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SPECIFICATIONS

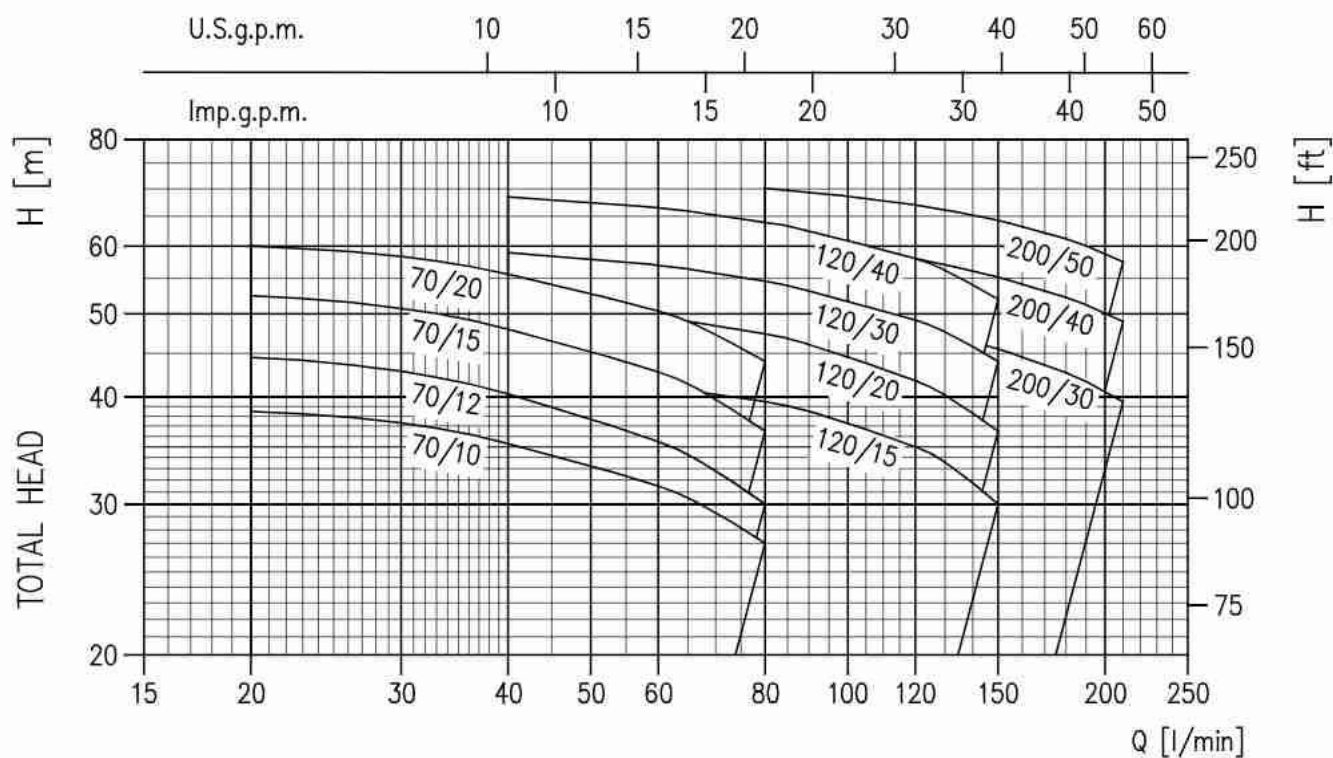
50Hz

Rev. 0

PUMP		
Liquid Handled	Type of liquid	Clean water
	Temperature [°C]	min. -5 max. +60 (Standard - L version – E - Q1AEGG – VAEGG– U3U3EGG - Q1U3EGG - U3CEGG) max. +110 (H – HS – HW - HSW)
Maximum working pressure [MPa]		0.8
Construction	Impeller	Closed centrifugal type (Twin)
	Shaft seal type	Mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction [inch]	from G1"¼ to G1"½ (2CDX 200) UNI ISO 228-1
	Discharge [inch]	G1" UNI ISO 228-1
Material	Casing	EN 1.4301 (AISI 304) - (AISI 316L only for "L" version)
	Impeller	EN 1.4301 (AISI 304) - (AISI 316L only for "L" version)
	Casing cover	EN 1.4301 (AISI 304) - (AISI 316L only for "L" version)
	Shaft seal	Ceramic/Carbon/NBR (for version see page 302)
	Shaft	AISI 304 / AISI 316L (Wet extension)
	Bracket	Aluminium (up to 1.5 kW included) Cast iron (2.2 kW and above)
Diffuser		AISI 304 / AISI 316L
Applicable standard of test		ISO 9906:2012 – Grade 3B

