



# Solutions in Motion.

High Tech Customised Solutions for Industrial Automation

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# Step by step to success.



From an idea to the installation of a ready-to-install, mass-produced product in six steps. Let us show you how you can save time, money, and labour – with AIRTEC.



## We love a challenge

Beginning in 1975 with the revolutionary AIRTEC ring, we have constantly pursued the same goal – developing pneumatic control technology to meet the highest demands of industry.

## Quality and Capacity

More than 35 years later, AIRTEC has become an industry leader with global reach following a consistent service objective: to ensure that our products fit the needs of our customers.

## AIRTEC: The Facts

- Among the industry leaders in pneumatic control technology for over 35 years
- Two prime locations in Germany
- Worldwide presence with sales offices and manufacturing facilities staffed by AIRTEC and its associates.
- ISO-certified quality management since 1994 (ISO 9001: 2008)

## Innovation and Skill

- ▶ Customised solutions
- ▶ Decades of experience
- ▶ Technical innovation
- ▶ Customer satisfaction
- ▶ International business network
- ▶ Reliable quality control
- ▶ Innovative product range
- ▶ Extensive sales and service network
- ▶ Reliable, high-performance partner
- ▶ High-quality products that maintain their value





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## Creating The Extraordinary Is Our Daily Business.

If you are looking for technically sophisticated, innovative solutions to the problems of industrial automation, you can rely on AIRTEC.

Our ready-to-install pneumatic control technology solutions will save you time and money, taking the pressure off your engineering team, lowering costs, reducing the demands of technical coordination, and helping you achieve a significantly better return on capital investment.

AIRTEC's aim is to put more than three decades of experience designing user-

friendly solutions to good use for you. With AIRTEC, you know your project is in good hands. You will be generating less paperwork, dealing with a single supplier, and managing less inventory, leaving more time to focus on your core business.

Working with AIRTEC means reducing the risk of production delays and bottlenecks, and simplifying production and assembly processes.

Our solutions will give your products a technical and financial edge over competitors – without adding to the internal

costs of business. You will see the benefits of planning and financial management by allowing AIRTEC to render a complete technical solution. In addition, you will profit from our global service network and comprehensive service guarantees.

We look forward to working with you. Applying optimal technical solutions to improve your products is our core business.

Call us today and arrange an obligation-free consultation to discuss the project needs of your business.



## Step 1: Consultation

The first step towards developing a smart solution to address the unique automation challenges facing your business is an in-depth consultation with an AIRTEC technical consultant.

Our consultant will discuss your requirements and application parameters face-to-face, take note of all relevant data, and put together a comprehensive overview of your project.

### **Our Philosophy**

We will work with you to understand your needs and develop optimal strategies to meet them. At this initial stage, we discuss your project goals, including all the relevant technical parameters – force, momentum, pressure, temperature, environmental conditions, and standards. Another important part of the process is developing a project schedule, setting out the important milestones for the journey

ahead – feasibility, layout, creation of an initial model, pre-production, and production planning.

This first round of discussions can take place almost as soon as you contact us. In most cases, we can meet you immediately!

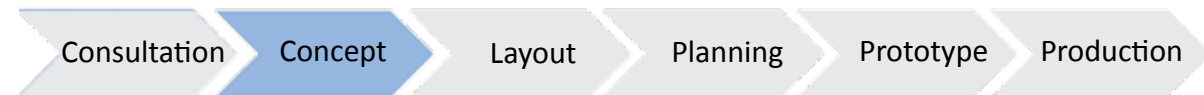
### **Our Technical Expertise**

No matter what the project, these initial discussions will be guided by your assigned AIRTEC technical consultant and, if required, a designated expert in the industry sector relevant to you – direct from the AIRTEC technology centre.

With the help of our technical team, this three-way conversation aims to clarify your requirements, so we can develop optimal solutions to the technical challenges facing your business.

