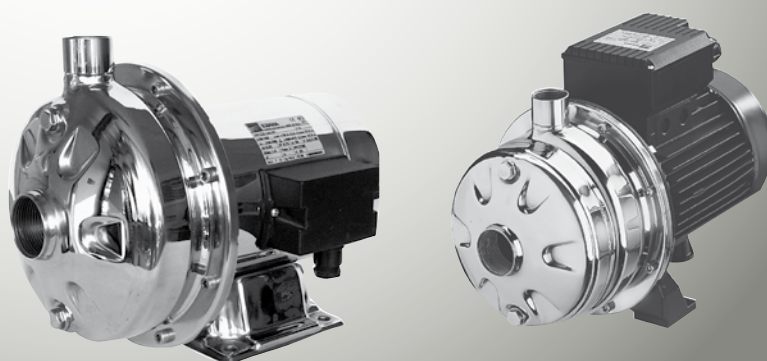




EBARA

CD/CDX
CENTRIFUGAL ELECTRIC PUMPS

50 Hz



SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304



Single impeller centrifugal electric pumps constructed entirely in AISI 304 stainless steel.

APPLICATIONS

- Domestic pressure boosting
- Small-scale garden irrigation
- Washing
- Treating water
- Cooling towers
- Moving clean water in general

TECHNICAL DETAILS

- Solid hydraulic structure
- Small dimensions

PUMP TECHNICAL DATA

- Maximum working pressure: 8 bar
 - Maximum temperature of the liquid:
 - 5°C ÷ +60°C for CD and CDE 70/05-70/07-90/10
 - 5°C ÷ +90°C for the rest of the CD range
 - 5°C ÷ +110°C for the H-HS-HW-HSW version
 - 5°C ÷ +120°C for the rest of the CDE range
 - G1½ suction connection for CD 200, G1¼ for the rest of the range
 - G1 discharge connection
 - MEI > 0,4
- For further information please see our Data Book on the web site www.ebaraurope.com

MOTOR TECHNICAL DATA

- High efficiency IE2 motors starting from 0,75kW
- 2 poles self-ventilated closed asynchronous motor with internal ventilation
- Class of insulation F
- IP55 Protection degree
- 230V ±10% 50Hz single phase voltage
- 230/400V ±10% 50Hz three phase voltage
- Permanent capacitor inserted and thermo-amperometric protection with automatic rearm incorporated for the single phase motor
- Protection under user's responsibility for the three phase version

MATERIALS

- Pump casing, impeller, diffuser, seal housing disc, bracket, motor case and fan cover in EN 1.4301 (AISI 304)
- Mechanical sealing in:
 - Ceramic/Carbon/NBR (standard)
 - Ceramic/Carbon/FPM (H version)
 - SiC/SiC/FPM (HS version)
 - Tungsten carbide/Tungsten carbide/FPM (HW version)
 - SiC/Tungsten carbide/FPM (HSW version)
 - Ceramic/Carbon/EPDM (E version)
 - Tungsten carbide/Special Carbon/EPDM (U3CEGG version)
- Shaft in AISI 303 (part in contact with the liquid)

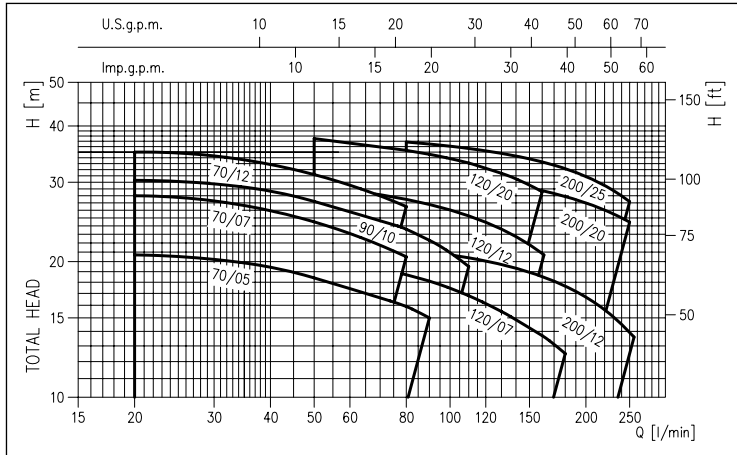
CONTROL PANELS

- 1EPBH

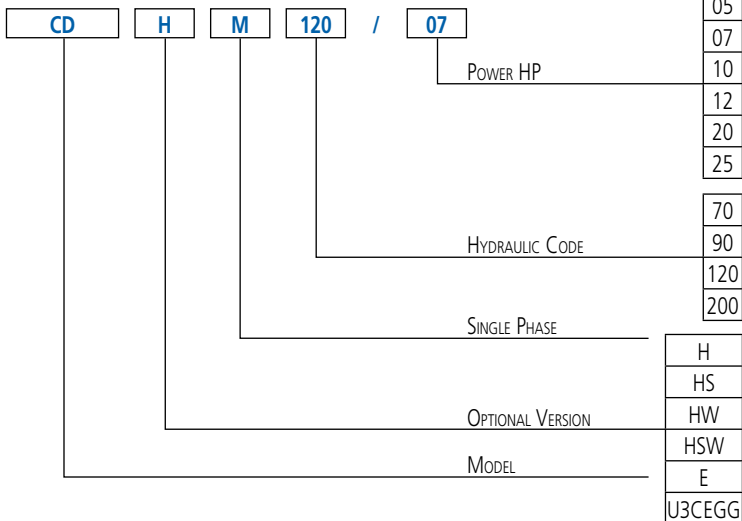
ACCESSORIES (On request)

