

## DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304



Dual impeller centrifugal electric pumps with hydraulic parts 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

- Strong structure
- Small dimensions

### PUMP TECHNICAL DATA

- Maximum working pressure: 8 bar
- Maximum temperature of the liquid:
  - 5°C ÷ +60°C for standard and E version
  - 5°C ÷ +110° for H-HS-HW-HSW version
- G1½ suction connection for 2CDX 200, G1¼ for the rest of the range
- G1 discharge connection

### MOTOR TECHNICAL DATA

- High efficiency motors IE2 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

- Pump casing, impeller, shaft, diffuser and seal housing disc in EN 1.4301 (AISI 304)
- Aluminium motor bracket (up to 1.5 kW included), in cast iron (2.2 kW and above)
- 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/Graphite/EPDM (E version)
  - Tungsten Carbide/Special Carbon/EPDM (U3CEGG version)

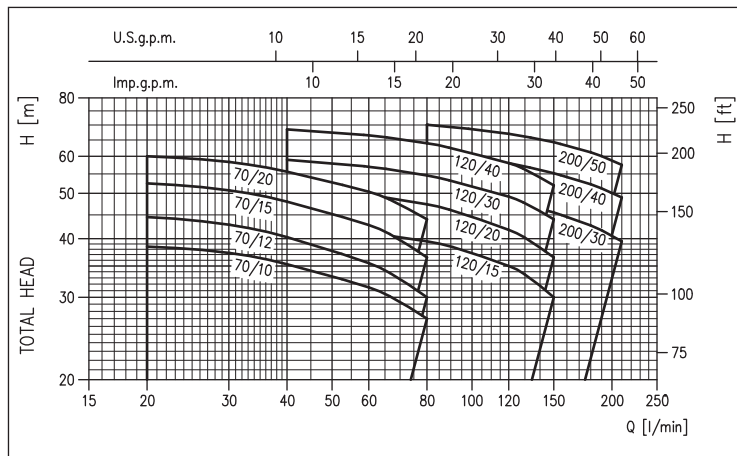
### CONTROL PANELS

- 1EPBH

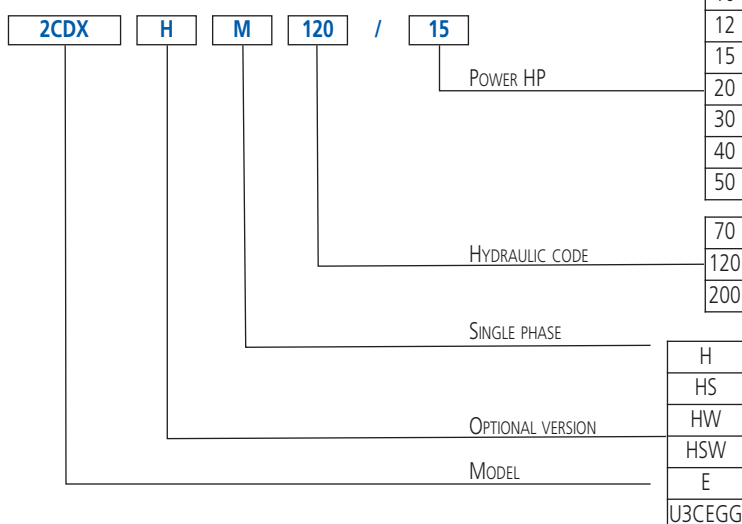
### ACCESSORIES (On request)

- 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
- 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



