

Brochure

2CDX



2CDX

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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)

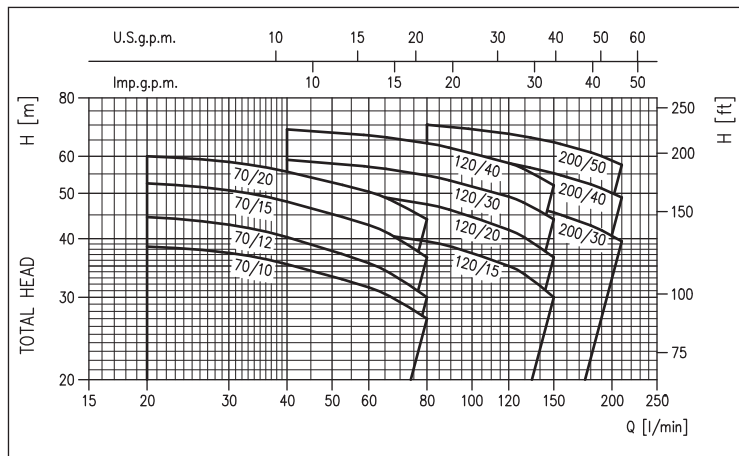
CONTROL PANELS

- 1EPBH

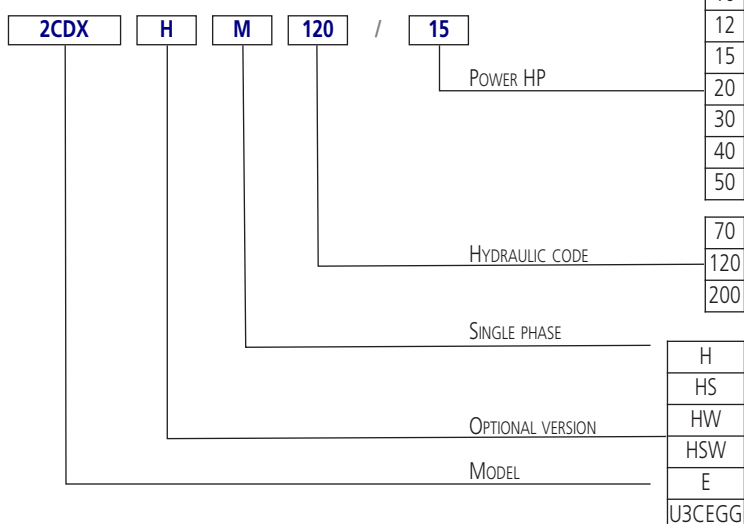
ACCESSORIES (On request)

- 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)



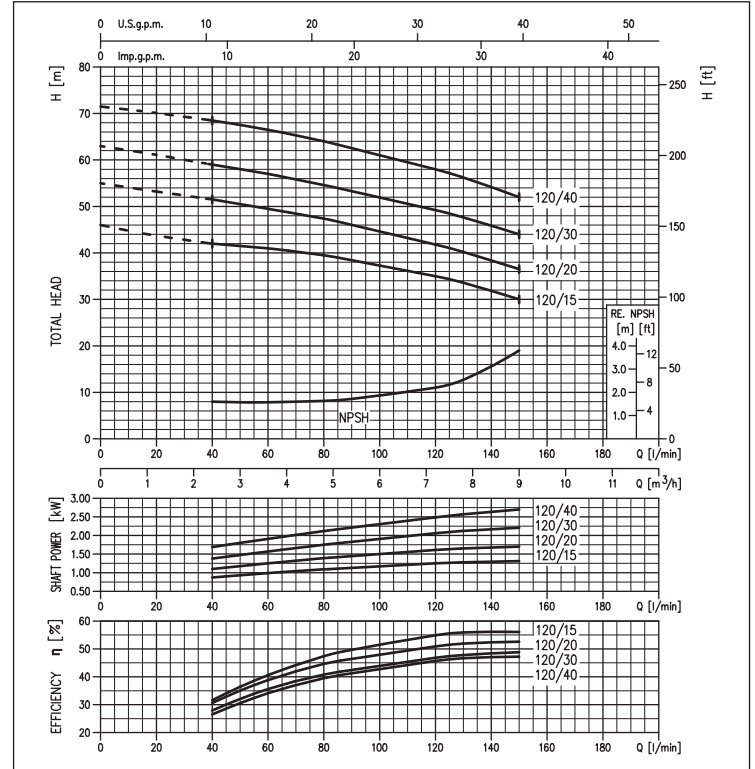
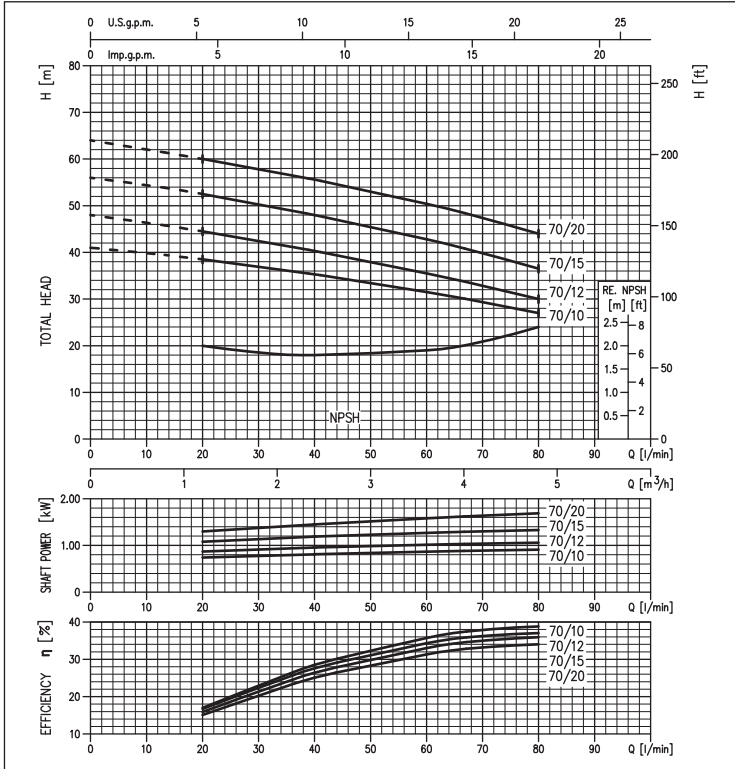
IDENTIFICATION CODE



DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS in AISI 304

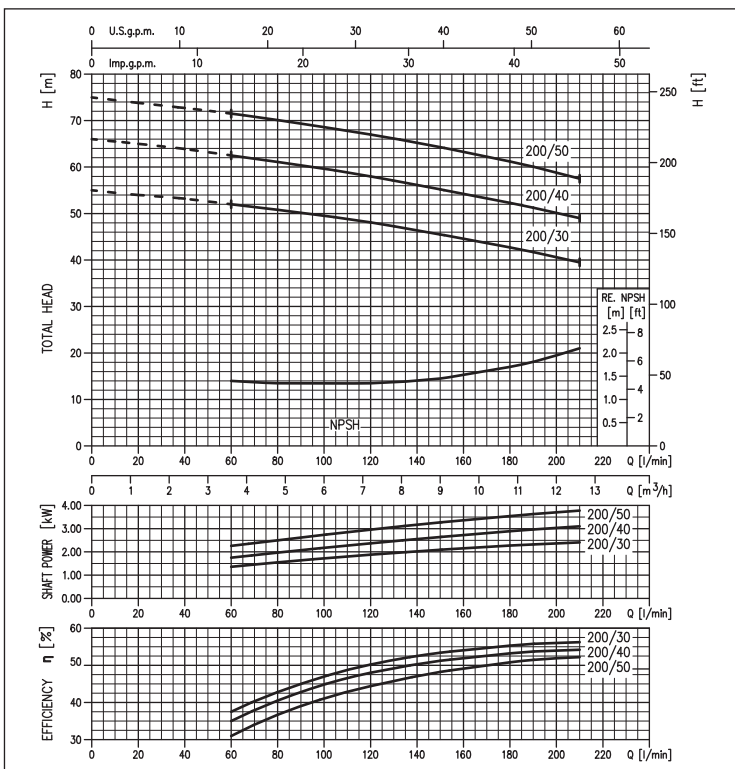
PERFORMANCE CURVES 2CDX 120 series

(according to ISO 9906 Attachment A)



PERFORMANCE CURVES 2CDX 200

(according to ISO 9906 Attachment A)



