



# CDX(L)

## SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316



**DYSTRYBUTOR**  
**Valmark Sp. z o.o.**  
 tel: (22) 868 58 58  
 mail: [biuro@valmark.pl](mailto:biuro@valmark.pl)



Single 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

- Solid hydraulic structure
- Small dimensions

### PUMP TECHNICAL DATA

- Maximum working pressure: 8 bar
  - Maximum temperature of the liquid:
    - 5°C ÷ +60°C for CDX(L) and for E, Q1AEGG, VAEGG, U3U3EGG, Q1U3EGG e U3CEGG 70/05-70/07-90/10 versions
    - 5°C ÷ +90°C for the rest of the CDX(L) range
    - 5°C ÷ +110°C for the H-HS-HW-HSW version
    - 5°C ÷ +120°C for E, Q1AEGG, VAEGG, U3U3EGG, Q1U3EGG and U3CEGG versions
  - G1½ suction connection for CDX(L) 200, G1¼ for the rest of the range
  - G1 discharge connection
  - MEI > 0.4
- For further information please see our Data Book on the web site [www.ebara-europe.com](http://www.ebara-europe.com)

### MOTOR TECHNICAL DATA

- High efficiency IE2 motors starting from 0.75kW up to 5.5kW  
IE3 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, diffuser and casing cover in AISI 304
- Shaft in AISI 303 (part in contact with the liquid)

#### AISI 316 (L) Version

- Pump casing, impeller, diffuser and casing cover in AISI 316
- Shaft in AISI 316 (part in contact with the liquid)

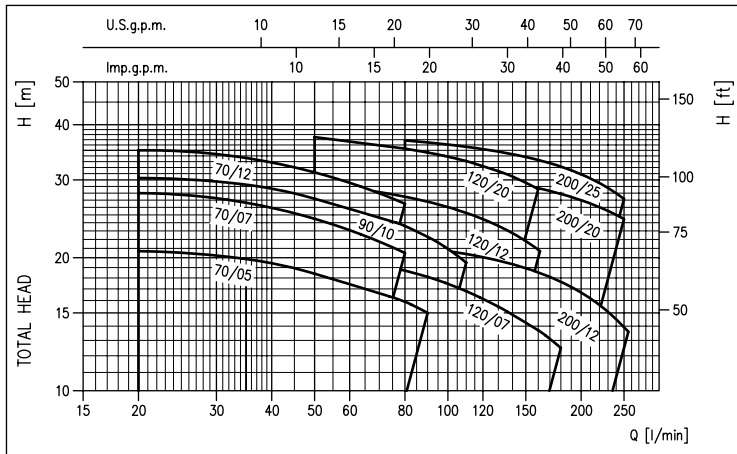
- Bracket and motor frame in aluminium
- Mechanical seal in:
  - Ceramic/Carbon/NBR (standard)
  - special versions: see p. 16

### ACCESSORIES (On request)

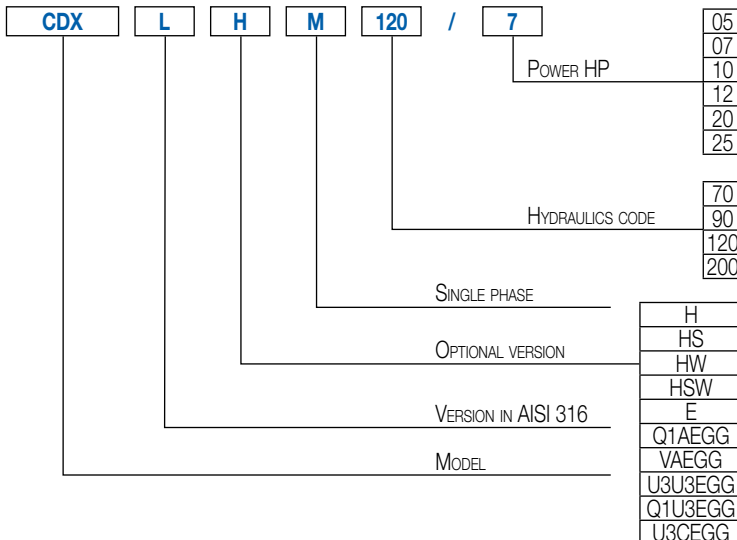
- Insulation casing for CDX (L) pump casing for applications with refrigerant liquids or liquids with high temperature variations that may generate condensate
- Electric panels
- Vessels
- Floats
- Pressure switches
- Presscomfort - Pressure regulator
- E-power - Variable speed control system
- E-drive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



