

MoveRoll Product Applications



moveroll
Simply the Smartest

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MoveRoll's paper roll handling philosophy, technology, and equipment are unique and innovative: Our product offering includes pressure conveyors, kickers, receivers, and braking pads, that have – for example - been successfully installed in paper mills in Finland, Sweden, USA, Brazil, Thailand, Italy, UK, Chile and South Africa. We are proud to offer only paper roll handling solutions that reduce the costs of investment and ownership through increased productivity, safety, and reliability, and through decreased installation, maintenance, and energy costs.

In the following pages you will find examples for MoveRoll product applications as well as links to videos and technical datasheets. This page, however is reserved to the product that started MoveRoll's success story in 2008: [MoveRoll® Pressure Conveyor](#)

MoveRoll® Pressure Conveyor

MoveRoll pressure conveyor offer an easy and innovative solution to transport paper rolls from point A to destination B. The conveyor modules are equipped with standard pressure elements, and have a height of 40 mm. The modules are easy to install and mount, for example directly on the floor of paper mills. Conveyor modules are available for horizontal paper roll transport, ramp applications, winder deck applications, as well as for turntable applications.



No mechanical parts

MoveRoll pressure conveyors do not have moving parts. Paper rolls are conveyed by pressure elements, that control air pressure and thus generate the rolling movement of the rolls. This unique technology enables smooth, safe, and controlled paper roll handling.

Modular Design (pre-tested)

MoveRoll pressure conveyors have a pre-manufactured modular design with a height of only 40 mm. Because of this modular system, installations can be completed easily and quickly in a very short amount of time. Prior to deliveries to customers, all modules are fully tested for safety and functionality in our facilities.

Cost effectiveness

As long term investment MoveRoll conveyors lower the cost of paper mills in three aspects;

1 - Low installation costs

It is possible to install the conveyor directly on the factory floor. Typically, in a pre-planned project, 10 m conveying length can be installed in just under 8 hours. Hence the total project costs are reduced through lower costs for construction and civil engineering works.

2- Low maintenance costs

MoveRoll pressure conveyor do not have mechanical parts, accordingly the maintenance requirements are very low. Conveyor maintenance consists mainly of replacing pressure elements, which can easily be done by paper mill staff without interrupting the production process.

3 - Low energy consumption

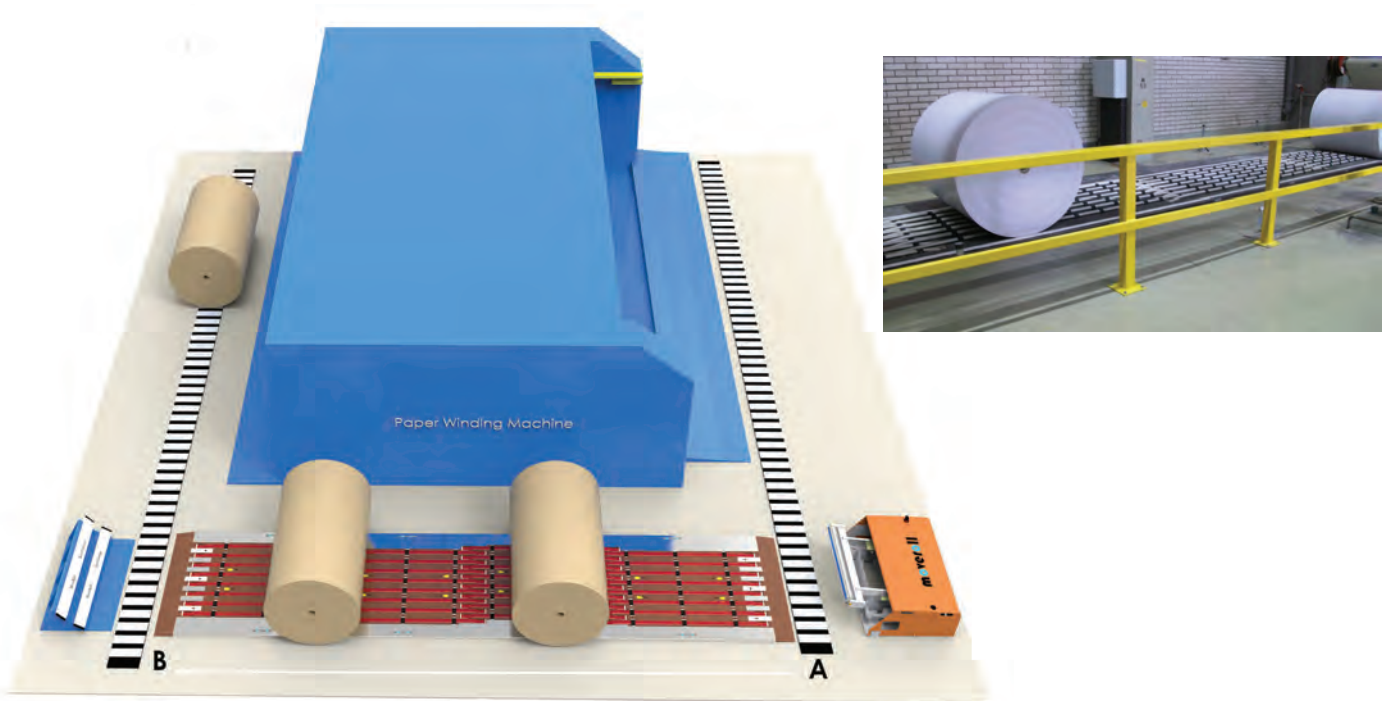
Compared to traditional pneumatic and mechanical systems, MoveRoll pressure conveyors can reduce energy consumption up to 80%. The system requires a feed line of only 3.5 bars of compressed air and control voltage (24VDC) for its sensors to recognize the roll movement.

