

BAB IX

KESIMPULAN

Dengan selesainya penrusunan tugas merancang ini, maka penulis dapat mengambil kesimpulan yang berhubungan dengan perencanaan kapal Tanker 1500 DWT sebagai sarana angkutan laut yang dapat menunjang perkembangan ekonomi di Indonesia. Adapun kesimpulan penulis adalah sebagai berikut

1. Data spesifikasi teknis dari kapal Tanker 1500 DWT:

Panjang seluruhnya (Loa)	= 66 m
Panjang antara garis tegak (Lpp)	= 62 m
Lebar (B)	= 13,8m
Tinggi (H)	= 5,5 m
Sarat Air (T)	= 4,5 m
Koeffisien blok (Cb)	= 0,599
Jumlah anak buah kapal (ABK)	= 18 orang
Vs	= 12 knot
Alat penggerak yang digunakan	
Jumlah mesin	= 1 (satu) buah
Merk	= MAN B&W
Type	= S 26 MC
Daya	= 2610 HP/1920 kw
Putaran mesin	= 250 rpm
Bore x Stroke	= 260 mm x 980 mm
Cycle	= 2 langkah
Jumlah silinder	= 6

Dimensi : 3955 mm (L);1880 mm (W);4500 mm (H)

SFOC : 174 gr/ kW.h.

SLOC	: 1,2gr/ kWh
Diameter propeller	: 2,9 m
Jumlah daun	: 3 (Tiga) buah
Kecepatan dinas	: 12 knot

2. Dalam rancangan, untuk dapat menentukan besarnya daya motor induk sebagai penggerak utama kapal, maka faktor kecepatan, daerah pelayaran serta dimensi dari kapal rancangan mempunyai pengaruh yang sangat besar.

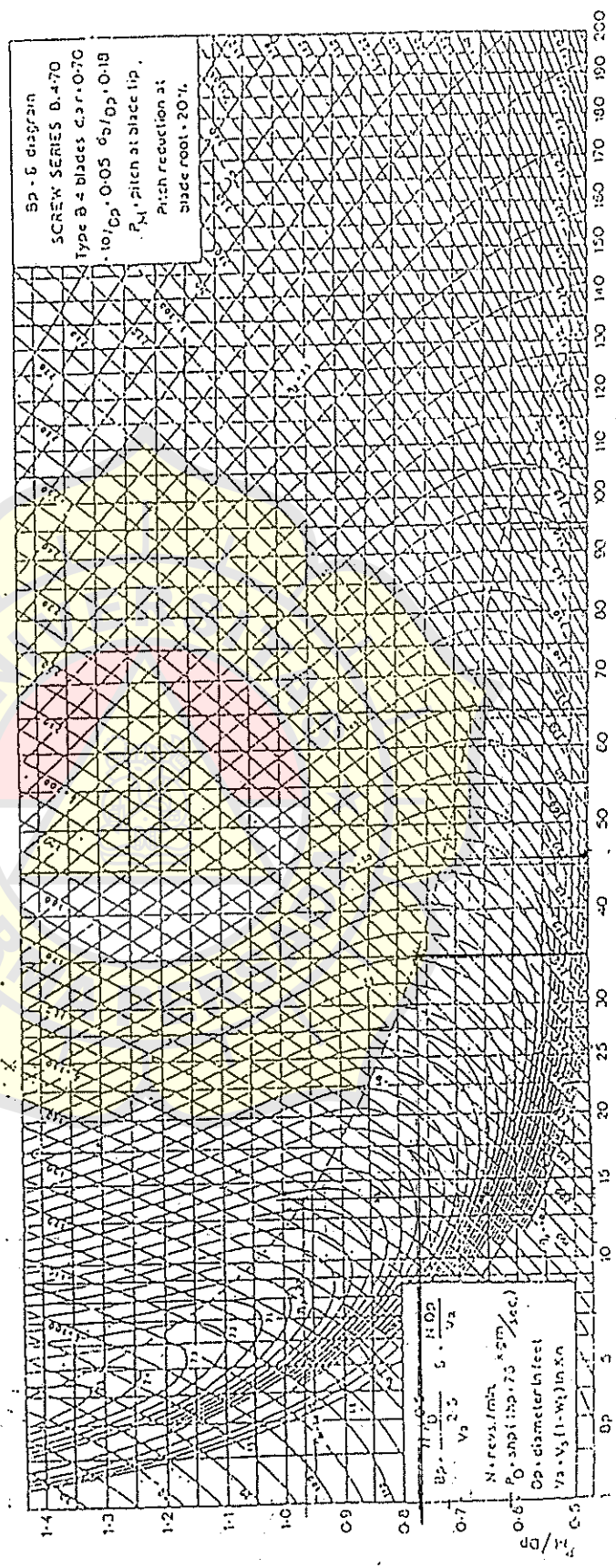
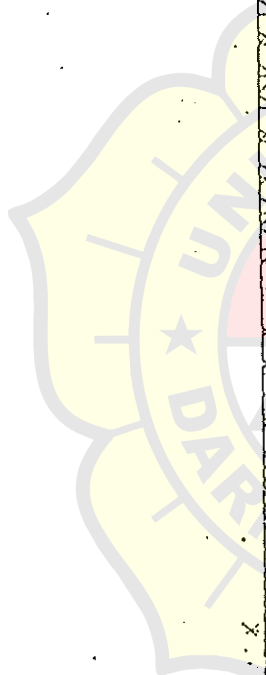
3. Dalam menentukan generator set didasarkan pada pembebanan penggunaan daya yang terbesar yaitu pada saat kapal melakukan berlayar sebesar 207,542 kW, dengan menggunakan 3 buah generator masing-masing berkapasitas 115 kW, dimana satu diantaranya berfungsi sebagai generator cadangan atau standby generator, daya yang dibutuhkan dapat terpenuhi.

4. Dalam perancangan kamar mesin, tidak lepas adanya asumsi-asumsi yang diberikan untuk mempermudah dalam perhitungan dengan tidak mengabaikan Tanggung jawab secara teknis, ekonomis serta peraturan-peraturan yang ada sehingga hasil perhitungan dapat mendekati keadaan yang sebenarnya.

5. Tata letak mesin induk, mesin bantu serta permesinan lainnya diatur seefisien mungkin. hal ini untuk mempermudah dalam hal perawatan dan perbaikan peralatan yang ada di kamar mesin serta tata letaknya sangat berpengaruh pada stabilitas kapal.

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STANDART UKURAN SEKOCI OLEH BOI (BOARD OF TRADE) ENGLAND

LAMPIRAN
SEKOCI

L. B. H (m)	L. B. H (ft)	Kapasitas (ft ³)	Jumlah orang	berat sekoci (kg)	Berat Orang (kg)	berat perangkapan (kg)	Total berat (kg)
9,4 x 7,74 x 1 x 1,114	30 x 9 x 3,75	607	60	2205	4500	356	7061
8,84 x 7,74 x 1,10	29 x 8,75 x 3,60	545	54	1976	4050	356	6382
8,53 x 7,59 x 1,07	28 x 8,50 x 3,50	500	50	1824	3750	330	5894
8,23 x 7,51 x 1,04	27 x 8,25 x 3,40	454	45	1645	3376	330	5351
7,92 x 7,44 x 0,99	26 x 8,00 x 3,25	405	40	473	3000	305	4778
7,62 x 7,36 x 0,96	25 x 7,75 x 3,15	366	36	1326	2700	305	4331
7,31 x 7,29 x 0,91	24 x 7,50 x 3,00	324	30	1180	2400	254	3843
7,01 x 7,29 x 0,88	23 x 7,50 x 2,90	300	30	1087	2250	254	3591
6,71 x 7,21 x 0,84	22 x 7,25 x 2,75	235	25	955	1950	229	3134
6,40 x 7,13 x 0,82	21 x 7,00 x 2,70	238	23	854	1725	229	2818
6,10 x 7,06 x 0,79	20 x 7,75 x 2,60	210	21	762	1575	203	2540
5,79 x 1,98 x 0,75	19 x 7,50 x 2,50	162	18	650	1350	178	2178
5,49 x 1,90 x 0,73	18 x 7,25 x 2,40	162	16	590	1200	152	1942
5,18 x 1,83 x 0,715	17 x 6,00 x 2,30	143	14	508	1050	152	1710
4,88 x 1,75 x 0,70	16 x 5,75 x 2,30	127	11	475	900	127	1484

