



# RADIAL PISTON DOUBLE PUMPS

Model : 2RC\*\*\*\*

Ref. No. D 09046

Release 11 / 2020

ENGINEERING - 1 of 4

A Polyhydron Group Company

## Description

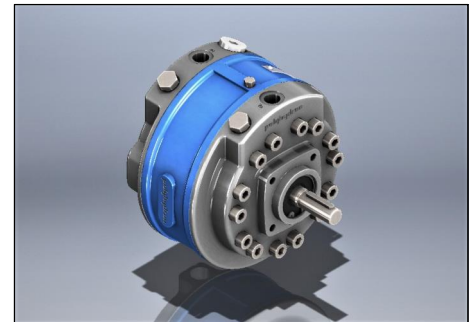
Model 2RC\*\*\*\* are rugged Radial Piston Double Pumps with 3, 5 or 7 pumping elements in each section of the pump. These pumps are valve controlled and there is no restriction on direction of rotation of the pump.

These pumps can be submerged in oil or externally mounted above oil level.

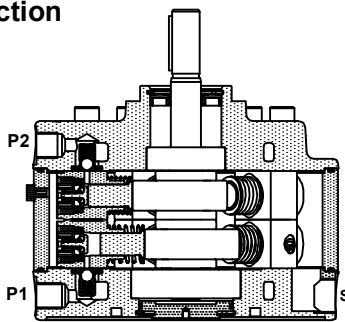
Pumps with model code 2RCE\*\*\* have extension shaft for through drive and are available with extension bracket assembly for coupling a pump having standard flange as per ISO 3019/1.

They are available with 21 flow combination and 7 pressure ratings.

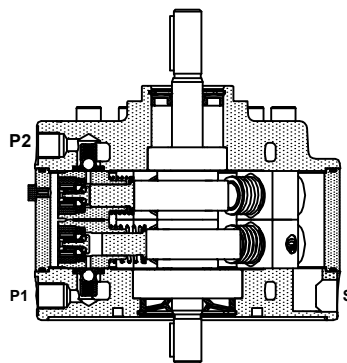
These pumps give fixed output per revolution of the shaft.



## Section

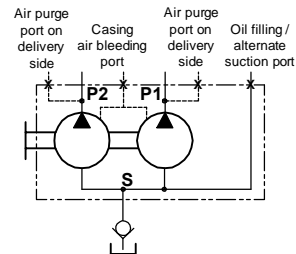


Model : 2RC\*\*\*

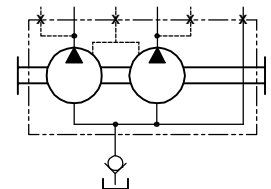


Model : 2RCE\*\*\*

## Hydraulic symbol



Model : 2RC\*\*\*



Model : 2RCE\*\*\*

## Technical specifications

|                            |   |  |
|----------------------------|---|--|
| Designation                | : | 2RC is a basic Radial piston double pump with casing. 2RCE is a Radial piston double pump with casing and extension shaft.   |
| Design                     | : | Radial piston, valve controlled.   |
| No. of elements            | : | 3, 5 or 7, each at P1 and P2 port depending upon flow requirement.   |
| Mounting                   | : | Face mounting with Air purge port at highest level.  |
| Interface                  | : | Factory standard.  |
| Direction of rotation      | : | 2RC - No restriction on direction of rotation.<br>2RCE - Depends upon the direction rotation of pump attached.   |
| Connection                 | : | Suction port - G1/2 female.<br>Delivery (port P1 and P2) - G3/8 female.  |
| Speed range                | : | 300 to 2000 r/min.   |
| Max. Suction Head          | : | At no time allow the oil level in the tank to fall 500 mm below the axis of the pump, when the pump is mounted horizontally, or 500 mm below the mounting face of the pump, when the pump is mounted vertically. |
| Flow and Pressure          | : | Refer Table no. 1  |
| Torque limitations         | : | Input drive shaft - 75 Nm<br>Extension shaft - 53 Nm   |
| Hydraulic medium           | : | Mineral oil.   |
| Temperature range          | : | -20°C to + 80°C.   |
| Viscosity range            | : | 10 cSt to 100 cSt.   |
| Fluid cleanliness required | : | ISO 4406 20/18/15 or better.   |
| Mass                       | : | Model : 2RC3 2RCE3 2RC5 2RCE5 2RC7 2RCE7<br>Kg : 11.2 11.9 16.2 17 17.71 18.41   |