- 5 litres 10 bar ¾" EPDM vessel
- 24 litres 8 bar 1" EPDM vessel
- 24 litres 10 bar 1" EPDM vessel
- PVC 5m key float with counter-weight
- PVC 10m key float with counter-weight
- SQUARE-D FSG-2 1.4÷4.6 bar G¼ F pressure switch
- FYG-22 2.8÷7 bar G¼ F pressure switch
- Presscomfort - Pressure regulator

PERFORMANCE RANGE (according to ISO 9906 Attachment A)

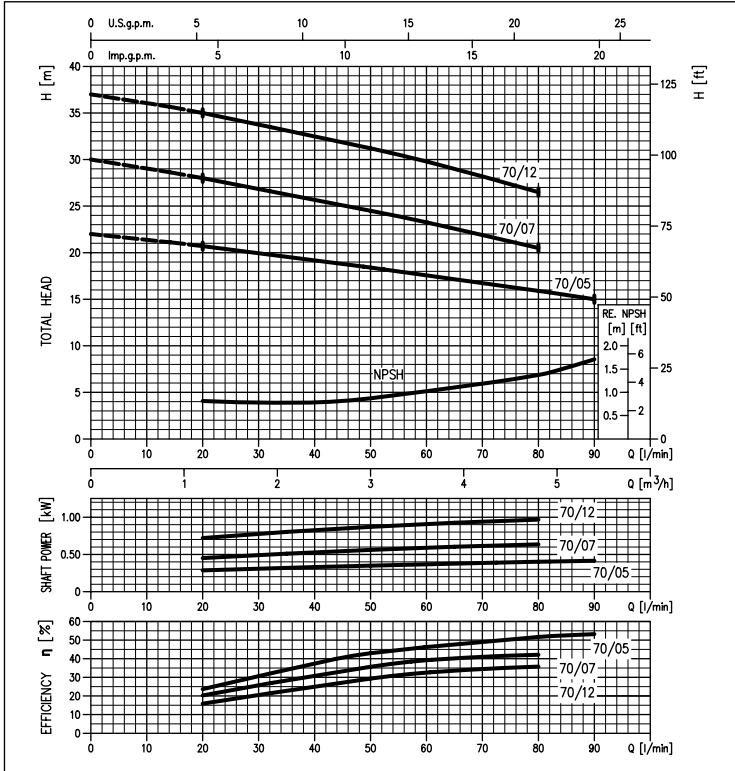


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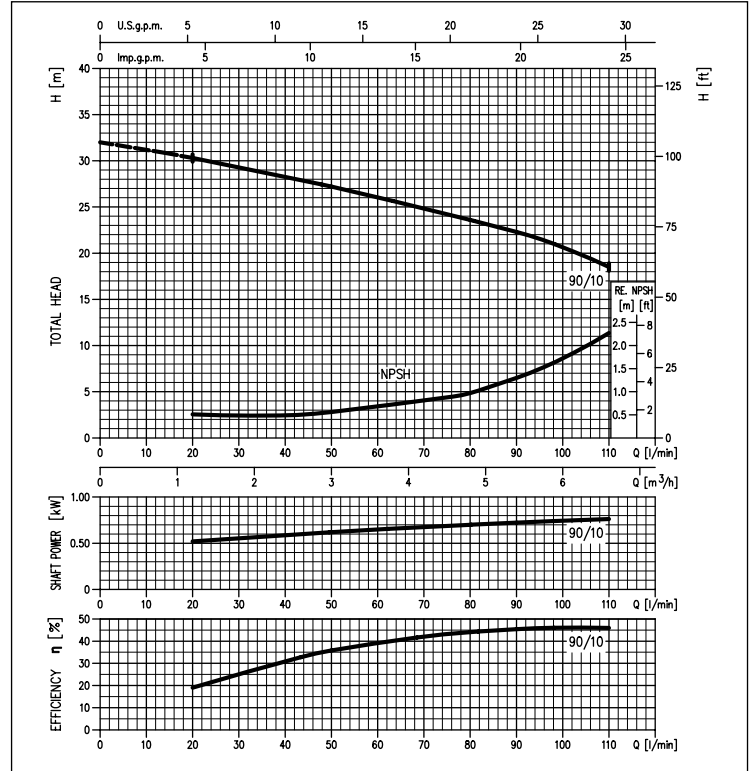


SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS in AISI 304

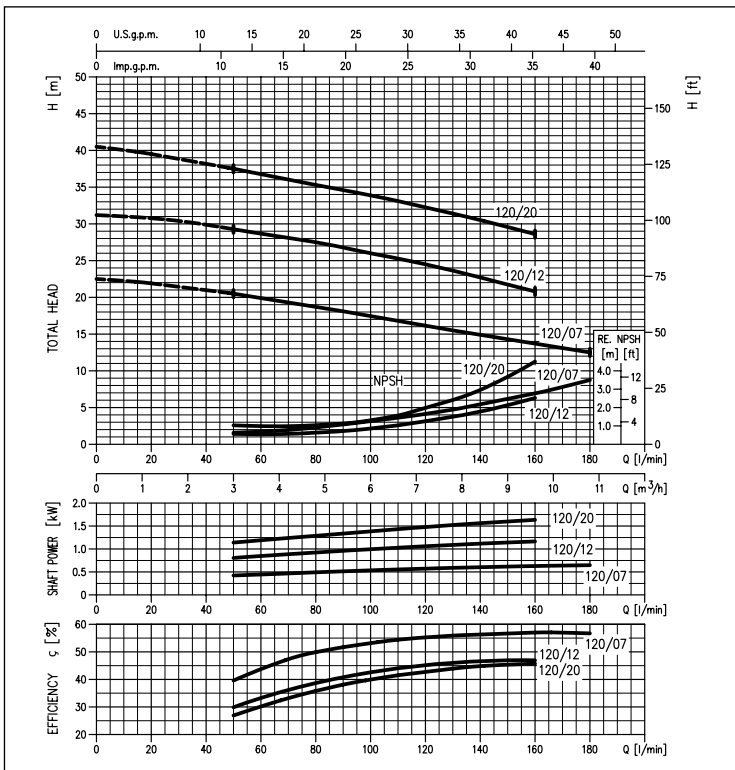
PERFORMANCE CURVES CD 70 series
(according to ISO 9906 Attachment A)



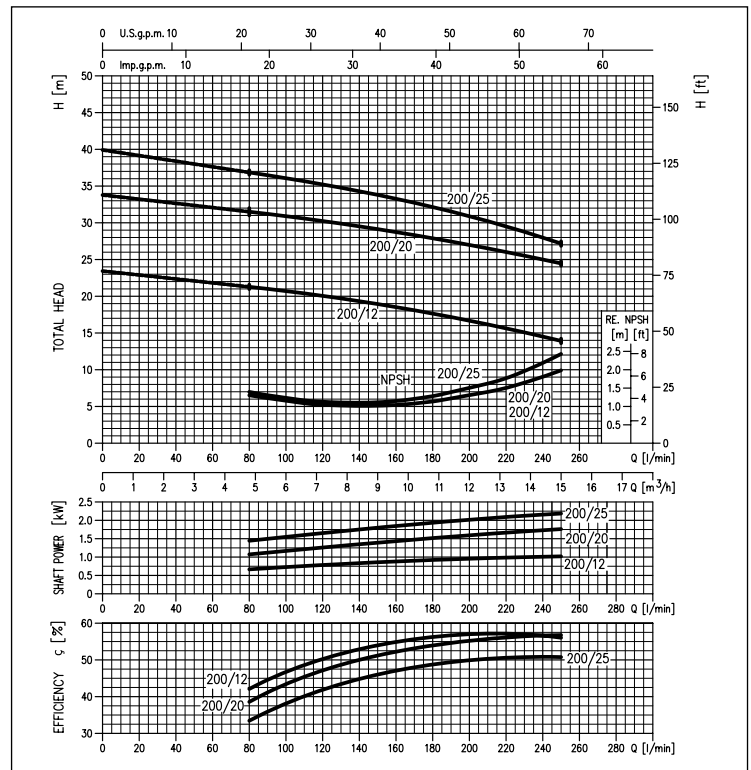
PERFORMANCE CURVES CD 90 series
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES CD 120 series
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES CD 200 series
(according to ISO 9906 Attachment A)