MOTOR		
Type	Electric - TEFC	
	Single Phase	Three Phase
Efficiency level (Reg. 640/2009)	-	IE3 from 0.75 kW up to 4.0 kW
No. of Poles	2	
Rotation speed [min ⁻¹]	≈ 2800	
Insulation Class	F	
Protection degree (CEI EN 60034-5)	IP 55	
Power rating	[kW]	0.75 ÷ 2.2
	[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	Aluminium	
Motor support	Aluminium	
Dimensions of cable entry	PG11 – PG13.5 – M16x1.5 – M20x1.5 (see dimensions table page 400)	

PERFORMANCE RANGE



SELECTION CHART

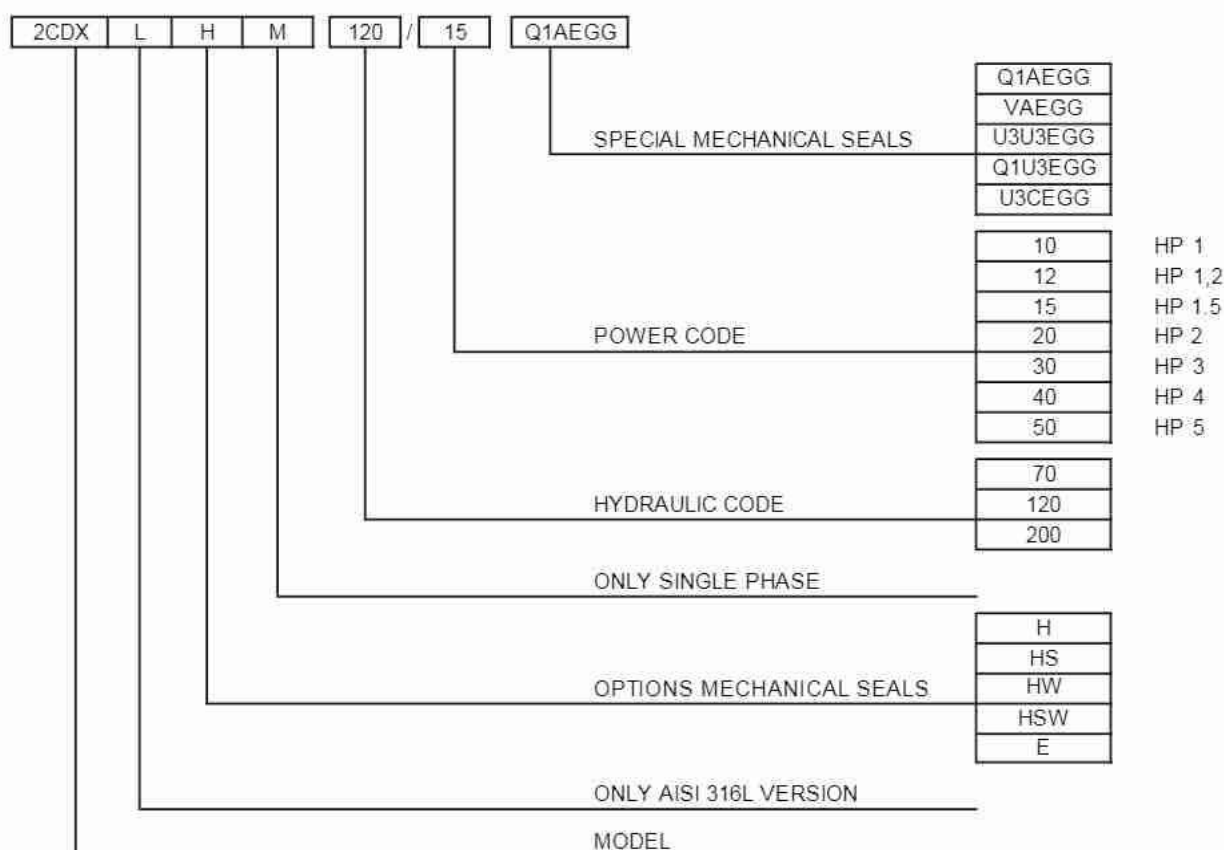
Pump Type		Power		Q=Capacity									
Single Phase	Three Phase	[kW]	[HP]	l/min	0	20	40	60	80	120	150	180	210
				m³/h	0	1.2	2.4	3.6	4.8	7.2	9.0	10.8	12.6
H=Total manometric head in meters													
2CDXM 70/10	2CDX 70/10	0.75	1	41	38.5	35.3	31.5	27	-	-	-	-	-
2CDXM 70/12	2CDX 70/12	0.9	1.2	48	44.5	40.3	35.5	30	-	-	-	-	-
2CDXM 70/15	2CDX 70/15	1.1	1.5	56	52.5	48	42.8	36.5	-	-	-	-	-
2CDXM 70/20	2CDX 70/20	1.5	2	64	60	55.6	50.4	44	-	-	-	-	-
2CDXM 120/15	2CDX 120/15	1.1	1.5	46	-	42	41	39.5	35	30	-	-	-
2CDXM 120/20	2CDX 120/20	1.5	2	55	-	51.5	49.5	47.4	41.8	36.5	-	-	-
-	2CDX 120/30	2.2	3	63	-	59	57	54.6	49.2	44	-	-	-
-	2CDX 120/40	3	4	71.5	-	68.5	66.5	64	58	52	-	-	-
-	2CDX 200/30	2.2	3	55	-	-	52	50.8	48.1	45.5	42.7	39.5	-
-	2CDX 200/40	3	4	66	-	-	62.5	61.1	58	55.2	52.3	49	-
-	2CDX 200/50	3.7	5	75	-	-	71.5	70.1	67	64.3	61.2	57.5	-

