

# Technical data

Pump name 2CDX 70/12

|          |                   |           |
|----------|-------------------|-----------|
| Customer | Date 23-June-2020 | Company   |
| Contact  | Item no.          | Issued by |
| Phone    | Project           | Phone     |
| E-mail   | Project ID        | E-mail    |

## Requested data

|   |                           |                     |                    |                        |
|---|---------------------------|---------------------|--------------------|------------------------|
| 1 | Pump type                 | CENTRIFUGAL PUMPS   | Fluid              | Water, clean           |
| 2 | Number of pumps / Reserve | 1 / 0               | Liquid temperature | K 293                  |
| 3 | Flow                      | m <sup>3</sup> /h 0 | Kin. viscosity     | mm <sup>2</sup> /s 1   |
| 4 | Head                      | m 0                 | Vapour pressure    | kPa 2.2                |
| 5 | Geodetic head             | m 0                 | PH value           | 7                      |
| 6 | Inlet pressure (pin)      | kPa 10              | Density            | kg/m <sup>3</sup> 1000 |
| 7 | Available system NPSH     | 0                   | Solids             | Weight % 0             |
| 8 | Ambient temperature       | K 290               |                    |                        |

## Pump

|    |                           |                                   |                                      |                                   |
|----|---------------------------|-----------------------------------|--------------------------------------|-----------------------------------|
| 9  | Pump name                 | 2CDX 70/12                        | Frequency                            | Hz 50                             |
| 10 | Design                    | CENTRIFUGAL PUMPS                 | Installation type                    | STANDARD                          |
| 11 | Manufacturer              | EPE                               | Impeller                             | Max. mm -                         |
| 12 | Speed                     | 1/min 2800                        | Diameter                             | Designed mm 153(No.1) / 132(No.1) |
| 13 | No. of Stage              | 2                                 |                                      | Min. mm -                         |
| 14 | Connection Suction side   | UNI ISO 228-1                     | Flow                                 | Operating m <sup>3</sup> /h       |
| 15 | Connection Discharge side | UNI ISO 228-1                     |                                      | Max- m <sup>3</sup> /h 4.8        |
| 16 | Max Working Pressure      | kPa 800                           |                                      | Min- m <sup>3</sup> /h 1.2        |
| 17 | Shut-off head             | kPa 470.08                        | Head                                 | Operating m                       |
| 18 | Total weight              | kg See the table of "Dimensions". |                                      | - (Qmax.) m 30.0                  |
| 19 | Shaft power               | kW                                |                                      | - (Qmin.) m 44.5                  |
| 20 |                           |                                   | Max. Shaft Power at max. impeller kW | 1.06                              |
| 21 | Required pump NPSH        | m                                 | Efficiency                           | %                                 |

## Materials

|    |          |          |  |  |
|----|----------|----------|--|--|
| 22 | Impeller | AISI 304 |  |  |
| 23 | Casing   | AISI 304 |  |  |
| 24 | Shaft    | AISI 304 |  |  |
| 25 |          |          |  |  |
| 26 |          |          |  |  |
| 27 |          |          |  |  |

## Motor

|    |                      |                                 |                  |       |
|----|----------------------|---------------------------------|------------------|-------|
| 28 | Manufacturer         | EPE Standard                    | Insulation class | F     |
| 29 | Type                 | TEFC_2CDX 70/12_230_Three Phase | Phases           | 3~    |
| 30 | Specific design      | IE3 / 50 Hz / Pole pairs 1      | Frame size       |       |
| 31 | Rated power          | kW 0.9                          | Weight           | kg 0  |
| 32 | Number of poles      | 2                               | Electric voltage | V 230 |
| 33 | Speed                | 1/min 2800                      | Electric current | A 4.3 |
| 34 | Degree of protection | IP 55                           |                  |       |
| 35 |                      |                                 |                  |       |

