

hMOOVITIQUE

TRANSFER SYSTEMS

ELCOM / FABER / H'FACTORY

hellomoov'

un mouvement d'avance

/ FRENCH INDUSTRIAL LEADER

For more than 35 years, **ELCOM** has brought innovating solutions to the industry. Our approach offers a complete freedom of design thanks to a unique range of flat belt conveyor and modular transfer systems.

35 YEARS

/ GEOGRAPHICAL PRESENCE

Benelux

Czech Republic

France

Germany

Hungary

Italy

Poland

Portugal

Scandinavia

Spain

Australia

Canada

USA

Tunisia

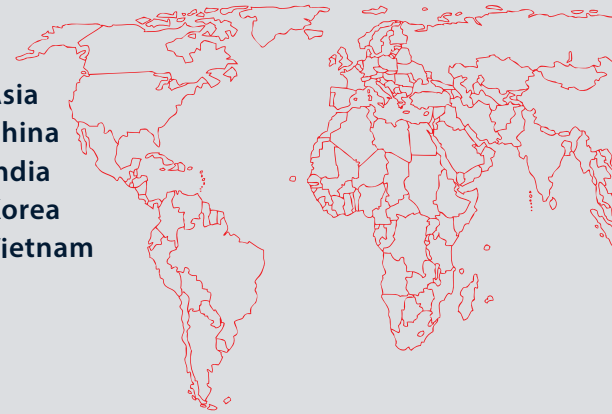
Asia

China

India

Korea

Vietnam



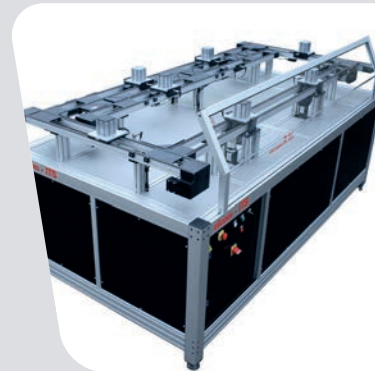
/ COMPLETE RANGE AND NEW PRODUCTS

Our creations result from a large range of products which is regularly enlarged by novelties, especially intelligent systems.

No pneumatic network and therefore no pneumatic energy costs:

10 to 20 times cheaper.

Our applications offer unlimited possibilities in terms of industrial modularity.



/ SERVICES

x Strong production capacity and very high reactivity

x Important stock, fast delivery

x Preparation for kit delivery

x Assembly of complete sets

x Quotations based on customers' drawings and sketches

x Technical advice

x CAD files library

x Fast prototype abilities

x Configurator



www.elcom-automation.com

/ A COMPLETE TRANSFER OFFER

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/ MODULAR TRANSFER SYSTEM

Bult from **h'elcom** range of profiles, the design of modular transfer systems **elcom** enable a great modularity.

Modular industrial system adapted for the realization of your assembly lines with automatic or manually operated work stations.

Workpiece carriers are conveyed on two parallel belts which facilitate the implementation of stoppers, positioning units, accessories...

Retractable pins, located under the workpiece carrier, allow:

- > **guiding the workpiece carrier with 4 pins on straight sections,**
- > **guiding the workpiece carrier round bends with 2 pins (the other being retracted).**

| The perfect complementarity between transfer systems, profiles and flat belt conveyors will facilitate the solving and realization of your ideas.

TRANSFERS TLM 1000, 1500, 2000, 5000





**Example of transfer ITS 24 V
TLM 1500 with:**

- workpiece carriers 150x150
- motorization 24 V
- positioning units 24 V
- stoppers 24 V



elcom ITS 24 V

Transfer system **elcom ITS 24 V**

Concept 24 V future-oriented

elcom ITS 24 V is an ingenious **elcom** concept which provides numerous advantages:

- Low energy consumption
50 to 90% reduction in consumption depending on the load.
- Electronic control of motor parameters (acceleration, speed, slowdown).
- Reduction or removal of pneumatic
- Possibility to automatically control the speeds during operation by programme, depending on the load.
- Frequent stopping and restarting of motors allowed thanks to the epicycloidal reduction gearbox (reduced consumption).
- Conveyor belts can be stopped in the event of prolonged stoppage or saturation of one or more sections.
- Reduced space requirement.
- Plug and Play concept (cards and programs integrated into the engine).
- Conception 4.0 ready : possibility of recovering output data for predictive maintenance.
- Easy to use, actuators can be controlled by a network (field bus), the belt drive motor remains controlled by the PLC (1 PLC output per speed).

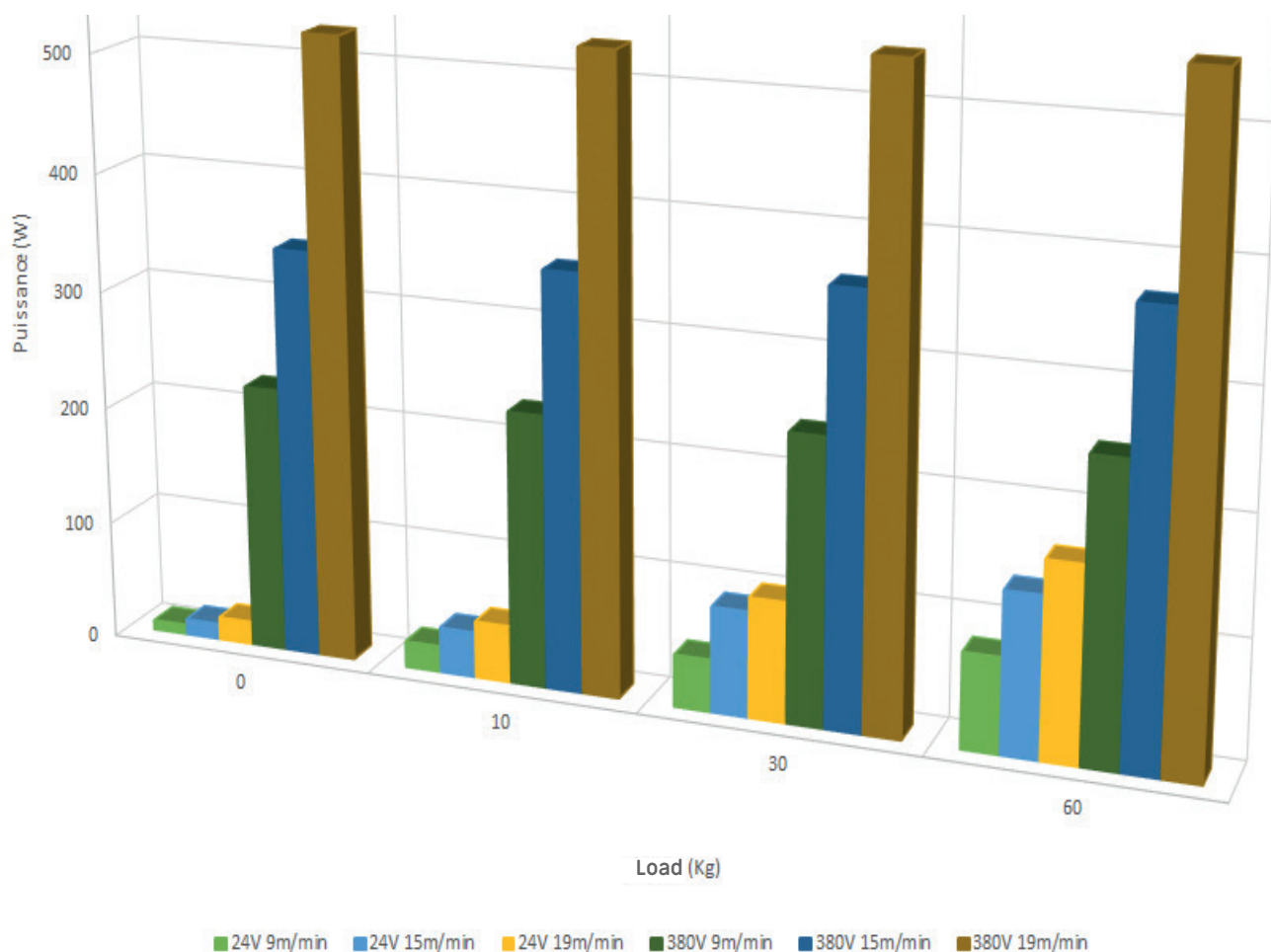


This logo allows you to easily identify components which belong to this concept within the catalogue.

Important : the new **elcom ITS 24 V concept is perfectly suitable to use with the **elcom** pneumatic transfer system.**

Transfer system **elcom ITS 24 V**

Comparison of energy consumption as a function of motorization / speed and load

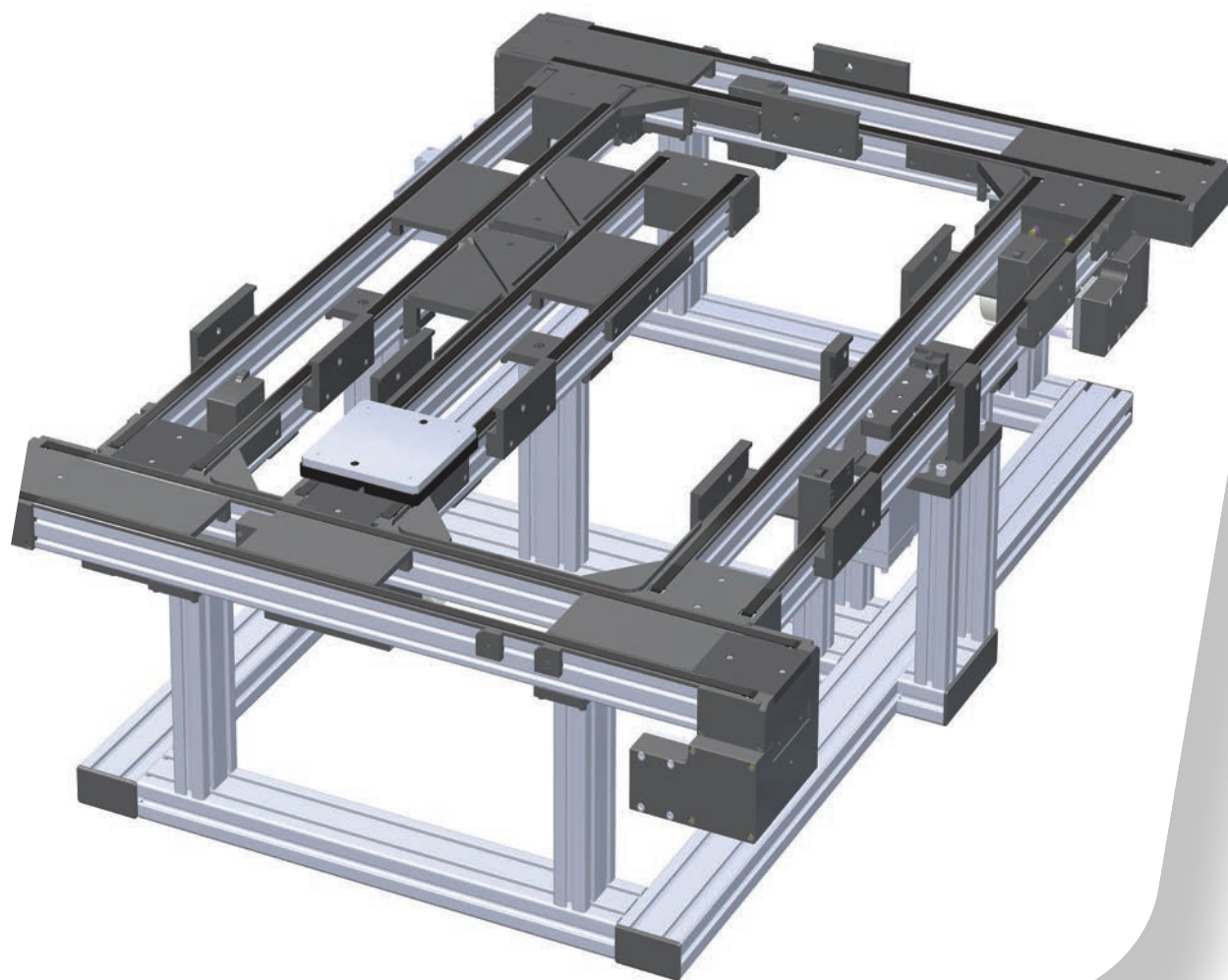


| You would like a FREE diagnostic!

**Contact our 24 V transfer technical expert to
evaluate the potential savings with him.**

/ TECHNOLOGICAL INNOVATIONS

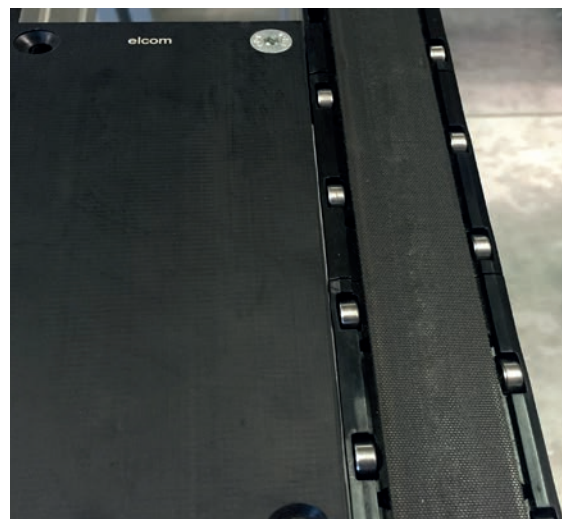
Transfer system **elcom ITS** 24 V TLM 1500



elcom ITS 24 V

Transfer system Module heavy loads

Module heavy loads is an option integrated into the guide belt which enables to increase the performances of the transfer TLM. It is fitted instead of the standard guide belt.



The benefits of this option are numerous:

- **Significant increase of the load carried by the transfer (x2.5 the nominal load)**
- **Easy and quick installation of modules in existing units**
- **Great modularity: quick replacement of standard guiding belt by module heavy loads with th possibility to combine them.**

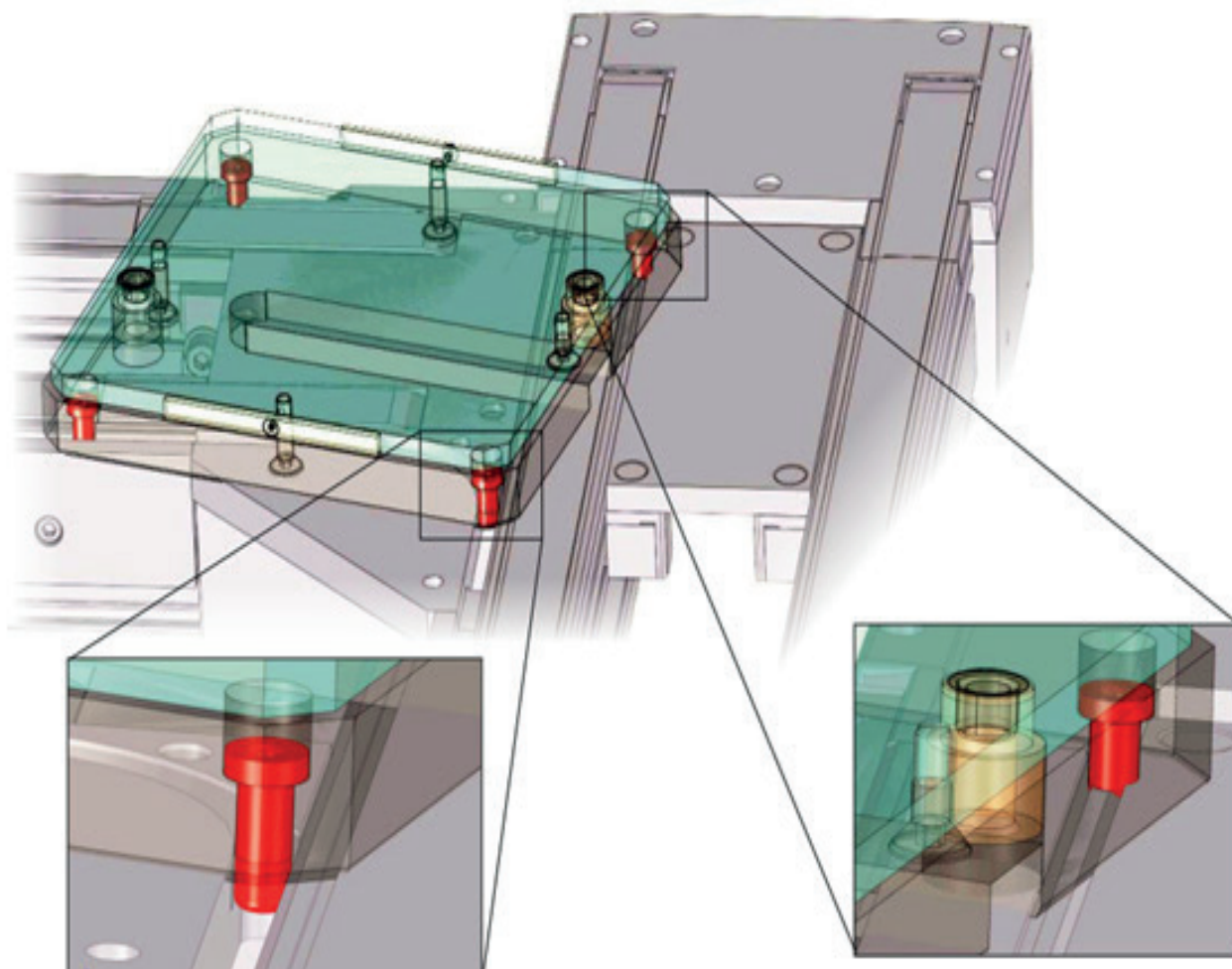
| Important : the new module heavy loads can be perfectly combined with the **elcom transfer range TLM 2000 flat belt.**

The operating principle of workpiece carriers

Our transfer systems operate with standard workpiece carriers on which a customized fitting of conveyed workpiece is fixed. Combined with transport units, stoppers, positioning units, lifts and many standard modules, our workpiece carrier systems offer many lay-outs for transport and part supply.

elcom differentiates itself from traditional transfer systems through an ingenious system of retractable pins located under the workpiece carrier (shown in red). They enable the workpiece guidance in straight lines and to make curves in cams.

Results: low cost of implementation with a simplified automation, a better flow of workpiece carrier, a reduced cycle time and reduced number of workpiece carriers.



Two main tasks are fulfilled:

The first task is the transport and the management of workpiece carriers.

This is done by means of transport modules based on double belt conveyors. The conveying of workpiece carriers to the desired location is carried out through cams, standard returns and lifts.

The second task is the stop and the positioning of workpiece carriers.

These are provided by stoppers (e.g. manual supply of workpiece carriers) and positioning units (e.g. robot loading). Standard modules are provided for each specific stage of the process (e.g. press positioning unit, returns...).

The benefits of this well-designed concept can also be noticed in the servicing and maintenance as less actuators and parts have to be maintained. Moreover, maintenance work can be carried out even on an operating machine, which helps keeping the production line available.

Overview of technical data

	TLM 1000	TLM 1500	TLM 2000			TLM 5000
Workpiece carriers (mm)	105 x 105 105 x 155	155 x 155	200 x 200 200 x 250 200 x 300 300 x 300 300 x 400 400 x 400	500 x 500 500 x 800 500 x 1000* 600 x 600 600 x 800 600 x 1000* 800 x 800 1000 x 1000 (*option 1500)		
Load/workpiece carrier (daN)	2	4	10			50
Speed (m/min)						
Flat belt	10 - 15 - 20		9 - 15 - 19			
Timing belt	12 - 16	12 - 16				10 - 12
Length of conveying unit						
Mini	500	500	500			500
Maxi	3160	3160	6250			6000
Maxi accumulation load per motor (daN)						
Flat belt	25 / 3 m		100 / 6 m 60 / 6 m (direct)			
Timing belt	35 / 3 m	35 / 3 m	60 / 6 m (light)			
Maximum loadmale absolue (daN) (without accumulation)						
Flat belt	50 / 3 m		200 / 6 m 120 / 6 m (direct)			
Timing belt	70 / 3 m	70 / 3 m	120 / 6 m (light)			400 or 75%
Motor power flat belt (380 V tree-phase)	0,09 KW - 0,4 A		V	KW	A	
			9	0,25	0,68	
			15	0,37	1,24	
			19	0,55	1,60	

Note:

Solutions exist to handle larger loads charges per workpiece carrier.

A complete system customization of the configuration (layout, cycle time, etc.) is possible after consultation with our technical office.

Please contact us +33(0)4 74 43 99 61 or by mail elcom38@hellomoov.com

Modularity

According to the requirements of the manufacturing process, different kinds of modular designs are possible.

The design of the line can evolve in several stages.

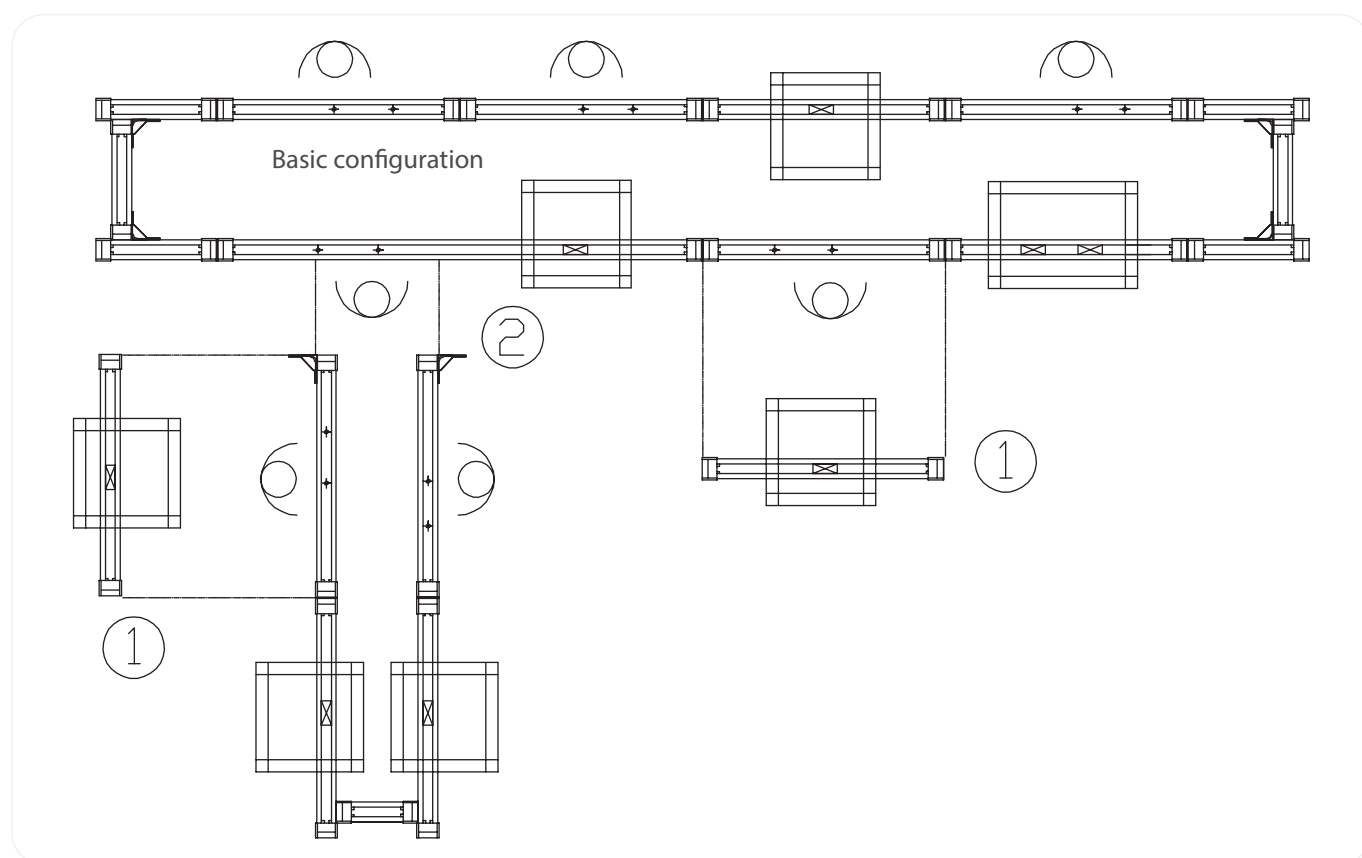
Examples:

1) Interchangeability of a module

- 4 fixing screws only
- no machining
- no adjusting

2) Addition of derivation

- 6 fixing screws
- no machining
- no adjusting



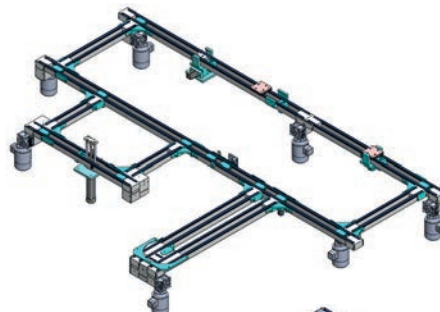
Modular transfer systems

elcom is the specialist of the systems of transfer with workpiece carriers.

Various dedicated transfer systems according to weight and dimensions of the carried workpiece are available to meet your production requirements.

Modular transfer system

TLM 1000 [Page 16](#)



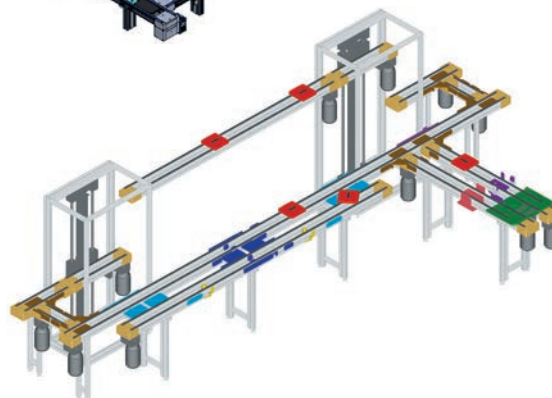
Modular transfer system

TLM 1500 [Page 64](#)



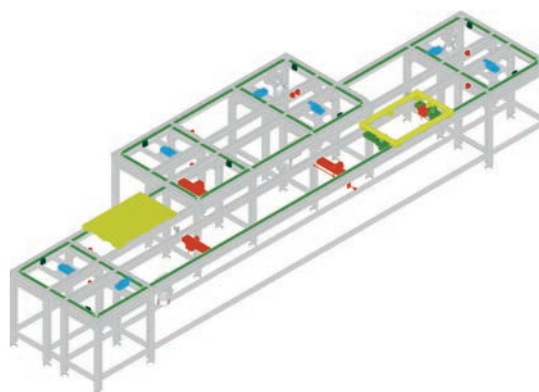
Modular transfer system

TLM 2000 [Page 104](#)



Modular transfer system

TLM 5000 [Page 184](#)



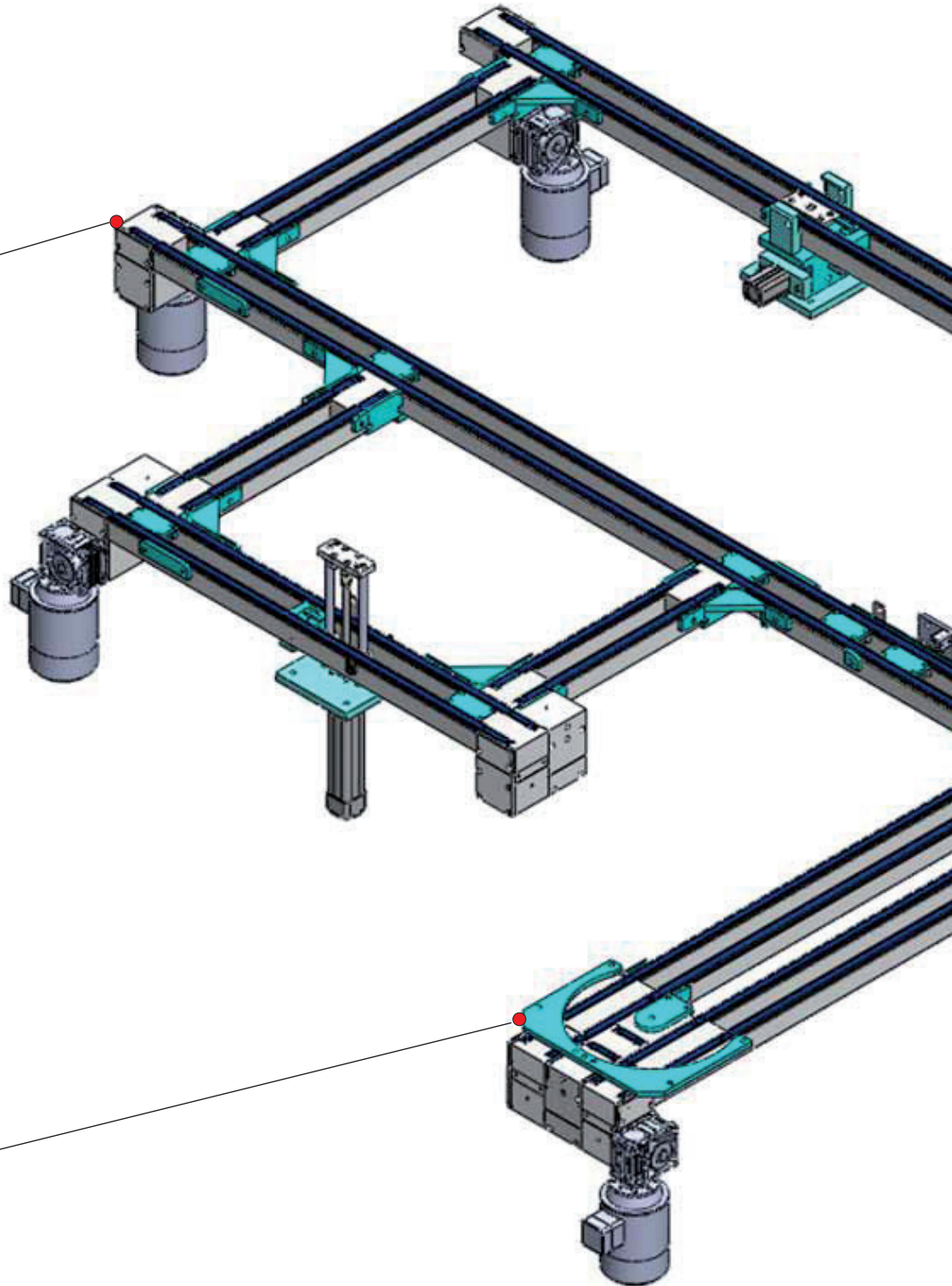
Inflatable belt

drive transfer [Page 202](#)

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24 V
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Conveying unit
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Stopper 24 V
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Derivation 24 V
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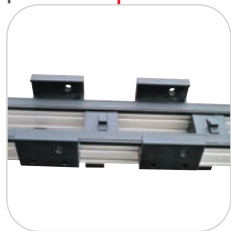
Positioning unit
24 V
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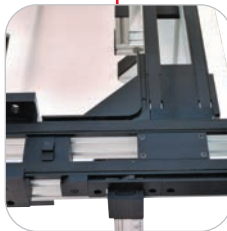
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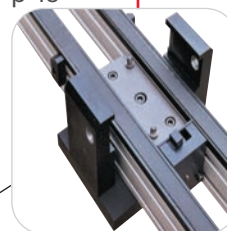
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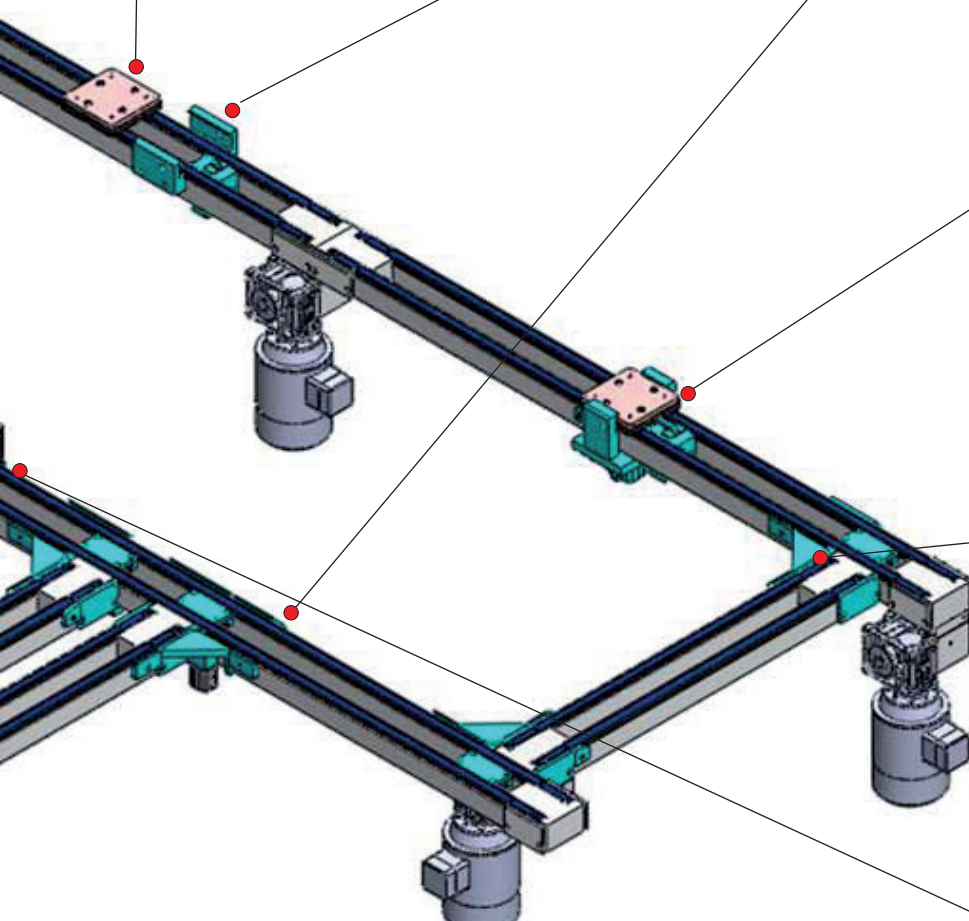
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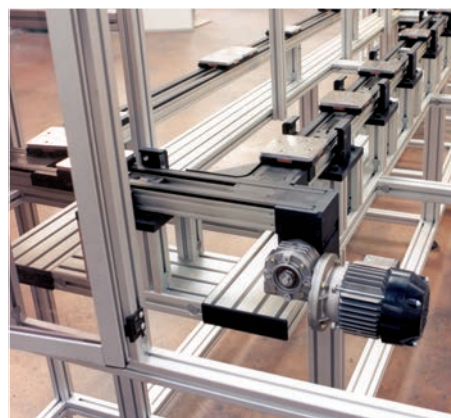


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Tip

Download all CAD 3D files on our website!

www.elcom-automation.com/transfers



Data

Workpiece carriers (mm)	105 x 105 105 x 155
Load/workpiece carrier (daN)	2
Speed (m/min) Flat belt Timing belt	10 - 15 - 20 12 - 16
Length of conveying unit Mini Maxi	500 3160
Maxi accumulation load per motor (daN) Flat belt Timing belt	50 25 70 35
Motor power (380 V three-phase)	0,09 KW - 0,4 A

The maximum length of the conveying units is: 3160 mm.

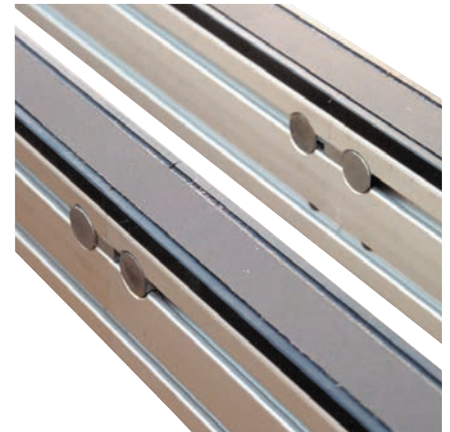
For long spans, several elements can be butted end to end.

For important accumulations, the length of the conveying units is adapted to the load.

It is recommended to place sensors in order to control accumulation of the load.

Pneumatic cylinders must be equipped with flow rate controllers.

It is possible for long spans to be cut in order to facilitate the dismantling of the machines.



Conveyor's cut profile butted end to end

Workpiece carriers

The workpiece carriers allow the mounting of holders which ensure an accurate positioning of the assembly during the process.

The workpiece carrier consists of two plates.

The upper aluminium plate allows the fastening of the workpieces, ensures the geometrical behaviour of workpiece carrier as well as the positioning accuracy. Machining (drillings and tappings) can be made according to the customer's wish.

Stainless steel bushes located in the aluminium plate

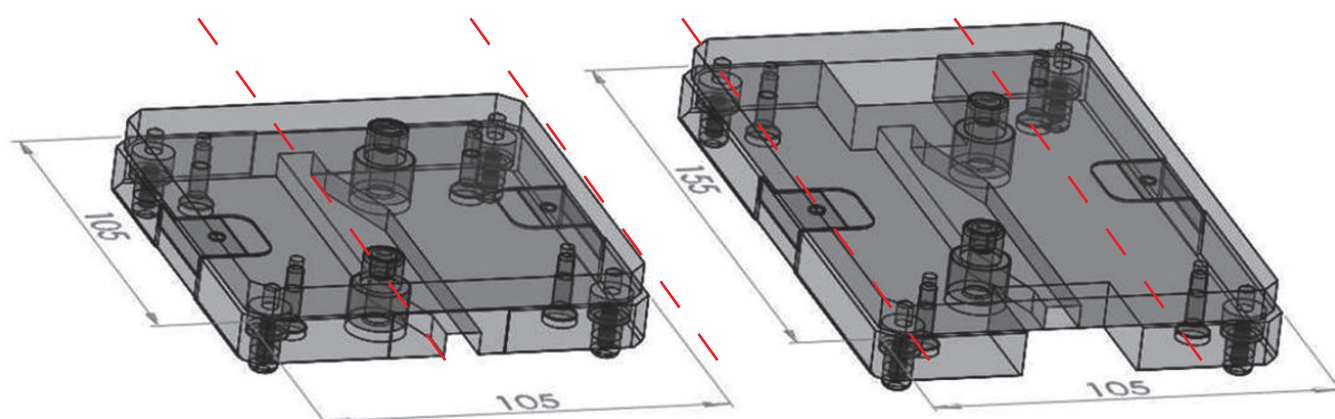
guarantee resistance to wear and a perfect accuracy. The PA base has an extremely low friction coefficient and lays on the conveying belts. This base hosts 4 guiding pins (specific to **elcom**) and has the necessary shape to ensure stoppers proper functioning.

Metallic bars are located on each side of the workpiece carrier in order to detect them at several workstations. The characteristics of stoppers, guiding pins with springs can be found in the next pages.

Variable length of **elcom's** workpiece carriers and specific workpiece carriers

Standard workpiece carriers are available to install the workpieces that will be conveyed. In many cases, the surface area of workpiece carrier is not sufficient. Specific workpiece carriers can be supplied. The use of 4 guiding pins makes it possible to vary the workpiece carrier's length and to optimize cycle times. The guiding

pins remain in the position of the nearest standard workpiece carrier. So, all the standard elements such as cams are usable without modification. The following variants for a TLM 1000 system clearly show the possibilities:



The lay-out of guide pins is identical in width. However, in the length direction, the guide pins of a 105x155 workpiece carrier have a larger gap than the 105x105

workpiece carriers. In case of use of workpiece carriers of several dimensions on the same transfer unit, the lay-out of guiding pins must be alike.

Workpiece carriers U and M

Workpiece carriers are used to support and position the components during the process.

The upper plate (made of aluminium) is used to fix the components and perform an accurate positioning of the workpiece carrier.

The PA base (which has a very low friction coefficient) is used to shelter the pins and to stop the workpiece carrier on the stopper.

Steel bushes located in the aluminium plate ensure a perfect accuracy and resistance against deterioration.

On each side of workpiece carrier, small metallic bars allow detection of workpiece carriers in various positions.

Unidirectional workpiece carriers (U)

They are perfectly compatible with a 180° swivelling.

Possibility of adding shock absorbers to limit the shock between the workpiece carriers and to reduce the noise (T).

Multidirectional workpiece carriers (M)

For square workpiece carriers only.


They are perfectly compatible with 90°, 180° and 270° swivellings, delivered with 2 bushes and 2 additional detection bars.

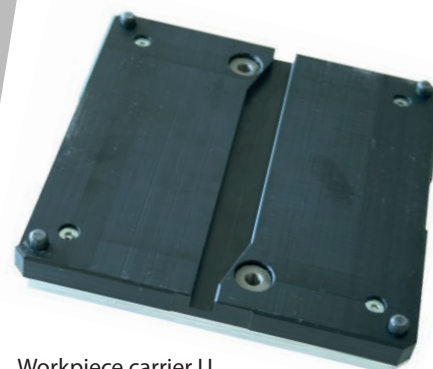
Workpiece carriers with shock absorber T

The PA base is provided with two drills on the side in the direction of motion. Shock absorbers are inserted in these drills.

These damp the impact between two workpiece carriers and therefore reduce noise pollution.

The workpiece carrier with shock absorber T corresponds to the standard U-type workpiece carrier.

 **The use of workpiece carrier with shock absorbers requires the installation of a stopper before each positioning unit. This avoids the shearing of shock absorbers.**



Workpiece carrier U



Workpiece carrier M



Workpiece carrier with shock absorber T

Workpiece carriers U and M Width 100

Technical data

Unidirectional workpiece carrier U

- x Plate Al
- x Base, PA black
- x 2 steel bushes
- x 4 pins PA
- x 4 springs
- x 4 countersunk screws M4x16
- x 2 detection bars
- x 2 plugs

Add T at the end of reference to mention shock absorber option.

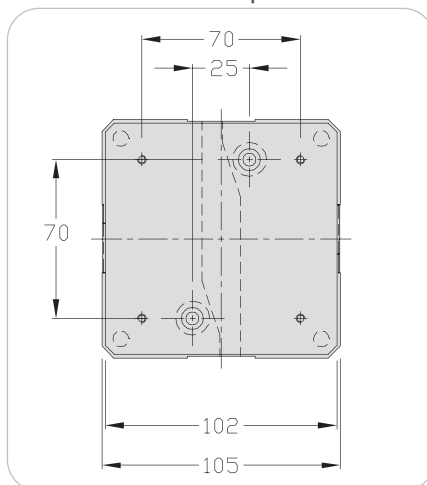
Multidirectional workpiece carrier M

- x Plate Al
- x Base, PA black
- x 2 steel bushes
- x 4 pins PA
- x 4 springs
- x 4 countersunk screws M4x16
- x 2 detection bars
- x 4 plugs

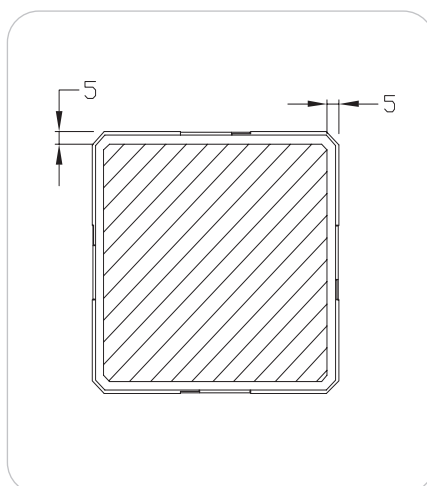
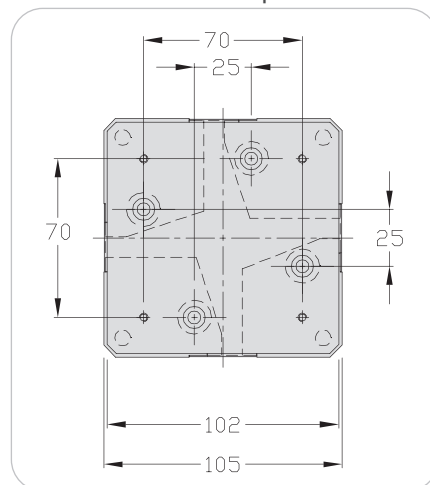
 Maximum load: 2 daN

Weight: 0,41 kg

Unidirectional workpiece carrier U

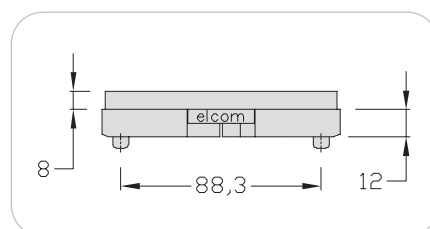
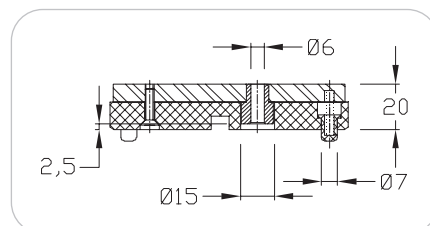
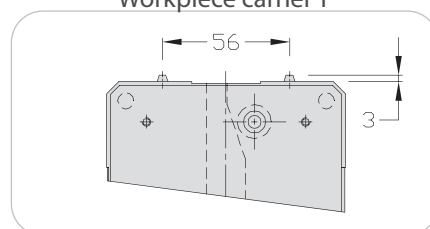


Multidirectional workpiece carrier M



Working area

Workpiece carrier T




Designation / Dimensions	Order unit	Reference
Workpiece carrier U 100x100	1 pce	110.62.000
Workpiece carrier U 100x100 T	1 pce	110.62.000.T
Workpiece carrier M 100x100	1 pce	110.64.000

Workpiece carriers U Width 100 - Length 150

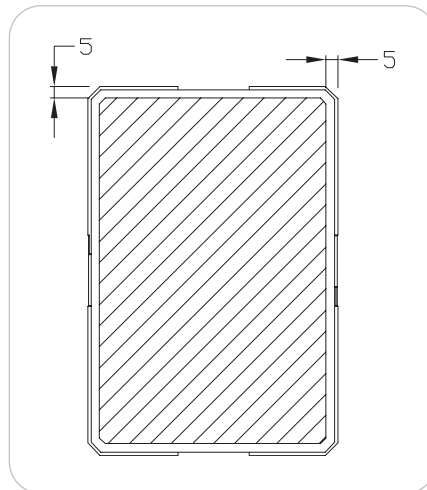
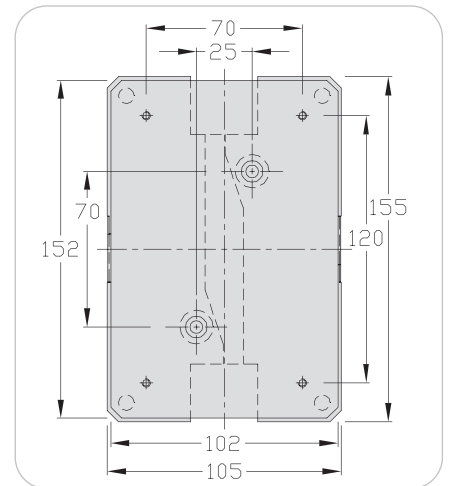
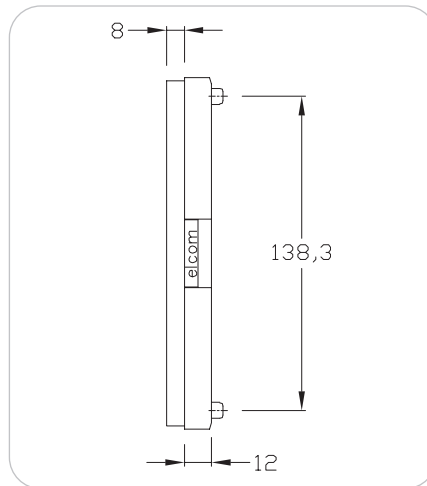
Technical data

- x Plate Al
- x Base, PA black
- x 2 steel bushes
- x 4 pins PA
- x 4 springs
- x 4 countersunk screws M4x16
- x 2 detection bars
- x 2 plugs

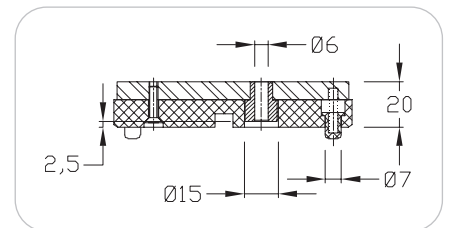
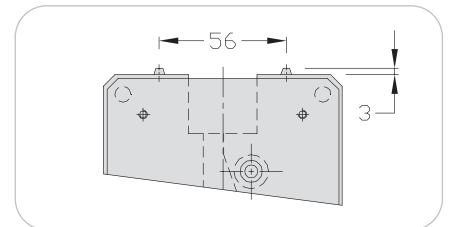
Add T at the end of reference to mention shock absorber option.

 Maximum load: 2 daN

Weight: 0,53 kg



Working area



Designation / Dimensions	Order unit	Reference
Workpiece carrier U 100x150	1 pce	115.62.000
Workpiece carrier U 100x150 T	1 pce	115.62.000.T

Conveying unit flat belt

Applications

Ensures the motion and accumulation of workpiece carriers 100x100 and 100x150.

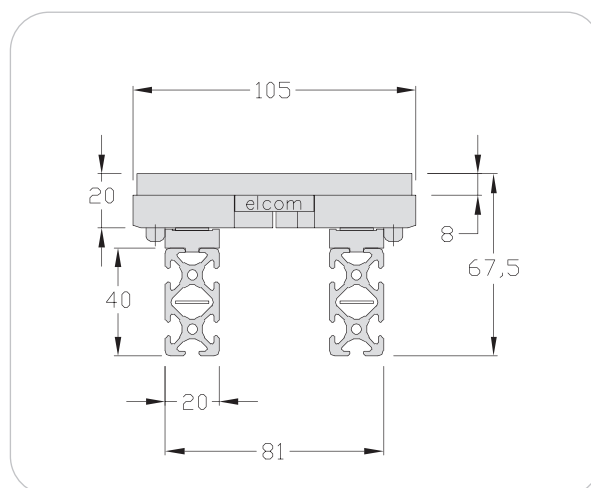
The motor can be fitted either vertically or horizontally, on the right or left side.

According to the load, longer spans can be butted end to end by straight joinings.

The cuttings of the conveyors allow division of the length, making transport and installation of the lines easier.

They also allow to make important lengths for reduced loads.

Spacers have to be fitted between the profiles every meter to ensure a perfect parallelism of the profiles.



Conveying unit timing belt

Applications

Ensures the motion and accumulation of workpiece carriers 100x100 and 100x150.

The motor can be fitted either vertically or horizontally, on the right or left side.

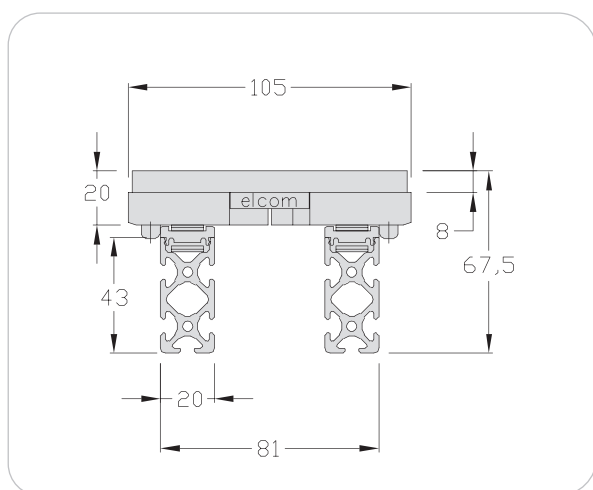
The use of timing belts enables to increase the carried load and facilitates the maintenance when changing belts.

Belt guides are pressed into aluminium profile housing.

According to the load, longer spans can be joined end to end by straight joinings.

The cuttings of conveyors allow division of the lengths, making transport and installation of the lines easier. The installation is facilitated thanks to the use of timing belts.

Spacers have to be fitted between the profiles every 1 meter to ensure a perfect parallelism of the profiles.



Conveying unit 24 V timing belt

Applications

Moving and accumulating of workpiece carriers width 100 mm.

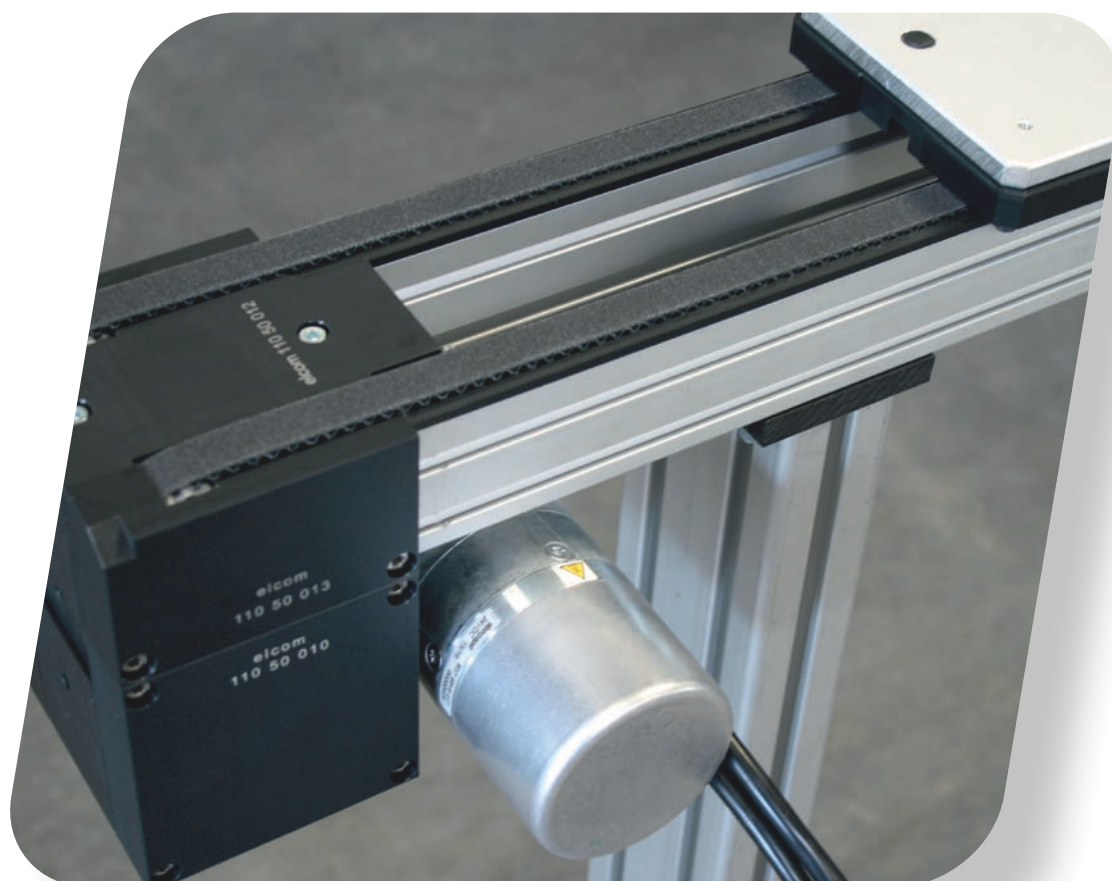
The use of timing belts increases the load being transported and facilitates the maintenance when changing belts. Belt guides are pressed into aluminium profile housings.

According to the load, longer spans can be joined end to end by straight joinings. The cuttings of conveyors allow division of the lengths, making transport and installation lines easier.

The reassembly is greatly facilitated thanks to the use of timing belts.

Spacers have to be fitted between the profiles every meter to ensure a perfect parallelism of the two profiles.

The use of a Brushless gear motor facilitates the wiring.



elcom ITS 24 V

Conveying unit flat belt Width 100

Technical data

Length mini L = 500 mm

Length maxi L = 3160 mm

For longer spans and according to the load, use several conveying units.

Conveying unit

x 1 idling unit

x 1 driving unit

Speeds: 10, 15 or 20 m/min
(other speeds on request)

x 1 motor 380 V three-phase

0,09 KW I : 0,4 A

Conveyor length

x 2 profiles 5 40x20, al anodized

x 2 belt guides, PA black

x 2 belts width 12,5 mm
thickness 1 mm, welded

Maximum load /3 m: 50 daN

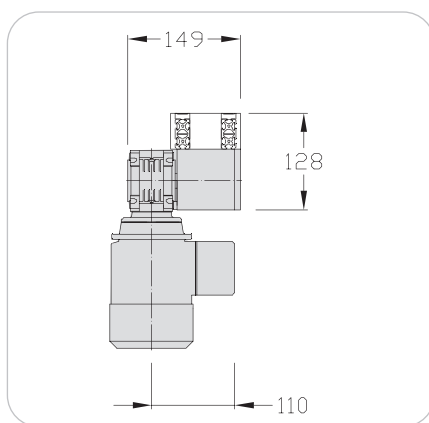
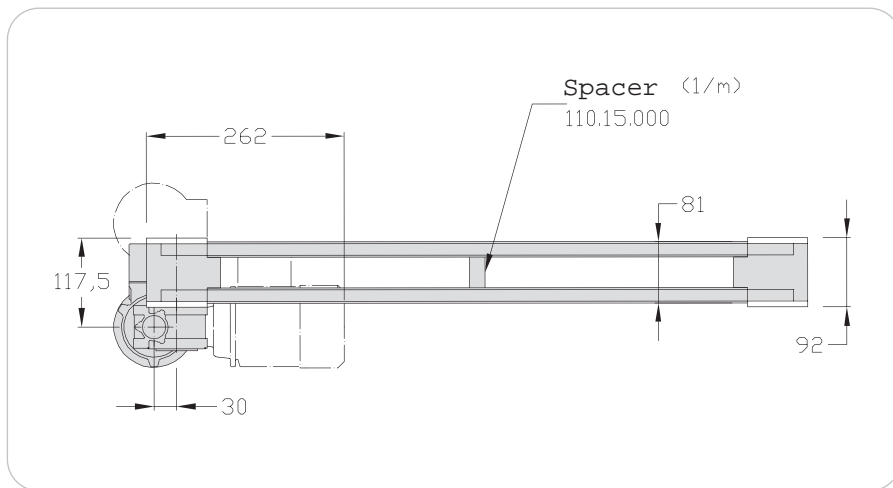
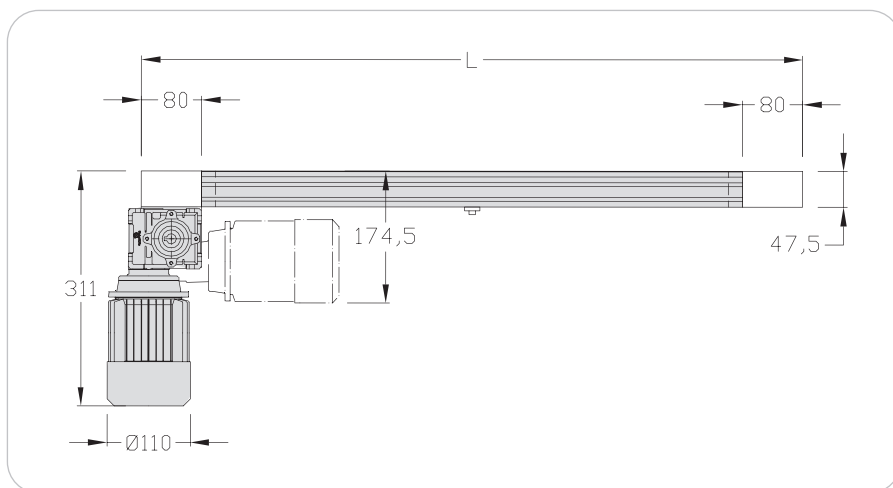
Maximum accumulation load /3 m:
25 daN

Belt length in mm

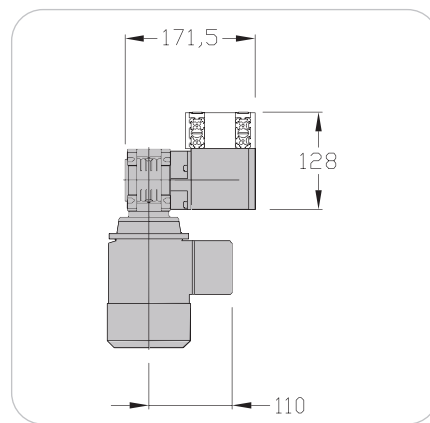
L welded=

$$Lc = [(L-160) \times 2 + 490] \times 0,97$$

Weight: 8 kg + 2,07 kg /m



Conveying unit 100



Conveying unit 100 fixed motor

Designation / Dimensions	Order unit	Reference
Conveying unit 100	1 pce	110.05.000.**
Conveying unit 100 fixed motor	1 pce	110.41.000.**
Conveying length	m	110.05.000.A

(** = speed of motor m/min: 10 - 15 and 20 eg: 110.05.000.10)

Conveying unit timing belt Width 100

Technical data

Length mini L = 500 mm

Length maxi L = 3 160 mm

For longer spans and according to the load, use several conveying units.

Conveying unit

- x 1 idling unit
- x 1 driving unit
 - speeds: 12 or 16 m/min (other speeds on request)
- x 1 motor 380 V three-phase
 - 0,09 KW I : 0,4 A

Conveyor length

- x 2 profiles 5 43x20, al anodized
- x 2 belt guides, PA black
- x 2 antistatic timing belts width 12 mm, 5 mm pitch

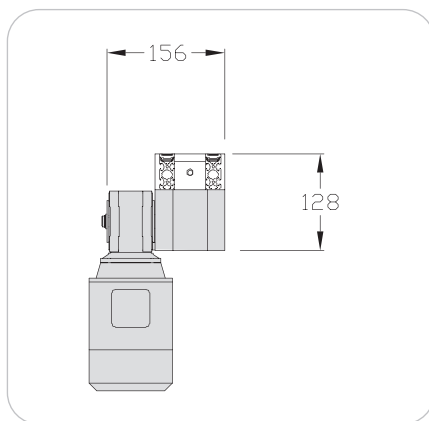
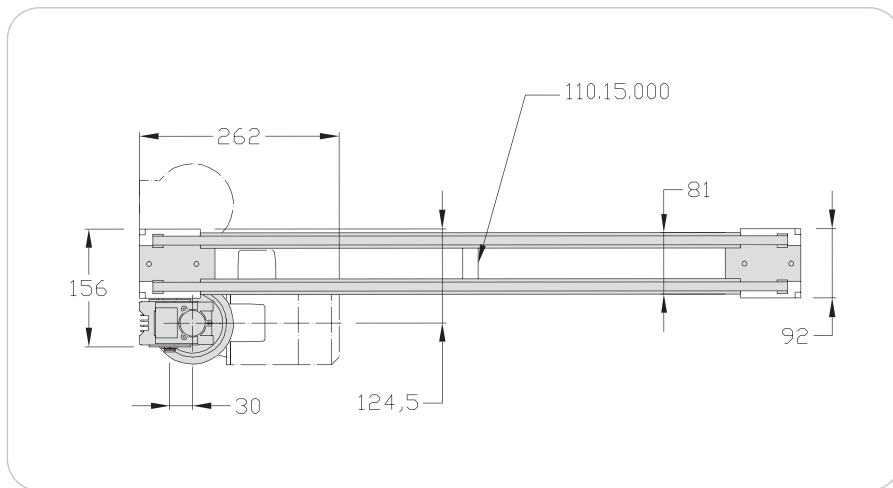
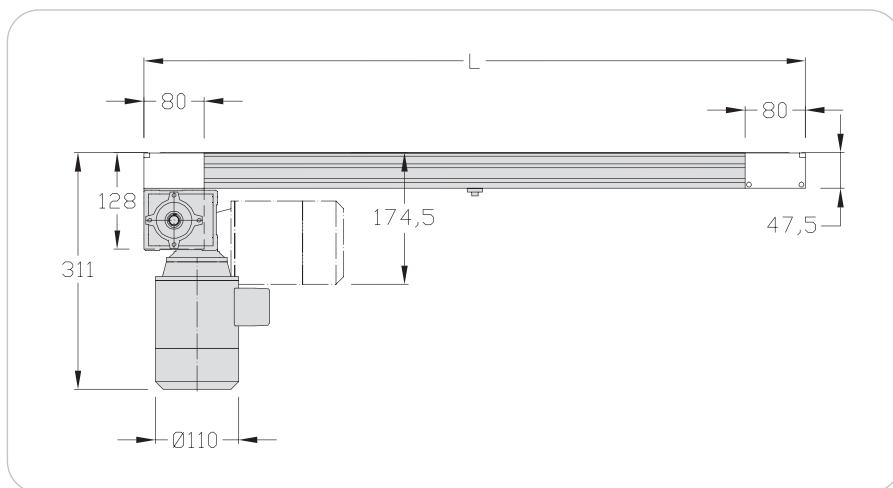
Maximum load /3 m: 70 daN

Maximum accumulation load /3 m: 35 daN

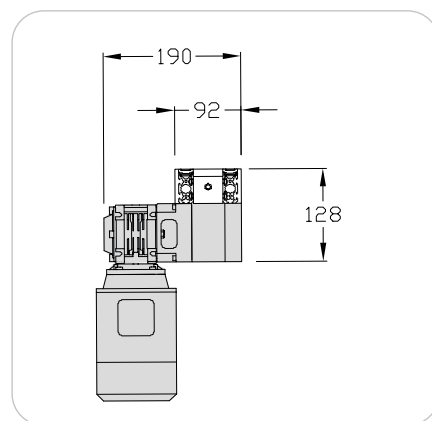
Belt length in mm

$$L_c = [(L-160) \times 2 + 526] \times 0,9995$$

Weight: 7,5 kg + 2,07 kg /m



Conveying unit 100 timing belt



Conveying unit 100 timing belt fixed motor

Designation / Dimensions	Order unit	Reference
Conveying unit 100 timing belt	1 pce	110.50.000.**
Conveying unit 100 timing belt fixed motor	m	110.42.000.**
Conveying length	m	110.50.000.A

(** = speed of motor m/min: 12 and 16 eg: 110.50.000.12)

Conveying unit 24 V timing belt Width 100

Technical data

Length mini L = 500 mm
 Length maxi L = 3 160 mm

For longer spans and according to the load, use several conveying units.

Conveying unit

- x 1 idling unit
- x 1 driving unit
 - speed: 9 to 19 m/min,
 - factory-programmed.
 - Possible stop in case of accumulation.
- x 1 motor 24 V 0,09 KW
 - I: minimum supply voltage 10 A

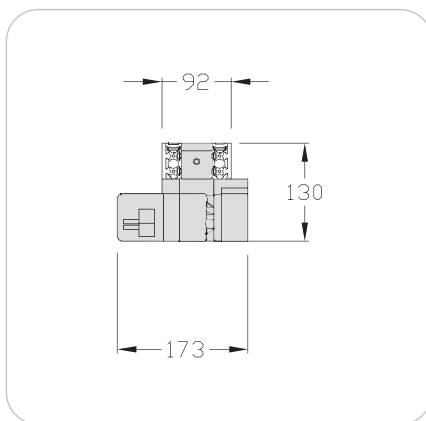
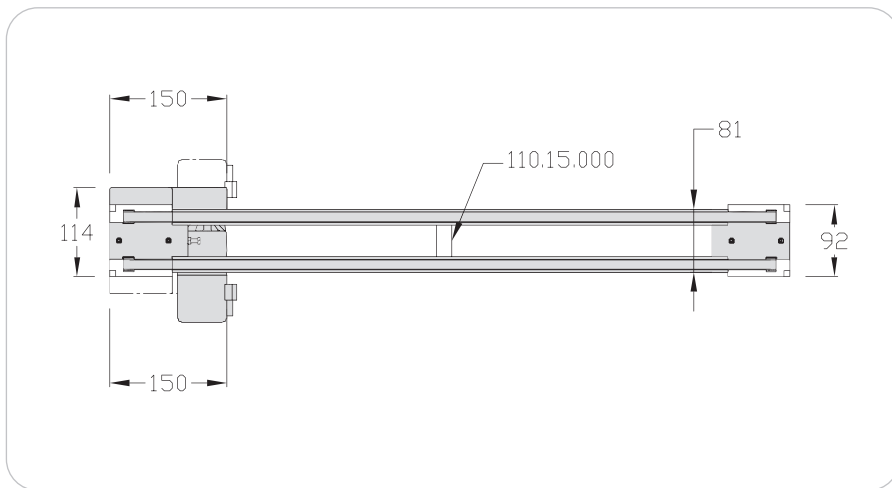
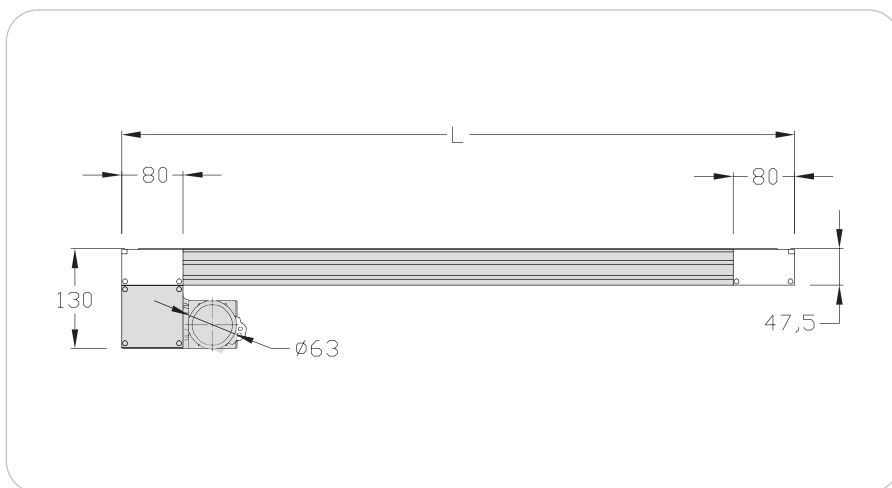
Conveyor length

- x 2 profiles 5 43x20, al anodized
- x 2 belt guides, PA black
- x 2 antistatic timing belts width 12 mm, 5 mm pitch

Maximum load / 3 m: 35 daN
 Maximum accumulation load / 3 m: 18 daN

Power supply: 24 VDC
 Supply current: 5,2 A
 Control voltage: 24 VDC
 Control current: 10 mA
 2 control outputs, 2 status inputs.

Weight: 7 kg + 2,07 kg /m



elcom ITS 24 V

Designation / Dimensions	Order unit	Reference
Conveying unit 24 V 100 timing belt motor Papst right	1 pce	110.50.000.EDP
Conveying unit 24 V 100 timing belt motor Papst left	1 pce	110.50.000.EGP
Conveying length	m	110.50.000.A

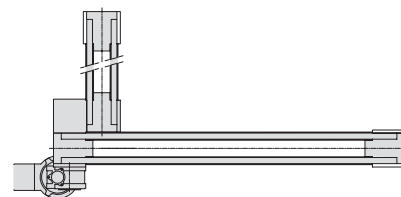
Multiple units

The aim of multiple units is to save space by having a single motor for several conveyors.

Multiple unit L 100

The use of L unit 100 enables to drive two conveyors with only one motor.

Less electrical wiring and removal of a contactor.

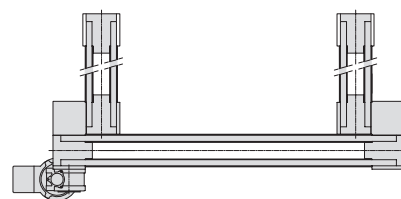


Multiple unit U 100

The use of U unit 100 enables to drive three conveyors with only one motor and thus to make a derivation.

Less electrical wiring and removal of two contactors.

Space saving.

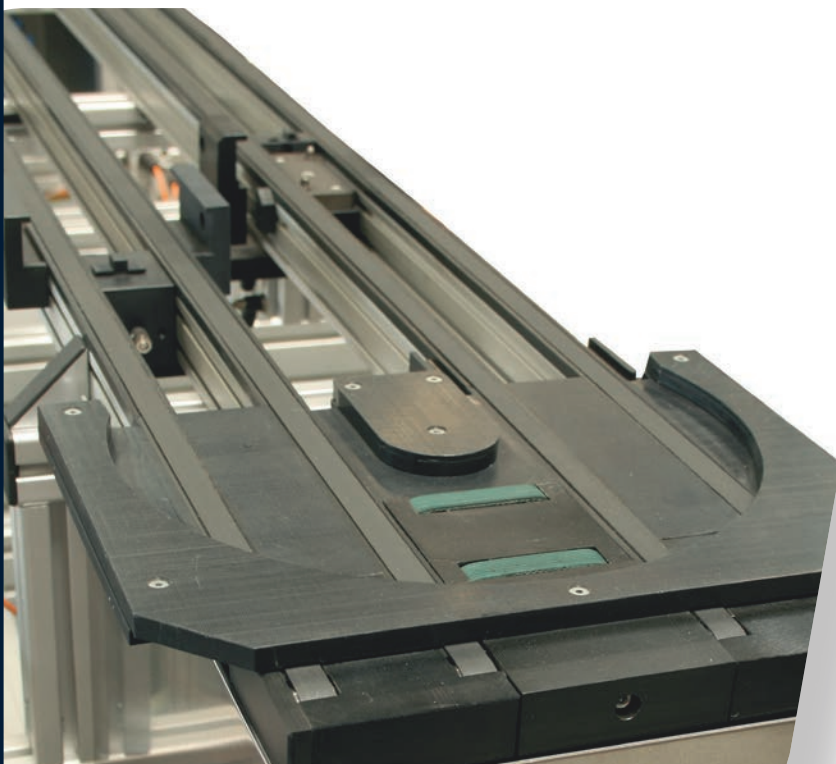
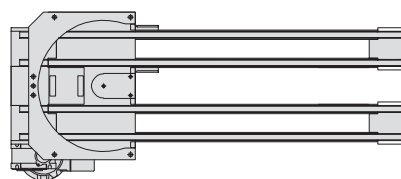


Multiple unit C 100

The use of C unit 100 enables to drive three conveyors with only one motor and thus to make a derivation.

Less electrical wiring and removal of two contactors.

Space saving.



Multiple unit L Width 100

Technical data

- x Maximum accumulation load:
 Pulling conveyor: 25 daN
 Pushing conveyor: +10 daN
- x Maxi length :
 Pulling conveyor: 3 160 mm
 Pushing conveyor: 1 000 mm

Conveying unit

- x 2 idling units
- x 2 driving units
 Speeds : 10,15 or 20 m/min
- x 1 conical torque
- x 1 motor 380 V three-phase
 0,09 KW I : 0,4 A

Conveyor length

- x 2 profiles 5 40x20, al anodized
- x 2 belt guides, PA black
- x 2 flat belts width 12,5 mm
 thickness 1 mm

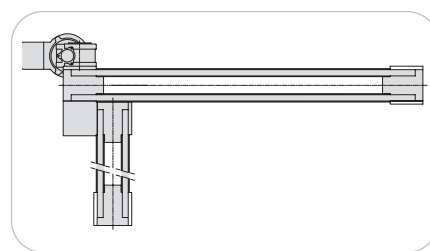
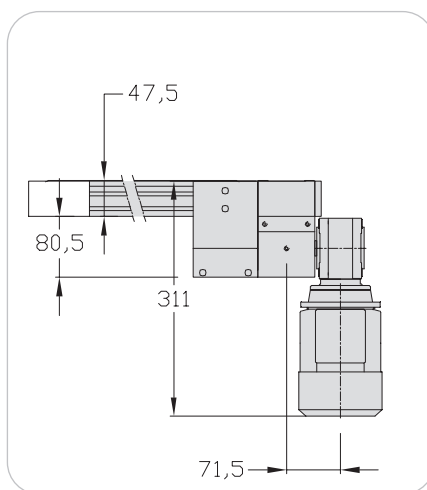
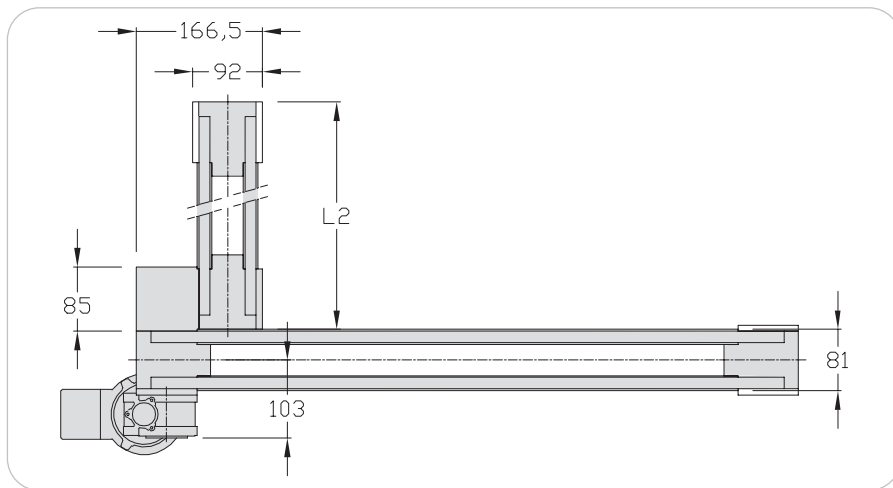
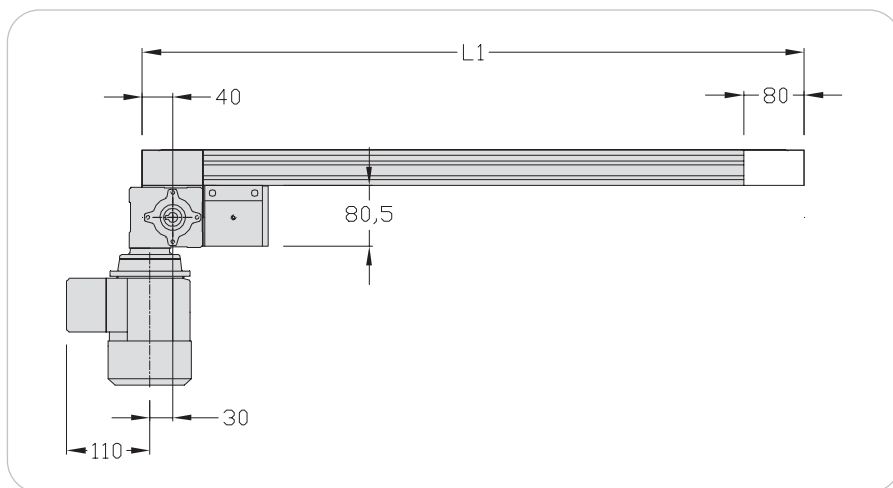
Mention lengths L1 and L2 in meter.

Belt length in mm

$$L \text{ welded} = [(L-160) \times 2 + 490] \times 0,97$$

Weight:

$$13,4 \text{ kg} + (L1 + L2) \times 2,07 \text{ kg/m}$$



Designation / Dimensions	Order unit	Reference
Multiple unit L 100	1 pce	110.39.000.**

(** = speed of motor m/min: 10, 15 or 20 eg: 110.39.000.10)

Multiple unit U Width 100

Technical data

- x Maximum accumulation load:
 Pulling conveyor: 20 daN
 +5 daN on each perpendicular conveyor
- x Maxi length:
 Pulling conveyor: 2 000 mm
 Perpendicular conveyor: 600 mm

Conveying unit

- x 2 idling units
- x 4 driving units
 Speeds: 10, 15 or 20 m/min
- x 2 conical torques
- x 1 motor 380 V three-phase
 0,09 KW I : 0,4 A

Conveyor length

- x 2 profiles 5 40x20, al anodized
- x 2 belt guides, PA black
- x 2 flat belts width 12,5 mm
 thickness 1 mm

Mention lengths L1, L2 and L3 in meter.

Belt length in mm

For length L1 :

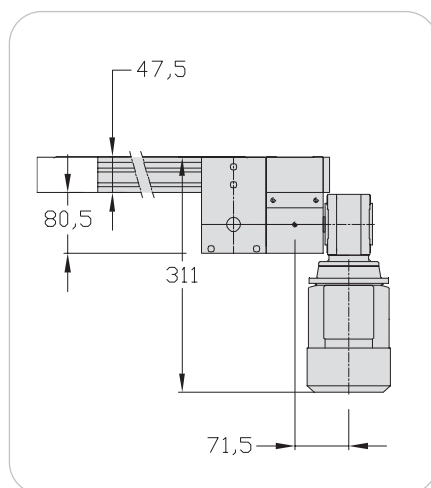
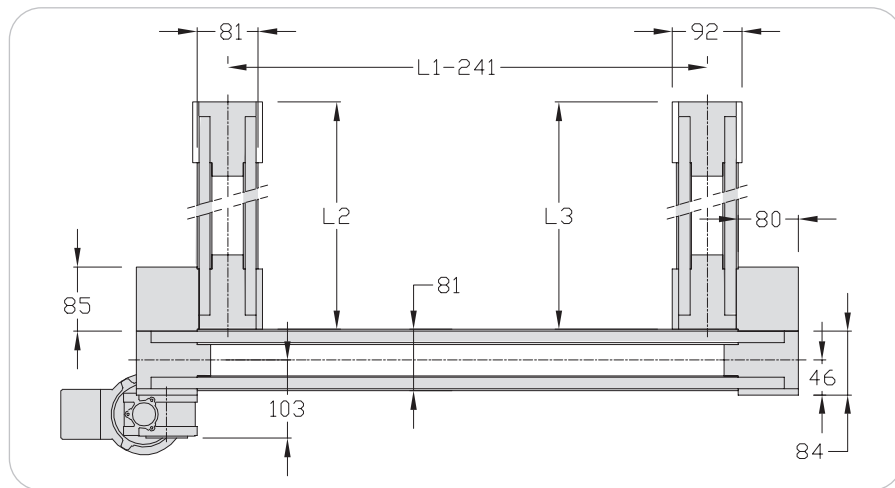
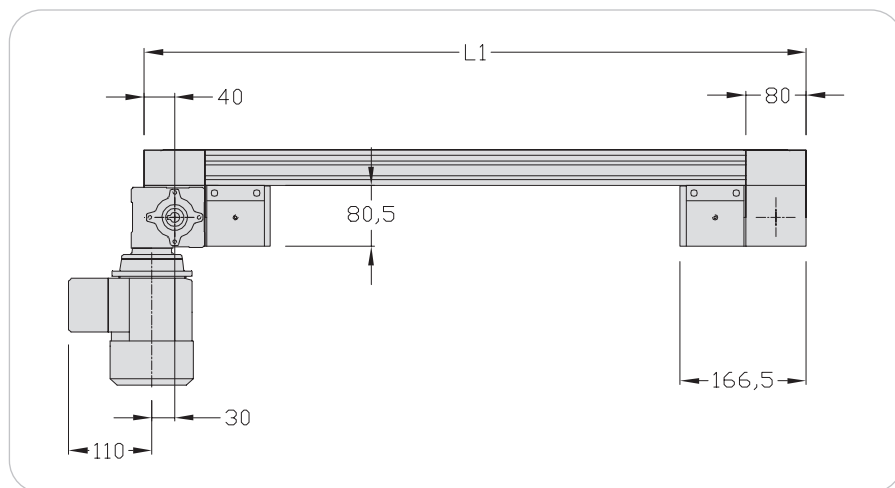
$$L \text{ welded} = [(L-160) \times 2 + 678] \times 0,97$$

For lengths L2 and L3 :

$$L \text{ welded} = [(L-160) \times 2 + 490] \times 0,97$$

Weight:

$$18,8 \text{ kg} + (L1 + L2 + L3) \times 2,07 \text{ kg/m}$$



Designation / Dimensions	Order unit	Reference
Multiple unit U 100	1 pce	110.38.000.**

(** = speed of motor m/min: 10, 15 or 20 eg: 110.38.000.10)

Multiple unit C Width 100

Technical data

- x Maximum accumulation load:
Pulling conveyor: 20 daN
Pushing conveyor: +10 daN
- x Maxi length: 2 000 mm

Conveying unit

- x 2 idling units
- x 2 driving units
Speeds : 10, 15 or 20 m/min
- x 1 return 180° 100
- x 2 conical torques
- x 1 motor 380 V three-phase
0,09 KW I : 0,4 A

Conveyor length

- x 2 profiles 5 40x20, al anodized
- x 2 belt guides, PA black
- x 2 flat belts width 12,5 mm
thickness 1 mm

Mention length L in meter.

Belt length in mm

$L \text{ welded} = [(L-160) \times 2 + 490] \times 0,97$



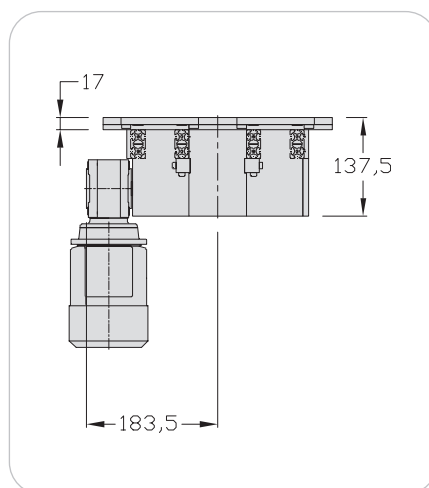
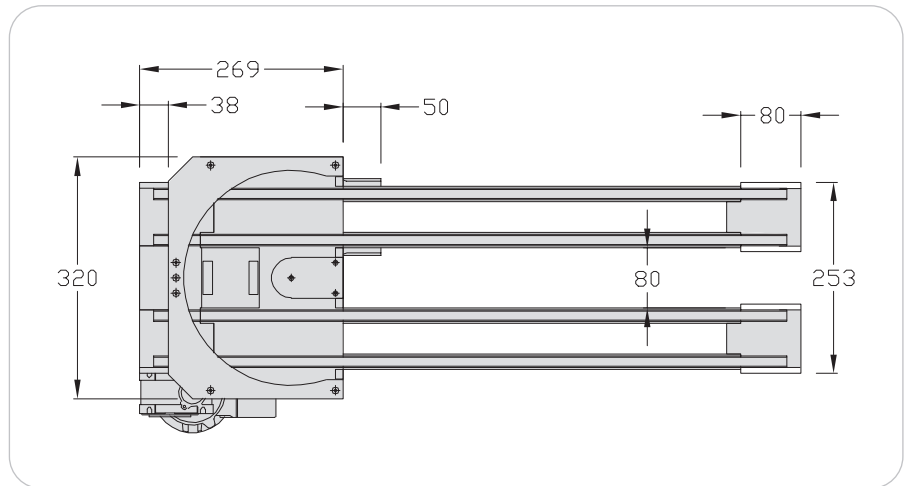
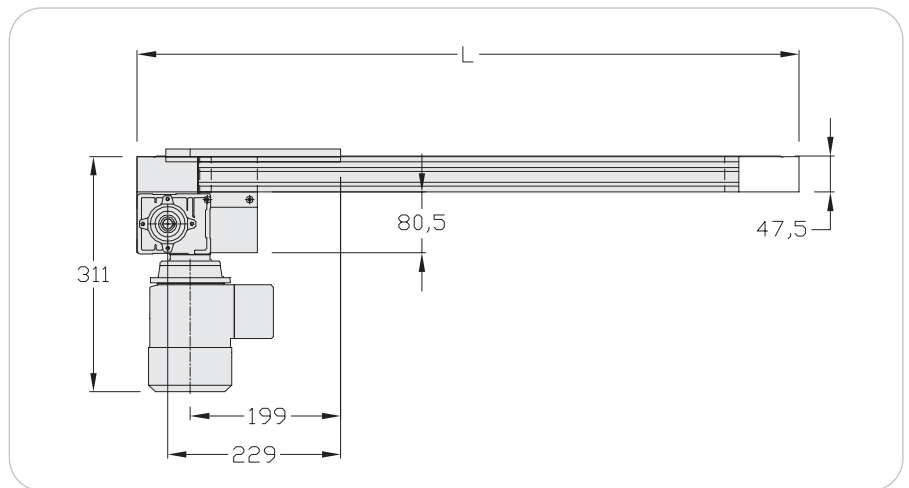
Minimum load on workpiece carrier: 0,3 daN



Do not accumulate in the unit

Weight:

20,2 kg + L x 4,14 kg/m



Designation / Dimensions	Order unit	Reference
Multiple unit C 100	1 pce	110.35.000.**

(** = speed of motor m/min: 10, 15 or 20 eg: 110.35.000.10)

Return 180° Width 100 Length 100

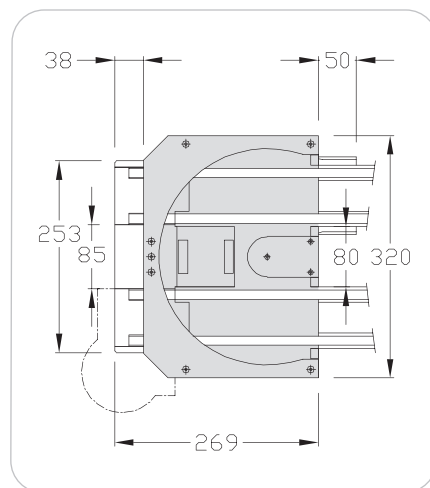
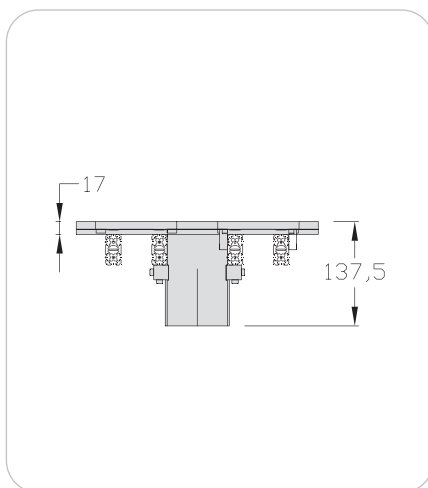
Applications

Allows the return of the workpiece carrier on a parallel conveyor with a reduced space between the two conveyors.