During the initial meeting with our experts, we get to know your requirements to develop optimal solutions.





## Step 2: The Basic Concept

Your assigned AIRTEC technical consultant will be working closely with AIRTEC's industry specialists and design engineers.

Step by step, a practical, cost-efficient concept emerges, based on a list of your functional requirements. At this stage, you will understand how AIRTEC's ready-to-install solutions can help make your work easier.

Our experienced development team has worked on many projects in a wide range of industries and environments. Their knowledge and skill are the foundation of our smart technical solutions.

Think of this experience as a resource you can draw on for your next automation project – something that's there to help you profit financially throughout your production chain.

We offer decentralised, automated systems, ready to install and connect, ranging from combined valve/drive units, to specially customised valve terminals, equipped with extra safety features and precisely configured connection facilities.

If you have a concept in mind, ask AIRTEC—we'll get your ideas up and running!



## Step 3: Layout

It won't take long for us to put together a detailed presentation with the initial layout of our proposed solution. CAD sketches, animations, and models will help give you a realistic picture of the product that you and the AIRTEC team will bring to life.

By this stage, you will have already seen what a partnership with AIRTEC is based on: our innovation, creativity, and technical expertise at your service, helping to keep you one step ahead of your competitors now, and in the future.

The tried and tested foundation of AIRTEC's technical solutions is our world-

class range of high-performance valve and cylinder components.

AIRTEC's ability to bring together state-of-the-art electronic, pneumatic, vacuum, and mechanical engineering technology has the potential to create valuable synergies in the manufacturing of your products. This ability results in decreased complexity, increased reliability and increased profits.

High-quality design, superior operational safety, and long product life have been the key features of AIRTEC's products for over 35 years.





## Stage 4: Detailed Planning

The fourth step on the road to an optimal technical solution focuses on detailed and precise planning of your project. At this stage of the process, we strive to work with you to develop a precise set of product specifications and a clearly defined conceptual solution.

### **Face-to-Face Technical Consultation**

Your personal AIRTEC technical consultant will make sure you are up-to-date at all times. Keeping you informed of project

developments and agreed goals and milestones is essential to the partnership between you and the AIRTEC team.

### **Effective Communication**

AIRTEC's efficient communication and decision-making systems enable you to make changes to the project at any stage. The optimal solution to your technical challenge will be customised for practical use every step of the way.

### **Flexibility**

At AIRTEC, we pride ourselves on flexibility. For you, that means improved products and competitiveness, better results, and ultimately, a superior return on investment.

AIRTEC's customised solutions mean less work and lower costs for you. You will instantly notice how AIRTEC can help you reduce the demands of design, production, and process management in many ways.



## Step 5: The Prototype

With the help of AIRTEC's technical knowledge and streamlined workflows, a first series of prototypes should soon be ready for deployment. Detailed performance tests can begin immediately.

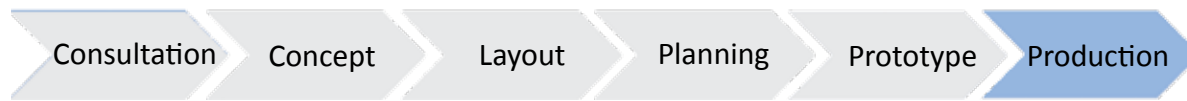
The emphasis at this stage of development is on technically refined samples of the product, as well as product testing and preparation of product accreditation at a national or international level. AIRTEC is there to facilitate every part of the process, and to get your new solution ready for mass production and integration into your business as quickly as possible.

Integrating related technologies from the fields of fluid power, mechanical engineering, and electrical engineering reduces the technical demands on your business, and makes our solutions as user-friendly as possible.

Together, with timely delivery of our tailor-made, ready-to-install solution, it's all designed to save you time and money.







## Step 6: Production

Your ready-to-install components have been delivered. Your new system has been tested. Now, we are ready to go into production.

