



**AVENTICS**

**YOUR CUSTOMIZED  
PNEUMATIC SOLUTION  
TESTED AND  
READY-TO-INSTALL**

**Pneumatics**  
It's that easy





# Always the best for your application – individually configured, modified or newly developed

Why be satisfied with less? Demand the best for your applications – in both technical and economic terms. We will show you that customized solutions are not only the better alternative, but also more cost-effective.

## If there is a solution, we will find it

Developing customer-specific solutions has always been one of our core skills. Building on decades of solid experience, our experts can draw from a wealth of knowledge and use it to create targeted solutions for your applications.

- System technology – ready-to-install pneumatic solutions
- Specific product solutions

Our system engineers offer our customers the planning, configuration and assembly of control panels, control cabinets, or handling systems. Our product development experts implement customer-specific product adaptations and special pneumatic solutions just for you.

## Industry expertise, an added benefit

Together with our customers, we have developed a product portfolio that is precisely tailored to meet the needs of the respective industry. It contains proven components and solutions that can also be adapted to suit your specific needs and requirements. Take advantage of our experience and contact us to discuss your application!



## 04 Processes and advantages

05 The simple route

## 06 The range of products and systems

08 Turnkey solutions

10 Specific product development

## 12 Global engineering

14 Product and industry expertise

15 In dialog

# Advantages at all levels: Optimum function, cost-effectiveness, efficiency

Rest assured that everything is on track: from planning, design and documentation to logistics and assembly, up to delivery. Make your work easier! Let a single contact person take care of all your needs.

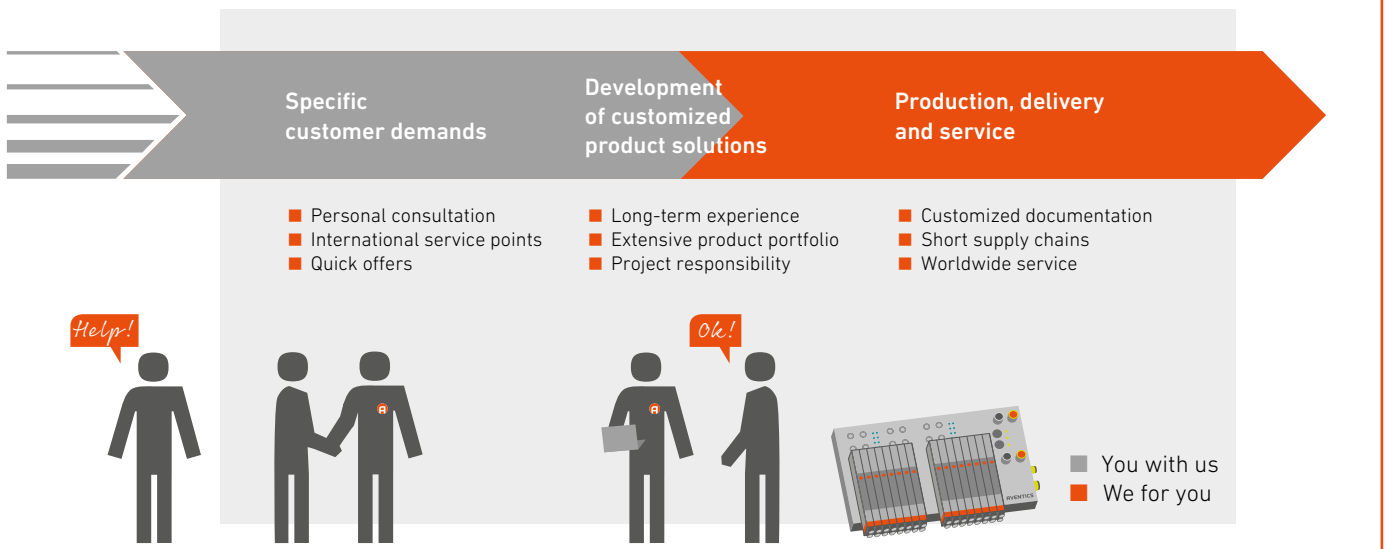
## You gain more efficient outcomes, saving you costs, time and irritation in the process

You gain valuable time and free up capacities in your internal work and processes. And the best promise: You can rest assured that everything will work according to plan. Smooth

implementation is our business and we take full responsibility for the pneumatic solution in terms of contents and organization. We have only lived up to our part of the bargain when you are satisfied and everything is fully operational. Guaranteed.

