



Precision, commitment  
and added value



# World-leading collaboration

Indexator Rotator Systems is the world's leading supplier and development partner for hydraulic rotators and ancillary equipment. Our products are used for forestry, general cargo handling and material handling in over 40 countries spanning five continents. The company has made a name for itself as a committed and professional business partner that helps its customers achieve better results. Through continual product development and as specialists in the important interplay between machine-crane-rotator-head/grapple/tools, we live up to our customers' high expectations for functionality and total economy.



● **Capacity, expertise and global commitment gathered in a single place in Vindeln, Västerbotten, at the geographical heart of Sweden.**



# Solutions to meet every need

Indexator offers the world's largest selection of hydraulic rotators and ancillary equipment such as swing dampers, links and hose swivels. The range includes everything from large and powerful rotators for the most demanding tasks to small, flexible models for simpler work. Designed to handle tough material stress and heavy strain on all vital parts and built to deliver, regardless of the temperature or weather conditions.

- **Forestry**

- **Transport**



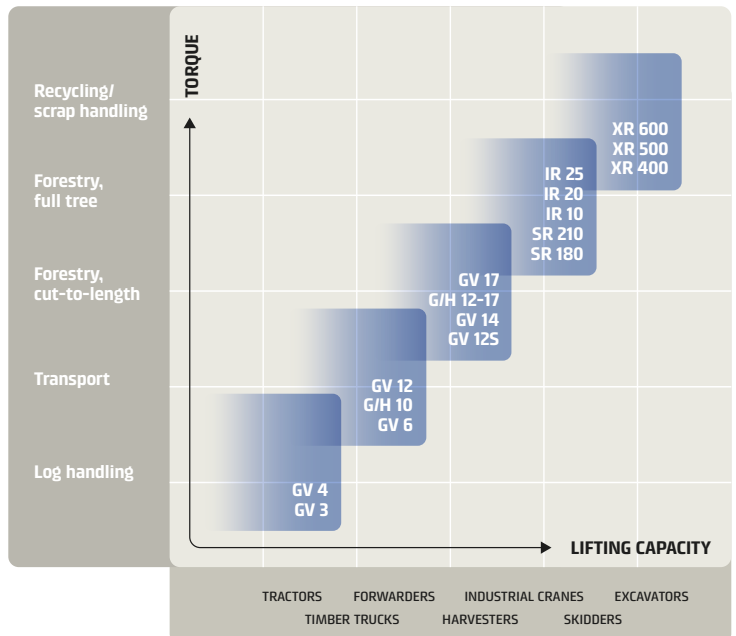


- General cargo
- Material handling
- Terminal handling



## PRODUCT GUIDE

We have a wide range of models for different applications.



# Total solutions from crane tip to tool

Innovation and product development form natural parts of Indexator's operations, and we seek to provide our customers clear added value from crane tip to tool. Every part of this chain is optimised to provide the best control, safety and productivity while also helping the customer minimise wear, costs and environmental impact.

## Indexator's weighing link with wireless transfer

The ability to weigh what the grapple picks up is ever more important, not just for assessing the value of a load, but also to avoid overloading. Indexator's weighing links are hydraulic and available in wireless versions, with or without swing dampers.