Safety

MoveRoll pressure conveyors have been designed with the main goal of increasing the safety of operators and equipment in paper mills. The modules are safety engineered against power failure. Moreover, throughout the entire handling process, paper rolls are fully controlled by the pressure elements. Thus, the safety of operators is increased and accident risks during the roll handling process are lowered.

Horizontal Conveyor application

MoveRoll horizontal conveyors are used in applications when paper rolls need to be transported from point A to point B. A typical example of such applications is the winder area. When single drum winders, for example, discharge rolls onto both sides of the winder, MoveRoll horizontal conveyors can be used to transport the rolling paper rolls gently and safely from the chain/slat conveyor (A) to the chain/slat conveyor (B).

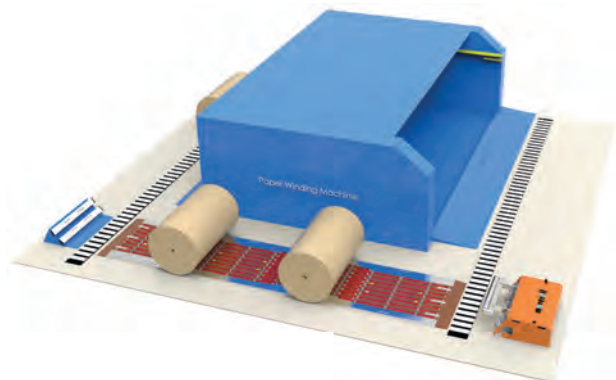


In applications such as this, paper rolls are usually unwrapped and may very easily suffer damage; for example, when they hit steel stops or collide with each other. MoveRoll's approach to paper roll handling is innovatively different: Pressure elements move the rolling paper rolls gently and safely; moreover, the conveyor modules have no mechanical parts. Because of this gentle, safe, and efficient transport method, material damages or paper loss are avoided.

MoveRoll horizontal conveyor has a height of 40 mm. It is possible to install the conveyor directly on the factory floor. MoveRoll horizontal conveyors can handle paper rolls safely, accurately and cost-efficiently in high volumes, and at the same time preserve the high quality of the finished paper products.

Highlights

- Easy to install and modify
- No mechanical parts
- Low maintenance
- No material damage
- Faster and safer delivery of the roll

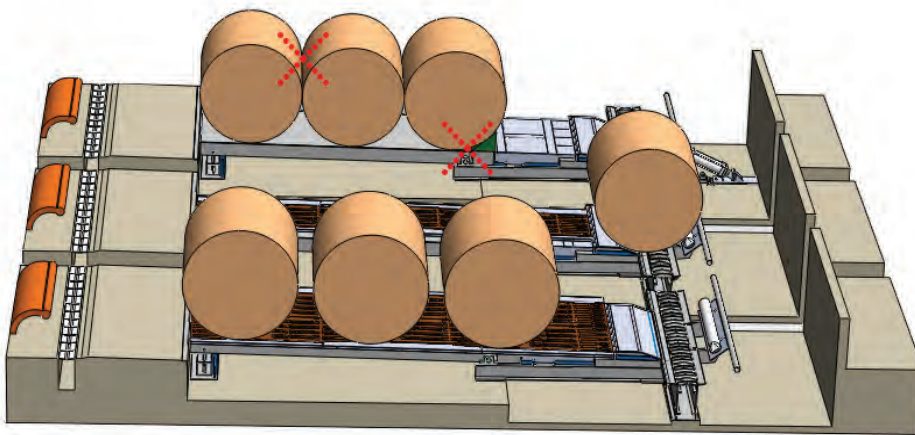


For technical datasheet of MoveRoll horizontal conveyor [click here](#)