## YOU WITH US – WE FOR YOU

The AVENTICS Request Management team is at your side for special requests for which there are no standard products available - ready to develop customized solutions.

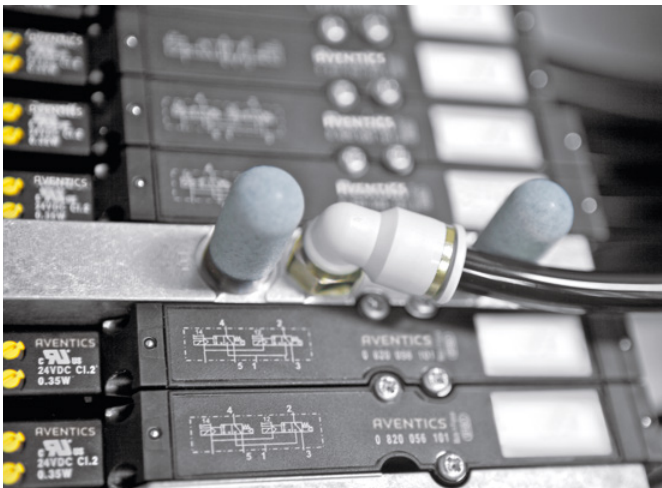


▲ Results-oriented work always involves the intelligent delegation of specific tasks. At the right time in the right scope, and to the right partner. Fall back on our experience as a specialist for customer-specific automation solutions.

# The simple route to an optimal solution – efficient and on schedule

## Your planning is in good hands

Starting from your task description, our specialists for system solutions work to create the right ready-to-install pneumatic solution. They select the products, components, and accessories that are best suited to your application. Details can make or break a project, especially if it is highly complex. For your planning and implementation, this makes it all the more important to have experts at your side who are experienced in putting together every last piece of the puzzle. Only the best right from the start. Make it your standard. And one you can count on.



## Consulting, planning, service, design, and documentation advantages

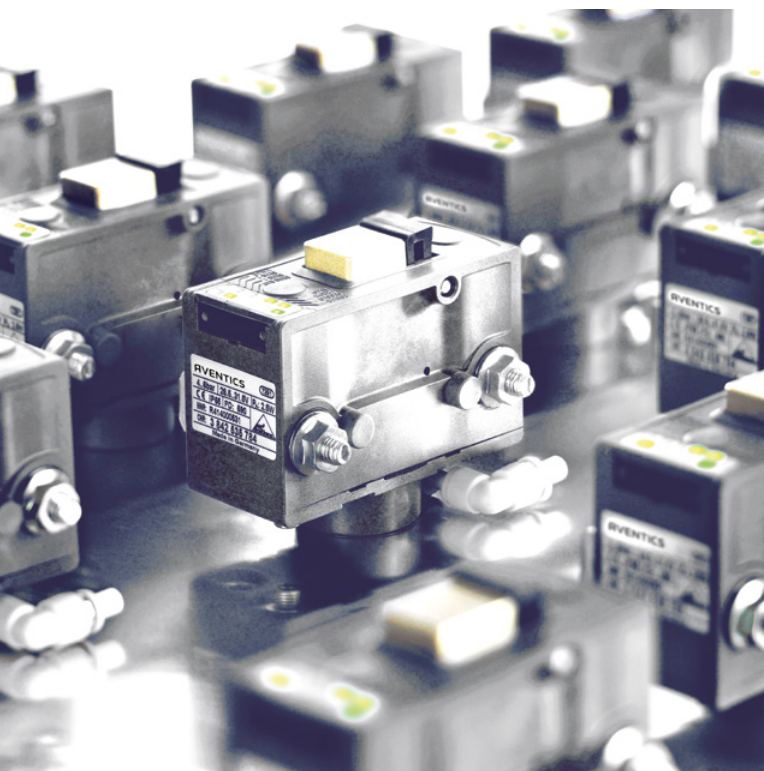
- You have only a single contact person, giving you more time for your core business
- You receive a pneumatic solution with precisely tailored functions, size and fitting dimensions that is optimized in terms of material and energy consumption.
- We provide you with a fully tested complete system that minimizes your risk
- Your internal engineering capacities are freed up
- You have no internal design costs due to our plug & play solutions
- You have no expenditure for project and product documentation

