

# LHD<sup>®</sup>

LOAD HANDLING DEVICES



## LHD Group main products



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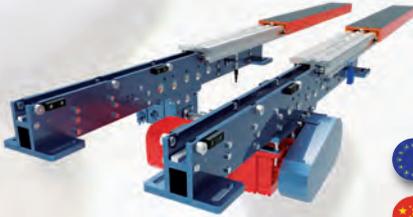
2020-PR-05



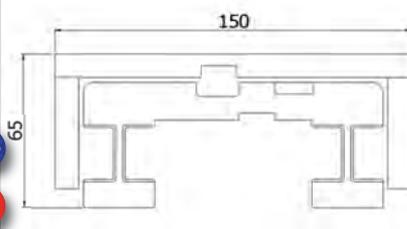


PALLET  
WAREHOUSES

ARES 65 W150



Technical details



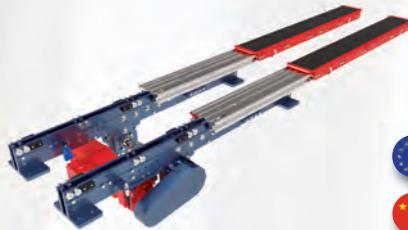
Description

The strength of the ARES 65 W150 is its load capacity of 400 Kg on each fork, with only 150 mm width of the upper slide. The standard version has a transmission system with racks and pinions. Just like every LHD telescopic fork, the ARES 65 W150 can be supplied in the monofork, pair or battery arrangement.

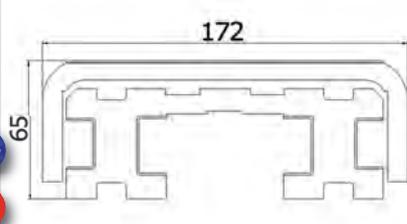
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 600 mm  | max. payload      | 600 kg             |
| max. length | 2000 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 650 mm  | max. speed        | 45 m/min           |
| max. stroke | 2100 mm |                   |                    |

PAPER AND  
STEEL COILS

ARES 65



Technical details



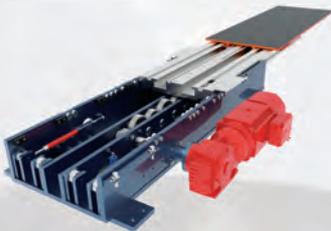
Description

Typical telescopic fork for automated warehouses, designed to move 800x1200 europallets. The upper slides are made of a single bent piece to increase the rigidity, and the ends are arrow-shaped to fit more easily under the pallet. As for the transmission, both chains and racks-and-pinions systems are available.

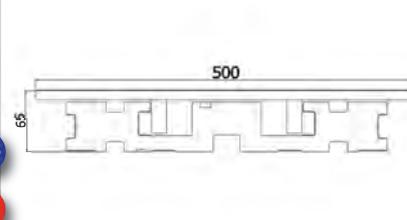
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 750 mm  | max. payload      | 1500 kg            |
| max. length | 2000 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 770 mm  | max. speed        | 45 m/min           |
| max. stroke | 2100 mm |                   |                    |

AUTOMOTIVE AND  
SPECIAL LOADS

ARES 65 K



Technical details



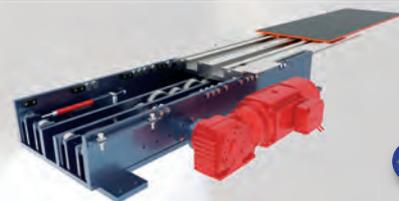
Description

The ARES 65 K is a particular wide-body telescopic monofork, which finds application where the load unit to move is else than a normal pallet (heavy boxes or closed pallets); in this case the load unit must be placed on special stands or L-profile to allow the fork to entry.

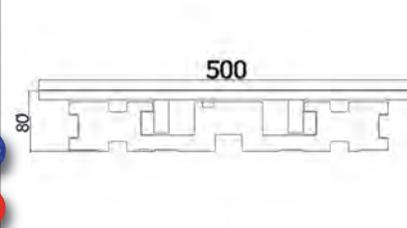
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1200 mm | max. payload      | 1500 kg            |
| max. length | 2000 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1300 mm | max. speed        | 45 m/min           |
| max. stroke | 2100 mm |                   |                    |

CARTON LOADERS  
AND MINLOADS

ARES 80 K



Technical details



Description

The ARES 80 K relies upon the same design as the 65 K, but with a middle slide thickness increased by 15 mm, which allows the handling of heavier loads (up to 2.000 Kg).

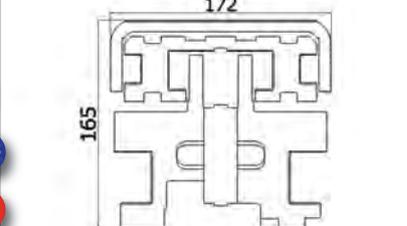
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1200 mm | max. payload      | 2000 kg            |
| max. length | 2000 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1300 mm | max. speed        | 45 m/min           |
| max. stroke | 2100 mm |                   |                    |

PUSH  
& PULL

ZEUS 165



Technical details



Description

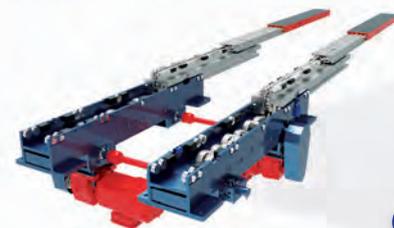
Typical double-depth telescopic fork for europallets. It's a single-engined fork, so the required space when operating is constant.

The upper slides are made of a single bent piece to increase the rigidity, and the ends are arrow-shaped to fit more easily under the pallet.

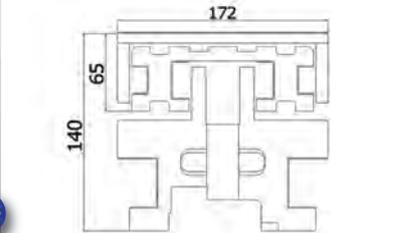
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1000 mm | max. payload      | 1200 kg            |
| max. length | 1500 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1900 mm | max. speed        | 45 m/min           |
| max. stroke | 3000 mm |                   |                    |

LIFTING  
UNITS

ZEUS 65-140



Technical details



Description

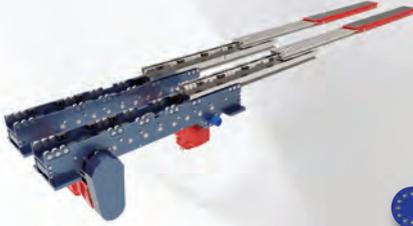
This is a double-engined, double-depth telescopic fork; in this model, each stroke is operated independently by an engine. Despite its small size, this fork can rely upon a remarkable strength and an outstanding size/ toughness ratio. It offers excellent performances in the work cycles, making the depth shift quicker.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1000 mm | max. payload      | 600 kg             |
| max. length | 1500 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1900 mm | max. speed        | 45 m/min           |
| max. stroke | 3000 mm |                   |                    |

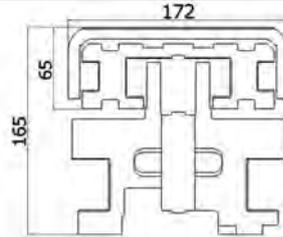
TRANSFER  
UNITS



ZEUS 65-165



Technical details



Description

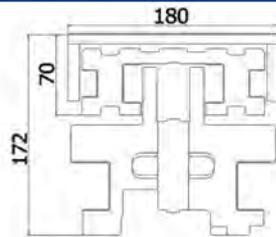
The ZEUS 65-165 has small size, high operating speed and small bending when picking up/laying down loads, with independently-operated engines. The upper slides are made of a single bent piece to increase the rigidity, and the ends are arrow-shaped to fit more easily under the pallet.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1000 mm | max. payload      | 1200 kg            |
| max. length | 1500 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1900 mm | max. speed        | 45 m/min           |
| max. stroke | 3000 mm |                   |                    |

