



EBARA

SELECTION CHART

50Hz

Rev. L

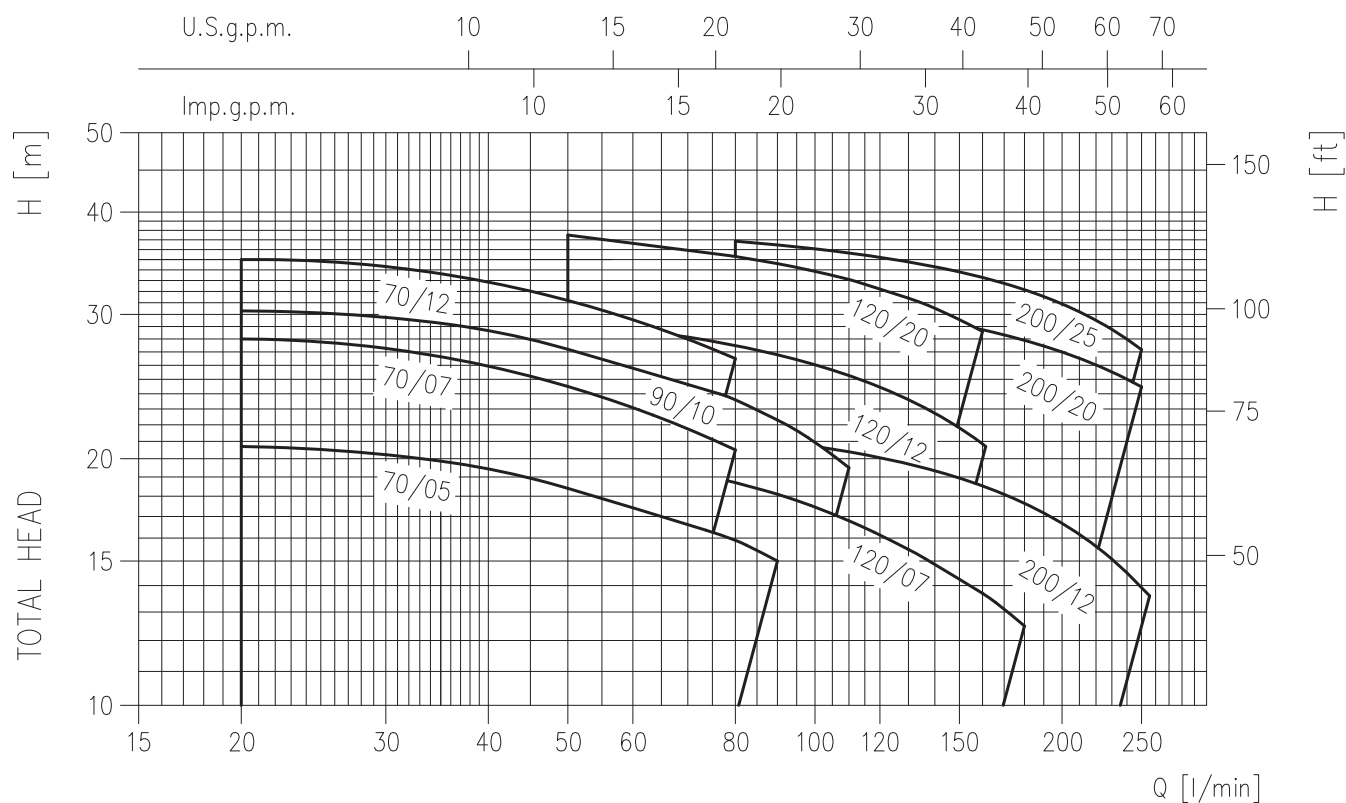
PUMP		
Liquid Handled	Type of liquid	Clean water
	Temperature [°C]	min. -5 max. +60 (CD and CDE 70/05-70/07-90/10) max. +90 max. +110 (H-HS-HW-HSW) max. +120 (CDE 70/12, 120/07, 120/12, 120/20, 200/12, 200/20, 200/25)
Maximum working pressure [MPa]		0.8
Construction	Impeller	Closed centrifugal type
	Shaft seal type	Mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction	G 1¼, (G 1½ CD 200) UNI ISO 228-1
	Discharge	G 1 UNI ISO 228-1
Material	Casing	EN 1.4301 (AISI 304)
	Impeller	EN 1.4301 (AISI 304)
	Casing cover	EN 1.4301 (AISI 304)
	Shaft seal	Ceramic/Carbon/NBR (for CDW) Ceramic/Carbon/FPM (for CDH) SiC/SiC/FPM (for CDHS) Tungsten Carbide/Tungsten Carbide/FPM (for CDHW) SiC/Tungsten Carbide/FPM (for CDHSW) Ceramic/Carbon/EPDM (for CDE)
	Shaft	AISI 303 (Wet extension)
	Bracket	EN 1.4301 (AISI 304)
Applicable standard of test		ISO 9906 – Annex A

MOTOR		
Type	Electric - TEFC	
	Single Phase	Three Phase
Efficiency level (Reg. 640/2009)	-	- from 0.37 kW up to 0.55 kW IE2 from 0.75 kW up to 1.8 kW
No. of Poles	2	
Rotation speed [min ⁻¹]	≈ 2800	
Insulation Class	F	
Protection degree (CEI EN 60034-5)	IP 55	
Power rating	0.37 ÷ 1.5	0.37 ÷ 1.8
	[kW]	[HP]
Frequency	0.5 ÷ 2	0.5 ÷ 2.5
	[Hz]	[Hz]
Voltage	230 ±10%	230/400 ±10%
Capacitor	Built in	-
Over load protection	Built in	Provided by the user
Casing material	EN 1.4301 (AISI 304)	
Base material/motor support	EN 1.4301 (AISI 304)	
Dimensions of cable entry	PG11	

