



EBARA

CDX/2CDX
CENTRIFUGAL ELECTRIC PUMPS

60 Hz



SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and 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

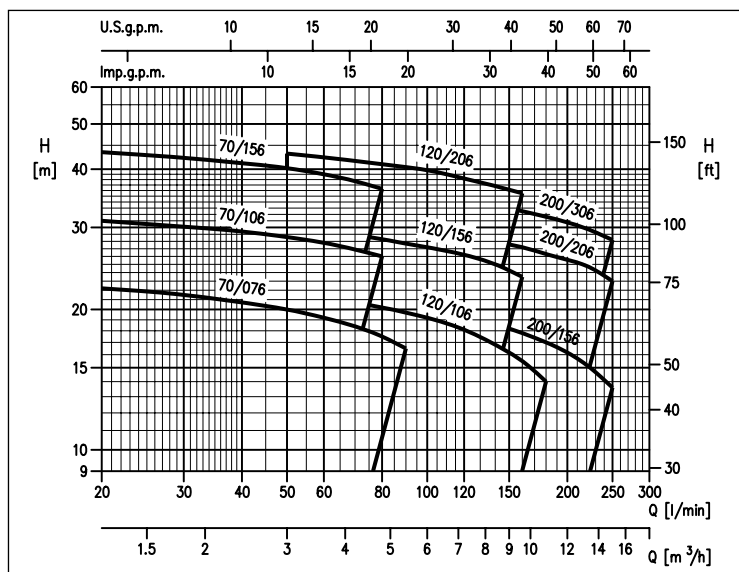
TECHNICAL DATA

- Maximum working pressure: 8 bar
- Maximum temperature of the liquid:
 - from -5°C to +60°C for CDX 70
 - from -5°C to +90°C for the rest of the range
- Self-ventilated 2 poles asynchronous motor
- Class of insulation F
- IP55 Protection rating
- 110-115V ±6%, 60Hz single-phase voltage
- 220-230V ±6%, 60Hz single-phase voltage
- 220/380-460V -6%+10%, 60Hz 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
- G1½ suction connection for CDX 200, G1¼ for the rest of the range
- G1 discharge connection

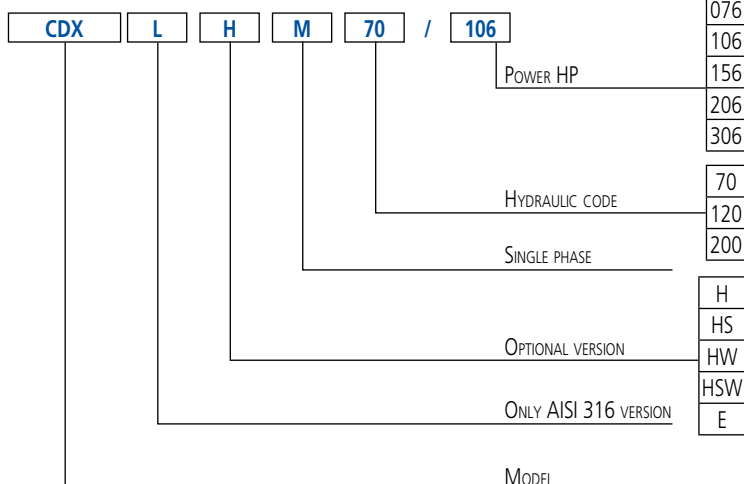
MATERIALS

- Casing, impeller, diffuser and casing cover in AISI 304 or AISI 316 for "L" version
- Shaft in AISI 303 or AISI 316 for "L" version
- Motor bracket and motor cover 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 - seal with reduced slide face)
 - SiC/Tungsten carbide/FPM (HSW version)
 - Ceramic/Graphite/EPDM (E version)

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



IDENTIFICATION CODE

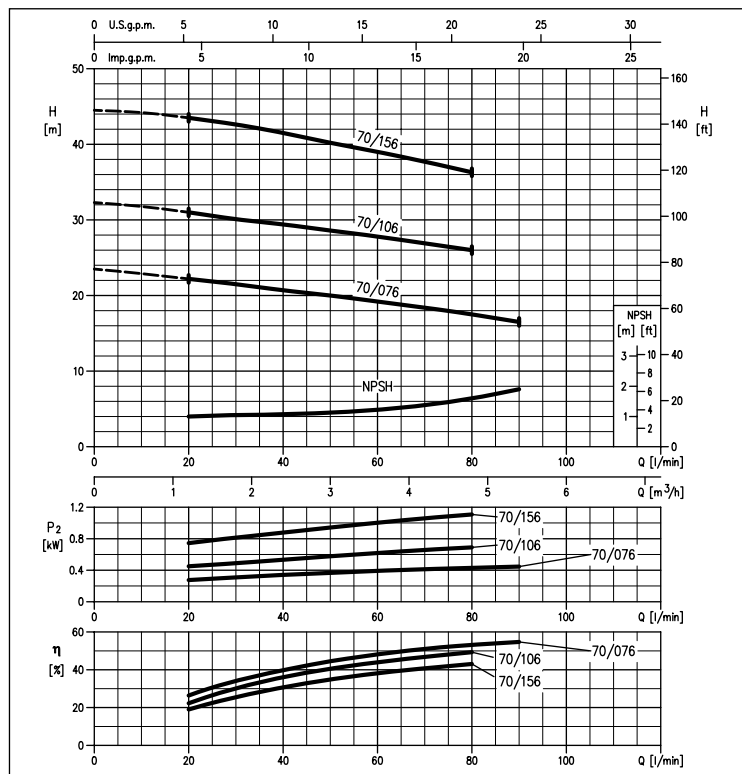


SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

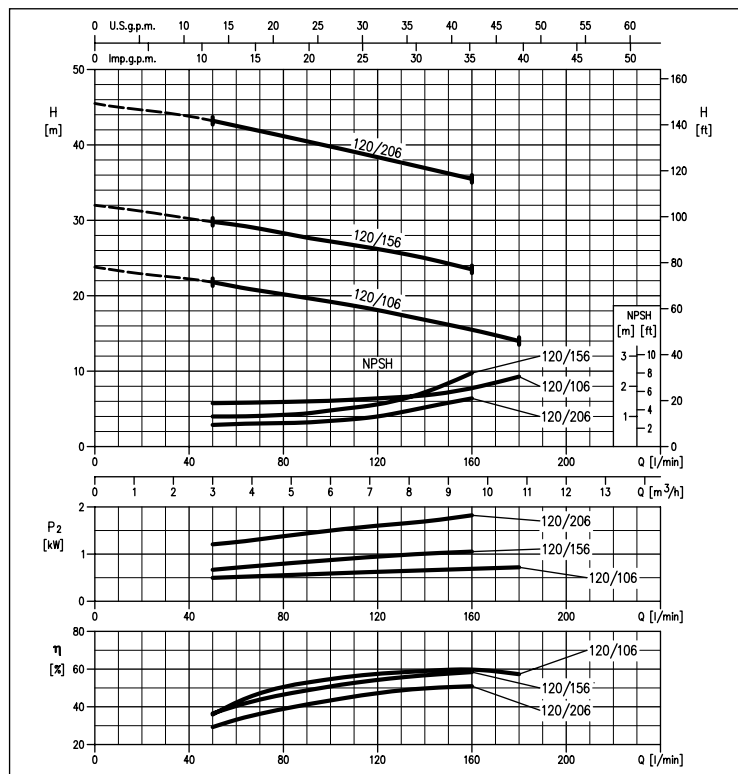
CDX 70 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



