



Japanese Technology since 1912

CDX

Data Book 50Hz



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## SPECIFICATIONS

50Hz

Rev. S

| PUMP                           |                  |                                                                                                                                                                                                                                                         |
|--------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Liquid Handled                 | Type of liquid   | Clean water                                                                                                                                                                                                                                             |
|                                | Temperature [°C] | min. -5<br>max. +60 only for model 70/05, 70/07, 90/10<br>max. +60 for model 70/05, 70/07, 90/10 version: E, Q1AEGG, VAEGG, U3U3EGG, Q1U3EGG, U3CEGG<br>max. +90<br>max. +110 H – HS - HW - HSW<br>max. +120 E, Q1AEGG, VAEGG, U3U3EGG, Q1U3EGG, U3CEGG |
| Maximum working pressure [MPa] |                  | 0.8                                                                                                                                                                                                                                                     |
| Construction                   | Impeller         | Closed centrifugal type                                                                                                                                                                                                                                 |
|                                | Shaft seal type  | Mechanical seal                                                                                                                                                                                                                                         |
|                                | Bearing          | Sealed ball bearing                                                                                                                                                                                                                                     |
| Pipe Connection                | Suction          | from G1"¼ to G1"½ UNI ISO 228-1                                                                                                                                                                                                                         |
|                                | Discharge        | G1" UNI ISO 228-1                                                                                                                                                                                                                                       |
| Material                       | Casing           | EN 1.4301 (AISI 304) - (AISI 316L only for "L" version)                                                                                                                                                                                                 |
|                                | Impeller         | EN 1.4301 (AISI 304) - (AISI 316L only for "L" version)                                                                                                                                                                                                 |
|                                | Casing cover     | EN 1.4301 (AISI 304) - (AISI 316L only for "L" version)                                                                                                                                                                                                 |
|                                | Shaft seal       | Ceramic/Carbon/NBR (for special versions see page 303)                                                                                                                                                                                                  |
|                                | Shaft            | AISI 303 / AISI 316L (Wet extension)                                                                                                                                                                                                                    |
|                                | Bracket          | Aluminium                                                                                                                                                                                                                                               |
| Applicable standard of test    |                  | ISO 9906:2012 – Grade 3B                                                                                                                                                                                                                                |

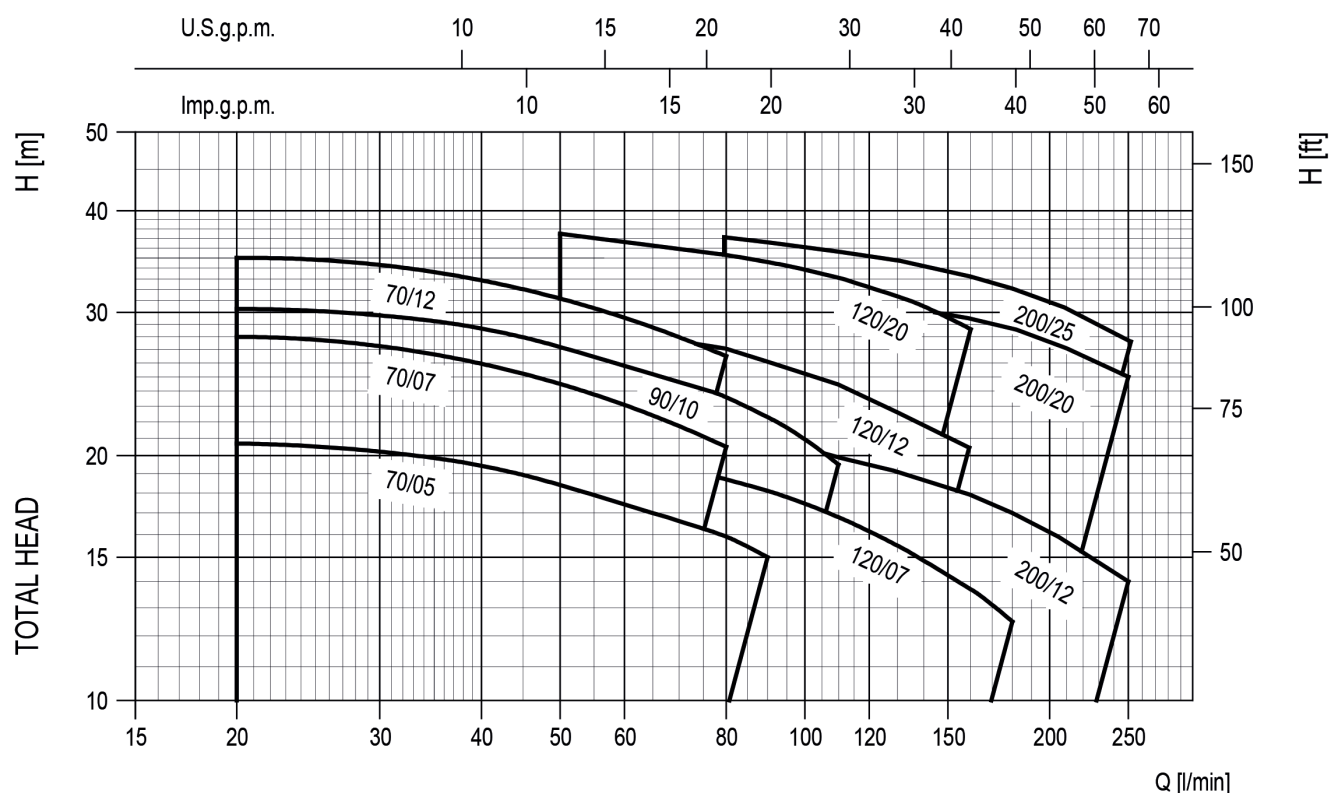
| MOTOR                               |                                                                      |                      |
|-------------------------------------|----------------------------------------------------------------------|----------------------|
| Type                                | Electric - TEFC                                                      |                      |
|                                     | Single Phase                                                         | Three Phase          |
| Efficiency level (Reg. 1781/2019)   | -                                                                    | IE3                  |
| No. of Poles                        | 2                                                                    |                      |
| Rotation speed [min <sup>-1</sup> ] | ≈ 2800                                                               |                      |
| Insulation Class                    | F                                                                    |                      |
| Protection degree (CEI EN 60034-5)  | IP 55                                                                |                      |
| Power rating                        | 0.37 ÷ 1.5                                                           | 0.37 ÷ 1.8           |
|                                     | [kW]                                                                 | [HP]                 |
| Frequency                           | 0.5 ÷ 2                                                              | 0.5 ÷ 2.5            |
|                                     | [Hz]                                                                 |                      |
| Voltage                             | 230 ±10%                                                             | 230/400 ±10%         |
| Voltage                             | [V]                                                                  |                      |
| Capacitor                           | Built in                                                             | -                    |
| Over load protection                | Built in                                                             | Provided by the user |
| Casing material                     | Aluminium                                                            |                      |
| Base material/motor support         | Aluminium                                                            |                      |
| Dimensions of cable entry           | PG11 - PG13.5 - M16x1.5 – M20x1.5<br>(see dimensions table page 400) |                      |