ZEUS 70-172



Technical details

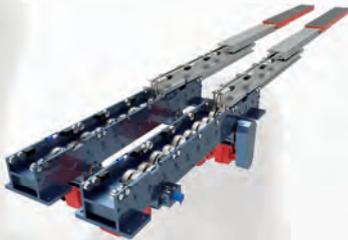


Description

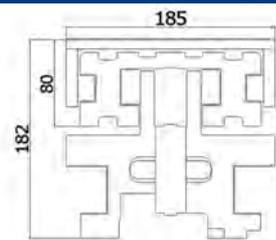
It's an enhanced version of the ZEUS 65-165. The 70-172 keeps all the peculiar features of the smaller sister, but with a higher load capacity. It's particularly fit for storage plants within bigger production facilities. Its shape allows attaining the highest moment of inertia of all telescopic forks currently on the market.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1000 mm | max. payload      | 1500 kg            |
| max. length | 1500 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1900 mm | max. speed        | 45 m/min           |
| max. stroke | 3000 mm |                   |                    |

ZEUS 80-182



Technical details



Description

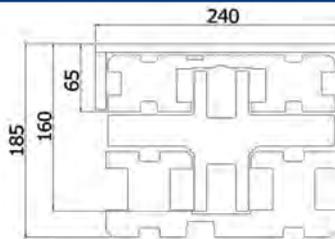
This is an even stronger version of the ZEUS 70-172. It keeps all the peculiar features of the twin-engined ZEUS series, but with an even higher carrying capacity (up to 2.000 Kg).

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1000 mm | max. payload      | 2000 kg            |
| max. length | 1500 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1900 mm | max. speed        | 45 m/min           |
| max. stroke | 3000 mm |                   |                    |

CRONOS 185



Technical details

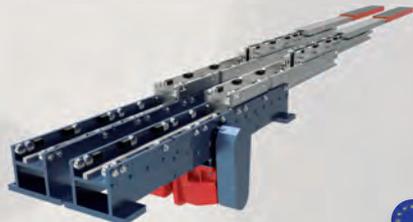


Description

Little sister of the more powerful CRONOS 248, the CRONOS 185 finds its application in the handling of pallets in triple depth. Simpler and easier than the 248, it perfectly fulfills the needs of those customer who need to move medium loads with long strokes for picking and laying.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1300 mm | max. payload      | 1000 kg            |
| max. length | 1600 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 3000 mm | max. speed        | 45 m/min           |
| max. stroke | 3700 mm |                   |                    |

CRONOS 248



Technical details



Description

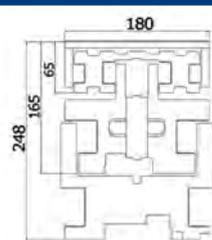
With its overall thickness of 248 mm, this equipment represents the solution to borderline cases in the sector of the linear handling. It finds application where a normal double-depth telescopic fork would be beyond the stroke limit, or where an even smaller bending, all other parameters being equal, is needed.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1300 mm | max. payload      | 1200 kg            |
| max. length | 1600 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 3000 mm | max. speed        | 45 m/min           |
| max. stroke | 3700 mm |                   |                    |

CRONOS 165-248



Technical details



Description

Same as a normal CRONOS 248, but with a twin drive (2 motors and 2 independent gear trains) allowing to operate the double and the triple depth separately, carrying out a double-depth stroke with only 165 mm thickness of ht moving elements.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1300 mm | max. payload      | 1200 kg            |
| max. length | 1600 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 3000 mm | max. speed        | 45 m/min           |
| max. stroke | 3700 mm |                   |                    |

PALLET WAREHOUSES

PAPER AND STEEL COILS

AUTOMOTIVE AND SPECIAL LOADS

CARTON LOADERS AND MINILoadS

PUSH & PULL

LIFTING UNITS

TRANSFER UNITS



PALLET  
WAREHOUSES

PAPER AND  
STEEL COILS

AUTOMOTIVE AND  
SPECIAL LOADS

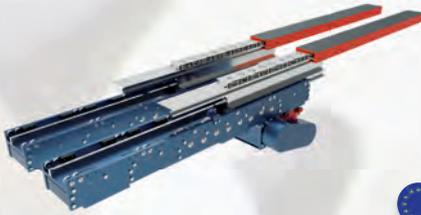
CARTON LOADERS  
AND MINILoadS

PUSH  
& PULL

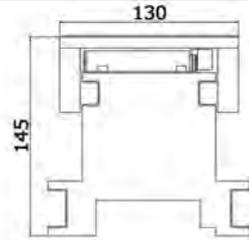
LIFTING  
UNITS

TRANSFER  
UNITS

### HEPHAESTUS



#### Technical details



#### Description

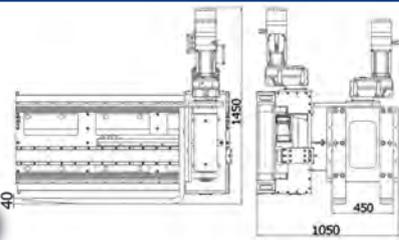
This machine can handle loads up to 1000 kg with a low deflection, despite its thickness of just 55 mm. The peculiar arrangement of its gear train allows to cover the middle slide completely, making the HEPHAESTUS particularly recommended for "dirty" working environments (e.g. sand molded casting).

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1000 mm | max. payload      | 1000 kg            |
| max. length | 1500 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1100 mm | max. speed        | 45 m/min           |
| max. stroke | 1600 mm |                   |                    |

### CERBERUS X1



#### Technical details



#### Description

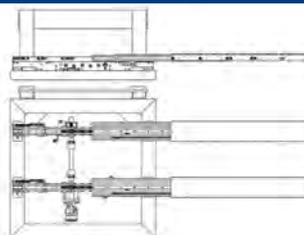
The CERBERUS X1 allows handling pallets with a load capacity up to 1.500 Kg. The rotation and translation speed is as fast as 30m/min. Thanks to this system, the pallets can be set down and picked up even rotated by 90° compared to the standard position on shelves. Both movements can be carried out simultaneously.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1700 mm | max. payload      | 1500 kg            |
| max. length | 2000 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1350 mm | max. speed        | 25 m/min           |
| max. stroke | 1650 mm |                   |                    |

### SPHINX



#### Technical details



#### Description

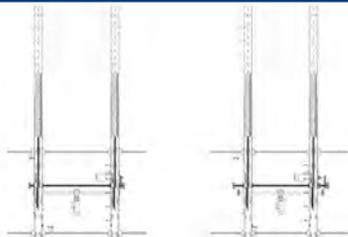
The SPHINX is a moving carriage, designed to be installed on the vertical mast of forklift trucks, allowing them to act as a stacker crane on wheels; this way, a forklift can pick up and lay down pallets laterally in a warehouse, making it possible to operate in narrower aisles.

|             |         |              |         |
|-------------|---------|--------------|---------|
| min. length | 1000 mm | max. payload | 1500 kg |
| max. length | 1500 mm |              |         |