The workpiece carrier is conveyed always keeping the same side towards the outside of the line.

For square workpiece carriers only.

2 parallel belts driven by a bevel gear pair on a conveyor unit.



Technical data

- x Aluminium housing
- x Conical torque

(No additional motor)



Minimum load on workpiece carrier: 0,3 daN



Do not accumulate workpiece carriers in the returns.

Weight: 8 kg

Designation / Dimensions	Order unit	Reference
Return 180° 100	1 pce	110.34.000

Return 180° Width 100 Length 150

Applications

Allows the return of the workpiece carrier on a parallel conveyor with a reduced space between the two conveyors.

The workpiece carrier is conveyed always keeping the same side towards the outside of the line.

For rectangular workpiece carriers 100x150 only.

2 parallel belts driven by a bevel gear pair on a conveyor unit.

Technical data

- x Aluminium housing
- x Conical torque

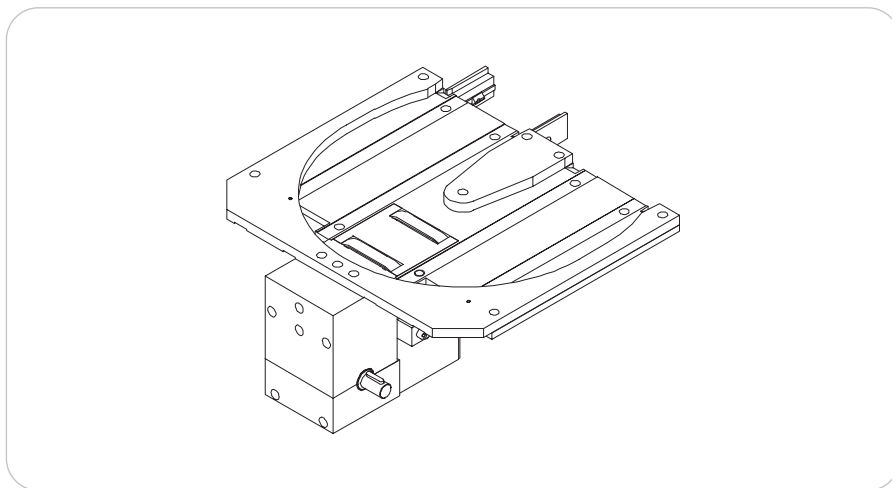
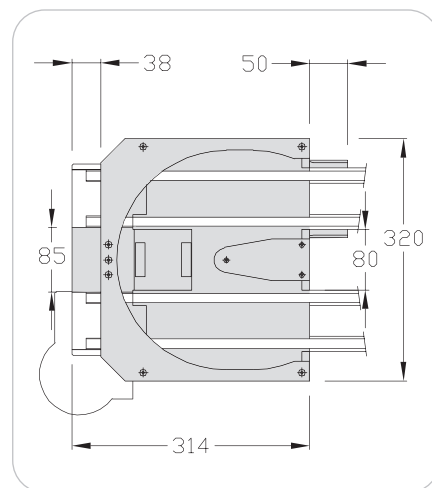
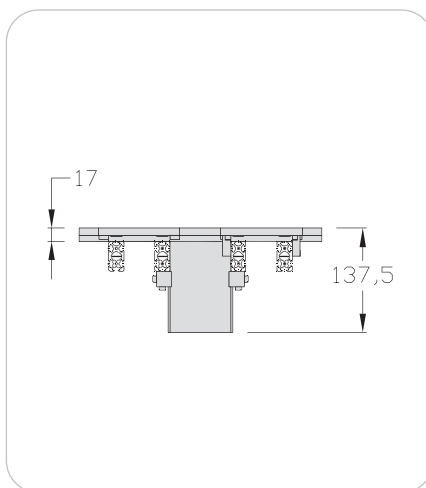
(No additional motor).



Minimum load on workpiece carrier: 0,3 daN



Do not accumulate workpiece carriers in the returns.



Weight: 8,3 kg

Designation / Dimensions	Order unit	Reference
Return 180° 100x150	1 pce	115.34.000

Conveyor cut

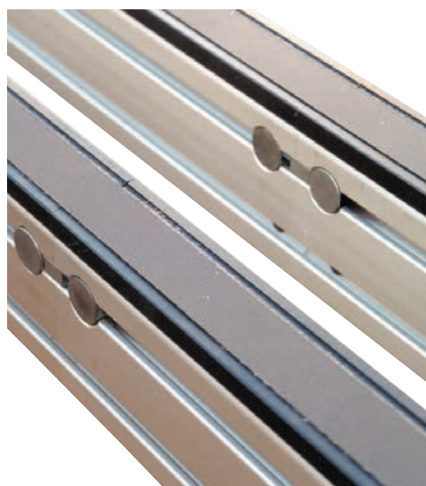
Applications

The cut allows division of conveyor lengths to make the transport and installation easier.

It also enables the making of important lengths when the load is limited.

Technical data

✘ Maximum length: 5 m



Lengths	Data	
	Maximum load daN	Maximum load in accumulation daN Flat belt
3,16 m	50	25
4 m	40	20
5 m	30	15

Designation / Dimensions	Order unit	Reference
Conveyor cut 100	1 cut	110.05.000B

Spacer Width 100

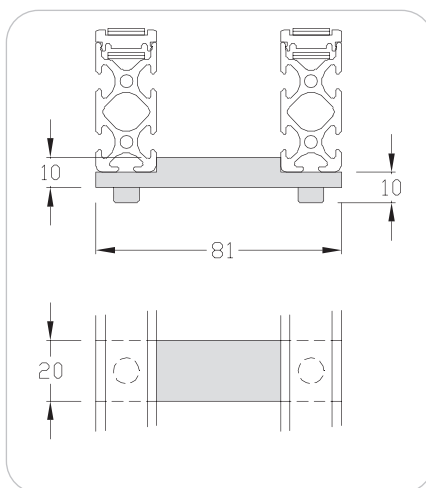
Applications

Spacers have to be fitted every 1 meter to ensure a perfect parallelism of profiles.

Technical data

✘ 1 aluminium part + fastening parts

Weight: 0,042 kg



Designation / Dimensions	Order unit	Reference
Spacer 100	1 pce	110.15.000

Caps Width 100

Applications

Allow to protect the direct driving and the idling unit. When using a cam, the opposite cap is delivered with the cam set.

Technical data

Cap 100 flat belt

x 2 parts, PE black + fastening parts

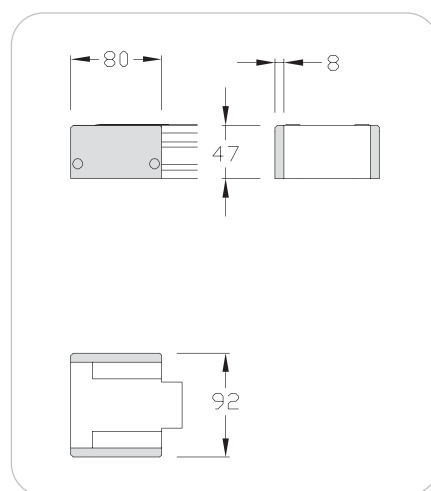
Cap for motorization 100 timing belt

x 1 part and 1 symmetrical part, PA black + fastening parts

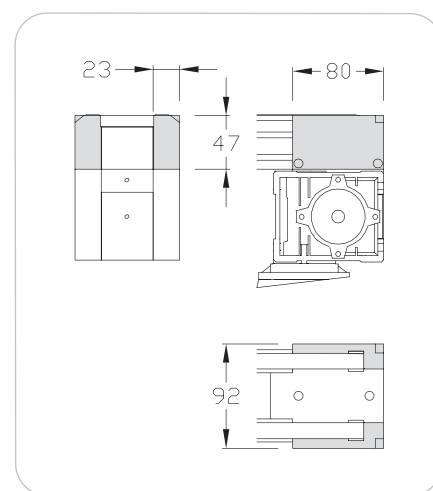
Cap for idling unit 100 timing belt

x 1 part and 1 symmetrical part, PA black + fastening parts

Weight: 0,07 kg



Flat belt



Timing belt

Designation / Dimensions	Order unit	Reference
Cap for motorization and idling unit 100	1 set	110.05.100
Cap for motorization 100 timing belt	1 set	110.50.100
Cap for idling unit 100 timing belt	1 set	110.50.200

Straight joinings Width 100

Applications

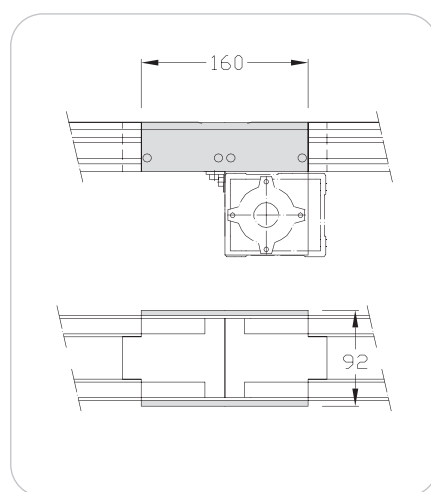
Allow to join end to end two conveying units.

Technical data

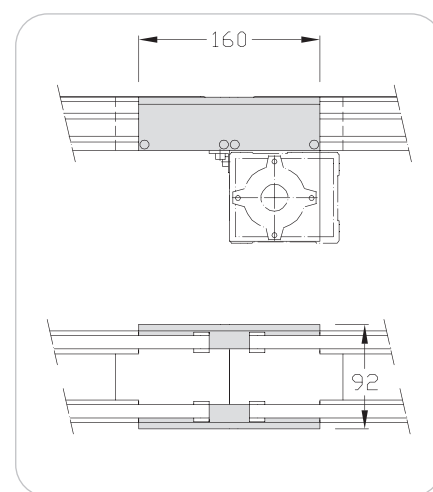
x Guide PA black

x Joining set aluminium

Weight: 0,16 kg



Flat belt



Timing belt

Designation / Dimensions	Order unit	Reference
Straight joining 100	1 set	110.18.000
Straight joining 100 timing belt	1 set	110.52.000

Half junction driving unit flat belt Width 100

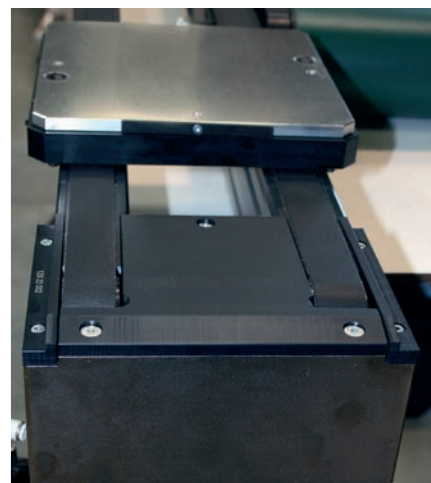
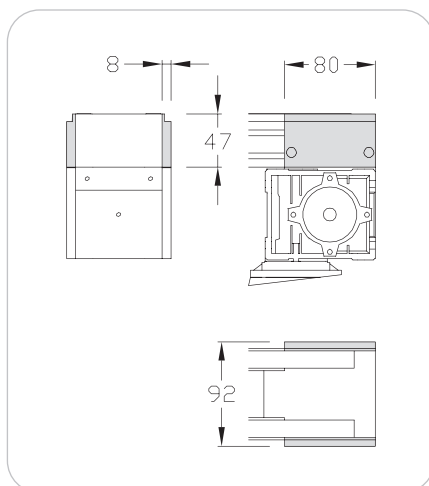
Applications

It allows a workpiece carrier to go out of the transfer line on the driving side.

Technical data

- x 2 parts, PE black
- x Fastening parts

Weight: 0,08 kg



Designation / Dimensions	Order unit	Reference
Half junction driving unit flat belt 100	1 set	110.40.100

Half junction idling unit flat belt Width 100

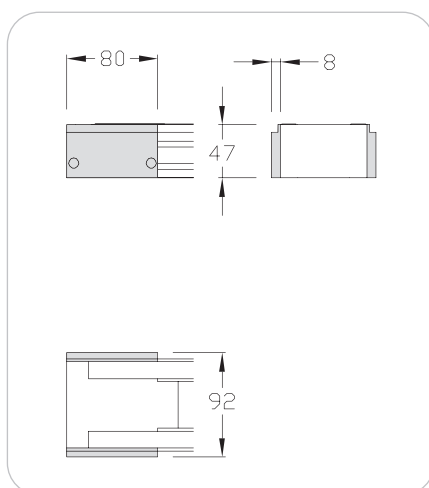
Applications

It allows a workpiece carrier to go out of the transfer line on the idling side.

Technical data

- x 2 parts, PE black
- x Fastening parts

Weight: 0,08 kg

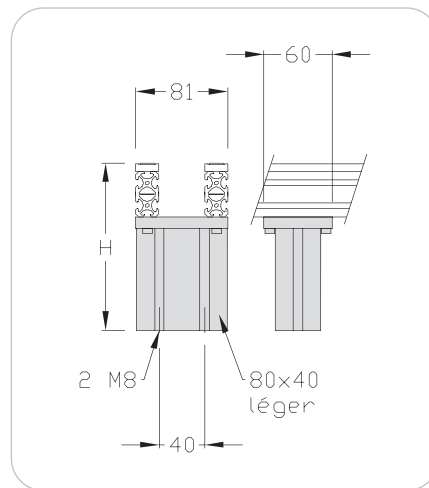


Designation / Dimensions	Order unit	Reference
Half junction idling unit flat belt 100	1 set	110.40.200

Conveying unit stand Width 100

Applications

Support to fit conveying units on table or frame.



Designation / Dimensions	Order unit	Reference
Conveying unit stand 100	1 set	110.16.000



Example of an application of conveying unit stands

Cams 90° Width 100

Applications

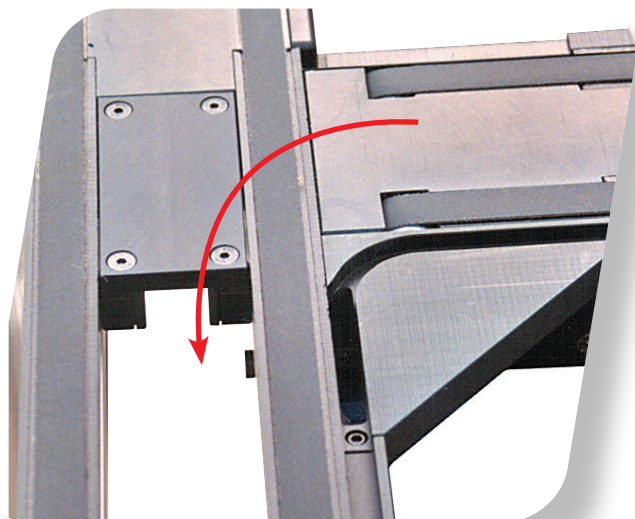
Cams ED, EG, SD, SG allow a perpendicular transfer of workpiece carriers from one conveying unit to the other without automatism.

The principle is the same for conveying units with flat belts and timing belts.

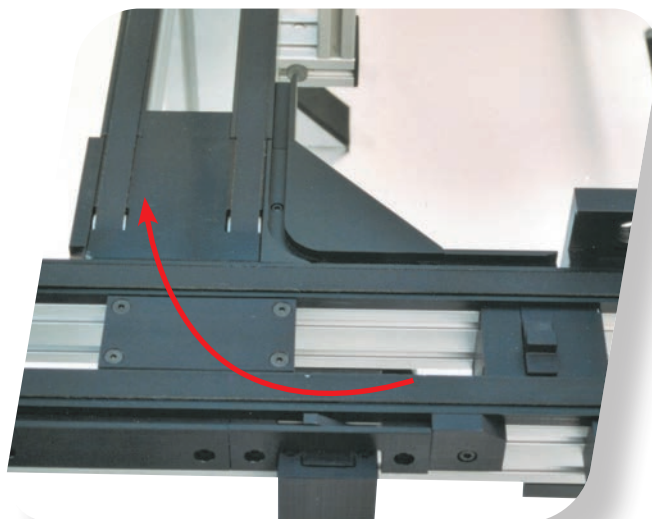
It's not possible as standard features, to set a cam between two different units.

The workpiece carrier is guided by the two inner pins, the outside pins are retracted. They are also used for derivations. For a good operating, the workpiece carrier which is coming in the cam mustn't be pushed by other workpiece carriers..

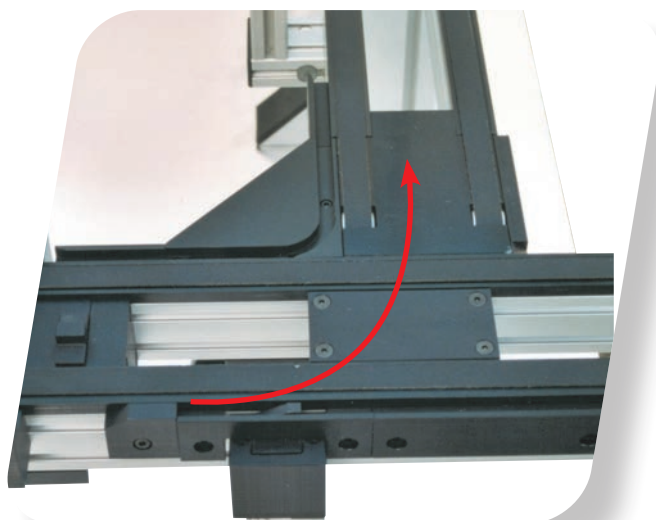
 **Do not accumulate the workpiece carriers in the cams.**



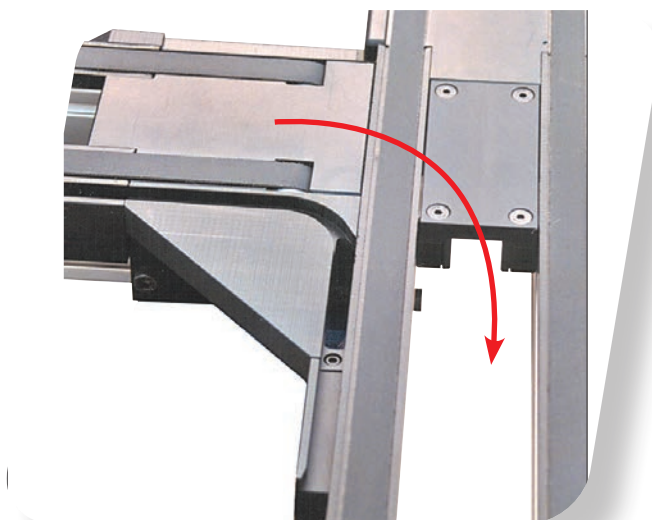
Cam 90° EG



Cam 90° SD



Cam 90° SG



Cam 90° ED

Cams 90° Width 100

Technical data

- ✗ Guiding cam and pin retracting plates, PA black
- ✗ Fastening parts
- ✗ Joining parts
- ✗ A cap for motorization or for idling unit

Various cams according to the length of workpiece carriers.

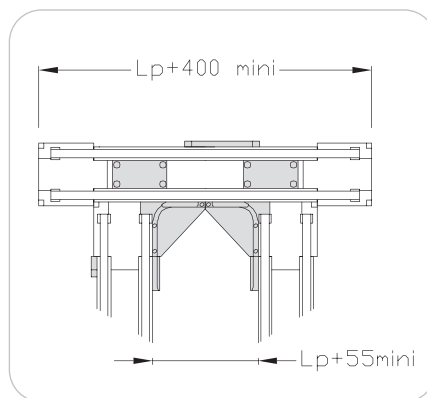
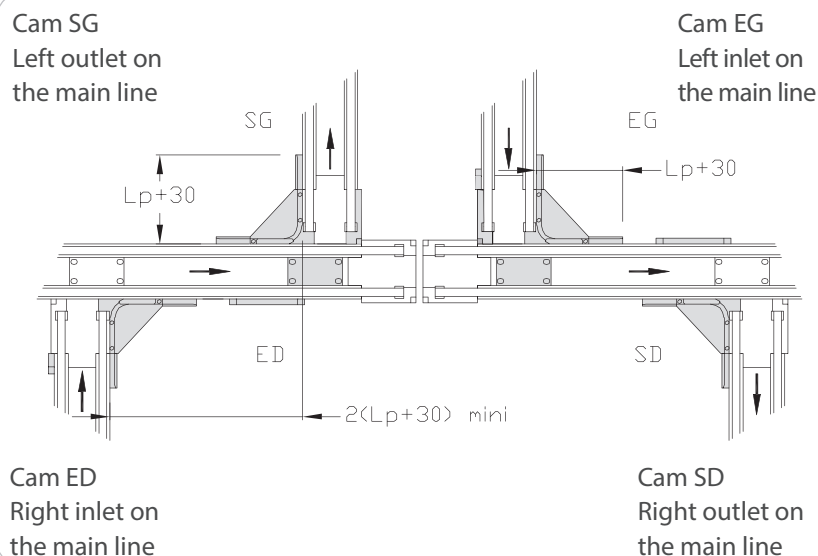
L_p = length of workpiece carriers

If a selection is necessary (derivation or not), add the derivation set.

Weight:

Cam 90° 100 : 0,42 kg

Cam 90° 150 : 0,45 kg



Designation / Dimensions	Order unit	Reference
Cam 90° ED 100	1 kit	110.04.100
Cam 90° EG 100	1 kit	110.04.200
Cam 90° SD 100	1 kit	110.04.300
Cam 90° SG 100	1 kit	110.04.400
Cam 90° ED 150	1 kit	115.04.100
Cam 90° EG 150	1 kit	115.04.200
Cam 90° SD 150	1 kit	115.04.300
Cam 90° SG 150	1 kit	115.04.400
Cam 90° ED 100 timing belt	1 kit	110.53.100
Cam 90° EG 100 timing belt	1 kit	110.53.200
Cam 90° SD 100 timing belt	1 kit	110.53.300
Cam 90° SG 100 timing belt	1 kit	110.53.400
Cam 90° ED 150 timing belt	1 kit	115.53.100
Cam 90° EG 150 timing belt	1 kit	115.53.200
Cam 90° SD 150 timing belt	1 kit	115.53.300
Cam 90° SG 150 timing belt	1 kit	115.53.400

Derivations Width 100

Applications

Derivations have to be used with a cam. They allow derivation or not of the workpiece carrier by retraction of the pins on one side or the other of the conveyor.

The two cylinders are controlled by only one solenoid valve.

Technical data

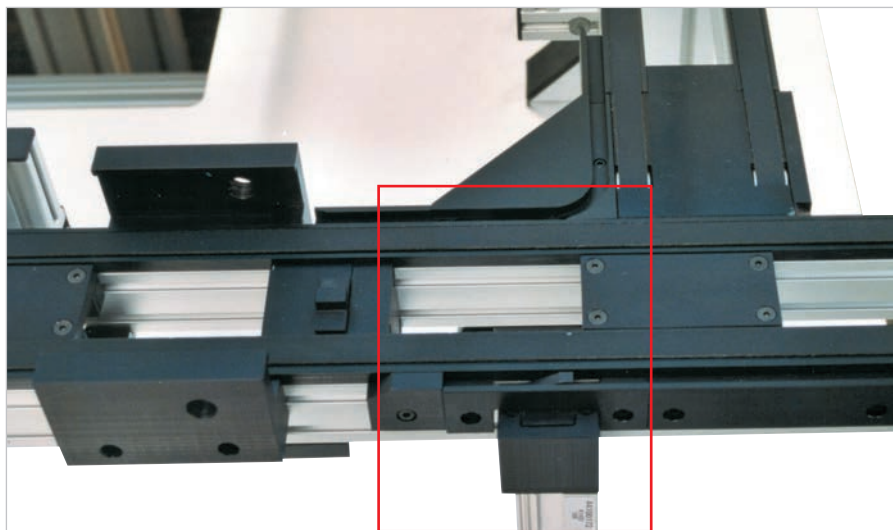
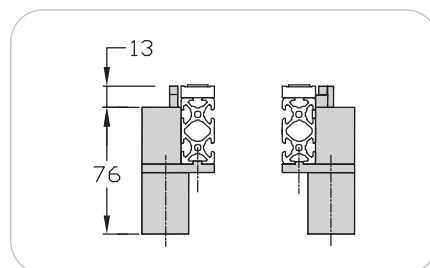
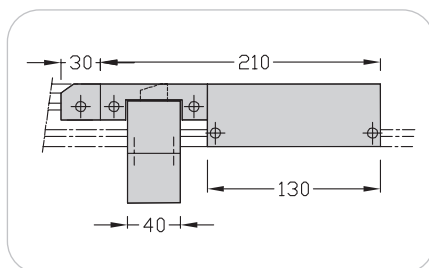
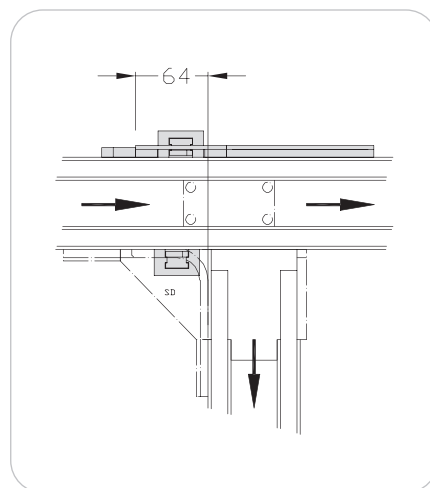
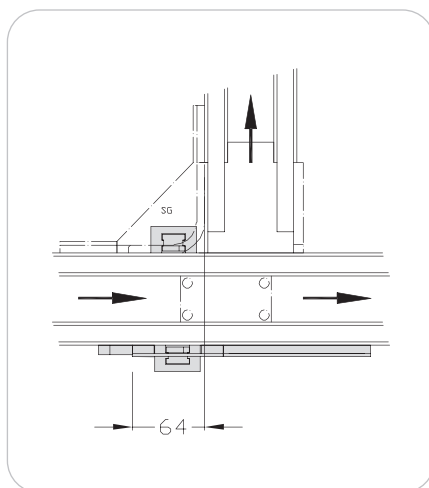
Ensemble comprenant :

- ✗ 2 plates Al
- ✗ 2 nuts 5 St M4
- ✗ 2 screws M4x10
- ✗ Body, levers and guides PA
- ✗ 2 cylinders \varnothing 16-5 M5, detectable positions



Cams are not included (to be ordered separately).

Weight: 0,4 kg



Designation / Dimensions	Order unit	Reference
Derivation 100 SD	1 kit	110.07.000
Derivation 100 SG	1 kit	110.13.000

Derivations 24 V Width 100

Applications

Necessarily combined with a cam, they allow the deviation of workpiece carriers, or not, by retracting the pins on one side or the other of the conveyor.

2 Brushless gear motors controlled by a control box ensure the movement.

A single output for logic controller is necessary.

Cams are not included.

Control module 24v output: automation, bus module, splitter,...

Standard connectors M12.

An extension for connection M8 male/female 3 pins between the motor and the control box is required.

Technical data

Complete set including:

- ✗ 2 plates Al
- ✗ 2 nuts 5 St M4
- ✗ 2 screws M4x10
- ✗ Body, levers and guides PA
- ✗ 2 gear motors 24 V

 **Cams are not included (to be ordered separately).**

Supply voltage of the control box:

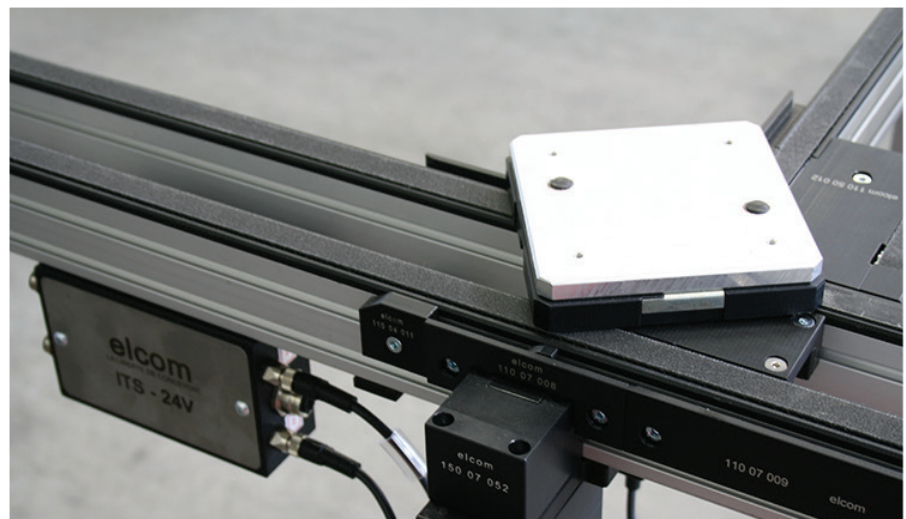
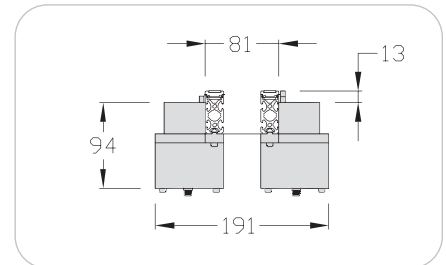
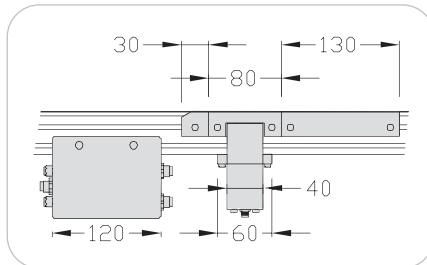
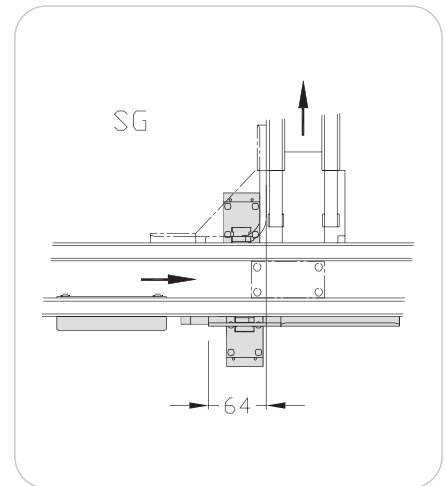
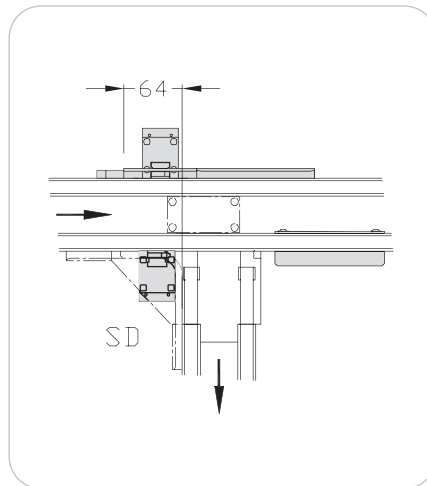
24 volt +/- 15%

Maximum power supply: 1,6 A

Control voltage: 24 volt +/- 10 %

Control current: 5 mA maxi

Weight: 0,8 kg



Designation / Dimensions	Order unit	Reference
Derivation 24 V 100 SD	1 kit	110.07.000.E
Derivation 24 V 100 SG	1 kit	110.13.000.E

Stoppers simple effect - double effect Width 100

Applications

Stop workpiece carriers during processing requiring no accuracy. Stopping the workpiece carriers in order to respect conveying priorities at the end of the derivation.

Stopper simple or double effect, supplied with lateral guides, sensor bracket for detection of workpiece carriers.

The anti bouncing back is integrated in the lateral guides.

Technical data

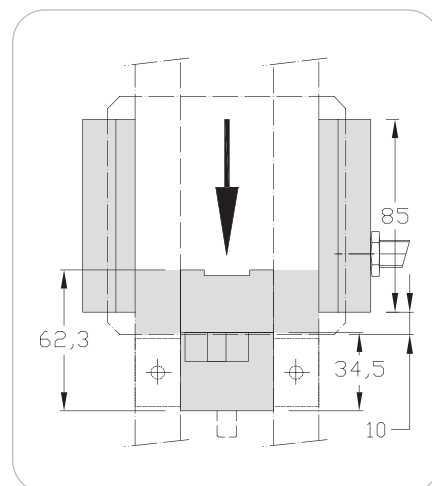
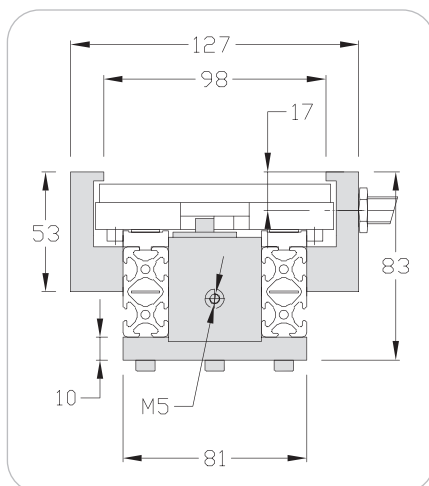
- ✗ Plate, al black
- ✗ Body and stopper PA
- ✗ Nuts 5 St M5 + screws
- ✗ Hole for shielded mounting sensor M12x100
- ✗ Detection range: 4 mm

Maximum load : 10 daN
(in accumulation)



Flow rate controller M5 should be adapted

Weight: 0,14 kg



Designation / Dimensions	Order unit	Reference
Stopper 100 simple effect	1 pce	110.02.000
Stopper 100 double effect	1 pce	110.22.000

Stopper, damped, pneumatic Width 100

Applications

Stop workpiece carriers requiring no positioning accuracy.

Shock reduction between the workpiece carrier and the stopper thanks to the adjustable damped function.

Pneumatic control of the stopper, spring return.

Supplied with lateral guides and sensor bracket for workpiece carriers.

Technical data

Complete set including:

- ✗ Stopper
- ✗ Stopper bracket
- ✗ Sensor bracket
- ✗ Screws and nuts

Maximum load/workpiece carrier (workpiece carrier included):

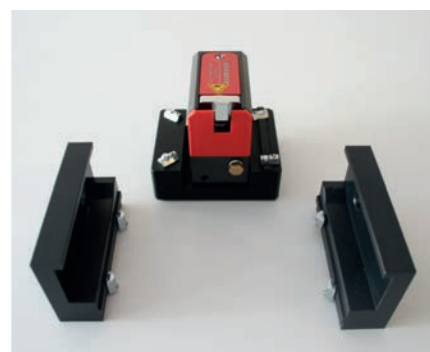
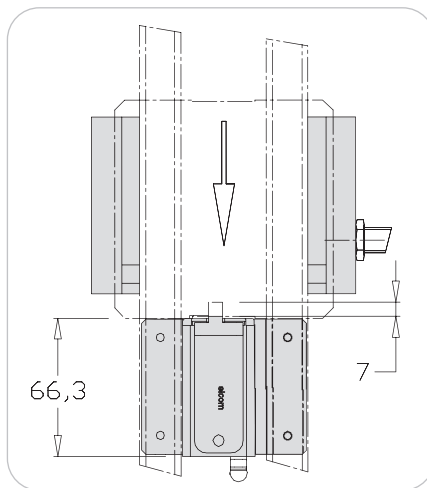
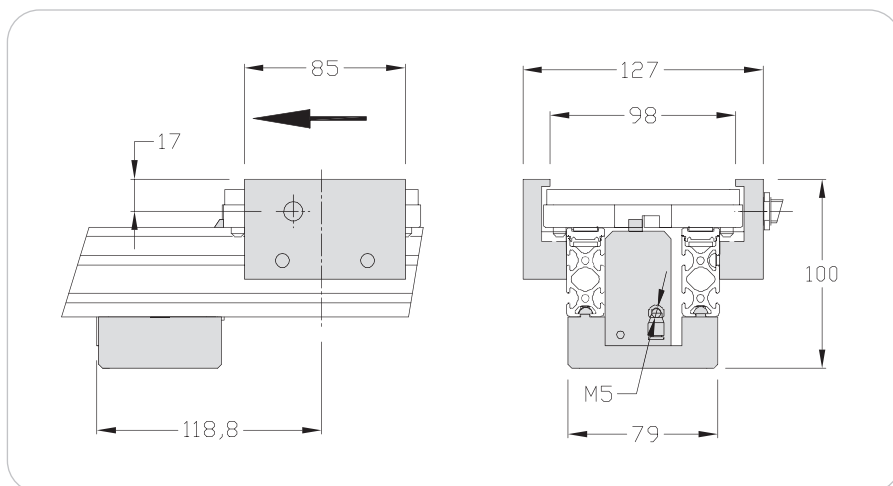
- 10 m/min: 9,5 kg
- 12 m/min: 9 kg
- 15 m/min: 8 kg
- 16 m/min: 7,5 kg
- 20 m/min: 6,5 kg

Air consumption: 0.036 l to 6 bars.
 Operating pressure: 4 to 8 bars.
 Longitudinal damping stroke: 7 mm



1 connection M5 for the stopper is required.

Weight: 0,82 kg



Designation / Dimensions	Order unit	Reference
Stopper 100, damped, pneumatic	1 pce	110.45.000.RAP

Stopper 24 V Width 100

Applications

It stops workpiece carriers requiring no accuracy during processing, perfectly adapted to manual work stations. Workpiece carriers are stopped to respect conveying priorities at the end of the derivation.

Simple effect stopper with spring return. Supplied with lateral guides and sensor bracket for the detection of workpiece carriers.

A Brushless gear motor controlled by a control box ensures the change in position.

A single output for logic controller is necessary.

Control module 24 V output: automation, bus module, splitter, ... Standard connectors M12.

An extension for connection M8 male/female 3 pins between the motor and the control box is required.

The anti-bouncing back part is integrated into the lateral guides.

Technical data

- ✗ Plate, stainless steel
- ✗ Body and stopper PA
- ✗ Nuts 5 St M5 + screws
- ✗ Hole for shielded sensor M12x100
- ✗ Detection range: 4 mm

Supply voltage of of the control box:

24 VDC +/- 15%

Maximum power supply: 0.9 A

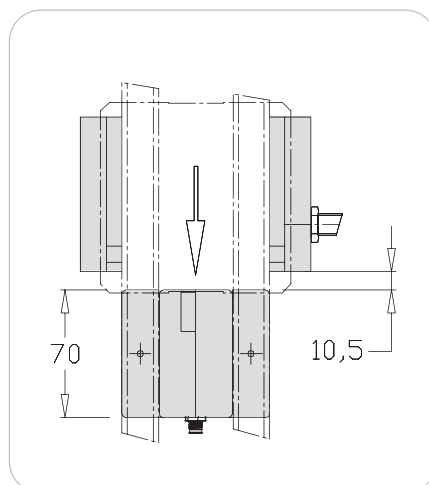
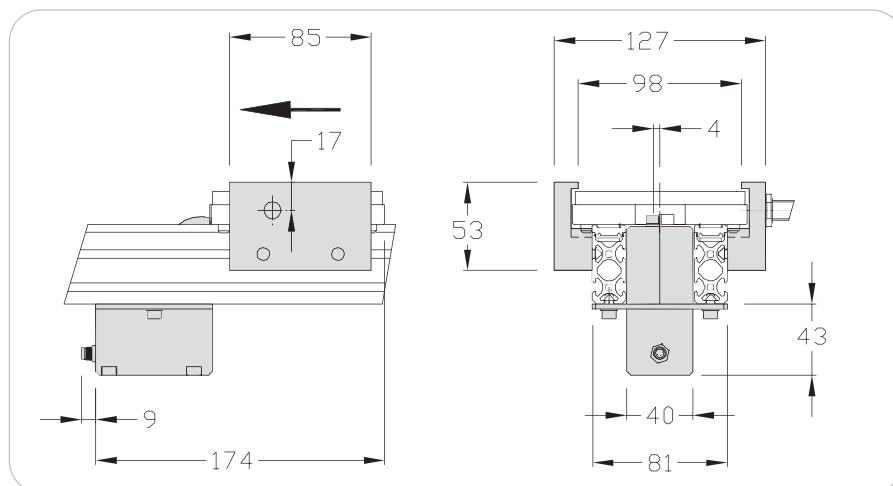
Control voltage: 24 VDC +/- 10 %

Control current: 5 mA maxi

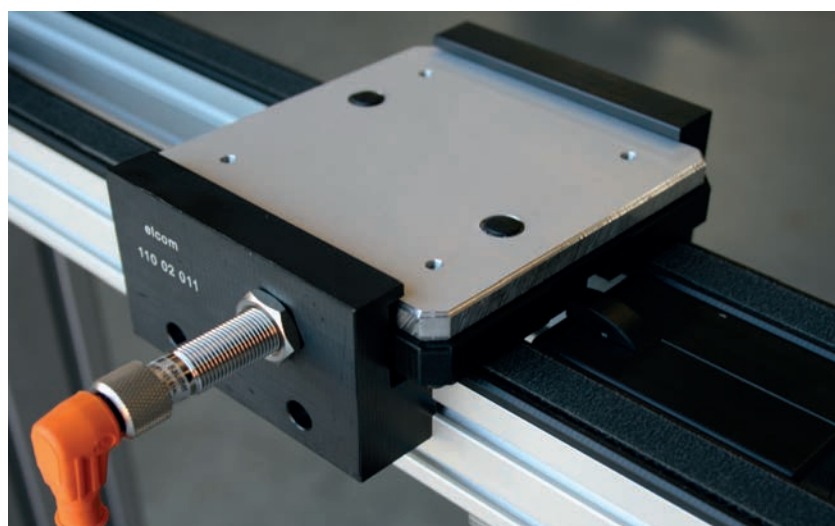
Maximum load : 15 daN

(in accumulation)

Weight: 0,6 kg



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Designation / Dimensions	Order unit	Reference
Stopper 24 V 100	1 pce	110.02.000.E

Applications TLM 1000



Positioning units

Stopping and positioning workpiece carriers for operations requiring accuracy.

The workpiece carrier is stopped, then lifted off the belts and positioned by a pin / locating system.

An automatic stopper is available for some positioning units. The vertical movement of the positioning unit plate unlocks the stopper.

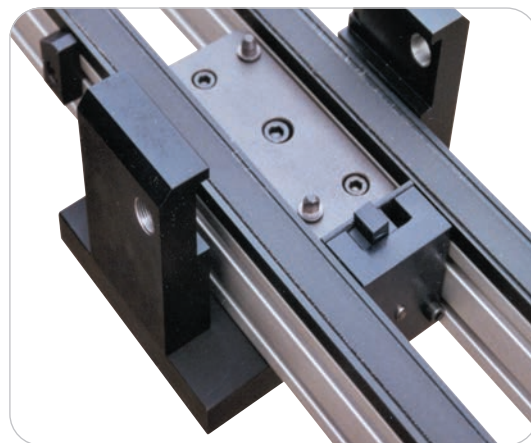
All workpiece carriers must be stopped and the positioning unit plate must go up every cycle to liberate the workpiece carrier.

Positioning units

The positioning unit is directly fitted on the conveying units.

3 possibilities: automatic stopper, simple effect stopper and double effect stopper.

Depending on the application, it is possible to choose the type of required control.

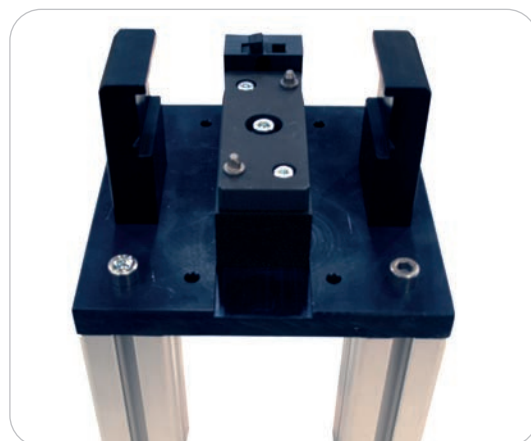


Positioning units for station

They are fixed to a table or a frame to assure accuracy with the other surrounding elements.

A positioning set is necessary for operations requiring accuracy.

3 possibilities: automatic stopper, simple effect stopper and double effect stopper.

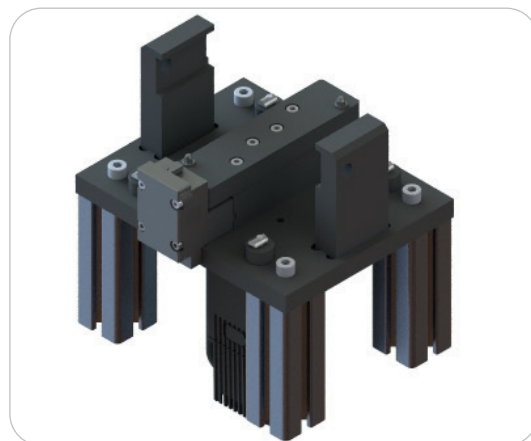


Positioning unit for station 24 V Automatic stopper



It is fixed to a table or a frame to ensure accuracy with the other peripheral elements. A positioning kit is required for accurate operations.

The stopper of workpiece carriers is positioned by the vertical movement (unnecessary stopper control). A Brushless gear motor ensures the control of the stopper and the positioning unit. Irreversible system.

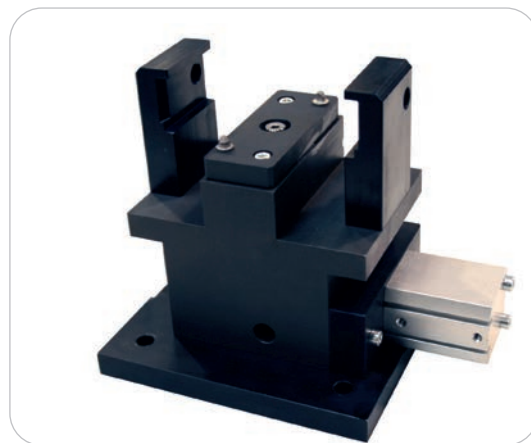


Positioning units, heavy

For operations requiring accuracy and involving important strain (up to 500 daN) at the centre of the workpiece carrier.

The positioning unit must be fixed on a frame capable of supporting the strain applied.

3 possibilities: automatic stopper, simple effect stopper and double effect stopper.

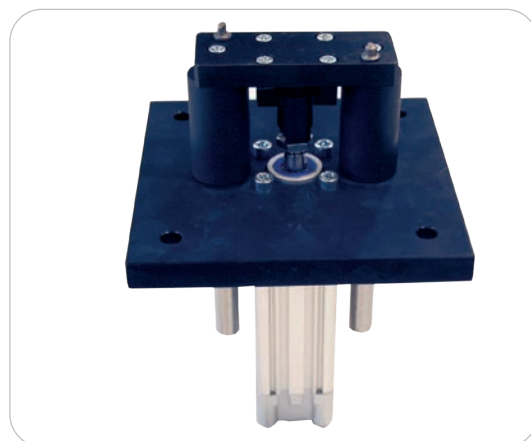


Positioning units, lift

Stop and positioning of workpiece carriers at a significant height above the conveyor.

The workpiece carrier is stopped, then elevated to a specific height, while being held by two centering pieces. An upstream stopper is required.

2 possibilities: simple effect stopper, double effect stopper.

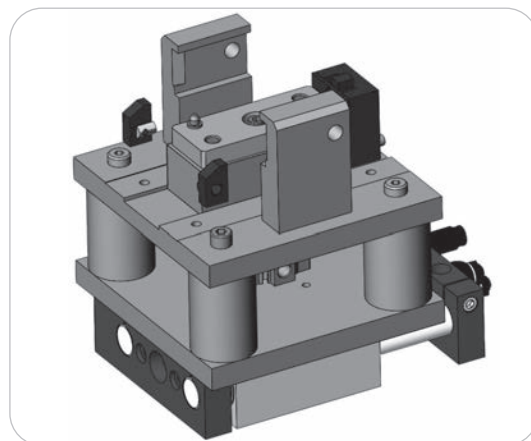


Multi-positioning unit

Allow two accurate positionings of the workpiece carrier at the same station. An upstream stopper is required.

1 possibility: automatic stopper.

On request: possibility to make a positioning unit with more positions.



Positioning units Width 100

Technical data

Complete set including:

- ✗ Stopper
- ✗ Positioning unit
- ✗ 1 double effect cylinder ø 32, detectable positions
- ✗ Holes for shielded mounting sensor M12x 100
- ✗ Detection range: 4 mm

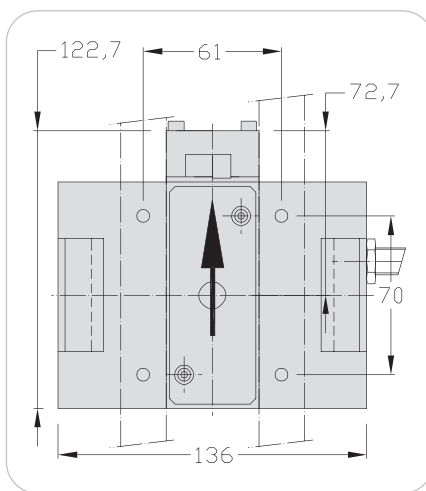
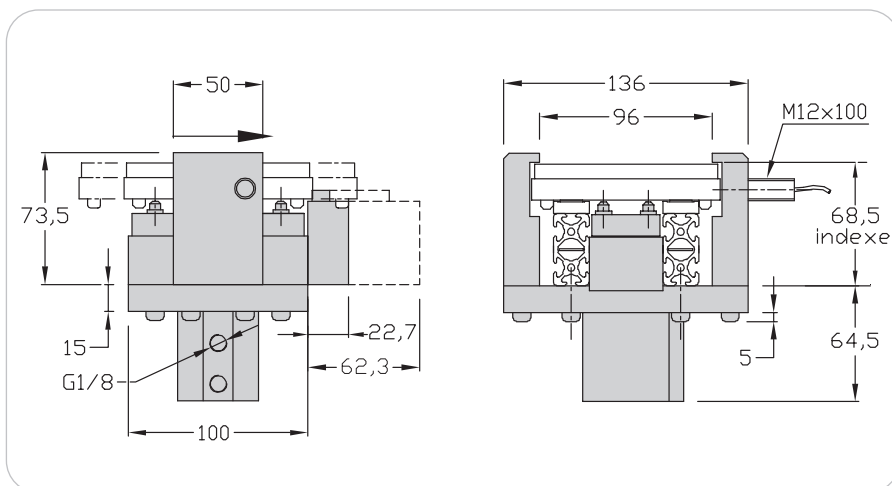
Maximum vertical strain: 40 daN for a pressure of 6 bars

Repeatability: +/- 0,03 mm

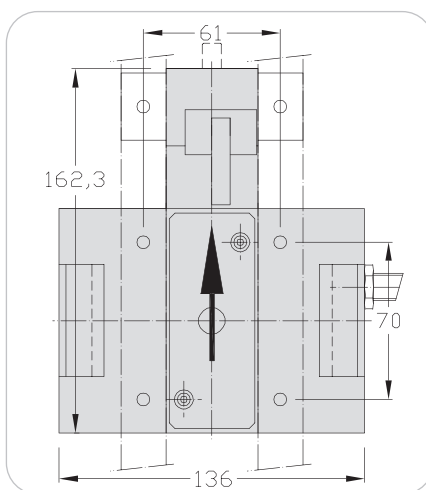


2 flow rate controllers G 1/8 for positioning unit cylinder and controllers for the stopper should be adapted.

Weight: 2 kg



Positioning unit 100 with automatic stopper



Positioning unit 100 with simple effect or double effect stopper

Designation / Dimensions	Order unit	Reference
Positioning unit 100	1 pce	110.09.000
Positioning unit 100 simple effect stopper	1 pce	110.24.000
Positioning unit 100 double effect stopper	1 pce	110.25.000

Positioning unit, damped pneumatic stopper Width 100

Technical data

Complete set including:

- ✘ Stopper
- ✘ Positioning unit
- ✘ 1 double effect cylinder $\varnothing 32$, detectable positions
- ✘ Holes for shielding mounting sensors M12x100
- ✘ Detection range: 4 mm
- ✘ Fastening parts

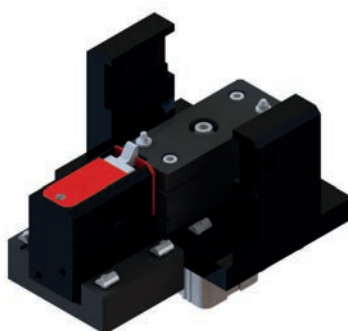
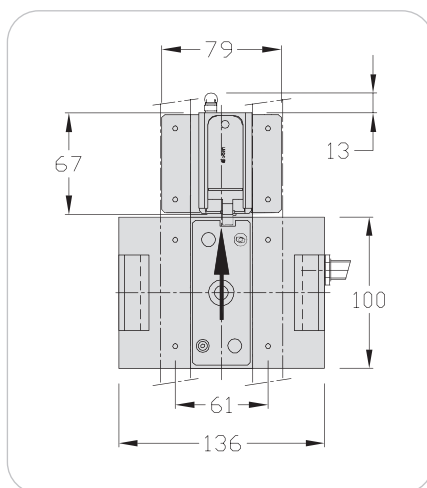
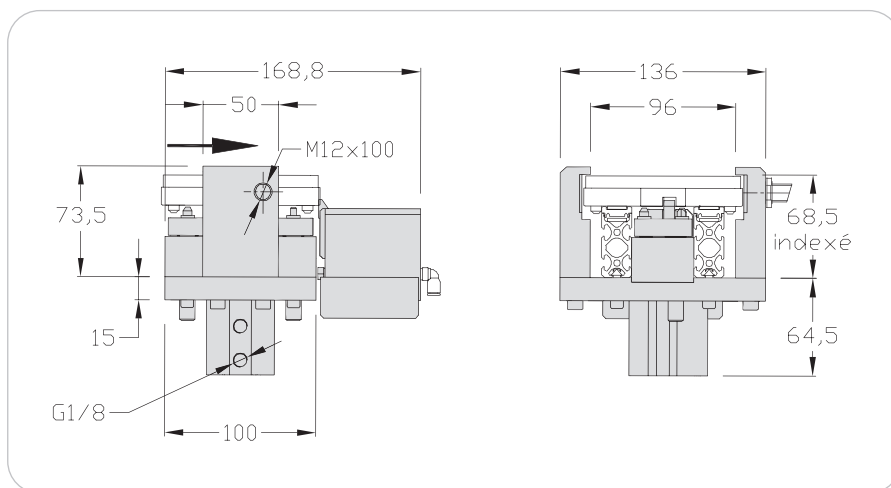
Maximum vertical strain: 40 daN to 6 bars

Repeatability: +/- 0,03 mm



2 flow rate controllers G 1/8 for the cylinder of the positioning unit + 1 connection M5 for the stopper are required.

Weight: 2,5 kg



Designation / Dimensions	Order unit	Reference
Positioning unit 100 damped pneumatic stopper	1 pce	110.24.000.RAP

Positioning units for station Width 100

Technical data

Complete set including:

- ✘ Stopper
- ✘ Positioning unit
- ✘ 1 double effect cylinder ø 32, detectable positions
- ✘ Holes for shielded mounting sensor M12x100
- ✘ Detection range: 4 mm
- ✘ 4 supports in profile 40x40
- ✘ Fastening elements

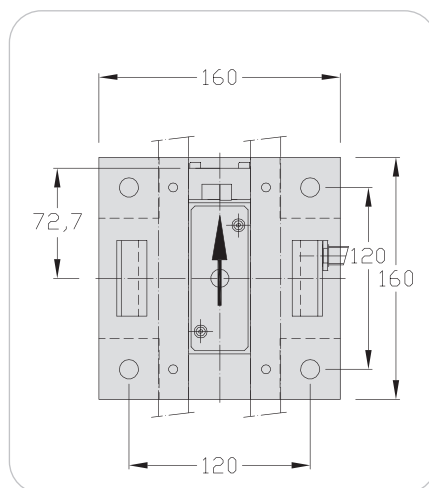
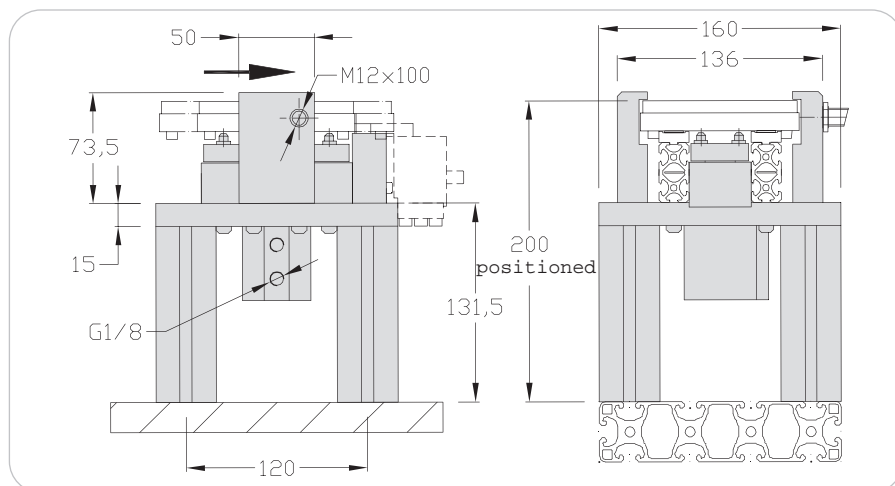
Maximum vertical strain: 40 daN for a pressure of 6 bars.

Repeatability: +/- 0,03 mm

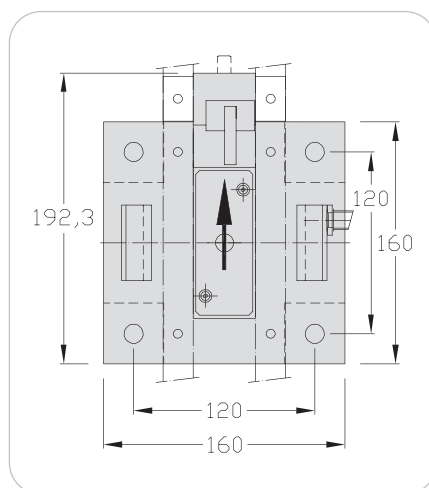


2 flow rate controllers G 1/8 for positioning unit cylinder and controllers for the stopper should be adapted.

Weight: 3,4 kg



Positioning unit for station 100 with automatic stopper



Positioning unit for station 100 with simple effect or double effect stopper

Designation / Dimensions	Order unit	Reference
Positioning unit for station 100	1 pce	110.10.000
Positioning unit for station 100 simple effect	1 pce	110.26.000
Positioning unit for station 100 double effect	1 pce	110.27.000

Positioning unit for station, damped pneumatic stopper Width 100

Technical data

Complete set including:

- ✗ Stopper
- ✗ Positioning unit
- ✗ 1 double effect cylinder \varnothing 32, detectable positions
- ✗ Holes for shielding mounting sensors M12x100
- ✗ Detection range: 4 mm
- ✗ 4 profile stand 8 40x40
- ✗ Fastening parts

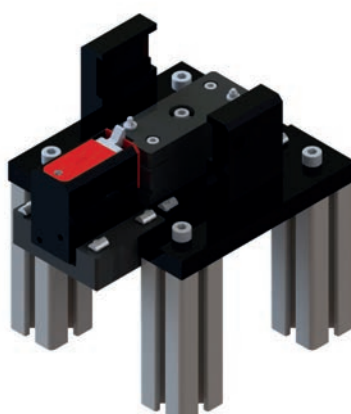
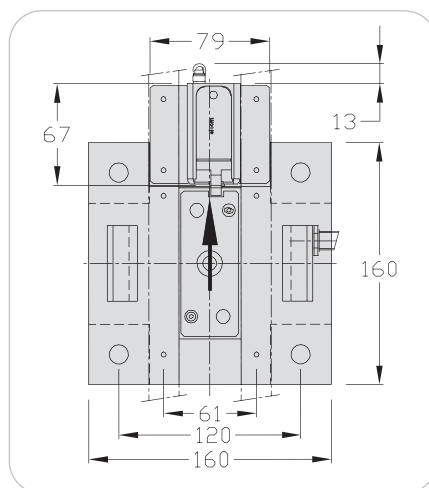
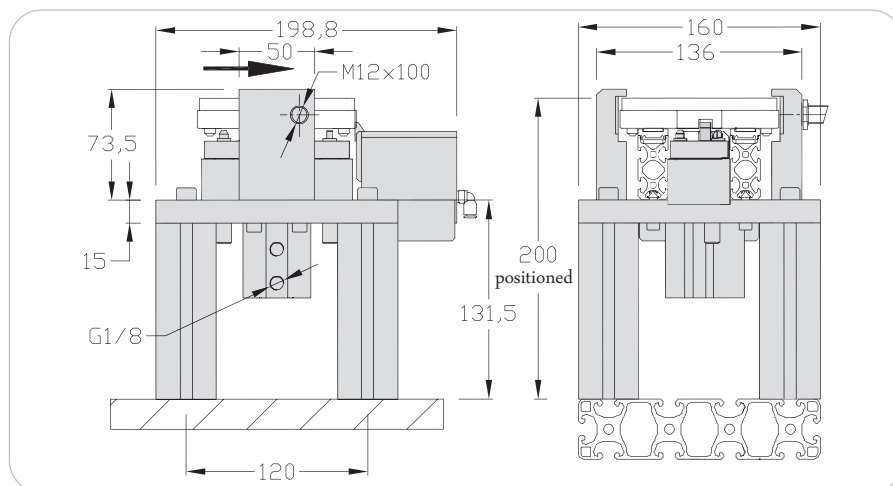
Maximum vertical strain: 40 daN to 6 bars

Repeatability: +/- 0,03 mm



2 flow rate controllers G 1/8 for the cylinder of the positioning unit + 1 connection M5 for the stopper are required.

Weight: 3,7 kg



Designation / Dimensions	Order unit	Reference
Positioning unit for station 100 damped pneumatic stopper	1 pce	110.26.000. RAP

Positioning unit for station 24 V Automatic stopper Width 100

Technical data

Complete set including:

- ✗ 1 gear motor 24 V
- ✗ Vertical movement provided by an irreversible screw-nut system
- ✗ Vertical position controlled by encoder
- ✗ Housing for shielded mounting sensors M12x100
- ✗ Detection range: 4 mm
- ✗ 4 profile stands 8 40x40
- ✗ Fastening parts

Maximum vertical strain: 100 daN.

Repeatability: +/- 0.03 mm

Motor supply voltage: 24 VDC

Motor supply current: 5 A

Control voltage: 24 VDC

Control current: 10 mA

5 positioning input status

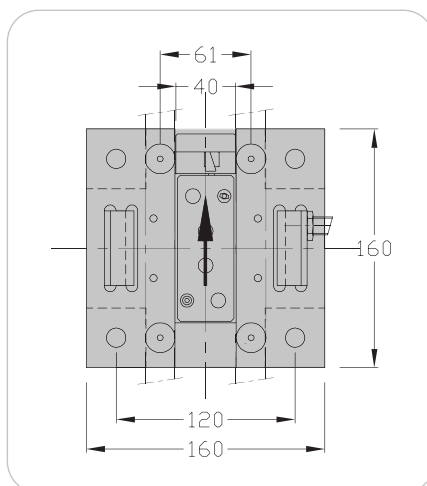
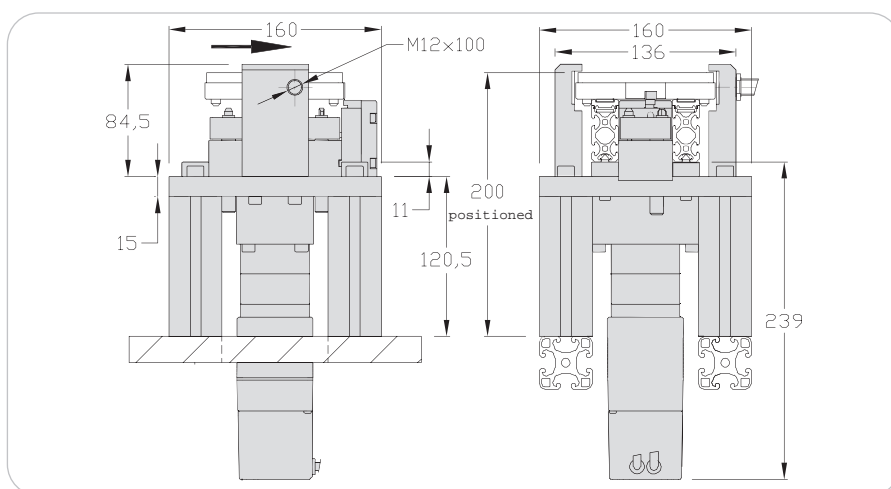
4 output status

The stopper of workpiece carriers is positioned by the vertical movement (unnecessary stopper control).

A Brushless gear motor ensures the control of the stopper and the positioning unit.

Irreversible system.

Weight: 7 kg



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Designation / Dimensions	Order unit	Reference
Positioning unit for station 24 V 100 Automatic stopper	1 pce	110.10.000.E

Positioning units heavy Width 100

Technical data

Complete set including:

- ✘ Stopper
- ✘ Positioning unit
- ✘ 1 double effect cylinder $\varnothing 25$, detectable positions
- ✘ Holes for shielded mounting sensor M12x100
- ✘ Detection range: 4 mm

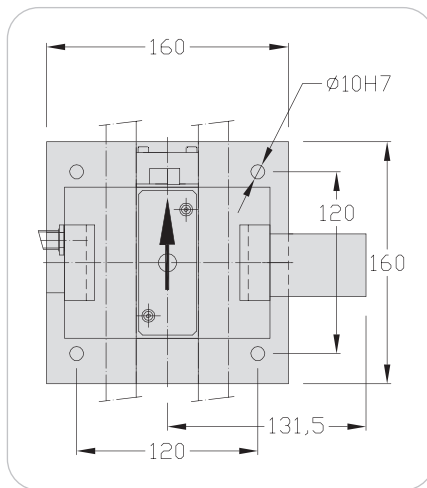
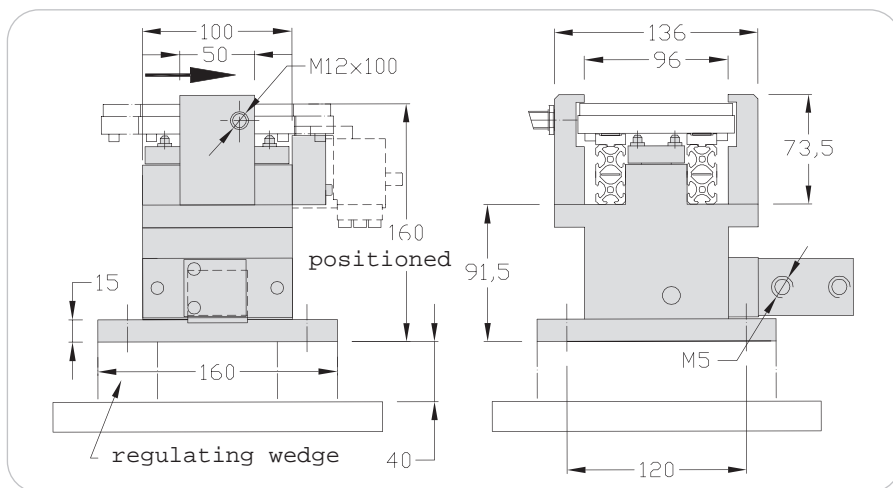
Maximum vertical strain: 500 daN at the centre of the workpiece carrier.

Repeatability: +/- 0,03 mm

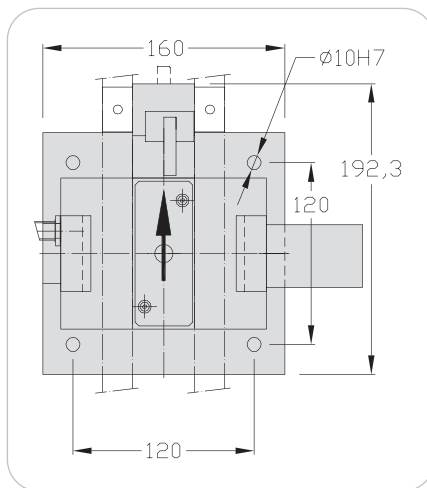


2 flow rate controllers M5 for positioning unit cylinder and controllers for the stopper should be adapted.

Weight: 8,7 kg



Positioning unit, heavy 100 with automatic stopper



Positioning unit, heavy 100 with simple effect or double effect stopper

Designation / Dimensions	Order unit	Reference
Positioning unit heavy 100	1 pce	110.11.000
Positioning unit heavy 100 simple effect	1 pce	110.28.000
Positioning unit heavy 100 double effect	1 pce	110.29.000

Positioning unit heavy, damped pneumatic stopper Width 100

Technical data

Complete set including:

- ✘ Stopper
- ✘ Positioning unit
- ✘ 1 pneumatic cylinder double effect
ø 25, detectable positions
- ✘ Holes for shielding mounting
sensors M12x100
- ✘ Detection range: 4 mm

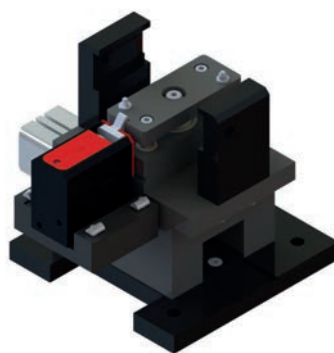
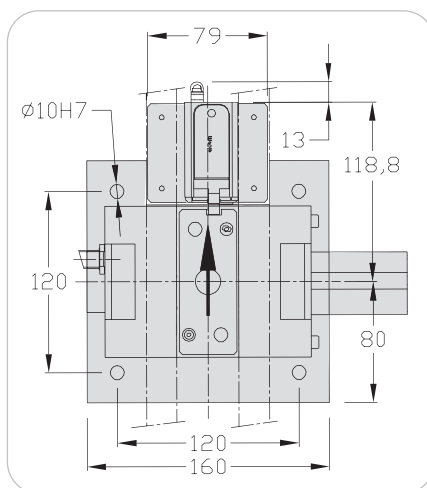
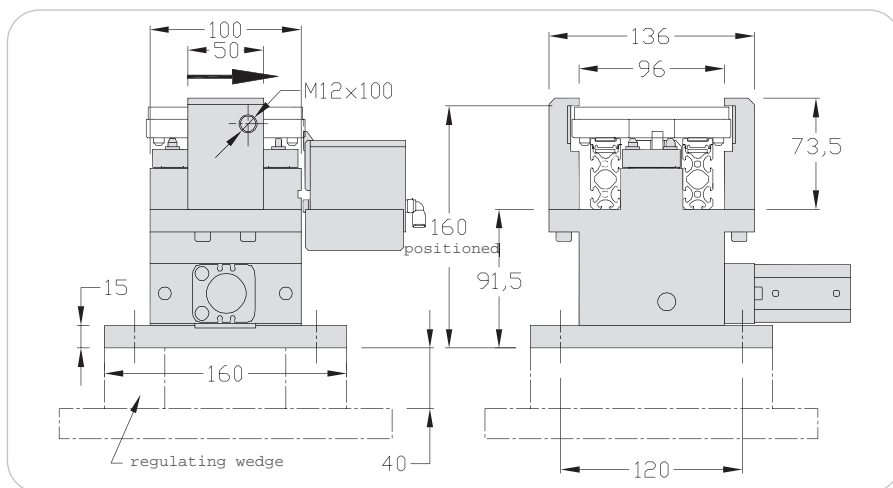
Maximum vertical strain: 500 daN
at the center of the workpiece carrier.

Repeatability: +/- 0,03 mm



2 flow rate controllers G 1/8 for the cylinder of the positioning unit + 1 connection M5 for the stopper are required.

Weight: 9 kg



Designation / Dimensions	Order unit	Reference
Positioning unit heavy 100 damped pneumatic stopper	1 pce	110.28.000.RAP

Positioning units lift Width 100

Technical data

Complete set including:

- ✗ Impulse controlled stopper and anti bouncing back devices
- ✗ 1 double effect cylinder $\varnothing 32$
- ✗ Ball bearing guide bush $\varnothing 14$
- ✗ 1 bracket support for shielded mounting sensor M12x100
- ✗ Detection range: 4 mm

Available cylinder strokes:
25-50-100-160-200 mm

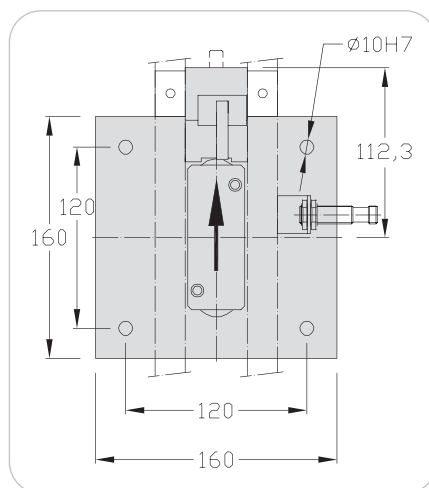
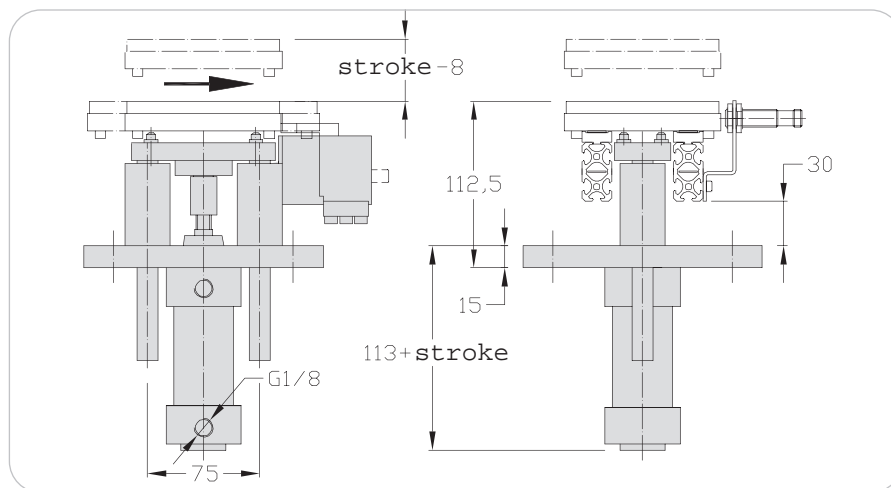
Maximum vertical strain: 40 daN

Repeatability: +/- 0,06 mm

A stopper located before the lift unit is generally necessary to avoid the arrival of another workpiece carrier during lifting.



2 flow rate controllers G 1/8 for positioning unit cylinder and controllers M5 for the stopper should be adapted.



Weight: 3,4 kg

Designation / Dimensions	Order unit	Reference
Positioning unit lift 100 simple effect	1 pce	110.12.000
Positioning unit lift 100 double effect	1 pce	110.31.000

(** = strokes: 25, 50 or 100 eg: 110.12.000.050)

Positioning unit lift, damped pneumatic stopper Width 100

Technical data

Complete set including:

- x Stopper
- x 1 double effect cylinder \varnothing 32
- x 1 ball bearing guide bush \varnothing 14
- x 1 bracket for shielded mounting sensor M12x10
- x Detection range: 4 mm

Available cylinder strokes:
25 - 50 - 100 - 160 - 200 mm

Maximum vertical strain: 40 daN

Repeatability: +/- 0,06 mm

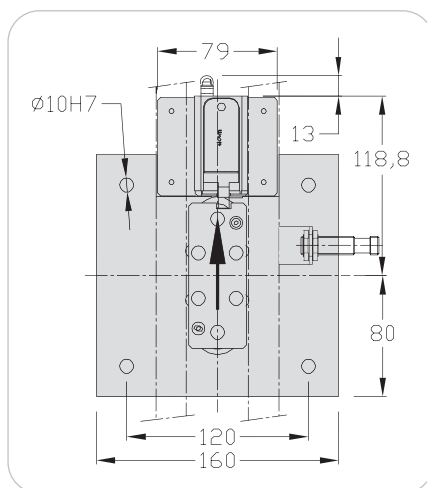
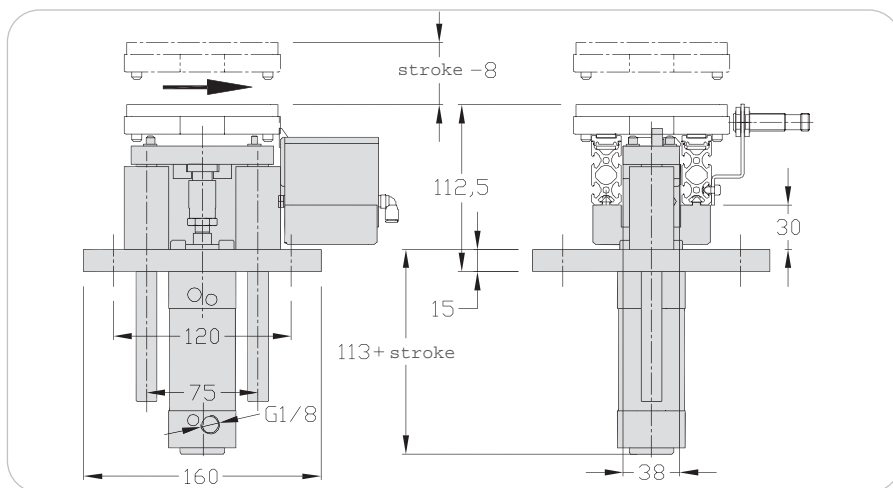


An upstream stopper is required to prevent the inlet of a workpiece carrier during the lifting.



2 flow rate controllers G 1/8 for the cylinder of the positioning unit + 1 connection M5 for the stopper are required.

Weight: 3,7 kg



Designation / Dimensions	Order unit	Reference
Positioning unit lift 100 damped pneumatic stopper	1 pce	110.12.000.RAP

Dead man option, Positioning unit lift Width 100

This option is available for all lift positioning units width 100 (references 110.12.000 - 110.12.000. RAP - 110.31.000).

The dead man option is used to lock the positioning unit, lift, in case of air cut-off and therefore avoid the lowering of the load.

Locking by springs.

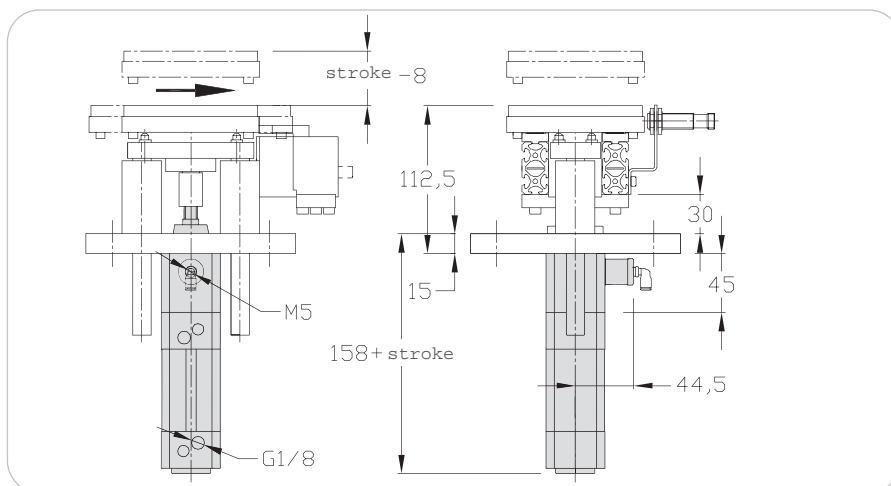
Retaining force: 600 N

Useful pressure range: 6 bars.



2 flow rate controllers G 1/8 + 1 connection M5 are required.

Weight: 1,25 kg (stroke 200).



Designation / Dimensions	Order unit	Reference
Dead man option, Positioning unit lift 100	1 pce	110.75.000

Multi-positioning unit Width 100

Technical data

Complete set including:

- ✘ Automatic stopper
- ✘ Positioning unit 100
- ✘ Slide PS 20
- ✘ Strokes: 50-100 or 200

The slide is fitted with shock absorbers and stop screws with integrated sensors.

Maximum vertical strain:
 stroke 50 or 100: 40 daN
 stroke 200: 20 daN

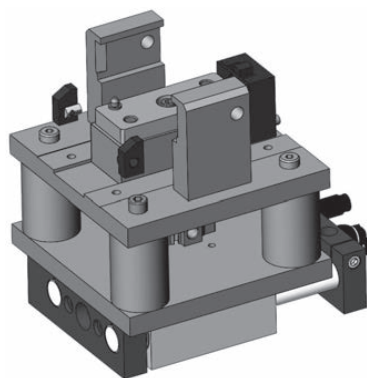
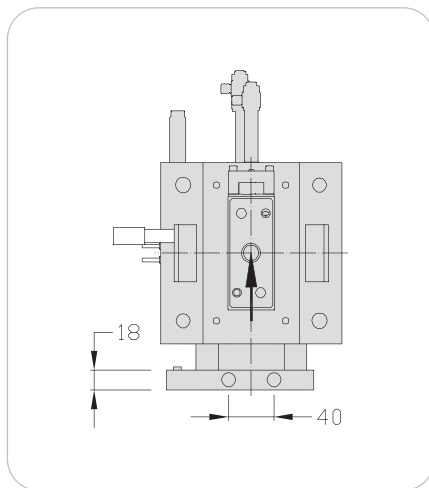
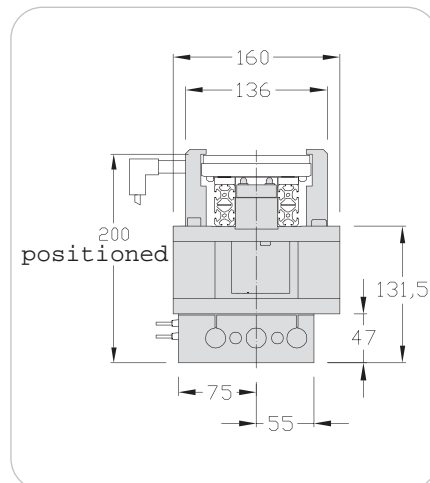
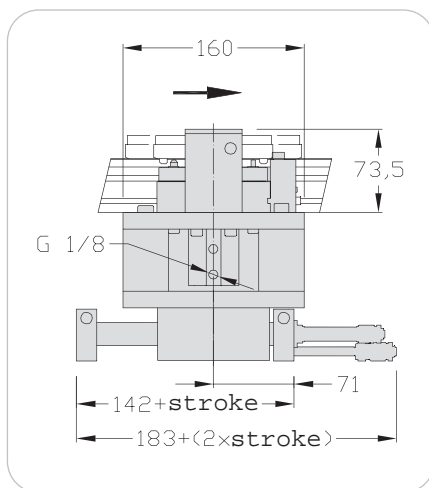
Repeatability: +/- 0,04 mm

A stopper located before the lift unit is generally necessary to avoid the arrival of another workpiece carriers during the slide moving.

Different multi-positioning units on request.

⚠ 2 flow rate controllers G 1/8 for positioning unit cylinder should be adapted

Weight: 7,4 kg



Designation / Dimensions	Order unit	Reference
Multi-positioning unit 100	1 pce	110.19.000.***

(*** = strokes 50 - 100 - 200 eg: stroke 50 110.19.000.050)

90° swivelling Width 100

Applications

90° swivelling of workpiece carriers by blocking and retracting the pins.