## PERFORMANCE RANGE and SELECTION CHART

50Hz

Rev. S

## PERFORMANCE RANGE



## SELECTION CHART

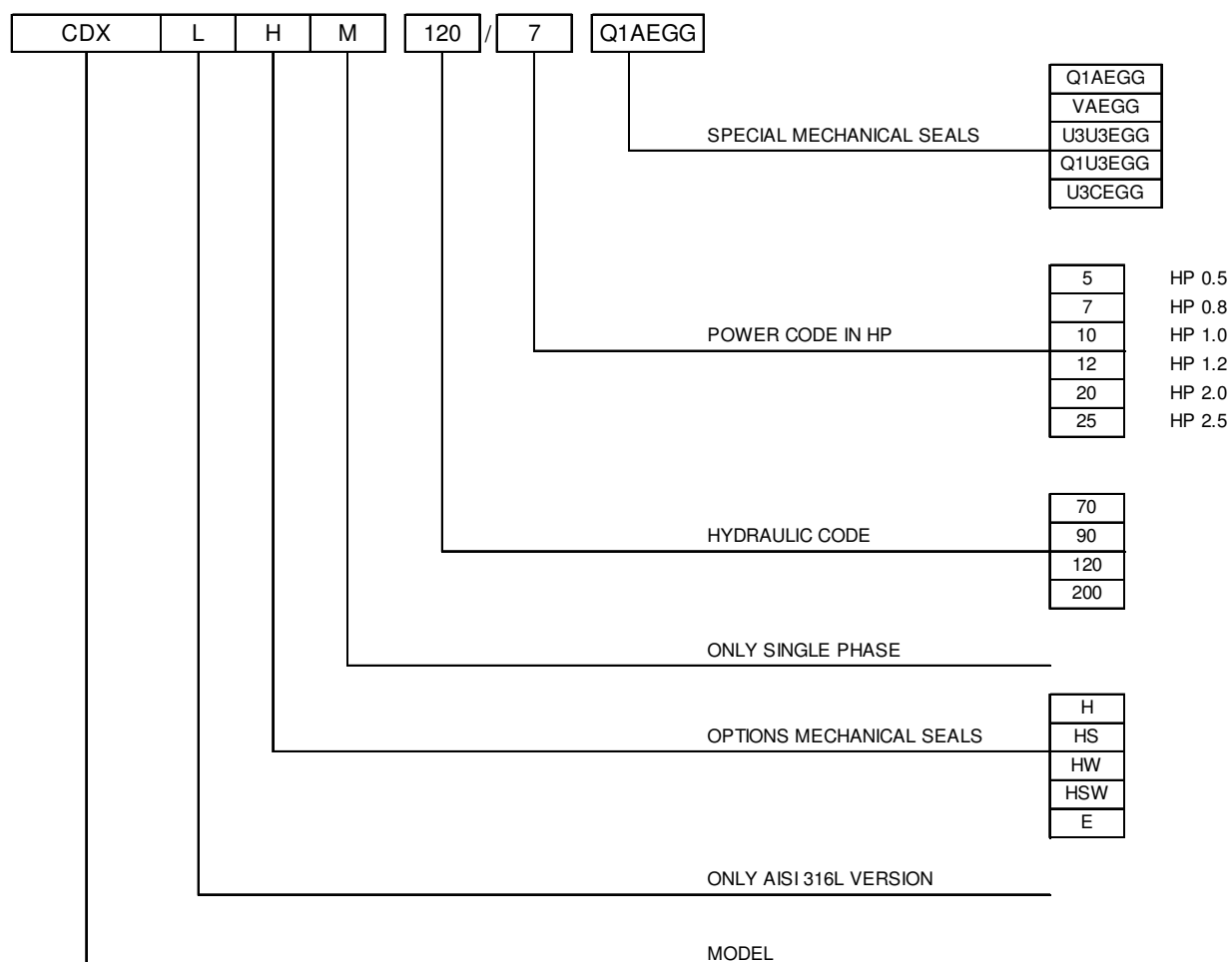
| Pump Type                         |             | Power |      | Q=Capacity |      |      |      |      |      |      |      |      |      |      |     |
|-----------------------------------|-------------|-------|------|------------|------|------|------|------|------|------|------|------|------|------|-----|
|                                   |             |       |      | l/min      | 0    | 20   | 50   | 80   | 90   | 110  | 130  | 160  | 180  | 210  | 250 |
| Single Phase                      | Three Phase | [kW]  | [HP] | m³/h       | 0    | 1.2  | 3    | 4.8  | 5.4  | 6.6  | 7.8  | 9.6  | 10.8 | 12.6 | 15  |
| H=Total manometric head in meters |             |       |      |            |      |      |      |      |      |      |      |      |      |      |     |
| CDXM 70/05                        | CDX 70/05   | 0.37  | 0.5  | 21.3       | 20.3 | 19.1 | 16.8 | 16.0 | -    | -    | -    | -    | -    | -    | -   |
| CDXM 70/07                        | CDX 70/07   | 0.55  | 0.75 | 31.1       | 29.8 | 27.3 | 24.4 | -    | -    | -    | -    | -    | -    | -    | -   |
| CDXM 90/10                        | CDX 90/10   | 0.75  | 1    | 30.5       | 29.1 | 26.6 | 23.4 | 22.1 | 19.3 | -    | -    | -    | -    | -    | -   |
| CDXM 120/07                       | CDX 120/07  | 0.55  | 0.75 | 22.5       | -    | 20.5 | 18.7 | 18.1 | 16.8 | 15.5 | 13.7 | 12.5 | -    | -    | -   |
| CDXM 120/12                       | CDX 120/12  | 0.9   | 1.2  | 31.2       | -    | 29.3 | 27.5 | 26.8 | 25.2 | 23.6 | 21.0 | -    | -    | -    | -   |
| CDXM 120/20                       | CDX 120/20  | 1.5   | 2    | 38.7       | -    | 36.4 | 34.8 | 34.2 | 33.0 | 31.7 | 29.7 | -    | -    | -    | -   |
| CDXM 200/12                       | CDX 200/12  | 0.9   | 1.2  | 22.8       | -    | -    | 21.3 | 21.0 | 20.4 | 19.7 | 18.5 | 17.6 | 16.0 | 14.0 | -   |
| CDXM 200/20                       | CDX 200/20  | 1.5   | 2    | 33.0       | -    | -    | 31.5 | 31.2 | 30.6 | 30.0 | 28.7 | 27.9 | 26.5 | 24.5 | -   |
| -                                 | CDX 200/25  | 1.8   | 2.5  | 39.4       | -    | -    | 36.8 | 36.5 | 35.6 | 34.7 | 33.3 | 32.0 | 30.0 | 27.2 | -   |

## TYPE KEY and CURVE SPECIFICATIONS

50Hz

Rev. S

## TYPE KEY



### PERFORMANCE CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906:2012 – Grade 3B

The curves refer to effective speed of asynchronous motors at 50 Hz, 2 poles.

Measurements were carried out with clean water at 20 °C of temperature and with a kinematic viscosity of  $\nu = 1 \text{ mm}^2/\text{s}$  (1 cSt)

The NPSH curve is an average curve obtained in the same conditions of performance curves.

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

In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

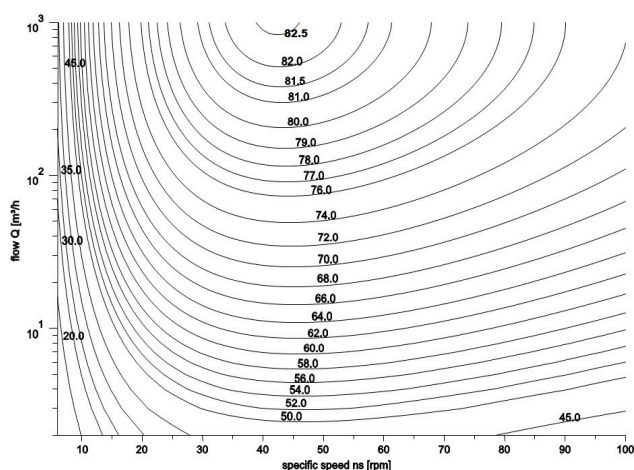
- Q = volume flow rate
- H = total head
- $P_2$  = pump power input (shaft power)
- $\eta$  = pump efficiency
- NPSH = net positive suction head required by the pump
- MEI = minimum efficiency index

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.

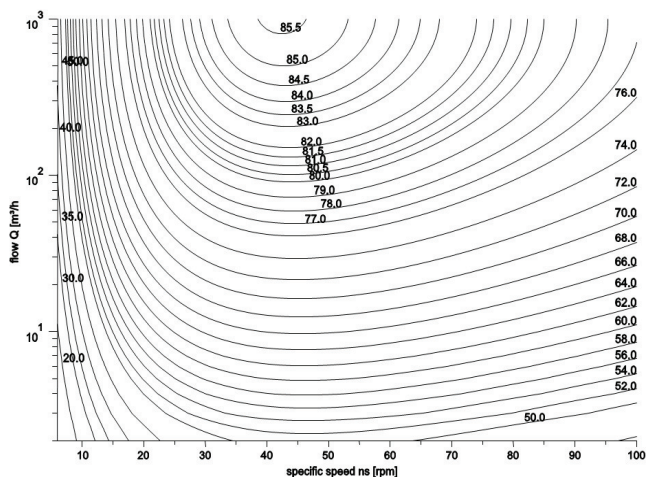
The efficiency of a pump with trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.

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.

