

# Technical Data

Booster set name

2GPE EVMSG5 15N5/3 ESPT

|          |            |            |           |
|----------|------------|------------|-----------|
| Customer | Date       | 09.06.2024 | Company   |
| Contact  | Item no.   |            | Issued by |
| Phone    | Project    |            | Phone     |
| E-mail   | Project ID |            | E-mail    |

## Requested data

|   |                        |                               |                       |       |
|---|------------------------|-------------------------------|-----------------------|-------|
| 1 | Pump type              | Booster Set                   | Fluid                 | Water |
| 2 | Number of pumps        | 2                             | Liquid temperature °C | 20    |
| 3 | Flow m³/h              |                               | Kin. viscosity cSt    | 1.005 |
| 4 | Head m                 |                               | Vapour pressure kPa   | 2.34  |
| 5 | Geodetic head m        |                               | PH value              |       |
| 6 | Inlet pressure kPa     | 0                             | Density kg/m³         | 998.3 |
| 7 | Available system NPSH  | Ask our technical department. | Solids Weight %       | 0     |
| 8 | Ambient temperature °C | 20                            | Installation height m | 100   |

## Booster Set

|    |                           |                                |                                      |                   |
|----|---------------------------|--------------------------------|--------------------------------------|-------------------|
| 9  | Booster set name          | 2GPE EVMSG5 15N5/3 ESPT        | Frequency Hz                         | 50                |
| 10 | Design                    | Booster Set                    |                                      |                   |
| 11 | Manufacturer              | EBARA                          | Impeller Dia.                        | Max. mm 91        |
| 12 | Speed rpm                 | 2900                           |                                      | Designed mm 91    |
| 13 | No. of Stage              | 15                             |                                      | Min. mm 91        |
| 14 | Connection Suction side   | UNI EN ISO 228 PN16            | Flow                                 | Operating m³/h    |
| 15 | Connection Discharge side | UNI EN ISO 228 PN16            |                                      | Max- m³/h 7.8     |
| 16 | Max Working Pressure kPa  | 1600                           |                                      | Min- m³/h 2.4     |
| 17 | Shut-off head kPa         | 1392.46                        | Head                                 | Operating m       |
| 18 | Total weight kg           | See the table of "Dimensions". |                                      | - (Qmax.) m 76.5  |
| 19 | Shaft power kW            |                                |                                      | - (Qmin.) m 134.8 |
| 20 |                           |                                | Max. Shaft Power at max. impeller kW | 2.99              |
| 21 | Required NPSH m           |                                | Efficiency %                         |                   |

## Materials

|    |                        |                  |        |          |
|----|------------------------|------------------|--------|----------|
| 22 | Frame                  | Galvanized steel | Shaft  | AISI 304 |
| 23 | Manifold               | AISI 304         | O-ring | EPDM     |
| 24 | Check valve            | Brass / NBR      |        |          |
| 25 | Ball / Butterfly valve | Brass / PTFE     |        |          |
| 26 | Impeller               | AISI 304         |        |          |
| 27 | Casing                 | Cast iron        |        |          |

## Motor

|    |                      |                                   |                    |     |
|----|----------------------|-----------------------------------|--------------------|-----|
| 28 | Manufacturer         | ETM                               | Insulation class   | F   |
| 29 | Type                 | TEFC_EVMS5 15/3.0_400_Three Phase | Phases             | 3~  |
| 30 | Specific design      | IE3 / 50 Hz / Pole pairs 1        | Frame size         | 100 |
| 31 | Rated power kW       | 3                                 | Weight; motor kg   | 22  |
| 32 | Number of poles      | 2                                 | Electric voltage V | 400 |
| 33 | Speed rpm            | 2890                              | Electric current A | 6.4 |
| 34 | Degree of protection | IP 55                             |                    |     |
| 35 |                      |                                   |                    |     |