### VARIAXIS



#### Technical details

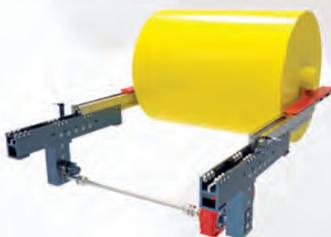


#### Description

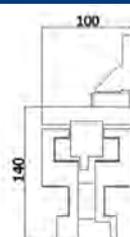
It's possible to handle different kinds of load units by installing the fork set on a VARIAXIS. It's a relatively simple system that makes the stocking operation more flexible. A motor operates a system of screws with recirculating balls and prismatic rails; it's possible to shift only one fork, or both of them symmetrically.

|                       |         |                       |          |
|-----------------------|---------|-----------------------|----------|
| max. adjustment range | 2000 mm | max. payload          | 2000 kg  |
| mobile forks          | 1 or 2  | max. adjustment speed | 10 m/min |

### ARES 140 SLV



#### Technical details



#### Description

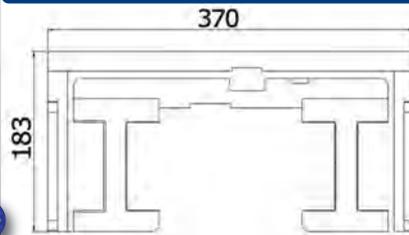
Smaller sister of the ATHENA 220 SLV, in this type of telescopic fork the high moment of inertia totally lies in its arm thickness rather than in its width. It's designed to pass through particularly narrow openings, although it can handle notably heavy loads, such as big metal or paper coils, with low bending and long life cycle.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 900 mm  | max. payload      | 1500 kg            |
| max. length | 1400 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1000 mm | max. speed        | 45 m/min           |
| max. stroke | 1500 mm |                   |                    |

### ATHENA 183



#### Technical details



#### Description

This model of the heavy-duty ATHENA series is particularly suitable for handling heavy loads with long strokes and low bending. In its version with inclined slides is expressly designed to handle big size coils.

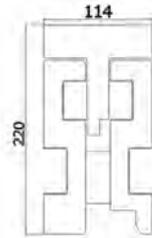
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1500 mm | max. payload      | 5000 kg            |
| max. length | 3000 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1600 mm | max. speed        | 45 m/min           |
| max. stroke | 3200 mm |                   |                    |



ATHENA 220 SLV



Technical details



Description

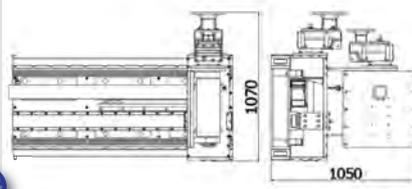
Bigger sister of the ARES 140 SLV, in this type of telescopic fork the high moment of inertia totally lies in its arm thickness rather than in its width. It's designed to pass through particularly narrow openings, although it can handle notably heavy loads, such as big metal or paper coils, with low bending and long life cycle.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1300 mm | max. payload      | 7000 kg            |
| max. length | 2900 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1400 mm | max. speed        | 45 m/min           |
| max. stroke | 3000 mm |                   |                    |

CERBERUS X2



Technical details

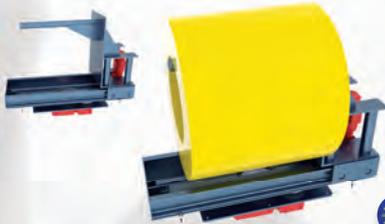


Description

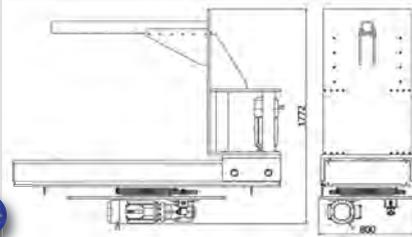
The CERBERUS X2 is designed to handle coils, up to 1.500 Kg heavy. The rotation and translation speed is as fast as 30m/min. Thanks to this system, the coils can be set down and picked up even rotated by 90° compared to the standard position on shelves. Both movements can be carried out simultaneously.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1700 mm | max. payload      | 1500 kg            |
| max. length | 2000 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1350 mm | max. speed        | 25 m/min           |
| max. stroke | 1650 mm |                   |                    |

CERBERUS X3



Technical details

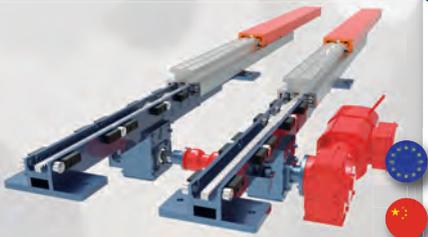


Description

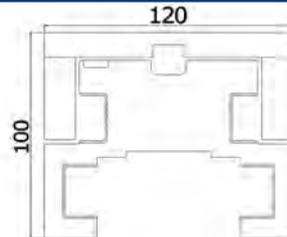
The CERBERUS X3 is a single-sided sideshift suitable for picking up pallets or coils on all sides. It is equipped with a rotary table for a 360° storage. Its carrying capacity is as high as 2.500 Kg.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1600 mm | max. payload      | 2500 kg            |
| max. length | 2300 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1100 mm | max. speed        | 25 m/min           |
| max. stroke | 1800 mm |                   |                    |

ARES 100



Technical details



Description

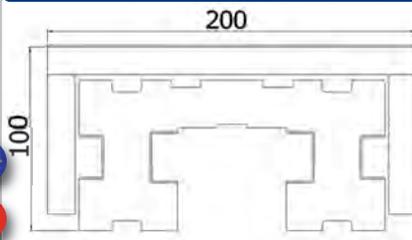
It's a very versatile and useful telescopic fork, entirely operated by racks and pinions, to pass through narrower openings other forks don't fit in. Although its limited thickness, the ARES 100 benefits from an outstanding carrying capacity resulting in a high moment of inertia, a small bending and a high speed.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 900 mm  | max. payload      | 600 kg             |
| max. length | 1900 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1000 mm | max. speed        | 45 m/min           |
| max. stroke | 2000 mm |                   |                    |

ATHENA 100



Technical details



Description

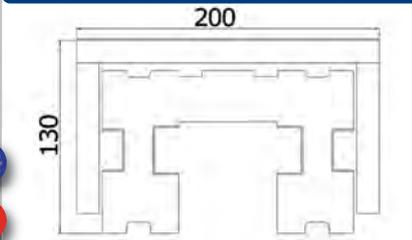
This is the smaller product of the ATHENA heavy series. Its strong structure, allows remarkable lengths and strokes. Its ultimate application field is the automotive industry; it's also suitable for the sectors of wood (panels), paper (rolls) and steel (coils). It's available both with racks-and-pinions and with chain transmission.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 900 mm  | max. payload      | 2000 kg            |
| max. length | 2200 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 950 mm  | max. speed        | 45 m/min           |
| max. stroke | 2300 mm |                   |                    |

ATHENA 130



Technical details



Description

Intermediate fork of the ATHENA series, it's a versatile and safe device equipment, with a remarkably small bending. It's the most used fork of this series, because despite its toughness it preserves good operating speed and working paces. It's available both with racks and pinions and with chains.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1100 mm | max. payload      | 3000 kg            |
| max. length | 2500 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1200 mm | max. speed        | 45 m/min           |
| max. stroke | 2600 mm |                   |                    |

PALLET WAREHOUSES

PAPER AND STEEL COILS

AUTOMOTIVE AND SPECIAL LOADS

CARTON LOADERS AND MINILOADS

PUSH & PULL

LIFTING UNITS

TRANSFER UNITS

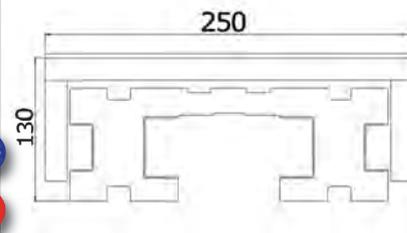


PALLET  
WAREHOUSES

### ATHENA 130 W250



#### Technical details



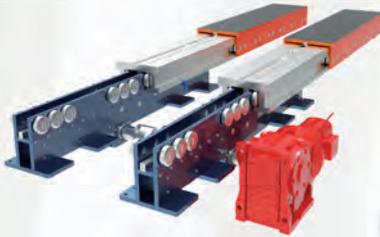
#### Description

This ATHENA for special applications allows handling heavy loads with long strokes and small bending. Not suitable for high speeds and accelerations, it works at its best where toughness, repeatability and fatigue stress are required. As for the transmission, it's available both with racks and pinions and with chains.