LAMPIRAN
SEKOCI

STANDART UKURAN SEKOCI OLEH BOG (BOARD OF TRADE) ENGLAND

L. B. H (m)	L. B. H (ft)	Kapasitas (t3)	Jumlah orang	berat sekoci (kg)	Berat Orang (kg)	berat perhengkapan (kg)	Total berat (kg)
9,4 x 7,74 x 1 x 1,115	30 x 9 x 3,75	627	50	2205	4500	356	7061
8,84 x 2,74 x 1,10	29 x 8,75 x 3,60	545	54	1976	4050	356	6382
8,53 x 2,59 x 1,07	28 x 8,50 x 3,50	500	50	1824	3750	300	5894
8,23 x 2,51 x 1,04	27 x 8,25 x 3,40	454	45	1645	3375	300	5351
7,92 x 2,44 x 0,99	26 x 8,00 x 3,25	405	40	473	3000	305	4718
7,62 x 2,36 x 0,96	25 x 7,75 x 3,15	366	36	1326	2700	305	4331
7,31 x 2,29 x 0,91	24 x 7,50 x 3,00	324	32	1180	2400	254	3343
7,01 x 2,29 x 0,88	23 x 7,50 x 2,90	300	30	1087	2250	254	3591
6,71 x 2,21 x 0,84	22 x 7,25 x 2,75	235	25	955	1950	229	3134
6,40 x 2,13 x 0,82	21 x 7,00 x 2,70	218	23	854	1725	229	2818
6,10 x 2,06 x 0,79	20 x 6,75 x 2,60	210	21	762	1575	203	2542
5,79 x 1,98 x 0,75	19 x 6,50 x 2,50	182	18	650	1350	178	2178
5,49 x 1,90 x 0,73	18 x 6,25 x 2,40	162	15	590	1200	152	1942
5,18 x 1,83 x 0,715	17 x 6,00 x 2,30	143	14	508	1050	152	1710
4,85 x 1,75 x 0,70	16 x 5,75 x 2,30	127	11	475	900	127	1484

Engine type	Layout point	Engine speed r/min	Mean effective pressure bar	Power								
				BHP								
				Number of cylinders								
				4	5	6	7	8	9	10	11	12
S42MC Bore 420 mm Stroke 1764 mm	L ₁	136	19.5	4320 5880	5400 7350	6480 8820	7560 10290	8640 11760	9720 13230	10800 14700	11880 16170	12960 17640
	L ₂	136	15.6	3460 4700	4325 5875	5190 7050	6055 8225	6920 9400	7785 10575	8650 11750	9515 12925	10380 14100
	L ₃	115	19.5	3660 4960	4575 6200	5490 7440	6405 8680	7320 9920	8235 11160	9150 12400	10065 13640	10980 14880
	L ₄	115	15.6	2920 3980	3650 4975	4380 5970	5110 6965	5840 7960	6570 8955	7300 9950	8030 10945	8760 11940
L42MC Bore 420 mm Stroke 1360 mm	L ₁	176	18.0	3980 5420	4975 6775	5970 8130	6965 9485	7960 10840	8955 12195	9950 13550	10945 14905	11940 16260
	L ₂	176	11.5	2540 3460	3175 4345	3810 5190	4445 6055	5080 6920	5715 7785	6350 8650	6985 9515	7620 10380
	L ₃	132	18.0	2980 4060	3725 5075	4470 6090	5215 7105	5960 8120	6705 9135	7450 10150	8195 11165	8940 12180
	L ₄	132	11.5	1920 2600	2400 3250	2880 3900	3360 4550	3840 5200	4320 5850	4800 6500	5280 7150	5760 7800
S35MC Bore 350 mm Stroke 1400 mm	L ₁	173	19.1	2960 4040	3700 5050	4440 6060	5180 7070	5920 8080	6660 9090	7400 10100	8140 11110	8880 12120
	L ₂	173	15.3	2380 3220	2975 4025	3570 4830	4165 5635	4760 6440	5355 7245	5950 8050	6545 8855	7140 9660
	L ₃	147	19.1	2520 3420	3150 4275	3780 5130	4410 5985	5040 6840	5670 7695	6300 8550	6930 9405	7560 10260
	L ₄	147	15.3	2020 2740	2525 3425	3030 4110	3535 4795	4040 5480	4545 6165	5050 6850	5555 7535	6060 8220
L35MC Bore 350 mm Stroke 1050 mm	L ₁	210	18.4	2600 3520	3250 4400	3900 5280	4550 6160	5200 7040	5850 7920	6500 8800	7150 9680	7800 10560
	L ₂	210	14.7	2080 2820	2600 3525	3120 4230	3640 4935	4160 5640	4680 6345	5200 7050	5720 7755	6240 8460
	L ₃	178	18.4	2200 3000	2750 3750	3000 4500	3850 5250	4400 6000	4950 6750	5500 7500	6050 8250	6600 9000
	L ₄	178	14.7	1760 2400	2200 3000	2640 3600	3080 4200	3520 4800	3960 5400	4400 6000	4840 6600	5280 7200
S26MC Bore 260 mm Stroke 980 mm	L ₁	250	18.5	1600 2180	2000 2725	2400 3270	2800 3815	3200 4360	3600 4905	4000 5450	4400 5995	4800 6540
	L ₂	250	14.8	1280 1740	1600 2175	1920 2610	2240 3045	2560 3480	2880 3915	3200 4350	3520 4785	3840 5220
	L ₃	212	18.5	1360 1860	1700 2325	2040 2790	2380 3255	2720 3720	3060 4185	3400 4650	3740 5115	4080 5580
	L ₄	212	14.8	1100 1480	1375 1850	1650 2220	1925 2590	2200 2960	2475 3330	2750 3700	3025 4070	3300 4440

176 45 73-9.0

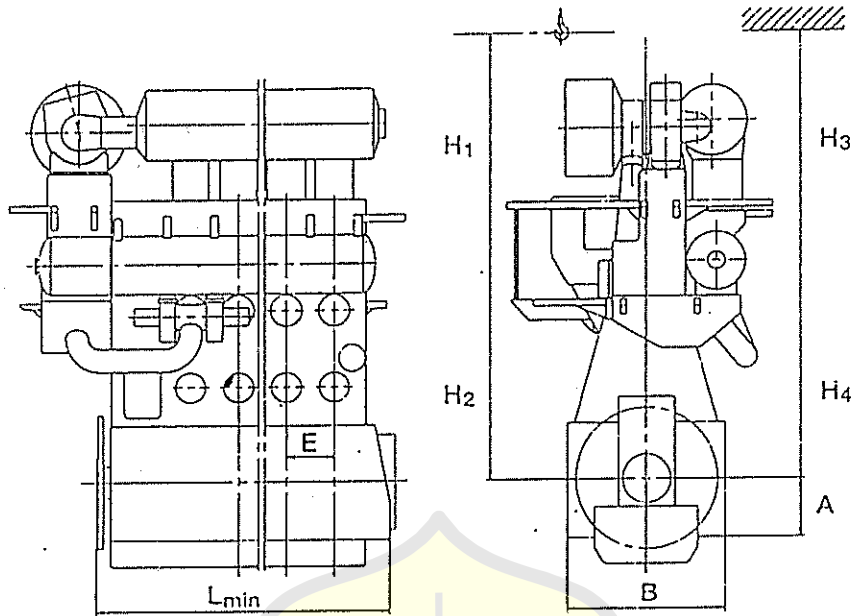
Fig. 1.03c: Power and speed

		Specific fuel oil consumption		g/kWh g/BHP _h		Lubricating oil consumption	
		With conventional turbochargers		System oil	Cylinder oil		
At load layout point		100%	80%	Approx. kg/cyl. 24h	g/kWh g/BHP _h		
L42MC	L ₁	177 130	174 129	3-4	0.8-1.2 0.6-0.9		
	L ₂	165 121	163 120				
	L ₃	177 130	174 129				
	L ₄	165 121	163 120				
S35MC	L ₁	178 131	177 130	2-3	0.95-1.5 0.7-1.1		
	L ₂	173 127	171 126				
	L ₃	178 131	177 130				
	L ₄	173 127	171 126				
L35MC	L ₁	177 130	175 129	2-3	0.8-1.2 0.6-0.9		
	L ₂	171 126	170 125				
	L ₃	177 130	175 129				
	L ₄	171 126	170 125				
S26MC	L ₁	179 132	178 131	1.5-3	0.95-1.5 0.7-1.1		
	L ₂	174 128	173 127				
	L ₃	179 132	178 131				
	L ₄	174 128	173 127				

178 45 79-2

Fig. 1.05f: Fuel and lubricating oil consumption

11 de



178 16 76-0

	S50-C	S50	L50	S46-C	S42	L42	S35	L35	S26
Dimensions in mm									
A	1085	1085	944	986	900	690	650	550	420
B	3150	2950	2710	2924	2670	2460	2200	1980	1880
E	850	890	890	782	748	748	600	600	490
H1	8950	8000	7825	8600	8050	6700	6425	5200	4825
H2	8375	8250	7325	8075	7525	6250	6050	4850	4725
H3	8150	8100	7400	7850	7300	6350	5925	5025	4525
H4							5850	4825	4500
Lmin									
4 cyl.	4739	5730	5615	4357	4240	4661	3480	3445	2975
5 cyl.	5589	6620	6505	5139	4988	5409	4080	4045	3465
6 cyl.	6439	7510	7395	5921	5736	6157	4680	4645	3955
7 cyl.	7289	8400	8285	6703	6484	6905	5280	5245	4445
8 cyl.	8139	9290	9175	7485	7232	7653	5880	5845	4935
9 cyl.					7980	8401	6480	6445	5425
10 cyl.					9476	9897	7080	7645	6405
11 cyl.					10224	10645	8280	8245	6895
12 cyl.					10972	11393	8880	8845	7385
Dry masses in tons									
4 cyl.	155	171	163	133	109	95	57	50	32
5 cyl.	181	195	188	153	125	110	65	58	37
6 cyl.	207	225	215	171	143	125	75	67	42
7 cyl.	238	255	249	197	160	143	84	75	48
8 cyl.	273	288	276	217	176	158	93	83	53
9 cyl.					195	176	103	92	58
10 cyl.					232	210	122	108	68
11 cyl.					249	229	132	118	74
12 cyl.					269	244	141	126	79

The distances H₁ and H₂ are from the centre of the crankshaft to the crane hook. The distances H₃ and H₄ for the double jib crane are from the centre of the crankshaft to the lower edge of the deck beam.

