2CDX(L)

DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

Dual impeller centrifugal electric pumps with hydraulic parts in AISI 304 and AISI 316.

APPLICATIONS

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

TECHNICAL DETAILS

- Sturdy structure
- Small dimensions

PUMP TECHNICAL DATA

- Maximum working pressure: 8 bar
- Maxim temperature of the liquid:
  -5°C ÷ +60°C 2CDX(L) for E, Q1AEGG, VAEGG, U3U3EGG, Q1U3EGG and U3CEGG versions
  -5°C ÷ +110° for H-HS-HW-HSW versions
- G1½ suction connection for 2CDX(L) 200, G1¼ for the rest of the range
- G1 discharge connection

MOTOR TECHNICAL DATA

- IE3 high energy-efficiency motors starting from 0.75kW
- Self-ventilated 2 pole asynchronous motor
- 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

AISI 304 Version

- Pump casing, impeller, shaft, diffuser and seal housing disc in EN 1.4301 (AISI 304)

AISI 316 (L) Version

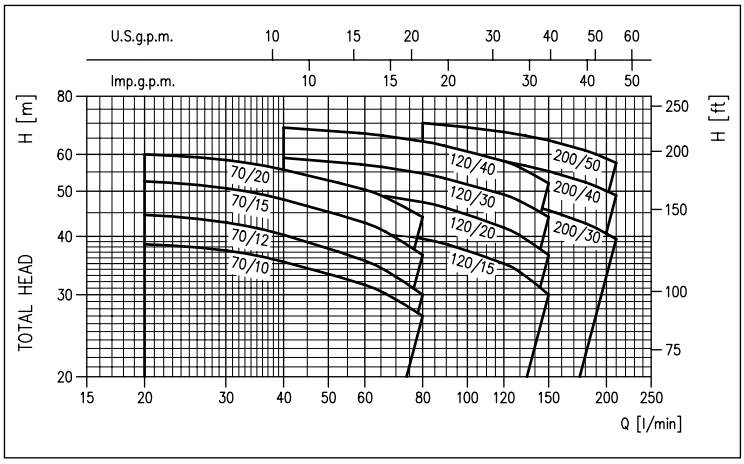
- Pump casing, impeller, shaft, diffuser and seal housing disc in AISI 316

- Aluminium motor bracket (up to 1.5 kW included), in cast iron (2.2 kW and above)
- Mechanical seal in:
  - Ceramic/Carbon/NBR (standard)
  - special versions: see p. 22

ACCESSORIES (On request)

- Insulation casing for 2CDX (L) pump casing for applications with refrigerant liquids or liquids with high thermal difference that may generate condensate
- Electric panels
- Vessels
- Floats
- Pressure switches
- Presscomfort - Pressure regulator
- E-power - Variable speed control system
- E-*drive* - Variable speed control system

