Angle seat valves

Suitable for contaminated fluids

Stainless steel or brass

Robust industry application

Engineering GREAT Solutions
IMI Precision Engineering is a world-leader in fluid and motion control. Building close, collaborative relationships with our customers, we gain a deep understanding of their engineering needs and then mobilise our resources and expertise to deliver distinctive products and solutions.

Wherever precision, speed and engineering reliability are essential, our global footprint, problem-solving capability and portfolio of high performance products enables us to deliver GREAT solutions which help customers tackle the world’s most demanding engineering challenges.

> **Reliability**
  We deliver and support our high quality products through our global service network.

> **High performance products**
  Calling on a world-class portfolio of fluid and motion control products including IMI Norgren, IMI Buschjost, IMI FAS, IMI Herion and IMI Maxseal.
  We can supply these singly, or combined in powerful customised solutions to improve performance and productivity.

> **Partnership & Problem Solving**
  We get closer to our customers to understand their exact challenges.
Where our product integrates

> Grinding/milling machine
> Dosing machines
> Surface treatment
> Processing bulk materials
> Packaging
> Injection moulding
> Foaming machines
> Textiles
> Compression moulding for chipboard coating
> Printing technology
> Washing systems
> Cooking boiler systems
> And many more...
Angle seat valves

Due to their robust design, pressure actuated angle seat valves are used in a wide variety of applications. Anywhere where a valve is demanded to deal with higher temperatures, aggressive, highly viscous or contaminated mediums a IMI Buschjost angle seat valve is the first choice.

Despite the significant abilities of these valves, their mode of operation is simple: a pressurized neutral control medium such as air, water or nitrogen is filled into the actuator which moves the valve piston up or down thus opening or closing the valve.

In comparison to solenoid valves, pressure actuated angle seat valves demonstrate a distinctly higher closing force, can realize shorter switching cycles, and are approved for use in the Ex-area (area with potentially explosive atmosphere) without further safeguards.

Depending on the environment and the process fluid, the valve body is available in brass (CW617N) and stainless steel (1.4408). The pneumatically operated angle seat valves have a maintenance-free piston actuator. There are two actuator sizes to select from in synthetic material, and two others in stainless steel / aluminium.

The multi-part, self adjusting packing seals the valve reliably and permanently against the operating fluid, ensuring high durability.

Buschjost angle seat valves make unpleasant water hammering a thing of the past as the medium flow itself is used for a damped closing of the valve. The inclined position of the valve seat to the flow direction allows superior flow characteristics.

When to use an angle seat pilot valve?

> When high flow rates are required
> When neutral pilot fluids like air or water are available
> When using highly viscous fluids – up to 600 MM2/SEC
> When very quick opening and closing time is required
> When using fluid with contamination
> When using aggressive fluids
> When using water with strong lime
> When back pressure tightness is required
> When using in explosion proof areas
Polymer Actuator
PA 66 with glass fibre 30%
Ø 50 mm

84720
Model | Port size | Orifice (mm) | Operating pressure (bar)
---|---|---|---
847220.0000.0000 | G1/2 | 15 | 0 ... 16
847230.0000.0000 | G3/4 | 20 | 0 ... 8
847240.0000.0000 | G1 | 25 | 0 ... 5

84740
Model | Port size | Orifice (mm) | Operating pressure (bar)
---|---|---|---
847420.0000.0000 | G1/2 | 15 | 0 ... 16
847430.0000.0000 | G3/4 | 20 | 0 ... 8
847440.0000.0000 | G1 | 25 | 0 ... 5

*1) Without pilot valve
*2) NPT available
*3) For gases and liquid fluids up to 600 mm²/s (cSt)

Brass body suitable for neutral gases and liquids
Stainless steel body suitable for aggressive gases and liquids

