CD

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 > 0,1
  For further information please see our Data Book on the web site www.ebaraeurope.com

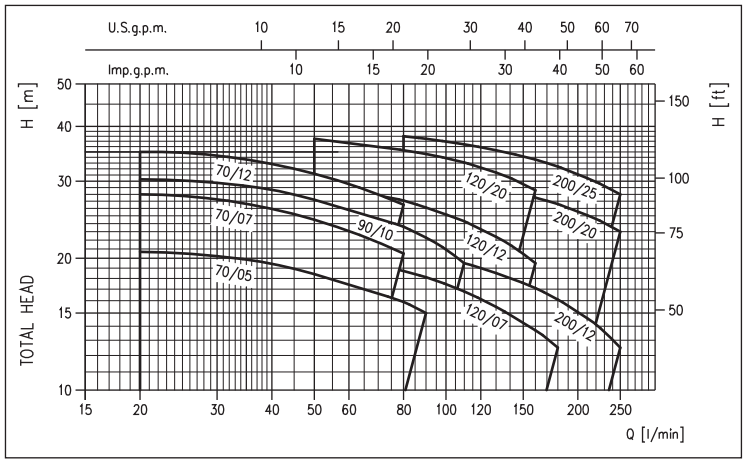
MOTOR TECHNICAL DATA
- High efficiency IE2 motors starting from 0,75kW
- 2 poles self-ventilated closed asynchronous motor with internal ventilation
- Class of insulation F
- IP55 Protection degree
- 230V ±10% 50Hz single phase voltage
  230/400V ±10% 50Hz three phase voltage
- Permanent capacitor inserted 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)

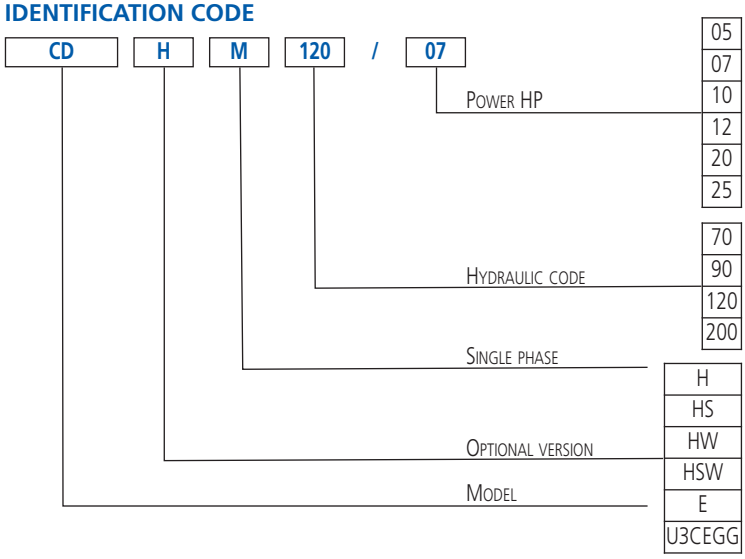
CONTROL PANELS
- 1EPBH

ACCESSORIES (On request)
- 5 litre 10 bar ¾ EPDM vessel
- 24 litre 8 bar 1" EPDM vessel
- 24 litre 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 (see page 208)
- Press•o•Matic - Variable speed control system
  (single phase 230V±10% power supply - three phase 220V output - maximum motor power 2.2 kW - 3 HP)

