Product information

Filter-pump functional module F-P · Functional modules

Description

The filter-pump functional module F-P allows the combination of micro annular gear pump and filter with short direct connections. The void volume of this compact system is low and the expenses of connecting elements are obsolete. The integrated wire mesh filter with a mesh size of 10 µm preventatively protects the pump and downstream fluidic micro structures from contamination with particles. Replacement of the easy accessible filter is uncomplicated, removing of the pump is unnecessary. The functional module can be used flexibly for several sizes of pumps of the low pressure and magnetic hermetic pump series. The modules can ideally be used for precise and reliable discrete and continuous dosing of volume flows from 0.15 to 72 ml/min. Applications in the field of analytical instrumentation, medical engineering and micro reaction technology as well as other.

Advantages

- Low void volume integration of micro annular gear pump and filter, short internal fluid connections
- Compact dimensions, low weight 40 x 22 x 35.5 mm, approx. 211 g (resp. without pump)
- Flexible use for mzr-pumps of low pressure and magnetic hermetic pump series low pressure pump series: mzr-2521, mzr-2921, mzr-4622, magnetic hermetic pump series: mzr-296x, mzr-466x, all pumps with manifold assembly M2.1
- Wide range of volume flows 0.15 - 9 ml/min; 0.3 - 18 ml/min and 1.2 - 72 ml/min
- Safety of operation through wire mesh filter protection of pump and downstream fluidic structures from particles
- Easy replacement of pump and filter mounting of functional module via stainless steel sheet

Applications

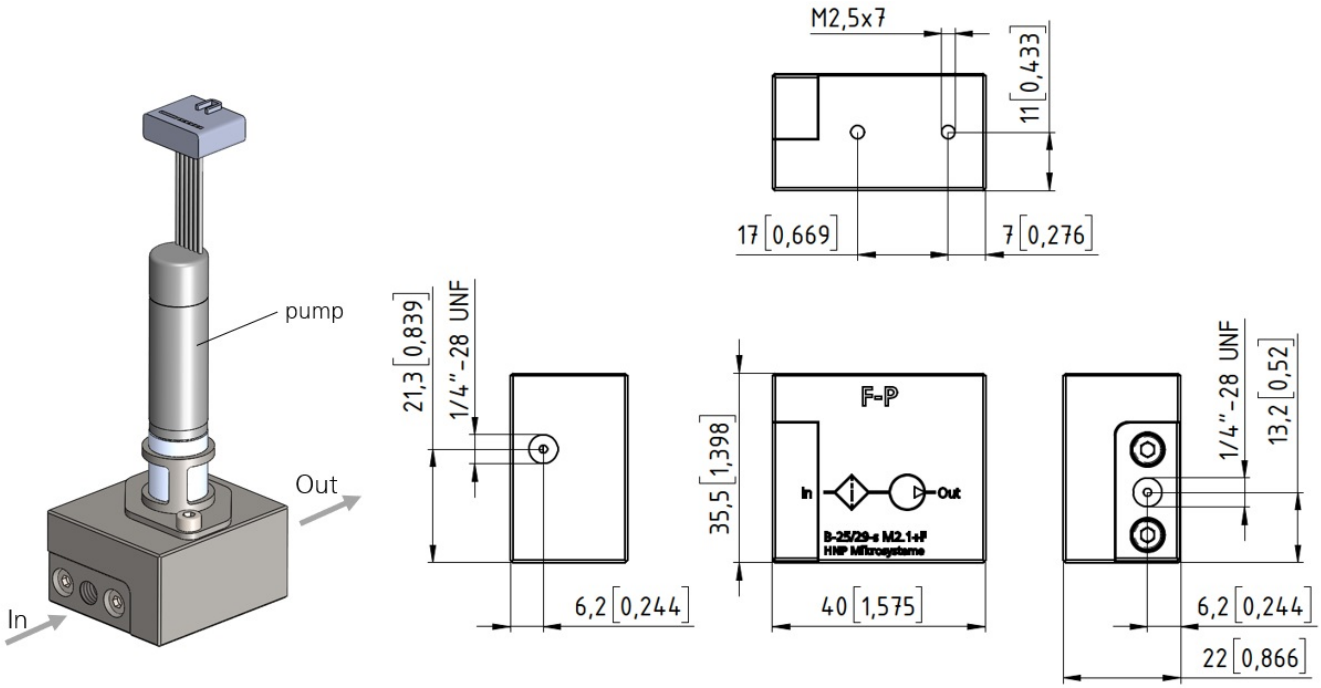
- Analytical instrumentation
- Laboratory automation
- Diagnostics
- Biotechnology
- Micro reaction technology
- Research and Development

Technical data

Flow rate	pump specific 0.15 - 72 * ml/min
Differential pressure range	pump specific 0 – 1.5 bar; 0 – 3 bar; 0 – 5 bar *
Maximum inlet pressure	1 bar
Liquid temperature range	-20 ... +60 °C
Viscosity range	0.3 - 100 mPas
Internal volume	400 µl
Fluid connection	1/4"-28 UNF
Mounting parts	2x Ø3.4 mm, 2x M2.5x7
Filter	mesh wire filter with mesh size 10 µm, filterarea 1.3 cm²
Wetted parts	Filter: stainless steel 316L, static seals: FPM, optional: FFPM; EPDM, manifold adapter: stainless steel 316L
Dimensions (L x W x H)	40 x 22 x 35.5 mm (without pump)
Weight	approx. 211 g (without pump)
Remarks	* pump specific value

Notice
Even if single parameters are within the indicated performance range of technical data, certain parameter combinations may not be achievable. Single parameters may exceed their indicated performance range under adequate circumstances. For detailed evaluation please contact HNP Mikrosysteme. Actual performance may vary. Specifications are subject to change without notice. This document is subject to change without notice.

Dimensions



Patents and trademarks

Our products are protected by the following national and international patents: DE 10 2018 129 631.2 B3; EP 3 884 162; CN 113 302 399 B; DE 10 2018 129 633.9 B3; EP 3 884 160; CN 113 272 553 B; DE 10 2018 129 634.7 B3; EP 3 884 527; DE 10 2018 129 635.5 B3; EP 3 762 165; DE 10146 793.1; EP 1 354 135 B1; US 7,698,818 B2; DE 10 2011 051 486 B4; EP 2 726 740 B1; US 9,404,492 B2; CN 103 732 921B; EP 2 640 977 B1; US 10,012,220 B2; CN 103 348 141 B; HK 1 185 648 B.

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