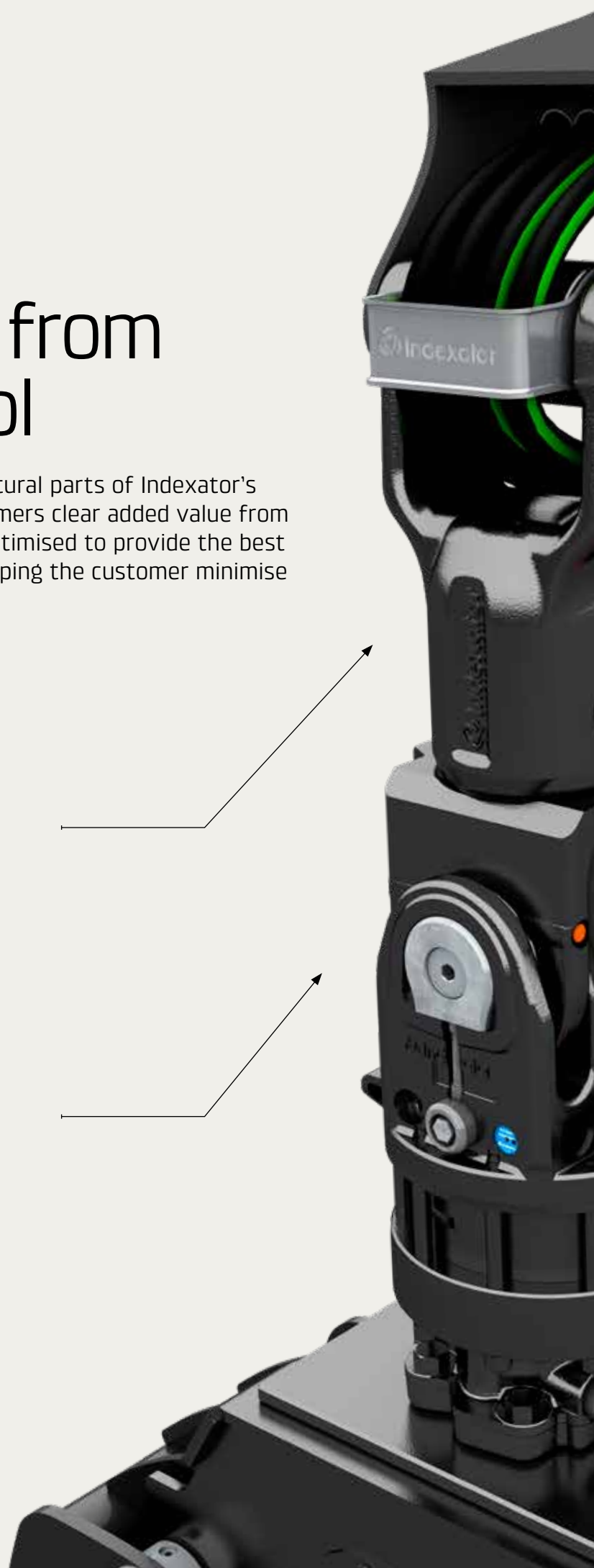
## BC – hydraulic brake control

Greater precision when weighing. The hydraulic brake control function (BC) is available as an option on Indexator's tried-and-tested MPB brake links. BC activates the brake when this is advantageous, but more importantly, it disengages the brake when it is not required. The brake function is engaged when the grapple does not have any load. When the grapple is loaded, the brake is disengaged and the precision of any weighing is not influenced by braking moment. In all, this means we can combine precise weighing with good swing damping.



### \*PATENT

Indexator has a number of patented and patent pending technical devices that make our products unique. They are marked with this symbol.







## Indexator's patented Y-link for protected hose routing

Protecting the hoses with Indexator's patented Y-link reduces the risk of leakage, which means greater productivity, lower costs and lower environmental impact. The Y-link is a cost-effective solution that can be combined with a number of models – everything from unbraked links to the most advanced swing damping systems.

### THE ADVANTAGES IN BRIEF:

- Full swing angles
- Lower costs
- Increased productivity
- Reduced environmental impact
- Increased service life for hoses



## MPB – superior damping

Indexator's patented\* and inverted swivel allows extra low-profile rotators with MPB swing dampers, also patented\*. What's more, our proprietary MPB disc brake technology (multi plate brake) provides rapid, safe and controlled damping. This provides your machine with a number of important qualities:

**REDUCED WEAR** | Forces on the crane and head/grapple are reduced as the MPB swing damper effectively absorbs the kinetic energy in the rotator and tool.

**IMPROVED CAB COMFORT** | Flexible braking means movements are not propagated into the cab.

**IMPROVED PRODUCTIVITY** | High braking effect combined with smooth swing damping shortens application and handling times.

**SERVICE-FRIENDLY** | The design means service intervals are further apart and the unit is easier to maintain. It also makes wear part replacement quick and easy.

## The world's largest range of rotators

Indexator offers all types of rotators, everything from large and powerful models for the most demanding tasks to small, flexible rotators for simpler work.

Our rotators are used all over the world in forestry, general cargo handling and material handling. This puts us in a unique position to operate in close co-operation with major machine manufacturers within all kinds of applications.



# Quality, capacity and commitment

End results are created here. In our modern production facility, all brainstorming sessions, all confidential collaborations, all product development and all solutions to meet market demands and requirements are transformed into finished products.

Our customer promises can be summarised in three concepts that permeate everything we do: **Precision – Commitment – Added value**

qValify  
ISO  
9001

qValify  
ISO  
14001

qValify  
OHSAS  
18001

Our production builds for the long term future using sustainable resources and operations, and is therefore both quality and environmentally certified.







## Everything under one roof

The 8,500 m<sup>2</sup> facility is designed for rational flows and a high level of capacity utilisation. At the centre of it all is the fully automated material handling system – FMS – and advanced, specially developed processing equipment and machine tools. They provide capacity, flexibility and the highest possible quality.