## Procurement, logistics, assembly, and delivery advantages

- You need only one material number for organizational administration of the complete system
- You have fewer procurement expenses as you are dealing with a single supplier
- Your internal logistics costs are reduced since there is only one delivery
- The assembly by our specialists reduces your assembly time
- The plug&play solutions eliminate internal testing costs
- You can avoid bottlenecks and production downtimes

# The range of products and systems

When developing customer solutions, our experts can draw on the latest findings in pneumatics, as well as the innovative products in our standard program. Products that have set the standard in many applications and are firmly established as “best in class”. In short, they have all the prerequisites for implementing customized, “best in class” solutions.



## Our product range: the solid foundation of our work

For over 30 years, we have developed specific pneumatic solutions for our customers – tailor-made, with worldwide service and always at the cutting edge of technology. We can rely on our comprehensive standard product offering for the implementation of individual and diverse tasks. Coupled with our expertise, this gives us a solid foundation for optimized results. Products and systems range from valve systems specifically configured for individual applications to ready-to-plug-in control cabinets and from a pure product modification to a completely new development.

- Modified valve systems
- Modified valves
- Modified maintenance units
- Modified cylinders
- Special accessories
- Cylinder valve units
- Control panels
- Control cabinets
- Complex pneumatic systems including electric controls
- Customized new product developments

# Mass balancing cylinder

Valve block with integrated pressure monitoring

Valve systems with additional applications

Electropneumatic pressure regulator with booster

3-position cylinder

# Cushioning cylinder

Cylinder with manual stroke setting

Mechanical roller lever valve

Cylinder made of special materials

Cylinder valve unit for very low temperatures

Compact control panel for decentralized installation

Gate valve under vacuum

Valve block for harsh environments


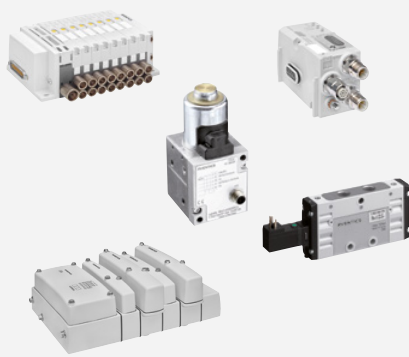

Electropneumatic test device

Control cabinet with stainless steel tubing

Control cabinet with complex automation control

Your pneumatic solution

**AVENTICS REQUEST MANAGEMENT:**  
PRODUCT MODIFICATION, SYSTEM CONFIGURATION, PRODUCT DEVELOPMENT

Actuators	Valve technology	Air supply management
Cylinders, drives, accessories	Valve systems, directional valves, electro-pneumatic pressure regulators, accessories	Maintenance units, pneumatic connection technology, accessories
		

# As diverse as your applications: a glimpse at our product portfolio

## Modified cylinders

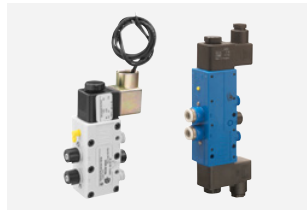
Customer-specific adjustments of our standard program cylinders include special mounting dimensions, strokes and add-on parts, as well as additional equipment for the specific conditions of the work environment.



