

CDX (L)

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and in AISI 316



Single impeller centrifugal electric pumps with hydraulic parts in AISI 304 and AISI 316 stainless steel.

APPLICATIONS

- Domestic pressure boosting
- Small-scale garden irrigation
- Washing
- Treating water
- Cooling towers
- Moving 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) 70/05-70/07-90/10
 - 5°C ÷ +90°C for the rest of CDX range
 - 5°C ÷ +110°C in the H-HS-HW-HSW-E version
 - 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.ebaraurope.com

MOTOR TECHNICAL DATA

- High efficiency IE2 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, diffuser and casing cover in AISI 304
 - Shaft in AISI 303 (part in contact with the liquid)
- AISI 316 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)
 - 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)

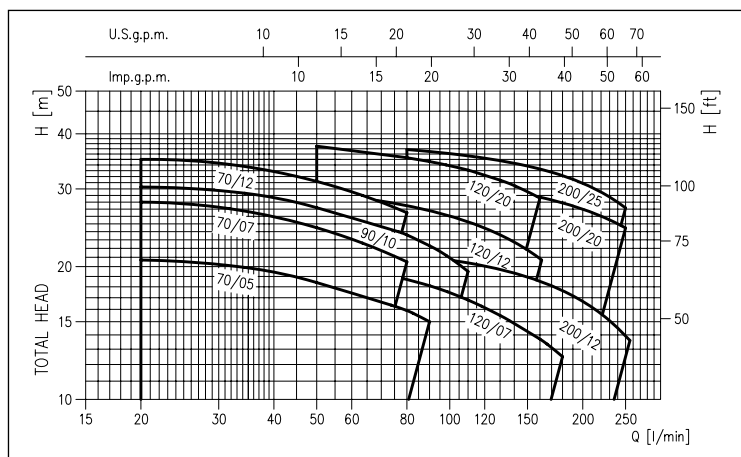
CONTROL PANELS

- 1EPBH

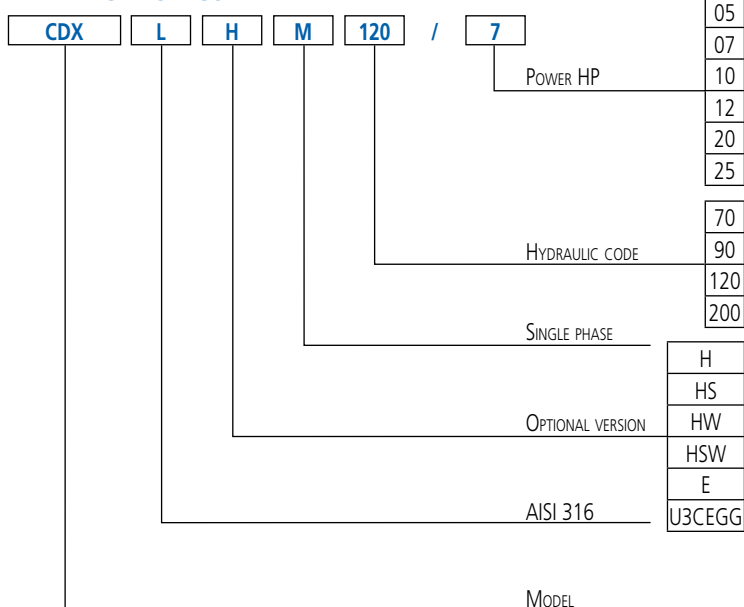
ACCESSORIES (On request)

- 5 litres 10 bar ¾" EPDM vessel
- 24 litres 8 bar 1" EPDM vessel
- 24 litres 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