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



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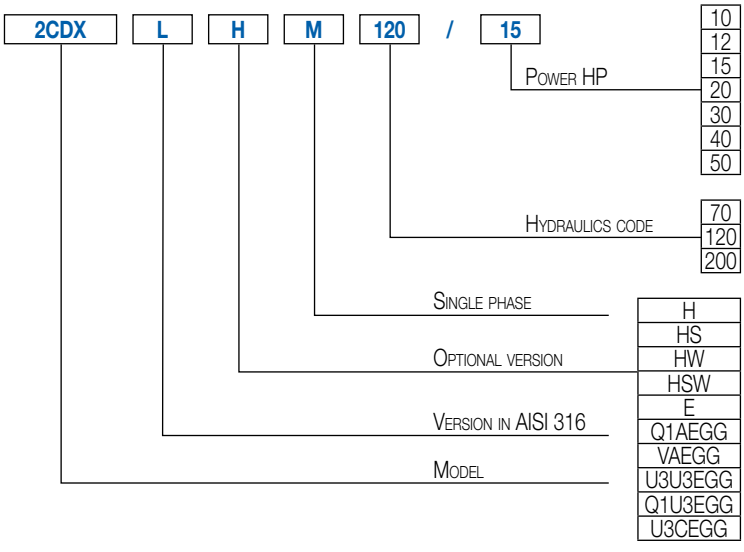
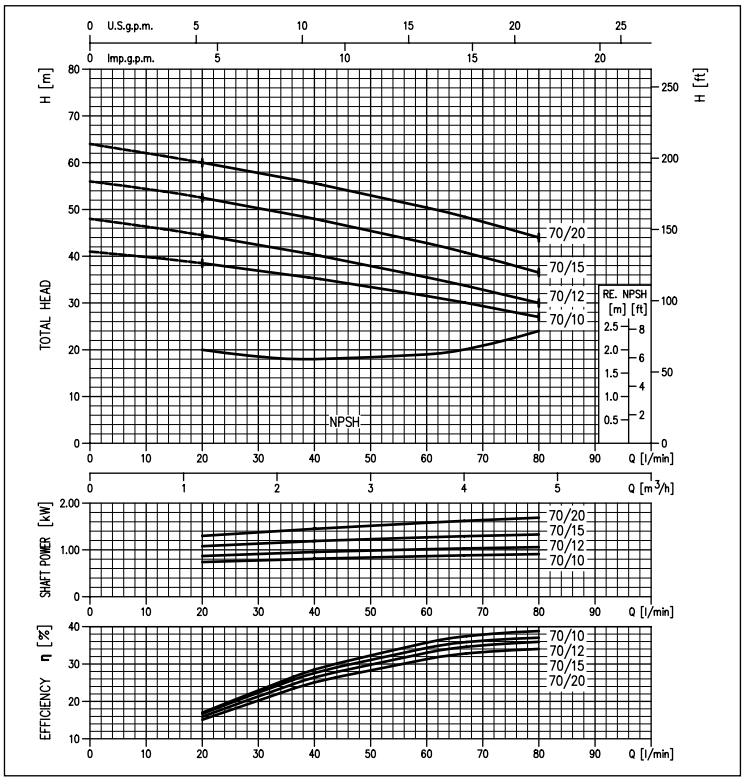


DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

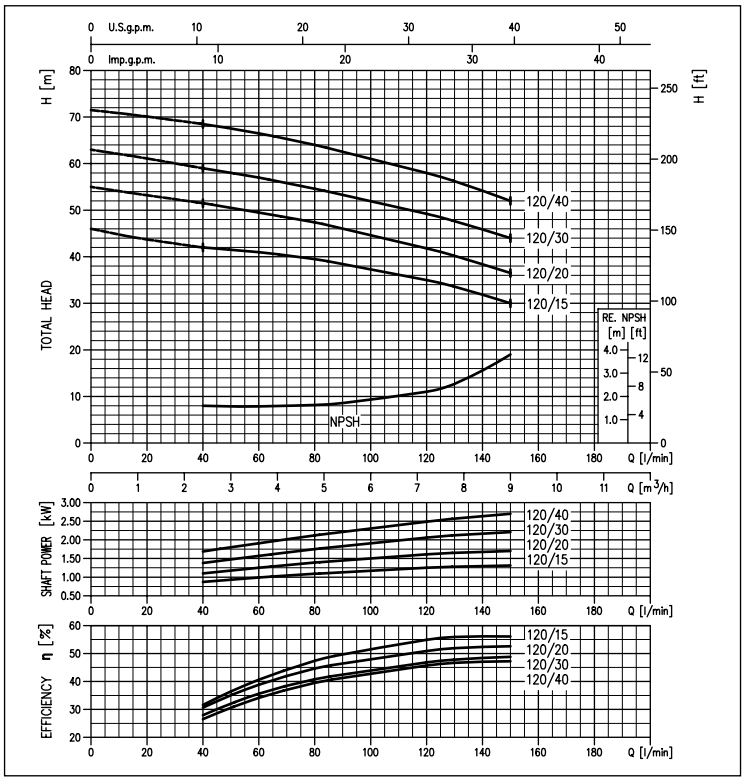
PERFORMANCE CURVES 2CDX 70 series

(according to ISO 9906 Attachment A)