## Remarks

|  |
|--|
|  |
|--|

# Performance curve

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## Requested data

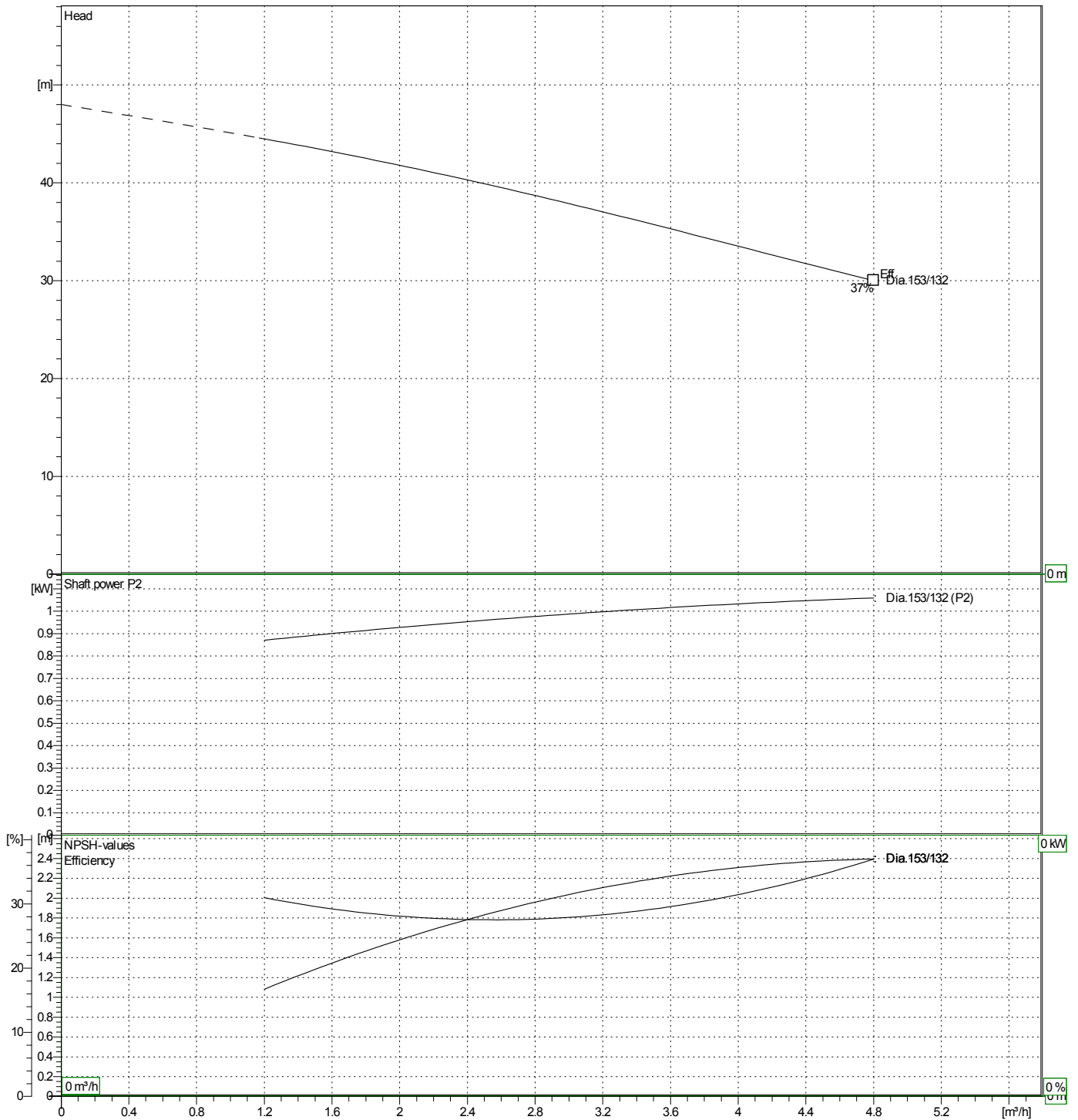
|   |               |                   |   |
|---|---------------|-------------------|---|
| 1 | Flow          | m <sup>3</sup> /h | 0 |
| 2 | Head          | m                 | 0 |
| 3 | Geodetic head | m                 | 0 |

## Pump

|                |                   |                              |                       |
|----------------|-------------------|------------------------------|-----------------------|
| Operating Flow | m <sup>3</sup> /h | Impeller Diameter Designedmm | 153(No.1) / 132(No.1) |
| Operating Head | m                 | Frequency                    | Hz 50                 |
|                |                   | Speed                        | 1/min                 |