## Remarks

# Performance curve

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## Requested data

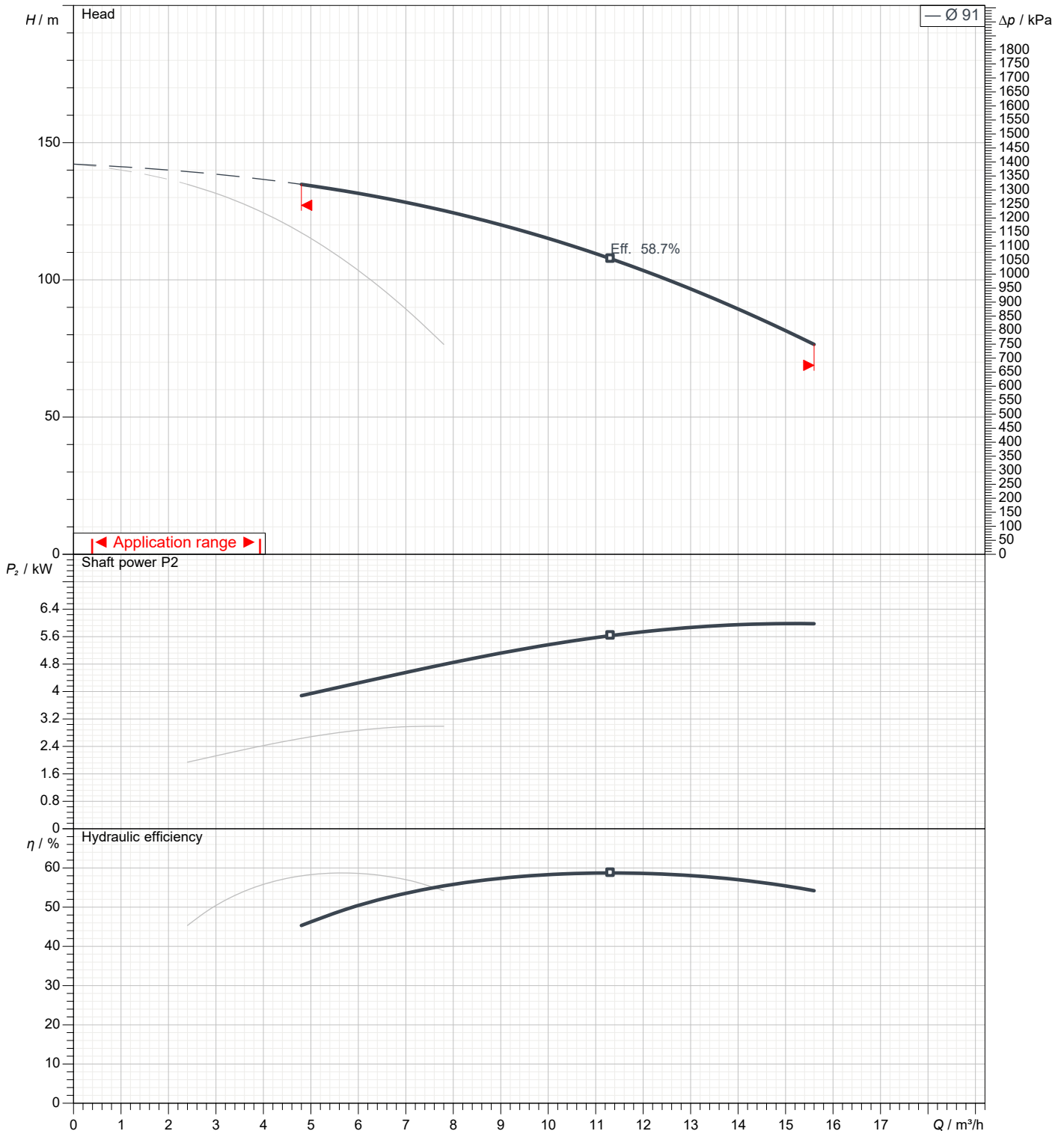
|   |               |      |  |
|---|---------------|------|--|
| 1 | Flow          | m³/h |  |
| 2 | Head          | m    |  |
| 3 | Geodetic head | m    |  |