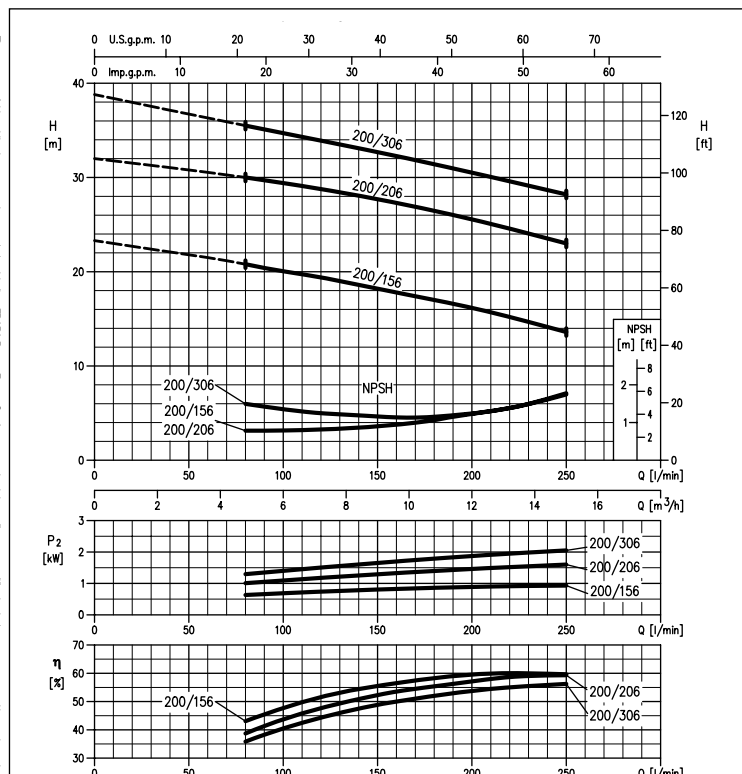
CDX 120 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



CDX 200 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



CDX(L)

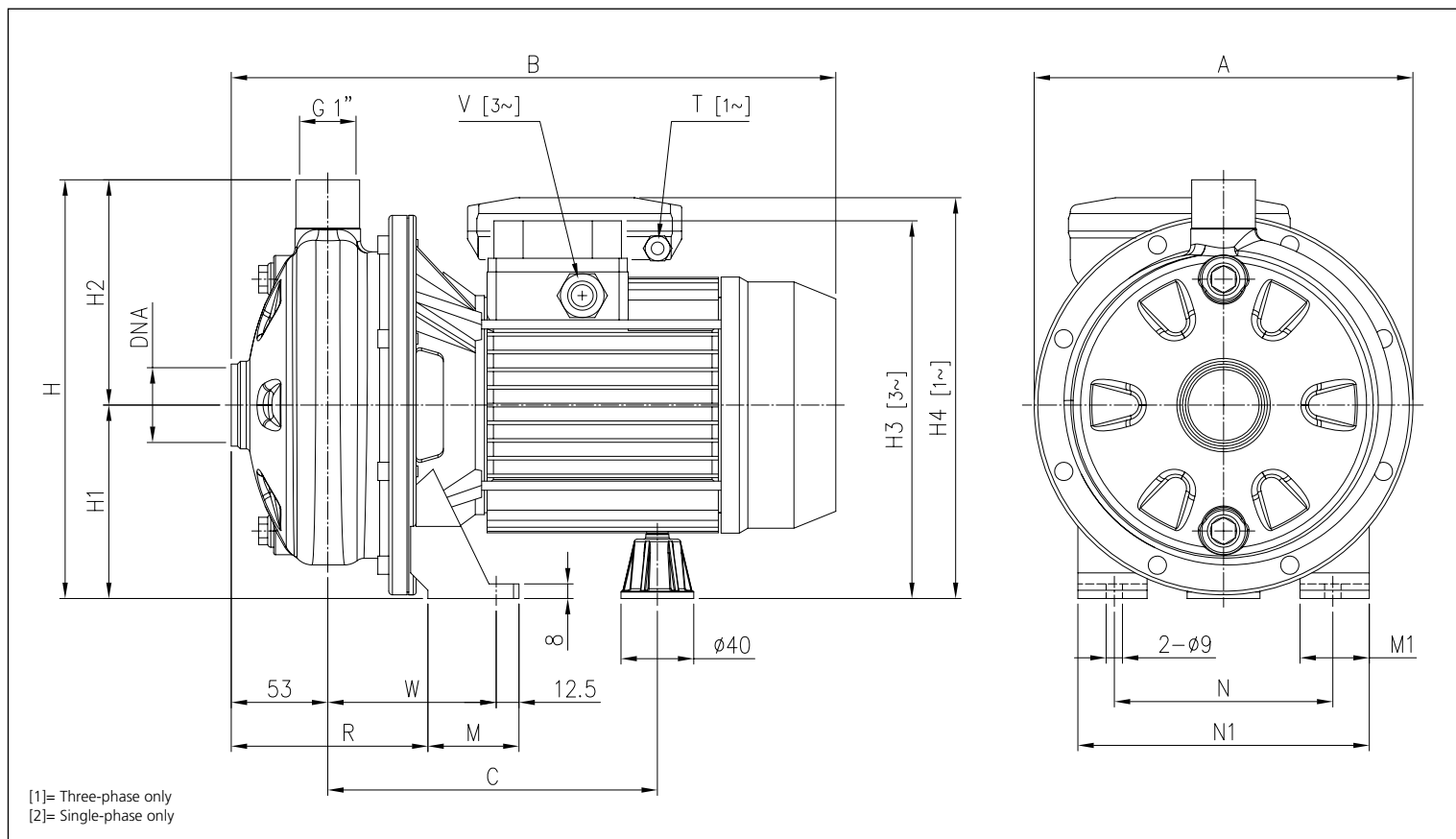
SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