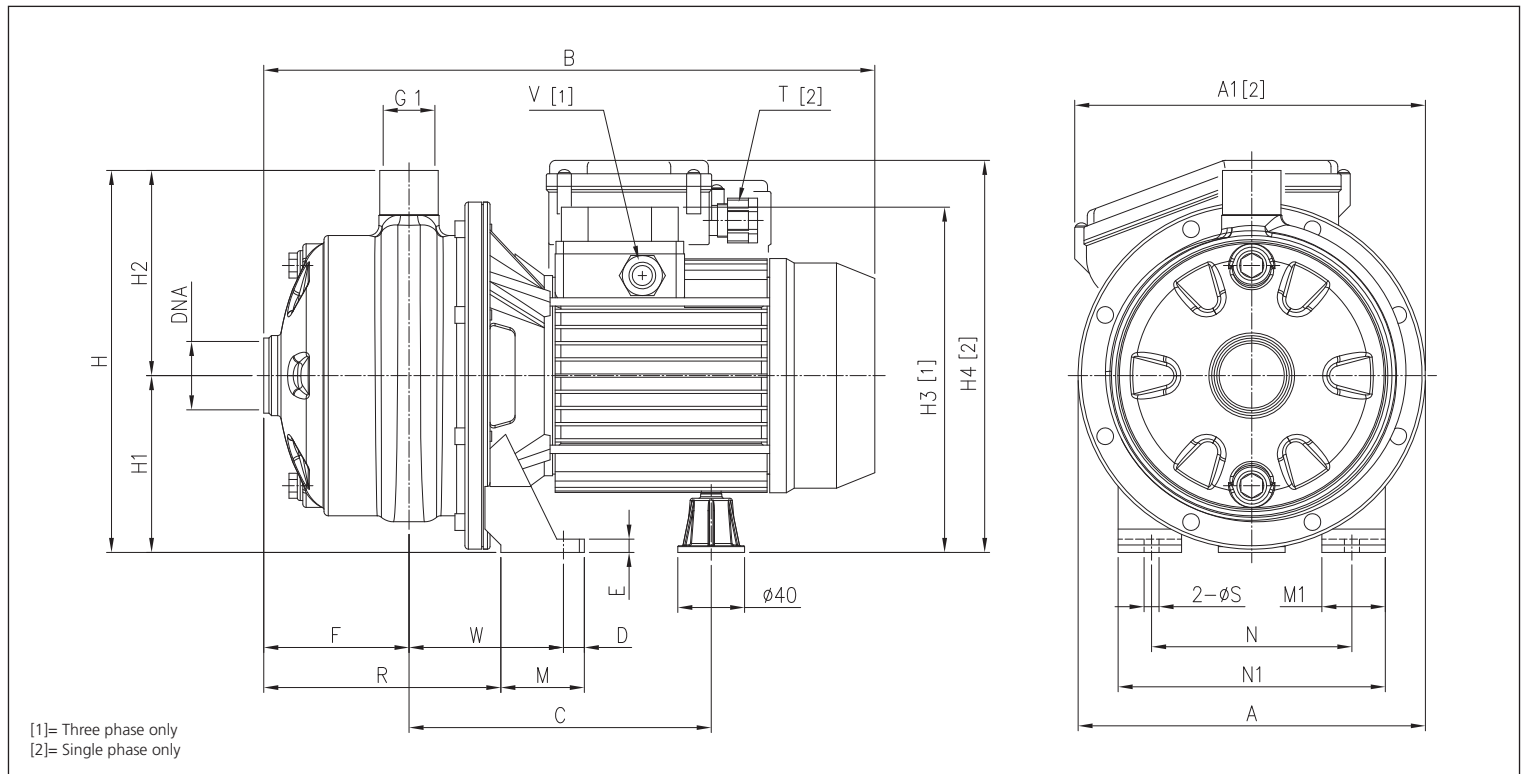
DUAL IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

PERFORMANCE TABLE

| 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 | 5,5 | 3,7 | - | - | 71,5 | 70,1 | 67,0 | 64,3 | 61,2 | 57,5 | - |

