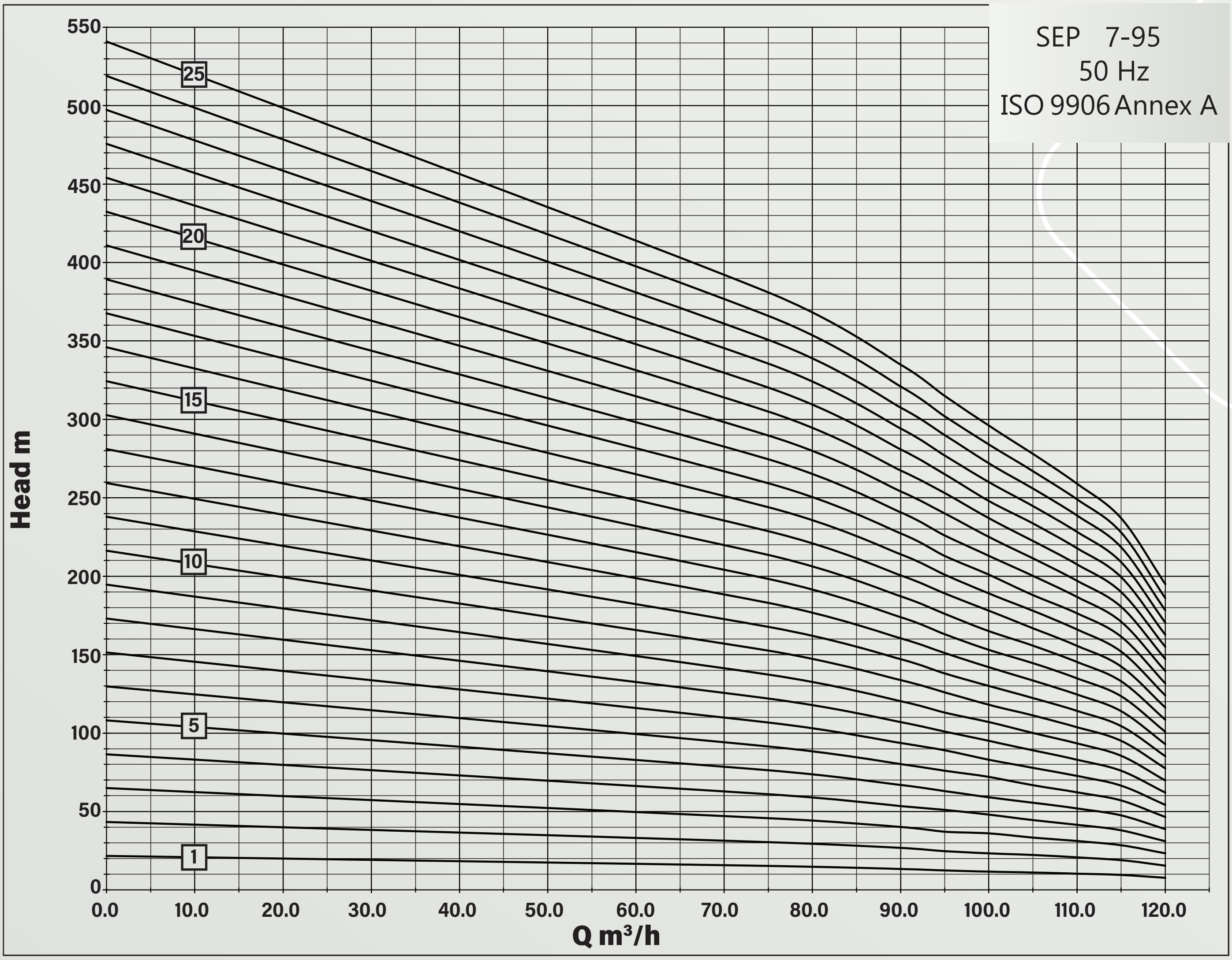


STAINLESS STEEL SUBMERSIBLE

SEP 7-95 SERIES

Stainless Steel Submersible Pumps / SEP 7-95 Series															50 Hz
Pump Type	power		Flow										Pump Weight	Pump length	Outlet
			m^3/h	0.0	75.0	90.0	95.0	100.0	105.0	110.0	115.0	120.0			
	Kw	Hp	l/s	0.00	20.83	25.00	26.39	27.78	29.17	30.56	31.94	33.33	Kg	cm	Inch
SEP 7-95/ 01	4	5.5		22	15	13	12	12	11	10	10	8	19	55	
SEP 7-95/ 02	7.5	10		43	31	27	25	23	22	21	19	16	23	68	
SEP 7-95/ 03	11	15		65	46	40	37	36	33	31	29	23	27	81	
SEP 7-95/ 04	15	20		87	61	54	51	48	45	42	38	31	31	94	
SEP 7-95/ 05	22	30		108	76	67	63	59	56	52	48	39	35	107	
SEP 7-95/ 06	26	35		130	92	80	76	72	67	62	57	47	38	119	
SEP 7-95/ 07	30	40		151	107	94	89	83	78	73	67	54	42	132	
SEP 7-95/ 08	37	50		173	122	107	101	95	89	83	76	62	46	145	
SEP 7-95/ 09	45	60		195	137	120	113	107	100	93	86	70	50	158	
SEP 7-95/ 10	45	60		216	153	134	126	118	111	104	95	78	54	171	