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



IDENTIFICATION CODE

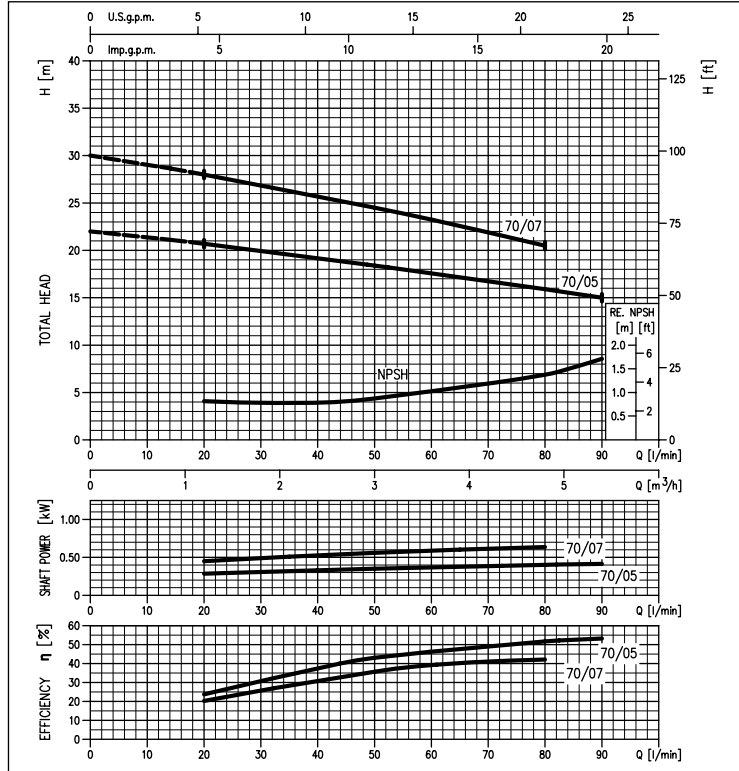


SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and in AISI 316

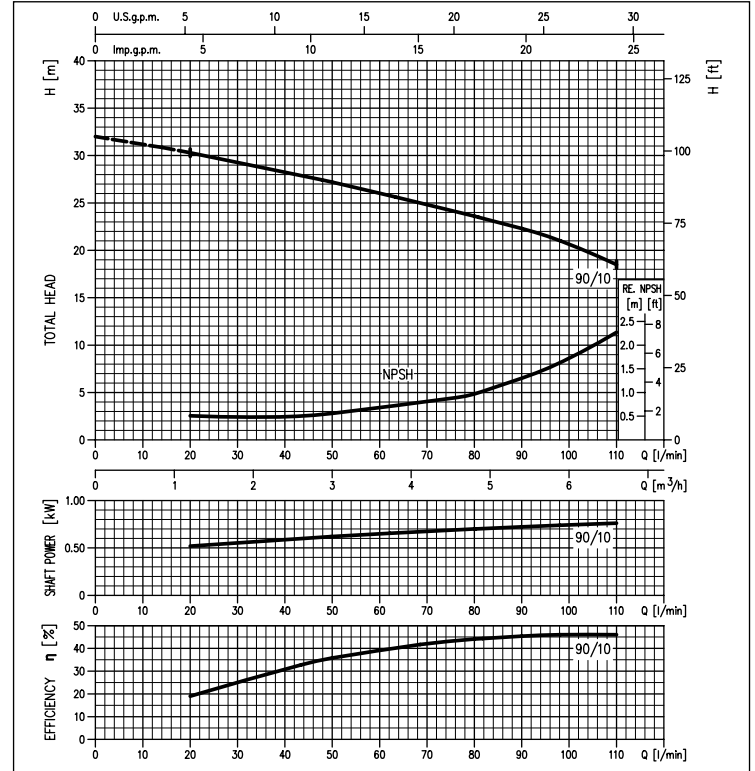
PERFORMANCE CURVES CDX 70 series

(according to ISO 9906 Attachment A)



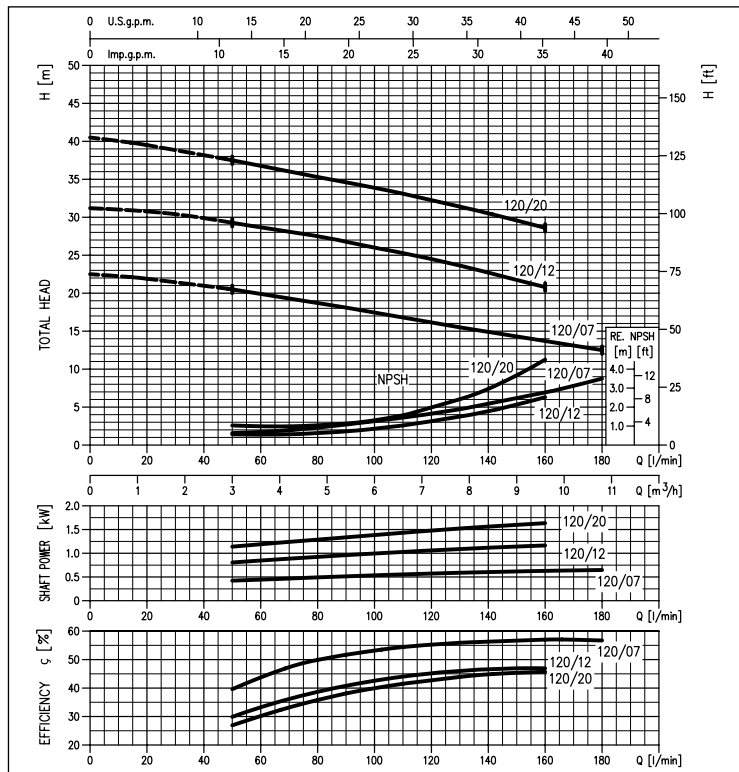
PERFORMANCE CURVES CDX 90 series

(according to ISO 9906 Attachment A)