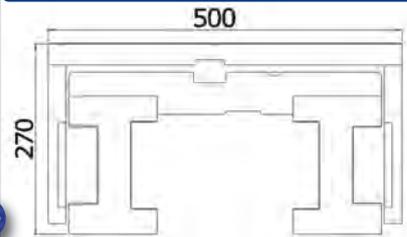
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1100 mm | max. payload      | 2500 kg            |
| max. length | 2500 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1200 mm | max. speed        | 45 m/min           |
| max. stroke | 2600 mm |                   |                    |

PAPER AND  
STEEL COILS

### ATHENA 270



#### Technical details



#### Description

It's a very strong, tough and performing telescopic fork. Thanks to its tough structure, the ATHENA 270 has a very small bending, even when carrying heavy loads. It's particularly suitable for the handling of car bodies and chassis within the automotive sector.

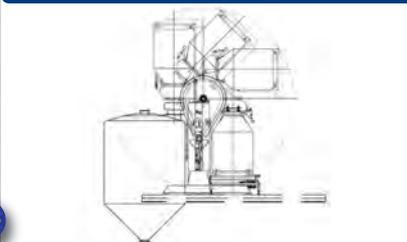
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1300 mm | max. payload      | 20000 kg           |
| max. length | 2900 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1400 mm | max. speed        | 45 m/min           |
| max. stroke | 3000 mm |                   |                    |

AUTOMOTIVE AND  
SPECIAL LOADS

### GOLIATH



#### Technical details



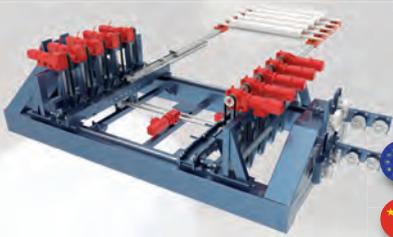
#### Description

Our GOLIATH, also known by its nickname Tipper, is indeed designed to tip over, by means of its pivoting framework, big hoppers in plants for chemical or food industry, to pour the contents into chemical reactors, autoclaves and such appliances.

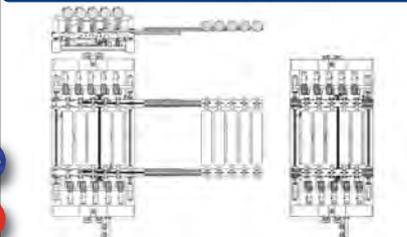
|                                    |         |                |         |
|------------------------------------|---------|----------------|---------|
| minimum hopper height above ground | 1000 mm | tippling angle | 180°    |
| maximum hopper height above ground | 1700 mm | max. payload   | 1600 kg |

CARTON LOADERS  
AND MINILOADS

### HERMES



#### Technical details



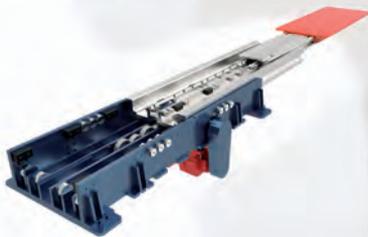
#### Description

The HERMES, operating jointly with telescopic forks for special loads, allows the operator to cherry-pick the desired items from a multiple storage, with an on-board selection system that lifts the items to keep while the telescopic forks put back down the remaining units. Also available for miniload boxes.

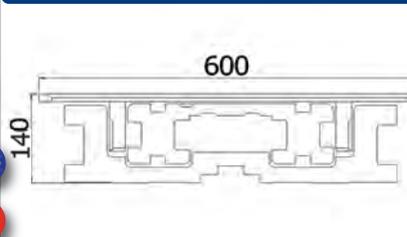
|                      |         |                   |                      |
|----------------------|---------|-------------------|----------------------|
| load units q.ty      | up to 5 | max. payload      | 1000 kg              |
| max. vertical stroke | 450 mm  | max. acceleration | 0,5 m/s <sup>2</sup> |
|                      |         | max. speed        | 10 m/min             |

PUSH  
& PULL

### CYCLOPS



#### Technical details



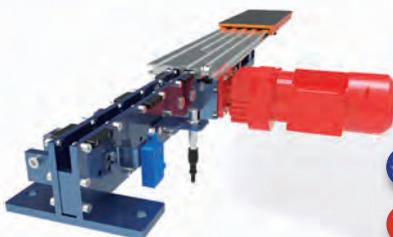
#### Description

The strong points of this monofork are its high moment of inertia and its relatively small size. With only 140 mm thickness, it can pick up a 2000 Kg load in double depth alone, despite the small bending and the high work pace it can reach. It's very useful for all those tasks where there's no room for a typical pair of forks.

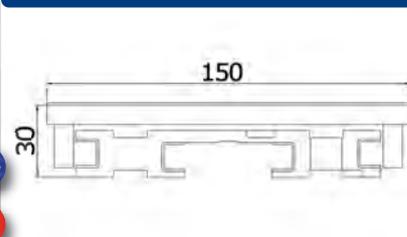
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1300 mm | max. payload      | 2000 kg            |
| max. length | 2000 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 2650 mm | max. speed        | 45 m/min           |
| max. stroke | 3900 mm |                   |                    |

LIFTING  
UNITS

### ARES 30



#### Technical details



#### Description

The ARES 30 fork is designed to handle loads with limited weight, especially where a good size/load ratio is required. Chains and pulleys provide the movement of the top element. This light series of telescopic fork achieves remarkable performances as for top speed and acceleration.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 600 mm  | max. payload      | 30 kg              |
| max. length | 900 mm  | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 700 mm  | max. speed        | 45 m/min           |
| max. stroke | 1000 mm |                   |                    |

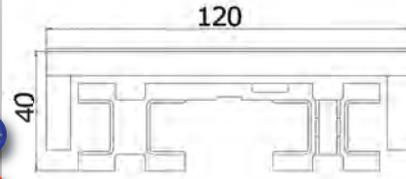
TRANSFER  
UNITS



ARES 40 W120



Technical details

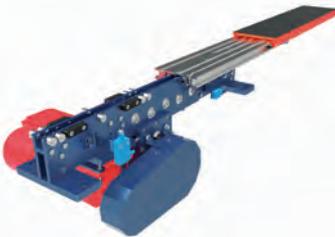


Description

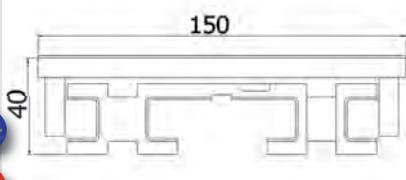
The ARES 40 W120 fork is designed to handle loads with limited weight, especially where a good size/load ratio is required. Chains and pulleys provide the movement of the top element. This light series of telescopic fork achieves remarkable performances as for top speed and acceleration.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 650 mm  | max. payload      | 80 kg              |
| max. length | 1450 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 750 mm  | max. speed        | 45 m/min           |
| max. stroke | 1550 mm |                   |                    |