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



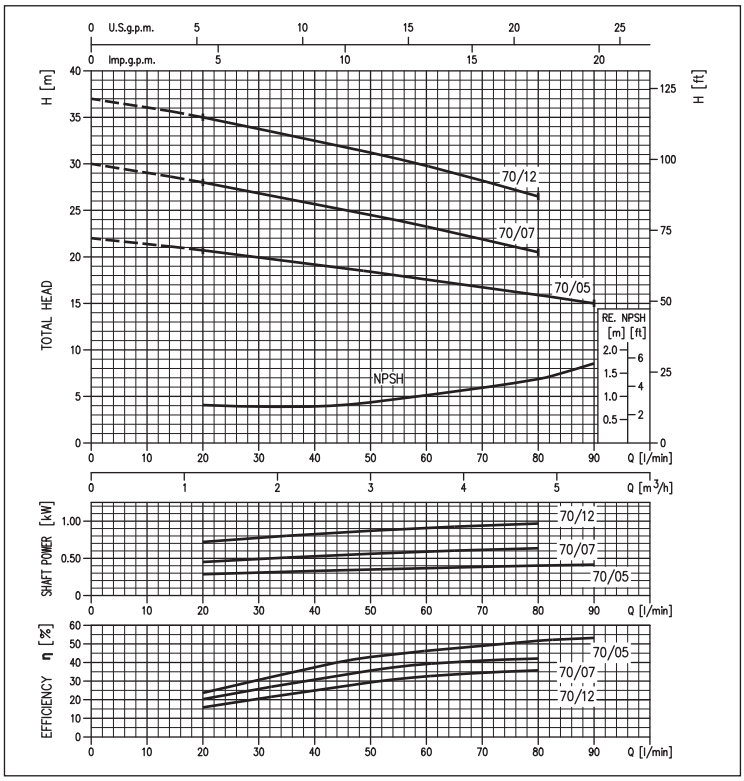
CD

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

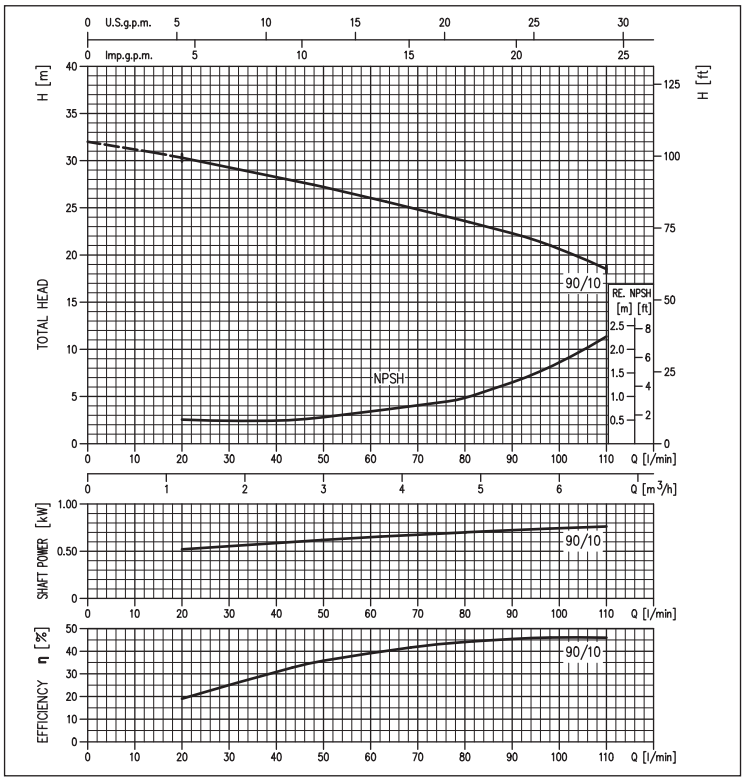
PERFORMANCE CURVES CD 70 series

(according to ISO 9906 Attachment A)