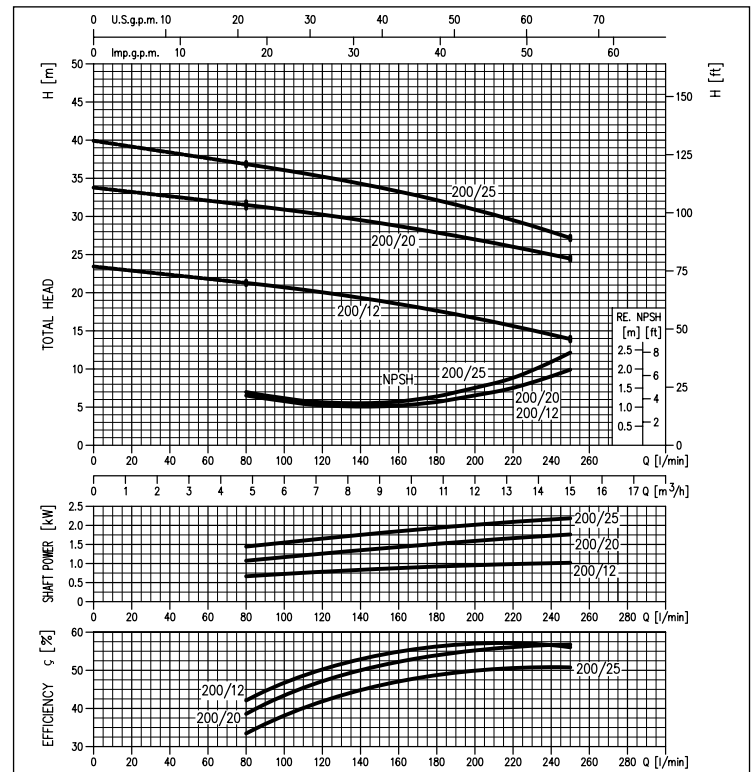
PERFORMANCE CURVES CDX 120 series

(according to ISO 9906 Attachment A)



PERFORMANCE CURVES CDX 200 series

(according to ISO 9906 Attachment A)



CDX (L)

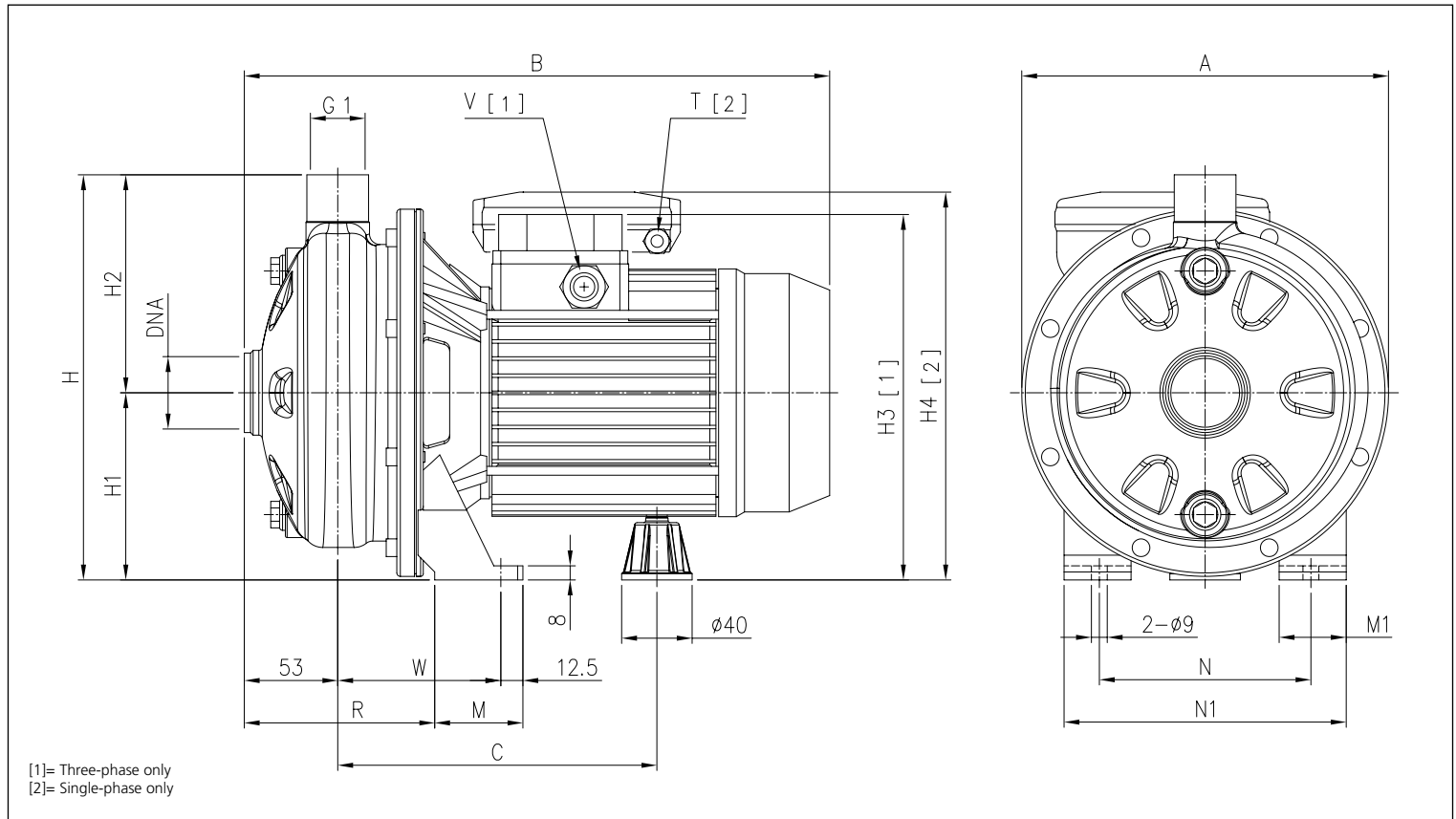
SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and in AISI 316