E - Cylinder distance H₁ - Vertical lift H₂ - Tilted lift H₃ - Electrical double jib crane H₄ Manual double jib crane

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Fig. 5.01b: Space requirements and masses

Starting air system: 30 bar (gauge)

Cylinder No.		4	5	6	7	8	9	10	11	12
S42MC										
Reversible engine										
Receiver volume (12 starts)	m ³	2 x 3.0	2 x 3.0	2 x 3.0	2 x 3.0	2 x 3.5	2 x 3.5	2 x 3.5	2 x 3.5	2 x 3.5
Compressor capacity, total	m ³ /h	160	180	180	180	210	210	210	210	210
Non-reversible engine										
Receiver volume (6 starts)	m ³	2 x 2.0	2 x 2.0	2 x 2.0	2 x 2.0	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5
Compressor capacity, total	m ³ /h	120	120	120	120	150	150	150	150	150
L42MC										
Reversible engine										
Receiver volume (12 starts)	m ³	2 x 2.0	2 x 2.0	2 x 2.0	2 x 2.0	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5	2 x 2.5
Compressor capacity, total	m ³ /h	120	120	120	120	150	150	150	150	150
Non-reversible engine										
Receiver volume (6 starts)	m ³	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5
Compressor capacity, total	m ³ /h	90	90	90	90	90	90	90	90	90
S35MC										
Reversible engine										
Receiver volume (12 starts)	m ³	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5
Compressor capacity, total	m ³ /h	60	60	60	60	90	90	90	90	90
Non-reversible engine										
Receiver volume (6 starts)	m ³	2 x 0.5	2 x 0.5	2 x 0.5	2 x 0.5	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.0
Compressor capacity, total	m ³ /h	30	30	30	30	60	60	60	60	60
L35MC										
Reversible engine										
Receiver volume (12 starts)	m ³	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5	2 x 1.5
Compressor capacity, total	m ³ /h	60	60	60	60	90	90	90	90	90
Non-reversible engine										
Receiver volume (6 starts)	m ³	2 x 0.5	2 x 0.5	2 x 0.5	2 x 0.5	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.0
Compressor capacity, total	m ³ /h	30	30	30	30	60	60	60	60	60
S26MC										
Reversible engine										
Receiver volume (12 starts)	m ³	2 x 0.9	2 x 0.9	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.0	2 x 1.0
Compressor capacity, total	m ³ /h	54	54	60	60	60	60	60	60	60
Non-reversible engine										
Receiver volume (6 starts)	m ³	2 x 0.4	2 x 0.4	2 x 0.4	2 x 0.4	2 x 0.5	2 x 0.5	2 x 0.5	2 x 0.5	2 x 0.5
Compressor capacity, total	m ³ /h	24	24	24	24	30	30	30	30	30

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Fig. 6.01.05d: Capacities of starting air receivers and compressors for main engine

Dengan didapatnya harga Thrust coefficient (τ_c) = 0.0754 dan Cavitation Number (σ_c) = 0.326, maka berdasarkan dari diagram burrill titik perpotongan kedua harga tersebut yakni τ_c dan σ_c , berada dibawah garis batas kavitasi, dengan demikian rancangan baling-baling tersebut dinyatakan bebas Kavitasi.

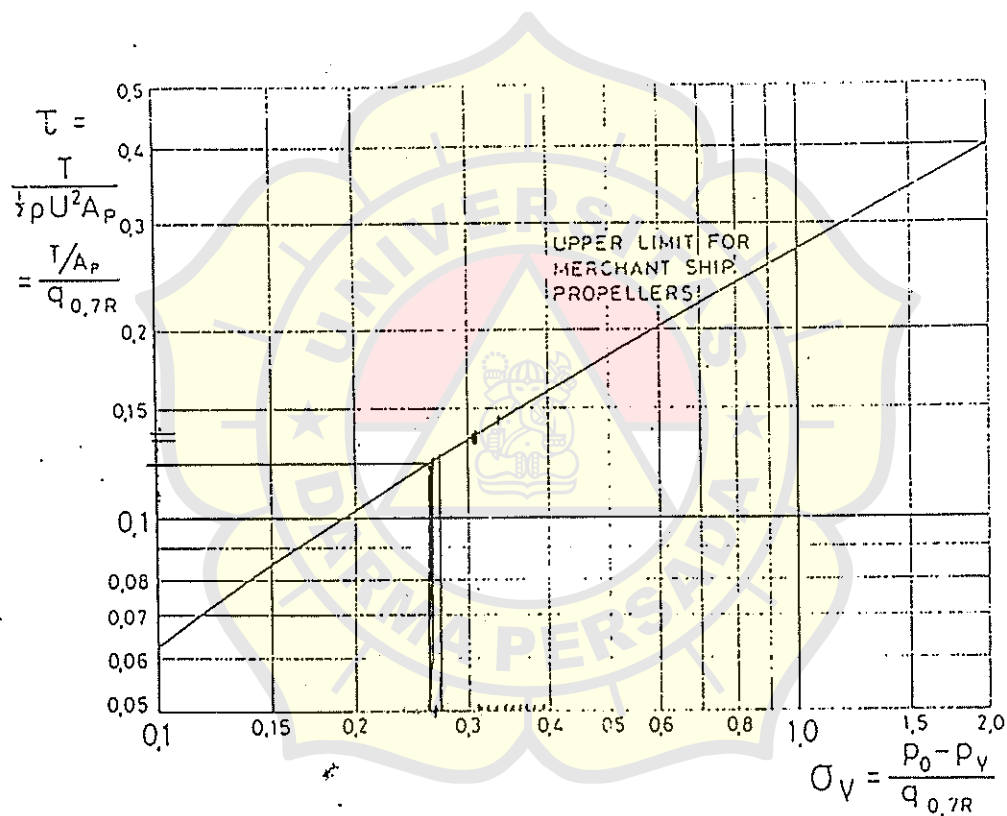


Figure 6.6.8. Cavitation diagram (Burrill)

