

Pneumatic Solutions for the Pulp and Paper Industry from Rexroth



From logs to paper



Best in class pneumatic solutions for the entire pulp and paper process

When you choose Rexroth you can count on our experience and expertise in your industry. With our extensive program of pneumatic components and systems, we can support you in finding the optimal solution.



Wood handling, debarking, chip cutting and chip handling



Fiber line, wet end, dry end and coating

For decades Rexroth has not only followed but actively participated in the development of the pulp and paper industry by working with companies that are leaders in the field. This is the task of our sector team specialists, who monitor the industry's every move.

From wood handling all the way through to the packing section, pneumatics plays an important role. The Rexroth program comprises numerous products and systems to meet the requirements of different parts of the process.

Wood handling requires robust components capable of functioning in outdoor conditions such as low temperatures. In the **fiber line, wet end, dry end and coating** sections you need products that can withstand damp conditions, heat and washing. **Reeling, winding and packing** operations impose normal indoor requirements. Rexroth's extensive product range can meet all of these various demands.

Our components are designed to minimize downtime in your appli-

cation. This is achieved by robust design, resulting in products that are largely maintenance-free and reliable in long-term operation. To this we can add individual solutions, modified standard components and custom made designs.

In this brochure we present a selection of Rexroth pneumatic products as a guide for you.

Many of the products are available with threads according to BSPP as well as NPTF.



Reeling, winding and packing

Rexroth solutions are not just limited to Pneumatics, we utilize all drive-relevant technologies and have a broad range of services:

- Industrial hydraulics
- Mobile hydraulics
- Controllers and drives
- Linear technology
- Assembly technology.

In addition, Rexroth service includes customer service and training activities for all the technology areas.

From design to delivery

Modern pneumatic systems call for compact units with high performance and easy handling – in every

phase from ordering through installation and maintenance.

The Interactive Designer on the Rexroth homepage supports you in every aspect of your business process. Our pneumatic design tools consist of

- Product calculation programs
- CAD library
- Product configurator
- Product catalogue
- Inquiry basket for on-line pricing
- Stock availability
- Ordering and status

www.boschrexroth.com/pneumatics



Rexroth, a strong partner who provides solutions around the world. Rexroth is a worldwide supplier with local support in more than 80 countries. We are not only familiar with the "local conditions" and cultures, but also with specific country requirements.

Robust pneumatic technology for wood handling

Components for wood handling need to withstand outdoor conditions such as low temperatures, water, resin exposure and harsh handling. Rexroth components are designed for such tough applications.



Wood handling, chip cutting

Rexroth's pneumatic applications support you through the varying demands of the entire wood handling process. In debarking, for example, you need high forces in limited space, making Rexroth's bellows cylinder the ideal choice.

The wood handling process spans a wide temperature range and requires extremely robust components. For outdoor applications we recommend setting the dew point of the compressed air supply to 10 °C (50 °F) below ambient.

Tie rod cylinder

The 167-60, incorporating our modular sealing concept, is ideal for the wood handling process. We recommend using the metal wiper, which is effective for hard materials such as resin and ice adhering to the piston rod. The module is easy to replace and has built-in seals and bushings.



Tie rod cylinder



VDMA 523 cylinder



Bellows actuators



Pneumatics on ice



NFA steel tie rod cylinders



Cabinets (e.g. with Clean Line)



Custom made products



Debarking and chip handling

VDMA 523 cylinder

This cylinder is available in four different profiles. The profiles differ in their features and include a corrosion protected version. The modular sealing concept is available as an option. Many of our cylinders have ideal pneumatic cushioning.

Bellows actuators

The clean design reduces maintenance needs to a minimum. The bellows are available in single, double or triple convolution versions. These cylinders give high forces with compact built-in dimensions.

Pneumatics on ice

Components developed for use in temperatures as low as $-40\text{ }^{\circ}\text{C}$ or $^{\circ}\text{F}$ possess features including specially selected sealing elements and high quality steel or non-ferrous metals.

NFA steel tie rod cylinders

PowerMaster[®] pneumatic air cylinders are fully interchangeable with other NFA cylinders.

Cabinets

Building pneumatics into cabinets is a proven solution and many standard pneumatic components can be used this way. Rexroth offers valves for special through-

wall mounting, the ideal solution for tough environments and cabinet assembly.