PERFORMANCE TABLE

Model		P ₁		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 ³ /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	-	-	-	-	-	16	-
CDXM 70/07	CDX 70/07	0,8	0,55	28	24,5	20,5	-	-	-	-	-	-	26,5	-
CDXM 90/10	CDX 90/10	1	0,75	30,3	27,2	23,6	22,3	19,5	-	-	-	-	30	-
CDXM 120/07	CDX 120/07	0,8	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	-	-	-	-
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	20,4	19,7	18,5	17,6	14,6	14	-
CDXM 200/20	CDX 200/20	2	1,5	-	-	31,5	31,2	30,6	30	28,7	27,9	25,1	24,5	-
-	CDX 200/25	2,5	1,8	-	-	36,8	26,5	35,6	34,7	33,3	32	30,5	27,2	-

DIMENSIONS



DIMENSIONS TABLE

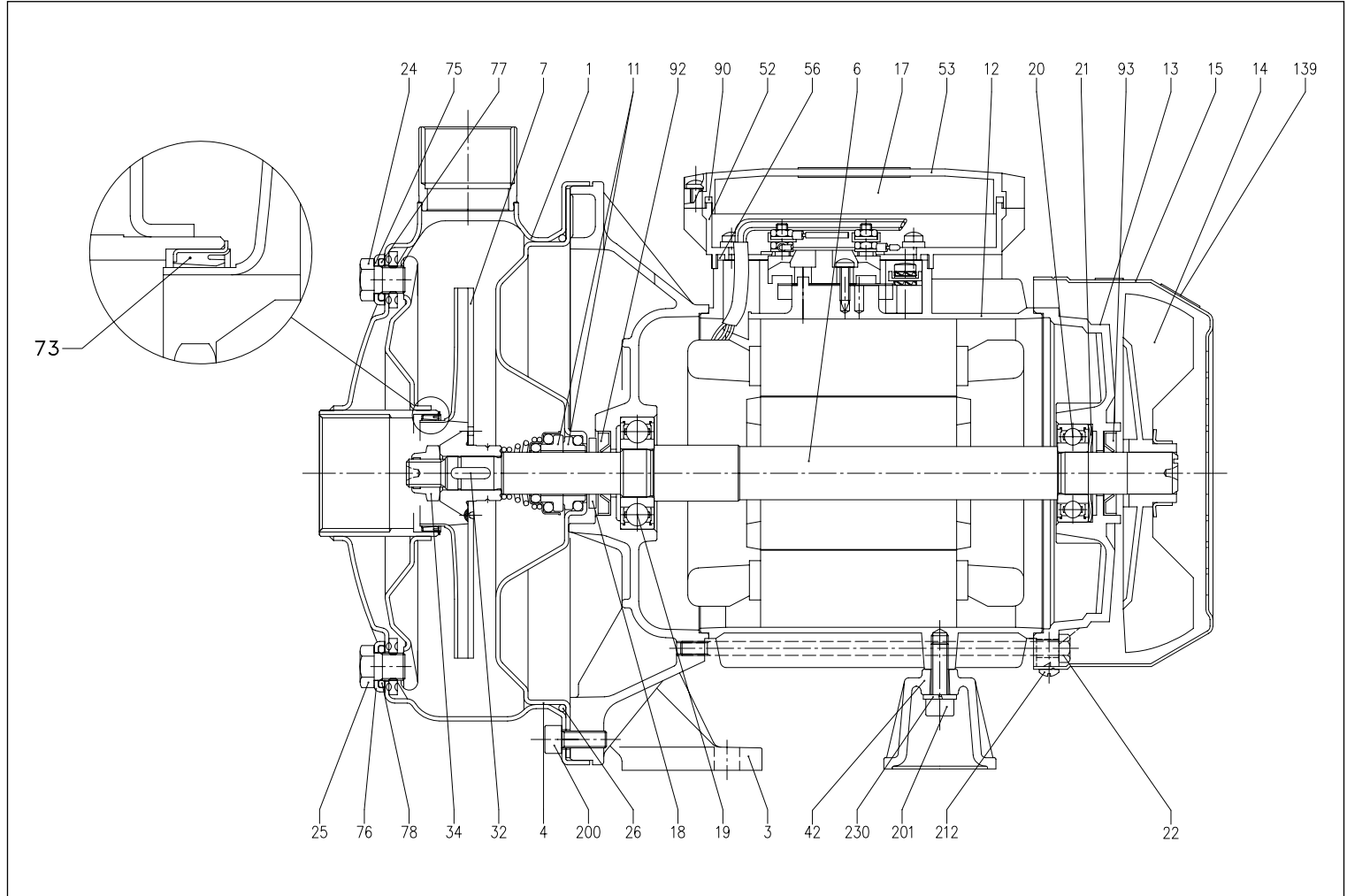
Model	Dimensions [mm]																Weight [kg]			
	A	B [2]	B [1]	C	H	H1	H2	H3 [1]	H4 [2]	M	M1	N	N1	R	T [2]	V [1]	W	DNA	[2]	[1]
CDX(M) 70/05	208	321	320	181	229,5	106	123,5	207	216	50	38	120	160	108	PG11	PG11	92,5	G1 ¼	8,3	8,3
CDX(M) 70/07	208	321	320	181	229,5	106	123,5	207	216	50	38	120	160	108	PG11	PG11	92,5	G1 ¼	9,8	9,7
CDX(M) 90/10	208	321	320	181	229,5	106	123,5	207	216	50	38	120	160	108	PG11	PG11	92,5	G1 ¼	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 ¼	9,6	9,5
CDX(M) 120/12	208	321	332	181	229,5	106	123,5	207	235	50	38	120	160	108	PG11	PG11	92,5	G1 ¼	11,8	12,4
CDX(M) 120/20	232	346,5	359	198,5	250	118	132	237	248,5	55	40	140	180	105,5	PG13,5	PG11	95	G1 ¼	16,5	17,2
CDX(M) 200/12	208	321	332	181	229,5	106	123,5	207	235	50	38	120	160	108	PG13,5	PG11	92,5	G1 ½	11,4	12,2
CDX(M) 200/20	208	346,5	359	198,5	229,5	106	123,5	225	236,5	55	40	140	180	105,5	PG13,5	PG11	95	G1 ½	15,3	16,1
CDX 200/25	232	-	359	198,5	250	118	132	237	-	55	40	140	180	105,5	-	PG11	95	G1 ½	-	15,9