To watch reference video of MoveRoll horizontal conveyor operating in a paper mill [click here](#)

Ramp Application

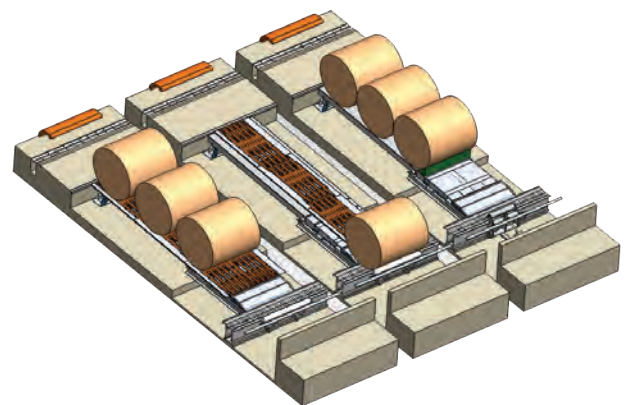
In traditional ramp applications, paper roll movement is usually generated mechanically or gravitationally. The use of gravitational force to induce and keep up the rolling movement of paper rolls on ramps poses a high safety risk, because the roll speed increases and the movement itself is uncontrolled. Mechanical paper roll actuation on ramps, on the other hand, involves high energy consumption and requires constant maintenance of the mechanical parts; furthermore, the paper roll transport capacity is limited.



MoveRoll's approach to paper roll handling is innovatively different: It is possible to install the conveyor modules directly on the floor or on top of an existing ramp application. That way high foundation costs can be avoided. The conveyor modules do not have mechanical parts, but are instead equipped with pressure elements which generate the smooth and safe movement of paper rolls on ramps.

Highlights

- Controlled roll movement
- No mechanical parts
- Low investment costs
- No material damage
- Productivity Increase

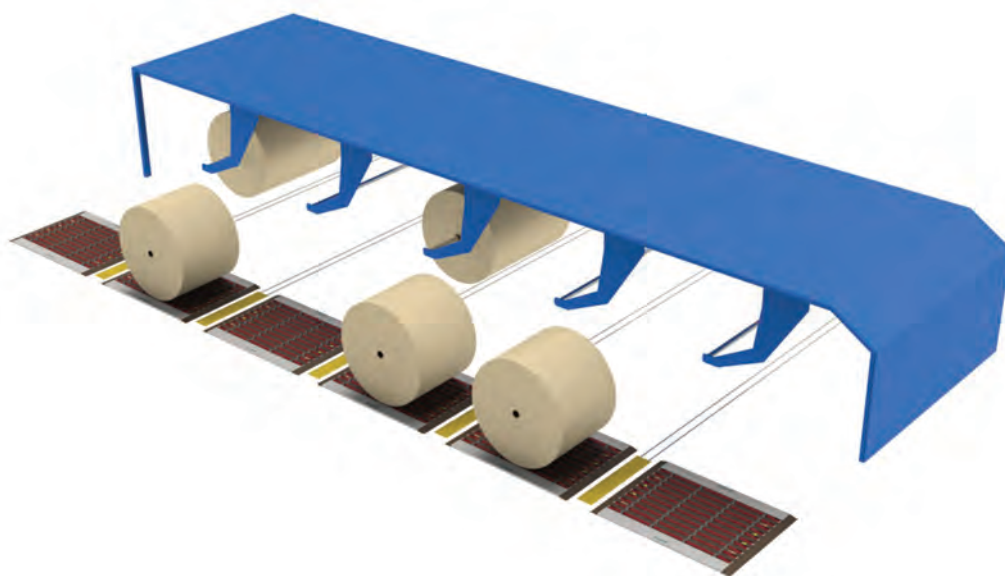


For technical datasheet of MoveRoll ramp conveyor [click here](#)

To watch refernce video of MoveRoll ramp conveyor operating in a paper mill [click here](#)

Sheeter / Corrugator Applications

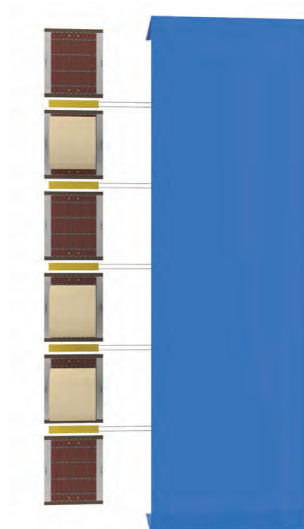
MoveRoll technology can be applied in applications where rolls are transported horizontally, and the final destination is the sheeter or corrugator. When paper mills use slat conveyors for sorting paper rolls, the can programme MoveRoll conveyors to send the roll to the required slat conveyor. The roll can pass over the slat or can stop on the slat conveyor.