### PERFORMANCE RANGE (according to ISO 9906 Attachment A)



### IDENTIFICATION CODE





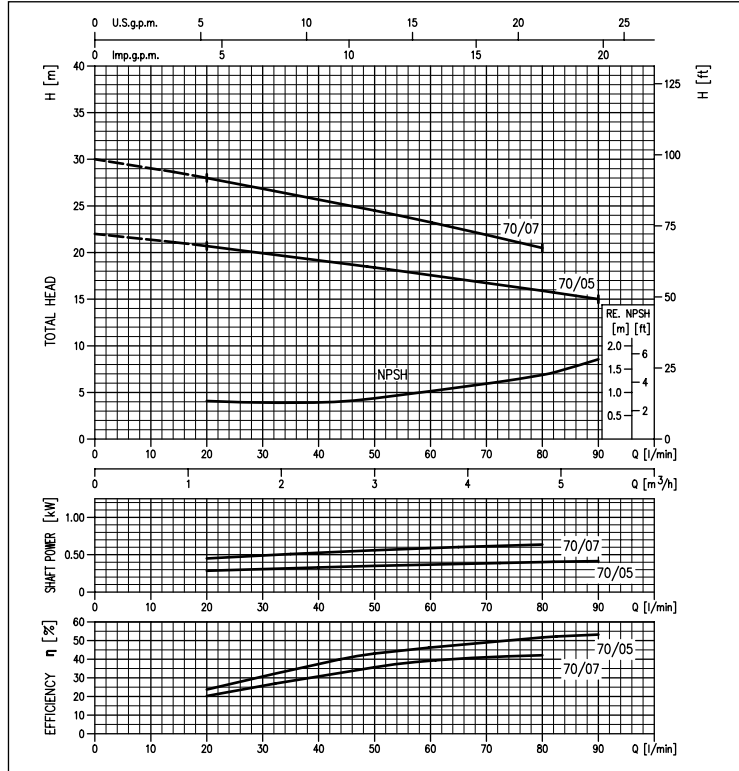
# CDX(L)

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in AISI 304 and AISI 316

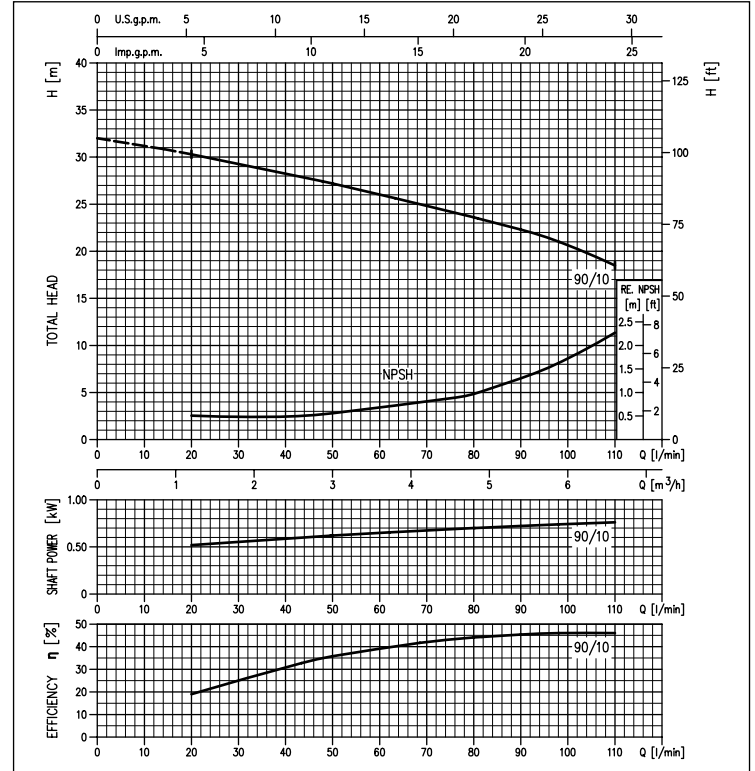
### PERFORMANCE CURVES CDX(L) 70 series

(according to ISO 9906 Attachment A)



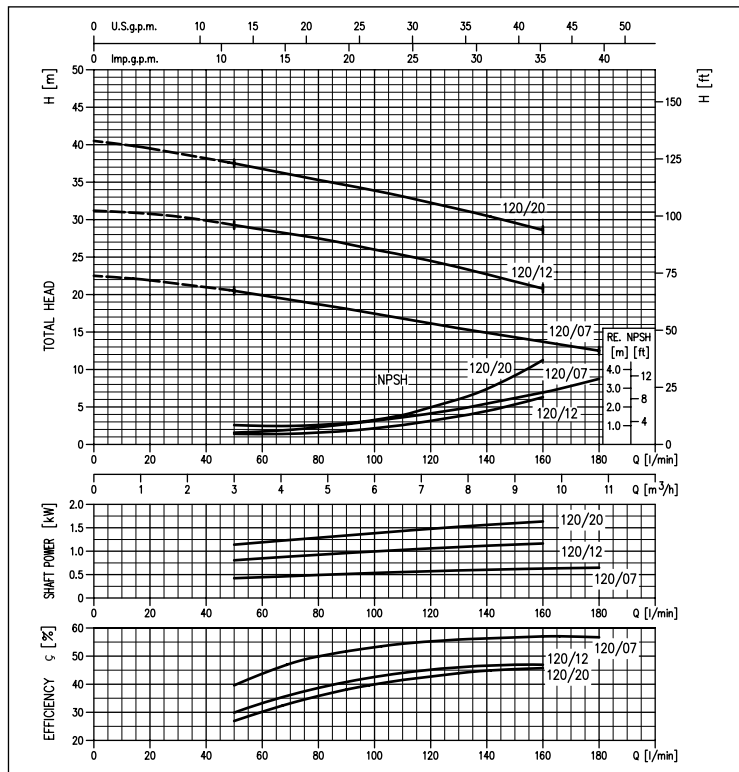
### PERFORMANCE CURVES CDX(L) 90 series

(according to ISO 9906 Attachment A)