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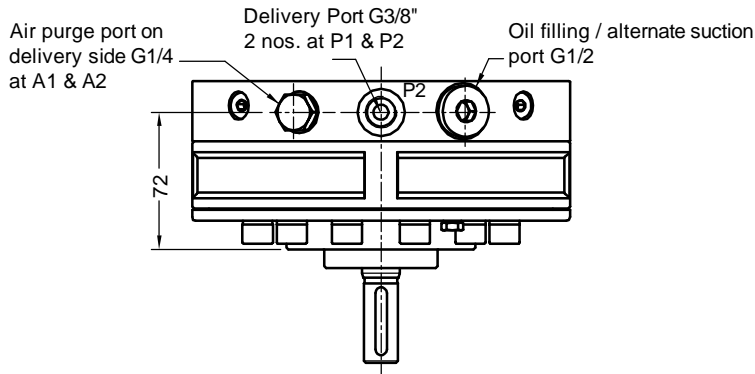
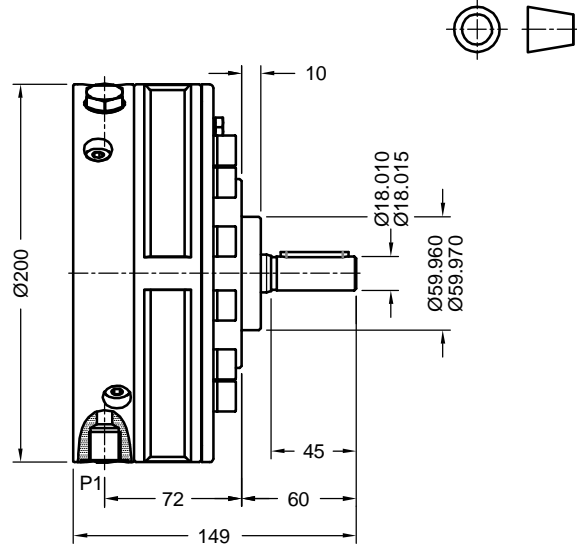
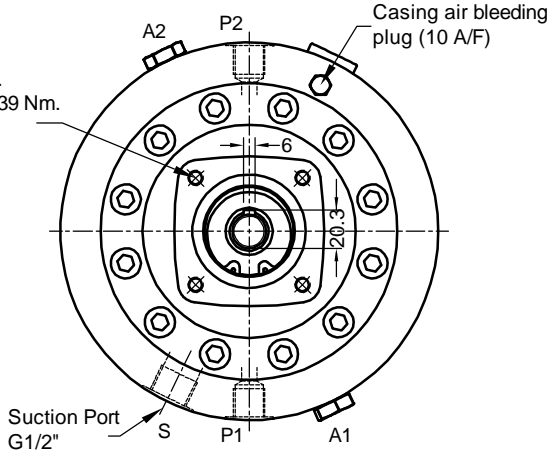
Unit dimensions

Dimensions in mm.