PERFORMANCE TABLE

Model		P ₂		Q=Flow rate											
Single-phase 110-115/220-230V	Three-phase 220/380-460V	[HP]	[kW]	l/min	20	50	80	90	120	140	160	180	220	250	
				m³/h	1,2	3	4,8	5,4	7,2	8,4	9,6	10,8	13,2	15,0	
H=Head [m]															
CDXM 70/076	CDX 70/076	0,75	0,55	22,2	20,0	17,5	16,5	-	-	-	-	-	-	-	
CDXM 70/106	CDX 70/106	1	0,75	31,0	28,6	26,0	-	-	-	-	-	-	-	-	
CDXM 70/156	CDX 70/156	1,5	1,1	43,5	40,2	36,3	-	-	-	-	-	-	-	-	
CDXM 120/106	CDX 120/106	1	0,75	-	21,8	20,2	19,7	18,1	16,8	15,5	14,0	-	-	-	
CDXM 120/156	CDX 120/156	1,5	1,1	-	29,8	28,3	27,7	26,2	25,0	23,5	-	-	-	-	
CDXM 120/206	CDX 120/206	2	1,5	-	43,2	41,0	40,4	38,2	36,8	35,5	-	-	-	-	
CDXM 200/156	CDX 200/156	1,5	1,1	-	-	20,8	20,4	19,4	18,6	17,8	17,0	15,2	13,5	-	
CDXM 200/206	CDX 200/206	2	1,5	-	-	30,0	29,5	28,6	27,9	27,2	26,3	24,6	23,0	-	
-	CDX 200/306	3	2,2	-	-	35,5	35,1	34,0	33,3	32,5	31,6	29,8	28,3	-	

DIMENSIONS



DIMENSIONS TABLE

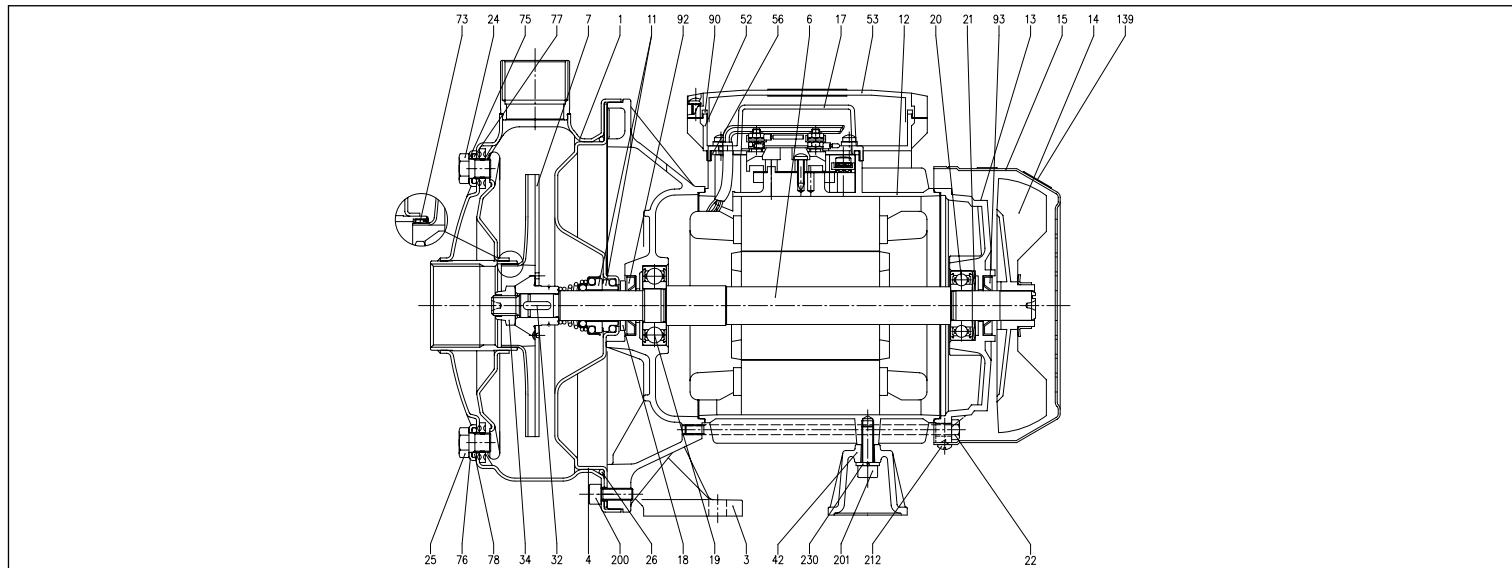
Model	Dimensions [mm]																		Weight [kg]	
	A	B [1]	B [2]	C	H	H1	H2	H3 [1]	H4 [2]	M	M1	N	N1	R	T [2]	V [1]	W	DNA	[2]	[1]
CDX(M) 70/076	208	320	321	181	229,5	106	123,5	207	216	50	38	120	160	108	PG11	PG11	92,5	G1 ?	8,5	8,4
CDX(M) 70/106	208	320	321	181	229,5	106	123,5	207	216	50	38	120	160	108	PG11	PG11	92,5	G1 ?	9,5	9,6
CDX(M) 70/156	208	332	321	181	229,5	106	123,5	207	216	50	38	120	160	108	PG11	PG11	92,5	G1 ?	11,7	12,5
CDX(M) 120/106	208	320	321	181	229,5	106	123,5	207	216	50	38	120	160	108	PG11	PG11	92,5	G1 ?	9,5	9,5
CDX(M) 120/156	208	332	321	181	229,5	106	123,5	207	216	50	38	120	160	108	PG11	PG11	92,5	G1 ?	11,7	12,4
CDX(M) 120/206	232	359	347	198,5	229,5	116	123,5	225	249	55	40	140	180	105,5	PG13,5	PG11	95	G1 ?	15,3	14,5
CDX(M) 200/156	208	320	321	181	229,5	106	123,5	207	216	50	38	120	160	108	PG11	PG11	92,5	G1 ?	11,0	10,7
CDX(M) 200/206	208	359	347	198,5	229,5	106	123,5	225	237	55	40	140	180	105,5	PG13,5	PG11	95	G1 ?	15,0	15,7
CDX 200/306	232	359	-	198,5	250	118	132	237	-	55	40	140	180	105,5	-	PG11	95	G1 ?	-	16,9