MEI = 0.4 for ESCC 2900 rpm

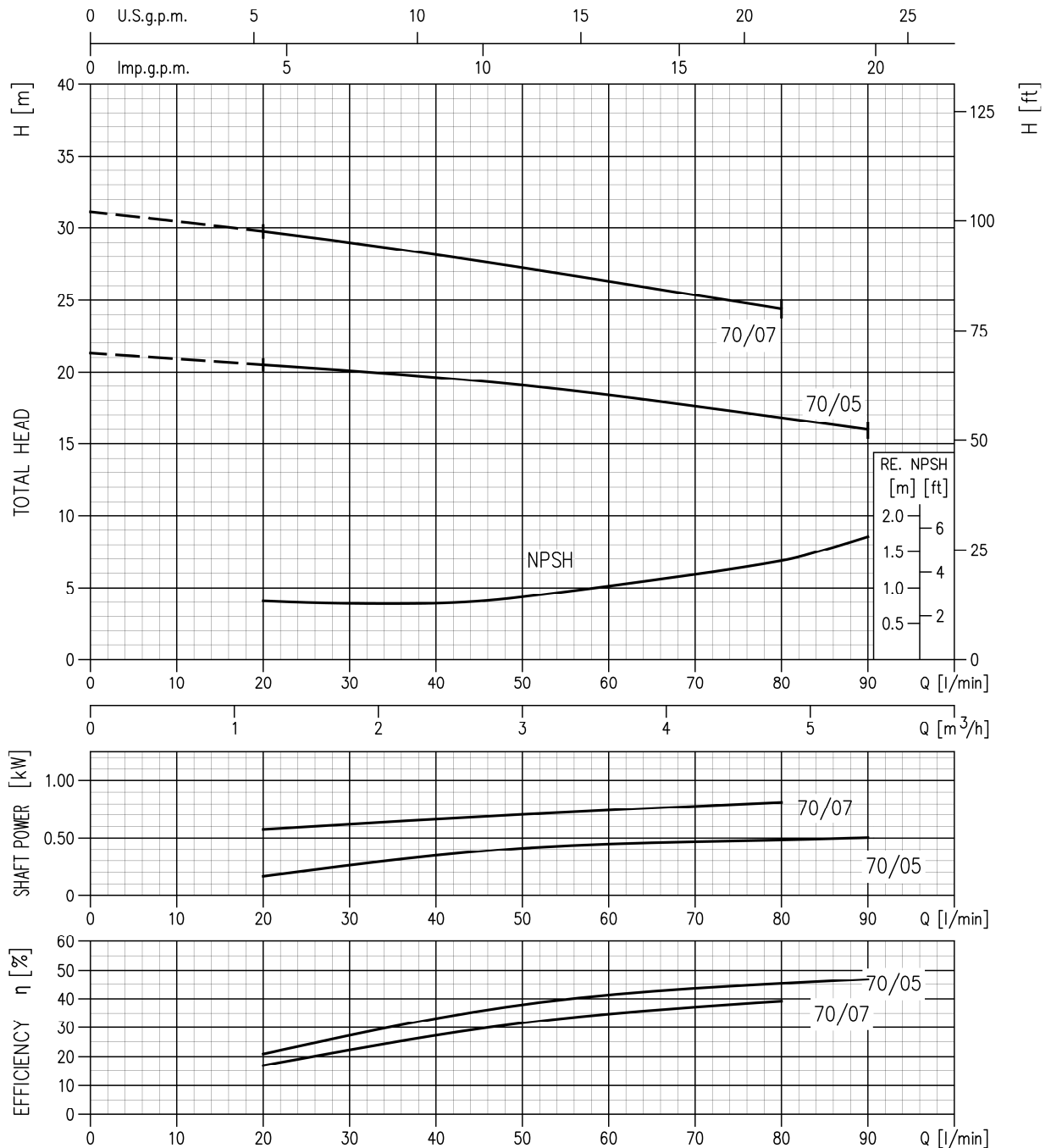


MEI = 0.7 for ESCC 2900rpm



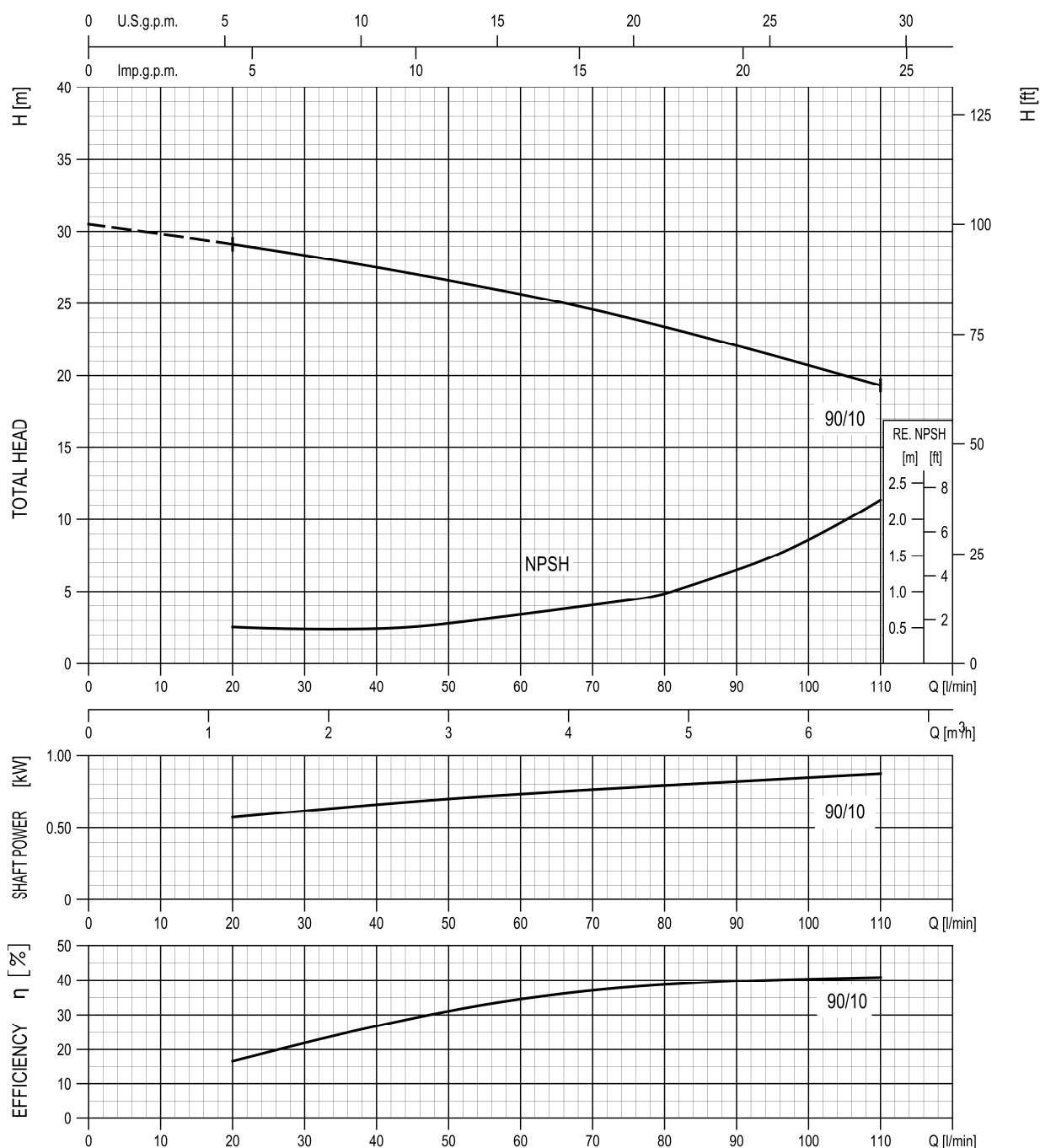
CDX 70/05 (0.37 kW) - Impeller diameter = 132 mm

CDX 70/07 (0.55 kW) - Impeller diameter = 157 mm



Rotation speed  $\approx 2800 \text{ min}^{-1}$   
 Test standard: ISO 9906:2012 – Grade 3B

