

Product Overview

Schmalz: Vacuum Technology for Intelligent Automation and Ergonomic Handling



1800
employees
working hard for our customers.



29
locations
for outstanding customer service worldwide.

Schmalz is the Market Leader in Vacuum Automation and Ergonomic Handling Systems.

9.0
percent
of our revenue is invested in innovative ideas and new products.

The wide range of products in the Vacuum Automation unit includes individual components such as suction cups and vacuum generators, as well as complete gripping systems and clamping solutions for holding workpieces, for example in CNC machining centers. The Handling Systems unit offers innovative handling solutions with vacuum lifters and crane systems for industrial and handicraft applications.

590
copyrights
are proof of our groundbreaking innovations.

Our products are used in different applications for example in the logistics industry, the automotive industry, the electronics sector and in furniture production.

With comprehensive consulting, a focus on innovation and first-class quality, Schmalz offers its customers long-lasting benefits. Schmalz's intelligent solutions make production and logistics processes more flexible and efficient, while also preparing them for the increasing trend toward digitalization.

Wide range of applications in all industries

- Metal/metal sheets
- Plastics
- Battery
- Wood
- Electronics
- Food
- Automotive
- Packaging
- Composites
- Solar
- Glass

Vacuum Automation



Components & Systems



Clamping solutions



Lifting systems and cranes



Binar Handling

Vacuum Clamping System



Clamping Solutions for CNC Machine Centres

Meeting future requirements clamping systems from Schmalz are the intelligent response to the continually increasing demands for more productivity and economic operation of CNC routers

Schmalz offers a broad range of clamping solutions for Schmalz consoles, as well as systems from other manufacturers. The vacuum blocks are suitable for consoles with both single and two-circuit vacuum systems, as well as flat tables and grid tables.



Multiclamp

The Vacuum Clamping system Multi-Clamp can be used in every workshop or on site, where ever workpieces have to be clamped for manual work. Thereby the clamping system can be fixed on almost every flat surface either mechanically or with the help of vacuum.



Matrix Plate

With the matrix plate, you can reliably clamp flat metal and plastic workpieces with planar undersides, without distortion. The matrix plate is secured to the machine table using clamping claws or a zero point clamping system and is modularly extendable.

Vacuum Clamping System Innospann Retrofitting of CNC Machining Centers



Up to 80 percent bottom setup times



Up to 50 percent higher holding



Height of the vacuum blocks accurate up +/- 0.1 mm

The vacuum clamping system Innospann enables every CNC machining centre to be retrofitted independently of manufacturer and type. Modernization facilitates quick and flexible retrofitting following frequent product changes- for efficient manufacturing processes starting from one-piece production. Schmalz thus provides an economic alternative to investment in a new machine.

Applications



Vacuum Tube Lifters Jumbo



JumboErgo

The tube lifter JumboErgo is equipped with a special rotary handle similar to the gas handle on a motorcycle. Both lightweight and heavy loads can be handled quickly and sensitively with this control element. The workpiece is lowered by "accelerating" and lifted by "decelerating". The rotation and direction of rotation avoid uncontrolled movements with the lifting device.

At the same time, the tube lifter JumboErgo guarantees ergonomic posture at every working height. The movable handlebar permits ergonomic picking of loads at large heights or directly from the floor.



JumboSprint

The tube lifter JumboSprint is the right choice for the handling of heavy or unwieldy loads in a rough environment or outdoors. Grip it with both hands and accurately direct the lifting unit with the load, e.g. bags, stones, plates, and much more.

The workpiece is lower by pressing the tube lifters' handlebar down and lifted by pulling it up. Because of its compact design, the control unit JumboSprint Mini permits easy insertion into wire mesh pallet baskets, carton boxes or similar containers.



JumboFlex

The tube lifter JumboFlex is perfect for frequent, very quick transfer of more lightweight goods with a weight of up to 35 kg. The tube lifter JumboFlex is the perfect handling solution which can be operated ergonomically and easily by using only one hand

Applications

- Fast and frequent lifting and moving of workpieces of up to 300 kg
- Handling workpieces such as cardboard boxes, bags, barrels, buckets and jugs in internal logistics processes
- Loading and unloading of CNC machining center



Vacuum Lifting Devices VacuMaster



VacuMaster Comfort

The standard fittings are complemented in the lifting device VacuMaster Comfort by additional features. Ergonomic operation at the push of a button is integrated in the control element. For example, horizontal and vertical swivelling, as well as movement up and down, can be controlled that way.

The fittings also include an electromagnetic valve with two-hand-vacuum-off-actuation and a regulated vacuum generator in the form of a pump with automatic energy saver. Delivery includes a chain hoist; alternatively, a chain hoist with frequency control can be used.

