



**EBARA**

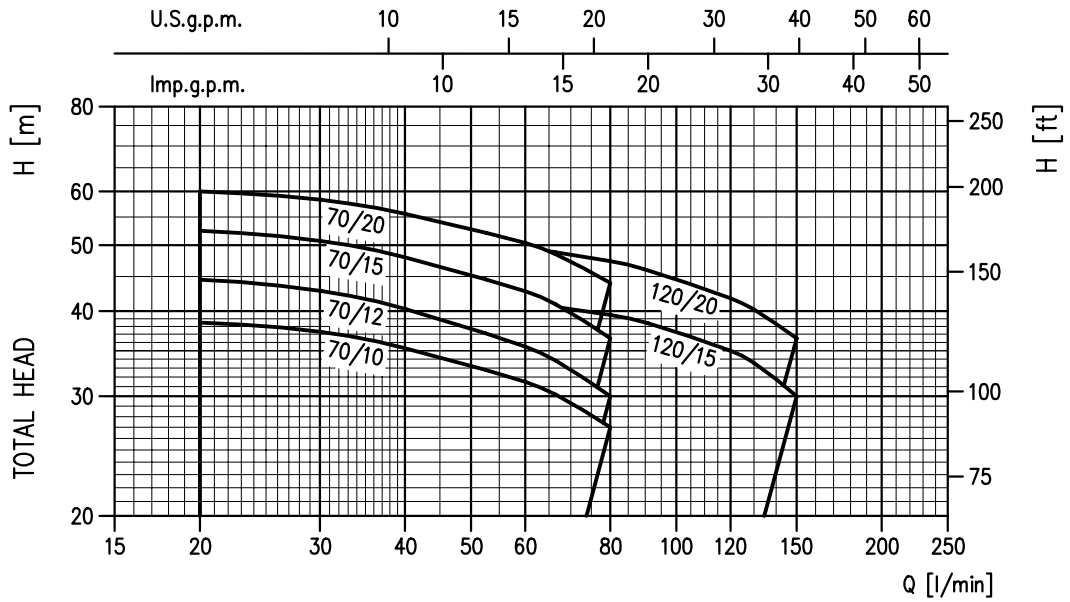
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## SPECIFICATIONS

50 Hz

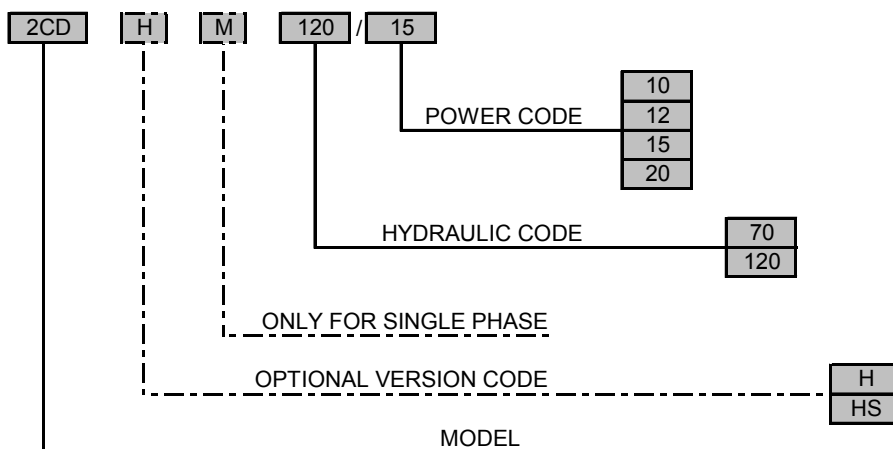
PUMP		
Liquid Handled	Type of liquid	Clean water
	Max temperature [°C]	60 110 (2CDH)
	Min temperature [°C]	-10
Maximum working pressure [MPa]		0.8
Construction	Impeller	Closed centrifugal type (Twin)
	Shaft seal type	Mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction	G 1¼
	Discharge	G 1
Material	Casing	AISI 304
	Impeller	AISI 304
	Casing cover	AISI 304
	Shaft seal	Ceramic/Carbon/NBR (2CD) Ceramic/Carbon/FPM (2CDH) SiC/SiC/FPM (2CDHS)
	Shaft	AISI 304 (Wet extension)
	Bracket Diffuser	AISI 304 AISI 304
Applicable standard of test		ISO 9906 – Annex A