SEP 7-95/ 11	45	60		238	168	147	138	130	122	114	105	85	57	183	
SEP 7-95/ 12	52	70		260	183	161	151	142	134	125	114	93	61	196	
SEP 7-95/ 13	59	80	Head m	281	198	174	163	153	145	135	124	101	65	209	5"
SEP 7-95/ 14	59	80		303	214	187	176	165	156	145	133	109	69	222	
SEP 7-95/ 15	66	90		324	229	201	189	178	167	156	143	116	73	235	
SEP 7-95/ 16	75	100		346	244	214	201	189	178	166	152	124	76	247	
SEP 7-95/ 17	75	100		368	259	227	213	201	188	176	162	132	80	260	
SEP 7-95/ 18	81	110		389	275	241	226	213	200	187	171	140	84	273	
SEP 7-95/ 19	92	125		411	290	254	240	225	211	197	181	147	88	286	
SEP 7-95/ 20	92	125		433	305	268	253	237	223	208	190	155	92	299	
SEP 7-95/ 21	92	125		454	320	281	265	248	234	218	200	163	95	311	
SEP 7-95/ 22	110	150		476	336	294	277	260	245	228	209	171	99	324	
SEP 7-95/ 23	110	150		497	351	308	290	272	256	239	219	178	103	337	
SEP 7-95/ 24	110	150		519	366	321	302	284	267	249	228	186	107	350	
SEP 7-95/ 25	110	150		541	381	335	315	296	278	259	237	195	111	363	