TYPE KEY and CURVE SPECIFICATIONS

50Hz

Rev. 0

TYPE KEY



PERFORMANCE CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906:2012 - Grade 3B

The curves refer to effective speed of asynchronous motors at 50 Hz, 2 poles.

Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt)

The NPSH curve is an average curve obtained in the same conditions of performance curves.

The continuous curves indicate the recommended working range. The dotted curve is only a guide.

In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

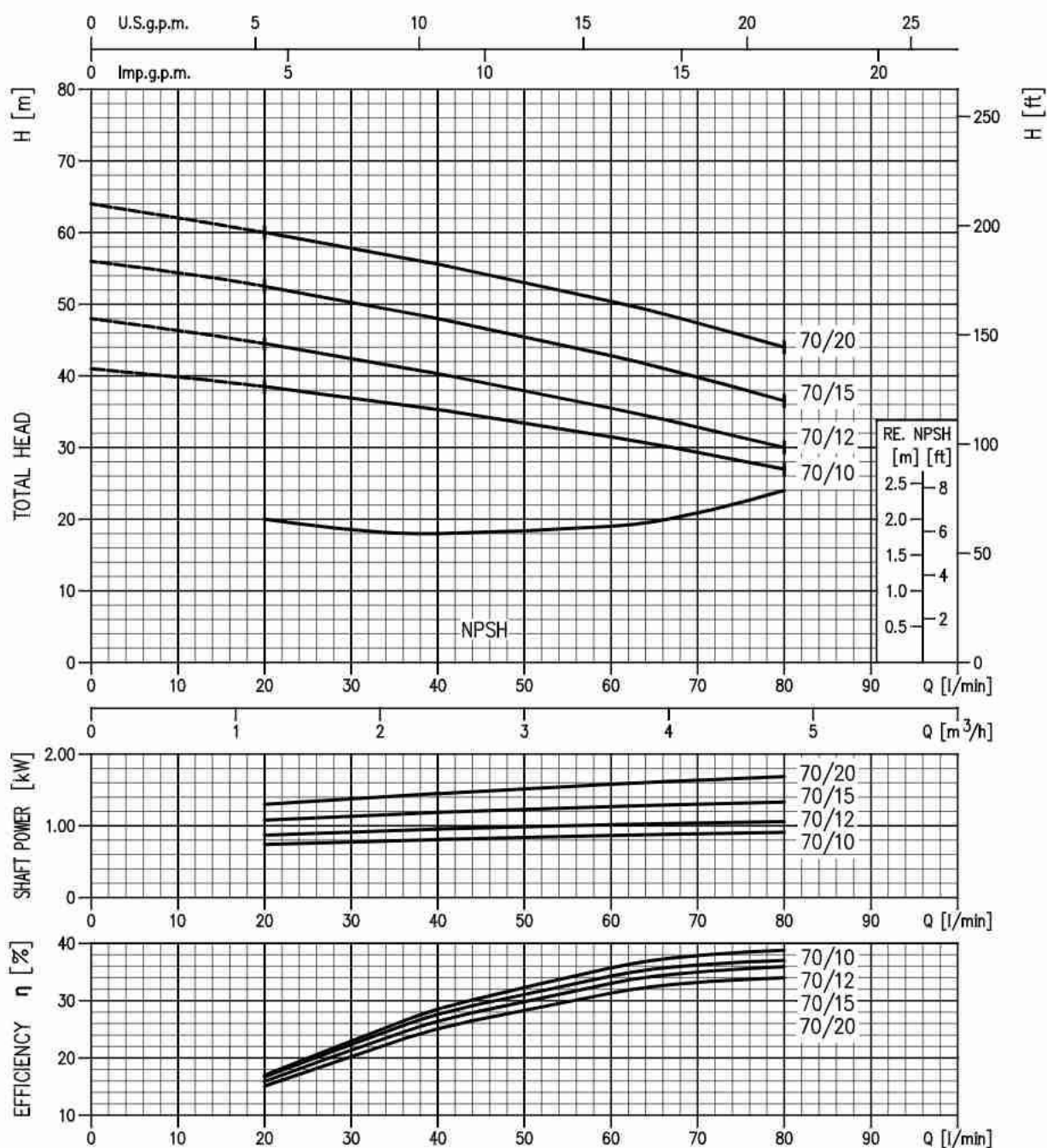
- Q = volume flow rate
- H = total head
- P_2 = pump power input (shaft power)
- η = pump efficiency
- NPSH = net positive suction head required by the pump