MOTOR		
Type	Electric - TEFC	
	Single Phase	Three Phase
No. of Poles	2	
Rotation speed [min <sup>-1</sup> ]	≈ 2800	
Insulation Class	Class F	
Protection degree	IP 55	
Power rating	[kW]	0.75 ÷ 1.5
	[HP]	1 ÷ 2
Frequency [Hz]	50	
Voltage [V]	230 ±10%	230/400 ±10%
Capacitor	Built in	-
Over load protection	Built in	Provided by the user
Casing material	AISI 304	
Base material/motor support	AISI 304	
Dimensions of cable entry	PG 11	



Type pumps		Power		Q=Capacity						
Single Phase	Three Phase	[kW]	[HP]	l/min	20	40	60	80	120	150
				m³/h	1.2	2.4	3.6	4.8	7.2	9
H=Total manometric head in meters										
2CDM 70/10	2CD 70/10	0.75	1	38.5	35.3	31.5	27	-	-	-
2CDM 70/12	2CD 70/12	0.9	1.2	44.5	40.3	35.5	30	-	-	-
2CDM 70/15	2CD 70/15	1.1	1.5	52.5	48	42.8	36.5	-	-	-
2CDM 70/20	2CD 70/20	1.5	2	60	55.6	50.4	44	-	-	-
2CDM 120/15	2CD 120/15	1.1	1.5	-	42	41	39.5	35	30	-
2CDM 120/20	2CD 120/20	1.5	2	-	51.5	49.5	47.4	41.8	36.5	-

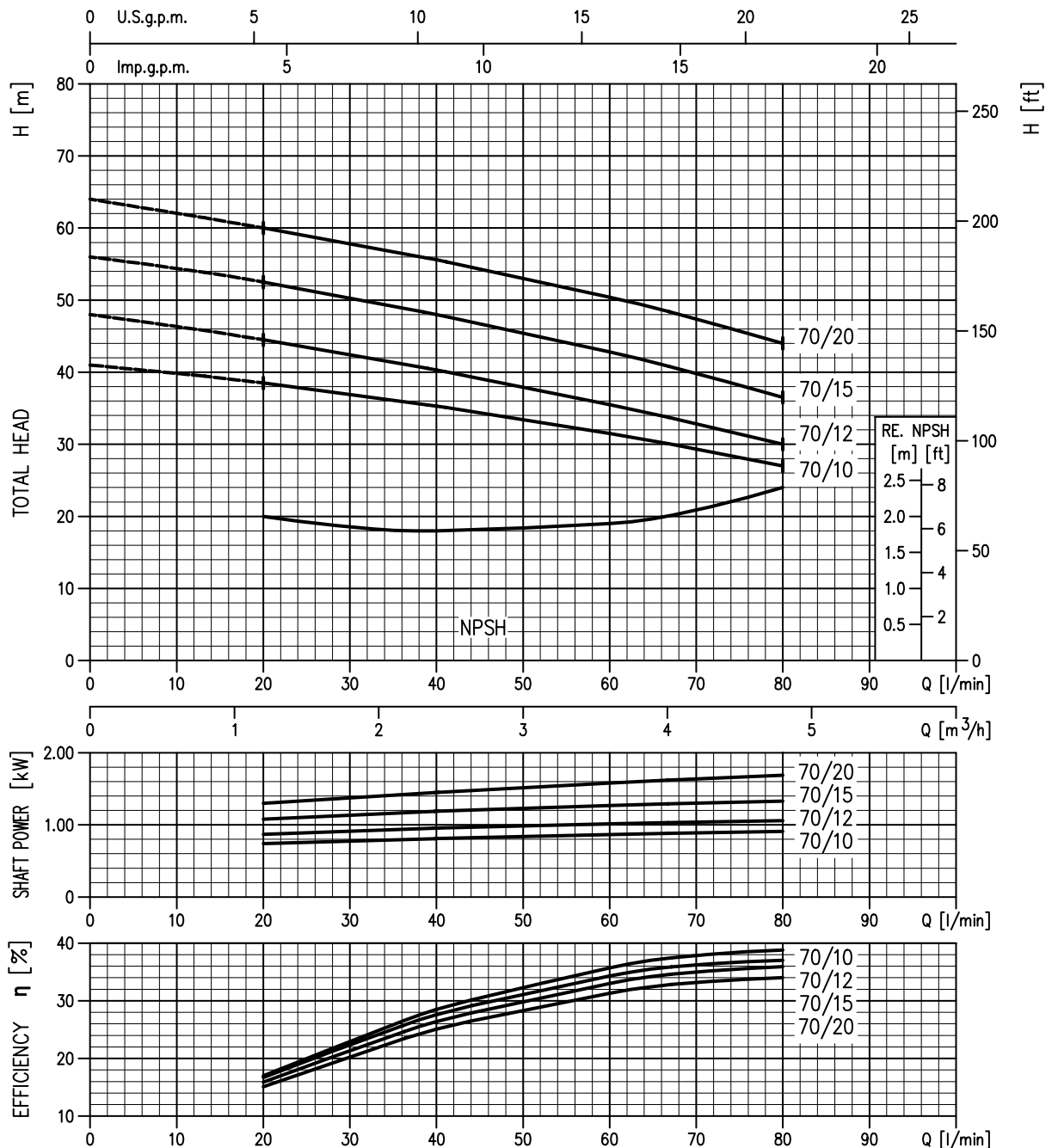
TYPE KEY:



2CD 70 PERFORMANCE CURVES

50 Hz

2CD 70/10 (0.75 kW) Impeller diameter = 132/132  
 2CD 70/12 (0.90 kW) Impeller diameter = 153/132  
 2CD 70/15 (1.10 kW) Impeller diameter = 153/153  
 2CD 70/20 (1.50 kW) Impeller diameter = 153/176

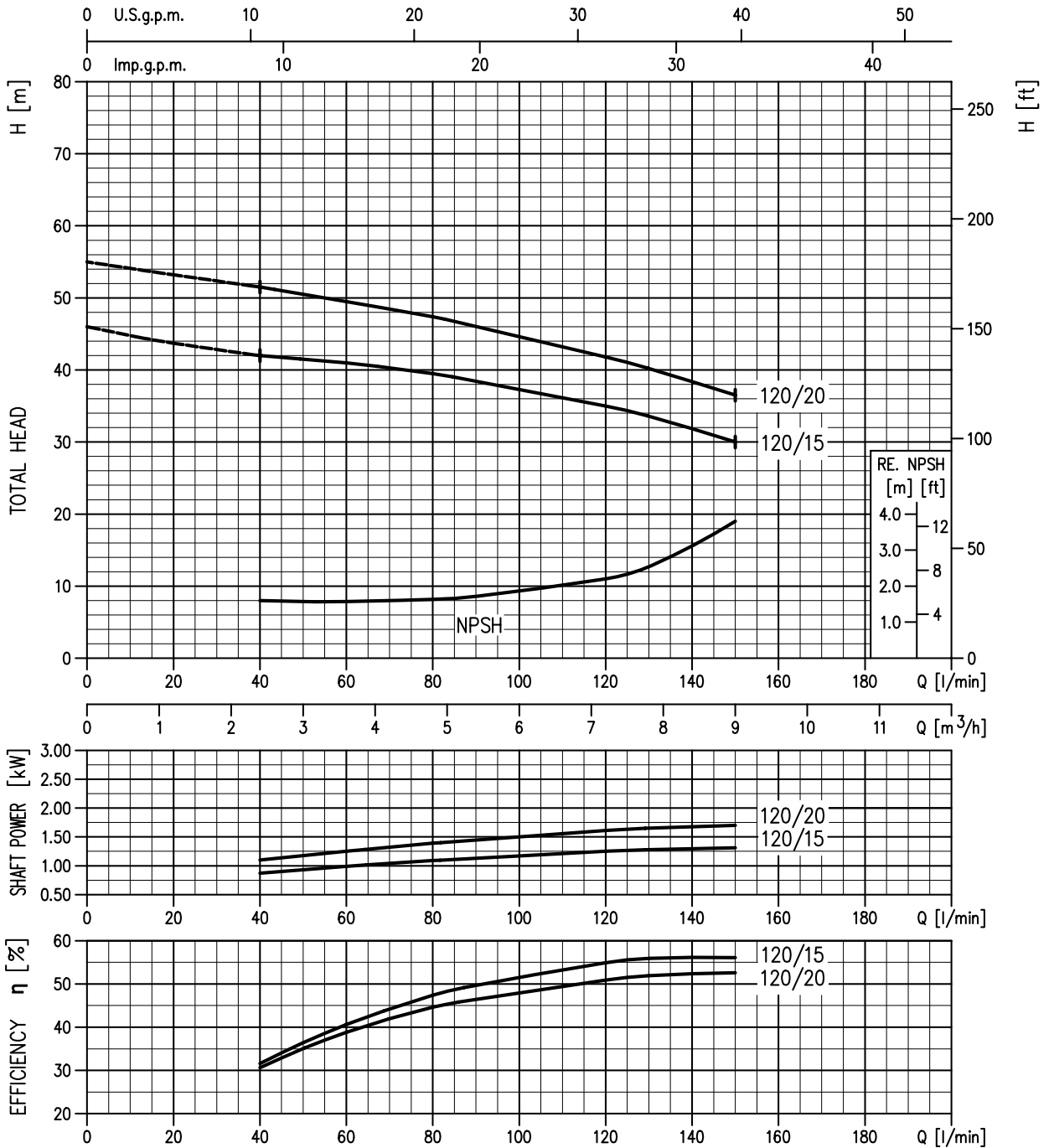