STAINLESS STEEL SUBMERSIBLE
SEP 7-95 SERIES



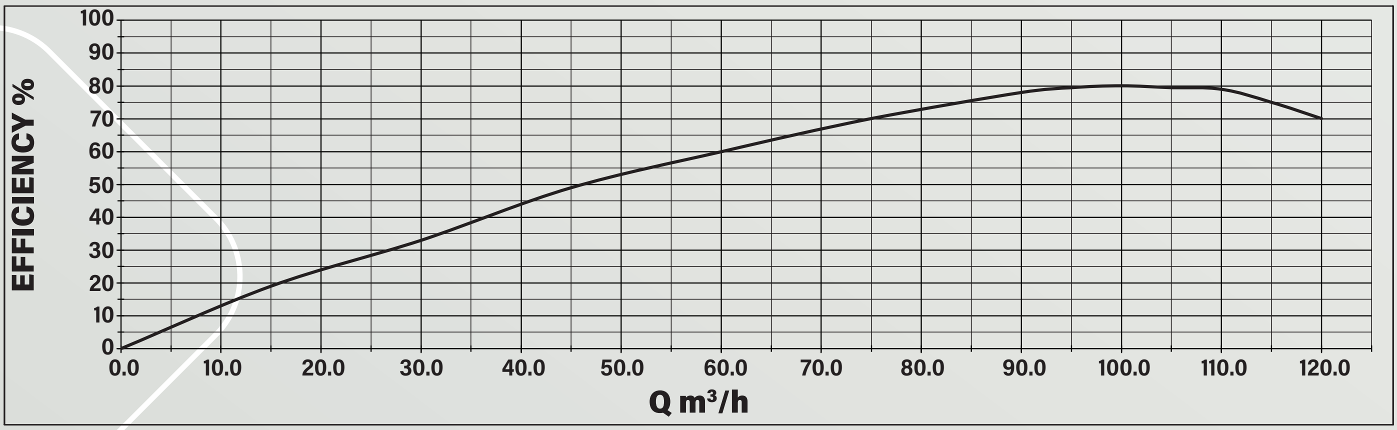


Table of head losses

Head losses in ordinary water pipes

Upper figures indicate the velocity of water in m/sec.

Lower figures indicate head loss in metr es per 100 metres of straight pipes.

Quantity of water			Head losses in ordinary water pipes											
			Nominal pipe diameter in inches and internal diameter in [mm]											
m^3/h	Litres/min.	Litres/sec.	1/2" 15.75	3/4" 21.25	1" 27.00	1 1/4" 35.75	1 1/2" 41.25	2" 52.50	2 1/2" 68.00	3" 80.25	3 1/2" 92.50	4" 105.0	5" 130.0	6" 155.5
0.6	10	0.16	0.855 9.910	0.470 2.407	0.292 0.784									
0.9	15	0.25	1.282 20.11	0.705 4.862	0.438 1.570	0.249 0.416								
1.2	20	0.33	1.710 33.53	0.940 8.035	0.584 2.588	0.331 0.677	0.249 0.346							
1.5	25	0.42	2.138 49.93	1.174 11.91	0.730 3.834	0.415 1.004	0.312 0.510							
1.8	30	0.50	2.565 69.34	1.409 16.50	0.876 5.277	0.498 1.379	0.374 0.700	0.231 0.223						
2.1	35	0.58	2.993 91.54	1.644 21.75	1.022 6.949	0.581 1.811	0.436 0.914	0.269 0.291						
2.4	40	0.67		1.879 27.66	1.168 8.820	0.664 2.290	0.499 1.160	0.308 0.368						
3.0	50	0.83		2.349 41.40	1.460 13.14	0.830 3.403	0.623 1.719	0.385 0.544	0.229 0.159					
3.6	60	1.00		2.819 57.74	1.751 18.28	0.996 4.718	0.748 2.375	0.462 0.751	0.275 0.218					
4.2	70	1.12		3.288 76.49	2.043 24.18	1.162 6.231	0.873 3.132	0.539 0.988	0.321 0.287	0.231 0.131				
4.8	80	1.33			2.335 30.87	1.328 7.940	0.997 3.988	0.616 1.254	0.367 0.363	0.263 6.164				
5.4	90	1.50			2.627 38.30	1.494 9.828	1.122 4.927	0.693 1.551	0.413 0.449	0.269 0.203				
6.0	100	1.67			2.919 46.49	1.660 11.90	1.247 5.972	0.770 1.875	0.459 0.542	0.329 0.244	0.248 0.124			
7.5	125	2.08			3.649 70.41	2.075 17.93	1.558 8.967	0.962 2.802	0.574 0.809	0.412 0.365	0.310 0.185	0.241 0.101		