It is possible to install the horizontal conveyor modules directly on the floor. There is no need for special structures respectively foundation or excavation works. MoveRoll horizontal conveyor modules are available in different lengths.

Highlights

- Easy to install and modify
- No mechanical parts
- Low maintenance
- No material damage
- Faster and safer delivery of the roll



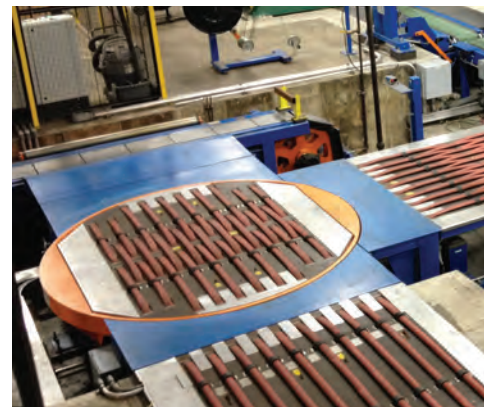
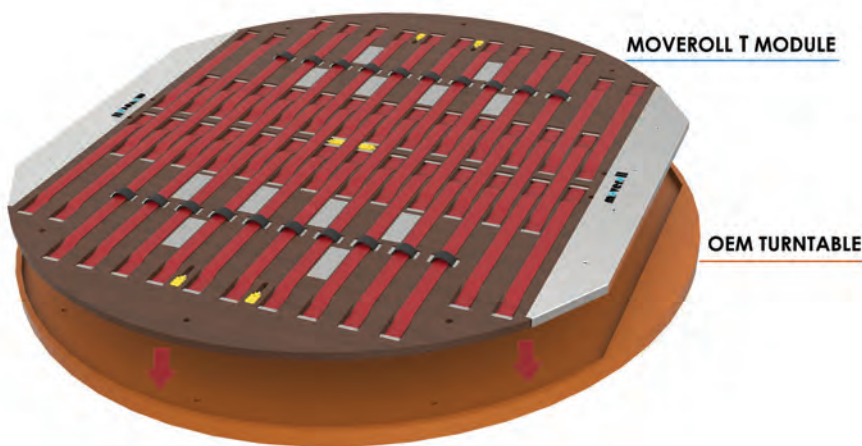
For technical datasheet of MoveRoll horizontal conveyor [click here](#)

To watch reference video of MoveRoll sheeter application operating in a paper mill [click here](#)

Turntable Application

MoveRoll has designed a special conveyor module for turntable applications. The module centralizes paper rolls on the turntable unit and drives them automatically to the final destination. This process does not require kickers or receivers.

Because of the smart design, the turntable module can be used with a broad range of turning module units. The installation of the turntable module on these turning units reduces the amount of mechanical parts on the turntable

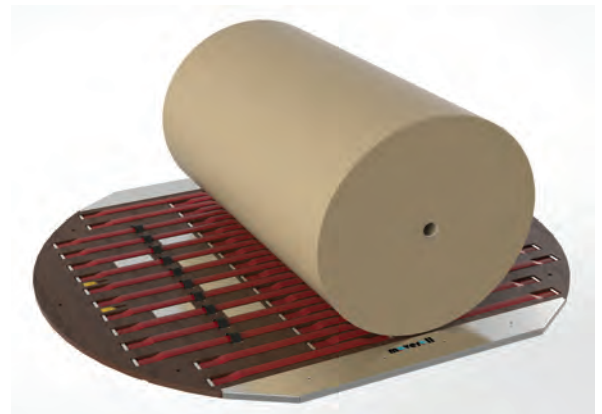


The working principle is very simple: The turntable module is equipped with pressure elements that control the movement of the roll and lock it in the center of the module. After the turning unit has turned, the pressure elements drive the roll to the designated destination.

Depending on the turning unit, MoveRoll turntable can transport rolls to more than one destination. The new unique and innovative technology used to lock and convey the paper rolls makes the delivery of paper rolls easy, fast and flexible.