Pump without extension shaft

Model - 2RC3

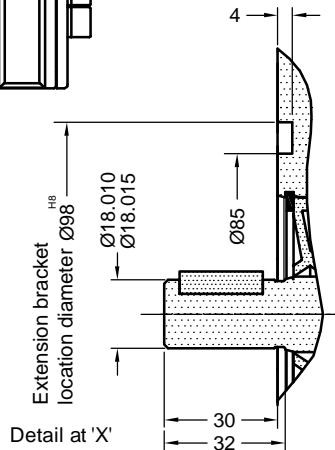
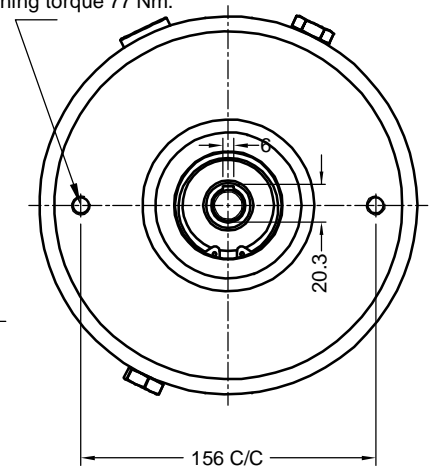
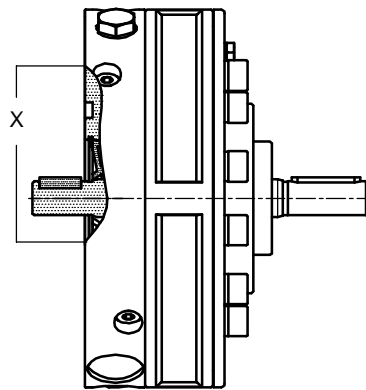
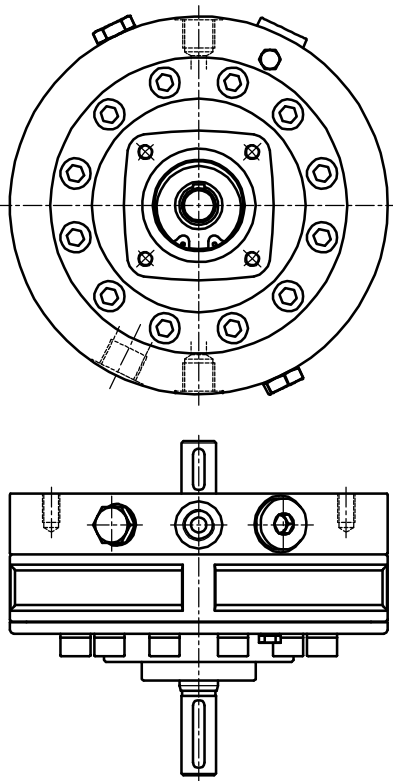
M8 x 12 deep,  
4 nos on 80 P.C.D.  
Tightening torque 39 Nm.



Pump with extension shaft

Model - 2RCE3

Extension bracket mounting  
M10 x 17 deep, 2 nos.  
Tightening torque 77 Nm.