Table 18.2 Anchor, Chain Cables and Ropes

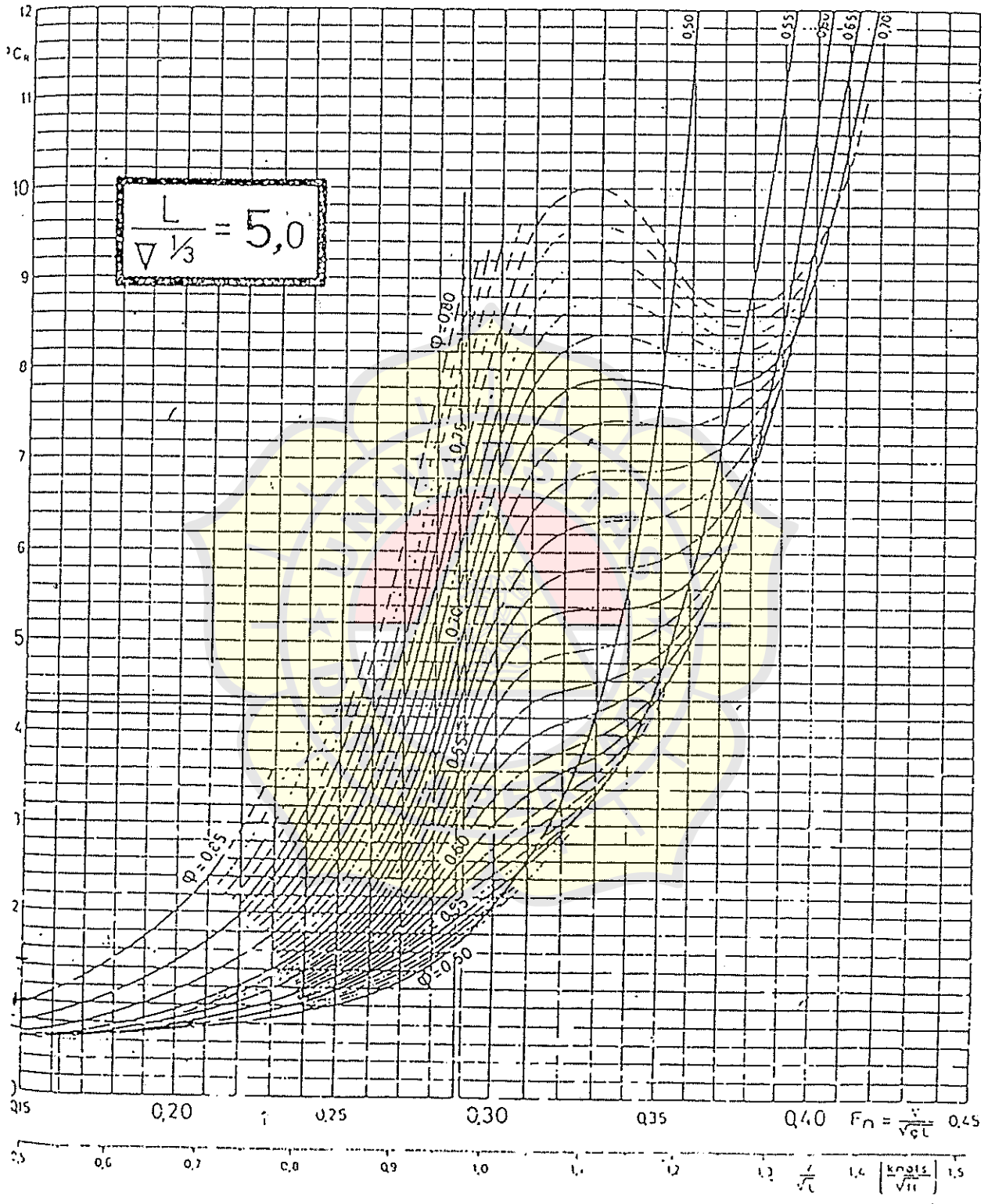
No. or Seq.	Equipment numeral	Stockless anchor			Stud link chain cables							Recommended ropes				
		Flower anchor		Stream anchor	Flower anchors			Stream wire or chain for stream anchor		Towline		Mooring ropes				
		Number ¹	Mass per anchor		Total length	Diameter			Length	Br. load ²	Length	Br. load ²	Number	Length	Br. load ²	
				d ₁		d ₂	d ₃	[m]								[kN]
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				[kg]	[m]	[mm]	[mm]	[mm]	[m]	[kN]	[m]	[kN]		[m]	[kN]	
101	up to - 50	2	120	40	165	17.5	12.5	12.5	80	65	180	100	3	80	35	
102	50 - 70	2	189	60	220	14	12.5	12.5	80	65	180	100	3	80	35	
103	70 - 90	2	249	80	270	16	14	14	85	75	180	100	3	100	40	
104	90 - 110	2	309	100	247.5	17.5	16	16	85	80	180	100	3	110	40	
105	110 - 130	2	369	120	247.5	19	17.5	17.5	90	90	180	100	3	110	45	
106	130 - 150	2	429	140	275	20.5	17.5	17.5	90	100	180	100	3	120	50	
107	150 - 175	2	489	165	275	22	19	19	90	110	180	110	3	120	55	
108	175 - 205	2	579	190	307.5	24	20.5	20.5	90	120	180	130	4	120	65	
109	205 - 240	3	669		307.5	26	22	26.5			180	150	4	120	70	
110	240 - 280	3	770		330	28	24	22			180	175	4	140	80	
111	280 - 320	3	870		357.5	30	26	24			180	200	4	140	85	
112	320 - 360	3	1020		357.5	32	28	24			180	225	4	140	95	
113	360 - 400	3	1140		385	34	30	26			180	250	4	140	100	
114	400 - 450	3	1290		385	36	32	28			180	275	4	140	110	
115	450 - 500	3	1440		412.5	38	34	30			190	305	4	160	120	
116	500 - 550	3	1590		412.5	40	36	32			190	340	4	160	130	
117	550 - 600	3	1740		440	42	38	34			190	370	4	160	145	
118	600 - 660	3	1920		440	44	40	36			190	405	4	160	160	
119	660 - 720	3	2100		440	46	42	36			190	440	4	170	170	
120	720 - 780	3	2280		467.5	48	44	38			190	480	4	170	185	
121	780 - 840	3	2460		467.5	50	46	40			190	520	4	170	200	
122	840 - 910	3	2640		467.5	52	48	42			190	560	4	170	215	
123	910 - 980	3	2850		495	54	50	44			200	600	4	180	230	
124	980 - 1060	3	3060		495	56	52	46			200	645	4	180	250	
125	1060 - 1140	3	3300		495	58	54	46			200	690	4	180	270	
126	1140 - 1220	3	3540		522.5	60	56	48			200	740	4	180	285	
127	1220 - 1300	3	3780		522.5	62	58	50			200	785	4	180	305	
128	1300 - 1390	3	4050		522.5	64	60	50			200	835	4	180	325	
129	1390 - 1480	3	4320		550	66	62	52			220	890	5	190	325	
130	1480 - 1570	3	4590		550	68	64	54			220	940	5	190	335	
131	1570 - 1670	3	4890		550	70	66	56			220	1025	5	190	350	
132	1670 - 1790	3	5250		577.5	73	68	58			220	1110	5	190	375	
133	1790 - 1930	3	5610		577.5	76	70	60			220	1170	5	200	400	
134	1930 - 2080	3	6000		577.5	78	72	62			240	1250	5	200	425	
135	2080 - 2230	3	6450		605	81	74	64			240	1355	5	200	450	
136	2230 - 2380	3	6900		605	84	76	66			240	1455	5	200	480	
137	2380 - 2530	3	7350		605	87	78	68			260	1470	6	200	480	
138	2530 - 2700	3	7800		632.5	90	80	70			260	1470	6	200	499	
139	2700 - 2870	3	8300		632.5	92	82	72			260	1470	6	200	500	
140	2870 - 3040	3	8790		632.5	95	84	74			280	1470	6	200	520	
141	3040 - 3210	3	9290		660	97	86	76			280	1470	6	200	555	
142	3210 - 3400	3	9790		660	100	88	78			280	1470	6	200	590	
143	3400 - 3600	3	10300		660	102	90	80			300	1470	6	200	620	
144	3600 - 3800	3	10800		687.5	105	92	82			300	1470	6	200	650	
145	3800 - 4000	3	11300		687.5	107	94	84			300	1470	7	200	680	
146	4000 - 4200	3	11800		687.5	111	97	87			300	1470	7	200	705	
147	4200 - 4400	3	12300		715	114	100	90			300	1470	7	200	735	
148	4400 - 4600	3	12800		715	117	102	92			300	1470	7	200	765	
149	4600 - 4800	3	13300		715	120	105	95			300	1470	7	200	795	
150	4800 - 5000	3	13800		742.5	122	107	97			300	1470	8	200	825	
151	5000 - 5200	3	14300		742.5	124	111	97			300	1470	8	200	855	
152	5200 - 5500	3	15300		742.5	127	114	100			300	1470	8	200	885	
153	5500 - 5800	3	16300		742.5	130	117	102			300	1470	9	200	915	
154	5800 - 6100	3	17300		742.5	132	120	107			300	1470	9	200	945	
155	6100 - 6500	3	18300		770	124	124	111			300	1470	10	200	975	
156	6500 - 6900	3	19300		770	126	127	114			300	1470	10	200	1005	
157	6900 - 7300	3	20300		770	128	130	117			300	1470	11	200	1035	
158	7300 - 7700	3	21300		770	130	133	120			300	1470	11	200	1065	
159	7700 - 8100	3	22300		770	132	136	123			300	1470	12	200	1095	
160	8100 - 8500	3	23300		770	134	139	126			300	1470	12	200	1125	
161	8500 - 8900	3	24300		770	136	142	129			300	1470	13	200	1155	
162	8900 - 9400	3	25300		770	138	145	132			300	1470	14	200	1185	
163	9400 - 10000	3	26300		770	140	148	135			300	1470	14	200	1215	
164	10000 - 10700	3	27300		770	142	151	138			300	1470	15	200	1245	
165	10700 - 11500	3	28300		770	144	154	141			300	1470	15	200	1275	
166	11500 - 12400	3	29300		770	146	157	144			300	1470	16	200	1305	
167	12400 - 13400	3	30300		770	148	160	147			300	1470	17	200	1335	
168	13400 - 14600	3	31300		770	150	163	150			300	1470	18	200	1365	
169	14600 - 16000	3	32300		770	152	166	153			300	1470	19	200	1395	

1 = Chain diameter Grade K 1 (Ordinary quality)
 2 = Chain diameter Grade K 2 (Special quality)
 3 = Chain diameter Grade K 3 (Extra special quality)