It is necessary to associate two 90° swivellings to have a 180° swivelling

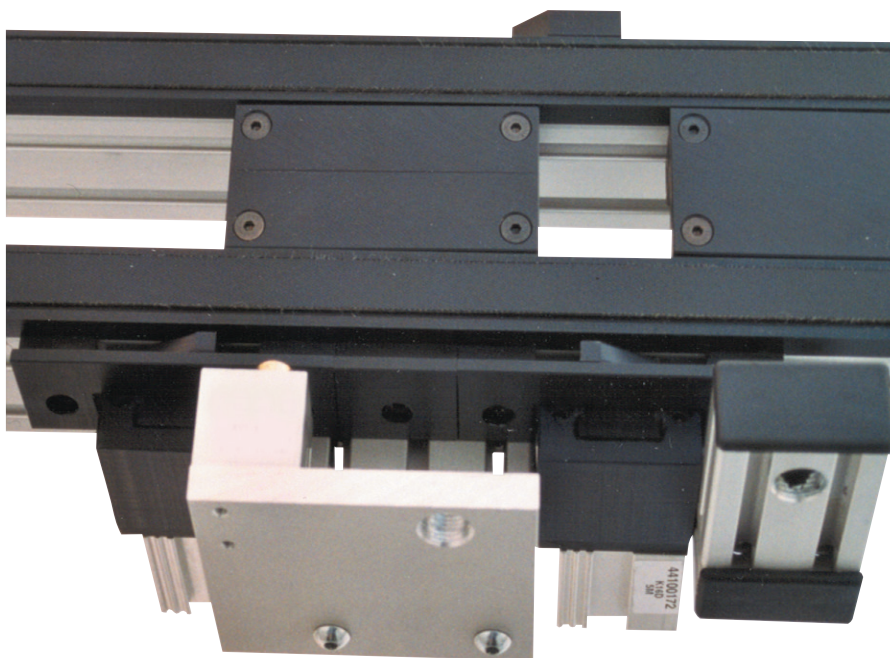
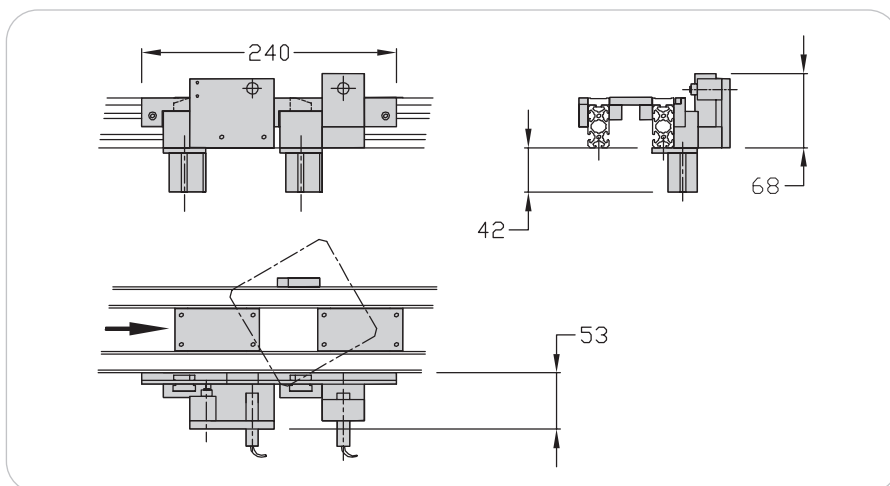
Technical data

- ✗ Plates and guides, PA black
- ✗ 2 cylinders \varnothing 16-5 (M5)
- ✗ 2 bracket supports for shielded mounting sensor M12x100
- ✗ 1 cylinder \varnothing 12-10 M5

Minimum load on the workpiece carrier: 0,3 daN

A stopper located before the swivelling unit is generally necessary to avoid the arrival of another workpiece carrier during swivelling.

Weight: 1,8 kg



Designation / Dimensions

90° swivelling 100

Order unit

1 set

Reference

110.14.000

Sensor bracket M12x100

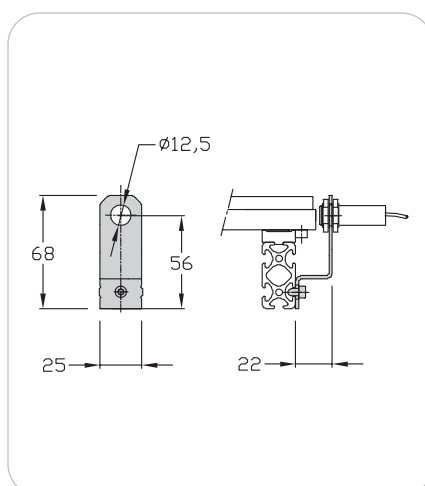
Applications

Bracket for workpiece carrier M12x100 sensor.

Technical data

- ✘ Stainless steel 2 mm
- ✘ Nut 5 St M4 + screws
- ✘ Detection range: 4 mm

Weight: 0,035 kg



Designation / Dimensions	Order unit	Reference
Sensor bracket 100	1 pce	110.17.000

Anti bouncing back

Applications

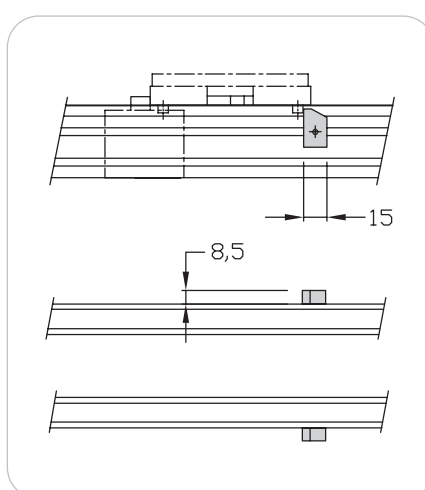
Avoids workpiece carrier bouncing back on stoppers or positioning units in case of high speed.

Allows to reduce the changing time of workpiece carrier in the positioning unit.

Technical data

- ✘ Parts, PA black
- ✘ Fastening parts

Weight: 0,1 kg



Designation / Dimensions	Order unit	Reference
Anti bouncing back	1 kit	110.30.000

Positioning kit

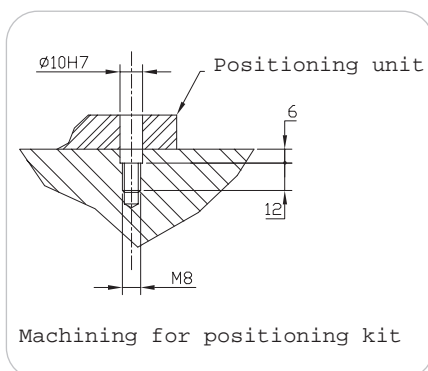
Applications

Allows accurate positioning unit on station.

Technical data

- ✘ 2 axis screws M8
- ✘ 2 hexagonal socket head cap screws M8

Weight: 0,08 kg



Designation / Dimensions	Order unit	Reference
Positioning kit	1 set	120.62.000

Inductive sensor M12x100

Applications

Detection for the workpiece carrier.

Technical data

- ✘ Shielded mounting sensor M12x100
- ✘ LED control display
- ✘ PNP-10-30 VDC
- ✘ Screwed connection
- ✘ Cable 5 m



Designation / Dimensions	Order unit	Reference
Inductive sensor M12x100	1 set	200.10.200

Cylinder sensors

Applications

Detection the position of cylinders, stoppers or positioning units.

Technical data

- ✘ 12-27 V-LED control display

Designation / Dimensions	Order unit	Reference
Cylinder sensor, positioning unit	1 kit	200.10.201
Cylinder sensor, positioning unit lift	1 kit	200.10.202

Conveying unit 24 V
p 73



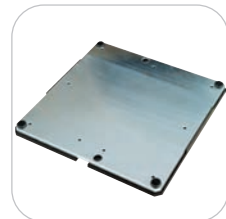
Positioning unit for
station 24 V
p 93



Positioning unit, lift
p 94



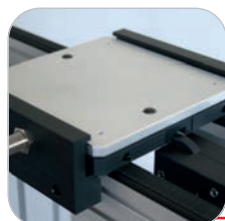
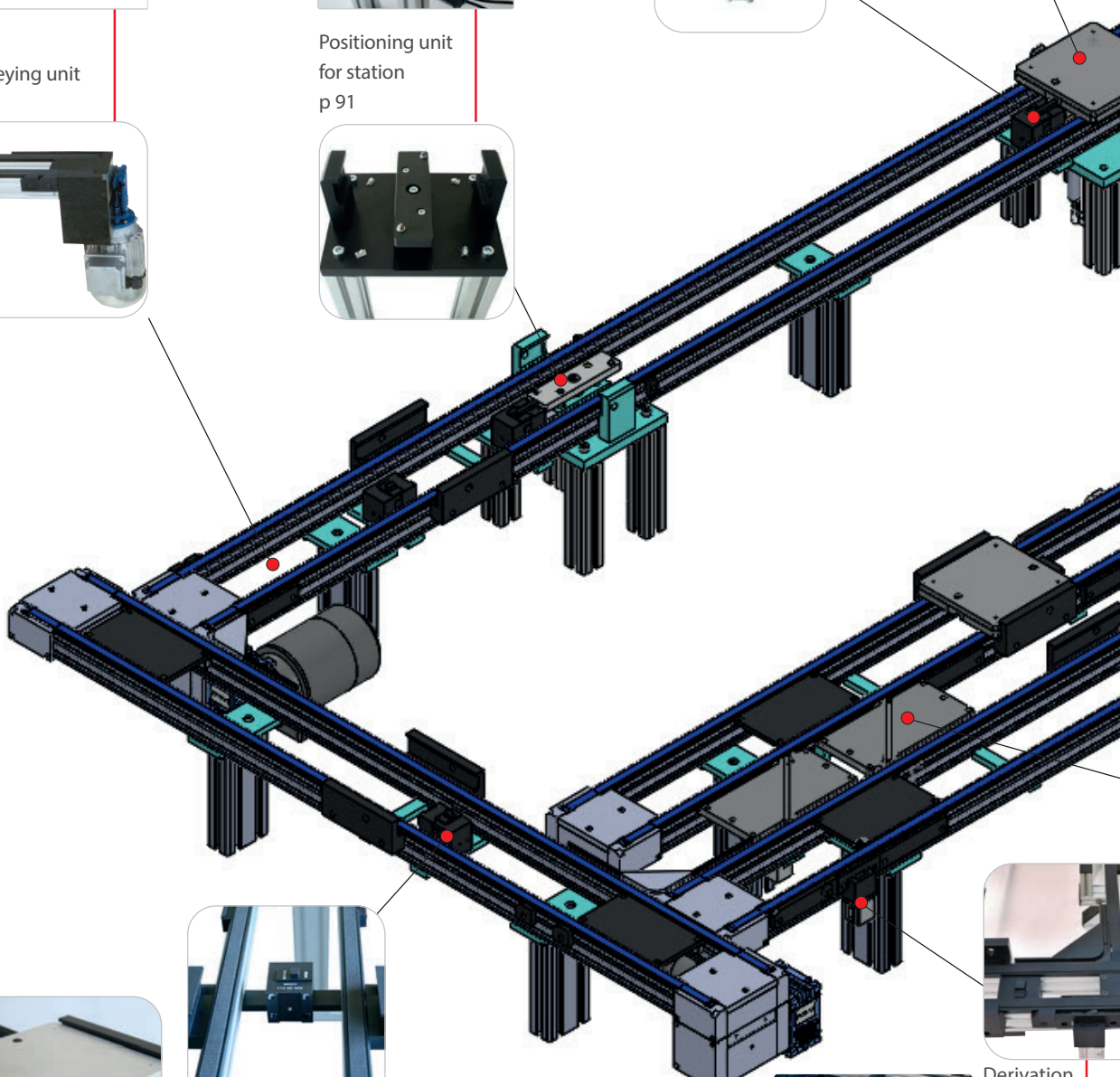
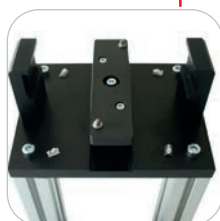
Workpiece carrier
p 68



Conveying unit
p 72



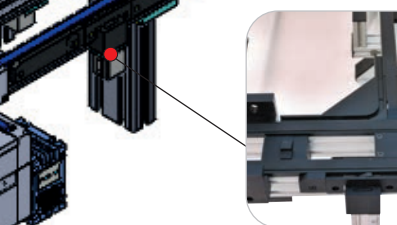
Positioning unit
for station
p 91



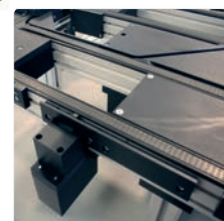
Stopper 24 V
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Stopper
p 82



Derivation
p 80



Derivation 24 V
p 81



Cap for motorization
p 76



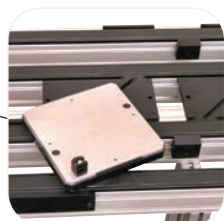
Cam 90°
p 78



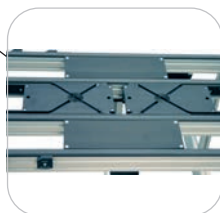
Cap for idling unit
p 76



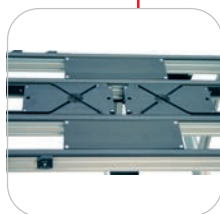
Conveying unit
stand
p 77



Cam short
p 100



Cam double
p 101



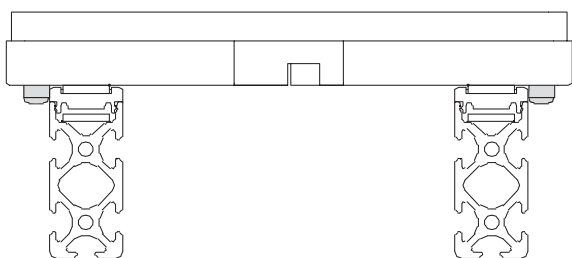
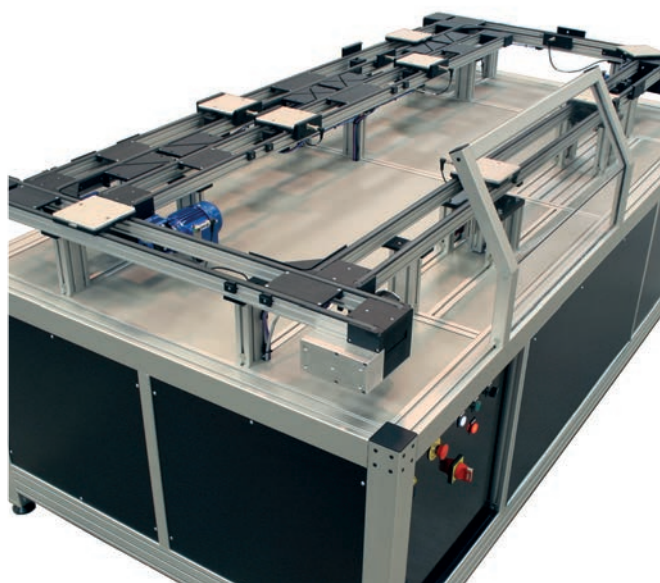
Cam double 24 V
p 102



elcom ITS 24 V

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Data

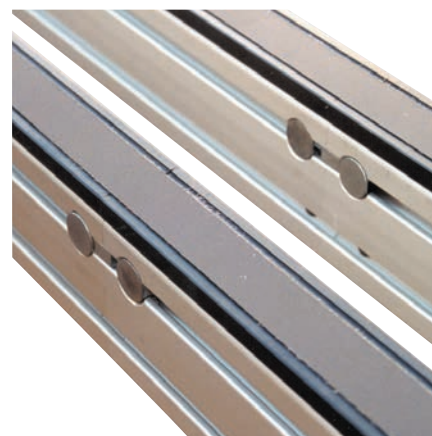
	TLM 1500
Workpiece carriers (mm)	155 x 155
Load/workpiece carrier (daN)	4
Speed (m/min) - Timing belt	12 - 16
Length of conveying unit	
Mini	500
Maxi	3 160
Maximum accumulation load per motor (daN)	
Timing belt	35
Absolute maximum load (daN)	
Timing belt	70 daN / 3m
Motor power (380 V three-phase)	0,09 KW - 0,4 A

The maximum length of the conveying units is: 3160 mm.
For long spans, several elements can be butted end to end.
For important accumulations, the length of the conveying units must be adapted to the load.

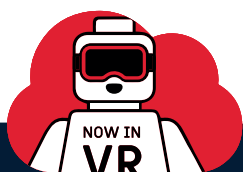
It is recommended to place sensors in order to control accumulation of the load.

Pneumatic cylinders must be equipped with flow rate controllers.

It is possible for long spans to have conveyor's cut done in order to facilitate the dismantling of the machines.



Conveyor's cut profile butted end to end



Tip

Download all CAD 3D files
on our website!

[www.elcom-automation.com/
transfers](http://www.elcom-automation.com/transfers)



Workpiece carriers

Applications

The workpiece carriers allow the mounting of holders which ensure an accurate positioning of the assembly during the process.

The workpiece carriers consists of two plates.

The upper aluminium plate allows the fastening of workpieces, ensures the geometrical behaviour workpiece carrier as well as the positioning accuracy. Machining (drillings and tappings) can be made according to the customer's wish.

Stainless steel bushes located in the aluminium plate

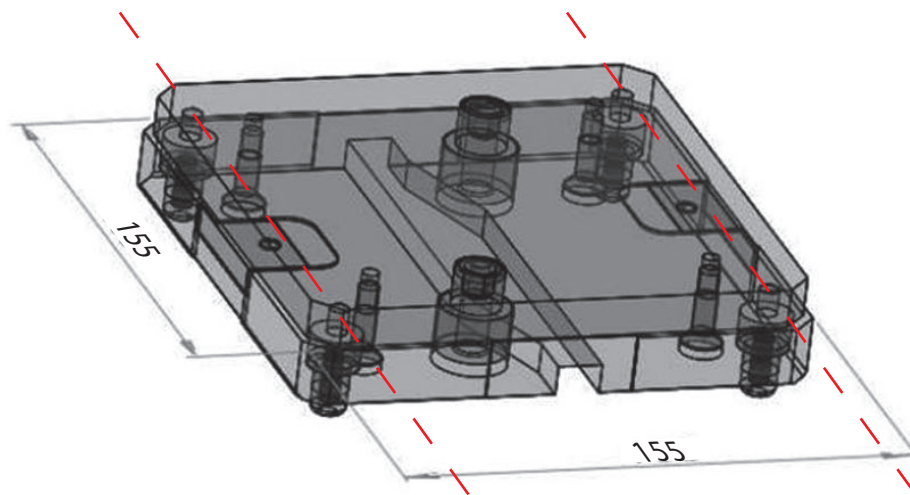
guarantee resistance to wear and a perfect accuracy. The PA base has an extremely low friction coefficient and lays on the conveying belts. This base hosts 4 guiding pins (specific to **elcom**) and has the necessary shape to ensure stoppers proper functioning.

Metallic bars are located on each side of the workpiece carrier in order to detect them at several workstations. The characteristics of stoppers, guiding pins with springs can be found in the next pages.

Variable length of **elcom**'s workpiece carriers and specific workpiece carriers

Standard workpiece carriers are available to install the workpieces that will be conveyed. In many cases, the surface area of workpiece carrier is not sufficient. Specific workpiece carriers can be supplied. The use of 4 guiding pins makes it possible to vary the length

of workpiece carrier and to optimize cycle times. The guiding pins remain in the position of the nearest standard workpiece carrier. So, all the standard elements such as cams are usable without modification.



Workpiece carriers U and M

Workpiece carriers are used to support and position the components during the process.

The upper plate (made of aluminium) is used to fix the components and perform an accurate positioning of the workpiece carrier.

The PA base (which has a very low friction coefficient) is used to shelter the pins and to stop the workpiece carrier on the stopper.

Steel bushes ensure perfect accuracy and resistance against deterioration.

On each side of workpiece carrier, small metallic bars allow detection of workpiece carriers at various positions.

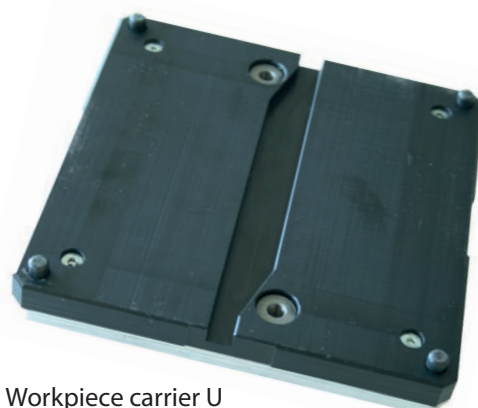
Unidirectional workpiece carriers

They are perfectly compatible with a 180° swivelling. Possibility of adding shock absorbers to limit the shock between the workpiece carriers and to reduce the noise (T).

Workpiece carriers multidirectionnelles (M)

For square workpiece carriers only.

They are perfectly compatible with 90°, 180° and 270° swivellings, delivered with 2 bushes and 2 additional detection bars.



Workpiece carrier U



Workpiece carrier M

Workpiece carriers with shock absorber T

The PA base is provided with two drills on the side in the direction of motion. Shock absorbers are inserted in these drills.

These damp the impact between two workpiece carriers and therefore reduce noise pollution.

The workpiece carrier with shock absorber T corresponds to the standard U-type workpiece carrier.



The use of workpiece carrier with shock absorbers requires the installation of a stopper before each positioning unit. This avoids the shearing of shock absorbers.



Workpiece carrier with shock absorber

Workpiece carrier U Width 150

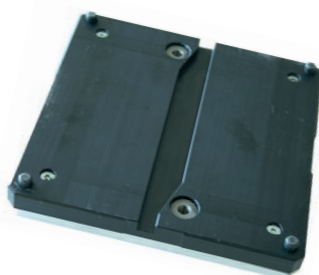
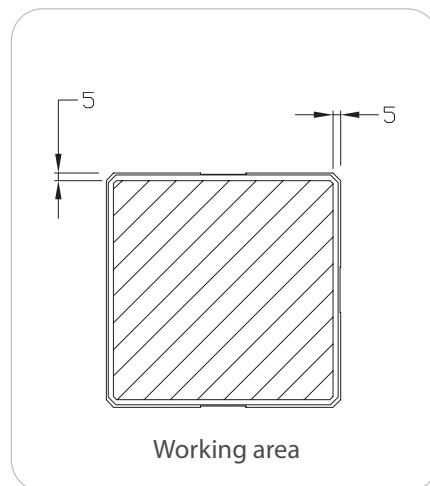
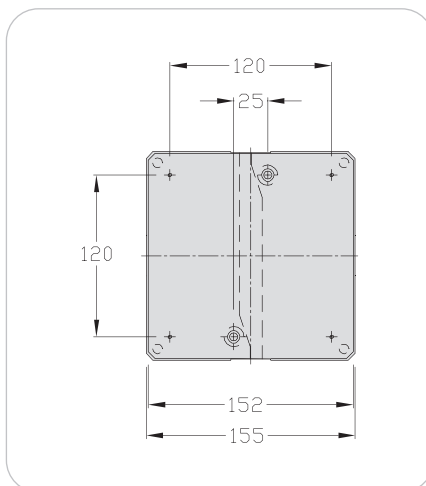
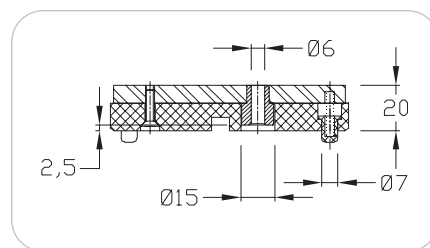
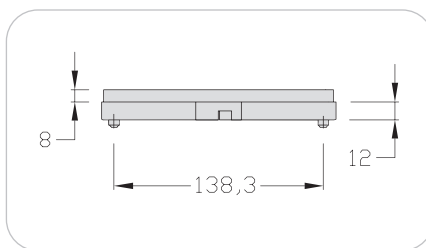
Technical data

- ✗ Plate Al
- ✗ Base, PA black
- ✗ 2 steel bushes
- ✗ 4 pins PA
- ✗ 4 springs
- ✗ 4 countersunk screws M4x16
- ✗ 2 detection bars
- ✗ 2 plugs

Add T at the end of reference to mention shock absorber option.

 **Maximum load: 4 daN**

Weight: 0,83 kg



Designation / Dimensions	Order unit	Reference
Workpiece carrier U 150x150	1 pce	150.62.000
Workpiece carrier U 150x150 T	1 pce	150.62.000.T

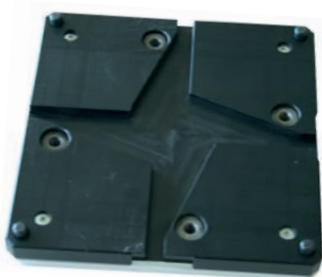
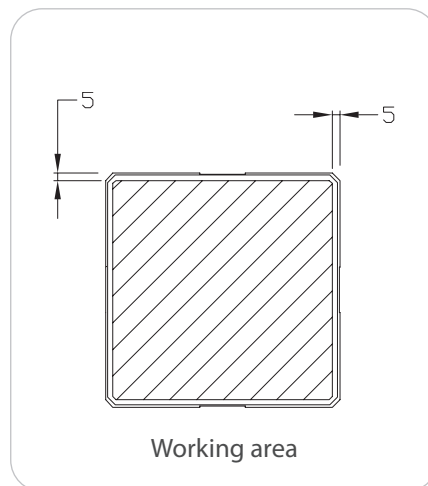
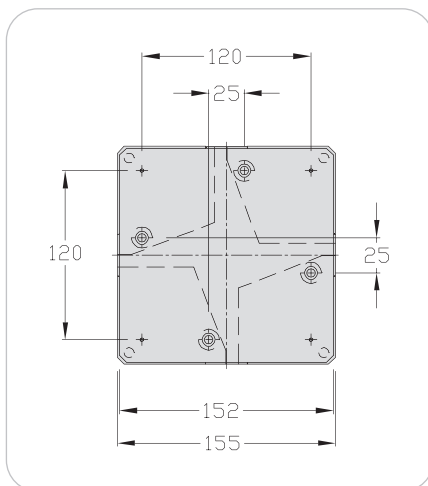
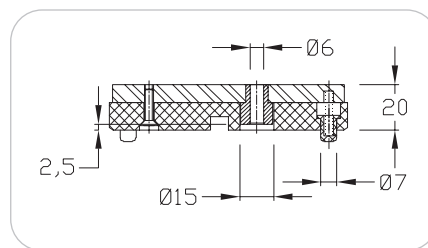
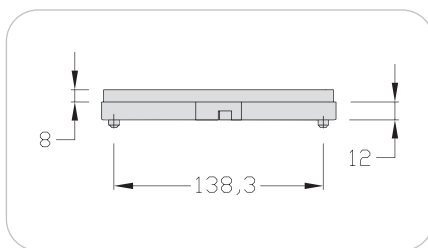
Workpiece carrier M Width 150

Technical data

- ✗ Plate Al
- ✗ Base, PA black
- ✗ 4 steel bushes
- ✗ 4 pins PA
- ✗ 4 springs
- ✗ 4 countersunk screws M4x16
- ✗ 4 detection bars
- ✗ 4 plugs

 **Maximum load: 4 daN**

Weight: 0,92 kg



Designation / Dimensions

Workpiece carrier M 150x150

Order unit

1 pce

Reference

150.64.000

Conveying unit timing belt

Applications

Moving and accumulating of workpiece carriers 150x150.

The motor can be fitted either vertically or horizontally, on the right or the left side.

The use of timing belts enables to increase the carried load and facilitates the maintenance when changing belts.

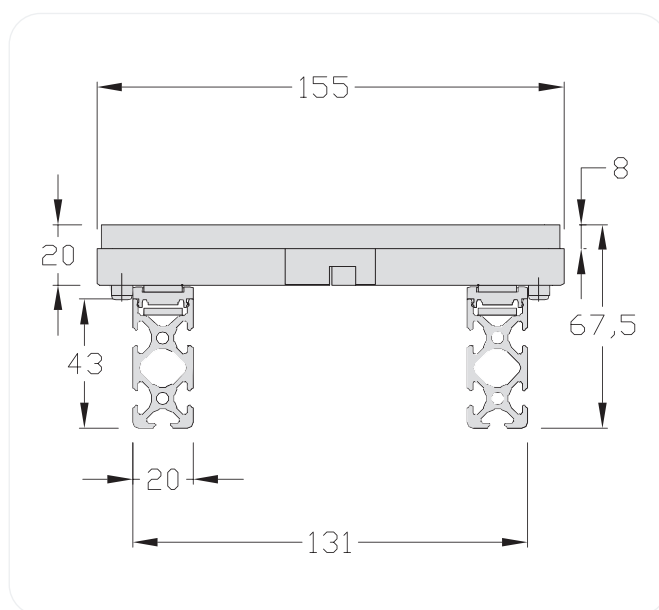
Belt guides are pressed into aluminium profile housing.

According to the load, longer spans can be joined end to end by straight joinings.

The cuttings of conveyors allow division of the lengths, making transport and installation of the lines easier.

The installation is facilitated thanks to the use of timing belts.

Spacers have to be fitted between the profiles every 1 meter to ensure a perfect parallelism of the profiles.



Conveying unit 24 V timing belt

Moving and accumulating of workpiece carriers 150x150. The use of antistatic timing belts increases the load being transported and facilitates the maintenance when changing belts. Belt guides are pressed into aluminium profile housings. According to the load, longer

spans can be joined end to end by straight joinings. The cuttings of conveyors allow division of the lengths, making transport and installation lines easier. The reassembly is greatly facilitated thanks to the use of timing belts. Spacers have to be fitted between the profiles every meter to ensure

a perfect parallelism of the two profiles.

This conveying unit is supplied with a Brushless motor factory-programmed according to your speed and acceleration ramp requirements. The use of a Brushless gear motor facilitates the wiring.



NEW:

This process allows to divide the electric consumption by 10 to 15.



elcom ITS 24 V

Conveying unit timing belt Width 150

Technical data

Length mini L = 500 mm
 Length maxi L = 3160 mm

For longer spans and according to the load, use several conveying units.

Conveying unit including

- ✘ 1 idling unit
- ✘ 1 driving unit
 speed: 12 or 16 m/min
- ✘ 1 motor 380 V three-phase
 0,09 KW I: 0,4 A

Conveyor length

- ✘ 2 profiles 5 43x20, al anodized
- ✘ 2 belt guides, PA black
- ✘ 2 antistatic timing belts
 width 12 mm, 5 mm step

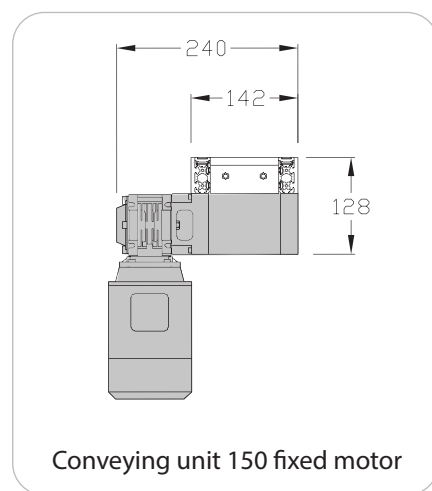
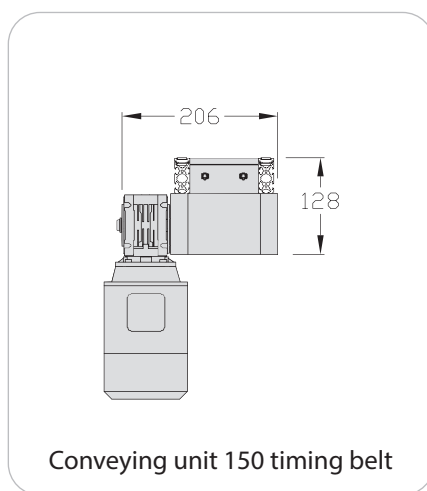
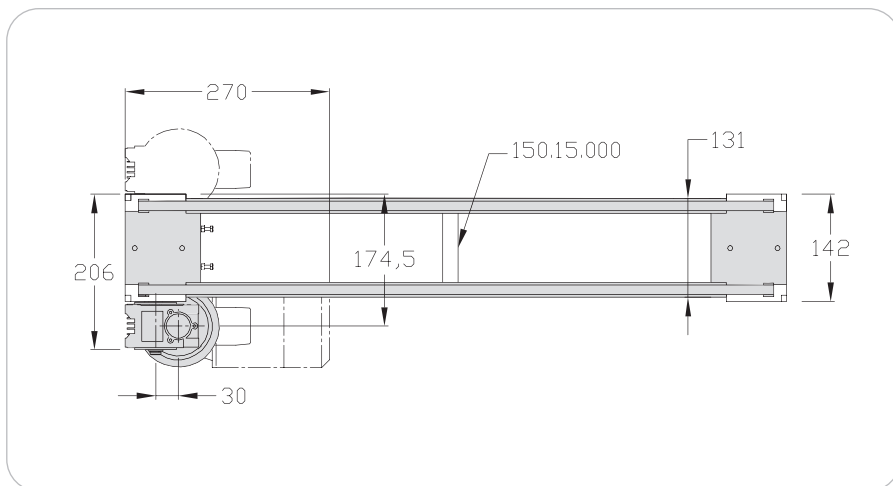
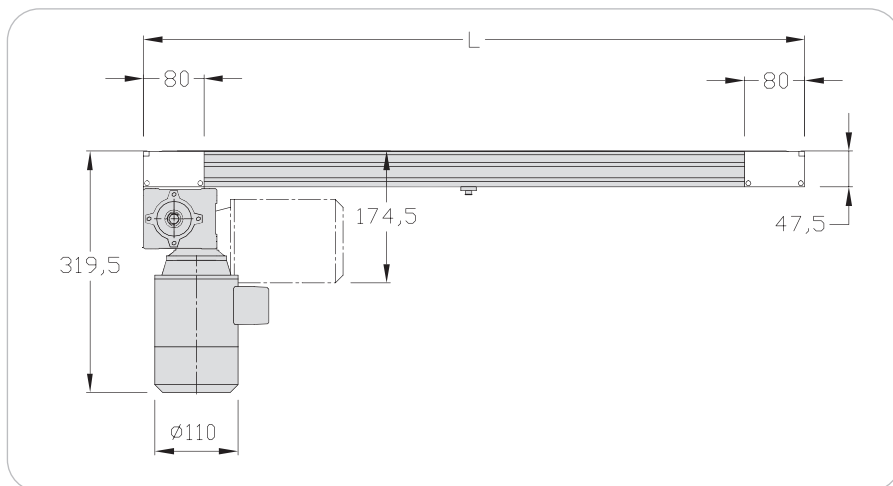
Maximum load / 3 m: 70 daN

Maximum accumulation load / 3 m:
 35 daN

Belt length in mm

$$L_c = [(L-160) \times 2 + 526] \times 0,9995$$

Weight: 9,5 kg + 2,07 kg /m



Designation / Dimensions	Order unit	Reference
Conveying unit 150 timing belt	1 pce	150.50.000.**
Conveying unit 150 timing belt fixed motor	1 pce	150.42.000.**
Conveying length	m	110.50.000.A

(** = speed of motor m/min: 12 or 16 eg: 150.50.000.12)

Conveying unit 24 V timing belt Width 150

Technical data

Length mini L = 500 mm
 Length maxi L = 3160 mm

For longer spans and according to the load, use several conveying units.

Conveying unit

- ✗ 1 idling unit
- ✗ 1 driving unit
 speed: 9 to 19 m/min
 programmable en usine,
- ✗ 1 motor 24 V
 0,09 KW
 I: minimum supply voltage 5 A

Conveyor length

- ✗ 2 profiles 5 43x20, al anodized
- ✗ 2 belt guides, PA black
- ✗ 2 antistatic timing belts
 width 12 mm, 5 mm step

Maximum load / 3 m: 70 daN
 Maximum accumulation load / 3 m:
 35 daN

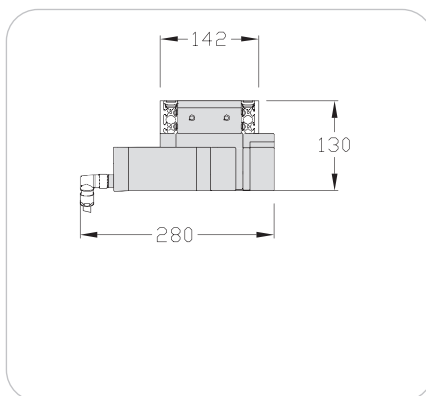
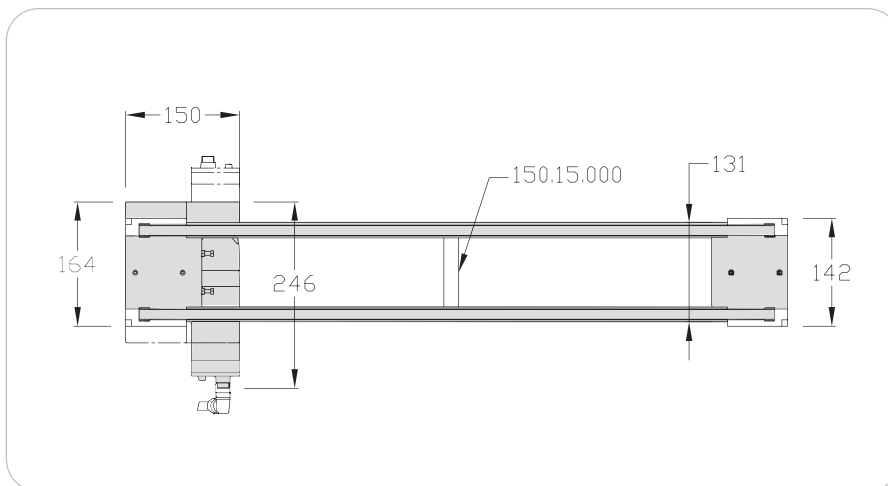
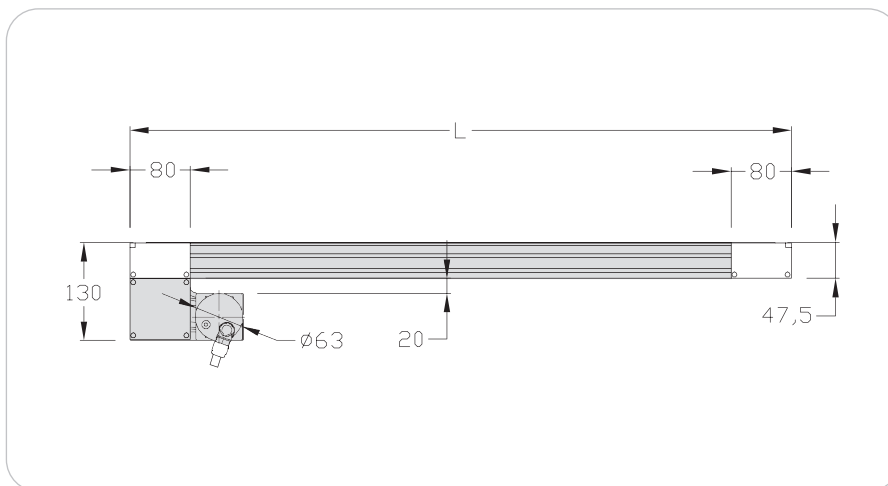
Belt length in mm

$$L_c = [(L-160) \times 2 + 526] \times 0,9995$$

Power supply: 24 VDC
 Supply current: 8,5 A
 Control voltage: 24 VDC
 Control current: 10 mA
 2 control outputs
 2 status inputs

 **A straight or angled connector is required**

Weight: 8 kg + 2,07 kg /m



Designation / Dimensions	Order unit	Reference
Conveying unit 24 V 150 timing belt motor Papst right	1 pce	150.50.000 EDP
Conveying unit 24 V 150 timing belt motor Papst left	1 pce	150.50.000 EGP
Conveying length	m	110.50.000 A

Spacer Width 150

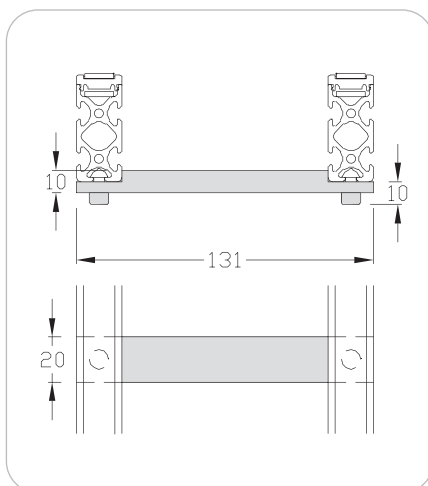
Applications

Spacers have to be fitted every 1 meter to ensure a perfect parallelism of profiles.

Technical data

✘ 1 aluminium part + fastening parts

Weight: 0,065 kg



Designation / Dimensions	Order unit	Reference
Spacer 150	1 pce	150.15.000

Caps Width 150

Applications

Allow to protect the direct driving and the idling unit.

When using a cam, the opposite cap is delivered with the cam set.

Technical data

Cap for motorization 100 adapt themselves on the motorization 150.

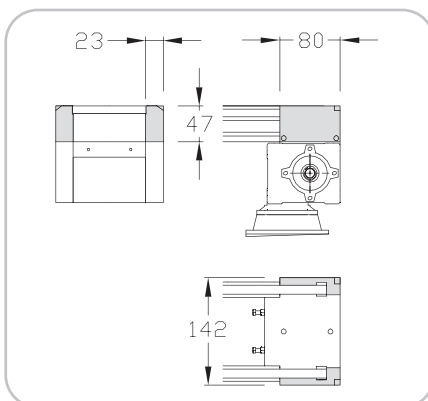
Cap for motorization

✘ 1 part + 1 symmetrical part, PA black + fastening parts

Cap for idling unit

✘ 1 part and 1 symmetrical part, PA black + fastening parts

Weight: 0,07 kg



Designation / Dimensions	Order unit	Reference
Cap for motorization 150 timing belt	1 set	110.50.100
Cap for idling unit 150 timing belt	1 set	110.50.200

Straight joining Width 150

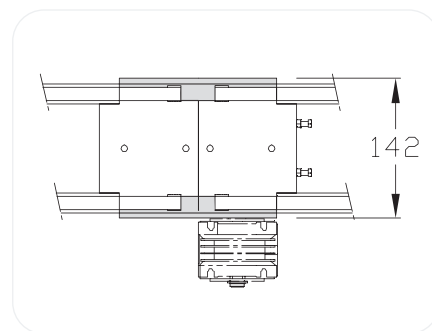
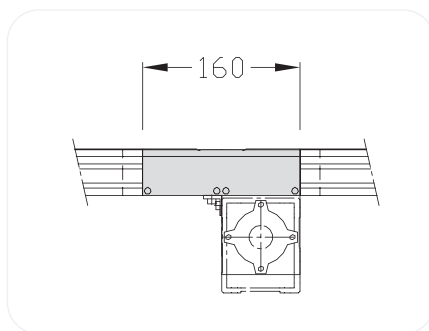
Applications

Allow to butt end to end two conveying units.

Technical data

- x Guide PA black
- x Joining set aluminium

Weight: 0,16 kg

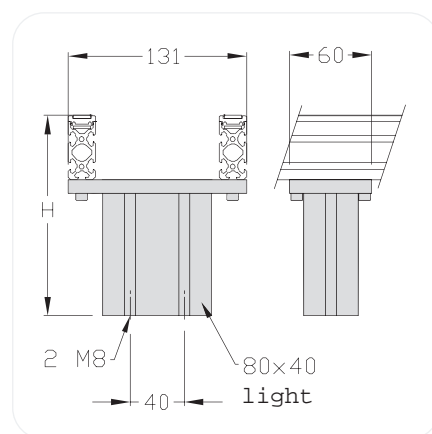


Designation / Dimensions	Order unit	Reference
Straight joining 150 timing belt	1 set	150.52.000

Conveying unit stand

Applications

Support to fit conveying units on table or frame.



Designation / Dimensions	Order unit	Reference
Conveying unit stand 150	1 set	150.16.000

Cams 90° Width 150

Applications

The cams **ED, EG, SD, SG** allow a perpendicular transfer of workpiece carriers from one conveying unit to the other without automatism.

The workpiece carrier is guided by the two inner pins, the outside pins are retracted.

They are also used for derivations.

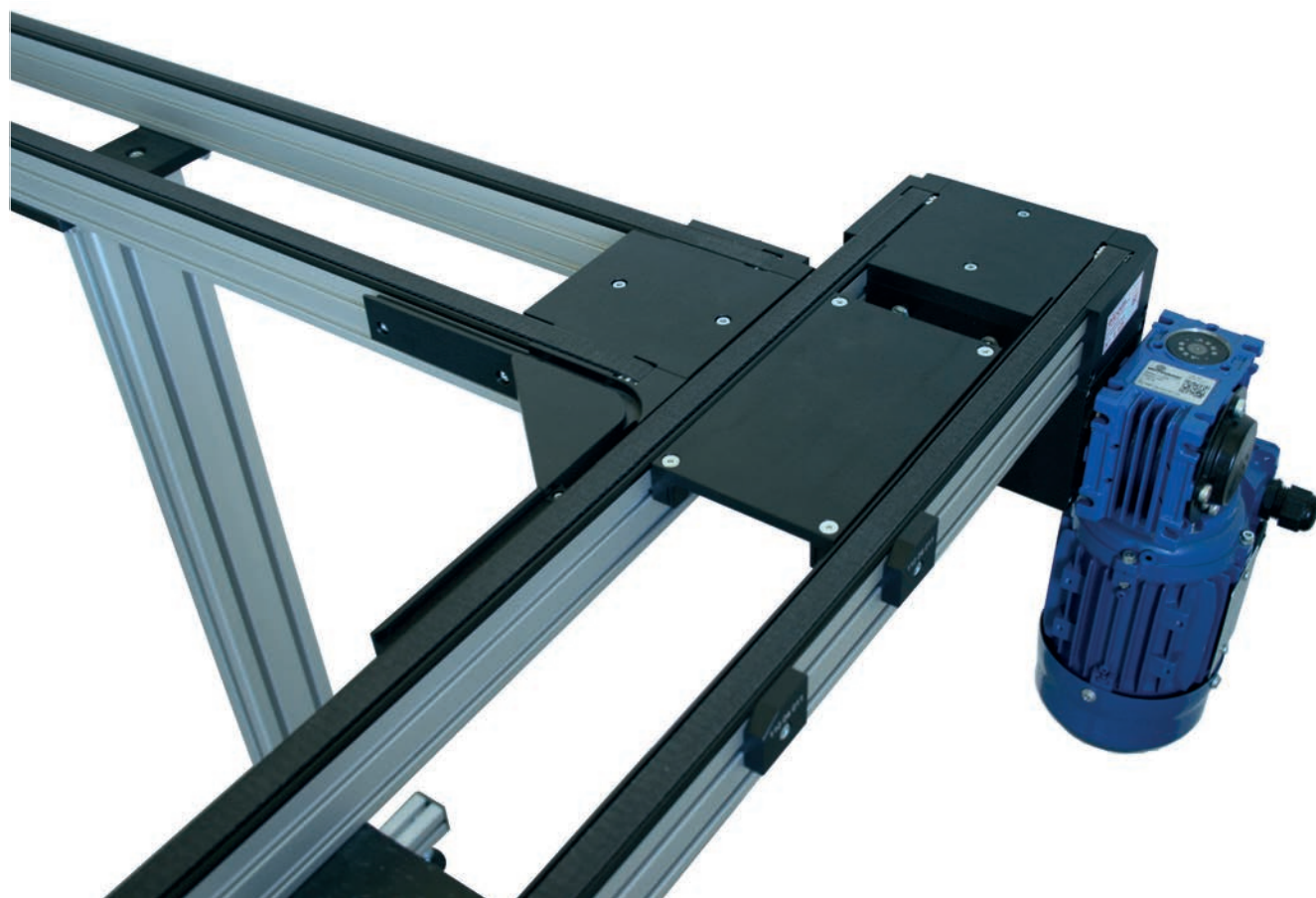
Do not accumulate the workpiece carriers in the cams.

For a good operating, the workpiece carrier coming in the cam mustn't be pushed by other workpiece carriers.

Cams short **SD-EG SG-ED** - Cams double

The short cams and the double cams allow deviation of workpiece carriers from a main line to a secondary line without additional motorization.

Economical, compact and very easily managed, they are ideal to set up work stations in derivation.



Cams 90° Width 150

Technical data

Complete set including:

- ✗ Guiding cam and pin retracting plates, PA black
- ✗ Fastening parts
- ✗ Joining parts
- ✗ A cap for motorization or for idling unit

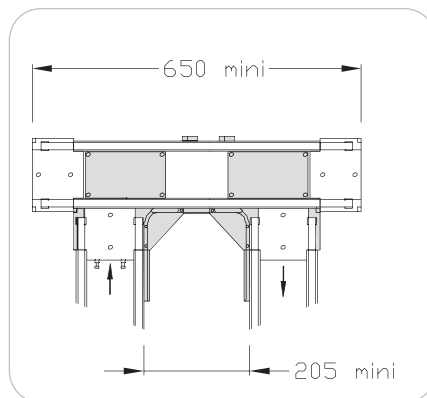
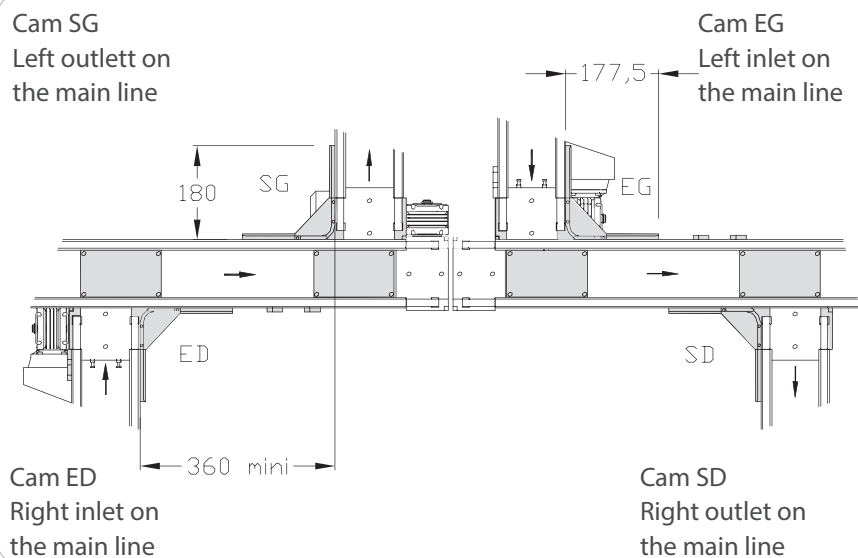
If a selection is necessary (derivation or not), add the derivation set.

Lp = workpiece carrier length

Weight:

Cams ED and EG: 0,50 kg

Cams SD and SG: 0,44 kg



Designation / Dimensions	Order unit	Reference
Cam 90° ED 150	1 kit	150.53.100
Cam 90° EG 150	1 kit	150.53.200
Cam 90° SD 150	1 kit	150.53.300
Cam 90° SG 150	1 kit	150.53.400

Derivations Width 150

Applications

Derivations have to be used with a cam. They allow potential diversion or not of the workpiece carrier by retraction of the pins on one side or the other of the conveyor.

The two cylinders are controlled by only one solenoid valve.

Technical data

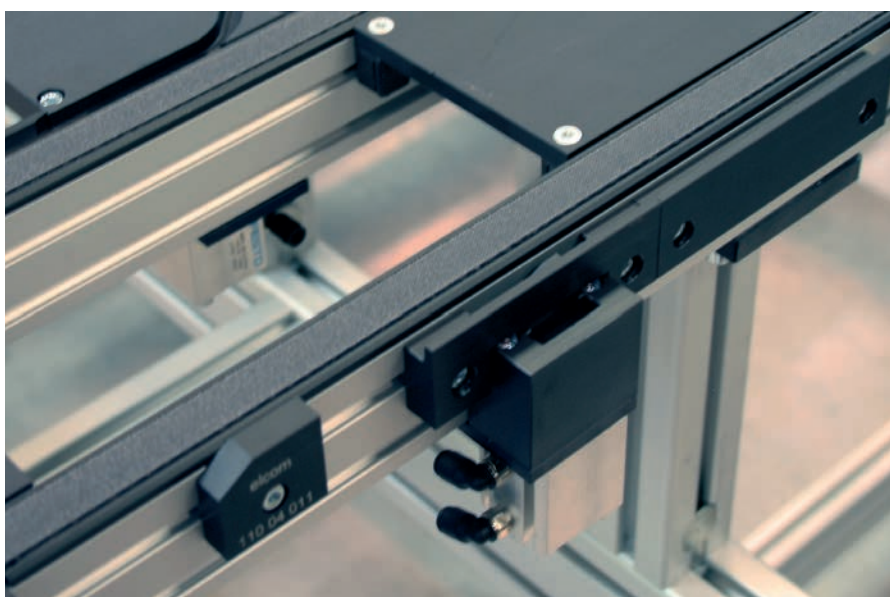
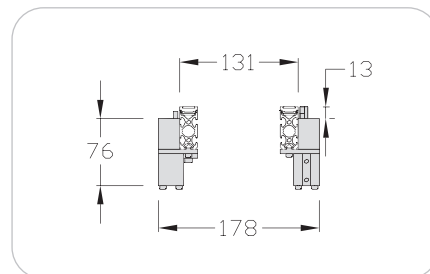
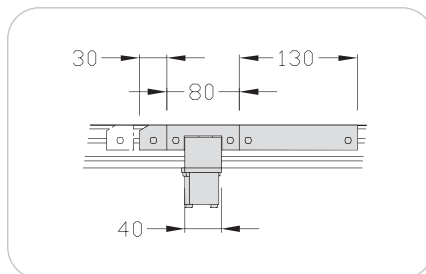
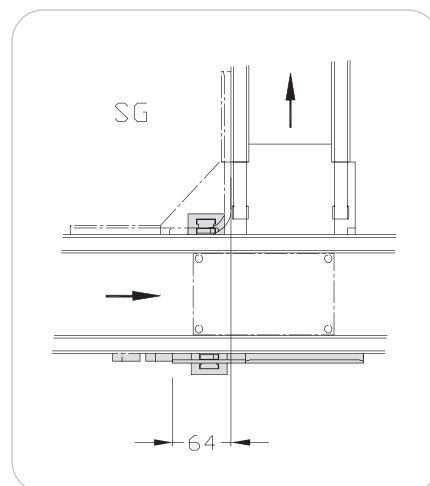
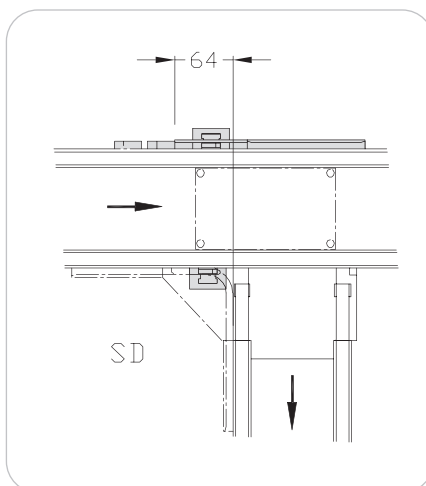
Complete set including:

- ✗ 2 plates Al
- ✗ 2 nuts 5 St M4
- ✗ 2 screws M4x10
- ✗ Body, levers and guides PA
- ✗ 2 cylinders \varnothing 16-5 M5, detectable positions



Cams are not included (must be ordered separately).

Weight: 0,4 kg



Designation / Dimensions	Order unit	Reference
Derivation 150 SD	1 kit	150.07.000
Derivation 150 SG	1 kit	150.13.000

Derivations 24 V Width 150

Applications

Necessarily combined with a cam, they allow the deviation of workpiece carriers, or not, by retracting the pins on one side or the other of the conveyor.

2 Brushless gear motors controlled by a control box ensure the movement. A single output for logic controller is necessary.

Control module 24 V output: automation, bus module, splitter... Standard connectors M12.

An extension for connection M8 male/female 3 pins between the motor and the control box is required.

Technical data

Complete set including:

- ✗ 2 plates Al
- ✗ 2 nuts 5 St M4
- ✗ 2 screws M4x10
- ✗ Body, levers and guides PA
- ✗ 2 servomotors



Cams are not included (must be ordered separately).

Supply voltage of of the control box:

24 volt +/- 15%

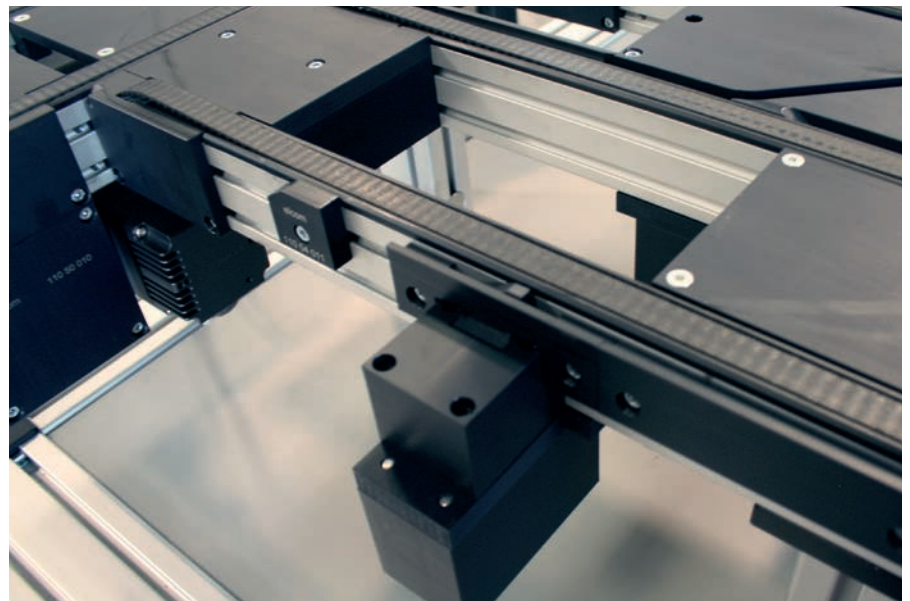
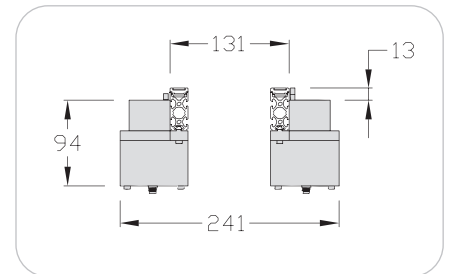
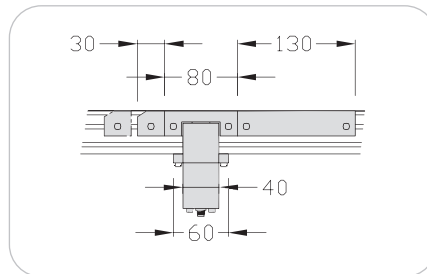
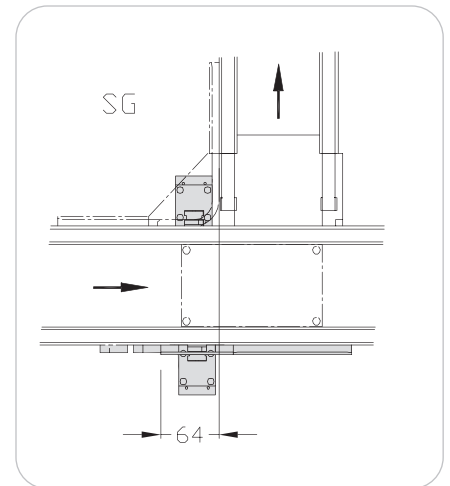
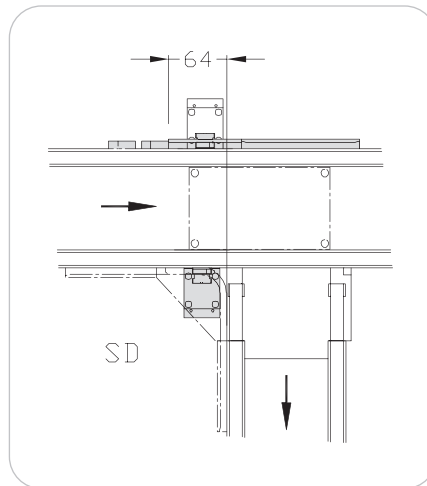
Power supply: 1,6 A maxi

Control voltage: 24 volt +/- 10 %

Control current: 5 mA maxi

Electrical connection: see detailed specification sheet included with the material.

Weight: 0,8 kg



elcom ITS 24 V

Designation / Dimensions	Order unit	Reference
Derivation 24 V 150 SD	1 kit	150.07.000.E
Derivation 24 V 150 SG	1 kit	150.13.000.E

Stoppers, simple-double effect Width 150

Applications

They stop workpiece carriers during processing requiring no accuracy.

They are perfectly adapted for manual work stations.

Management of workpiece carriers in order to respect conveying priorities at the end of the derivation.

Stopper simple or double effect, supplied with lateral guides, sensor bracket for detection of workpiece carriers.

The anti bouncing back is integrated in the lateral guides.

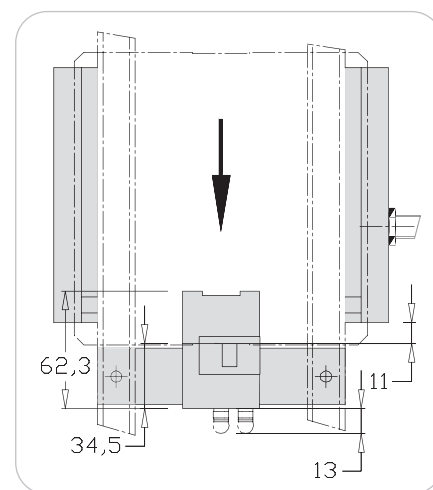
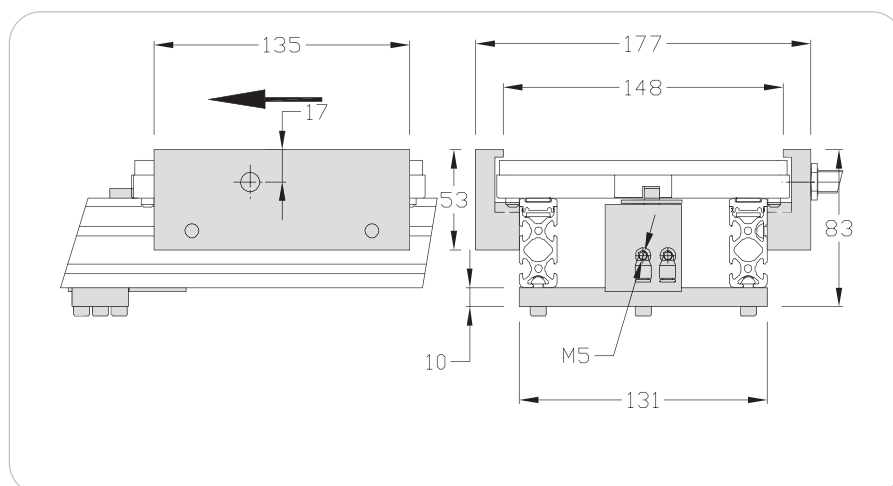
Technical data

- ✗ Plate, al black
- ✗ Body and stopper PA
- ✗ Nuts 5 St M5 + screws
- ✗ Hole for shielded mounting sensor M12x100
- ✗ Detection range: 4 mm

Maximum load: 10 daN
(in accumulation)

 **Flow rate controllers M5 should be adapted.**

Weight: 0,5 kg



Designation / Dimensions	Order unit	Reference
Stopper 150 simple effet	1 pce	150.02.000
Stopper 150 double effet	1 pce	150.22.000

Stopper damped, pneumatic Width 150

Applications

Stops workpiece carriers during processing requiring no accuracy. It allows reducing the shock of workpiece carrier against the stoppers thanks to the adjustable pneumatic damping. Pneumatic control of the stopper with spring return.

Stopper supplied with sensor bracket.

Technical data

- x Stopper
- x Stopper bracket
- x Sensor bracket
- x Screws and nuts

Minimum load / workpiece carrier:
12-16 m/min

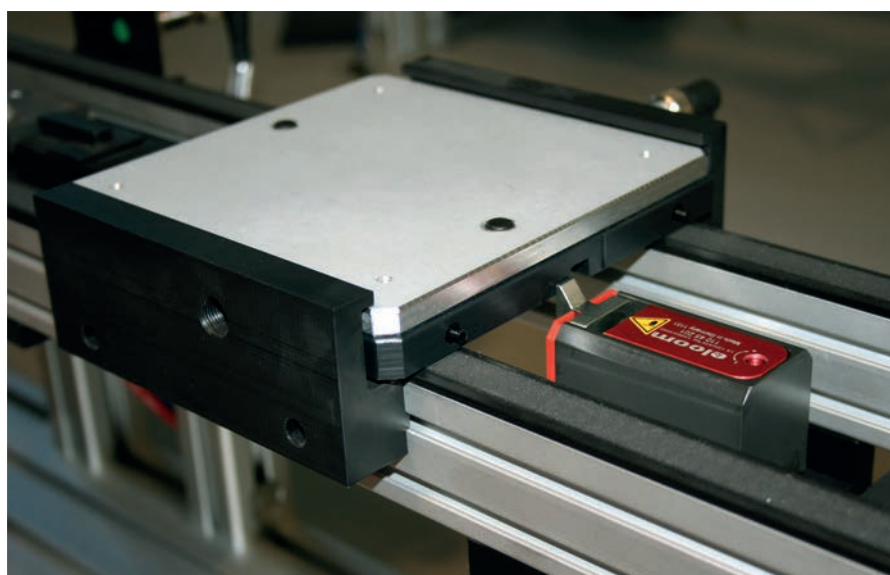
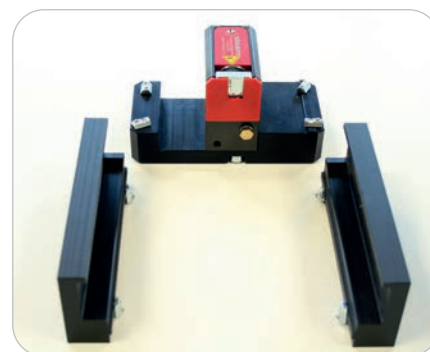
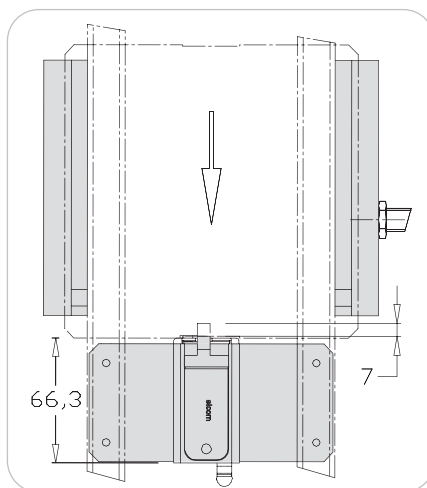
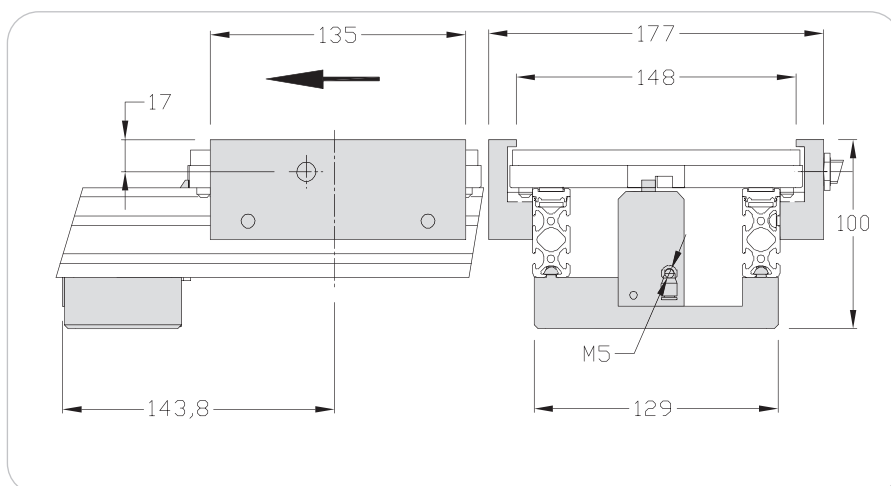
Maximum load/workpiece carrier
(workpiece carrier included):
- 7,5 kg to 16 m/min
- 9 kg to 12 m/min

Air consumption: 0,036 l to 6 bars.
Operating pressure: 4 to 8 bars.

Longitudinal damping stroke: 7 mm

A connection M5 is required.

Weight: 1,06 kg



Designation / Dimensions	Order unit	Reference
Stopper damped 150 pneumatic	1 pce	150.45.000.RAP

Stopper 24 V Width 150

Applications

Stopper 24 V stops workpiece carriers requiring no accuracy during processing, perfectly adapted to manual work stations.

Workpiece carriers are stopped to respect conveying priorities at the end of the derivation.

Simple effect stopper with spring return. Supplied with lateral guides and sensor bracket for the detection of workpiece carriers.

A servomotor controlled by a control box ensures the change in position.

A single output for logic controller is necessary.

Control module 24 V output: automation, bus module, splitter...

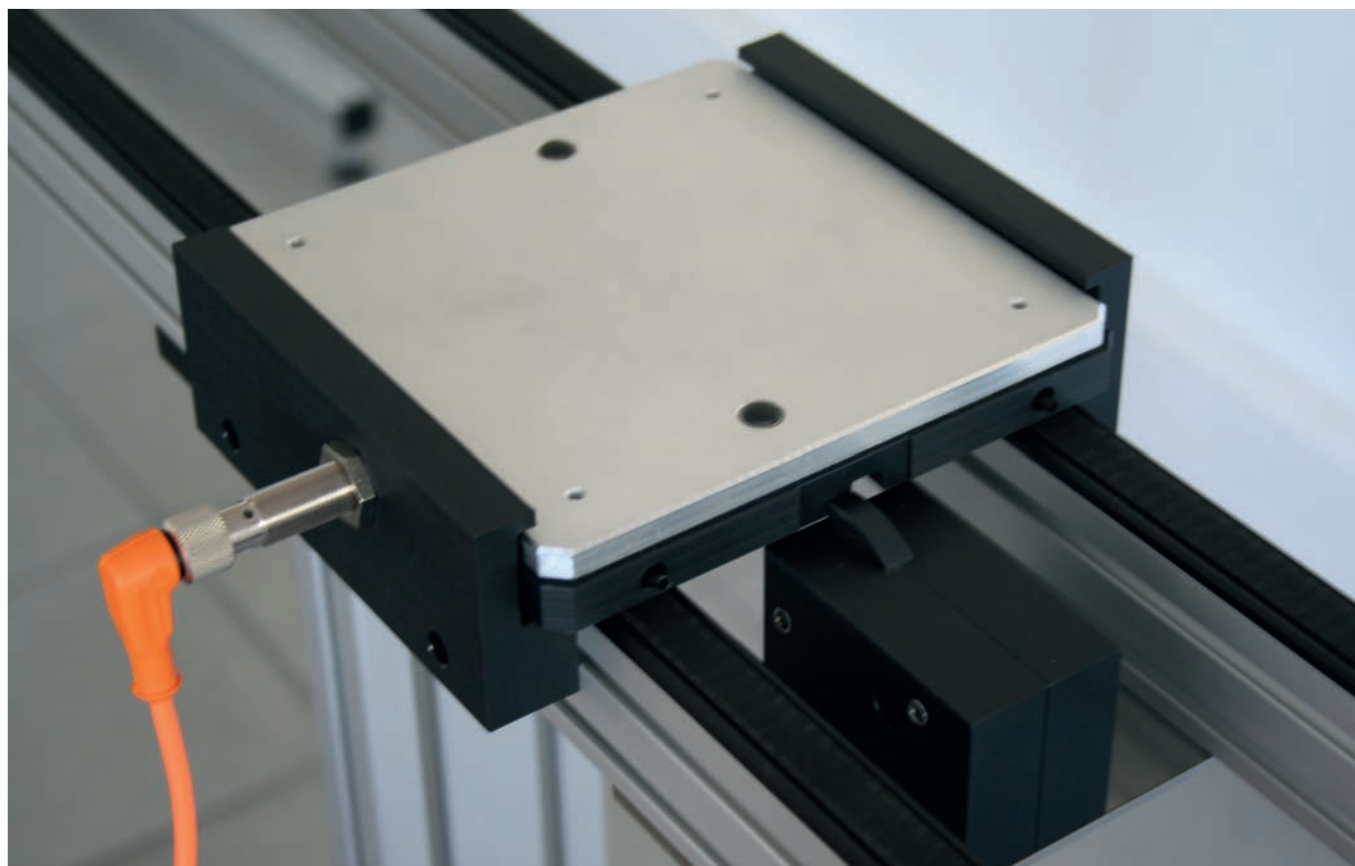
Standard connectors M12.

An extension for connection M8 male/female 3 pins between the stopper and the control box is required.

The anti-bouncing back part is integrated into the lateral guides.



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Technical data

- ✗ Plate, stainless steel
- ✗ Body and stopper PA
- ✗ Nuts 5 St M5 + screws
- ✗ Hole for shielded sensor M12x100
- ✗ Detection range: 4 mm

Supply voltage of of the control box:

24 VDC +/- 15%

Maximum power supply: 0.9 A

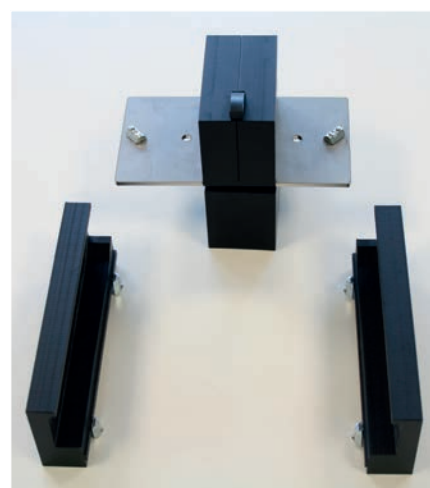
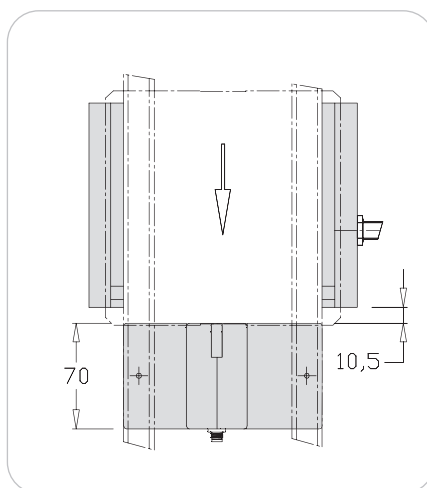
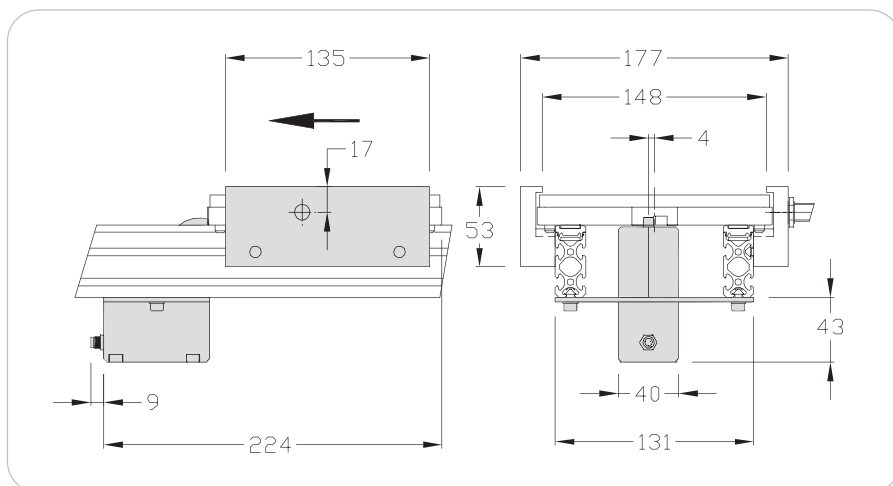
Control voltage: 24 VDC +/- 10 %

Control current: 5 mA maxi

Maximum load: 20 daN (in accumulation)

Electrical connection: see detailed specification sheet included with the material.

Weight: 0,75 kg



elcom ITS 24 V

Designation / Dimensions	Order unit	Reference
Stopper 24 V 150	1 pce	150.02.000.E

Positioning unit

The positioning unit is directly fitted on the conveying units.

2 possibilities: stopper simple effect and stopper double effect.



Positioning unit, damped pneumatic stopper

It is directly fitted on the conveying units.

Shocks are reduced between the workpiece carrier and the stopper thanks to the adjustable damped function.

Pneumatic control of the stopper, spring return.



Positioning unit for station

They are settled on a table or a frame to ensure accuracy with the other surrounding elements.

A positioning set is necessary for operations requiring accuracy.

2 possibilities: simple effect stopper and double effect stopper.

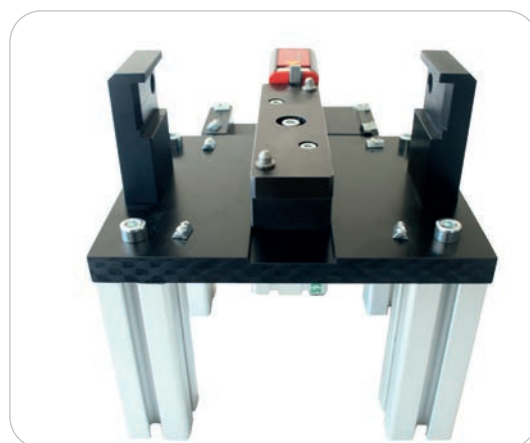


Positioning unit for station, damped pneumatic stopper

It is fixed to a table or a frame to ensure accuracy with the other peripheral elements.

A positioning kit is required for accurate operations.

Shocks are reduced between the workpiece carrier and the stopper thanks to the adjustable damped function. Pneumatic control of the stopper, spring return.



Positioning unit for station 24 V, automatic stopper



elcom ITS 24V

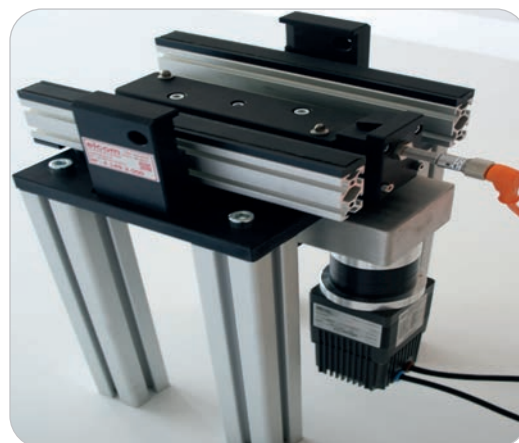
It is fixed to a table or a frame to ensure accuracy with the other peripheral elements.

A positioning kit is required for accurate operations.

The stopper of workpiece carriers is positioned by the vertical movement (no stopper control needed).

A Brushless gear motor ensures the control of the stopper and the positioning unit.

Irreversible system.



Positioning units lift

Stop and positioning of workpiece carriers at an significant height above the conveyor.

The workpiece carrier is stopped, then elevated to a specific height, while being held by two centering pieces.

An upstream stopper is required.

2 possibilities: simple effect stopper and double effect stopper.



Positioning unit lift, damped pneumatic stopper

Stops and positions workpiece carriers at a significant height above the conveyor.

The workpiece carrier is stopped, centered by 2 specific parts and then lifted.

Shocks are reduced between the workpiece carrier and the stopper thanks to the adjustable damped function. An upstream stopper is required due to the lifting of the workpiece carrier (not supplied). Pneumatic control of the stopper, spring return.

The dead man's option is used to lock the lift positioning unit in case of air cut-off and therefore avoids the lowering of the load.



Positioning units Width 150

Technical data

Complete set including:


- ✘ Stopper
- ✘ Positioning unit
- ✘ 1 double effect cylinder $\varnothing 32$, detectable positions
- ✘ Holes for shielded mounting sensor M12x100
- ✘ Detection range: 4 mm

Maximum vertical strain: 40 daN for a pressure of 6 bars

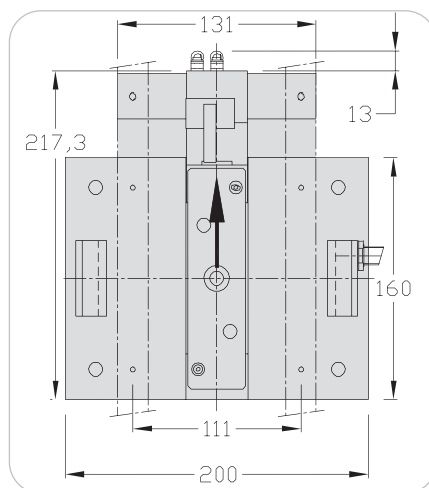
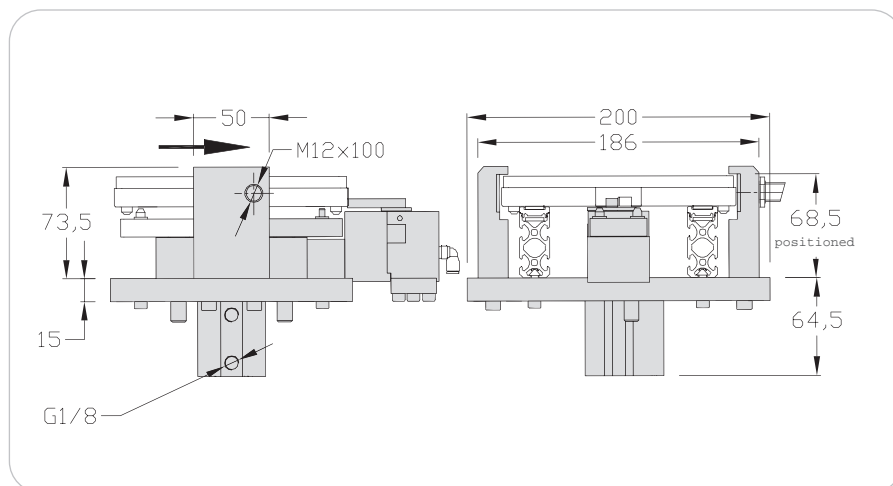
Repeatability: $\pm 0,03$ mm

2 possibilities:

Stiopper simple effect or stopper double effect

 **2 flow rate controllers G 1/8 for positioning unit cylinder and controllers for the stopper should be adapted.**

Weight: 3,4 kg



Designation / Dimensions	Order unit	Reference
Positioning unit 150 simple effect	1 pce	150.24.000
Positioning unit 150 double effect	1 pce	150.25.000

Positioning unit damped pneumatic stopper Width 150

Technical data

Complete set including:

- ✘ Stopper
- ✘ Positioning unit
- ✘ 1 double effect cylinder ø 32, detectable positions
- ✘ Holes for shielding mounting sensors M12x100
- ✘ Detection range: 4 mm

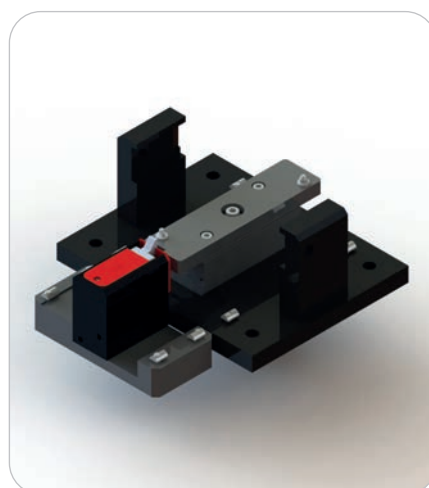
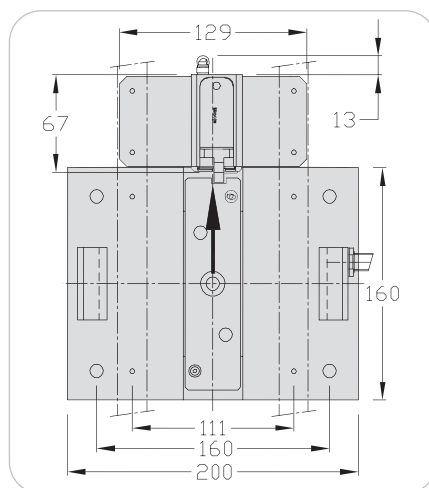
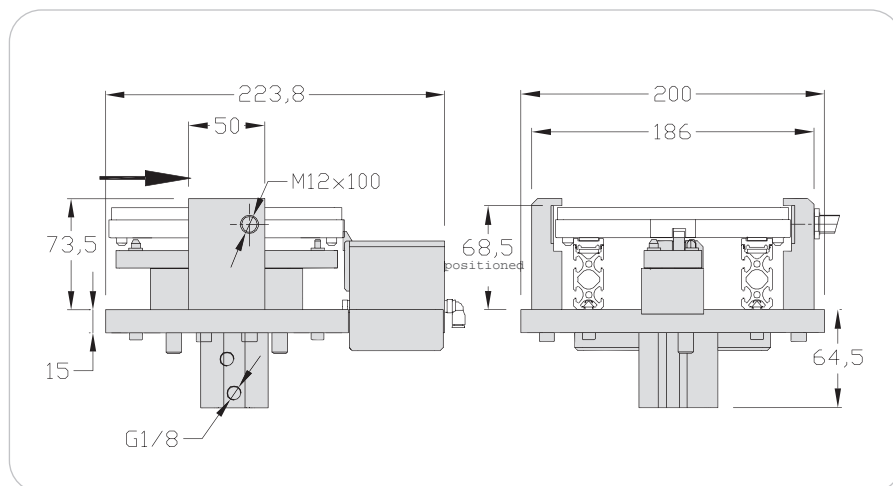
Maximum vertical strain: 40 daN to 6 bars

Repeatability: +/- 0,03 mm



2 flow rate controllers G 1/8 for the cylinder of the positioning unit + 1 connection M5 for the stopper are required.

Weight: 3,6 kg



Designation / Dimensions	Order unit	Reference
Positioning unit 150 damped pneumatic stopper	1 pce	150.24.000.RAP

Positioning units for station Width 150

Technical data

Complete set including:

- ✗ Stopper and positioning unit
- ✗ 1 double effect cylinder $\varnothing 32$, detectable positions
- ✗ Holes for shielded mounting sensor M12x100
- ✗ Detection range: 4 mm
- ✗ 4 feet in profile 40x40
- ✗ Fastening elements

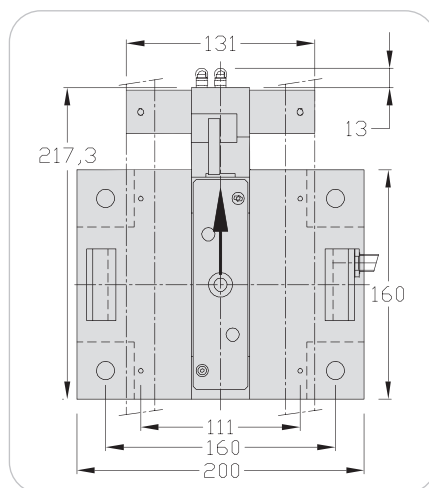
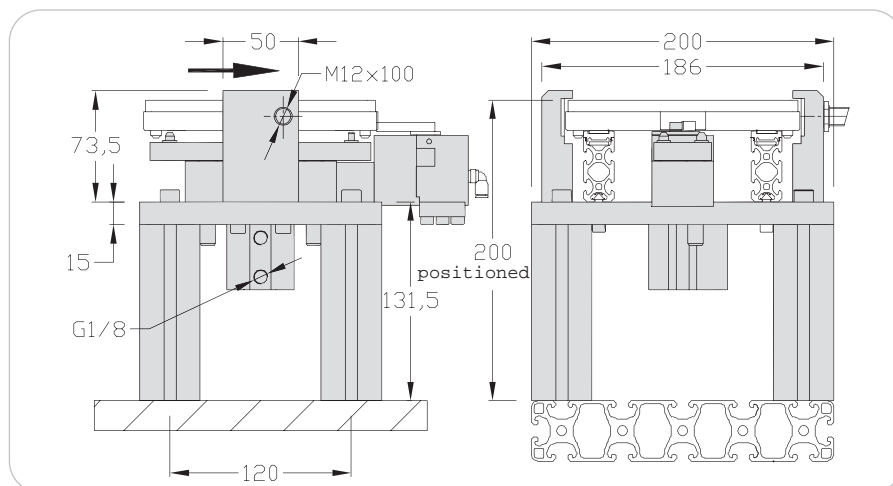
Maximum vertical strain: 40 daN for a pressure of 6 bars

Repeatability: +/- 0,03 mm



2 flow rate controllers M5 and G 1/8 for positioning unit cylinder and controllers for the stopper should be adapted.