Rotation speed:  $\approx 2800 \text{ min}^{-1}$   
 Test fluid: clean water at 20°C  
 Applicable standard of test: ISO 9906 - Annex A

2CD 120 PERFORMANCE CURVES

50 Hz

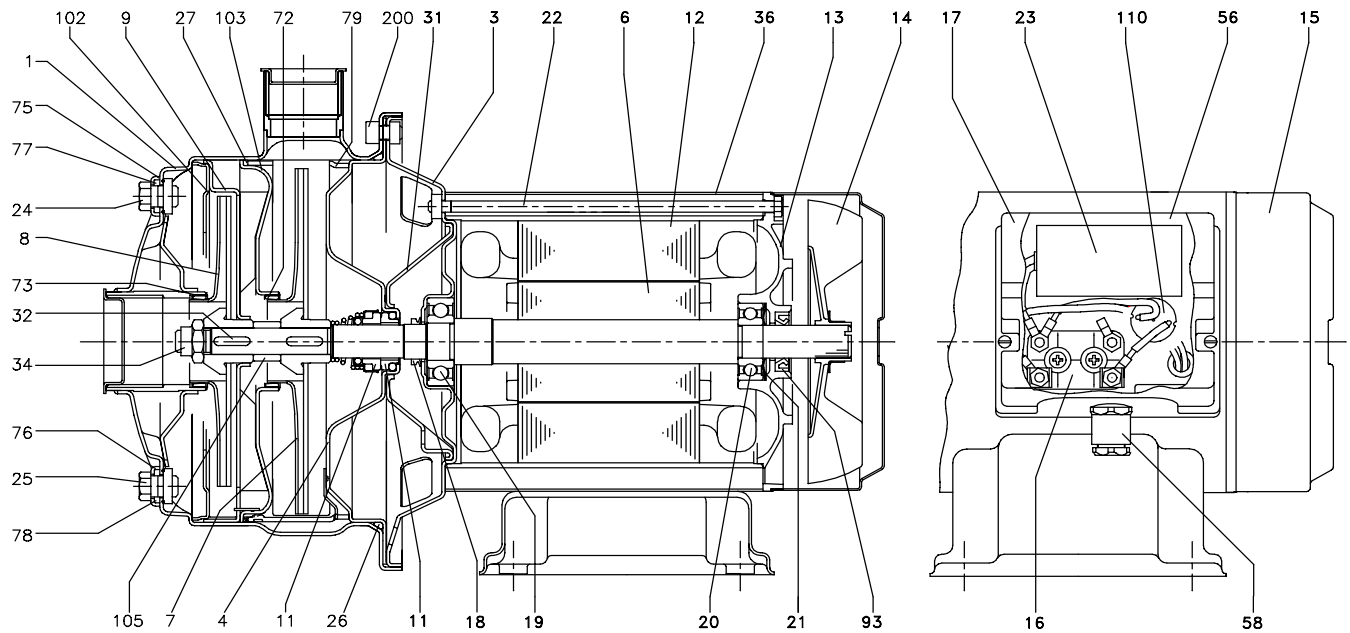
2CD 120/15 (1.10 kW) Impeller diameter = 132/132  
 2CD 120/20 (1.50 kW) Impeller diameter = 157/132