ARES 40 W150



Technical details

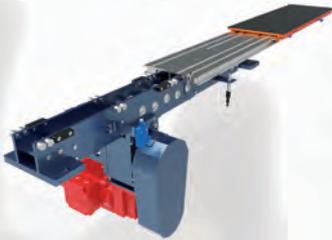


Description

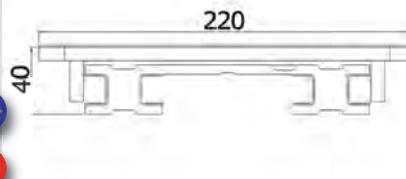
The ARES 40 W150 fork is designed to handle loads with limited weight, especially where a good size/load ratio is required. Chains and pulleys provide the movement of the top element. This light series of telescopic fork achieves remarkable performances as for top speed and acceleration.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 650 mm  | max. payload      | 100 kg             |
| max. length | 1450 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 750 mm  | max. speed        | 45 m/min           |
| max. stroke | 1550 mm |                   |                    |

ARES 40 W220



Technical details

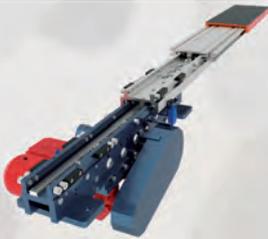


Description

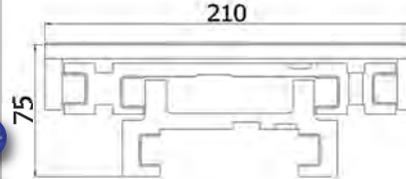
It's the most important fork within the ARES miniload series, meant for unusual, bulky and heavy loads. It's driven through a chains/gears compound, to reach remarkable top speeds and accelerations. The wider top plate (with grip pad) allows carrying the load safely and firmly, in high-performances mini-load plants.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 650 mm  | max. payload      | 100 kg             |
| max. length | 1450 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 750 mm  | max. speed        | 45 m/min           |
| max. stroke | 1550 mm |                   |                    |

ZEUS 75



Technical details

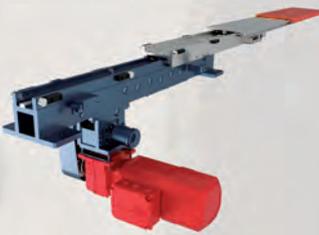


Description

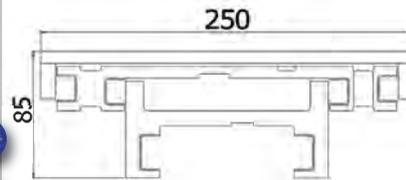
Being the double-depth version of the ARES 40, the ZEUS 75 is fit for those applications where a small space of the slides is required. The steel/aluminium fixed body reduces the overall weight. The ZEUS 75 is recommended as single fork with a larger plate on top, to handle small carton or plastic boxes.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 650 mm  | max. payload      | 100 kg             |
| max. length | 1200 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1300 mm | max. speed        | 45 m/min           |
| max. stroke | 2400 mm |                   |                    |

ZEUS 85



Technical details



Description

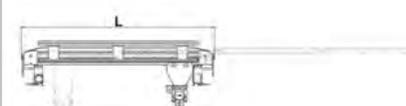
Being the thicker version of the ZEUS 75, the ZEUS 85 is fit for those applications where a small space of the slides is required. The steel/aluminium fixed body reduces the overall weight. The ZEUS 85 is recommended as single fork with a larger plate on top, to handle small carton or plastic boxes.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 650 mm  | max. payload      | 150 kg             |
| max. length | 1200 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1300 mm | max. speed        | 45 m/min           |
| max. stroke | 2400 mm |                   |                    |

PHOEBUS X1



Technical details



Description

Designed for backing up the telescopic forks, the side belt conveyor allows moving the loads onboard simultaneously. The fork set can pick up the load from the shelf, and then the PHOEBUS can lay it down in the unloading bay with no need of telescopic stroke. The X1 version has 1 pair of side belts (for single depth).

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 420 mm  | max. payload      | 50 kg              |
| max. length | 1250 mm | max. acceleration | 1 m/s <sup>2</sup> |
|             |         | max. speed        | 45 m/min           |

PALLET WAREHOUSES

PAPER AND STEEL COILS

AUTOMOTIVE AND SPECIAL LOADS

CARTON LOADERS AND MINILoadS

PUSH & PULL

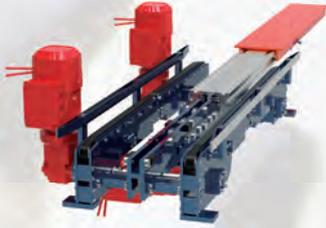
LIFTING UNITS

TRANSFER UNITS

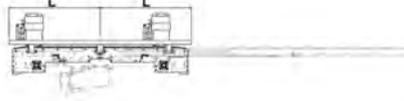


PALLET  
WAREHOUSES

### PHOEBUS X2



#### Technical details



#### Description

Designed for backing up the telescopic forks, the side belt conveyor allows moving the loads onboard simultaneously. The fork set can pick up the load from the shelf, and then the PHOEBUS can lay it down in the unloading bay with no need of telescopic stroke. The X2 version has 2 pairs of side belts (for double depth).

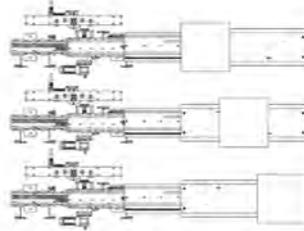
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 420 mm  | max. payload      | 2x50 kg            |
| max. length | 1250 mm | max. acceleration | 1 m/s <sup>2</sup> |
|             |         | max. speed        | 45 m/min           |

PAPER AND  
STEEL COILS

### MEDUSA



#### Technical details



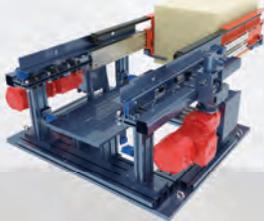
#### Description

The MEDUSA is essentially a double-depth telescopic fork (usually in a monofork arrangement) equipped with a further moving plate that can shift along the top slide, regardless the position of the fork, allowing to change the position of a load unit that sits on the upper slide according to customer needs, with no need of side belts.

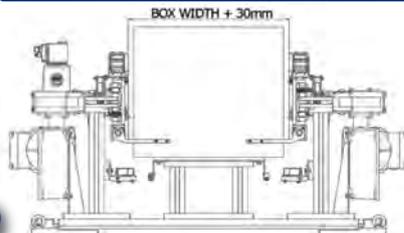
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 650 mm  | max. payload      | 100 kg             |
| max. length | 1200 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1300 mm | max. speed        | 45 m/min           |
| max. stroke | 2400 mm |                   |                    |

AUTOMOTIVE AND  
SPECIAL LOADS

### ARACHNE X4



#### Technical details



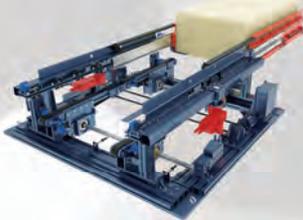
#### Description

The ARACHNE X4 can carry out the handling of one 50 Kg heavy plastic box (or carton) about as big as 600x400 mm in single depth; in the picking phase, two telescopic arms reach the load on the shelf and, by means of small pivoting fingers, drag it onboard the shuttle. Its light structure allows high work speeds.