Highlights

- Easy to install and modify
- Reduction of mechanical parts
- Low maintenance
- No material damage
- No need for kicker / receiver

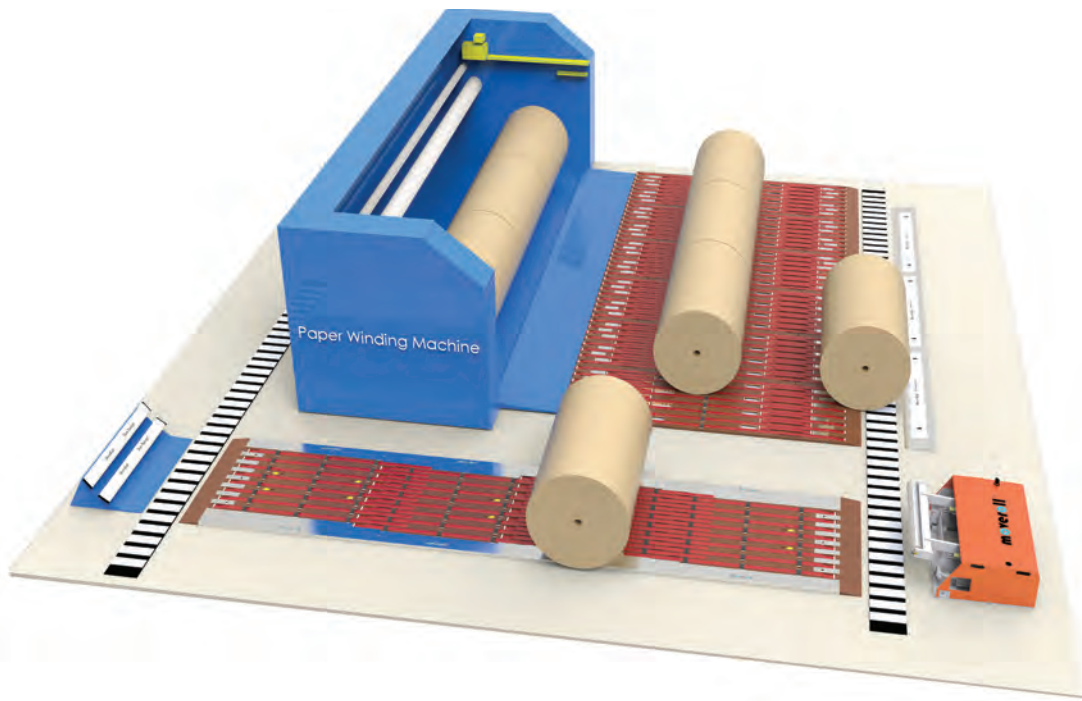


For technical datasheet of MoveRoll turntable [click here](#)

To watch reference video of MoveRoll turntable module operating in a paper mill [click here](#)

MoveRoll Winder Deck

MoveRoll Winder Deck consists of MoveRoll horizontal pressure conveyors that have been especially modified for the winder deck application. After ejection from the winder, pressure elements guarantee a controlled transport of the rolling paper rolls.

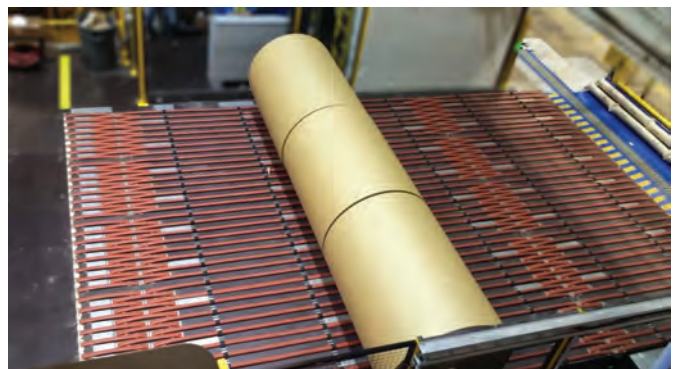


The old winder deck solutions, which use steel stops or sorting stations, can cause the rolls to bounce back and forth heavily. This means too much ergonomically unfriendly and potentially unsafe manual work for the operators. Moreover, the actuation of paper rolls by gravity force on winder decks can create a very dangerous work environment, and may be the cause of damage to paper rolls and equipment.