### **Service and Support**

But, AIRTEC's work does not end there. From this point on, our comprehensive service program and logistics networks will be there to help you use your product to create tangible, long-term benefits for your clients.

AIRTEC's technical solutions are designed to make a valuable and sustainable, long-term contribution to the competitiveness of your business. Setting you apart from your market competitors is an essential part of our service.

Our worldwide service desks and business partners will enable you to maximise the economic use of your customised,

technical solution, guaranteeing maximum exposure and maximum profit.

As a valued AIRTEC client, you will be receiving a complete set of tools aimed at adding value to your business, not just a ready-to-use set of technical hardware.

AIRTEC is there for you – throughout the world. The staff which makes up AIRTEC's worldwide network of branches and affiliates are working constantly to ensure AIRTEC's products and performance are up to the most challenging standards demanded by industry.

AIRTEC takes a genuine *Made in Germany* approach to production and product design. Our total package can make a major contribution to the long-term success of your business.





## Energy

- Gas and Water Supply
- Waste Removal and Recycling
- Sewage and Waste Disposal

## Wood and Paper Products

- Plywood, Fibreboard, and Veneer Panelling
- (Pre-fabricated) Building Materials
- Packaging Materials
- Pulp, Paper, Cardboard and Paperboard

## Chemical Products

- Coking Units
- Petroleum Processing
- Pharmaceuticals
- Chemical Products
- Rubber Ware
- Synthetic Materials

## Automotive Construction

- Passenger and Utility Vehicles
- Fire Engines
- Street-cleaning Vehicles
- Milk Collection Trucks
- Tank Trucks
- Transport Technology
- Livestock Transportation
- Government Utility Vehicles
- Rail Rolling Stock
- Agricultural Machinery and Vehicles

## Ceramic Products

- Glass and Stone Products
- Wall and Floor Tiling
- Concrete, Cement, Limestone and Plaster Products
- Brickyard Technology

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## Food Products

- Meat and Fish Processing
- Fruit and Vegetable Processing and Handling
- Milk Processing
- Abattoir Equipment
- Grain Milling
- Animal Fodder Handling
- Bottle Filling Technology
- Sugar Production

## Textiles

- Spinning Machines
- Weaving Machines
- Textile Refinement
- Textile Goods, Clothing and Footwear
- Leather Treatment

## Metal Goods

- Iron and Steel
- Foundries
- Steel and Aluminium Manufacturing
- Forging, Melding, Stamping and Drawing Equipment
- Surface Finishing Equipment
- Heat Treatments
- Cutlery, Tools and Metal Fittings
- Ironwork, Metalwork and Sheet Metal



## Other Machines, Appliances and Equipment

- Analytic Technology
- Construction Equipment
- Aboveground and Underground Mining Equipment
- Office Equipment
- Dental and Medical Equipment
- Materials Handling Equipment
- Woodworking Machinery
- Plastic-manufacturing Machines
- Storage Technology
- Measuring and Control Equipment
- Printing Machinery
- Moulding Presses
- Vacuum Technology
- Packing Equipment
- Car Washing Technology
- Industrial Tool Machinery

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## Industrial Equipment

- Machines and Factory Equipment
- Fluid Technology Components

AIRTEC has solutions for industrial automation to suit almost any industry.

# AIRTEC Solutions

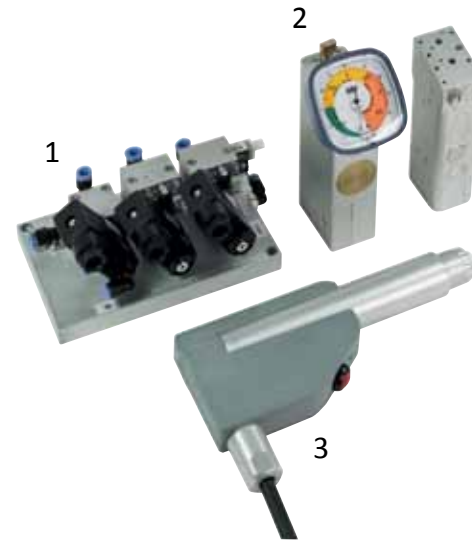
Examples of past projects in customised automation solutions:



Automotive Technology

AIRTEC's task here was to design a component for operational tests on braking systems for the German technical standards agency, 'TÜV'.