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

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Casing	AISI 304 / AISI 316 [8]	25	Drain plug	AISI 303 / AISI 316 [8]
3	Motor bracket	Aluminium	26	O-ring [3]	NBR
4	Casing cover	AISI 304 / AISI 316 [8]	32	Key	AISI 316
6	Shaft with rotor	AISI 303 / AISI 316 [8] (Wet extension)	34	Impeller nut	AISI 304 / AISI 316 [8]
7	Impeller	AISI 304 / AISI 316 [8]	42	Motor support	Aluminium
11	Mechanical seal [3] - [4]	Carbon/Ceramic/NBR	52	Terminal box [1]	ABS
12	Motor frame with stator	-	53	Terminal box cover [6]	ABS [6]
13	Motor cover	Aluminium	56	Box gasket	NBR
14	Fan	PA	73	Casing ring [5]	AISI 304 / AISI 316 [8]
15	Fan cover	Fe P04 Galvanized	75	Washer	AISI 304 / AISI 316 [8]
16	Terminal board	-	76	Washer	AISI 304 / AISI 316 [8]
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 [7]	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 [8]			

[1] Only for single phase [2] Only for three phase [3] FPM for CDX H-HS-HW-HSW [4] Special version, see page 301

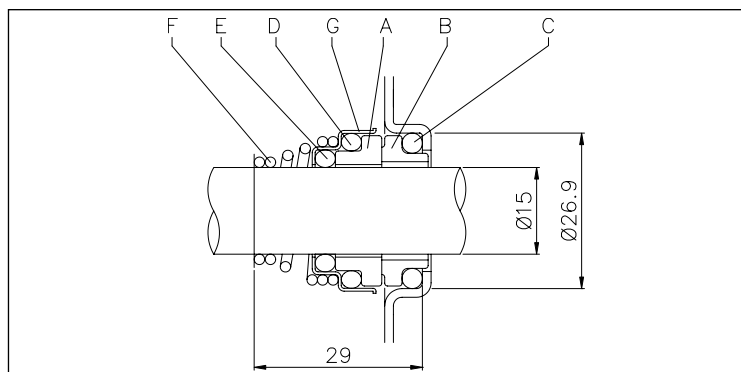
[5] NBR for CDX 70/076-70/106-70/156

FPM for CDX H-HS-HW-HSW of the CDX 70/076-70/106-70/156

[6] Whit gasket in NBR only for version single phase CDXM 70/076, 70/106, 70/156, 120/106, 120/156, 200/156

[7] Only for version single phase CDXM 120/206, 200/206 [8] Only for "L" version

MECHANICAL SEAL CDX standard



MATERIALS TABLE

Ref.	Name	Material
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

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

SPECIAL MECHANICAL SEALS (on request)

Name	H version	HS version	Material HW version	HSW version	E version
Fixed Part	Carbon	SiC	Tungsten Carbide	Tungsten Carbide	Carbon
Rotating Part	Ceramic	SiC	Tungsten Carbide	SiC	Ceramic
Elastomers	FPM	FPM	FPM	FPM	EPDM
Spring	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316
Structure/Frame	AISI 304	AISI 316	AISI 316	AISI 316	AISI 316

ELECTRIC DATA TABLE

Model		P ₂		Capacitor Single-phase				P ₁		Absorbed Current [A]				
Single-phase 110-115/220-230V	Three-phase 220/380-460V	[HP]	[kW]	110-115V μF	220-230V V _c	110-115V μF	220-230V V _c	Single-phase [kW]	Three-phase [kW]	Single-phase 110-115V	Single-phase 220-230V	220V	380V	460V
CDXM 70/076	CDX 70/076	0,75	0,55	45	250	12,5	450	0,7	0,74	7,5	3,4	2,0	1,2	1,2
CDXM 70/106	CDX 70/106	1	0,75	60	250	14	450	1,05	0,97	9,4	5,1	2,9	1,7	1,6
CDXM 70/156	CDX 70/156	1,5	1,1	-	-	25	450	1,56	1,5	-	7,5	3,8	2,2	2,2
CDXM 120/106	CDX 120/106	1	0,75	60	250	14	450	1,06	0,99	10,4	5,2	2,9	1,7	1,7
CDXM 120/156	CDX 120/156	1,5	1,1	-	-	25	450	1,5	1,5	-	7,2	3,8	2,2	2,2
CDXM 120/206	CDX 120/206	2	1,5	-	-	35	450	2,34	2,9	-	11,3	8,1	4,7	4,3
CDXM 200/156	CDX 200/156	1,5	1,1	-	-	20	450	1,35	1,	-	6,6	2,9	1,7	1,6
CDXM 200/206	CDX 200/206	2	1,5	-	-	35	450	2,06	2,9	-	10,0	8,1	4,7	4,3
-	CDX 200/306	3	2,2	-	-	-	-	-	2,9	-	-	8,1	4,7	4,3

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 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

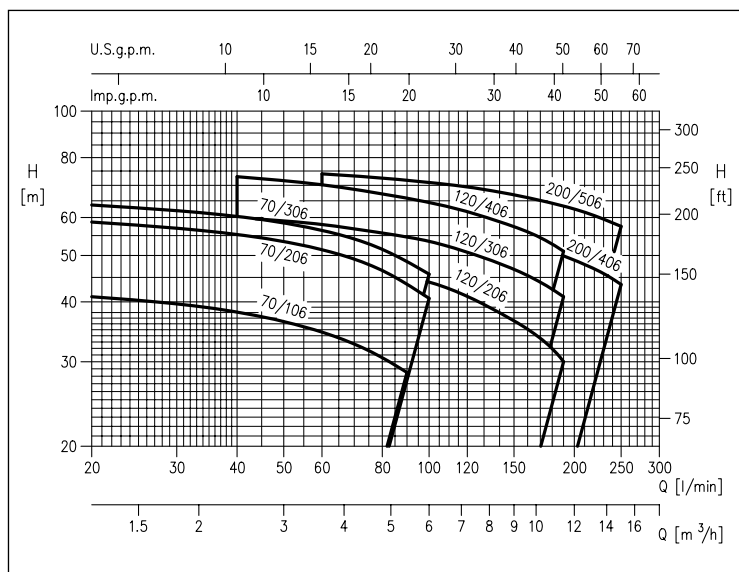
TECHNICAL DATA

- Maximum working pressure: 8 bar
- Maximum temperature of the liquid: from -5°C to +60°C from -5°C to +110° in the H-HS version
- Self-ventilated 2 pole asynchronous motor
- Class of insulation F
- IP55 Protection rating
- 220-230V ±6%, 60Hz single-phase voltage
- 220/380-460V -6%+10%, 60Hz 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
- G1½ suction connection for CDX 200, G1¼ for the rest of the range
- G1 discharge connection

