

High performance series Modular system

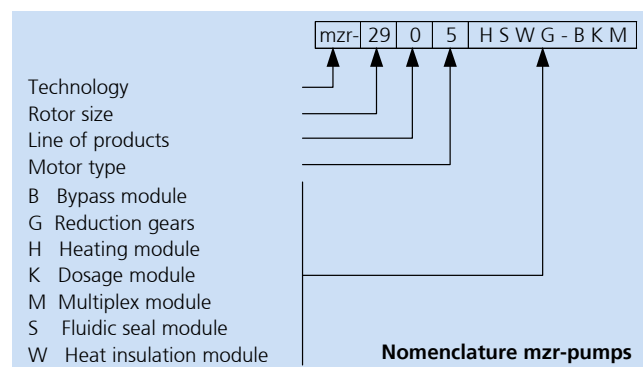
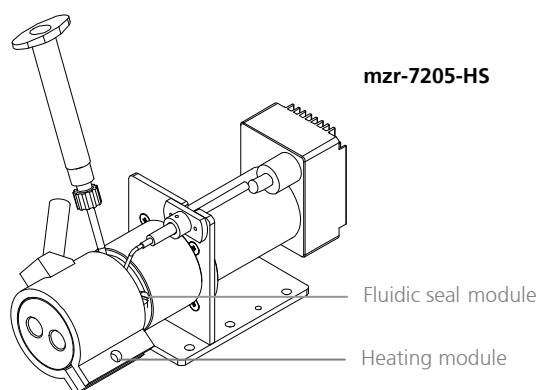
mzr [®]	2505	2905	4605	7205	7208	11508
Flow rate [ml/min]	0.0015-9	0.003-18	0.012-72	0.048-288	0.048-288	0.19-1152
Fluid connection	1/4" – 28 UNF	1/4" – 28 UNF	1/4" – 28 UNF	1/8" NPT	1/8" NPT	3/8" NPT
Fluidic seal module	●	●	●	●	●	●
Heat insulation module	●	●	●	●	●	●
Heating module	●	●	●	●	● *	–
Double shell heating module	●	●	●	●	● *	● *
Reduction gears	–	–	●	●	–	–
Elastic coupling	●	●	●	–	–	–
Dosage module	●	●	●	–	–	–

*) only with frontal fluid connectors

The use of supplementary modules permits to go beyond the standard application range of the pumps. The modular system of the high performance pump series includes the *fluidic seal module*. This module can be employed for liquids which tend to react or crystallize, when air contact is given. It prevents reactions by covering the outgoing shaft

with a sealing liquid. The *heat insulation module* increases the working temperature range of the pumps by preventing the motor from overheating. The *heating module* provides active heating of the pump head. Alternative *drives* expand the application range of the pump to high pressures and viscosity values as well as to areas exposed to explosion hazards.

The table shows the compatibility of the supplementary modules with different pump sizes. The modules can be combined with each other and nearly all pump motors. For the choice of supplementary modules, technical support is provided by HNP Mikrosysteme.



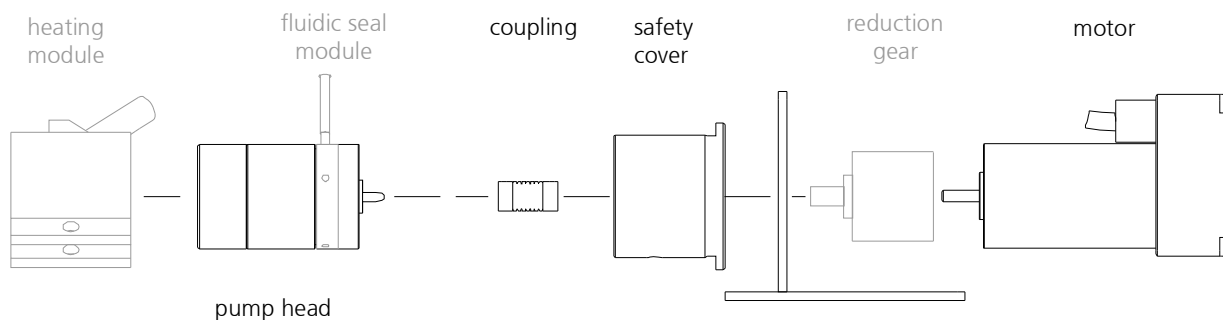
Contact

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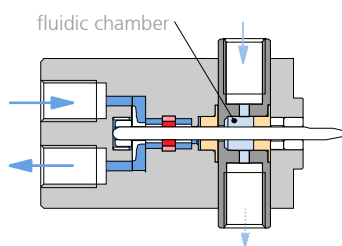
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Configuration of the modular system