2CDX 70/10 (0.75 kW) - Impeller diameter = 132/132 mm

2CDX 70/12 (0.9 kW) - Impeller diameter = 153/132 mm

2CDX 70/15 (1.1 kW) - Impeller diameter = 153/153 mm

2CDX 70/20 (1.5 kW) - Impeller diameter = 153/176 mm



Rotation speed $\approx 2800 \text{ min}^{-1}$

Test standard: ISO 9906:2012 - Grade 3B

PERFORMANCE CURVE

50Hz

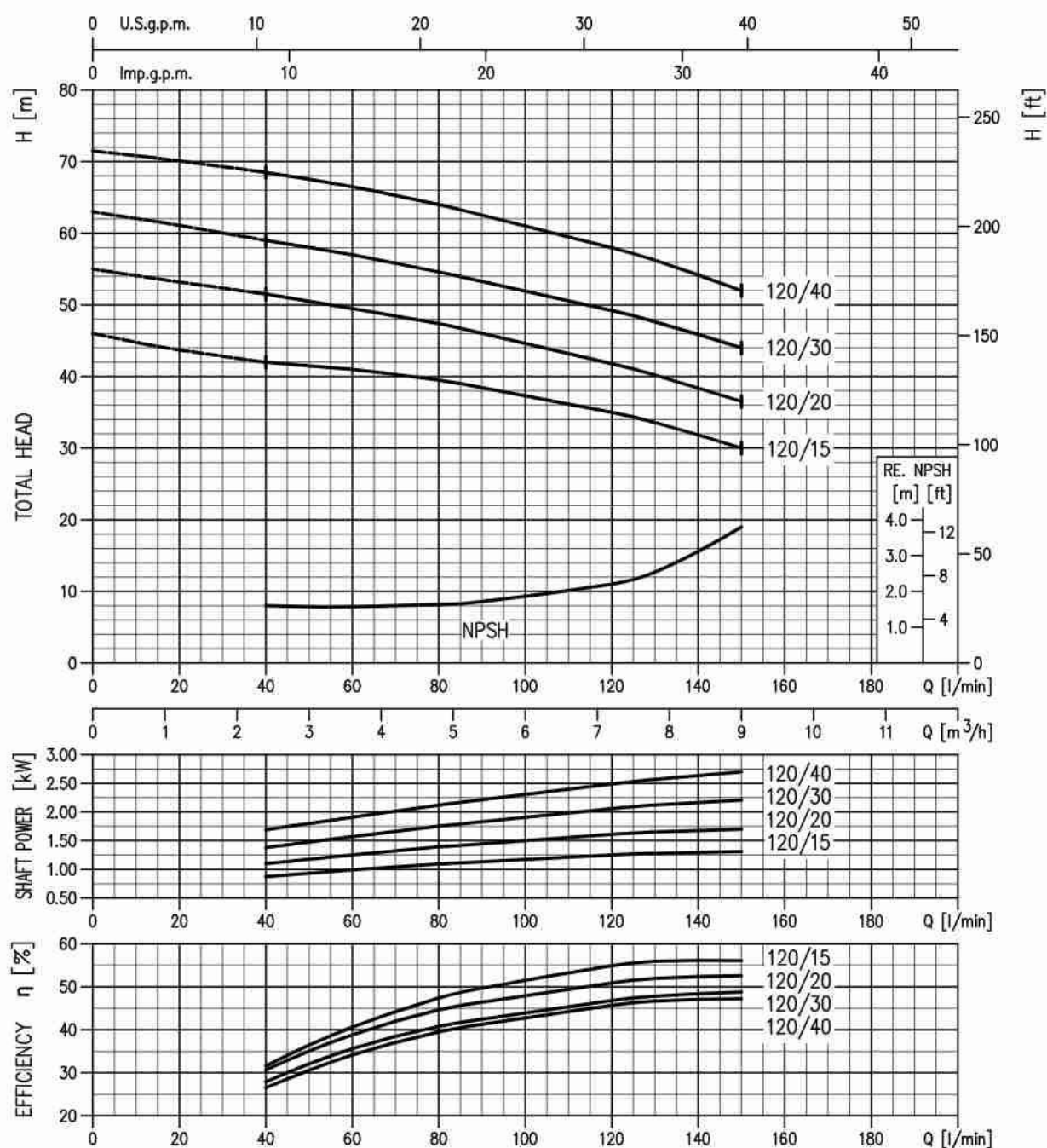
Rev. 0

2CDX 120/15 (1.1 kW) - Impeller diameter = 132/132 mm

2CDX 120/20 (1.5 kW) - Impeller diameter = 157/132 mm

2CDX 120/30 (2.2 kW) - Impeller diameter = 157/157 mm

2CDX 120/40 (3.0 kW) - Impeller diameter = 176/157 mm