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

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and in AISI 316

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



MATERIALS TABLE

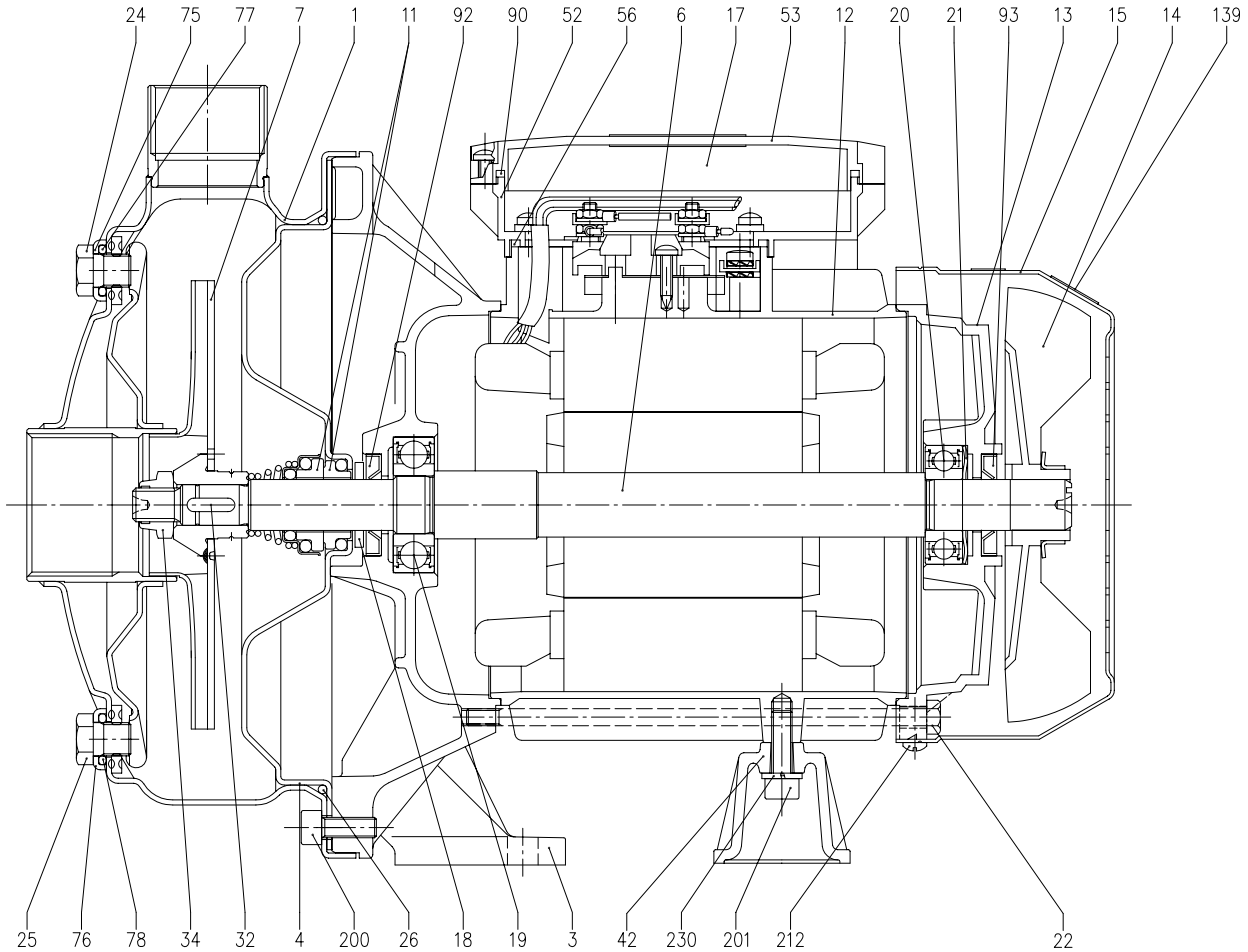
Ref.	Name	Material	Ref.	Name	Material
1	Casing	AISI 304 / AISI 316 [5]	25	Drain plug	AISI 303 / AISI 316 [5]
3	Motor bracket	Aluminium	26	O-ring [3]	NBR
4	Casing cover	AISI 304 / AISI 316 [5]	32	Key	AISI 316
6	Shaft with rotor	AISI 303 / AISI 316 (Wet extension)	34	Impeller nut	AISI 304 / AISI 316 [5]
7	Impeller	AISI 304 / AISI 316 [5]	42	Motor support	Aluminium
11	Mechanical seal [3]	Carbon/Ceramic/NBR	52	Terminal box [1]	ABS
12	Motor frame with stator	-	53	Terminal box cover [1]	ABS
13	Motor cover	Aluminium	56	Box gasket	NBR
14	Fan	PA	73	Casing ring [4]	NBR
15	Fan cover	Fe P04 Galvanized	75	Washer	AISI 304 / AISI 316 [5]
16	Terminal board	-	76	Washer	AISI 304 / AISI 316 [5]
17	Terminal box cover [2]	Aluminium	77	O-ring [3]	NBR
18	Splash ring	NBR	78	O-ring [3]	NBR
19	Pump side ball bearing	-	90	Terminal box cover gasket [1]	NBR
20	Fan side ball bearing	-	92	Lip seal	-
21	Adjusting ring	Steel C70	93	Lip seal	-
22	Tie rod	Fe 420 Galvanized	110	Protector [1]	-
23	Capacitor [1]	-	200	Screw	Stainless steel A2 UNI7323
24	Priming plug	AISI 303 / AISI 316 [5]			

[1] Only for single phase [2] Only for three phase