Item No. 00 09 01 59 (2505)
 Item No. 00 09 01 18 (2905)
 Item No. 00 09 01 06 (4605)
 Item No. 00 09 01 10 (7205)
 Item No. 00 09 01 26 (11508)



Item No. 00 09 01 60 (2505)
 Item No. 00 05 00 00 (2905)
 Item No. 00 09 01 15 (4605)
 Item No. 00 05 03 00 (7205)
 Item No. 00 09 01 33 (11508)

Item No. 00 09 01 61 (2505)
 Item No. 00 03 00 00 (2905)
 Item No. 00 09 01 14 (4605)
 Item No. 00 03 03 00 (7205 F)
 Item No. 00 09 01 36 (11508 F)

Item No. 00 04 00 00

Item No. 00 09 01 62 (2505)
 Item No. 00 09 01 37 (2905)
 Item No. 00 09 01 38 (4605)
 Item No. 00 09 01 39 (7205 F)
 Item No. 00 09 01 40 (11508 F)

Item No. 00 09 01 01 (4605)
 Item No. 00 09 01 02 (7205)

Item No. 63 00 01 02 (2505, 2905)
 Item No. 63 00 02 02 (4605)

Special modules

see individual product data sheets

Fluidic seal module

Fluidic seal module enables to deliver liquids sensitive to contact with air or moisture. The module can be applied for liquids which tend to react or crystallize in contact with gases such as oxygen or water vapor. It is recommended to discuss the use of a fluidic seal module with the pump manufacturer.

The fluidic seal module prevents both the liquid from leaking out of the shaft seal area and the surrounding gases and moisture from penetrating into the pump. A fluid chamber is formed between the shaft sealing of the pump and an additional sealing. This fluid chamber is filled with a sealing liquid which assures the sealing function. The sealing liquid has to be compatible with the delivered liquid and should be individually selected for each application. By this measure contact with air or moisture can be avoided.

Heat insulation module

The heat insulation module allows for the delivery of hot liquids up to 150 °C (302 °F). It includes a heat insulating coupling made of plastic (PEEK™) between the motor and the pump head. The heat transfer from the pump to the heat-sensitive motor is reduced to a certain extent. However, the motor can be damaged by temperatures exceeding the specified range (see product information). Convection cooling of the motor is recommended for high duty cycles and high liquid temperatures.

Heating module

The heating module enables active heating of the pump head up to 150 °C (302 °F). The motor is prevented from overheating by a plastic coupling. The heating module comprises a heating jacket covering the pump head and a thermal element which is mounted directly in the pump head. The heat regulation module (Item No. 00 04 00 00) should be used in order to control the temperature of the pump head.

Temperature control unit

Desk top unit (B x H x D: 185 x 80 x 205 mm), heating power up to 2500 W, alarm via relay, interface

Double shell heating module

The double shell heating module is used with the high performance pump series featuring lateral connectors and may be applied in combination with the sealing module. The module temperature is limited to 150 °C (302 °F) and for mzs-11508 to 120 °C (248 °F), a thermo sensor is built-in. The module is made of stainless steel and is filled with thermo fluids such as thermo oil, water or steam. The employed thermo liquid connector is 2 x G1/8". The max. pressure of the thermo liquid may amount to 80 bar (580 psi). The coupling between the pump and the motor is made out of temperature resistant plastic PEEK™

Reduction gear

The reduction gear increases the torque of the drive (limited speed) for the delivery of high viscosity liquids or operation at pressures exceeding 40 bar (600 psi). The reduction gear set (3.71 : 1) can only be used with the standard motor xx05 and the pump heads mzs-4600 and mzs-7200.

Elastic coupling

The elastic coupling is recommended for the exchange of pump heads at self-assembly and disassembly.

By-pass module – for continuous delivery in the µl/h-range

Dosage module – volumetric dosage of adhesives, encapsulation compounds and grease

Multiplex module – operation of up to 255 pumps with a single RS-232 interface