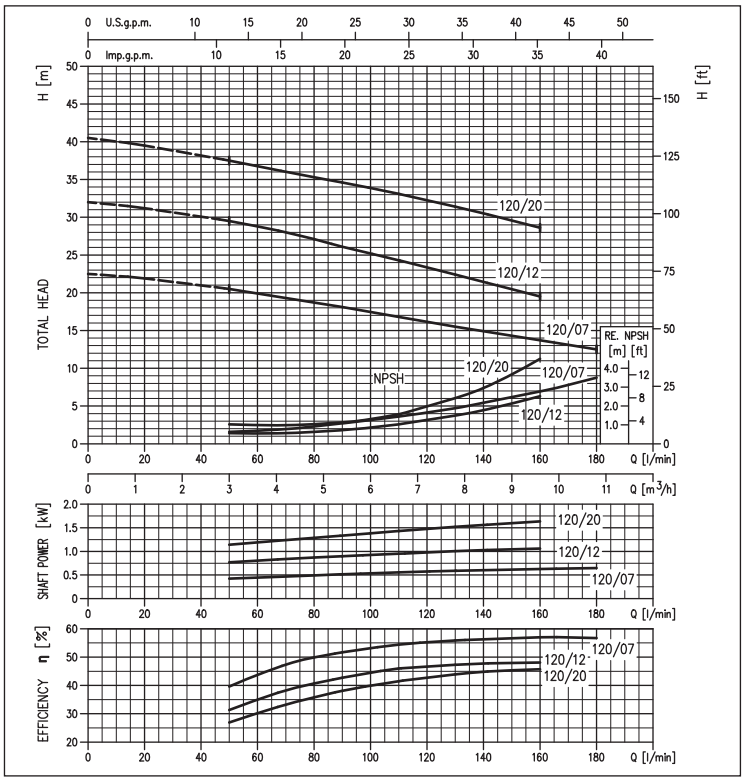
PERFORMANCE CURVES CD 90 series

(according to ISO 9906 Attachment A)



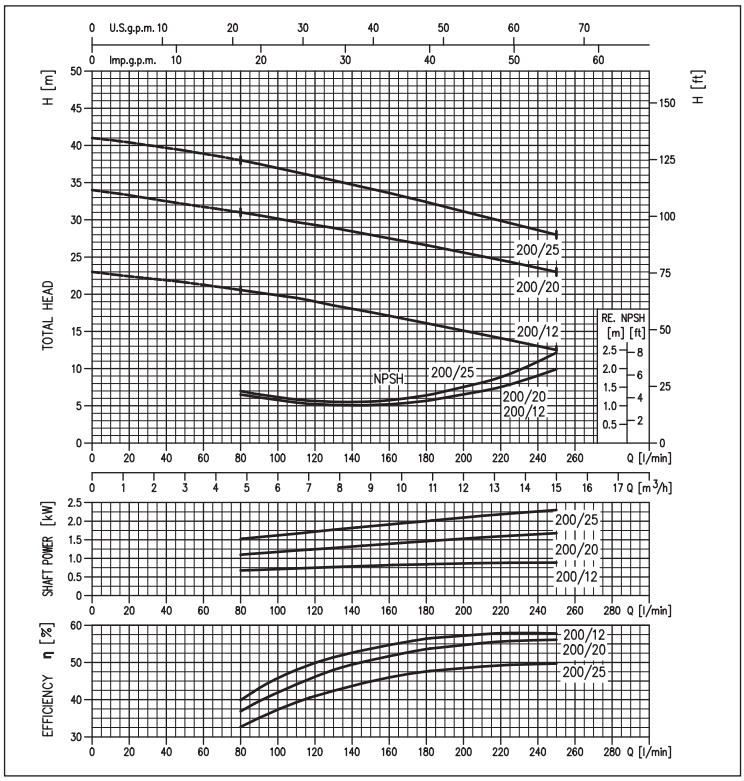
PERFORMANCE CURVES CD 120 series

(according to ISO 9906 Attachment A)



PERFORMANCE CURVES CD 200 series

(according to ISO 9906 Attachment A)



