

# Smart gravity engineering

## Dynamic Storage Technology



**eurol**....

# Smart gravity engineering

## For perfect warehouse technology

At a time of increasingly tough international competition, both the price of goods and the speed with which customers' needs must be met are becoming more and more important. Pallet flow systems, in which the goods can be stored quickly, efficiently, and thus cost-effectively, and then accessed again with equal speed and convenience, provide an enormous competitive advantage. Euroroll uses Smart Gravity engineering to always find the best solution for warehouse systems of every type and size – including the best solution for your company.

What Smart gravity engineering means to your company:

### **Smart**

is the fact that Euroroll will work together with you to find the most cost-effective and best solution for your storage requirements.

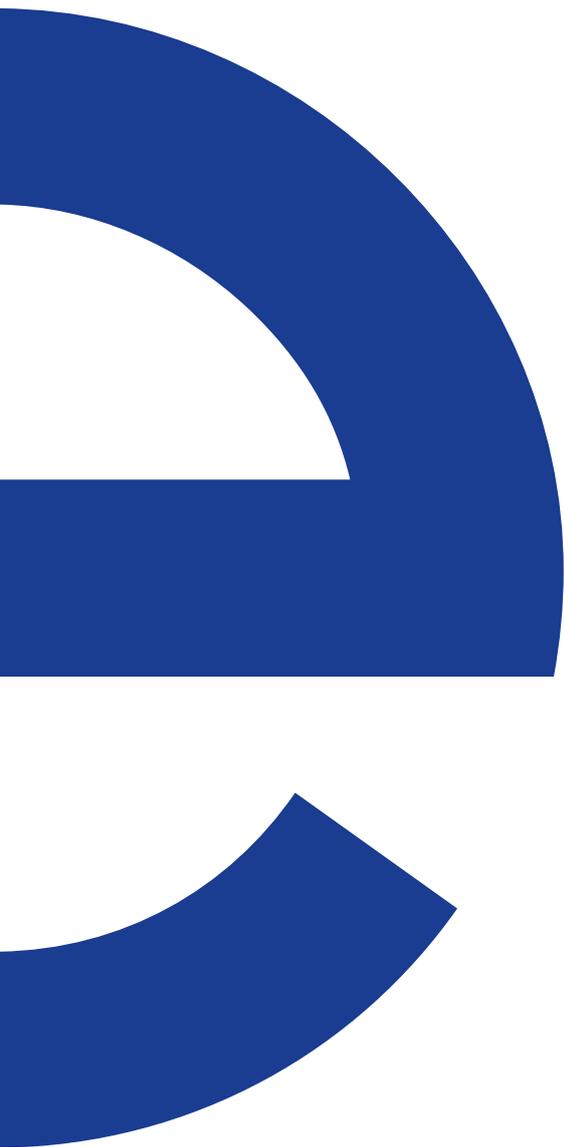
### **Gravity**

The Euroroll pallet flow systems use exclusively gravity-powered roller systems. This eliminates the need for expensive electrical wiring and additional power costs.

### **Engineering**

Euroroll's development specialists design the best possible solution for your storage system based on your needs and requirements – regardless of the goods and products in question.

You can trust our experience: Euroroll has been one of the leading specialists in gravity-powered storage and conveyor systems since 1983.



# The Euroroll system

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# Pallet flow systems

## Pallet storage with Euroroll – dynamic, efficient, practical

You would like to optimise your warehouse? Ask the specialist for gravity-operated storage and conveyor technology: Euroroll

### Our goal: Your satisfaction

Save on warehouse space, operating hours, and energy costs for the storage of pallets: Our company is succeeding at this with its dynamic Euroroll warehouse technology. The pallets move forward on roller tracks with a slight downward slope, powered solely by gravity – without the additional supply of energy. Euroroll pallet flow systems are suited for pallet storage in accordance with the FIFO principle (First in, first out) and the LIFO principle (Last in, first out). They are just as well suited for buffer warehouses and for special solutions precisely tailored to your company. The Euroroll team will collaborate closely with you to fulfil your requirements; we are driven by your satisfaction.

### Excellence in development and production

Euroroll develops and produces all components of the pallet flow systems in Germany. Production steps such as welding, punching, sawing, machining or the powder-coating of components are completed at our plant in Herbern. Thanks to this enormous depth of production and the vast experience of our employees, we supply products of uniformly high quality. At the same time, we are able to quickly and variably address your demands. The most frequent production processes are automated, enabling Euroroll to guarantee a high degree of efficiency for your storage and conveyor technology.





You can rely on Euroroll's ongoing support during the planning, production and commissioning of your system. And afterwards also, of course.



**Priceless: the decades of experience**

Euroroll has been a conscientious and reliable partner for all applications of dynamic pallet storage since as early as 1983.

**More than practical: Pallet tests**

Before starting the actual planning, we test whether or not the pallets primarily used by you are suitable for the pallet flow system. We maintain a 500 m<sup>2</sup> test area on the Euroroll premises specifically for the pallet tests. This enables us to individually evaluate all types of pallets. And that allows us to guarantee full functionality of the gravity conveyors.

**Necessary: good planning**

With your support, experienced sales engineers will determine your requirements and work closely with you and our Euroroll designers to find the most suitable solution for your needs.

**Indispensable: proper implementation**

We maintain regular contact with you during the fulfilment of your order, not lastly to ensure the quality of the production adapted to your wishes and requirements. If you prefer, we will also professionally install your system ourselves.

**Worth its weight in gold: competent after-sales support**

Following delivery, we will always be happy to assist you, providing both advice and support in such issues as further optimisations, maintenance, and the instruction and training of your warehouse employees.



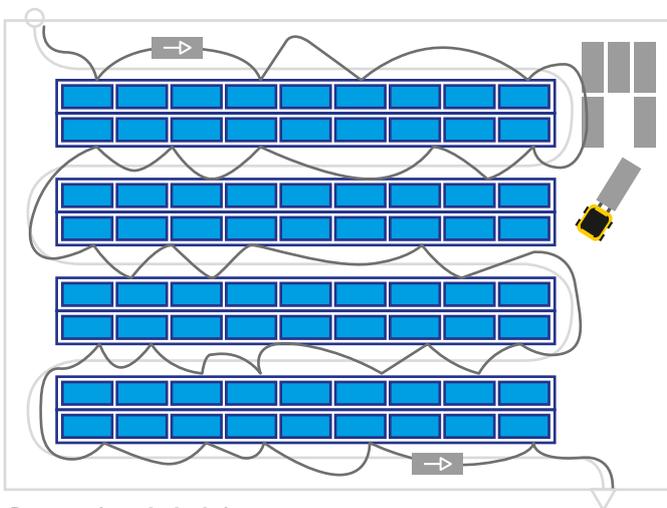
# Pallet flow systems

## Efficient storage with Euroroll pallet flow systems

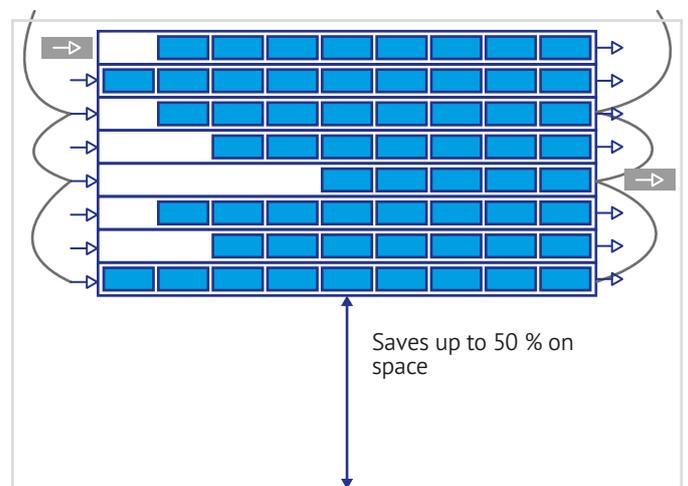
Storage space is a valuable commodity. Euroroll pallet flow systems enable you to optimally use your storage space since the aisles between the individual channels can be eliminated. Space-savings of up to 50% result in comparison with classical warehouse systems; Pallet flow systems thus represent the most compact solution in warehouse technology. This also means: You can store considerably more pallets on the same surface area – naturally in three dimensions – and save on costs.

An additional benefit of flow racks: In contrast to block storage, all items are immediately available. Euroroll pallet flow systems are available in FIFO and LIFO designs.

