



Micro diaphragm pump for continuous pumping

- self-priming
- nearly pulsation free
- for continuous pump applications
- diaphragm pump



Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with



Type 2505 ▶
Socket for 10 mm for
Bürkert Solenoid Valves

Type description

The Burkert series 7604 is a unique, selfpriming, adjustable, diaphragm pump with a long service life and quiet operation that is ideally qualified for aggressive media. The pump is perfectly suited for continuous liquid low flow applications. Variations in flow rate are achieved by simply varying the frequency input. With a maximum frequency input of about 40 Hz, the fluid flows virtually pulsation free. Perfluorelastomer seals and a PEEK body are the only wetted parts, allowing the pump to be used for a wide range of aggressive fluids, organic and inorganic solvents and other difficult to handle media. The compact design (only 11 mm wide) allows for ease of mounting with standard bodies designed for surface mount (manifold) or tube connections. The low power consumption allows the device to be easily incorporated into mobile devices, and virtually eliminates any heat transfer passed from the actuator to the fluid. „Manufactured by Burkert“ ensures the user the same high quality products and proven reliability they have depended on in today’s innovative market.

Table of contents

| | |
|--|----------|
| 1. General technical data | 3 |
| 2. Product versions | 4 |
| 3. Materials | 4 |
| 3.1. Chemical Resistance Chart – Bürkert resistApp..... | 4 |
| 3.2. Material specifications | 5 |
| 4. Dimensions | 5 |
| 4.1. Flange version (FB05) with rectangular plug | 5 |
| 4.2. UNF version (UNFB) with flying leads..... | 6 |
| 4.3. Hose connector version (DA14) with rectangular plug | 6 |
| 5. Performance specifications | 7 |
| 5.1. Flow characteristic..... | 7 |
| Flow rate diagram | 7 |
| 6. Product accessories | 7 |
| 6.1. Integrated impulse generator | 7 |
| 7. Ordering information | 7 |
| 7.1. Bürkert eShop – Easy ordering and quick delivery..... | 7 |
| 7.2. Bürkert product filter..... | 8 |
| 7.3. Ordering chart..... | 8 |
| 7.4. Ordering chart accessories..... | 9 |
| Rectangular plug Type 2505, fittings and hoses..... | 9 |

1. General technical data

| Product properties | |
|------------------------------|--|
| Dimensions | Detailed information can be found in chapter "4. Dimensions" on page 5. |
| Materials | |
| Fluid housing | PEEK |
| Seals | FFKM |
| Reproducibility | ± 5 % ^{1.)} |
| Mounting pitch | 11 mm |
| Pump frequency | 8...40 Hz |
| Life cycle (max.) | >1 billion (10 ⁹) |
| Performance data | |
| Flow rate | Min. 1 ml/min ^{1.) 2.)} Max. >5 ml/min ^{1.) 2.)} |
| Flow rate at 35 Hz | ≥ 4.5 ml/min ^{1.) 2.)} |
| Output pressure | >200 mbar ^{3.)} |
| Suction pressure (dry pump) | >100 mbar |
| Electrical data | |
| Nominal voltage | 12/24 V DC, pulsating with max. 40 Hz (use impulse generator) Duty cycle 50:50 |
| Voltage tolerance | ± 10 % |
| Power consumption (max.) | 1.5 W (P _{eff} = 400 mW) |
| Medium data | |
| Medium | Resistant to neutral and aggressive liquids (see "3.1. Chemical Resistance Chart – Bürkert resistApp" on page 4) Suitable for particles <20 µm ^{4.)} |
| Mediumtemperature | +10 °C...+60 °C |
| Product connections | |
| Port connection | Bürkert flange Hose connector Ø 2.8 mm UNF ¼"-28 |
| Electrical connection | Rectangular plug Type 2505 ▶, flying leads |
| Environment and installation | |
| Installation position | As required, preferably with flange downwards |
| Ambient temperature | +10 °C...+55 °C |
| Protection class | IP40 (IP30 with rectangular plug Type 2505) |




1.) At 22 °C, purified water, related to the individual pump

2.) The flow rate depends on the individual operating conditions

3.) Pressure: overpressures with respect to atmospheric pressure

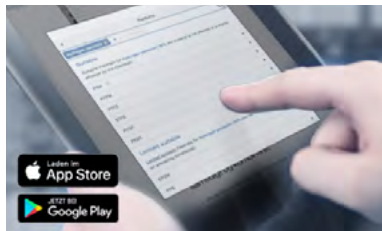
4.) The use of a suitable filter is recommended.