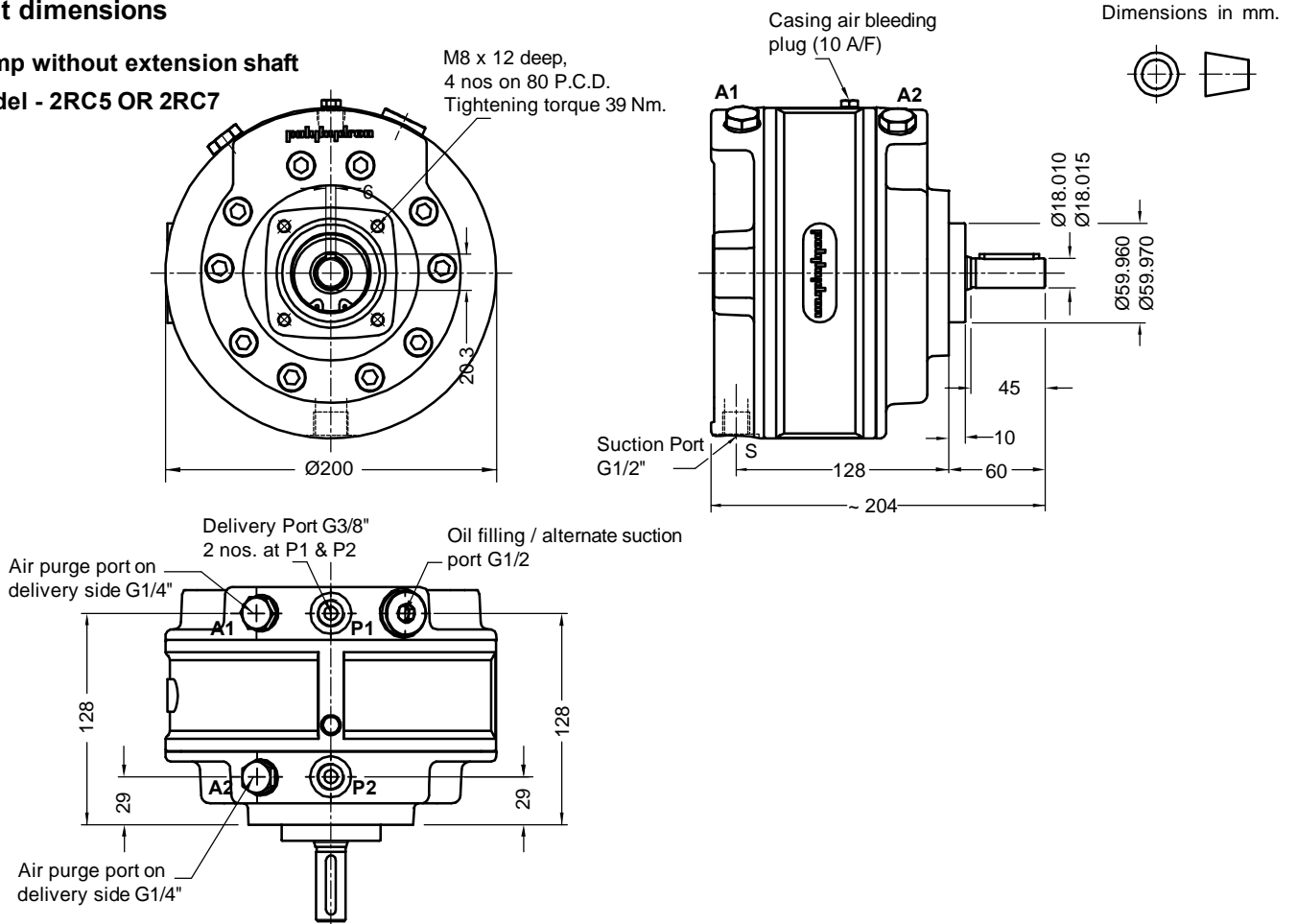




### Unit dimensions

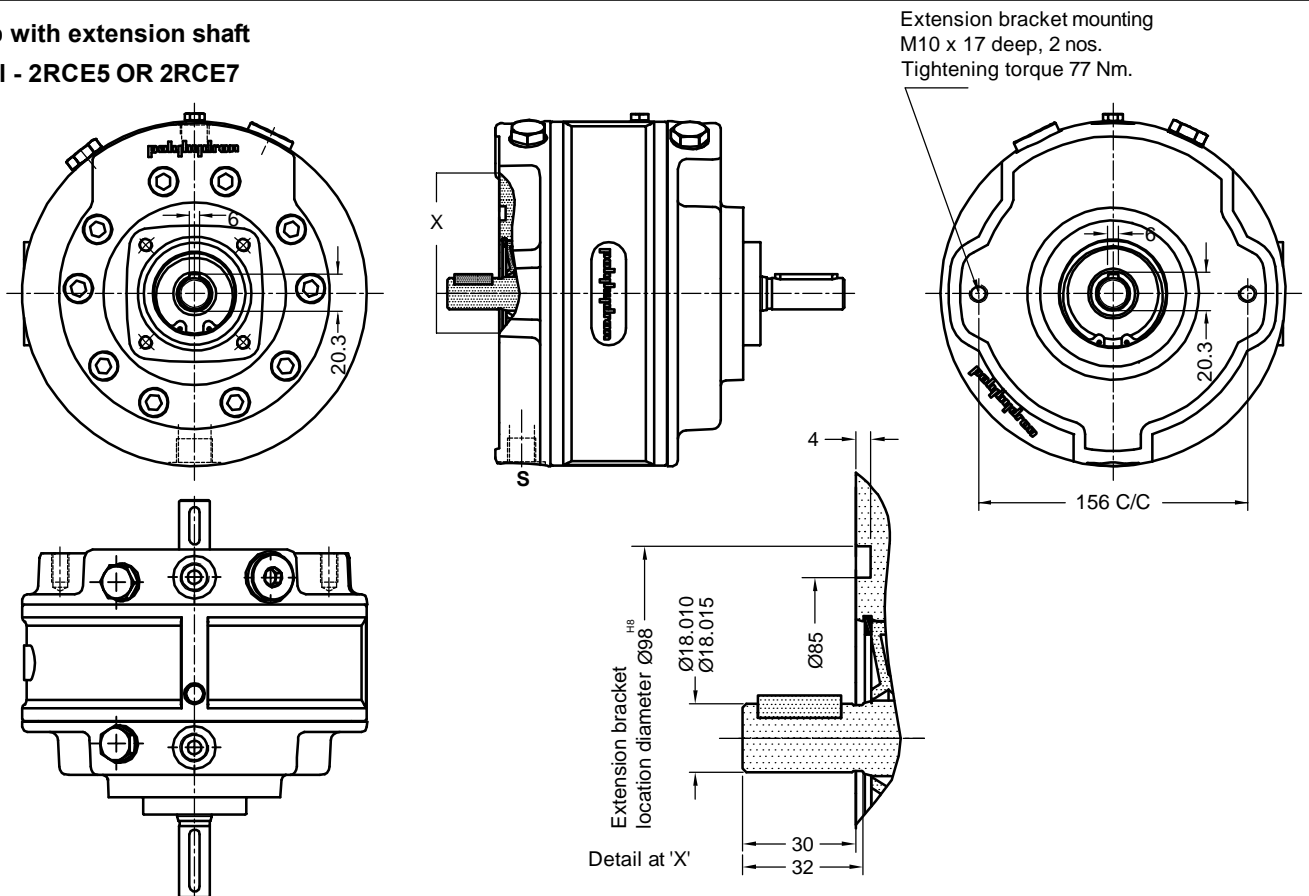
#### Pump without extension shaft

##### Model - 2RC5 OR 2RC7



#### Pump with extension shaft

##### Model - 2RCE5 OR 2RCE7



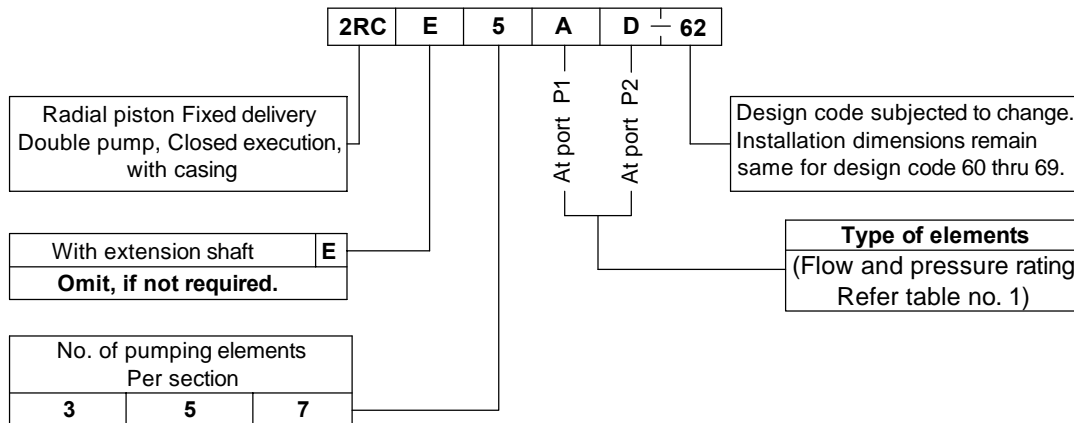


Performance Table no. 1

| No. of pumping elements per section | Element type | Geometrical displacement in cm <sup>3</sup> /r | Pump output in l/min At 1450 r/min | Maximum Operating pressure in bar | Pressure in bar                                    |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------------------------------|--------------|--|------------------------------------|-----------------------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                                     |              |  |                                    |                                   | 50   | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  |
|                                     |              |  |                                    |                                   | Power required per section to drive the pump in kW |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 3                                   | Z            | 0.69   | 0.9                                | 700                               | 0.10   | 0.19 | 0.29 | 0.39 | 0.48 | 0.58 | 0.68 | 0.77 | 0.87 | 0.96 | 1.06 | 1.16 | 1.25 | 1.35 |
| 5                                   |              | 1.15   | 1.5                                |                                   | 0.16   | 0.32 | 0.48 | 0.64 | 0.80 | 0.96 | 1.13 | 1.29 | 1.45 | 1.61 | 1.77 | 1.93 | 2.09 | 2.25 |
| 7                                   |              | 1.61   | 2.2                                |                                   | 0.23   | 0.45 | 0.68 | 0.90 | 1.13 | 1.35 | 1.58 | 1.80 | 2.03 | 2.25 | 2.48 | 2.70 | 2.93 | 3.15 |
| 3                                   | A            | 1.20   | 1.6                                | 550                               | 0.17   | 0.34 | 0.51 | 0.69 | 0.86 | 1.03 | 1.20 | 1.37 | 1.54 | 1.71 | 1.89 |      |      |      |