**QUALITY CERTIFICATION:** We work intelligently and efficiently with lean production methods to reduce waste and keep things in order. We work constantly to put new practical knowledge to good use. We are certified to ISO 9001, 14001 and

OHSAS 18001 standards, which means our production meets certification requirements in terms of quality, the environment and working environment.

### **RESPONSIBILITY & COMMITMENT:**

Indexator takes responsibility for everything from product development to service and support. Our quality work is based on commitment and personal responsibility following the principle "Right from me". This means all employees have a mandate and responsibility to take immediate action when a fault is detected.

Each employee looks at things with the customer's eyes in each part of the production chain. We are proud of our delivery accuracy and delivery performance.

**FULL-SCALE TEST OPERATION:** Not everything is automated. Pre-assembly and final assembly are done by hand to ensure quality and configuration. Finished rotators are put through a test cycle, where all functions are checked. The test operation is fully automated to avoid human influence, but is monitored by an operator. No deviations are tolerated.

## OUR PHILOSOPHY IN THREE POINTS

### **Right by me**

All of our employees create an internal chain of deliveries from person to person. We avoid unnecessary work for the next link in the chain. We provide feedback on what was handed over and strive to continuously improve the work flow.

### **Continuous improvements**

This applies to everything from the products themselves to our work methods and routines. An important part of the improvement work is also eliminating waste. We constantly ask ourselves: "Does this really add value to the products and services we offer?"

### **Long-term thinking**

Indexator shall always strive to do what is right, even if it sometimes is not profitable in the short term. The obligations we have to our customers, suppliers, society, the environment and each other take precedence. This makes us – and our customers – winners in the long run.

## THE INDEXATOR PRODUCT FAMILY

# Good reasons for choosing our products



### Best total economy

Indexator products contribute to high productivity and good profitability – regardless of the type of machine, crane or tool.

### Wide range of models

The world's largest range of models, sizes, interfaces, functions and more, means there is a product to suit your particular needs.

### Tough & durable

Machines, cranes, heads, tools and grapples are becoming increasingly more high performance – forces are increasing. To meet this demand, Indexator rotators are built and equipped with bearing solutions to handle both axial and radial loads and are designed to handle tough material stress and heavy strain on all vital parts.

### Wear-resistant vane motor

The rotators are based on the well-proven vane motor principle. The motors enjoy high torque. The modular design and the low number of moving parts make our rotators durable, easy to service and ensure well-documented long service life.

### Hydraulically balanced

Well-balanced pressures and flows provide smooth rotation and stable functions. You have full control. There are no internal hydraulic loads that have a negative effect on service life.

### Quality assurance

To ensure quality and configuration, pre-assembly and final assembly are carried out by hand. Every rotator is individually tested; no deviations are tolerated.

### Protected hose routing

The new, patented links reduce the risk of leakage, which leads to greater productivity, lower costs and less harm to the environment. The Y-link is available in a number of models – everything from unbraked links to the most advanced swing damping systems.

### Best braking solution

Quick, reliable and controlled swing damping thanks to the market's best braking solution.

### Compact, modular construction

The rotators are compact, have a low profile and are highly reliable. Models with three main modules: motor, rotator shaft and swivel house, which together create a compact body. The modular construction also makes a mechanical version possible, i.e. without a motor.

### Hydraulic weighing links

Hydraulically transmits pressure changes to a scale system and eliminates overloading while providing a rational value determination of the load. The open interface makes the weighing link compatible with all scale systems on the market.

### Smart hose swivels

High-quality swivels that rotate freely, even at extreme pressures, increase hose service life and allow shorter hoses.

### Right material selection

Thoroughly tested materials and components ensure good properties and durability.

### Easy to service

Simple replacement of seals and other wear parts. You save time and money.

### Delivery performance

We have invested in an ultra-modern production facility to meet the high demands for accurate delivery. Indexator works with sophisticated production technology.

### Always close

Nothing beats personal service when you need an answer. Indexator has a team of experienced employees with a wealth of product knowledge able to answer questions and process orders from customers and workshops.





*Richard Larker is R&D Manager at Indexator, associate professor of structural materials and conducts research into high-strength forgings and tribology.*

# World-class product development

A word like 'unique' should be treated with caution. But when it comes to Indexator's R&D and prototype test facility, no other word will do. It's where we design the future together with the world's leading machine manufacturers. It's where we develop technical concepts for patents and products. And it's where we verify designs and validate production methods.