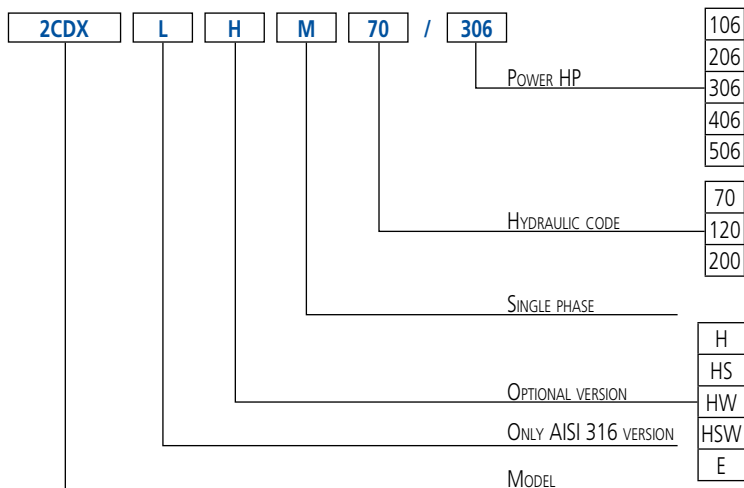
MATERIALS

- Casing, impeller, shaft, diffuser and casing cover in AISI 304 or AISI 316 for "L" version
- Motor bracket: in aluminium (up to 2,2 kW included), in cast iron (3 kW and above)
- Mechanical seal in:
 - Ceramic/Carbon/NBR (standard)
 - Ceramic/Carbon/FPM (H version)
 - SiC/SiC/FPM (HS version)
 - Tungsten carbide/Tungsten carbide/FPM (HW version - seal with reduced slide face)
 - SiC/Tungsten carbide/FPM (HSW version)
 - Ceramic/Graphite/EPDM (E version)

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



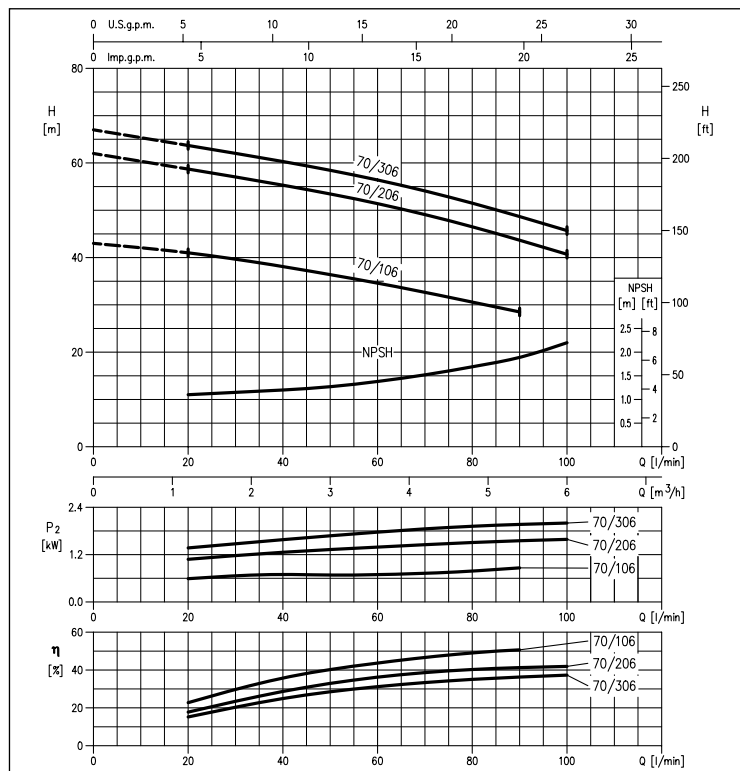
2CDX(L)

DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

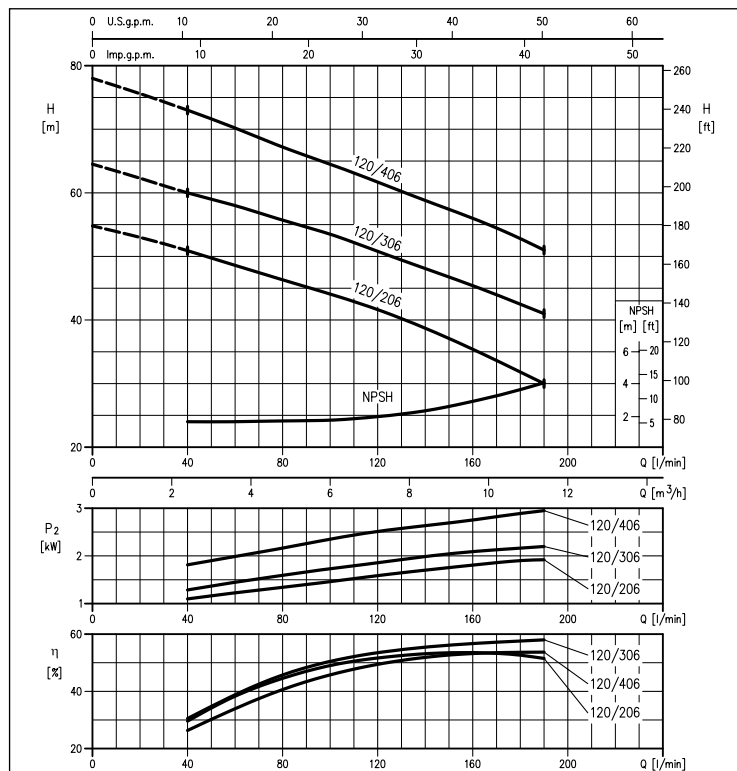
2CDX 70 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



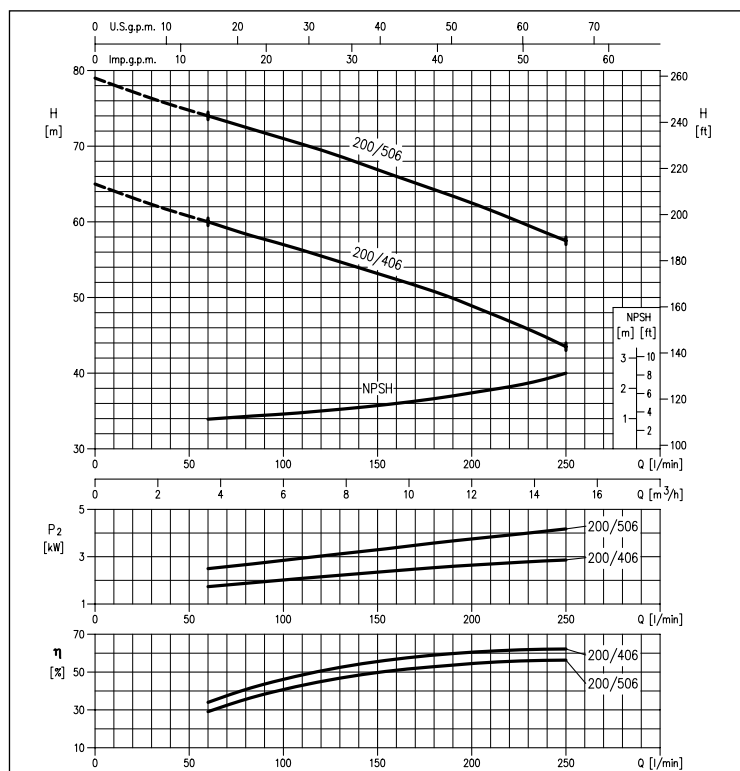
2CDX 120 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