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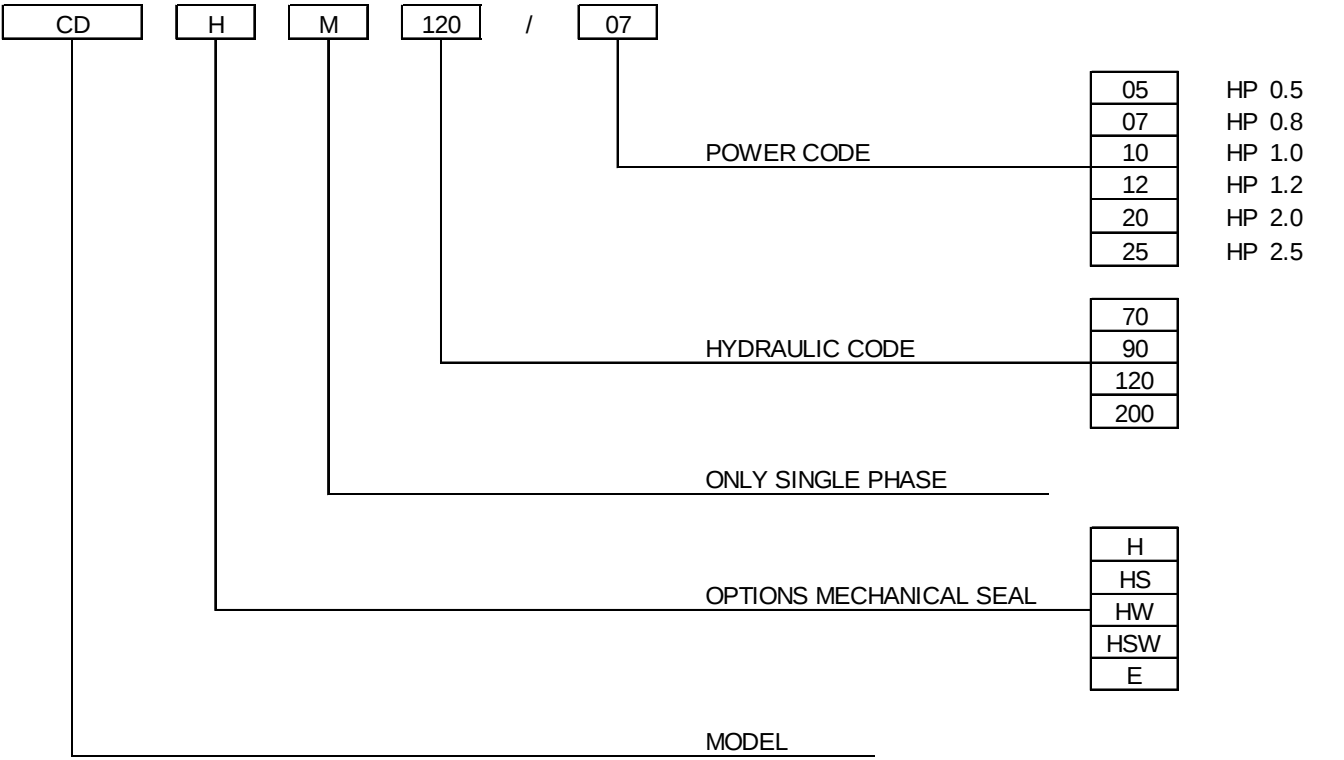
Pump type		Power		Q=Capacity												
Single Phase	Three Phase	[kW]	[HP]	l/min	0	20	50	80	90	110	130	160	180	210	250	
				m³/h	0	1.2	3.0	4.8	5.4	6.6	7.8	9.6	10.8	12.6	15.0	
H= Total manometric head in meters																
CDM 70/05	CD 70/05	0.37	0.5	22	20.7	18.4	15.9	15	-	-	-	-	-	-	-	
CDM 70/07	CD 70/07	0.55	0.8	30	28	24.5	20.5	-	-	-	-	-	-	-	-	
CDM 70/12	CD 70/12	0.9	1.2	37	35	31.2	26.5									
CDM 90/10	CD 90/10	0.75	1	32	30.3	27.2	23.6	22.3	19.5	-	-	-	-	-	-	
CDM 120/07	CD 120/07	0.55	0.8	22.5	-	20.5	18.7	18.1	16.8	15.5	13.7	12.5	-	-	-	
CDM 120/12	CD 120/12	0.9	1.2	31.2	-	29.3	27.5	26.8	25.2	23.6	21	-	-	-	-	
CDM 120/20	CD 120/20	1.5	2	40.5	-	37.5	35.3	34.6	33.1	31.4	28.6	-	-	-	-	
CDM 200/12	CD 200/12	0.9	1.2	22.8	-	-	21.3	21	20.4	19.7	18.5	17.6	16	14		
CDM 200/20	CD 200/20	1.5	2	33	-	-	31.5	31.2	30.6	30	28.7	27.9	26.5	24.5		
-	CD 200/25	1.8	2.5	39.4	-	-	36.8	36.5	35.6	34.7	33.3	32	30	27.2		