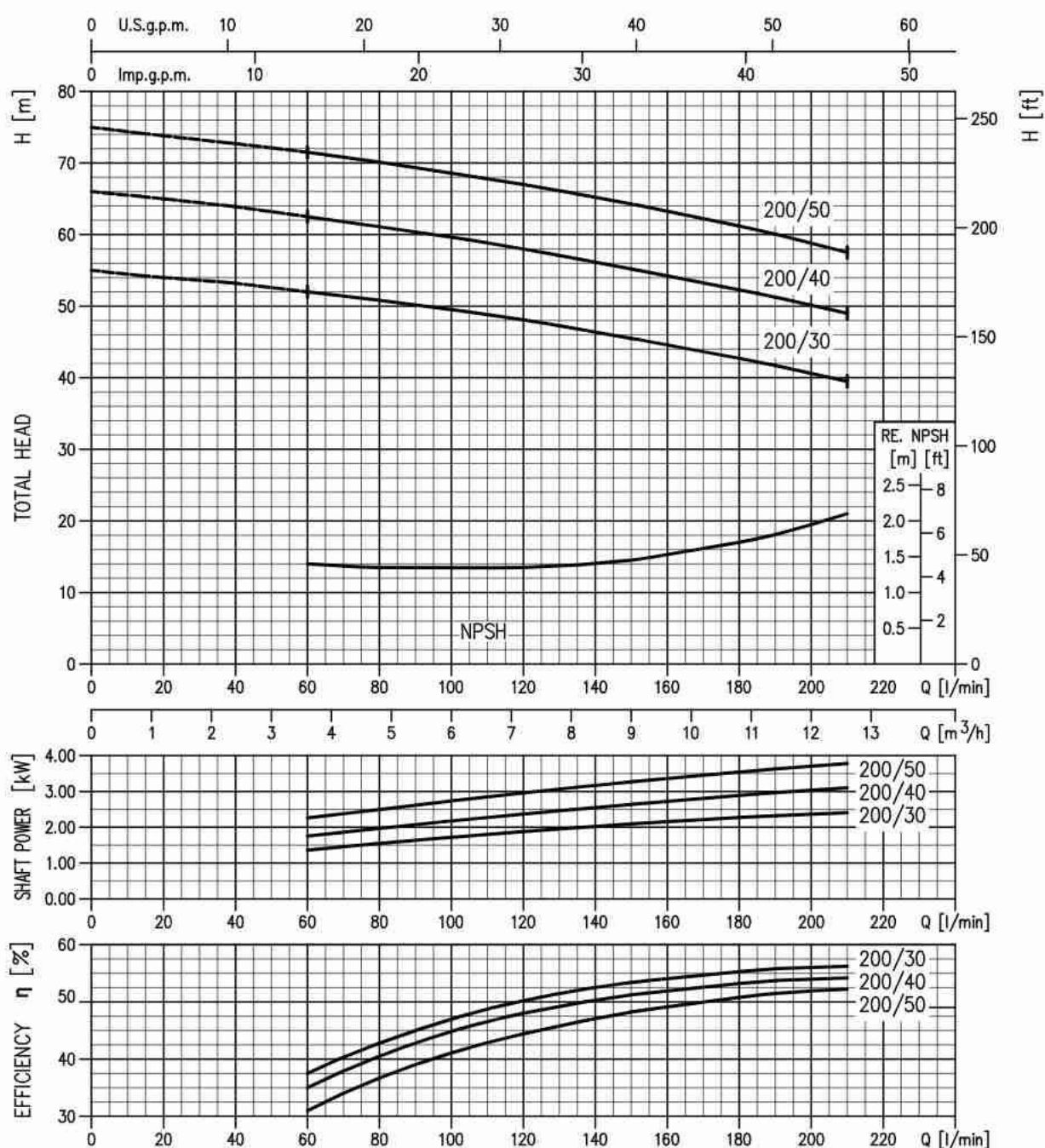
Rotation speed ≈ 2800 min⁻¹

Test standard: ISO 9906:2012 - Grade 3B

2CDX 200/30 (2.2 kW) - Impeller diameter = 157/132 mm

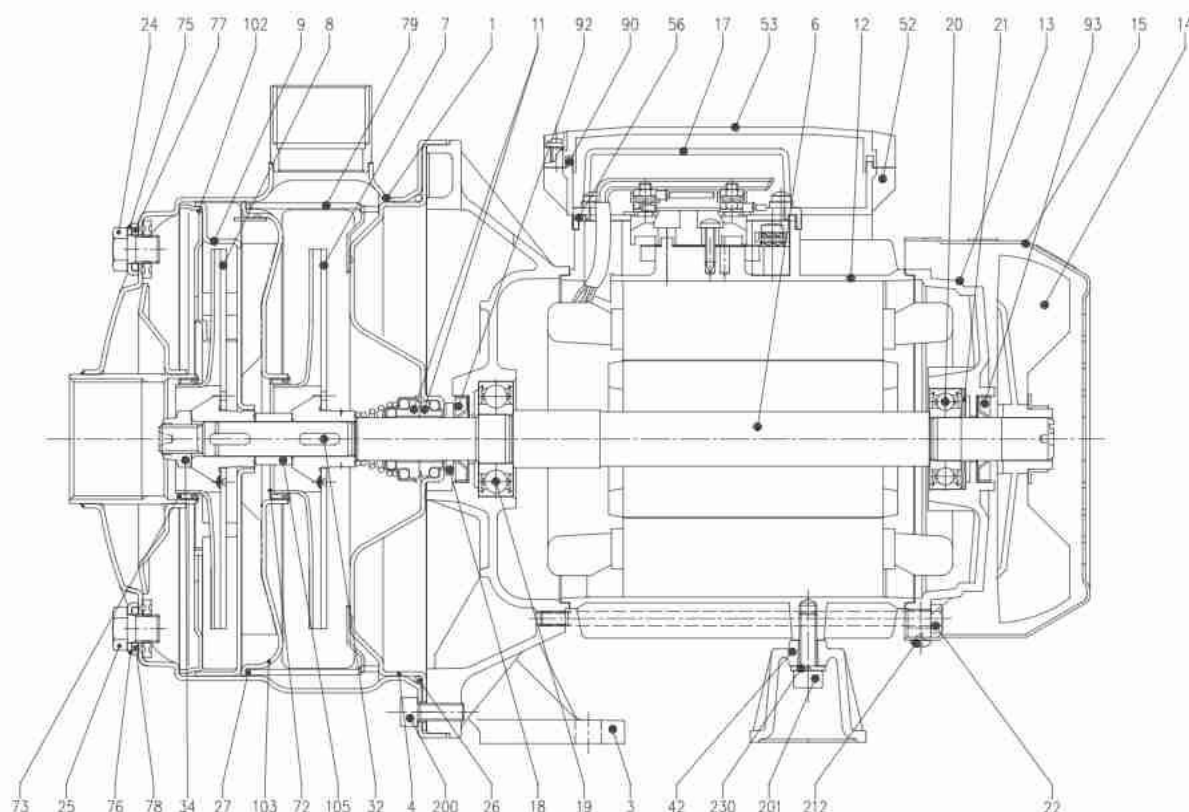
2CDX 200/40 (3.0 kW) - Impeller diameter = 157/157 mm