MoveRoll's approach to roll handling is innovatively different: Since pressure elements are controlling the roll movement, unexpected changes in rolling direction are avoided and the roll speed can be controlled. Depending on winder width and a paper mill's specific needs, the concrete length and width of the winder deck solution can be tailor-made. It is possible to incorporate several roll stop stations and roll stop sections. Paper rolls can be sorted separately or can all at once be driven to the next conveying device or designation.

Highlights

- Easy to install and maintain
- No mechanical parts
- Low maintenance
- No material damage
- Smooth and safe delivery of the roll



For technical datasheet of MoveRoll winder deck [click here](#)

To watch reference VIDEO of MoveRoll winder deck operating in a paper mill [click here](#)

Braking Pad

MoveRoll braking pad is an innovative roll speed reducing solution. The Pad reduces roll speed up to 0,5m/s or can – under certain circumstances – even stop rolls completely. Reduced roll speed means minimal roll bouncing and significantly shorter settling times. Unique design and soft special materials ensure gentle contact with the roll and no damages are incurred on the roll. Thin cushions are designed to be positioned on the rolling surface and to stay in place without any attachment. Special design and soft material guarantees gentle handling and leaves no marks on rolls.



Braking is controlled by special soft material and air that exhausts out of the braking pad as the roll weight squeezes it. The Braking Pad is placed on the floor as seen in figure 1. acting as a barrier to reduce the speed of the paper roll. When reaching the Braking Pad, paper roll goes over , initially collecting air on front end of the pad which later will be realised from the exhaust ports on back of the braking pad (fig 3.) When the air exhausts from the pads front at the same time it causes counter pressure in back that brakes or stops the roll.

MoveRoll Braking Pad is feasible for various roll handling applications. For example, paper mills can place Braking Pads in front of slat or chain conveyors to slow down roll speed and reduce roll settling time.

Similarly, Braking Pads are useful on different sections of ramps to slow down roll speed before the rolls impact on stoppers. In situations, where the roll speed is high – e.g. on winder decks, the pads are most effective in two separate rows; for example, in front and behind separation stoppers. For the convenience of our customers and end customers, MoveRoll Braking Pads are available in different lengths. To meet the different needs in paper mills, the Braking Pads are available with or without magnet. The magnetic option is suitable for metallic surfaces, the non-magnetic version suits all other surfaces.



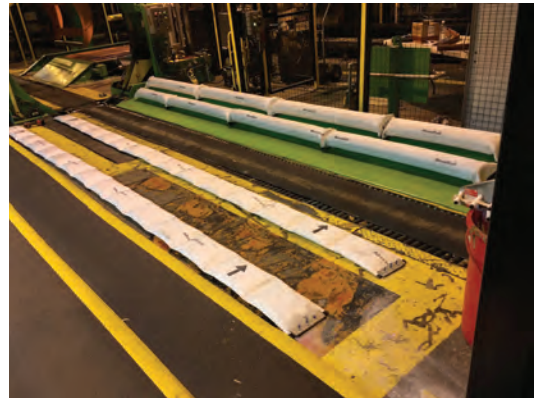
Highlights

- Easy to install or remove
- Prevents damages to the existing equipment
- Reduces kinetic energy of rolls
- Reduces possibility of roll damages
- Increases in occupational safety and equipment safety

To watch refernce video of MoveRoll Braking Pad [click here](#)
For technical datasheet for Braking Pad [click here](#)

Zero Energy Receiver

MoveRoll Zero Energy receiver is the smart solution to cushion roll impact. Meant for low-frequency roll handling applications, the patented Zero Energy Receiver features special roll handling cushions. Notably, the Zero Energy Receiver **does not need any energy sources** to absorb the kinetic energy of paper or board rolls. Thus, many problems that are common with traditional roll receivers are easily solved.



Especially, when rolls e.g. come down sloped floors they move in an uncontrolled manner and gain speed. Traditionally, steel stops or hard materials are used to receive the rolls, which causes them to bounce back and forth forcefully. This results in a dangerous work environment, easily damaged rolls and longer roll settling times than necessary.

MoveRoll Zero Energy receiver improves these issues significantly. The self-inflating roll handling cushions are adjustable to ensure that rolls in different sizes and weights can be handled. Since the cushions absorb kinetic energy of the rolls, the bouncing back is greatly reduced. The material of the cushions is flexible and prevents rolls from hitting against the metal frame of the Zero Energy Receiver; hence, roll damages are avoided. Furthermore, the absorption of kinetic roll energy reduces the roll settling time significantly. This again leads to increased production efficiency.