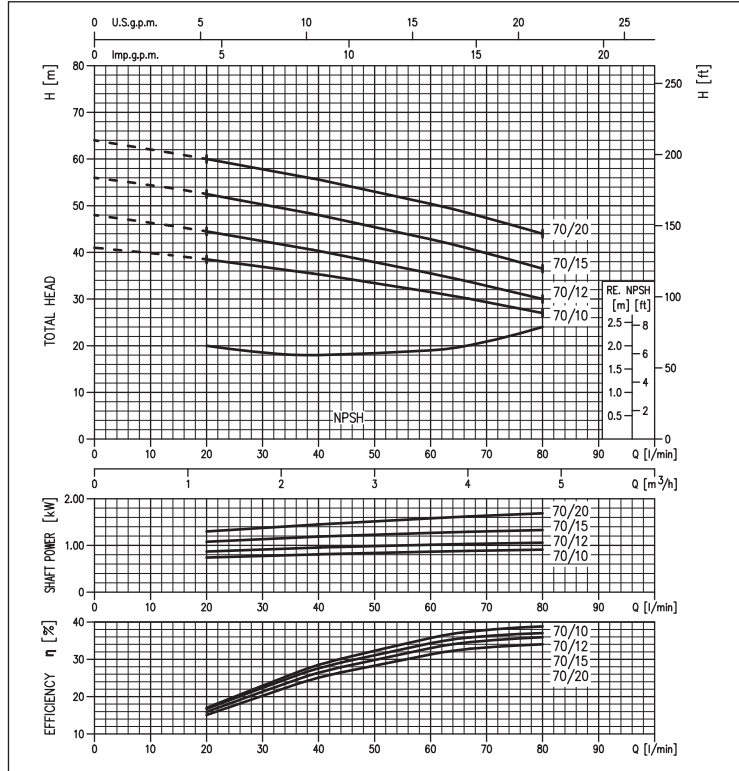


# 2CDX

## DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS in AISI 304

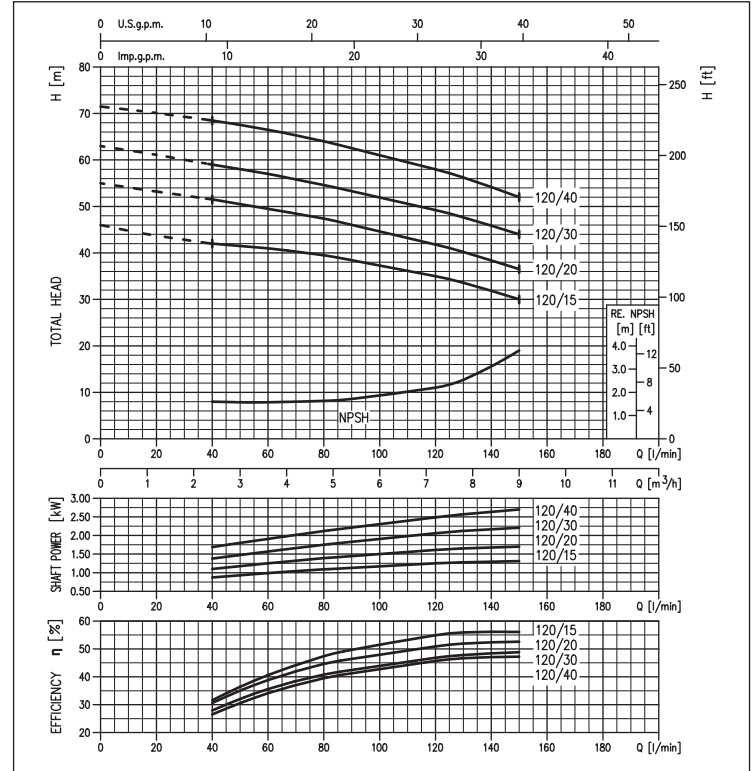
### PERFORMANCE CURVES 2CDX 70 series

(according to ISO 9906 Attachment A)