It's at this centre of excellence that customers' development departments work side-by-side with our material experts, designers and production engineers. It's also where many of our customers' own innovations are developed, which obviously means extremely high levels of confidentiality. Our ability to create watertight bulkheads between each project is routine procedure for us. Indexator is very, very good at keeping things confidential.



## GV/AV ROTATORS

# Cost-effective solutions for goods and material handling



GV/AV rotators have become somewhat of an industry standard anywhere that professional general cargo and material handling and profitable forestry work are performed. Cost-effective solutions that combine a compact design with low weight and high performance.

GV – Grapple rotator AV – Head rotator



### GV 3

- 3-tonne lifting capacity
- For lighter forestry and agriculture machines and general cargo handling.
- Light and compact.
- High torsion strength.
- Several versions available.



### GV 4 / AV 4

- 4.5-tonne lifting capacity
- For lighter forestry and agriculture machines and general cargo handling.
- Alternative versions available for different swing damper and link designs.



### GV 6

- 6-tonne lifting capacity
- For lighter types of material handling.
- Light and compact with high performance.
- Choose between mounting with a lower link or shaft mounting.



### GV 12 / AV 12

- 10-tonne lifting capacity
- For professional forestry work.
- Robust and durable.
- Alternative versions available for e.g. different types of hose routing.
- Lower links in different designs for e.g. full tree or cut-to-length handling.



### GV 124

- 10-tonne lifting capacity
- For tools needing an extra hydraulic function, e.g. grapple saw.
- Robust, well-proven design.
- High-value material selection.
- Low pressure drop.



### GV 14 / AV 14

- 10-tonne lifting capacity
- Built for tough applications.
- Extremely low weight in relation to performance.
- Alternative versions available, e.g. for forwarders and harvesters.



### GV 17 / AV 17

- 16-tonne lifting capacity
- Built for heavy tools and tough work.
- Robust and powerful design.
- High torque.
- Flexible, with alternative interfaces to the swing damper/link and tool.

## G/H ROTATORS

# Rotators for swing dampers that maximise profitability.

The perfect rotator solution for modern and efficient forestry work. Durable, powerful and with the highest performance. All rotators are adapted for our specially developed MPB swing dampers.

**G** – Grapple rotator **H** – Head rotator



### G 101

- 6-tonne lifting capacity
- For small and mid-size forwarders.
- Wear-resistant and service friendly.
- Powerful upper mounting suitable for MPB swing dampers.



### G 121

- 10-tonne lifting capacity
- Ideal for forwarders, log trucks and material handling with high demands on functionality and performance.
- Suitable for MPB swing dampers.



### G 141

- 10-tonne lifting capacity
- Extremely high torsional strength in relation to weight and build height.
- Extremely durable upper mounting.
- Suitable for MPB swing dampers.



### G 171

- 16-tonne lifting capacity
- For large forwarders and tougher grapple applications.
- With the MPB swing damper, optimises productivity and efficiency.
- High torsion strength and precision.



### H 101

- 6-tonne lifting capacity
- Mid-sized rotator for thinning and lighter clear-cutting.
- Wear-resistant and service friendly.
- Powerful upper mounting suitable for MPB swing dampers.



### H 121

- 10-tonne lifting capacity
- For harvesters used for thinning and lighter clear-cutting.
- Suitable for MPB swing dampers.



### H 112/H 122/H 132/H 152

- 10-tonne lifting capacity
- For harvesters used for heavier thinning and clear-cutting.
- Suitable for MPB double swing dampers.
- Powerful upper mounting with robust bearing positioning for long service life.



### H 172/H 182

- 16-tonne lifting capacity
- For felling with high demands on performance, reliability and total economy.
- With the MPB swing damper, optimises productivity and efficiency.
- High torsion strength and precision.

# Endless possibilities

Indexator offers swing dampers and links for most crane models and applications on the market. Regardless of your machine or crane, we can provide a solution that increases productivity and comfort while reducing the load on the crane and tool.

Indexator has a long history of providing interfaces that have gone on to become the market standard.. The MPB interface is more or less standard on harvesters today. The great demand in recent years for Indexator's protected hose routing – Y-links – will soon make it the new standard interface for forwarders. It's also increasingly common in many truck applications.

When you choose an Indexator product you can be sure of getting the latest technology. The various component parts work in support of each other to help you – the professional user – raise your productivity.





## Links



### LINKS

Primarily used for simple, light applications and where work does not require any swing damping. The links are available in a number of different variants, including the Y-link for protected hose routing.