Rotation speed:  $\approx 2800 \text{ min}^{-1}$   
 Test fluid: clean water at  $20^\circ\text{C}$   
 Applicable standard of test: ISO 9906 - Annex A

## SECTIONAL VIEW

50 Hz

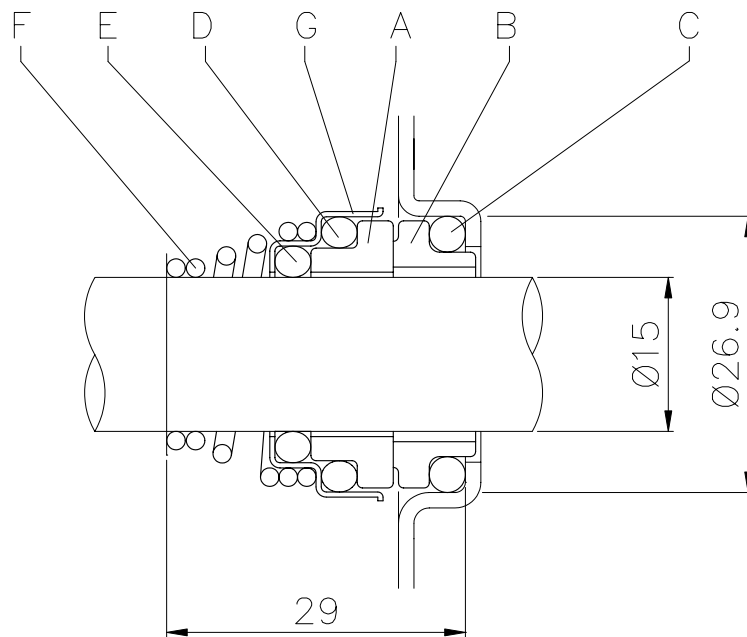


N°	PART NAME	MATERIAL	Q.TY	N°	PART NAME	MATERIAL	Q.TY
1	Casing	AISI 304	1	26	O-ring [3]	NBR	1
3	Motor bracket	AISI 304	1	27	O-ring [3]	NBR	1
4	Casing cover	AISI 304	1	31	Thrust flange	AISI 304	1
6	Shaft with rotor	AISI 304 (Part in contact with liquid)	1	32	Key	AISI 304	2
7	Impeller	AISI 304	1	34	Impeller nut	AISI 304	1
8	Impeller	AISI 304	1	36	External motor casing	AISI 304	1
9	Diffuser	AISI 304	1	56	Box gasket	NBR	1
11	Mechanical seal [3]	Ceramic/Carbon/NBR	1	58	Cable entry	-	1
12	Motor frame with stator	-	1	72	Casing ring [3]	NBR	1
13	Motor cover	Aluminium	1	73	Casing ring [3]	NBR	1
14	Fan	Polypropilene	1	75	Washer	AISI 304	1
15	Fan cover	AISI 304	1	76	Washer	AISI 304	1
16	Terminal box	-	1	77	O-ring [3]	NBR	1
17	Terminal box cover [2]	Polyamide	1	78	O-ring [3]	NBR	1
18	V seal ring	NBR	1	79	Space diffuser	AISI 304	1
19	Pump side ball bearing	-	1	93	Lip seal	-	1
20	Fan side ball bearing	-	1	102	Suction cover	AISI 304	1
21	Adjusting ring	Steel C70	1	103	Conveyor cover	AISI 304	1
22	Tie rod	Fe 42 Zinked	4	105	Sleeve	AISI 304	1
23	Capacitor [1]	-	1	110	Protector [1]	-	1
24	Priming plug	AISI 303	1	200	Screw	Stainless steel A2 UNI7323	8
25	Drain plug	AISI 303	1	-	-	-	-