Test standard: ISO 9906:2012 - Grade3B

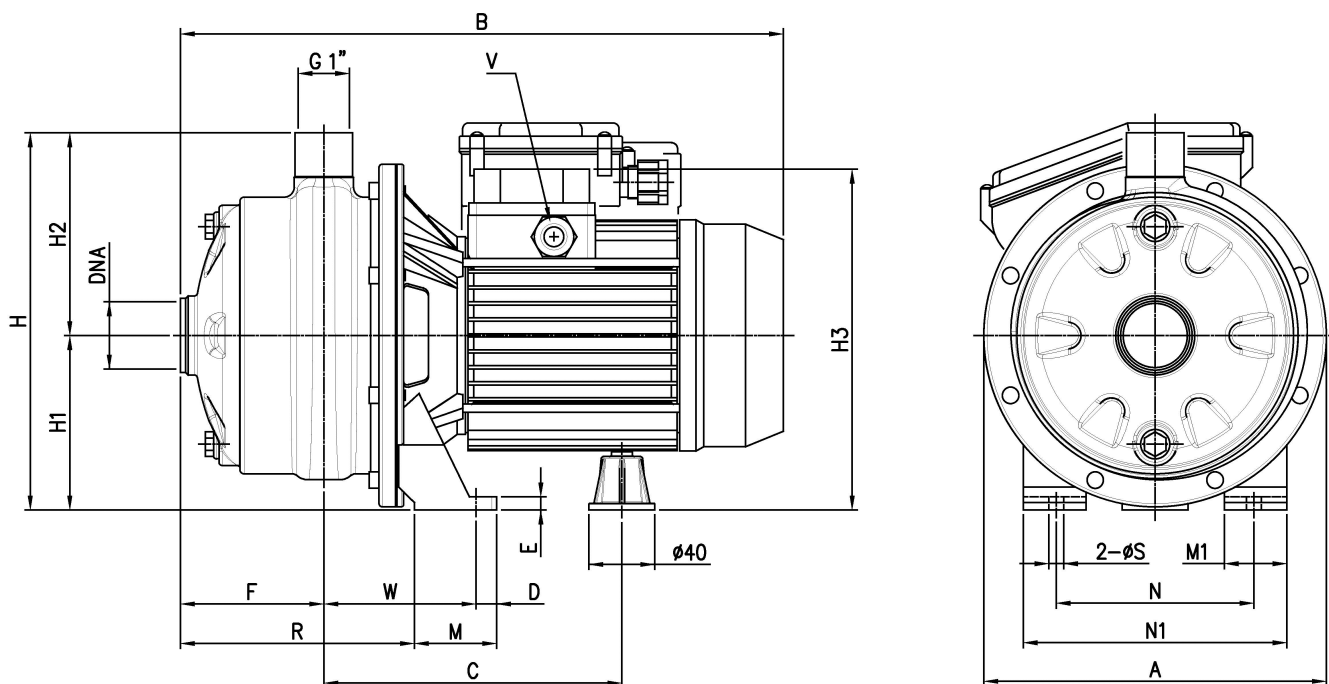
Water, clean [100%]; 293K; 998.3kg/m<sup>3</sup>; 1mm<sup>2</sup>/s