TYPE KEY AND CURVE SPECIFICATIONS

50Hz

Rev. L

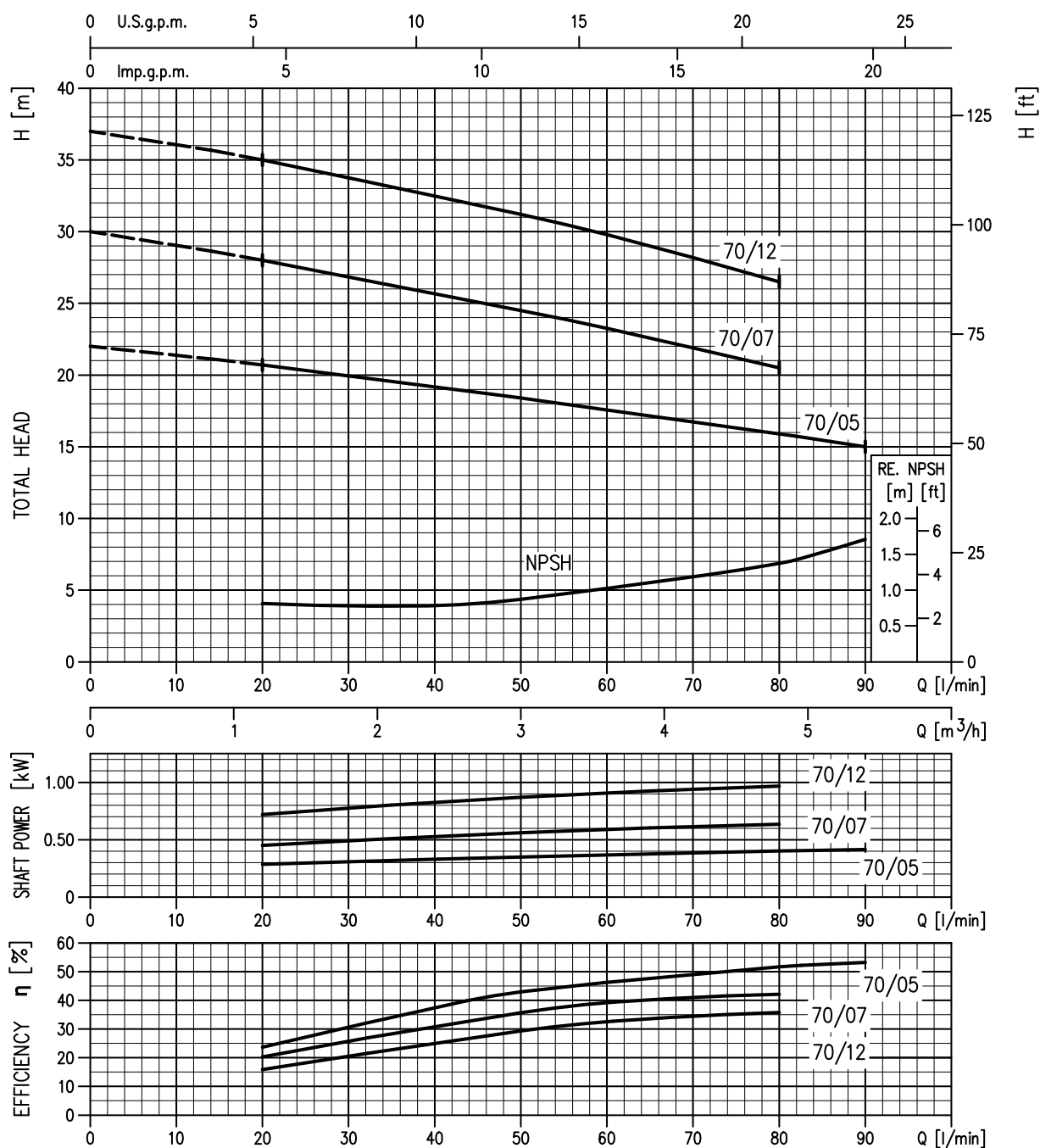
TYPE KEY



CD 70/05 (0.37 kW) - Impeller diameter = 132 mm

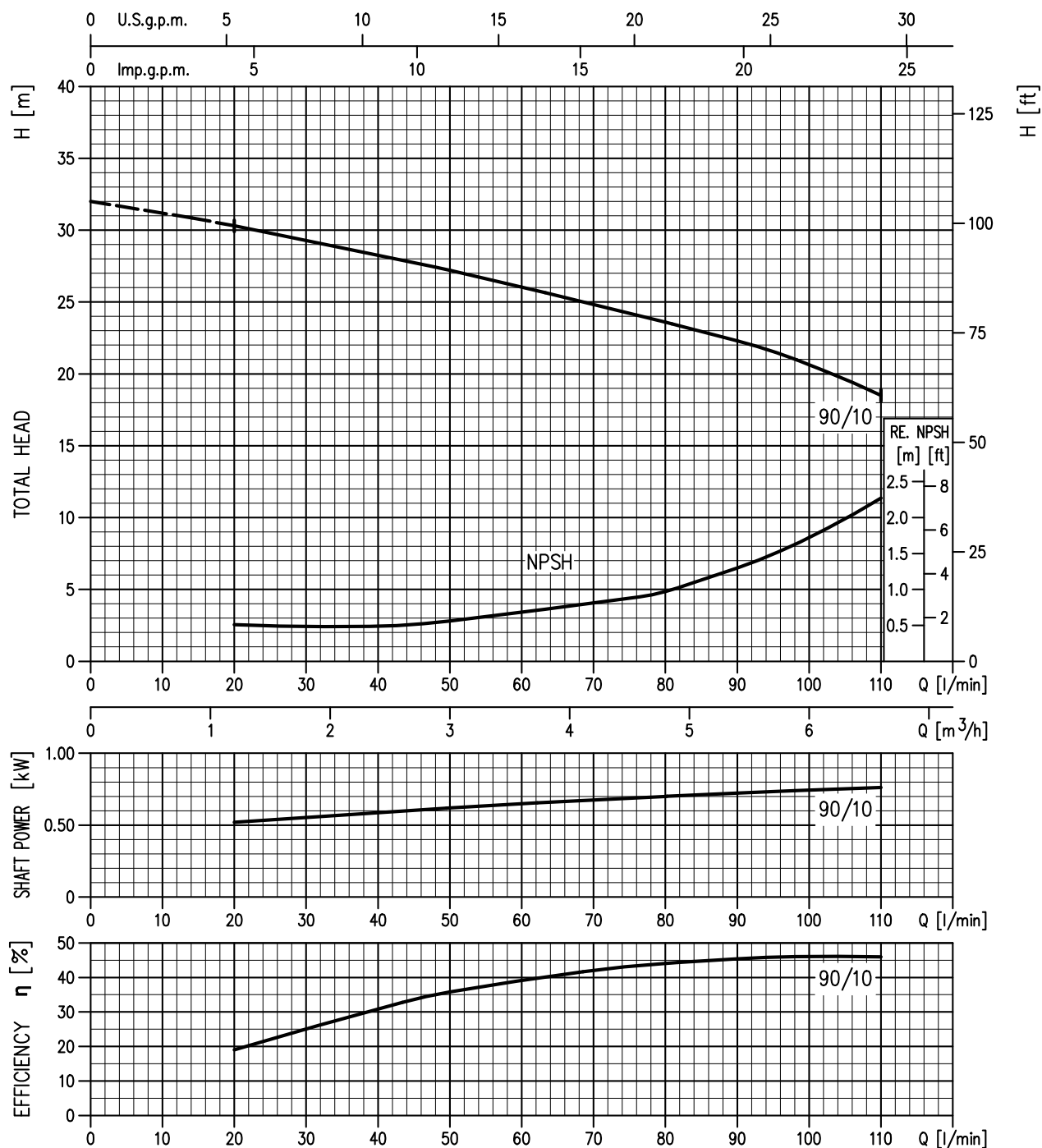
CD 70/07 (0.55 kW) - Impeller diameter = 157 mm

CD 70/12 (0.90 kW) - Impeller diameter = 176 mm



Rotation speed $\approx 2800 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