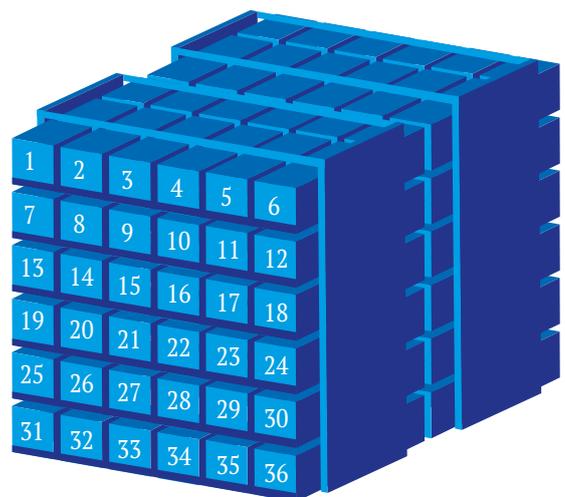
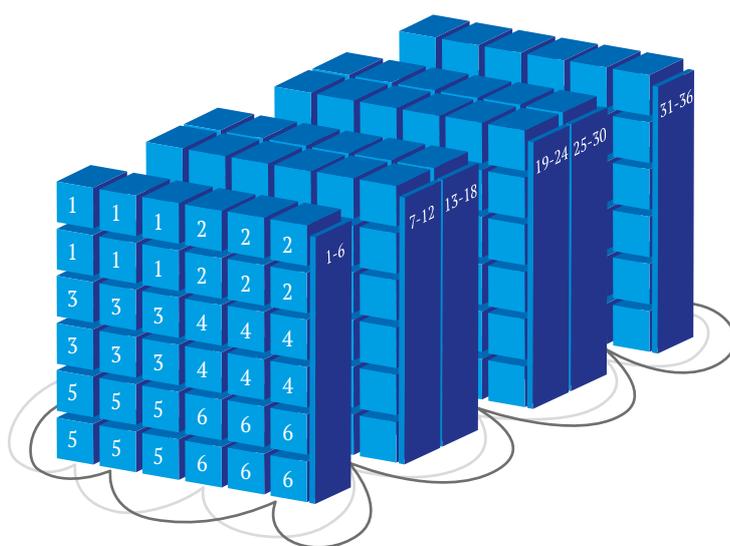
### Better space usage due to pallet flow systems



Conventional shelving



Compact FIFO design

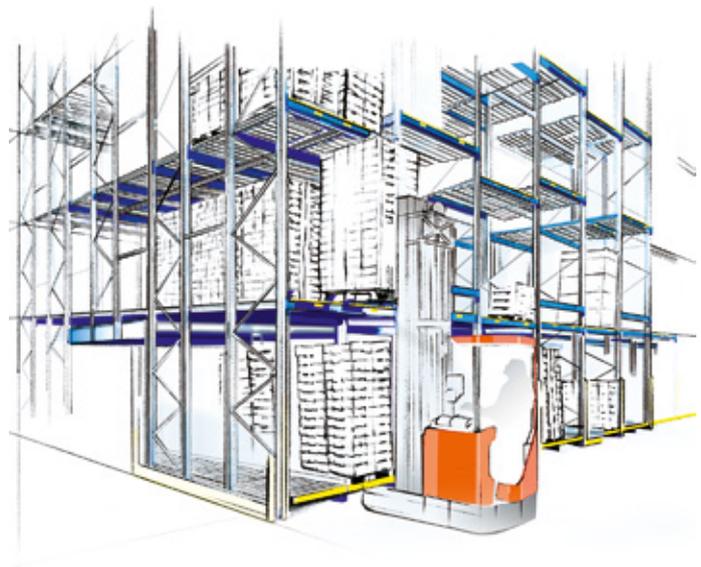
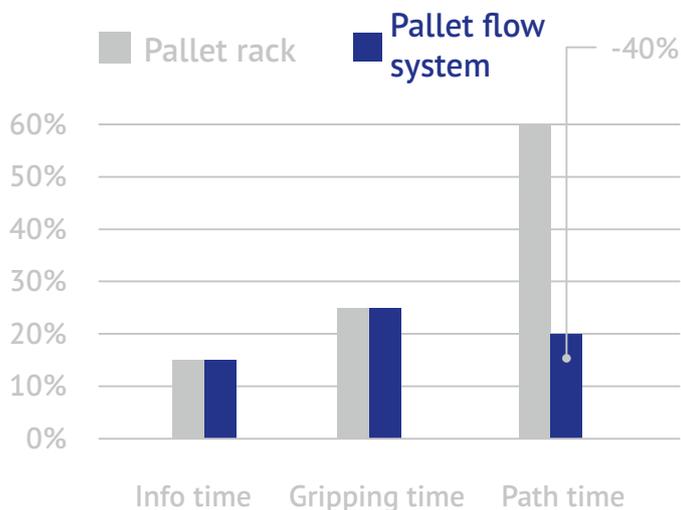


# Working efficiently with pallet flow systems

An additional advantage of Euroroll's pallet flow system is the fact that the employees operate the racks from the front only. They no longer need to approach every aisle individually. The positive results: The paths travelled by your employees are reduced by up to 40% with productivity increasing at the same time.

The storage and retrieval sides of FIFO systems are separated. This prevents employees in these areas from getting in each other's way. This also enables safe and quick processes for loading the channels and removing the goods.

In addition to this, products with expiration dates or product batches can be easily monitored with the pallet flow system using the FIFO principle.



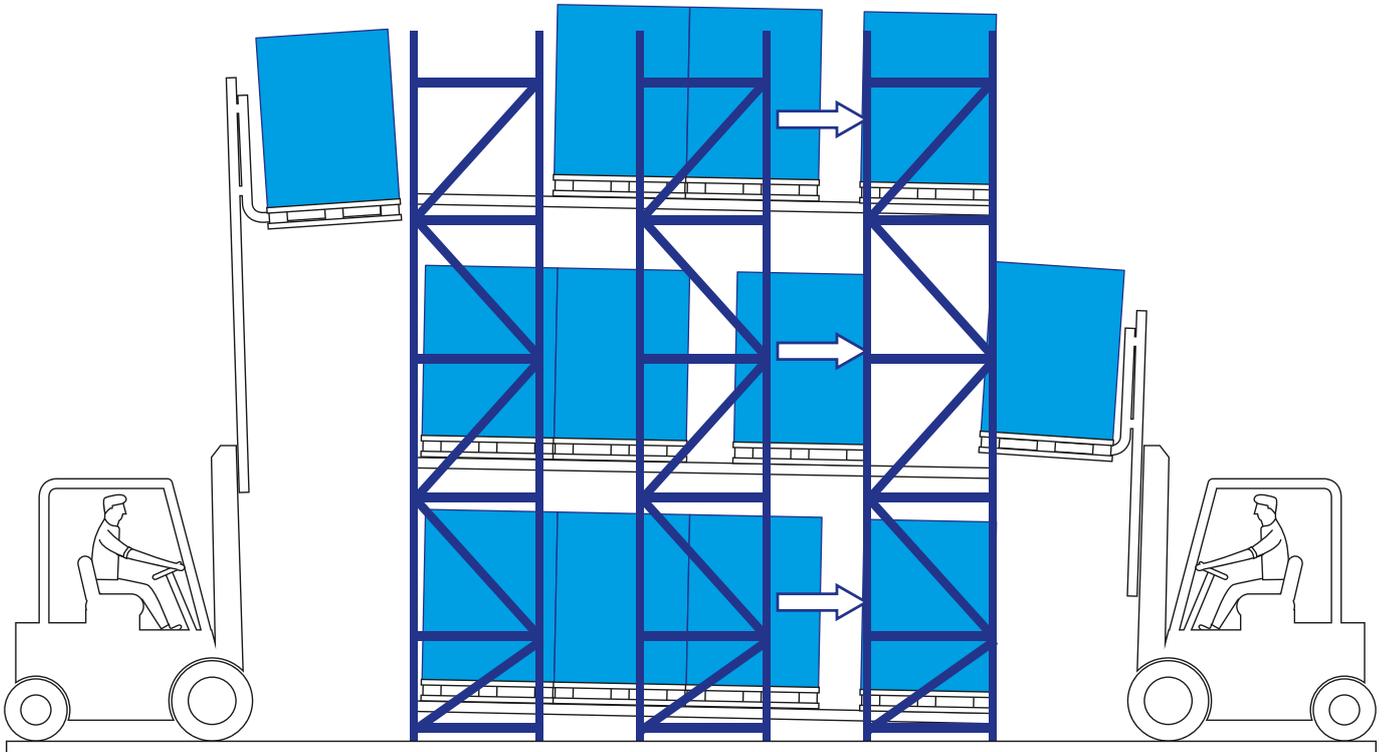
## Lower costs with greater safety

- Pallet flow systems use gravity to transport goods from the loading side to the removal side. No energy costs are incurred.
- Euroroll pallet flow systems are low maintenance. They consist of low-wear components that are designed for heavy duty operation. Euroroll keeps the most important components stocked at all times if one of them needs to be replaced. Maintenance can be done during operation of the system.
- Euroroll pallet flow systems are easy and safe to operate. We are constantly working on new developments to make the dynamic warehouse technology even better.