Weight: 4,3 kg



Positioning unit for station 150 with simple effect and double effect

Designation / Dimensions	Order unit	Reference
Positioning unit for station 150 simple effect	1 pce	150.26.000
Positioning unit for station 150 double effect	1 pce	150.27.000

Positioning unit for station, damped pneumatic stopper Width 150

Technical data

Complete set including:

- ✗ Stopper
- ✗ 1 double effect cylinder ø 32, detectable positions
- ✗ Holes for shielding mounting sensors M12x100
- ✗ Detection range: 4 mm
- ✗ 4 profile stands 8 40x40
- ✗ Fastening parts

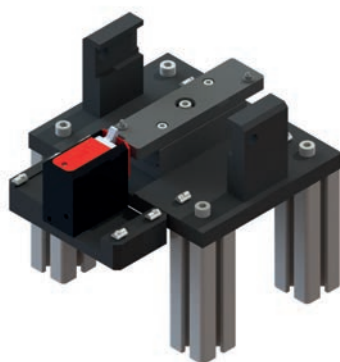
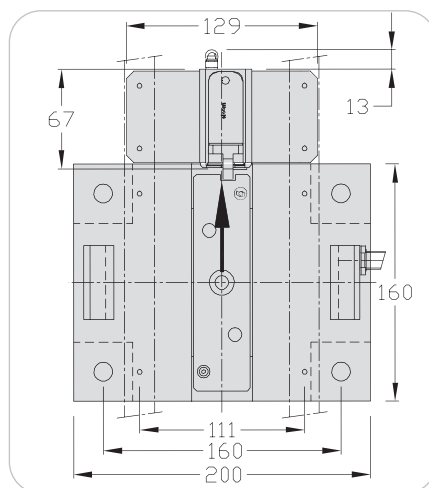
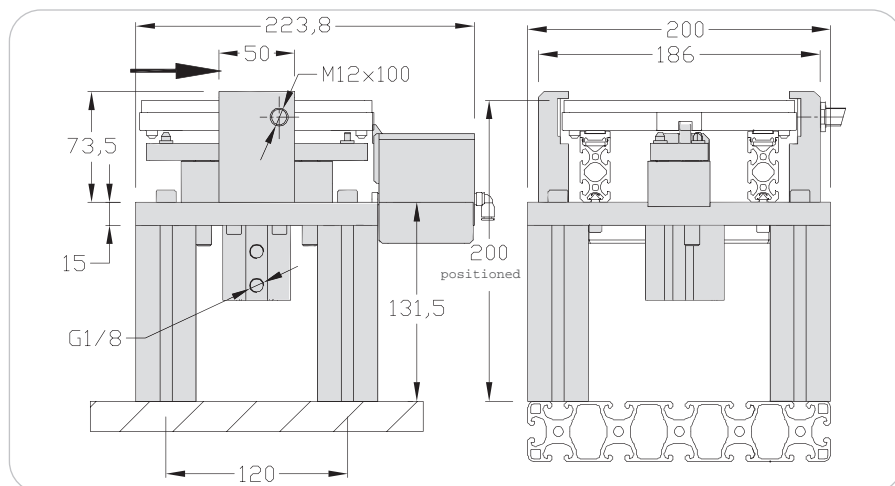
Maximum vertical strain: 40 daN to 6 bars

Repeatability: +/- 0,03 mm



2 flow rate controllers G1/8 for the cylinder of the positioning unit + flow rate controllers for the stopper are required.

Weight: 4,6 kg



Designation / Dimensions	Order unit	Reference
Positioning unit for station 150 damped pneumatic stopper	1 pce	150.26.000.RAP

Positioning unit for station 24 V, automatic stopper Width 150

Technical data

Complete set including:

- ✗ 1 gear motor 24 V
- ✗ Vertical movement provided by an irreversible screw-nut system
- ✗ Vertical position controlled by encoder
- ✗ Housing for shielded mounting sensors M12X100
- ✗ Detection range: 4 mm
- ✗ 4 profile stands 8 40x40
- ✗ Fastening parts

Maximum vertical strain: 100 daN

Repeatability: +/- 0,03 mm

Tension d'alimentation motor :

24 VDC

Courant d'alimentation motor : 4 A

Control voltage: 24 VDC

Control current: 10 mA

5 positioning input status

4 output status

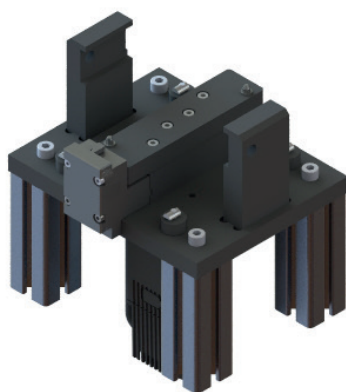
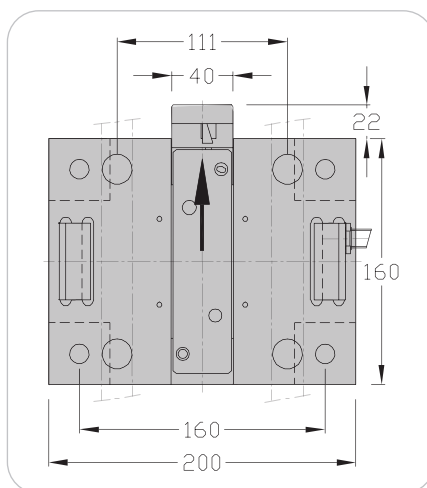
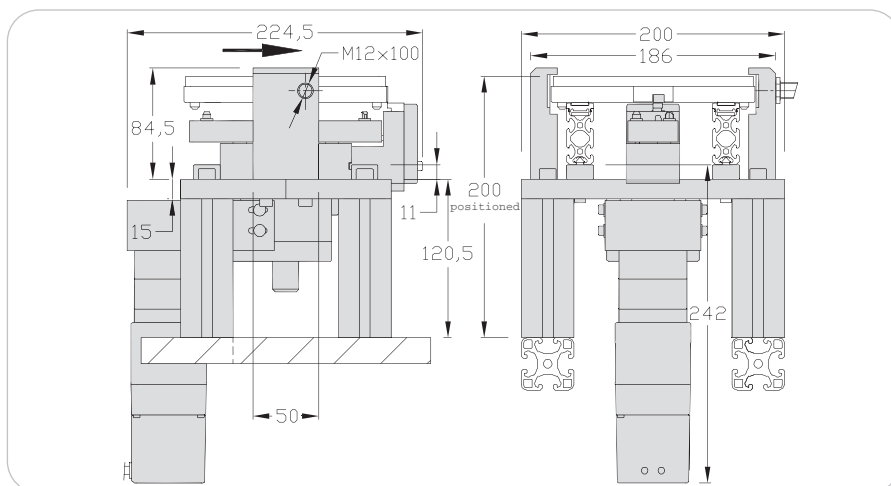
The stopper of workpiece carriers is positioned by the vertical movement (no stopper control needed).

A Brushless gear motor ensures the control of the stopper and the positioning unit.

Irreversible system.

Electrical connection: see detailed specification sheet included with the material.

Weight: 7,5 kg



elcom ITS 24 V

Designation / Dimensions	Order unit	Reference
Positioning unit for station 24 V 150 automatic stopper	1 pce	150.10.000.E

Positioning units lift Width 150

Technical data

Complete set including:

- ✗ Impulse controlled stopper and anti bouncing back devices
- ✗ 1 double effect cylinder ø 32
- ✗ Ball bearing guide bush ø 14
- ✗ 1 bracket support for shielded mounting sensor M12x100
- ✗ Detection range: 4 mm

Available cylinder strokes:
25 - 50 - 100 - 160 - 200 mm

Maximum vertical strain: 40 daN

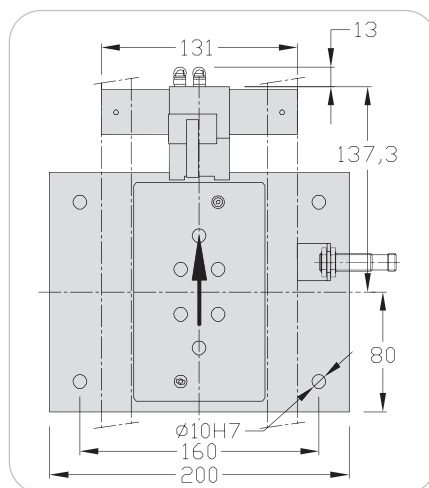
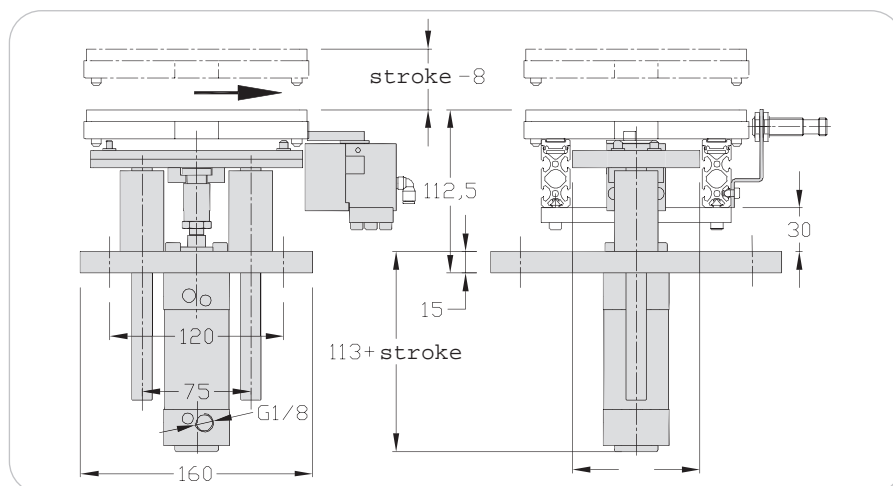
Repeatability: +/- 0,06 mm



A stopper located before the lift unit is generally necessary to avoid the arrival of another workpiece carrier during lifting.



2 flow rate controllers G 1/8 for positioning unit cylinder and controllers M5 for the stopper should be adapted.



Weight: 4,6 kg

Designation / Dimensions	Order unit	Reference
Positioning unit lift 150 simple effect	1 pce	150.12.000
Positioning unit lift 150 double effect	1 pce	150.31.000

Positioning unit lift, damped pneumatic stopper Width 150

Technical data

Complete set including:

- ✗ Stopper
- ✗ 1 double effect cylinder $\varnothing 32$
- ✗ 1 ball bearing guide bush $\varnothing 14$
- ✗ 1 bracket for shielded mounting sensor M12x10
- ✗ Detection range: 4 mm

Available cylinder strokes:
25 - 50 - 100 - 160 - 200 mm

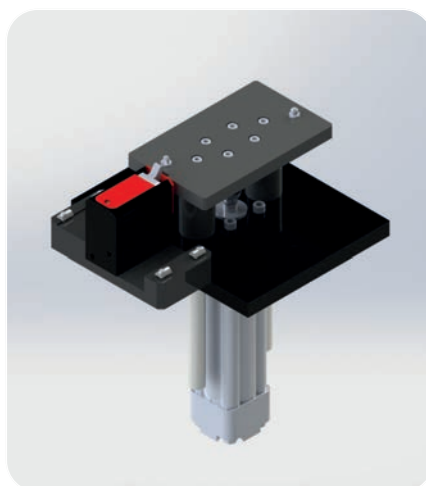
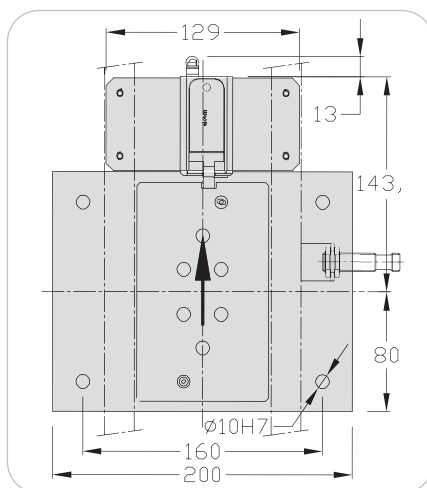
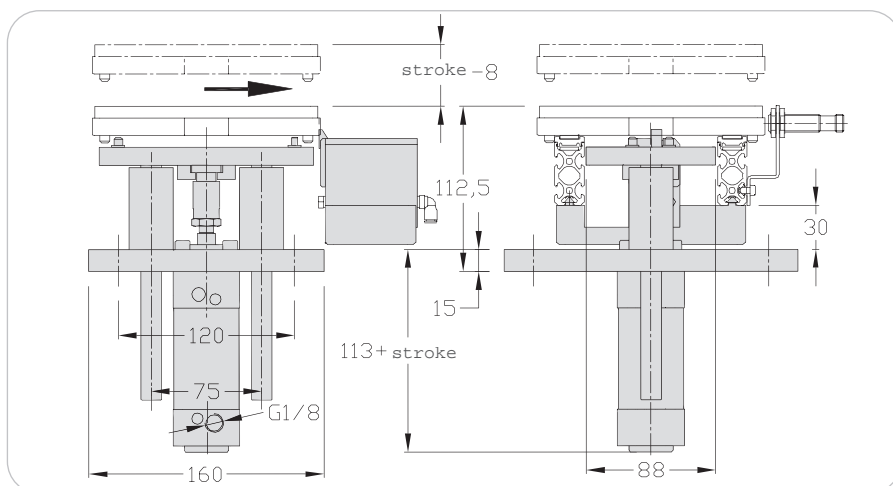
Maximum vertical strain: 40 daN

Repeatability: +/- 0,06 mm

! An upstream stopper is required to prevent the inlet of a workpiece carrier during the lifting.

! 2 flow rate controllers G 1/8 for the cylinder of the positioning unit + 1 connection M5 for the stopper are required.

Weight: 5 kg



Designation / Dimensions	Order unit	Reference
Positioning unit lift 150 damped pneumatic stopper	1 pce	150.12.000.RAP

Dead man option, Positioning unit lift Width 150

Applications

This option is available for all lift positioning units width 150 (references 150.12.000 - 150.12.000.RAP - 150.31.000).

Locking by springs.

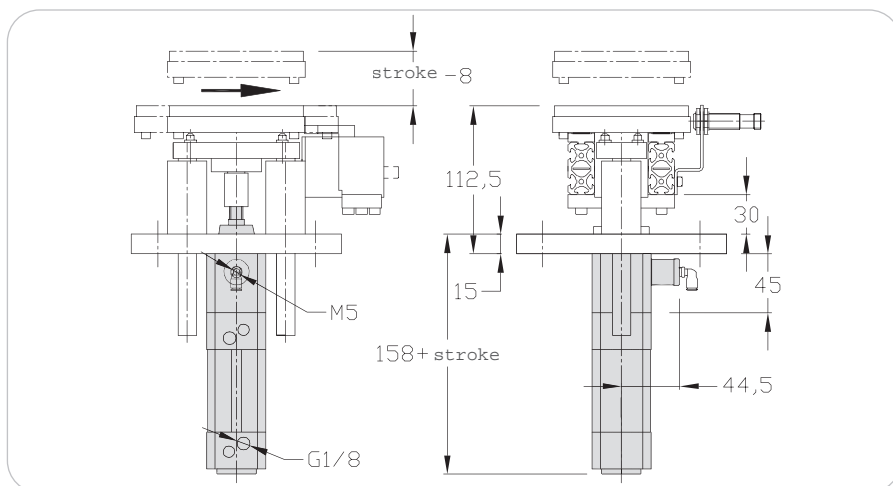
Retaining force: 600 N

Useful pressure range: 6 bars.



2 flow rate controllers G1/8 + 1 connection M5 are required.

Weight: 1,25 kg (stroke 200).



Designation / Dimensions	Order unit	Reference
Dead man option, Positioning unit lift 150	1 pce	110.75.000

Sensor bracket M12x100

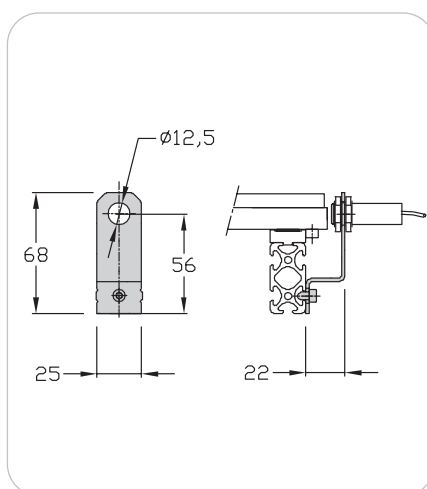
Applications

Bracket for workpiece carrier M12x100 sensor.

Technical data

- ✗ Stainless steel 2 mm
- ✗ Nut 5 St M4 + screws
- ✗ Detection range: 4 mm

Weight: 0,035 kg



Designation / Dimensions	Order unit	Reference
Sensor bracket 150	1 pce	110.17.000

Anti bouncing back

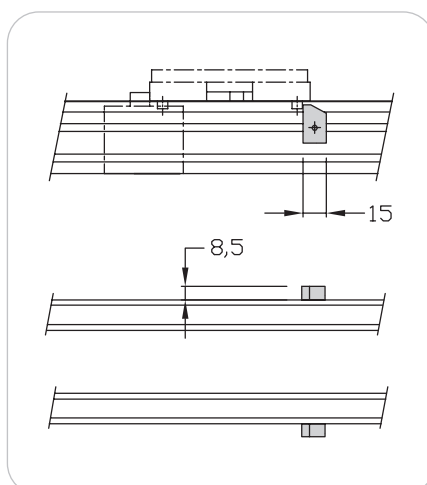
Applications

Avoids workpiece carrier bouncing back on stoppers or positioning units in case of high speed. Allows to reduce the changing time of workpiece carriers in the positioning units..

Technical data

- ✗ Parts, PA black
- ✗ Fastening parts

Weight: 0,1 kg



Designation / Dimensions	Order unit	Reference
Anti bouncing back	1 kit	110.30.000

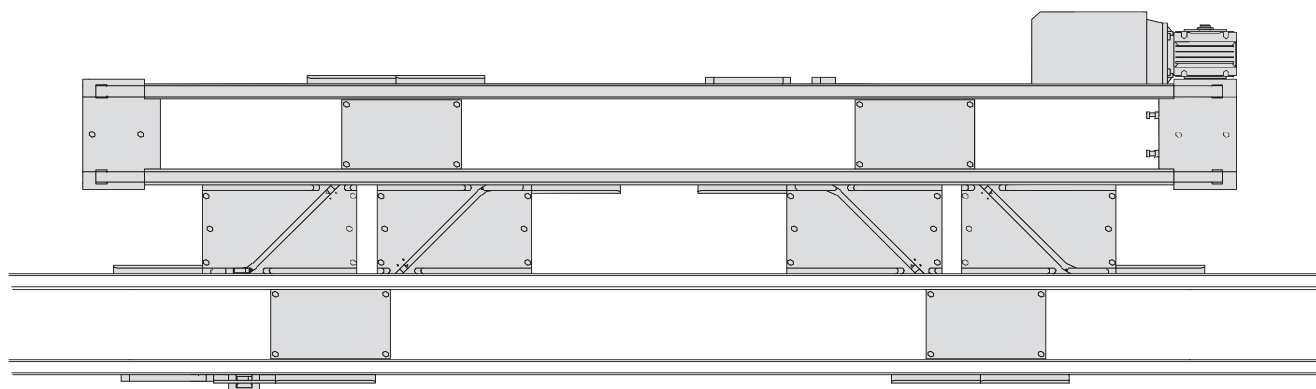
Cams short - Width 150

Applications

Short cams SD-EG SG-ED - Double cams

The short cams and the double cams allow deviation of workpiece carriers from a main line to a secondary line without additional motorization. Economical, compact and very easily managed, they are ideal to set up work stations in derivation.

 **Do not accumulate the workpiece carriers in the cams.**



Short cam 150

The double cams allow deviation of workpieces carriers from a main line to a secondary line without additional motorization.

Economical, compact and very easily managed, they are ideal to set up work stations in derivation.

Cam double 24 V - Width 150

Two Brushless gear motors controlled by a control box ensure the rotation of the selector.

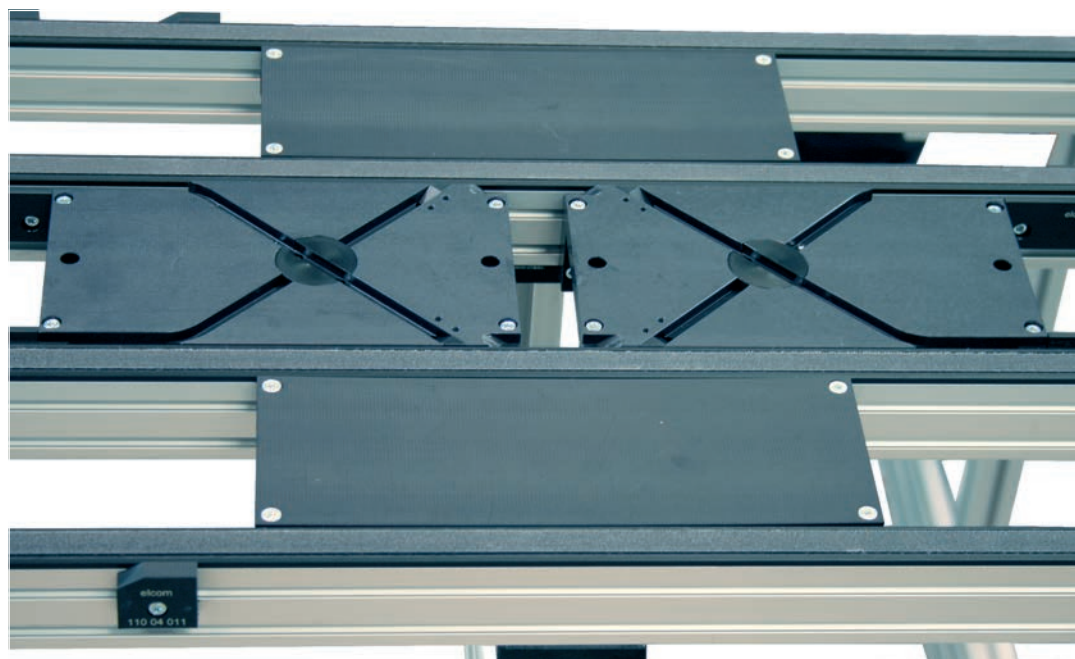
A single output for logic controller is necessary.

Combined with a derivation kit, control and supply can be used on the box of the derivation kit.

Control module 24 V output: automation, bus module, splitter...

Standard connectors M12.

An extension for connection M8 male/female 3 pins between the motor and the control box is required.



Double cam 150



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Cams short SD-EG/SG-ED Width 150

Technical data

Complete set including:

- ✘ Cams and guides, PA black
- ✘ Fastening parts
- ✘ Screw and nuts 5 St M4

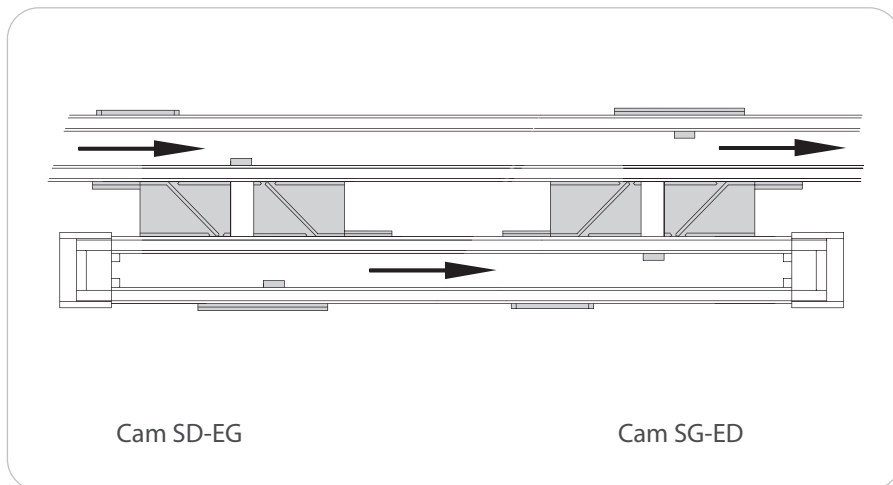
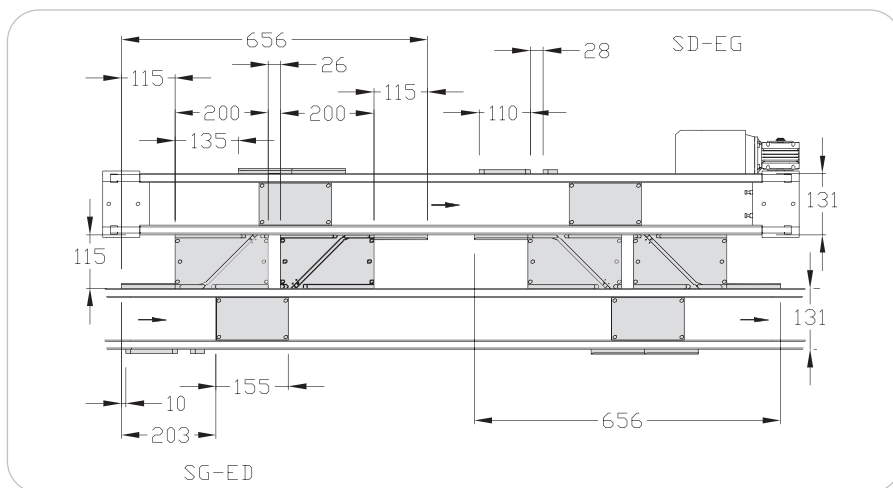
(1 set SD-EG + 1 set SG-ED are necessary to make a complete derivation)

If a selection is necessary (derivation or not), add the derivation set.

! Maximum load: 2 daN

! Do not accumulate the workpiece carriers in the cams.

Weight: 1,14 kg



Designation / Dimensions	Order unit	Reference
Cam short 150 SD-EG	1 kit	150.46.000
Cam short 150 SG-ED	1 kit	150.17.000

Cam double Width 150


Technical data

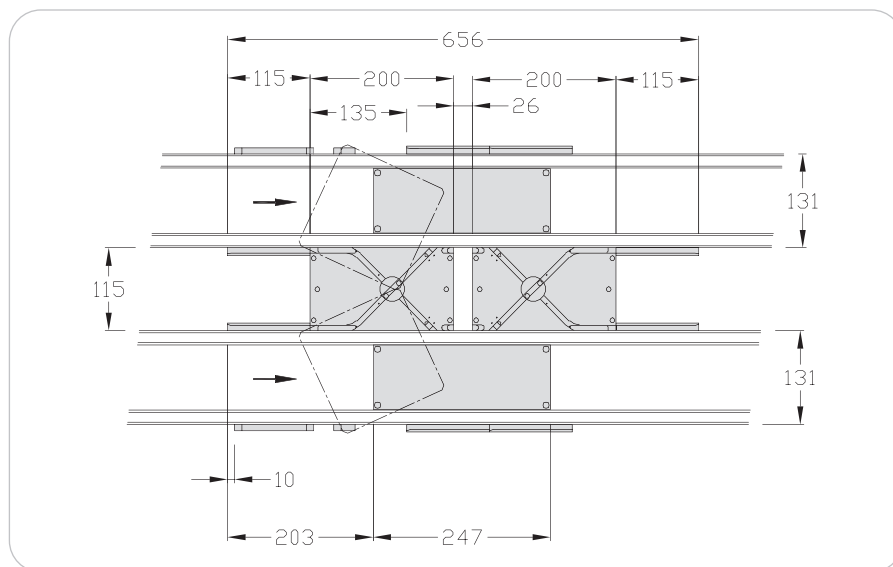
Complete set including:

- ✘ Cam, selectors, ramps and guides, PA black
- ✘ 2 rotative cylinders, (M5)
- ✘ Fastening parts
- ✘ Screw and nuts 5 St M4

If a selection is necessary (derivation or not), add the derivation set.

 **Maximum load: 2 daN**

 **Do not accumulate the workpiece carriers in the cams.**



Weight: 1,72 kg

Designation / Dimensions	Order unit	Reference
Cam double 150	1 kit	150.21.000

Cam double 24 V Width 150

Technical data

Complete set including:

- ✗ Cam, selectors, ramps and guides, PA black
- ✗ 2 Brushless gear motors
- ✗ Interface : standard 3-pins M8 connector
- ✗ Fastening parts
- ✗ Screws and nuts 5 St M4

If a selection is necessary (derivation or not) add the derivation set.

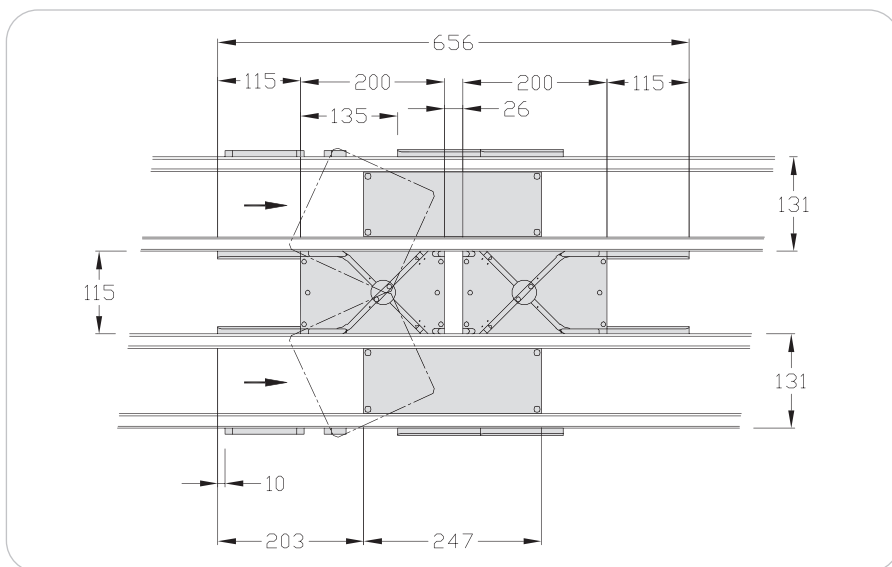
Supply voltage of the control box:

24 VDC +/- 15%

Power supply: 1,6 A maxi

Control voltage: 24 VDC +/- 10 %

Control current: 5 mA maxi



Load mini/workpiece carrier: 2 daN



Do not accumulate workpiece carriers in cams.

Electrical connection: see detailed specification sheet included with the material.

Weight: 1,95 kg



elcom ITS 24 V

Designation / Dimensions	Order unit	Reference
Cam double 24 V 150	1 pce	150.21.000.E

Positioning kit

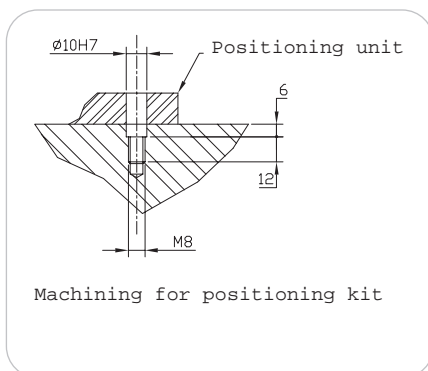
Applications

Allows accurate positioning unit on station.

Technical data

- x 2 axis screws M8
- x 2 hexagonal socket head cap screws M8

Weight: 0,08 kg



Designation / Dimensions	Order unit	Reference
Positioning kit	1 kit	120.62.000

Inductive sensor M12x100

Applications

Detection for the workpiece carrier.

Technical data

- x Shielded mounting sensor M12x100
- x LED control display
- x PNP-10-30 VDC
- x Screwed connection
- x Cable 5 m



Designation / Dimensions	Order unit	Reference
Inductive sensor M 12x 100	1 kit	200.10.200

Inductive sensor

Applications

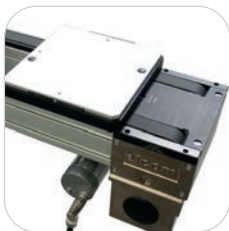
Detection the position of cylinders, stoppers or positioning units.

Technical data

- x 12-27 V-LED control display

Designation / Dimensions	Order unit	Reference
Cylinder sensor, positioning unit	1 kit	200.10.201
Cylinder sensor, lift positioning unit	1 kit	200.10.202

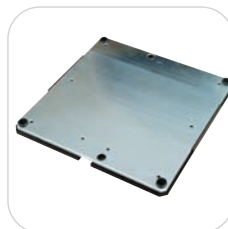
Conveying unit 24 V
p 118



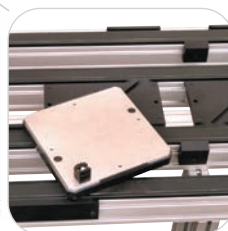
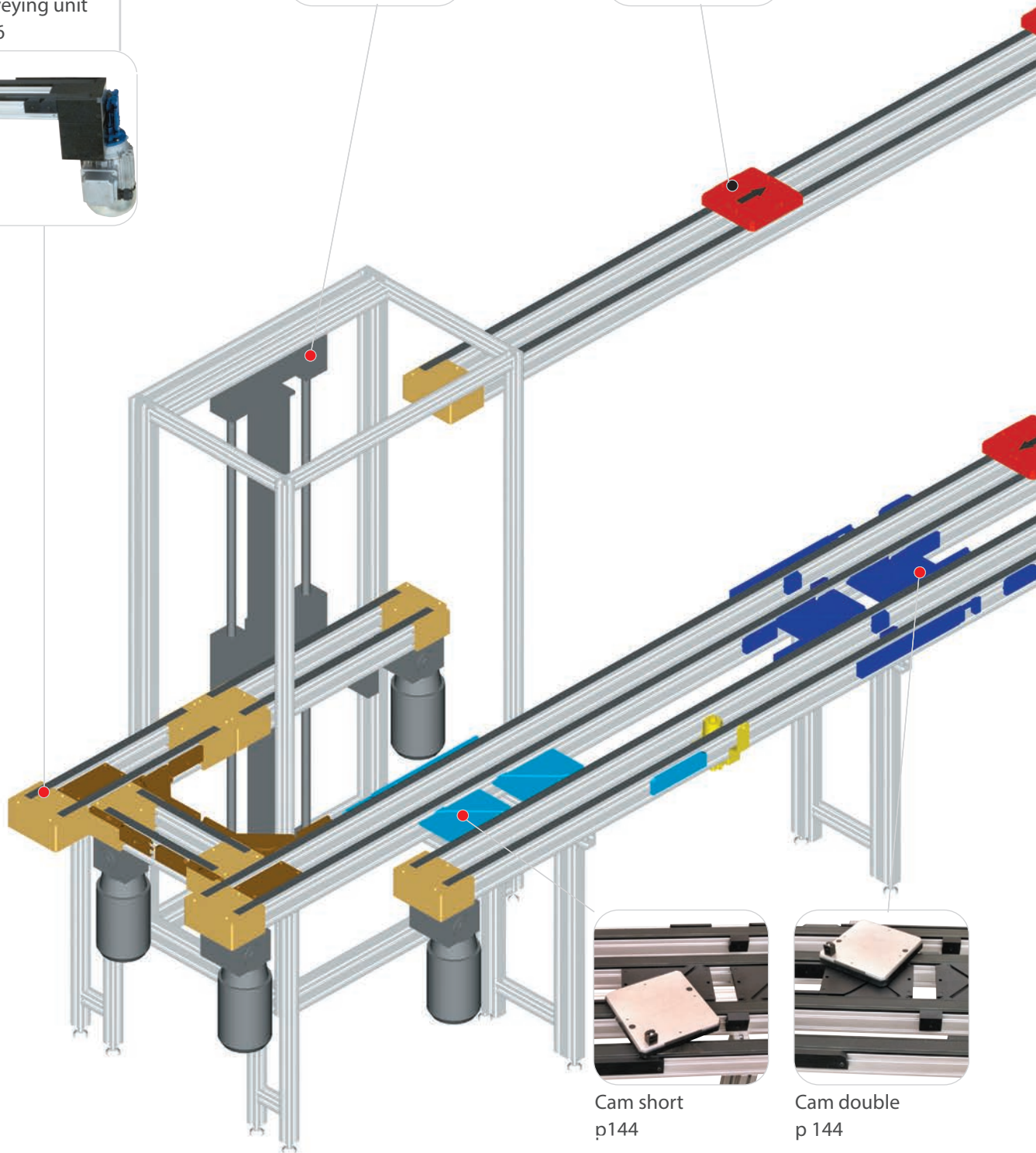
Lift
p 137



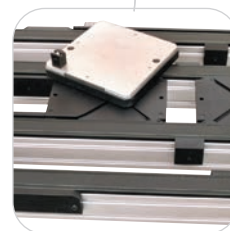
Workpiece carrier
p 108



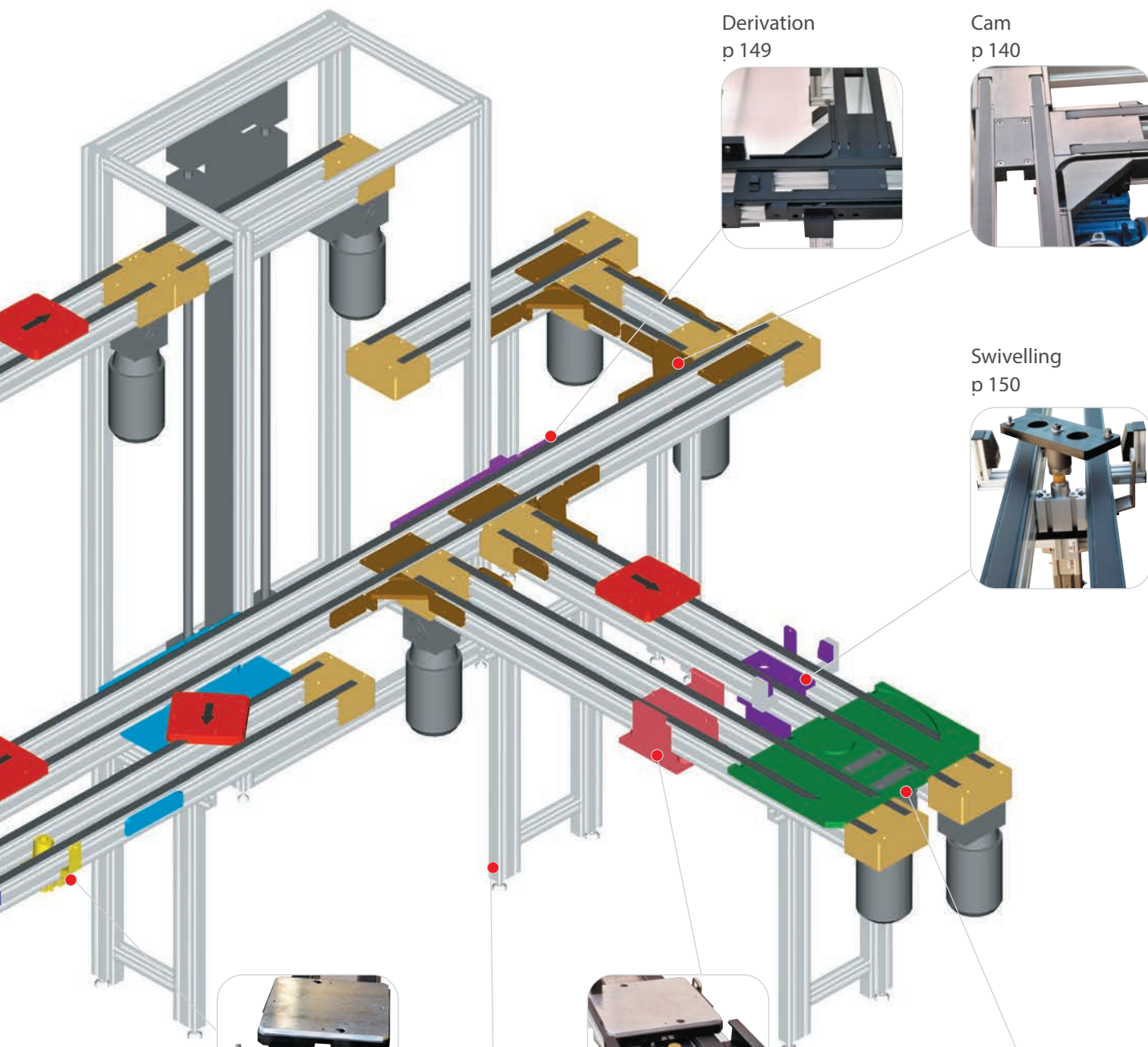
Conveying unit
p 116



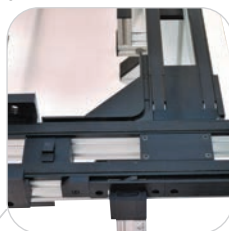
Cam short
p144



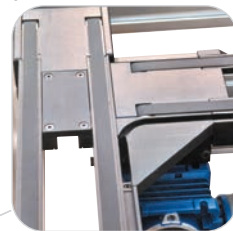
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p 144



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Cam
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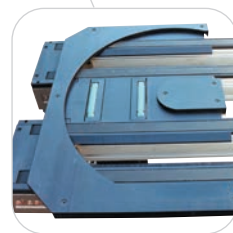
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stand
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Positioning unit
24 V
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www.elcom-automation.com/transfers



Tip
Download all CAD 3D files on our website!

Data

	TLM 2000			TLM 2000 direct			TLM 2000 timing belt 60 kg			TLM 2000 timing belt 150 kg		
Workpiece carriers (mm)	200x200 200x250 200x300 300x300 300x400 400x400			200x200 200x250 200x300 300x300 300x400 400x400			200x200 200x250 200x300			200x200 200x250 200x300		
Load / workpiece carriers (daN)	10			10			10			10		
Speed (m/min)	9 - 15 - 19			9 - 15 - 19			9 - 15 - 19			14		
Length of conveying unit Mini Maxi	500 6250			500 6250			500 6160			500 6250		
Maxi accumulation load per motor (daN)	100			60			60			150		
Motor power (380 V three-phase)	Speed m/min	KW	A	Speed m/min	KW	A	Speed m/min	KW	A	Speed m/min	KW	A
	9	0,25	0,7	9	0,25	0,7	9	0,25	0,7	14	0,55	1,6
	15	0,37	1,2	15	0,37	1,2	15	0,37	1,2			
	19	0,55	1,4	19	0,55	1,4	19	0,55	1,4			

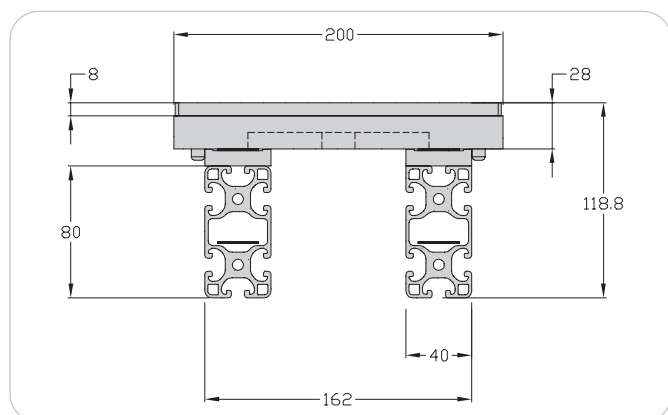
The maximum lengths of the conveying units are respectively:

- * 6250 mm for TLM 2000
- * 6160 mm for TLM 2000 timing belt light motorization

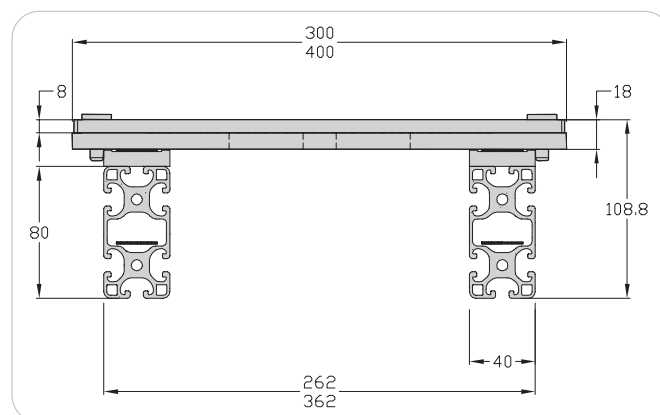
For long spans, several elements can be joined end to end.
 For important accumulations, the length of the conveying units is adapted to the load.
 It is recommended to place sensors in order to control accumulation of the load.
 Pneumatic cylinders must be equipped with flow rate controllers.
 It is possible for long spans to be cut in order to facilitate the dismantling of the machines.



TLM 2000 Width 200



TLM 2000 Widths 300 and 400



Workpiece carriers

Applications

The workpiece carriers allow the mounting of holders which ensure an accurate positioning of the assembly during the process.

The workpiece carriers consists of two plates.

The upper aluminium plate allows the fastening of workpieces, ensures the geometrical behaviour of workpiece carrier as well as the positioning accuracy. Machining (drillings and tappings) can be made according to the customer's wish.

Stainless steel bushes located in the aluminium plate

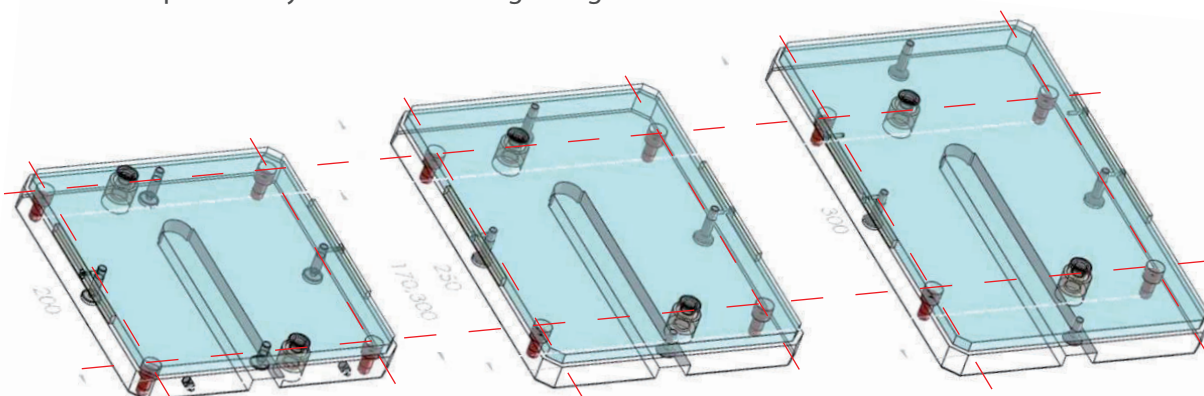
guarantee resistance to wear and a perfect accuracy. The PA base has an extremely low friction coefficient and lays on the conveying belts. This base hosts 4 guiding pins (specific to **elcom**) and has the necessary shape to ensure stoppers proper functioning.

Metalic bars are located on each side of the workpiece carrier in order to detect them at several workstations. The characteristics of stoppers, guiding pins with springs can be found in the next pages.

Variable length of **elcom's** workpiece carriers and specific workpiece carriers

Standard workpiece carriers are available to install the workpieces that will be conveyed. In many cases, the surface area workpiece carrier is not sufficient. Specific workpiece carriers can be supplied. The use of 4 guiding pins makes it possible to vary the length of workpiece carrier and to optimize cycle times. The guiding

pins remain in the position of the nearest standard workpiece carrier. So, all the standard elements such as cams are usable without modification. The following variants for a TLM 2000 system clearly show the possibilities:



Standard square dimensions:

- 200 x 200 mm
- 300 x 300 mm
- 400 x 400 mm

Standard rectangle dimensions:

- 200 x 250 mm
- 200 x 300 mm
- 300 x 400 mm

Customized customer's dimensions:

- 200 x XXX mm
- 300 x XXX mm
- 400 x XXX mm
- XXX = Dimension defined by the user

The lay-out of guide pins is identical in width. However, in the length direction, the guide pins of a 400x400 workpiece carrier have a larger gap than the 200x200

workpiece carriers. In case of use of workpiece carriers of several dimensions on the same transfer unit, lay-out of the guiding pins must be alike.

Workpiece carriers

Workpiece carriers and specific adjustments

Standard workpiece carriers are available to install the customers' workpiece. In many cases, the surface area of workpiece carrier is not sufficient. Specific workpiece carriers must be provided. These must be mostly defined by our customer and be applied to our standard workpiece carriers.

Our standard workpiece carriers and the specific adjustments form together the basis of a secure

workpiece conveying. Furthermore this allows an optimum supply of the workpiece carriers at the workbenches. Depending on use, the workpiece carrier will be positioned with an accuracy of 30 µm.

In addition to the positioning, pressure forces are discharged by the workpiece carriers. Our standard modules offer here a derivation of the force up to 40 kN (4 tons).

Workpiece carriers U and M

Workpiece carriers are used to support and position the components during the process.

The upper plate (made of aluminium) is used to fix the components and perform an accurate positioning of the workpiece carrier.

The PA base (which has a very low friction coefficient) is used to shelter the pins and to stop the workpiece carrier on the stopper.

Steel bushes assure perfect accuracy and resistance against deterioration.

On each side of workpiece carrier, small metallic bars allow detection of workpiece carriers at different positions.

Unidirectional workpiece carriers (U)

They are perfectly compatible with a 180° swivelling.

Possibility of adding shock absorbers to limit the shock between the workpiece carriers and to reduce the noise (T).

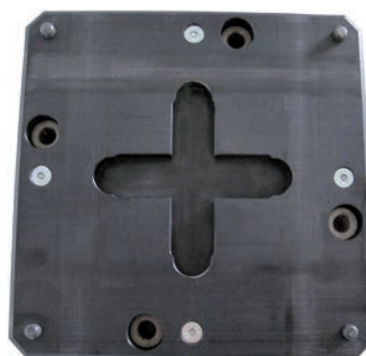
Multidirectional workpiece carriers (M)

For square workpiece carriers only.

They are perfectly compatible with 90°, 180° and 270° swivellings, delivered with 2 bushes and 2 additional detection bars.



Workpiece carriers U



Workpiece carriers M

Workpiece carriers U shock absorbers (T)

The aluminum plate is provided with two drills on the side in the direction of motion. Shock absorbers are inserted in these drills. These damp the impact against the plate and therefore reduce noise pollution.

The workpiece carrier with shock absorber T corresponds to the standard U-type workpiece carrier.



The use of the workpiece carrier with shock absorbers require the installation of a stopper before each positioning unit. This avoids the shearing of shock absorbers.



Workpiece carrier with shock absorber

Workpiece carriers U Widths 200

Technical data

- x Plate Al
- x Base, PA black
- x 2 steel bushes
- x 4 pins PA
- x 4 springs
- x 3 countersunk screws M6x25
- x 1 countersunk screw M6x16
- x 2 detection bars
- x 2 plugs

B = 200 C = 170

B = 250 C = 170

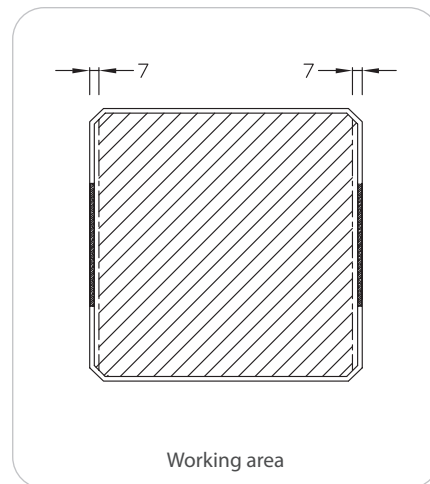
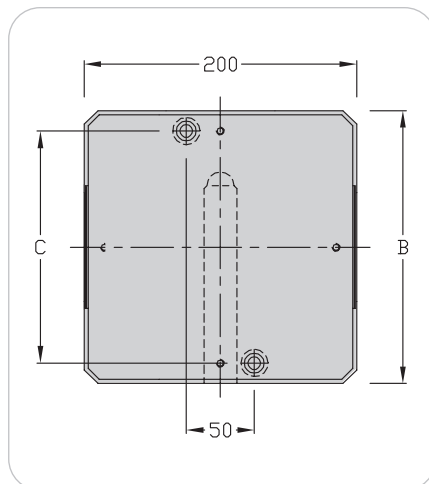
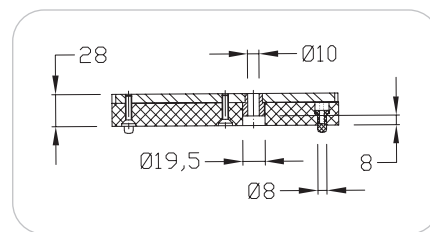
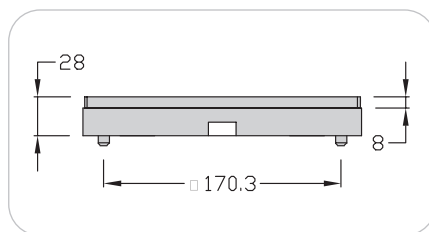
B = 300 C = 170

! Maximum load: 10 daN

Weight: 200x200: 1,75 kg

200x250: 2,20 kg

200x300: 2,63 kg



Designation / Dimensions	Order unit	Reference
Workpiece carrier U 200x200	1 pce	120.61.000
Workpiece carrier U 200x250	1 pce	125.62.000
Workpiece carrier U 200x300	1 pce	123.62.000

Workpiece carriers U shock absorbers (T) Width 200

Applications

The use of workpiece carriers with shock absorbers (workpiece carriers T) limits the shock between the workpiece carriers and reduces the noise.

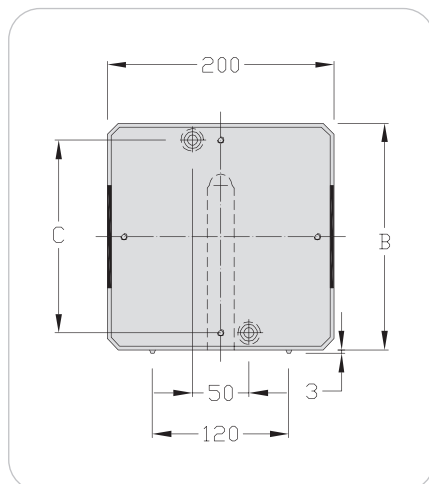
For unidirectional workpiece carriers only.

Set up a stopper before each positioning unit.

Weight: 200x200 : 1,75 kg

200x250 : 2,20 kg

200x300 : 2,63 kg



Designation / Dimensions	Order unit	Reference
Workpiece carrier U 200x200 T	1 pce	120.61.000.T
Workpiece carrier U 200x250 T	1 pce	125.62.000.T
Workpiece carrier U 200x300 T	1 pce	123.62.000.T

Workpiece carriers M Widths 200

Technical data

- x Plate Al
- x Base, PA black
- x 2 steel bushes
- x 4 pins PA
- x 4 springs
- x 4 countersunk screws M6x25
- x 2 detection bars
- x 2 plugs

B = 200 C = 170

B = 250 C = 170

B = 300 C = 170



Maximum load: 10 daN

Weight: 200x200: 1,75 kg

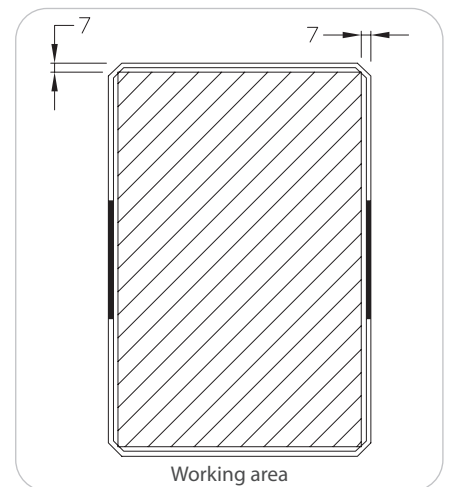
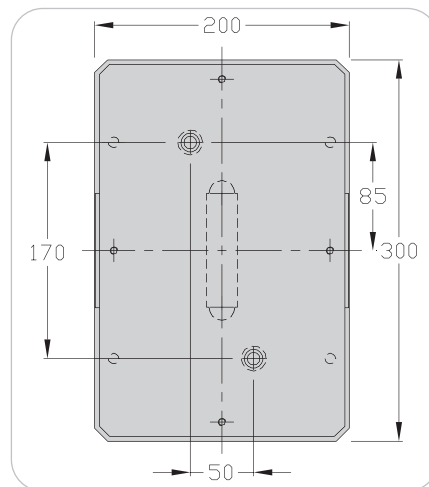
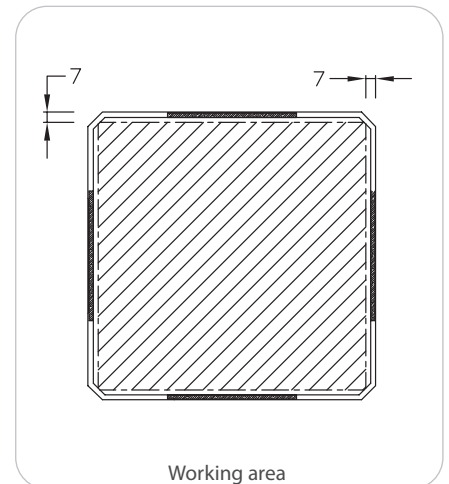
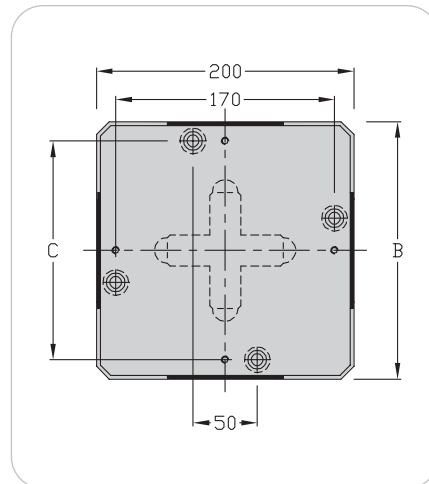
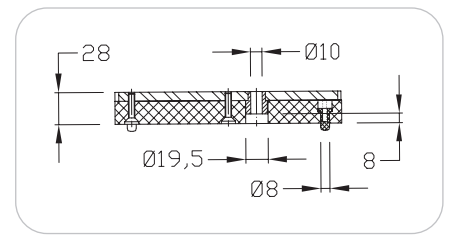
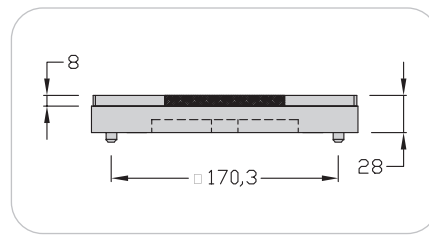
200x250: 2,20 kg

200x300: 2,63 kg

Option : set 90°

Technical data

- x 2 detection bars
- x 2 steel bushes
- x 2 plugs



Designation / Dimensions	Order unit	Reference
Workpiece carrier M 200x200	1 pce	120.63.000
Workpiece carrier M 200x250	1 pce	125.73.000
Workpiece carrier M 200x300	1 pce	123.73.000
Set 90° 200x200	1 pce	900.00.001

Workpiece carriers U Widths 300 - 400

Technical data

- x Plate Al
- x Base, PA black
- x 2 steel bushes
- x 4 pins PA
- x 4 springs
- x 9 countersunk screws M6x16
- x 2 detection bars
- x 2 plugs

A = 300 B = 300 C = 270

A = 300 B = 400 C = 370

A = 400 B = 400 C = 370

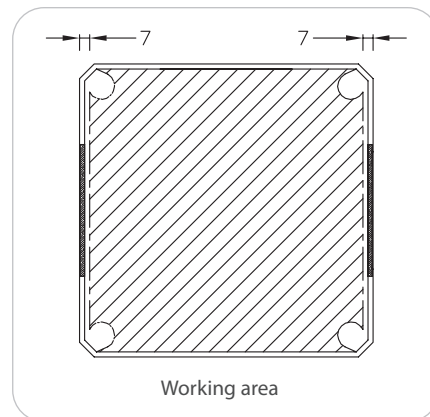
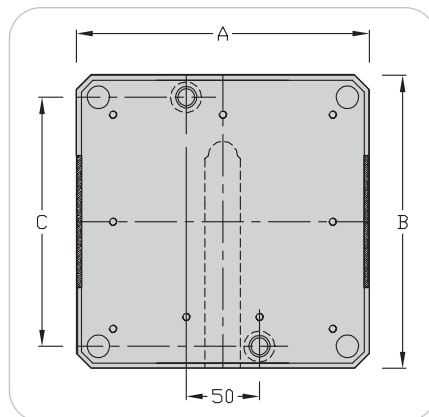
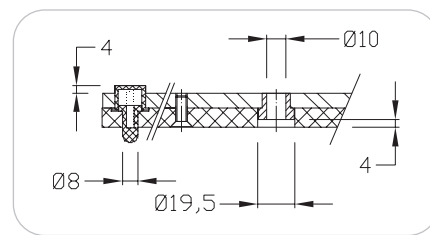
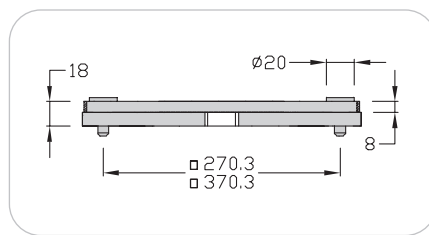


Maximum load: 10 daN

Weight: 300x300: 3,10 kg

300x400: 4,10 kg

400x400: 5,40 kg



Designation / Dimensions	Order unit	Reference
Workpiece carrier U 300x300	1 pce	130.61.000
Workpiece carrier U 300x400	1 pce	134.62.000
Workpiece carrier U 400x400	1 pce	140.61.000

Workpiece carriers U shock absorbers (T) Widths 300 - 400

Applications

The use of workpiece carriers with shock absorbers (workpiece carriers T) limits the shock between the workpiece carriers and reduces the noise.

For unidirectional workpiece carriers only.

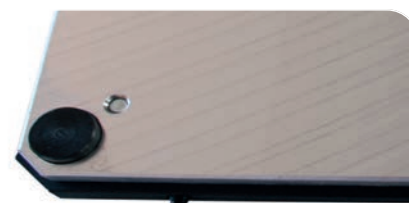
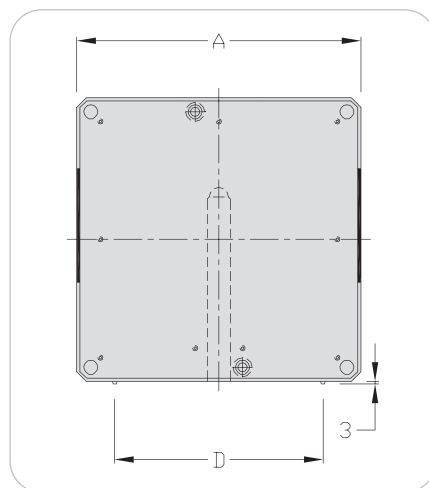
Set up a stopper before each positioning unit.

A = 300 D = 220 A = 400 D = 320

Weight: 300x300: 3,10 kg

300x400: 4,10 kg

400x400: 5,40 kg



Designation / Dimensions	Order unit	Reference
Workpiece carrier U 300x300 T	1 pce	130.61.000.T
Workpiece carrier U 300x400 T	1 pce	134.62.000.T
Workpiece carrier U 400x400 T	1 pce	140.61.000.T

Workpiece carriers M Widths 300 - 400

Technical data

- x Plate Al
- x Base, PA black
- x 2 steel bushes
- x 4 pins PA
- x 4 springs
- x 8 countersunk screws M6x16
- x 2 detection bars
- x 2 plugs

A = 300 B = 300 C = 270 D = 270

A = 300 B = 400 C = 370

A = 400 B = 400 C = 370 D = 370

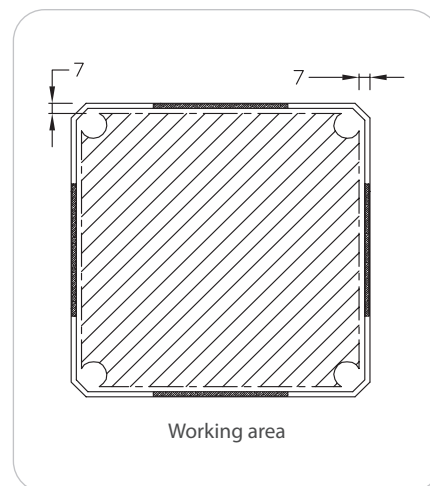
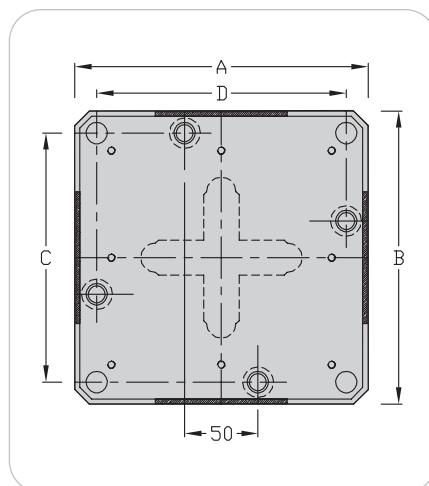
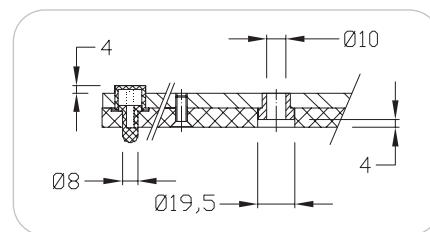
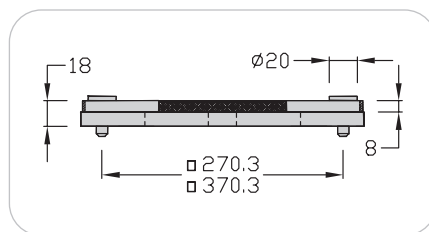


Maximum load: 10 daN

Weight: 300x300: 3,10 kg

300x400: 4,10 kg

400x400: 5,40 kg



Option : set 90°

Technical data

- x 2 detection bars
- x 2 steel bushes
- x 2 plugs

Designation / Dimensions	Order unit	Reference
Workpiece carrier M 300x300	1 pce	130.63.000
Workpiece carrier M 300x400	1 pce	134.73.000
Workpiece carrier M 400x400	1 pce	140.63.000
Set 90° 300 and 400	1 pce	900.00.003

Conveying units flat belt

Moving and accumulating of workpiece carriers.

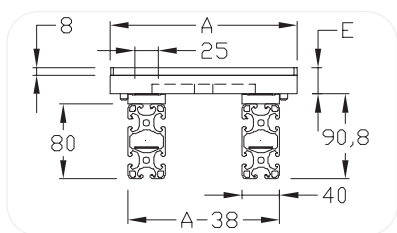
The motor can be fitted either vertically or horizontally, on the right or left side.

According to the load, longer spans can be joined end to end by a straight joining.

The cutting of the conveyors allows division of the length, making transport and installation of the lines easier.

They also allow to make important lengths for reduced loads.

Provide a spacer every meter.



Conveying units direct

Moving and accumulating of workpiece carriers.

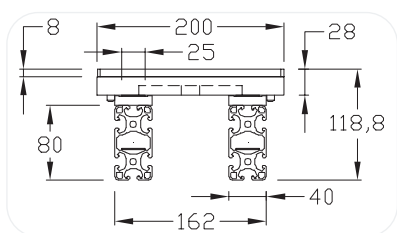
The motor can be fitted either vertically or horizontally, on the right or left side.

Perfectly compatible with the other conveying units.

The use of a new antistatic timing belt enables «Flex-proof» weldings.

Timing belts' change is highly reduced.

Provide a spacer every meter.



Antistatic set (option)

The antistatic set will divert through metal rollers the frame's static charge caused by the belt's friction.

The charge will be dissipated by the frame's grounding.



Conveying units light timing belt

Moving and accumulating of workpiece carriers.

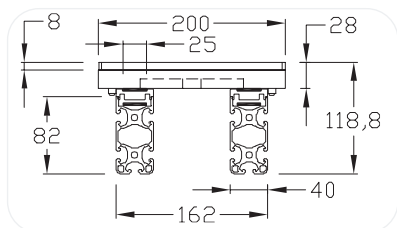
The motor can be fitted either vertically or horizontally, on the right or left side.

Perfectly compatible with the other conveying units.

The use of antistatic timing belts width 25 mm facilitates the maintenance when changing belts.

Belt guides are pressed into aluminium profile housings.

Provide a spacer every meter and every extremity.



Conveying units heavy timing belt

Moving and accumulating of workpiece carriers.

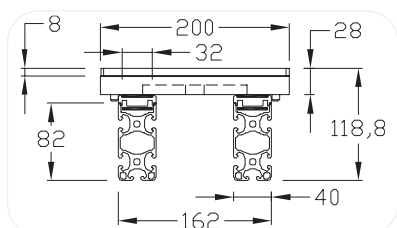
The motor can be fitted either vertically or horizontally, on the right or left side.

Perfectly compatible with the other conveying units.

The use of antistatic timing belts width 32 mm enables to convey important loads and facilitates maintenance when changing belts.

Belt guides are pressed into aluminium profile housings.

Provide a spacer every meter and every extremity.



Conveying units direct 24 V Widths 200 - 300 - 400

Applications

Moving and accumulating of workpiece carriers widths 200, 300 and 400 mm.

According to the load, longer spans can be joined end to end by straight joinings.

The cuttings of conveyors allow division of the lengths, making

transport and installation lines easier.

The Flexproof type welding belt greatly reduces the change of belts. Spacers have to be fitted between the profiles every meter to ensure a perfect parallelism of the two profiles.

This conveying unit is supplied with a Brushless motor factory-programmed according to your speed and acceleration ramp requirements. The use of a Brushless gear motor facilitates the wiring.



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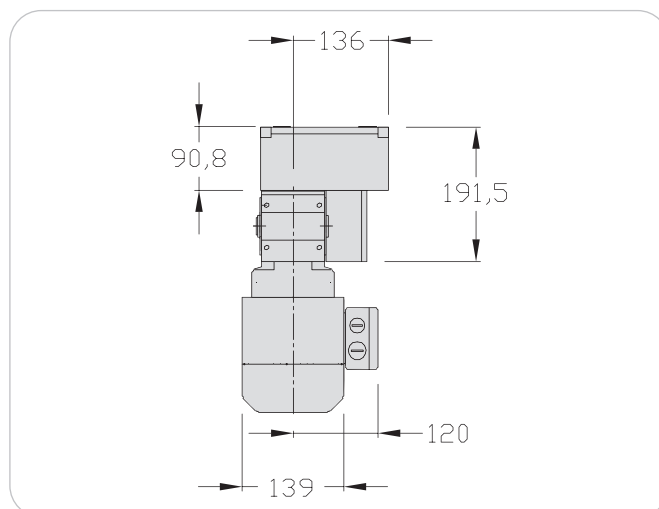
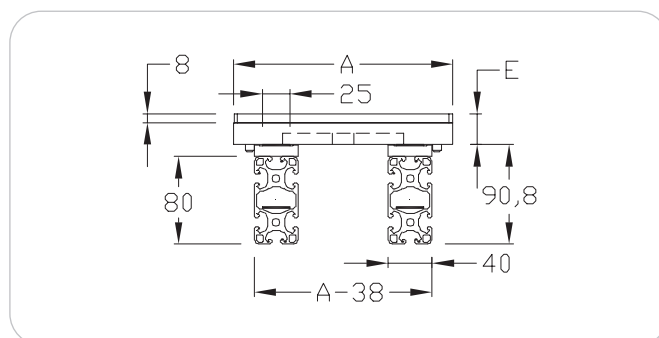
Conveying units pushing motor flat belt

Applications

Moving and accumulating of workpiece carriers 200x200 and 400x400 on a flat belt unit with pushing motor. The motor can be fitted either vertically or horizontally, on the right or left side.

According to the load, longer spans can be joined end to end by straight joinings.

The cuttings of conveyors allow division of the lengths, making transport and installation of the lines easier. Spacers have to be fitted between the profiles every 1 meter to ensure a perfect parallelism of the profiles.



Conveying units flat belt Widths 200 - 300 - 400

Technical data

Length mini L = 500 mm
 Length maxi L = 6 250 mm

For longer spans and according to the load, use several conveying units.

Unit transport

- x 1 idling unit
- x 1 driving unit
 speeds: 9, 15 or 19 m/min
 (other speeds on request)
- x 1 motor 230/400 V three-phase
 0,25 KW (9 m/min) I: 0,7 A
 0,37 KW (15 m/min) I: 1,2 A
 0,55 KW (19 m/min) I: 1,4 A

Conveyor length

- x 2 profiles 8 80x40, Al anodized
- x 2 belt guides, PA black
- x 2 belts width 25 mm
 thickness 1,6 mm, welded



Maximum load /6 m: 200 daN
Maximum accumulation load /6 m: 100 daN

Belt length in mm

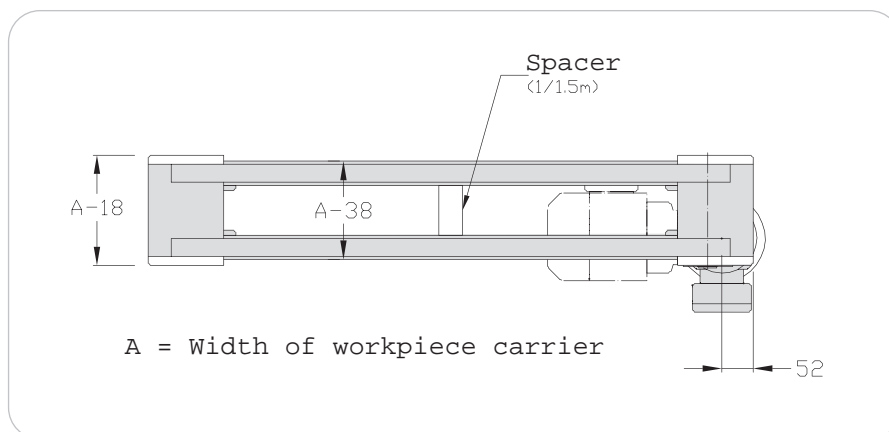
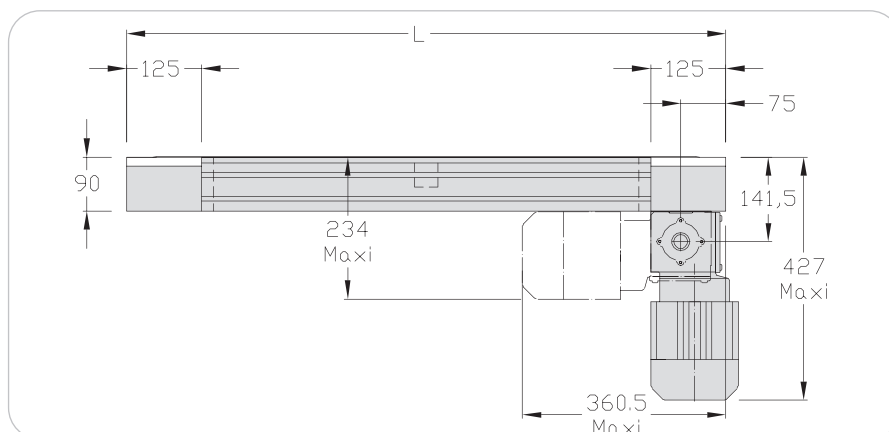
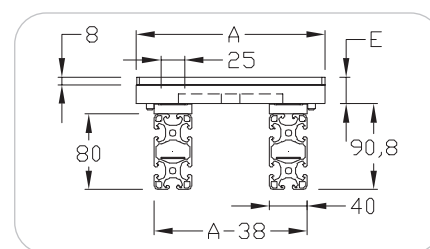
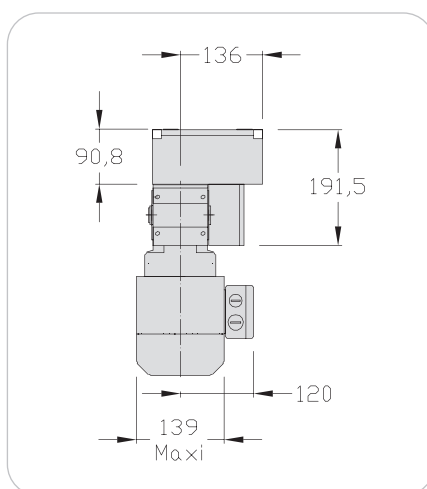
$L_{\text{welded}} = [(L-100) \times 2 + 173] \times 0,98$

Weight: 200: 15,7 kg +/- 6,7 kg
 300: 18,5 kg +/- 6,7 kg
 400: 21,1 kg +/- 6,7 kg

Antistatic option:

To be ordered with the initial assembling:

- 2 shouldered screws
- 2 steel rollers



Designation / Dimensions	Order unit	Reference
Conveying unit 200 flat belt	1 pce	120.02.000.**
Conveying unit 300 flat belt	1 pce	130.02.000.**
Conveying unit 400 flat belt	1 pce	140.02.000.**
Conveying length	m	120.02.000.A
Antistatic set	1 pce	120.02.000.C

(** = speed of motor m/min: 9, 15 or 19 eg: 120.02.000.09)

Conveying unit light timing belt Width 200

Technical data

Length mini L = 500 mm
 Length maxi L = 6 160 mm

For longer spans and according to the load, use several conveying units.

Conveying unit

- x 1 idling unit
- x 1 driving unit
 speed: 9, 15 or 19 m/min
- x 1 motor 240/400 V three-phase
 0,25 KW (9 m/min) I : 0,7 A
 0,37 KW (15m/min) I : 1,2 A
 0,55 KW (19m/min) I : 1,4 A

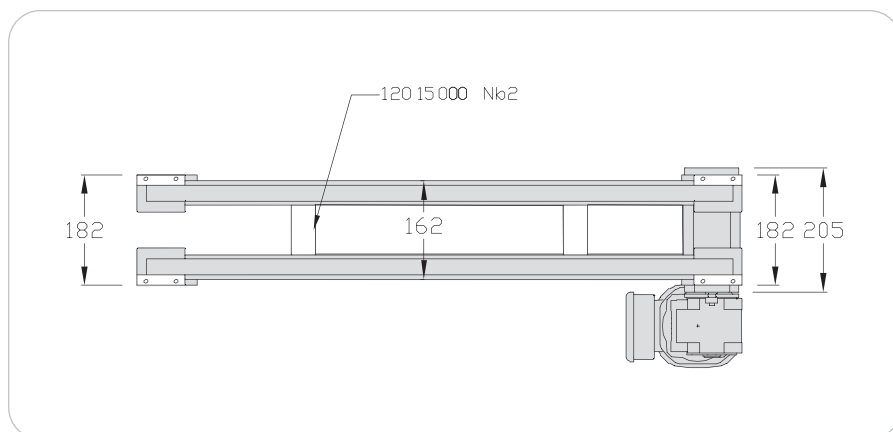
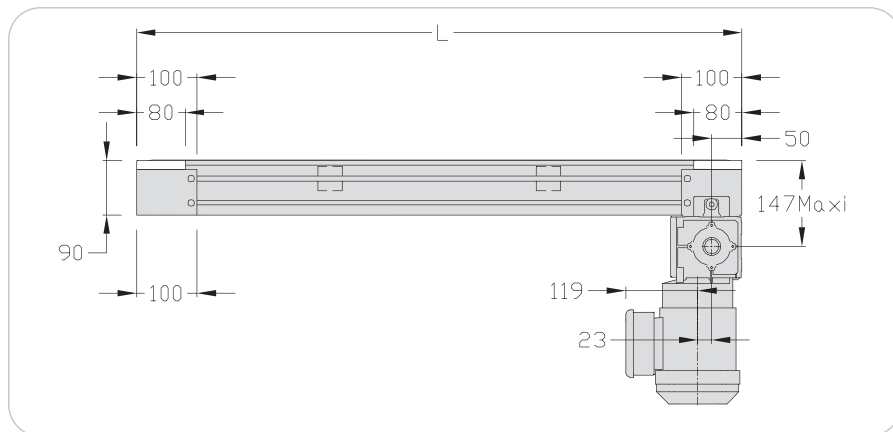
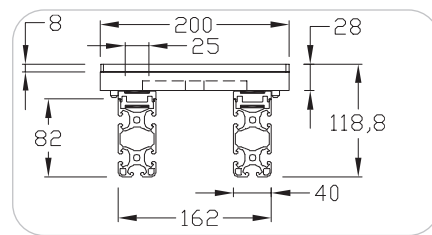
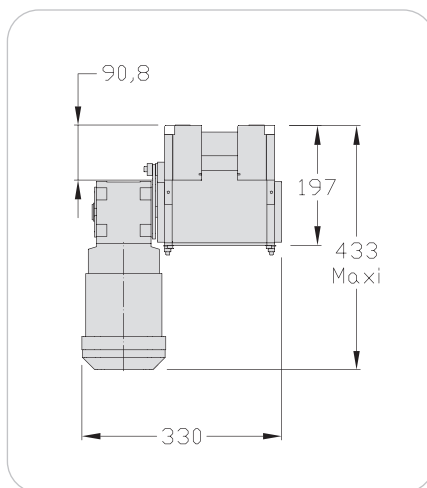
Conveyor length

- x 2 profiles 8 82x40, Al anodized
- x 2 belt guides, PA black
- x 2 antistatic belts
 width 25 mm, 5 mm step



Maximum load /6 m: 120 daN
Maximum accumulation load /6 m: 60 daN

Weight: 16,7 kg + 6,8 kg/m



Designation / Dimensions	Order unit	Reference
Conveying unit 200 light timing belt	1 pce	120.87.000.**
Conveying length	m	120.87.000.A

(** = speed of motor m/min: 9, 15 or 19 eg: 120.87.000.09)

Conveying unit heavy timing belt Width 200

Technical data

Length mini L = 500 mm
 Length maxi L = 6 250 mm

For longer spans and according to the load, use several conveying units.

Conveying unit

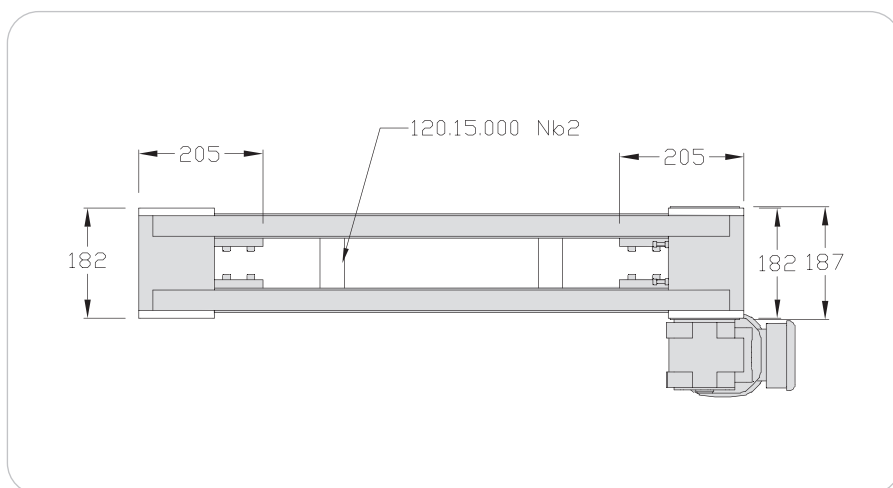
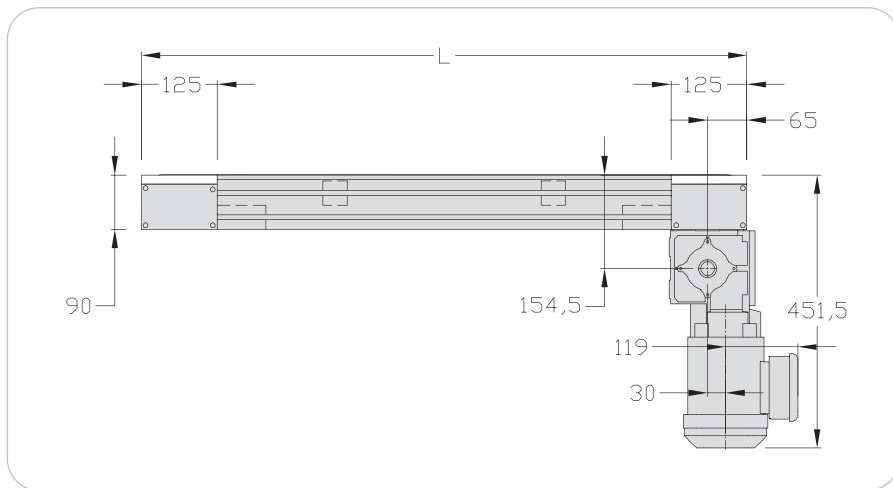
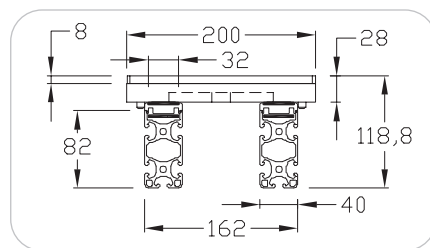
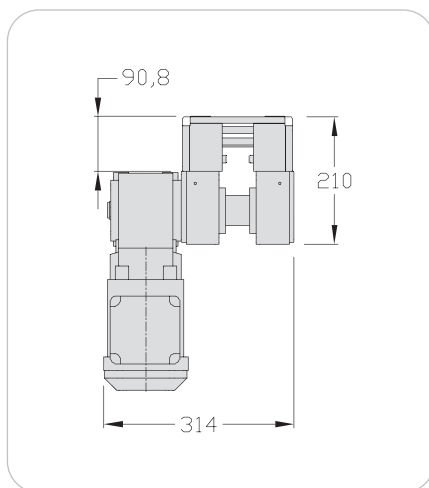
- x 1 idling unit
- x 1 driving unit
 speed : 14 m/min
- x 1 motor 240/400 V three-phase
 0,55 KW (14m/min) I : 1,6 A

Conveyor length

- x 2 profiles 8 82x40, Al anodized
- x 2 belt guides, PA black
- x 2 antistatic belts
 width 32 mm, 5 mm step

! Maximum load /6 m: 300 daN
 Maximum accumulation load /6 m: 150 daN

Weight: 21,2 kg + 6,9 kg/m



Designation / Dimensions	Order unit	Reference
Conveying unit 200 heavy timing belt	1 pce	120.80.000.14
Conveying length	m	120.80.000.A

Conveying unit 24 V direct flat belt Widths 200 - 300 - 400

Technical data

Length mini L = 500 mm
 Length maxi L = 6 250 mm

For longer spans and according to the load, use several conveying units.