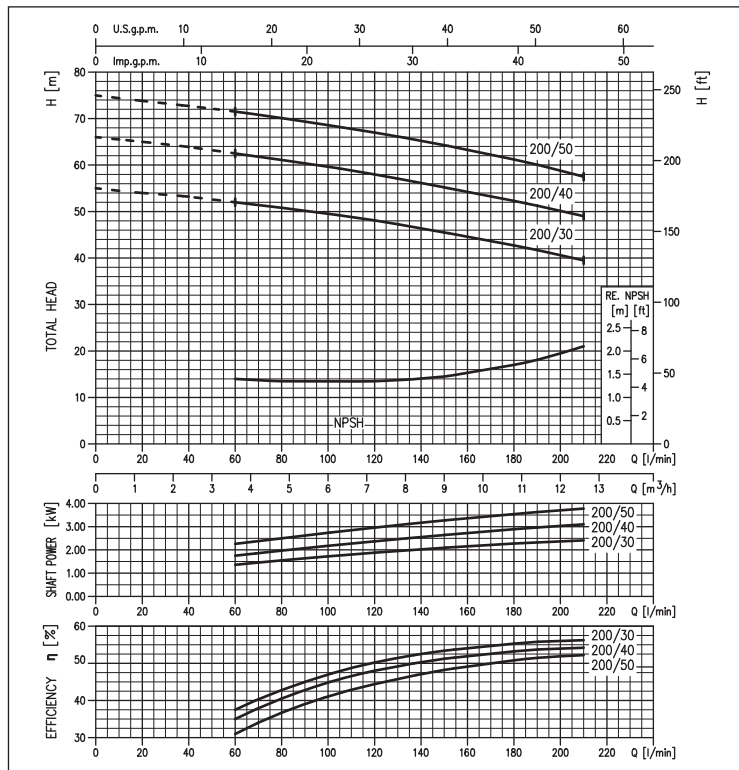
### PERFORMANCE CURVES 2CDX 120 series

(according to ISO 9906 Attachment A)



### PERFORMANCE CURVES 2CDX 200

(according to ISO 9906 Attachment A)



The contents of this publication must not be regarded as binding. EBARA Pumps Europe S.p.A. reserves the right to effect any modification it deems necessary without prior notice.

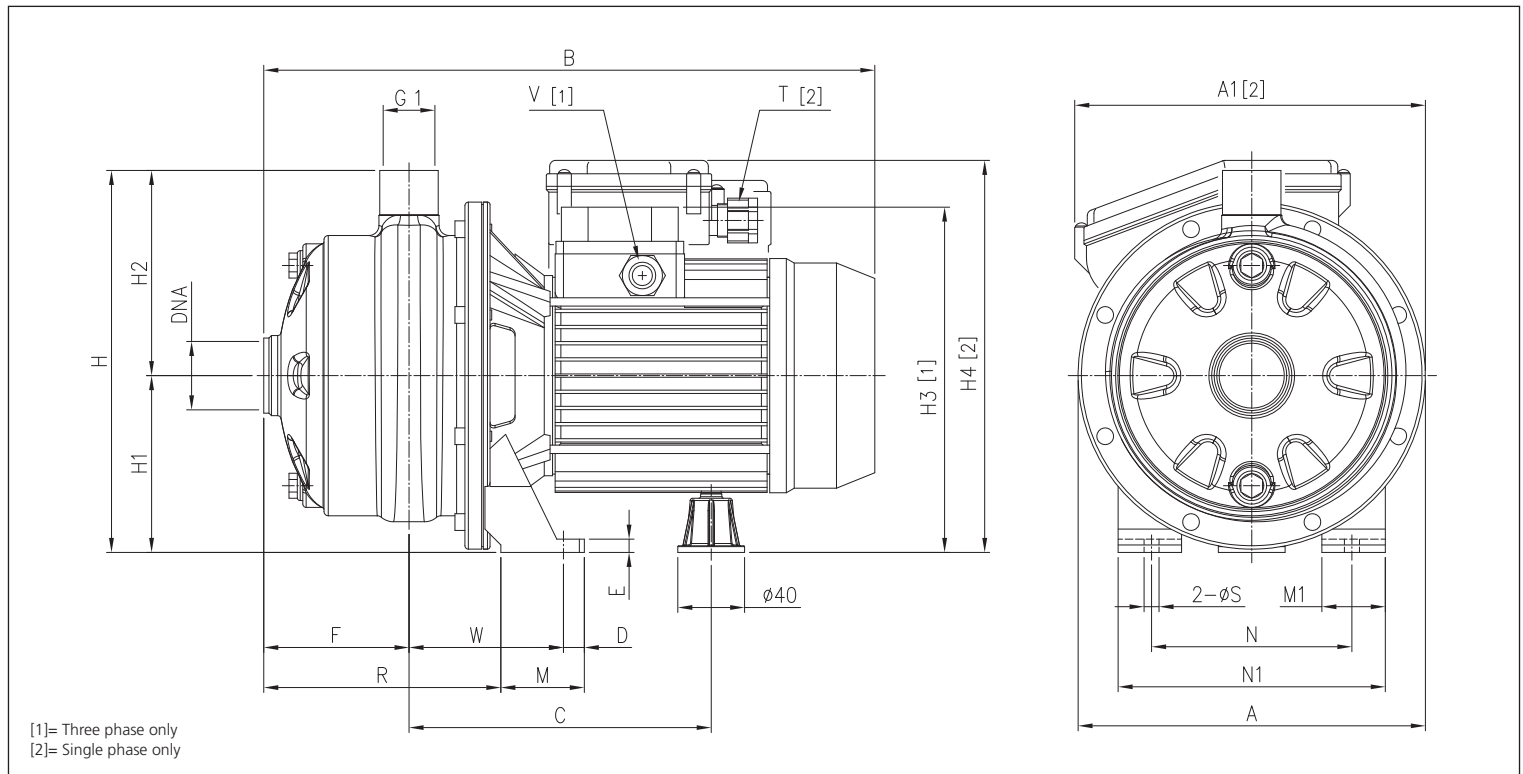
## DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