# Pallet flow systems

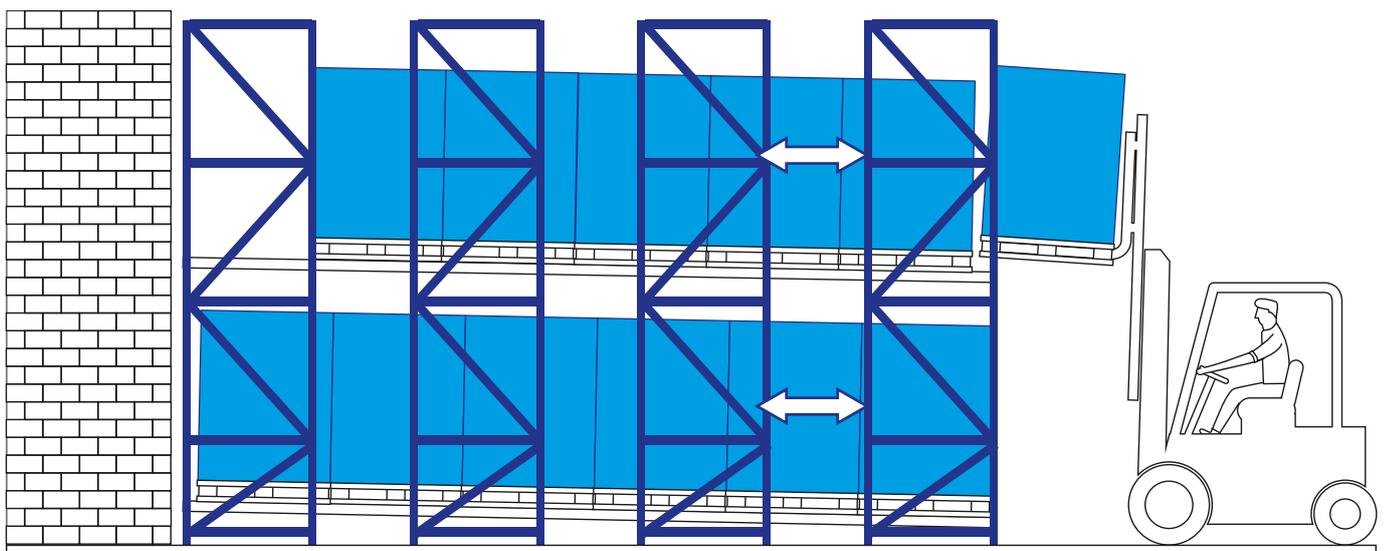
## FIFO and LIFO principle for pallet flow systems

**FIFO** or First In, First Out means that the goods first stored are the first removed. The loading and picking sides are separated from one another. This system is referred to as live storage or flow storage. Some of its advantages include good utilisation of the storage space and the easy monitoring of perishable goods.



*Flow storage*

With the **LIFO** principle (Last In, First Out) or Push-Back storage, the most recently stocked goods are removed first. They are loaded and removed from the same side.



*Push-Back storage*

The pallets are pushed in against the incline. One of the advantages is optimal use of space such as in deep-freezers or hall niches.

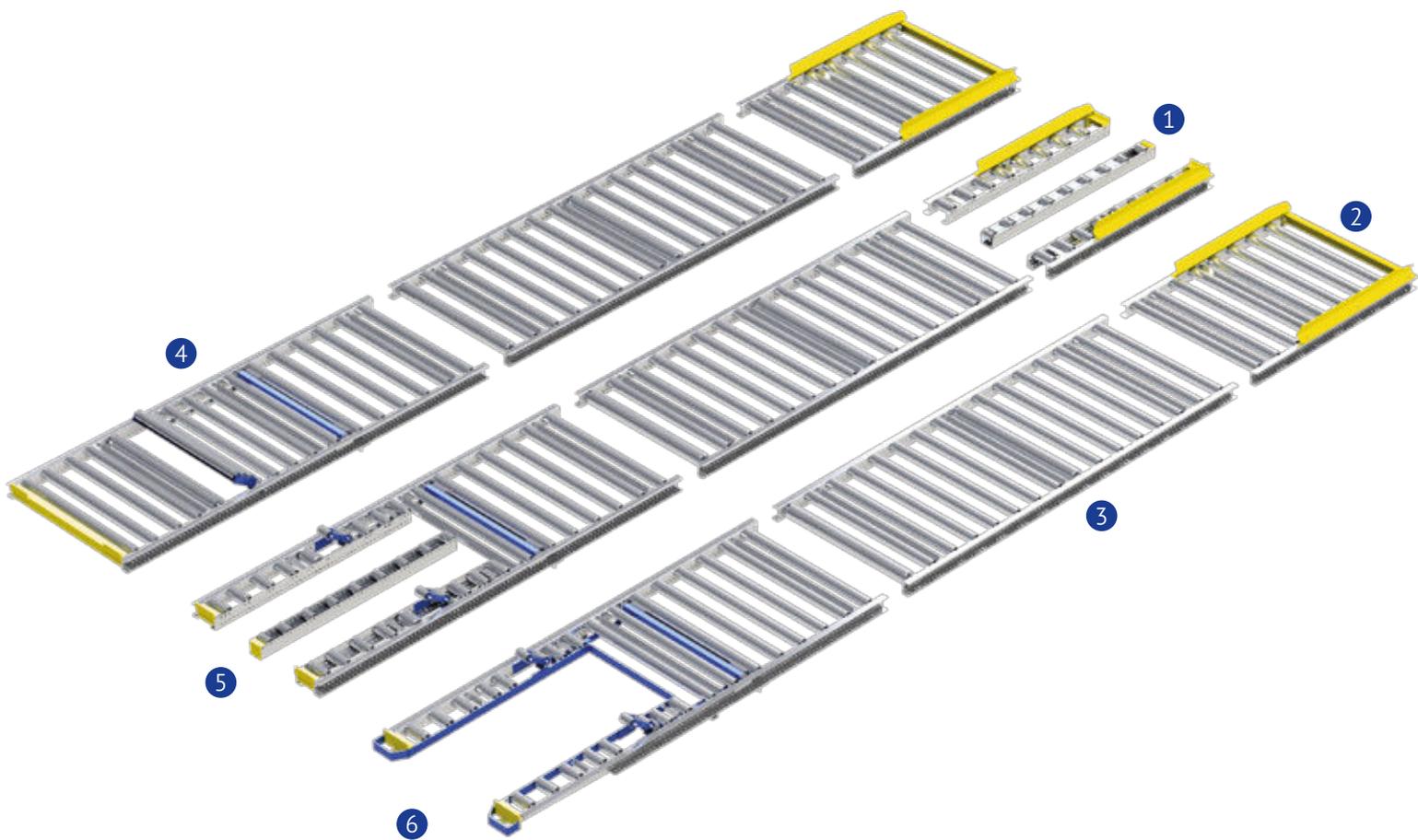
# Roller-track elements

Roller tracks form the heart of Euroroll's dynamic warehouse technology. They can be installed in a rack system at multiple levels and side-by-side. The height and depth of the rack system are therefore primarily depending on the dimensions

and available space in your warehouse. The floor tracks can be installed on the floor with our supports; the rack tracks are installed in the rack system – each with decline to the removal side, enabling the next pallet to follow automatically and

controlled when a pallet is removed. Every roller track consists of three types of elements: the loading element, one or more centre elements, and the removal element. In the design phase, we match the correct loading and

unloading elements (full width rollers or divided tracks) to your material handling equipment.