- ▲ Cylinders with modified piston rods, specially designed profiles, special equipment, and additional functions.

## Modified valves

We optimally match the valves to the requirements of your application – whether for specific work environments, special versions, or with special functions.



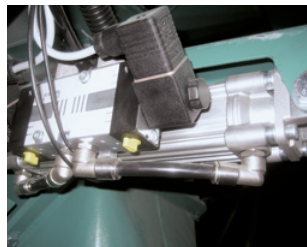
- ▶ Valves with individual connection technology, machine-related additional functions and customer-specific equipment.

## Modified maintenance units

The maintenance units are custom-configured for your specific needs and preassembled ready for installation – including flow optimization and compressed air monitoring for long-term energy efficiency.



- ▲ Maintenance unit with integrated pressure switches and special tubing for high volume flows.



- ▲ Cylinder valve unit as a decentralized control unit for opening and closing spools in a silo system.

## Modified valve systems

Based on suitable valves and valve electronics from the standard product range, the valve systems are configured with specific add-on components, function units and necessary accessories, and preassembled ready for installation.



- ▲ AV valve system with integrated E/P pressure regulator and AES connection technology.



- ▲ Valve system for use in a bottle-filling plant with protection class IP67.

## Cylinder valve units

We configure the perfect cylinder-valve combination for every task and work environment. The cylinder valve units are equipped with all desired special functions and mounting elements.

## Modified electropneumatic pressure regulators

The E/P pressure regulators are adjusted to the required specifications. This involves the modification, optimization or new development of electronic and mechanical components.

## Specific accessories

Depending on the customer requirements, the accessory parts, tubing and push-in fittings of our standard product range are modified in terms of technology and design.