DIMENSIONS



DIMENSIONAL TABLE

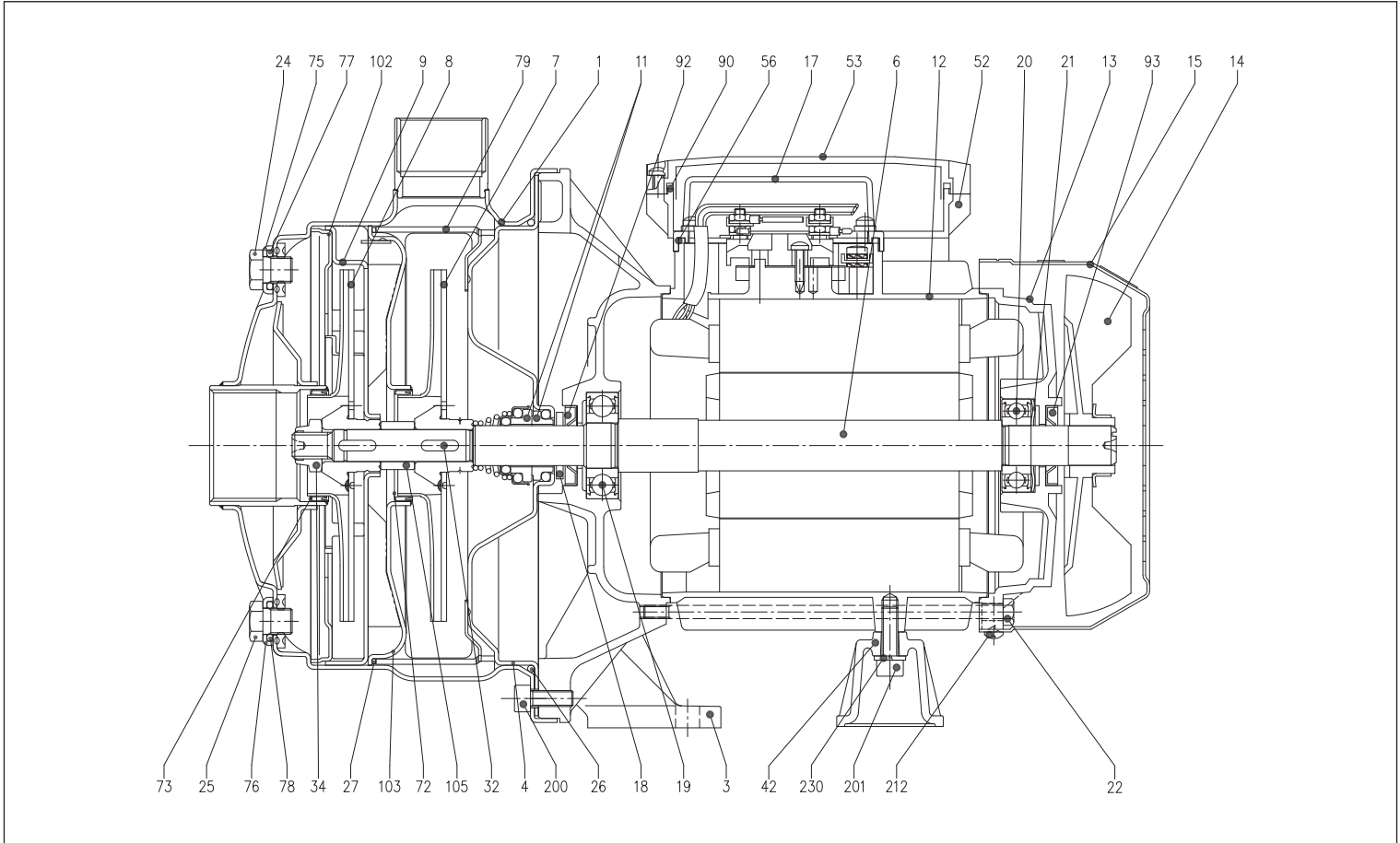
| Model | A | | B | | C | D | E | F | H | H1 | Dimensions [mm] | | | | M | M1 | N | N1 | R | T [2] | V [1] | W | S | DNA | Weight [kg] | |
|----------------|-----|---------|-------|-------|-------------|------|----|----|-----|-----|-----------------|--------|--------|----|----|-----|-----|-------|---------|---------|-------|----|-----|------|-------------|------------|
| | A | A1* [2] | B [2] | B [1] | | | | | | | H2 | H3 [1] | H4 [2] | M | | | | | | | | | | | Weight [2] | Weight [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

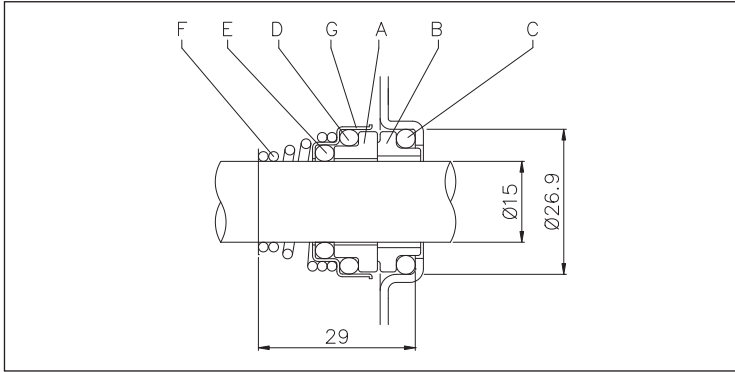
[3]= FPM for H-HS-HW-HSW versions, EPDM for E version

[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 ₂ | | Efficiency | | Capacitor | | Efficiency (%) | | | P ₁ | | Absorbed Current [A] | | |
|-------------------|----------------------|----------------|------|--------------|-------------|-----------------|----------------|----------------|------|------|-------------------|------------------|----------------------|------------------|------------------|
| Single phase 230V | Three phase 230/400V | [HP] | [kW] | Single phase | Three phase | Single phase μF | V _c | 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 ₂ | | L _{pA} - 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 | |

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