[1] Only for single phase

[2] Only for three phase

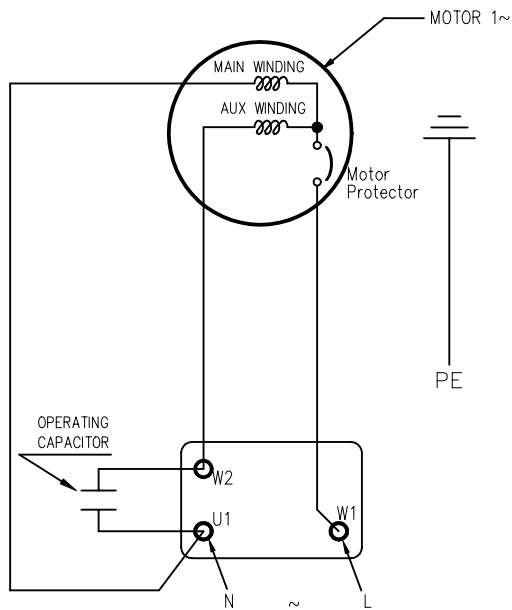
[3] FPM for 2CDH and 2CDHS



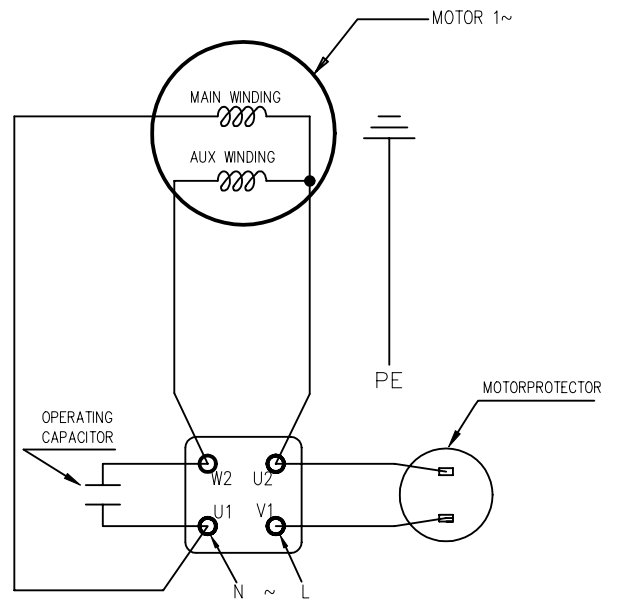
REF	PART NAME	MATERIAL		
		Standard version (2CD)	Optional (2CDH)	Optional (2CDHS)
A	Rotary seal ring	Ceramic	Ceramic	Silicon carbide
B	Stationary seal ring	Carbon graphite	Carbon graphite	Silicon carbide
C	O Ring	NBR	FPM	FPM
D	O Ring	NBR	FPM	FPM
E	O Ring	NBR	FPM	FPM
F	Self driving spring	AISI 316	AISI 316	AISI 316
G	Frame	AISI 304	AISI 304	AISI 316