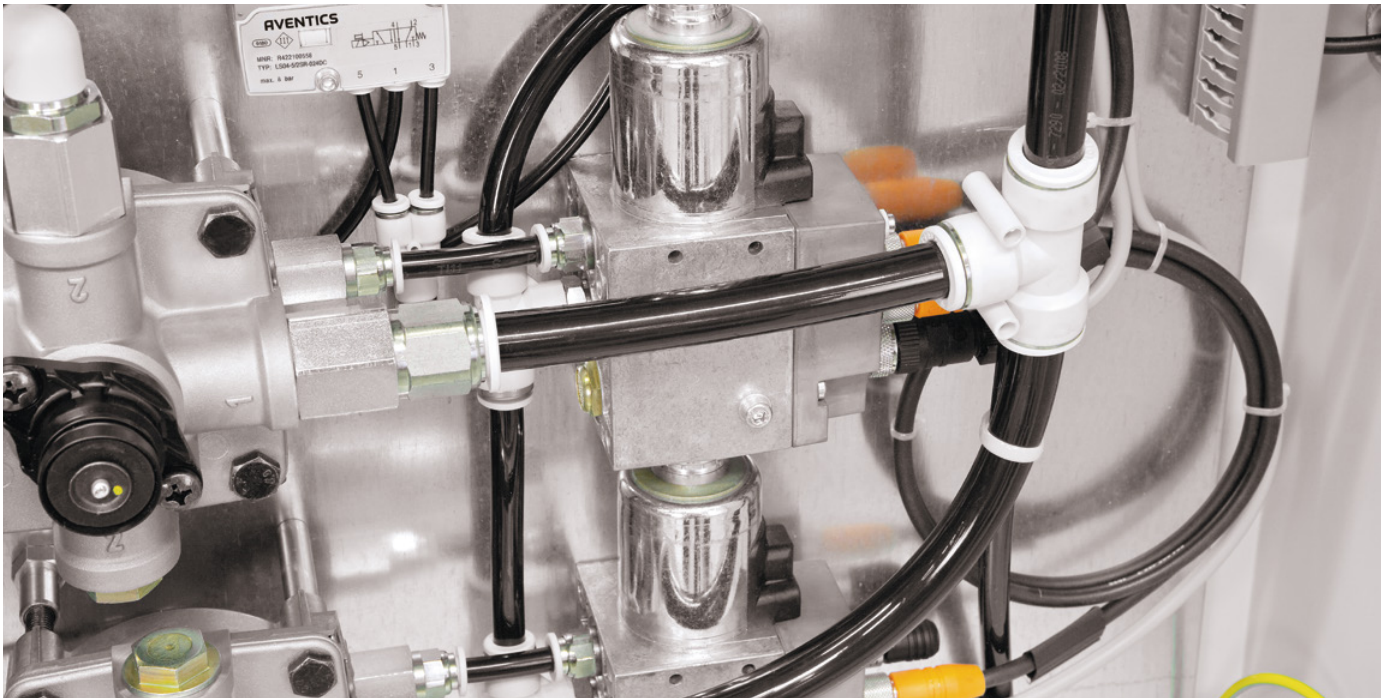


- ▲ E/P pressure regulator for energy-efficient regulation of pneumatic springs in trains.



- ▲ Accessories with other qualities, designs, connections, or enhanced technical properties.





### Application-specific control cabinets and panels

We plan the entire pneumatic control for your application and deliver a ready-to-install solution. The control panels are specifically adjusted to the available space in the machine and the work environment, and come preassembled and fully tested. The preassembled control cabinets with all essential components for your application are ready-to-install, interconnected, and fully protected against external influences. The spectrum of control cabinets ranges from a small switch box with basic functions to a complex switching center with all control options and PLC.

### Technical options for control cabinets:

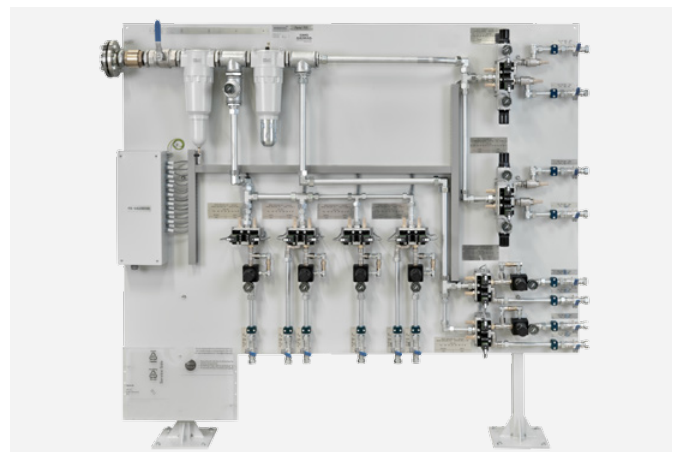
- Sizes from 300 x 300 x 210 mm to 1500 x 2500 x 500 mm
- Custom paint jobs
- Electronic controls incl. fieldbus connections
- Compressed air preparation with all functions (press./vac.)
- Use of ATEX components

### Added benefits for your application:

- Perfectly matched components
- Integrated pneumatic and electronic control
- Increased functional reliability
- Longer service life
- Excellent adjustment to your requirements
- Reduced maintenance effort
- More flexible assembly options
- Improved energy efficiency



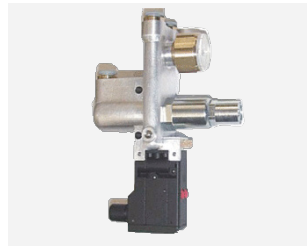
▲ Electropneumatic control cabinet for the control of entire automation processes.



▲ Fluid panel for the steel industry.



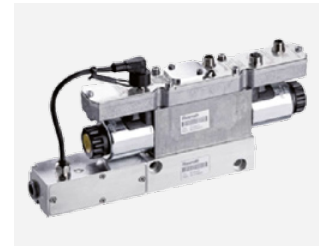
▲ Electropneumatic pressure regulator switched parallel for large flow rates with integrated switching valve for 0 bar exhaust.



