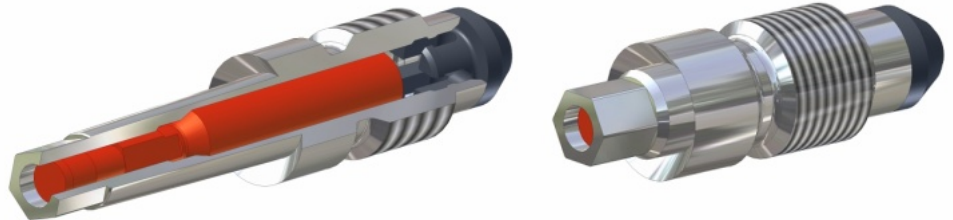


Mold-Injectors for Gas Assisted Injection Molding (GAIM)



Applications:

In the mold, directly at the cavity

Characteristics:

- Annular gap, with self cleaning function
- Valve injector, with low gas flow resistance

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Technical description

Process:

- Short shot
- Full shot
- Gas cooling / Gas rinsing

Advantages:

- Cycle time reduction
- Contact force reduction
- Flexible installation
- Rigidity
- Light weight
- Low distortion
- Good surface quality
- No sunken areas

Gas injection technology

With gas injection technology, gas is injected into the plastic melt at the end of the injecting process. The injected gas displaces the melt on the inside thus resulting in a cavity being formed.

- **Short shot**, cavity is partially filled with plastic melt. The plastic melt is pressed against the mold wall with the injected fluid.
- **Full shot**, entire cavity is filled with plastic melt. The injected fluid forces the melt into an adjoining cavity.
- **Full shot back pressure procedure**, entire cavity is filled with plastic melt. The injected fluid forces the melt through the sprue bushing back into cylinder vestibule.

The GIT mold injector

Gas injectors are installed directly into the mold. One or more injectors are assembled into the mold, depending of the size and geometry of the molded part as well as the fluidity of the melt.

With an installation either parallel or diagonal to the form direction, the mold injector must be used with an extraction mechanism.

Arguments for Herzog injectors

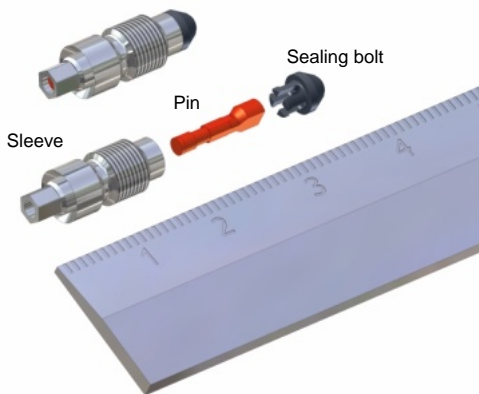
- Small dimensions
- Back-gassing (gas pressure release)
- Ensures high process stability
- Self cleaning function
- Low maintenance
- Assembly / disassembly at the mold interface level

Design and function of the injector

The regulated gas, usually nitrogen, is fed through drillings in the mold to the injector and through this into the molded part. The back-gassing or gas pressure release goes through the same injector back into the supply.

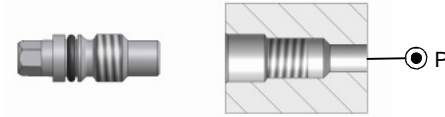
The gassing of the cavity is only possible when the gas injection pressure is higher than the opposing pressure in the cavity. The gas injection pressure moves the pin which opens the injector completely, allowing for high volumes to be achieved. The back-gassing goes through cross-shaped surfaces on the sealing area of the pin. The gap is large enough to allow the gas to flow through, but small enough to prevent the melt from seeping in.

Maintenance of the injector can be carried out simply and quickly when the mold is open.

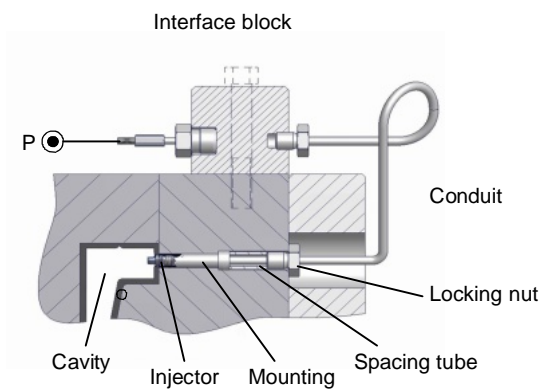


Installation variation**Installed directly in the mold**

The injector opening is directly in the mold.
Gassing occurs by means of drill holes in the mold plate.

