

APSOfluid®

Components for Industrial
Automation



Optimized Application Efficiency through Customized Products

Sales partnership between Angst+Pfister and SMC

Through its close sales partnership with SMC, the worldwide leading experts in pneumatics, Angst+Pfister offers its customers the combined power of top-notch technological expertise and a highly efficient supply chain. With customized product and supply solutions that are unparalleled anywhere else in the world, Angst+Pfister serves its customers in a competent, fast, reliable and economical fashion!

Customer benefits:

- A high level of technological competence and product availability
- Supply and customized production – from a single source
- Easy ordering through APSOparts® – the Online Shop of Angst+Pfister
- Time and cost savings through Kanban, just-in-time solutions and EDI connections



Automation – pneumatics, electric actuators, vacuum technology

More and more, pneumatics, electric actuators, vacuum technology, sensor technology, and instrumentation are being employed in combination for automation processes. As such, today's automation solutions require knowledge of each individual discipline. Angst+Pfister offers the full range of technology from one source – to deliver professional technical consultation to automation users.



Fluid control

To enhance its automation technology, Angst+Pfister offers material control and monitoring components. The product selection ranges from regulation and dosage valves to sensor components. They are suitable for use with materials ranging from compressed air and water to steam and chemical substances.

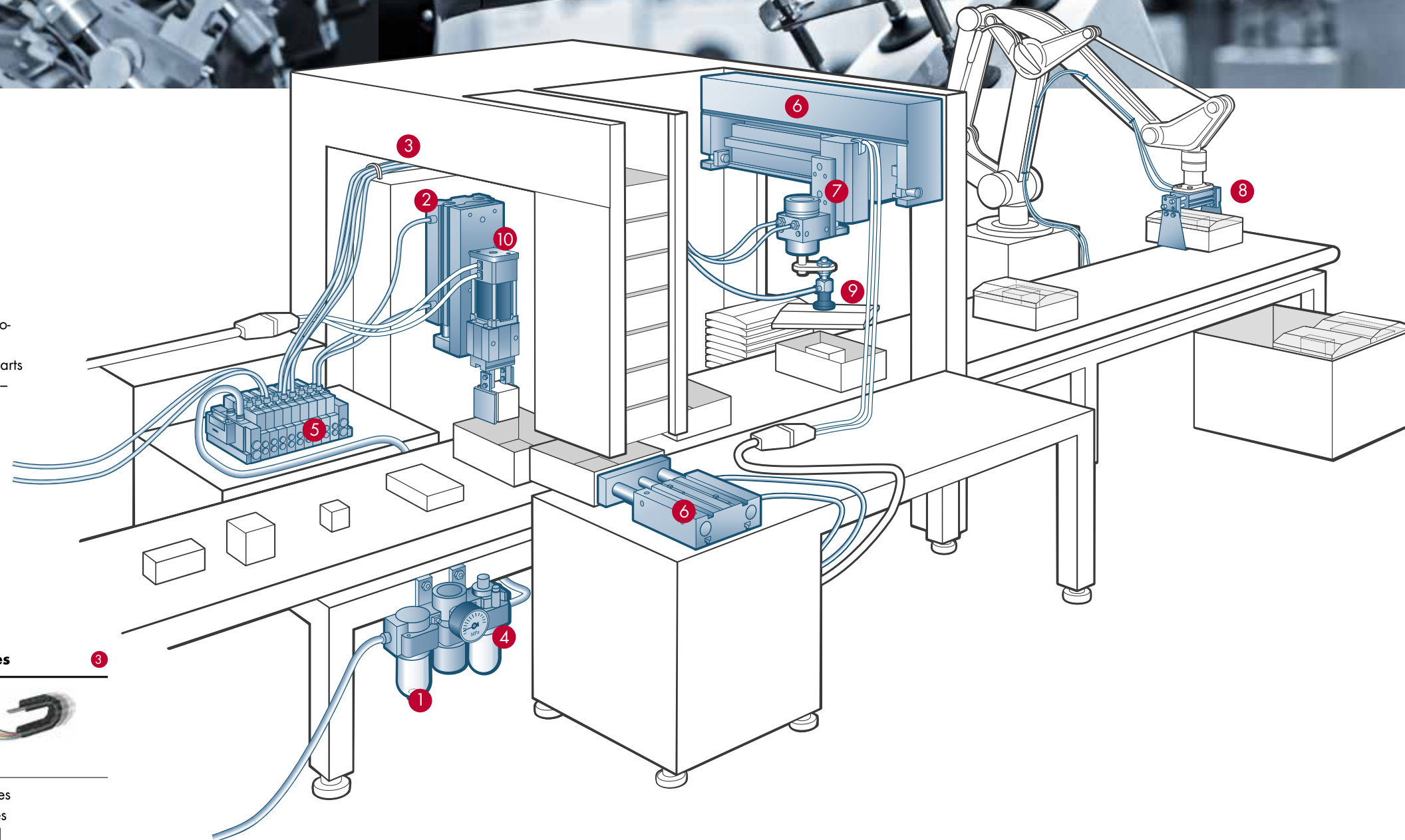


Additional product areas and specialized applications

In addition to its standardized products for automation and fluid control, Angst+Pfister offers components for specialized applications: air filters, products for clean-room implementation and antistatic use, PTFE and PFA products and much more. For increased efficiency, units are available in numerous versions – each tailored to meet specific customer requirements.

Automation – pneumatics, electric actuators, vacuum technology

In the pneumatics sector, Angst+Pfister serves its customers with compact, lightweight parts as well as components for fast pick-and-place movements and clean compressed air. Whether for positioning monitoring, workpiece recognition, the precise power control of sensitive components or moving to any desired position – Angst+Pfister delivers reliable, precise, high-quality electric actuators. Angst+Pfister vacuum technology products include lightweight, economical parts as well as components that facilitate vacuum suctioning of a wide variety of shapes and surfaces – without any damage to the workpieces.