 [3] FPM for CDX H-HS-HW-HSW
 [4] NBR for CDX 70/05, 70/07, 90/10
 FPM for CDX H-HS-HW-HSW 70/05, 70/07, 90/10
 [5] Only for "L" version

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and in AISI 316

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



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Casing	AISI 304 / AISI 316 [5]	25	Drain plug	AISI 303 / AISI 316 [5]
3	Motor bracket	Aluminium	26	O-ring [3]	NBR
4	Casing cover	AISI 304 / AISI 316 [5]	32	Key	AISI 316
6	Shaft with rotor	AISI 303 / AISI 316(Wet extension)	34	Impeller nut	AISI 304 / AISI 316 [5]
7	Impeller	AISI 304 / AISI 316 [5]	42	Motor support	Aluminium
11	Mechanical seal [3]	Carbon/Ceramic/NBR	52	Terminal box [1]	ABS
12	Motor frame with stator	-	53	Terminal box cover [1]	ABS
13	Motor cover	Aluminium	56	Box gasket	NBR
14	Fan	PA	73	Casing ring	-
15	Fan cover	Fe P04 Galvanized	75	Washer	AISI 304 / AISI 316 [5]
16	Terminal board	-	76	Washer	AISI 304 / AISI 316 [5]
17	Terminal box cover [2]	Aluminium	77	O-ring [3]	NBR
18	Splash ring	NBR	78	O-ring [3]	NBR
19	Pump side ball bearing	-	90	Terminal box cover gasket [1]	NBR
20	Fan side ball bearing	-	92	Lip seal	-
21	Adjusting ring	Steel C70	93	Lip seal	-
22	Tie rod	Fe 420 Galvanized	110	Protector [1]	-
23	Capacitor [1]	-	200	Screw	Stainless steel A2 UNI7323
24	Priming plug	AISI 303 / AISI 316 [5]			