CD 90/10 (0.75 kW) MEI > 0.50 - Impeller diameter = 157 mm

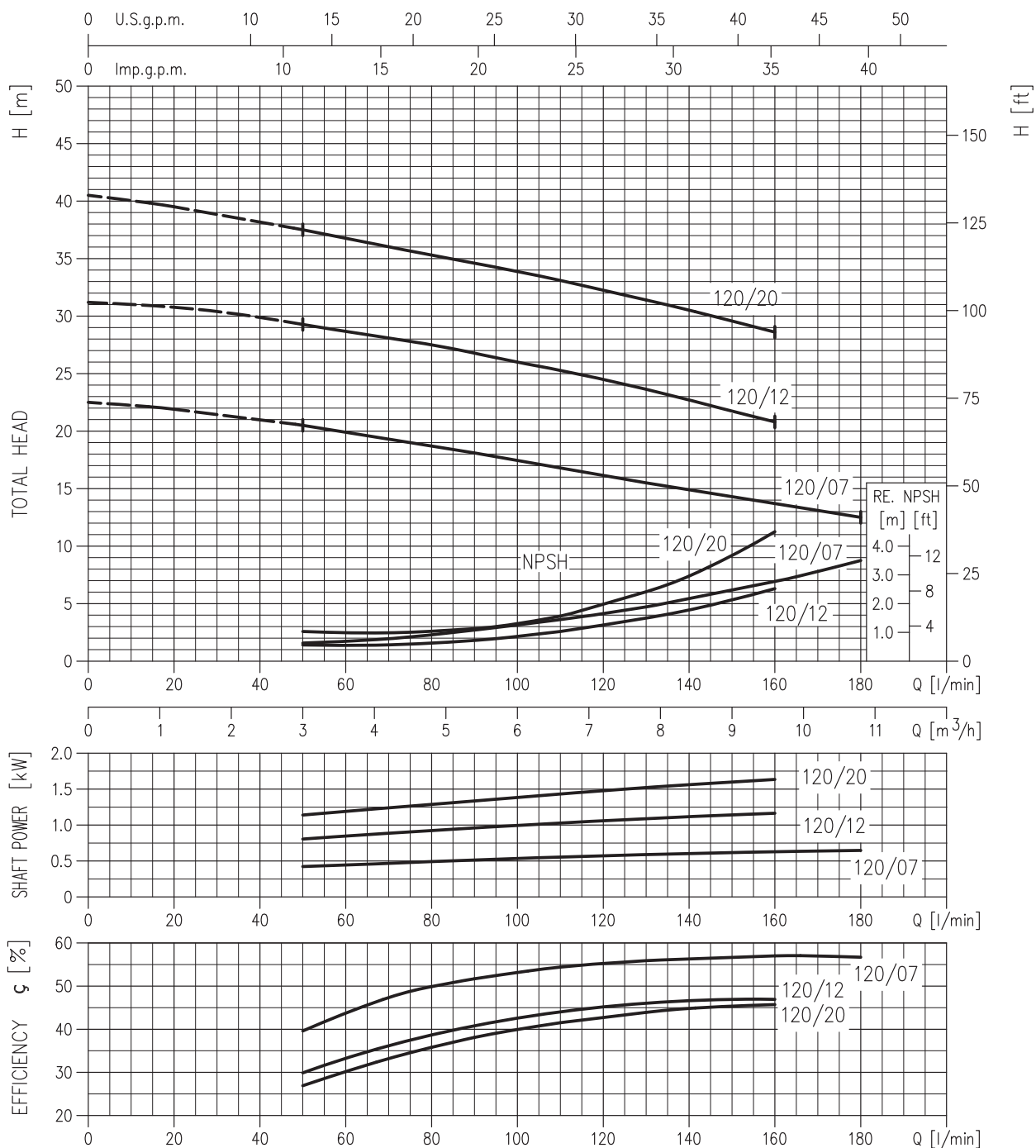


Rotation speed $\approx 2800 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

CD 120/07 (0.75 kW) MEI > 0.50 - Impeller diameter = 132 mm

CD 120/12 (0.90 kW) MEI > 0.40 - Impeller diameter = 157 mm

CD 120/20 (1.50 kW) MEI > 0.40 - Impeller diameter = 176 mm

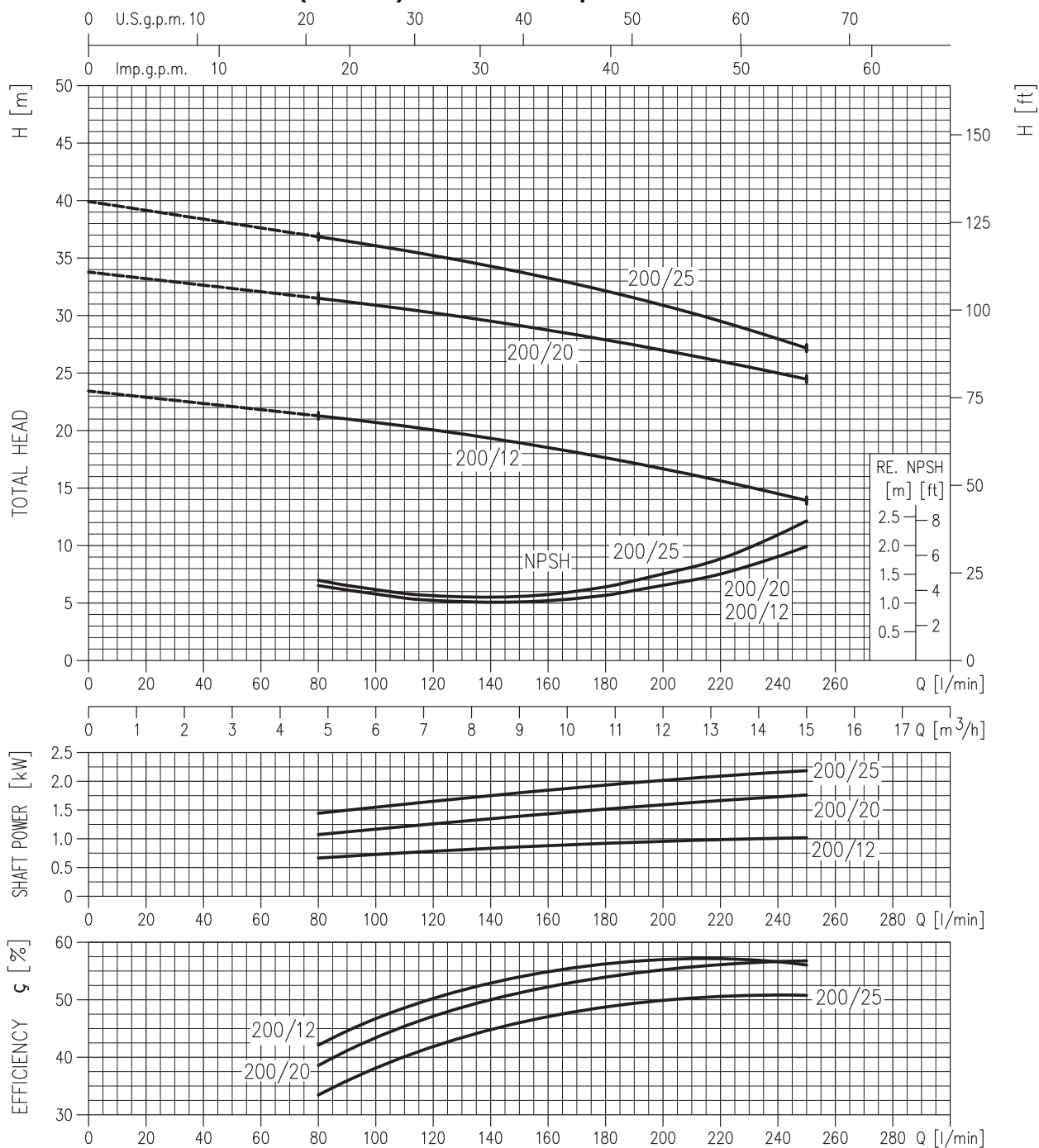


Rotation speed $\approx 2800 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