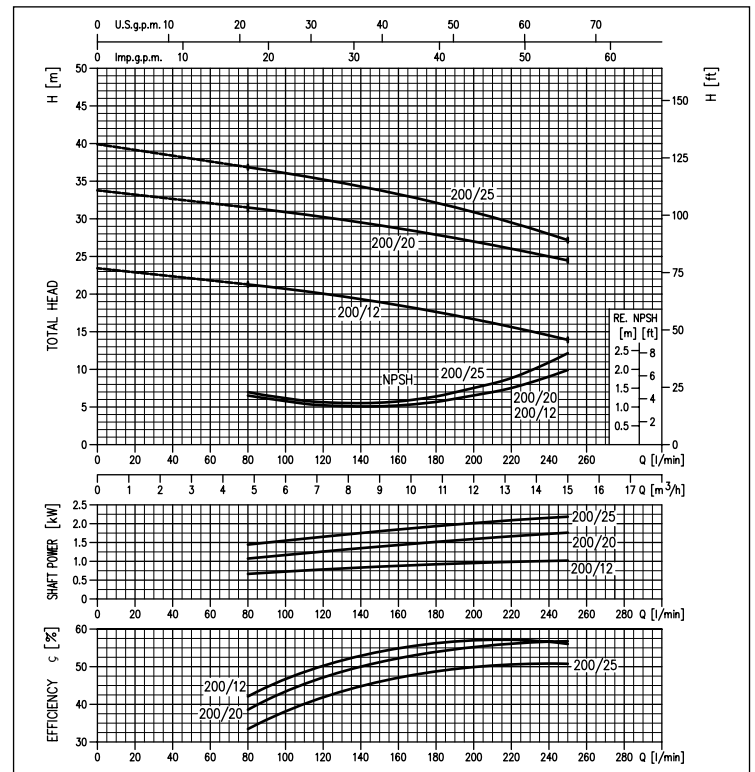
### PERFORMANCE CURVES CDX(L) 120 series

(according to ISO 9906 Attachment A)



### PERFORMANCE CURVES CDX(L) 200 series

(according to ISO 9906 Attachment A)



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# CDX(L)

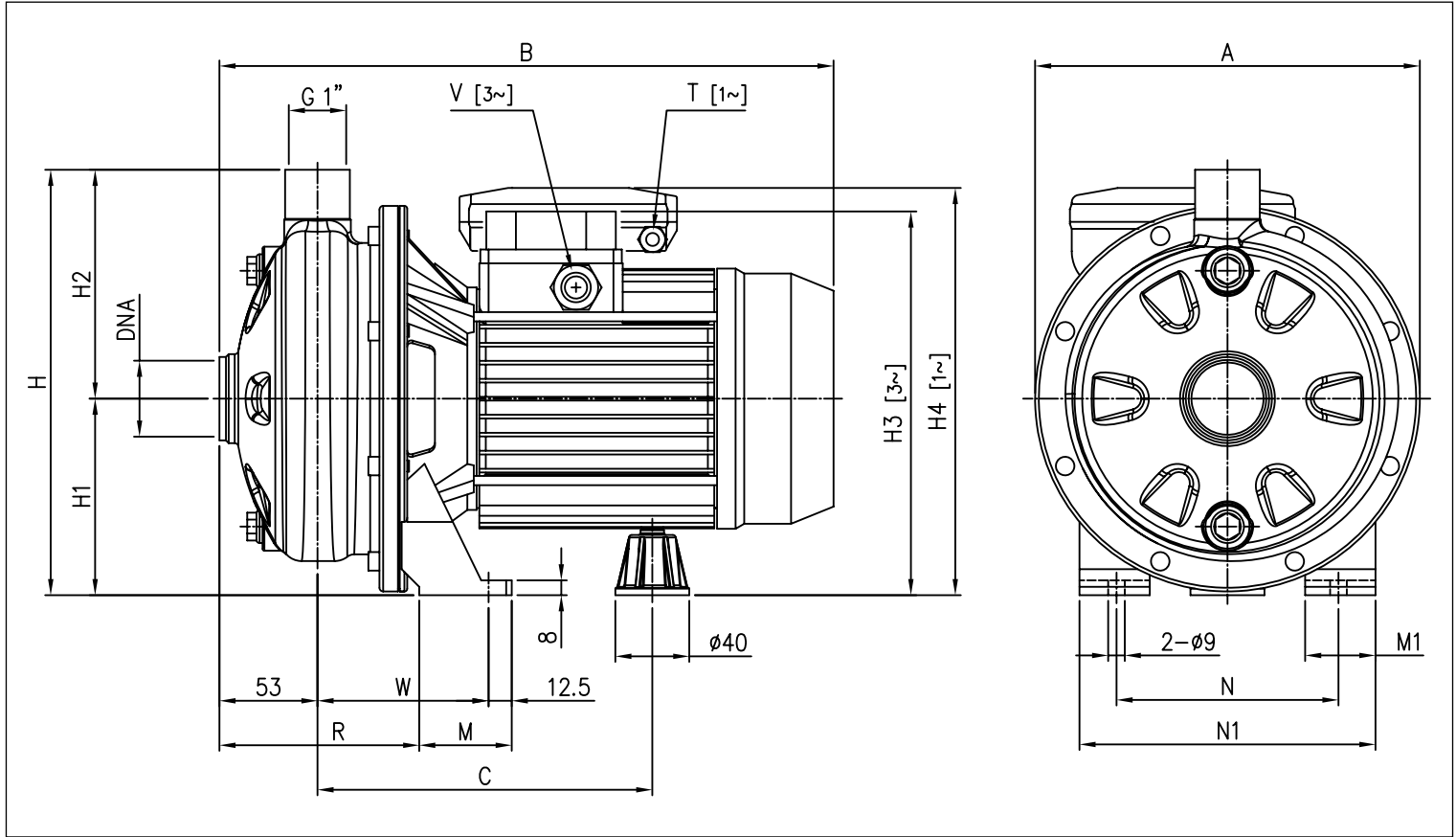
## SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