Conveying unit

- x 1 idling unit
- x 1 driving unit
 - speed: 9 to 19 m/min, factory-programmed.
 - Possible stop in case of accumulation.
- x 1 motor 24 V
 - 0,15 KW
 - I: minimum supply voltage 10 A

Conveyor length

- x 2 profiles 8 80x40, Al anodized
- x 2 guide-bandes, PA black
- x 2 belts width 25 mm, thickness 1,8 mm, welded

Maximum load / 6 m: 120 daN
 Maximum accumulation load / 6 m: 60 daN

Belt length (in mm) :

$$L_c = [(L-250) \times 2 + 733] \times 0,98$$

Power supply: 24 VDC

Supply current: 8,5 A

Control voltage: 24 VDC

Control current: 10 mA

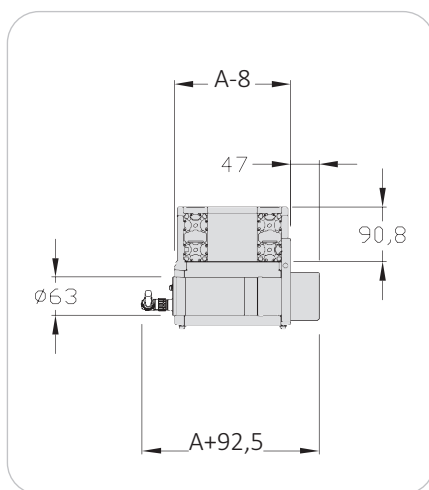
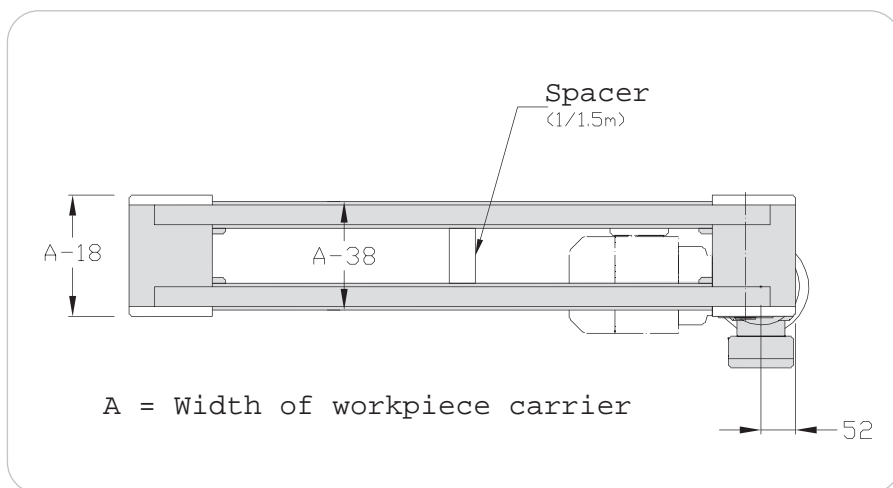
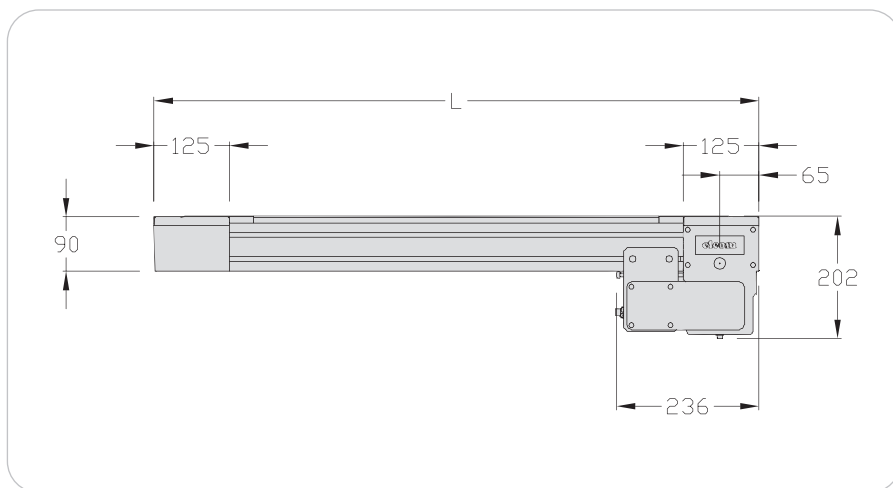
2 control outputs, 2 status inputs.

Weight:

200: 11,0 kg + 6,7 kg /m

300: 13,8 kg + 6,7 kg /m

400: 16,5 kg + 6,7 kg /m



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Designation / Dimensions	Order unit	Reference
Conveying unit 24 V 200 direct flat belt	1 pce	120.11.000.E
Conveying unit 24 V 300 direct flat belt	1 pce	130.11.000.E
Conveying unit 24 V 400 direct flat belt	1 pce	140.11.000.E
Conveying length	m	120.11.000.A

Conveying units pushing motor Widths 200 - 300 - 400

Technical data

Length mini L = 500 mm
 Length maxi L = 6 250 mm

For longer spans and according to the load, use several conveying units.

Unit transport

- x 1 idling unit
- x 1 driving unit :
 speeds: 9, 15 or 19 m/min
 (other speeds on request)
- x 1 motor : 230/400 V three-phase
 0,25 KW (9 m/min) I : 0,7 A
 0,37 KW (15 m/min) I : 1,2 A
 0,55 KW (19 m/min) I : 1,4 A

Conveyor length

- x 2 profiles 8 80x40, Al anodized
- x 2 belt guides, PA black
- x 2 belts width 25 mm



Maximum load /6 m: 100 daN
Maximum accumulation load /6 m: 50 daN

Belt length in mm

$$L \text{ welded} = [(L-100) \times 2 + 173] \times 0,98$$

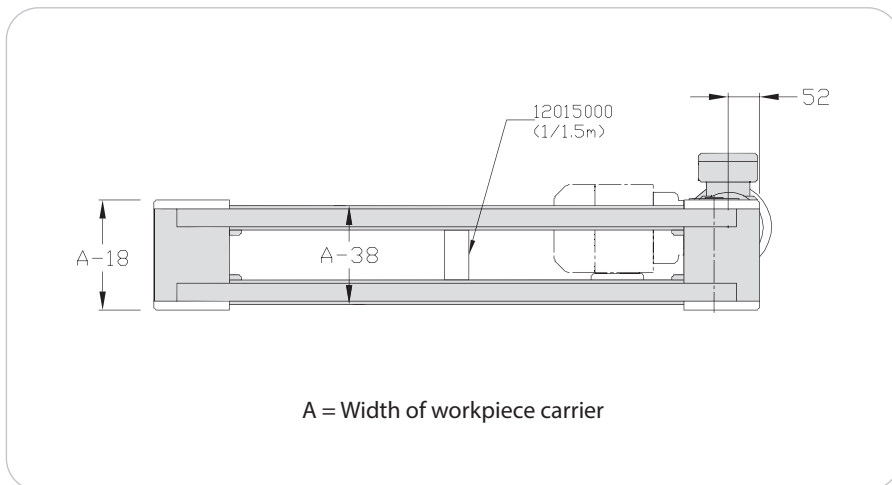
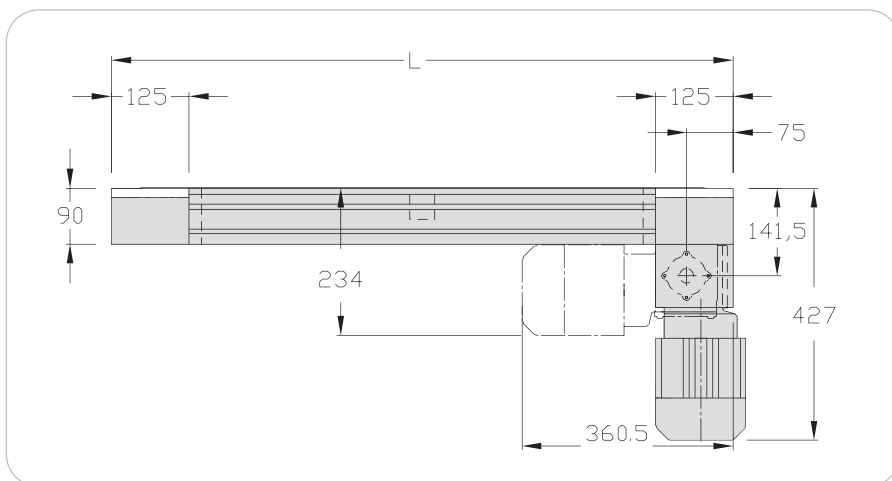
Weight:

200: 15,7 kg + 6,7 kg /m
 300: 18,5 kg + 6,7 kg /m
 400: 21,1 kg + 6,7 kg /m

Antistatic option

To be ordered with the initial assembling:

- 2 shouldered screws
- 2 steel rollers



Designation / Dimensions	Order unit	Reference
Conveying unit 200 pushing motor	1 pce	120.02.000.P.**
Conveying unit 300 pushing motor	1 pce	130.02.000.P.**
Conveying unit 400 pushing motor	1 pce	140.02.000.P.**
Conveying length	m	120.02.000.A
Antistatic set	1 kit	120.02.000.C

(** = speed of motor m/min: 9 - 15 or 19 eg: 120.02.000.P.09)

Conveying unit direct Widths 200 - 300 - 400

Technical data

Length mini L = 500 mm
 Length maxi L = 6 250 mm

For longer spans and according to the load, use several conveying units.

Conveying unit

- x 1 idling unit
- x 1 driving unit
 speeds: 9, 15 or 19 m/min
- x 1 motor 230/400 V three-phase
 0,25 KW (9 m/min) I : 0,7 A
 0,37 KW (15 m/min) I : 1,2 A
 0,55 KW (19 m/min) I : 1,4 A

Conveyor length

- x 2 profiles 8 80x40, Al anodized
- x 2 belt guides, PA black
- x 2 belts width 25 mm
 thickness 1,8 mm, welded



Maximum load /6 m: 120 daN
Maximum accumulation load /6 m: 60 daN

Belt length in mm

$L_{\text{welded}} = [(L-250) \times 2 + 733] \times 0,98$

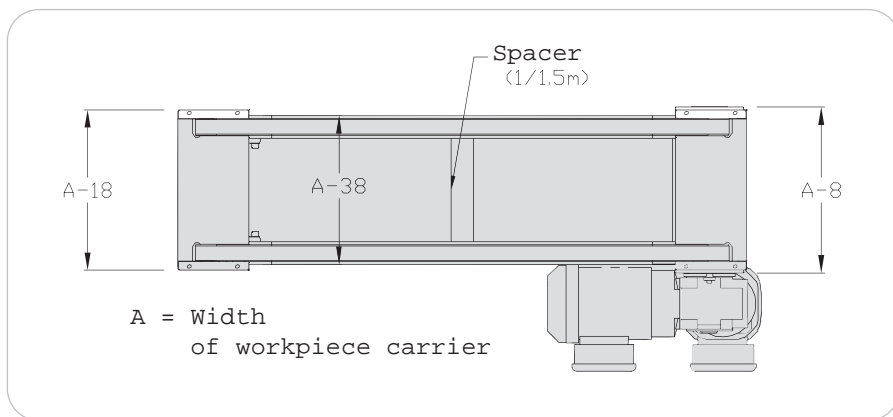
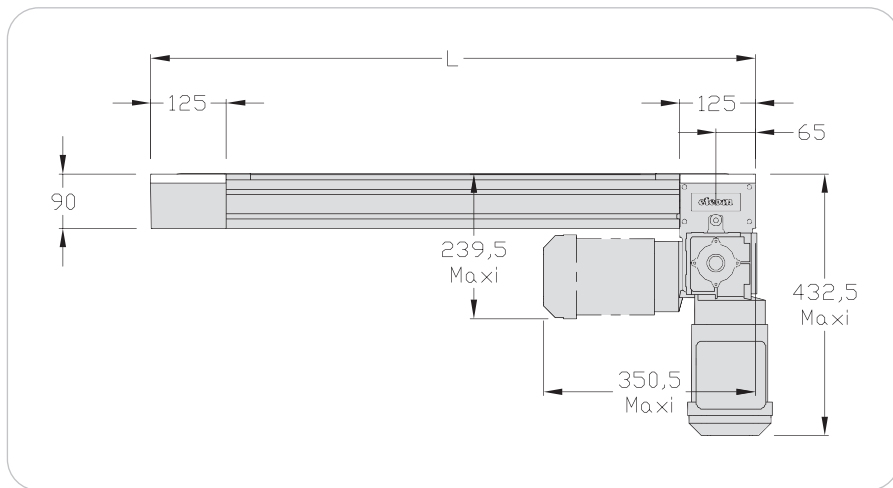
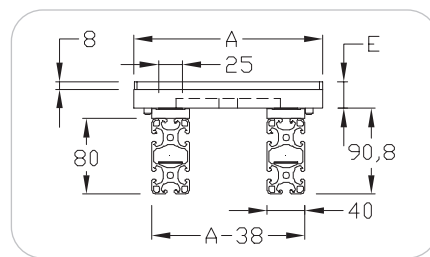
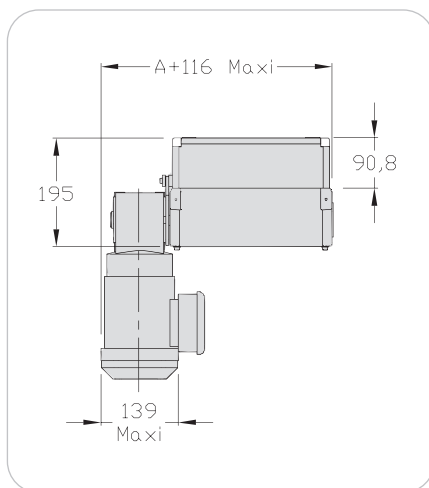
Weight:

200 : 16,5 kg + 6,7 kg/m
 300 : 19,3 kg + 6,7 kg/m
 400 : 22,0 kg + 6,7 kg/m

Antistatic option

To be ordered with the initial assembling:

- 2 shouldered screws
- 2 steel rollers



Designation / Dimensions	Order unit	Reference
Conveying unit 200 direct	1 pce	120.11.000.**
Conveying unit 300 direct	1 pce	130.11.000.**
Conveying unit 400 direct	1 pce	140.11.000.**
Conveying length	m	120.11.000.A
Antistatic set	1 kit	120.11.000.C

(** = speed of motor m/min: 9, 15 or 19 eg: 120.11.000.09)

Height reductions Widths 200 - 300 - 400

Applications

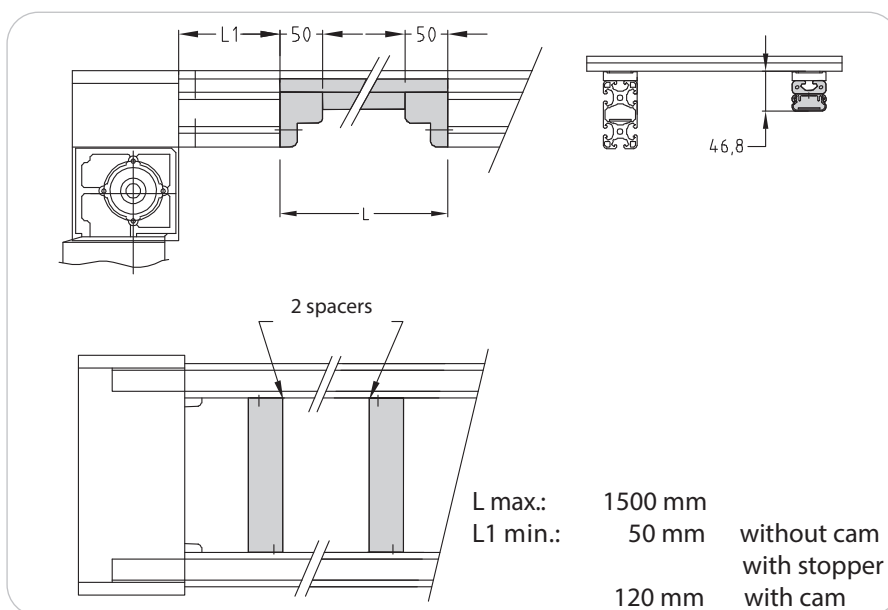
For ergonomic manual stations (from a seated position). Enable reduction of the height of the conveyor in front of the worker.

Technical data

Including:

- x 2 spacers
- x 2 reducings PA
- x 1 profile 40x16
- x 1 conduit profile 40x20

For flat belt only.



Designation / Dimensions	Order unit	Reference
Height reduction 200	1 pce	120.98.000
Height reduction 300	1 pce	130.98.000
Height reduction 400	1 pce	140.98.000

Coupe convoyeur

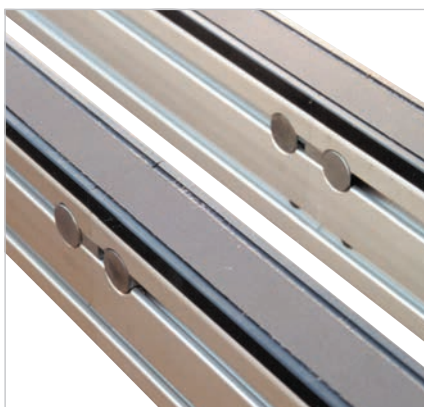
Applications

The cut allows division of the conveyor lengths to make the transport and installation easier.

It also enables the making of important lengths when the load is limited.

Technical data

- x Maximum length: 12 m
- x 6 double universal fastenings 8



Lengths	Loads	
	Maximum daN	Accumulation maximum daN
TLM 2000		
7 m	180	90
8 m	160	80
9 m	140	70
10 m	120	60
11 m	100	50
12 m	80	40

Designation / Dimensions	Order unit	Reference
Conveyor cut 200 - 300 - 400	1 cpe	120.02.000B

Cap 200

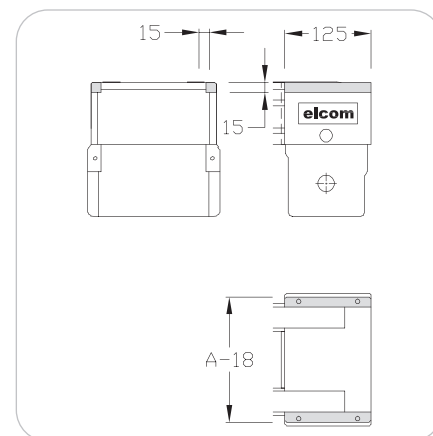
Applications

Allows to protect the direct driving unit and the idling unit.
When using cam, the opposite cap is delivered with the cam set.
Also used for motorization 120.02.000.

Technical data

✘ 2 parts, PA black

Weight: 0,07 kg



Designation / Dimensions	Order unit	Reference
Cap 200	1 kit	120.11.100

Straight joining for driving unit flat belt

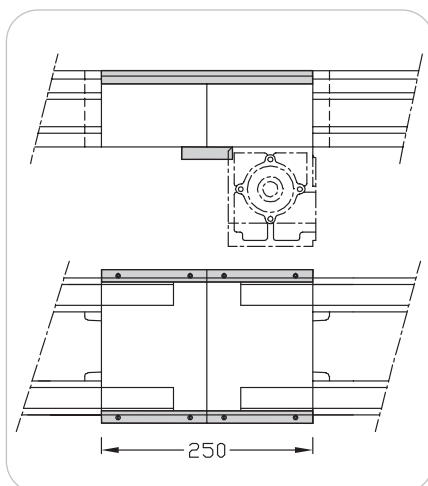
Applications

Allows to join end to end two conveying units.

Technical data

- x Guide PA black
- x Joining set alu

Weight: 0,18 kg



Straight joining for direct driving unit

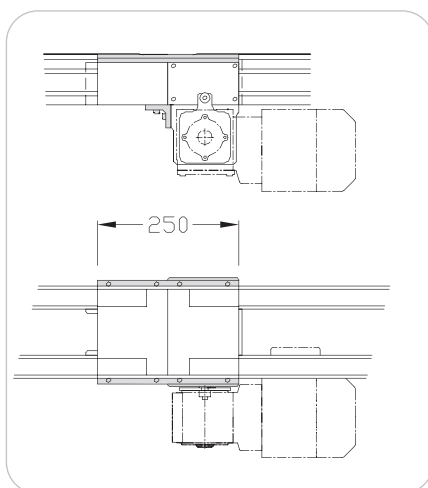
Applications

Allows to join end to end two conveying units.

Technical data

- x Guide PA black
- x Joining set alu

Weight: 0,2 kg



Designation / Dimensions	Order unit	Reference
Straight joining 200 - 300 - 400	1 set	120.18.000
Straight joining for direct driving unit	1 set	120.18.000.SC

Straight joining for motorization light timing belt

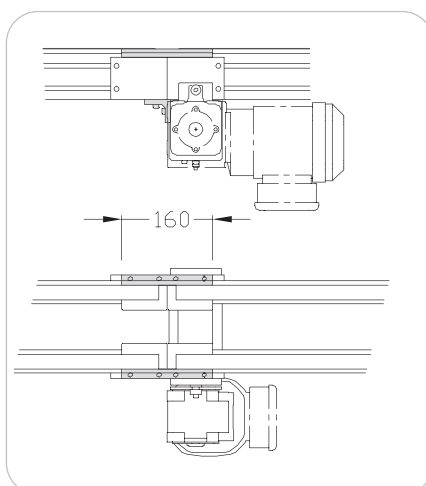
Applications

Allows to join end to end two conveying units.

Technical data

- x Guide PA black
- x Joining set alu

Weight: 0,18 kg



Straight joining for heavy motorization timing belt

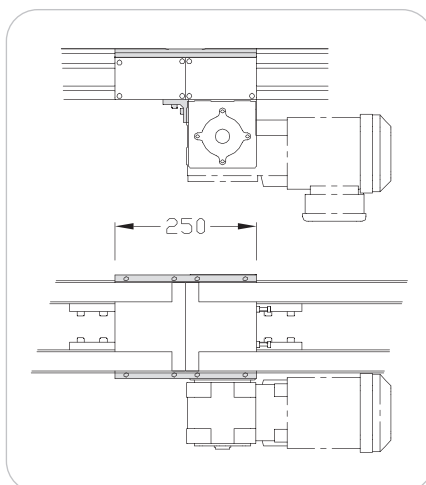
Applications

Allows to join end to end two conveying units.

Technical data

- x Guide PA black
- x Joining set alu

Weight: 0,2 kg



Designation / Dimensions	Order unit	Reference
Straight joining for motorization light timing belt	1 set	120.89.000
Straight joining for heavy motorization timing belt	1 set	120.82.000

Spacers Widths 200 - 300 - 400

Applications



If the length of the conveying unit is >1,5 m, spacers have to be fitted between the profiles 8 80x40. (1 spacer /1,5 m).

Technical data

Width 200

- ✘ Cast aluminium
- ✘ 2 universal fastenings

Widths 300 and 400

- ✘ Profile 8 40x40 light
- ✘ 2 universal fastenings

Weight: 200: 0,18 kg

300: 0,40 kg

400: 0,55 kg

200



300 - 400



Designation / Dimensions	Order unit	Reference
Spacer 200	1 pce	120.15.000
Spacer 300	1 pce	130.15.000
Spacer 400	1 pce	140.15.000

Half junctions flat belt Widths 200 - 300 - 400

Applications

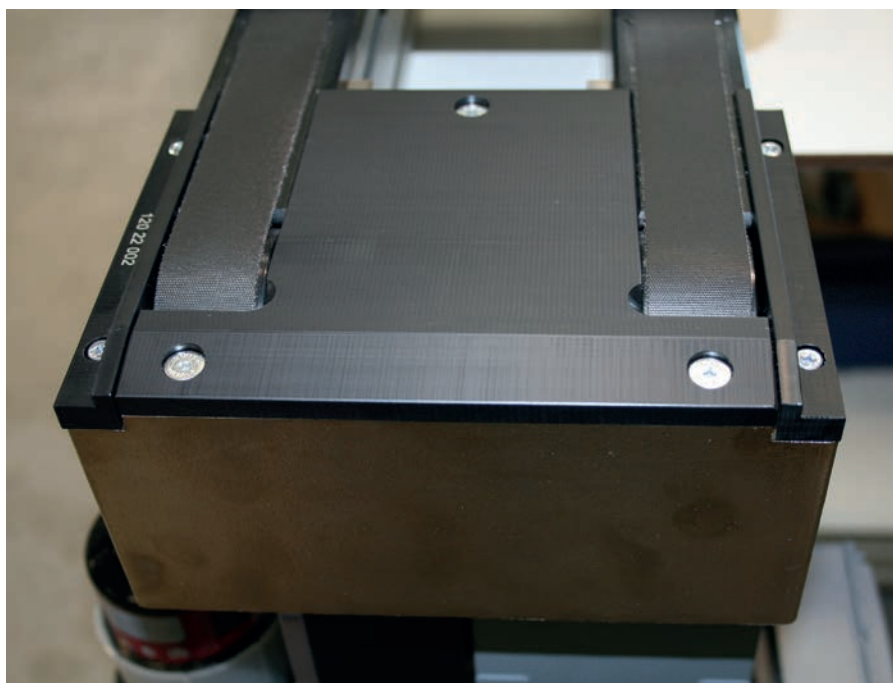
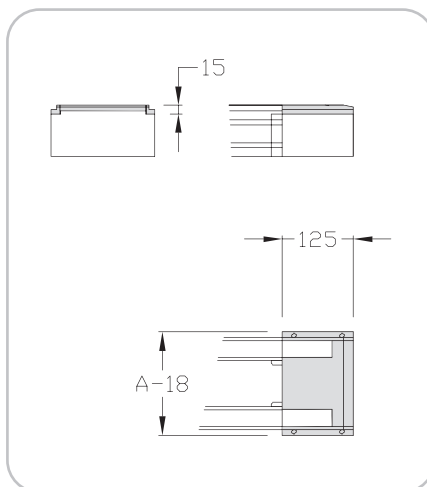
For TLM 2000, widths 200 , 300 and 400, flat belt.

Half junctions allow a workpiece carrier to go out at the end of the line either on the driving or the idling side.

Technical data

- ✗ 2 parts, PA black
- ✗ Fastening parts
- ✗ Chain cover with slope

Weight: 200: 0,3 kg
300: 0,4 kg
400: 0,5 kg



Designation / Dimensions	Order unit	Reference
Half junction flat belt 200	1 set	120.22.000
Half junction flat belt 300	1 set	130.22.000
Half junction flat belt 400	1 set	140.22.000

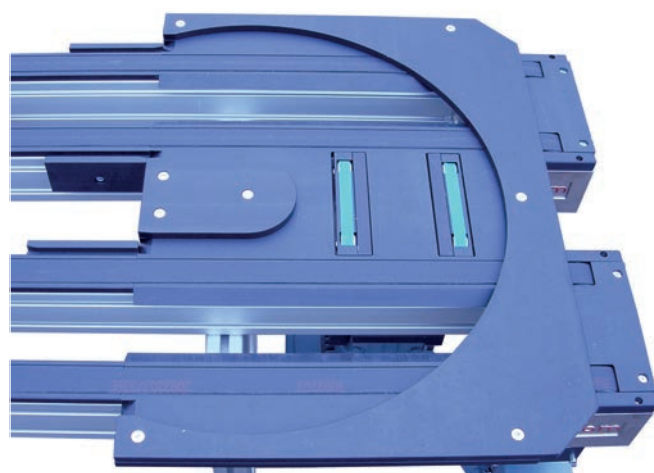
Returns 180°

Applications

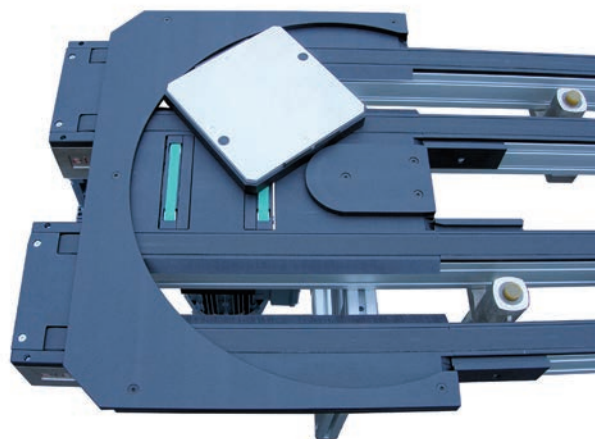
Allows the return of the workpiece carrier on a parallel conveyor with a reduced space between the two conveyors. The workpiece carrier is conveyed always keeping the same side towards the outside of the line.

To facilitate the maintenance, the gear motor is identical to the driving units motors.

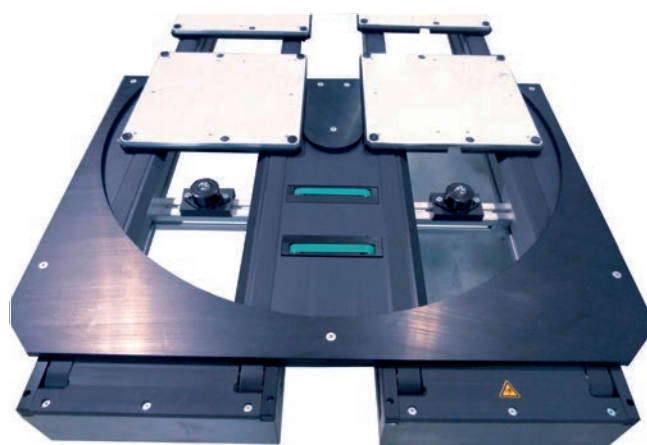
Do not accumulate workpiece carriers in the returns.



Return 180° Width 200



Return 180° Width 300



Return 180° Width 300

Returns 180° Widths 200 - 300

Technical data

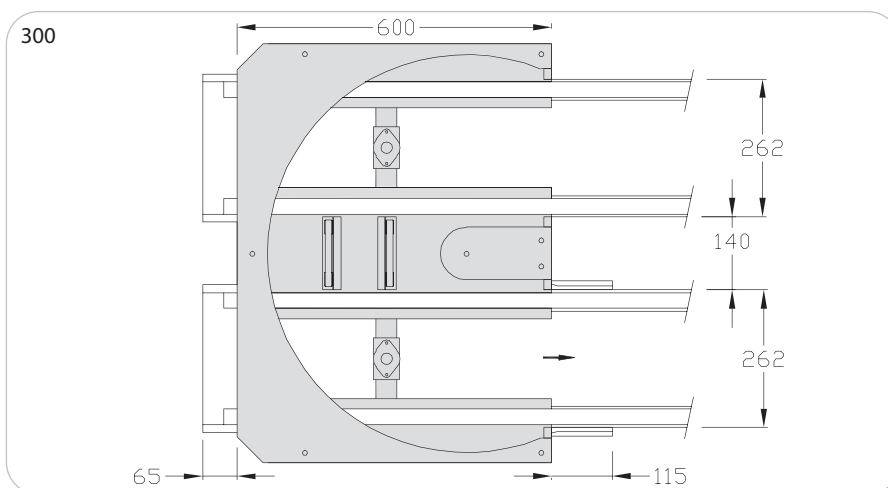
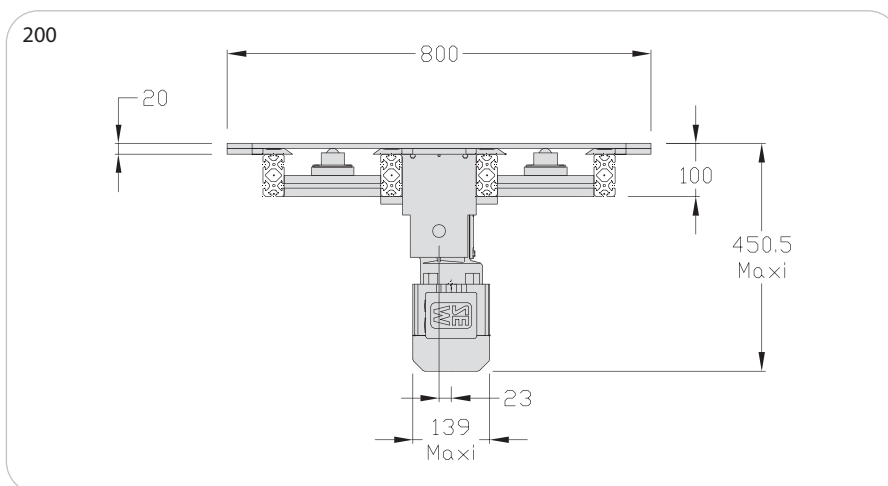
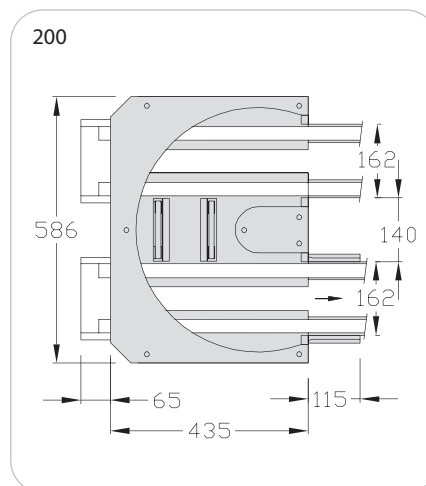
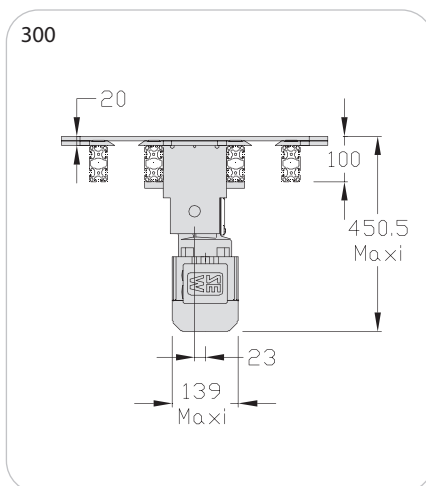
- ✗ Motor plates, Al black
- ✗ 2 parallel belts driven by a gear motor
- ✗ Plates and lateral guide supports, PA black
- ✗ Screws and bolts

Just for rectangular workpiece carriers 200 and 300.



Do not accumulate workpiece carriers in the returns.

Weight: 200: 16 kg
300: 18,2 kg



Designation / Dimensions	Order unit	Reference
Return 180° - 200	1 pce	120.34.000.**
Return 180° - 300	1 pce	130.34.000.**

(** = speed of motor m/min: 9, 15 or 19 eg: 120.34.000.09)

Return 180° Width 200 Length 250

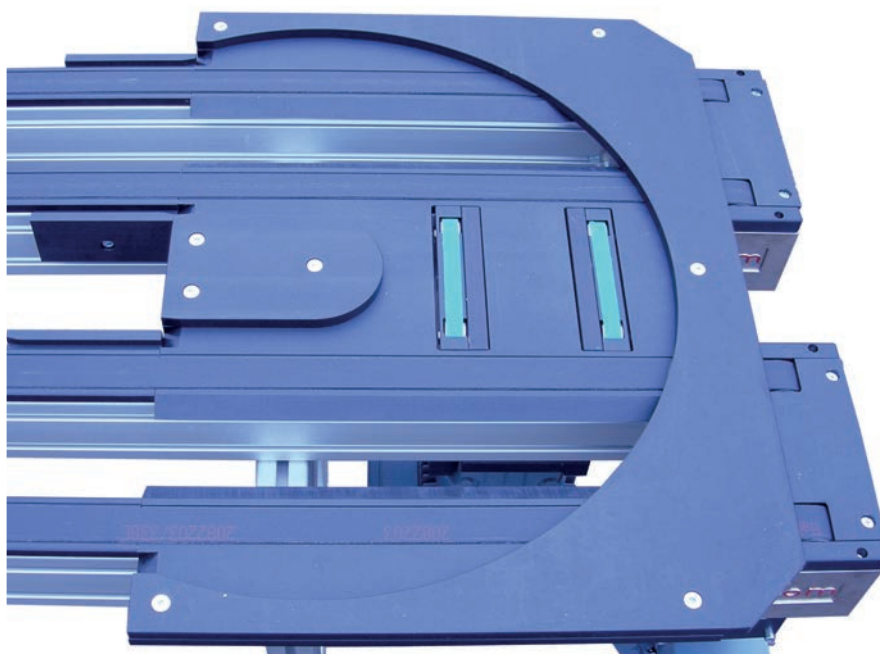
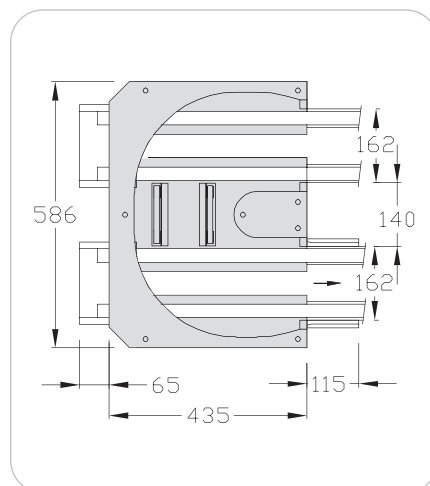
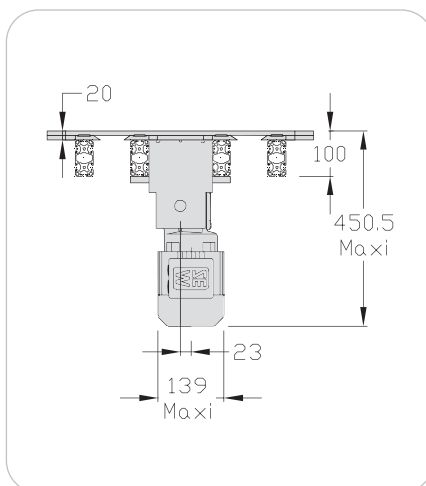
Technical data

- ✗ Motor plates, Al black
- ✗ 2 parallel belts driven by a gear motor on a conveyor unit
- ✗ Plate and lateral guide, PA black
- ✗ Screws

For rectangular workpiece carriers 400x400 only.

 **Do not accumulate workpiece carriers in the returns.**

Weight: 16 kg



Designation / Dimensions	Order unit	Reference
Return 180° 200x250	1 pce	125.34.000.**

(** = speed of motor m/min: 9 - 15 or 19 eg: 125.34.000.09)

Return 180° Width 400

Technical data

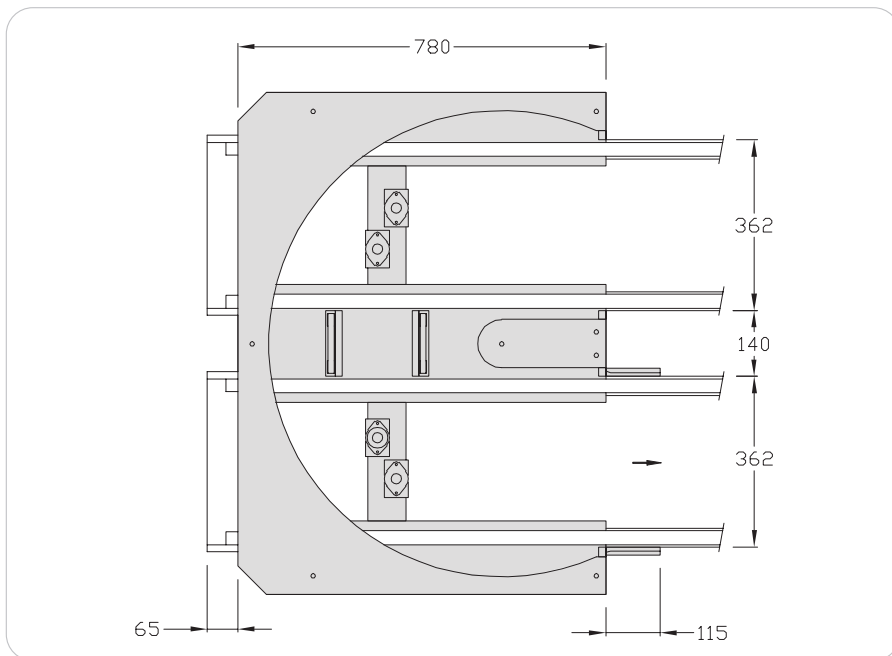
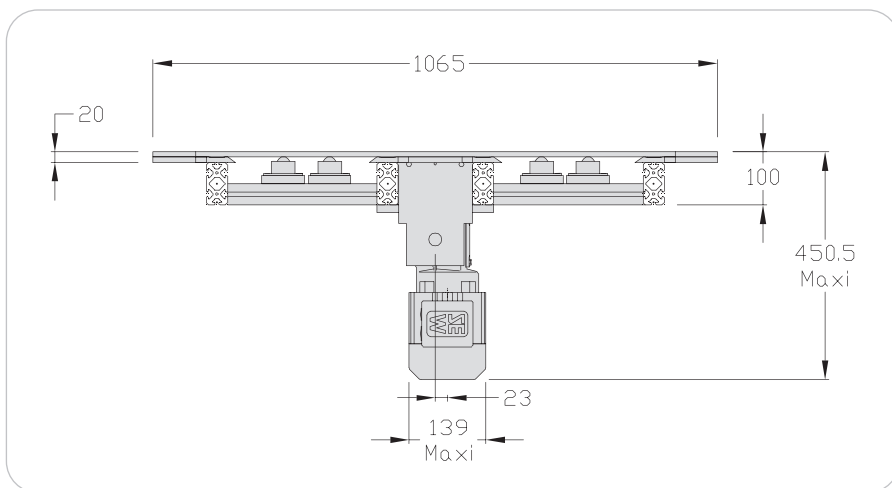
- ✗ Motor plates, Al black
- ✗ 2 parallel belts driven by a gear motor
- ✗ Plates and lateral guide supports, PA black.
- ✗ Screws and bolts

For square workpiece carriers 400x400 only.



Do not accumulate workpiece carriers in the returns.

Weight: 20 kg



Designation / Dimensions	Order unit	Reference
Return 180° 400	1 pce	140.34.000.**

(** = speed of motor m/min: 9, 15 or 19 eg: 140.34.000.09)

Chain lubricating sets

Applications

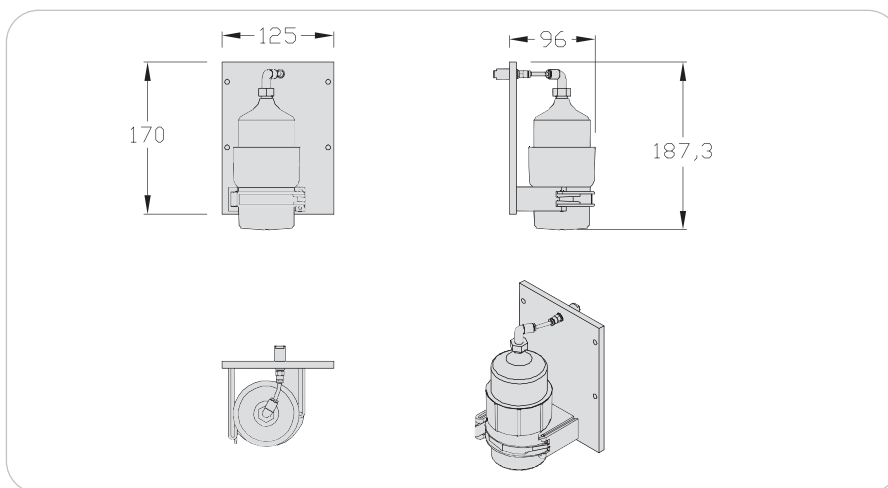
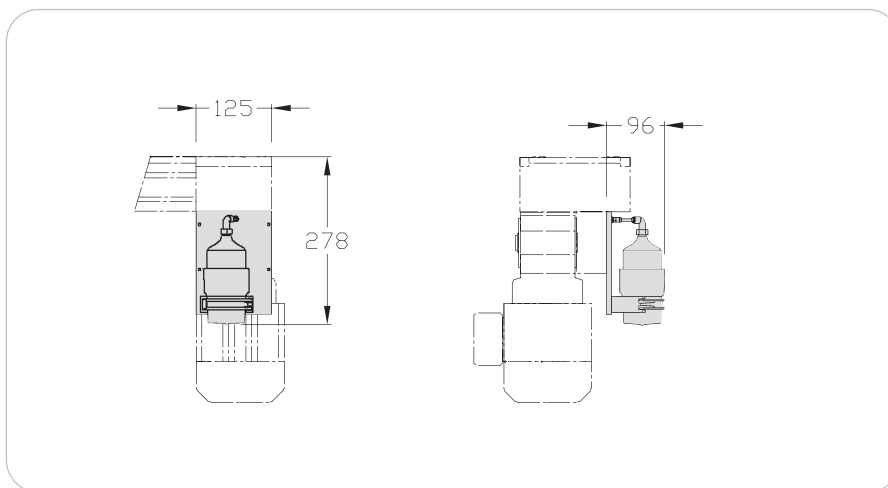
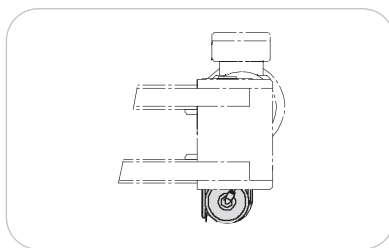
Allow the automatic chain lubrication of the driving chain of the conveying unit TLM 2000 pushing motor (120.02.000P – 130.02.000.P – 140.02.000P) for 12 months.

Technical data

- ✗ Oil cartridge ref. 900.00.106
- ✗ Batteries (to be changed every 12 months) ref. 900.00.108
- ✗ Oil for chain SO14

0,13 cm³ by injection

Weight: 1,2 kg

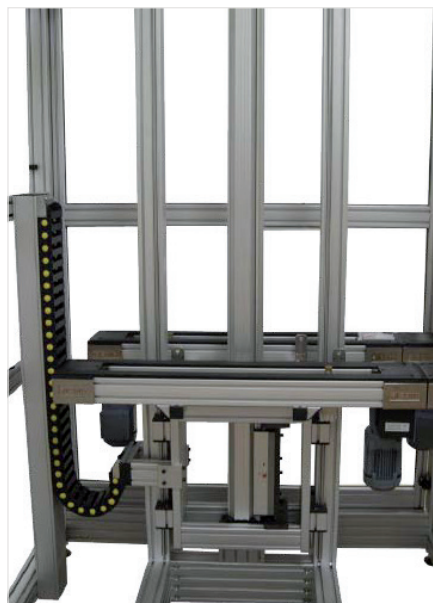


Designation / Dimensions	Order unit	Reference
Chain lubricating set	1 kit	900.00.100
Chain lubricating set pushing motor	1 kit	900.00.100.P

Lifts



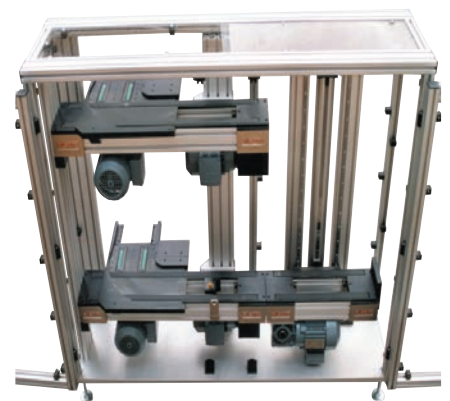
Bridge built from two transfer systems



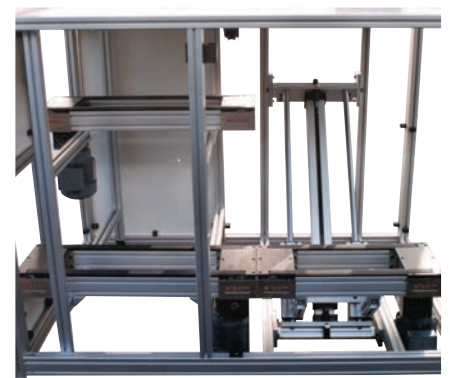
Lift for two transfer system units
(from 1000 mm to 3000 mm)



Inclined transfersystem lift-upper or basement type



Angle transfer system-upper or basement type (pneumatic cylinder model)



Inclined transfersystem lift-upper or basement type (with pneumatic cylinder)

Lifts Widths 200 - 300 - 400

Applications

Allow the return of workpiece carriers above or below a line or the distribution of workpiece carriers on several levels.

Manufactured from standard elements, each lift is adapted to the size of the workpiece carriers, the strokes and other line-specific parameters.

Technical data

- x Frame
- x Guides + lifting cylinder
- x Waiting area for conveyors

Dimensions

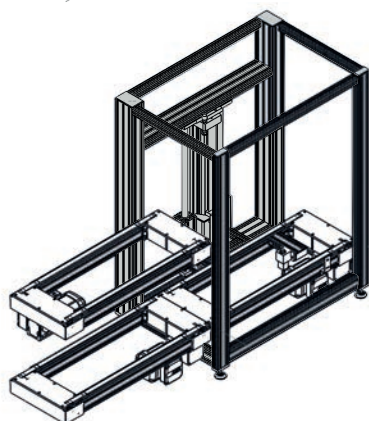
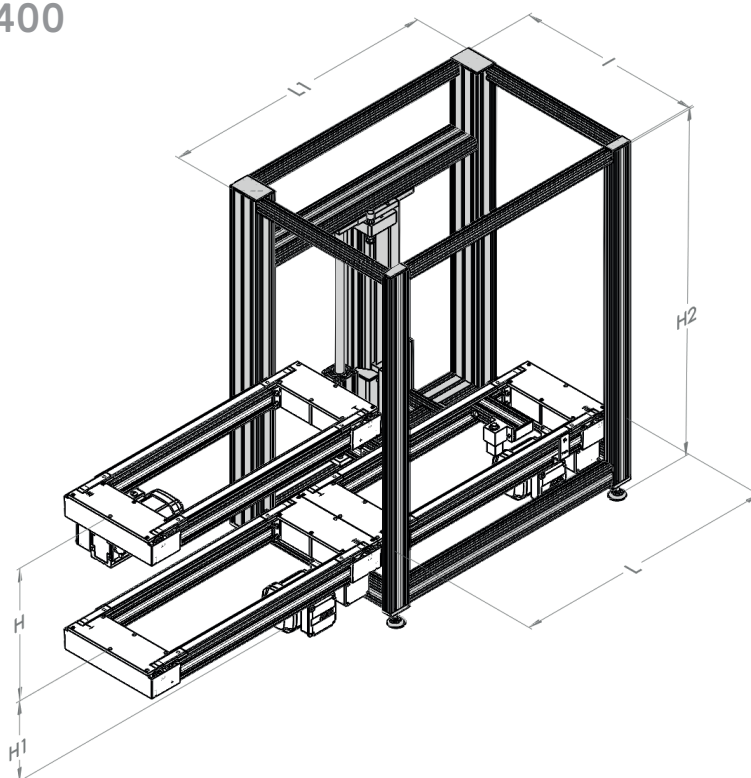
- H = Lifting height
- L = Length of moving conveyor
- H1 = Minimum height of conveyor 300 mm
- H2 = (if workpiece carrier height < 280 mm) $H1+H+280$
- H2 = (if workpiece carrier height > 280 mm) $H1+H$
- L1 = Total length of lift ($L = L+40$ mm)
- l = Depth of lift (Conveyor width + 360 mm)

Lift type (workpiece carrier entry/exit)

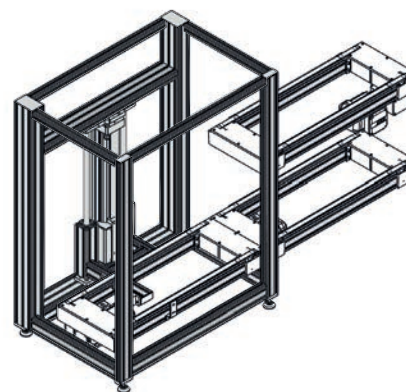
- EG-SG (left entry/left exit)
- ED-SD (right entry/right exit)
- EG-SD (left entry/right exit)
- ED-SG (right entry/left exit)

Maximum load: 20 kg
Speed of cylinder stroke: 1m/s

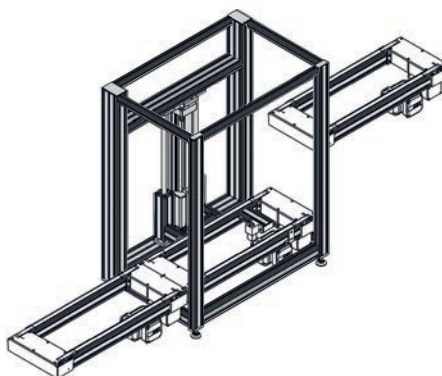
The protective housings for conveyors are not included in the delivery.



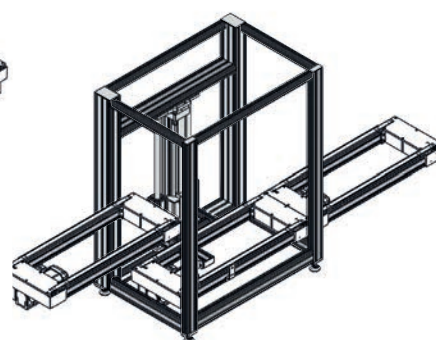
Type EG-SG



Type ED-SD

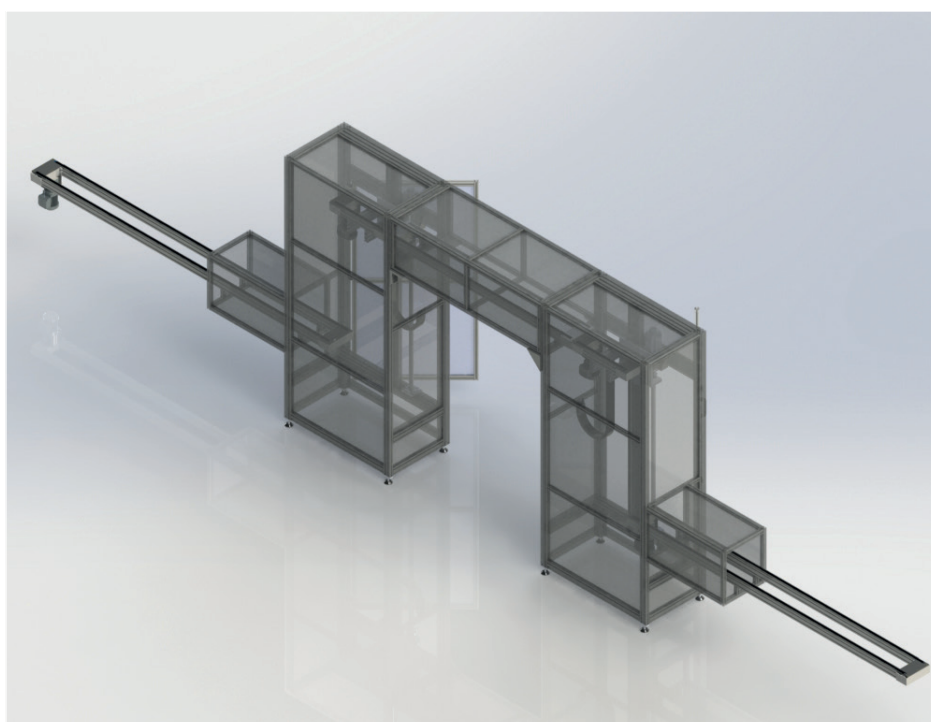
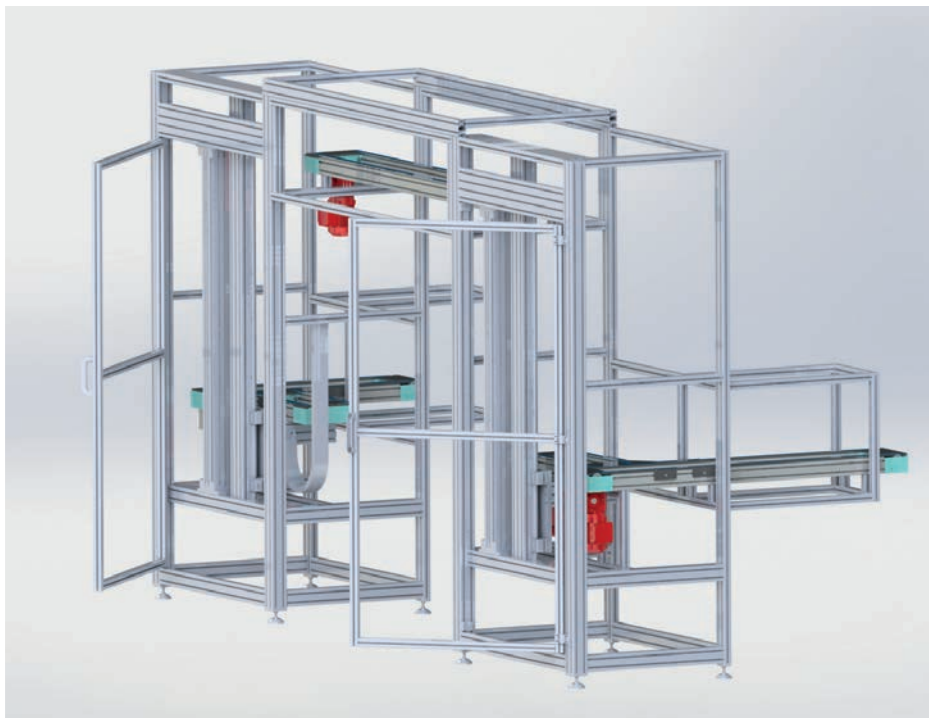


Type EG-SD



Type ED-SG

On request: timing belt drive or ball-and-screw drive.
Asynchronous or brushless motorization.



Electrical version of the ballscrew on request.

Designation / Dimensions	Order unit	Reference
Lift width 200	1 pce	120.57.000
Lift width 300	1 pce	130.57.000
Lift width 400	1 pce	140.57.000

Cams 90°

Applications

Cams ED, EG, SD, SG for conveying units flat belt.

They allow a perpendicular transfer of workpiece carriers from one conveying unit to the other.

The workpiece carrier is guided by the two inside pins, the outside pins are retracted.

Can also be used for derivations.

Cams ED, EG, SD, SG for conveying units timing belt.

They allow a perpendicular transfer of workpiece carriers from one conveying unit to the other.

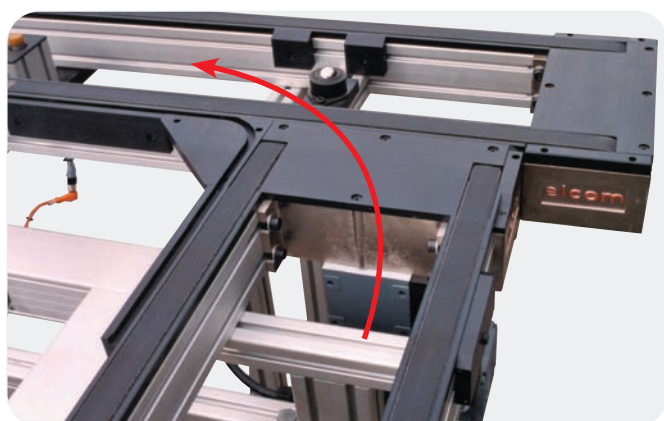
The workpiece carrier is guided by the two inside pins, the outside pins are retracted.

No automatism is required.

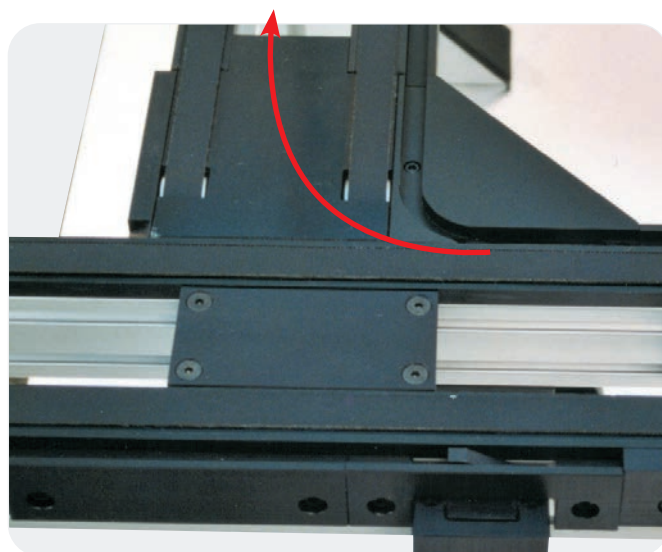
If a selection is necessary (derivation or not), add the derivation set.



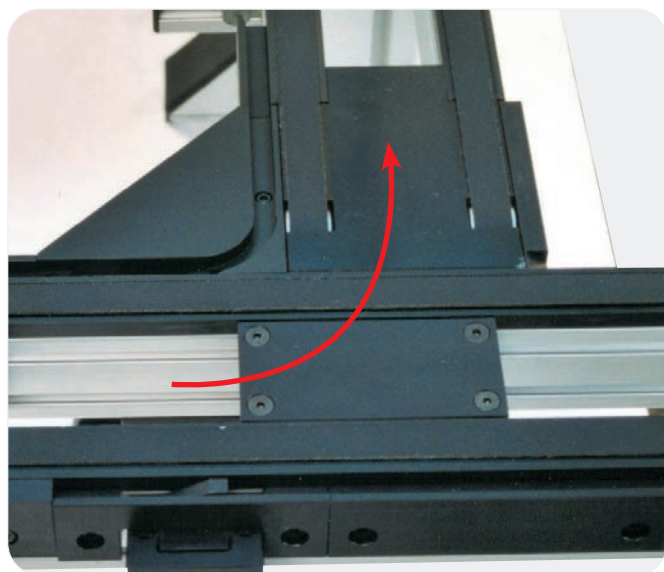
Do not accumulate workpiece carriers in cams.



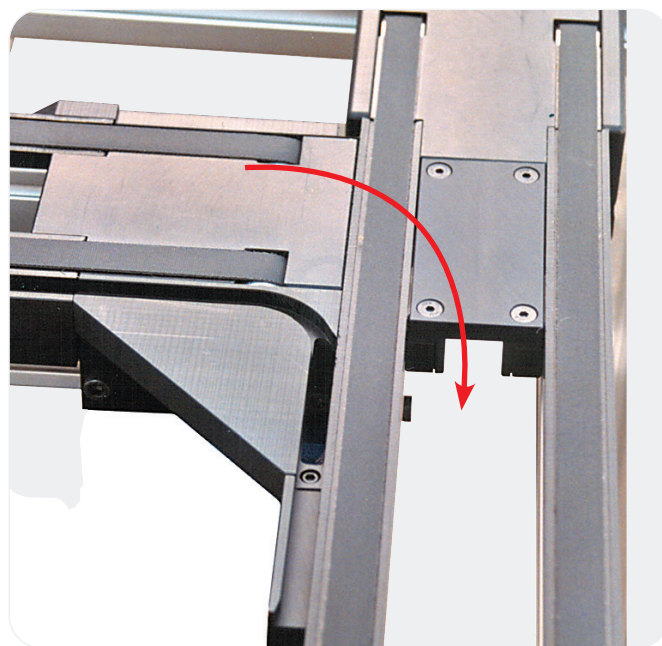
Cam 90° EG



Cam 90° SD



Cam 90° SG



Cam 90° ED

Cams 90° Widths 200 - 300 - 400

Technical data

- ✗ Guiding cam, PA black
- ✗ Pin retracting plates, PA black
- ✗ Fastening parts
- ✗ Joining parts
- ✗ Caps

Different cams according to the dimensions of the workpiece carriers.

The cams 200 allow also the use of workpiece carriers 200x250 and 200x300.

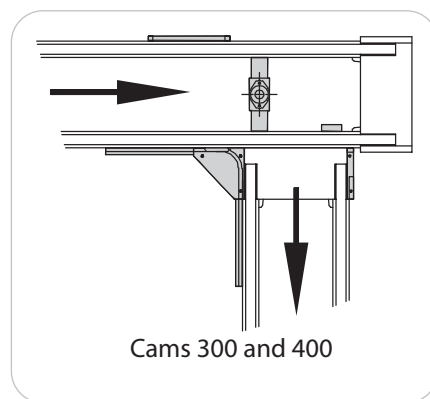
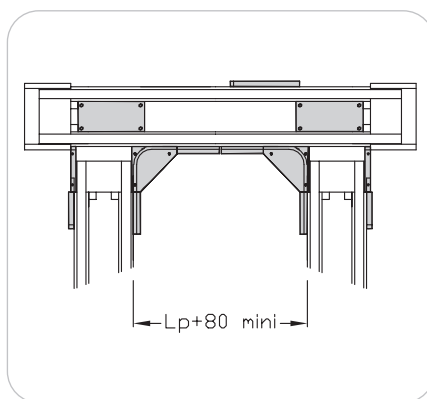
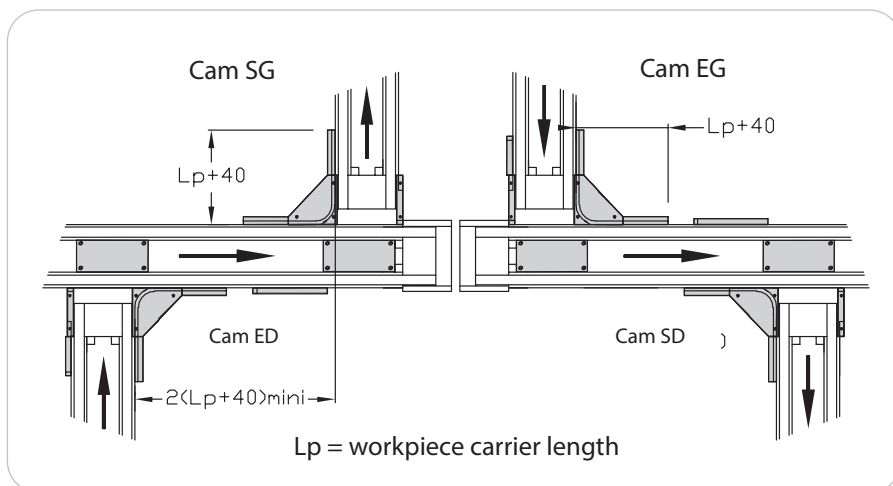
The cams 300 allow also the use of workpiece carriers 300x400.

If a selection is necessary (derivation or not), add the derivation set



Do not accumulate workpiece carriers in cams.

Weight: 200: 0,91 kg
 300: 1,5 kg
 400: 1,9 kg



Cam ED
Right inlet
on main line

Cam SD
Right outlet
on main line

Cam EG
Left inlet
on main line

Cam SG
Left outlet
on main line

Designation / Dimensions	Order unit	Reference
Cam 90° ED 200	1 kit	120.06.000
Cam 90° EG 200	1 kit	120.16.000
Cam 90° SD 200	1 kit	120.26.000
Cam 90° SG 200	1 kit	120.36.000
Cam 90° ED 200 direct	1 kit	120.06.000.SC
Cam 90° EG 200 direct	1 kit	120.16.000.SC
Cam 90° ED 300	1 kit	130.06.000
Cam 90° EG 300	1 kit	130.16.000
Cam 90° SD 300	1 kit	130.26.000
Cam 90° SG 300	1 kit	130.36.000
Cam 90° ED 300 direct	1 kit	130.06.000.SC
Cam 90° EG 300 direct	1 kit	130.16.000.SC
Cam 90° ED 400	1 kit	140.06.000
Cam 90° EG 400	1 kit	140.16.000
Cam 90° SD 400	1 kit	140.26.000
Cam 90° SG 400	1 kit	140.36.000
Cam 90° ED 400 direct	1 kit	140.06.000.SC
Cam 90° EG 400 direct	1 kit	140.16.000.SC

Cams 90° timing belt, light motorization

Width 200

Technical data

Complete set including:

- ✘ Guiding cam and pin retracting plates, PA black
- ✘ Fastening parts
- ✘ Joining parts
- ✘ Caps

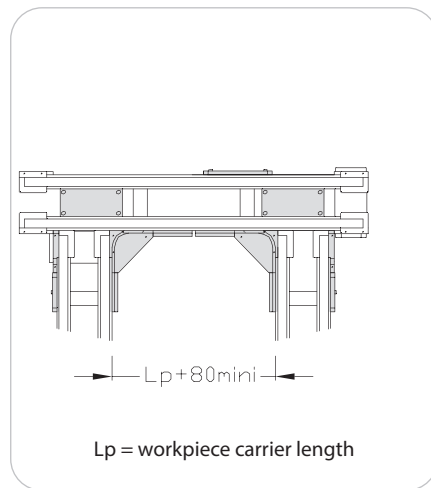
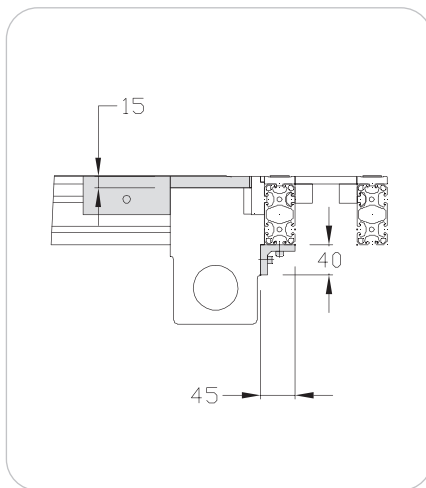
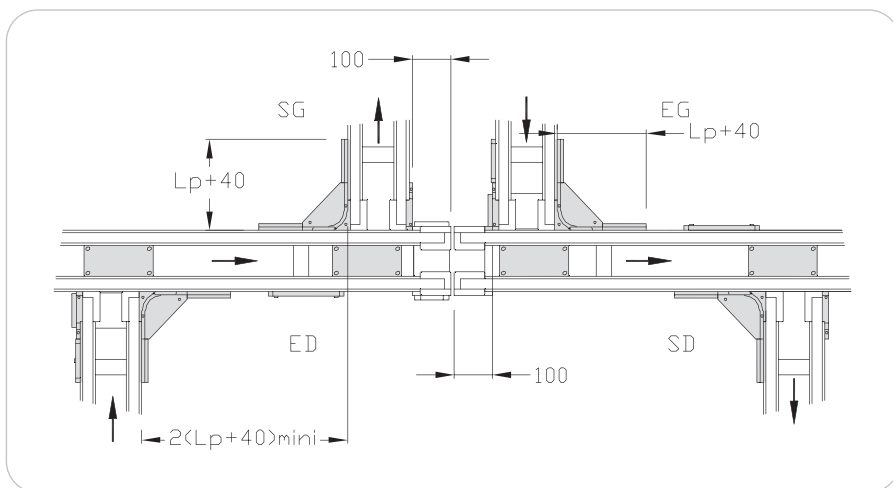
The cams 200 allow also the use of workpiece carriers 200x250 and 200x300.

If a selection is necessary (derivation or not), add the derivation set.



Do not accumulate workpiece carriers in cams.

Weight: 1 kg



Designation / Dimensions	Order unit	Reference
Cam 90° ED 200 timing belt light motorization	1 pce	120.90.100
Cam 90° EG 200 timing belt light motorization	1 pce	120.90.200
Cam 90° SD 200 timing belt light motorization	1 pce	120.90.300
Cam 90° SG 200 timing belt light motorization	1 pce	120.90.400

Cams 90° timing belt, heavy motorization

Width 200

Technical data

Complete set including:

- ✗ Guiding cam and pin retracting plates, PA black
- ✗ Fastening parts
- ✗ Joining parts
- ✗ Caps

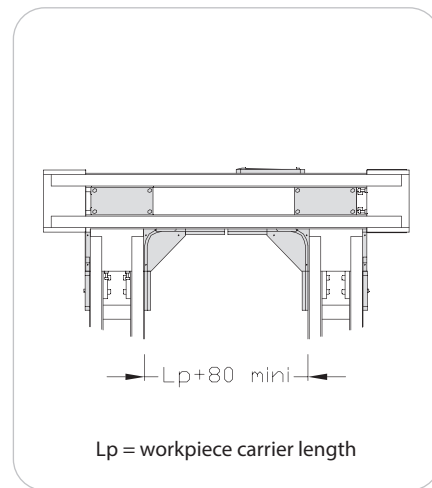
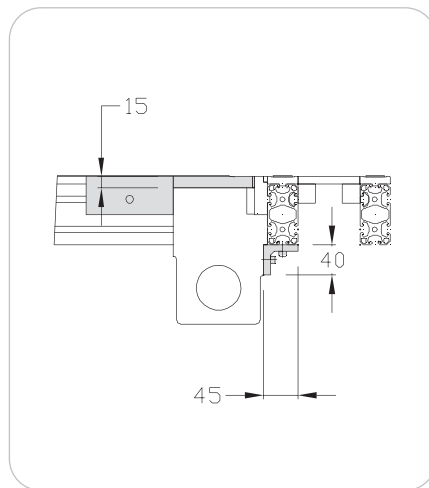
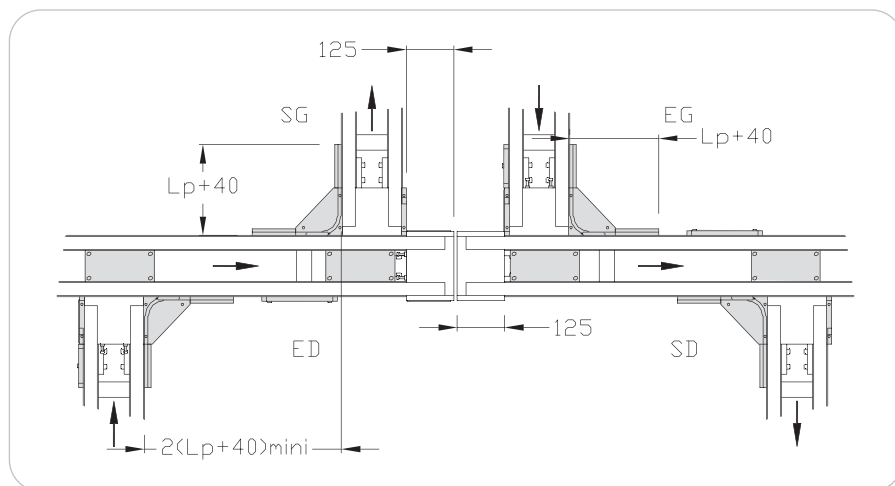
The cams 200 allow also the use of workpiece carriers 200x250 and 200x300.

If a selection is necessary (derivation or not), add the derivation set.



Do not accumulate workpiece carriers in cams.

Weight: 1 kg



Designation / Dimensions	Order unit	Reference
Cam 90° ED 200 timing belt heavy motorization	1 pce	120.83.100
Cam 90° EG 200 timing belt heavy motorization	1 pce	120.83.200
Cam 90° SD 200 timing belt heavy motorization	1 pce	120.83.300
Cam 90° SG 200 timing belt heavy motorization	1 pce	120.83.400

Cams short - cams double

Applications

Short cams SD-EG SG-ED - Double cams

The short cams and double cams allow deviation of workpiece carriers from a main line to a secondary line without additional motorization.

Economical, compact and very easily managed, they are ideal to set up work stations in derivation.



Do not accumulate workpiece carriers in cams.



Cam short 200



Cam double 200

Cams short SD-EG/SG-ED Width 200

Technical data

Complete set including:

- ✗ Cams and guides, PA black
- ✗ Fastening parts
- ✗ Screw and nut St M6

(1 set SD-EG + 1 set SG-ED are necessary to make a complete derivation)

They allow also the use of workpiece carriers 200x250 and 200x300.

If a selection is necessary (derivation or not), add the derivation set

Minimum load on workpiece carrier:
2 daN

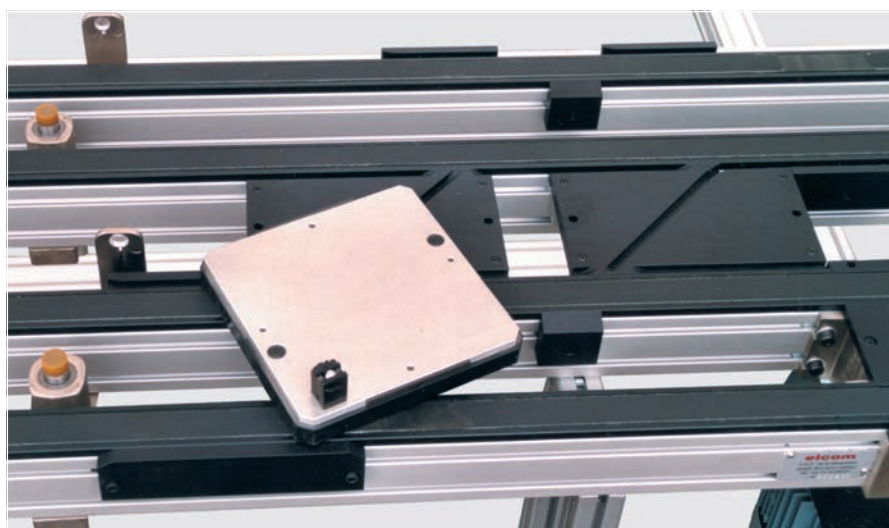
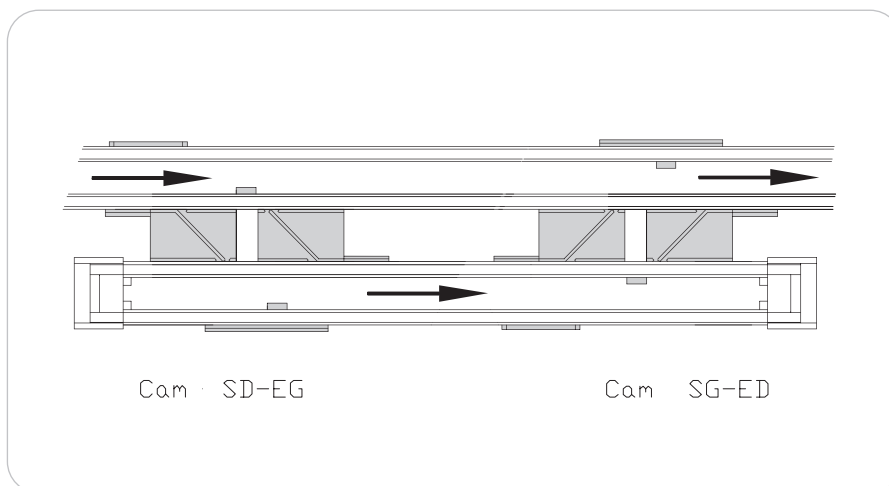
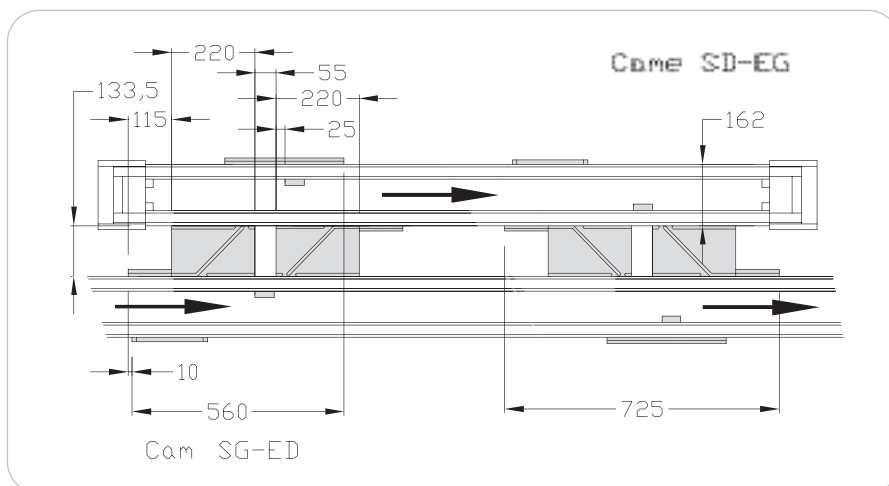


Do not accumulate workpiece carriers in cams.



Minimum load on workpiece carrier: 2 daN

Weight: 2,2 kg



Designation / Dimensions	Order unit	Reference
Cam short 200 SD-EG	1 kit	120.46.000
Cam short 200 SG-ED	1 kit	120.17.000

Cams short SD-EG/SG-ED Widths 300 - 400

Technical data

Complete set including:

- ✗ Cam and guides, PA black
- ✗ Fastening parts
- ✗ Screw and nut St M6

(1 set SD-EG + 1 set SG-ED are necessary to make a complete derivation)

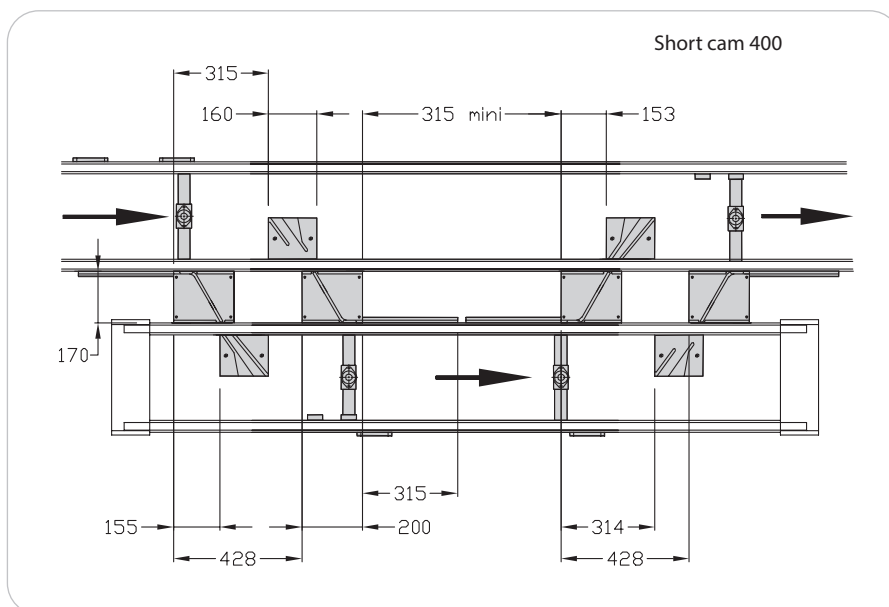
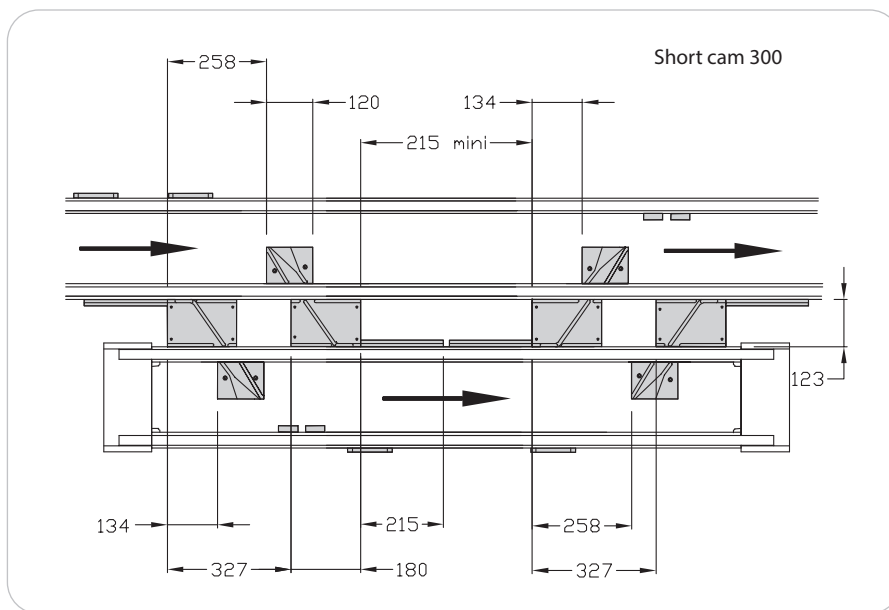
The short cam 300 allow also the use of workpiece carriers 300x400.

If a selection is necessary (derivation or not) add the derivation set.

! Do not accumulate workpiece carriers in cams.

! Minimum load on workpiece carrier: 2 daN

Weight: Short cam 300: 6,1 kg
Short cam 400: 13,2 kg



Designation / Dimensions	Order unit	Reference
Cam short 300 SD-EG	1 kit	130.46.000
Cam short 300 SG-ED	1 kit	130.17.000
Cam short 400 SD-EG	1 kit	140.46.000
Cam short 400 SG-ED	1 kit	140.17.000

Cam double Width 200

Technical data

Complete set including:

- ✗ Cam, selectors, ramps and guides, PA black
- ✗ 2 rotative cylinders, (M5)
- ✗ Fastening parts
- ✗ Screw and nut St M6

They allow also the use of workpiece carriers 200x250 and 200x300.

If a selection is necessary (derivation or not) add the derivation set.

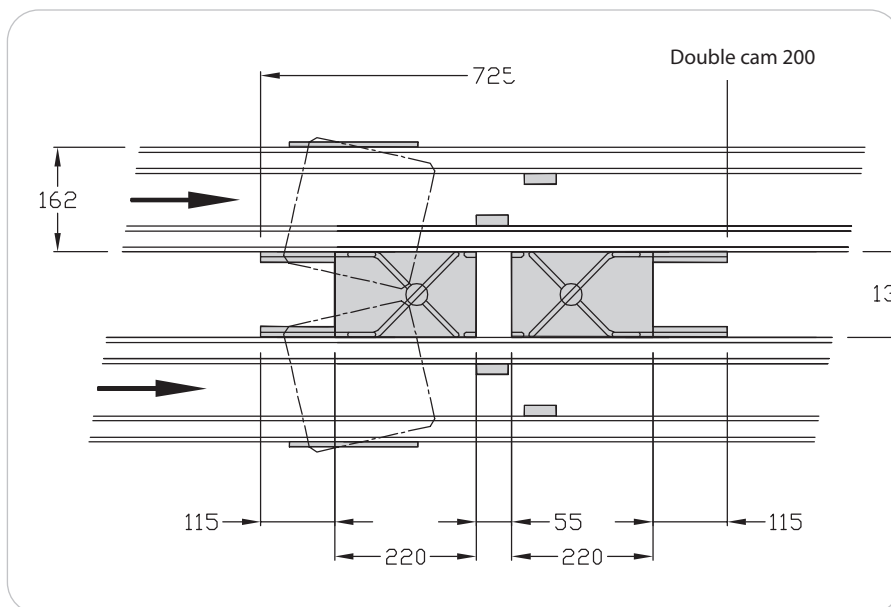


Do not accumulate workpiece carriers in cams.



Minimum load on workpiece carrier: 2 daN

Weight: 3,6 kg



Designation / Dimensions

Cam double 200

Order unit

1 kit

Reference

120.21.000

Cams double Widths 300 - 400

Technical data

Complete set including:

- ✘ Cam, selectors, ramps and guides, PA black
- ✘ 2 rotative cylinders, (M5)
- ✘ Fastening parts
- ✘ Screw and nut St M6

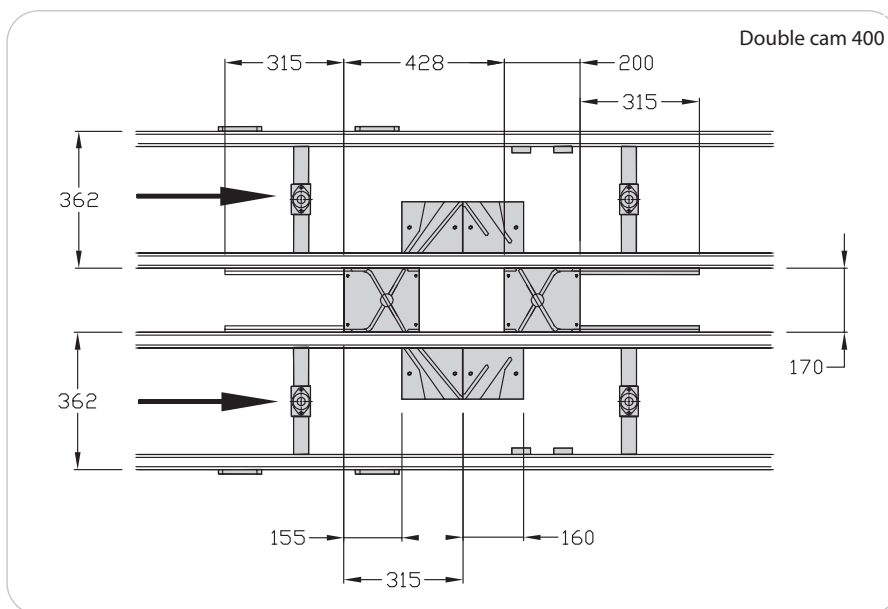
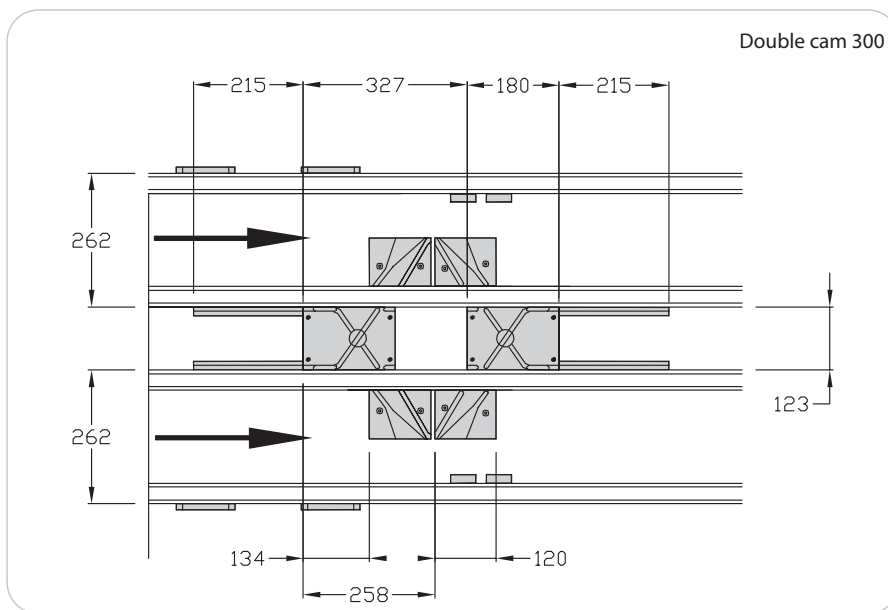
The double cams 300 allow also the use of workpiece carriers 300x400.