NO AIR - NO ELECTRICITY - NO MECHANICAL PARTS

The Zero energy solution requires very low maintenance and it can be easily done by maintenance department in the factory. The typical maintenance would be only the replacement of the cushions once they reach the end of lifecycle and such process can be done in less than 10 minutes. Once the cushions have been changed the receiver is again as brand new.



Highlights

- Easy installation with no maintenance required.
- Zero energy consumption
- Preservation of roll quality and prevention of equipment damage.
- Reduction of roll speed and gentle roll cushioning
- Increased operator safety

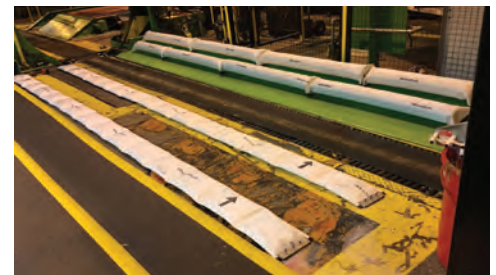
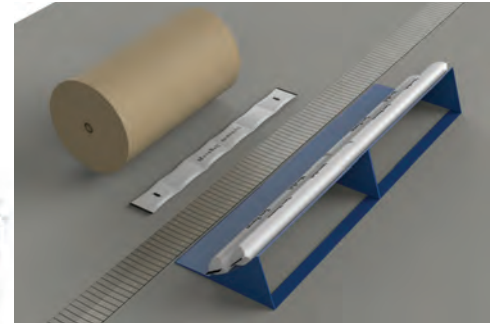
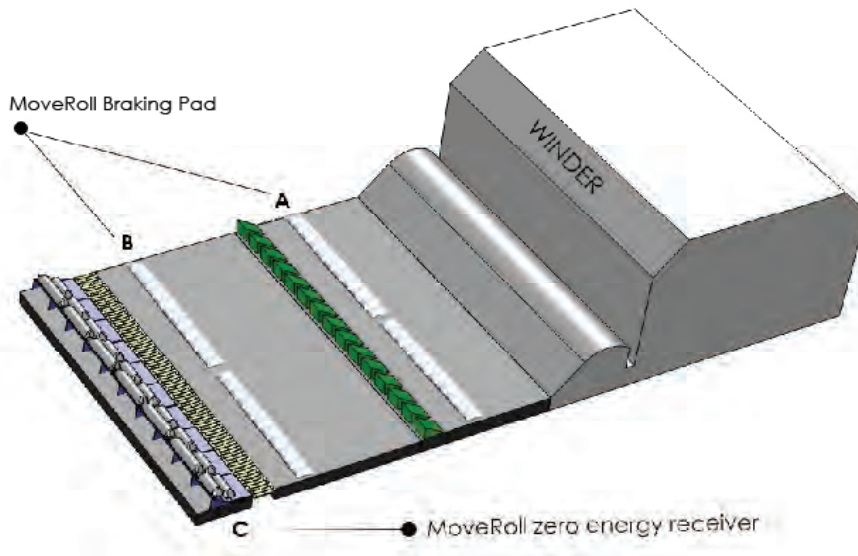
For technical datasheet for Zero Energy Receiver [click here](#)

To watch reference video of Zero Energy Receiver [click here](#)

Low Cost Winder Upgrade

MoveRoll® Braking Pad & MoveRoll® Zero Energy Receiver

As described above, MoveRoll zero energy receiver and MoveRoll braking pad are ideal for a low cost winder deck upgrade. Because of the high speed of outgoing rolls and usage of mechanical parts in the roll separation area, paper rolls may suffer damage. In addition, paper rolls, moving in an uncontrolled manner, do also pose a significant health and safety risk to operators on winder decks.



In section (A) MoveRoll braking pads are used before the separation device. These braking pads reduce the roll velocity, before the rolls paper rolls reach the mechanical parts; thus the roll impact is significantly milder. The roll speed must be reduced both for safety and protection of roll quality and equipment.

MoveRoll zero energy receiver (section C) is used to stop and guide rolls gently onto the slat, chain or belt conveyor. Since the zero energy receiver is equipped with special roll handling cushions, this process does not cause damages to the roll quality.

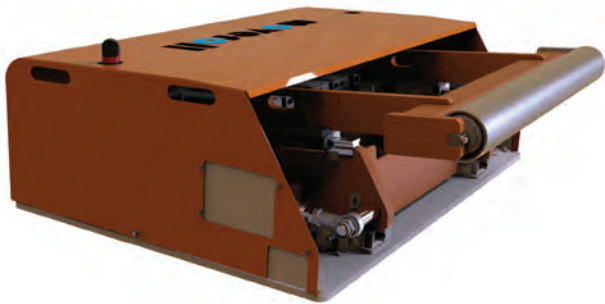
In order to guarantee controlled stopping of the rolls and to keep the roll impact as low as possible, it is recommended to use MoveRoll braking pads in front of the slat, chain or belt conveyor and the zero energy receiver (section B). The combination between Braking Pad and Zero Energy receiver guarantees a smooth and safe landing of the roll with minimal impact on the equipment and paper roll itself.

