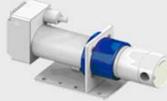


## Overview modules of high performance pump series

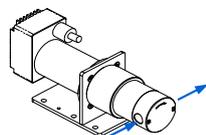
Module	Pumps										Description	
	mzr-2505	mzr-2905	mzr-4000	mzr-4605	mzr-6305	mzr-7205	mzr-7208	mzr-7208X1	mzr-11507	mzr-11508		mzr-11508X1
<b>Fluidic seal module</b> 	●	●	●	●	●	●	●	●	●	●	●	Fluidic seal module for delivery of air or moisture sensitive media which tend to crystallize or react, and for vacuum applications. The fluidic seal module prevents contact between pumped liquid and surrounding air. Unwanted reactions like crystallization caused by contact with air or moisture, evaporation or crosslinking can be avoided. For additional information please consult the user manual.
<b>Heat insulation module</b> 	●	●	●	●	●	●	●	●	●	●	●	Heat insulation module allows delivery of hot liquids up to 150 °C (302 °F); for a short term up to 200 °C (392 °F). It includes a heat insulating coupling made of plastic (PEEK™) between motor and pump head. Heat transfer from pump head to temperature sensitive motor and from motor to pump head is reduced by a plastic cover.
<b>Electric heating module</b> 	F	F	F	F	F	F	F	F	F	F	F	The electric heating module allows active heating of the pump head. It consists of a heating jacket covering the pump head and a thermal element which is mounted directly on the pump head.
<b>Temperature control unit</b> 	F	F	F	F	●	●	●	●	●	●	●	The temperature control unit controls the temperature of the pump head when using the electric heating module.
<b>Double shell heating module</b> 	F	F	F	F	F	F	F	F	F	F	F	The double shell heating module actively heats (or cools) the pump head up to 150 °C (302 °F) (120 °C for mzr-11508) with a heat transfer liquid. This module can be used with pumps of the high performance series with frontal fluid connection in combination with or without fluidic seal module.
<b>Reduction gear</b> 				3.71 : 1	3.71 : 1, 14 : 1	3.71 : 1, 14 : 1					4.8 : 1	Increase of drive torque for delivery of high viscous liquids or against differential pressures higher as specified for standard applications.
<b>Elastic coupling</b> 	●	●	●	●								For an easier exchange of pump heads of the high performance series an elastic coupling can be offered, which enables a simplified assembly and disassembly. The transmittable torque is limited.
<b>Dosage module</b> 	●	●	●	●								The dosage module is designed for discrete dosage of smallest liquid amounts when precise and non-running handling is required. The dosage of spots as well as beads is possible. Standardized cartridges with volumes up to 55 ml are used to supply the liquids to the pump via a short connector. When dosing high viscous liquids, the cartridge can be pressurized pneumatically and without media contact.
<b>By-pass module</b> 	●	●	●	●								With a by-pass module for lowest volume dispensing, volume flows in the nanoliter ranges can be implemented. This technology is based on splitting the volume flow generated by a micro annular gear pump according to the ratio of fluidic resistances of two defined capillaries.

● available    F only available for frontal fluid connection

### Fluid connections

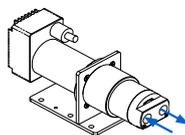
**S = lateral (side)**

Example:  
mzr-7205 **S**  
1/8" NPT lateral (2x)



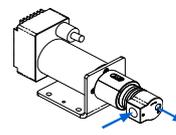
**F = frontal**

Example:  
mzr-7205 **F**  
1/8" NPT frontal (2x)



**S/F = side / frontal**

Example:  
mzr-4605 **S/F**  
1/8" NPT lateral (1x), 1/4"-28 UNF frontal (1x)



### Contact