FOR MOTORS WITH LOCKED ROTOR CURRENT  
UP TO 25 [A]  
INTERNAL MOTORPROTECTOR

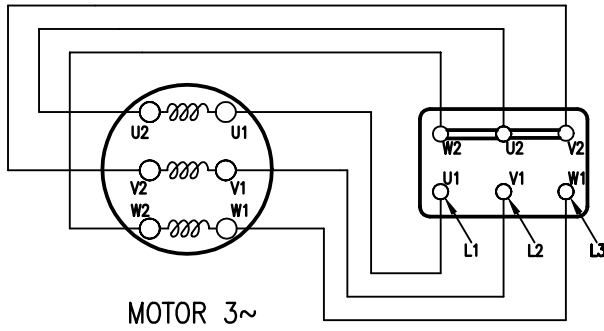


FOR MOTORS WITH LOCKED ROTOR CURRENT  
OVER 25 [A]  
EXTERNAL MOTORPROTECTOR

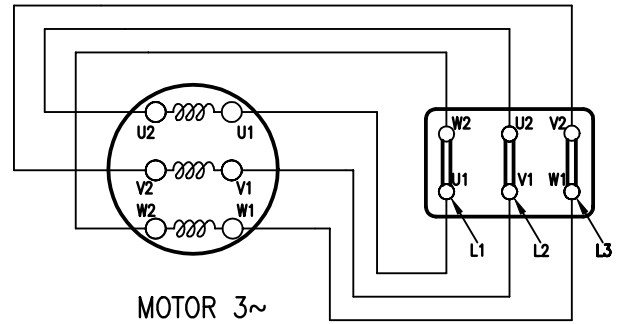


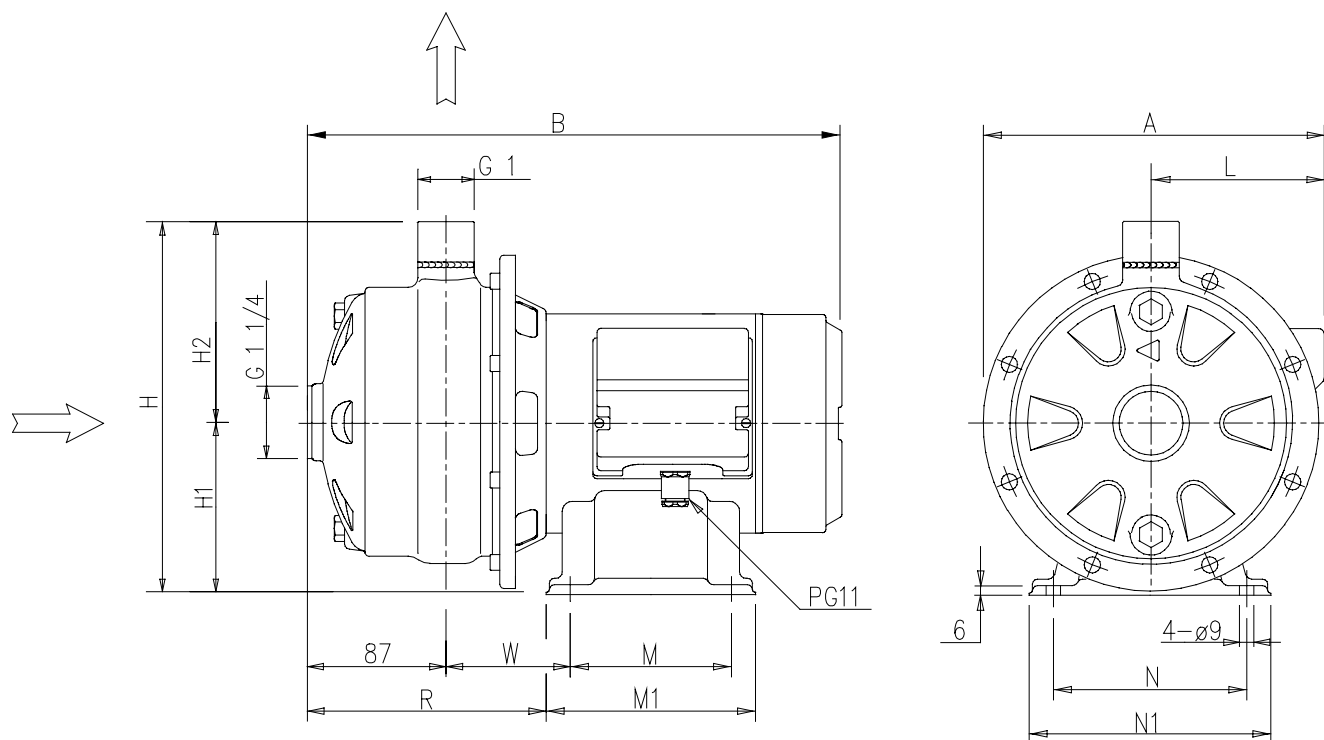
PUMP	MOTORPROTECTOR	
	INTERNAL	EXTERNAL
2CDM 70/10	X	
2CDM 70/12	X	
2CDM 70/15		X
2CDM 70/20		X
2CDM 120/15		X
2CDM 120/20		X

STAR CONNECTION (400 V)