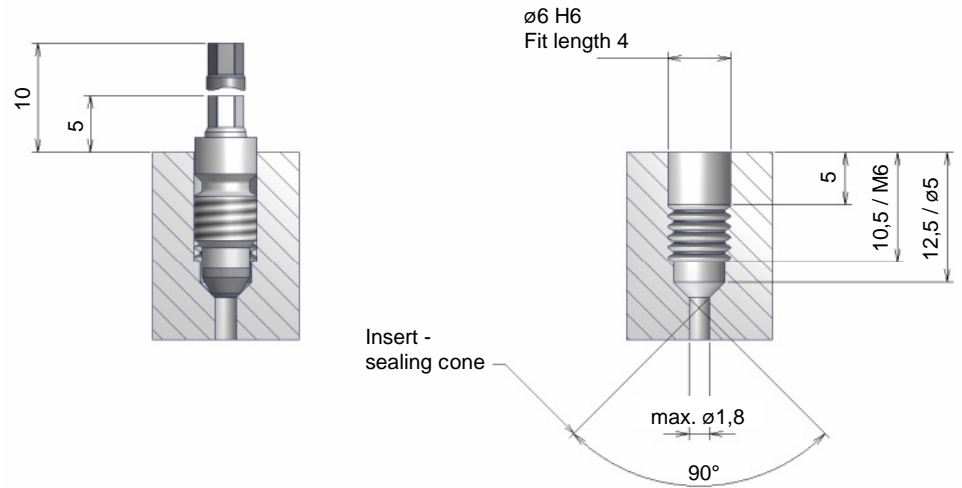
**Using a mounting and conduit**

The injector opening is in a mounting which is allowed into the mold.
A conduit runs from the injector mounting through the mold to the interface block.

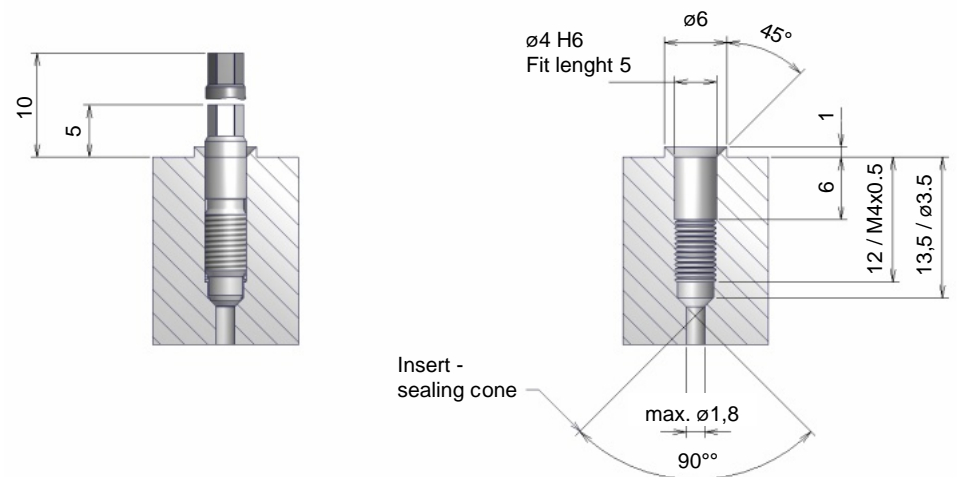


Injector bore dimensions

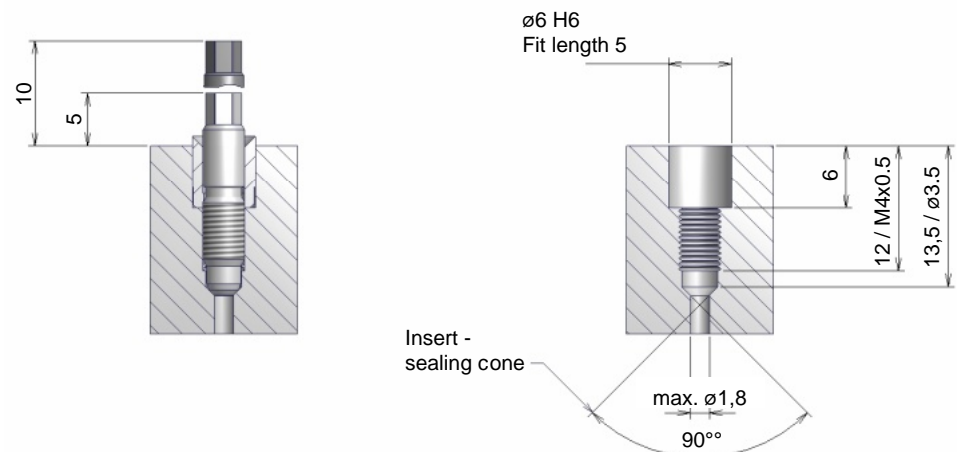
Mold Injector M6 thread. Dimensions in mm.



Mold Injector M4x0.5 thread - sealing lip on mold plate. Dimensions in mm.



Mold Injector M4x0.5 thread - sealing lip on separate casing. Dimensions in mm.





Service set - Torque wrench for Injectors / Initial operation

The injector is an accurately manufactured component which requires skilled handling. Suitable tools should be selected for assembly and cleaning. For this purpose, we recommend our service set.