### PERFORMANCE CHART

Model		P <sub>e</sub>		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 <sup>3</sup> /h	1.2	3	4.8	5.4	6.6	7.8	9.6	10.8	12.6	15.0	
				H=Head [m]											
CDXM 70/05	CDX 70/05	0.5	0.37	20.7	18.4	15.9	15.0	-	-	-	-	-	-	-	
CDXM 70/07	CDX 70/07	0.75	0.55	28.0	24.5	20.5	-	-	-	-	-	-	-	-	
CDXM 90/10	CDX 90/10	1	0.75	30.3	27.2	23.6	22.3	19.5	-	-	-	-	-	-	
CDXM 120/07	CDX 120/07	0.75	0.55	-	20.5	18.7	18.1	16.8	15.5	13.7	12.5	-	-	-	
CDXM 120/12	CDX 120/12	1.2	0.9	-	29.3	27.5	26.8	25.2	23.6	21.0	-	-	-	-	
CDXM 120/20	CDX 120/20	2	1.5	-	37.5	35.3	34.6	33.1	31.4	28.6	-	-	-	-	
CDXM 200/12	CDX 200/12	1.2	0.9	-	-	21.3	21.0	20.4	19.7	18.5	17.6	16.0	14.0	-	
CDXM 200/20	CDX 200/20	2	1.5	-	-	31.5	31.2	30.6	30.0	28.7	27.9	26.5	24.5	-	
-	CDX 200/25	2.5	1.8	-	-	36.8	26.5	35.6	34.7	33.3	32.0	30.0	27.2	-	

### DIMENSIONS



### DIMENSIONAL TABLE

Model	A		B		C	H	H1	H2	H3	Dimensions [mm]		N	N1	R	T	V	W	DNA	Weight [kg]				
	[2]	[1]	[2]	[1]						M	M1								[2]	[1]	[2]	[1]	*
CDX(M) 70/05	208	321	320	-	181	229.5	106	123.5	207	216	50	38	120	160	108	PG11	PG11	-	92.5	G1 1/4	8.3	8.3	-
CDX(M) 70/07	208	321	320	-	181	229.5	106	123.5	207	216	50	38	120	160	108	PG11	PG11	-	92.5	G1 1/4	9.8	9.7	-
CDX(M) 90/10	208	321	320	320	181	229.5	106	123.5	207	216	50	38	120	160	108	PG11	PG11	M16x1.5	92.5	G1 1/4	11.0	11.0	11.0
CDX(M) 120/07	208	321	320	-	181	229.5	106	123.5	207	216	50	38	120	160	108	PG11	PG11	-	92.5	G1 1/4	9.6	9.5	-
CDX(M) 120/12	208	321	332	332	181	229.5	106	123.5	207	235	50	38	120	160	108	PG11	PG11	M16x1.5	92.5	G1 1/4	11.8	12.4	12.4
CDX(M) 120/20	232	346.5	359	371.5	198.5	250	118	132	237	248.5	55	40	140	180	105.5	PG13.5	PG11	M20x1.5	95	G1 1/4	16.5	17.2	18.1
CDX(M) 200/12	208	321	332	332	181	229.5	106	123.5	207	235	50	38	120	160	108	PG13.5	PG11	M16x1.5	92.5	G1 1/2	11.4	12.2	12.2
CDX(M) 200/20	208	346.5	359	371.5	198.5	229.5	106	123.5	225	236.5	55	40	140	180	105.5	PG13.5	PG11	M20x1.5	95	G1 1/2	15.3	16.1	17
CDX 200/25	232	-	359	371.5	198.5	250	118	132	237	-	55	40	140	180	105.5	-	PG11	M20x1.5	95	G1 1/2	-	15.9	16.8