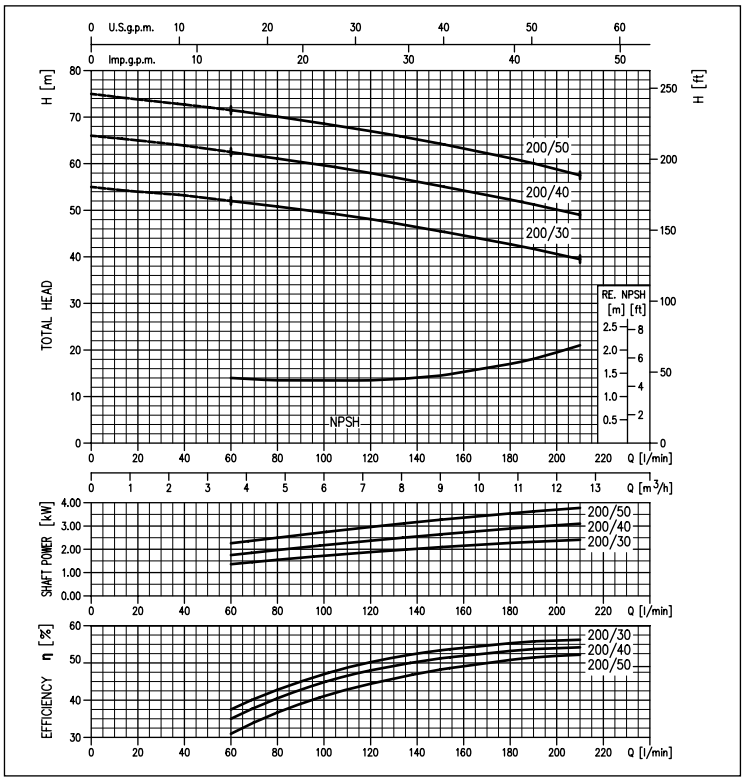
PERFORMANCE CURVES 2CDX 120 series

(according to ISO 9906 Attachment A)



PERFORMANCE CURVES 2CDX 200 series

(according to ISO 9906 Attachment A)



2CDX(L)

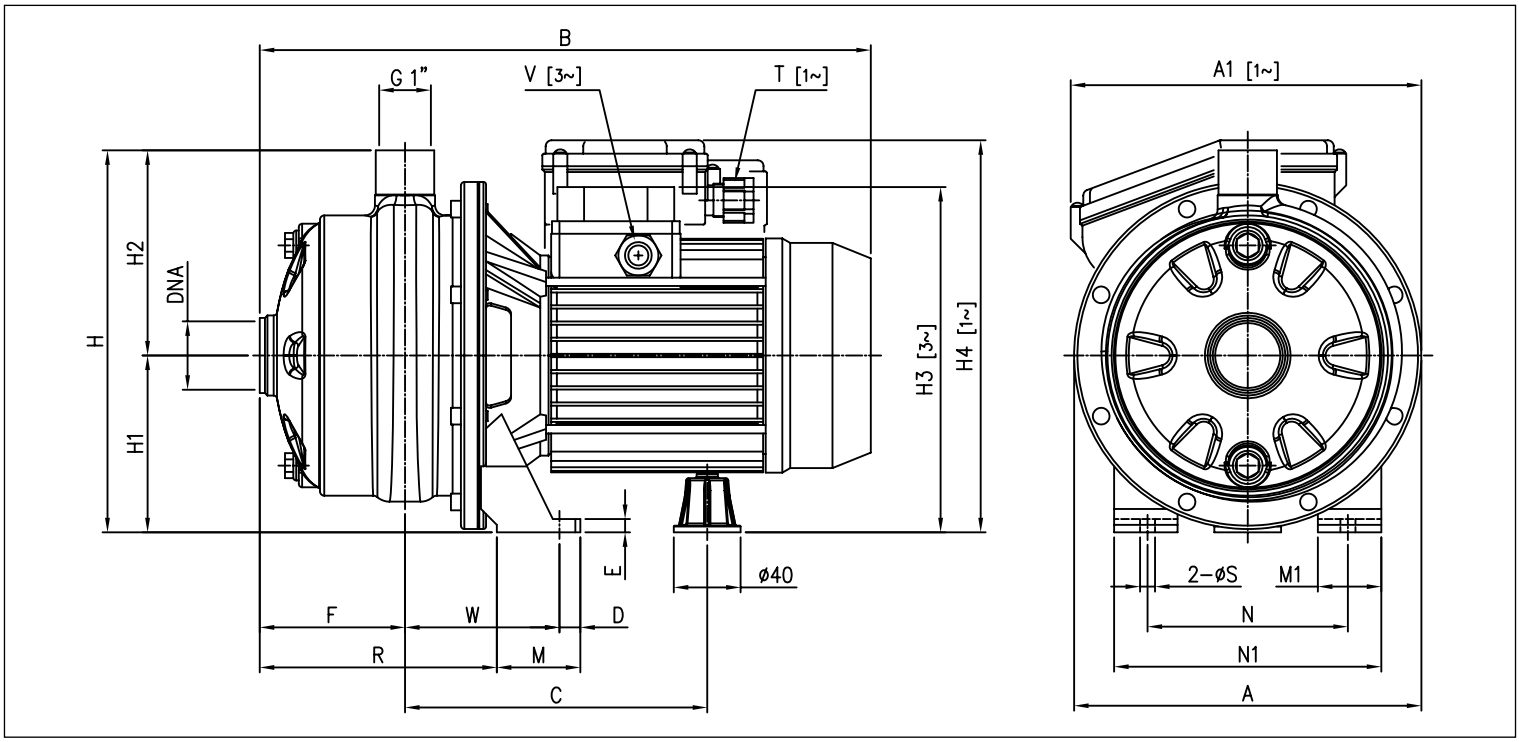
DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

