ES05 – THE ESSENTIAL VALVE SYSTEM
SIMPLE, FLEXIBLE AND EFFICIENT
ES05 – the simple solution for elementary pneumatics

From your idea to the finished product: The ES05 Essential valve system from AVENTICS is setting benchmarks for demand-based, custom-configurable valve systems. Buy AVENTICS assembled systems or build your own.

**Option 1 - Factory assembled valve systems**

Users can individually configure their ES05 valve system in the online configurator in just a few steps. Our configuration tool will then provide all necessary documentation, spare parts lists, 3D models, operating instructions, and assembly instructions for system extensions. The configurator creates a material number which can be immediately used to order the complete ES05 valve system. And in just a few days, you will receive the ready-to-install and tested valve system.

**Option 2 - Build your own valve systems**

ES05 is a modular system that enables users to create individual valve systems based on simple assembly steps and just a few components – with a single tool and uniform torque. All components are distinct which makes incorrect installation virtually impossible. Final inspection is easy thanks to the Essential Test Box which allows you to carry out all necessary tests – including the right assembly tool and test instructions. AVENTICS ES05: It’s that easy.

**The choice is yours**

For valve systems with a field bus or multipole connection, electrical wirings are integrated into the base plate. Alternatively, conventional single wiring is also possible. If required, the valve coil can be turned at a later stage to enable variable connection configuration.

**Think different**

Usually pilots are integrated in the valve, but the pilots of ES05 are integrated in the base plate. Thanks to this concept you can easily and cost-effectively adapt the valve function - even at a later stage. Choose your base plate according to your demands: As a flexible solution ready for all valve functions or more cost efficient optimized for single solenoid valves.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Pressure range</td>
<td>0 to 8 bar</td>
</tr>
<tr>
<td>Int./ext. pilot pressure</td>
<td></td>
</tr>
<tr>
<td>Flow rate</td>
<td>Up to 600 NL/min</td>
</tr>
<tr>
<td>Integrated fittings</td>
<td>Metric D8</td>
</tr>
<tr>
<td></td>
<td>D 3/8”</td>
</tr>
<tr>
<td>High-tech polymer</td>
<td>Robust and light weight</td>
</tr>
<tr>
<td>LED indication</td>
<td></td>
</tr>
<tr>
<td>Connectivity options</td>
<td>D-Sub connection</td>
</tr>
<tr>
<td></td>
<td>Field bus</td>
</tr>
<tr>
<td></td>
<td>Single wire</td>
</tr>
<tr>
<td></td>
<td>IO-Link</td>
</tr>
<tr>
<td>Switch-on-time</td>
<td>&lt; 20ms</td>
</tr>
<tr>
<td>Up to 12 valves</td>
<td>Up to 24 solenoids</td>
</tr>
</tbody>
</table>
ES05 – The Essential Valve System

ES05 is a valve system that has been designed especially for standard pneumatics applications and industrial automation. Simple, flexible and efficient – without bells and whistles.

**Easy assembly**
- Due to a modular concept, low number of parts and the one-tool-concept our customers save time.
- Thanks to the easy construction concept, mistakes at assembly are nearly impossible.

**High flexibility**
- The ES05 allows individual configuration, the flexible electrical connectivity enables easy modification and extensions.
- Modifications are possible at any time down to the last minute or even after installation.

**Easy configuration**
- Through the engineering tools you can easily configure, assemble or order your desired products, including all documentation free-of-charge.

**High quality**
- You can benefit from cost focussed contemporary products in technical excellence made from extensive wealth of experience.

**Lower inventory**
- Small number of parts required to build a vast variations of valve systems reduces inventory investment.

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Single wire  
AES field bus  
IO-Link  
Individual valve
One-tool concept for simple assembly

The entire assembly process is very simple, only requires a single tool and can be done in three easy steps.

1. Base plate assembly
Mount the tie rods on the left end plate e.g. with D-Sub connection and extend to the required expansion stage using tie rod extensions. After that, push the base plate onto the tie rods and mount finally the right end plate.

2. Valves
Place the corresponding valve functions on the base plate positions and tighten.

3. Test
Connect the ES05 valve system electrically and pneumatically to the Essential Test Box and perform a short function and leakage test. Done!
Facts and figures

<table>
<thead>
<tr>
<th></th>
<th>Valve system</th>
<th>Single valve</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Valve functions</strong></td>
<td>5/2 single and double solenoid; dual 3/2 nc and no; 5/3 closed center; blanking plate; intermediate supply plate</td>
<td></td>
</tr>
<tr>
<td><strong>Number of valves</strong></td>
<td>Up to 12 valves in steps of 2</td>
<td>1 valve</td>
</tr>
<tr>
<td><strong>Electrical connection</strong></td>
<td>Single wire (form C, industry)  D-Sub connection (25-pin)  Field bus connection via AES IO-Link</td>
<td>Single wire (form C, industry)</td>
</tr>
<tr>
<td><strong>IP rating</strong></td>
<td>IP65 (single wire)  IP50 (D-Sub, Field bus, IO-Link)</td>
<td>IP65</td>
</tr>
<tr>
<td><strong>Switch-on-time</strong></td>
<td>&lt; 20ms</td>
<td>&lt; 20ms</td>
</tr>
<tr>
<td><strong>Dimensions of D-Sub and single wire version</strong></td>
<td>(Depth/Height/Length - X = number of valves)</td>
<td>100mm/86mm/X*18+69mm</td>
</tr>
</tbody>
</table>

Overview of basic components

* End plate kit
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