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

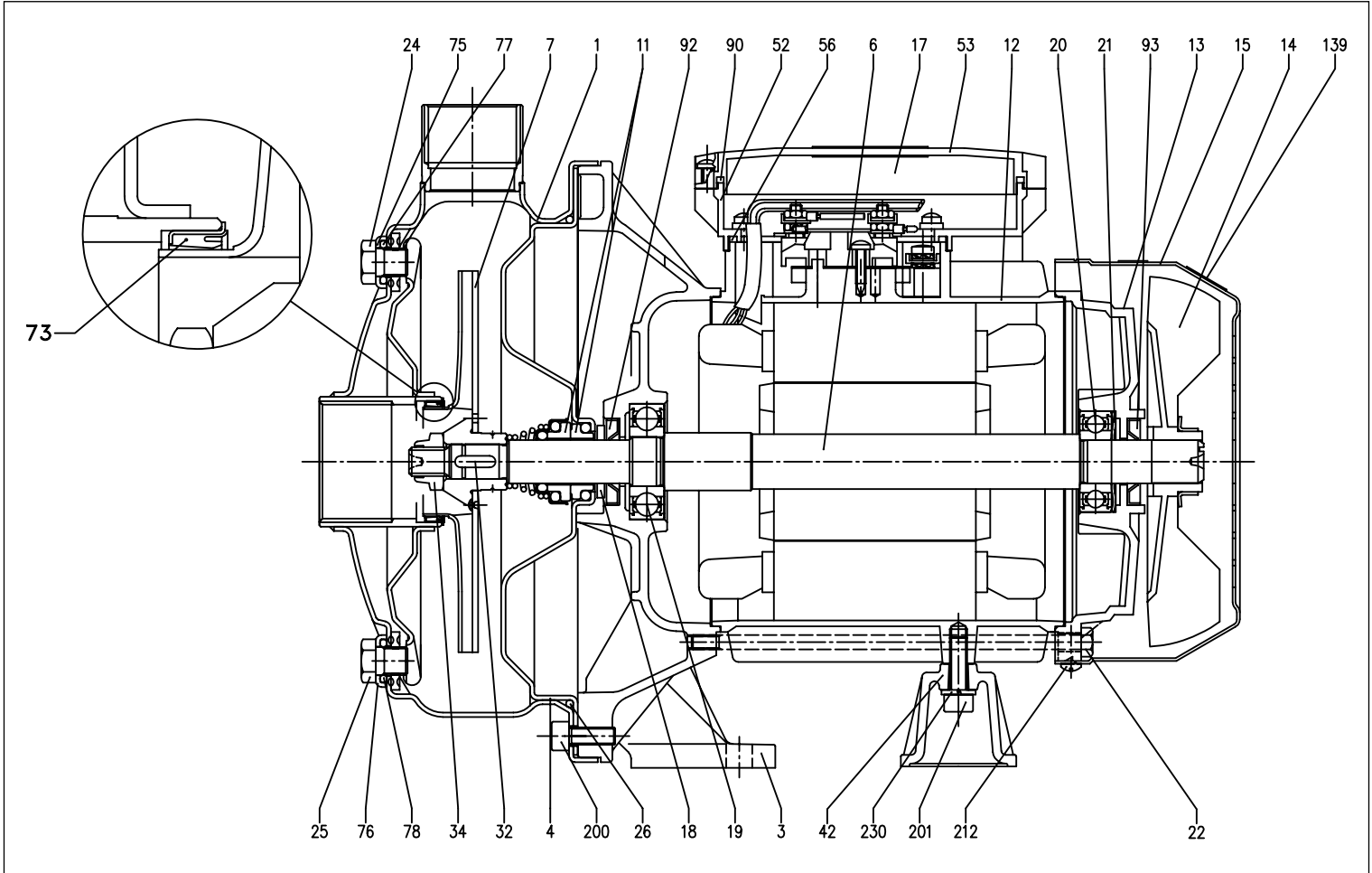
\* Models with IE3 motor only

# CDX(L)

## SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

### SECTIONAL VIEW CDX(L) 70/05 - 70/07 - 90/10



### MATERIALS TABLE

Ref.	Name	Materials	Ref.	Name	Materials
1	Pump casing	EN 1.4301 (AISI 304) / AISI 316	25	Plug	AISI 303 / AISI 316
3	Motor bracket	Aluminium	26	O-Ring [3]	NBR
4	Casing cover	EN 1.4301 (AISI 304) / AISI 316	32	Key	AISI 316
6	Shaft	AISI 303 / AISI 316 Part in contact with the liquid	34	Impeller nut	EN 1.4301 (AISI 304) / AISI 316
7	Impeller	EN 1.4301 (AISI 304) / AISI 316	42	Motor support	Aluminium
11	Mechanical seal [3]	Ceramic/Carbon/NBR	52	Terminal Box [2]	ABS
12	Motor frame	-	53	Terminal Box cover [2]	ABS
13	Motor cover	Aluminium	56	Terminal box cover gasket	NBR
14	Fan	PA	73	Casing ring [4]	EN 1.4301 (AISI 304)
15	Fan cover	Galvanised Fe P04	75	Washer	EN 1.4301 (AISI 304) / AISI 316
16	Terminal Box	-	76	Washer	EN 1.4301 (AISI 304) / AISI 316
17	Terminal Box cover [1]	Aluminium	77	O-Ring [3]	NBR
18	Splash ring	NBR	78	O-Ring [3]	NBR
19	Bearing (pump side)	-	90	Gasket [2]	NBR
20	Bearing (motor side)	-	92	Seal ring	-
21	Adjustment ring	Steel C70	93	Seal ring	-
22	Tie-rod	Galvanised Fe 42	110	Motor protector [2]	-
23	Capacitor [2]	-	200	Screw (pump body)	Stainless Steel A2 UNI7323
24	Plug	AISI 303 / AISI 316			