## Booster set

|                           |      |    |                 |     |      |
|---------------------------|------|----|-----------------|-----|------|
| Operating flow            | m³/h |    | Frequency       | Hz  | 50   |
| Operating head            | m    |    | Number of poles |     | 2    |
| ImpellerDiameter Designed | mm   | 91 | Speed           | rpm | 2900 |

Test standard: ISO 9906:2012 - Grade3B

Water; 20°C; 998.3kg/m³; 1cSt

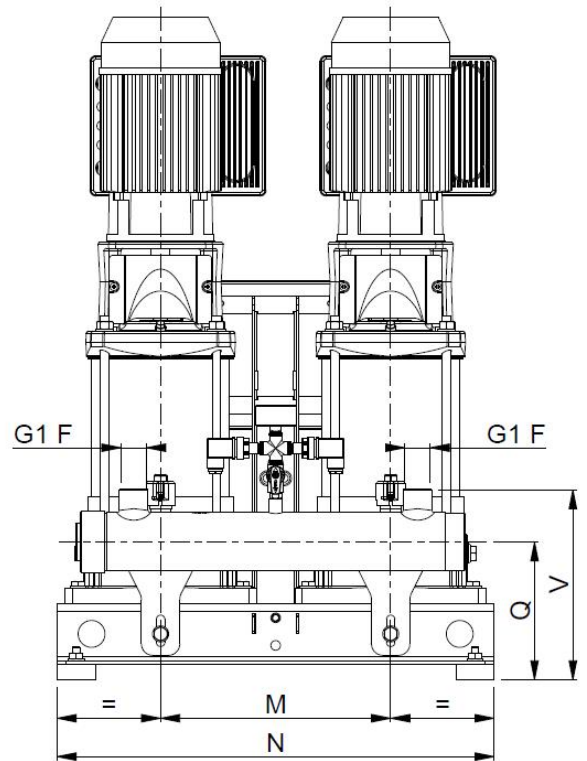
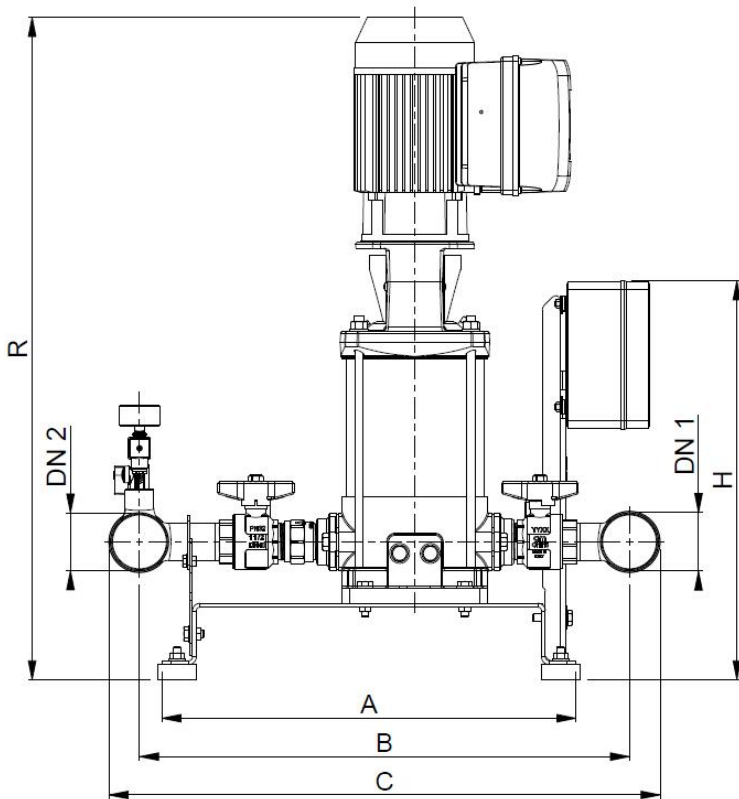