PERFORMANCE CHART

Model		P_2		Q = Flow Rate							
Single phase 230V	Three phase 230/400V	[HP]	[kW]	l/min	20	40	60	80	120	150	180	210
				m^3/h	1.2	2.4	3.6	4.8	7.2	9	10.8	12.6
				H=Head [m]								
2CDXM 70/10	2CDX 70/10	1	0.75	38.5	35.3	31.5	27.0	-	-	-	-	
2CDXM 70/12	2CDX 70/12	1.2	0.9	44.5	40.3	35.5	30.0	-	-	-	-	
2CDXM 70/15	2CDX 70/15	1.5	1.1	52.5	48.0	42.8	36.5	-	-	-	-	
2CDXM 70/20	2CDX 70/20	2	1.5	60.0	55.6	50.4	44.0	-	-	-	-	
2CDXM 120/15	2CDX 120/15	1.5	1.1	-	42.0	41.0	39.5	35.0	30.0	-	-	
2CDXM 120/20	2CDX 120/20	2	1.5	-	51.5	49.5	47.4	41.8	36.5	-	-	
-	2CDX 120/30	3	2.2	-	59.0	57.0	54.6	49.2	44.0	-	-	
-	2CDX 120/40	4	3	-	68.5	66.5	64.0	58.0	52.0	-	-	
-	2CDX 200/30	3	2.2	-	-	52.0	50.8	48.1	45.5	42.7	39.5	
-	2CDX 200/40	4	3	-	-	62.5	61.1	58.0	55.2	52.3	49.0	
-	2CDX 200/50	5	3.7	-	-	71.5	70.1	67.0	64.3	61.2	57.5	

DIMENSIONS



DIMENSIONAL TABLE

Modello	Dimensioni [mm]																						Peso [kg]	
	A	A1 [2]**	B [2]	B [1]	C	D	E	F	H	H1	H2	H3 [1]	H4 [2]	M	M1	N	N1	R	T [2]	V [1]	W	S	DNA	[2]	[1]
2CDX(M) 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	G1¼	12,7	12,6
2CDX(M) 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	G1¼	13,3	13,7
2CDX(M) 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	G1¼	17,5	17,0
2CDX(M) 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	G1¼	18,5	20,1
2CDX(M) 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	G1¼	16,3	15,6
2CDX(M) 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	G1¼	17,0	18,3
2CDX 120/30	232	-	-	405	223,5÷234,5	12,5	10	87	250	118	132	237	-	65	40	140	180	143,5	-	M20x1,5	109	9	G1¼	-	26,1
2CDX 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	G1¼	-	27,8
2CDX 200/30	208	-	-	458	223,5÷234,5	12,5	10	87	229	106	123	230	-	65	40	140	180	143,5	-	M20x1,5	109	9	G1½	-	26,6
2CDX 200/40	232	-	-	458	223,5÷234,5	12,5	10	87	250	118	132	242	-	65	40	140	180	143,5	-	M20x1,5	109	9	G1½	-	27,6
2CDX 200/50	232	-	-	481	232,5	16	12	87	250	118	132	259	-	68	50	160	210	143,5	-	M20x1,5	108,5	12	G1½	-	35,6