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

[3]= FKM for CDX(L)H, CDX(L)HS, CDX(L)HW, CDX(L)HSW

EPDM for CDX(L)E, CDX(L)Q1AEGG, CDX(L)VAEGG, CDX(L)U3U3EGG, CDX(L)Q1U3EGG, CDX(L)U3CEGG

[4]= FKM for CDX(L)H, CDX(L)HS, CDX(L)HW, CDX(L)HSW

NBR for CDX(L)E, CDX(L)Q1AEGG, CDX(L)VAEGG, CDX(L)U3U3EGG, CDX(L)Q1U3EGG, CDX(L)U3CEGG

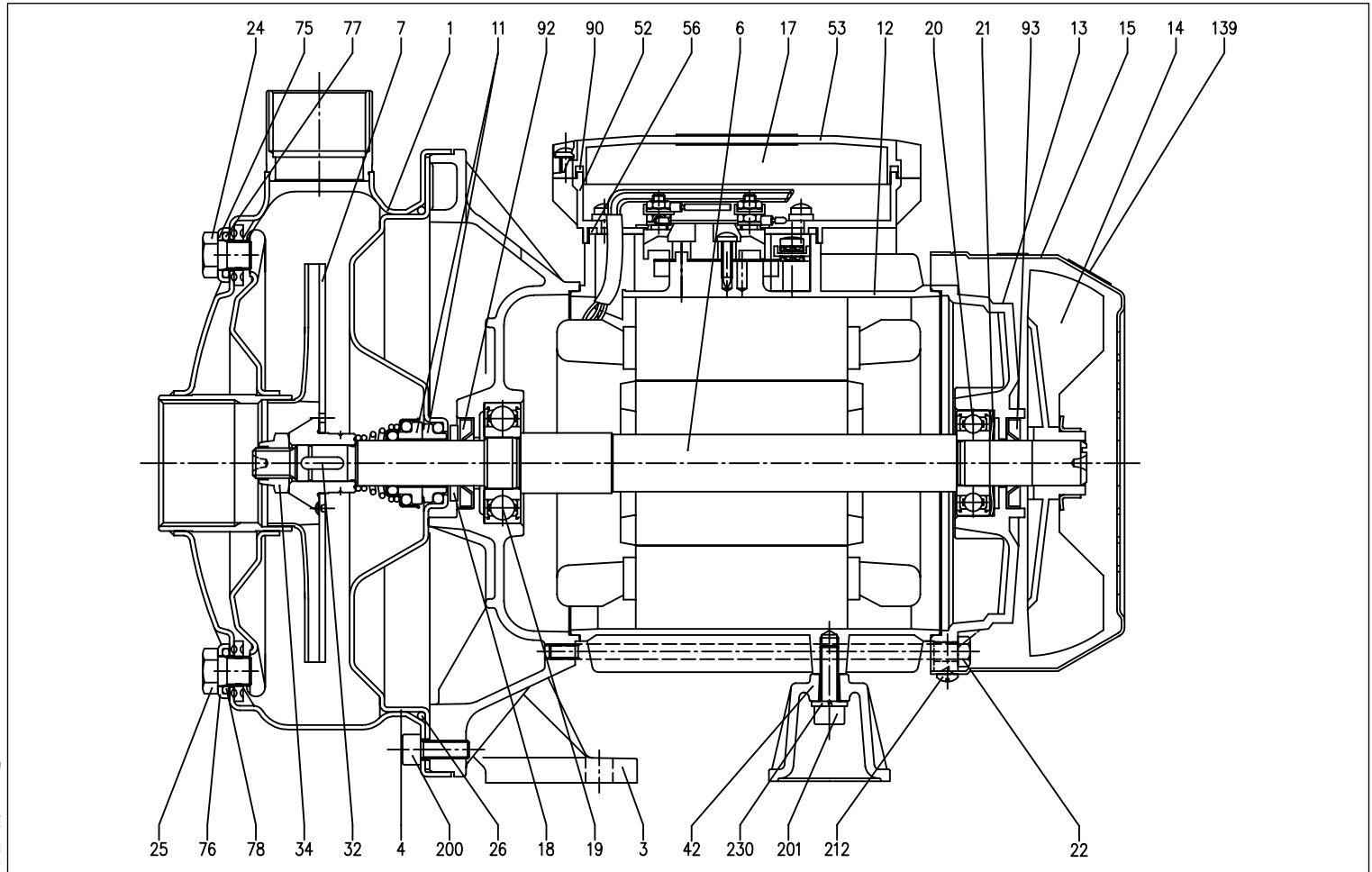
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# CDX(L)

## SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

### SECTIONAL VIEW CDX(L) 120/07 - 120/20



### MATERIALS TABLE

Ref.	Name	Materials	Ref.	Name	Materials
1	Pump casing	EN 1.4301 (AISI 304) / AISI 316	25	Plug	AISI 303 / AISI 316
3	Motor bracket	Aluminium	26	O-Ring [3]	NBR
4	Casing cover	EN 1.4301 (AISI 304) / AISI 316	32	Key	AISI 316
6	Shaft	AISI 303 / AISI 316 Part in contact with the liquid	34	Impeller nut	EN 1.4301 (AISI 304) / AISI 316
7	Impeller	EN 1.4301 (AISI 304) / AISI 316	42	Motor support	Aluminium
11	Mechanical seal [3]	Ceramic/Carbon/NBR	52	Terminal Box [2]	ABS
12	Motor frame	-	53	Terminal Box cover [2]	ABS
13	Motor cover	Aluminium	56	Terminal box cover gasket	NBR
14	Fan	PA	73	Casing ring	-
15	Fan cover	Galvanised Fe P04	75	Washer	EN 1.4301 (AISI 304) / AISI 316
16	Terminal Box	-	76	Washer	EN 1.4301 (AISI 304) / AISI 316
17	Terminal Box cover [1]	Aluminium	77	O-Ring [3]	NBR
18	Splash ring	NBR	78	O-Ring [3]	NBR
19	Bearing (pump side)	-	90	Gasket [2]	NBR
20	Bearing (motor side)	-	92	Seal ring	-
21	Adjustment ring	Steel C70	93	Seal ring	-
22	Tie-rod	Galvanised Fe 42	110	Motor protector [2]	-
23	Capacitor [2]	-	200	Screw (pump body)	Stainless Steel A2 UNI7323
24	Plug	AISI 303 / AISI 316			