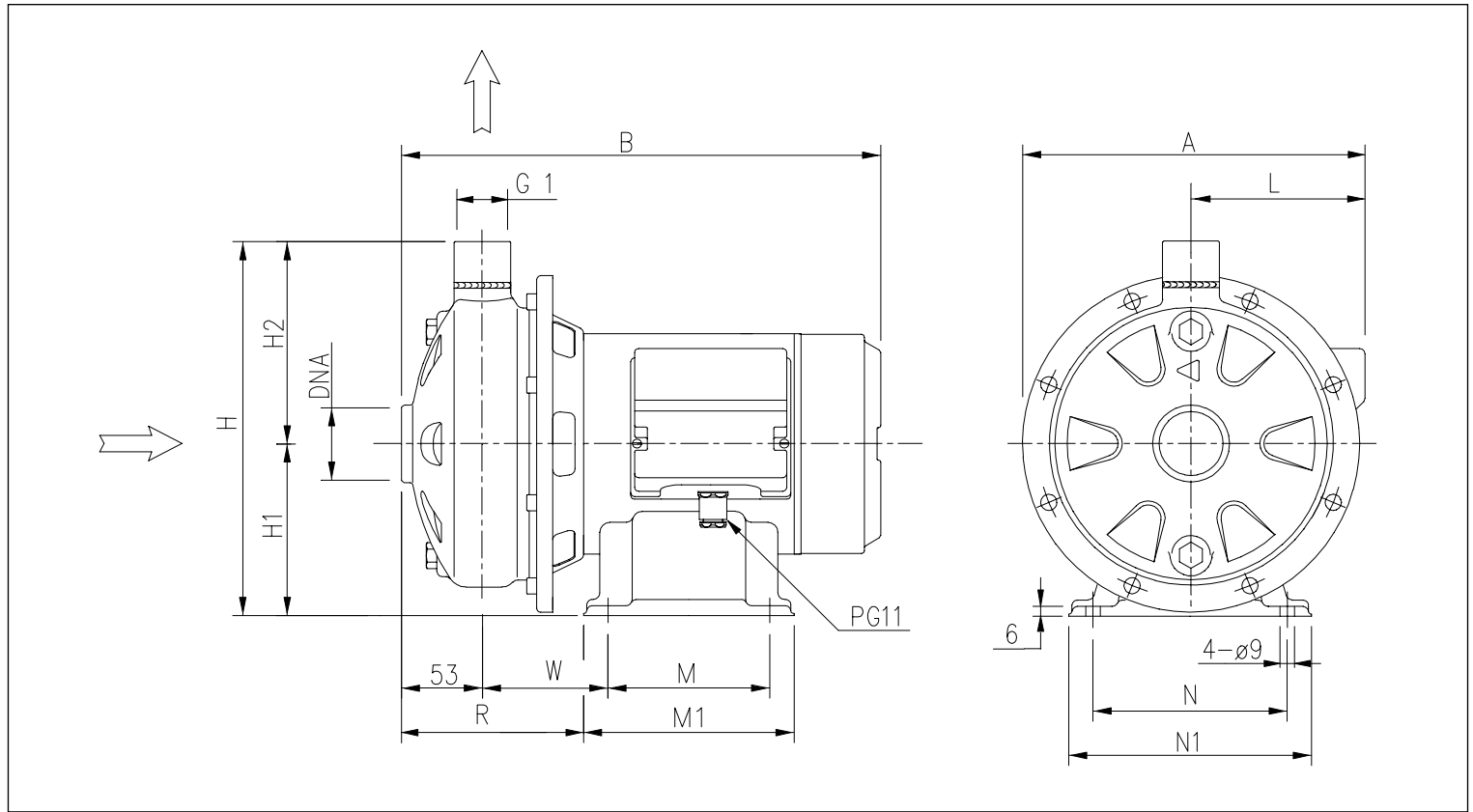
SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

PERFORMANCE TABLE

Model		P ₁		Q=Flow rate										
Single phase 230V	Three phase 230/400V	[HP]	[kW]	l/min	20	50	80	90	110	130	160	180	210	250
				m ³ /h	1,2	3	4,8	5,4	6,6	7,8	9,6	10,8	12,6	15
				H=Head [m]										
CDM 70/05	CD 70/05	0,5	0,37	20,7	18,4	15,9	15	-	-	-	-	-	-	-
CDM 70/07	CD 70/07	0,8	0,55	28	24,5	20,5	-	-	-	-	-	-	-	-
CDM 70/12	CD 70/12	1,2	0,9	35	31,2	26,5	-	-	-	-	-	-	-	-
CDM 90/10	CD 90/10	1	0,75	30,3	27,2	23,6	22,3	19,5	-	-	-	-	-	-
CDM 120/07	CD 120/07	0,8	0,55	-	20,5	18,7	18,1	16,8	15,5	13,7	12,5	-	-	-
CDM 120/12	CD 120/12	1,2	0,9	-	29,3	27,5	26,8	25,2	23,6	21	-	-	-	-
CDM 120/20	CD 120/20	2	1,5	-	37,5	35,3	34,6	33,1	31,4	28,6	-	-	-	-
CDM 200/12	CD 200/12	1,2	0,9	-	-	21,3	21	20,4	19,7	18,5	17,6	16	14	-
CDM 200/20	CD 200/20	2	1,5	-	-	31,5	31,2	30,6	30	28,7	27,9	26,5	24,5	-
-	CD 200/25	2,5	1,8	-	-	36,8	36,5	35,6	34,7	33,3	32	30	27,2	-