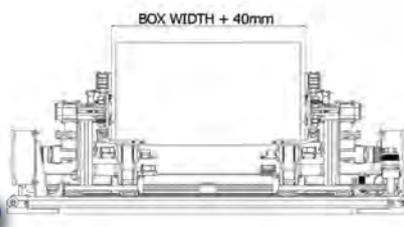
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 750 mm  | max. payload      | 50 kg              |
| max. length | 1200 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 850 mm  | max. speed        | 45 m/min           |
| max. stroke | 1300 mm |                   |                    |

CARTON LOADERS  
AND MINLOADS

### ARACHNE X6



#### Technical details



#### Description

The ARACHNE X6 can carry out the handling of two 50 Kg heavy plastic boxes (or cartons) about as big as 600x400 mm in double depth; in the picking phase, two telescopic arms reach the load on the shelf and, by means of small pivoting fingers, drag it onboard the shuttle. Its light structure allows high work speeds.

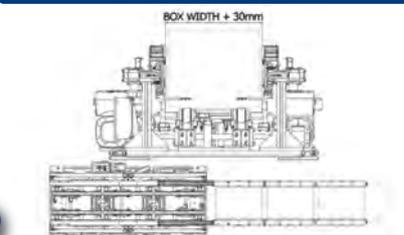
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 800 mm  | max. payload      | 2x50 kg            |
| max. length | 1550 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 900 mm  | max. speed        | 45 m/min           |
| max. stroke | 1650 mm |                   |                    |

PUSH  
& PULL

### ARACHNE X8



#### Technical details



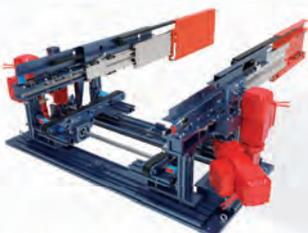
#### Description

The ARACHNE X8 can carry out the handling of three 50 Kg heavy plastic boxes (or cartons) about as big as 600x400 mm in triple depth; in the picking phase, two telescopic arms reach the load on the shelf and, by means of small pivoting fingers, drag it onboard the shuttle. Its light structure allows high work speeds.

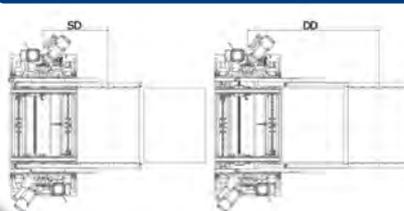
|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 1800 mm | max. payload      | 3x50 kg            |
| max. length | 2600 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1900 mm | max. speed        | 45 m/min           |
| max. stroke | 2700 mm |                   |                    |

LIFTING  
UNITS

### ARACHNE XX4



#### Technical details



#### Description

The ARACHNE XX4 can carry out the handling of one 50 Kg heavy plastic box (or carton) about as big as 600x400 mm in double depth; in the picking phase, two telescopic arms reach the load on the shelf and, by means of small pivoting fingers, drag it onboard the shuttle. Its light structure allows high work speeds.

|             |         |                   |                    |
|-------------|---------|-------------------|--------------------|
| min. length | 750 mm  | max. payload      | 50 kg              |
| max. length | 1000 mm | max. acceleration | 1 m/s <sup>2</sup> |
| min. stroke | 1400 mm | max. speed        | 45 m/min           |
| max. stroke | 2000 mm |                   |                    |

TRANSFER  
UNITS



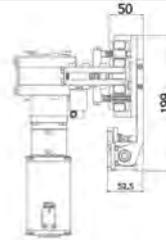
### ARACHNE X6C



**PATENTED**



#### Technical details



#### Description

It's a particular version of the ARACHNE X6, whose dragging fingers are designed to be powered by batteries or capacitors, which makes it suitable for small battery-powered shuttles; the cable carrier is no longer needed, which allows to reduce the required vertical space.

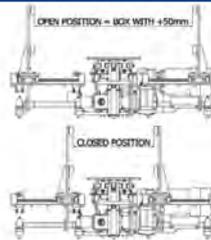
|                    |         |                          |                    |
|--------------------|---------|--------------------------|--------------------|
| <b>min. length</b> | 1200 mm | <b>max. payload</b>      | 2x50 kg            |
| <b>max. length</b> | 1550 mm | <b>max. acceleration</b> | 1 m/s <sup>2</sup> |
| <b>min. stroke</b> | 1300 mm | <b>max. speed</b>        | 45 m/min           |
| <b>max. stroke</b> | 1650 mm |                          |                    |

PALLET WAREHOUSES

### GRYPHON



#### Technical details



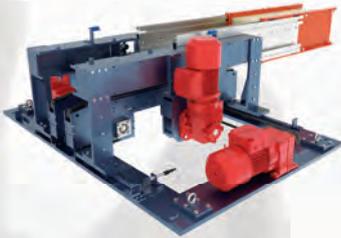
#### Description

Operating jointly with telescopic forks for miniload (usually monoforks), the GRYPHON can help to keep load units aligned and stable in the moving phases, especially in case of light but voluminous carton boxes, preventing misalignments on the shelves that could result in collisions.

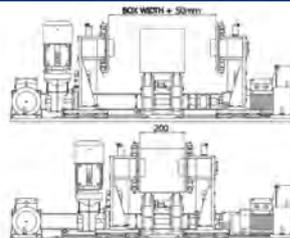
|                    |         |                   |         |
|--------------------|---------|-------------------|---------|
| <b>max. length</b> | 1000 mm | <b>max. speed</b> | 2 m/min |
|--------------------|---------|-------------------|---------|

PAPER AND STEEL COILS

### KARKINOS



#### Technical details



#### Description

The KARKINOS is the best solution for handling plastic boxes or cartons in single depth, with high speed and reliability. It doesn't require much maintenance and it's easy to operate. With no mobile dragging "fingers", it can handle the load in a very simple way through a clamping movement.

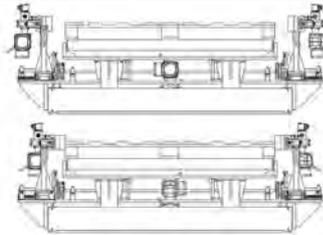
|                    |         |                          |                    |
|--------------------|---------|--------------------------|--------------------|
| <b>min. length</b> | 1200 mm | <b>max. payload</b>      | 300 kg             |
| <b>max. length</b> | 1550 mm | <b>max. acceleration</b> | 1 m/s <sup>2</sup> |
| <b>min. stroke</b> | 1250 mm | <b>max. speed</b>        | 45 m/min           |
| <b>max. stroke</b> | 1600 mm |                          |                    |

AUTOMOTIVE AND SPECIAL LOADS

### KARKINOS R



#### Technical details



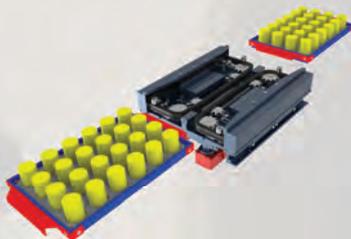
#### Description

The KARKINOS R allows handling pallets or trays in single depth along an idle roller conveyor, with high speed and reliability. It's easy to operate and it doesn't require much maintenance. With no mobile dragging "fingers", it can handle the load in a very simple way.