CD

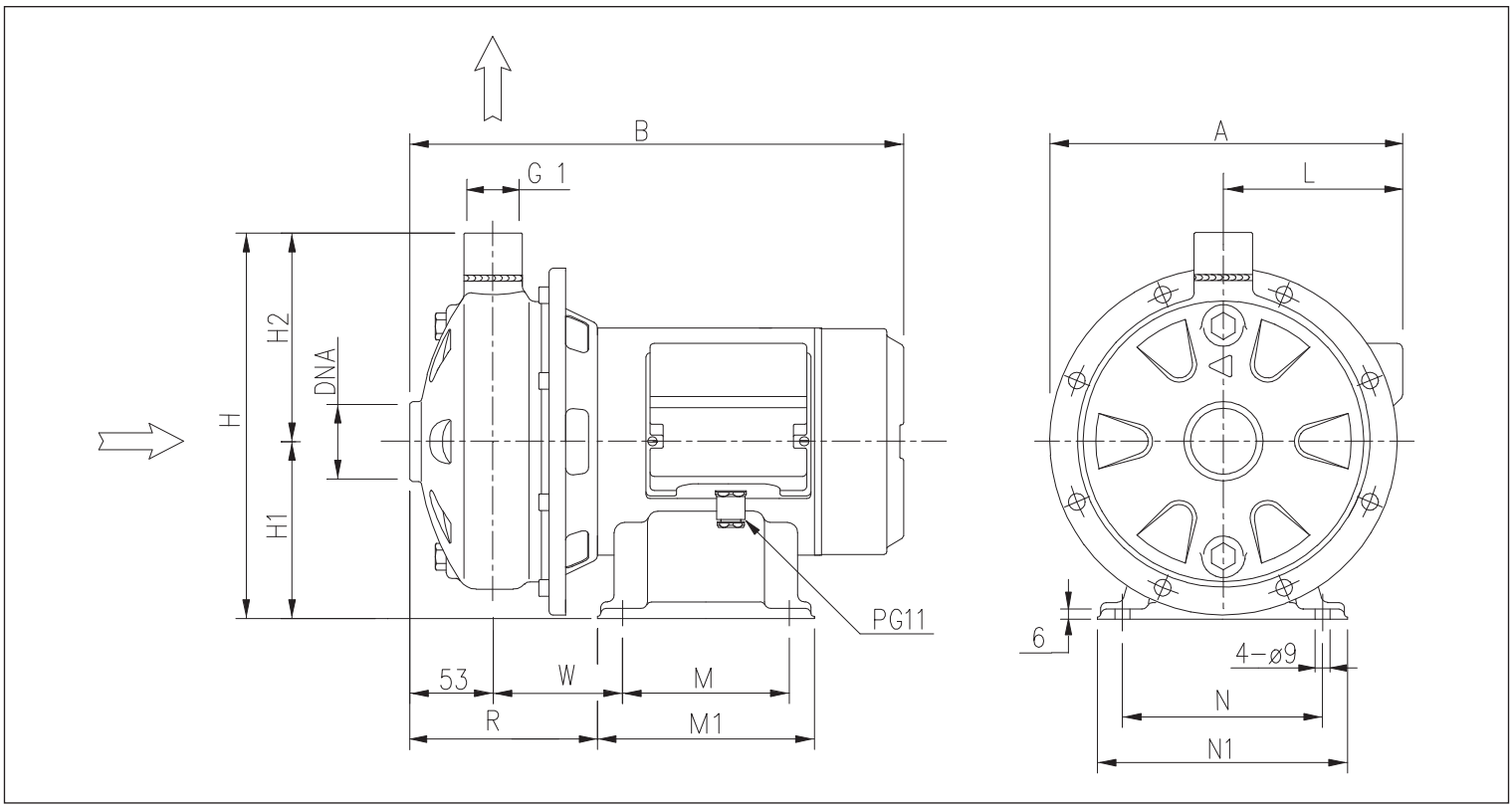
SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

PERFORMANCE TABLE

Model		P_2		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	15,0	-	-	-	-	-	-
CDM 70/07	CD 70/07	0,8	0,55	28,0	24,5	20,5	-	-	-	-	-	-	-
CDM 70/12	CD 70/12	1,2	0,9	35,0	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	-	29,5	27,1	26,1	24,3	22,4	19,5	-	-	-
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	-	-	20,7	20,2	19,5	18,5	17,1	16,1	14,6	12,5
CDM 200/20	CD 200/20	2	1,5	-	-	31,0	30,6	29,7	28,9	27,5	26,6	25,1	23,0
-	CD 200/25	2,5	1,8	-	-	38,0	37,5	36,4	35,3	33,6	32,4	30,5	28,0

DIMENSIONS



DIMENSIONAL TABLE

Model	Dimensions [mm]																		Weight [kg]	
	A		B		H	H1	H2	L		M		M1		N	N1	R	W	DNA		
	[2]	[1]	[2]	[1]				[2]	[1]	[2]	[1]	[2]	[1]						[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