CD 200/12 (0.90 kW) MEI > 0.50 - Impeller diameter = 132 mm

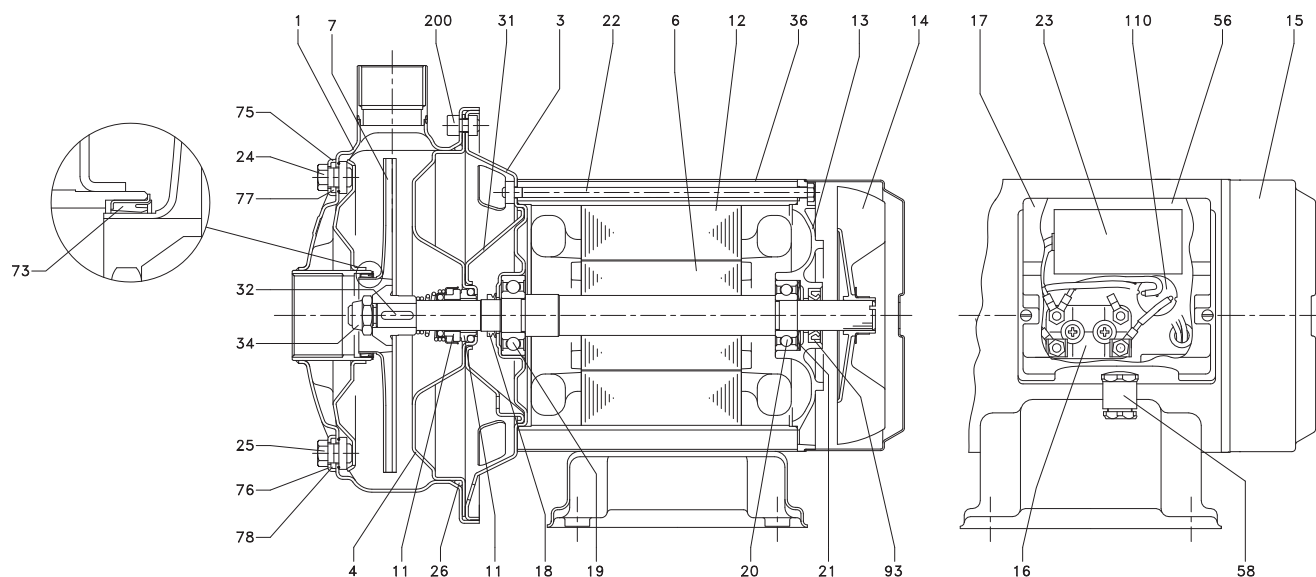
CD 200/20 (1.50 kW) MEI > 0.60 - Impeller diameter = 157 mm

CD 200/25 (1.80 kW) MEI > 0.40 - Impeller diameter = 176 mm



Rotation speed $\approx 2800 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

SECTIONAL VIEW CD 70/05 - 70/07 - 90/10



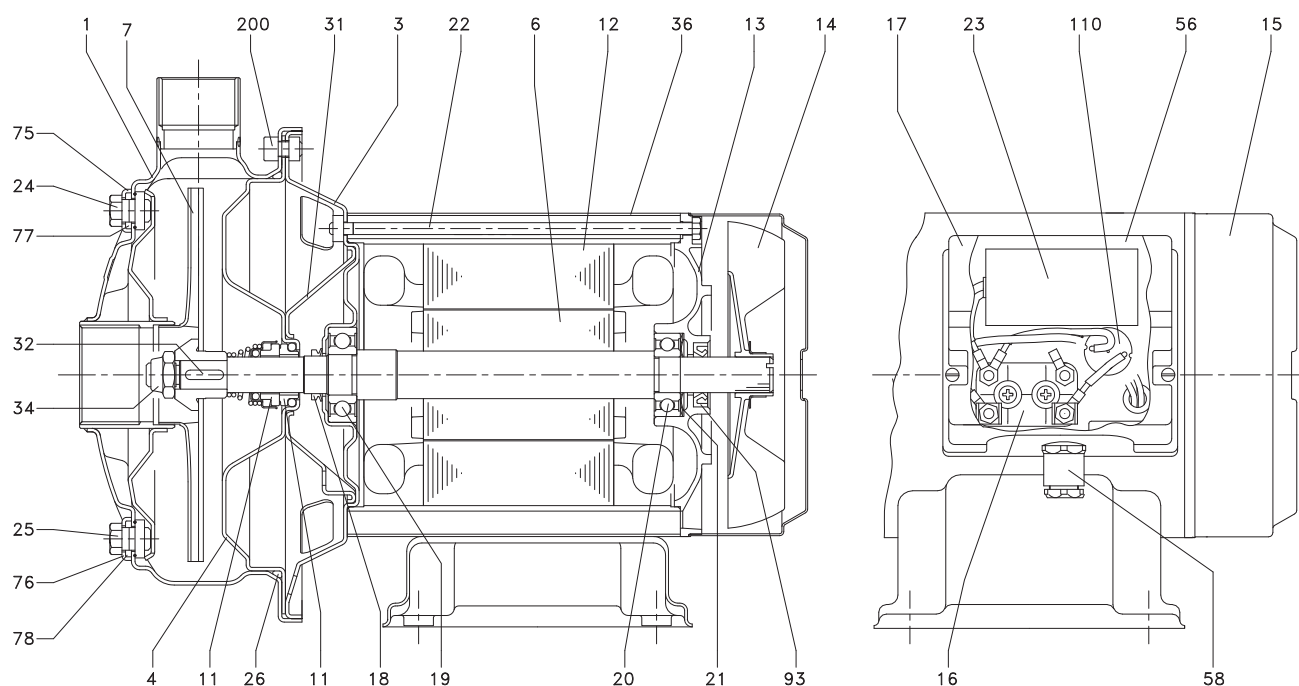
N°	PART NAME	MATERIAL	DIMENSION	STANDARD	Q.TY	N°	PART NAME		MATERIAL	DIMENSION	STANDARD	Q.TY
1	Casing	AISI 304			1	25	Drain plug		AISI 304			1
3	Motor bracket	AISI 304			1	26	O-ring [2]		NBR			1
4	Casing cover	AISI 304			1	31	Thrust flange		AISI 304			1
6	Shaft with rotor	AISI 303 (Wet extension)			1	32	Key		AISI 316	4x4x14	UNI 6604	1
7	Impeller	AISI 304			1	34	Impeller nut		Stainless steel A2-70	M10X1,25	UNI 7474	1
11	Mechanical seal	Ceramic/Carbon/NBR	see page 301		1	36	Motor casing		AISI 304			1
12	Motor frame with stator	-			1	56	Box gasket		NBR			1
13	Motor cover	Aluminium			1	58	Cable entry		-			1
14	Fan	PA			1	73	Casing ring [3]		NBR			1
15	Fan cover	AISI 304			1	75	Washer		AISI 304			1
16	Terminal board	-			1	76	Washer		AISI 304			1
17	Terminal box cover	PA66 glass fibre reinforced			1	77	O-ring [2]		NBR			1
18	Splash ring	NBR			1	78	O-ring [2]		NBR			1
19	Pump side ball bearing	-			1	93	Lip seal		NBR			1
20	Fan side ball bearing	-			1	110	Protector [1]		-			1
21	Adjusting ring	Steel C70			1	200	Screw	70/05, 70/07, 90/10,	Stainless steel A2-70	M6X12	UNI 5931	8
22	Tie rod	Fe 420 Galvanized			4							
23	Capacitor [1]	-			1							
24	Priming plug	AISI 304			1							
								70/12		M8X14		