2CDX 200/50 (3.7 kW) - Impeller diameter = 176/157 mm

Rotation speed $\approx 2800 \text{ min}^{-1}$

Test standard: ISO 9906:2012 - Grade 3B

SECTIONAL VIEW



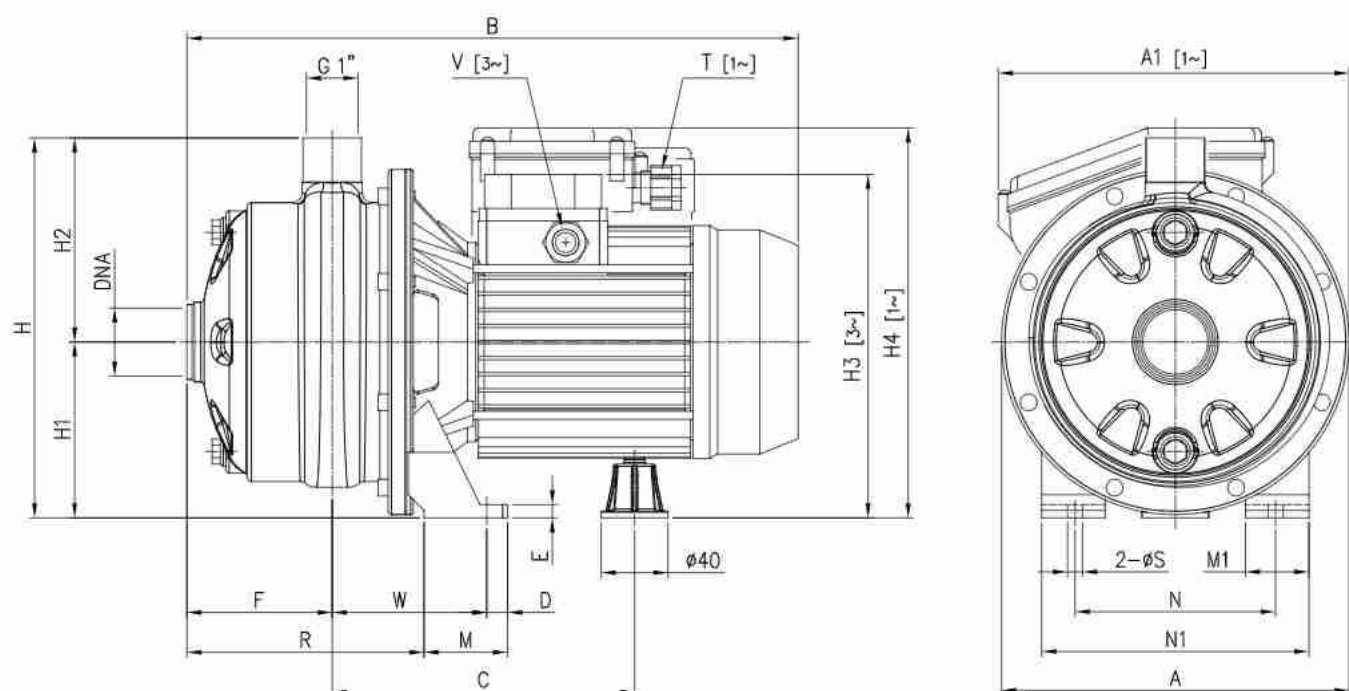
N°	PART NAME	MATERIAL	DIMENSION	STANDARD	QTY
1	Casing	AISI 304 / AISI 316L [6]			1
3	Motor bracket	[4]			1
4	Casing cover	AISI 304 / AISI 316L [6]			1
6	Shaft with rotor	AISI 303 / AISI 316L [6] (Wet extension)			1
7	Impeller	AISI 304 / AISI 316L [6]			1
8	Impeller	AISI 304 / AISI 316L [6]			1
9	Diffuser	AISI 304 / AISI 316L [6]			1
11	Mechanical seal	Ceramic/Carbon/MBR			1
12	Motor frame with stator	-			1
13	Motor cover	Aluminium			1
14	Fan	PA			1
15	Fan cover	Fe P04 Galvanized			1
17	Terminal box cover	Aluminium			1
18	Splash ring	NBR			1
19	Pump side ball bearing	-			1
20	Fan side ball bearing	-			1
21	Adjusting ring	Steel C70			1
22	Tie rod	Fe 420 Galvanized			4
24	Priming plug	AISI 304 / AISI 316 [6]			1
25	Drain plug	AISI 304 / AISI 316 [6]			1
26	O-ring	NBR			1
27	O-ring	NBR			1
32	Key	AISI 316			2
34	Impeller nut	Stainless steel A2-70	M10X1.25	UNI 7474	1

N°	PART NAME	MATERIAL	DIMENSION	STANDARD	QTY
42	Motor support	Aluminium			1
52	Capacitor box	[1]	ABS class V-0		1
53	Capacitor box cover	[1]	ABS class V-0		1
56	Box gasket	NBR			1
72	Gearing ring	[5]	NBR		1
73	Casing ring	[5]	NBR		1
75	Washer	AISI 304			1
76	Washer	AISI 304			1
77	O-ring	[3]	NBR		1
78	O-ring	[3]	NBR		1
79	Space diffuser	AISI 304 / AISI 316 [6]			1
90	Terminal box cover gasket	[1]	NBR		1
92	Lip seal	NBR			1
93	Lip seal	NBR			1
102	Suction cover	AISI 304 / AISI 316 [6]			1
103	Conveyor cover	AISI 304 / AISI 316 [6]			1
105	Sleeve	AISI 304 / AISI 316 [6]			1
200	Screw	70/10, 120/15, 120/20, 200/30 70/12, 70/15, 70/20, 120/20, 120/40, 200/40, 200/50	Stainless steel A2-70	M5X16 M5X18	UNI 5931 8
201	Screw		Zn, Steel cl. 8.8		UNI 5931 1
212	Screw		Stainless steel A2	3.5X9.5	UNI 6954 4
230	Washer		Steel C70	6.4	UNI 1761 1

- [1] Only for single phase
 [2] Only for three phase
 [3] FPM for H-HS-HW-HSW
 EPDM for E and Special Mechanical Seals
 [4] Material: Aluminium for version up to 1.5 kW included
 Cast iron for version 2.2 kW and above

- [5] FPM for H-HS-HW-HSW
 [6] Only for "L" version
 [7] See **MECHANICAL SEAL** pages 302-303