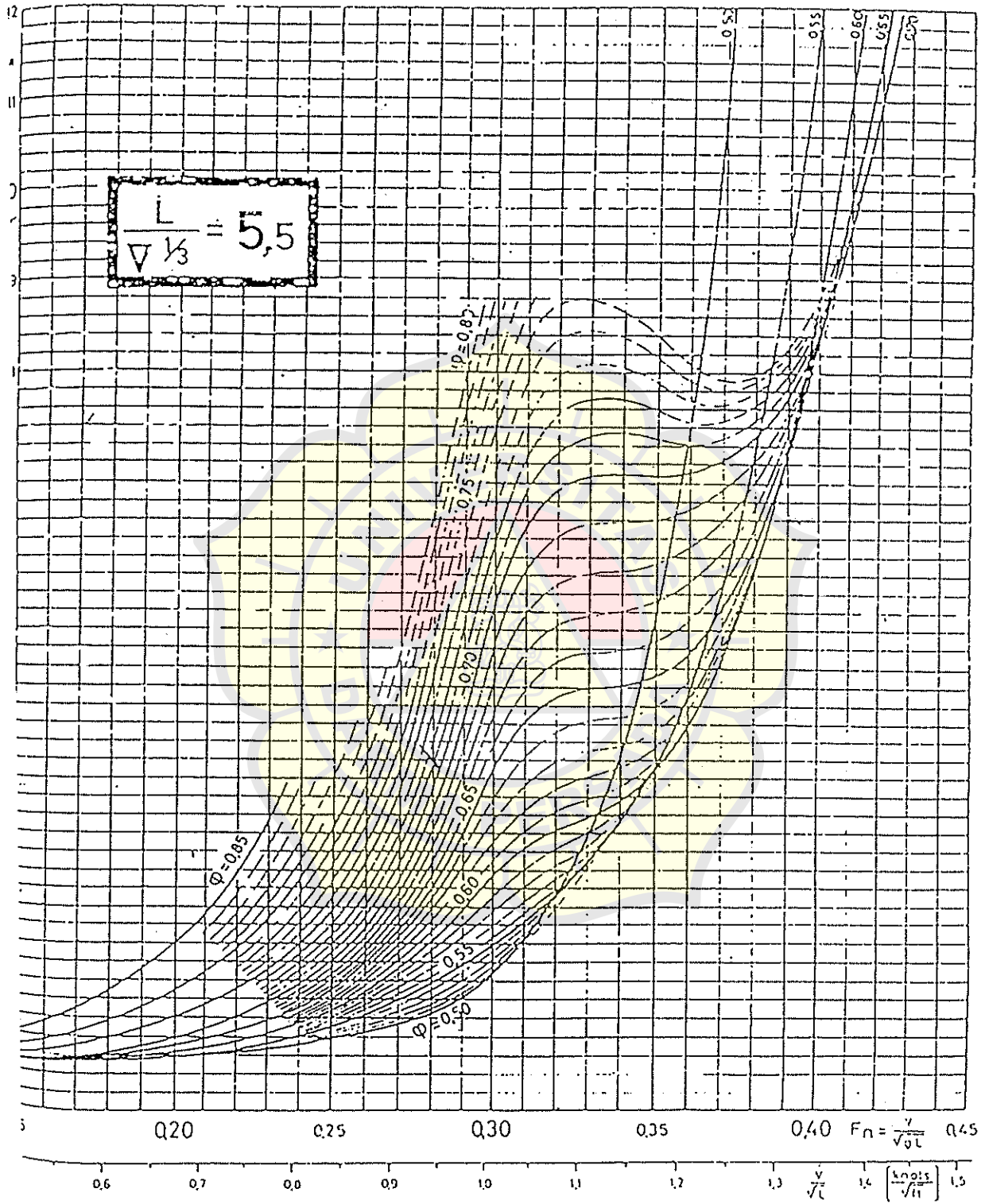
See also D

1 see C.1.
 2 see F.1.2

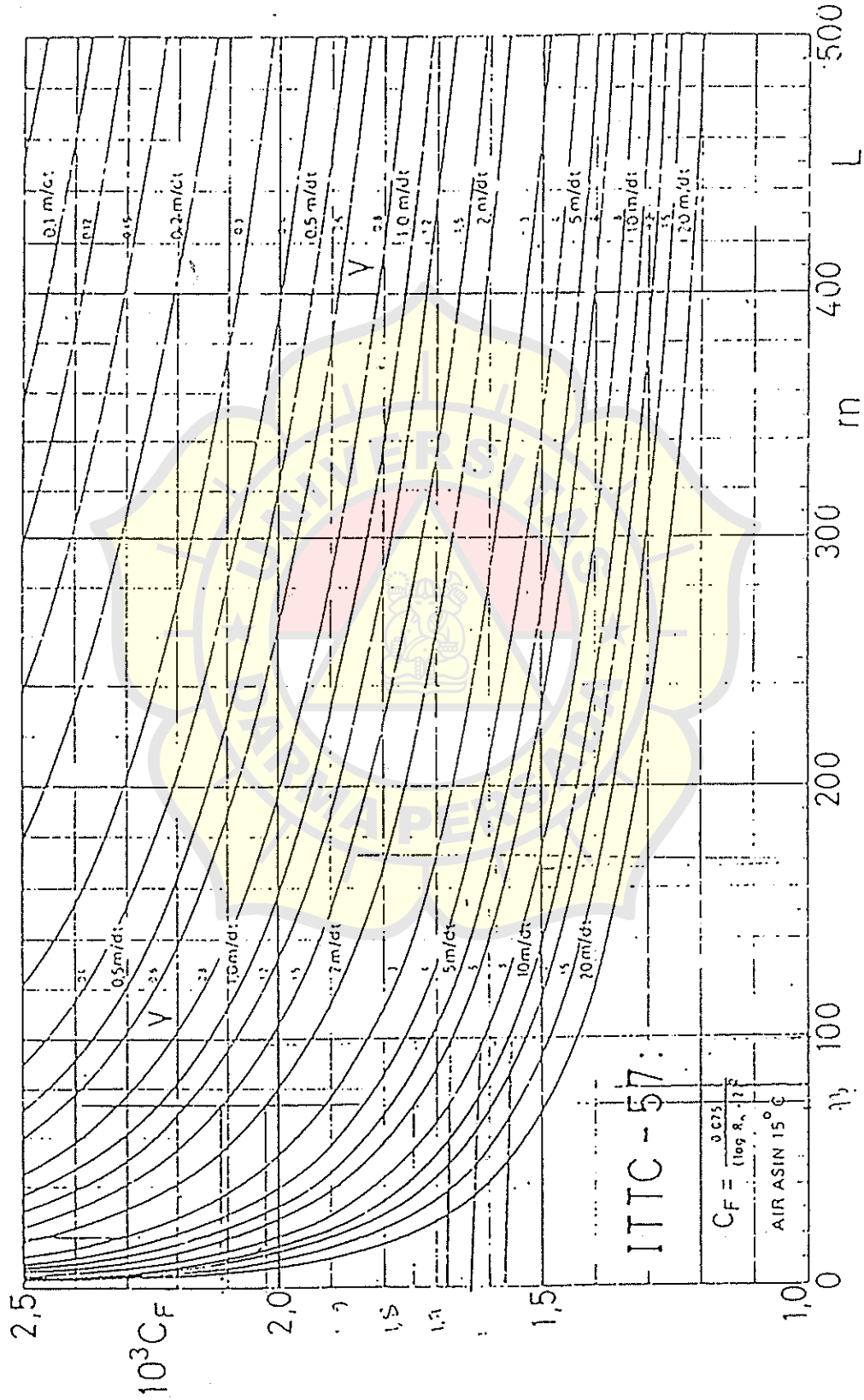
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 KOEFISIEN TAHANAN SISA