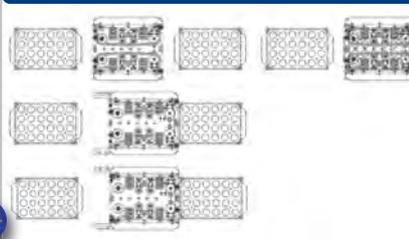
|                    |         |                                       |                    |
|--------------------|---------|---------------------------------------|--------------------|
| <b>max. length</b> | 2500 mm | <b>max. payload in push/pull mode</b> | 1300 kg            |
| <b>max. stroke</b> | 1450 mm | <b>max. acceleration</b>              | 1 m/s <sup>2</sup> |
|                    |         | <b>max. speed</b>                     | 45 m/min           |

CARTON LOADERS AND MINILoadS

### KHARON



#### Technical details



#### Description

This equipment carries out its operation by means of two cams ("fingers") moving along one or two chain loops that enable the picking. The KHARON allows picking up and laying down in automated warehouses so-called "trays", through appropriately shaped edges on both sides of these containers.

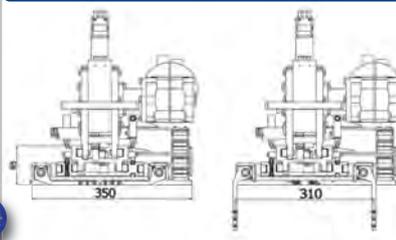
|                    |         |                          |                    |
|--------------------|---------|--------------------------|--------------------|
| <b>min. length</b> | 785 mm  | <b>max. payload</b>      | 100 kg             |
| <b>max. length</b> | 1385 mm | <b>max. acceleration</b> | 1 m/s <sup>2</sup> |
| <b>min. stroke</b> | 865 mm  | <b>max. speed</b>        | 45 m/min           |
| <b>max. stroke</b> | 1465 mm |                          |                    |

LIFTING UNITS

### ARACHNE Z4



#### Technical details



#### Description

The ARACHNE Z4 consists of a telescopic monofork operating upside down, whose last element includes small pivoting fingers, designed to drag light loads, such as carton or plastic boxes, on idle roller conveyors or similar surfaces, in a push/pull operation. With its light structure, it can attain remarkable work speeds.

|                    |         |                          |                    |
|--------------------|---------|--------------------------|--------------------|
| <b>min. length</b> | 850 mm  | <b>max. payload</b>      | 50 kg              |
| <b>max. length</b> | 1000 mm | <b>max. acceleration</b> | 1 m/s <sup>2</sup> |
| <b>min. stroke</b> | 1450 mm | <b>max. speed</b>        | 45 m/min           |
| <b>max. stroke</b> | 2000 mm |                          |                    |

TRANSFER UNITS

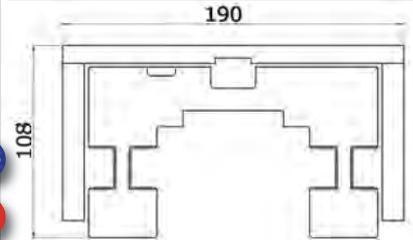


PALLET  
WAREHOUSES

### PEGASUS



#### Technical details



#### Description

When it comes to push/pull the load, PEGASUS is the right solution. It's a single-depth telescopic fork with internal double gear train transmission, to handle up to 4.000 Kg in push/pull mode. Just like normal telescopic forks, it can also be used to lift the load, the capacity depending on the thickness.

|             |         |                                |                    |
|-------------|---------|--------------------------------|--------------------|
| min. length | 1000 mm | max. payload in push/pull mode | 4000 kg            |
| max. length | 2600 mm | max. acceleration              | 1 m/s <sup>2</sup> |
| min. stroke | 1100 mm | max. speed                     | 45 m/min           |
| max. stroke | 2700 mm |                                |                    |

PAPER AND  
STEEL COILS

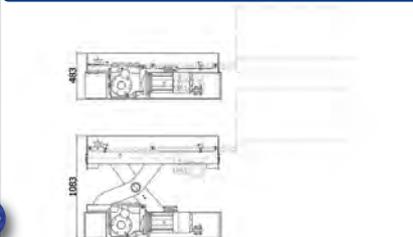
### TITAN



**PATENTED**



#### Technical details



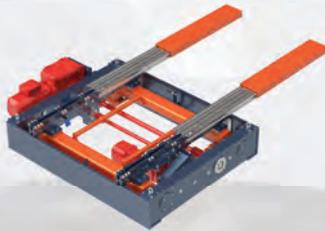
#### Description

The TITAN is a new concept of scissor lift: all of the now-existing machines of this kind need the centre of gravity of the load to fall within their footprint. Conversely, this remarkably robust and sturdy equipment has been specifically designed to lift heavy loads whose centre of gravity is located outside the footprint of the device.

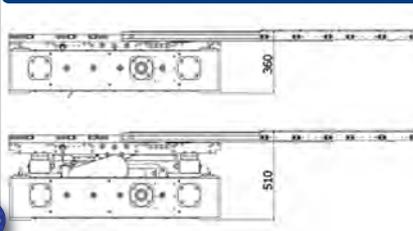
|                         |         |                           |                 |
|-------------------------|---------|---------------------------|-----------------|
| maximum vertical stroke | 1000 mm | max. payload lifting time | 2000 kg<br>10 s |
|-------------------------|---------|---------------------------|-----------------|

AUTOMOTIVE AND  
SPECIAL LOADS

### ATLAS X1



#### Technical details



#### Description

To ensure efficiency, an accurate, reliable, maintenance-free and powerful system is needed. Hence, our Lift is entirely gear-driven - unlike our competitors' ones, relying on chains - with a single-body chassis and a lifting movement carried out through eccentric cams.

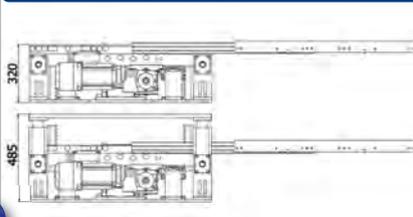
|                         |        |                           |                |
|-------------------------|--------|---------------------------|----------------|
| minimum vertical stroke | 60 mm  | max. payload lifting time | 1000 kg<br>5 s |
| maximum vertical stroke | 150 mm |                           |                |

CARTON LOADERS  
AND MINLOADS

### ATLAS X2



#### Technical details



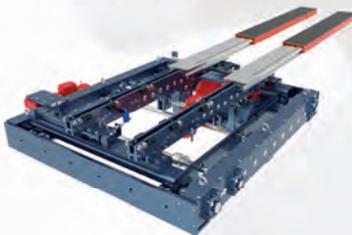
#### Description

To ensure efficiency, an accurate, reliable, maintenance-free and powerful system is needed. Hence, our Lift is entirely gear-driven - unlike our competitors' ones, relying on chains - with a single-body chassis and a lifting movement carried out through gears and racks.

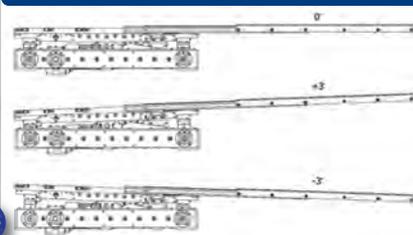
|                         |        |                           |                 |
|-------------------------|--------|---------------------------|-----------------|
| minimum vertical stroke | 60 mm  | max. payload lifting time | 2000 kg<br>10 s |
| maximum vertical stroke | 180 mm |                           |                 |

PUSH  
& PULL

### ATLAS X3



#### Technical details



#### Description

This specific version of the ATLAS Lift allows adding a tilting movement by -3° or +3°, useful in some applications with gravity ramps, such as gravity flow racking.