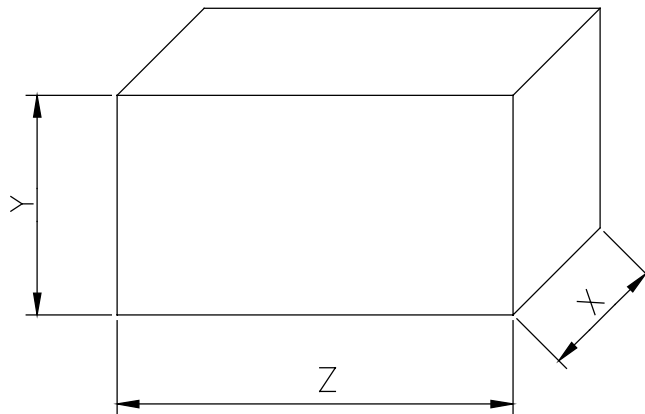
DELTA CONNECTION (230 V)





Pump type 2CDM-2CD	Dimensions [mm]														
	A		B		H	H1	H2	L		M	M1	N	N1	R	W
	[1]	[2]	[1]	[2]				[1]	[2]						
70/10	206	210	363	363	229	106	123	102	106	100	130	120	150	164	93
70/12	206	206	363	363	229	106	123	102	102	100	130	120	150	164	93
70/15	226	226	393	375	229	106	123	110	110	120	150	140	170	170	95
70/20	214	214	393	393	229	106	123	110	110	120	150	140	170	170	95
120/15	214	214	393	375	229	106	123	110	110	120	150	140	170	170	95
120/20	214	214	393	393	229	106	123	110	110	120	150	140	170	166	95

- [1] THREE PHASE MODEL
- [2] SINGLE PHASE MODEL



Type pumps		PACKING [mm]			WEIGHT [kg]	
Single Phase	Three Phase	X	Y	Z	Single Phase	Three Phase
2CDM 70/10	2CD 70/10	245	260	400	14	14
2CDM 70/12	2CD 70/12	245	260	400	14.7	14.7
2CDM 70/15	2CD 70/15	245	280	400	17.8	17.8
2CDM 70/20	2CD 70/20	245	285	400	19.8	18.8
2CDM120/15	2CD 120/15	245	285	400	16.1	15.8
2CDM 120/20	2CD 120/20	245	260	400	17.8	17.5

Type pumps		Power		Locked rotor current			Capacitor		Input power		Full load current		
Single Phase 230 V 50 Hz	Three Phase 230/400 V 50 Hz	[kW]	[HP]	Single Phase 230 V 50 Hz	Three Phase 230 V 400 V 50 Hz 50 Hz		Single Phase [μF]	Vc [V]	Single Phase	Three Phase	Single Phase	Three Phase 230 V 400 V	
2CDM 70/10	2CD 70/10	0.75	1	22.7	24.1	13.9	20	450	1.25	1.18	5.8	4.0	2.3
2CDM 70/12	2CD 70/12	0.9	1.2	25.5	28.2	16.3	31.5	450	1.5	1.5	7.0	5.0	2.9
2CDM 70/15	2CD 70/15	1.1	1.5	39	29.4	17	35	450	1.8	1.64	8.1	5.6	3.3
2CDM 70/20	2CD 70/20	1.5	2	43	45	26	40	450	2.3	2.2	10.0	7.0	4.0
2CDM 120/15	2CD 120/15	1.1	1.5	39	29.4	17	35	450	1.8	1.7	8.3	5.6	3.3
2CDM 120/20	2CD 120/20	1.5	2	43	45	26	40	450	2.35	2.2	10.2	7.0	4.0

Type pumps		Ball Bearing	
Single Phase 230 V 50 Hz	Three Phase 230/400 V 50 Hz	Pump side	Fan side
2CDM 70/10	2CD 70/10	6203 ZZ	6202 ZZ
2CDM 70/12	2CD 70/12	6203 ZZ	6202 ZZ
2CDM 70/15	2CD 70/15	6204 ZZ	6203 ZZ
2CDM 70/20	2CD 70/20	6204 ZZ	6203 ZZ
2CDM 120/15	2CD 120/15	6204 ZZ	6203 ZZ
2CDM 120/20	2CD 120/20	6204 ZZ	6203 ZZ