2. Product versions

| Rectangular plug device with flange | Flying leads device with UNF connection | Rectangular plug device with hose connection |
|---|--|---|
|  |  |  |

3. Materials

3.1. Chemical Resistance Chart – Bürkert resistApp

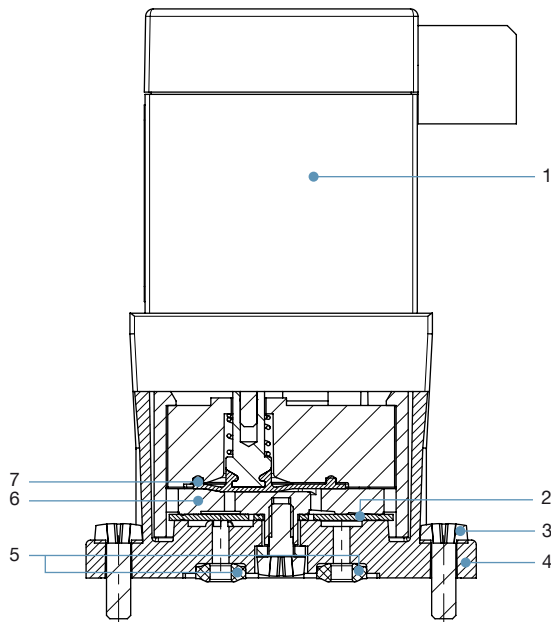


Bürkert resistApp – Chemical Resistance Chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

[Start Chemical Resistance Check](#)

3.2. Material specifications



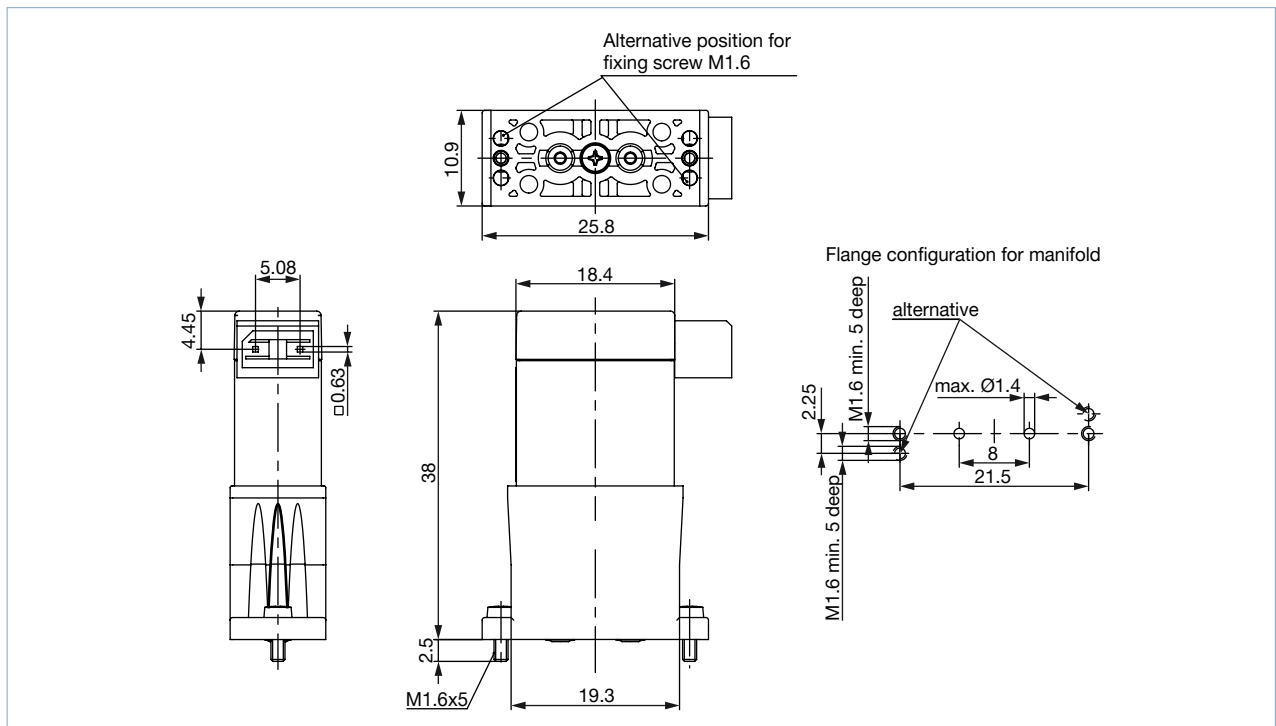
| No. | Element | Material |
|-----|--------------------------------|----------------------------------|
| 1 | Coil | PA |
| 2 | Check valve (medium contact) | FFKM |
| 3 | Fixing screw | Steel (hardened and tempered) |
| 4 | Fluid housing (medium contact) | PEEK |
| 5 | Moulded seal (medium contact) | FFKM |
| 6 | Fluidic (medium contact) | PEEK |
| 7 | Diaphragm (medium contact) | FFKM |