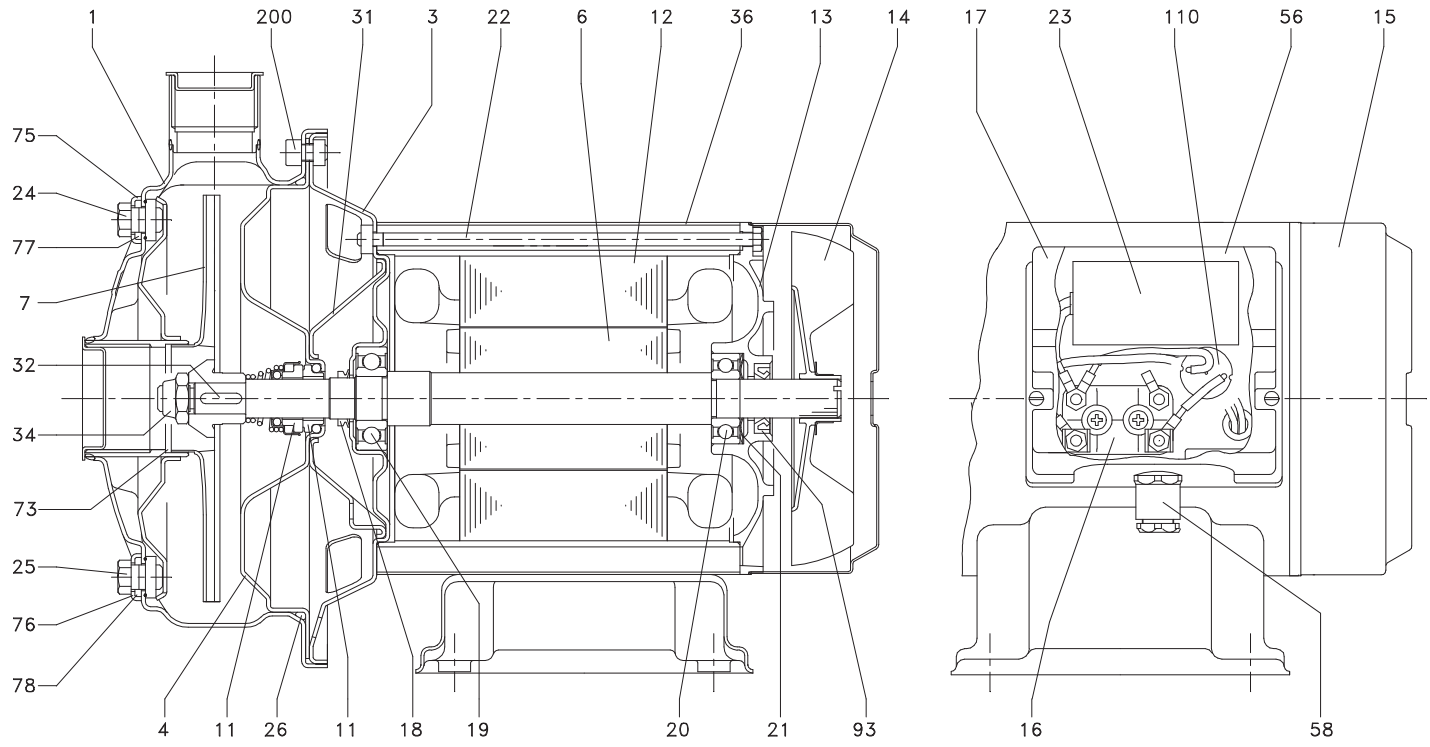
[1]= Three phase only
[2]= Single phase only