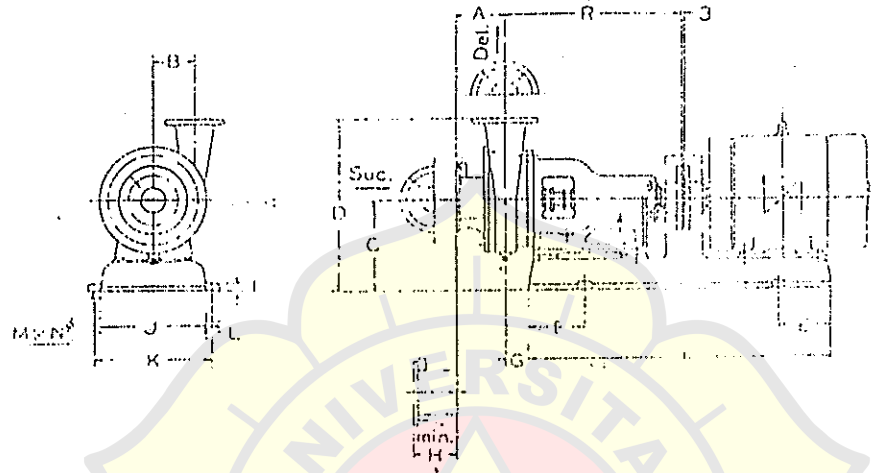
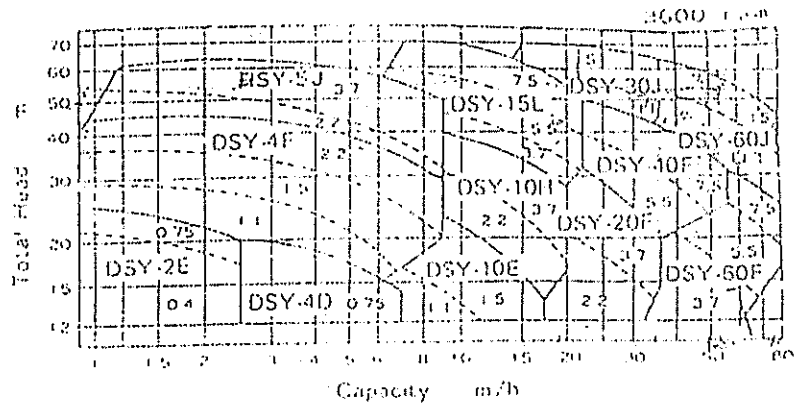
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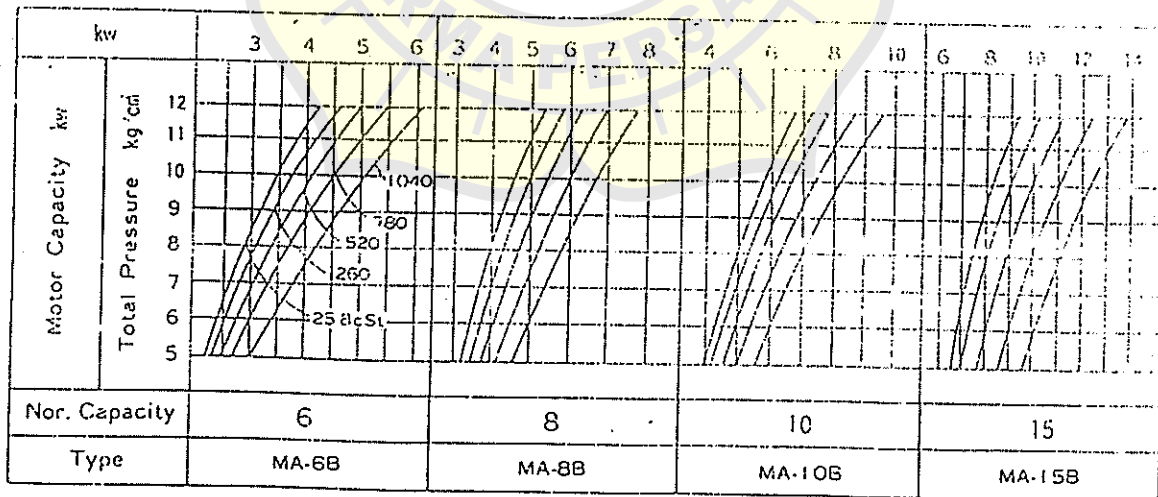
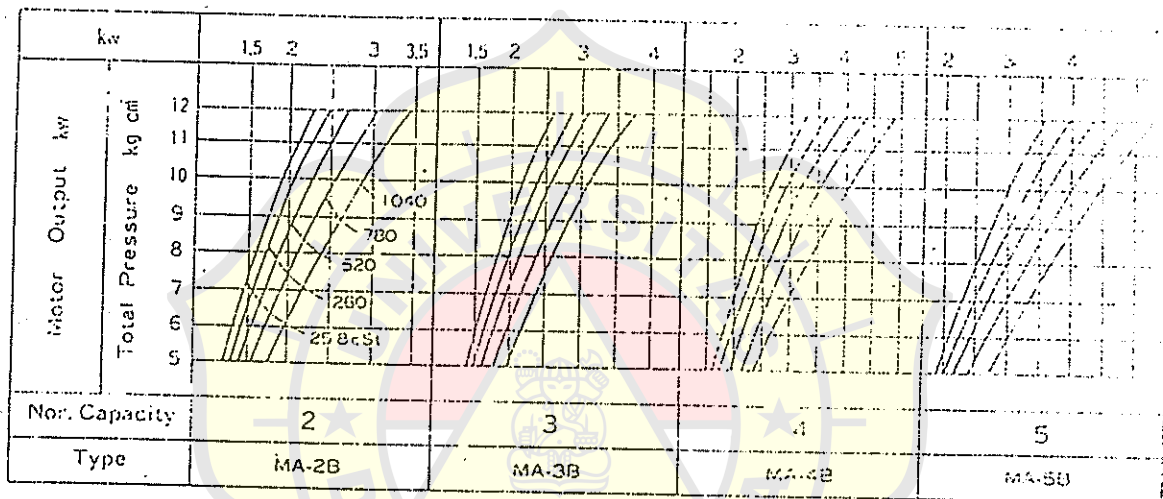
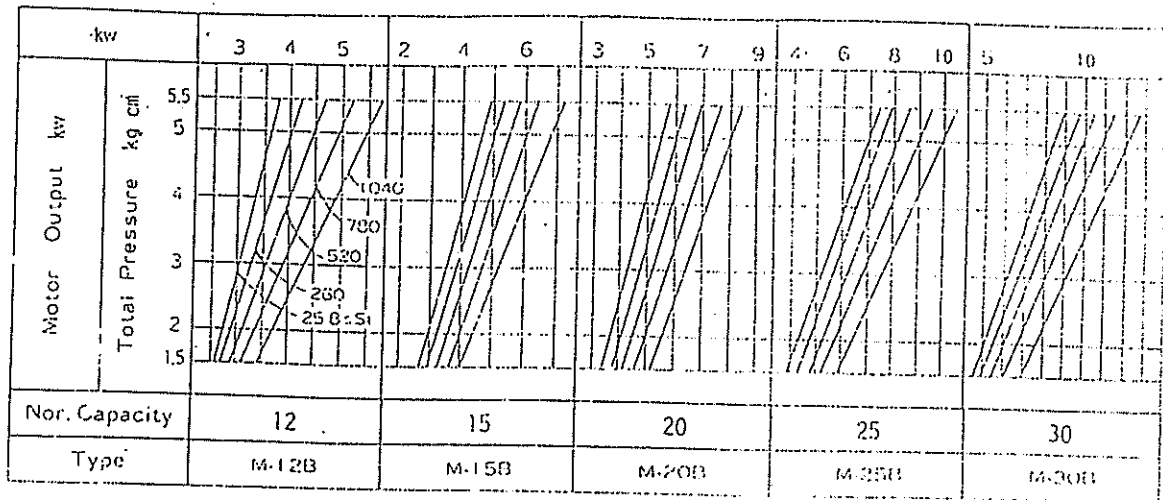
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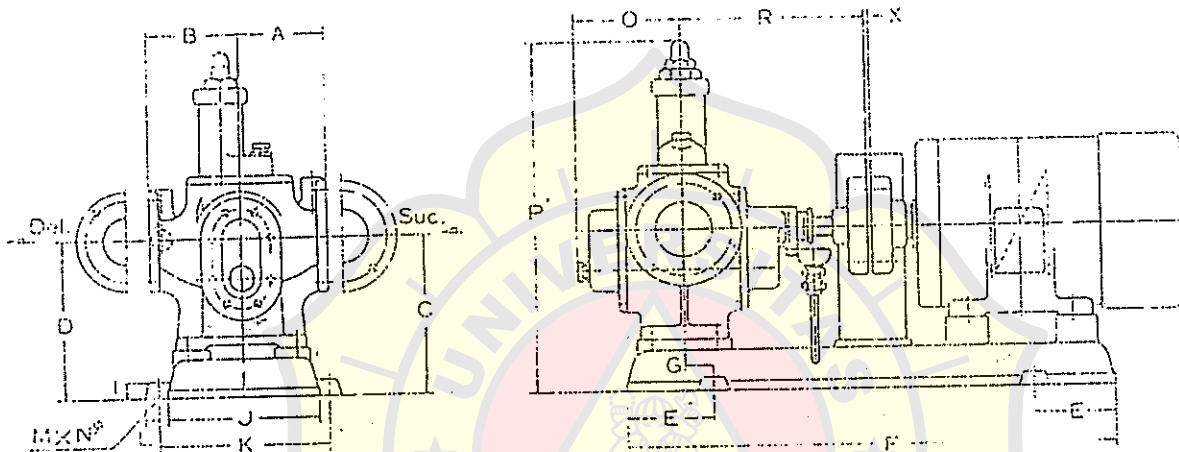
DSY Type