| 5                                   |              | 2.00   | 2.7                                |                                   | 0.29   | 0.57 | 0.86 | 1.14 | 1.43 | 1.71 | 2.00 | 2.29 | 2.57 | 2.86 | 3.14 |      |      |      |
| 7                                   |              | 2.80   | 3.8                                |                                   | 0.40   | 0.80 | 1.20 | 1.60 | 2.00 | 2.40 | 2.80 | 3.20 | 3.60 | 4.00 | 4.40 |      |      |      |
| 3                                   | B            | 1.89   | 2.6                                | 450                               | 0.27   | 0.54 | 0.80 | 1.07 | 1.34 | 1.61 | 1.88 | 2.14 | 2.41 |      |      |      |      |      |
| 5                                   |              | 3.15   | 4.3                                |                                   | 0.45   | 0.89 | 1.34 | 1.79 | 2.23 | 2.68 | 3.13 | 3.57 | 4.02 |      |      |      |      |      |
| 7                                   |              | 4.41   | 6.0                                |                                   | 0.63   | 1.25 | 1.88 | 2.50 | 3.13 | 3.75 | 4.38 | 5.00 | 5.63 |      |      |      |      |      |
| 3                                   | C            | 2.70   | 3.7                                | 350                               | 0.39   | 0.77 | 1.16 | 1.54 | 1.93 | 2.32 | 2.70 |      |      |      |      |      |      |      |
| 5                                   |              | 4.50   | 6.2                                |                                   | 0.64   | 1.29 | 1.93 | 2.57 | 3.22 | 3.86 | 4.50 |      |      |      |      |      |      |      |
| 7                                   |              | 6.30   | 8.6                                |                                   | 0.90   | 1.80 | 2.70 | 3.60 | 4.50 | 5.40 | 6.30 |      |      |      |      |      |      |      |
| 3                                   | D            | 3.18   | 4.3                                | 300                               | 0.45   | 0.91 | 1.36 | 1.81 | 2.26 | 2.72 |      |      |      |      |      |      |      |      |