9.0	150	2.50				2.490 25.11	1.870 12.53	1.154 3.903	0.668 1.124	0.494 0.506	0.372 0.256	0.289 0.140		
10.5	175	2.92				2.904 33.32	2.182 16.66	1.347 5.179	0.803 1.488	0.576 0.670	0.434 0.338	0.337 0.184		
12	200	3.33				3.319 42.75	2.493 21.36	1.539 6.624	0.918 1.901	0.659 0.855	0.496 0.431	0.385 0.234	0.251 0.084	
15	250	4.17				4.149 64.86	3.117 32.32	1.924 10.03	1.147 2.860	0.823 1.282	0.620 0.646	0.481 0.350	0.314 0.126	
18	300	5.00					3.740 45.52	2.309 14.04	1.377 4.009	0.988 1.792	0.744 0.903	0.577 0.488	0.377 0.175	0.263 0.074
24	400	6.67					4.987 78.17	3.078 24.04	1.836 6.828	1.317 3.053	0.992 1.530	0.770 0.829	0.502 0.294	0.351 0.124
30	500	8.33						3.848 36.71	2.295 10.40	1.647 4.622	1.240 2.315	0.962 1.254	0.628 0.445	0.439 0.187
36	600	10.0						4.618 51.84	2.753 14.62	1.976 6.505	1.488 3.261	1.155 1.757	0.753 0.623	0.526 0.260
42	700	11.7							3.212 19.52	2.306 8.693	1.736 4.356	1.347 2.345	0.879 0.831	0.614 0.347
48	800	13.3							3.671 25.20	2.635 11.18	1.984 5.582	1.540 3.009	1.005 1.066	0.702 0.445
54	900	15.0							4.130 31.51	2.964 13.97	2.232 6.983	1.732 3.762	1.130 1.328	0.790 0.555
60	1000	16.7							4.589 38.43	3.294 17.06	2.480 8.521	1.925 4.595	1.256 1.616	0.877 0.674
75	1250	20.8								4.117 26.10	3.100 13.00	2.406 7.010	1.570 2.458	1.097 1.027
90	1500	25.0								4.941 36.97	3.720 18.42	2.887 9.892	1.883 3.468	1.316 1.444
105	1750	29.2									4.340 24.76	3.368 13.30	2.197 4.665	1.535 1.934
120	2000	33.3									4.960 31.94	3.850 17.16	2.511 5.995	1.754 2.496
150	2500	41.7										4.812 26.26	3.139 9.216	2.193 3.807
180	3000	50.0											3.767 13.05	2.632 5.417
240	4000	66.7											5.023 22.72	3.509 8.926
300	5000	83.3												4.386 14.42
90 ° bends, slide valves			1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.6	1.7	2.0	2.5
T-pieces, non-return valves			4.0	4.0	4.0	5.0	5.0	5.0	6.0	6.0	6.0	7.0	8.0	9.0