Pre-assembled cabinets will minimize the ordering and installation expenses and will avoid risk of error.

Custom made products

If our standard range is not wide or deep enough we could provide you with custom solutions. These could be everything from small modifications of the standard products, pre-assembled units or completely custom made solutions.

The right materials for the fiber line, wet end, dry end and coating

Conditions in this part of the process are very severe. High humidity and temperatures combined with chemical exposure demand high-quality materials. Rexroth has the answer.



Fiber line



Wet end

Production speeds are increasing all the time. These are the most cost-intensive parts of the process and downtime must be avoided at all costs. Rexroth quality products with durable materials keep the breakdowns to a minimum. An important requirement for pneumatic components in this part of the process is that they

can withstand damp conditions, heat and washing. Our extensive range of pneumatic components incorporating acid-proof materials makes Rexroth an important partner in this process. For optimum reliability we offer cylinders with reinforced wipers, bellows actuators with acid-proof rings and valves.

Tie rod cylinder

The cylinder 167 in acid-proof, with numerous variants, features many mounting options and has a wide range of diameters. The long seal life has been optimized for usage in fiber line, wet end, dry end and coating.



Tie rod cylinder



Round cylinders



Bellows actuators



Oscillator cylinders



Valves



E/P pressure control valves



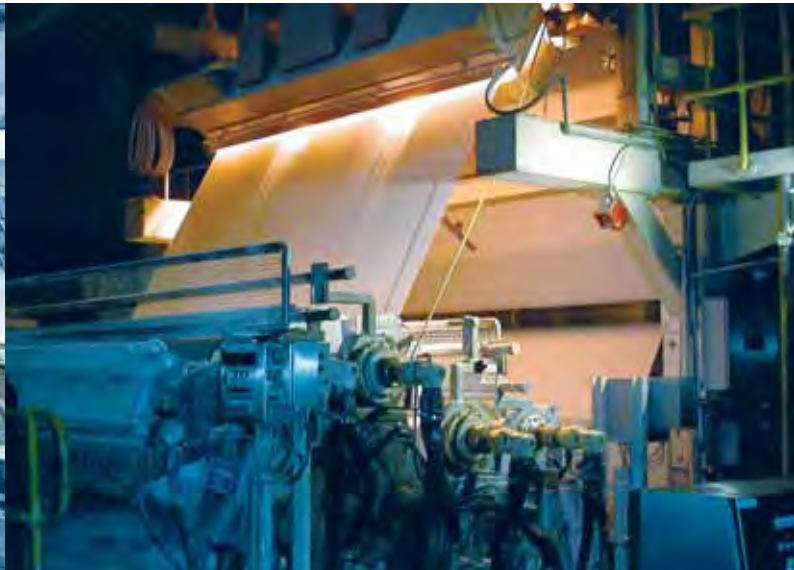
Stainless steel fittings



Compressed air preparation, FRL



Dry end



Coating

Round cylinders

The round cylinders are designed for easy installation and could be suitable for machines with high hygienic demands where it should be easy to clean.

Bellows actuators

The bellows actuators, fitted with acid-proof rings, are a functional solution that offers long durability in exposed areas such as the wet end. They combine small built-in dimensions with high forces.

Oscillator cylinders

The design of the cylinder and valve function gives very smooth

operation combined with simple control of stroke and frequency. Easy installation is another feature.

Valves

Valves series 343 and check/choke valves in acid-proof steel is ideal for high humidity applications. More valves on page 10-11.

E/P pressure control valves

The electropneumatic pressure control valve converts an electrical command value into a pneumatic pressure and/or flow. It is highly dynamic, with a short response time and minimal hysteresis combines compact design and high

flow rates with very accurate repeatability.

Stainless steel fittings

We have stainless, nickel-plated, plastic fittings and connectors as well as all types of tubes.

Compressed air preparation, FRL

Rexroth has a complete line of air preparation units, e.g. pressure regulators, precision regulators, filters, lubricators, shut-off valves, soft start valves etc. from port sizes G 1/8" to 2" and NPT 1/8" to 3". We also offer pre-assembled and tested units.

Simple solutions in the reeling, winding and packing section

Working together with our customers, Rexroth has developed innovative automation products specially designed to meet the requirements in this phase of the industry. The demands could be everything from normal conditions to harsh handling of the products. The Rexroth products have been designed to work reliably.