Type	Motor (kw)	Bore		Dimension (mm)																Total Weight (kg)
		Suc.	Del.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	R		
DSY-2E	0.75	32	32	88	73	165	315	100	550	35	100	25	200	240	23	4	15	350	40	
	1.5	32	32	96	92	165	315	100	600	30	100	25	200	240	23	4	15	350	50	
DSY-4D	0.75	32	32	90	65	172	290	100	550	35	100	25	200	240	23	4	15	350	40	
	1.5	32	32	96	92	175	325	100	620	35	100	25	240	280	23	4	15	350	50	
DSY-4F	2.2	32	32	96	92	175	325	100	620	35	100	25	240	280	23	4	15	350	50	
	3.7	32	32	94	95	182	325	100	620	35	100	25	240	280	23	4	15	350	60	
DSY-5J	2.2	32	32	94	95	182	325	100	620	35	100	25	240	280	23	4	15	350	60	
	3.7	32	32	94	95	197	340	100	650	30	100	25	260	300	23	4	15	350	80	
DSY-10E	1.5	50	50	96	75	155	295	100	600	30	100	25	200	240	23	4	15	350	60	
	2.2	50	50	96	96	175	325	100	620	35	100	25	240	280	23	4	15	350	55	
DSY-10H	3.7	50	50	96	96	190	340	100	650	30	100	25	260	300	23	4	15	350	55	
	5.5	50	50	110	120	190	390	125	700	28	100	25	300	340	23	4	15	370	80	
DSY-15L	5.5	50	50	110	120	210	410	125	700	28	100	25	300	340	23	4	15	370	80	
	7.5	50	50	110	120	210	410	150	750	28	100	25	300	340	23	4	15	370	80	
DSY-20F	2.2	65	65	105	95	175	315	100	620	35	100	25	240	280	23	4	15	350	75	
	3.7	65	65	105	95	190	330	100	650	30	100	25	260	300	23	4	15	350	75	
DSY-40F	5.5	100	100	118	105	202	420	125	700	28	100	25	300	340	23	4	15	370	125	
	7.5	100	100	118	105	202	420	150	750	28	100	25	300	340	23	4	15	370	125	
DSY-30J	11	65	65	120	120	249	445	175	860	35	100	25	360	400	23	4	15	425	110	
	15	65	65	120	120	249	445	175	900	35	100	25	360	400	23	4	15	425	110	
DSY-60F	3.7	100	100	122	115	210	390	120	700	35	100	25	300	340	23	4	15	425	160	
	5.5	100	100	122	115	210	390	150	750	30	100	25	300	340	23	4	15	425	160	
DSY-60J	7.5	100	100	122	115	210	390	150	780	35	100	25	300	340	23	4	15	425	160	
	11	100	100	120	120	235	445	175	860	35	100	25	350	400	23	4	15	425	110	
	15	100	100	120	120	235	445	175	900	35	100	25	360	400	23	4	15	425	110	



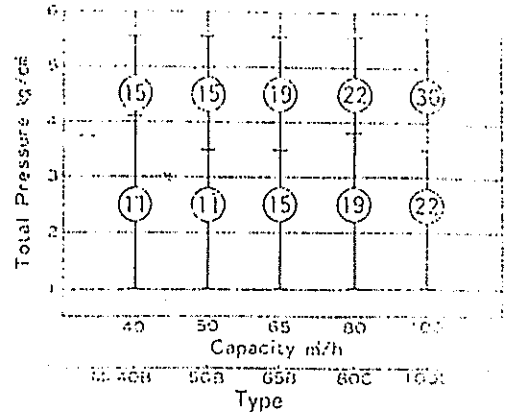
Type



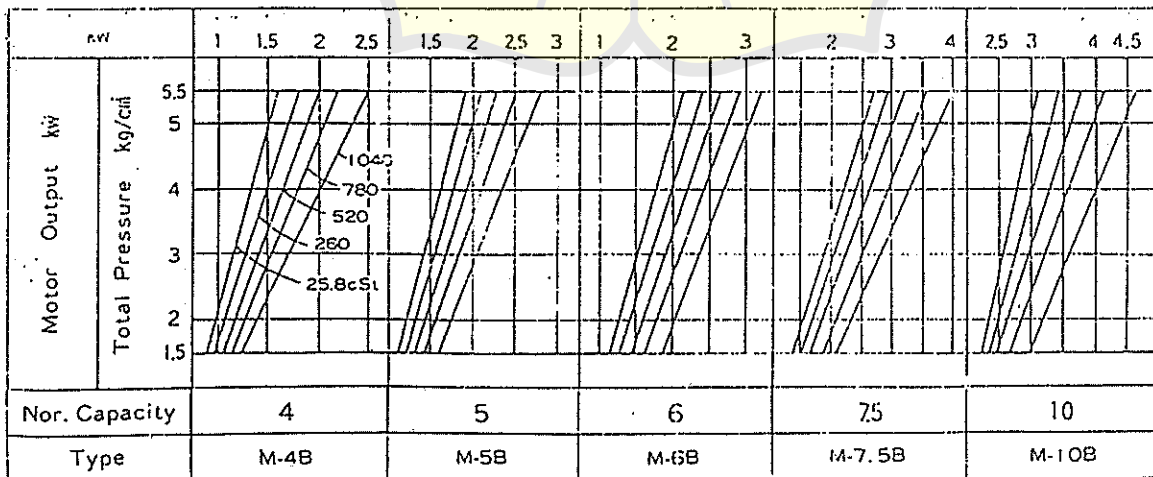
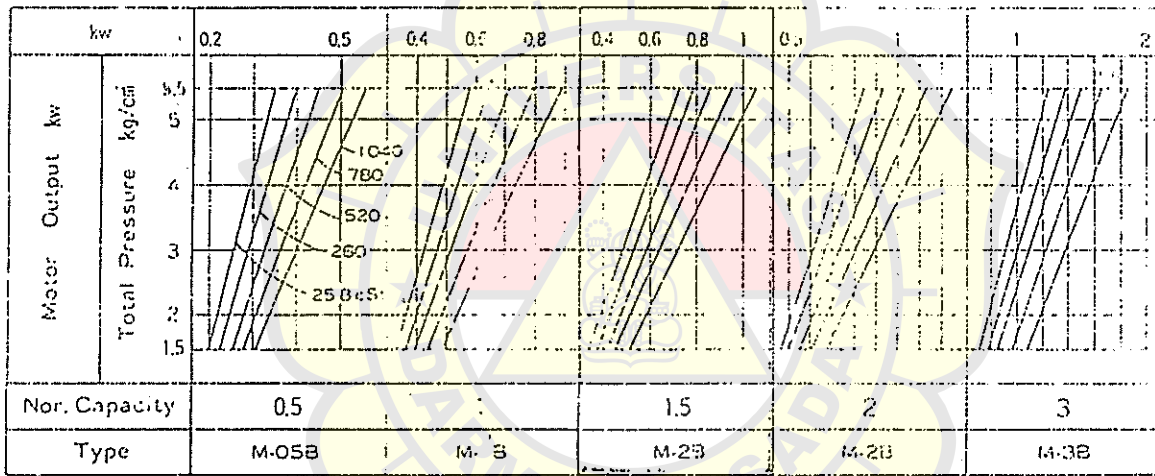
Dimensions - mm

Type	No of Rev. (r.p.m.)	Motor (kw)	Bore Suc. Del.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	X	Full Weight (kg)
05B	1200	0.4	25 20	110	110	200	200	50	365	21		20	170	140	15	4	15	55	330	122	3	35
1B	1200	0.75	32 25	95	95	195	195	100	500	60		25	260	300	23	4	15	83	380	175	3	45
2B	1200	0.75 1.5	40 32	95	95	195	195	100	500	60		25	260	300	23	4	15	83	385	175	3	45
3B	1200	0.75 1.5	50 40	100	100	210	210	100	550	35		25	260	300	23	4	15	83	412	188	3	50
4B	1200	1.5 2.2	65 50	105	105	225	225	100	600	20		25	280	320	23	4	15	144	470	200	3	75
5B	1200	1.5 2.2	65 50	105	105	225	225	100	600	20		25	280	320	23	4	15	111	470	200	3	75
6B	1200	2.2	65 50	105	105	225	225	100	600	20		25	280	320	23	4	15	55	470	200	3	75
	1200	3.7	65 50	105	105	230	230	130	640	60		25	300	330	25	4	15	63	475	200	3	78
7.5B	1200	2.2 3.7	80 65	110	110	245	245	150	700	50		25	300	350	23	4	15	122	500	220	3	90
10B	1200	2.2 3.7	80 65	140	140	230	230	125	700	30		25	310	350	23	4	15	137	530	245	3	95
12B	1200	3.7	80 65	140	140	230	230	125	700	30		25	310	350	23	4	15	152	530	250	3	100
	1200	5.5	80 65	140	140	230	230	125	750	30		25	310	350	23	4	15	152	530	250	3	100
15B	1200	3.7 5.5	80 65	150	150	260	260	100	750	0.20		25	310	350	23	4	15	165	565	285	3	140
	1200	7.5	80 65	150	150	270	270	150	950	65		30	350	390	22	4	19	165	575	285	3	140
20B	1200	5.5	100 80	160	160	270	270	150	800	50		25	310	350	23	4	15	193	618	315	3	135
	1200	7.5	100 80	160	160	270	270	200	900	100		25	350	390	23	4	15	193	618	315	3	135
25B	1200	5.5	100 80	160	160	270	270	150	800	50		25	310	350	23	4	15	193	618	315	3	135
	1200	7.5	100 80	160	160	270	270	200	900	100		25	350	390	23	4	15	193	618	315	3	135
30B	1200	7.5 11	125 100	175	175	320	320	200	1000	80		30	370	420	25	4	19	210	688	357	3	200
40B	1200	7.5 11	150 125	190	190	330	330	200	1050	40.57		35	490	540	25	4	23	240	780	387	3	220
50B	1200	11 15	150 125	235	235	390	390	250	1100	90		30	450	500	25	4	19	225	835	385	3	365
65B	1200	15 18.5	150 125	235	235	390	390	200	1150	30		30	500	550	25	4	19	245	840	415	3	370
80C	900	18.5 22	150 125	250	250	460	460	200	1500	0		45	570	620	30	6	23	377	1005	577	3	490
100D	720	22 30	200 175	350	350	370	370	300	1730	30		35	620	680	28	4	23	523	1395	730	4	550

