



## Seal adjustment on semiconductor valves – Efficient media handling in the process area

### Process description

Process reliability is one of the most important factors in semiconductor production. Part of this is ensuring consistently high media quality. Excessive flow turbulence, redirections, dead spaces or stationary medium can adversely affect this quality and lead to crystallisation, which causes deposits in the plant. Consequently, these media must be kept moving.

However, medium only becomes stationary when small amounts of the medium in question are required, resulting in some valve components being closed. The medium then builds up in front of these components.

To prevent this build-up, valves are used that have a close tight function, though this can be deliberately bypassed if necessary. Adjusting the seal of a valve regulates the flow of a medium without stopping it completely.

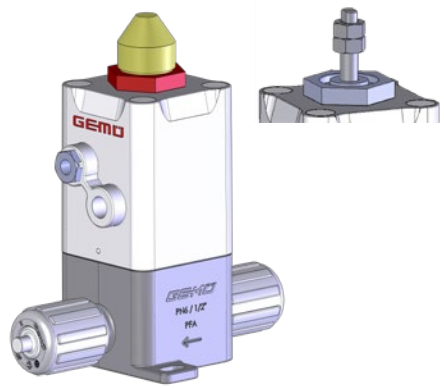
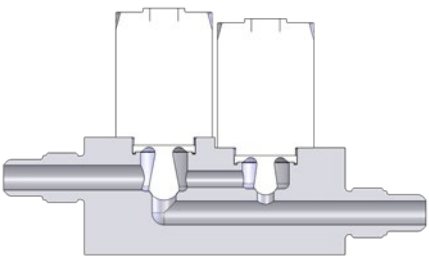
### The task

In the facility area of the semiconductor factory, the medium is stored in tanks and kept in motion by means of circulation. In the process area, there is no temporary storage of the medium; instead it is used straight away. It is therefore necessary to have a loop system in which the medium circulates before it is used. After passing through this loop system, the medium must be prepared to ensure a consistently high quality.

By adjusting the seal, a flow rate can be achieved that is high enough to prevent crystallisation, while simultaneously minimising the amount of medium requiring preparation. Bypass valves or valves with a built-in seal adjuster are suitable for this purpose.

# GEMÜ seal adjustment solutions for GEMÜ iComLine valves

GEMÜ offers the seal adjuster for iComLine exclusively for actuator size 2.

Seal adjuster	Bypass version	Advantages at a glance
		<ul style="list-style-type: none"><li>• Coated metal parts Protection cap prevents contamination from exposed stainless steel parts</li><li>• Two nuts for simple, quick adjustment of the flow rate with greater process reliability</li><li>• Proven PD technology</li><li>• Standard sealing and actuator</li><li>• Flexible use for single valves or with PC50 special blocks</li><li>• Can be adjusted during operation</li></ul>
Adjustments made by trained personnel with tools	Adjustments made without tools → Safety risk	
No differentiation from standard body	Differentiation from the standard body through additional flow path	
No additional dead space	Additional dead space compared with the standard body	
Actuator replacement → Body remains in the plant	Later installation not possible	

## Suitable GEMÜ products