# Dimensions

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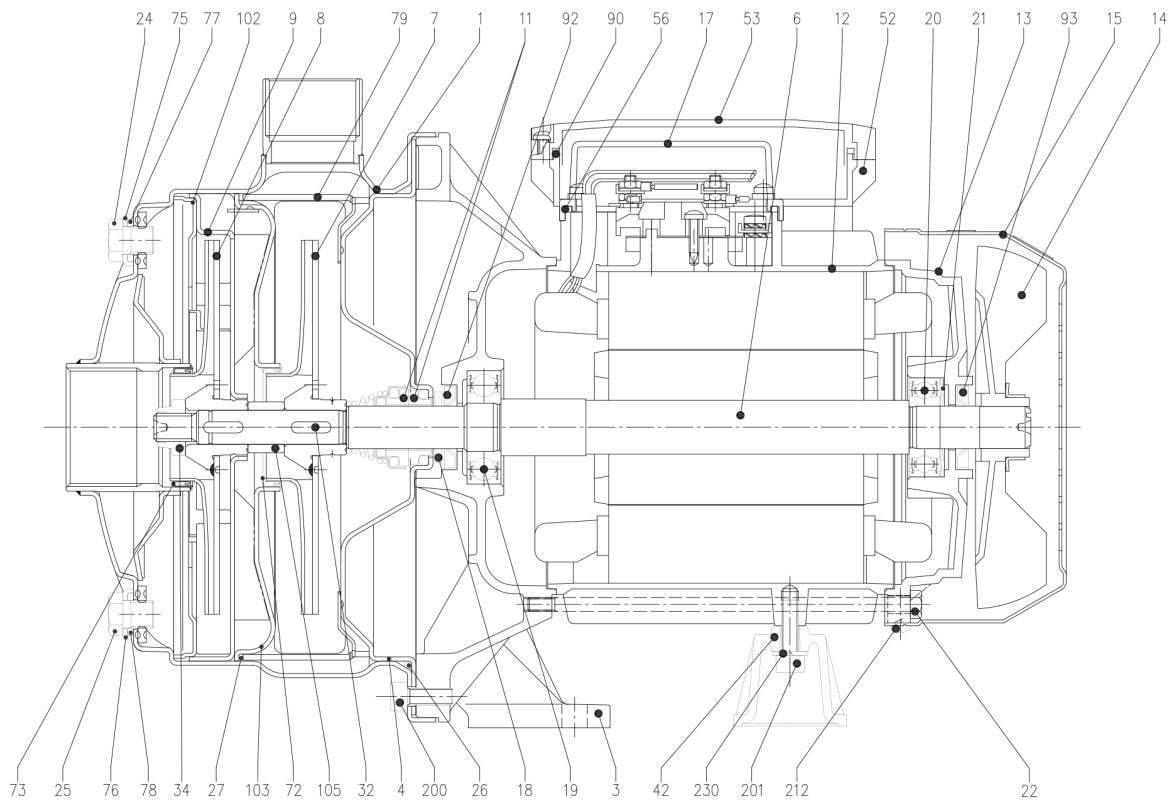


| Dimensions in |     | mm     |            |         |  |  |  |
|---------------|-----|--------|------------|---------|--|--|--|
| 1             | A   | 208    | N          | 140     |  |  |  |
| 2             | B   | 366    | N1         | 160     |  |  |  |
| 3             | C   | 181    | R          | 142     |  |  |  |
| 4             | D   | 12.5   | S          | 9       |  |  |  |
| 5             | DNA | G1 1/4 | V          | M16X1.5 |  |  |  |
| 6             | E   | 8      | W          | 95      |  |  |  |
| 7             | F   | 89     | Weight P&M | 13.7 kg |  |  |  |
| 8             | H   | 229    |            |         |  |  |  |
| 9             | H1  | 106    |            |         |  |  |  |
| 10            | H2  | 123    |            |         |  |  |  |
| 11            | H3  | 207    |            |         |  |  |  |
| 12            | M   | 50     |            |         |  |  |  |
| 13            | M1  | 40     |            |         |  |  |  |

# (1/3) Construction

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(2/3)