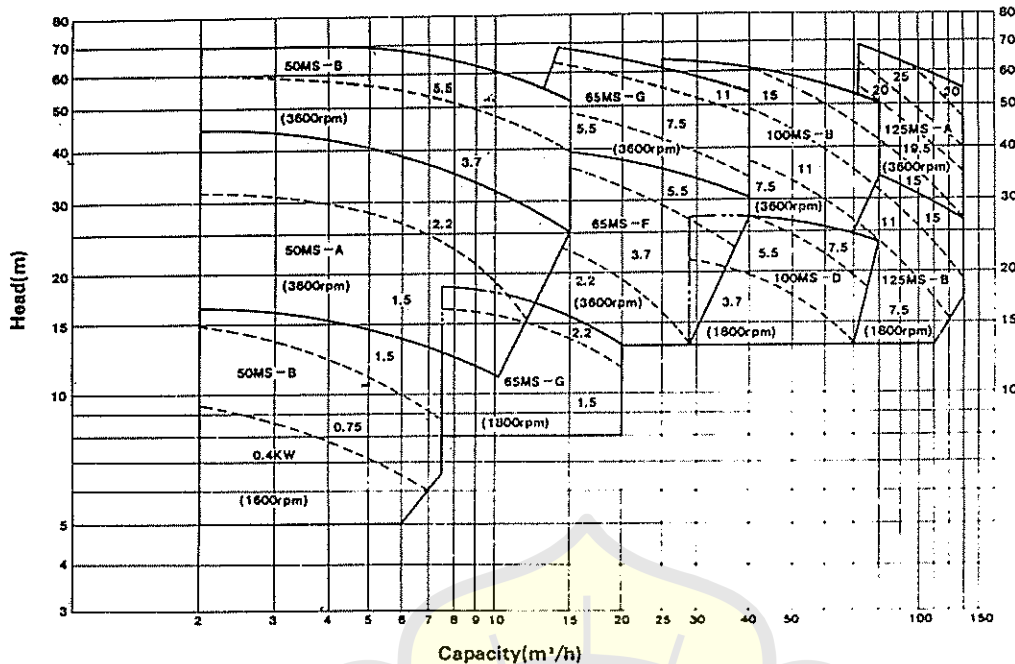
A Type PERFORMANCE CHART



The number in the mark indicates the output (kw) of the motor when 260cSt oil is used.



PERFORMANCE CHART



EXPLANATION ON PERFORMANCE CHART

In selecting the size of a pump pattern, if the required specified point of Q-H falls just on the boundary line in the performance chart, please select the small size of nominal bore of the pattern from the adjoining ones.

The numerals entered between diagonal dotted lines in the performance chart show the required capacity of the driver in KW. The driver with this capacity will never be overloaded at any point on the Q-H curve developed by the pump at the rated speed.

Ex. In case, the specified capacity, total head and speed are 30 m³/h, 15 m and 3,450 rpm, respectively, Select 50 MS-B from between the adjoining patterns of 50 MS-B and 65MS-F. capacity of driver, 3.7 KW.

SELF PRIMING DEVICE

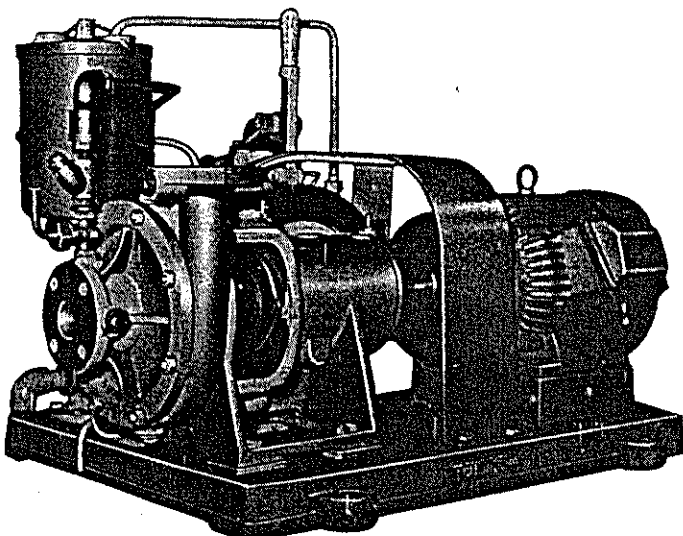
The pump can be supplied, if required, with automatic priming equipment including its necessary accessories such as sealing water tank, non-return valve, float valve and piping.

The feature of this automatic priming system is as follows:-

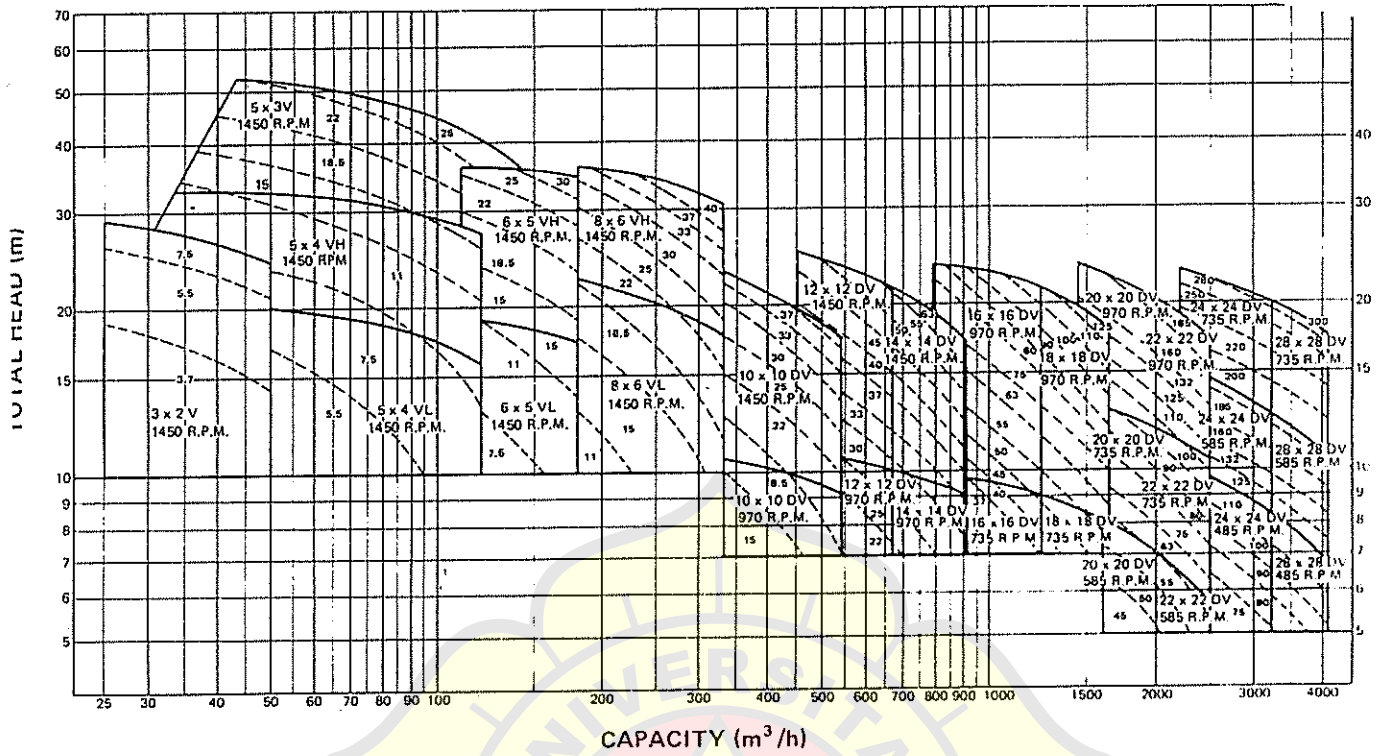
The primer is driven from the main pump shaft through combination coupling and friction pulley. The engagement and disengagement of the pulley are controlled automatically by means of a mechanism which is subjected to the discharge pressure developed by the main pump.

The primer ceases operation automatically on the accomplishment of the priming of the main pump and remains idle during the main pump is in service.

If the air breaks into the main pump for some reason, resulting in going down of the discharge pressure developed by the main pump, the primer begins to work automatically and the cycle recommences.



Performance Ranges



60Hz