CDX 90/10 (0.75 kW) MEI &gt; 0.50 - Impeller diameter = 157 mm

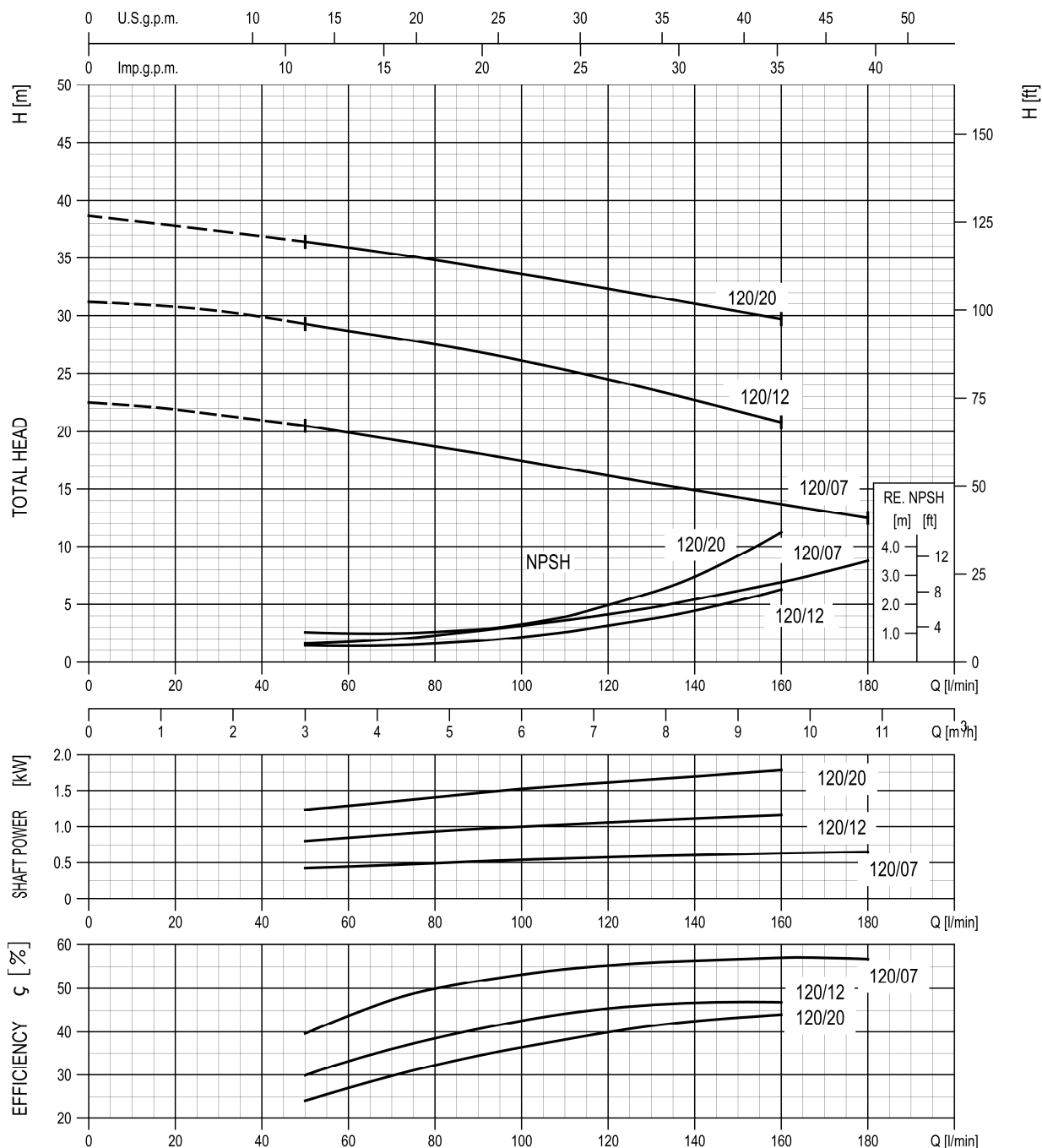


Rotation speed  $\approx 2800 \text{ min}^{-1}$   
Test standard: ISO 9906:2012 – Grade 3B

CDX 120/07 (0.55 kW) MEI > 0.50 - Impeller diameter = 132 mm

CDX 120/12 (0.90 kW) MEI > 0.40 - Impeller diameter = 157 mm

CDX 120/20 (1.50 kW) MEI > 0.40 - Impeller diameter = 176 mm

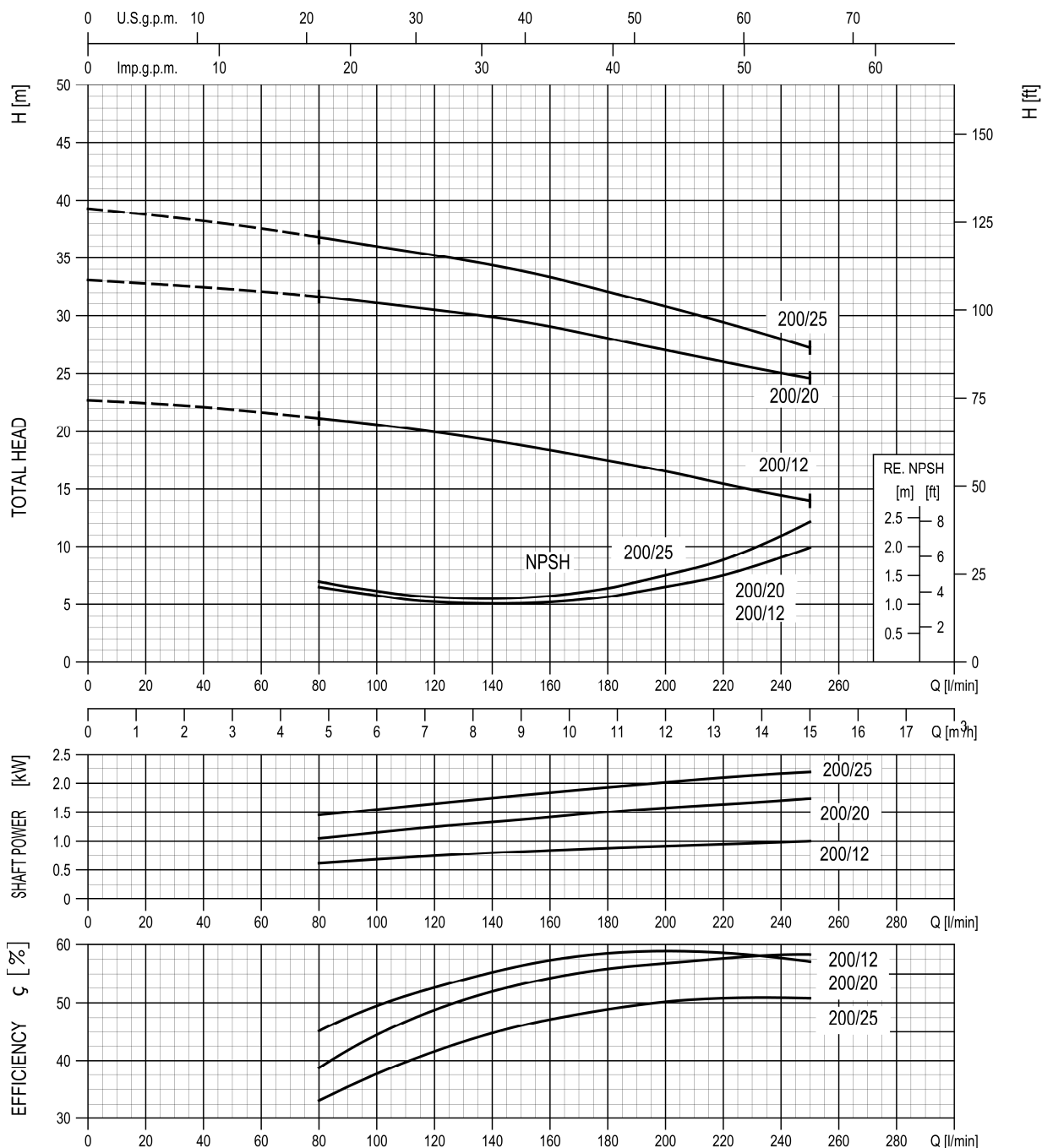


Rotation speed  $\approx 2800 \text{ min}^{-1}$   
 Test standard: ISO 9906:2012 – Grade 3B

CDX 200/12 (0.90 kW) MEI > 0.50 - Impeller diameter = 132 mm

CDX 200/20 (1.50 kW) MEI > 0.60 - Impeller diameter = 157 mm

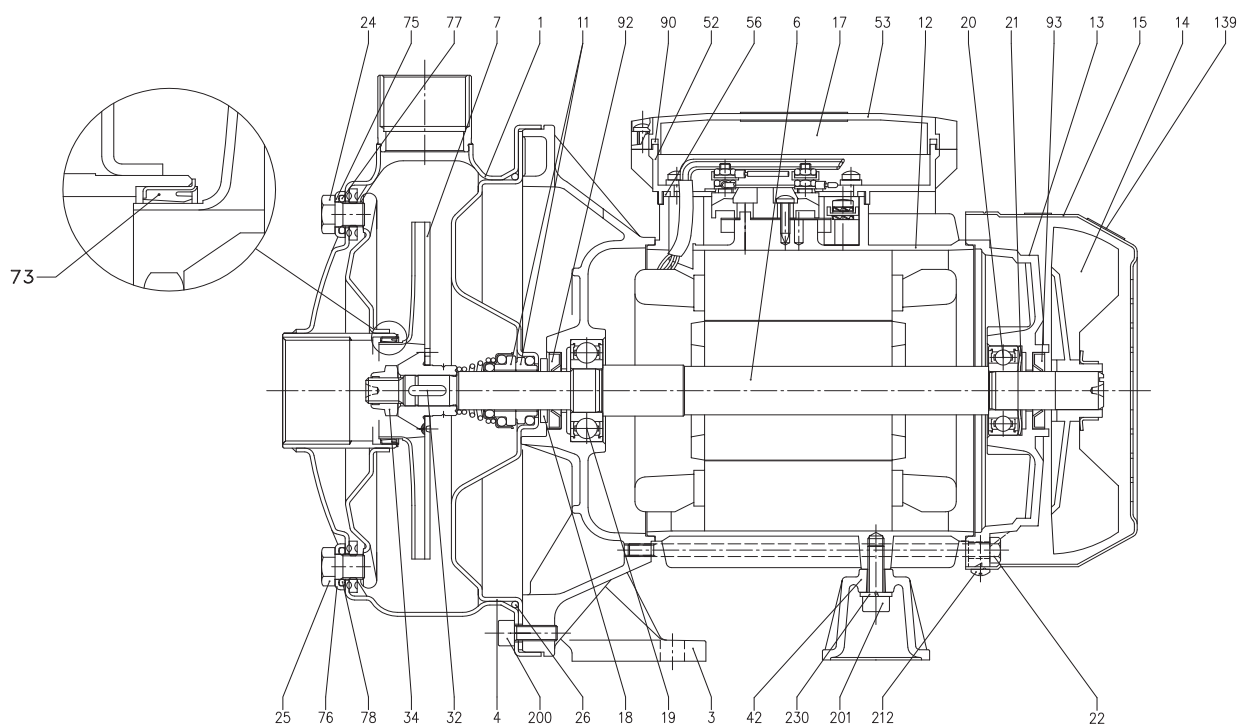
CDX 200/25 (1.80 kW) MEI > 0.40 - Impeller diameter = 176 mm