2CDX 200 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



2CDX(L)

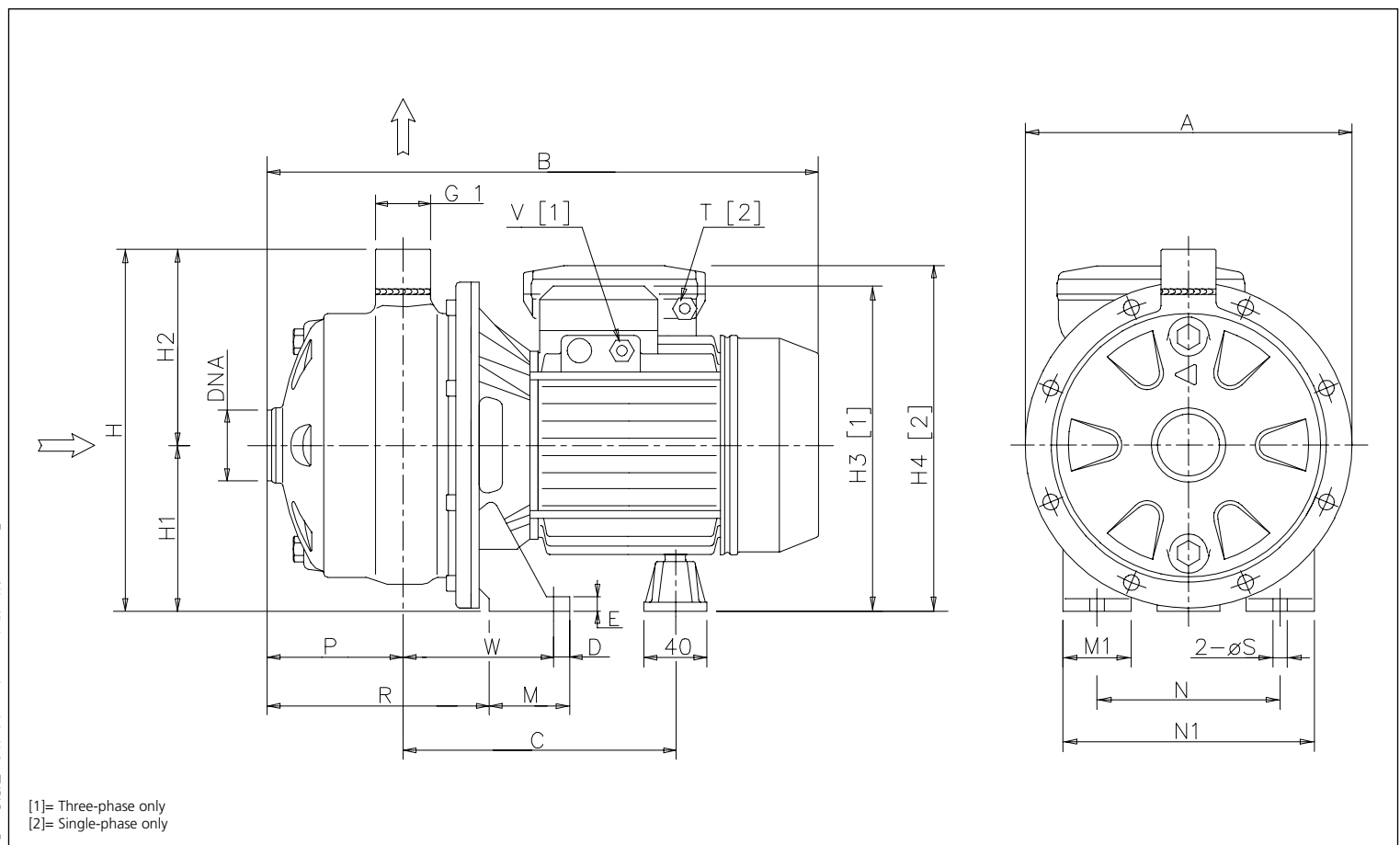
DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

PERFORMANCE TABLE

Model		P ₂		Q=Flow rate											
Single-phase 220-230V	Three-phase 220/380-460V	[HP]	[kW]	l/min	20	40	60	90	100	120	140	160	190	240	250
				m ³ /h	1,2	2,4	3,6	5,4	6	7,2	8,4	9,6	11,4	14,4	15
				H=Head [m]											
2CDXM 70/106	2CDX 70/106	1	0,75	41,0	38,1	34,6	28,5	-	-	-	-	-	-	-	-
2CDXM 70/206	2CDX 70/206	2	1,5	58,5	55,5	51,5	44,0	40,5	40,5	-	-	-	-	-	-
2CDXM 70/306	2CDX 70/306	3	2,2	63,5	60,5	56,5	49,0	45,5	45,5	-	-	-	-	-	-
-	2CDX 120/206	2	1,5	-	50,5	48,5	45,0	44,0	41,5	38,6	35,6	30,0	-	-	-
-	2CDX 120/306	3	2,2	-	60,0	58,0	54,5	53,5	51,0	48,5	45,5	41,0	-	-	-
-	2CDX 120/406	4	3	-	73,0	70,0	66,0	64,5	62,0	59,0	56,0	51,0	-	-	-
-	2CDX 200/406	4	3	-	-	60,0	58,0	57,0	55,5	54,0	52,5	50,0	45,0	43,5	-
-	2CDX 200/506	5,5	4	-	-	74,0	72,0	71,0	69,5	68,0	66,0	63,5	58,5	57,5	-