[1] Only for single phase

[2] FPM for H-HS-HW-HSW
EPDM for E

[3] FPM for CDH 70/05, CDHS 70/05, CDHW 70/05, CDHSW 70/05, CDH 70/07, CDHS 70/07, CDHW 70/07,
CDHSW 70/07, CDH 90/10, CDHS 90/10, CDHW 90/10, CDHSW 90/10
NBR for CDE 70/05, 70/07, 90/10

SECTIONAL VIEW CD 70/12 - 120/07 - 120/20

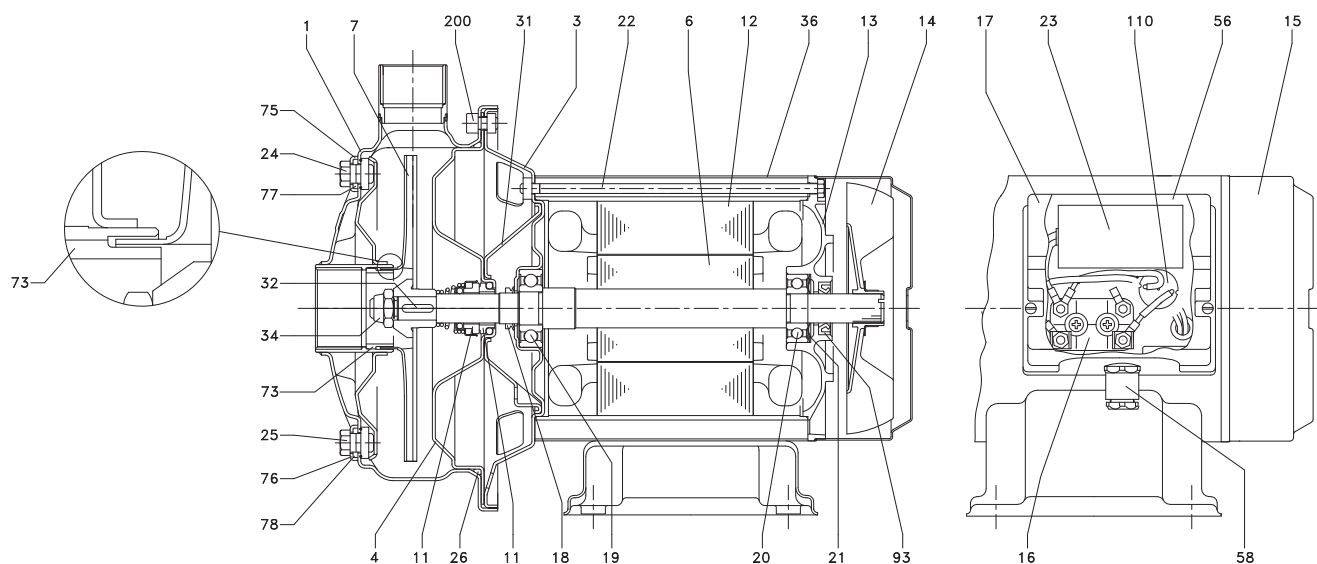


N°	PART NAME	MATERIAL	DIMENSION	STANDARD	Q.TY	N°	PART NAME		MATERIAL	DIMENSION	STANDARD	Q.TY
1	Casing	AISI 304			1	25	Drain plug		AISI 304			1
3	Motor bracket	AISI 304			1	26	O-ring [2]		NBR			1
4	Casing cover	AISI 304			1	31	Thrust flange		AISI 304			1
6	Shaft with rotor	AISI 303 (Wet extension)			1	32	Key		AISI 316	4x4x14	UNI 6604	1
7	Impeller	AISI 304			1	34	Impeller nut		Stainless steel A2-70	M10X1,25	UNI 7474	1
11	Mechanical seal	Ceramic/Carbon/NBR	see page 301		1	36	Motor casing		AISI 304			1
12	Motor frame with stator	-			1	56	Box gasket		NBR			1
13	Motor cover	Aluminium			1	58	Cable entry		-			1
14	Fan	PA			1	73	Casing ring		-			1
15	Fan cover	AISI 304			1	75	Washer		AISI 304			1
16	Terminal board	-			1	76	Washer		AISI 304			1
17	Terminal box cover	PA66 glass fibre reinforced			1	77	O-ring [2]		NBR			1
18	Splash ring	NBR			1	78	O-ring [2]		NBR			1
19	Pump side ball bearing	-			1	93	Lip seal		NBR			1
20	Fan side ball bearing	-			1	110	Protector [1]		-			1
21	Adjusting ring	Steel C70			1	200	Screw	120/07	Stainless steel A2-70	M6X12	UNI 5931	8
22	Tie rod	Fe 420 Galvanized			4							
23	Capacitor [1]	-			1							
24	Priming plug	AISI 304			1							