## Hydraulic weighing links



### WEIGHING LINKS

Indexator's test-winning weighings link is available with or without a brake, wireless transfer and a Y-link design for protected hose arrangement.

## Swing dampers with disc brake



### SINGLE SWING DAMPER

Used for light and medium-weight applications where there is a need to dampen swinging in one direction.



### DOUBLE SWING DAMPER

Used where there is a need to dampen swinging in two directions.

## MPB swing dampers with multi-plate brake



### MPB SINGLE SWING DAMPER

Used where there is a need to dampen swinging in one direction, primarily on light and medium-weight applications. There are also models with Y-links for protected hose routing.



### MPB DOUBLE SWING DAMPER

The most powerful brake on the market. Used where there is a need to dampen swinging in two directions. Our MPB double swing dampers are available with one or two brake kits.

## IR/SR ROTATORS

# Heavy-duty rotators for demanding jobs and environments

Indexator's IR/SR rotators are primarily intended for use on excavators, large cranes and skidders. These are rotators for the really tough jobs in e.g. material and scrap handling, recycling and timber handling. Everywhere that demands on a rotator are extremely high.



### IR 10 / IR 10-5

- For tough material handling.
- Equipped with bearings to withstand forces in different load directions.
- Swivel function with low pressure drop.
- Available in different versions, including as a mechanical rotator.
- Variant for direct connection of up to five grapple cylinders without the need for a distribution block.



### IR 20 / IR 20-5

- For applications with high demands for functionality and wear resistance.
- Mounted on bearings to withstand large dynamic forces in different load directions.
- Modular design with low number of moving parts for a high level of reliability.
- Variant for direct connection of up to five grapple cylinders without the need for a distribution block.



### IR 12

- Specially designed for heavy timber handling.
- Modular design with e.g. alternative motor options.
- Upper mounting and links as option.
- Flexible with X-channels for extra hydraulic functions as an option.



### IR 22

- Designed for extremely tough forestry applications.
- High torque for demanding timber handling and optimised function.
- Flexible, with the possibility of using alternative hose connection and extra channels.



### IR 25

- Designed for tough recycling and material handling.
- Integrated cylinder attachments.
- High torsion strength and durability.
- Long service life and good total economy.
- Handles direct connection of five grapple cylinders with no need for a distribution block.



### SR 180 / SR 210

- Specially designed for skidders and full tree handling.
- Extremely high torsion strength and durability.
- Service-friendly design.
- Available in two versions, for mid-sized and large skidders.



### MOUNTING IR

For floating installations, our industrial rotators can be suspended from a range of mountings designed for the various product families. Where appropriate, they can be installed directly using Indexator's links.

The durability and design of our mountings are optimised for the various rotators. By purchasing genuine Indexator mountings, you ensure an industrial rotator with a long service life and problem-free operation.



IR



SR





## XR ROTATORS

# Uncompromising power for the toughest environments

The XR range consists of compact, powerful, slew base bearing rotators designed for extreme applications, where loads and demands on the rotator function are extremely high. Product series for rigid and floating installation. We offer oil distributors from Indexator's standard product range as well as customised models. With their compact, power-dense design and extreme torque – up to three times more than the competition – the XR range is the ideal solution for seriously demanding work.



### XR 400

- Max axial dynamic load  $\pm 200$  kN.
- Able to withstand forces in different load directions thanks to its unique bearing.
- Compact rotator design.
- High torque for demanding applications.
- Available with an extra channel for central lubrication
- Available in several different models. Read more at [indexator.com](http://indexator.com).



### XR 500

- Max axial dynamic load  $\pm 250$  kN.
- Equipped with bearings to withstand forces in every load direction.
- Compact rotator design.
- High torque for demanding applications.
- Available with HPL relief valve for the grapple function.



### XR 600

- Max axial dynamic load  $\pm 300$  kN.
- Designed to handle the very biggest applications.
- Amply sized hydraulic connections.
- Equipped with bearings to withstand major forces in every load direction.
- Extremely high torque
- Available with HPL relief valve for the grapple function.

The XR product range includes many variants and is constantly being extended to meet rotator demand from the smallest to the very largest.