**A flow system can be essentially broken down into 3 sections:**

- |                              |                                |
|------------------------------|--------------------------------|
| 1 Loading element divided    | 4 Unloading element full width |
| 2 Loading element full width | 5 Unloading element divided    |
| 3 Centre element             | 6 Unloading element floor      |

# Roller-track elements

## 1 Loading element divided

The roller track element on the loading side is designed for the equipment the operators use to load the pallets. For equipment without tilt mast, divided loading elements are used with 2 or 3 tracks.



## 2 Loading element with full width rollers

For handling equipment with tiltable masts or forks, full width roller elements generally form the start of the roller track. When using automated devices with driven roller conveyors, this type of loading element is also part of the standard design.



## 3 Centre element

Two pallet spaces are located on every centre element. An adequate number of brake rollers per element controls the speed of the pallets when moving along the roller track. The number of lined-up centre elements essentially determines the depth of the roller track.





#### 4 Unloading element with full width rollers

A so called separator parts the front pallet from the following pallets when arriving at the end of the lane. Also here, the material handling equipment or picking method determines the type of unloading element. The full width roller track design is suitable for equipment with tiltable masts of forks.



#### 5 Unloading element with divided rollers

If the equipment can not tilt its mast or forks, the unloading element will be designed with 2 or 3 tracks. This will enable the forks to move freely between the tracks. The pallet can be lifted safely and conveniently.



#### 6 Unloading element on floor

Additional reinforcements are attached to the roller tracks at floor level to prevent the operating units from damaging the roller track. Euroroll offers you a large number of solutions here both for manual picking operation, "heavy-duty" usage and everything in between – and of course, always tailored to your requirements.



# System components

## 1 Side profile

Rely on Euroroll quality – the U and C shaped side profiles with the dimensions 80x40x3 mm are pre galvanised and roll formed. The grid dimension of the holes is 26 mm, enabling roller spacing from 78 mm to 156 mm.

Alternative profiles are available on request. In warehouses with reduced bay widths, an L- profile can be used to save space. U and C profiles, however, ensure better stability; for this reason, Euroroll uses them as its standard.

## 2 Conveyor roller

Maintenance-free is the trademark of the Euroroll conveyor roller. It consists of two special ball bearings which are forcefully and positively pressed into a galvanised conveyor roller tube with a diameter of 60 mm. Even a heavy pallet is a light one for Euroroll conveyor rollers – every roller has a load capacity of 240 kg. Our fully automated roller press guarantees uniform high quality of the conveyor rollers, which also results in a long service life. If damaged, replacing a roller is simple and quick and can be done without special tools.





### 3 Roller protector

The welded roller protector on the track's feed side prevents the rollers from damage, e.g. due to the forks of the truck. It is therefore one of the standard components of the Euroroll tracks. The use of an angular beam eliminates the need for the roller protector.



### 4 Entry guides

Euroroll entry guides make it easier for your employees to place pallets on the gravity-powered roller track. The entry guides use their colouring to optically indicate both the beginning and the width of the roller track to the users and serve as a mechanical aid for the pallets. These properties particularly pay off for the loading of your warehouse's upper levels. The entry guides reliably and quickly show the employees the path to the roller track. The guide retains its dimensional stability even when a pallet is set down somewhat more roughly.



### 5 End stop

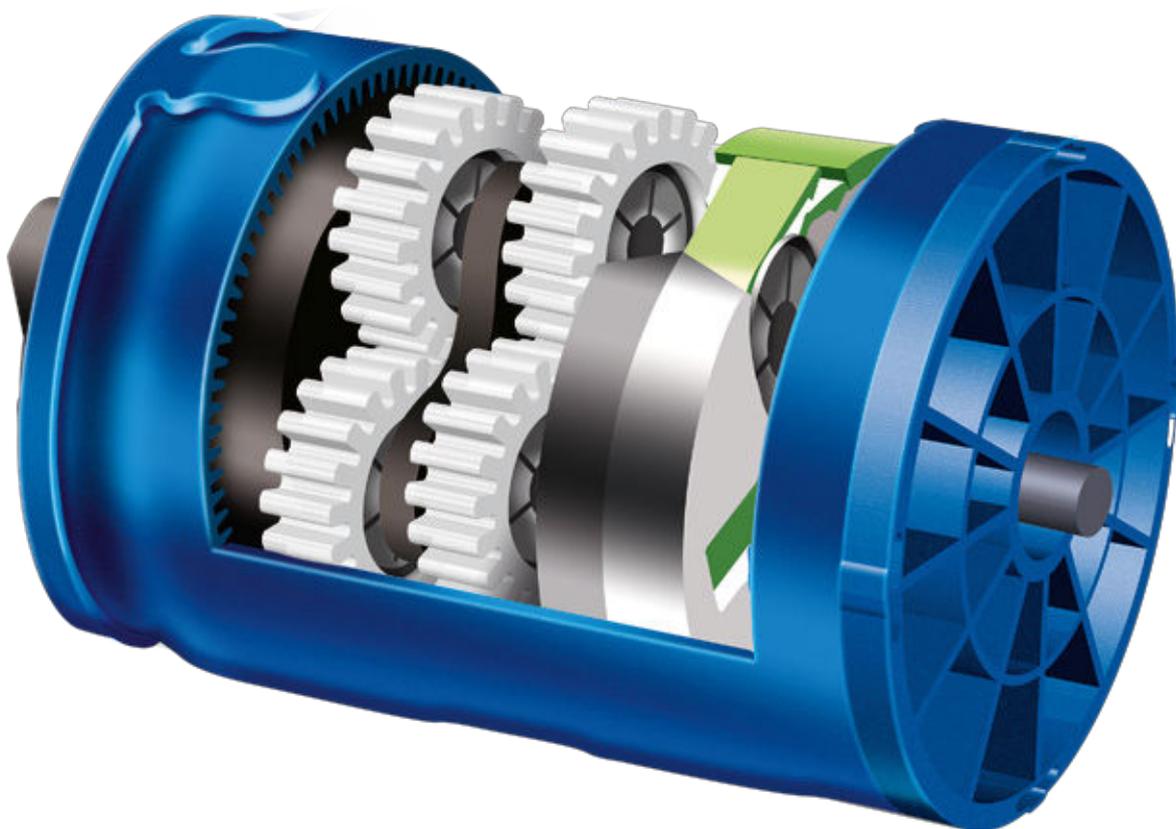
The Euroroll multi-function end stop is a component of the unloading element. It is a pallet stop, roller guard and path guide all rolled into one. The end stop thus safely catches your goods at the end of the track, protect the rollers from damage when the pallet is removed, and shows the users the path to the pallets with its pronounced colouring, even at the top levels of the warehouse system.



# System components

## 6 Brake roller

Goods transported by gravity – but safely! Thanks to the Euroroll brake rollers, which are part of every roller track and regulate the speed, your goods move safely and controlled through the channels. Rely on tried-and-tested Euroroll quality – we have been constantly developing this component for more than 30 years. The technical design and the monitored production of this important component and the precise installation by Euroroll ensure the safe transport and storage of your goods.



### **Technical information on Euroroll brake roller:**

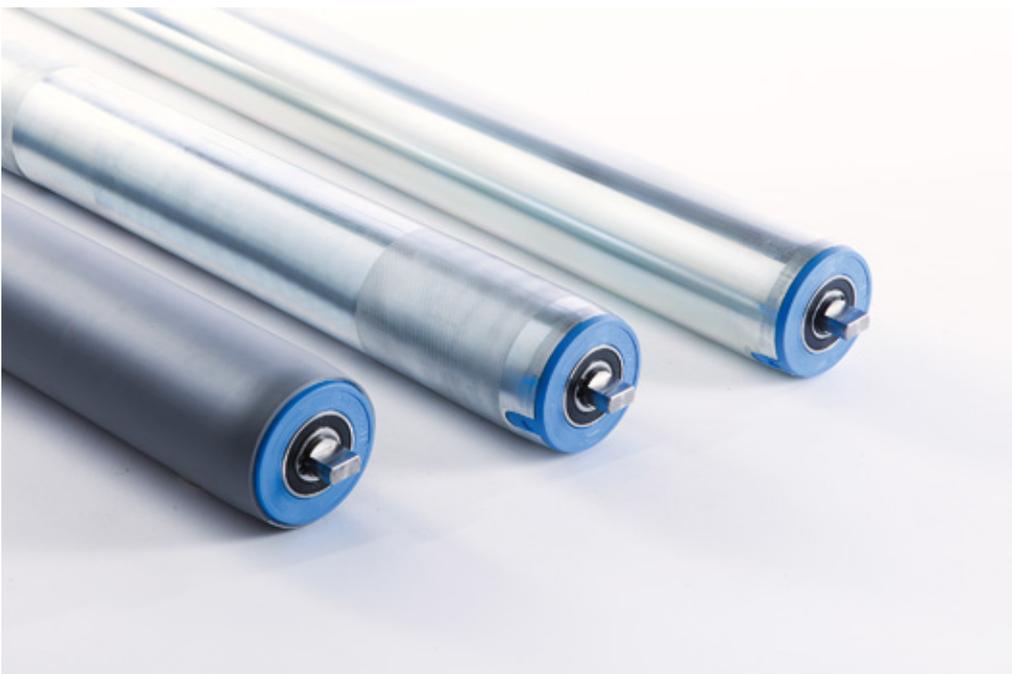
Diameter: 80 mm  
Pressing: automatic brake-roller pressing  
Maximum pallet weight: 1400 kg  
Minimum installation length: 124 mm  
Maximum speed of the pallets: 0.3 m/s  
Extra light start-up behaviour  
Three-stage planetary gear