DIMENSIONS



DIMENSIONS TABLE

Model	A	B [1]	C [2]	D	E	H	H1	H2	H3 [1]	Dimensions [mm]										Weight [kg]				
										H4 [2]	M	M1	N	N1	P	R	S	T [2]	V [1]	W	DNA	[2]	[1]	
2CDX(M) 70/106	208	354	354	181	12,5	8	229	106	123	208	216	50	38	120	160	87	142	Ø9	PG 11	PG 11	93	G1?	12,6	12,0
2CDX(M) 70/206	208	380	393	199	12,5	8	229	106	123	225	242	55	40	140	180	87	140	Ø9	PG 13,5	PG 11	95	G1?	16,6	16,0
2CDX(M) 70/306	208	380	393	199	12,5	8	229	106	123	225	242	55	40	140	180	87	140	Ø9	PG 13,5	PG 11	95	G1?	16,9	16,0
2CDX 120/206	208	395	-	199	12,5	8	229	106	123	225	-	55	40	140	180	89	142	Ø9	-	PG 11	95	G1?	-	17,5
2CDX 120/306	208	395	-	199	12,5	8	229	106	123	225	-	55	40	140	180	89	142	Ø9	-	PG 11	95	G1?	-	20,1
2CDX 120/406	208	459	-	224/235	12,5	8	229	106	123	230	-	65	40	140	180	89	146	Ø9	-	PG 13,5	109	G1?	-	25,9
2CDX 200/406	208	457	-	224/235	12,5	8	229	106	123	230	-	65	40	140	180	87	144	Ø9	-	PG 13,5	109	G1?	-	25,7
2CDX 200/506	208	480	-	233	16,0	12	241	118	123	259	-	68	50	160	210	87	144	Ø12	-	PG16	109	G1?	-	35,7

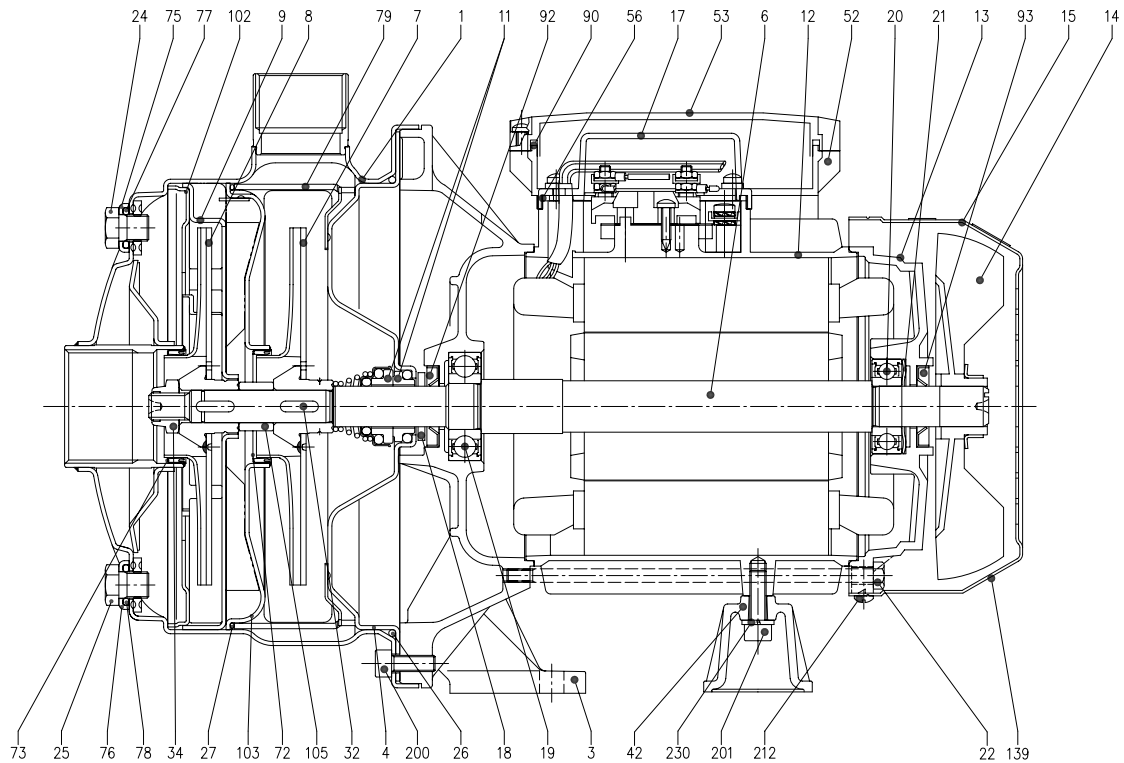
[1]= Three-phase only
[2]= Single-phase only

2CDX(L)

DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Casing	EN 1.4301 (AISI 304)	26	O-Ring [3]	NBR
3	Motor bracket	Aluminium (up to 2,2 kW included) Cast iron (from 3 kW and above)	27	O-Ring [3]	NBR
4	Casing cover	EN 1.4301 (AISI 304)	32	Key	AISI 316
6	Shaft	EN 1.4301 (AISI 304)	34	Impeller nut	EN 1.4301 (AISI 304)
7	Impeller	Part in contact with the liquid EN 1.4301 (AISI 304)	42	Motor support	Aluminium
8	Impeller	EN 1.4301 (AISI 304)	52	Terminal box [2]	ABS
9	Diffuser	EN 1.4301 (AISI 304)	53	Terminal box cover [2] [4]	ABS
11	Mechanical seal [3]	Carbon/Ceramic/NBR	56	Terminal box cover gasket	NBR
12	Motor frame with stator	-	72	Casing ring [3]	NBR
13	Motor cover	Aluminium	73	Casing ring [3]	NBR
14	Fan	PA	75	Washer	EN 1.4301 (AISI 304)
15	Fan cover	Galvanised Fe P04	76	Washer	EN 1.4301 (AISI 304)
16	Terminal box	-	77	O-Ring [3]	NBR
17	Terminal box cover [2]	Aluminium	78	O-Ring [3]	NBR
18	Splash ring	NBR	79	Space diffuser	EN 1.4301 (AISI 304)
19	Bearing (pump side)	-	90	Terminal box cover gasket [7]	NBR
20	Bearing (motor side)	-	92	Lip seal	-
21	Adjusting ring	Steel C70	93	Lip seal	-
22	Tie-rod	Galvanised Fe 42	102	Suction cover	EN 1.4301 (AISI 304)
23	Capacitor [1]	-	103	Conveyor cover	EN 1.4301 (AISI 304)
24	Priming plug	AISI 303	105	Sleeve	EN 1.4301 (AISI 304)
25	Drain plug	AISI 303	110	Protector [2]	-
			200	Screw (pump body)	A2 UNI7323 stainless steel

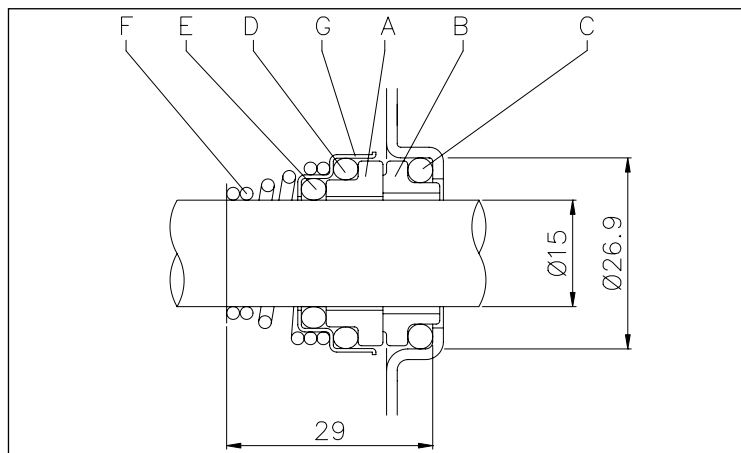
[1]= Three-phase only [2]= Single-phase only [3]= FPM for H-HS-HW-HSW versions
 [4]= Whit gasket in NBR only for 2CDXM 70/106
 [5]= Only for 2CDXM 70/206-70/306