** Value specified only if greater than "A"

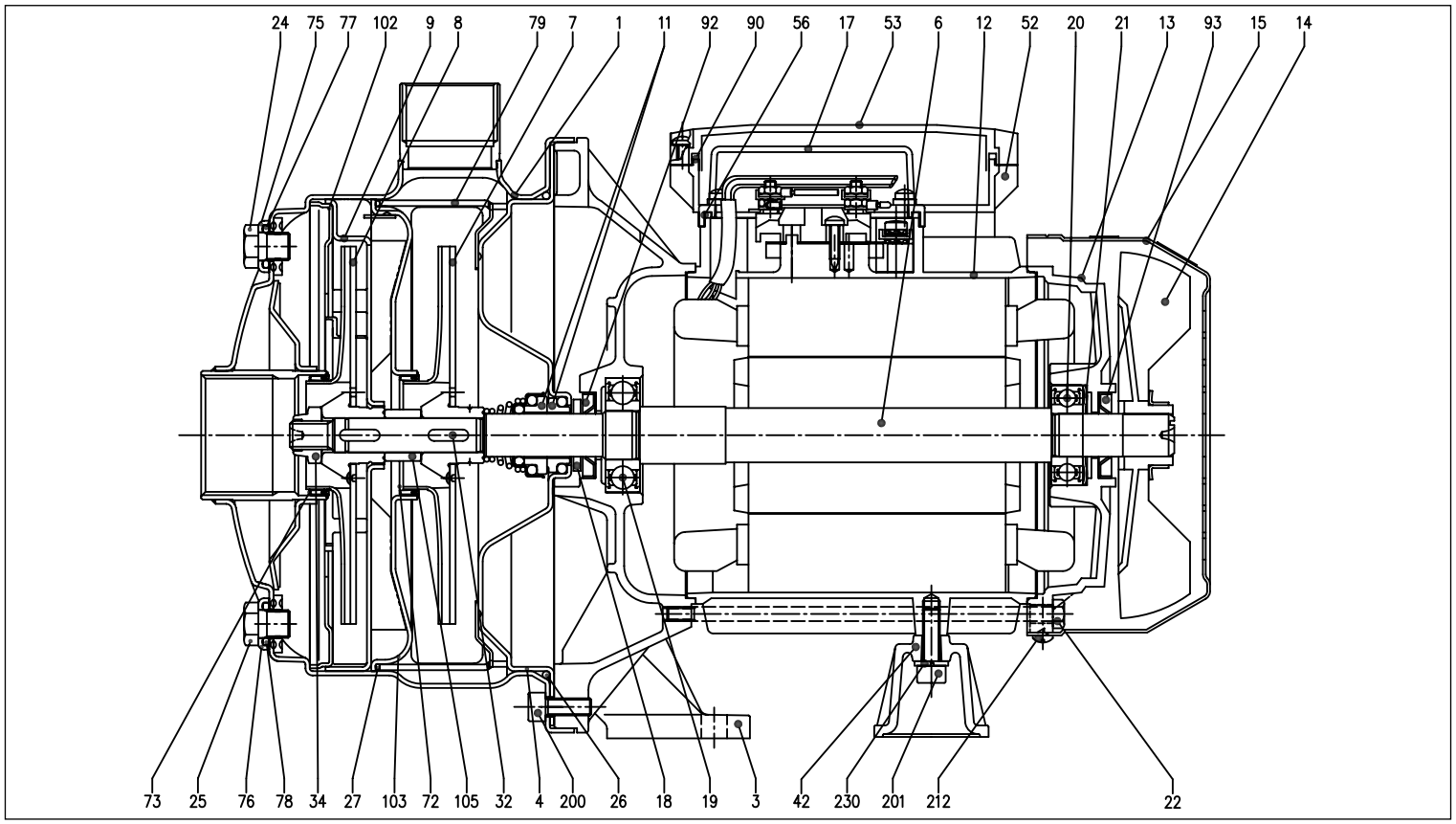
[1]= Three phase only [2]= Single phase only

2CDX(L)

DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Materials	Ref.	Name	Materials
1	Pump casing	EN 1.4301 (AISI 304) / AISI 316	32	Key	AISI 316
3	Motor bracket	Aluminium (up to 1.5 kW included) Cast iron (from 2.2 kW and above)	34	Impeller nut	Stainless Steel A2-70 / AISI 316
			42	Motor support	Aluminium
4	Casing cover	EN 1.4301 (AISI 304) / AISI 316	52	Terminal Box [2]	ABS
6	Shaft	EN 1.4301 (AISI 304) / AISI 316 Part in contact with the liquid	53	Terminal Box cover [2]	ABS
7	Impeller	EN 1.4301 (AISI 304)	56	Terminal box cover gasket	NBR
8	Impeller	EN 1.4301 (AISI 304)	72	Casing ring [4]	NBR
9	Diffuser	EN 1.4301 (AISI 304)	73	Casing ring [4]	NBR
11	Mechanical seal	Ceramic/Carbon/NBR	75	Washer	EN 1.4301 (AISI 304) / AISI 316
12	Motor frame	-	76	Washer	EN 1.4301 (AISI 304) / AISI 316
13	Motor cover	Aluminium	77	O-Ring [3]	NBR
14	Fan	PA	78	O-Ring [3]	NBR
15	Fan cover	Galvanised Fe P04	79	Diffuser spacer	EN 1.4301 (AISI 304)
17	Terminal Box cover [1]	Aluminium	90	Gasket [2]	NBR
18	Splash ring	NBR	92	Seal ring	NBR
19	Bearing (pump side)	-	93	Seal ring	NBR
20	Bearing (motor side)	-	102	Diffuser cover	EN 1.4301 (AISI 304)
21	Adjustment ring	Steel C70	103	Conveyor cover	EN 1.4301 (AISI 304)
22	Tie-rod	Galvanised Fe 42	105	Impeller spacer	EN 1.4301 (AISI 304)
24	Plug	EN 1.4301 (AISI 304) / AISI 316	200	Screw (pump body)	Stainless Steel A2-70
25	Plug	EN 1.4301 (AISI 304) / AISI 316	201	Screw	Zn. steel cl.8.8
26	O-Ring [3]	NBR	212	Screw	Stainless Steel A2
27	O-Ring [3]	NBR	230	Washer	Steel C70

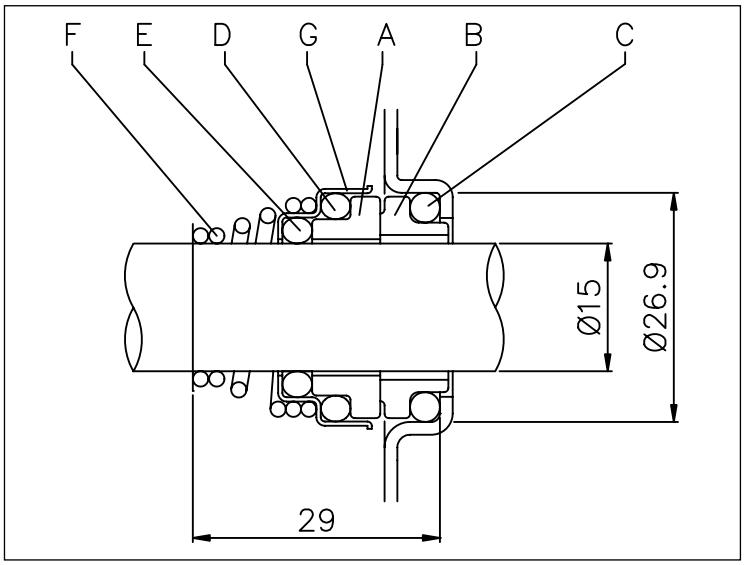
[1]= Three-phase only
[2]= Single phase only
[3]= FKM for 2CDX(L)H, 2CDX(L)HS, 2CDX(L)HW, 2CDX(L)HSW
EPDM for 2CDX(L)E, 2CDX(L) Q1AEGG, 2CDX(L) VAEGG, 2CDX(L) U3U3EGG, 2CDX(L) Q1U3EGG, 2CDX(L) U3CEGG
[4]= FKM for 2CDX(L)H, 2CDX(L)HS, 2CDX(L)HW, 2CDX(L)HSW
NBR for 2CDX(L)E, 2CDX(L) Q1AEGG, 2CDX(L) VAEGG, 2CDX(L) U3U3EGG, 2CDX(L) Q1U3EGG, 2CDX(L) U3CEGG

2CDX(L)

DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

MECHCANICAL SEAL 2CDX(L) 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
A	Rotating part	Ceramic	Silicon Carbide	Tungsten Carbide	Silicon Carbide	Ceramic
B	Fixed part	Carbon	Silicon Carbide	Tungsten Carbide	Tungsten Carbide	Carbon
C	O-Ring	FKM	FKM	FKM	FKM	EPDM
D	O-Ring	FKM	FKM	FKM	FKM	EPDM
E	O-Ring	FKM	FKM	FKM	FKM	EPDM
F	Spring	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316
G	Structure/frame	AISI 304	AISI 316	AISI 316	AISI 316	AISI 316

Ref.	Name	Materials				
		Q1AEGG Version	VAEGG Version	U3U3EGG Version	Q1U3EGG Version	U3CEGG Version
A	Rotating part	Silicon Carbide	Ceramic	Tungsten Carbide	Silicon Carbide	Tungsten Carbide
B	Fixed part	Metallised carbon	Metallised carbon	Tungsten Carbide	Tungsten Carbide	Special Carbon
C	O-Ring	EPDM	EPDM	EPDM	EPDM	EPDM
D	O-Ring	EPDM	EPDM	EPDM	EPDM	EPDM
E	O-Ring	EPDM	EPDM	EPDM	EPDM	EPDM
F	Spring	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316
G	Structure/frame	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316

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ELECTRIC DATA TABLE

Model Single phase 230V	Model Three phase 230/400V	P_2 [HP]	P_2 [kW]	Efficiency Single phase	Efficiency Three phase	Capacitor Single phase µF	Capacitor Single phase V_c	Efficiency (%) Three phase η % 50%	Efficiency (%) Three phase η % 75%	Efficiency (%) Three phase η % 100%	P_1 Single phase [kW]	P_1 Three phase [kW]	Absorbed Current [A] Single phase 230V	Absorbed Current [A] Three phase 230V	Absorbed Current [A] Three phase 400V
2CDXM 70/10	2CDX 70/10	1	0,75	-	IE3	20	450	80,9	82,3	82,1	1,30	1,11	6,0	3,4	2,0
2CDXM 70/12	2CDX 70/12	1,2	0,9	-	IE3	31,5	450	81,7	83,1	82,4	1,55	1,34	7,0	4,3	2,5
2CDXM 70/15	2CDX 70/15	1,5	1,1	-	IE3	40	450	83,5	84,3	84,6	1,80	1,77	8,1	5,8	3,3
2CDXM 70/20	2CDX 70/20	2	1,5	-	IE3	40	450	84,2	86,8	86,9	2,30	2,30	10,0	7,8	4,5
2CDXM 120/15	2CDX 120/15	1,5	1,1	-	IE3	40	450	83,5	84,3	84,6	1,80	1,77	8,3	5,8	3,3
2CDXM 120/20	2CDX 120/20	2	1,5	-	IE3	40	450	84,2	86,8	86,9	2,35	2,30	10,2	7,8	4,5
-	2CDX 120/30	3	2,2	-	IE3	-	-	86,2	87,0	86,0	-	2,55	-	8,2	4,7
-	2CDX 120/40	4	3	-	IE3	-	-	85,9	87,5	87,1	-	3,44	-	11,1	6,4
-	2CDX 200/30	3	2,2	-	IE3	-	-	85,9	87,5	87,1	-	3,44	-	11,1	6,4
-	2CDX 200/40	4	3	-	IE3	-	-	85,9	87,5	87,1	-	3,76	-	11,2	6,5
-	2CDX 200/50	5	3,7	-	IE3	-	-	85,8	88,3	88,4	-	4,52	-	15,1	8,7

NOISE DATA TABLE

Model Single phase 230V	Model Three phase 230/400V	P_2 [HP]	P_2 [kW]	L_{pA} - dB(A)*
2CDXM 70/10	2CDX 70/10	1	0.75	62
2CDXM 70/12	2CDX 70/12	1.2	0.9	
2CDXM 70/15	2CDX 70/15	1.5	1.1	64
2CDXM 70/20	2CDX 70/20	2	1.5	
2CDXM 120/15	2CDX 120/15	1.5	1.1	64
2CDXM 120/20	2CDX 120/20	2	1.5	
-	2CDX 120/30	3	2.2	68
-	2CDX 120/40	4	3	
-	2CDX 200/30	3	2.2	68
-	2CDX 200/40	4	3	
-	2CDX 200/50	5	3.7	

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

Insulation casing

For applications with refrigerant liquids or liquids with high thermal difference that may generate condensate