Reeling and winding

The reliability of automation components depends to a large extent on the expertise of the engineers working on the development of the components and on the design of the system. When you choose Rexroth, you can count on our experience and know-how both as a component and system supplier. Rexroth specialists can help you

design and build sub-systems incorporating cylinders, slides and rotation modules. This is achieved on the platform provided by an extremely broad-based standard product range.

RexMover

RexMover rodless cylinder is the outcome of years of experience



RexMover



GPC



KPZ and KHZ



Packing

and is enhanced with innovative, user-driven features including space-saving design. It is robust in construction yet user-friendly, high-speed and virtually leak-free.

GPC

The GPC series is ideal for applications calling for high precision and increased side load capacity.



OCT



Flat-oval piston cylinder



TaskMaster® cylinders



Membrane cylinder



Vacuum



Packing



Baling

Compared to standard cylinders, the GPCs feature precise movement as well as high side load and anti-rotation capacity.

KPZ and KHZ

Rexroth's compact and short-stroke cylinders can be supplied in almost unlimited versions. These cylinders are suitable for applications where space is limited.

OCT

The Octagon represents a new way of thinking about the traditional mini-ISO cylinder. The non-rotating feature is achieved by the octa-

gonal barrel and piston. The barrel design also offers an improved way of mounting sensors.

Flat-oval piston cylinder

The oval cylinder is another option for compact assembly, which has the non-rotating feature.

TaskMaster® cylinders

TaskMaster aluminum cylinders feature a clean, integral tie rod design, NFPA rod threads and port dimensions, magnetic piston, over-size rod options, and port and cushion options for maximum application flexibility.

Membrane cylinder

The membrane cylinder, with its low friction, is ideal for dancer-roll applications.

Vacuum

For the packing process Rexroth offers an extensive program of vacuum components. Suction cups, the easy way to pick and place, are available in shapes, materials and sizes to suit all types of objects and applications. Vacuum is generated by Rexroth ejectors, which can be supplied as stand-alone products or assembled into valve manifolds.

Pneumatic valves and accessories for every part of the process

Valves are used in all parts of the process. They may be for outdoor applications, high temperatures, high or low flow rates and for manual, electric or pneumatic operation. The Rexroth range offers everything from manually operated valves to completely pre-assembled and tested valve manifolds, which reduces the assembly time. The valves could also be equipped for field-bus connection and/or with built in failure diagnostics, which will minimize down time during a breakdown!



Manually and mechanically operated valves

There are plenty of options here, for example the ST series of manually operated valves, some of which can be panel-mounted. Numerous control components are available.

We can also supply acid-proof steel valves.

Single valves

If the need is for high flow, choose the 560 series.

The consistent trend in the pneumatic sector is towards smaller valves with higher flow rates. In response to this demand we have developed the new TC valve series. These valves are ideal for pneumatic applications with limited space and extremely demanding flow rate capacities. You can choose between single valves and block valves.

The Rexroth range also includes a stainless steel spool alternative ST.

Namur

Namur standard valves come in three different types including one with protection class IP67.

Compact and Standard valve systems

Modern valve block systems, such as the complete valve block program from Rexroth, minimize ordering and installation expenses and avoid the risk of error. Instead of ordering, assembling and wiring many individual components, you just select the functions required, and Rexroth will deliver your valve



block system completely assembled and tested.

The Rexroth valve manifolds could be of compact design, used in confined area or valve manifolds according to ISO standard.

The Ceram directional control valve uses ceramic plates for sealing and stick-free operation. It withstands rugged conditions and dirty air, and is according to ISO standard 5599-1.

Fieldbus and DDL

Fieldbus simplifies the communication between valve manifolds and the control systems. The number of connection points and wires are minimized which will reduce the assembly cost, risk of failure and the time during breakdown analysis.

Rexroth products interface with all major bus protocols including AS-i and our new DDL (Direct Diagnostic Link) version has enhanced diagnostics that reduces downtime even further.

Installation materials

Pick and choose from Rexroth's diverse program of fittings and tubes for every purpose and type of application.

Pressure switches

The Rexroth program includes pressure and vacuum switches with analog or digital output and can be programmed via the display.

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