## Speed regulation in the gravity-powered roller track

The type of brake rollers which is right for your purposes and the increments at which these speed regulators should be installed in your gravity-powered roller track depend on several factors.

- Design and function of the roller tracks
- Incline (downward slope)
- The transported products (dimensions, weight, material, sensitivity)
- Environmental impacts, e.g. humidity and storage temperature



### Brake support rollers for every requirement

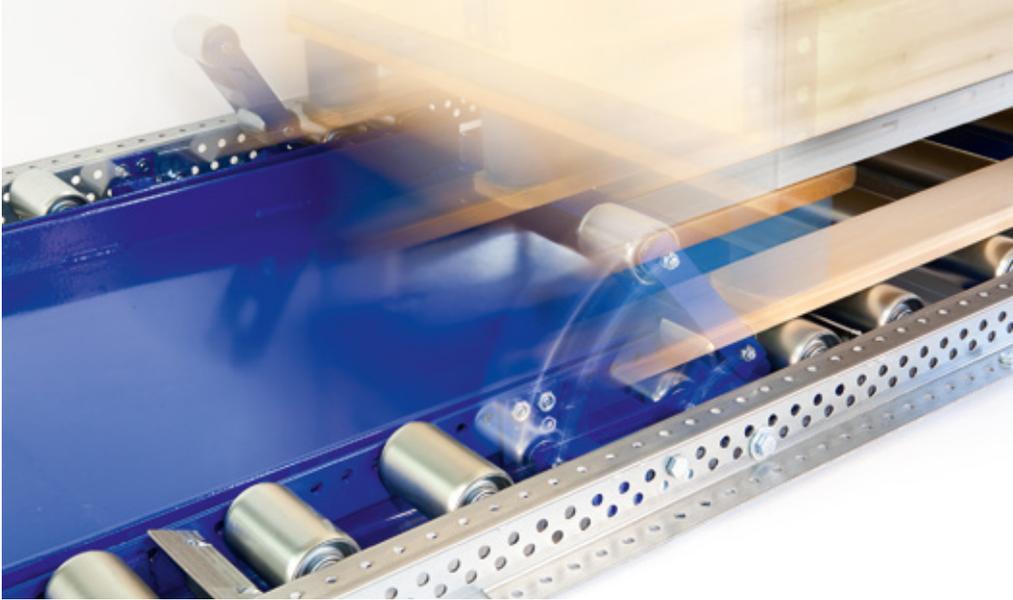
If the roller track is primarily intended for the transport of car containers, hygienic pallets, or steel frames, the brake support rollers can be equipped with an additional rubber surface or knurling. This reduces the slippage between the pallets and the brake roller.



# System components

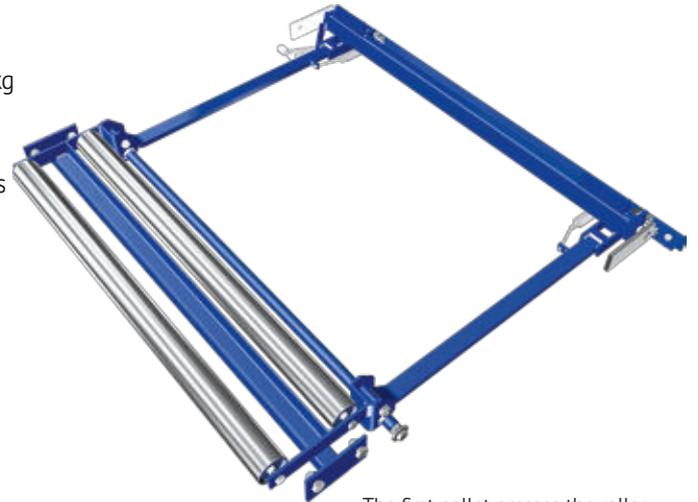
## 7 Separator

"Flex-TV" – an all purpose separator



The "flex-TV" separator parts the pallet to be removed at the end of the lane from the subsequent pallets, enabling your employees to conveniently remove it without any line pressure. This allows you to avoid potentially hazardous situations in your warehouse.

- The "flex-TV" separator enables pallets of differing lengths to be used in mixed operation on a gravity-powered roller track.
- It enables the transport of channel loads of up to around 20,000 kg on a single roller track (larger channel loads on request).
- Even pallets with greatly differing weights are safely separated.
- If the pallets are ever separated incorrectly, the system will always re-set to its starting position, enabling your goods to be safely separated again.
- The roller paddle is positioned higher up in the lane, out of reach of the forks, eliminating any risk of damage.



The first pallet presses the roller paddle down when it reaches the end of the lane. They cannot be damaged during removal as they are located outside of the removal range.

The paddle and stopper are not connected directly. This prevents damage in the event that two pallets do not separate properly.

### "Flex-TV" separating device for all picking elements

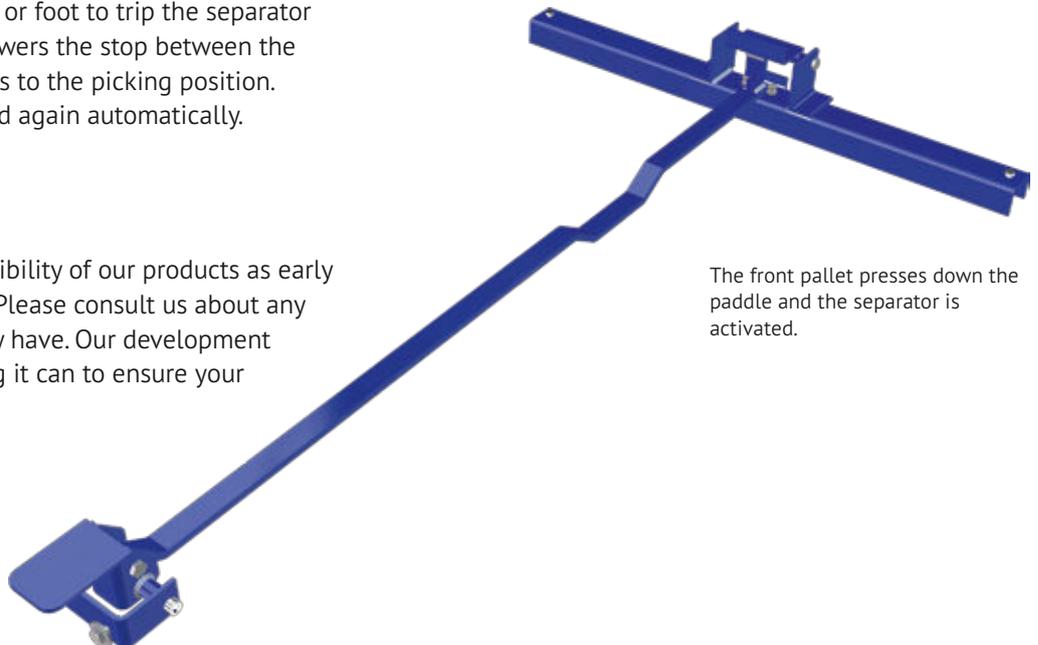
It makes no difference if you require an unloading element with full width or splitted rollers: the Euroroll "Flex-TV" separator can be installed anywhere. It ensures the greatest possible safety during removal of the conveyor goods – regardless of which equipment your employees use.