If a selection is necessary (derivation or not), add the derivation set.

! Do not accumulate workpiece carriers in cams.

! Minimum load on workpiece carrier: 2 daN

Weight: Cam double 300: 5,4 kg
 Cam double 400: 12,2 kg



Designation / Dimensions	Order unit	Reference
Cam double 300	1 kit	130.21.000
Cam double 400	1 kit	140.21.000

Derivations Widths 200 - 300 - 400

Technical data

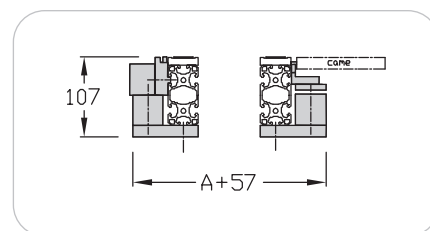
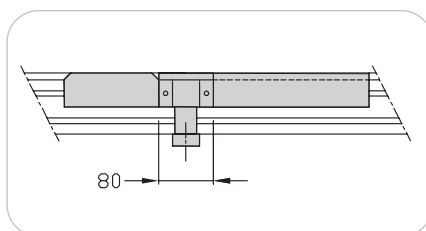
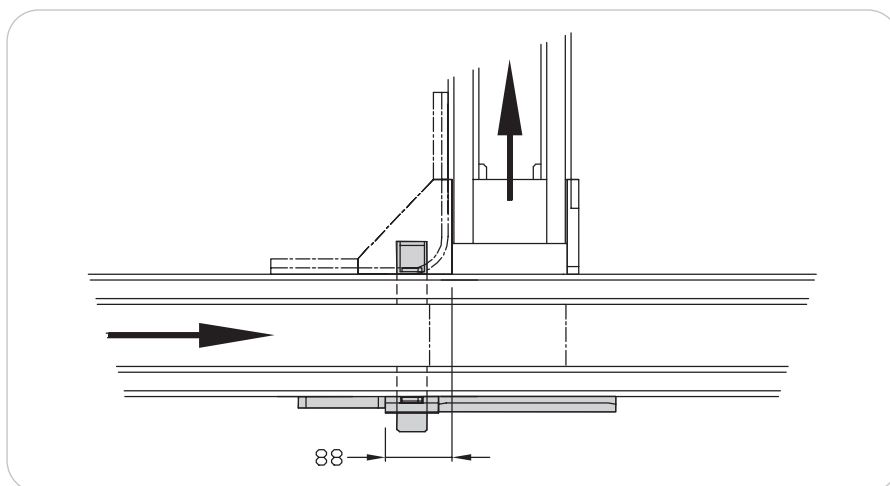
Complete set including:

- ✗ 2 plates Al
- ✗ 2 nuts St M6
- ✗ 2 screws M6x20
- ✗ Body, levers, guides PA and screws and bolts
- ✗ 2 cylinders \varnothing 20-10 (M5), detectable positions
- ✗ 1 protection Ac black



Cams are not included (to be ordered separately).

Weight: Derivation 200: 1,4 kg
 Derivation 300: 1,5 kg
 Derivation 400: 1,5 kg



Designation / Dimensions	Order unit	Reference
Derivation 200	1 kit	120.07.000
Derivation 300	1 kit	130.07.000
Derivation 400	1 kit	140.07.000

Swivellings 90° Widths 200 - 300 - 400

Technical data

Complete set including:

- ✗ Plates and lateral guide supports, PA black
- ✗ 3 cylinders ø 20-10 (M5)
- ✗ 1 stopper
- ✗ 2 brackets for shielded mounting sensor M12x100

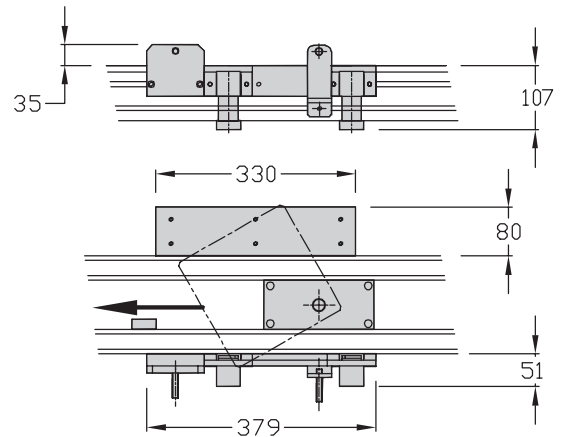
A stopper located before the swivelling unit is generally necessary to avoid the arrival of another workpiece carrier during swivelling.



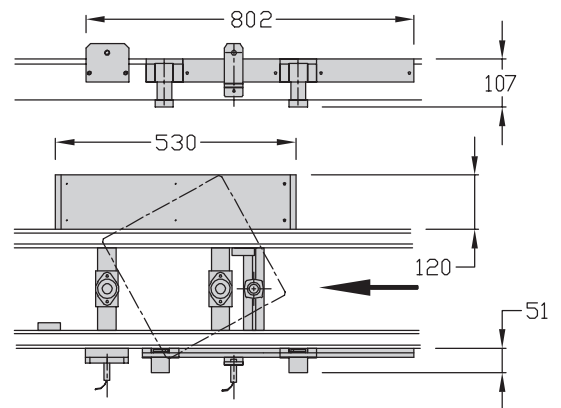
Minimum load on workpiece carrier: 2 daN

Weight: Swivelling 90° 200: 3,8 kg
 Swivelling 90° 300: 5,8 kg
 Swivelling 90° 400: 6,9 kg

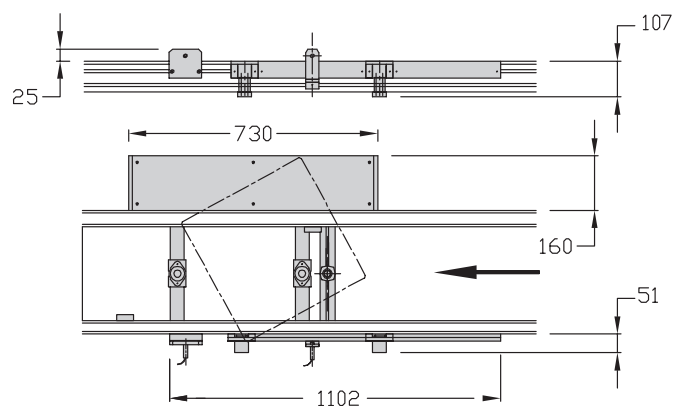
Swivelling 90°
200x200



Swivelling 90°
300x300



Swivelling 90°
400x400



Designation / Dimensions	Order unit	Reference
Swivelling 90° 200	1 kit	120.27.000
Swivelling 90° 300	1 kit	130.27.000
Swivelling 90° 400	1 kit	140.27.000

Specify (R) for spring stopper e.g. 130.27.000 (R)

Swivellings 180° Widths 200 - 300 - 400

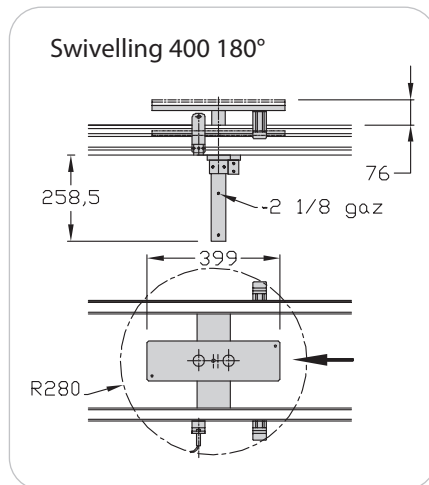
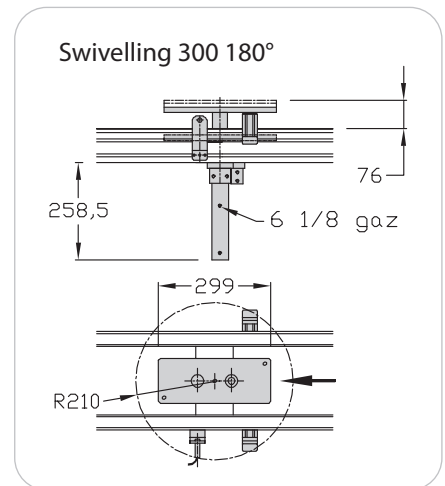
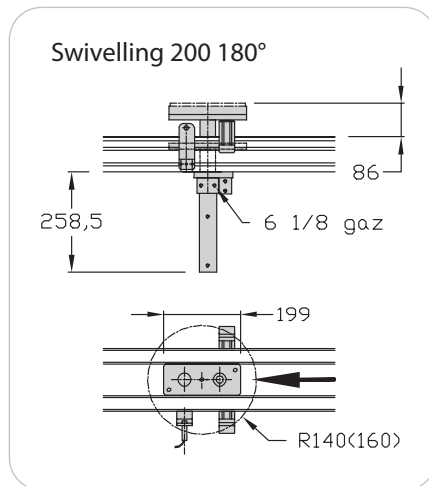
Technical data

- ✗ Stopper
- ✗ Linear rotating cylinder
- ✗ Sensor bracket

A stopper located before the swivelling unit is generally necessary to avoid the arrival of another workpiece carrier during the swivelling.

⚠ Flow rate controllers should be adapted.

Weight: Swivelling 180° 200: 5,6 kg
 Swivelling 180° 300: 6,7 kg
 Swivelling 180° 400: 7,6 kg



Designation / Dimensions	Order unit	Reference
Swivelling 180° 200	1 kit	120.28.000
Swivelling 180° 300	1 kit	130.28.000
Swivelling 180° 400	1 kit	140.28.000
Shock absorber kit	1 kit	120.28.200

Specify (R) for spring stopper e.g. 130.28.000 (R)

Rotation damper kit

Applications

Allows dumping at the end of the stroke on a 180° return.

Technical data

✖ 2 dampers M8x100

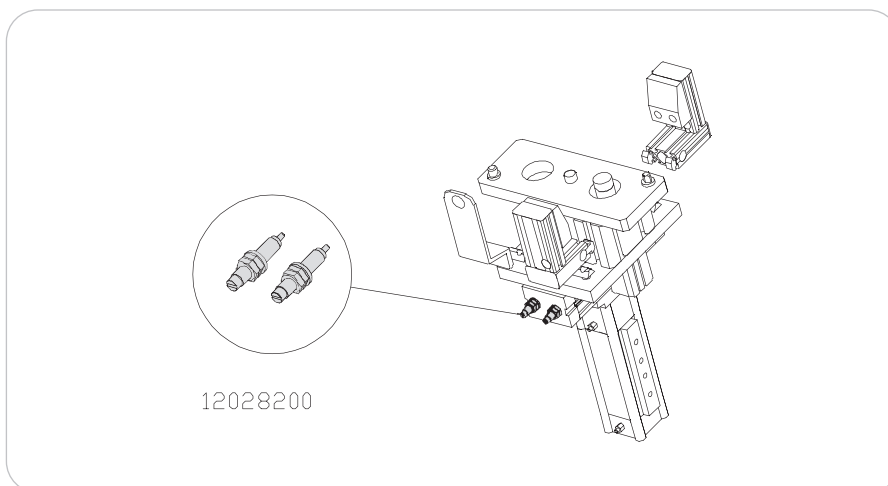
To be mounted on 180° return, references:

120.28.000

130.28.000

140.28.000

Weight: 0,23 kg

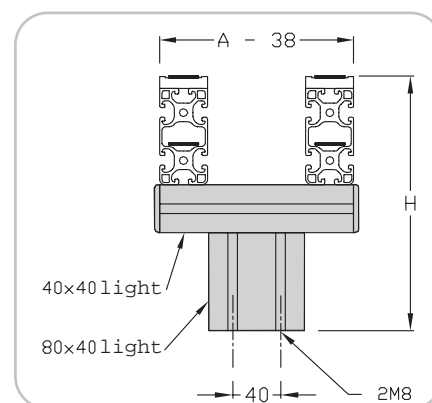


Designation / Dimensions	Order unit	Reference
Rotation damper kit	1 kit	120.28.200

Conveying unit stands

Applications

Support to fit conveying units on table or frame.
With profile 40x40 and 80x40, it is compatible with full range of profiles and modular elements of **elcom**.

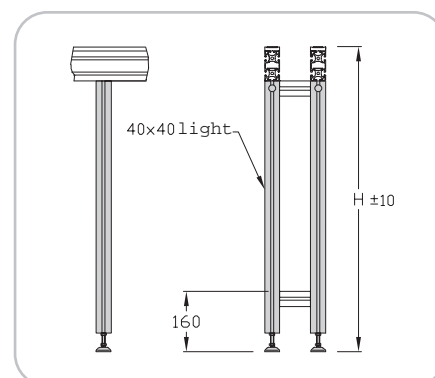


Designation / Dimensions	Order unit	Reference
Conveying unit stand 200	1 kit	120.20.000
Conveying unit stand 300	1 kit	130.20.000
Conveying unit stand 400	1 kit	140.20.000

Simple stands

Applications

Support for one conveying unit.
With profile 40x40 and 80x40, it is compatible with full range of profiles and modular elements of **elcom**.

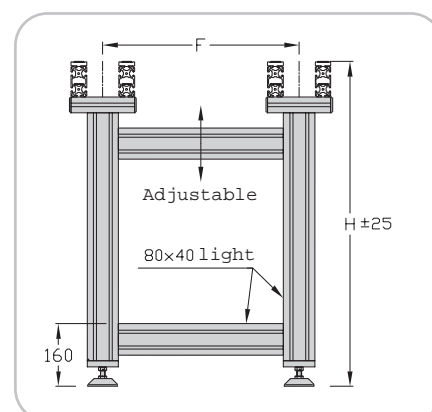


Designation / Dimensions	Order unit	Reference
Simple stand 200	1 kit	120.12.000
Simple stand 300	1 kit	130.12.000
Simple stand 400	1 kit	140.12.000

Double stands

Applications

Support for two parallel conveying units.
With profile 40x40 and 80x40, they are compatible with full range of profiles and modular elements of **elcom**.



Designation / Dimensions	Order unit	Reference
Double stand 200	1 kit	120.19.000
Double stand 300	1 kit	130.19.000
Double stand 400	1 kit	140.19.000

Stoppers

Applications

Stopping workpiece carriers during processing requiring no accuracy. They are perfectly adapted for manual work stations. Workpiece carriers are stopped to respect conveying priorities at the end of the derivation.

Stoppers can be supplied with a spring to make the stopper rod pop out in case of an emergency stop.

Supplied with sensor bracket for detection of workpiece carriers.



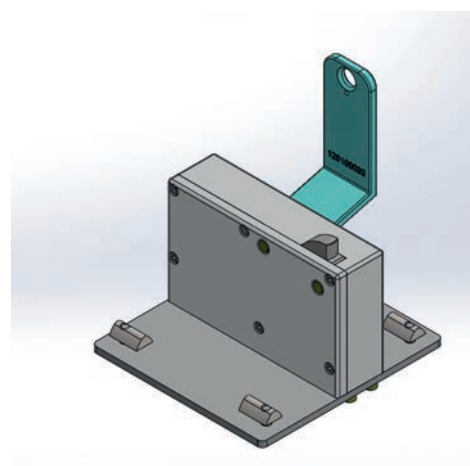
Stopper 24 V



Applications

Stopping workpiece carriers during processing requiring no accuracy. They are perfectly adapted for manual work stations. Workpiece carriers are stopped to respect conveying priorities at the end of the derivation.

Supplied with sensor bracket for detection of workpiece carriers.



Stoppers damped

Applications

They allow to reduce the shock of the workpiece carrier on the stoppers or on positioning unit stoppers.

Stopper rod moves in contact with the workpiece carrier and a shock absorber neutralizes the kinetic energy of workpiece carrier.

The stop position depends on the load on the workpiece carrier or the number of workpiece carriers.

The maximum load on a stopper for an optimum damping is 20 kg.

All stoppers have springs which enable to maintain stopper rod in high position in case of emergency stop.

Use preferably workpiece carriers with shock absorbers.



Stopper damped, pneumatic

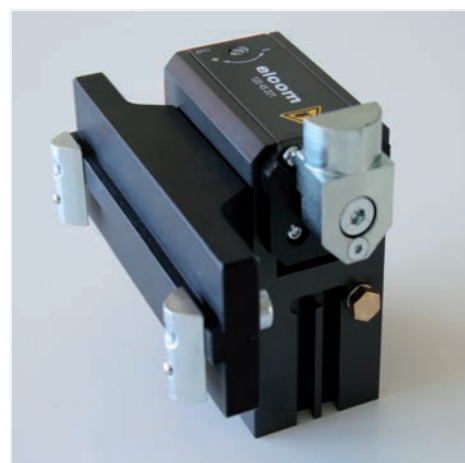
Applications

Stopping workpiece carriers during process requiring no accuracy. Perfectly adapted for manual operations.

Workpiece carriers are stopped to respect conveying priorities at the end of derivation.

The stopper 200, damped, pneumatic is used to reduce the shock between the workpiece carrier and the stopper thanks to the adjustable damped function. The damped is adjusted in an optimum way for a workpiece carrier but can be different according to the weight of each workpiece carrier.

The sensor bracket is provided.

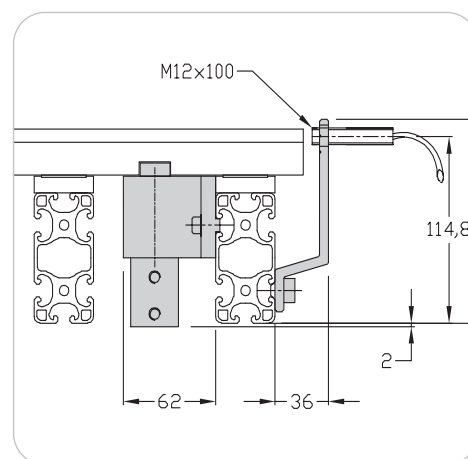


Stoppers short

Applications

Thanks to the combination of small size and reduced height, the short stopper allows construction of ergonomic workstations along the line.

Reduced accumulated load.



Stoppers Widths 200 - 300 - 400

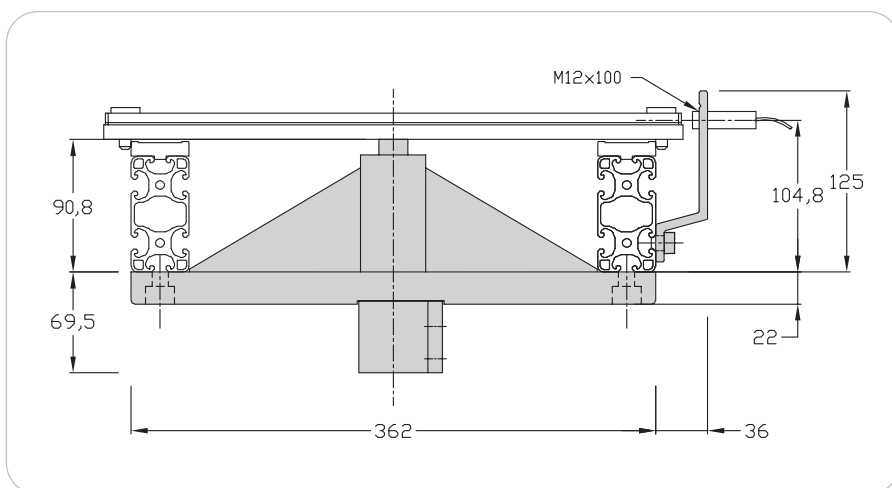
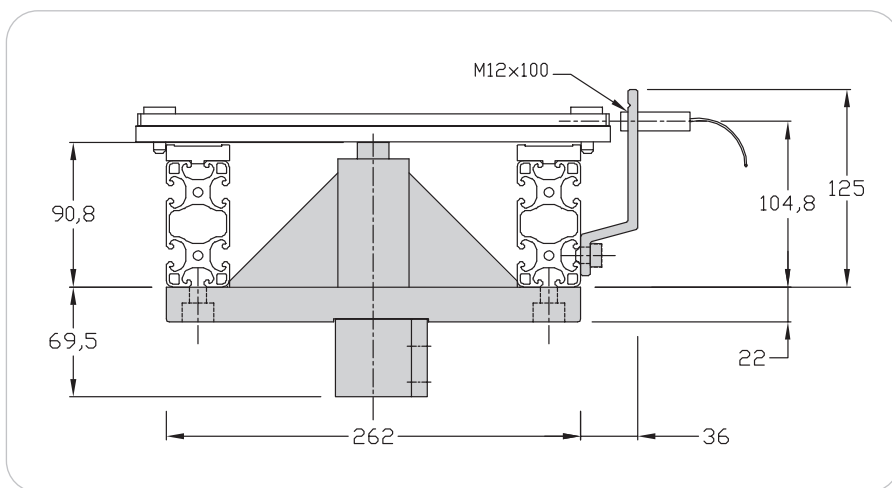
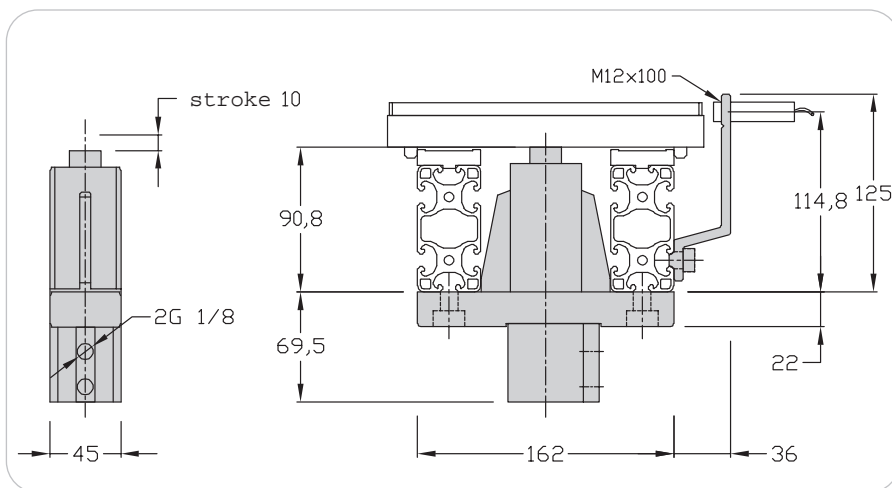
Technical data

- ✗ Stopper rod (polyurethane coated)
- ✗ Complete set with double effect cylinder ø32 mm, detectable positions
- ✗ Bracket for shielded mounting sensor M12x100
- ✗ Detection range: 4 mm

Maximum load: 50 daN
(in accumulation)

 **Flow rate controllers G 1/8 should be adapted.**

Weight: 200: 1,3 kg
300: 1,7 kg
400: 2 kg



Designation / Dimensions	Order unit	Reference
Stopper 200	1 pce	120.65.000
Stopper 300	1 pce	130.65.000
Stopper 400	1 pce	140.65.000

Specify (R) for spring stopper e.g. 120.65.000 (R)

Stoppers 24 V Widths 200 - 300 - 400

Technical data

- ✗ Plate, stainless steel
- ✗ Body and stopper PA
- ✗ Nuts 8 St M6 + screws
- ✗ Hole for shielded sensor M12x100
- ✗ Detection range: 4 mm

Supply voltage of of the control box:
 24 VDC +/- 15%
 Power supply: 0.9 A maxi
 Control voltage: 24 VDC +/- 10 %
 Control current: 5 mA maxi

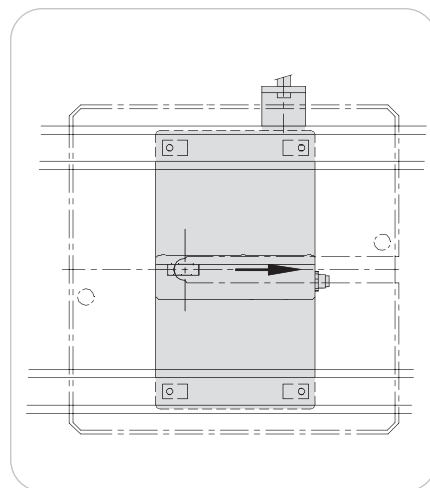
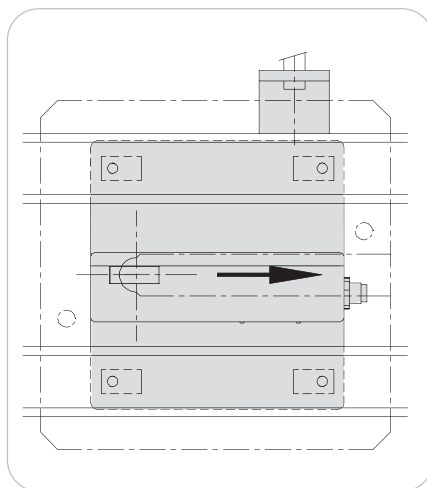
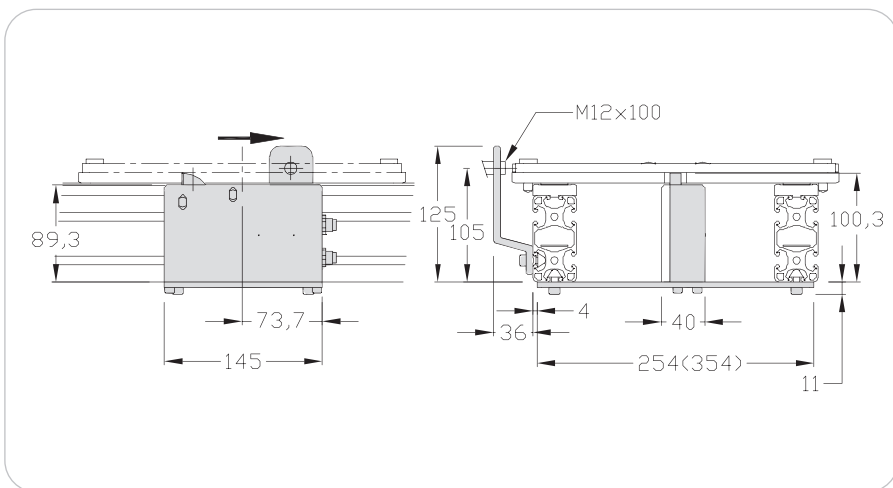
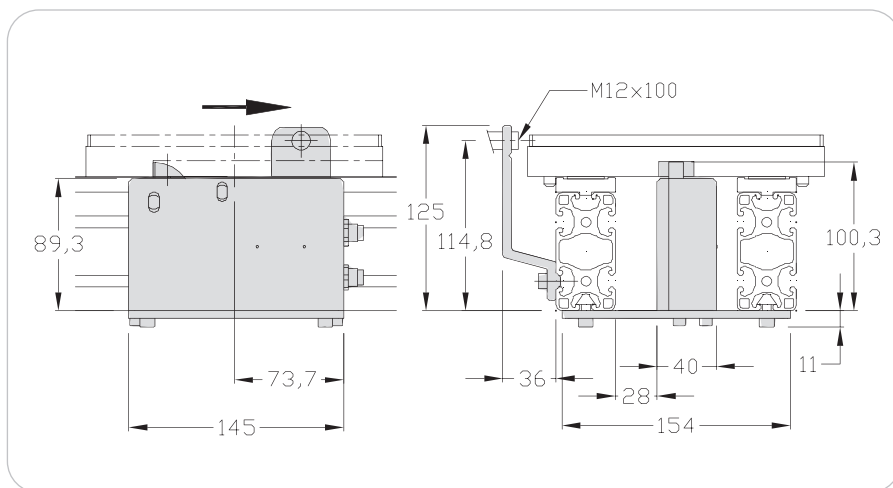
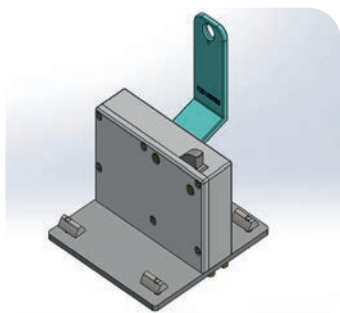
A Brushless gear motor controlled by a control box ensures the change in position.

Control module 24v output:
 automation, bus module, splitter,...

Standard connectors M12.

Maximum load: 50 daN
 (in accumulation)

Weight: 200: 1,7 kg
 300: 2.2 kg
 400: 2.8 kg



Designation / Dimensions	Order unit	Reference
Stopper 24 V 200	1 pce	120.65.000.E
Stopper 24 V 300	1 pce	130.65.000.E
Stopper 24 V 400	1 pce	140.65.000.E

Stoppers damped Widths 200 - 300 - 400

Technical data

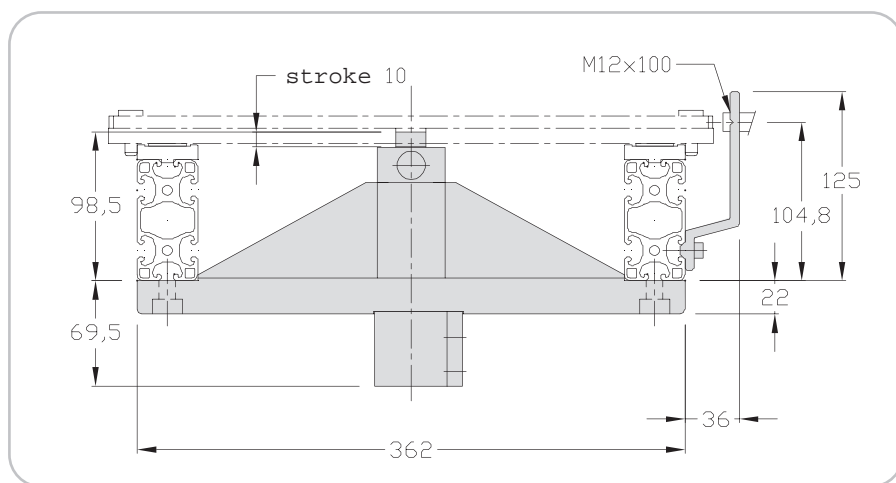
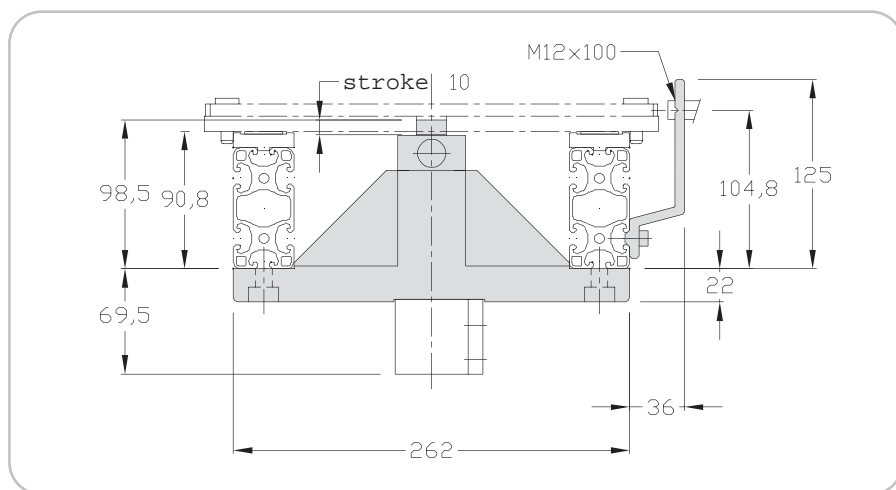
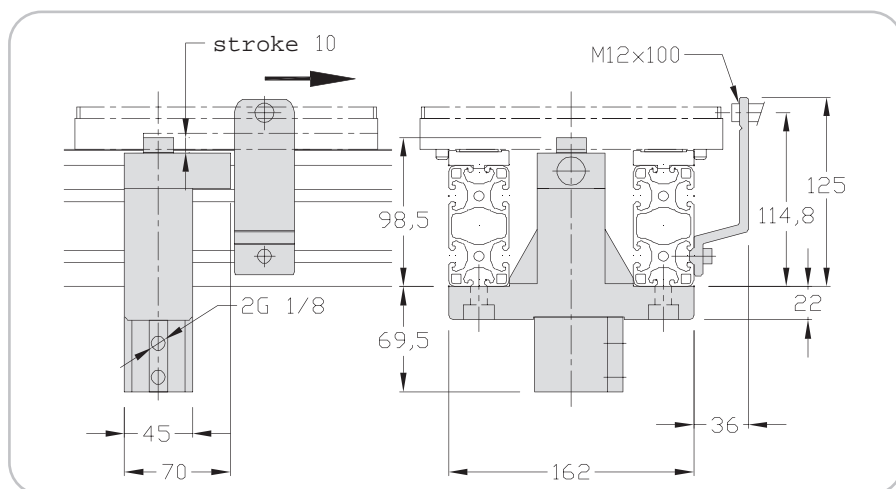
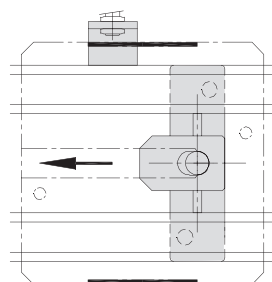
- ✗ Stopper rod, steel
- ✗ Complete set with double effect cylinder $\varnothing 32$, detectable positions.
- ✗ Bracket for shielded mounting sensor M12x100.
- ✗ Detection range: 4 mm

Maximum load: 20 daN



Flow rate controllers G 1/8 should be adapted

Weight: 200: 1,4 kg
 300: 1,8 kg
 400: 2,1 kg



Designation / Dimensions	Order unit	Reference
Stopper 200 damped	1 pce	120.65.000.RA
Stopper 300 damped	1 pce	130.65.000.RA
Stopper 400 damped	1 pce	140.65.000.RA

R = for spring stopper A = damped

Stopper damped, pneumatic Width 200

Technical data

- x Stopper
- x Stopper bracket
- x Sensor bracket
- x Screws and nuts

Maximum load:

9m/min	1,7-60 daN
15m/min	1,7-50 daN
19m/min	1,7-43 daN

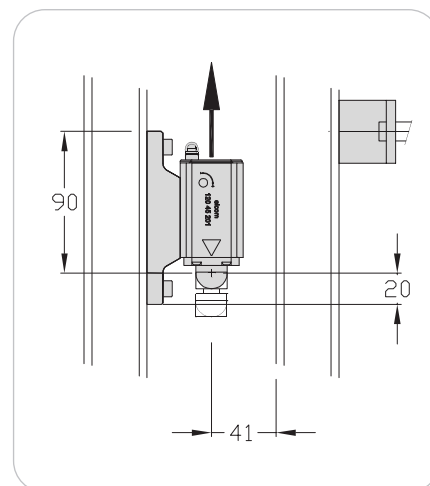
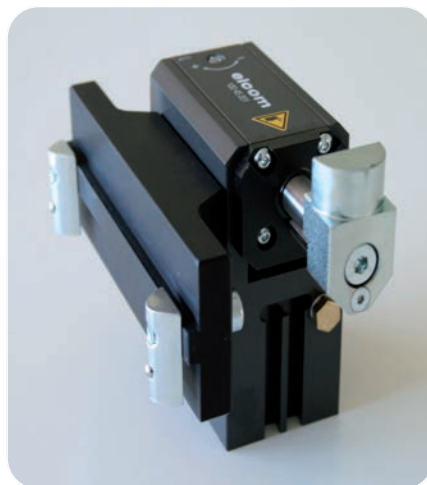
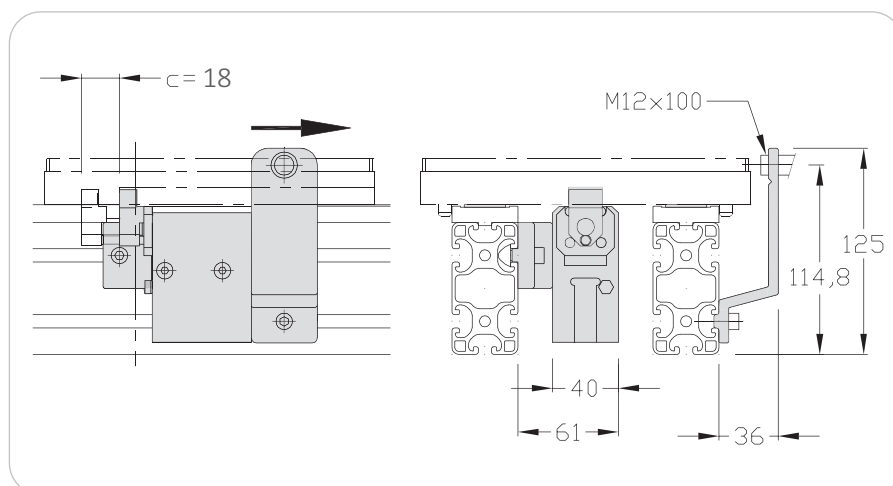
Air consumption: 0,11 l for a pressure of 6 bars.

Pressure on use: 4 to 8 bars.
Connection M5 not included.

Restoring force: 115 N.

Longitudinal damping stroke: 23 mm.

Weight: 0,95 kg



Designation / Dimensions	Order unit	Reference
Stopper 200 damped, pneumatic	1 pce	120.45.000 RAP

Stoppers short Widths 200 - 300 - 400

Technical data

- ✗ Stopper rod (polyurethane coated)
- ✗ Complete set with double effect cylinder \varnothing 20 mm, detectable positions.
- ✗ Bracket for shielded mounting sensor M12x100.
- ✗ Detection range: 4 mm

Stoppers 300-400:

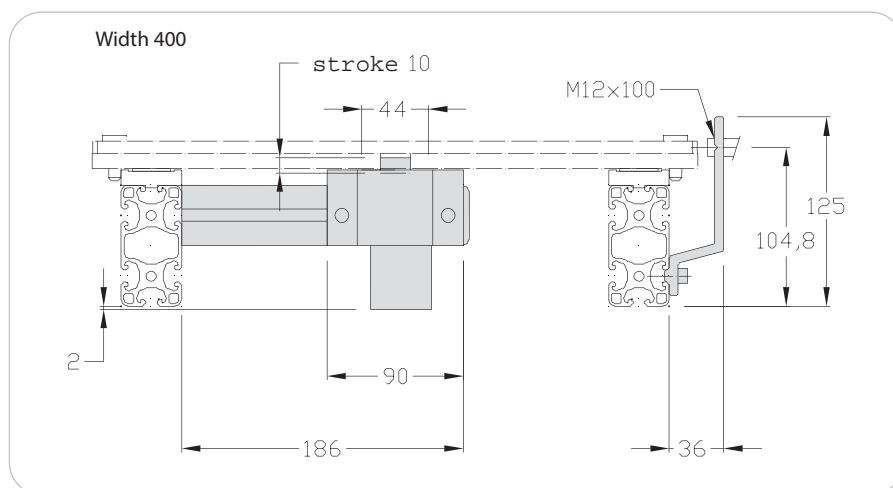
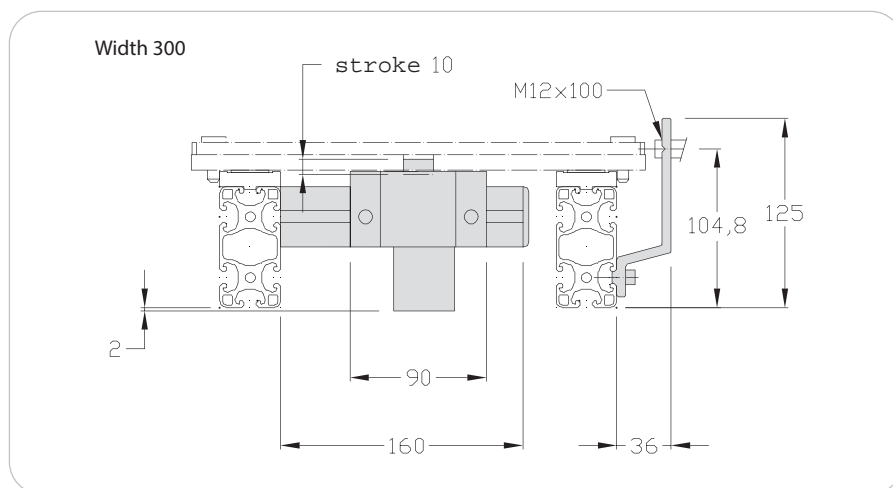
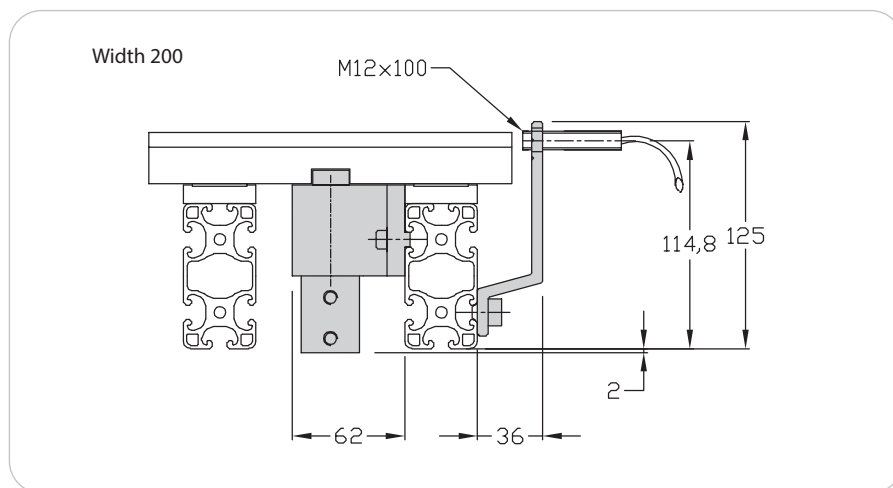
- ✗ 1 profile Al 80x40 light
- ✗ 2 universal fastenings 8

Maximum load : 15 daN
(in accumulation)



Flow rate controllers G 1/8 should be adapted

Weight: Stopper, short 200: 0,9 kg
 Stopper, short 300: 1,4 kg
 Stopper, short 400: 1,8 kg



Designation / Dimensions	Order unit	Reference
Stopper short 200	1 pce	120.32.000
Stopper short 300	1 pce	130.32.000
Stopper short 400	1 pce	140.32.000

Specify (R) for spring stopper e.g. 120.32.000 (R)

Brush unit

Applications

Allows the cleaning of the transfer units of conveying belts.

The brushes sweep any potential deposits on the belts and avoid the accumulation of foreign materials in mechanical parts.

Two articulated arms with fixed brushes installed in the belt conveying direction allow continuous mechanical cleaning of the conveyor belts.

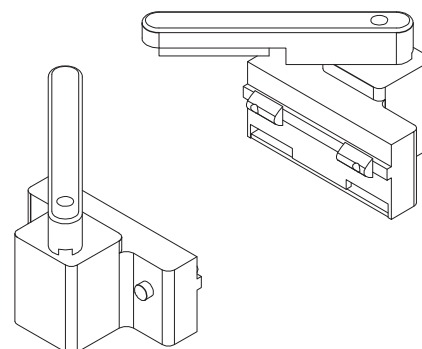
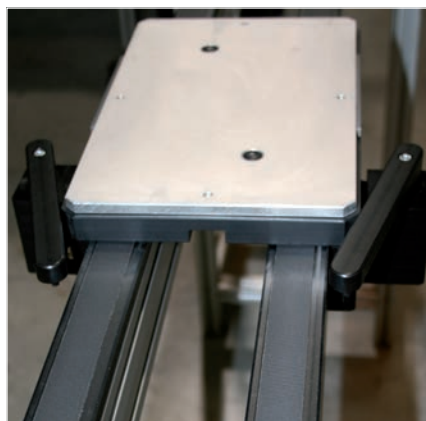
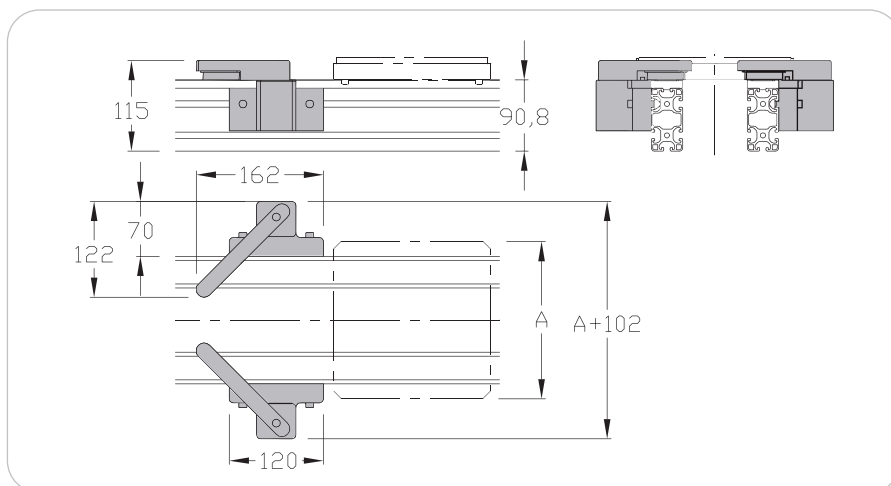
The arms retract automatically during the traffic of workpiece carriers.

Technical data

Complete set including:

- ✘ 2 brushes
- ✘ 2 brackets
- ✘ Screws and nuts

Weight: 0,86 kg



Designation / Dimensions	Order unit	Reference
Brush unit	1 pce	120.49.000

Positioning units

Stopping and positioning workpiece carriers for operations requiring accuracy. The workpiece carrier is stopped, then lifted off the belts and positioned by a pin and locating. In case of heavy shocks, it is possible to use positioning units with damped stopper.

Positioning unit 24 V



The stopper of workpiece carriers is positioned by the vertical movement (unnecessary stopper control). A Brushless gear motor ensures the control of the stopper and the positioning unit.

Irreversible system.



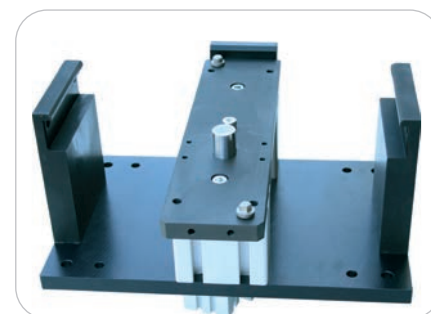
Positioning units low

The positioning unit is directly fitted on the conveying units.

Damped low positioning units:

An upstream stopper is required.

A cam repositions the workpiece carrier when the positioning unit is rising.



Positioning units for station

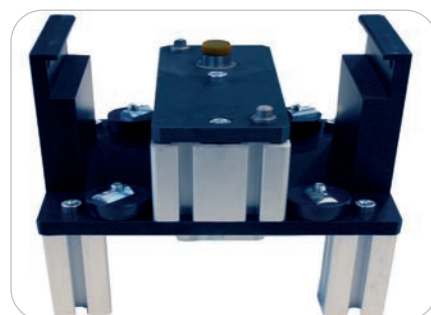
They are fixed to a table or a frame to ensure accuracy of the other surrounding elements.

Damped positioning units for station:

An upstream stopper is required.

A cam repositions the workpiece carrier when the positioning unit is rising.

Dead man option available on widths 200-300-400.



Positioning units heavy

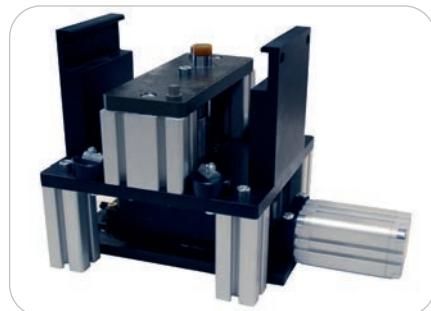
For operations requiring accuracy and involving important strain (up to 1500 daN) at the center of workpiece carrier.

The positioning unit must be fixed on a frame capable of supporting the strain applied.

Positioning units heavy, damped:

An upstream stopper is required.

A cam repositions the workpiece carrier when the positioning unit is rising.



Positioning units lift

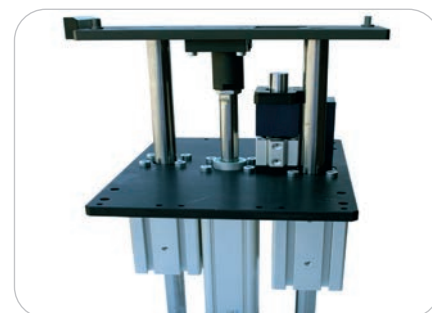
They stop and position workpiece carriers at a significant height above the conveyor.

The workpiece carrier is stopped, then elevated to a specific height, while being held by two centering pieces.

Damped lift positioning units:

An upstream stopper is required.

A cam repositions the workpiece carrier when the positioning unit is rising. Dead man option available on widths 200-300-400.



Positioning units bridge

The bridge positioning units allow to rise a workpiece carrier in a station and to another workpiece carrier can flow below.

Particularly suitable at the checkpoint.

Positioning accuracy +/- 1 mm.

A refocusing of workpiece carrier is required for operations which need an important accuracy.

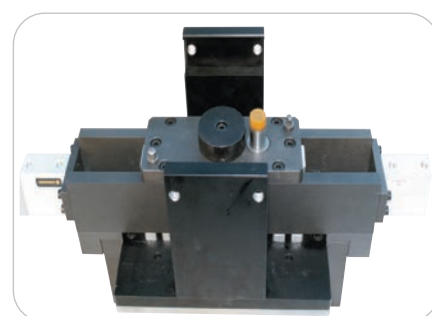
Damped bridge positioning units. An upstream stopper is required.



Positioning units press

Support significant strain (5000 daN) on the surface between the two belts.

The positioning unit must be fixed on a frame capable of supporting the strain applied.



Positioning units multi-positioning

They allow two accurate positionings of the workpiece carrier at the same station.



Positioning units Widths 200 - 300 - 400

Technical data

Complete set including:

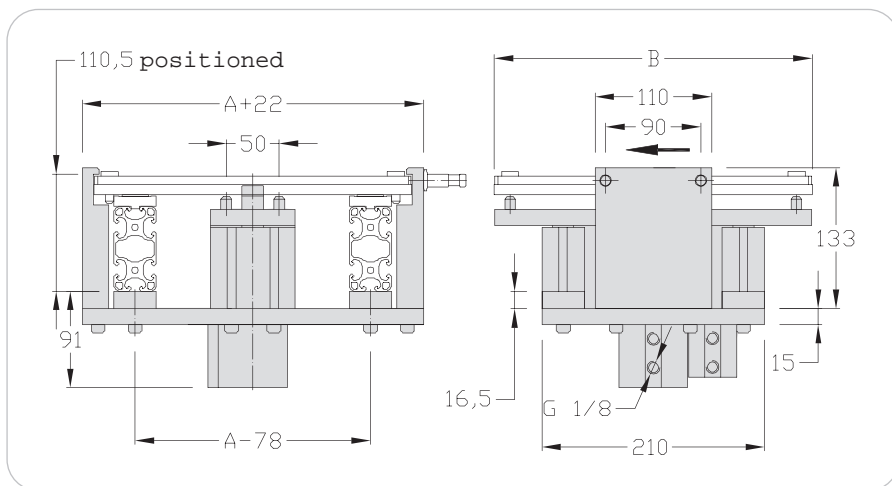
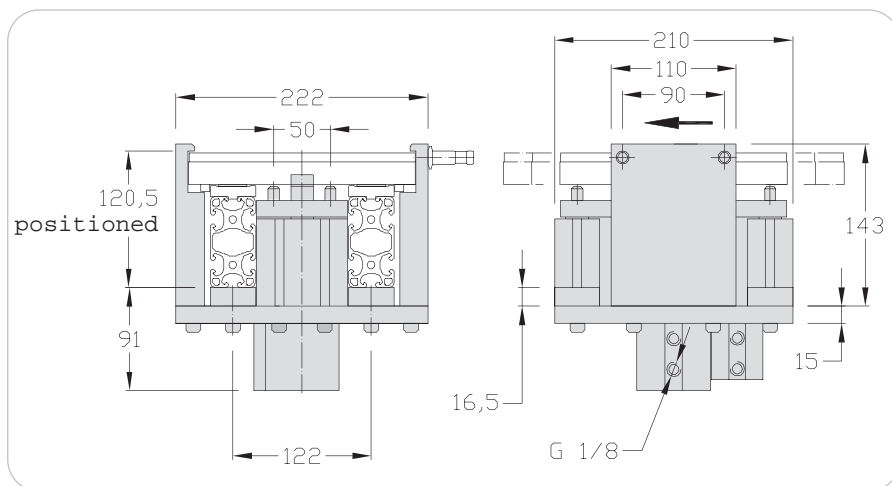
- x** Stopper
1 double effect cylinder ø 32, detectable positions
- x** Positioning unit
1 double effect cylinder ø 50, detectable positions
- x** Holes for shielding mounting sensors
M12x100
- x** Detection range: 4 mm
- x** Fastening parts

! 4 flow rate controllers G 1/8 should be adapted

Maximum vertical strain: 100 daN for a pressure of 6 bars at the center of workpiece carrier.

Repeatability: +/- 0,03 mm

Weight: 200 : 8,7 kg
300 : 10,5 kg
400 : 12,2 kg



A = workpiece carrier width
B = workpiece carrier length

Designation / Dimensions	Order unit	Reference
Positioning unit 200	1 pce	120.64.000
Positioning unit 300	1 pce	130.64.000
Positioning unit 300x400	1 pce	134.64.000
Positioning unit 400	1 pce	140.64.000

Specify (R) for spring stopper eg: 130.64.000.R

Positioning units 24 V Widths 200 - 300 - 400

Technical data

Complete set including:

- ✗ 1 gear motor 24 V
- ✗ Vertical movement provided by an irreversible screw-nut system
- ✗ Vertical position controlled by encoder
- ✗ Housing for shielded mounting sensors M12x100
- ✗ Detection range: 4 mm
- ✗ Fastening parts

Maximum vertical strain: 100 daN.

Repeatability: +/- 0.03 mm

Motor supply voltage: 24 VDC

Motor supply current: 5,2 A

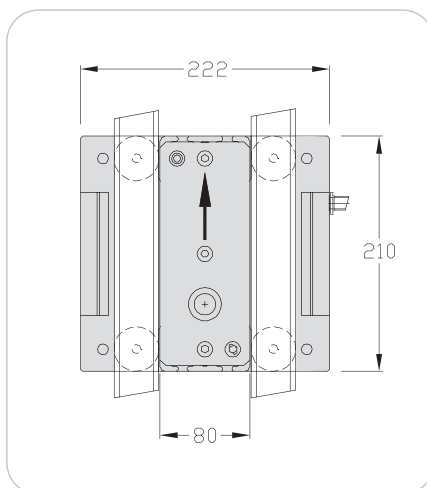
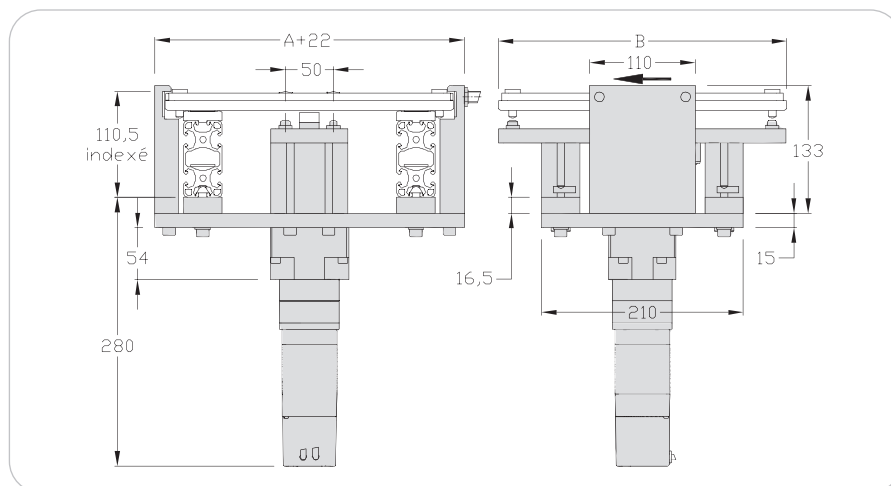
Control voltage: 24 VDC

Control current: 10 mA

5 positioning input status

4 output status

Weight: 200 : 8,5 kg



Designation / Dimensions	Order unit	Reference
Positioning unit 24 V 200	1 pce	120.64.000.E
Positioning unit 24 V 300	1 pce	130.64.000.E
Positioning unit 24 V 300x400	1 pce	134.64.000.E
Positioning unit 24 V 400	1 pce	140.64.000.E

Positioning units damped Widths 200 - 300 - 400

Technical data

Complete set including:

- ✘ Stopper
 - 1 double effect cylinder \varnothing 32, detectable positions
- ✘ Positioning unit
 - 1 double effect cylinder \varnothing 50, detectable positions
- ✘ Holes for shielding mounting sensors M12x100
- ✘ Detection range: 4 mm
- ✘ 4 supports in profile 8 40x40
- ✘ Fastening parts

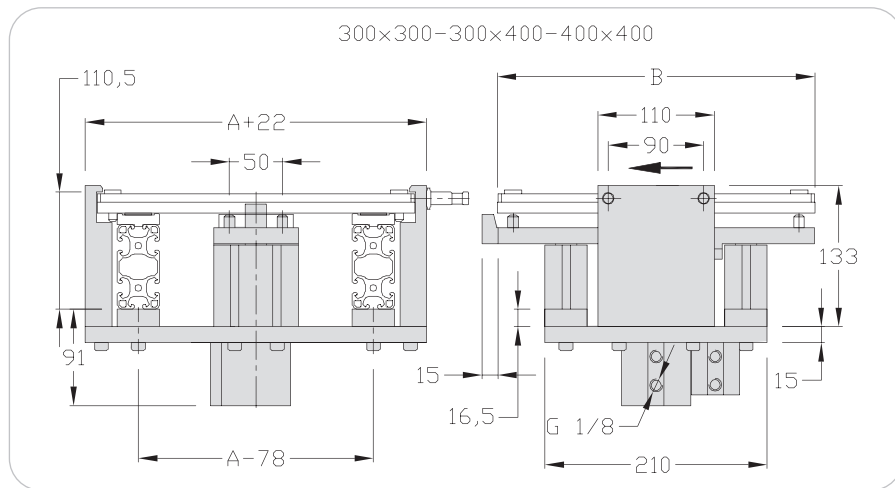
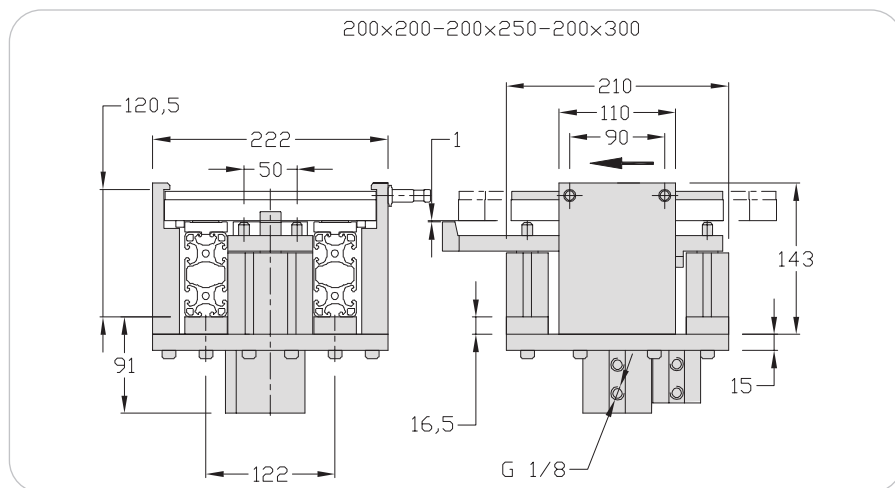
Maximum vertical strain: 100 daN for a pressure of 6 bars at the center of workpiece carrier.

Repeatability: +/- 0,03 mm



Flow rate controllers G 1/8 should be adapted G 1/8

Weight: 200 : 10,2 kg
 300 : 11,2 kg
 400 : 13 kg



A = workpiece carrier width
 B = workpiece carrier length

Designation / Dimensions	Order unit	Reference
Positioning unit 200 damped	1 pce	120.64.000.RA
Positioning unit 200x250 damped	1 pce	125.64.000.RA
Positioning unit 200x300 damped	1 pce	123.64.000.RA
Positioning unit 300 damped	1 pce	130.64.000.RA
Positioning unit 300x400 damped	1 pce	134.64.000.RA
Positioning unit 400 damped	1 pce	140.64.000.RA

R = for spring stopper A = damped

Positioning units for station Widths 200 - 300 - 400

Technical data

Complete set including:

- ✗ Stopper
1 double effect cylinder \varnothing 32, detectable positions
- ✗ Positioning unit
1 double effect cylinder \varnothing 50, detectable positions
- ✗ Holes for shielding mounting sensors M12x100
- ✗ Detection range: 4 mm
- ✗ 4 supports in profile 8 40x40
- ✗ Fastening parts

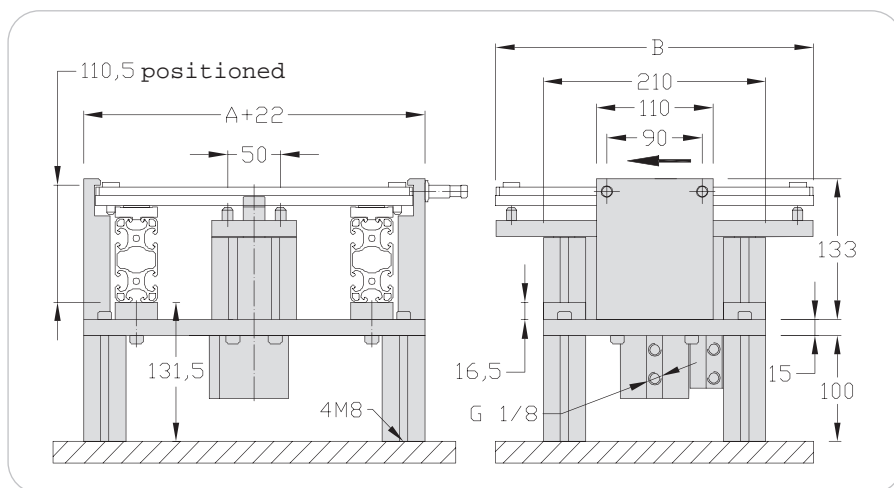
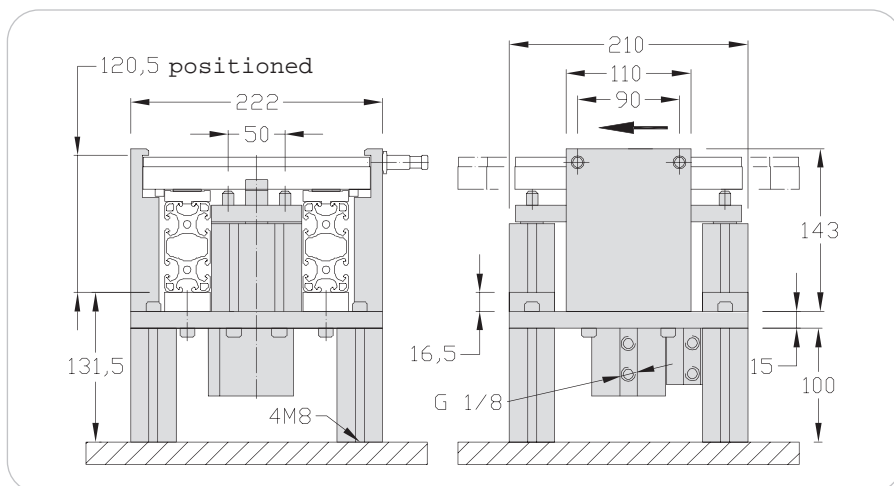
Maximum vertical strain: 100 daN for a pressure of 6 bars at the center of workpiece carrier

Repeatability: +/- 0,03 mm

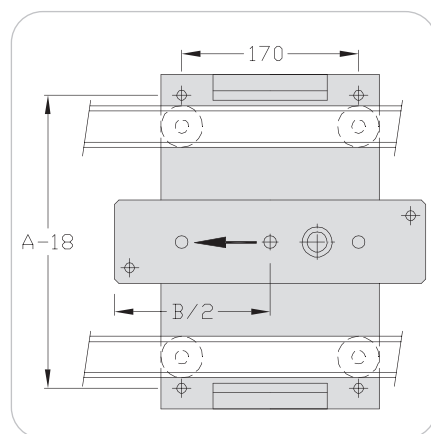


4 flow rate controllers G 1/8 should be adapted

Weight: 200 : 8,7 kg
300 : 10,5 kg
400 : 12,2 kg



A = workpiece carrier width
B = workpiece carrier length



Designation / Dimensions	Order unit	Reference
Positioning unit for station 200	1 pce	120.69.000
Positioning unit for station 300	1 pce	130.69.000
Positioning unit for station 300x400	1 pce	134.69.000
Positioning unit for station 400	1 pce	140.69.000

Specify (R) for spring stopper eg: 120.69.000.R

Positioning units for station, damped Widths 200 - 300 - 400

Technical data

Complete set including:

- x** Stopper
 - 1 double effect cylinder \varnothing 32, detectable positions
- x** Positioning unit
 - 1 double effect cylinder \varnothing 50, detectable positions
- x** Holes for shielding mounting sensors M12x100
- x** Detection range: 4 mm
- x** 4 supports in profile 8 40x40
- x** Fastening parts

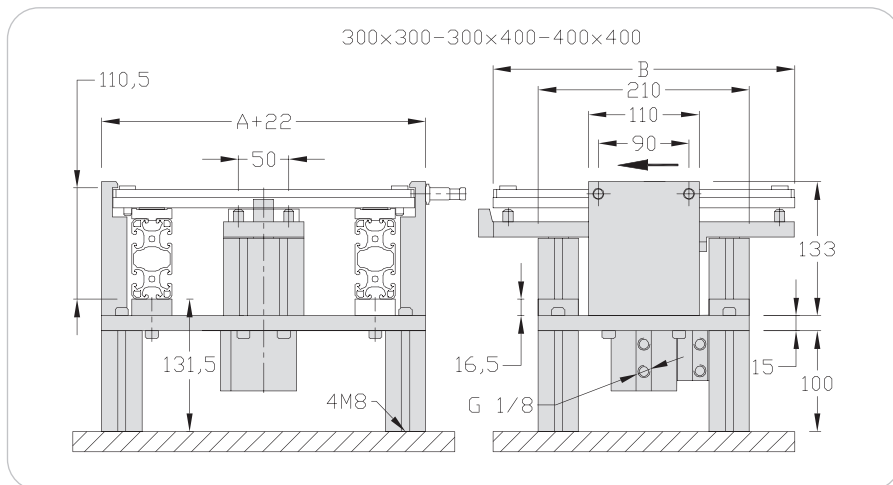
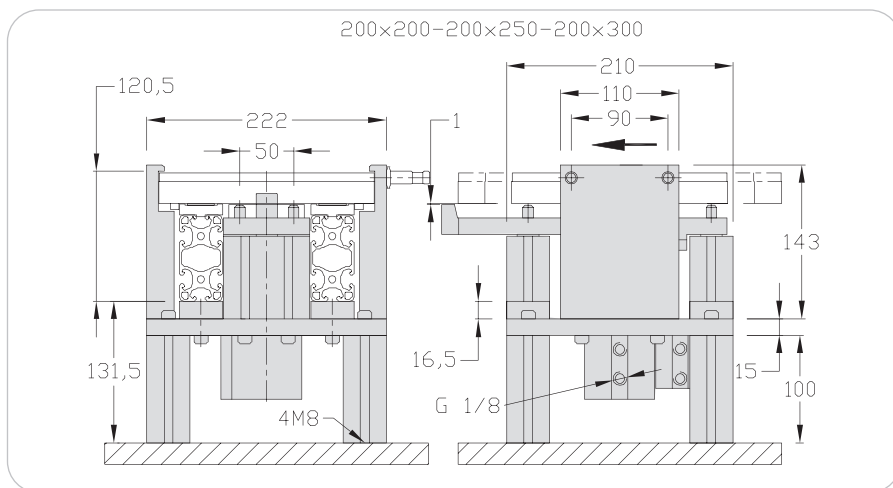
Maximum vertical strain: 100 daN for a pressure of 6 bars at the center of workpiece carrier.

Repeatability: +/- 0,03 mm

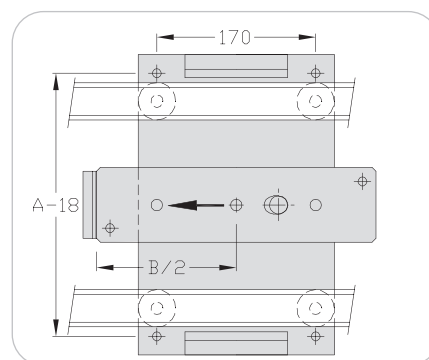


Flow rate controllers G 1/8 should be adapted

Weight: 200: 10,2 kg
 300: 11,2 kg
 400: 13 kg



A = workpiece carrier width
 B = workpiece carrier length



Designation / Dimensions	Order unit	Reference
Positioning unit for station 200 damped	1 pce	120.69.000 RA
Positioning unit for station 200x250 damped	1 pce	125.69.000 RA
Positioning unit for station 200x300 damped	1 pce	123.69.000 RA
Positioning unit for station 300 damped	1 pce	130.69.000 RA
Positioning unit for station 300x400 damped	1 pce	134.69.000 RA
Positioning unit for station 400 damped	1 pce	140.69.000 RA

R = for spring stopper A = damped

Dead man option, positioning units Widths 200 - 300 - 400

Applications

This option is available for all positioning units and positioning units for station widths 200 - 300 - 400.

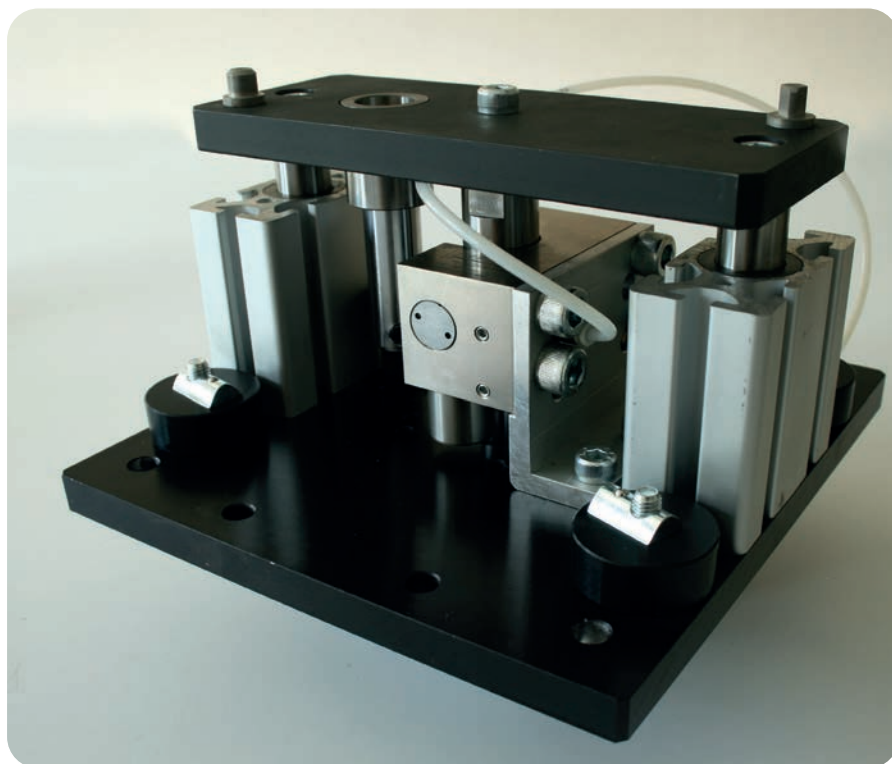
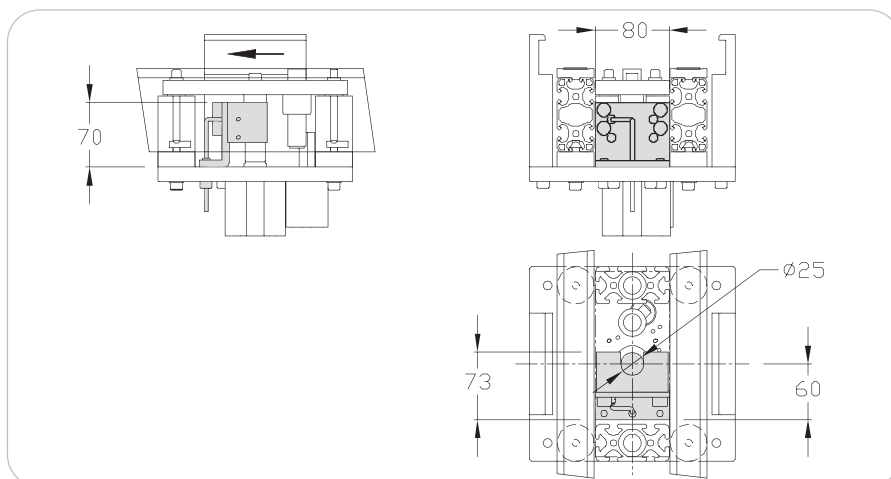
Pneumatic clamping element for shaft $\varnothing 25$.

Locking by springs.

Retaining force: 750 N

Useful pressure range: 6 bars.

Weight: 1,3 kg



Designation / Dimensions

Dead man option, positioning units 200 - 300 - 400

Order unit

1 pce

Reference

120.74.000

Positioning units heavy Widths 200 - 300 - 400

Technical data

Complete set including:

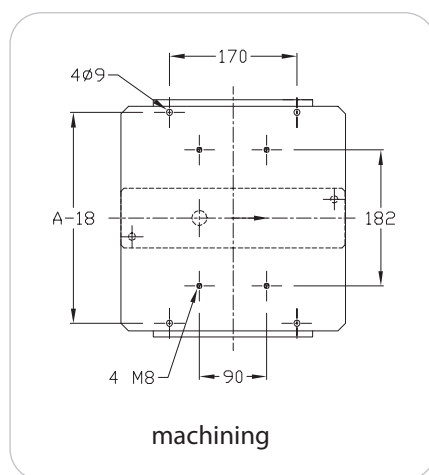
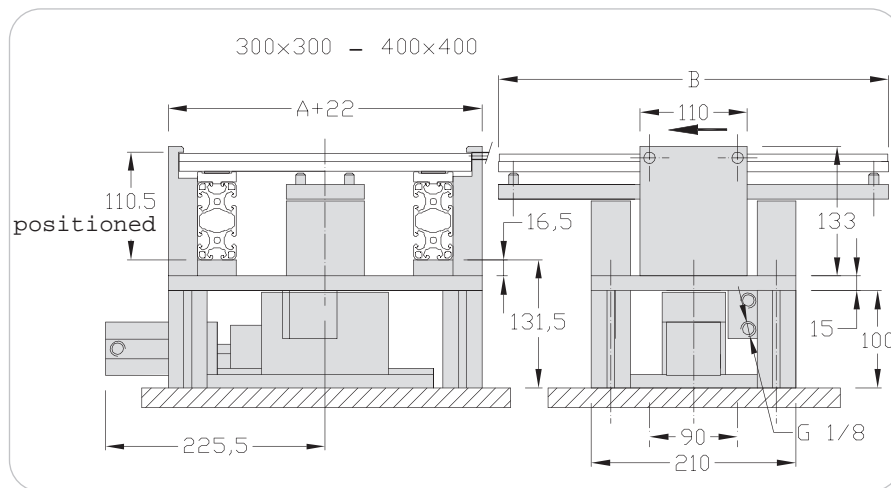
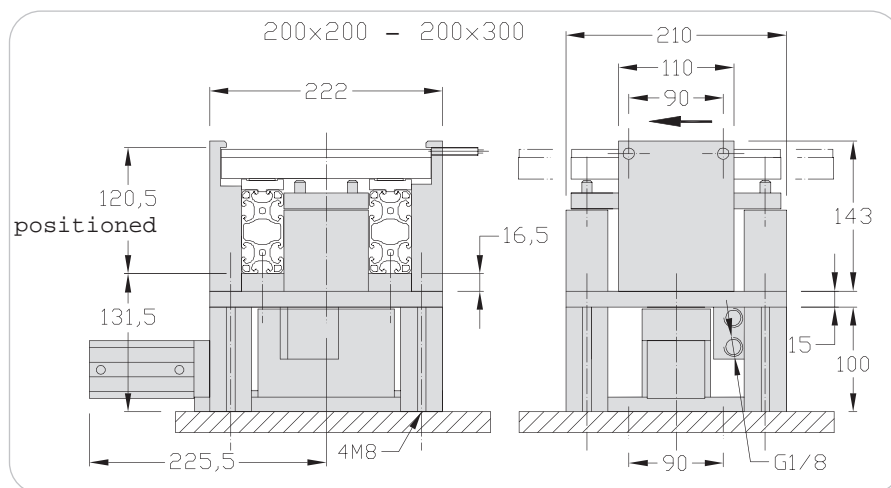
- x Stopper
- x Positioning unit
- x 2 pneumatic cylinders, detectable positions
- x Spacers profilé 40x40
- x Fastening parts
- x Holes for shielding mounting sensors M12x100, noyables
- x Detection range: 4 mm

Maximum vertical strain: 1500 daN at the center of workpiece carrier (60x60 mm).

Repeatability: +/- 0,03 mm

 **Flow rate controllers G 1/8 should be adapted.**

Weight: 200: 18,3 kg
 300: 19,6 kg
 400: 21,8 kg



Designation / Dimensions	Order unit	Reference
Positioning unit heavy 200	1 pce	120.68.000
Positioning unit heavy 300	1 pce	130.68.000
Positioning unit heavy 300x400	1 pce	134.68.000
Positioning unit heavy 400	1 pce	140.68.000

Positioning units heavy, damped Widths 200 - 300 - 400

Technical data

Complete set including:

- x Stopper
- x Positioning unit
- x 2 pneumatic cylinders, detectable positions
- x Spacers profilé 40x40
- x Fastening parts
- x Holes for shielding mounting sensors M12x100, noyables
- x Detection range: 4 mm

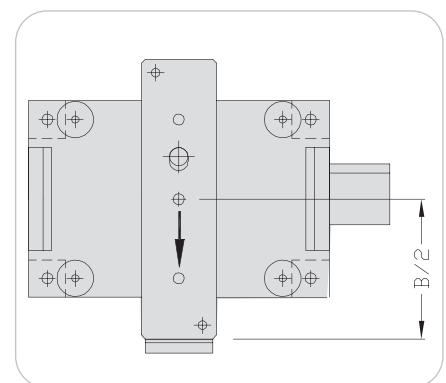
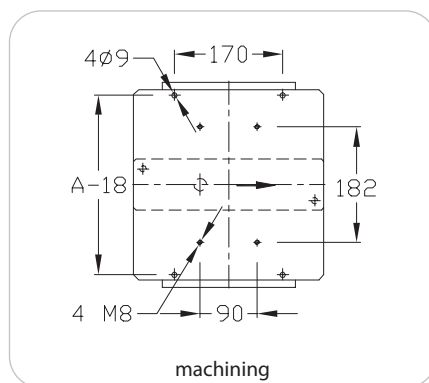
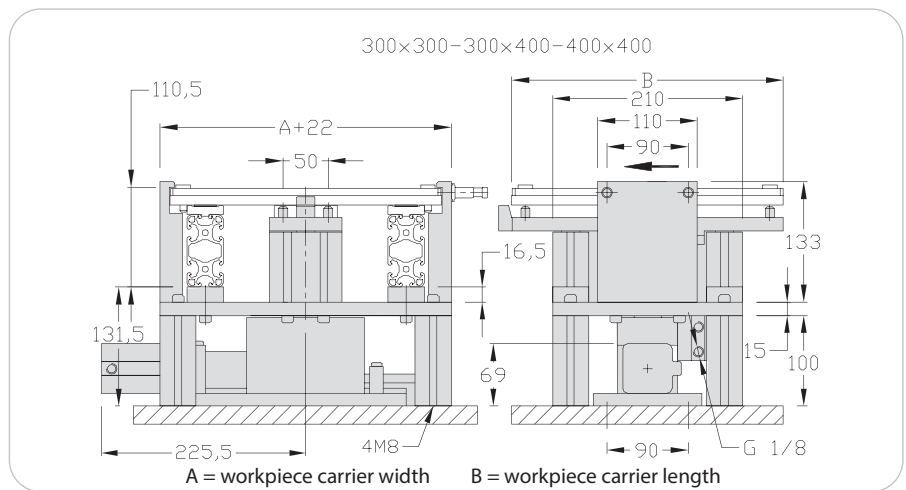
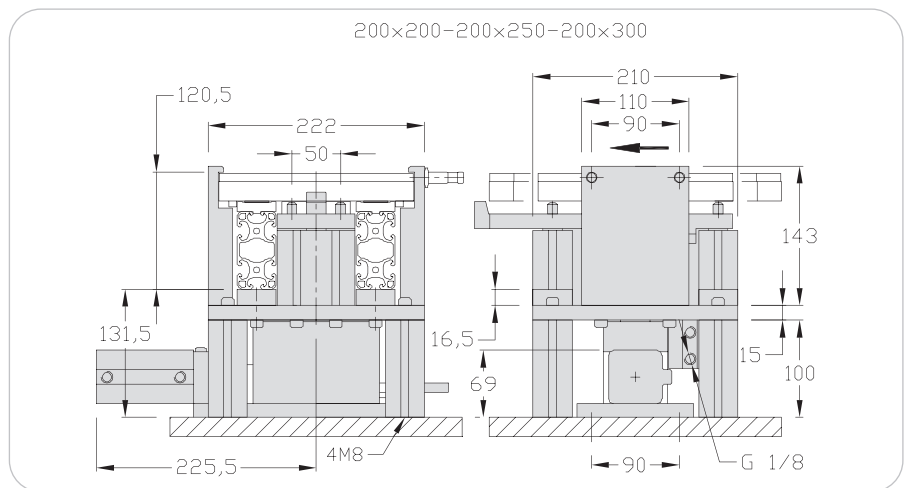
Maximum vertical strain: 1500 daN at the center of workpiece carrier (60x60 mm)

Repeatability: +/- 0,03 mm



Flow rate controllers G 1/8 should be adapted.

Weight: 200: 18,3 kg
 300: 19,6 kg
 400: 21,8 kg



Designation / Dimensions	Order unit	Reference
Positioning unit heavy 200, damped	1 pce	120.68.000 RA
Positioning unit heavy 200x250, damped	1 pce	125.68.000 RA
Positioning unit heavy 200x300, damped	1 pce	123.68.000 RA
Positioning unit heavy 300, damped	1 pce	130.68.000 RA
Positioning unit heavy 300x400, damped	1 pce	134.68.000 RA
Positioning unit heavy 400, damped	1 pce	140.68.000 RA

R = for spring stopper A = damped

Dead man option, Positioning units lift Widths 200 - 300 - 400

Applications

This option is available for all lift positioning units widths 200 - 300 - 400.

Locking by springs.

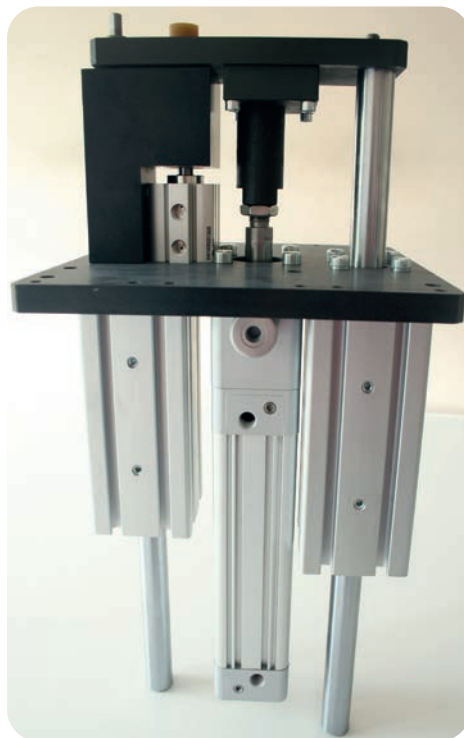
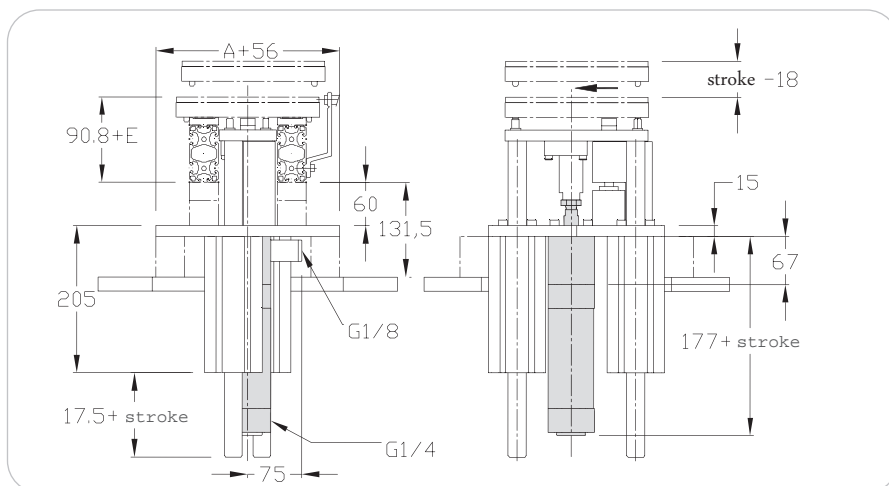
Retaining force: 1400 N

Useful pressure range: 6 bars.



2 flow rate controllers G1/4 + 1 connection G 1/8 are required.

Weight: 4,2 kg (stroke 400).