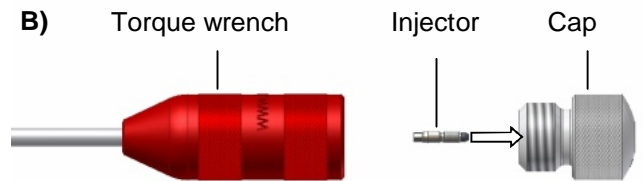
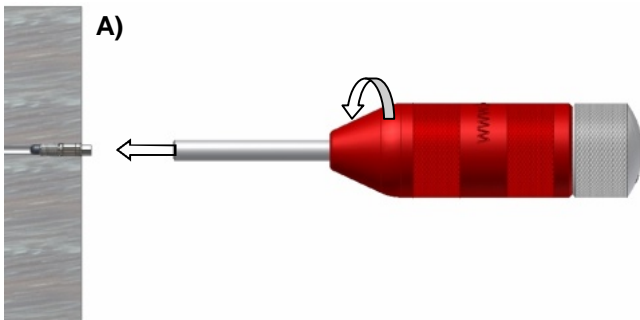
Initial operation

Attention: Do not heat injector above 400° C.
Injector is sensitive to blows and lateral forces.

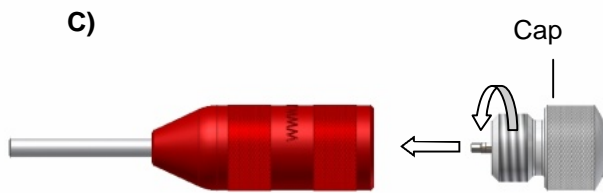
Installation

1. Check that the thread, sealing surface and sleeve are intact (free of damage and dirt).
2. Make sure that the injector is provided with a pin. The pin must not protrude from the injector housing at the thread end.
3. The following torques are necessary to fix the injector into the mold:
max. torque = 2 Nm (200Ncm)

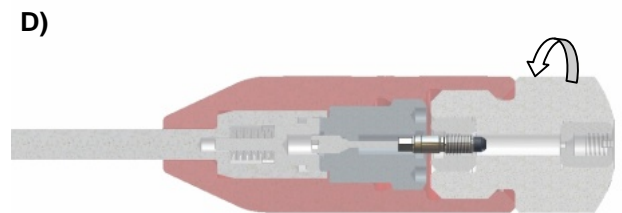
Disassembly - Removing the pin from the injector



Screw the injector into the cap



Screw cap fully into the torque wrench as indicated



Loosen cap and remove with injector bushing and extracted pin.

Cleaning without service set

- The cleaning of the injector must be carried out with care. Overheating or excessive mechanical wear (filing, polishing) can prevent the injector from function.
- The sealing bolt and the internal pin can normally be removed towards the thread. The internal pin may be ejected with a 1.9 mm diameter drift.
- Cleaning the pin takes place by rubbing off the deposits.
- The cleaning of the housing (sleeve) is carried out as follows: use a \varnothing 2 H6 reamer and turn carefully and lightly
Caution: Introduce the reamer from the injector thread end and turn slightly.
- Injectors which are contaminated with thermoplastics are cleaned in a fluidized bed bath or an ultrasonic reaction vessel.


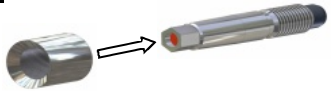
Dimension Sheet for enquiry		or order	GIT Mold-Injectors
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Company:
Street:
City / Zip:
Land:

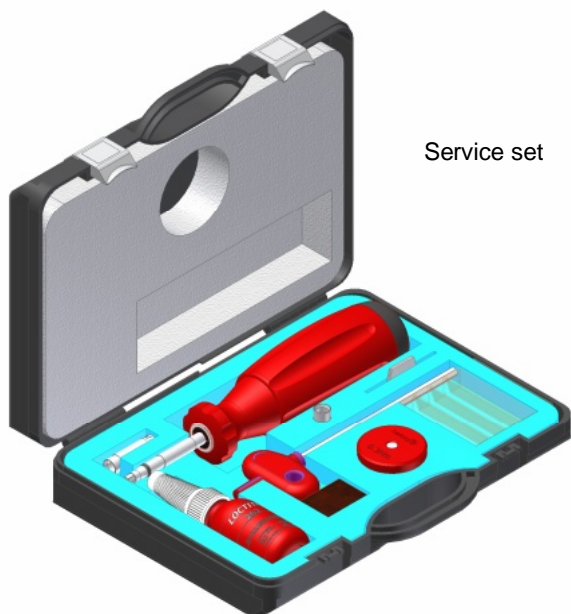
Contact person:
Tel.:
Fax:
E-Mail:

Standard dimensions	GIT Mold Injector	
	M6	M4x0.5
Assembly thread	M6	M4x0.5
Sealing lip	Integrated as standard	Not integrated / Optional
Injector opening in the molded part	Ø 4.6mm	Ø 4mm
Injector cavity immersion depth	5mm or 10mm	5mm or 10mm
Gas withdrawal through injector	Standard	Standard

Please check

GIT mold injector	M6		M4x0.5	
	GIT mold injector length in mm	5	10	5
Sealing lip	<i>Integrated on the injector</i> 		Optional sealing lip casing 	
GIT service set *	M6 Service set		M4x0.5 Service set	

* We recommend using our specially designed tool for installation and cleaning.



Note:

- Technical modifications reserved.
- We need additional information for requirements, which vary from our standard range e.g. drawing sample. Our customer services will be pleased to help you.