▲ Unit consisting of a valve, pressure regulator and gauge with a specifically designed base plate and all ports facing the same direction.



▲ Electropneumatic pressure regulator in combination with a relay valve to accommodate large ventilation flows.



▲ Electropneumatic pressure regulator with air flow sensor and integrated air flow control.



◀ Cylinders with individual piston rods, specific profiles, materials, functions, and mounting elements.



▲ Tilt sensor, sensor and control valve for the automatic compensation of weight on rotating tools, e.g. welding tips.



▲ Impact cylinder with air reservoir and integrated valve, specifically for all applications with limited air supply. The cylinder contains an integrated air reservoir and valve.

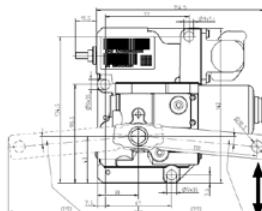
### Application examples for specific product developments

From one-off solutions to series components – specific product developments can optimize an application down to the very last detail. Sometimes, just a simple modification or addition to selected standard products can improve function and reduce costs.

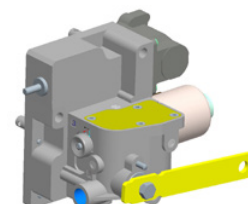
- Modification of standard components
- Integrating various functions in a single product
- Product development with expanded specifications
- Integration of electronics and pneumatics



Briefing, consulting and finding solutions



Development and design



Simulation, function test, and concept verification

# Good reasons for customized pneumatic components

Of course, a tailor-made design is always the best solution. It fits exactly and, as a result, provides decisive additional benefits – if you know how to do it. Only then can targeted solutions be efficiently achieved and implemented with technical and organizational prowess.

## Well organized, competent, prudent: It's that simple

All we need is a description of your task. We guarantee efficient progress within a proven project organization with clearly defined targets and deadlines.

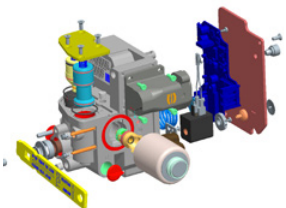
Their tasks range from implementing simple customized modifications to standard components to developing completely new user-oriented devices in innovative models and functions. From highly complex projects with functional integration to cautious, yet effective, adjustments, either way we provide you with tailor-made components with clear added benefits for your application.



▲ Multi-position cylinder. 13 different strokes in a single device.

## From briefing to series production

Professional from the start: from our initial conversation with the user and the joint creative phase to the specific search for solutions, and finally series production. Simulation, functional and concept testing, prototype construction, all test phases, pre-series production to SOP up to series maturity are all part of our service.



Pre-series production and test phases



Series production and application



◀ Electronic air control valve with proportional valve, two switching valves and control electronics with sensors.

# Unconventional and interdisciplinary – targeted product development with world-wide proven expertise

For us, each day is different from the next – our experts have cross-systems expertise and a wealth of experience gained in cooperation with users from a wide variety of countries and industries.

## We speak your language

To us, close collaboration with our customers is one of the most important factors for success. For more than 30 years we have been jointly developing and creating successful product solutions. Our solutions always result from a joint creative process in working together with the customer. This requires a common understanding – with regard to both technology and language. Our developers, technicians, and consultants have internationally based expertise, know what they are talking about, are at home all over the world, and provide you with support in your native language. This makes the process much easier and more efficient. Talk to us today!