# Dimensions

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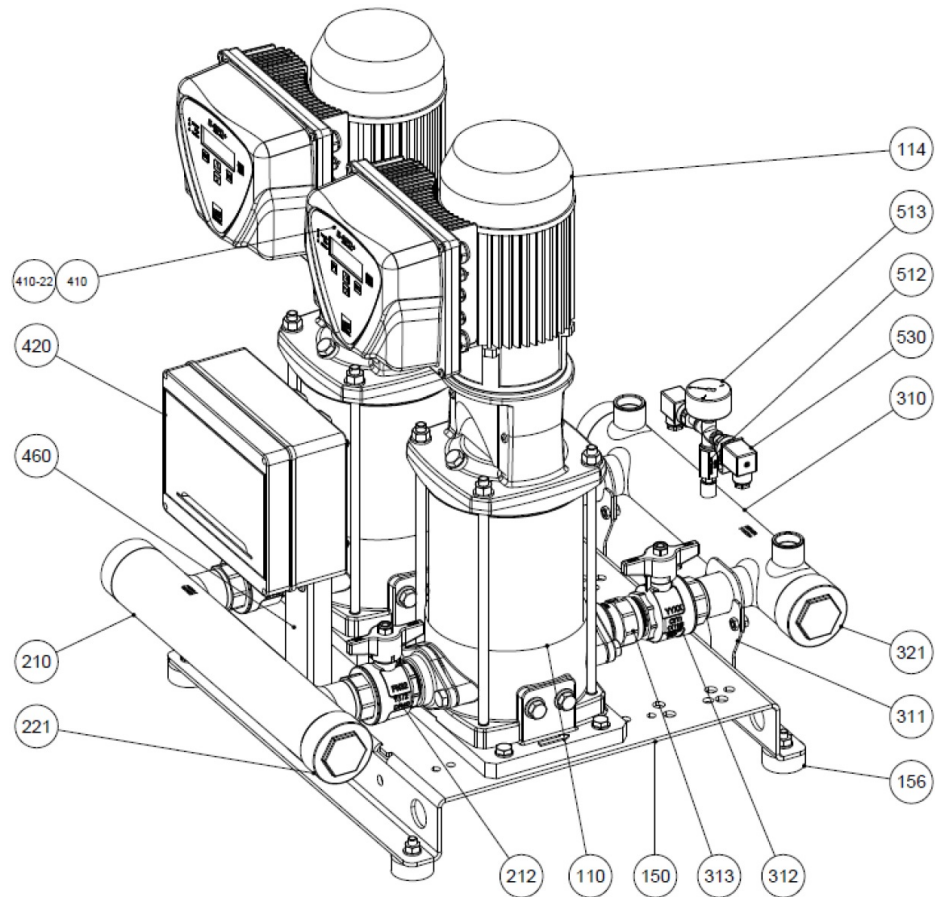
| Dimensions in |           | mm   |  |  |  |  |  |  |
|---------------|-----------|------|--|--|--|--|--|--|
| 1             | A         | 380  |  |  |  |  |  |  |
| 2             | B         | 565  |  |  |  |  |  |  |
| 3             | C         | 625  |  |  |  |  |  |  |
| 4             | DN1       | G 2  |  |  |  |  |  |  |
| 5             | DN2       | G 2  |  |  |  |  |  |  |
| 6             | H         | 535  |  |  |  |  |  |  |
| 7             | M         | 300  |  |  |  |  |  |  |
| 8             | N         | 550  |  |  |  |  |  |  |
| 9             | Q         | 150  |  |  |  |  |  |  |
| 10            | R         | 1100 |  |  |  |  |  |  |
| 11            | V         | 210  |  |  |  |  |  |  |
| 12            | Weight kg | 116  |  |  |  |  |  |  |
| 13            |           |      |  |  |  |  |  |  |
| 14            |           |      |  |  |  |  |  |  |
| 15            |           |      |  |  |  |  |  |  |