DIMENSIONS



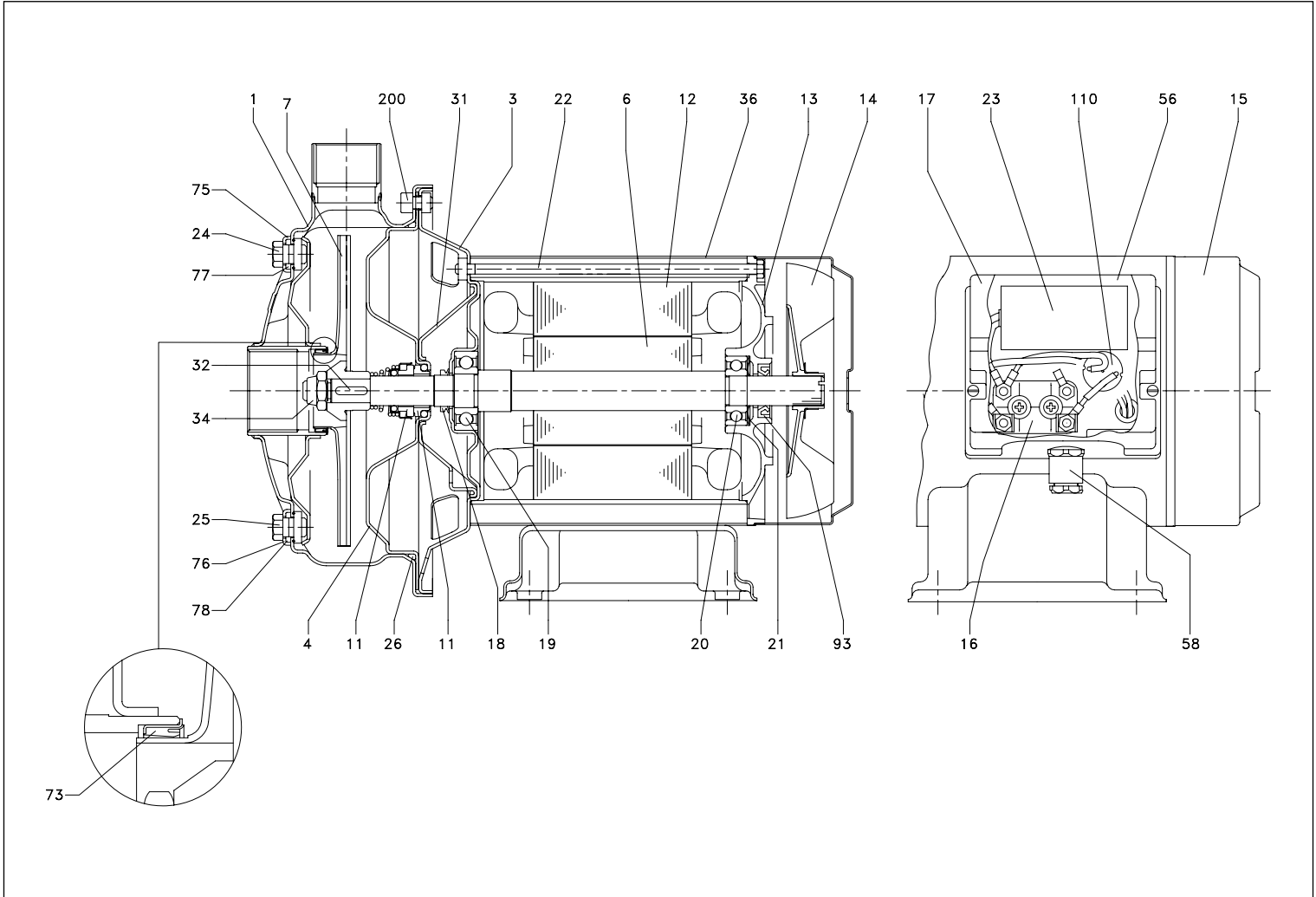
DIMENSIONS TABLE

Model	Dimensions [mm]																		Weight [kg]	
	[2]	A [1]	[2]	B [1]	H	H1	H2	[2]	L [1]	[2]	M [1]	[2]	M1 [1]	N	N1	R	W	DNA	[2]	[1]
CD(M) 70/05	209	208	298	298	229,5	106	123,5	105	104	100	100	130	130	120	150	115,5	77,5	G1¼	8,7	8,7
CD(M) 70/07	209	208	298	298	229,5	106	123,5	105	104	100	100	130	130	120	150	115,5	77,5	G1¼	10,0	10,0
CD(M) 70/12	208	208	328	338	229,5	106	123,5	104	104	100	100	130	130	120	150	130,5	92,5	G1¼	13,2	13,7
CD(M) 90/10	209	208	328	328	229,5	106	123,5	105	104	100	100	130	130	120	150	130,5	92,5	G1¼	11,5	11,6
CD(M) 120/07	209	208	298	298	229,5	106	123,5	105	104	100	100	130	130	120	150	115,5	77,5	G1¼	10,0	10,5
CD(M) 120/12	208	208	328	338	229,5	106	123,5	104	104	100	100	130	130	120	150	130,5	92,5	G1¼	12,3	12,9
CD(M) 120/20	232	232	356	366	250	118	132	116	116	120	120	150	150	140	170	133	95	G1¼	15,3	17,4
CD(M) 200/12	208	208	328	338	229,5	106	123,5	104	104	100	100	130	130	120	150	130,5	92,5	G1½	12,0	12,6
CD(M) 200/20	213	213	356	366	229,5	106	123,5	109	109	120	120	150	150	140	170	133	95	G1½	15,8	16,6
CD 200/25	-	232	-	366	250	118	132	-	116	-	120	-	150	140	170	138	100	G1½	-	17,4