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

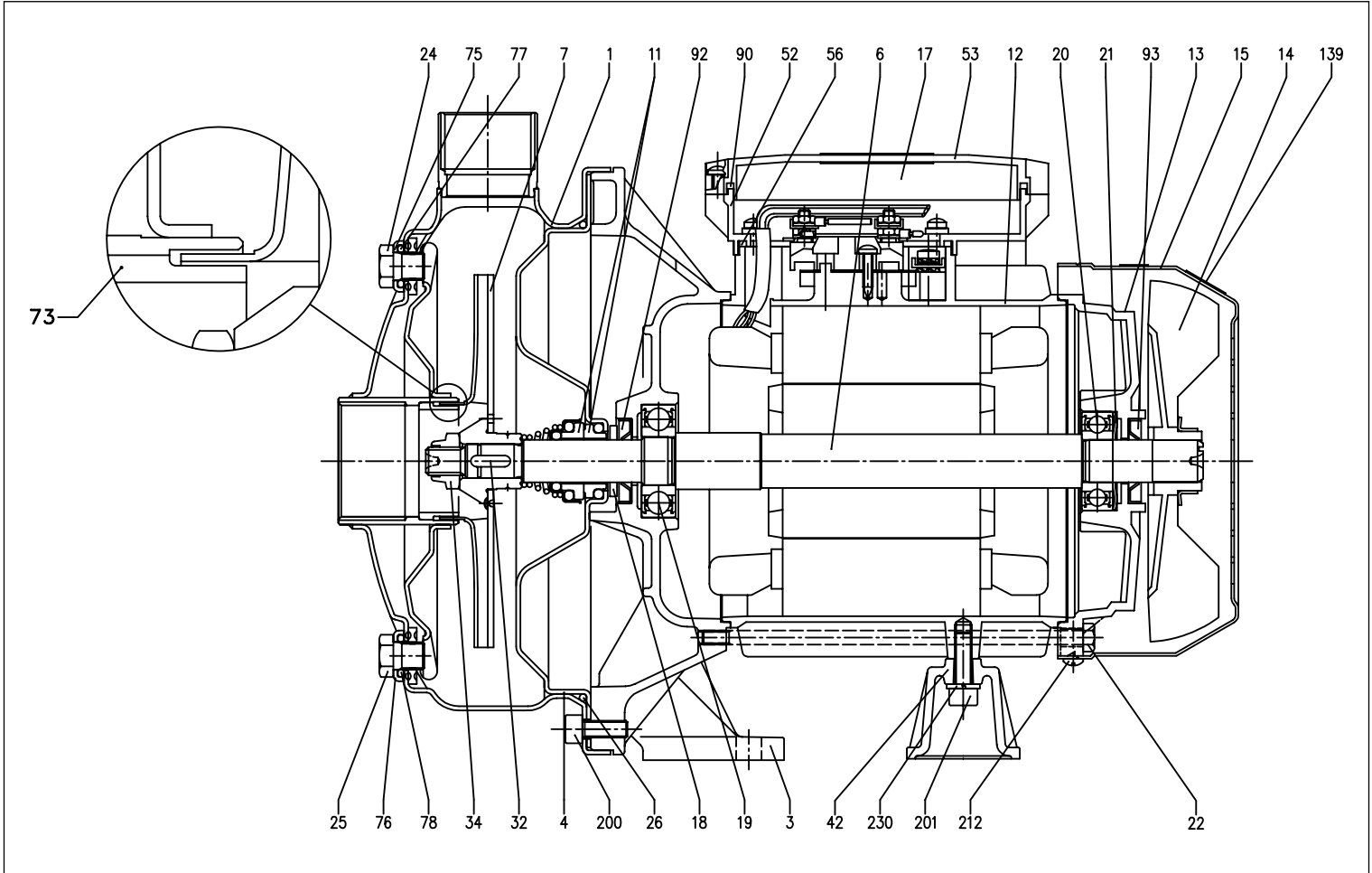
[3]= FKM for CDX(L)H, CDX(L)HS, CDX(L)HW, CDX(L)HSW

EPDM for CDX(L)E, CDX(L) Q1AEGG, CDX(L) VAEGG, CDX(L) U3U3EGG, CDX(L) Q1U3EGG, CDX(L) U3CEGG

## SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

### SECTIONAL VIEW CDX(L) 120/12 - 200/12 - 200/20 - 200/25



### MATERIALS TABLE

Ref.	Name	Materials	Ref.	Name	Materials
1	Pump casing	EN 1.4301 (AISI 304) / AISI 316	25	Plug	AISI 303 / AISI 316
3	Motor bracket	Aluminium	26	O-Ring [3]	NBR
4	Casing cover	EN 1.4301 (AISI 304) / AISI 316	32	Key	AISI 316
6	Shaft	AISI 303 / AISI 316 Part in contact with the liquid	34	Impeller nut	EN 1.4301 (AISI 304) / AISI 316
7	Impeller	EN 1.4301 (AISI 304) / AISI 316	42	Motor support	Aluminium
11	Mechanical seal [3]	Ceramic/Carbon/NBR	52	Terminal Box [2]	ABS
12	Motor frame	-	53	Terminal Box cover [2]	ABS
13	Motor cover	Aluminium	56	Terminal box cover gasket	NBR
14	Fan	PA	73	Double casing ring	EN 1.4301 (AISI 304) / AISI 316
15	Fan cover	Galvanised Fe P04	75	Washer	EN 1.4301 (AISI 304) / AISI 316
16	Terminal Box	-	76	Washer	EN 1.4301 (AISI 304) / AISI 316
17	Terminal Box cover [1]	Aluminium	77	O-Ring [3]	NBR
18	Splash ring	NBR	78	O-Ring [3]	NBR
19	Bearing (pump side)	-	90	Gasket [2]	NBR
20	Bearing (motor side)	-	92	Seal ring	-
21	Adjustment ring	Steel C70	93	Seal ring	-
22	Tie-rod	Galvanised Fe 42	110	Motor protector [2]	-
23	Capacitor [2]	-	200	Screw (pump body)	Stainless Steel A2 UNI7323
24	Plug	AISI 303 / AISI 316			