**Manual separator for picking**

The Euroroll manual separator is primarily designed for picking operation with special focus on safety. The approaching goods may not continue on to the picking position until the employees have removed the empty pallet from the roller track. If this has occurred, the employees can use their hand or foot to trip the separator at the end of the track. This lowers the stop between the rollers and the next pallet rolls to the picking position. The following pallet is stopped again automatically.

We at Euroroll ensure the flexibility of our products as early as in the development stage. Please consult us about any specific requirements you may have. Our development department will do everything it can to ensure your satisfaction.



The front pallet presses down the paddle and the separator is activated.

# Accessories



## Tiltable roller racks

Tiltable roller racks offer the benefit that the floor underneath the track can be cleaned – a requirement not only for the food and beverage industry. Whether on crossbeams or with their own supports – Euroroll will provide you with the tiltable version best suited to your requirements. On request, the tiltable lanes can be designed in such way, that the floor surface is free of any supports, enabling to drive in with a cleaning device.



Divided floor mounted tracks, which are designed for operation with pallet trucks, can be optionally equipped with a front tiltable unloading element. Standard integrated locking devices reliably lift the last 2.5 metres of track, enabling your employees to safely and thoroughly clean this area which is particularly susceptible to soiling.



## Tiltable tracks with gas springs

Make it easier for your employees to lift the roller track using the support of gas-pressured springs fitted under the track. The lane is not only easier to lift up and lower again; the procedure is also faster and more efficient. Primarily for routinely performed cleaning work, tiltable tracks with gas-pressured springs are an extremely ergonomic solution.

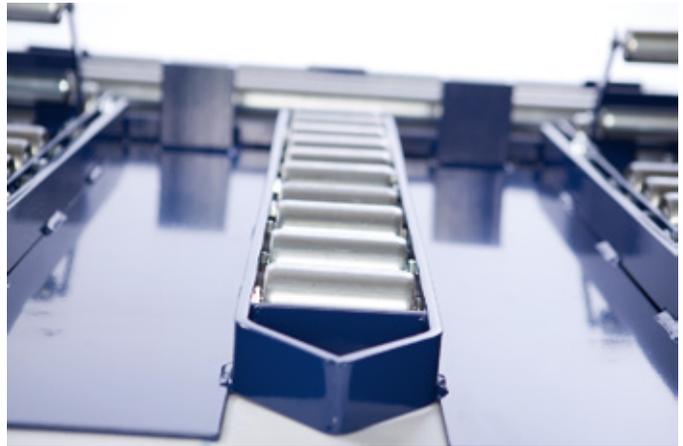


### Drive-in ramp for unloading elements

You would like for your employees to be able to remove the pallets from your pallet flow system even more conveniently? Then choose the Euroroll drive-in ramps, which are specially designed for the unloading elements at the end of the roller tracks. The pallet trucks can drive onto the ramp so that their forks are directly at the height of the pallets for removal. This makes it easier for you to lift the pallets from the roller track. That protects both the pallets and the roller track because there is no contact with the pallet truck or the roller track during removal.



Just as there are different versions of unloading elements, drive-in ramps are also available in various designs. The version which is right for you depends on which equipment you use for pallet removal. Depending on the design of your pallet truck, you will be provided with drive-in ramps for twin or triple track unloading elements.



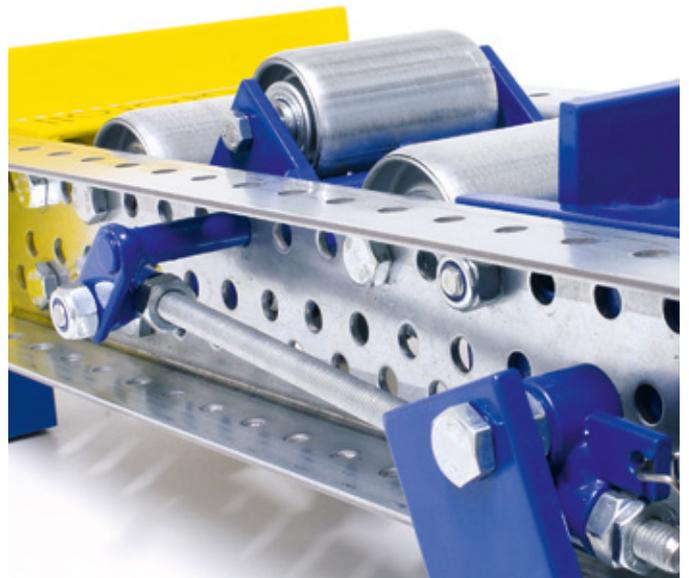
Euroroll drive-in ramps are also available in a reinforced version for "heavy-duty" usage. These are particularly suited for large loads and for warehouses with a high flow of goods. An additional back stop mounted on the drive-in ramp protects both the pallet truck and the roller track from damage.



# Accessories

## "Time-TV" time delay separator

Safety in the warehouse is Euroroll's top priority. We therefore have time-delayed triggers for the separators, abbreviated as Time-TV. The time delay can be adapted to the needs of your warehouse and changed at any time. The separator does not open until the time selected by you has lapsed and the next pallet rolls forward onto the offload position.

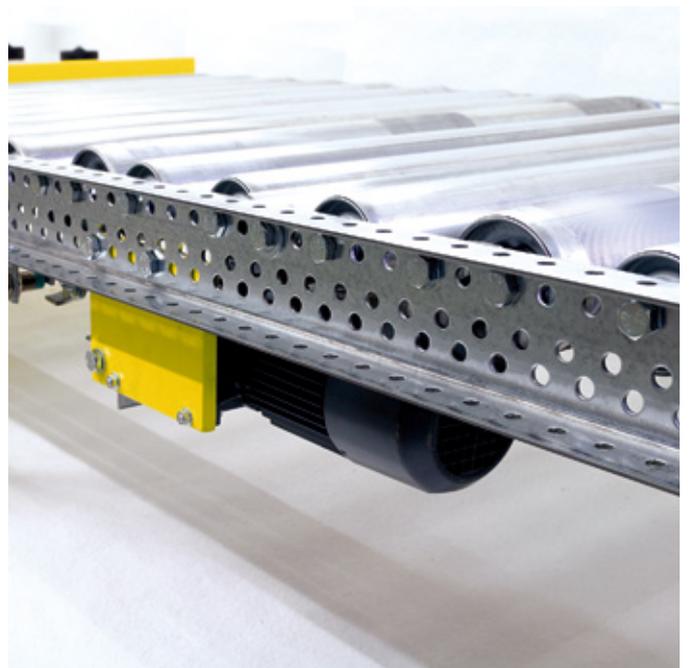


## Electrical and pneumatic separation

Particular requirements demand special solutions for your warehouse. With meanwhile four decades of experience, the Euroroll development department is prepared for this challenge. Thus, instead of the standard Flex-TV separator, an electrically controlled separator can also be used at the end of the roller track, if, for example:

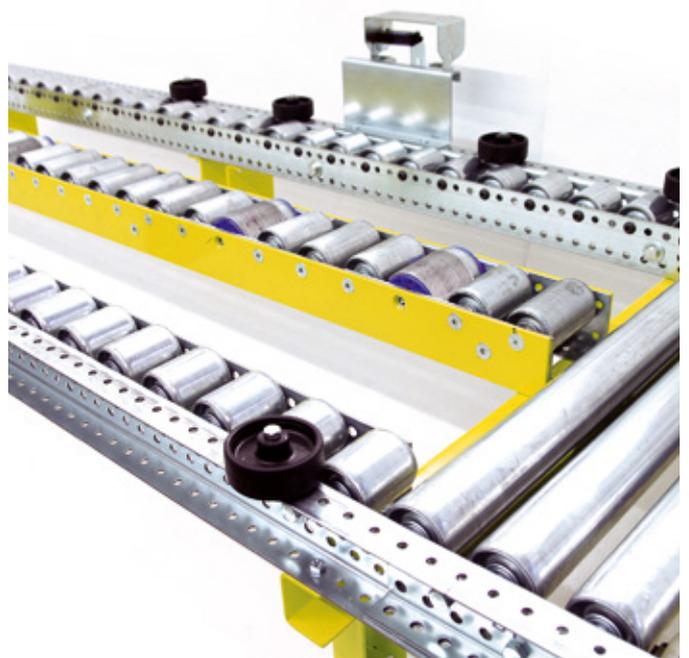
- The warehouse management system is set to selectively release or close individual lanes.
- You use very light pallets with a weight of less than 60 kg or
- You need to leave an area vacant, for example, for a fire-safety door.