Maintenance devices 1



- Filters, regulators, lubricators
- Pre-assembled according to customers wishes
- Soft start-up valves

Couplings 2



- Speed controllers
- Plug-in connections
- Quick-acting couplings

Technical hoses 3



- Standard hoses
- Dragline hoses
- Chemical and high-temperature hoses

Instrumentation 4



- Manometers
- Pressure switches
- Flow switches

Valves 5



- Customized valve manifolds
- Electromagnetic valves
- Mechanically Actuated Valves

Pneumatic cylinders 6



- ISO air cylinders
- Rodless cylinders
- Guide cylinders

Electrical drive components 7



- Linear drives
- High rigidity slider
- Miniature actuators

Pneumatic handling components 8



- Grippers
- Rotary actuators
- Table cylinders

Vacuum handling components 9



- Vacuum ejectors
- Vacuum pads
- Air suction filters

Electrical handling components 10



- Grippers
- Rotary tables
- Slide tables



Fluid control

Angst + Pfister offers a broad selection of reliable components for fluid control and measurement. From operation and dosage valves to sensor components – suitable for use with fluids such as gases, water, coolant, steam and many others.

- Electrically or pneumatically operated valves available
- Metric and imperial connections with nominal sizes (NS) up to 50 mm
- Pressure range up to 70 bar (7 MPa)



Air



Medium vacuum



Water



Oil



Steam



Hot water



Chemicals

Valves

 Direct operated 2 port solenoid valves NS 1 to 10mm/0 to 1 MPa	 Pilot operated 2 port solenoid valves NS 10 to 25 mm/0 to 1 MPa
 Air operated 2 port valves NS 7 to 50mm/0 to 1.6MPa	 Air operated 2/3 port valves Ideal for coolant NS 7 to 25 mm/0 to 7 MPa
 2 port solenoid valves with very high capacity Ideal for bag filter cleaning NS up to 100 mm/0.03 to 0.7 MPa	 Compact direct operated 2/3 port solenoid valves Ideal for chemicals NS 1.1 to 2 mm/-75 kPa to 0.6 MPa

Sensor components

 Flow switches and sensors for compressed air, water and chemicals Flow rate: 0.5 to 250l/min (water) 0 to 12,000l/min (compressed air)	 Pressure switches and sensors for compressed air, water and chemicals Pressure: -0.1 MPa to 15 MPa
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Additional product areas and special applications

In addition to its selection of standardized products in the areas of automation and fluid control, Angst + Pfister also offers products for special applications: air filters, products for clean-room implementation and antistatic use, PTFE and PFA products and much more. The units are available in numerous versions for increased application efficiency and adapted to meet the specific needs of every customer – from design to shipment through to final assembly.