[1] Only for single phase

[2] FPM for H-HS-HW-HSW
EPDM for E

SECTIONAL VIEW CD 120/12 - CD 200/12 - CD 200/20 - CD 200/25

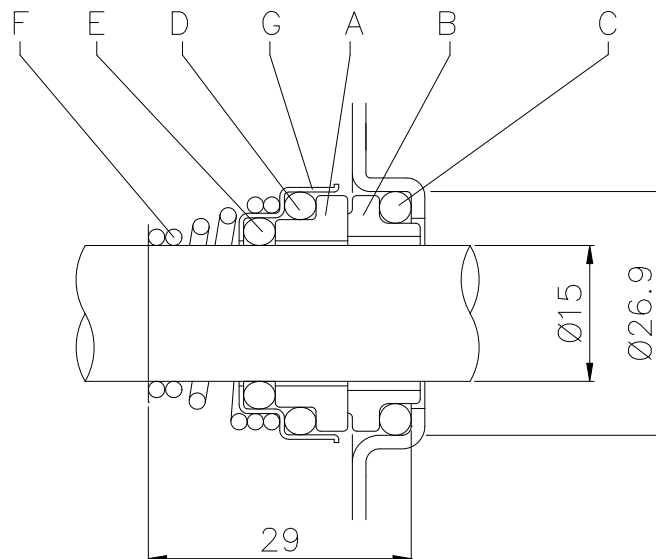


N°	PART NAME	MATERIAL	DIMENSION	STANDARD	Q.TY	N°	PART NAME		MATERIAL	DIMENSION	STANDARD	Q.TY
1	Casing	AISI 304			1	25	Drain plug		AISI 304			1
3	Motor bracket	AISI 304			1	26	O-ring [2]		NBR			1
4	Casing cover	AISI 304			1	31	Thrust flange		AISI 304			1
6	Shaft with rotor	AISI 303 (Wet extension)			1	32	Key		AISI 316	4x4x14	UNI 6604	1
7	Impeller	AISI 304			1	34	Impeller nut		Stainless steel A2-70	M10X1,25	UNI 7474	1
11	Mechanical seal	Ceramic/Carbon/NBR	see page 301		1	36	Motor casing		AISI 304			1
12	Motor frame with stator	-			1	56	Box gasket		NBR			1
13	Motor cover	Aluminium			1	58	Cable entry		-			1
14	Fan	PA			1	73	Double ring		AISI 304			1
15	Fan cover	AISI 304			1	75	Washer		AISI 304			1
16	Terminal board	-			1	76	Washer		AISI 304			1
17	Terminal box cover	PA66 glass fibre reinforced			1	77	O-ring [2]		NBR			1
18	Splash ring	NBR			1	78	O-ring [2]		NBR			1
19	Pump side ball bearing	-			1	93	Lip seal		NBR			1
20	Fan side ball bearing	-			1	110	Protector [1]		-			1
21	Adjusting ring	Steel C70			1	200	Screw	120/12,200/12,200/20	Stainless steel A2-70	M6X12	UNI 5931	8
22	Tie rod	Fe 420 Galvanized			4							
23	Capacitor [1]	-			1			200/25				
24	Priming plug	AISI 304			1							

[1] Only for single phase

[2] FPM for H-HS-HW-HSW
EPDM for E

MECHANICAL SEAL

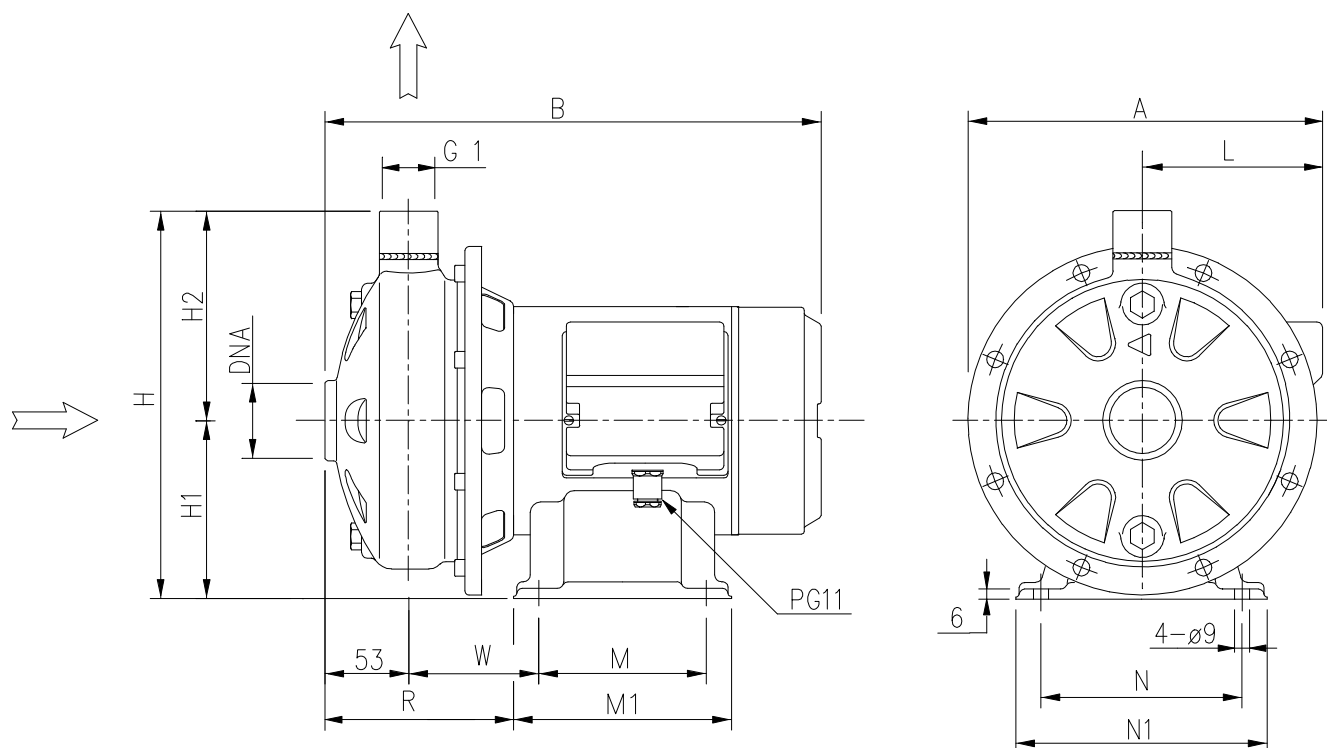


REF	PART NAME	Standard version (CD)	MATERIAL				
			(CDH)	(CDHS)	Optional (CDHW)	(CDHSW)	(CDE)
A	Rotary seal ring	Ceramic	Ceramic	Silicon carbide	Tungsten carbide	Silicon carbide	Ceramic
B	Stationary seal ring	Carbon graphite	Carbon graphite	Silicon carbide	Tungsten carbide	Tungsten carbide	Carbon graphite
C	O Ring	NBR	FPM	FPM	FPM	FPM	EPDM
D	O Ring	NBR	FPM	FPM	FPM	FPM	EPDM
E	O Ring	NBR	FPM	FPM	FPM	FPM	EPDM
F	Self driving spring	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316
G	Frame	AISI 304	AISI 304	AISI 316	AISI 316	AISI 316	AISI 316

BEARINGS

Pump type		Ball Bearing	
Single Phase	Three Phase	Pump side	Fan side
CDM 70/05	CD 70/05	6203 2RSH	6202 2RSH
CDM 70/07	CD 70/07	6203 2RSH	6202 2RSH
CDM 70/12	CD 70/12	6203 2RSH	6202 2RSH
CDM 90/10	CD 90/10	6203 2RSH	6202 2RSH
CDM 120/07	CD 120/07	6203 2RSH	6202 2RSH
CDM 120/12	CD 120/12	6203 2RSH	6202 2RSH
CDM 120/20	CD 120/20	6204 2RSH	6203 2RSH
CDM 200/12	CD 200/12	6203 2RSH	6202 2RSH
CDM 200/20	CD 200/20	6204 2RSH	6203 2RSH
-	CD 200/25	6204 2RSH	6203 2RSH