The table is calculated in accordance with H. Lang's new formula a = 0.02 and for a water temperature of 10 °C.
The head loss in bends, slide valves, T-pieces and non-return valves is equivalent to the metres of straight pipes stated in the last two lines of the table.
To find the head loss in foot valves, multiply the loss in T-pieces by two.

Head losses in plastic pipes

Upper figures indicate the velocity of water in m/sec.
Lower figures indicate head loss in metres per 100 metres of straight pipes.

Quantity of water			PELM/PEH PN 10											
			PELM					PEH						
m^3/h	Litres/min.	Litres/sec.	25 20.4	32 26.2	40 32.6	50 40.8	63 51.4	75 61.4	90 73.6	110 90.0	125 102.2	140 114.6	160 130.8	180 147.2
0.6	10	0.16	0.49 1.8	0.30 0.66	0.19 0.27	0.12 0.085								
0.9	15	0.25	0.76 4.0	0.46 1.14	0.3 0.6	0.19 0.18	0.12 0.63							
1.2	20	0.33	1.0 6.4	0.61 2.2	0.39 0.9	0.25 0.28	0.16 0.11							
1.5	25	0.42	1.3 10.0	0.78 3.5	0.5 1.4	0.32 0.43	0.2 0.17	0.14 0.074						
1.8	30	0.50	1.53 13.0	0.93 4.6	0.6 1.9	0.38 0.57	0.24 0.22	0.17 0.092						
2.1	35	0.58	1.77 16.0	1.08 6.0	0.69 2.0	0.44 0.70	0.28 0.27	0.2 0.12						
2.4	40	0.67	2.05 22.0	1.24 7.5	0.80 3.3	0.51 0.93	0.32 0.35	0.23 0.16	0.16 0.063					
3.0	50	0.83	2.54 37.0	1.54 11.0	0.99 4.8	0.63 1.40	0.4 0.50	0.28 0.22	0.2 0.09					
3.6	60	1.00	3.06 43.0	1.85 15.0	1.2 6.5	0.76 1.90	0.48 0.70	0.34 0.32	0.24 0.13	0.16 0.050				
4.2	70	1.12	3.43 50.0	2.08 18.0	1.34 8.0	0.86 2.50	0.54 0.83	0.38 0.38	0.26 0.17	0.18 0.068				
4.8	80	1.33		2.47 25.0	1.59 10.5	1.02 3.00	0.64 1.20	0.45 0.50	0.31 0.22	0.2 0.084				
5.4	90	1.50		2.78 30.0	1.8 12.0	1.15 3.50	0.72 1.30	0.51 0.57	0.35 0.26	0.24 0.092	0.18 0.05			
6.0	100	1.67		3.1 39.0	2.0 16.0	1.28 4.6	0.8 1.80	0.56 0.73	0.39 0.30	0.26 0.12	0.2 0.07			
7.5	125	2.08		3.86 50.0	2.49 24.0	1.59 6.6	1.00 2.50	0.70 1.10	0.49 0.50	0.33 0.18	0.25 0.10	0.20 0.055		
9.0	150	2.50			3.00 33.0	1.91 8.6	1.20 3.5	0.84 1.40	0.59 0.63	0.39 0.24	0.30 0.13	0.24 0.075		
10.5	175	2.92			3.5 38.0	2.23 11.0	1.41 4.3	0.99 1.80	0.69 0.78	0.46 0.30	0.36 0.18	0.28 0.09		
12	200	3.33			3.99 50.0	2.55 14.0	1.60 5.5	1.12 2.40	0.78 1.0	0.52 0.40	0.41 0.22	0.32 0.12	0.25 0.065	
15	250	4.17				3.19 21.0	2.01 8.0	1.41 3.70	0.98 1.50	0.66 0.57	0.51 0.34	0.40 0.18	0.31 0.105	0.25 0.06
18	300	5.00				3.82 28.0	2.41 10.5	1.69 4.60	1.18 1.95	0.78 0.77	0.61 0.45	0.48 0.25	0.37 0.13	0.29 0.085
24	400	6.67					3.21 19.0	2.25 8.0	1.57 3.60	1.05 1.40	0.81 0.78	0.65 0.44	0.50 0.23	0.39 0.15
30	500	8.33					4.01 28.0	2.81 11.5	1.96 5.0	1.31 2.0	1.02 1.20	0.81 0.63	0.62 0.33	0.49 0.21
36	600	10.0					4.82 37.0	3.38 15.0	2.35 6.6	1.57 2.60	1.22 1.50	0.97 0.82	0.74 0.45	0.59 0.28
42	700	11.7					5.64 47.0	3.95 24.0	2.75 8.0	1.84 3.50	1.43 1.90	1.13 1.10	0.87 0.60	0.69 0.40
48	800	13.3						4.49 26.0	3.13 11.0	2.09 4.5	1.62 2.60	1.29 1.40	0.99 0.81	0.78 0.48
54	900	15.0						5.07 33.0	3.53 13.5	2.36 5.5	1.83 3.20	1.45 1.70	1.12 0.95	0.08 0.58
60	1000	16.7						5.64 40.0	3.93 16.0	2.63 6.7	2.04 3.90	1.62 2.2	1.24 1.2	0.96 0.75
75	1250	20.8							4.89 25.0	3.27 9.0	2.54 5.0	2.02 3.0	1.55 1.6	1.22 0.95
90	1500	25.0							5.88 33.0	3.93 13.0	3.05 8.0	2.42 4.1	1.86 2.3	1.47 1.40
105	1750	29.2							6.86 44.0	4.59 17.5	3.56 9.7	2.83 5.7	2.17 3.2	1.72 1.9
120	2000	33.3								5.23 23.0	4.06 13.0	3.23 7.0	2.48 4.0	1.96 2.4
150	2500	41.7								6.55 34.0	5.08 18.0	4.04 10.5	3.10 6.0	2.45 3.5
180	3000	50.0								7.86 45.0	6.1 27.0	4.85 14.0	3.72 7.6	2.94 4.4
240	4000	66.7									8.13 43.0	6.47 24.0	4.96 13.0	3.92 7.5
300	5000	83.3										8.08 33.0	6.2 18.0	4.89 11.0