The electric motor can alternatively be designed as a pneumatic cylinder so that it is not controlled electrically, but rather by compressed air.



## Lateral guides

Lateral guides primarily ensure that the pallets remain "on course", particularly with very long tracks or when steel and plastic pallets are used. A dynamic (rolling) lateral guide is generally the best solution for wooden and plastic pallets. We at Euroroll generally recommend a static lateral guide for steel pallets.





### Supports

Euroroll will provide the required support structure for roller tracks, when installed directly on the floor. Euroroll supports are available up to a height of around 2000 mm and are spaced around 1200 mm apart and equipped with cross reinforcements as needed. The standard Euroroll supports are coated in RAL 5010 (blue); the galvanised design is available on request.



### Spindle feet

The height-adjustable feet ideally compensate unevenness in the floor. Particularly for an automatic pallet feed, the transfer height from automation to gravity conveyor can be set precisely.



### Collision guard

Euroroll's solid collision guard, which consists of a welded frame and hot-rolled profiles, protects the roller track from damage due to the approach of forklifts, etc. The collision guard even softens the rough placement of pallets.



### Wheel-stop rails

Wheel-stop rails attached to the floor in front of the flow rack are used as a restriction for forklifts and other operating units. They primarily prevent damage to the rack.

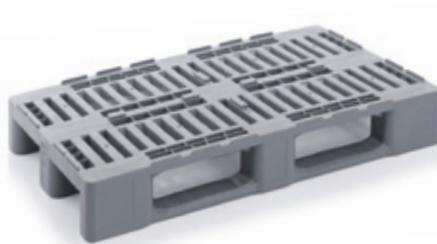


# Pallets, racks & material handling equipment

Numerous pallet types in various shapes and of different materials are suited for use in pallet flow systems. The most popular type is the wooden pallet. If required, pallet flow systems even transport various pallet types in a single channel; this assumes that the pallet feet or runners have a sufficiently large tread. Only this can guarantee that the pallets run smoothly on the roller track without jolts. Some of the suitable pallets include:



**Europallet**



**Hygiene pallet H1**



**Grid box**

If you would like to use special pallets in your pallet flow system, our test department will first determine whether or not your pallets are suited for roller tracks. This enables us to guarantee you 100% functionality, even before the system is built.

## Rack systems and Euroroll roller tracks – a strong team

Euroroll roller tracks are compatible with all racking systems. They can therefore be installed in both new and existing racking installations. We will be happy to work with you to find a solution which is optimally suited to your needs and your warehouse.

The way in which the roller tracks are fastened in your rack system primarily depends on the beam type installed. Clamp plates are an option for I and C beams; for box beams either beam connectors or clamp hooks can be used. If the roller tracks end on the floor, beams can only be positioned to a height of approx. 200mm over floor level. The rest of the lane will be mounted on Euroroll floor supports. These are available in various designs.



**Beam connector**



**Clamp hook**



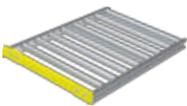
**Clamp plate**

### Adapted to your material handling equipment: Euroroll roller tracks

Euroroll will design the roller tracks in accordance with the material handling equipment you are using to load and unload pallets. In the following table, you can find what elements are suitable for the specified handling equipment.



### Operating units

Element input		Device	Element removal		
					
✓	✓	Device with tiltable mast	✓	✓	✓
	✓	Device without tiltable mast		✓	✓
		Electric powered pallet truck			✓
		Manual pallet truck			✓
✓		Device with tiltable roller conveyor			
✓		Device with roller conveyor, not tiltable			
✓	✓	Auto device with tilting telescopic forks	✓	✓	
	✓	Auto device without tilting telescopic forks		✓	

# Safety

Safety is a key issue at Euroroll. We offer you an integrated safety concept exactly coordinated with your needs and the protection of your employees and which, among other things, considers the standard BG, ISO, EN, and FEM guidelines. We can even provide this in writing; Euroroll has been ISO certified since 2007 and is audited at routine intervals.

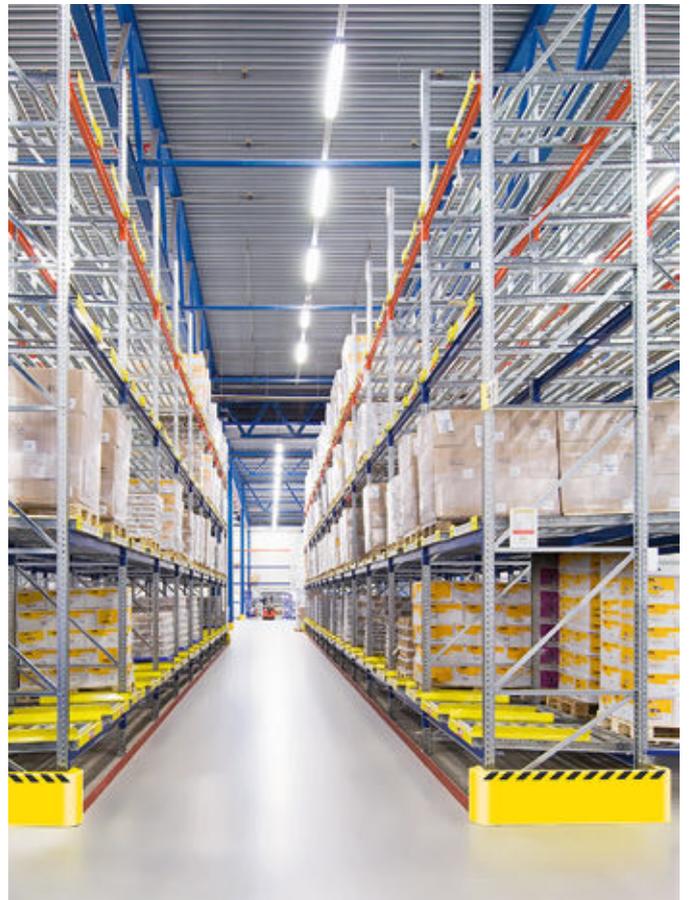
Safety at Euroroll starts in administration and development and continues – independently – in production and sales. We will gladly follow up your order with the annual inspections required for flow systems.

## **Always state of the art**

Our vast experience in the area of dynamic warehouse technology guarantees you a tried-and-tested state-of-the-art system which includes all of the required safety features. Already in the component design stage, we concentrate on reducing daily operating risks to a minimum. Our experience helps us once again here: We already know in advance where problems can occur.

## **Control is better**

Parts relevant to safety such as brake rollers, separators and end stops are designed with high mechanical margins. We also test for 100% functionality before every installation. We equip brake rollers with traceability and use a manufacturing or start date to determine their age.





### **Documentation and training**

The delivery of your dynamic storage products includes project-specific documentation. This includes the scope of delivery, detail and assembly drawings and a maintenance and operating manual. We can also assist you with the installation and commissioning of your system. We will train your employees as needed to ensure that they operate the system properly and can perform minor maintenance work themselves.



### **After-Sales Service – A lifetime of reliability and safety**

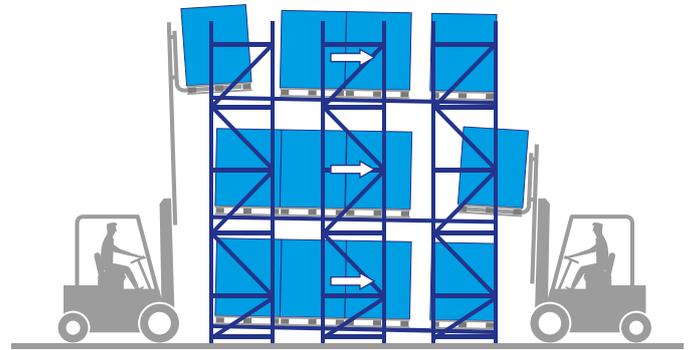
Euroroll pallet flow systems require a minimum amount of maintenance. Euroroll can send service parts on short notice - we have most of the parts in stock. The quick replacement of defective parts will protect your employees from dangerous situations without interrupting the operation of your flow system – for its entire service life.