[1]= Three-phase only
[2]= Single-phase only

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS in AISI 304

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



MATERIALS TABLE

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

[1] Only for single phase

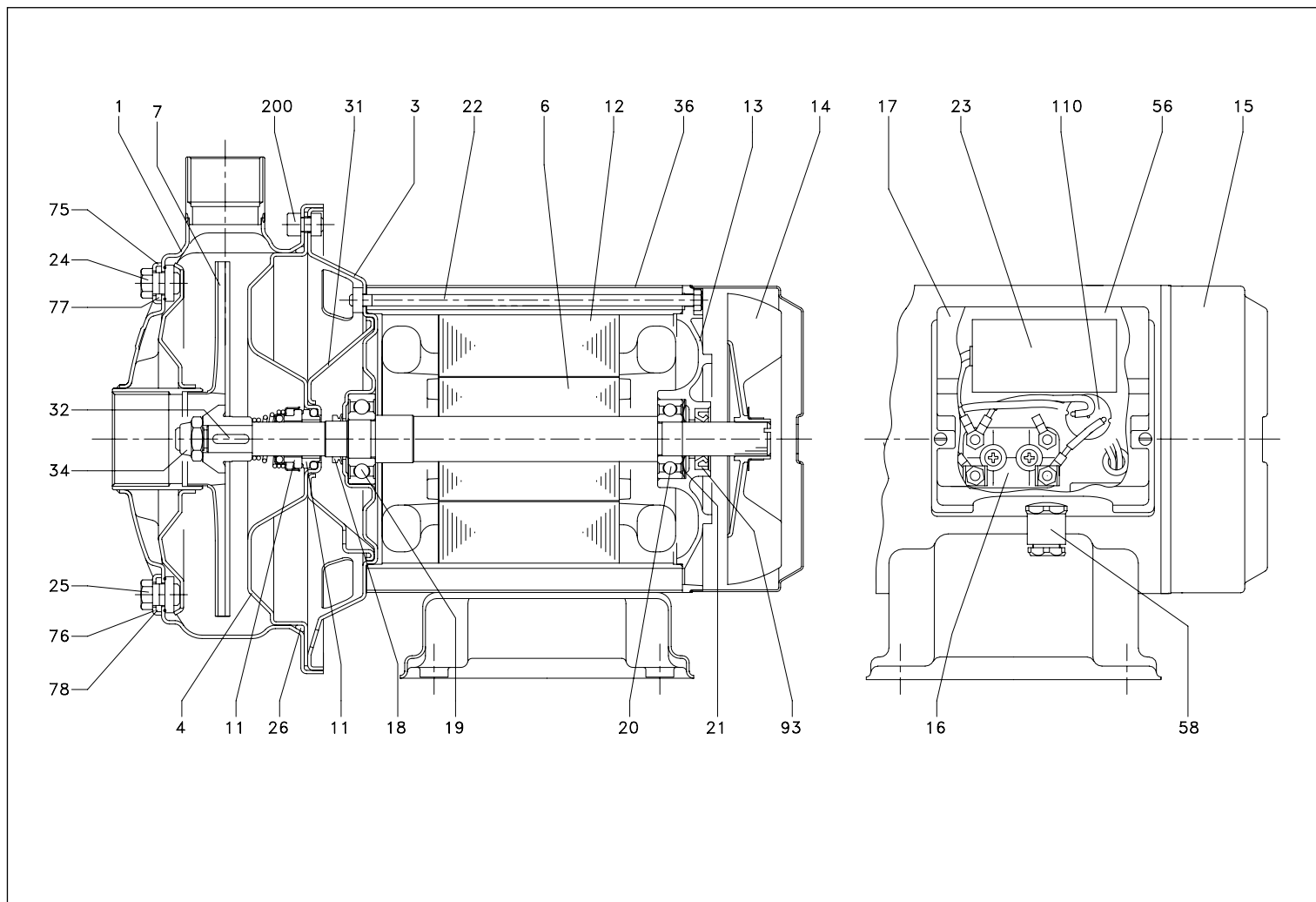
[2] FPM for H-HS-HW-HSW
EPDM for E

[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

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

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



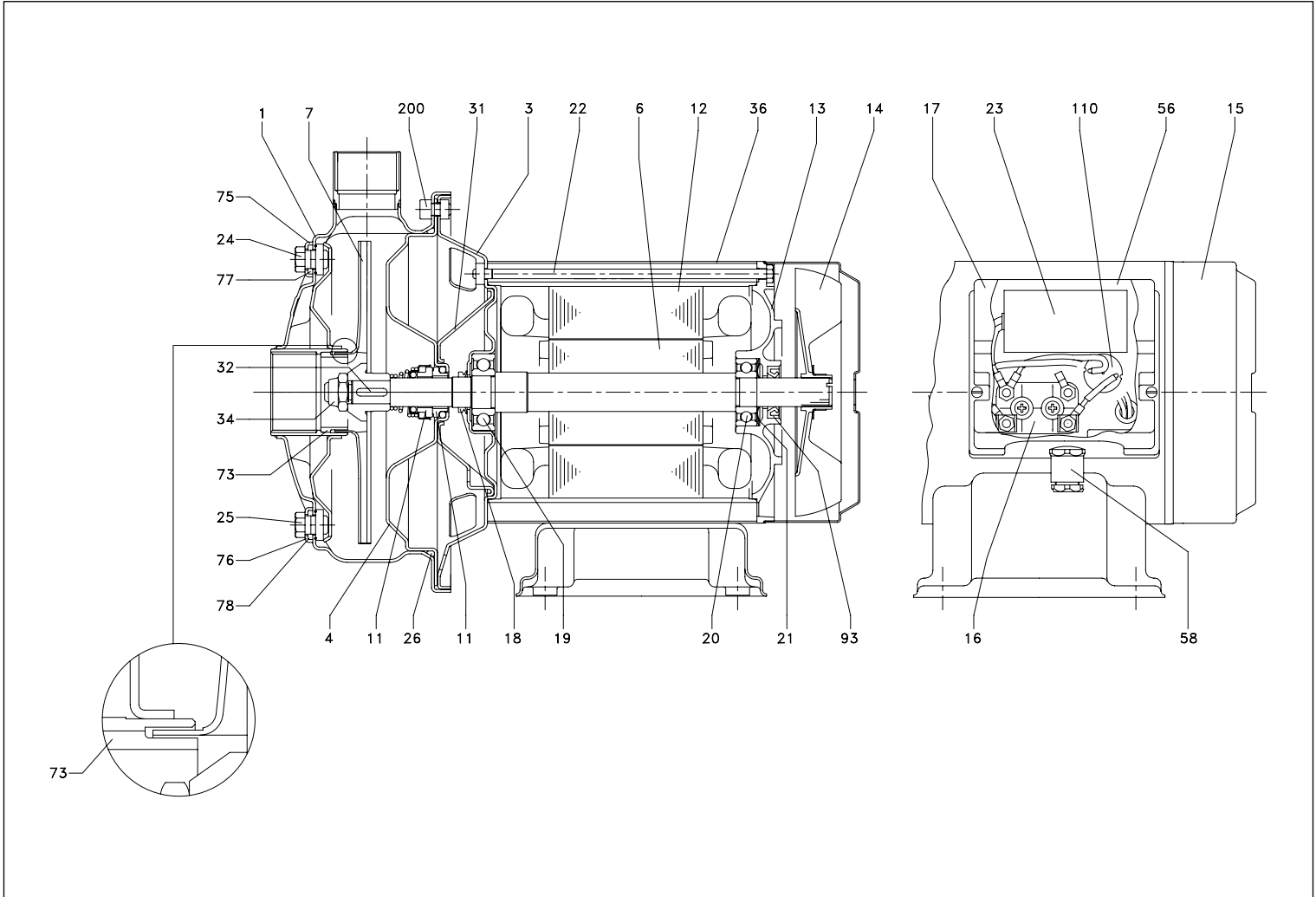
MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Casing	AISI 304 / AISI 316 [5]	24	Priming plug	AISI 303 / AISI 316 [5]
3	Motor bracket	Aluminium	25	Drain plug	AISI 304
4	Casing cover	AISI 304 / AISI 316 [5]	26	O-ring [3]	NBR
6	Shaft with rotor	AISI 303 / AISI 316 (Wet extension)	31	Thrust flange	AISI 304
7	Impeller	AISI 304 / AISI 316 [5]	32	Key	AISI 316
11	Mechanical seal	Carbon/Ceramic/NBR	34	Impeller nut	Stainless steel A2-70
12	Motor frame with stator	-	36	Motor casing	AISI 304
13	Motor cover	Aluminium	56	Box gasket	NBR
14	Fan	PA	58	Cable entry	-
15	Fan cover	Fe P04 Galvanized	73	Casing ring	-
16	Terminal board	-	75	Washer	AISI 304
17	Terminal box cover	Aluminium	76	Washer	AISI 304
18	Splash ring	NBR	77	O-ring [3]	NBR
19	Pump side ball bearing	-	78	O-ring [3]	NBR
20	Fan side ball bearing	-	93	Lip seal	NBR
21	Adjusting ring	Steel C70	110	Protector [1]	-
22	Tie rod	Fe 420 Galvanized	200	Screw	Stainless steel A2-70
23	Capacitor [1]	-			