### PERFORMANCE TABLE

Model		P <sub>2</sub>		Q=Flow rate									
Single phase 230V	Three phase 230/400V	[HP]	[kW]	l/min m <sup>3</sup> /h	20 1,2	40 2,4	60 3,6	80 4,8	120 7,2	150 9	180 10,8	210 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	5,5	3,7	-	-	71,5	70,1	67,0	64,3	61,2	57,5	-	

### DIMENSIONS



### DIMENSIONAL TABLE

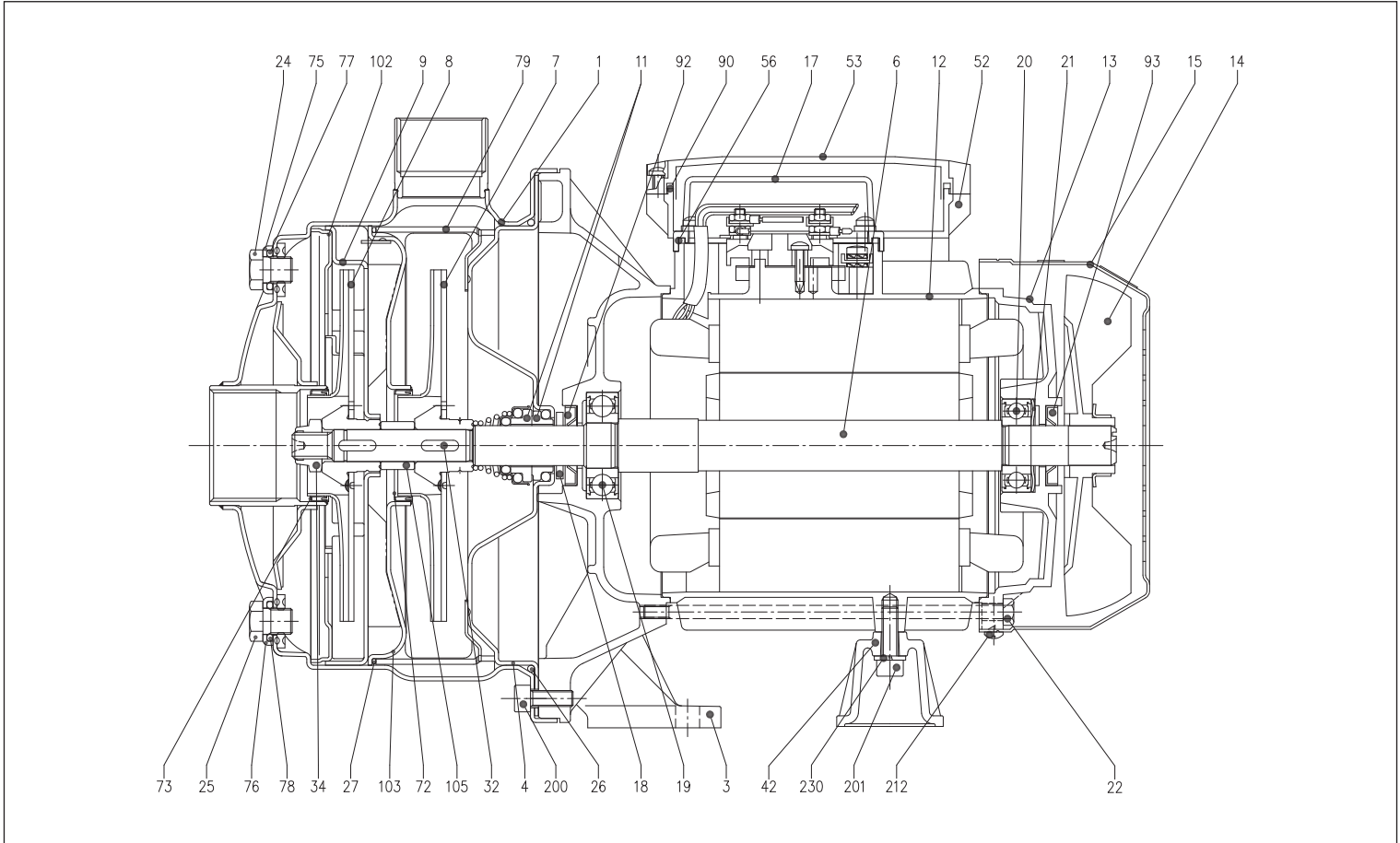
Model	A		B		C	D	E	F	H	H1	Dimensions [mm]				M	M1	N	N1	R	T [2]	V [1]	W	S	DNA	Weight [kg]	
	A1 [2]	[2]	[2]	[1]							H2	H3 [1]	H4 [2]	M											Weight [2] [1]	
2CDX(M) 70/10	208	-	355	354	181	12,5	8	87	229	106	123	207	216	50	38	120	160	142	PG 11	PG 11	92,5	9	G1¼	12,7	12,6	
2CDX(M) 70/12	208	210	355	366	181	12,5	8	87	229	106	123	207	235	50	38	120	160	142	PG 13,5	PG 11	92,5	9	G1¼	13,3	13,7	
2CDX(M) 70/15	232	-	395,5	382	198,5	12,5	8	89	250	118	132	237	248,5	55	40	140	180	141,5	PG 13,5	PG 11	95	9	G1¼	17,5	17,0	