## Indexator XR in brief

Easy to service

Leak-proof, water resistant

Low profile, well protected design

Extra channel for central lubrication

Vane motor with extreme torque

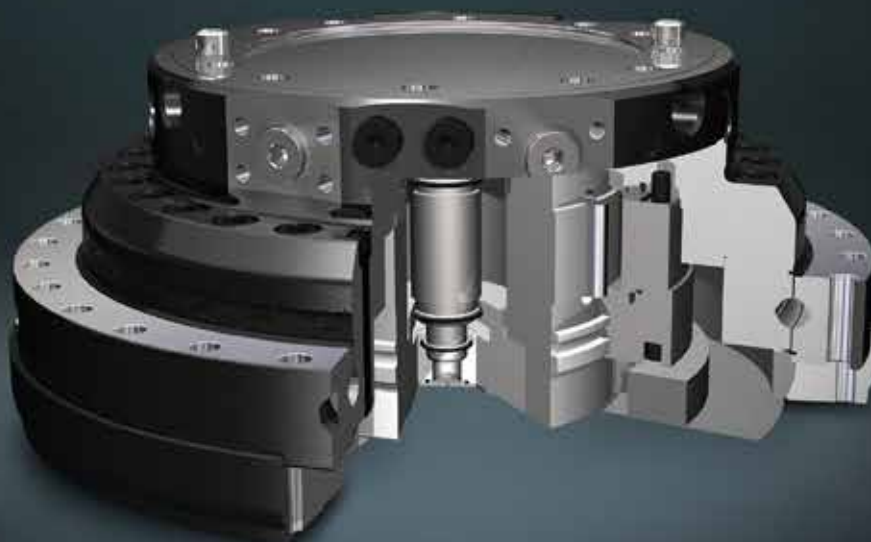
Relief valve integrated in motor

Handles radial and axial forces thanks to its swivel base bearing

Unique interface allows strong incorporation

Patented torque transfer

Direct drive with a strong, tolerant vane motor means no gearing is necessary



### HIGH TORQUE

Higher torque than every other solution. Handles high flows with very low pressure drops. The result is performance that exceeds requirements for even the heaviest jobs.

### DURABLE

Built to handle the forces from truly heavy loads. Whether forces are at right angles or come from the same direction, XR rotators are extremely durable, powerful and enjoy long service lives.

### Unbeatable service life

The torque transfer solution means external loads are not transferred to the motor or the swivel. The combination of a tolerant vane motor and the fact that no gearing is needed means the XR rotator has unbeatably long service life.



### PATENTED TORQUE TRANSFER

Thanks to the XR series' patented design and its floating torque transfer solution, external forces acting on the bearings do not affect the motor and swivel inside the XR Rotator. This extends the rotator's service life significantly in comparison with competing solutions.