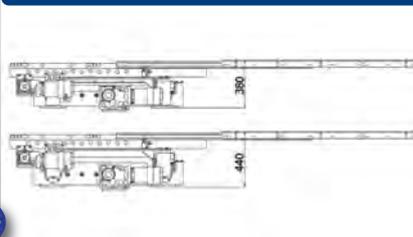
|                       |        |                           |                 |
|-----------------------|--------|---------------------------|-----------------|
| maximum tilting angle | +/- 3° | max. payload lifting time | 1200 kg<br>10 s |
|-----------------------|--------|---------------------------|-----------------|

LIFTING  
UNITS

### GEMINI X1



#### Technical details



#### Description

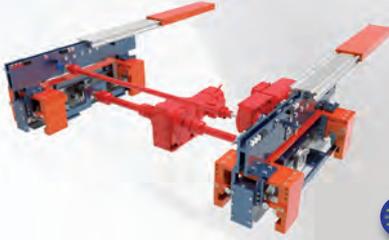
It's a narrow-body version of our ATLAS Lift, meant to operate with telescopic monoforks, and driven through eccentric cams.

|                         |        |                           |               |
|-------------------------|--------|---------------------------|---------------|
| minimum vertical stroke | 60 mm  | max. payload lifting time | 750 kg<br>6 s |
| maximum vertical stroke | 100 mm |                           |               |

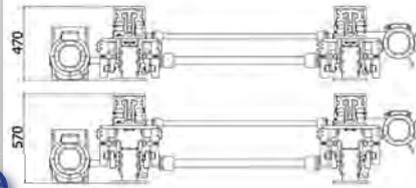
TRANSFER  
UNITS



### GEMINI X2



#### Technical details



#### Description

It's simply the twin-body version of our GEMINI X1 Lift, meant to operate with couples of telescopic forks, and driven through eccentric cams, with a considerably lighter structure compared to the ATLAS series.

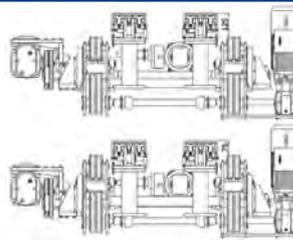
|                                |               |                              |                |
|--------------------------------|---------------|------------------------------|----------------|
| <b>minimum vertical stroke</b> | <b>60 mm</b>  | <b>max. payload</b>          | <b>1500 kg</b> |
| <b>maximum vertical stroke</b> | <b>100 mm</b> | <b>lifting time</b>          | <b>6 s</b>     |
|                                |               | <b>maximum axis distance</b> | <b>2000 mm</b> |

PALLET WAREHOUSES

### APOLLO



#### Technical details



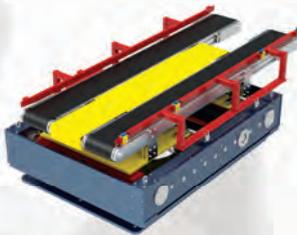
#### Description

The APOLLO is a compound system (telescopic forks + conveyor), meant to improve the functionality of the handling device. With closed forks, the conveyor lifts, handling the pallet separately. It allows to reduce the cycle times within the automated warehouses, and to improve the positioning of the load on the shelf.

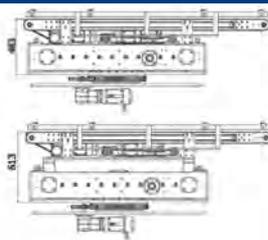
|                                |                |                     |                 |
|--------------------------------|----------------|---------------------|-----------------|
| <b>min. length</b>             | <b>1000 mm</b> | <b>max. payload</b> | <b>1500 kg</b>  |
| <b>max. length</b>             | <b>1700 mm</b> | <b>max. speed</b>   | <b>25 m/min</b> |
| <b>maximum vertical stroke</b> | <b>60 mm</b>   |                     |                 |

PAPER AND STEEL COILS

### ARGOS



#### Technical details



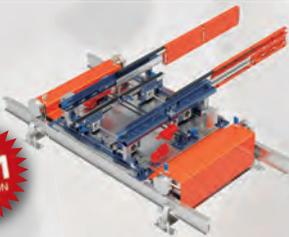
#### Description

The ARGOS system is a transfer unit operating by means of belts. It's equipped with a lifting device to adapt to the various loading and unloading levels. As optional device, a rotary table that allows the 360° unloading is available. The load capacity is as high as 100 Kg. ARGOS is suitable to operate on shuttles.

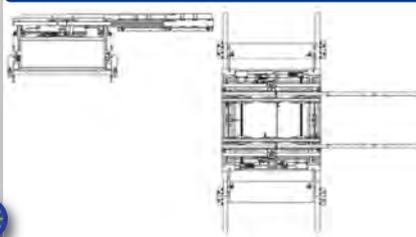
|                       |                |                     |               |
|-----------------------|----------------|---------------------|---------------|
| <b>max. stroke</b>    | <b>130 mm</b>  | <b>max. payload</b> | <b>100 kg</b> |
| <b>swinging range</b> | <b>+/-180°</b> |                     |               |

AUTOMOTIVE AND SPECIAL LOADS

### MERCURY



#### Technical details



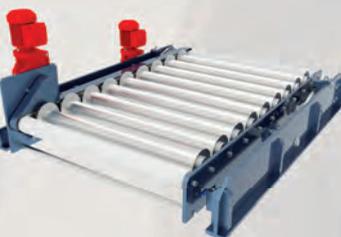
#### Description

The MERCURY is autonomous and independent, noiseless, clean, lubrication-free and needs low maintenance; it's possible to add shuttles or rails to extend the system in a modular way. It's meant to be combined with ARACHNE system, or otherwise with ATLAS, GEMINI or TITAN lifting devices.

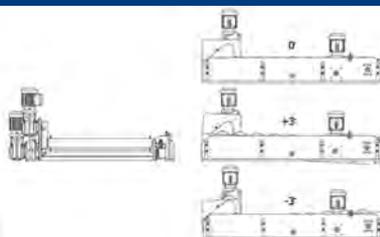
|                    |                |                          |                          |
|--------------------|----------------|--------------------------|--------------------------|
| <b>min. length</b> | <b>1200 mm</b> | <b>max. payload</b>      | <b>1200 kg</b>           |
| <b>max. length</b> | <b>2000 mm</b> | <b>max. acceleration</b> | <b>1 m/s<sup>2</sup></b> |
| <b>min. stroke</b> | <b>1300 mm</b> | <b>max. speed</b>        | <b>45 m/min</b>          |
| <b>max. stroke</b> | <b>2100 mm</b> |                          |                          |

CARTON LOADERS AND MINILOADS

### HEMERA



#### Technical details



#### Description

This system is meant to be installed on stacker cranes and shuttles, and allows unloading the pallets by gravity, thanks to its motorised roller conveyor and a tilting movement of the frame by -3° or +3°.

|                              |               |                     |                |
|------------------------------|---------------|---------------------|----------------|
| <b>maximum tilting angle</b> | <b>+/- 3°</b> | <b>max. payload</b> | <b>1000 kg</b> |
|                              |               | <b>tilting time</b> | <b>3 s</b>     |

PUSH & PULL

### SISYPHUS



#### Technical details



#### Description

The SISYPHUS system allows horizontal or vertical carousel-like operations. It allows to have a buffer stock of available pieces or to store pieces for production. The accumulation of the carriages takes place in the lower or upper part; the SISYPHUS system can be floor-mounted or hanging.

|                    |                 |                     |                 |
|--------------------|-----------------|---------------------|-----------------|
| <b>min. length</b> | <b>2000 mm</b>  | <b>max. payload</b> | <b>100 kg</b>   |
| <b>max. length</b> | <b>12000 mm</b> | <b>min. speed</b>   | <b>7 m/min</b>  |
|                    |                 | <b>max. speed</b>   | <b>15 m/min</b> |

LIFTING UNITS

TRANSFER UNITS



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