# Designs

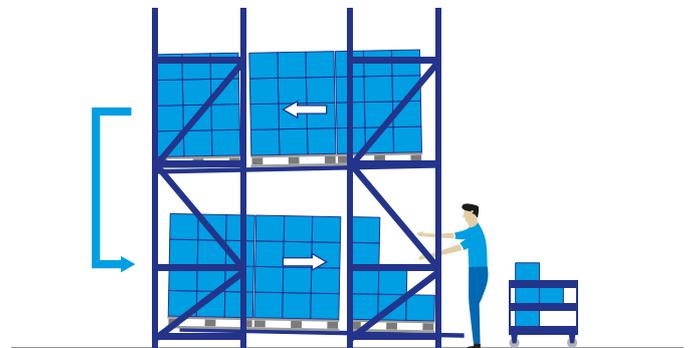
## Pallet flow warehouse at multiple levels

- The pallets are loaded and removed separately from one another, ensuring trouble-free and safe work.
- The pallets roll forward independently, making the goods constantly available.
- The goods flow in strict accordance with the FIFO principle.



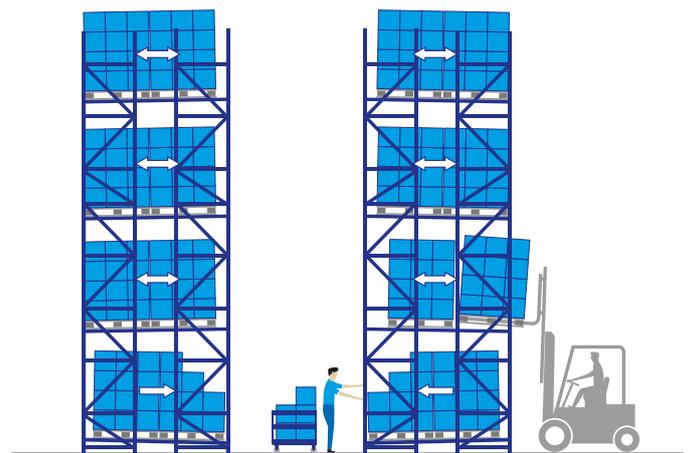
## Pallet flow warehouses with alternating lanes

- While the lower channel is ready for picking, the upper channel serves as a buffer store.
- The pallets are loaded and the goods picked on the same side of the flow system; on the opposite side, the upper level can be used for full pallet picking or replenishment of the pick lanes.
- The warehouse is loaded and the goods removed in strict accordance with the FIFO principle.



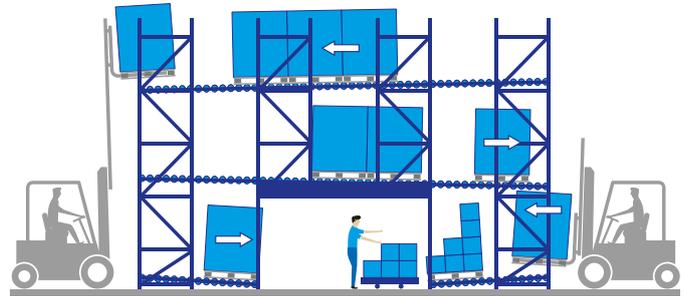
## Push back storage on multiple levels with two truck isles and a central picking isle.

- In the central isle, operators can focus on picking from pallets. In both lateral isles Pallets are buffered in a push-back system. Replenishment is also done from the buffer store.
- In the push-back system, pallets are pushed up against the slope. The system accepts the most diverse items and many references can be stored.
- There is a clear separation between forklift drivers and pickers.



### Flow Storage with alternating tracks and picking tunnel in the center

- Alternating roller tracks run over the picking tunnel, in line with the FIFO principle.
- The warehouse can be loaded with pallets from both sides without any disturbance to the employees in the picking tunnel. This increases the safety in the warehouse and the picking output.
- The picking tracks can be easily replenished from both sides.
- Full pallets are picked directly from the buffer.
- This design has the advantage of good surface and height utilisation.
- It is possible to store large quantities of goods.



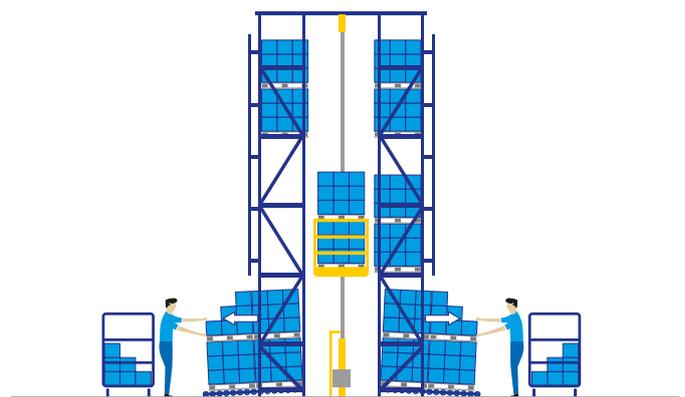
### Flow storage at various levels with picking forklifts

- Picking forklifts load the individual picking levels with the goods. The picking aisles are located in the centre.
- Several employees from the picking division can work at different levels at the same time.
- The design enables good use of space and the availability of many items.
- The separation of loading and removal enables trouble-free work.



### High bay racking with static storage at higher levels and picking isles at ground level

- High degree of automation
- Automated cranes load the individual picking tracks with the goods.
- Several employees from the picking division can work at the lower level at the same time.
- The design enables the availability of many items.
- Space utilisation and picking output are extremely high.



# Applications

## Installed worldwide: Dynamic Euroroll warehouse technology

Quality takes priority: Numerous companies from various industries have been working with Euroroll pallet flow systems since the 1980s. They are always glad to rely on Euroroll's dynamic warehouse technology for the most diverse purposes. And not just in Europe, but all over the world.

## Euroroll systems for industry

Euroroll has developed a large number of technically sophisticated industrial solutions. Rack blocks for automated guided vehicle systems (AGVs), for example, offer solutions for which the flow system can be fully automatically loaded with pallets. The same applies for pallet removal. Fire-protection panels can be installed and a fire-extinguishing system integrated in areas with special safety requirements.



*FTS loading and removal*

## Sophisticated solutions for all purposes

You need a roller track which is suited for all pallet types? Euroroll has the solution for you: Our universally designed tracks transport wooden, steel, and plastic pallets and Euro and CHEP pallets all in the same lane – both in longitudinal and crosswise format. And even in mixed operation if required. The solid ramps even permit the removal of pallets stored crosswise with a manual or powered pallet truck. The tracks can be designed in various colours to enable faster identification of the goods. This lets your employees recognise at a glance which pallets must be loaded on which trucks.



*Cross-transport shipping track*



### **The person at centre stage**

The ergonomics of the dynamic warehouse technology are a top priority at Euroroll. Because nothing is more important for the company's success than a satisfied and healthy team. For this reason, we make the work easier for your employees wherever possible. This improves performance and increases productivity. Euroroll products are also very robust. This prevents small defects from having major consequences.



*Picking roller tracks*

### **Length of floor roller tracks**

A rack is not always required. Roller tracks can be installed directly on the floor. Euroroll will produce you the supports required for this. These tracks can particularly be used in the shipping area for trip preparation or as unloading channels for high-rack warehouses.



*Length of floor roller track*



# Applications

## High quality and cost-consciousness = Euroroll

Special solutions, such as those for steel load carriers from the automotive industry, are a challenge and never a problem for the Euroroll development team. You can be sure that we will quickly implement your project – with the highest quality and always with an eye on the costs.



*Flow racks for steel load carriers*

## Euroroll shipping tracks – also suited for an automated environment

Euroroll roller tracks can be excellently integrated in an automated environment, in which shuttle cars, electric overhead conveyors, chain conveyors or similar equipment provide the pallets and a Warehouse Management System (WMS) controls the path of the pallets to the shipping tracks. The WMS adjusts the pallets to the trips of the dispatch trucks and sends them to the shipping tracks. Displays are posted over the tracks which indicate which track is loaded onto which truck. The chance of mix-ups when the trucks are loaded is ruled out by the stable Euroroll electric pallet truck removal with ramp.



*Shipping track with reinforced removal station*



### Your wishes are our motivation

Do you have special preferences, perhaps in the colouring or design of ramps and safety devices? We at Euroroll will attempt everything possible as long as safety is not compromised.



*Shuttle warehouse with inclined roller track*

### Easier picking with Euroroll

An additional variant, which Euroroll has already implemented for its customers, is the cross-transport of Euro-pallets beneath a shuttle rack. This enables goods to be picked onto the pallets.



*Cross-transport Euro-pallets*



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