

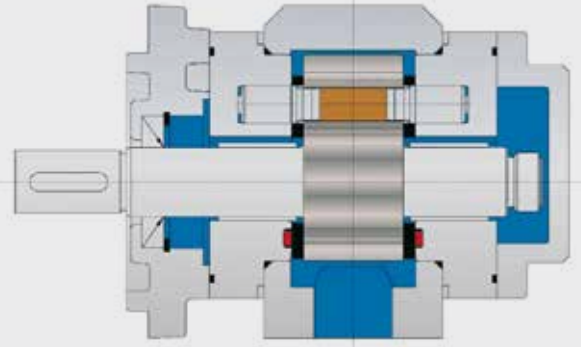
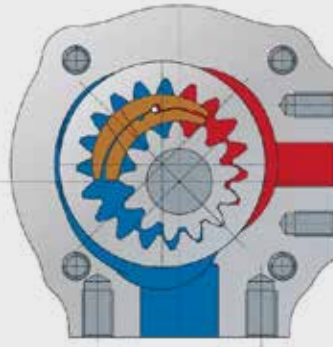
# Internal gear pump

## Type EIPC3 for industrial applications with constant displacement volume

EIPC3

### Characteristics

- Internal gear pump with axial and radial gap compensation
- Radial compensation with segments
- Suction and pressure port radial
- Field of application: Industrial hydraulic
- Low noise
- Long time life
- Low pulsation (pressure pulsation ~2 %)
- Multi flow combinations



### Technical Data

| Rated Size                                                     | 020                                                              | 025         | 032         | 040         | 050         | 063         | 064         |
|----------------------------------------------------------------|------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Spec. volume Vth [cm³/rev]**                                   | 20,0                                                             | 24,8        | 31,6        | 39,5        | 49,5        | 62,5        | 65,3        |
| Continuous operating pressure [bar]**                          | 250                                                              |             |             |             |             | 180         | 250         |
| Peak operating pressure [bar]<br>max. 10 sec 15 % duty cycle** | 320                                                              |             |             | 300         | 280         | 210         | 280         |
| Cut-in pressure peak [bar]**                                   | 350                                                              |             |             | 325         | 300         | 210         | 300         |
| Nominal speed [min⁻¹]                                          | 200 – 3.400                                                      | 200 – 3.200 | 200 – 3.000 | 100 – 2.500 | 100 – 1.800 |             | 100 – 1.800 |
| Max. speed [min⁻¹]                                             | 3.900                                                            | 3.800       | 3.700       | 2.500       | 1.800       |             | 1.800       |
| Nominal speed [min⁻¹]****                                      | For rated size 040-064 available                                 |             |             | 100 – 3.200 | 100 – 3.000 | 200 – 2.200 | 100 – 2.200 |
| Max. speed [min⁻¹]****                                         | For rated size 040-064 available                                 |             |             | 3.600       | 3.600       | 2.400       | 2.400       |
| Operating viscosity [mm²/s]                                    | 10 – 300                                                         |             |             |             |             |             |             |
| Starting viscosity [mm²/s]                                     | 2.000                                                            |             |             |             |             |             |             |
| Operating temperature [°C]                                     | -20 to +100                                                      |             |             |             |             |             |             |
| Operating medium                                               | HL – HLP DIN 51 524 part 1/2                                     |             |             |             |             |             |             |
| Max. medium temperature [°C]                                   | 120                                                              |             |             |             |             |             |             |
| Min. medium temperature [°C]                                   | -40                                                              |             |             |             |             |             |             |
| Max. ambient temperature [°C]                                  | 80                                                               |             |             |             |             |             |             |
| Min. ambient temperature [°C]                                  | -40                                                              |             |             |             |             |             |             |
| Max. admission pressure (intake side) [bar]                    | 2 bar absolute                                                   |             |             |             |             |             |             |
| Min. admission pressure (intake side) [bar]                    | 0.8 bar absolute (Start 0.6)                                     |             |             |             |             |             |             |
| Weight appr. [kg]                                              | 8,3                                                              | 8,6         | 9,2         | 9,8         | 10,5        | 10,5        | 11,5        |
| Degree of filtration                                           | Class 20/18/15 due to ISO 4406                                   |             |             |             |             |             |             |
| Life expectancy                                                | not less than 1x 10⁷ load cycles against peak operating pressure |             |             |             |             |             |             |
| Efficiency η vol:                                              | 93                                                               | 93          | 94          | 95          | 95          | 94          | 95          |
| Efficiency η hm:                                               | 91                                                               | 92          | 92          | 93          | 93          | 92          | 93          |
| Pump noise*<br>(measured in sound chamber) dB[A]               | 62                                                               | 63          | 64          | 65          | 66          | 64          | 68          |

n = 1.450 min⁻¹    Δ p = 250 bar (180 bar at size 063)    T = 50 °C    Medium: HLP 46    Brugger value min. 30N/mm² recommended 50N/mm² for servo applications

\* Measured in anechoic room of Eckerle Hydraulic Division; Axial microphone distance 1.0 m

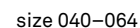
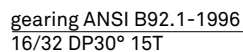
\*\* For acceptable pressure at 400–1.800 rpm. Further rpm on request.

\*\*\* Due to manufacturing tolerances the displacement volume could vary.

\*\*\*\* 2" suction port

The pumps have no corrosion protection. The max. permissible values must not be applied cumulatively. Please contact us.

Order example: EIPC3-\_\_\_RA23-1X



\* is suitable for speed controlled drive applications  
(available only for size 040, 050, 063, 064)

**EIP C3 - 032 RK23 - 1X SXXX**

### Special version number

Tailor made design - No standard

### Revision code

1st number: Change of external dimensions

2nd number: internal modifications

### Intake and outlet connection - with metric threads

3: According to SAE J 518 - Code 61 / 62

6: According to SAE J 518 - Code 61 / 62 with oversized

suction port for variable speed drives

0: suction port closed; common inlet

– other flanges on request –

### Mounting flange

2: SAE/B 2-bolt flange, centring collar Ø 101,6 / at EIPC3

2: SAE/C 2-bolt flange, centring collar Ø 127 / at EIPC5

2: SAE/D 2-bolt flange, centring collar Ø 152,4 / at EIPC6

3: Direct mounting

5: VDMA flange on request

– other flanges on request –

### Shaft end

A: straight keyed shaft

K: straight keyed shaft with PTO

B: SAE splined shaft end

L: SAE splined shaft end with PTO

E: SAE splined shaft End On one side

Multi-flow pump, not usable as single pump

No mounting option for further pumps

P: SAE splined shaft end on both sides

Secondary pump section - not usable as single pump

### Rotation direction

R: Clockwise (S: CW size 5/3 I T: CW size 5/2)

L: counterclockwise

### Rated size

Three digits

### Frame size

3, 5 or 6

### Type

C: Industrial pump with aluminium housing

### Eckerle internal gear pump

### Order example

**EIPC3-032 RK23-1X**

for industrial applications, frame size 3 with 32.1 cm<sup>3</sup>/rev., clockwise rotation, straight keyed shaft with PTO, SAE/B2-bolt flange, SAE type suction and pressure port, revision code 1X