The table is based on a nomogram.
Roughness: K = 0.01 mm.
Water temperature: t = 10 °C.

CABLE SELECTION TABLE

Maximum Lengths in Meters (m) for 400V/50Hz, 5% Voltage Drop, 30°C Ambient Temperature
IEC Publication 364-5-523 (1983) Table 52-B1

DIRECTONLINE(DOL)

Motor Power		Cable Size mm², Copper Wire, Rated In sulationat70°C															
KW	HP	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400
4	5,5	180	290	430	710												
5,5	7,5	130	210	320	530	830											
7,5	10	90	150	230	390	610	940										
9,3	12,5	80	130	190	320	510	770										
11	15	60	100	160	270	430	650	890									
13	17,5		90	140	230	370	560	770									
15	20		80	120	200	320	490	680	920								
18,5	25			100	160	260	400	540	740	980							
22	30				140	220	340	470	630	840							
26	35				120	190	290	390	540	720	920						
30	40					160	250	340	470	620	790	940					
37	50					130*	200	280	380	500	640	760	890	1020			
45	60						170	240	330	440	570	690	810	940			
52	70						150*	210	290	390	500	600	710	820	980		
55	75						140*	190	270	360	470	560	660	770	910		
60	80							180	250	340	440	530	630	730	870	1010	
67	90							160*	220	300	390	460	550	630	750	860	1000
75	100								200*	270	350	420	490	570	680	780	910
83	111								180*	250	320	390	450	530	630	730	850
85	114									230	290	350	410	480	570	650	750
93	125									220*	280	340	390	460	550	620	720
110	150										220	270	310	360	420	480	550
130	175										200*	240	280	330	390	440	520
150	200											200*	240	280	330	380	440
185	250													210*	250	280	330

STAR-DELTA(YΔ)

MotorPower		Cable Size mm², Copper Wire, Rated Insulation at 70°C															
KW	HP	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	400
4	5,5	270	430	640													
5,5	7,5	190	310	480	790												
7,5	10	130	220	340	580	910											
9,3	12,5	120	190	280	480	760											
11	15	90	150	240	400	640	970										
13	17,5	70	130	210	340	550	840										
15	20	70	120	180	300	480	730	1020									
18,5	25	60	90	150	240	390	600	810									
22	30		70	120	210	330	510	700	940								
26	35		60*	100	180	280	430	580	810								
30	40			90	150	240	370	510	700	930							
37	50				120	190	300	420	570	750	960						
45	60				100	160	250	360	490	660	850						
52	70				90*	150	220	310	430	580	750	900					
55	75					130	210	280	400	540	700	840	990				
60	80					120	190	270	370	510	660	790	940				
67	90					100	180	240	330	450	580	690	820	940			
75	100					90*	150	210	300	400	520	630	730	850	1020		
83	111						130	190	270	370	480	580	670	790	940		
85	114						130*	180	250	340	430	520	610	720	850	970	
93	125						120*	160	240	330	420	510	580	690	820	930	
110	150							130*	190	250	330	400	460	540	630	720	820
130	175								160*	220	300	360	420	490	580	660	780
150	200								150*	190	250	300	360	420	490	570	660
185	250										190*	240	270	310	370	420	490

* For Individual Contactor

Notes

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