Rotation speed  $\approx 2800 \text{ min}^{-1}$

Test standard: ISO 9906:2012 – Grade 3B

## SECTIONAL VIEW CDX 70/05 - 70/07 - 90/10

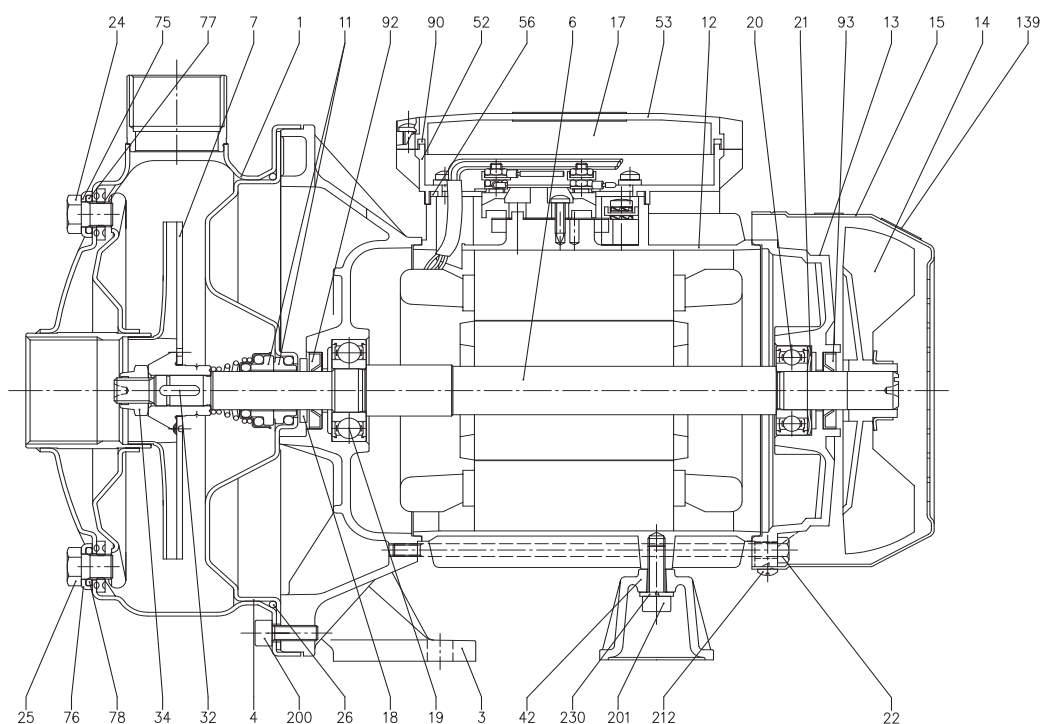


| N° | PART NAME               | MATERIAL                                 | Q.TY |
|----|-------------------------|------------------------------------------|------|
| 1  | Casing                  | AISI 304 / AISI 316L [5]                 | 1    |
| 3  | Motor bracket           | Aluminium                                | 1    |
| 4  | Casing cover            | AISI 304 / AISI 316L [5]                 | 1    |
| 6  | Shaft with rotor        | AISI 303 / AISI 316L [5] (Wet extension) | 1    |
| 7  | Impeller                | AISI 304 / AISI 316L [5]                 | 1    |
| 11 | Mechanical seal [6]     | Carbon/Ceramic/NBR                       | 1    |
| 12 | Motor frame with stator | -                                        | 1    |
| 13 | Motor cover             | Aluminium                                | 1    |
| 14 | Fan                     | PA                                       | 1    |
| 15 | Fan cover               | Fe P04 Zincate                           | 1    |
| 17 | Terminal box cover [2]  | Aluminium                                | 1    |
| 18 | Splash ring             | NBR                                      | 1    |
| 19 | Pump side ball bearing  | -                                        | 1    |
| 20 | Fan side ball bearing   | -                                        | 1    |
| 21 | Adjusting ring          | Steel C70                                | 1    |
| 22 | Tie rod                 | Fe 420 Zincate                           | 4    |
| 24 | Priming plug            | AISI 304 / AISI 316 [5]                  | 1    |

| N°  | PART NAME                     | MATERIAL                   | Q.TY |
|-----|-------------------------------|----------------------------|------|
| 25  | Drain plug                    | AISI 304 / AISI 316 [5]    | 1    |
| 26  | O-ring [3]                    | NBR                        | 1    |
| 32  | Key                           | AISI 316                   | 1    |
| 34  | Impeller nut                  | AISI 304 / AISI 316 [5]    | 1    |
| 42  | Motor support                 | Aluminium                  | 1    |
| 52  | Terminal box [1]              | ABS class V-0              | 1    |
| 53  | Terminal box cover [1]        | ABS class V-0              | 1    |
| 56  | Box gasket                    | NBR                        | 1    |
| 73  | Casing ring [4]               | NBR                        | 1    |
| 75  | Washer                        | AISI 304                   | 1    |
| 76  | Washer                        | AISI 304                   | 1    |
| 77  | O-ring [3]                    | NBR                        | 1    |
| 78  | O-ring [3]                    | NBR                        | 1    |
| 90  | Terminal box cover gasket [1] | NBR                        | 1    |
| 92  | Lip seal                      | -                          | 1    |
| 93  | Lip seal                      | -                          | 1    |
| 200 | Screw                         | Stainless steel A2 UNI7323 | 8    |

- [1] Only for single phase  
 [2] Only for three phase  
 [3] FPM for H-HS-HW-HSW  
 EPDM for E and Special Mechanical Seal  
 [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  
 [6] See **MECHANICAL SEAL** pages 303-304

## SECTIONAL VIEW CDX 120/07 - 120/20



| N° | PART NAME               | MATERIAL                                 | Q.TY |
|----|-------------------------|------------------------------------------|------|
| 1  | Casing                  | AISI 304 / AISI 316L [4]                 | 1    |
| 3  | Motor bracket           | Aluminium                                | 1    |
| 4  | Casing cover            | AISI 304 / AISI 316L [4]                 | 1    |
| 6  | Shaft with rotor        | AISI 303 / AISI 316L [4] (Wet extension) | 1    |
| 7  | Impeller                | AISI 304 / AISI 316L [4]                 | 1    |
| 11 | Mechanical seal [5]     | Carbon/Ceramic/NBR                       | 1    |
| 12 | Motor frame with stator | -                                        | 1    |
| 13 | Motor cover             | Aluminium                                | 1    |
| 14 | Fan                     | PA                                       | 1    |
| 15 | Fan cover               | Fe P04 Zincate                           | 1    |
| 17 | Terminal box cover [2]  | Aluminium                                | 1    |
| 18 | Splash ring             | NBR                                      | 1    |
| 19 | Pump side ball bearing  | -                                        | 1    |
| 20 | Fan side ball bearing   | -                                        | 1    |
| 21 | Adjusting ring          | Steel C70                                | 1    |
| 22 | Tie rod                 | Fe 420 Zincate                           | 4    |
| 24 | Priming plug            | AISI 304 / AISI 316 [4]                  | 1    |

| N°  | PART NAME                     | MATERIAL                   | Q.TY |
|-----|-------------------------------|----------------------------|------|
| 25  | Drain plug                    | AISI 304 / AISI 316 [4]    | 1    |
| 26  | O-ring [3]                    | NBR                        | 1    |
| 32  | Key                           | AISI 316                   | 1    |
| 34  | Impeller nut                  | AISI 304 / AISI 316 [4]    | 1    |
| 42  | Motor support                 | Aluminium                  | 1    |
| 52  | Terminal box [1]              | ABS class V-0              | 1    |
| 53  | Terminal box cover [1]        | ABS class V-0              | 1    |
| 56  | Box gasket                    | NBR                        | 1    |
| 73  | Casing ring                   | -                          | 1    |
| 75  | Washer                        | AISI 304                   | 1    |
| 76  | Washer                        | AISI 304                   | 1    |
| 77  | O-ring [3]                    | NBR                        | 1    |
| 78  | O-ring [3]                    | NBR                        | 1    |
| 90  | Terminal box cover gasket [1] | NBR                        | 1    |
| 92  | Lip seal                      | -                          | 1    |
| 93  | Lip seal                      | -                          | 1    |
| 200 | Screw                         | Stainless steel A2 UNI7323 | 8    |