Designation / Dimensions	Order unit	Reference
Dead man option, Positioning units lift 200 - 300 - 400	1 pce	120.75.000

Positioning units bridge Width 200

Technical data

Complete set including:

- x Stopper
1 double effect cylinder $\varnothing 32$,
detectable positions
- x Positioning unit
1 double effect cylinder $\varnothing 50$,
detectable positions
- x Ball bearing guide bush $\varnothing 25$
- x Fastening parts
- x 1 bracket for shielded mounting
sensor M12x100
- x Detection range: 4 mm

A stopper located before the lift unit is generally necessary to avoid the arrival of another workpiece carrier during lifting.

Available cylinder strokes:
100 - 125 - 160 - 200 - 250 mm

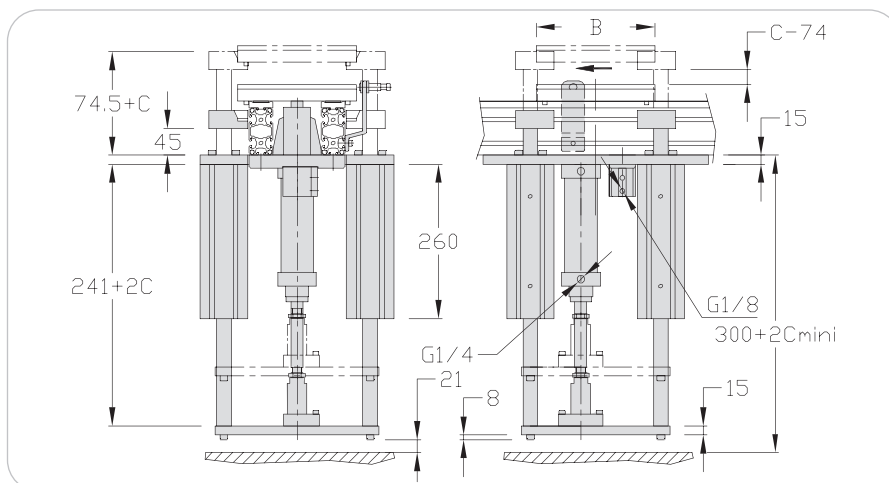
Maximum vertical strain:
60 daN at the center of workpiece carrier.

Repeatability: +/- 1 mm

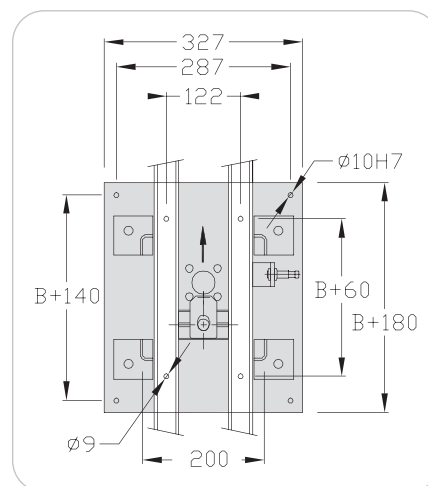


Flow rate controllers G 1/4 should be adapted

Weight: 200x200: 30 kg
200x250: 31,5 kg
200x300: 33 kg



B = Workpiece carrier length



Designation / Dimensions	Order unit	Reference
Positioning unit bridge 200	1 pce	120.71.000
Positioning unit bridge 200, spring	1 pce	120.71.000 R
Positioning unit bridge 200, damped, spring	1 pce	120.71.000 RA
Positioning unit bridge 200x250	1 pce	125.71.000
Positioning unit bridge 200x250, spring	1 pce	125.71.000 R
Positioning unit bridge 200x250, damped, spring	1 pce	125.71.000 RA
Positioning unit bridge 200x300	1 pce	123.71.000
Positioning unit bridge 200x300, spring	1 pce	123.71.000 R
Positioning unit bridge 200x300, damped, spring	1 pce	123.71.000 RA

Positioning units, press Widths 200 - 300 - 400

Technical data

Complete set including:

- ✘ Stopper
- ✘ Lifting cylinder
- ✘ 2 locking cylinders
- ✘ Fastening parts
- ✘ 2 brackets for shielded mounting sensor M12x100
- ✘ Detection range: 4 mm

The positioning unit, press, must be fixed on a frame capable of supporting the strain applied.

Maximum vertical strain

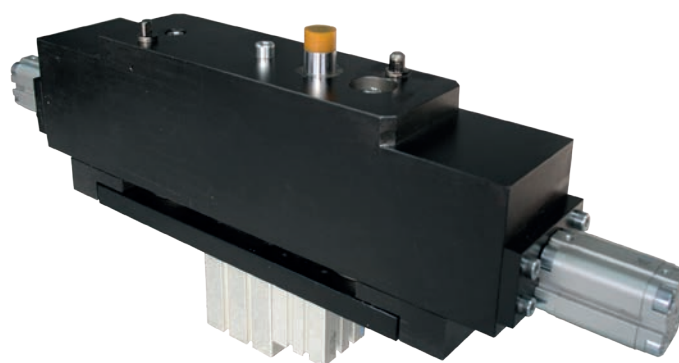
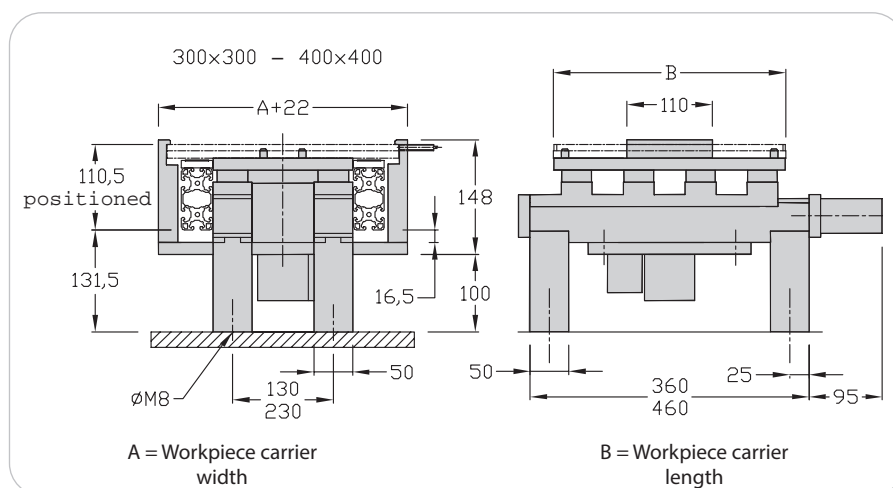
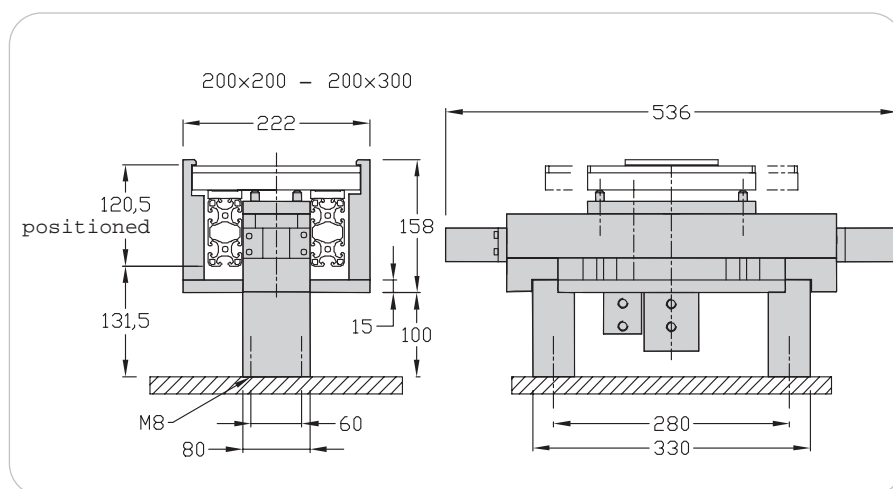
- 200x200: 3 000 daN
- 300x300: 5 000 daN
- 400x400: 5 000 daN

Repeatability: +/- 0,03 mm



Flow rate controllers G 1/8 should be adapted

- Weight: 200x200 : 25 kg
 300x300 : 35 kg
 300x400 : 42 kg
 400x400 : 48 kg



Designation / Dimensions	Order unit	Reference
Positioning unit press 200x200	1 pce	120.33.000
Positioning unit press 300x300	1 pce	130.33.000
Positioning unit press 300x400	1 pce	134.33.000
Positioning unit press 400x400	1 pce	140.33.000

Specify (R) for spring stopper eg: 120.33.000.R

Multi-positioning unit Width 200

Technical data

Complete set including:

- ✘ Stopper
- ✘ Positioning unit 200
- ✘ Slide PS 20
stroke: 50-100 or 200

The slide is fitted with shock absorbers and stop screws with integrated sensors.

Maximum vertical strain:
stroke 50 or 100: 40 daN
stroke 200: 20 daN

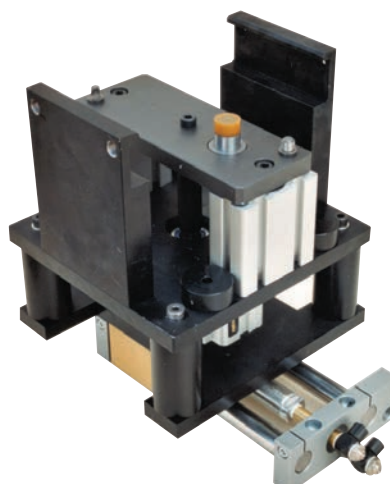
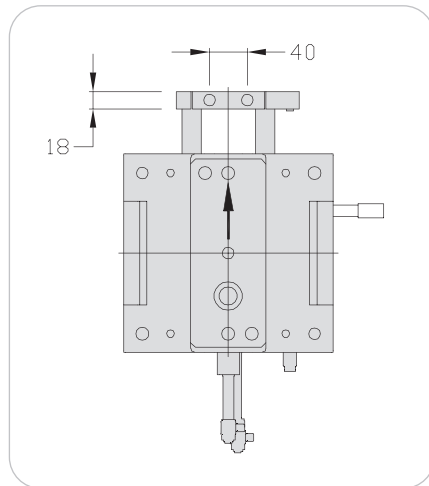
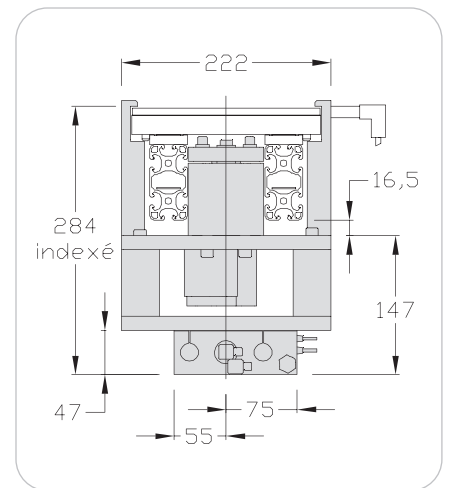
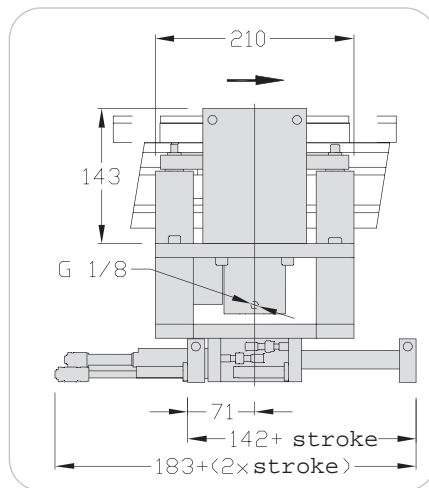
Repeatability: +/- 0,04 mm



A stopper located before the multi-positioning unit is generally necessary to avoid the arrival of another workpiece carrier during the slide moving.

Multi-positioning units can be made on request.

Weight: 14,5 kg



Designation / Dimensions	Order unit	Reference
Multi-positioning unit 200	1 pce	120.72.000.***

(*** = strokes 50 - 100 - 200 Ex.: stroke 50 120.72.000.050)

Reinforcement for positioning units Widths 300 - 400

Applications

On positioning units and positioning units for station 300, 300x400 and 400, reinforcement bars allow a better force distribution applied on the workpiece carrier and therefore on all the positioning unit surface.

Width 300

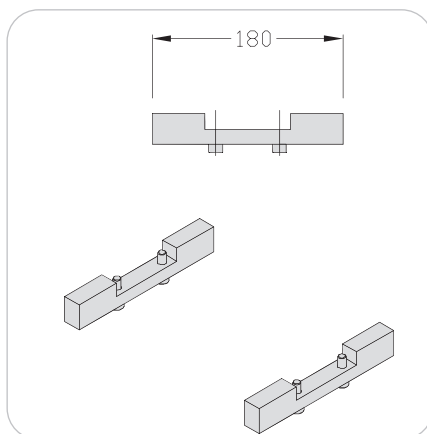
- ✗ 2 steel bars 180x19 thickness 29
- ✗ Fastening 2x2 Chc M8

Width 400

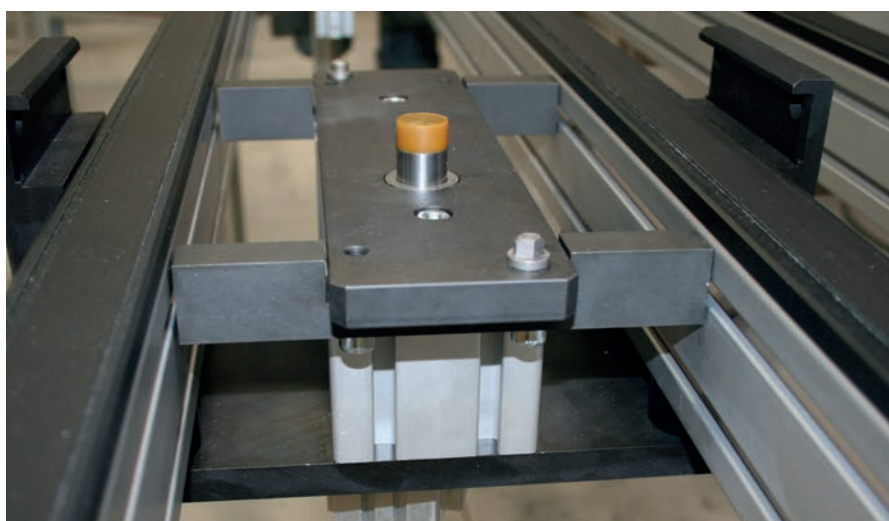
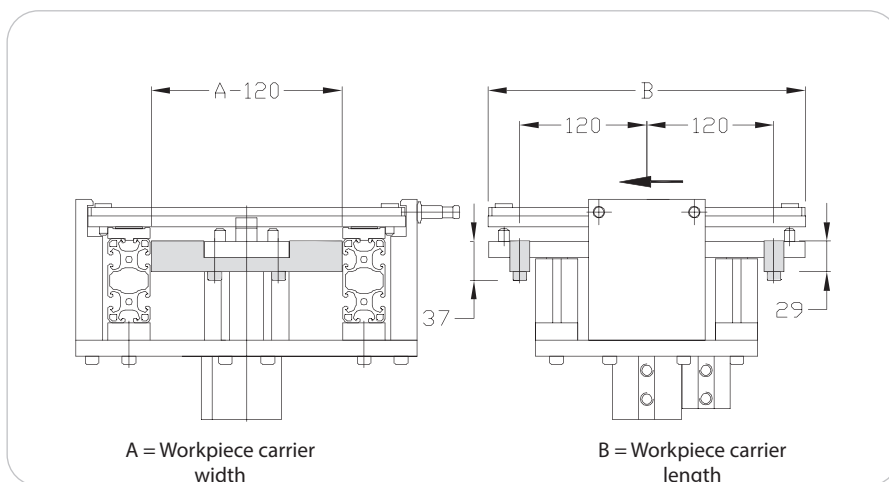
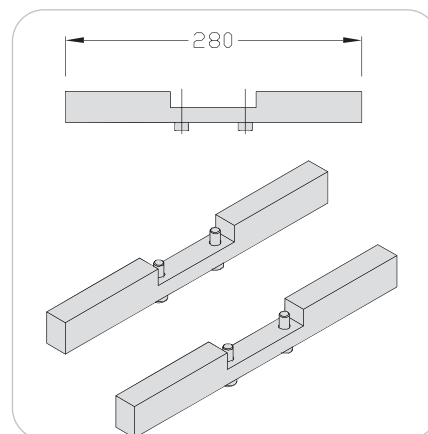
- ✗ 2 steel bars 280x20 thickness 29
- ✗ Fastening 2x2 Chc M8

Weight: 300: 1,25 kg
400: 2,20 kg

300



400



Designation / Dimensions	Order unit	Reference
Reinforcement for positioning unit 300	1 kit	130.64.100
Reinforcement for positioning unit 400	1 kit	140.64.100

Module TLM 2000 heavy load Width 200

Applications

Used with TLM 2000 flat belt range.
 The standard belt guide is replaced by preassembled absorbing load modules of length 80 mm, pressed into transfer profiles, thus multiplying the strain on a pallet by 2,5 compared to a standard unit. The pallet is driven by a belt sliding on ball bearings mounted on springs. The pallet move on ball bearings to reduce the friction coefficient between the pallet and the belt. Define in advance lengths of conveying units to avoid cutting of these modules.

Technical data

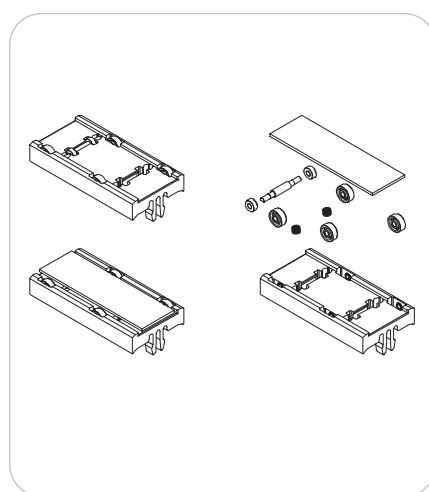
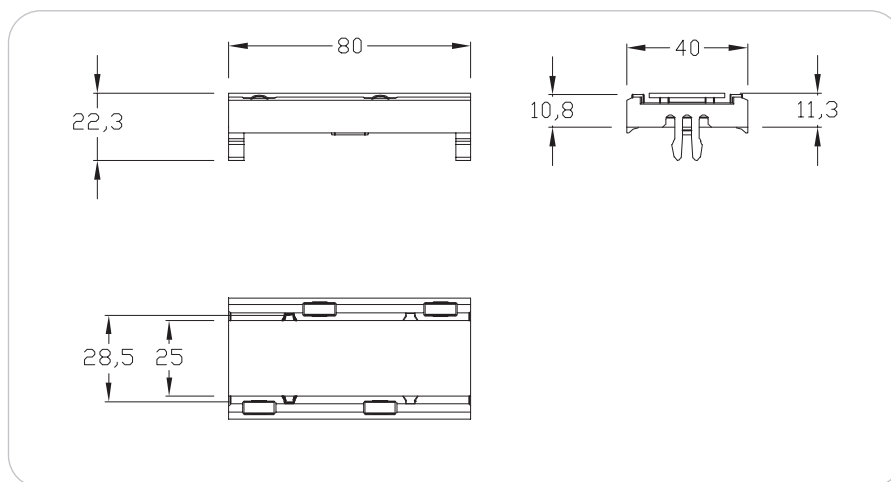
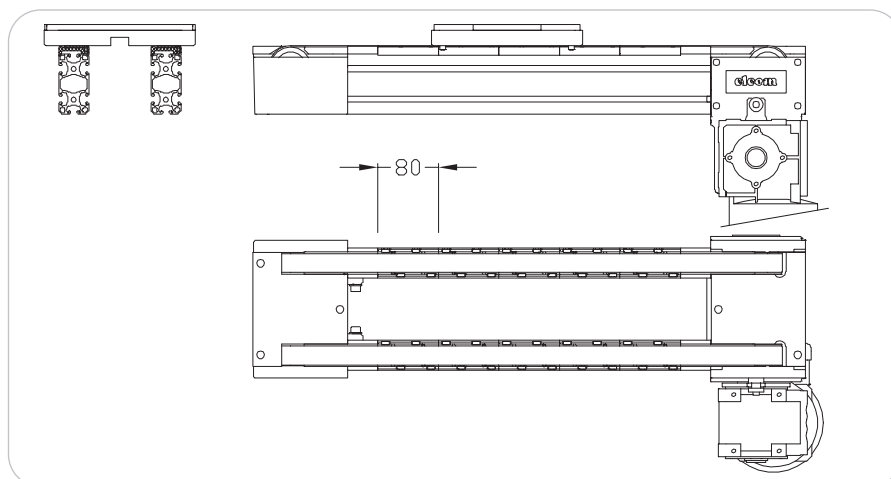
- ✗ Module length 80 mm
- ✗ Fastening with 2 clips
- ✗ External ball bearings pallet support Ø10, stainless steel
- ✗ Inside ball bearings belt support Ø7, stainless steel

Maximum load / 6 m:
 2.5 x standard load

Maximum standard load:
 2.5 x standard load

Possible combination of standard belt guide and absorbing load modules by following up application.

Weight: 0,035 kg / module



Designation / Dimensions	Order unit	Reference
Module TLM 2000, heavy load	1 pce	120.02.000L

Logic block

Applications

Allows simple identification of workpiece carriers and memorizing information at different stages of the line.

The coder consists in a plastic body in which steel ball can only have two stable positions. Coding is done by changing the position of the ball with a micro cylinder. Reading is done by magnetic detection. Resetting can be done simply by running the coder under a fixed cam.

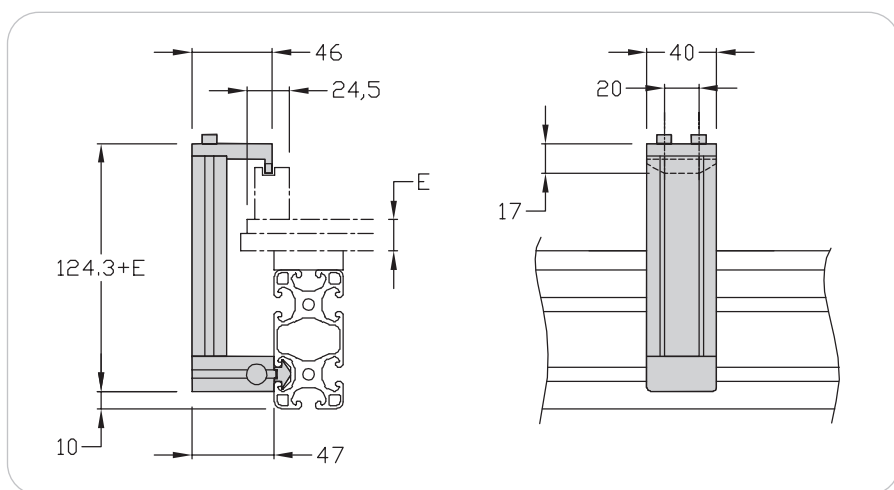
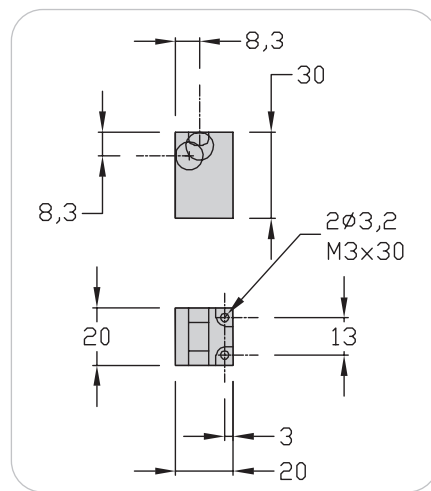
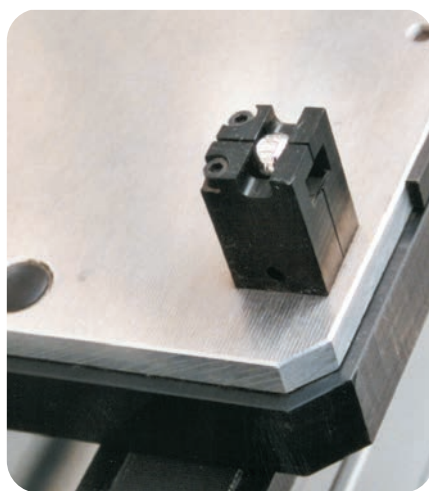
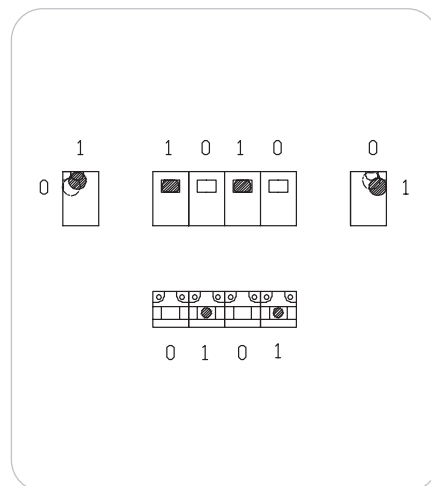
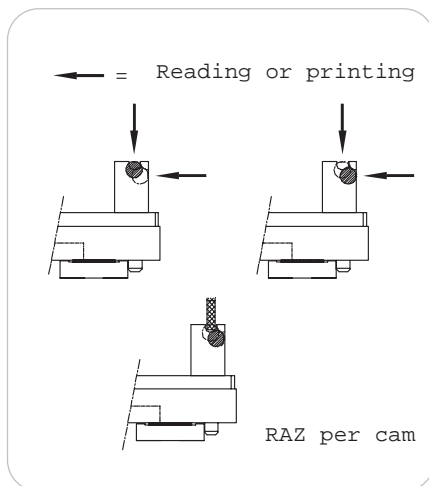
One coder is equivalent to 1 byte of memory. Several coders can be placed side by side on the same workpiece carrier.

Technical data

- ✗ Body, PA black
- ✗ Steel ball $\varnothing 10$

Weight:

Logic block : 0,018 kg
 RAZ : 0,19 kg



Designation / Dimensions	Order unit	Reference
Logic block	1 pce	100.00.000
RAZ codage 200	1 pce	100.01.000
RAZ codages 300 - 400	1 pce	100.02.000

Workpiece carrier sensor

Applications

Allows to detect the workpiece carrier's flow in a definite area of the transfer system and allows to know when the workpiece carrier leaves or enter into this area in order to manage accumulations.

Avoid the sensor change of state in this area.

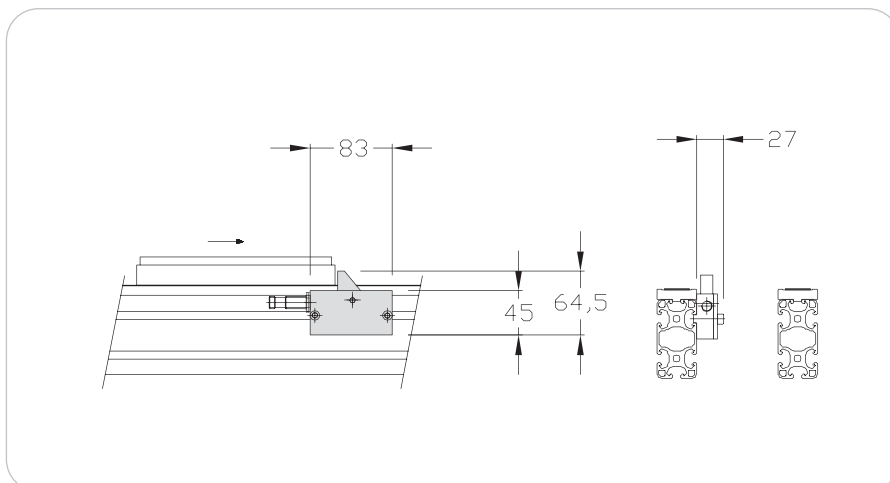
Technical data

- ✗ Plastic body
- ✗ Steel detection bar



Sensor M12x100, reach of 4 mm shielded sensor not supplied

Weight: 0,23 kg



Designation / Dimensions	Order unit	Reference
Workpiece carrier sensor	1 kit	200.20.000

Sensor brackets M12x100

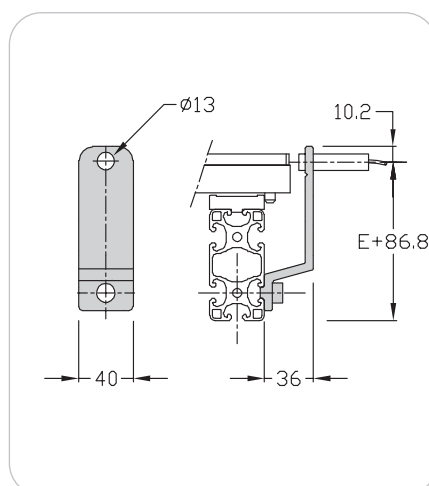
Applications

M12x100 sensor bracket for workpiece carrier.

Technical data

- ✘ Cast aluminium
- ✘ Nut 8 St M6 + screws
- ✘ Detection range: 4 mm

Weight: 200: 0,1 kg
 300: 0,1 kg
 400: 0,1 kg



Designation / Dimensions	Order unit	Reference
Sensor bracket 200	1 pce	120.10.000
Sensor bracket 300-400	1 pce	140.10.000

Positioning kit

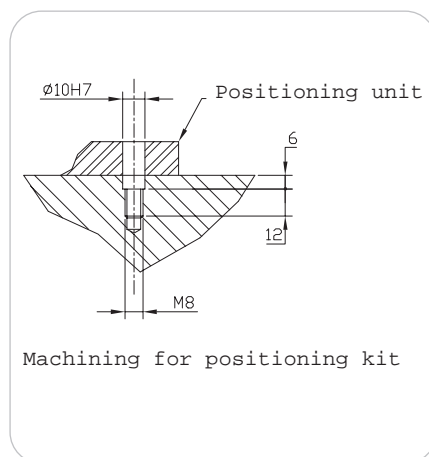
Applications

Allows accurate positioning unit on station.

Technical data

- ✘ 2 axis screws M8
- ✘ 2 hexagonal socket head cap screws M8

Weight: 0,08 kg



Designation / Dimensions	Order unit	Reference
Positioning kit	1 kit	120.62.000

Anti bouncing back

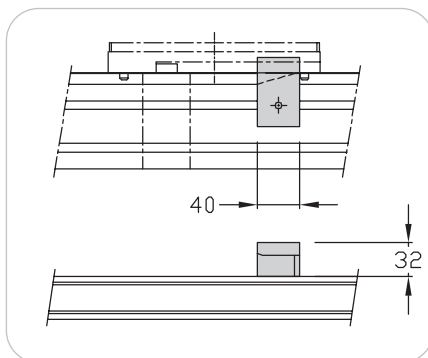
Applications

Avoids workpiece carrier bouncing back on stoppers or positioning units in case of high speed. Allows to reduce the changing time of workpiece carriers in the positioning units.

Technical data

- x Parts, PA black
- x Fastening parts

Weight: 0,1 kg



Designation / Dimensions	Order unit	Reference
Anti bouncing back 200	1 kit	120.30.000

Inductive sensor M12x100

Applications

Detection for the workpiece carrier.

Technical data

- x Shielded mounting sensor M12x100
- x LED control display
- x PNP-10-30 VDC
- x Screwed connection
- x Cable 5 m



Designation / Dimensions	Order unit	Reference
Inductive sensor M 12x 100	1 kit	200.10.200

Cylinder sensors

Applications

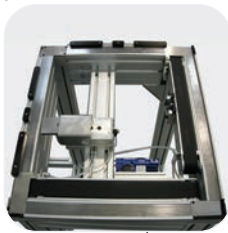
Detection the position of cylinders, stoppers or positioning units.

Technical data

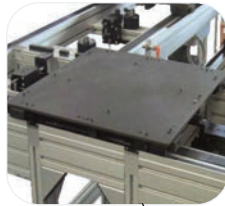
- x 12-27 V-LED control display

Designation / Dimensions	Order unit	Reference
Cylinder sensor, positioning unit	1 kit	200.10.201
Cylinder sensor, positioning unit lift	1 kit	200.10.202

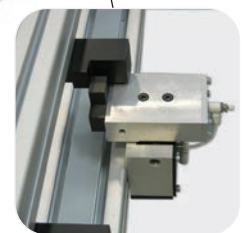
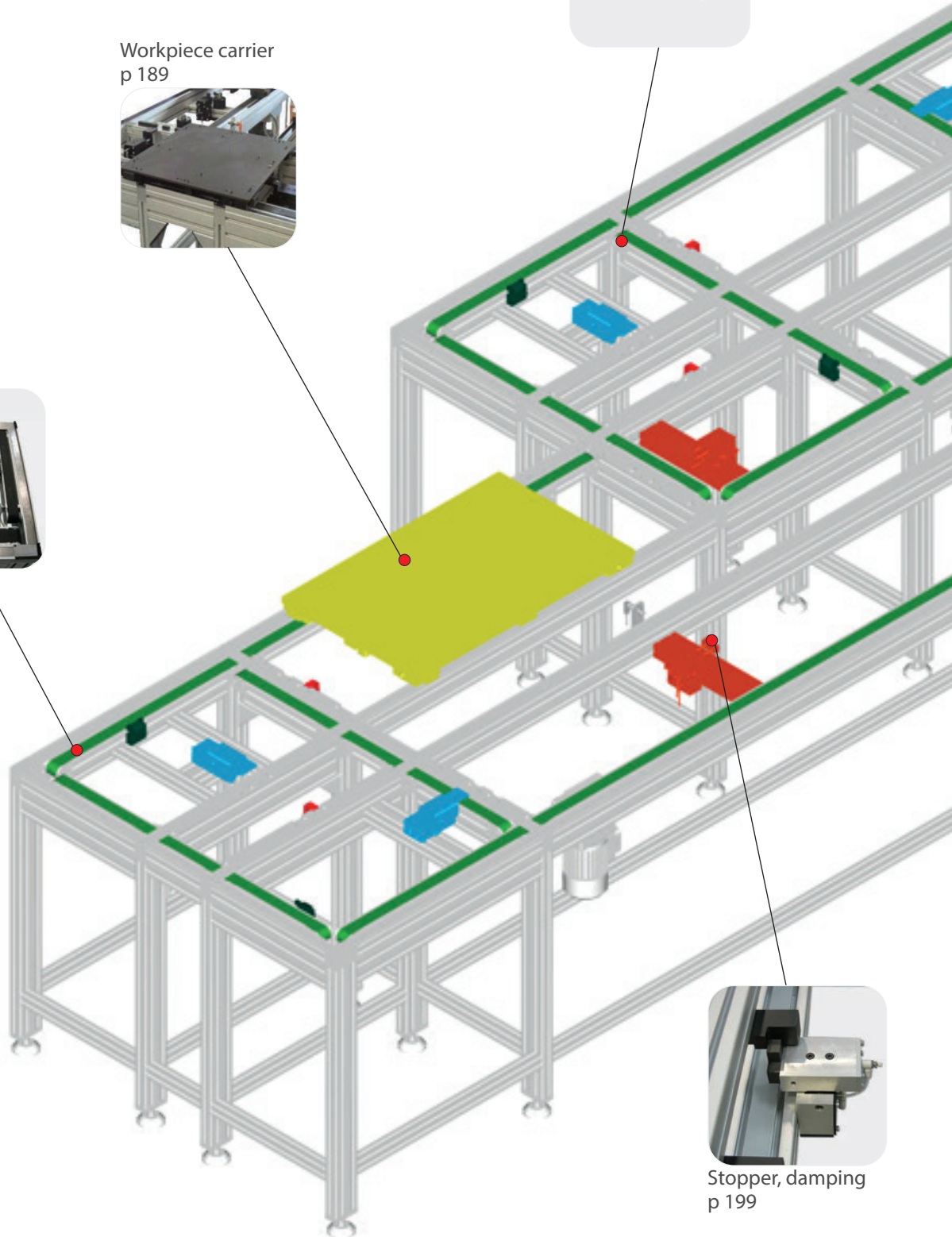
Angle
p 196



Workpiece carrier
p 189

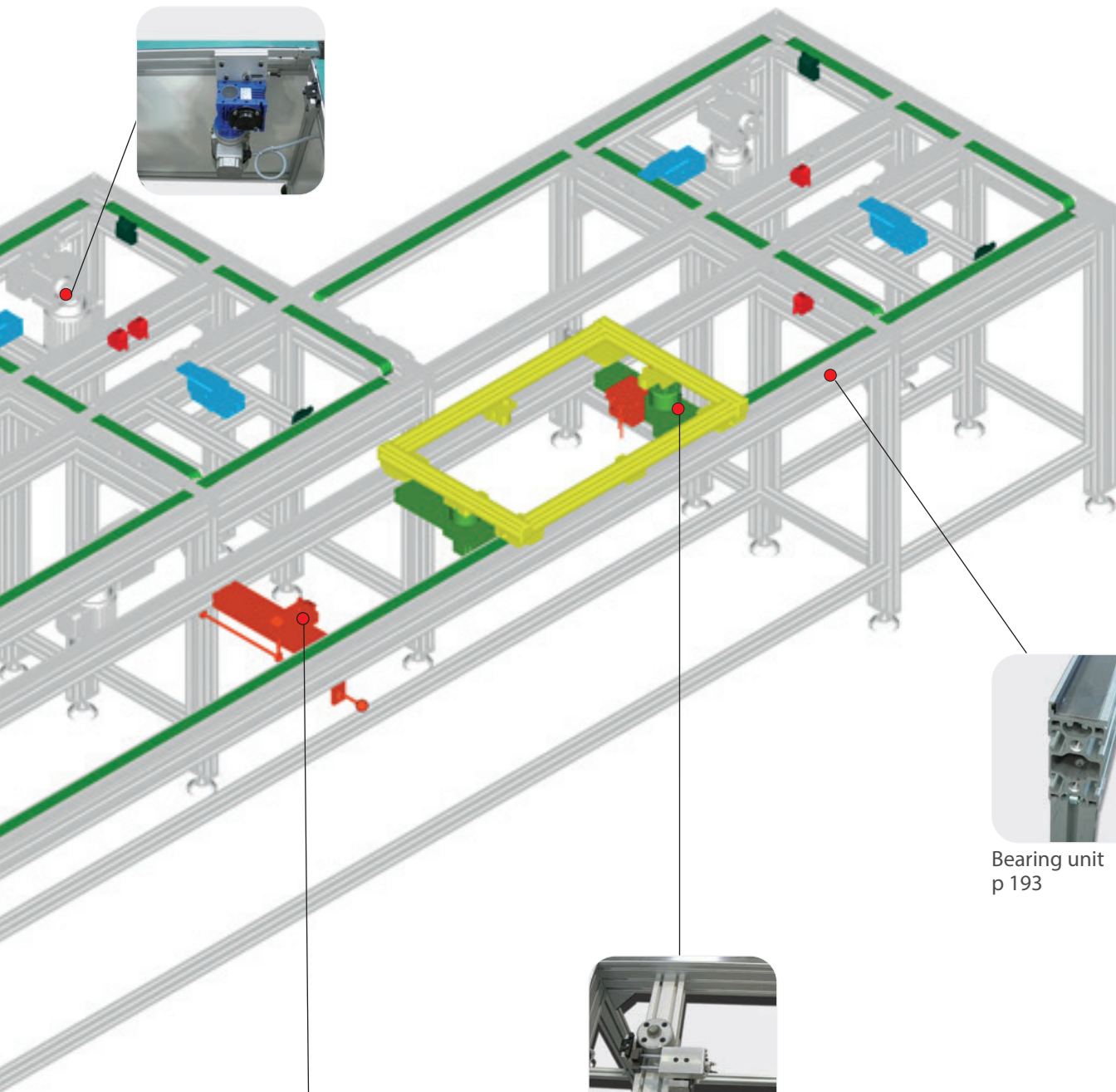
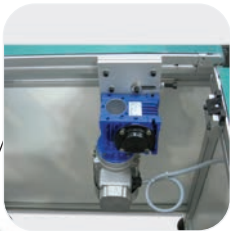


Derivation module
p 196

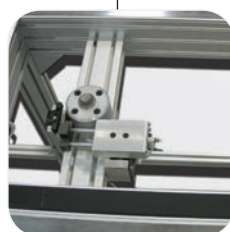


Stopper, damping
p 199

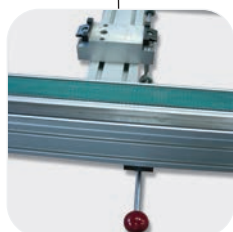
Conveying unit
p 192



Bearing unit
p 193



Positioning unit
p 200



Stopper, manuel
p 198

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Data

Workpiece carriers (mm) * Possibility => 1500	500 x 500 500 x 1000* 600 x 800 800 x 800	500 x 800 600 x 600 600 x 1000 1000 x 1000
Load/workpiece carrier (daN)	50	
Speed (m/min)	10 - 12	
Length of conveying unit Mini Maxi	500 6000	
Maximum accumulation load per motor (daN)	400 or 75 %	
Motor power (380 V three-phase)	0,25 KW - 0,83 A	

The maximum length of the conveying units is: 6 000 mm.

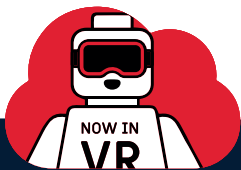
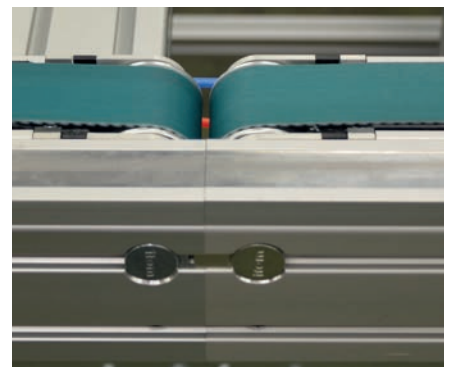
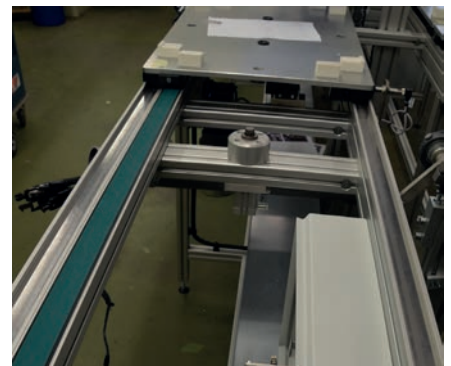
For long spans, several elements can be joined end to end.

For important accumulations, the length of the conveying units is adapted to the load.

It is recommended to place sensors in order to control accumulation of the load.

Pneumatic cylinders must be equipped with flow rate controllers.

It is possible for long spans to be cut in order to facilitate the dismantling of the machines.



Tip

Download all CAD 3D files on our website!

www.elcom-automation.com/transfers



General principle

Workpiece carriers are used to support and position the components during the process.

Flexible and economical industrial system adapted to convey large workpiece carriers 500x500 to 1000x1000.

Workpiece carriers (of various materials), fitted with multidirectional rollers, are conveyed on stainless steel treads, allowing high loads.

The conveying of workpiece carriers is carried out by belt driving units with controlled pneumatic pressure. For a manual moving of the workpiece carrier, some sections are available without driving.

A pneumatic management device put in each angle allows the damping and the automatic change of direction of the workpiece carrier (without PLC).

The modular design of TLM 5000 transfer system allows to optimize the dimensions of workpiece carriers to conveyed components.

Further extensions and modifications can be easily made.



Workpiece carriers

The modular conception of TLM 5000 allows large architectures of workpiece carriers.

Multidirectional rollers ensure the rolling of workpiece carriers. They are integrated in PA angles which are fixed under the 4 angles of the workpiece carrier.

PA blocks consist in:

- x 1 shock absorber to limit the shock between the workpiece carriers and to reduce the noise.
- x 1 multidirectional roller
- x 1 detection bar to ensure the control of workpiece carriers.

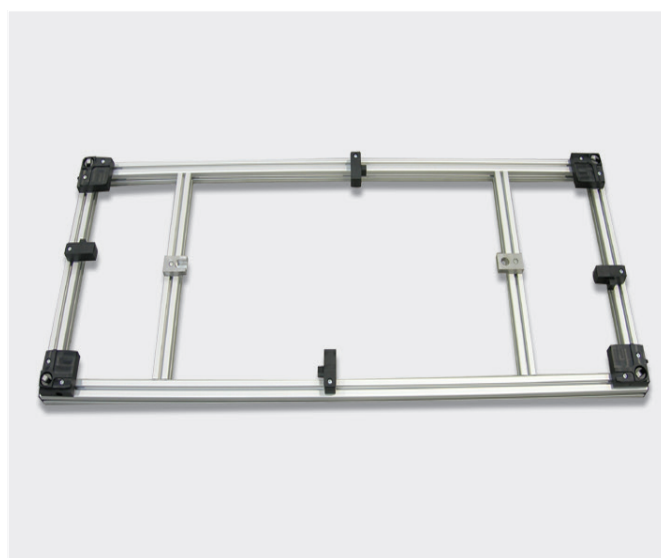
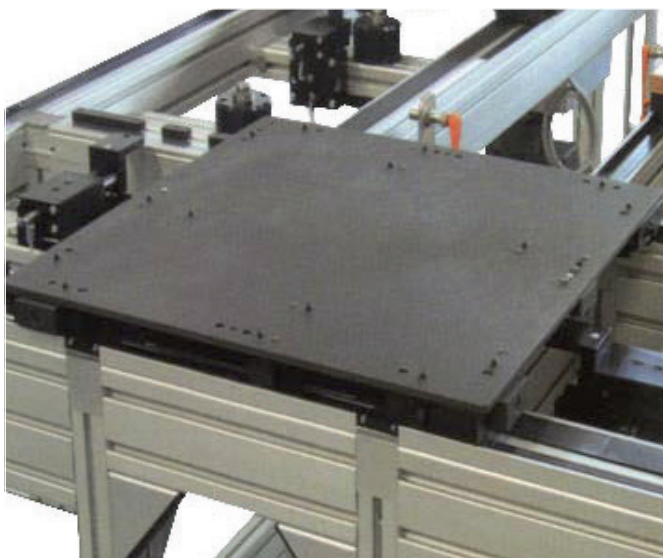
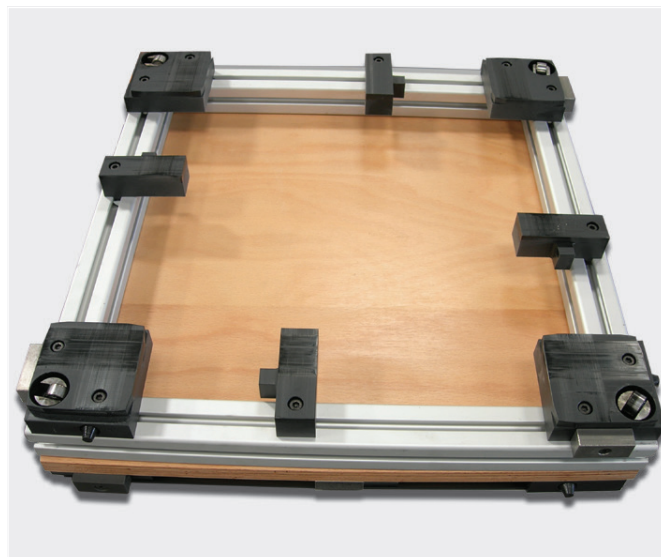
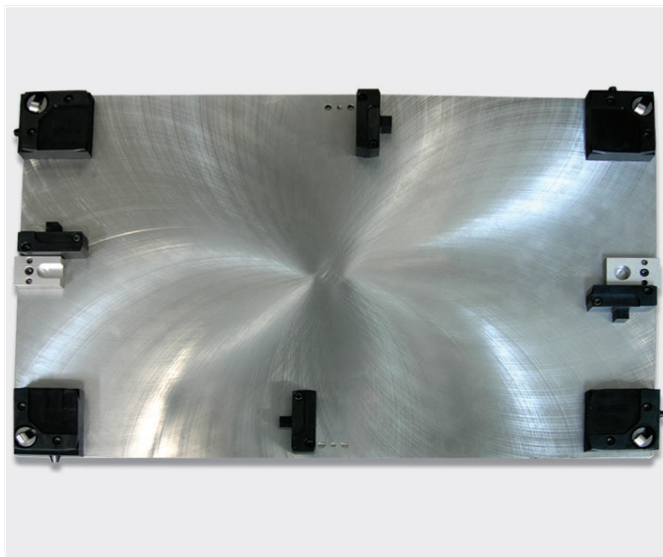
The drive is ensured by angle blocks and by the central base (one, two or three depending the dimension of workpiece carrier).

The central base allow a quick start of workpiece carriers in corners and the stop of workpiece carrier on stoppers.

Two centering bushes ensure the position on positioning units.

Various plates are usable according to the size and application:

- x Aluminium profile 40x40 or other
- x Aluminium plate, thickness: 8, 10, 12 or 16 mm
- x Steel plate
- x Beech multi-ply plate



Workpiece carrier, base

Technical data

Square workpiece carrier

- x** 4 angle blocks equipped with:
 - * multidirectional roller
 - * shock absorber
 - * detection bar
- x** 4 central base

Rectangular workpiece carrier

- x** 4 angle blocks equipped:
 - * multidirectional roller
 - * shock absorber
 - * detection bar
- x** 6 central base

Option: bush set

- x** 2 steel bushes

Option: bush set profile

- x** 2 steel bushes

Note: 2 bushes per workpiece carrier should be adapted in case of indexing in 2 directions

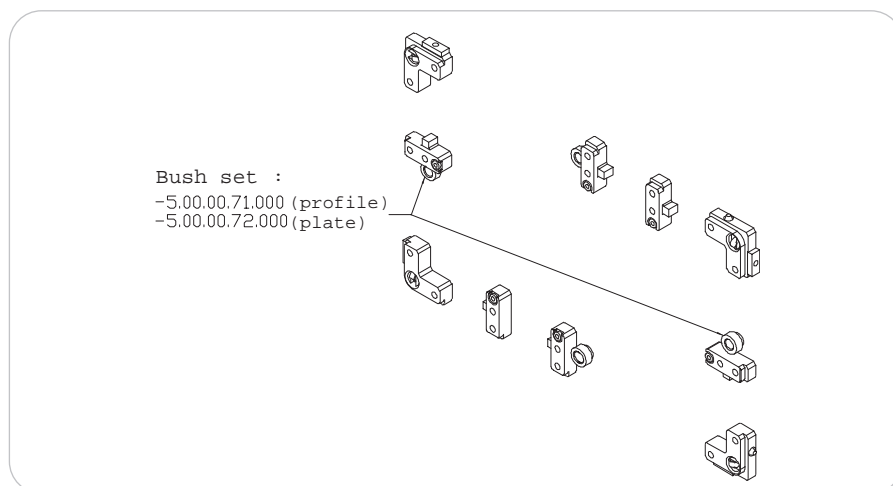
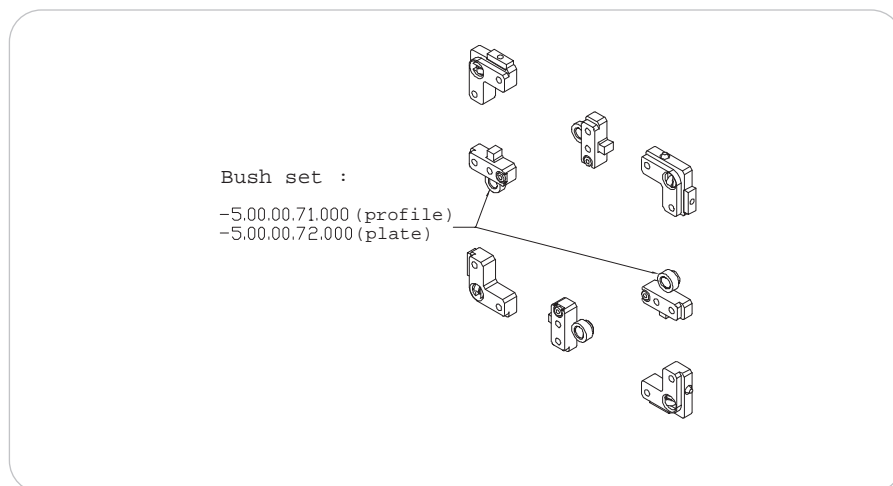
Weight:

Workpiece carrier, squared: 1,5 kg

Workpiece carrier, rectangular: 2 kg

Bush: 0,5 kg

Bush profile: 0,7 kg



Workpiece carriers, above Widths 500 - 600 - 800 - 1000

Technical data

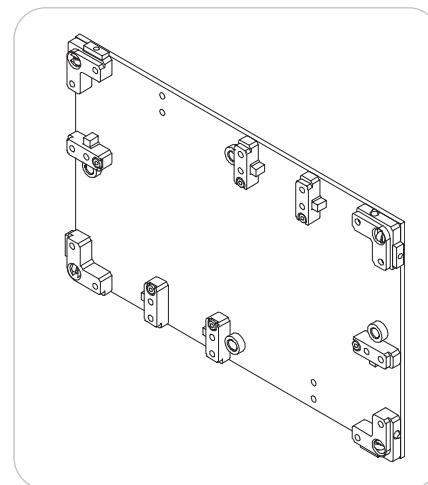
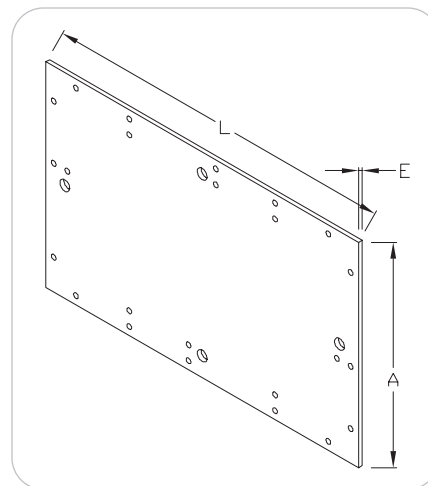
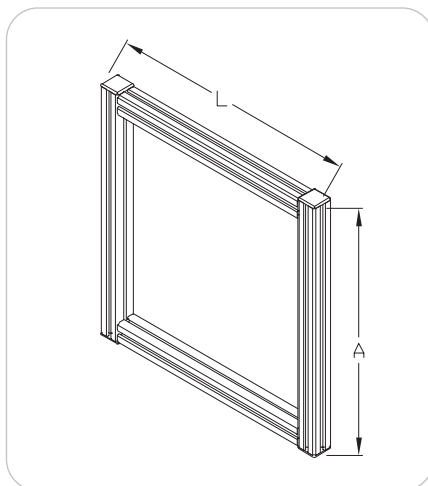
Profile workpiece carrier

- ✗ Frame in aluminium profile 40x40

Plate workpiece carrier

Option:

- ✗ Aluminium
- ✗ Thickness: 8, 10, 12 or 16 mm
- ✗ Steel
- ✗ Beech multi-ply
- ✗ Plastic



Drive units

Applications

Drive unit including:

x Bearing part

Maxi length: 6 m

The rollers, placed under the workpiece carrier, roll on a steel strip which enables a move without any effort and a durability.

The load is supported by a profile 80x40 which is surmounted by a support profile strip ensuring a great rigidity.

x Drive part

Maxi length: 6 m

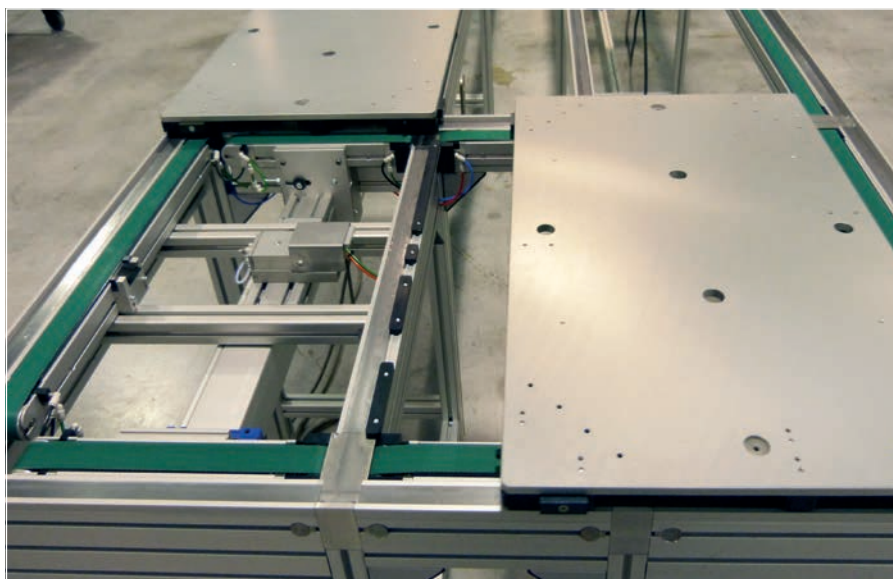
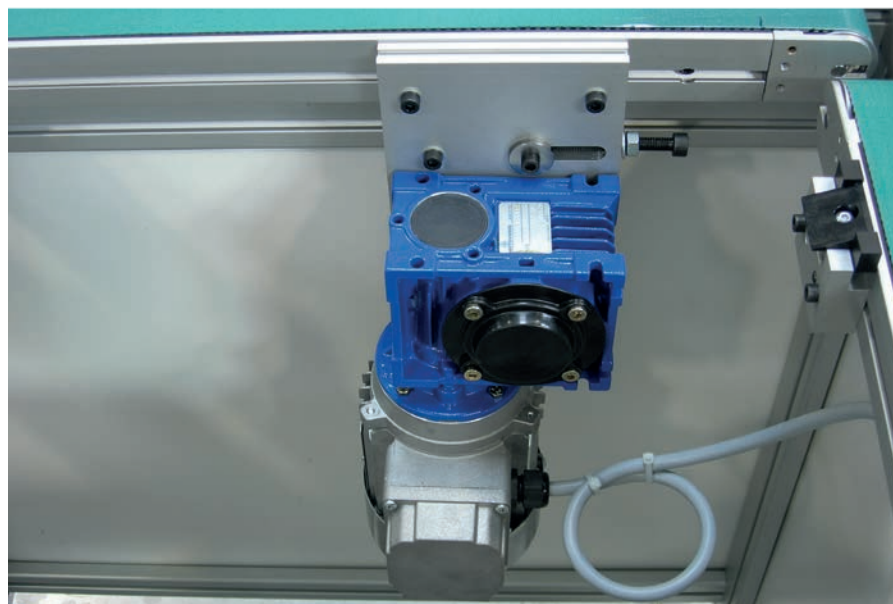
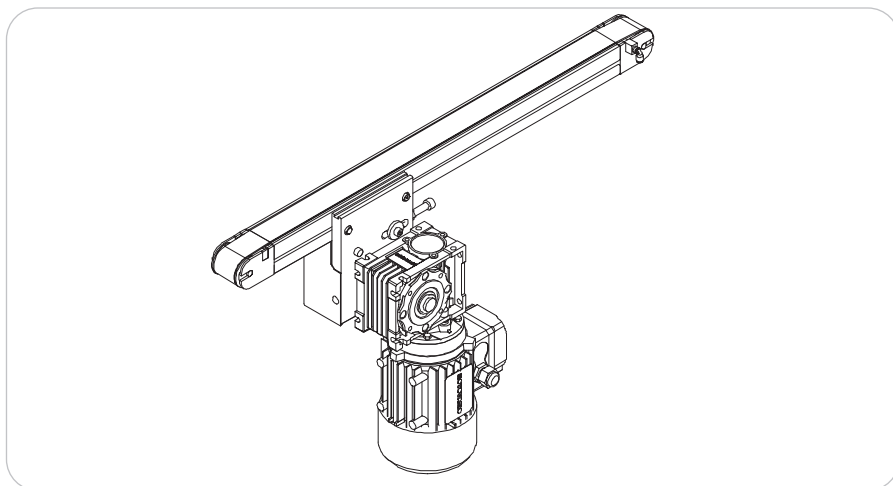
The inflatable unit ensures the move of the workpiece carrier.

A timing belt, (continuously running) is supported by a plastic slide strip in which a pneumatic membrane exerts a vertical force.

Adjustment of the air pressure in the membrane can vary the thrust force under the workpiece carrier.

To maximize the number of motors, it is recommended to use the same unit in angles.

In many lean applications, the bearing part is used alone and the workpiece carriers are manually conveyed from workstation to workstation.



Drive units Widths 500 - 600 - 800 - 1000

Technical data

Drive part:

✘ Maxi length: 6 m

✘ Maxi filling ratio: 75%

A = Workpiece carrier width



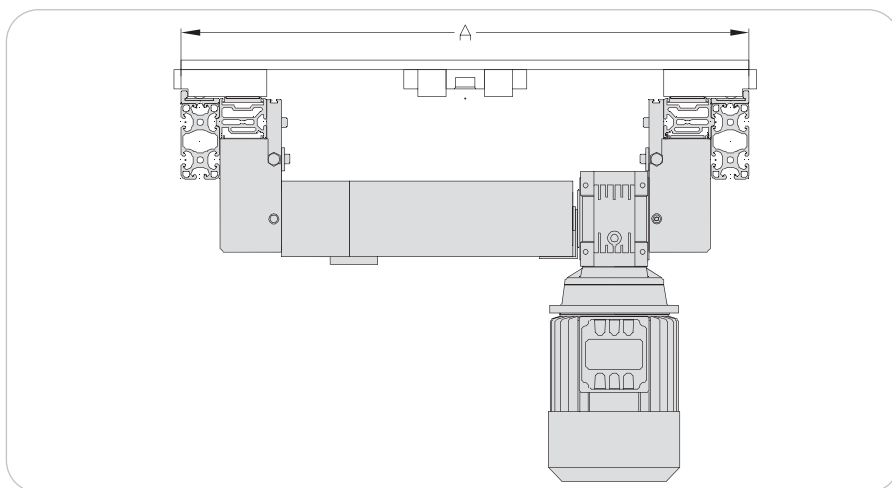
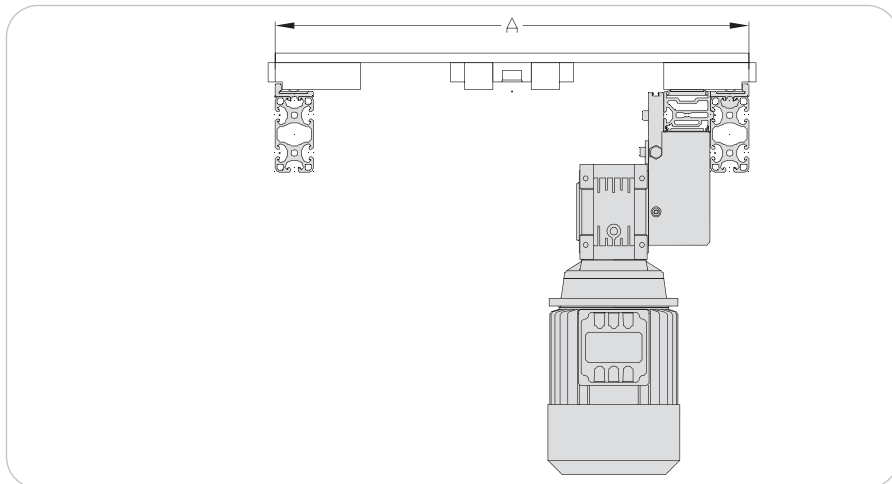
Maximum load on workpiece carrier: 400 daN

Weight:

Drive unit: 11 kg + 2 kg/m

Drive unit, double: 18 kg + 4 kg/m

Bearing unit: 7 kg/m



Stands, light and heavy

Technical data

Stand, light:

Used only as bracket, the longitudinal stress are stood by a station or a by a rigid frame (1 stand every 1,5 m).

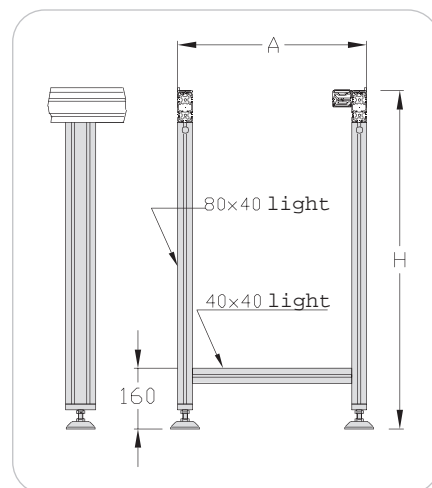
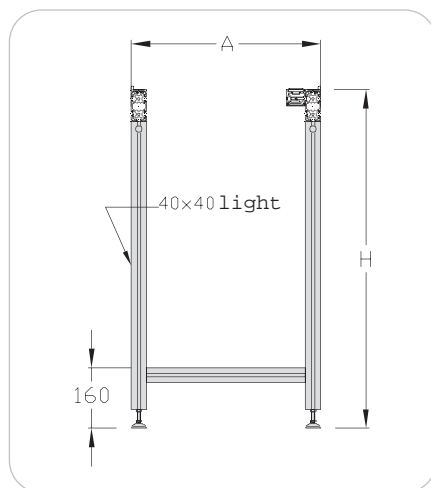
Stand, heavy:

Used when the transfer ensures rigidity. According to the loads, reinforcing pieces are necessary.

Weight:

Light: 3,5 kg

Heavy: 6 kg



Sensor bracket M12x100

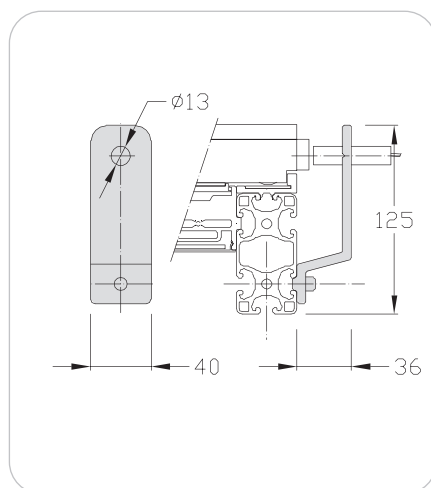
Applications

Bracket for workpiece carrier M12x100 sensor

Technical data

- ✗ Cast aluminium
- ✗ Nut 8 St M6 + screws
- ✗ Detection range: 4 mm

Weight: 0,1 kg



Cuts and straight joining

Applications

The cuts allow division of conveyor lengths to make the transport and installation of the line easier.

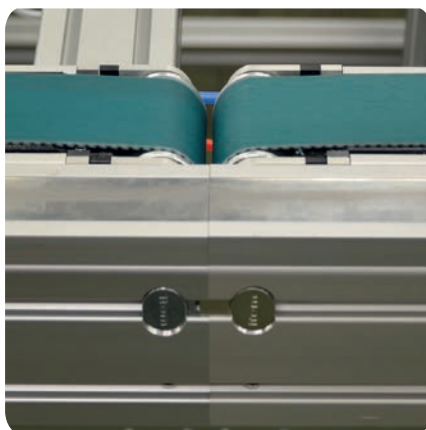
They also enable building significant lengths.



Inflatable units cannot be cut.

Technical data

x 6 double universal fastenings



Spacers Widths 500 - 600 - 800 - 1000

Applications



If the length of the conveying unit is >1,5 m, spacers have to be fitted between the profiles 8 80x40.

(1 spacer every 1,5 m).

Technical data

x Profile 8 40x40 light

x 2 universal fastenings

Weight: 500: 0,8 kg

600: 1 kg

800: 1,3 kg

1000: 1,6 kg



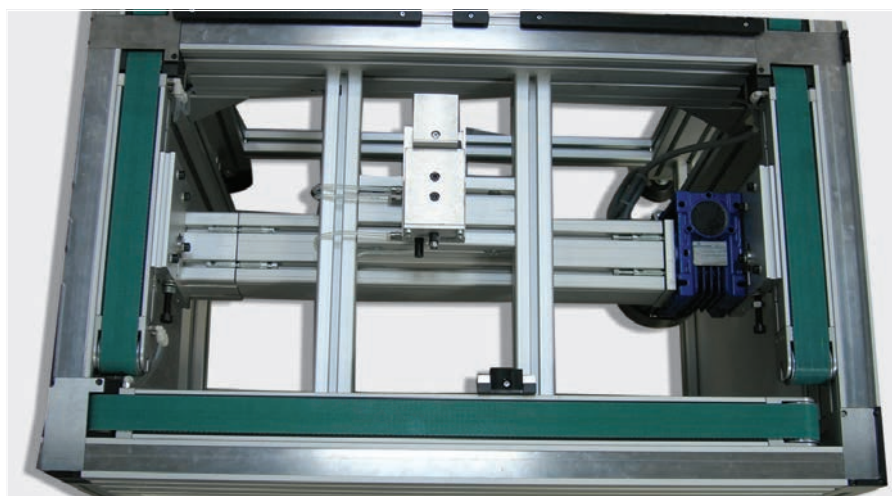
Angles

Angle modules ensure moving of workpiece carrier into angles without automatism.

The angle is self-supporting, it is supplied with 4 rigid feet, 2 inflatable units set in parallel and piloted by a pneumatic shock absorber. An output valve ensures the reset of the shock absorber.

Rectangular workpiece carriers have 2 units which are set in parallel on the same motorization.

With automatic control, it is not possible to perform an operation or an accumulation in the angle.

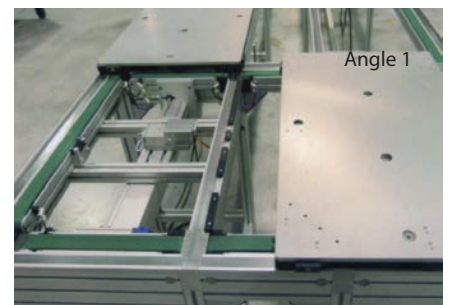
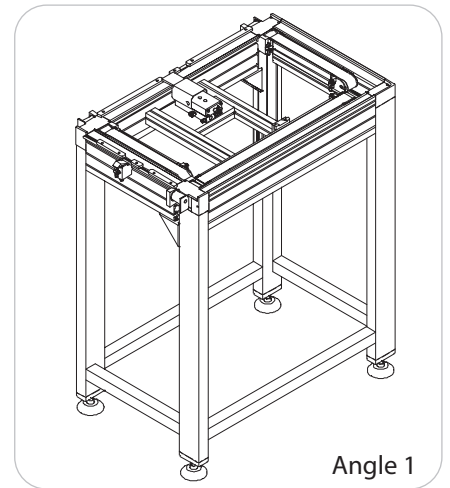
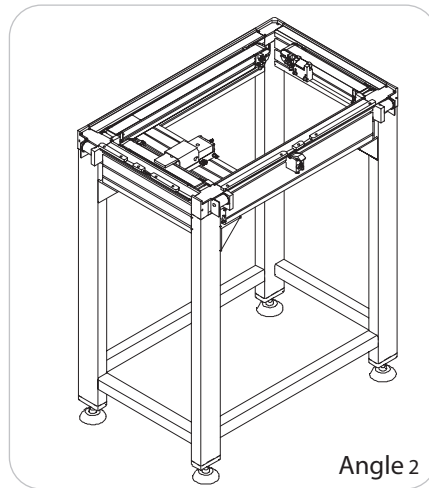
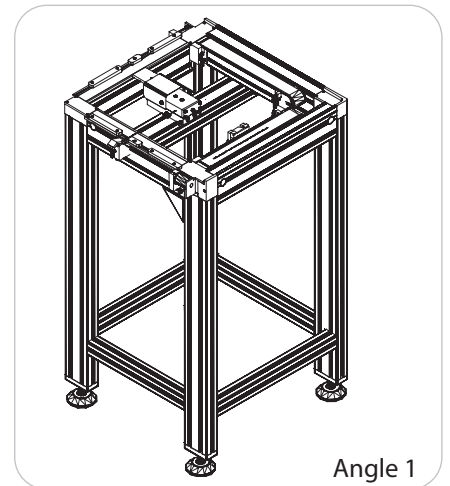
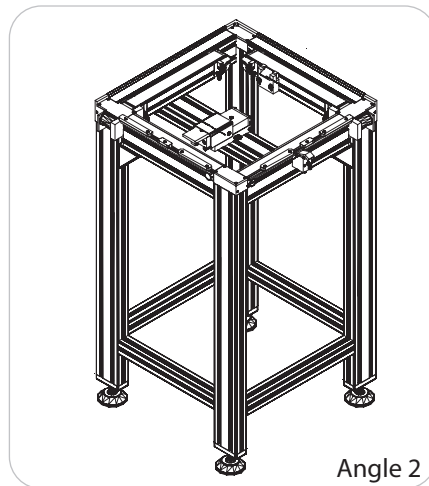


Angles

Technical data

- ✘ Structure with aluminium profile
- ✘ Adjustable shock absorber with piloting device
- ✘ 1 anti bouncing back device
- ✘ Reset valve
- ✘ Guides for workpiece carrier

Weight: 35 kg



Stoppers

Applications

Stopping workpiece carriers during processing requiring no accuracy.

Stopper, manual

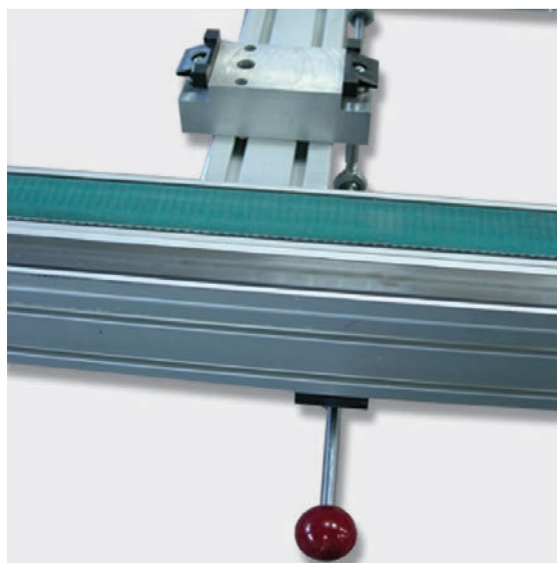
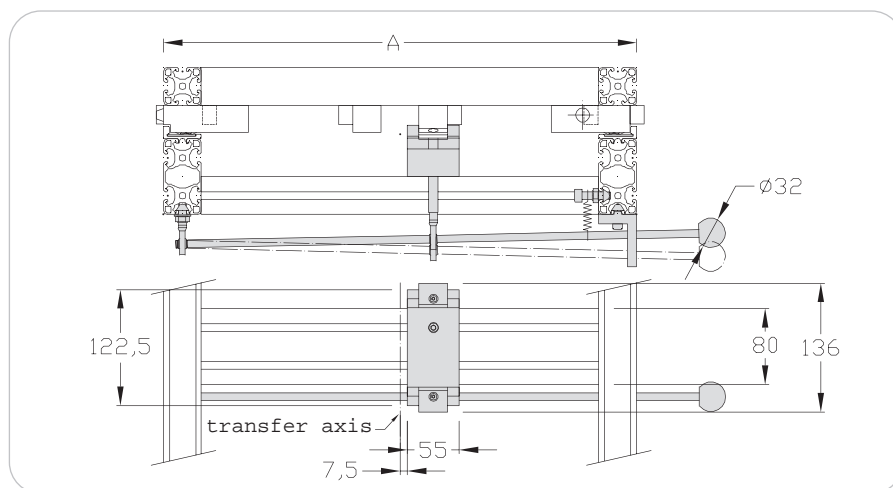
The manual stopper is used for lean applications, it doesn't require management. For workpiece carriers with less than 30 kg.

Stopper with anti bouncing back device.

Technical data

✘ The operator releases the workpiece carrier.

Weight: 1,7 kg



Stoppers, damped

Pneumatic stopper: used on manual workstation or to manage accumulations.

it allows the stop of workpiece carriers from the front or rear.

Stoppers are equipped with an adjustable pneumatic shock absorber to ensure a stop without shock of workpiece carrier. Reset is automatic.

The workpiece carrier can be stopped on the front or the rear. Depending on the direction of workpiece carrier arrival, there are left and right stoppers.

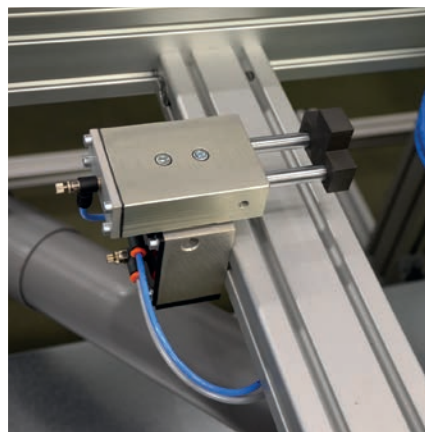
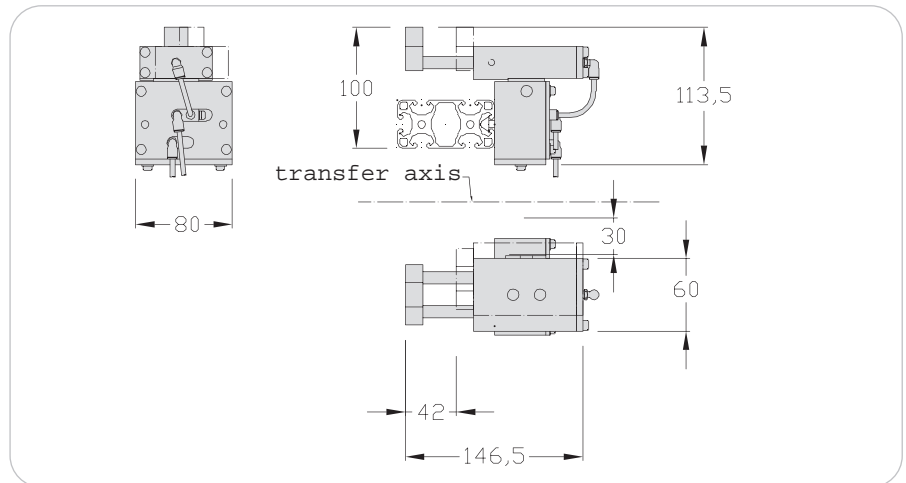
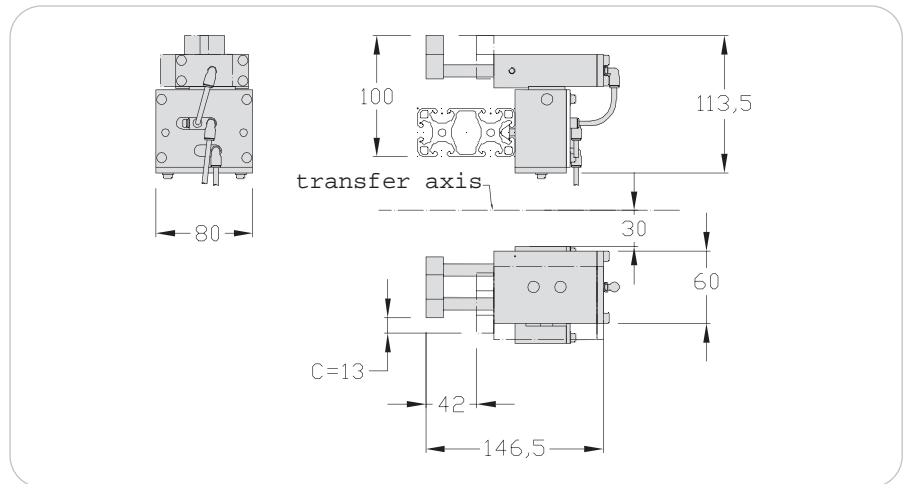
For lean applications, the control can be done by a button or a pneumatic pedal.

Anti bouncing back option:

Prevents bounces of workpiece carriers when stopping on the stoppers.

For lean applications, this option prevents the back up of workpiece carriers.

Weight: 1,3 kg



Positioning unit

Applications

Stopping and positioning workpiece carriers for operations requiring accuracy.

The workpiece carrier is stopped by a damping stopper, then positioned by a locating pin system.

No vertical movement of the workpiece carrier.

Positioning unit can be equipped with antibouncing back device.

Technical data

✘ 2 cylinders Ø 32

✘ 4 flow rate controllers 1/8 + bushes should be adapted

Supplied with 1 sensor bracket.

Forecast 1 sensor M12x100 detection range 4 mm has to be adapted.

Repeatability with:

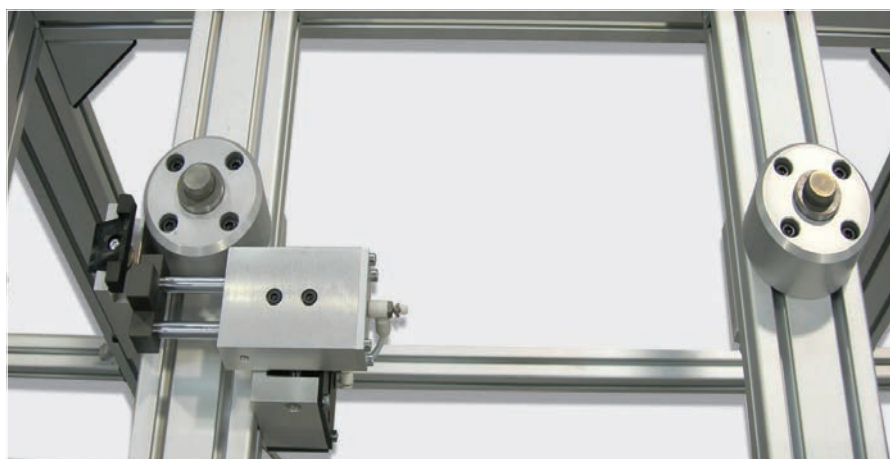
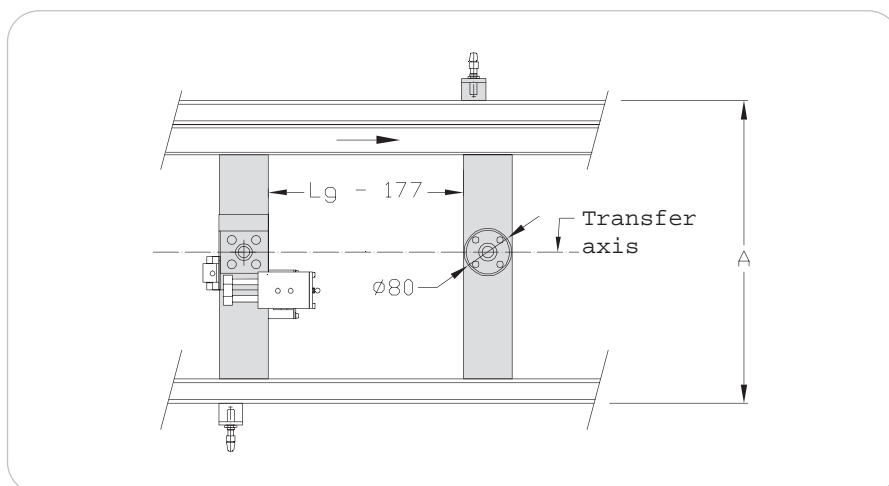
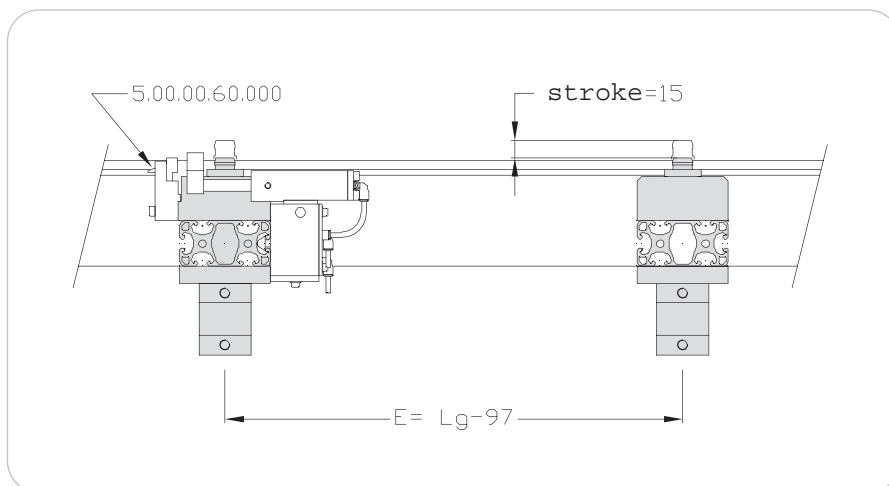
aluminium or steel plate: +/- 0.05

frame profile: +/- 0.2

Maximum load: 100 daN

Pay attention to the workpiece carrier bending.

Weight: 7 kg



Inductive sensor M12x100

Applications

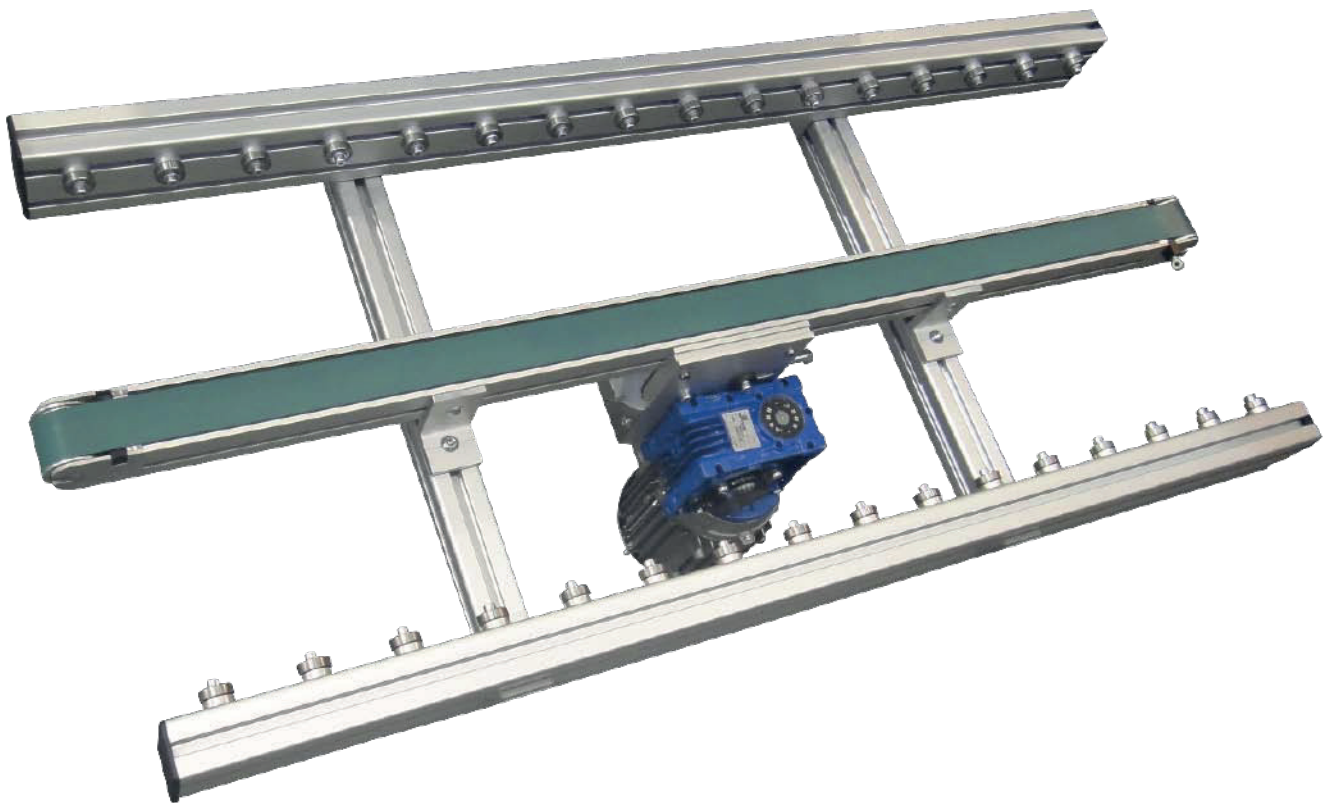
Detection for the workpiece carrier.