2CDX(L)

DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304 and AISI 316

MECHANICAL SEAL 2CDX standard



MATERIALS TABLE

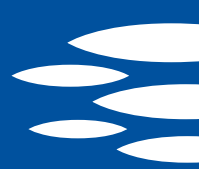
Ref.	Name	Material
A	Rotating part	Ceramic
B	Fixed part	Carbon
C	O-Ring	NBR
D	O-Ring	NBR
E	O-Ring	NBR
F	Spring	AISI 316
G	Structure/frame	AISI 304

SPECIAL MECHANICAL SEALS (on request)

Name	H version	HS version	Material HW version	HSW version	E version
Fixed Part	Carbon	SiC	Tungsten Carbide	Tungsten Carbide	Carbon
Rotating Part	Ceramic	SiC	Tungsten Carbide	SiC	Ceramic
Elastomers	FPM	FPM	FPM	FPM	EPDM
Spring	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316
Structure/Frame	AISI 304	AISI 316	AISI 316	AISI 316	AISI 316

ELECTRIC DATA TABLE

Model		P ₂		Capacitor Single-phase		P ₁		Absorbed Current [A]			
Single-phase 220-230V	Three-phase 220/380-460V	[HP]	[kW]	µF	V.	Single-phase [kW]	Three-phase [kW]	Single-phase 220-230V	220V	380V	460V
2CDXM 70/106	2CDX 70/106	1	0,75	20	450	1,37	1	6,4	2,9	1,7	1,6
2CDXM 70/206	2CDX 70/206	2	1,5	35	450	2,05	2,9	9,9	8,1	4,7	4,3
2CDXM 70/306	2CDX 70/306	3	2,2	35	450	2,63	2,9	11,9	8,1	4,7	4,3
-	2CDX 120/206	2	1,5	-	-	-	2,9	-	8,1	4,7	4,3
-	2CDX 120/306	3	2,2	-	-	-	2,9	-	8,1	4,7	4,3
-	2CDX 120/406	4	3	-	-	-	3,9	-	10,5	6,1	5,6
-	2CDX 200/406	4	3	-	-	-	3,9	-	10,5	6,1	5,6
-	2CDX 200/506	5,5	4	-	-	-	5,1	-	14,7	8,5	8,0



SPECIFIC PERFORMANCE

The specifications below qualify the curves shown in our catalogues and Data Book (see www.ebara.eu).

All the performance curves are calculated according to ISO 9906 Attachment A.

Tolerance according to ISO 9906 Attachment A. The curves refer to an effective speed of the 50 Hz asynchronous motors.

The measurements are made with water temperature of 20°C and cinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt).

During the pump selection, consider to get a safety margin of at least 0.5 m.

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

In order to prevent the risk of overheating, the pumps must not be used at a flow rate below 10% of the maximum efficiency flow rate.

During selection of the pumps, there is a safety margin of at least 1 m.

Symbols:

- Q = Volume flow rate [m^3/h]
- H = Total head [m]
- P_1 = Power absorbed by the electric line
- P_2 = Pump power input (shaft power)
- η = Pump efficiency
- NPSH = Net positive suction head required by the pump
- MEI = Minimum Efficiency Index

The minimum efficiency index (MEI) is a measure of the quality of a pump size in respect to its mean efficiency.

The minimum efficiency index is based on the hydraulic efficiency and on the head at the best efficiency point.

The efficiency of a pump with trimmed impeller is usually lower than that of a pump with the full impeller diameter.

The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption.

The minimum efficiency index (MEI) is based on the full impeller diameter.

The operation of these water pumps with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.



DNV BUSINESS ASSURANCE MANAGEMENT SYSTEM CERTIFICATE

Certificato No. / Certificate No. **CERT-17819-2006-AQ-VEN-SINCERT**

Si attesta che / This is to certify that

EBARA PUMPS EUROPE S.p.A.

Sede e Stabilimento di Brendola: Via Pacinotti, 32 - 36040 Brendola (VI) - Italy
Stabilimento di Cles: Via Campo Sportivo, 30 - 38023 Cles (TN) - Italy
Filiale di Palermo: Via Don Luigi Sturzo, 181/183 - Z. I. - 90040 Carini (PA) - Italy
Filiale di Cagliari: Via del Fangario, 29 - 09122 Cagliari (CA) - Italy

*è conforme ai requisiti della norma per i sistemi di gestione:
has been found to conform to the management system standard:*

UNI EN ISO 9001:2008 (ISO 9001:2008)

*Questa Certificazione è valida per il seguente campo applicativo:
This Certificate is valid for the following product or service ranges:*

**Progettazione, produzione, vendita e commercializzazione di pompe e sistemi di pompaggio
(Settore EA : 18 - 17)**

**Design, manufacture, sales and trade of pumps and pumping systems
(Sector EA : 18 - 17)**

Data Prima Emissione/Initial Certification Date:

2006-10-13

*Il Certificato è valido fino al:
This Certificate is valid until:*

2015-10-10

*L'audit è stato eseguito sotto la supervisione di/
The audit has been performed under the supervision of*

Michele Gaiba
Lead Auditor



SGQ N°003 A PRD N°003 B
SGA N°003 D SSI N°002 G
SCR N°004 F FSM N°001 I

Membro di MLA EA per gli schemi di accreditamento SGQ, SGA, PRD, PRS, ISF e LAB di MLA IAF per gli schemi di accreditamento SGQ, SGA, SSI, FSM e PRD e di MRA ILAC per gli schemi di accreditamento LAB

Luoogo e Data/Place and Date:

Agrate Brianza (MB), 2012-10-02

*Per l'Organismo di Certificazione:
For the Accredited Unit:*



Zeno Beltrami
Management Representative

La validità del presente Certificato è subordinata al rispetto delle condizioni contenute nel Contratto di Certificazione.
Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

DET NORSKE VERITAS ITALIA SRL - CENTRO DIREZIONALE COLLEONI - PALAZZO SIRIO - V.LE COLLEONI, 9 - 20864 AGRATE BRIANZA (MB) - ITALY - TEL. 039.68.99.905 - WWW.DNVBA.COM/IT