PUMP

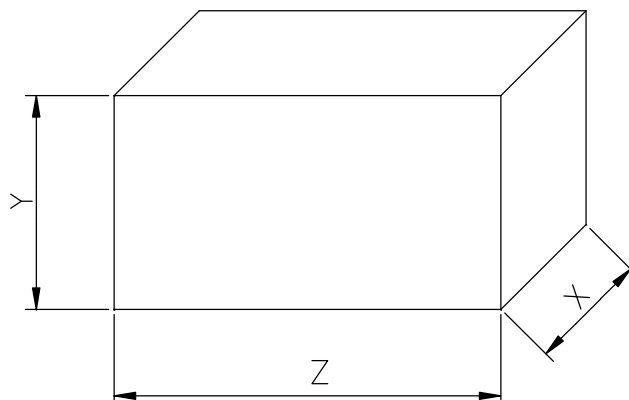


Pump type CDM-CD	Dimensions [mm]																		Weight [kgf]	
	A [1~]	A [3~]	B [1~]	B [3~]	H	H1	H2	L [1~]	L [3~]	M [1~]	M [3~]	M1 [1~]	M1 [3~]	N	N1	R	W	DNA	[1~]	[3~]
70/05	209	208	298	298	229.5	106	123.5	105	104	100	100	130	130	120	150	115.5	77.5	G1 1/4	8.7	8.7
70/07	209	208	298	298	229.5	106	123.5	105	104	100	100	130	130	120	150	115.5	77.5	G1 1/4	10	10
70/12	208	208	328	338	229.5	106	123.5	104	104	100	100	130	130	120	150	130.5	92.5	G1 1/4	13.2	13.7
90/10	209	208	328	328	229.5	106	123.5	105	104	100	100	130	130	120	150	130.5	92.5	G1 1/4	11.5	11.6
120/07	209	208	298	298	229.5	106	123.5	105	104	100	100	130	130	120	150	115.5	77.5	G1 1/4	10	10.5
120/12	208	208	328	338	229.5	106	123.5	104	104	100	100	130	130	120	150	130.5	92.5	G1 1/4	12.3	12.9
120/20	232	232	356	366	250	118	132	116	116	120	120	150	150	140	170	133	95	G1 1/4	15.3	17.4
200/12	208	208	328	338	229.5	106	123.5	104	104	100	100	130	130	120	150	130.5	92.5	G1 1/2	12	12.6
200/20	213	213	356	366	229.5	106	123.5	109	109	120	120	150	150	140	170	133	95	G1 1/2	15.8	16.6
200/25	-	232	-	366	250	118	132	-	116	-	120	-	150	140	170	138	100	G1 1/2	-	17.4

[1~] Single phase

[3~] Three phase

PACKING



Pump type		Packing [mm]			Weight [kgf]	
Single Phase	Three Phase	X	Y	Z	[1~]	[3~]
CDM 70/05	CD 70/05	239	250	362	9.6	9.6
CDM 70/07	CD 70/07	239	250	362	10.8	10.8
CDM 70/12	CD 70/12	244	279	382	13.8	14.6
CDM 90/10	CD 90/10	239	250	362	12.2	12.4
CDM 120/07	CD 120/07	239	250	362	10.5	11.3
CDM 120/12	CD 120/12	239	250	362	13	13.7
CDM 120/20	CD 120/20	244	279	382	17.5	18.3
CDM 200/12	CD 200/12	239	250	362	12.8	13.4
CDM 200/20	CD 200/20	239	250	362	16.6	17.6
-	CD 200/25	239	250	362	-	18.4

[1~] Single phase

[3~] Three phase

MOTOR DATA

Pump type		Power		Efficiency		Capacitor		Efficiency (% load)			Input		Full load current			Locked rotor current		
Single Phase	Three Phase	[kW]	[HP]	Single Phase	Three Phase	Single Phase [μF]	[V]	Three phase η %			Single Phase	Three Phase	Single Phase	Three Phase	400 V	Single Phase	Three Phase	400 V
								50%	75%	100%								
CDM 70/05	CD 70/05	0.37	0.5	-	-	12.5	450	-	-	-	0.75	0.68	3.4	2.4	1.4	10.1	11.0	6.15
CDM 70/07	CD 70/07	0.55	0.75	-	-	16	450	-	-	-	1.1	1.0	5.0	3.5	2.0	16.1	17.0	9.7
CDM 70/12	CD 70/12	0.9	1.2	-	IE2	31.5	450	79.0	81.7	81.6	1.5	1.35	6.5	4.3	2.5	24.5	31.0	17.8
CDM 90/10	CD 90/10	0.75	1.0	-	IE2	20	450	77.2	80.9	81.3	1.2	1.05	5.6	3.3	1.9	22.7	22.0	12.9
CDM 120/07	CD 120/07	0.55	0.75	-	-	16	450	-	-	-	1.0	1.0	4.6	3.2	1.85	16.1	17.0	9.7
CDM 120/12	CD 120/12	0.9	1.2	-	IE2	31.5	450	79.0	81.7	81.6	1.6	1.45	6.9	4.5	2.6	25	31.0	17.8
CDM 120/20	CD 120/20	1.5	2.0	-	IE2	40	450	80.3	83.4	83.8	2.1	2.09	9.3	7.0	4.0	43	34.3	20.0
CDM 200/12	CD 200/12	0.9	1.2	-	IE2	31.5	450	79.0	81.7	81.6	1.4	1.35	6.3	4.3	2.5	25	31.0	17.8
CDM 200/20	CD 200/20	1.5	2.0	-	IE2	40	450	80.3	83.4	83.8	2.3	2.22	10.2	7.4	4.3	43	34.3	20.0
-	CD 200/25	1.85	2.5	-	IE2	-	-	83.0	84.4	83.8	-	2.87	-	8.7	5.0	-	59.0	34.3

NOISE DATA

Pump type		Power		L _{pA} - dB(A) *
Single Phase	Three Phase	[kW]	[HP]	
CDM 70/05	CD 70/05	0.37	0.5	<70
CDM 70/07	CD 70/07	0.55	0.75	
CDM 70/12	CD 70/12	0.9	1.2	
CDM 90/10	CD 90/10	0.75	1.0	
CDM 120/07	CD 120/07	0.55	0.75	
CDM 120/12	CD 120/12	0.9	1.2	
CDM 120/20	CD 120/20	1.5	2.0	
CDM 200/12	CD 200/12	0.9	1.2	
CDM 200/20	CD 200/20	1.5	2.0	
-	CD 200/25	1.85	2.5	

* Mean value of several measures at 1m distance around the pump.

Tolerance ± 2.5 dB.