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

[3]= FKM for CDX(L)H, CDX(L)HS, CDX(L)HW, CDX(L)HSW

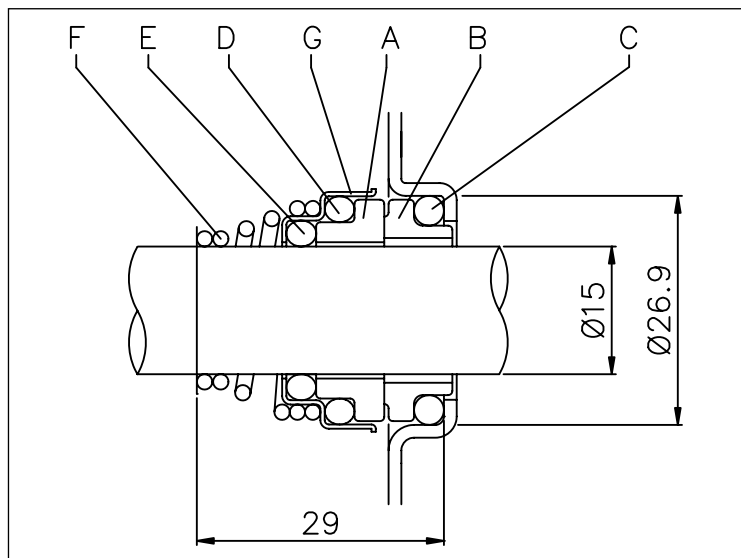
EPDM for CDX(L)E, CDX(L) Q1AEGG, CDX(L) VAEGG, CDX(L) U3U3EGG, CDX(L) Q1U3EGG, CDX(L) U3CEGG



## SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

### 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
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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## SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

### ELECTRIC DATA TABLE

Single phase 230V	Model Three phase 230/400V	P <sub>2</sub>		Efficiency		Capacitor Single phase		Efficiency (%) Three phase			P <sub>1</sub>		Absorbed Current [A]		
		[HP]	[kW]	Single phase	Three phase	μF	V.	50%	η % 75%	100%	Single phase [kW]	Three phase [kW]	Single phase 230V	Three phase 230V	400V
CDXM 70/05	CDX 70/05	0.5	0.37	-	-	12.5	450	-	-	-	0.75	0.68	3.4	2.4	1.4
CDXM 70/07	CDX 70/07	0.75	0.55	-	-	16	450	-	-	-	1.1	1.0	5.0	3.5	2.0
CDXM 90/10	CDX 90/10	1	0.75	-	IE2	20	450	77.2	80.9	81.3	1.2	1.05	5.6	3.3	1.9
-		1	0.75	-	IE3	-	-	80.9	82.3	82.1	-	0.91	-	3.0	1.7
CDXM 120/07	CDX 120/07	0.75	0.55	-	-	16	450	-	-	-	1.0	1.0	4.6	3.2	1.85
CDXM 120/12	CDX 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
-		1.2	0.9	-	IE3	-	-	81.7	83.1	82.4	-	1.34	-	4.3	2.5
CDXM 120/20	CDX 120/20	2	1.5	-	IE2	40	450	80.3	83.4	83.8	2.1	2.09	9.3	7.0	4.0
-		2	1.5	-	IE3	-	-	84.2	86.8	86.9	-	2.01	-	7.1	4.1
CDXM 200/12	CDX 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
-		1.2	0.9	-	IE3	-	-	81.7	83.1	82.4	-	1.34	-	4.3	2.5
CDXM 200/20	CDX 200/20	2	1.5	-	IE2	40	450	80.3	83.4	83.8	2.3	2.22	10.2	7.4	4.3
-		2	1.5	-	IE3	-	-	84.2	86.8	86.9	-	2.01	-	7.1	4.1
-	CDX 200/25	2.5	1.8	-	IE2	-	-	83.0	84.4	83.8	-	2.87	-	8.7	5.0
-		2.5	1.8	-	IE3	-	-	86.2	87.0	86.0	-	2.55	-	8.2	4.7

### NOISE DATA TABLE

Single phase 230V	Model Three phase 230/400V	P <sub>2</sub>		L <sub>pa</sub> - dB(A)*
		[HP]	[kW]	
CDXM 70/05	CDX 70/05	0.5	0.37	61
CDXM 70/07	CDX 70/07	0.75	0.55	62
CDXM 90/10	CDX 90/10	1	0.75	62
CDXM 120/07	CDX 120/07	0.75	0.55	62
CDXM 120/12	CDX 120/12	1.2	0.9	64
CDXM 120/20	CDX 120/20	2	1.5	64
CDXM 200/12	CDX 200/12	1.2	0.9	62
CDXM 200/20	CDX 200/20	2	1.5	64
-	CDX 200/25	2.5	1.8	65

\* 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

DYSTRYBUTOR  
Valmark Sp. z o.o.  
tel: (22) 868 58 58  
mail: biuro@valmark.pl