Polymer Actuator
PA 66 with glass fibre 30%
Ø 70 mm

84500
Model | Port size | Orifice (mm) | Operating pressure (bar)
---|---|---|---
845020.0000.0000 | G1/2 | 15 | 0 ... 16
845030.0000.0000 | G3/4 | 20 | 0 ... 10
845040.0000.0000 | G1 | 25 | 0 ... 10
845050.0000.0000 | G1 1/4 | 32 | 0 ... 7
845060.0000.0000 | G1 1/2 | 40 | 0 ... 4,5
845070.0000.0000 | G2 | 50 | 0 ... 3

*1) Without pilot valve
*2) NPT available
*3) For gases and liquid fluids up to 600 mm²/s (cSt)

84520
Model | Port size | Orifice (mm) | Operating pressure (bar)
---|---|---|---
845220.0000.0000 | G1/2 | 15 | 0 ... 16
845230.0000.0000 | G3/4 | 20 | 0 ... 10
845240.0000.0000 | G1 | 25 | 0 ... 10
845250.0000.0000 | G1 1/4 | 32 | 0 ... 7
845260.0000.0000 | G1 1/2 | 40 | 0 ... 4,5
845270.0000.0000 | G2 | 50 | 0 ... 3

*1) Without pilot valve
*2) NPT available
*3) For gases and liquid fluids up to 600 mm²/s (cSt)
Stainless steel and aluminium actuator Ø 70 mm

<table>
<thead>
<tr>
<th>Model *1)</th>
<th>Port size *2)</th>
<th>Orifice (mm)</th>
<th>Operating pressure *3) (bar)</th>
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<td>G1/2</td>
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<td>0 ... 16</td>
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<tr>
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<td>821840.0000.0000</td>
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<td>25</td>
<td>0 ... 10</td>
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<td>821850.0000.0000</td>
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<td>32</td>
<td>0 ... 7</td>
</tr>
<tr>
<td>821860.0000.0000</td>
<td>G1 1/2</td>
<td>40</td>
<td>0 ... 4,5</td>
</tr>
<tr>
<td>821870.0000.0000</td>
<td>G2</td>
<td>50</td>
<td>0 ... 3</td>
</tr>
</tbody>
</table>

*1) Without pilot valve  
*2) NPT available  
*3) For gases and liquid fluids up to 600 mm²/s (cSt)

Stainless steel and aluminium actuator Ø 125 mm

<table>
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<th>Orifice (mm)</th>
<th>Operating pressure *3) (bar)</th>
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<td>822850.0000.0000</td>
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<td>822860.0000.0000</td>
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<td>822870.0000.0000</td>
<td>G2</td>
<td>50</td>
<td>0 ... 10</td>
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*1) Without pilot valve  
*2) NPT available  
*3) For gases and liquid fluids up to 600 mm²/s (cSt)

82480

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<th>Orifice (mm)</th>
<th>Operating pressure *3) (bar)</th>
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<td>824850.0000.0000</td>
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<td>32</td>
<td>0 ... 16</td>
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<td>824860.0000.0000</td>
<td>G1 1/2</td>
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<td>0 ... 10</td>
</tr>
<tr>
<td>824870.0000.0000</td>
<td>G2</td>
<td>50</td>
<td>0 ... 10</td>
</tr>
</tbody>
</table>

*1) Without pilot valve  
*2) NPT available  
*3) For gases and liquid fluids up to 600 mm²/s (cSt)

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*4) 0000 = without pilot valve, 0247 = with pilot valve for V d.c., 0247 = with pilot valve for V a.c.

*5) For gases and liquid fluids up to 400 mm²/s (cSt)
Options and Accessories

Options
- Normally closed
- Normally open
- Higher operating pressure
- Electrical position indicator with 2 micro switches
- Double acting
  Further options on request.

Accessories
- With or without 3/2-way control valve (see data sheet N/en 5.8.640)
- NAMUR adapter plate for upgrade
- Proportional valve
- Positional control
- Regulating cone

Complementary products

There are a number of recommended options for operating angle seat pilot valves:

- Pilot valve for double-acting actuators
- 3/2-way pilot valve stainless steel
- 3/2-way pilot valve

On multiple valve applications why not consider a valve island from the VM or VS range?

Contact your local sales agent for further details.
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