[1] Only for single phase [2] Only for three phase

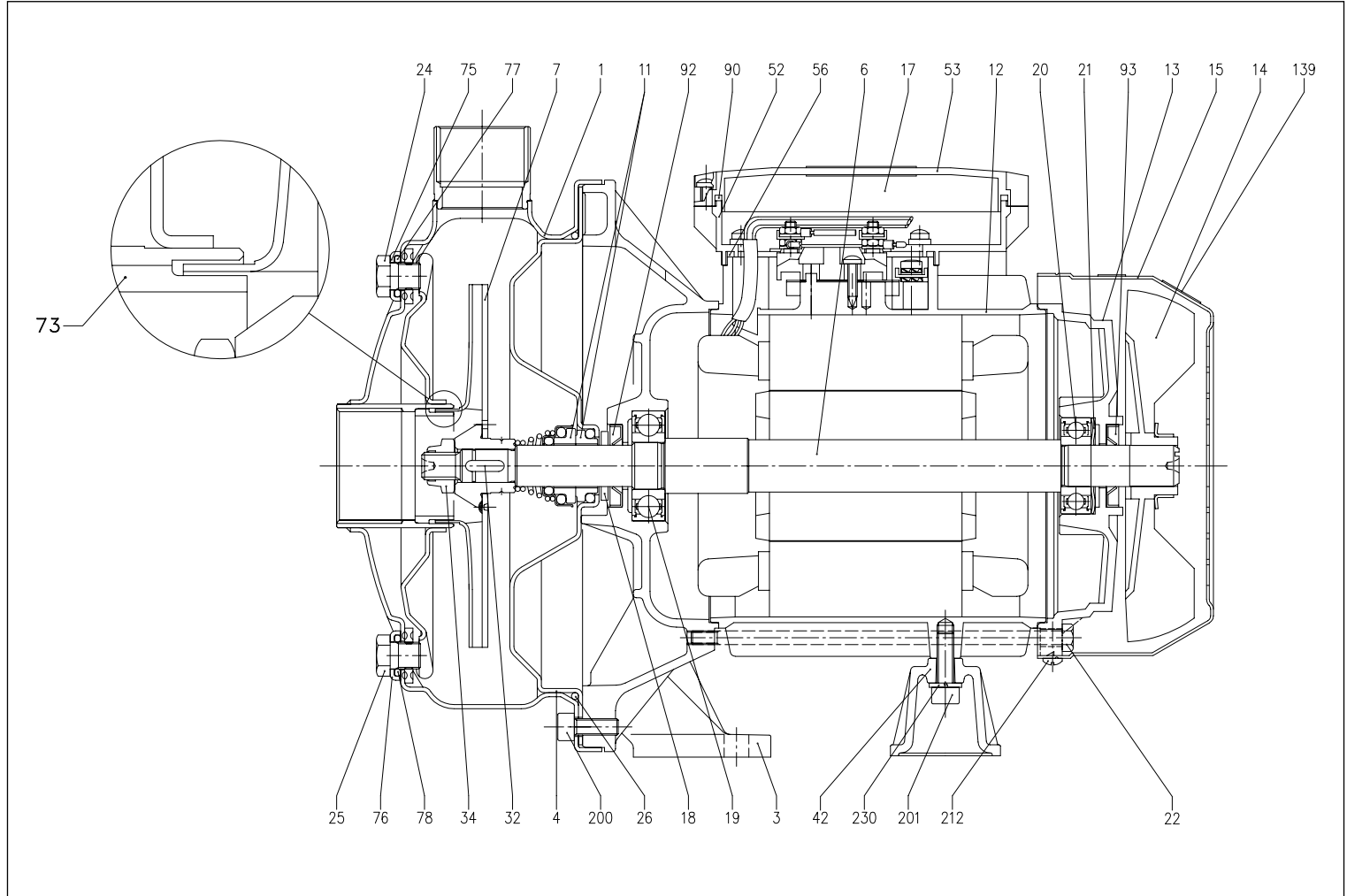
[3] FPM for CDX H-HS-HW-HSW

[5] Only for "L" version

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and in AISI 316

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



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Casing	AISI 304 / AISI 316 [5]	25	Drain plug	AISI 304 / AISI 316 [5]
3	Motor bracket	Aluminium	26	O-ring [3]	NBR
4	Casing cover	AISI 304 / AISI 316 [5]	32	Key	AISI 316
6	Shaft with rotor	AISI 303 / AISI 316 (Wet extension)	34	Impeller nut	AISI 304 / AISI 316 [5]
7	Impeller	AISI 304 / AISI 316 [5]	42	Motor support	Aluminium
11	Mechanical seal [3]	Carbon/Ceramic/NBR	52	Terminal box [1]	ABS
12	Motor frame with stator	-	53	Terminal box cover [1]	ABS
13	Motor cover	Aluminium	56	Box gasket	NBR
14	Fan	PA	73	Double ring	AISI 304 / AISI 316 [5]
15	Fan cover	Fe P04 Galvanized	75	Washer	AISI 304 / AISI 316 [5]
16	Terminal board	-	76	Washer	AISI 304 / AISI 316 [5]
17	Terminal box cover [2]	Aluminium	77	O-ring [3]	NBR
18	Splash ring	NBR	78	O-ring [3]	NBR
19	Pump side ball bearing	-	90	Terminal box cover gasket [1]	NBR
20	Fan side ball bearing	-	92	Lip seal	-
21	Adjusting ring	Steel C70	93	Lip seal	-
22	Tie rod	Fe 420 Galvanized	110	Protector [1]	-
23	Capacitor [1]	-	200	Screw	Stainless steel A2 UNI7323
24	Priming plug	AISI 303 / AISI 316 [5]			

[1] Only for single phase [2] Only for three phase

[3] FPM for CDX H-HS-HW-HSW

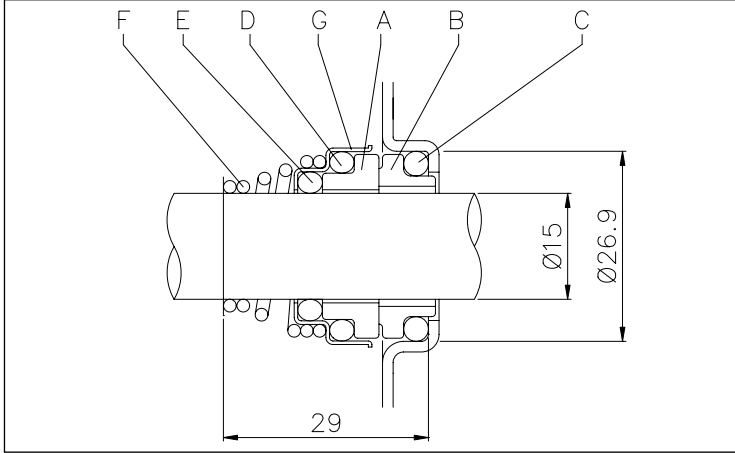
[5] Only for "L" version

CDX (L)

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and in AISI 316

MECHANICAL SEAL standard



MATERIALS TABLE