[1] Only for single phase

[2] Only for three phase

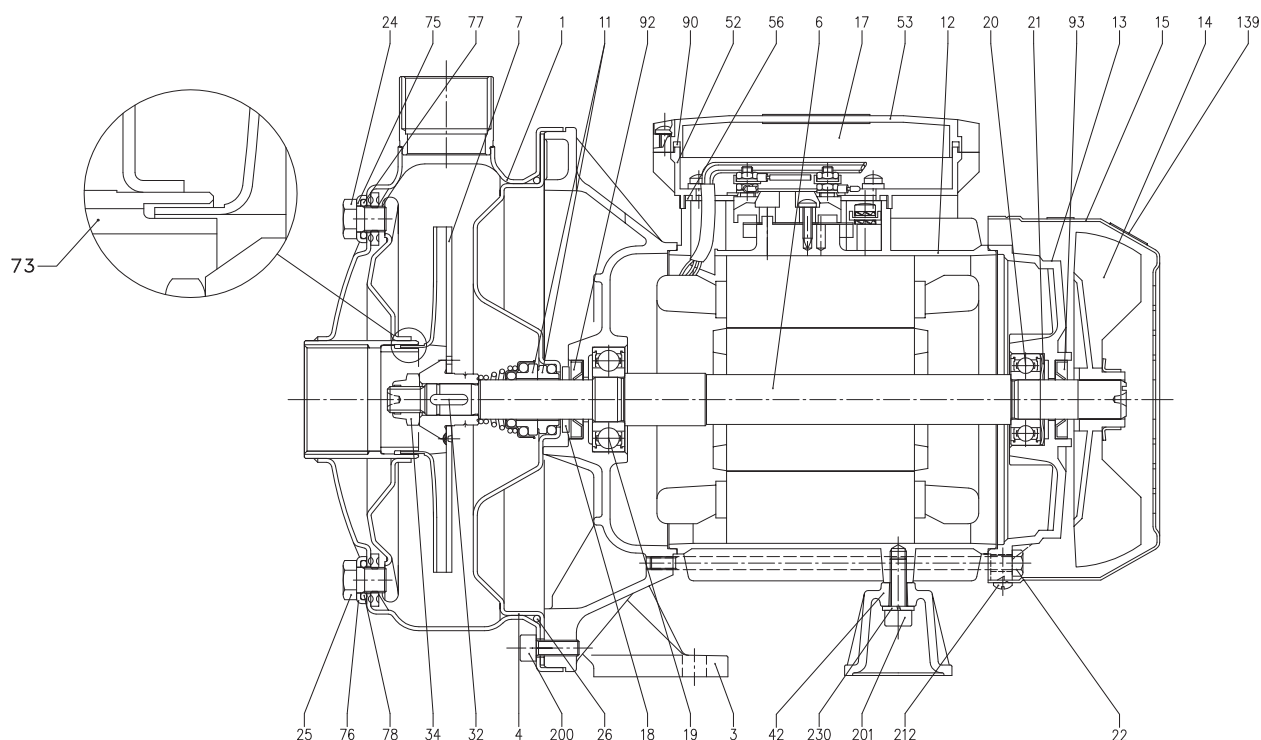
[3] FPM for H-HS-HW-HSW

EPDM for E and Special Mechanical Seal

[4] Only for "L" version

[5] See **MECHANICAL SEAL** pages 303-304

## SECTIONAL VIEW CDX 120/12 - 200/12 - 200/20 - 200/25



| N° | PART NAME               | MATERIAL                                 | Q.TY |
|----|-------------------------|------------------------------------------|------|
| 1  | Casing                  | AISI 304 / AISI 316L [4]                 | 1    |
| 3  | Motor bracket           | Aluminium                                | 1    |
| 4  | Casing cover            | AISI 304 / AISI 316L [4]                 | 1    |
| 6  | Shaft with rotor        | AISI 303 / AISI 316L [4] (Wet extension) | 1    |
| 7  | Impeller                | AISI 304 / AISI 316L [4]                 | 1    |
| 11 | Mechanical seal [5]     | Carbon/Ceramic/NBR                       | 1    |
| 12 | Motor frame with stator | -                                        | 1    |
| 13 | Motor cover             | Aluminium                                | 1    |
| 14 | Fan                     | PA                                       | 1    |
| 15 | Fan cover               | Fe P04 Zincate                           | 1    |
| 17 | Terminal box cover [2]  | Aluminium                                | 1    |
| 18 | Splash ring             | NBR                                      | 1    |
| 19 | Pump side ball bearing  | -                                        | 1    |
| 20 | Fan side ball bearing   | -                                        | 1    |
| 21 | Adjusting ring          | Steel C70                                | 1    |
| 22 | Tie rod                 | Fe 420 Zincate                           | 4    |
| 24 | Priming plug            | AISI 304 / AISI 316 [4]                  | 1    |

| N°  | PART NAME                     | MATERIAL                   | Q.TY |
|-----|-------------------------------|----------------------------|------|
| 25  | Drain plug                    | AISI 304 / AISI 316 [4]    | 1    |
| 26  | O-ring [3]                    | NBR                        | 1    |
| 32  | Key                           | AISI 316                   | 1    |
| 34  | Impeller nut                  | AISI 304 / AISI 316 [4]    | 1    |
| 42  | Motor support                 | Aluminium                  | 1    |
| 52  | Terminal box [1]              | ABS class V-0              | 1    |
| 53  | Terminal box cover [1]        | ABS class V-0              | 1    |
| 56  | Box gasket                    | NBR                        | 1    |
| 73  | Double ring                   | AISI 304 / AISI 316 [4]    | 1    |
| 75  | Washer                        | AISI 304                   | 1    |
| 76  | Washer                        | AISI 304                   | 1    |
| 77  | O-ring [3]                    | NBR                        | 1    |
| 78  | O-ring [3]                    | NBR                        | 1    |
| 90  | Terminal box cover gasket [1] | NBR                        | 1    |
| 92  | Lip seal                      | -                          | 1    |
| 93  | Lip seal                      | -                          | 1    |
| 200 | Screw                         | Stainless steel A2 UNI7323 | 8    |