CD

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

SECTIONAL VIEW



MATERIALS TABLE

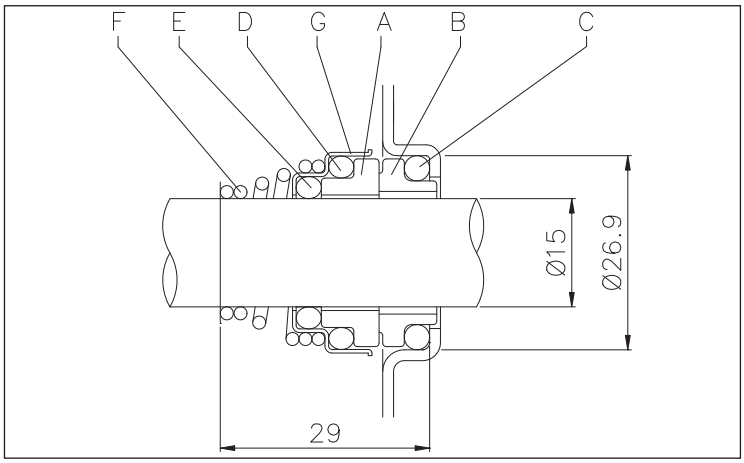
Ref.	Name	Materials	Ref.	Name	Materials
1	Pump casing	EN 1.4301 (AISI 304)	24	Plug	EN 1.4301 (AISI 304)
3	Motor bracket	EN 1.4301 (AISI 304)	25	Plug	EN 1.4301 (AISI 304)
4	Casing cover	EN 1.4301 (AISI 304)	26	O-Ring [2]	NBR
6	Shaft	AISI 303 Part in contact with the liquid	31	Seal disc spacer	EN 1.4301 (AISI 304)
7	Impeller	EN 1.4301 (AISI 304)	32	Key	AISI 316
11	Mechanical seal [2]	Ceramic/Carbon/NBR	34	Impeller nut	Stainless steel A2-70
12	Motor frame	-	36	Motor casing	EN 1.4301 (AISI 304)
13	Motor cover	Aluminium	56	Terminal box cover gasket	NBR
14	Fan	PA	58	Cable entry	-
15	Fan cover	EN 1.4301 (AISI 304)	73	Casing ring [3]	NBR
16	Terminal box	-	75	Washer	EN 1.4301 (AISI 304)
17	Terminal box cover	PA66 reinforced with fibreglass	76	Washer	EN 1.4301 (AISI 304)
18	Seal ring	NBR	77	O-Ring [2]	NBR
19	Bearing (pump side)	-	78	O-Ring [2]	NBR
20	Bearing (motor side)	-	93	Seal ring	NBR
21	Adjusting ring	Steel C70	110	Motorprotector [1]	-
22	Tie-rod	Galvanised Fe 42	200	Screw (pump body)	Stainless steel A2-70
23	Capacitor [1]	-			

[1]= Single phase only
[2]= FPM for CDH-CDHS-CDHW-CDHSW, EPDM for CDE
[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

CD

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS
in AISI 304

MECHANICAL SEAL standard



MATERIALS TABLE

Ref.	Name	Materials
A	Rotating part	Ceramic
B	Fixed part	Carbon
C	O-Ring	NBR
D	O-Ring	NBR
E	O-Ring	NBR
F	Spring	AISI 316
G	Structure/frame	AISI 304

SPECIAL MECHANICAL SEALS (on request)

Ref.	Name	Materials					
		H version	HS version	HW version	HSW version	E version	U3CEGG version
A	Rotating part	Ceramic	SiC	Tungsten Carbide	SiC	Ceramic	Tungsten Carbide
B	Fixed part	Carbon	SiC	Tungsten Carbide	Tungsten Carbide	Carbon	Special Carbon
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	Spring	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316
G	Structure/frame	AISI 304	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316

ELECTRIC DATA TABLE

Model		P_2		Efficiency		Capacitor		Efficiency (%) Three phase			P_1		Absorbed Current [A]		
Single phase 230V	Three phase 230/400V	[HP]	[kW]	Single phase	Three phase	Single phase µF	V_c	η % 50%	75%	100%	Single phase [kW]	Three phase [kW]	Single phase 230V	Three phase 230V	Three phase 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 TABLE

Model		P_2		L_{pA} - dB(A)*
Single phase 230V	Three phase 230/400V	[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.
Tollerance ± 2.5 dB.