A selection of our products

 Antistatic • Ionizers • Antistatic connectors • Measuring devices	 Precision pressure control • E/P converters • Precision regulators
 PTFE/PFA • Hoses • Fittings • Valves	 Special filters • Mist and micro mist filter • Odor removal filter • Oil separators
 Clean-room pneumatics • Up to ISO grade 7 • Pneumatic cylinders • Valves • Connectors • Air preparation equipment	 Main line components • Refrigerated air dryer • Water separators • Membrane air dryers • Main line filters
 Special fittings • Low torque rotary joint • Multi-connectors • Rotary fittings • Stainless steel one-touch fittings	 Pneumatic equipment • Blow guns • Silencers • Pressure booster

Components

 Production The components manufactured at our own production facilities are tailored to meet the exact individual needs of our customers. They are designed in cooperation by the customer and our technicians and built to specifications by our highly trained staff. This allows you to save money and increase efficiency during the procurement and engineering process.	 Complex systems and specialized products You require modular units, equipment assembly or customized mechanical processing? Thanks to our highly flexible manufacturing possibilities, we can deliver specialized items practically as fast as our standardized products.
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From Standard Products to Customer-specific Solutions

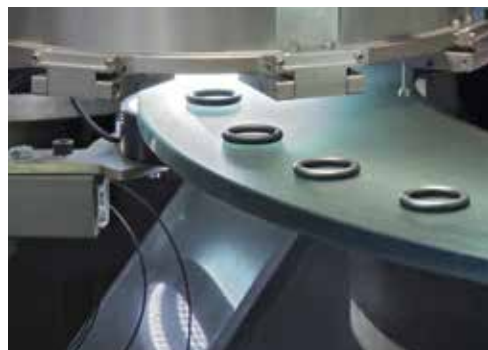
Over the years, Angst + Pfister has built up a comprehensive team of highly qualified application engineers who have amassed expertise across a broad range of industries. Under the APSO (Angst + Pfister Solutions) brand, our engineering specialists develop customized solutions for practically any application within our five core product areas. Let our engineers serve you with tailor-made solutions in the areas of Antivibration Technology, Fluid Handling Technology, Sealing Technology, Engineering Plastics Technology and Drive Technology.



Engineering services: Expertise all along the line

Technical industry expertise from around the globe that benefits our local customers:

- design-in and development support (CAD, CAE)
- experimental validation and virtual design
- material and compound specifications
- industry approvals and certifications
- technical seminars and training courses



The perfect global production platform: High-quality components for the highest requirements

Angst + Pfister has production facilities in 15 countries worldwide. This global orientation provides our customers with the most cost-effective production environment – even before considering our competitive ability to meet quantity, logistic and quality requirements. Being a company that is certified according to ISO-9001:2000, we make every effort to completely meet the quality requirements of our customers.



Reliable logistics and customer focus worldwide

A comprehensive logistics infrastructure ensures that the right products are getting to their destination when and where they are required. Highly efficient processes, supported by an electronic order processing system, characterize the Angst + Pfister Logistics Centre. Thanks to our extraordinary international network, a “just-in-time” delivery is supplied to all our customers, no matter the location.

Services from Angst + Pfister Group

Angst + Pfister – Your supply and solutions partner

The Angst + Pfister Group is a leading international technical manufacturer and service provider for high-end industrial components. As a supply and solutions partner for engineering plastics, sealing, fluid handling, drive, and antivibration technology as well as

sensors, Angst + Pfister combines efficient logistics concept with comprehensive product application engineering services. Besides providing customer-specific parts, the Group offers a product range consisting of approximately 100,000 standard items.

Our core product divisions



APSOplast®
Engineering Plastics
Technology



APSOseal®
Sealing
Technology



APSOfluid®
Fluid Handling
Technology



APSOdrive®
Drive
Technology



APSOvib®
Antivibration
Technology

Switzerland

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