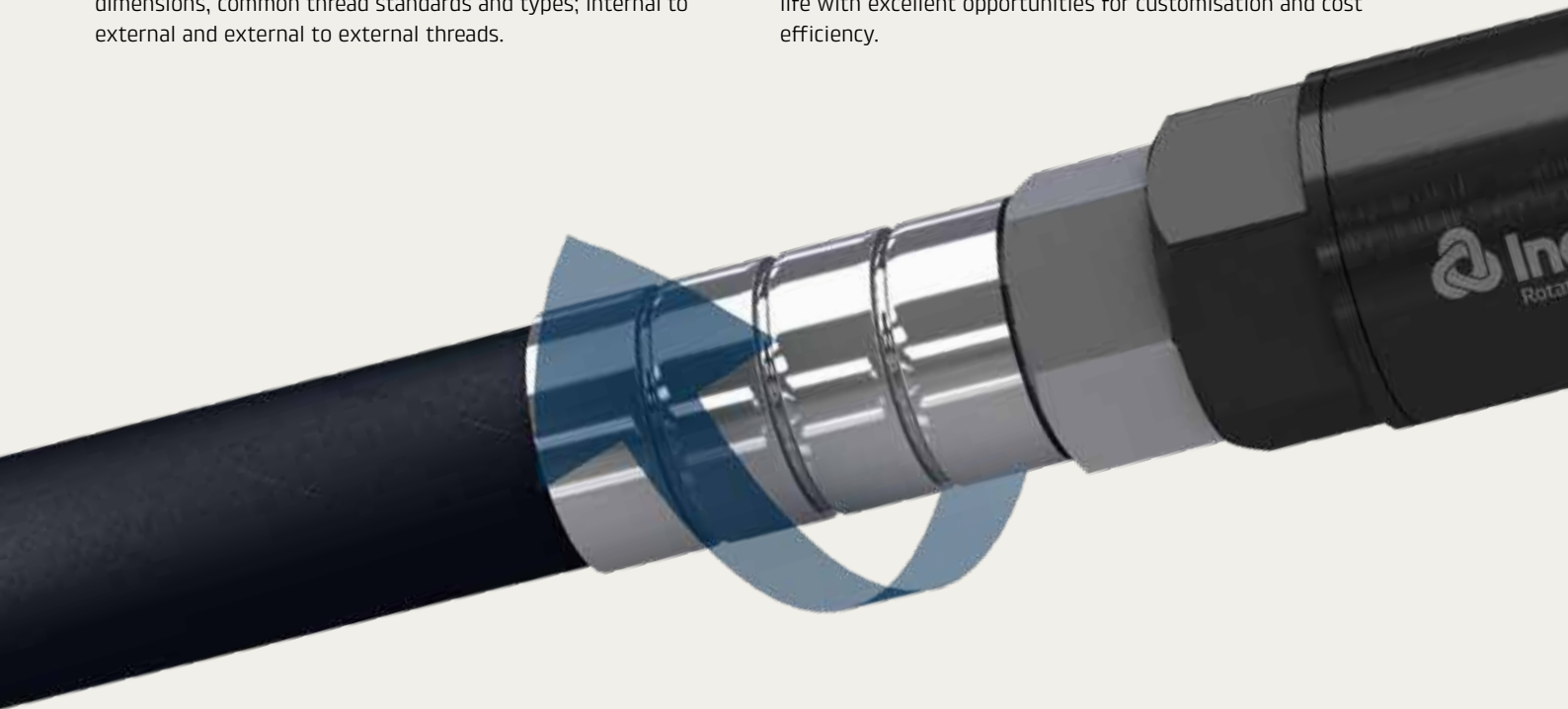
## IDL/K100-SWIVELS

# Innovative hose swivels for green, economical, hassle-free operation.

Indexator swivels are among the best investments you can make to reduce a machine's wear costs. The swivel constantly protects the hose connections and rotates as necessary to protect the hose from harmful twisting.

Indexator has a full range of high-quality hose swivels that provide maximum freedom of choice regarding sizes and dimensions, common thread standards and types; internal to external and external to external threads.

What's more, we are busy launching next-generation swivels that combine impressive performance, quality and service life with excellent opportunities for customisation and cost efficiency.