PUMP

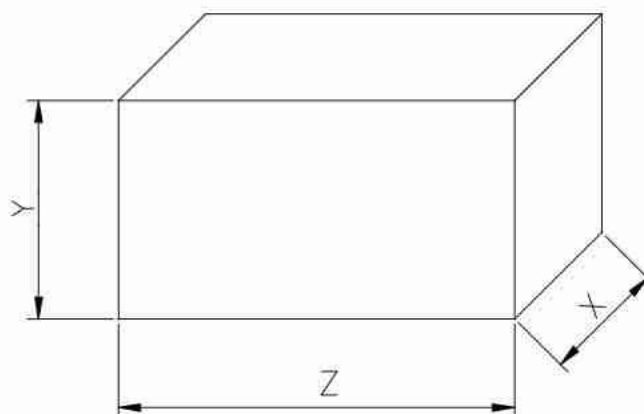


Pump type		Dimensions [mm]																							Weight [kgf]	
Single Phase	Three Phase	A	A1+ [1~]	B [1~] [3~]	C	D	E	F	H	H1	H2	H3 [3~]	H4 [1~]	M	M1	N	N1	R	T [1~]	V [3~]	W	S	DNA	[1~]	[3~]	
2CDKM 70/10	2CDK 70/10	208	-	355	354	181	12.5	8	87	229	106	123	207	216	50	38	120	160	142	PG 11	M16x1.5	92.5	9	G1 1/4	12.7	12.6
2CDKM 70/12	2CDK 70/12	208	210	355	366	181	12.5	8	87	229	106	123	207	235	50	38	120	160	142	PG 13.5	M16x1.5	92.5	9	G1 1/4	13.3	13.7
2CDKM 70/15	2CDK 70/15	232	-	395.5	407	198.5	12.5	8	89	250	118	132	237	248.5	55	40	140	180	141.5	PG 13.5	M20x1.5	95	9	G1 1/4	17.5	17
2CDKM 70/20	2CDK 70/20	232	-	382.5	407.5	198.5	12.5	8	89	250	118	132	237	248.5	55	40	140	180	141.5	PG 13.5	M20x1.5	95	9	G1 1/4	18.5	20.1
2CDKM 120/15	2CDK 120/15	208	210	395.5	407	198.5	12.5	8	89	229	106	123	225	236.5	55	40	140	180	141.5	PG 13.5	M20x1.5	95	9	G1 1/4	16.3	15.8
2CDKM 120/20	2CDK 120/20	208	210	382.5	407.5	198.5	12.5	8	89	229	106	123	225	236.5	55	40	140	180	141.5	PG 13.5	M20x1.5	95	9	G1 1/4	17	18.3
-	2CDK 120/30	232	-	-	405	198.5	12.5	10	87	250	118	132	237	-	65	40	140	180	143.5	-	M20x1.5	109	9	G1 1/4	-	26.1
-	2CDK 120/40	232	-	-	458	223.5 + 234.5	12.5	10	87	250	118	132	242	-	65	40	140	180	143.5	-	M20x1.5	109	9	G1 1/4	-	27.8
-	2CDK 200/30	208	-	-	458	223.5 + 234.5	12.5	10	87	229	106	123	230	-	85	40	140	180	143.5	-	M20x1.5	109	9	G1 1/4	-	26.6
-	2CDK 200/40	232	-	-	458	223.5 + 234.5	12.5	10	87	250	118	132	242	-	85	40	140	180	143.5	-	M20x1.5	109	9	G1 1/4	-	27.6
-	2CDK 200/50	232	-	-	481	232.5	16	12	87	250	118	132	259	-	88	50	160	210	143.5	-	M20x1.5	108.5	12	G1 1/2	-	35.6

(*) Specified only if higher than "A"

[1~] Single phase

[3~] Three phase

PACKING

Pump type		Packing [mm]						Weight [kgf]	
Single Phase	Three Phase	X		Y		Z			
		[1~]	[3~]	[1~]	[3~]	[1~]	[3~]	[1~]	[3~]
2CDXM 70/10	2CDX 70/10	237	237	280	280	445	445	13.3	13.3
2CDXM 70/12	2CDX 70/12	237	237	280	285	445	500	13.9	14.6
2CDXM 70/15	2CDX 70/15	237	237	285	285	500	500	18.4	17.8
2CDXM 70/20	2CDX 70/20	237	237	285	285	500	500	19.5	21
2CDXM 120/15	2CDX 120/15	237	237	285	285	500	500	17	16.4
2CDXM 120/20	2CDX 120/20	237	237	285	285	500	500	17.7	19.3
-	2CDX 120/30	-	237	-	285	-	500	-	26.7
-	2CDX 120/40	-	237	-	285	-	585	-	28.8
-	2CDX 200/30	-	237	-	285	-	585	-	28.5
-	2CDX 200/40	-	237	-	285	-	585	-	28.6
-	2CDX 200/50	-	237	-	285	-	585	-	37.5

[1~] Single phase

[3~] Three phase