Ref.	Name	Material
A	Rotary seal ring	Ceramic
B	Stationary seal ring	Carbon graphite
C	O Ring	NBR
D	O Ring	NBR
E	O Ring	NBR
F	Self driving spring	AISI 316
G	Frame	AISI 304

SPECIAL MECHANICAL SEALS (on request)

Ref.	Name	Material					
		Version H	Version HS	Version HW	Version HSW	Version E	Version U3CEGG
A	Rotary seal ring	Ceramic	SiC	Tungsten carbide	SiC	Ceramic	Tungsten carbide
B	Stationary seal ring	Carbon graphite	SiC	Tungsten carbide	Tungsten carbide	Carbon graphite	Carbon graphite
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	Self driving spring	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316
G	Frame	AISI 304	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316

ELECTRIC DATA TABLE

Model	Single phase 230V	Three phase 230/400V	P ₂		Efficiency		Capacitor		Efficiency (%)			P ₁		Full load current [A]		
			[HP]	[kW]	Single phase	Three phase	Single phase	Three phase	50%	75%	100%	Single phase [kW]	Three phase [kW]	Single phase 230V	Three phase 230V	400V
			μF	V.	η %	η %	η %	[kW]	[kW]	230V	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	
CDXM 120/07	CDX 120/07	0,75	0,55	-	IE2	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	
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	
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	
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	
-	CDX 200/25	2,5	1,8	-	IE2	-	-	83,0	84,4	83,8	-	2,87	-	8,7	5,0	

NOISE DATA

Model	Single phase 230V	Three phase 230/400V	P ₂		L _{max} - 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	62	
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 measures at 1m distance around the pump.
Tolerance ± 2.5 dB.