Workpieces can be optionally swivelled by 90° or flipped over by 180° with the VacuMaster Comfort lifting device. The device is appropriate for a burden of 125 to 750 kg.



VacuMaster Basic

The lifting device VacuMaster Basic is suitable for, among other things, handling of plates and barrels. The vacuum lifting device's high degree of convertibility is ensured by pump sizes, handlebar lengths, suction plates, longitudinal and cross beams which can be individually adjusted to the specific application. The longitudinal beam includes an integrated vacuum reservoir and distributor.

Ergonomic work is made possible by the handlebar. The warning unit and a check valve guarantee a high degree of occupational safety.

Workpieces can be optionally swivelled by 90° or flipped over by 180° with the VacuMaster Basic. This device is appropriate for use in lifting borders of 125 to 750 kg.



VacuMaster Vario

Heavy, mostly airtight workpieces can be handled horizontally by the VacuMaster Vario lifting device. Because of its modular design, the VacuMaster Vario lifting device can easily be adjusted to each application and is therefore particularly appropriate for loading of machines with table metal sheets.

A high degree of occupational safety is ensured by the large vacuum reservoir and electronic warning unit.

The VacuMaster Vario lifting device is appropriate for a burden of 1,000 to 2,000 kg.

Functions

- Long lifetime due to extremely robust construction
- Individual adaptation of the device with a compact modular system
- Audible warning in the case of a power failure
- Large vacuum reservoir
- Unique manual slide valve prevents incorrect operation
- Clearly visible manometer
- High availability due to maximum reliability
- Easy handling due to low intrinsic weight
- All controls easily accessible
- Compliance with the latest ergonomic knowledge protects user's health

Applications



Aluminium Crane System & Chain Hoists



Binar Handling

Part of Schmalz Group

Schmalz has acquired the Swedish company Binar Handling AB and its four subsidiaries in Europe and Asia, strengthening its market position in ergonomic handling technology. With this acquisition Schmalz now offers solutions for sensitive balancing and ergonomic handling products like Neo 30, Quick Lift Arm and Quick Lift Rail



Neo 30

With a easy and quick installation the NEO 30 can be installed in most common rail system. Just attaching the swivel to the trolley or an eyebolt and the NEO 30 is set for use. No need of adding space and cost consuming media supply – the NEO 30 is equipped with a battery as the single energy source.

The NEO 30 can handle goods up to 30kg with a safe and precise movement from the operators hand.

Together with the NEO 30 a wide variety of standardized end effectors are provided as options.

Advanced parameter setting included with software iLab3



Quick Lift Arm

All the expert knowledge required to combine efficiency and ergonomics is incorporated in our control handle. Combined with our manipulator arms, our lifting devices are designed for 50, 100, 200 and 300 kg.

The manipulator arms are often mounted on floor pillars, but can also be suspended from the ceiling. The arms have an ultra- lightweight design because they are made of thin but extremely strong so-called ultra high strength steel (UHSS), and are, therefore, very easy to use.



Quick Lift Rail

The rail systems are available in Quick-Lift Rail (QLR) and Quick-Lift Driven (QLD). Quick-Lift Rail is a rail mounted equipment with manual movement in the X and Y axes with rail. Vertical lifting from 50 to 600 kg can be done using QLR and it is very smooth when using our precision control handle.

QLD is mounted to ceiling or floor rails and offers unique motor-assisted operation on the X and Y axes, following even the most minor movements of the operator. This helps maintain a high speed over long distances without strain. This is an optimum solution when working in a large area.



Key Feature of Quick Lift Control Unit:

- One hand operation
- Smooth 360 degrees function with endless rotating with pneumatic/vacuum connections.
- Hands on control with auto balance (float mode)
- Grip-friendly control handle converts your hand's movement into electronic signals.
- Only one millimeter displacement of the grip is needed up or down, to raise or lower the material.
- Precision manoeuvring by touch of your hand
- The intelligent extension of the human arm
- Fail safe bracking system in case of power failure

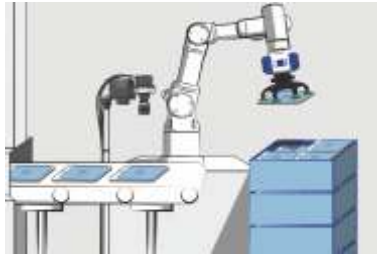
Applications



Vacuum Components & Gripping System



Vacuum Components



Vacuum Technology for Robotics



Vacuum Gripping Systems

Automation with vacuum is a key to efficient processes. Individual components and ready-to-connect gripping systems from Schmalz are used successfully in various industries and applications.