| 5                                   |              | 5.30   | 7.2                                |                                   | 0.75   | 1.51 | 2.26 | 3.02 | 3.77 | 4.53 |      |      |      |      |      |      |      |      |
| 7                                   |              | 7.42   | 10.1                               |                                   | 1.06   | 2.11 | 3.17 | 4.23 | 5.28 | 6.34 |      |      |      |      |      |      |      |      |
| 3                                   | E            | 3.69   | 5.0                                | 250                               | 0.53   | 1.05 | 1.58 | 2.10 | 2.63 |      |      |      |      |      |      |      |      |      |
| 5                                   |              | 6.15   | 8.4                                |                                   | 0.88   | 1.75 | 2.63 | 3.50 | 4.38 |      |      |      |      |      |      |      |      |      |
| 7                                   |              | 8.61   | 11.7                               |                                   | 1.23   | 2.45 | 3.68 | 4.90 | 6.13 |      |      |      |      |      |      |      |      |      |
| 3                                   | F            | 4.23   | 5.8                                | 200                               | 0.60   | 1.21 | 1.81 | 2.41 |      |      |      |      |      |      |      |      |      |      |
| 5                                   |              | 7.05   | 9.6                                |                                   | 1.00   | 2.01 | 3.01 | 4.02 |      |      |      |      |      |      |      |      |      |      |
| 7                                   |              | 9.87   | 13.5                               |                                   | 1.41   | 2.81 | 4.22 | 5.63 |      |      |      |      |      |      |      |      |      |      |

1kW = 1.34 hp

Ordering code



Note : For Bell housing refer Data sheet no. D 09035 and For extension bracket refer Data sheet no. D 09090.  
For commissioning of pump refer datasheet no. D 11200 P.

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For critical applications, please ask for certified installation drawing.