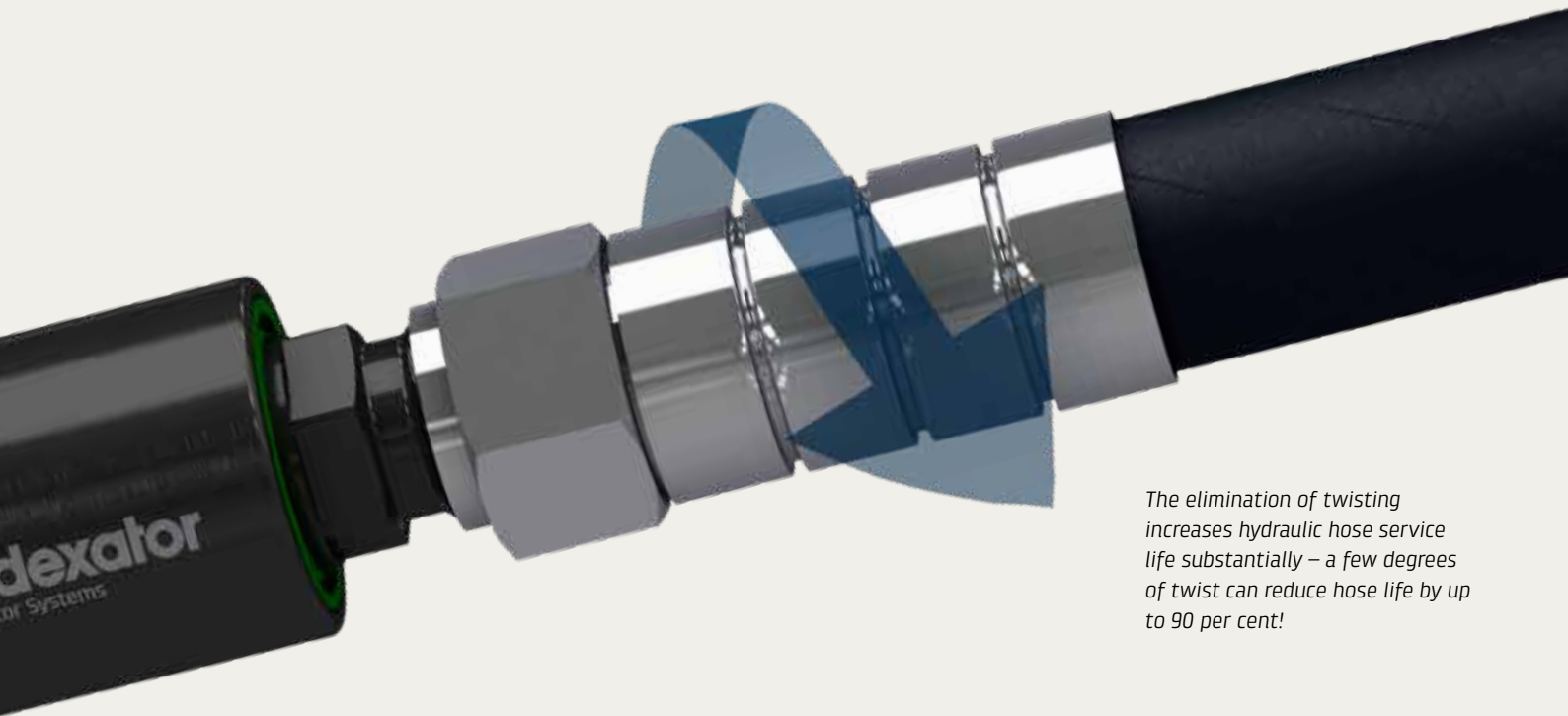


### IDL – proven reliability

Indexator's IDL swivel is a tried-and-tested workhorse that neutralises torque resistance for both radial and axial loads with the help of needle and ball bearings. IDL makes sure hydraulic hoses can rotate unimpeded and also handle high working pressures over time.

The swivel allows shorter hoses, which means weight savings and straighter, secure hose routing. It also means fewer hose replacements thanks to an increased hose service life. IDL swivels are available in a range with different thread standards, dimensions and sizes.





*The elimination of twisting increases hydraulic hose service life substantially – a few degrees of twist can reduce hose life by up to 90 per cent!*

## Indexator hose swivels – the advantages

**FREE ROTATION** | The hose swivels rotate freely and continuously, even at extreme pressure spikes. No braking action.

**HIGH PRESSURE** | Indexator hose swivels handle high working pressures over long periods.

**FEWER HOSE REPLACEMENTS** | Well-functioning hose swivels extend the service life of hydraulic hoses. You save money and have fewer worries.

**SHORTER HOSES** | Hose swivels you can rely on mean shorter hoses. In addition to weight savings, you get a straighter, and thus safer, hose routing.

**NO PRESSURE LOSSES** | No extra friction heat is generated to interfere with the hydraulic system.

**FEWER RUPTURED HOSES** | Low torque resistance significantly reduces the risk of ruptured hoses. Great for the economy and the environment.



### K100 – next-generation swivels

The Indexator K100 series is engineered for today's modern hydraulic systems in forestry and construction machines. With their compact, robust design and reliable bearing solutions, the swivels are dimensioned to handle truly tough assignments with high oil flows. The K100 series handles high working pressures over long periods and can withstand pressure peaks. One important basis for the high performance is the specially designed seal solution.

What's more, the swivel is impossible to pull apart, thus sparing the environment unnecessary oil spillages. They are incredibly corrosion resistant and have extremely long service lives compared to the competition. The modular construction makes it easy to adapt the K100 to suit every customer's requirements, sizes and connections.



Technical support from Indexator's own specialists is just an e-mail or phone call away. The experience and knowledge learned from this customer dialogue is then conveyed to design engineers and other key individuals, thereby creating continual product development.





## Expertise with personal service and support

Nothing beats personal service when you need an answer. Indexator has a team of experienced employees with a wealth of product knowledge able to answer questions and process orders from customers and workshops. Our support personnel consider technical support to be part of our core business and they literally have the collective expertise of the entire rotator factory at their disposal. Their desks are just a few metres from product and production specialists and they can quickly pass new knowledge back to designers and other

key individuals. We continually develop our network of service providers and our spare parts supply in close collaboration with our customers. This means that help is available wherever our customers operate, which minimises downtime and loss of revenue. Our retailers keep a spare parts stock – everything from wear parts to complete rotators and accessories. Indexator supplies service providers with up-to-date service literature, repair manuals, spare parts catalogues and solid training.



## Indexator Service School

To bring service even closer to the customer, we have set up the Indexator Service School. This training gives our customers' service technicians professional training in the repair and maintenance of Indexator rotators. The training is global, and eventually leads to accreditation. Course participants come from specialist workshops affiliated with machine retailers in different countries as well as from independent

service providers. Courses are usually held at Indexator's production facility in Sweden, but can also be carried out on site at the customer. A specially adapted curriculum is at the heart of the set-up; in other words, the training is tailored to suit the participants' previous knowledge and the rotator models available in the geographic market concerned.





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