[1] Only for single phase
 [2] FPM for H-HS-HW-HSW
 EPDM for E

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS in AISI 304

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



MATERIALS TABLE

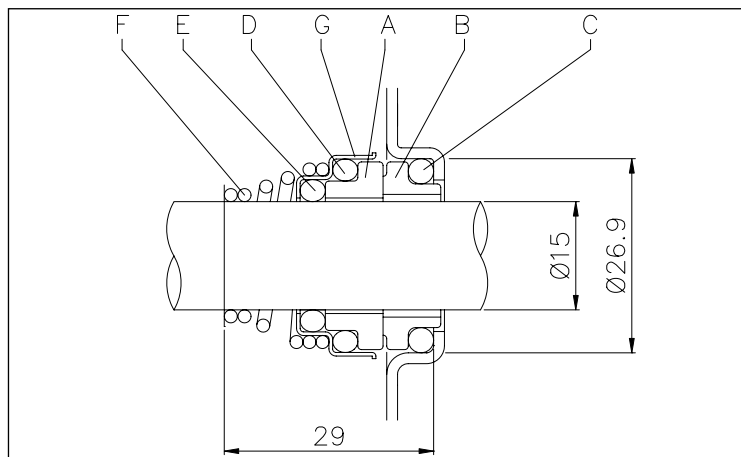
Ref.	Name	Material	Ref.	Name	Material
1	Casing	AISI 304	24	Priming plug	AISI 304
3	Motor bracket	AISI 304	25	Drain plug	AISI 304
4	Casing cover	AISI 304	26	O-ring [2]	NBR
6	Shaft with rotor	AISI 303 (Wet extension)	31	Thrust flange	AISI 304
7	Impeller	AISI 304	32	Key	AISI 316
11	Mechanical seal	Ceramic/Carbon/NBR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

[1] Only for single phase
[2] FPM for H-HS-HW-HSW
EPDM for E

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

MECHANICAL SEAL standard



MATERIALS TABLE

Ref.	Name	Material
A	Rotary seal ring	Ceramic
B	Stationary seal ring	Carbon graphite
C	O Ring	NBR
D	O Ring	NBR
E	O Ring	NBR
F	Self driving spring	AISI 316
G	Frame	AISI 304

SPECIAL MECHANICAL SEALS (on request)

Ref.	Name	Material					
		Version H	Version HS	Version HW	Version HSW	Version E	Version U3CEGG
A	Rotary seal ring	Ceramic	SiC	Tungsten carbide	SiC	Ceramic	Tungsten carbide
B	Stationary seal ring	Carbon graphite	SiC	Tungsten carbide	Tungsten carbide	Carbon graphite	Carbon graphite
C	O Ring	FPM	FPM	FPM	FPM	EPDM	EPDM
D	O Ring	FPM	FPM	FPM	FPM	EPDM	EPDM
E	O Ring	FPM	FPM	FPM	FPM	EPDM	EPDM
F	Self driving spring	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316
G	Frame	AISI 304	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316

ELECTRIC DATA TABLE

Single phase 230V	Three phase 230/400V	P ₁		Efficiency		Capacitor Single phase µF	Single phase V _c	Efficiency (%)			P ₂		Full load current [A]		
		[HP]	[kW]	Single phase	Three phase			Three phase η %			Single phase	Three phase	Single phase	Three phase	
								50%	75%	100%	[kW]	[kW]	230V	230V	400V
CDM 70/05	CD 70/05	0,5	0,37	-	-	12,5	450	-	-	-	0,75	0,68	3,4	2,4	1,4
CDM 70/07	CD 70/07	0,75	0,55	-	-	16	450	-	-	-	1,1	1,0	5,0	3,5	2,0
CDM 70/12	CD 70/12	1,2	0,9	-	IE2	31,5	450	79,0	81,7	81,6	1,5	1,35	6,5	4,3	2,5
CDM 90/10	CD 90/10	1	0,75	-	IE2	20	450	77,2	80,9	81,3	1,2	1,05	5,6	3,3	1,9
CDM 120/07	CD 120/07	0,75	0,55	-	-	16	450	-	-	-	1,0	1,0	4,6	3,2	1,85
CDM 120/12	CD 120/12	1,2	0,9	-	IE2	31,5	450	79,0	81,7	81,6	1,6	1,45	6,9	4,5	2,6
CDM 120/20	CD 120/20	2	1,5	-	IE2	40	450	80,3	83,4	83,8	2,1	2,09	9,3	7,0	4,0
CDM 200/12	CD 200/12	1,2	0,9	-	IE2	31,5	450	79,0	81,7	81,6	1,4	1,35	6,3	4,3	2,5
CDM 200/20	CD 200/20	2	1,5	-	IE2	40	450	80,3	83,4	83,8	2,3	2,22	10,2	7,4	4,3
-	CD 200/25	2,5	1,85	-	IE2	-	-	83,0	84,4	83,8	-	2,87	-	8,7	5,0

NOISE DATA

Single phase 230V	Three phase 230/400V	P ₂		L _{pa} - dB(A)*
		[HP]	[kW]	
CDM 70/05	CD 70/05	0,5	0,37	<70
CDM 70/07	CD 70/07	0,75	0,55	
CDM 70/12	CD 70/12	1,2	0,9	
CDM 90/10	CD 90/10	1	0,75	
CDM 120/07	CD 120/07	0,75	0,55	
CDM 120/12	CD 120/12	1,2	0,9	
CDM 120/20	CD 120/20	2	1,5	
CDM 200/12	CD 200/12	1,2	0,9	
CDM 200/20	CD 200/20	2	1,5	
-	CD 200/25	2,5	1,85	

* Mean value of several measures at 1m distance around the pump.
Tolerance ± 2.5 dB.