

## High performance series Modular system

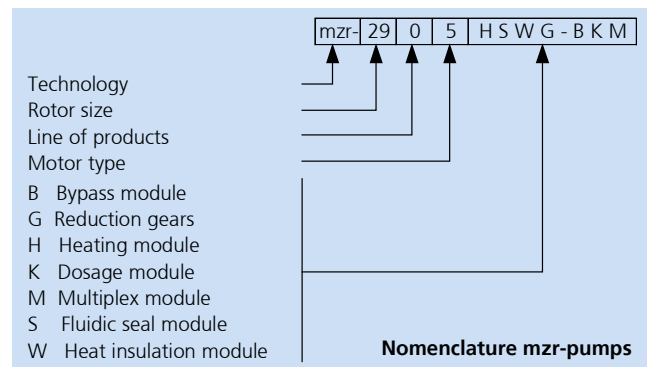
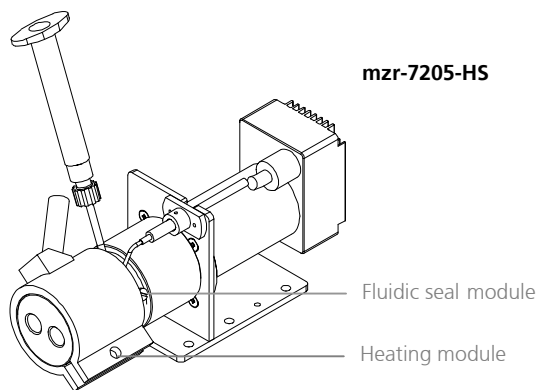
mzr <sup>®</sup>	2905	4605	7205	7206	7208	7209
Flow rate [ml/min]	0.3-18	1.2-72	4.8-288	19.2-288	0,048-288	0,048-225.6
Fluid connections	1/4" – 28 UNF	1/4" – 28 UNF	1/8" NPT M10 x 1	1/8" NPT M10 x 1	1/8" NPT M10 x 1	1/8" NPT M10 x 1
Fluidic seal module	●	●	●	●	●	●
Heat insulation module	●	●	●	●	●	●
Heating module	●	●	●	● *	● *	● *
Reduction gears	–	●	●	–	–	–
Elastic coupling	●	●	–	–	–	–
Dosage module	●	●	–	–	–	–

\*) only with face side M10x1 interface

The functionality of micro annular gear pumps can be expanded by supplementary modules. The modules are designed to fulfill specifications which go beyond the standard application range of the pumps. The modular system of the high performance series pump includes a fluidic seal module. The module can be employed for liquids which tend to react or crystal-

lize, when air contact is given. The module prevents reactions by covering the outgoing shaft by a fluidic ambience. The heat insulation module increases the operative temperature range of the pumps. The module prevents the motor from overheating. Active heating of the pump head is provided through a regulated heating jacket. Alternative drives

expand the pump's application range for high pressure and viscosity as well as for explosion proof areas. The table shows the availability of the supplementary modules for the different pump sizes. The modules can be combined with each other and nearly all pump motors. For the employment of modules a further discussion is strongly recommended.



### Contact

Sanwa Tsusho Co., Ltd.

13-2, Nishi-Gotanda 3 chome, Shinagawa-ku, Tokyo 141-0031 Japan

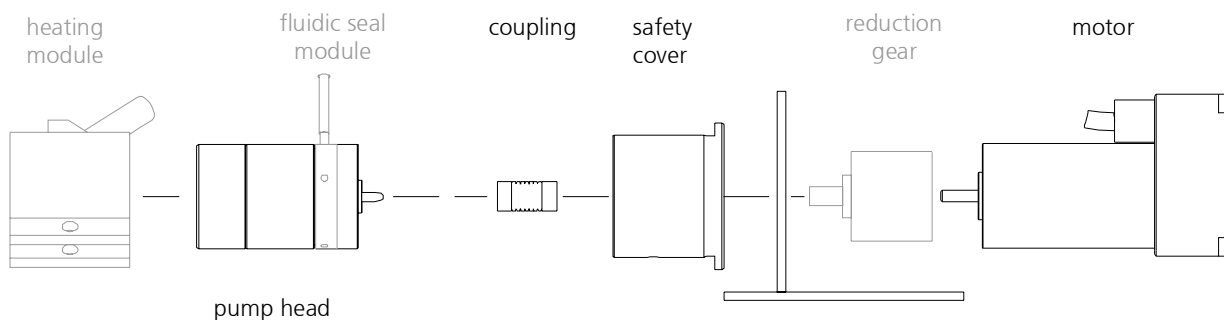
phone +81-3-3492-6300

faX +81-3-3492-6311

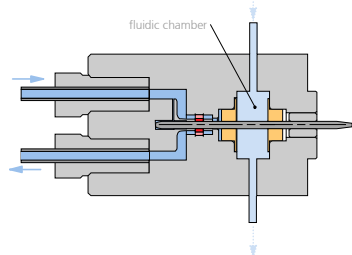
e-mail [mailto@sanwatsusho.com](mailto:mailto@sanwatsusho.com)

<http://www.sanwatsusho.com>

## Configuration modular system



Item No. 00 09 01 18 (29xx)  
 Item No. 00 09 01 06 (46xx)  
 Item No. 00 09 01 10 (72xx)



Item No. 00 05 00 00 (2905)  
 Item No. 00 09 01 15 (4605)  
 Item No. 00 05 03 00 (7205)

Item No. 00 03 00 00 (2905)  
 Item No. 00 09 01 14 (4605)  
 Item No. 00 03 03 00 (7205)

Item No. 00 04 00 00

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

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

Item No. 00 06 01 00 (2900)  
 Item No. 00 06 02 00 (4600)

## Special modules

see special product information

### Fluidic seal module

Fluidic seal module for delivery of liquids sensitive to air or moisture contact. The module can be applied for liquids which tend to react or crystallize in contact with gases such as oxygen or water. The use of a fluidic seal module has to be proven with the pump manufacturer.

The fluidic seal module prevents the delivered liquid from a direct contact with the air in the pump's environment. It secures that either liquid penetrates to the outside or the liquid comes into contact with the outside air or gas environment. An ambient fluidic chamber, which is located between shaft coming out of the pump and the pumps outer motor shaft side is filled with a sealing liquid. The sealing liquid, where a certain pressure is requires assures the sealing function. The sealing liquid has to be compatible with the delivered liquid and has to be determined in interdependence.

### Heat insulation module

The heat insulation module allows delivering of hot liquids up to 150 °C (302 °F). It includes a heat insulating coupling between motor and pump made out of plastic (PEEK). The heat transfer from the pump to the heat sensitive motor is reduced to a limited amount. The motor can be damaged by temperatures above the specified range (see product information). A convection cooling of the motor is recommended for high duty cycles and liquid temperature.

### Heating module

The heating module enables active heating of the pump head up to 150 °C (302 °F). The motor is prevented from overheating through a plastic coupling. The heating module comprises a heating jacket covering the pump head radially and a thermoelement which is mounted directly in the pump head. The heat regulation module (Item No. 00 04 00 00) has to be applied for the control of the pump head's temperature.

### Heat regulation module

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

### Reduction gear

Increase of the drive torque (limited speed) for delivery of highly viscous liquids or pressure above 40 bar (600 psi). The reduction gear set (3,71 : 1) can be only used with standard motor xx05 and pump heads mzs-4600, mzs-7200.

### Elastic coupling

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

### Adapter Ismatec Reglo

To adapt pumps with the Ismatec-Reglo drive series specific adapters for the high performance series are provided.

*Bypass 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 only one RS-232 interface