The manufacturer's initial concept was developed, in conjunction with AIRTEC's technical team, into a component designed for mass production and use.



Medical Technology

Modular techniques that form the basis of our core range of components, together with superior, vertical integration and state-of-the-art machinery, make AIRTEC an ideal business partner in the field of medical technology.

- 1) Test block for respirators
- 2) Manual control unit (for CPR)
- 3) Electro-pneumatic functional component (percussive wave therapy)



Analytic Devices

AIRTEC solenoid valve-control block used in metal analysis equipment, e.g. for quality-control purposes in research laboratories. In the field of environmental protection, analysers equipped with AIRTEC control blocks are playing an increasingly important role.

Highly precise pressure, flow, and cycle time provide the basis for exact measurement results and optimal process control. This innovative design completely avoids the use of lubricants and coating substances.

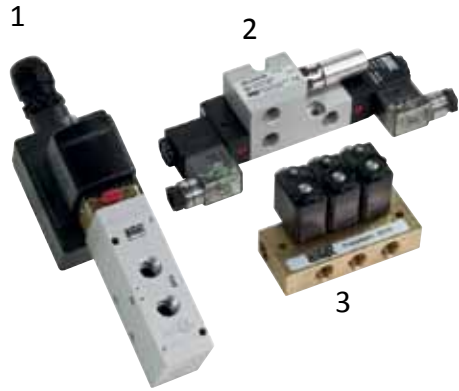
In the field of technical analytics, AIRTEC's existing international client base means that our wide-ranging experience can be put to good use in your project.



Woodworking Machinery

This valve unit, mounted on a standard ISO cylinder, was the key to meeting our client's need for a compact positioning element for use in a woodworking machine.

With easy-to-access connective capacity, shut-down facilities, and an innovative design that eliminates all lateral overlap, this AIRTEC unit succeeded in significantly improving the operation and handling of our client's machining system.



1) This 5/2-way ATEX solenoid valve, for use in surface engineering, was designed without a connection box, enabling the attachment of cables of arbitrary length without the need for standard ATEX models.

2) A pressure regulator designed for upstream-connection with a fixed, maximum pressure setting for the connected control port optimizes the operational safety features of this 5/2-way NAMUR valve for use in a variety of mixing techniques.

3) This 3/2-way valve control block for use in underground mining was designed to precisely, and reliably, meet our client's specifications, which included solenoid capacities, raw material compatibility (brass), as well as specific, inner parts and operational temperature parameters.

Plant Engineering



This AIRTEC valve control block, with an integrated pressure regulator, was designed for use in industrial glazing and adhesive processes.

High flow capacity, as well as operator-friendly design and ease of maintenance, were at the heart of the AIRTEC team's approach to this project.

With the help of AIRTEC technology, our client was able to dramatically lower costs, streamline piping processes and simplify installation.

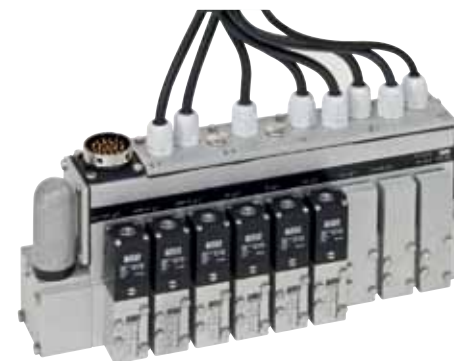
Adhesive Technology



This control valve block was designed for serial use in hydraulic-pneumatic moulding presses in metal machining.