# Construction

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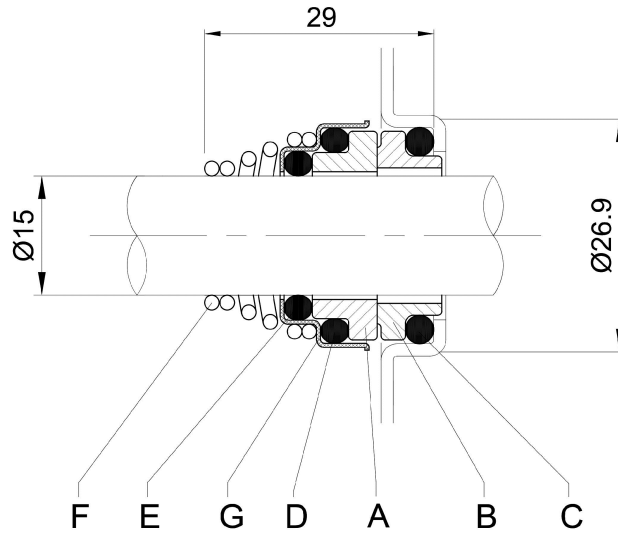
| N°  | PART NAME                     | MATERIAL  | DIMENSION | STANDARD | Q.TY |
|-----|-------------------------------|---|-----------|----------|------|
| 1   | Casing                        | AISI 304 / AISI 316L [6]                            |           |          | 1    |
| 3   | Motor bracket                 | [4]   |           |          | 1    |
| 4   | Casing cover                  | AISI 304 / AISI 316L [6]                            |           |          | 1    |
| 6   | Shaft with rotor              | AISI 303 / AISI 316L [6] (Wet extension)            |           |          | 1    |
| 7   | Impeller                      | AISI 304 / AISI 316L [6]                            |           |          | 1    |
| 8   | Impeller                      | AISI 304 / AISI 316L [6]                            |           |          | 1    |
| 9   | Diffuser                      | AISI 304 / AISI 316L [6]                            |           |          | 1    |
| 11  | Mechanical seal [7]           | Ceramic/Carbon/NBR                                  |           |          | 1    |
| 12  | Motor frame with stator       | -   |           |          | 1    |
| 13  | Motor cover                   | Aluminium   |           |          | 1    |
| 14  | Fan                           | PA  |           |          | 1    |
| 15  | Fan cover                     | Fe P04 Galvanized                                   |           |          | 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 Galvanized                                   |           |          | 4    |
| 24  | Priming plug                  | AISI 304 / AISI 316 [6]                             |           |          | 1    |
| 25  | Drain plug                    | AISI 304 / AISI 316 [6]                             |           |          | 1    |
| 26  | O-ring [3]                    | NBR   |           |          | 1    |
| 27  | O-ring [3]                    | NBR   |           |          | 1    |
| 32  | Key                           | AISI 316  |           |          | 2    |
| 34  | Impeller nut                  | Stainless steel A2-70                               | M10X1,25  | UNI 7474 | 1    |
| 42  | Motor support                 | Aluminium   |           |          | 1    |
| 52  | Capacitor box [1]             | ABS class V-0                                       |           |          | 1    |
| 53  | Capacitor box cover [1]       | ABS class V-0                                       |           |          | 1    |
| 56  | Box gasket                    | NBR   |           |          | 1    |
| 72  | Casing ring [5]               | NBR   |           |          | 1    |
| 73  | Casing ring [5]               | NBR   |           |          | 1    |
| 75  | Washer                        | AISI 304  |           |          | 1    |
| 76  | Washer                        | AISI 304  |           |          | 1    |
| 77  | O-ring [3]                    | NBR   |           |          | 1    |
| 78  | O-ring [3]                    | NBR   |           |          | 1    |
| 79  | Space diffuser                | AISI 304 / AISI 316 [6]                             |           |          | 1    |
| 90  | Terminal box cover gasket [1] | NBR   |           |          | 1    |
| 92  | Lip seal                      | NBR   |           |          | 1    |
| 93  | Lip seal                      | NBR   |           |          | 1    |
| 102 | Suction cover                 | AISI 304 / AISI 316 [6]                             |           |          | 1    |
| 103 | Conveyor cover                | AISI 304 / AISI 316 [6]                             |           |          | 1    |
| 105 | Sleeve                        | AISI 304 / AISI 316 [6]                             |           |          | 1    |
| 200 | Screw                         | 70/10, 120/15, 120/20, 200/30                       | M6X16     | UNI 5931 | 8    |
|     |                               | 70/12, 70/15, 70/20, 120/30, 120/40, 200/40, 200/50 | M8X18     |          |      |
| 201 | Screw                         | Zn. Steel cl.8.8                                    |           | UNI 5931 | 1    |
| 212 | Screw                         | Stainless steel A2                                  | 3.5X9.5   | UNI 6954 | 4    |
| 230 | Washer                        | Steel C70   | 6,4       | UNI 1751 | 1    |

- [1] Only for single phase
- [2] Only for three phase
- [3] FPM for H-HS-HW-HSW  
EPDM for E and Special Mechanical Seals
- [4] Material: Aluminium for version up to 1.5 kW included  
Cast iron for version 2.2 kW and above
- [5] FPM for H-HS-HW-HSW
- [6] Only for "L" version
- [7] See **CONSTRUCTION 3**

# (3/3) Construction

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| REF | PART NAME            | MATERIAL<br>Standard and L version |
|-----|----------------------|------------------------------------|
| 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                           |