2CDX(M) 70/20	232	-	382,5	395	198,5	12,5	8	89	250	118	132	237	248,5	55	40	140	180	141,5	PG 13,5	PG 11	95	9	G1¼	18,5	19,2	
2CDX(M) 120/15	208	210	395,5	382	198,5	12,5	8	89	229	106	123	225	236,5	55	40	140	180	141,5	PG 13,5	PG 11	95	9	G1¼	16,3	15,6	
2CDX(M) 120/20	208	210	382,5	395	198,5	12,5	8	89	229	106	123	225	236,5	55	40	140	180	141,5	PG 13,5	PG 11	95	9	G1¼	17,0	17,4	
2CDX 120/30	232	-	-	419	223,5÷234,5	12,5	10	87	250	118	132	242	-	65	40	140	180	143,5	-	PG 13,5	109	9	G1¼	-	25,2	
2CDX 120/40	232	-	-	458	223,5÷234,5	12,5	10	87	250	118	132	242	-	65	40	140	180	143,5	-	PG 13,5	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	-	PG 13,5	109	9	G1½	-	25,7	
2CDX 200/40	232	-	-	458	223,5÷234,5	12,5	10	87	250	118	132	242	-	65	40	140	180	143,5	-	PG 13,5	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	-	PG 16	108,5	12	G1½	-	35,6	