The secret to AIRTEC's solution here was combining several functional details in a single, compact valve block suited for overall functionality.

Metal Processing



This specialised valve terminal was designed for use in a packing plant for meat products.

Both the valves and the manifold have been prepared with a special coating, stainless steel screws, and a stainless steel end cover enhancing overall design and functionality.

Input and output cables attached to remote sensors and actuators were fixed to the device.

Food-processing Technology

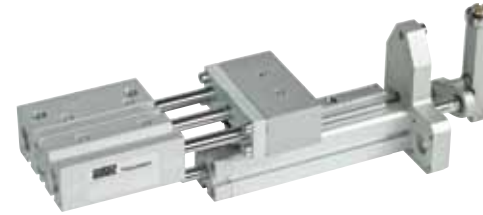


Automotive Construction

This control block, equipped with only four connections and a number of different AIRTEC 3/2-way double solenoid valves, is designed to test braking systems in a range of utility vehicles.

AIRTEC's client set out precise design specifications relating to flow capacity and operational safety.

The function of this complex AIRTEC product was to test the leak-tightness of braking systems in trailers and semi-trailers, as well as the effects of brake failure and detached brake cables.



Machine Tool Production

Using a specially devised lift/pivot drive based on the NXD cylinder series, the integration of two AIRTEC drive-units enabled the AIRTEC team to construct a ready-to-install metering device for testing input ratios as part of machine tool production.

Its function is to measure the strength of materials using an integrated position-sensing system.

Easily accessible interfaces and rapid adjustment facilities were designed to facilitate maintenance.



Plant Engineering

This valve control block is designed to regulate pneumatic door and gate systems.

Compact and ready-to-install, its main purpose is to reduce the end-user's cost of design, assembly, and individual testing.

The self-contained, integrated design eliminates all leakage at fitting, hose joints and pump connections.



Plant Engineering

Woodworking machines and machine tools, as well as bottling and agricultural equipment, are just a few examples of the many possible uses of this combined AIRTEC valve/cylinder unit.

With the addition of integrated sensory technology and AIRTEC's innovative built-in 2x 3/2-way valve technology, the end-user has a compact, ready-to-install drive unit at their disposal.

Retaining most of the standards of ISO 15552, AIRTEC produces and delivers these drive units for the ISO piston series XL and XV ( $\varnothing$ 32 to 125 mm) cylinders and for the rodless series ZX cylinder.

# The AIRTEC Standard Program



Rodless Cylinders



Compact Cylinders



Special Valves



Standard Cylinders



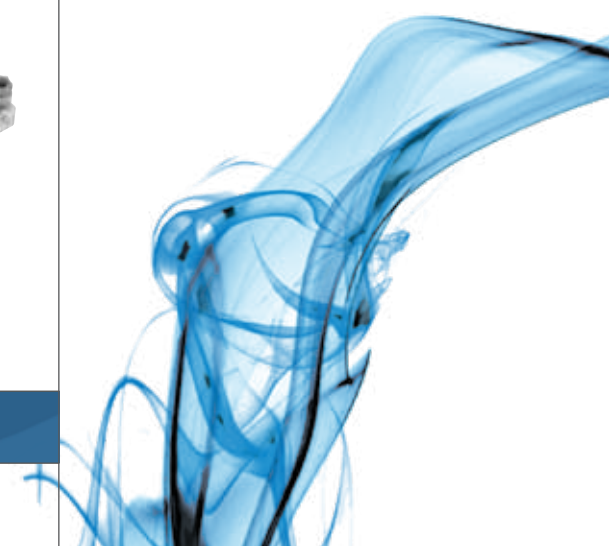
Solenoid Valve Terminal with Multi-Pole or Bus Connection



Manual and Mechanical Valves



Solenoid Valves





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## Solutions in Motion.

AIRTEC is your reliable partner when it comes to innovative industrial automation. Our customised solutions make your products simply better.