4. Dimensions

4.1. Flange version (FB05) with rectangular plug

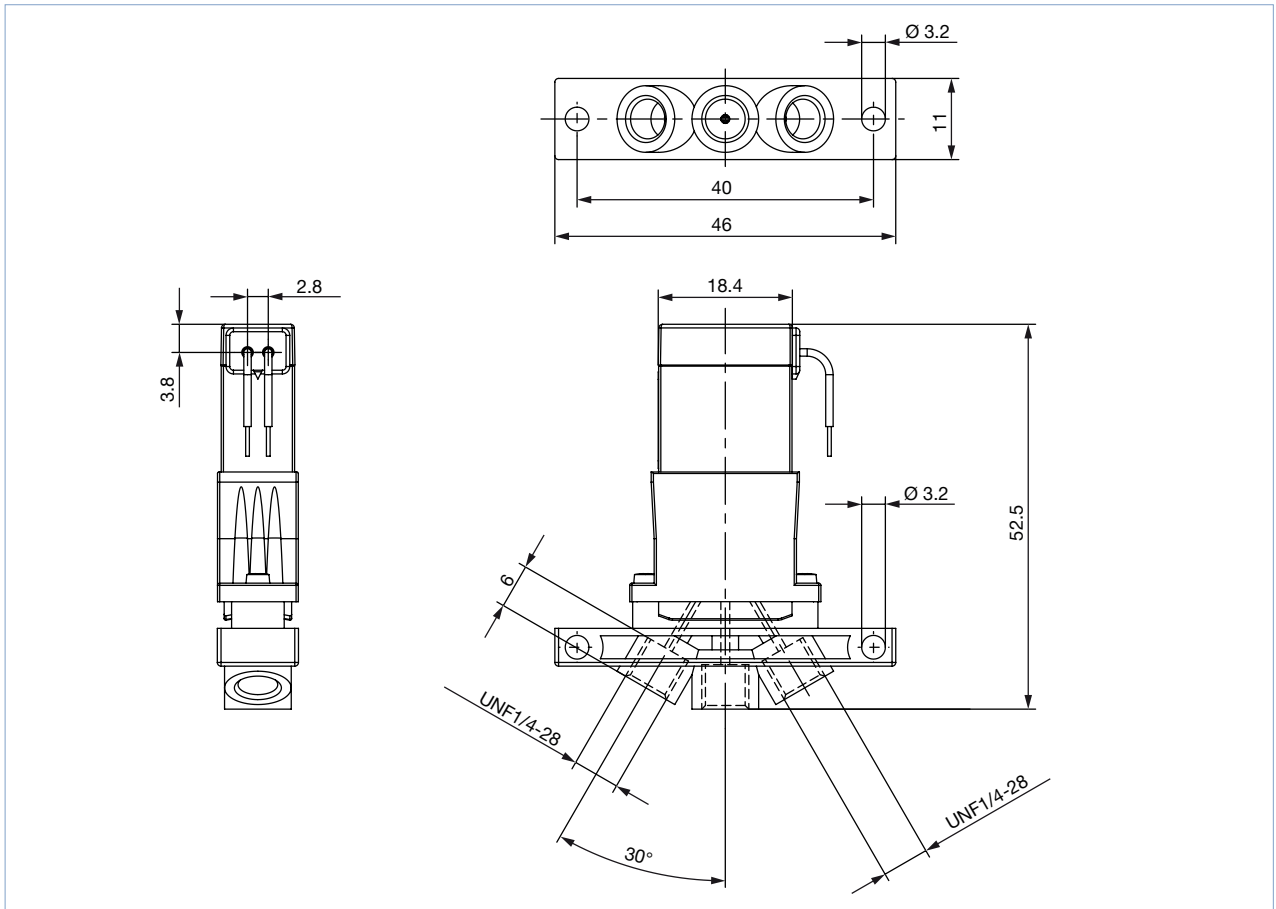
Note:

Dimensions in mm

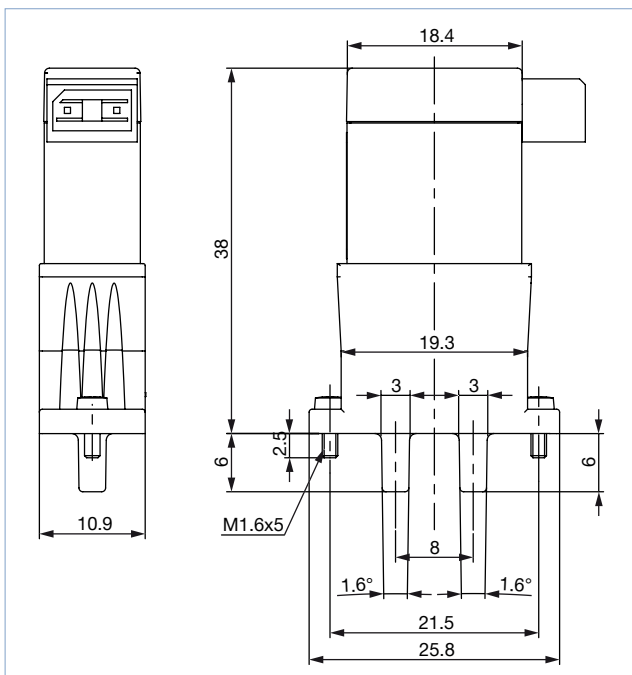


DTS 1000011780 EN Version: N Status: RL (released | freigegeben | validé) printed: 18.12.2019

