**Description**

Model **12RC**** are rugged Radial Piston Double Pumps and have either 3, 5, 7 or 9 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 model **12RCE*** have extension shaft for through drive and are available with extension bracket assembly for coupling a pump having standard flanges as per ISO 3019/2 (Ref datasheet no. D 09090). They are available with 12 displacements and 3 pressure ratings. Flows can be combined internally or externally to feed one circuit or can be used independently to feed two circuits. Each section of pumps give fixed output per revolution of the shaft.

**Technical specifications**

- **Designation**: 12RC is a basic Radial piston double pump with casing. 12RCE is a Radial piston double pump with casing and extension shaft.
- **Design**: Radial piston, valve controlled.
- **No. pumping elements**: 3, 5, 7 or 9 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**: 12RC - No restriction on direction of rotation. 12RCE - Depends upon the direction rotation of pump attached.
- **Connection**: Suction port - G3/4 female. Delivery (port P1 and P2) - G1/2 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 - 220 Nm. Extension shaft - 130 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 | 12RC3 | 12RCE3 | 12RC5 | 12RCE5 | 12RC7 | 12RCE7 | 12RC9 | 12RCE9
| Kg    | 25.4 | 26   | 33   | 34.2  | 35.4  | 36   | 39.1  | 39.5  |
Unit dimensions

Pump without extension shaft

Model - 12RC3

Pump with extension shaft

Model - 12RCE3

Dimensions in mm.
### Unit dimensions

#### Pump without extension shaft

**Model - 12RC5, 12RC7 or 12RC9**

- **Air purge port on delivery side**
  - G1/4 at A1 & A2

- **Delivery Port**
  - G1/2x14 deep
  - 2 nos. at P1 & P2

- **Suction Port**
  - G3/4x18 deep

- **Oil filling / alternate suction port**
  - G3/4

- **Casing air bleeding plug (10 A/F)**
  - ø262

- **Extension bracket mounting holes**
  - M10x17 deep, 4 nos.

- **Tightening torque** 77 Nm.

#### Pump with extension shaft

**Model - 12RCE5, 12RCE7 or 12RCE9**

- **Extension bracket mounting holes**
  - M10x17 deep, 4 nos.

- **Tightening torque** 77 Nm.
# Performance Table no.1

<table>
<thead>
<tr>
<th>No. of pumping elements per section</th>
<th>Element type</th>
<th>Geometrical displacement in cm³/rev</th>
<th>Pump output in l/min At 1450 r/min</th>
<th>Maximum Operating pressure in bar</th>
<th>Power required to drive the pump in kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>A</td>
<td>4.62</td>
<td>6.3</td>
<td>400</td>
<td>0.66 1.31 1.97 2.63 3.28 3.94 4.14 5.25</td>
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<td>B</td>
<td>7.70</td>
<td>10.5</td>
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<td>1.09 2.19 3.28 4.38 5.47 6.57 6.89 8.75</td>
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<td>13.85</td>
<td>18.9</td>
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<tr>
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<td>250</td>
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<tr>
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<td>17.3</td>
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<td>31.2</td>
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<td>3.26 6.51 9.77 13.02 16.28</td>
</tr>
</tbody>
</table>

Note: Torque limitation: The total sum of torque applied to drive the each section of double pump and the pump attached (In case model 12RE is used), at any given instance, should not exceed 220 Nm.

### Ordering code

- **12RC**<br>Radial piston, Fixed delivery, Closed execution, with casing<br>With extension shaft, E<br>Omit, if not required.

- **3**<br>Number of pumping elements per section
- **5**
- **7**
- **9**

### Design code subjected to change.

- Installation dimensions remain same for design code 11 thru 19.
- **11** For 12RC5, 12RC7 & 12RC9
- **02** For 12RC3

### Type of elements

- (Flow and pressure rating Refer table no. 1)

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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