[1] Only for single phase

[2] Only for three phase

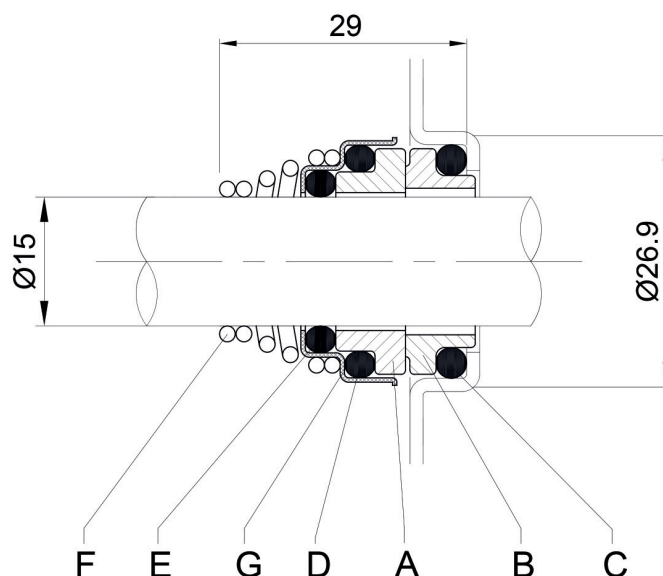
[3] FPM for H-HS-HW-HSW

EPDM for E and Special Mechanical Seal

[4] Only for "L" version

[5] See **MECHANICAL SEAL** pages 303-304

## MECHANICAL SEAL



**STANDARD**  
+  
"L" version

| REF | PART 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        |

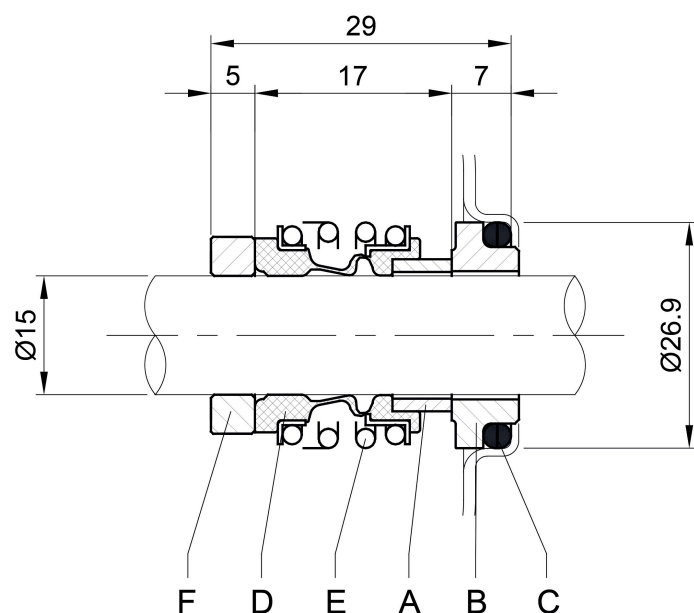
**OPTIONAL**

| REF | PART NAME            | MATERIAL        |                  |                  |                 |
|-----|----------------------|-----------------|------------------|------------------|-----------------|
|     |                      | H               | HW               | HSW              | E               |
| A   | Rotary seal ring     | Ceramic         | Tungsten carbide | Silicon carbide  | Ceramic         |
| B   | Stationary seal ring | Carbon graphite | Tungsten carbide | Tungsten carbide | Carbon graphite |
| C   | O-Ring               | FPM             | FPM              | FPM              | EPDM            |
| D   | O-Ring               | FPM             | FPM              | FPM              | EPDM            |
| E   | O-Ring               | FPM             | FPM              | FPM              | EPDM            |
| F   | Self-driving spring  | AISI 316        | AISI 316         | AISI 316         | AISI 316        |
| G   | Frame                | AISI 304        | AISI 316         | AISI 316         | AISI 316        |

**SPECIAL**

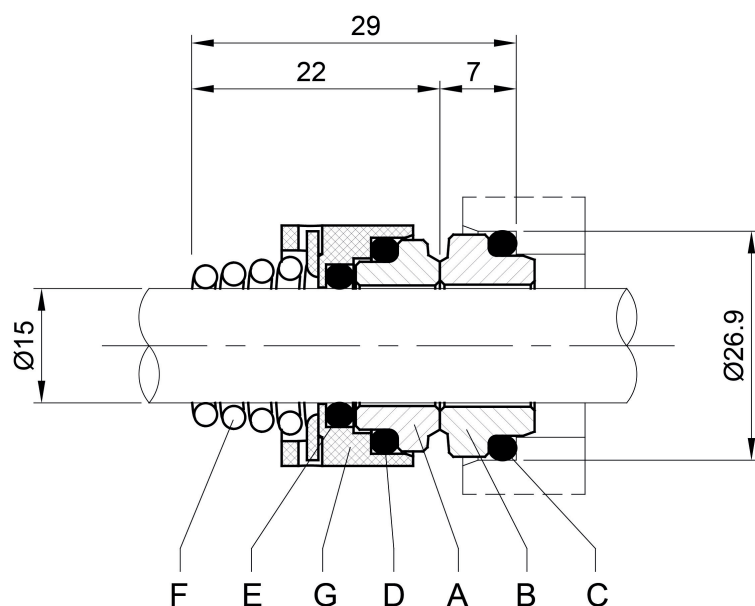
| REF | PART NAME            | MATERIAL         |                   |                  |                  |
|-----|----------------------|------------------|-------------------|------------------|------------------|
|     |                      | Q1U3EGG          | VAEGG             | U3U3EGG          | U3CEGG           |
| A   | Rotary seal ring     | Silicon carbide  | Ceramic           | Tungsten carbide | Tungsten carbide |
| B   | Stationary seal ring | Tungsten carbide | Metallised carbon | Tungsten carbide | special Carbon   |
| C   | O-Ring               | EPDM             | EPDM              | EPDM             | EPDM             |
| D   | O-Ring               | EPDM             | EPDM              | EPDM             | EPDM             |
| E   | O-Ring               | EPDM             | EPDM              | EPDM             | EPDM             |
| F   | Self-driving spring  | AISI 316         | AISI 316          | AISI 316         | AISI 316         |
| G   | Frame                | AISI 316         | AISI 316          | AISI 316         | AISI 316         |

## MECHANICAL SEAL



OPTIONAL

| REF | PART NAME            | MATERIAL<br>HS  |
|-----|----------------------|-----------------|
| A   | Rotary seal ring     | Silicon carbide |
| B   | Stationary seal ring | Silicon carbide |
| C   | O-Ring               | FPM             |
| D   | Bellows              | FPM             |
| E   | Frame + Spring       | AISI 316        |
| F   | Spacer ring          | AISI 316        |



SPECIAL

| REF | PART NAME            | MATERIAL<br>Q1AEGG |
|-----|----------------------|--------------------|
| A   | Rotary seal ring     | Silicon carbide    |
| B   | Stationary seal ring | Metallised carbon  |
| C   | O-Ring               | EPDM               |
| D   | O-Ring               | EPDM               |
| E   | O-Ring               | EPDM               |
| F   | Self-driving spring  | AISI 316           |
| G   | Frame                | AISI 316           |

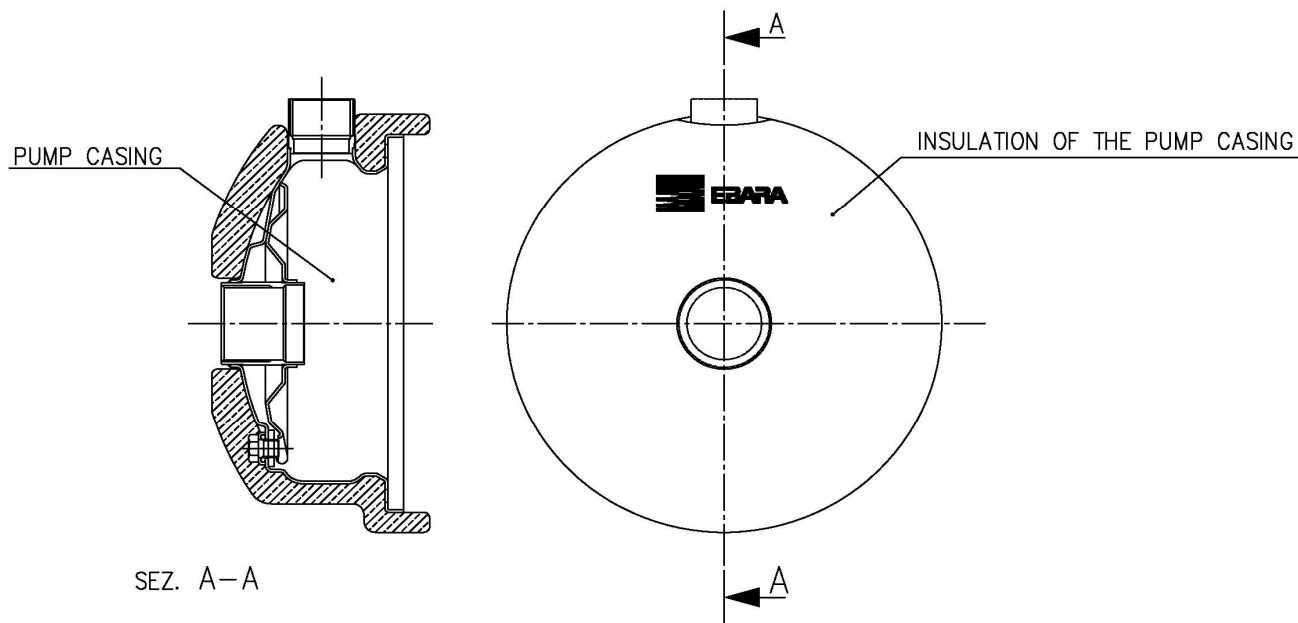
## BEARINGS

| Pump type    |             | Ball Bearing |             |           |             |
|--------------|-------------|--------------|-------------|-----------|-------------|
| Single Phase | Three Phase | Pump side    |             | Fan side  |             |
|              |             | [1~]         | [3~]        | [1~]      | [3~]        |
| CDXM 70/05   | CDX 70/05   | 6203 2RSH    | 6203-2DW C3 | 6202 2RSH | 6202-2DW C3 |
| CDXM 70/07   | CDX 70/07   | 6203 2RSH    | 6203-2DW C3 | 6202 2RSH | 6202-2DW C3 |
| CDXM 90/10   | CDX 90/10   | 6203 2RSH    | 6203-ZZ C3  | 6202 2RSH | 6202-ZZ C3  |
| CDXM 120/07  | CDX 120/07  | 6203 2RSH    | 6203-2DW C3 | 6202 2RSH | 6202-2DW C3 |
| CDXM 120/12  | CDX 120/12  | 6203 2RSH    | 6203-ZZ C3  | 6202 2RSH | 6202-ZZ C3  |
| CDXM 120/20  | CDX 120/20  | 6204 2RSH    | 6204-ZZ C3  | 6203 2RSH | 6203-ZZ C3  |
| CDXM 200/12  | CDX 200/12  | 6203 2RSH    | 6203-ZZ C3  | 6202 2RSH | 6202-ZZ C3  |
| CDXM 200/20  | CDX 200/20  | 6204 2RSH    | 6204-ZZ C3  | 6203 2RSH | 6203-ZZ C3  |
| -            | CDX 200/25  | -            | 6204-ZZ C3  | -         | 6203-ZZ C3  |