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

## DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

### SECTIONAL VIEW



### MATERIALS TABLE

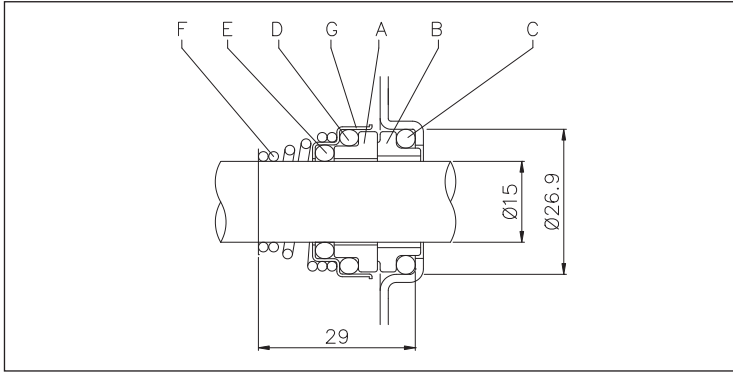
Ref.	Name	Materials	Ref.	Name	Materials
1	Pump casing	EN 1.4301 (AISI 304)	32	Key	AISI 316
3	Motor bracket	Aluminium (up to 1.5 kW included) Cast iron (from 2.2 kW and above)	34	Impeller nut	Stainless steel A2-70
4	Casing cover	EN 1.4301 (AISI 304)	42	Motor support	Aluminium
6	Shaft	EN 1.4301 (AISI 304)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

[1]= Three phase only  
 [2]= Single phase only  
 [3]= FPM for H-HS-HW-HSW versions, EPDM for E version  
 [4]= FPM for H-HS-HW-HSW versions, NBR for E version

## DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

### MECHANICAL SEAL 2CDX 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 <sub>2</sub>		Efficiency		Capacitor		Efficiency (%)			P <sub>1</sub>		Absorbed Current [A]		
Single phase 230V	Three phase 230/400V	[HP]	[kW]	Single phase	Three phase	Single phase μF	V <sub>c</sub>	50%	75%	100%	Single phase [kW]	Three phase [kW]	Single phase 230V	Three phase 230V	Three phase 400V
2CDXM 70/10	2CDX 70/10	1	0,75	-	IE2	20	450	77,2	80,9	81,3	1,30	1,14	6,0	3,6	2,0
2CDXM 70/12	2CDX 70/12	1,2	0,9	-	IE2	31,5	450	79,0	81,7	81,6	1,55	1,35	7,0	4,3	2,5
2CDXM 70/15	2CDX 70/15	1,5	1,1	-	IE2	40	450	79,7	82,5	83,0	1,80	1,80	8,1	5,6	3,2
2CDXM 70/20	2CDX 70/20	2	1,5	-	IE2	40	450	80,3	83,4	83,8	2,30	2,28	10,0	7,4	4,3
2CDXM 120/15	2CDX 120/15	1,5	1,1	-	IE2	40	450	79,7	82,5	83,0	1,80	1,80	8,3	5,6	3,2
2CDXM 120/20	2CDX 120/20	2	1,5	-	IE2	40	450	80,3	83,4	83,8	2,35	2,28	10,2	7,3	4,2
-	2CDX 120/30	3	2,2	-	IE2	-	-	83,1	85,7	86,2	-	2,90	-	8,8	5,1
-	2CDX 120/40	4	3	-	IE2	-	-	85,0	86,7	86,3	-	3,48	-	10,6	6,1
-	2CDX 200/30	3	2,2	-	IE2	-	-	85,0	86,7	86,3	-	3,48	-	10,6	6,1
-	2CDX 200/40	4	3	-	IE2	-	-	85,0	86,7	86,3	-	3,83	-	11,6	6,7
-	2CDX 200/50	5,5	3,7	-	IE2	-	-	84,3	87,2	87,8	-	4,56	-	15,1	8,7

### NOISE DATA TABLE

Model		P <sub>2</sub>		L <sub>pA</sub> - dB(A)*
Single phase 230V	Three phase 230/400V	[HP]	[kW]	
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	5,5	3,7	
-	2CDX 200/50	5,5	3,7	

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