- Our project management team has an international focus
- Customer-specific engineering at the shown locations.
- We have development centers and production sites in Europe, the Americas, and Asia
- Our consultants and engineers are always close to the customer, providing you with on-site support
- Worldwide sales and service



AVENTICS Corporation  
Lexington, USA



Development centers and production sites

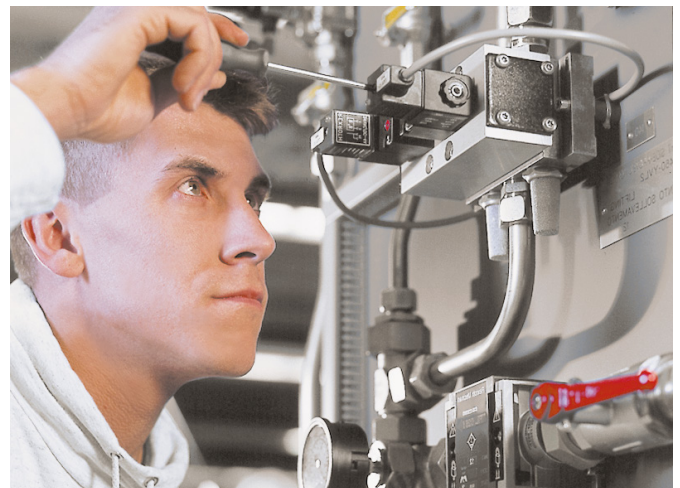
# Technological leadership and international market transparency



## Utilize our product and industry experience for your application!

We see optimization as an ongoing process. The world around us is constantly changing and we are not satisfied with "leaving well enough alone". There are always enough reasons to stay on the lookout for potential improvements. Our experts for customer-specific solutions will be happy to assist you. Because only the best is good enough for your application – in every sector.

- Industrial Automation
- Life Sciences
- Food & Beverage
- Commercial Vehicles
- Railway Technology
- Energy
- Marine Technology



# In dialog with our customers and partners

## Around-the-clock information

The AVENTICS Internet portal is available day or night. Our online catalog provides you with information about our entire product assortment including all technical details, as well as our sophisticated Engineering Tools.



## Based on proven expertise and a first-class product portfolio

Our understanding of cooperation goes well beyond individual projects. We are always in dialog with our customers and are always a competent contact for both technical and economic questions. The know-how contained in our comprehensive pneumatic product range gives us a solid foundation for our work.

- Cylinders and accessories
- Valves and valve systems
- Air supply management
- Vacuum technology

Understanding our customers allows us to respond more quickly and gives us a head start in achieving tailor-made solutions. Thus, we always remain close to the action and ensure the technological lead for us and our customers.



## Online catalog

The fastest point of entry is via our online catalog. Here you can start your search directly by entering a part number or keyword.



## CAD

Your desired object can be issued here directly as a CAD file in various formats, as a PDF file, or for further configuration in your software.



## Configurators

The configurator can be reached by clicking the selected product. After selecting your product, you can begin to adapt it to your own specifications.



## Calculation programs

Here you can specify the dimensions or load-bearing capacity of your components with a wide variety of calculation options. We also provide an air consumption calculator as a special feature.



## Circuit diagram software

With the D&C Scheme Editor, you can quickly and easily create circuit diagrams that are based on your component layout and linked to your catalog selection.



## eShop

The eShop is our online shop that answers your price requests and monitors the whole order process up to delivery.



## CylinderFinder

The CylinderFinder facilitates selection of the suitable cylinder from all available variations and designs.



## AVENTICS

www.aventics.com  
info@aventics.com

Follow us:



<http://www.aventics.com/en/customer-specific-solutions/>



### Germany

AVENTICS GmbH  
Ulmer Straße 4  
30880 Laatzen, Germany  
Tel +49 511 2136-522  
Fax +49 511 2136-163  
www.aventics.de

### USA

AVENTICS Corporation  
PO Box 13597  
1953 Mercer Road (40511)  
Lexington, KY 40512  
Tel +1 859 254-8031  
www.aventics.us

### China

AVENTICS Group  
2002 Unit, Asdendas Plaza, No 333  
Tianyaoqiao Road, Xuhui district  
Shanghai, China, 200030  
Tel +86 21 2426 9666  
www.aventics.cn

### Further contacts

[www.aventics.com/contact](http://www.aventics.com/contact)

Your contact:



The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.