[1~] Single phase

[3~] Three phase

THERMAL INSULATION

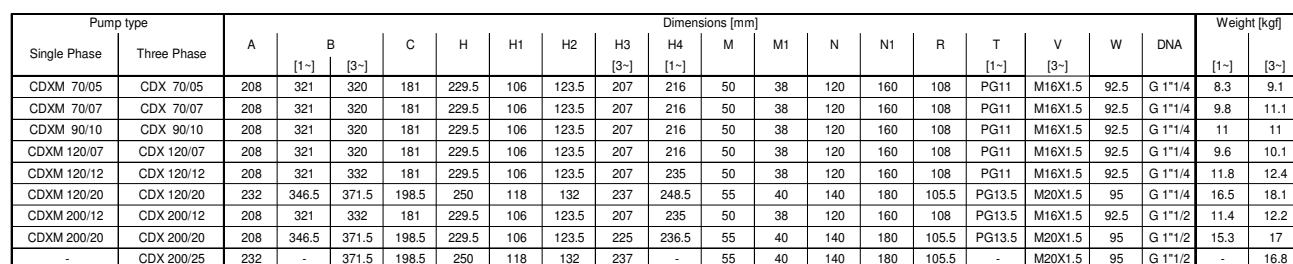


| Pump Type  | Insulation of the pump casing |
|------------|-------------------------------|
| CDX 70/05  | ON REQUEST                    |
| CDX 70/07  |                               |
| CDX 90/10  |                               |
| CDX 120/07 |                               |
| CDX 120/12 |                               |
| CDX 120/20 |                               |
| CDX 200/12 |                               |
| CDX 200/20 |                               |
| CDX 200/25 |                               |

# CDX

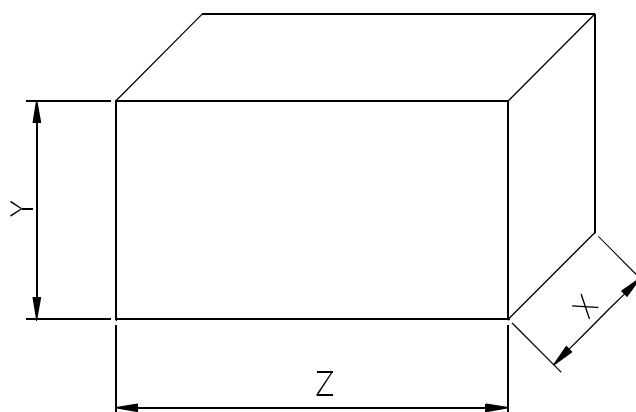
## 50Hz

## PUMP



[3~] Three phase

## PACKING



| Pump type    |             | Packing [mm] |      |      |      |      |      | Weight [kgf] |      |
|--------------|-------------|--------------|------|------|------|------|------|--------------|------|
| Single Phase | Three Phase | X            |      | Y    |      | Z    |      | [1~]         | [3~] |
|              |             | [1~]         | [3~] | [1~] | [3~] | [1~] | [3~] |              |      |
| CDXM 70/05   | CDX 70/05   | 247          | 247  | 289  | 289  | 402  | 402  | 9            | 9.8  |
| CDXM 70/07   | CDX 70/07   | 247          | 247  | 289  | 289  | 402  | 402  | 10.4         | 11.9 |
| CDXM 90/10   | CDX 90/10   | 247          | 247  | 289  | 289  | 402  | 402  | 11.7         | 11.6 |
| CDXM 120/07  | CDX 120/07  | 247          | 247  | 289  | 289  | 402  | 402  | 10.2         | 11.9 |
| CDXM 120/12  | CDX 120/12  | 244          | 244  | 308  | 308  | 452  | 452  | 12.5         | 13.2 |
| CDXM 120/20  | CDX 120/20  | 244          | 244  | 308  | 308  | 452  | 452  | 17.2         | 18.9 |
| CDXM 200/12  | CDX 200/12  | 244          | 244  | 308  | 308  | 452  | 452  | 12.1         | 12.9 |
| CDXM 200/20  | CDX 200/20  | 244          | 244  | 308  | 308  | 452  | 452  | 16           | 17.7 |
| -            | CDX 200/25  | -            | 244  | -    | 308  | -    | 452  | -            | 17.6 |

[1~] Single phase

[3~] Three phase

## MOTOR DATA

| Pump type    |             | Power |      | Efficiency   |             | Capacitor         |                 | Efficiency (% load) |      |      | Input [kW]   |             | Full load current [A] |                   |                   | Locked rotor current [A] |                   |                   |
|--------------|-------------|-------|------|--------------|-------------|-------------------|-----------------|---------------------|------|------|--------------|-------------|-----------------------|-------------------|-------------------|--------------------------|-------------------|-------------------|
| Single Phase | Three Phase | [kW]  | [HP] | Single Phase | Three Phase | Single Phase [μF] | Three Phase [V] | Three phase η %     |      |      | Single Phase | Three Phase | Single Phase 230 V    | Three Phase 230 V | Three Phase 400 V | Single Phase 230 V       | Three Phase 230 V | Three Phase 400 V |
| CDXM 70/05   | CDX 70/05   | 0.37  | 0.5  | -            | IE3         | 12.5              | 450             | 75.1                | 78.5 | 78.0 | 0.75         | 0.71        | 3.4                   | 2.4               | 1.4               | 10.1                     | 12.7              | 7.3               |
| CDXM 70/07   | CDX 70/07   | 0.55  | 0.75 | -            | IE3         | 16                | 450             | 80.2                | 82.8 | 82.9 | 1.1          | 0.91        | 5.0                   | 3.0               | 1.7               | 16.1                     | 20.5              | 11.8              |
| CDXM 90/10   | CDX 90/10   | 0.75  | 1.0  | -            | IE3         | 20                | 450             | 80.9                | 82.3 | 82.1 | 1.20         | 1.05        | 5.6                   | 3.3               | 1.9               | 22.7                     | 19.7              | 11.4              |
| CDXM 120/07  | CDX 120/07  | 0.55  | 0.75 | -            | IE3         | 16                | 450             | 80.2                | 82.8 | 82.9 | 1.00         | 0.91        | 4.6                   | 3.0               | 1.7               | 16.1                     | 20.5              | 11.8              |
| CDXM 120/12  | CDX 120/12  | 0.9   | 1.2  | -            | IE3         | 31.5              | 450             | 81.7                | 83.1 | 82.4 | 1.60         | 1.34        | 6.9                   | 4.3               | 2.5               | 25.0                     | 28.8              | 16.6              |
| CDXM 120/20  | CDX 120/20  | 1.5   | 2.0  | -            | IE3         | 40                | 450             | 84.2                | 86.8 | 86.9 | 2.10         | 2.01        | 9.3                   | 7.1               | 4.1               | 43.0                     | 66.6              | 38.4              |
| CDXM 200/12  | CDX 200/12  | 0.9   | 1.2  | -            | IE3         | 31.5              | 450             | 81.7                | 83.1 | 82.4 | 1.40         | 1.34        | 6.3                   | 4.3               | 2.5               | 25.0                     | 28.8              | 16.6              |
| CDXM 200/20  | CDX 200/20  | 1.5   | 2.0  | -            | IE3         | 40                | 450             | 84.2                | 86.8 | 86.9 | 2.30         | 2.01        | 10.2                  | 7.1               | 4.1               | 43.0                     | 66.6              | 38.4              |
| -            | CDX 200/25  | 1.8   | 2.5  | -            | IE3         | -                 | -               | 86.2                | 87.0 | 86.0 | -            | 2.55        | -                     | 8.2               | 4.7               | -                        | 66.6              | 38.43             |

## NOISE DATA

| Pump type    |             | Power |      | L <sub>pA</sub> - dB(A) * |
|--------------|-------------|-------|------|---------------------------|
| Single Phase | Three Phase | [kW]  | [HP] |                           |
| CDXM 70/05   | CDX 70/05   | 0.37  | 0.5  | 61                        |
| CDXM 70/07   | CDX 70/07   | 0.55  | 0.75 | 62                        |
| CDXM 90/10   | CDX 90/10   | 0.75  | 1    |                           |
| CDXM 120/07  | CDX 120/07  | 0.55  | 0.75 |                           |
| CDXM 120/12  | CDX 120/12  | 0.9   | 1.2  |                           |
| CDXM 120/20  | CDX 120/20  | 1.5   | 2    | 64                        |
| CDXM 200/12  | CDX 200/12  | 0.9   | 1.2  | 62                        |
| CDXM 200/20  | CDX 200/20  | 1.5   | 2    | 64                        |
| -            | CDX 200/25  | 1.8   | 2.5  | 65                        |

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