4.2. UNF version (UNFB) with flying leads



4.3. Hose connector version (DA14) with rectangular plug

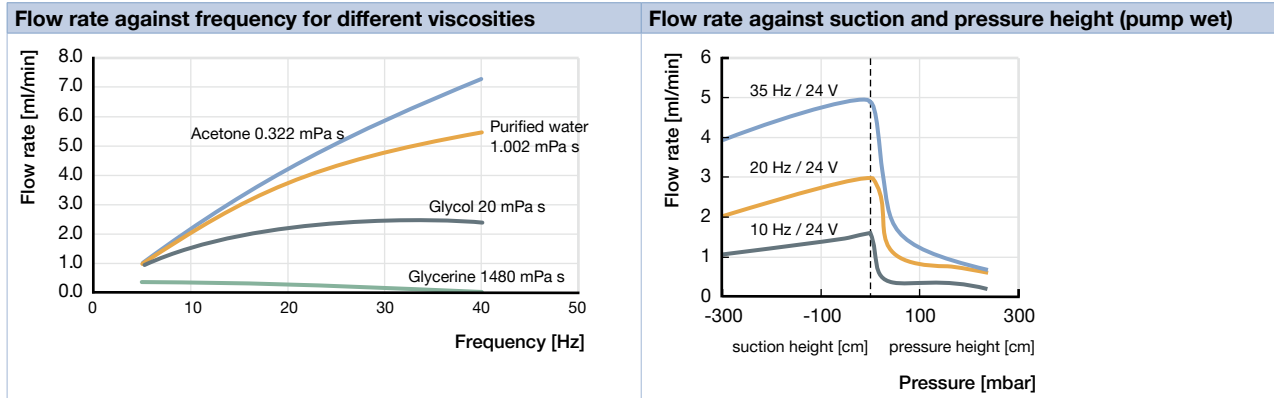


5. Performance specifications

5.1. Flow characteristic

Flow rate diagram

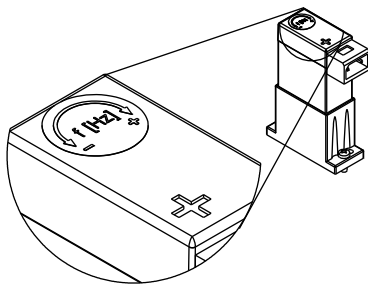
The following flow rate diagrams are examples only. The flow rate depends on the individual operating conditions.



6. Product accessories

6.1. Integrated impulse generator

The optional integrated impulse generator is built in the cover of the pump. The desired frequency can be set via a rotary potentiometer.



| Technical data | |
|-------------------|------------------|
| Frequency range | 8...40 Hz |
| Nominal voltage | 24 V DC, 12 V DC |
| Voltage tolerance | ± 10 % |

7. Ordering information

7.1. Bürkert eShop – Easy ordering and quick delivery

Bürkert eShop – Easy ordering and fast delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

[Order online now](#)

7.2. Bürkert product filter



Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

[Try out our product filter](#)

7.3. Ordering chart

Note:

The scope of delivery for rectangular plug devices is without plug connector, see [“7.4. Ordering chart accessories” on page 9](#)








| Port connection | Seal material | Body material | Electrical connection | Voltage | Article no. |
|-----------------------------------|---------------|---------------|--|---------|-------------|
| Flange | FFKM | PEEK | Rectangular plug | 24 V | 156992 |
| | | | Rectangular plug with integrated impulse generator | 24 V | 161399 |
| | | | Rectangular plug | 12 V | 169489 |
| | | | Rectangular plug with integrated impulse generator | 12 V | 208104 |
| Hose connector $\text{Ø}a=2.8$ mm | FFKM | PEEK | Rectangular plug | 24 V | 156993 |
| | | | Rectangular plug with integrated impulse generator | 24 V | 161398 |
| | | | Rectangular plug | 12 V | 171568 |
| | | | Rectangular plug with integrated impulse generator | 12 V | 246567 |
| UNF 1/4-28 | FFKM | PEEK | Rectangular plug | 24 V | 155781 |
| | | | Rectangular plug with integrated impulse generator | 24 V | 163782 |
| | | | Flying leads | 24 V | 189519 |
| | | | Rectangular plug | 12 V | 164991 |
| | | | Rectangular plug with integrated impulse generator | 12 V | 183561 |
| | | | Flying leads | 12 V | 210613 |

7.4. Ordering chart accessories

Rectangular plug Type 2505, fittings and hoses

Note:

For further rectangular plug versions see separate data sheet for **Type 2505** ▶.

| Accessories | Description | Article no. |
|---|--|--|
|  | Rectangular plug grid 5.08 mm with 300 mm flying leads | 644068  |
|  | Rectangular plug grid 5.08 mm with 3 m cable | 252572  |
|  | Rectangular plug grid 5.08 mm with 2 separate contacts | 644067  |
|  | Fittings and hoses | see data sheet TVU003 ▶ |

Bürkert – Close to You

For up-to-date addresses
please visit us at
www.burkert.com

DTS 1000011780 EN Version: N Status: RL (released | freigegeben | validé) printed: 18.12.2019