# (1/2) Construction

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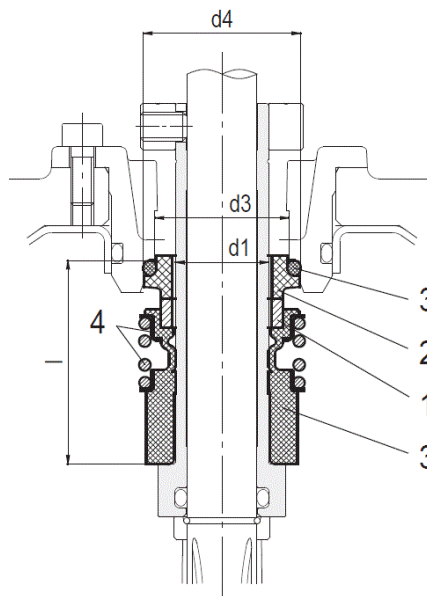


| N°     | PART NAME              | MATERIAL               | Quantity |
|--------|------------------------|------------------------|----------|
| 110    | Principal pump         | -                      | 2        |
| 114    | Electric motor         | -                      | 2        |
| 150    | Baseplate              | Galvanized steel       | 1        |
| 156    | Baseplate foot         | SBR                    | 4        |
| 210    | Suction manifold       | AISI 304               | 1        |
| 212    | Ball valve             | Brass / P.T.F.E.       | 2        |
| 221    | Threaded female cap    | AISI 304               | 1        |
| 310    | Discharge manifold     | AISI 304               | 1        |
| 311    | Manifold bracket       | Galvanized steel       | 2        |
| 312    | Ball valve             | Brass / P.T.F.E.       | 2        |
| 313    | Check valve            | Brass / NBR            | 2        |
| 321    | Threaded female cap    | AISI 304               | 1        |
| 410    | E-SPD+                 | -                      | 2        |
| 410-22 | E-SPD+ adaptor         | -                      | 2        |
| 420    | Protection panel       | -                      | 1        |
| 460    | Protection panel frame | Galvanized steel       | 1        |
| 512    | Ball valve             | Brass / P.T.F.E.       | 1        |
| 513    | Pressure gauge         | Copper alloy / plastic | 1        |
| 530    | Pressure transmitter   | -                      | 2        |

# (2/2) Construction

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up to 16 bar  
Cartridge Unbalanced type

| Type key | Availability | Max operating pressure | Max operating temperature | Shaft seal type |      | Shaft seal material |      |                 |      |            |      |                    |        |      |
|----------|--------------|------------------------|---------------------------|-----------------|------|---------------------|------|-----------------|------|------------|------|--------------------|--------|------|
|          |              |                        |                           | Cartridge       |      | 1                   |      | 2               |      | 3          |      | 4                  |        | 5    |
|          |              |                        |                           | Type            | Code | Rotating part       | Code | Stationary part | Code | Elastomers | Code | Compression spring | Collar | Code |
| Q1BEG    | ●            | 16 bar                 | - 30°C to + 120°C         | Unbalanced      | (-)  | SiC                 | (Q1) | Carbon          | (B)  | EPDM       | (E)  | AISI 316           | (G)    |      |

| Pump model    | Shaft seal type |            | Max operating pressure | d1 [mm] | d2 [mm] | d3 [mm] | d4 [mm] | l [mm] |
|---------------|-----------------|------------|------------------------|---------|---------|---------|---------|--------|
| EVMS 1/3/5    | Cartridge       | Unbalanced | 16 bar                 | 16      | -       | 23      | 27      | 35     |
|               |                 | Balanced   | 25 bar                 |         | 20      |         |         | 42.5   |
| EVMS 10/15/20 | Cartridge       | Unbalanced | 16 bar                 | 20      | -       | 29      | 35      | 37.5   |
|               |                 | Balanced   | 25 bar                 |         | 24      |         |         | 45     |