By combining the different MoveRoll products, paper mills can optimize operator safety on the winder deck and reduce material damages most efficiently.

MoveRoll® Kicker / Receiver

MoveRoll pneumatic kicker has been developed to push rolls horizontally in order that they roll smoothly onto the next conveying device. The kicker can be easily installed as new application or to replace the existing traditional kickers. Moreover, the kicker can also be used to receive paper rolls.

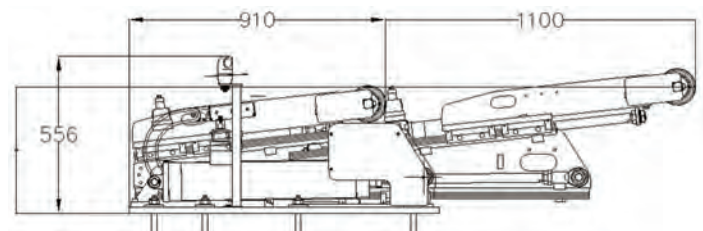
The innovative and patented design of MoveRoll Oy makes it possible to have a powerful kicker in compact size. The kicker can actuate the movement of rolls with a roll weight of up to 4.5 tons. Compared to traditional kickers and depending on the application, MoveRoll kicker can reduce the energy consumption up to 75 %.



MoveRoll kicker is also a perfect solution for applications where the space between chain / slat conveyor and the wall is limited. The kicker has a width of only 910mm (nominal 1100), but – due to its patented telescopic sliding rail – can expand up to 2010 mm. In order to increase operator safety, the kicker is equipped with an adjustable alarm system which is activated once the device is operating.

Highlights

- Easy to install and maintain
- Energy efficient
- Preservation of roll quality through gentle kicking/ receiving
- Prevention of equipment damage
- Increased operator safety



For technical datasheet of MoveRoll kicker [click here](#)

To watch refernce video of MoveRoll kicker operating in a paper mill [click here](#)

MoveRoll Company

MoveRoll Oy is a Finnish paper roll handling equipment supplier to the global paper industry. With know-how in compressed air systems and long experience in the pulp and paper industry, we have designed unique innovative concepts that make roll handling in paper mills easy, safe and cost effective. Developing and manufacturing new solutions that would revolutionize the industry has always been our main goal. Our priority is to offer new innovative solutions that fulfill the needs of our customers to their best satisfaction.



MoveRoll Strategy

MoveRoll Oy's ambition is to become a globally recognized brand and a pioneer supplier of new innovative paper roll handling equipment. In order to reach this vision, we will continue investing in new technology and product development, and continue to expand our network of partners to make MoveRoll products globally available.

MoveRoll pays high attention to customer service, offering continuous support and assistance during the entire product lifecycle. This helps us to maintain a close relationship with our customers, to monitor the performance of our products, and to deliver the best possible service. One of our main aims is to supply and manufacture highest quality roll handling equipment that will always be more cost effective than traditional roll handling products. That is why our product offering includes only solutions that reduce the costs of investment and ownership through increased productivity, safety, and reliability, and through decreased installation, maintenance, and energy costs.

MoveRoll Partners

In order to make MoveRoll products globally available, MoveRoll cooperates with international partners and aims to expand this network continuously. Most generally, our partners can be distinguished in System Integrator Partners and Sales Partners. Our System Integrator Partners are internationally recognized and trusted paper roll handling system manufacturers, that include our products in projects provide the best possible installation and maintenance services to paper mills. Our Sales Partners function as our local sales and customer support contact. This collaboration enables us to optimize our customer-, sales- and aftersales service.

Contact Us



You can contact us directly by phone or e-mail. We would be happy to support you with more information about our products or contact information of our international system suppliers. Our staff will also assist you to find the best solutions for your conveying systems in your paper mills. Together with our experts you can create and develop projects that will save your time and your costs.

MoveRoll Oy

**Pienteollisuustie 3 B
06450 Porvoo, FINLAND**

**Phone: +358 400 610764
E-mail: info@moveroll.fi**

**Skype: Moveroll
Web: www.moveroll.com**