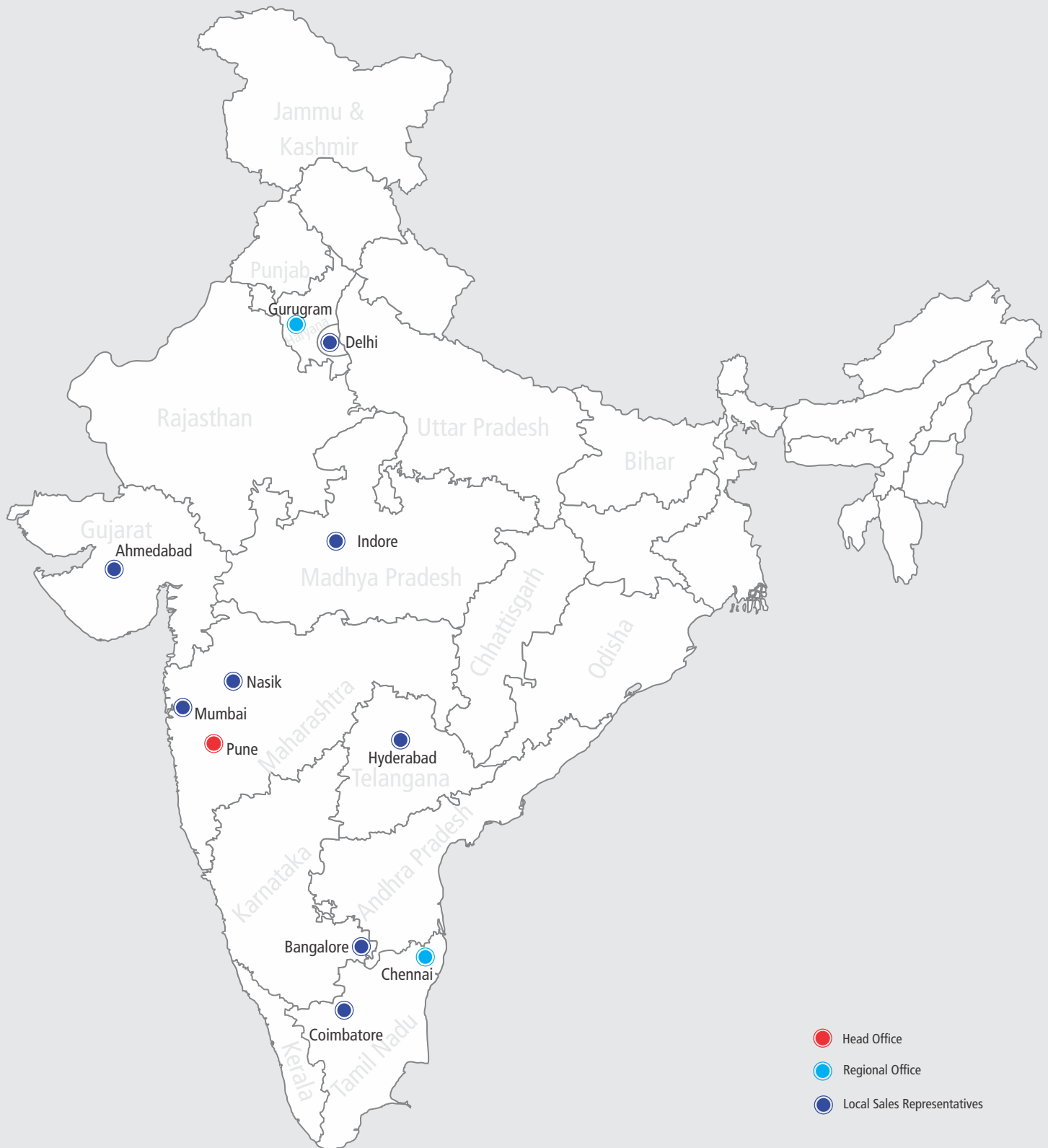
Vacuum components from Schmalz are used to build individual vacuum systems. The product range includes suction cups in various shapes, sizes and materials for almost any application. The vacuum is generated pneumatically with compact ejectors or electrically with powerful pumps and blowers. The range also includes valves, vacuum switches and other components for controlling and monitoring the vacuum system.

Vacuum components from Schmalz are characterized by the highest quality, energy efficiency and networkability: They provide digital energy and process data in real time and make processes transparent. In addition, Schmalz develops software solutions that help to fully exploit the potential for digitalization in automation.

Vacuum gripping systems from Schmalz are delivered ready to connect. They optimize the loading and unloading of machines, the (de)palletizing as well as the picking and packaging of objects. During project planning and design, Schmalz customers benefit from our many years of experience and know-how as a system provider.

Applications





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