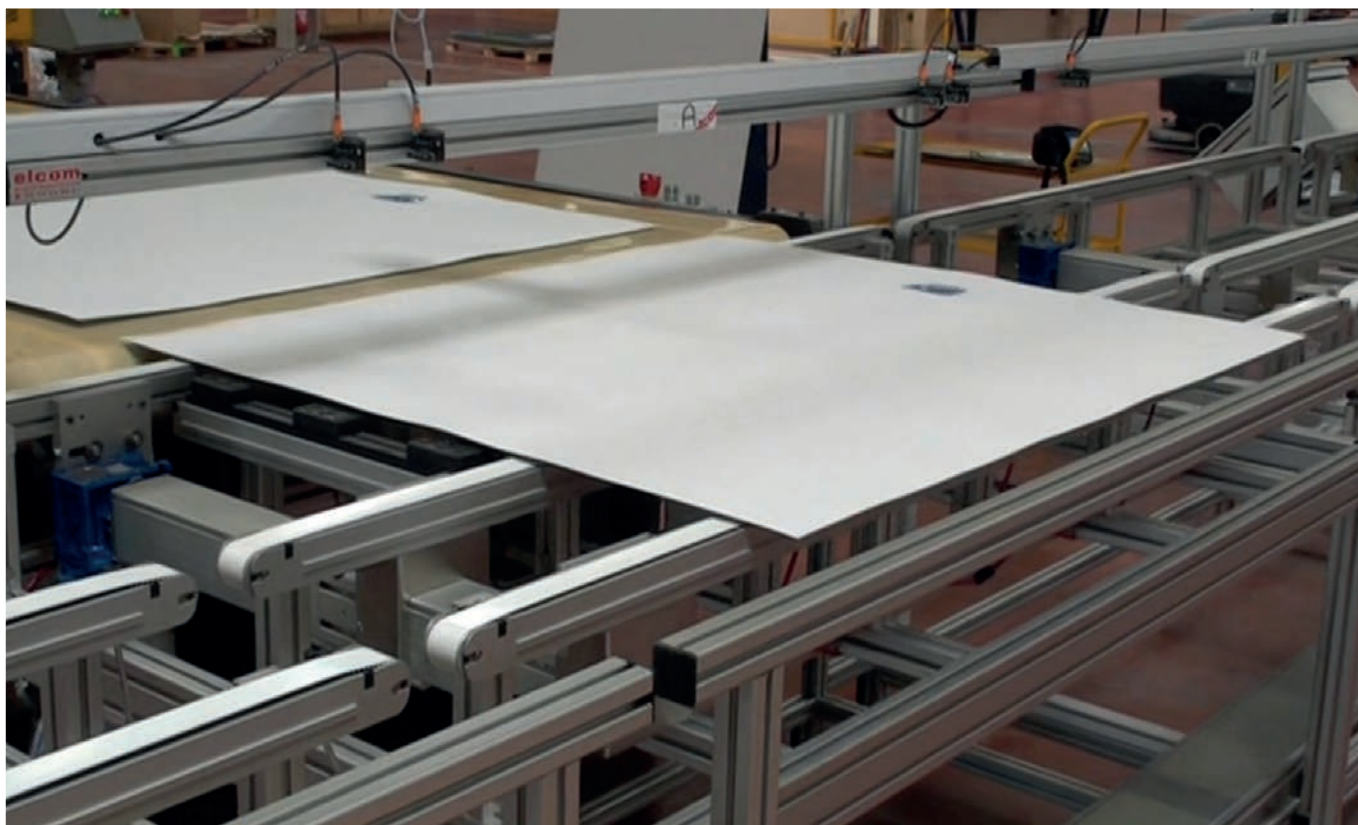
Technical data

- ✗ Shielded mounting sensor M12x100
- ✗ LED control display
- ✗ PNP-10-30 VDC
- ✗ Screwed connection
- ✗ Cable 5 m



Inflatable belt drive transfer





Inflatable belt drive transfer

Technical data

For workpiece carriers in accumulation

- ✗ Timing belt drive
- ✗ Pulley with ball bearings
- ✗ PA guiding belts
- ✗ The maximum load limit is supported by ball bearings on each side
- ✗ The use of compressed air lifts the belt and allows the workpiece carriers' conveying

Dimensions

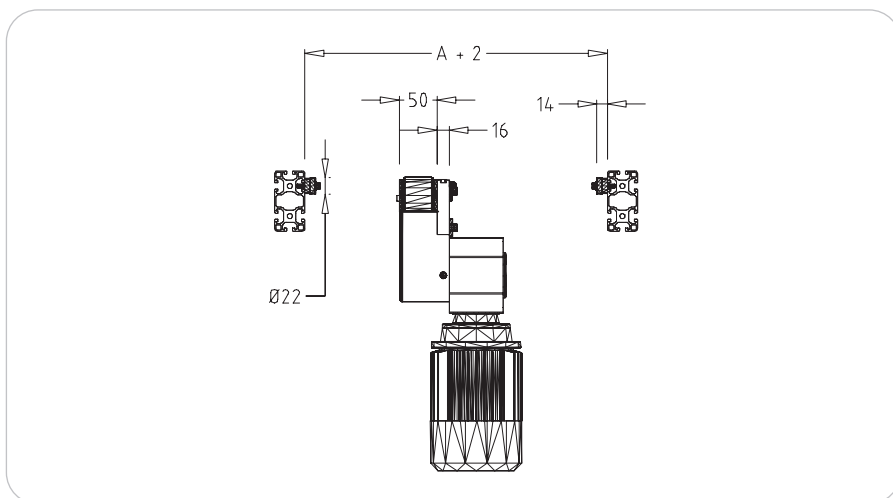
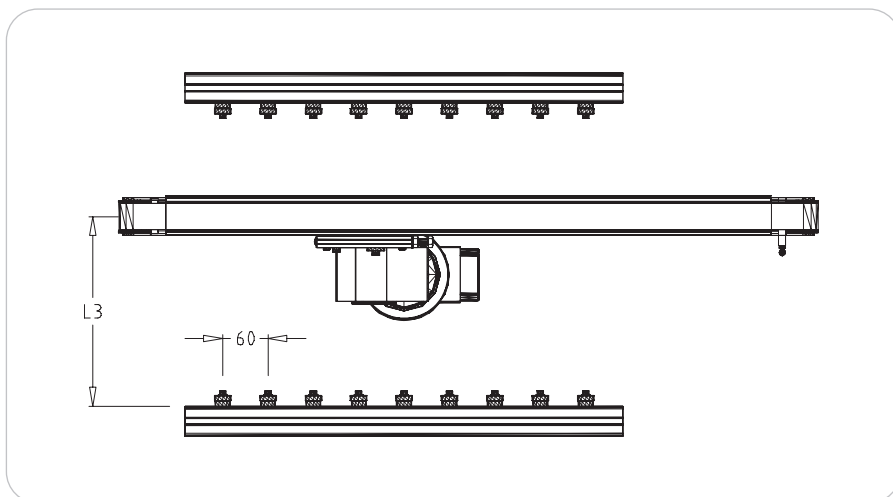
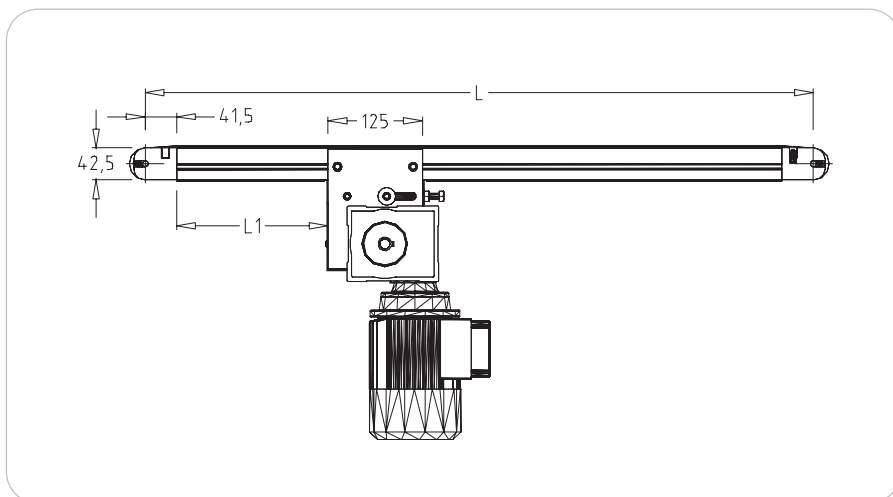
- ✗ Width A: 200 to 500 mm
- ✗ Length maxi.: 6000 mm

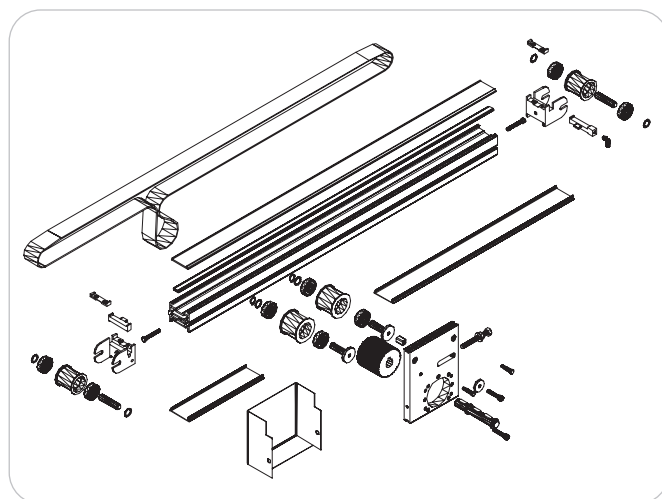
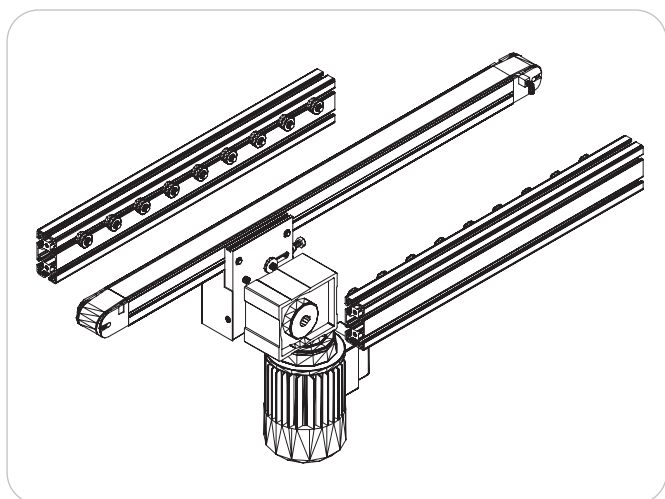
Motorisations

- ✗ 230/400 V Three-Phase 50 Hz
- Speed in m/min (+/- 10 %):
5-10-12-16-18

Maximum pressure: 0.8 bar

The pressure regulator is not supplied in the delivery.





Inflatable belt conveyor holder

Technical data

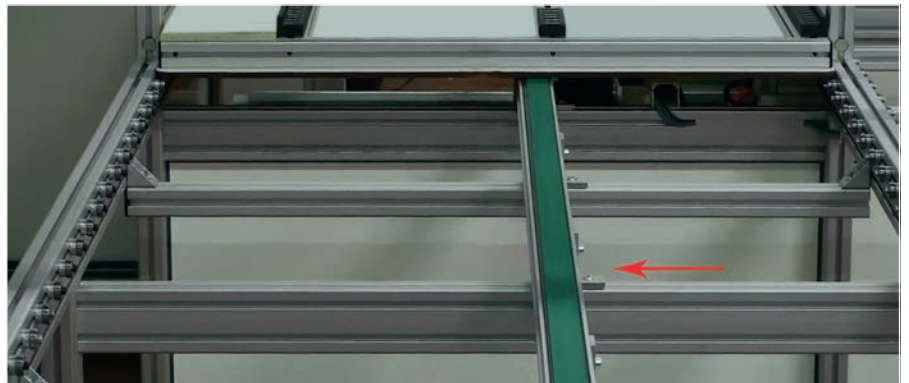
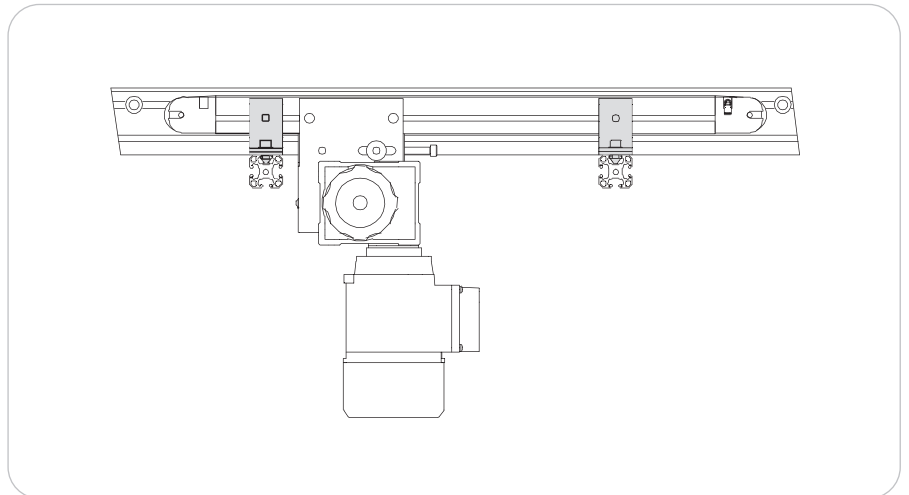
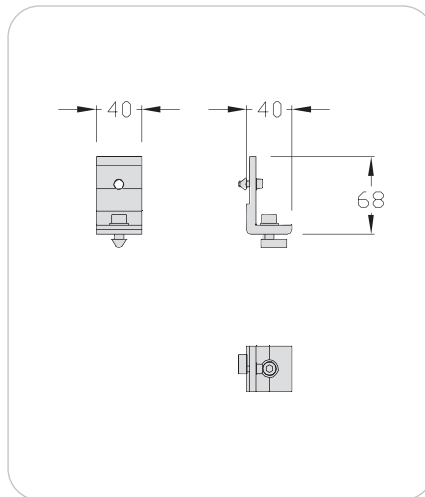
Allow to easily fasten a drive unit with an inflatable belt on a frame.

Caractéristiques techniques

- ✗ Aluminium holder
- ✗ Conveyor fastening set:
Chc 8x20
Nut 6 St M5
- ✗ Frame fastening set:
Chc 8x20
Nut 8 St M8

Maximum distance between axes:
1 000 mm

Weight: 0,11 kg

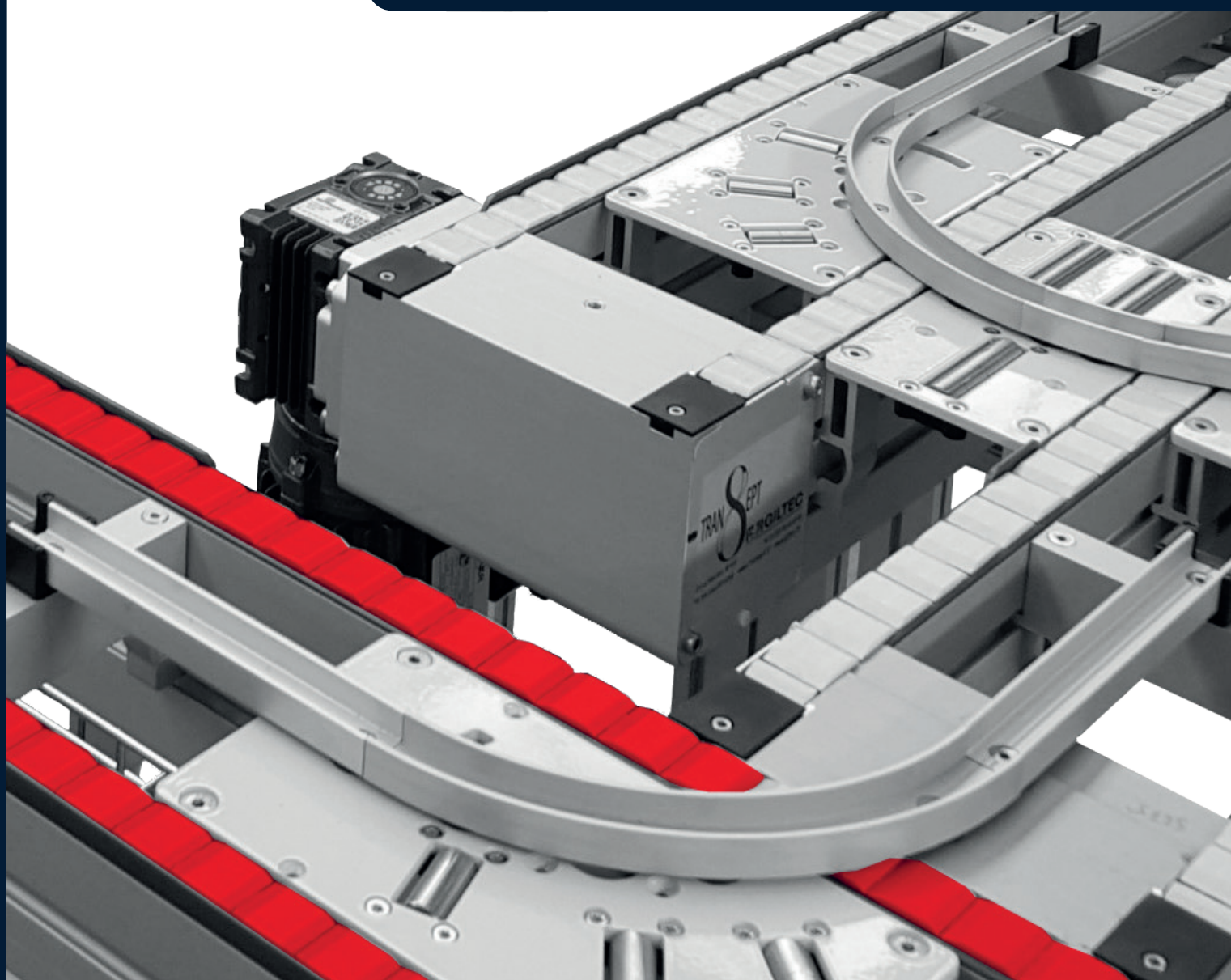




/ TR TRANSFER SYSTEM

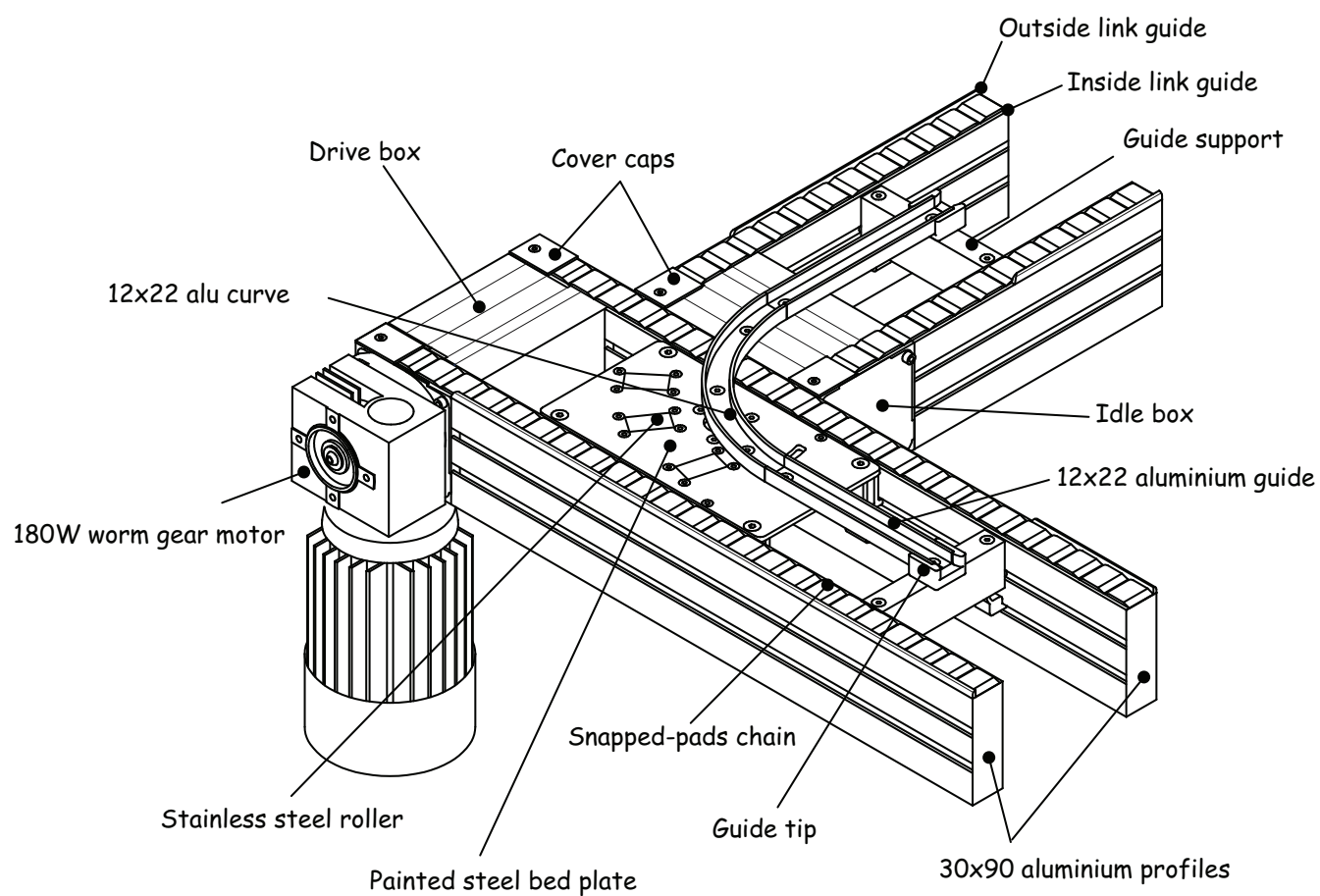
| Transfer TR

Configurable and modular. Quick and easy to assemble.

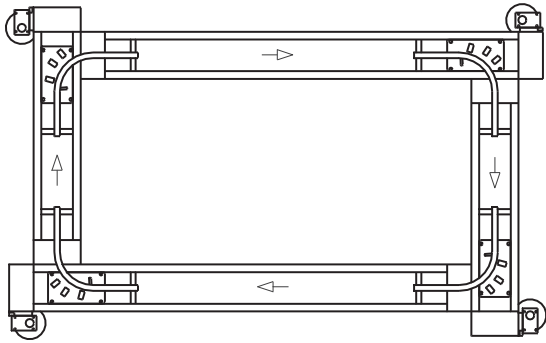


The chain and runner solution!

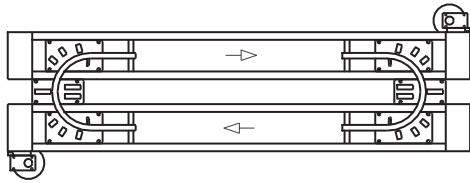
- > Simple and robust construction
- > Tray loads up to 10 kg
- > Track widths 100, 175, 250, 325, 400
- > Non-standard width possible, without curve functions



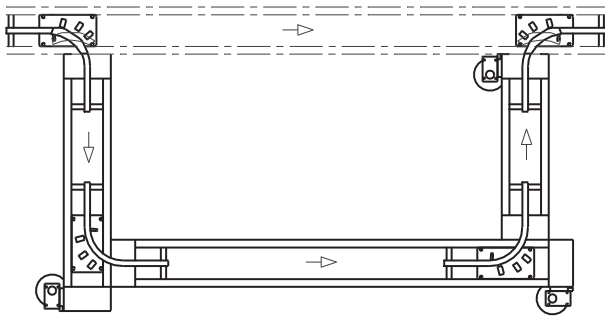
Description (modules)



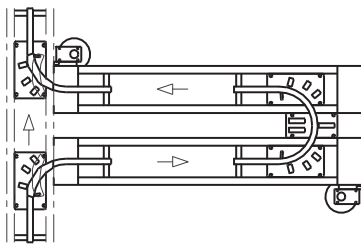
Rectangular basis



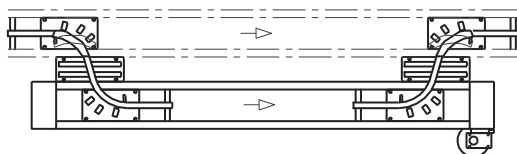
Hippodrome basis



Shunt

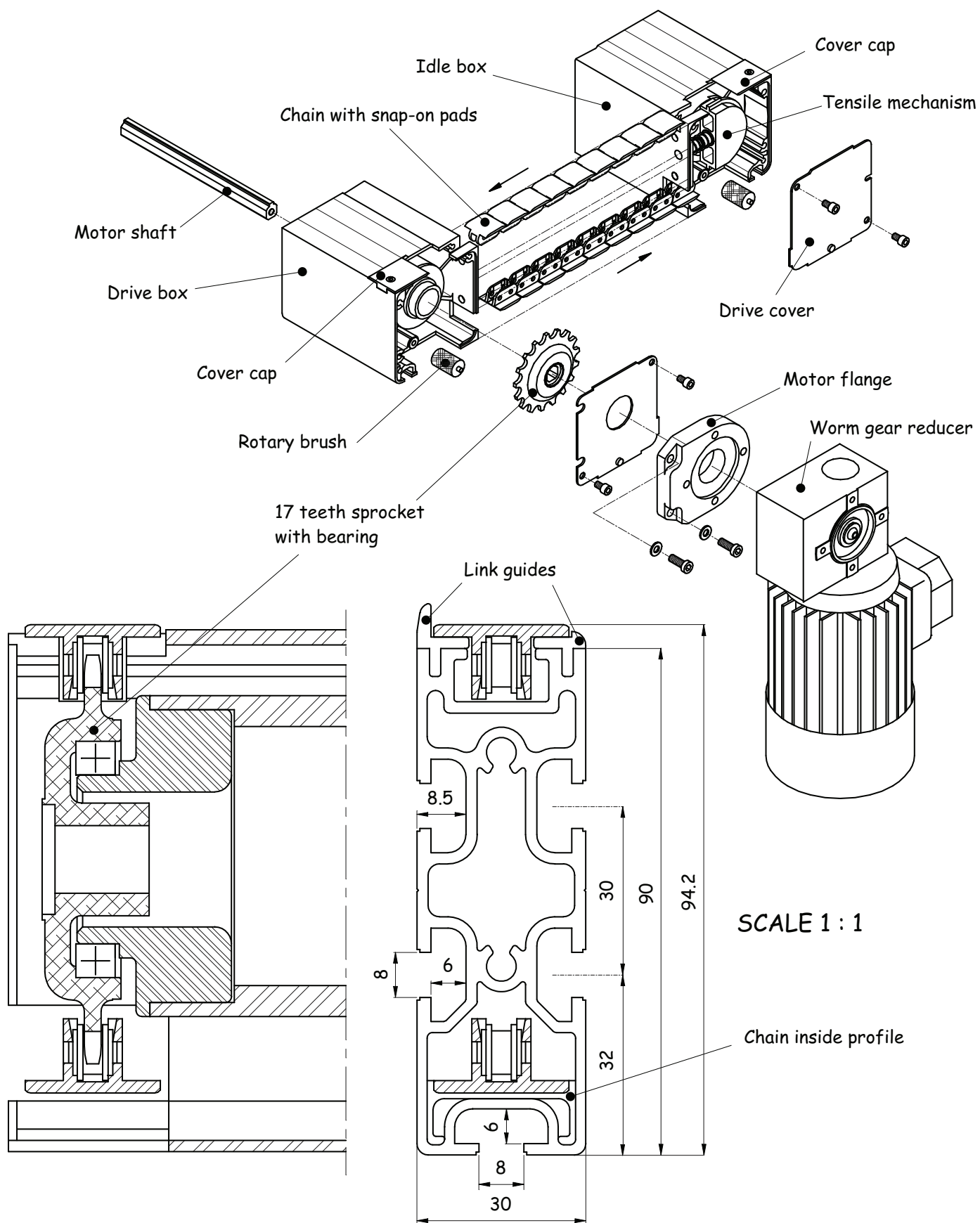


Spur track



Diversion

Description (drive)



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Straight section

Technical data

Each straight section incorporates two 30 mm x 90 mm aluminium profiles sections equipped with lateral guides (fuchsia coloured guides) for the guidance of the workpiece carriers.

The maximum loading for each straight section used in **accumulation** of workpiece carriers is up to: **75 kg** (however, should the transfer speed exceed 15m/min, this value should be decreased to 50 kg).

Worm gear motor reducer, size 30 mm.

Three-phase motor 180W 63 B14:

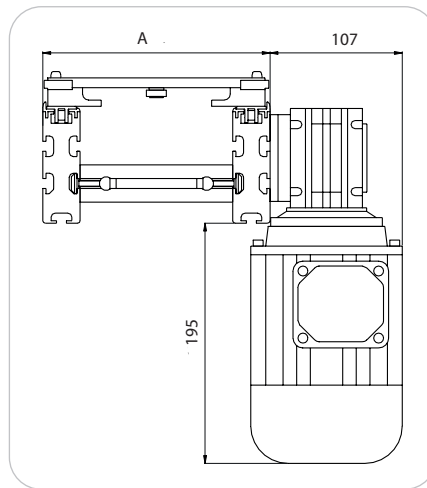
- 50Hz 230/400V
- 60Hz 230/460V

Standard speed (input 50Hz) :

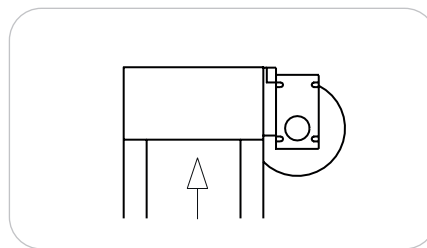
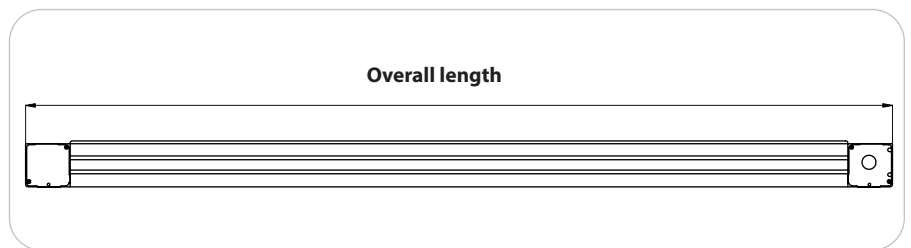
14,6 m/min.

Other speeds:

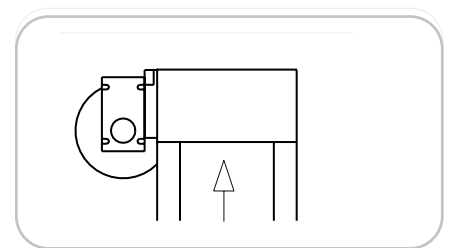
- use frequency inverter (from 30Hz to 70Hz)
- and/or other worm gear ratio (ref. 7161)



Line	A (mm)
100	112
175	183
250	258
325	333
400	408



Right side motor mount



Left side motor mount

Designation / Dimensions	Order unit	Reference
Straight section right side motor mount line 100	1 kit	4140
Straight section right side motor mount line 175	1 kit	6141
Straight section right side motor mount line 250	1 kit	6144
Straight section right side motor mount line 325	1 kit	6147
Straight section right side motor mount line 400	1 kit	6150
Straight section left side motor mount line 100	1 kit	4141
Straight section left side motor mount line 175	1 kit	6142
Straight section left side motor mount line 250	1 kit	6145
Straight section left side motor mount line 325	1 kit	6148
Straight section left side motor mount line 400	1 kit	6151

Example straight section line 175, overall length 3500 mm, with right side motor mount

6141-3500

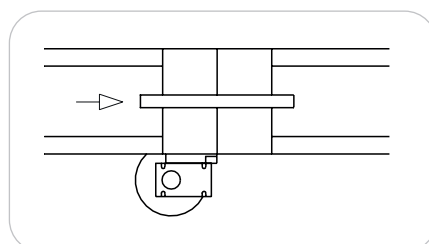
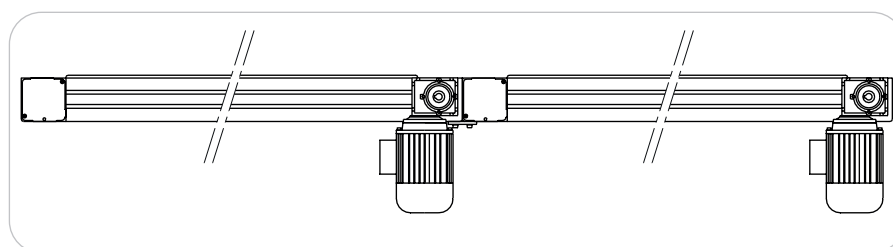
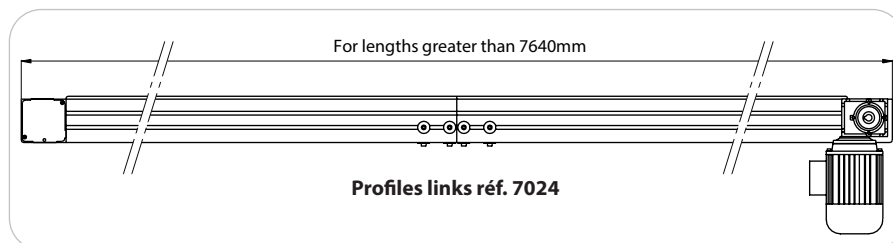
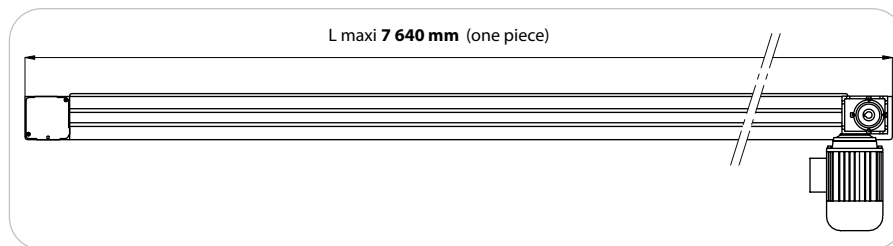
Lengths maxi / mini and continuities

Technical data

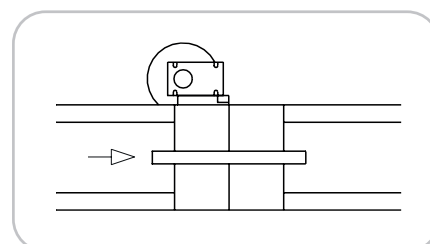
Lengths maxi / mini and continuities

Length maxi: **7 640 mm** (one piece).

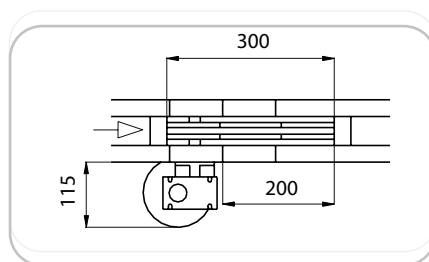
Possible length greater to 7 640 mm.



**Continuity lines 175 to 400
right side motor mount**



**Continuity lines 175 to 400
left side motor mount**



**Continuity line 100
right side motor mount**

Designation / Dimensions	Order unit	Reference
Continuity line 175, 250, 325, 400, right or left side motor mount	1 pce	4156
Continuity line 100, right side motor mount	1 pce	4061
Continuity line 100, left side motor mount	1 pce	4062

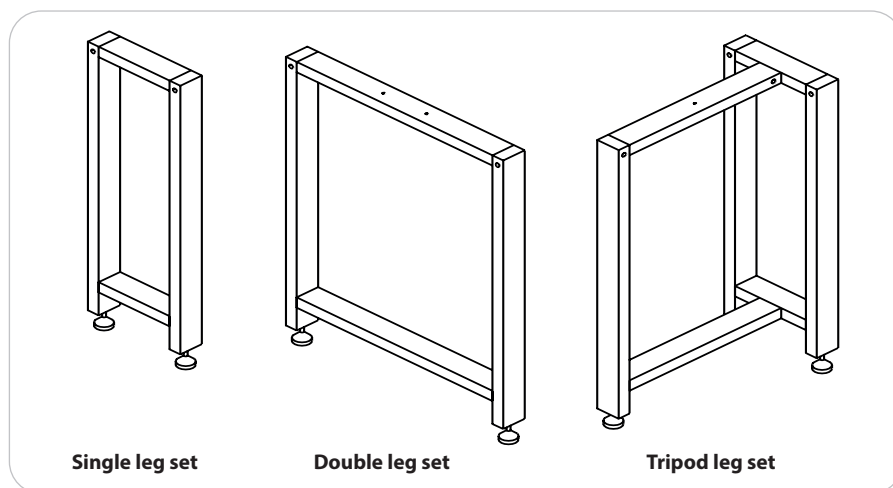
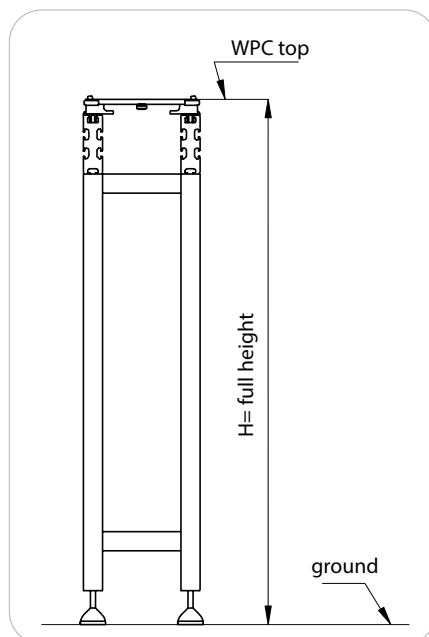
Leg sets

Technical data

Leg sets are used to support the transfer sections. It is recommended that leg sets are spaced at 2 meters intervals. Leg sets are generally made of standard profile (30x60) or another one if required.

They are delivered and equipped with adjustable feet and fixing accessories (ground fasteners not included).

Tripod leg set 8056 fits very well with perpendicular straight sections.

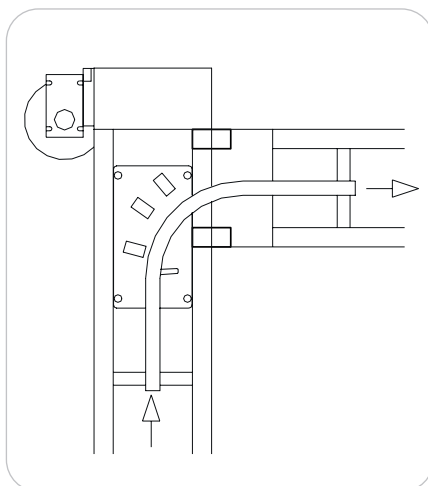


Designation / Dimensions	Order unit	Reference
Single leg set line 100	1 kit	6049
Single leg set line 175	1 kit	6050
Single leg set line 250	1 kit	6051
Single leg set line 325	1 kit	6052
Single leg set line 400	1 kit	8055
Double leg set line 100 (180° curve)	1 kit	6063
Double leg set line 100 (I/O combination)	1 kit	6065
Double leg set line 175	1 kit	6053
Double leg set line 250	1 kit	6054
Double leg set line 325	1 kit	6055
Double leg set line 400 (I/O combination)	1 kit	8054
Tripod leg set line 175	1 kit	8056
Tripod leg set line 250	1 kit	8057
Tripod leg set line 325	1 kit	8058
Tripod leg set line 400	1 kit	8059

Links

Technical data

Link 4056 (perpendicular sections) and fixing 4156 (aligned sections) ensure reliable geometry when assembling the transfer system.



Designation / Dimensions	Order unit	Reference
Link perpendicular section	1 kit	4056
Link aligned section	1 kit	4156

Workpiece carrier Line 100

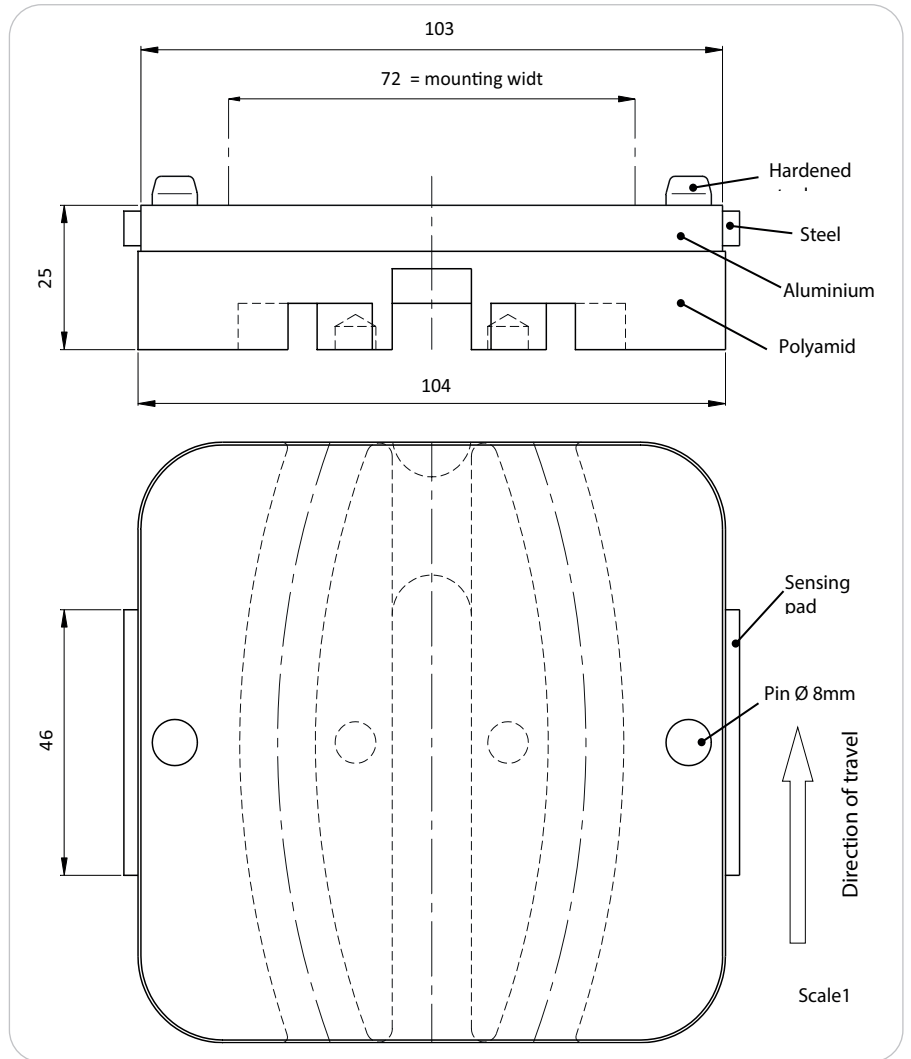
Technical data

Workpiece carriers (WPC) are used to locate and transfer parts during the whole production and assembly cycle. Line 100 WPC is made of aluminium plate and polyamid pad and is equipped with grooves to ensure perfect guidance through curves and other functions.

For indexing, Ø 8mm pins are provided and allow precise positioning in X, Y and Z axis within a +/- 0.03mm repeatability. Special contour features within the WPC pad ensures total immobilization at a stop position. Steel pads on either side allow sensing with conventional inductive sensors. Mechanical data processing can be provided as described in page 262.

Line 100 workpiece carrier can accommodate payloads up to **5 kg**.

Empty weight: **0,3 kg**



Designation / Dimensions

Workpiece carrier line 100

Order unit

1 kit

Reference

8006

Stop/Pad/Anti-backslash/Anti-lift/Sensing Line 100

Technical data

The stop unit provides a simple stop facility when precise positioning of the workpiece carrier is not necessary.

The stop may also be used for flow control and prioritisation of workpiece carriers prior to and after « mobile » functions and precise station stops.

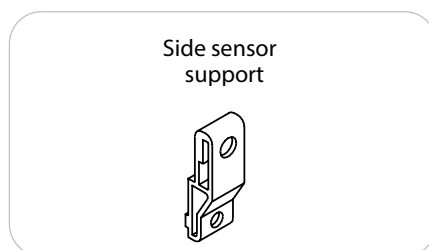
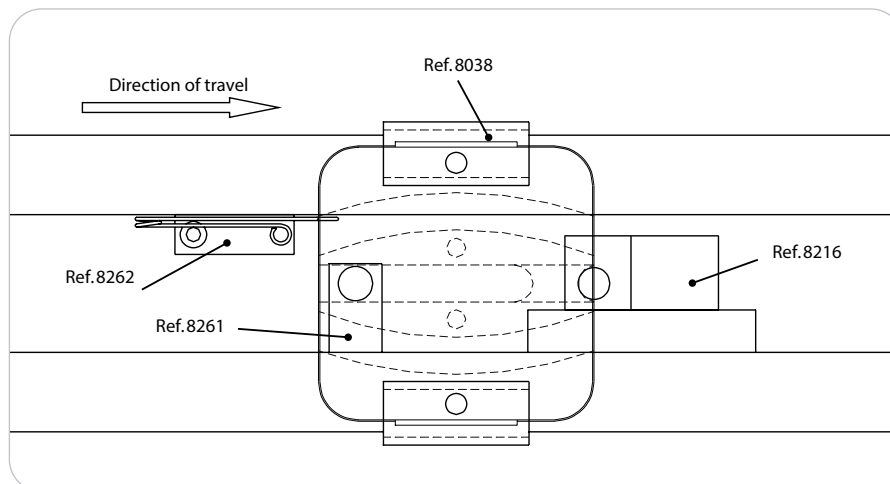
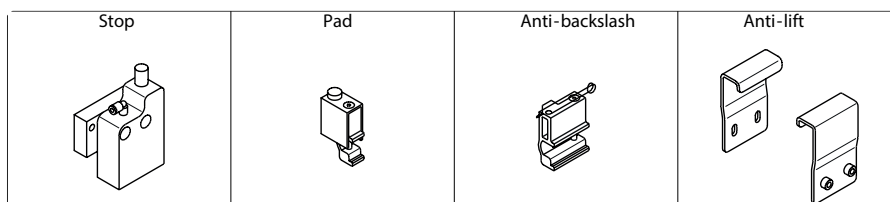
The pad improves the stop precision and the anti-backslash kit reduces the WPC bounce, providing better cycle times. When unloading pieces at manual workstations, the anti-lift kit prevents the operator from lifting of the WPC from the transfer line.

Stop:

- ✗ stop capability: 75 kg
- ✗ stop accuracy +/-0,3mm (with pad)
- ✗ cylinder Ø 25mm, simple acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connector for Ø4 mm pipe (provided)
- ✗ acetal body, stainless steel plunger
- ✗ sensing up/down positions: on request ref. 8014 (M8 sensors not included).

Side sensor support

When stopping within a workstation, workpiece carriers may be detected using inductive sensors M12 (recommended span 4mm), with or without connectors, fitted to supports 8095. These sensors also ensure flow and priority control.



Designation / Dimensions	Order unit	Reference
Stop line 100	1 kit	8216
Pad line 100	1 kit	8261
Anti-backslash line 100	1 kit	8262
Anti-lift line 100	1 kit	8038
Side sensor support line 100	1 kit	8095

Positioning tool 40 kg (stroke 6 mm) Line 100

Technical data

When a process requires precise positioning for the workpiece carriers, the positioning tool 40 kg (stroke 6 mm) ensures a +/- 0.03mm XYZ repeatability.

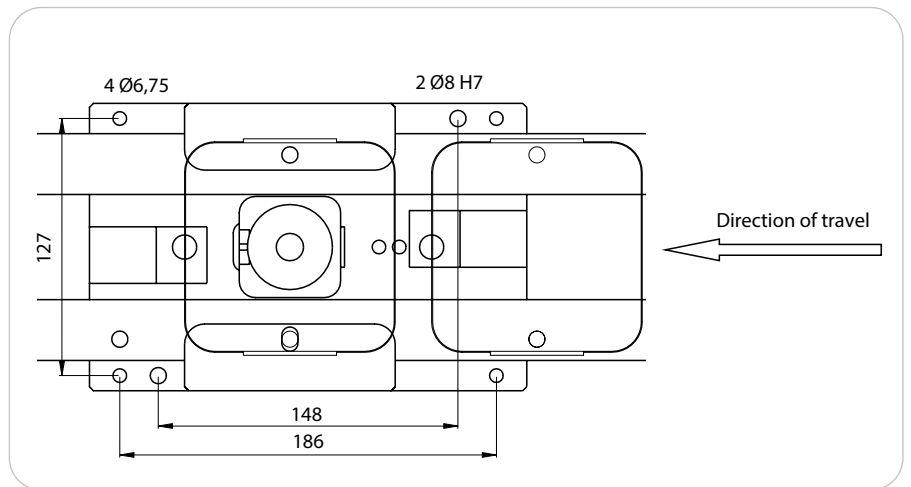
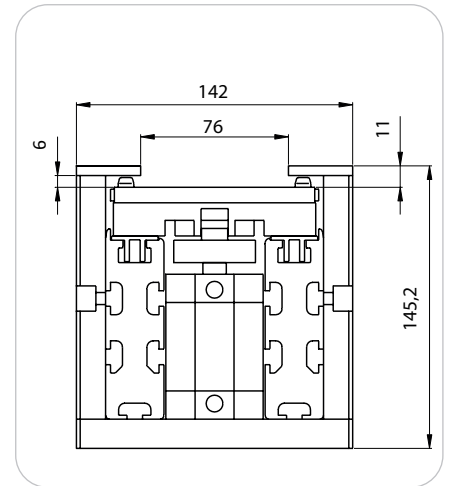
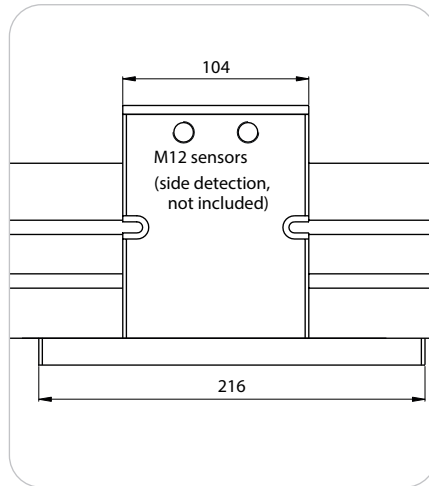
The positioning tool is manufactured from high grade aluminium. A double-acting pneumatic cylinder lifts and secures the workpiece carrier in hardened steel jaws.

Two sensors fitted on the cylinder body ensure detection of up/down positions. Threads in the side of the positioning tool allow the use of M12 sensors (not included).

The positioning tool 40 kg (stroke 6 mm) is delivered with 2 stops 8016, pre-fitted on its base. These stops must be ordered separately.

Cylinder:

- ✗ Ø 32mm, double acting
- ✗ lubricated or not, cleaned air, 4 to 6 bars
- ✗ connectors Ø 4mm pipe (included)
- ✗ 2 sensors (included)



IMPORTANT



✗ The positioning tool must be fitted to a stable and robust structure in order to ensure the accuracy of this function

✗ The positioning tool must be fully guarded once fitted.

Designation / Dimensions	Order unit	Reference
Positioning tool 40 kg stroke 6 mm line 100	1 kit	8035

Positioning tool 40 kg (strokes 50 and 100 mm) Line 100

Technical data

The positioning tool 50 mm or 100 mm stroke version of the positioning tool 40 kg ensures a +/- 0.03mm XYZ repeatability.

The positioning tool is manufactured from high grade aluminium. A double-acting pneumatic cylinder lifts and secures the workpiece carrier in hardened steel jaws.

Two sensors fitted on the cylinder body ensure detection of up/down positions. Threads in the side of the positioning tool allow the use of M12 sensors (not included).

The positioning tool 40 kg (stroke 50/100mm) is delivered with 2 stops 8016, pre-fitted on its base. These stops must be ordered separately.

Cylinder:

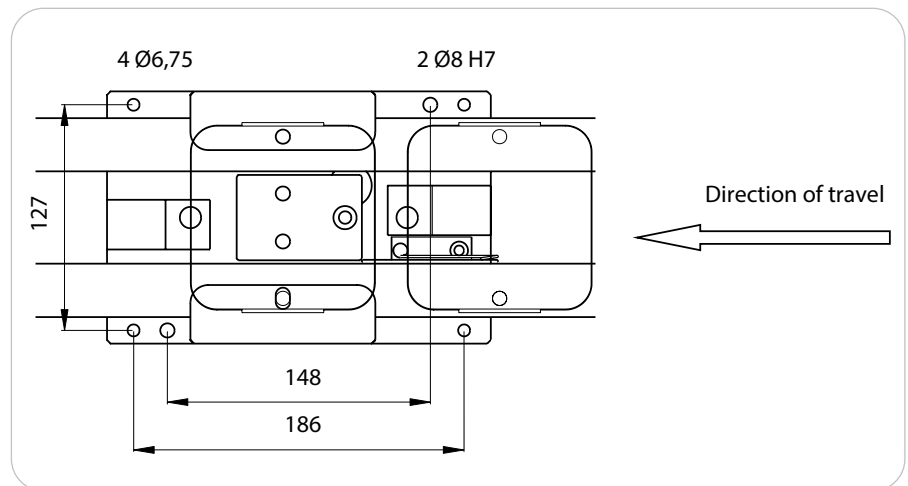
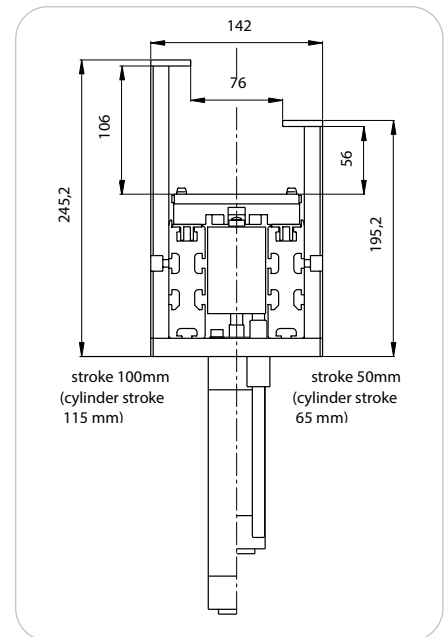
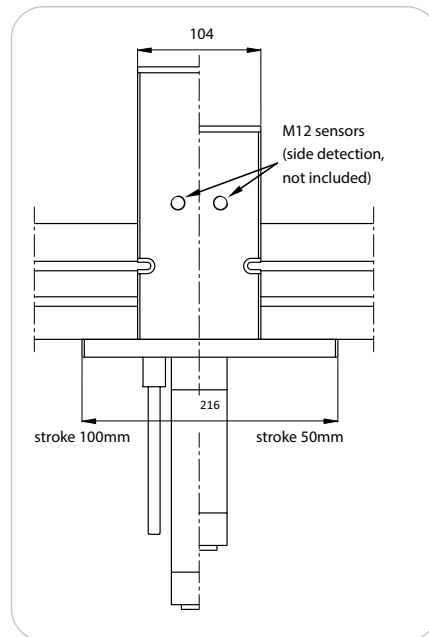
- ✗ Ø 32mm, double acting
- ✗ lubricated or not, cleaned air, 4 to 6 bars
- ✗ connectors Ø 4mm pipe (included)
- ✗ 2 sensors (included)

IMPORTANT



✗ The positioning tool must be fitted to a stable and robust structure in order to ensure the accuracy of this function

✗ The positioning tool must be fully guarded once fitted.



Designation / Dimensions	Order unit	Reference
Positioning tool 40 kg stroke 50 mm line 100	1 kit	8135
Positioning tool 40 kg stroke 100 mm line 100	1 kit	8235

Positioning tool 160 kg (stroke 6 mm) Line 100

Technical data

When a process requires precise positioning under strong efforts, the positioning tool 160 kg (stroke 6 mm) ensures a +/- 0.03mm XYZ repeatability.

The positioning tool is manufactured from high grade aluminium. A double-acting pneumatic cylinder lifts and secures the workpiece carrier in hardened steel jaws.

Two sensors fitted on the cylinder body ensure detection of up/down positions. Threads in the side of the positioning tool allow the use of M12 sensors (not included).

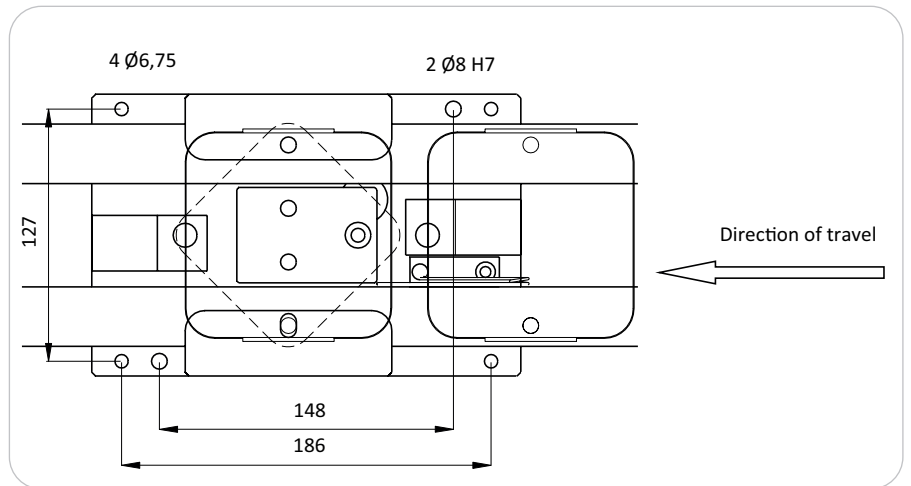
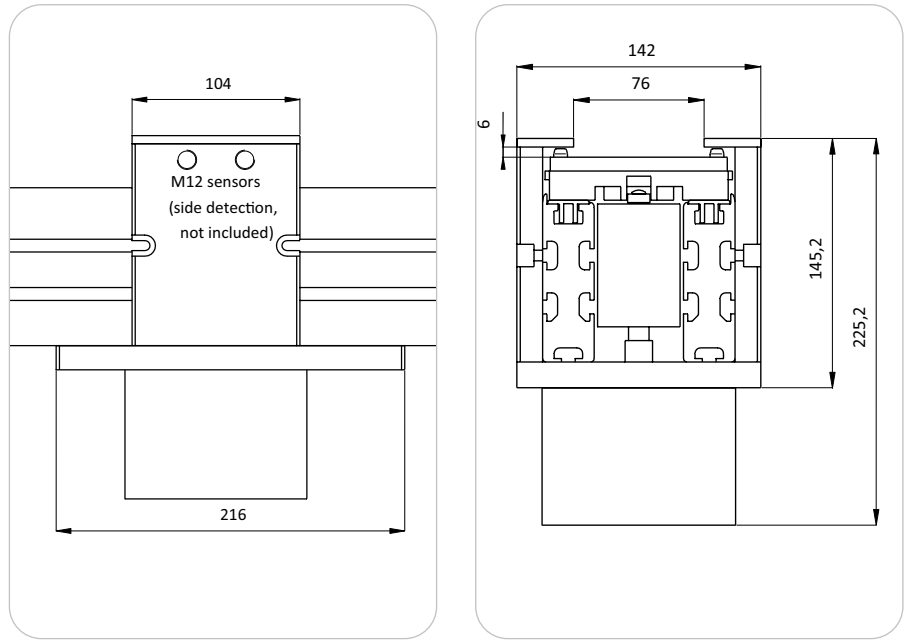
The positioning tool 160 kg (stroke 6 mm) is delivered with 2 stops 8016, pre-fitted on its base. These stops must be ordered separately.

Cylinder:

- ✗ Ø 63 mm, double acting
- ✗ lubricated or not, cleaned air, 4 to 6 bars
- ✗ connectors Ø 4mm pipe (included)
- ✗ 2 sensors (included)

IMPORTANT

- ⚠ **The positioning tool must be fitted to a stable and robust structure in order to ensure the accuracy of this function**
- The positioning tool must be fully guarded once fitted.**



Designation / Dimensions	Order unit	Reference
Positioning tool 160 kg stroke 6 mm line 100	1 kit	8036

Curve 90° (static) Line 100

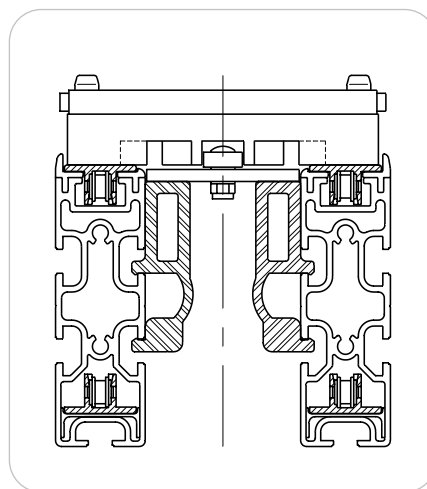
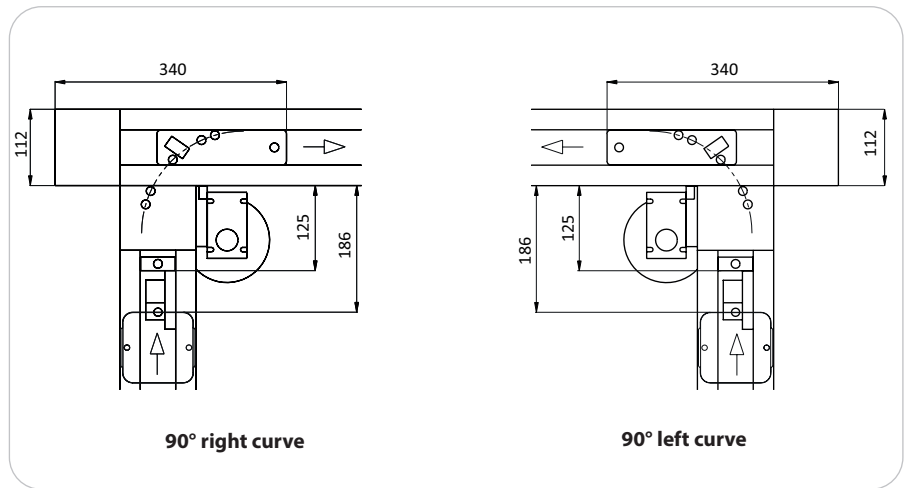
Technical data

Using the 90° curve, it is possible to cross from one section perpendicular to another. Grooves under the workpiece carriers ensure perfect guidance on ball bearings fixed upon the bed plates.

Specially designed claws allow the bed plates to be fitted easily.

In this configuration, accumulation of workpiece carriers is possible. The small content of mechanical elements and features within the 90° curve results in high reliability

The minimum distance at which the workpiece carriers may be stopped in relationship to the curve is shown in the drawings above.



Designation / Dimensions	Order unit	Reference
Curve 90° (static) right line 100	1 kit	4022
Curve 90° (static) left line 100	1 kit	4023

Curve 90° (mobile) Line 100

Technical data

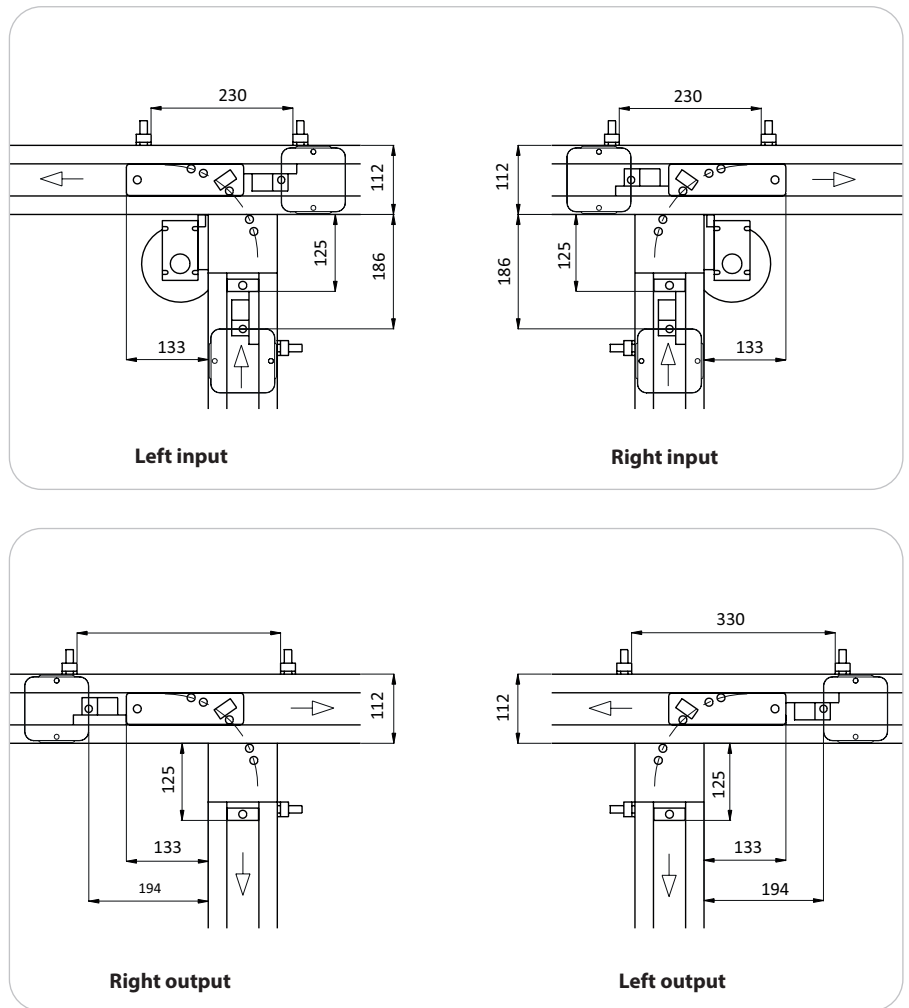
The 90° curve « mobile » allows workpiece carriers to be introduced from a secondary section to a main one (« input ») or from a main section to a secondary one (« output »).

Grooves under the workpiece carriers ensure perfect guidance on ball bearings fixed upon the bed plates.

This function is « mobile » due to the retractable main bed plate. The 90° curve « mobile » presents a reduced flowstoppage rate requiring minimum automation.

Retractable bed plate cylinder:

- ✗ Ø 16 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø 4 mm pipe (included)
- ✗ sensors on cylinder body (not included)



Designation / Dimensions	Order unit	Reference
Curve 90° mobile Left input line 100	1 kit	4024
Curve 90° mobile Right input line 100	1 kit	4025
Curve 90° mobile Right output line 100	1 kit	4024
Curve 90° mobile Left output line 100	1 kit	4025

Curve 180° Line 100

Technical data

Using the 180° curve, it is possible to cross from one section in parallel to another operating in the opposite direction.

Four combinations cover all possible configurations.

This function is « mobile » due to the retractable bed plate. In the « static/static » curve, accumulation of workpiece carriers is possible. The bed plate between the sections (« middle bed plate ») is equipped with a motorized roller to aid workpiece carriers through the curve.

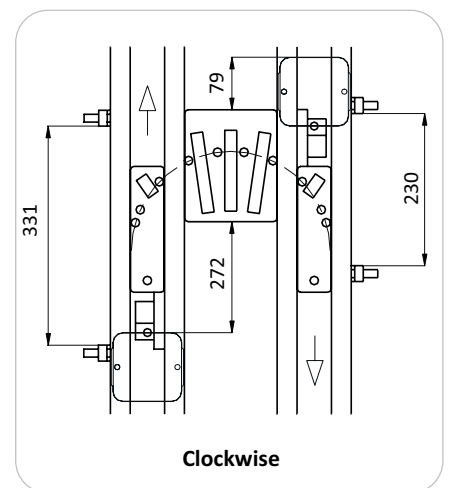
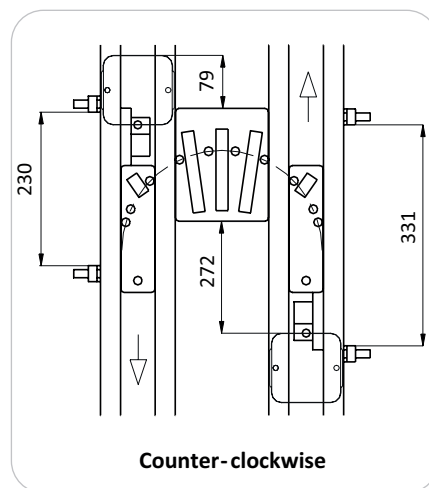
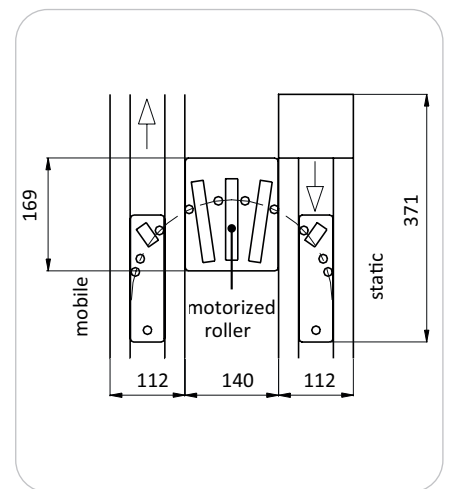
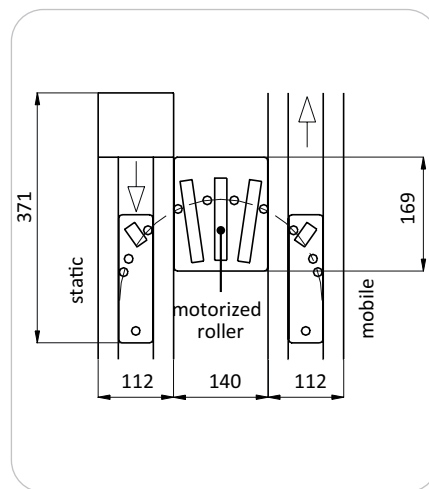
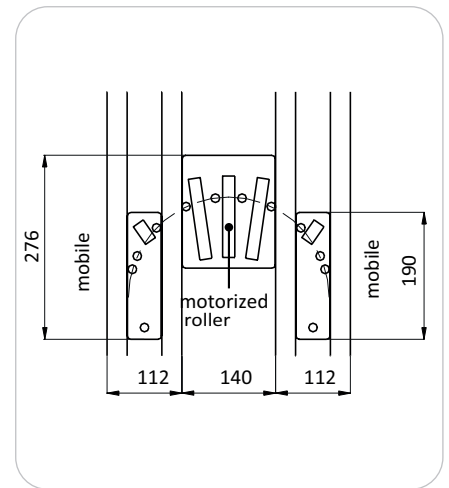
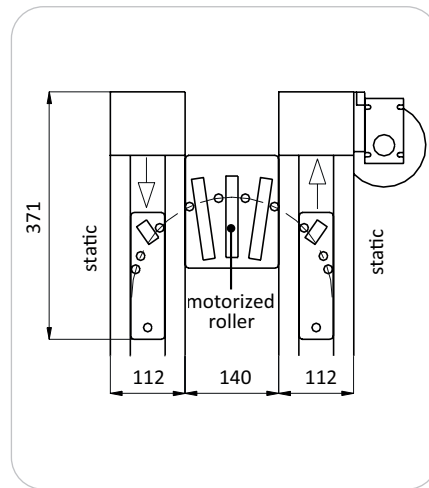
Retractable bed plate cylinder:

- ✗ Ø 16 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø 4 mm pipe (included)
- ✗ sensors on cylinder body (not included)

Intermediate motorized roller:

- ✗ power 6,3 W
- ✗ voltage 220 V single-phase
- ✗ frequency 50 Hz
- ✗ rated current 73 mA

The minimum distance at which the workpiece carriers may be stopped in relationship to the curve is shown in the drawings below.



Designation / Dimensions	Order unit	Reference
Curve 180° static/static line 100	1 kit	4012
Curve 180° static/mobile line 100	1 kit	4013
Curve 180° mobile/static line 100	1 kit	4014
Curve 180° mobile/mobile line 100	1 kit	4015

Combination input/output Line 100

Technical data

The function of the input/output combination is adapted to transfer workpiece carriers from one section to another operating in parallel and running in the same direction.

This function is « mobile » due to the retractable bed plate. The bed plate between the sections (« middle bed plate ») is equipped with two motorized rollers (driven by only one motor) to aid workpiece carriers through the transfer sections.

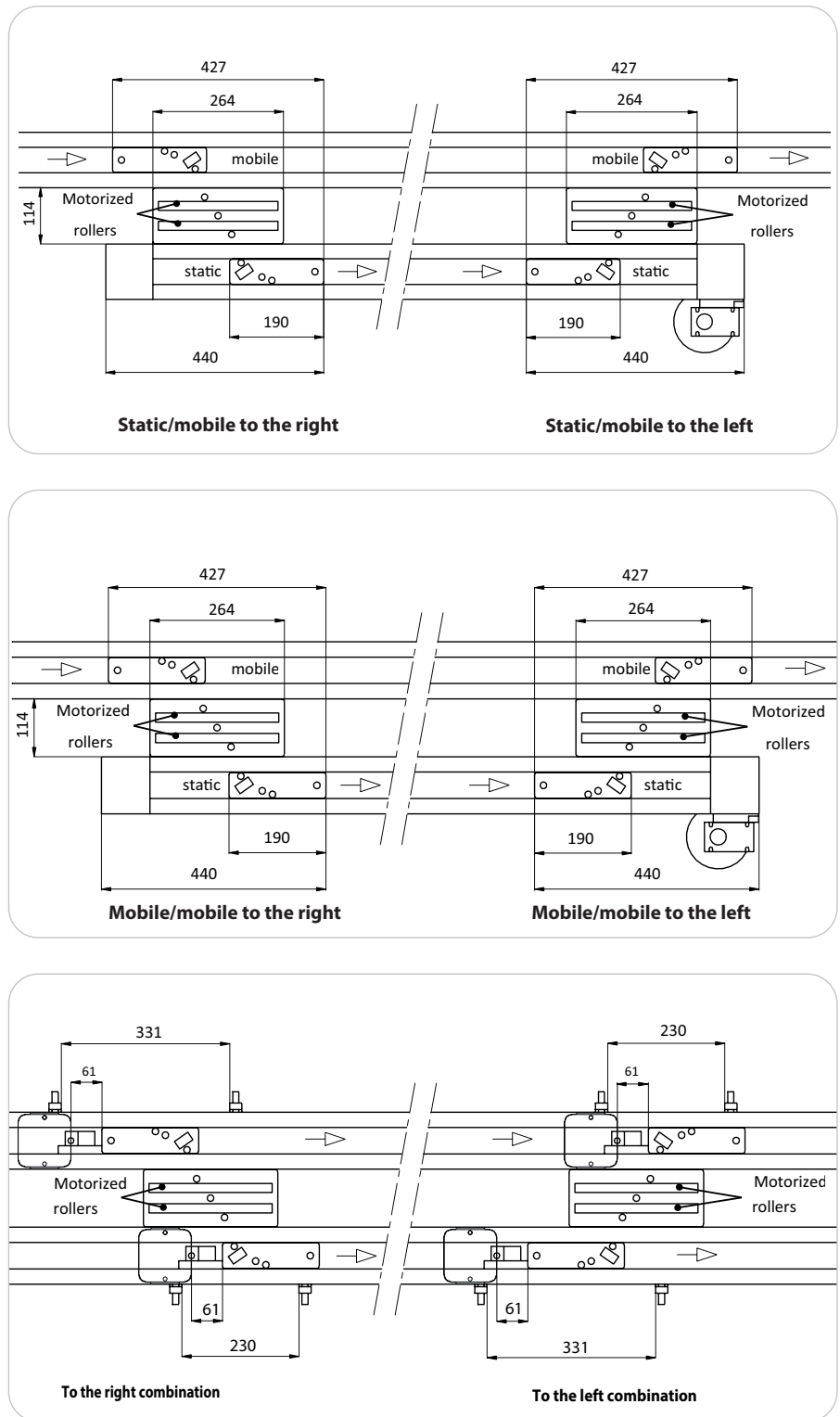
Retractable bed plate cylinder:

- x Ø 16 mm, double acting
- x lubricated or not, cleaned air, 5 to 6 bars
- x connectors for Ø 4 mm pipe (included)
- x sensors on cylinder body (not included)

Intermediate motorized roller:

- x power 6,3 W
- x voltage 220 V single-phase
- x frequency 50 Hz
- x rated current 73 mA

The minimum distance at which the workpiece carriers may be stopped in relationship to the combination is shown in the drawings below.



Designation / Dimensions	Order unit	Reference
Combination right input/output, static/mobile line 100	1 kit	4017
Combination right input/output, mobile/mobile line 100	1 kit	4018
Combination left input/output, static/mobile line 100	1 kit	4020
Combination left input/output, mobile/mobile line 100	1 kit	4021

Workpiece carrier Line 175

Technical data

Workpiece carriers (WPC) are used to locate and transfer parts during the whole production and assembly cycle. Line 175 WPC are made of aluminium plate and polyamid pad and are equipped with ball bearings to ensure perfect guidance through curves and other functions.

For indexing, Ø 8mm pins are provided and allow precise positioning in X, Y and Z axis within a +/- 0.03mm repeatability.

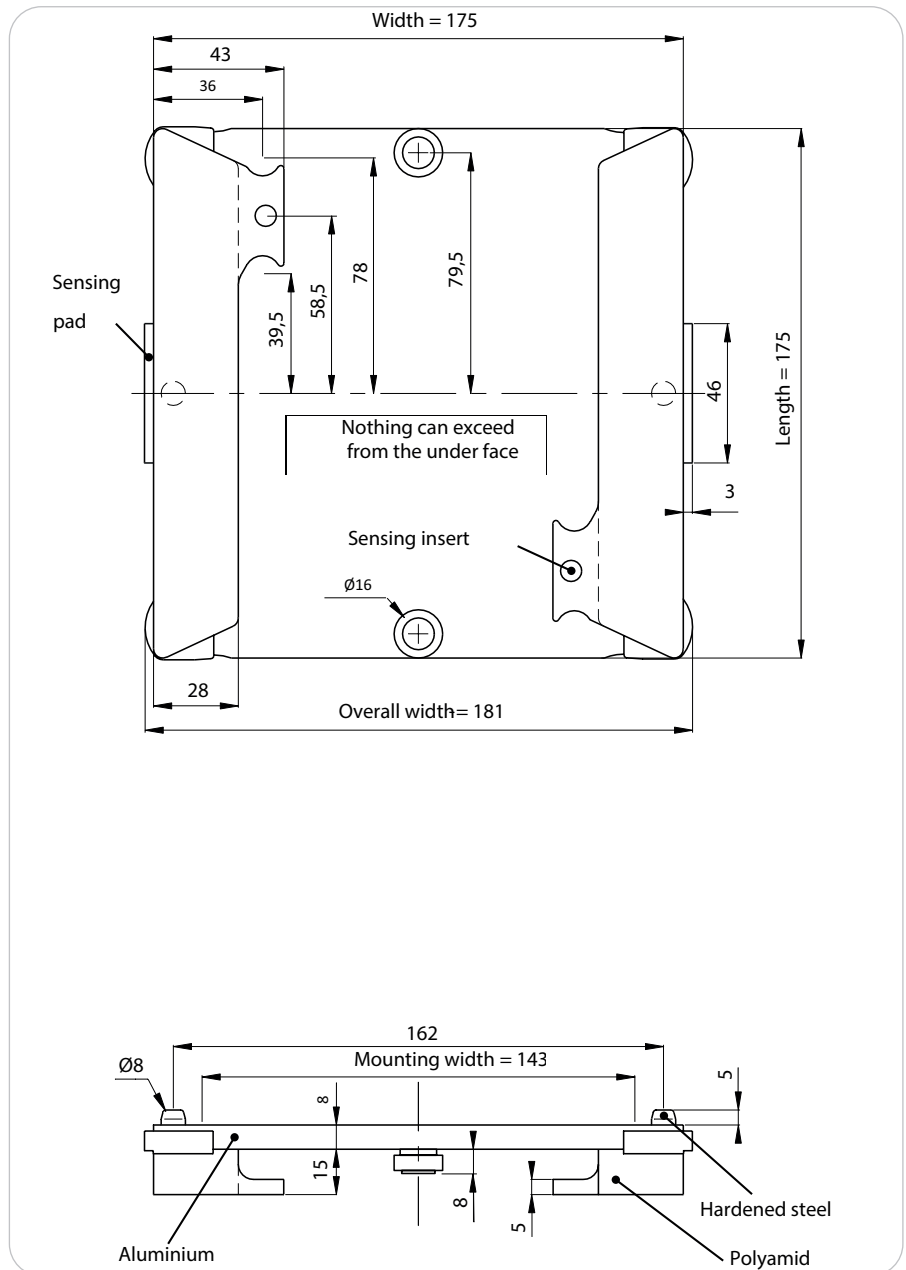
Special contour features within the WPC pad ensures total immobilization at a stop position.

Steel pads on either side allow sensing with conventional inductive sensors. Mechanical data processing can be provided as described in page262.

Line 175 workpiece carriers (references 8000 and 8001) can accommodate payloads up to 7 kg.

WPC plate is made of anodized aluminium. Flatness is better than 0.5mm. Detachable molded polyamid pads may be replaced easily. Friction coefficients are 0.25 (carrying) and 0.50 (accumulation).

Empty weight: **0,7 kg**



Designation / Dimensions	Order unit	Reference
Workpiece carrier 175x175 Line 175	1 kit	8000

Workpiece carrier Line 175

Technical data

Workpiece carriers (WPC) are used to locate and transfer parts during the whole production and assembly cycle. Line 175 WPC are made of aluminium plate and polyamid pad and are equipped with ball bearings to ensure perfect guidance through curves and other functions.

For indexing, Ø 8mm pins are provided and allow precise positioning in X, Y and Z axis within a +/- 0.03mm repeatability.

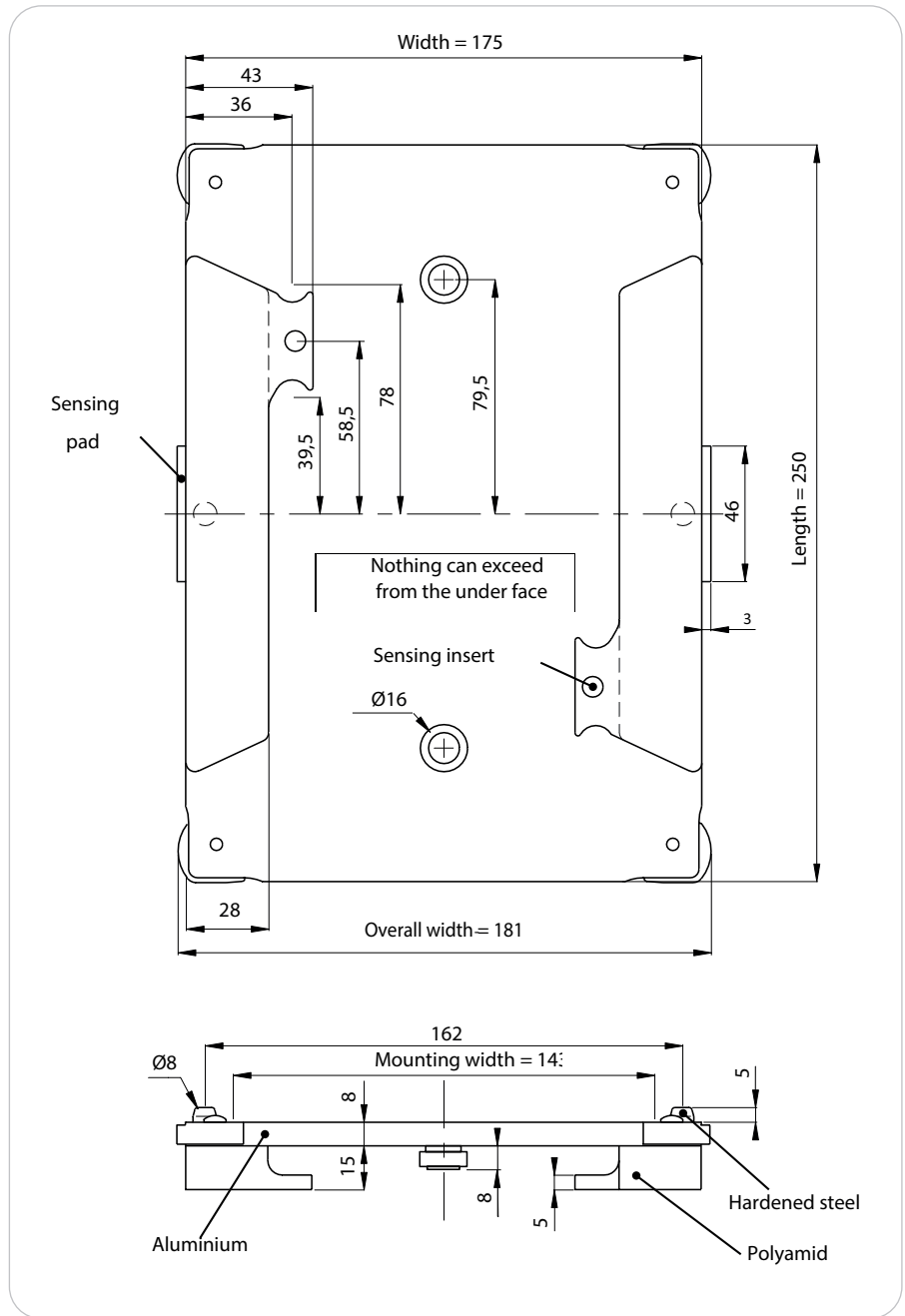
Special contour features within the WPC pad ensures total immobilization at a stop position.

Steel pads on either side allow sensing with conventional inductive sensors. Mechanical data processing can be provided as described in page262.

Line 175 workpiece carriers (references 8000 and 8001) can accommodate payloads up to 7 kg.

WPC plate is made of anodized aluminium. Flatness is better than 0.5mm. Detachable molded polyamid pads may be replaced easily. Friction coefficients are 0.25 (carrying) and 0.50 (accumulation).

Empty weight: **1 kg**



Designation / Dimensions	Order unit	Reference
Workpiece carrier 175x250 Line 175	1 kit	8001

Workpiece carrier Line 250

Technical data

Workpiece carriers (WPC) are used to locate and transfer parts during the whole production and assembly cycle. Line 250 WPC are made of aluminium plate and polyamid pad and are equipped with ball bearings to ensure perfect guidance through curves and other functions.

For indexing, Ø 8mm pins are provided and allow precise positioning in X, Y and Z axis within a +/- 0.03mm repeatability.

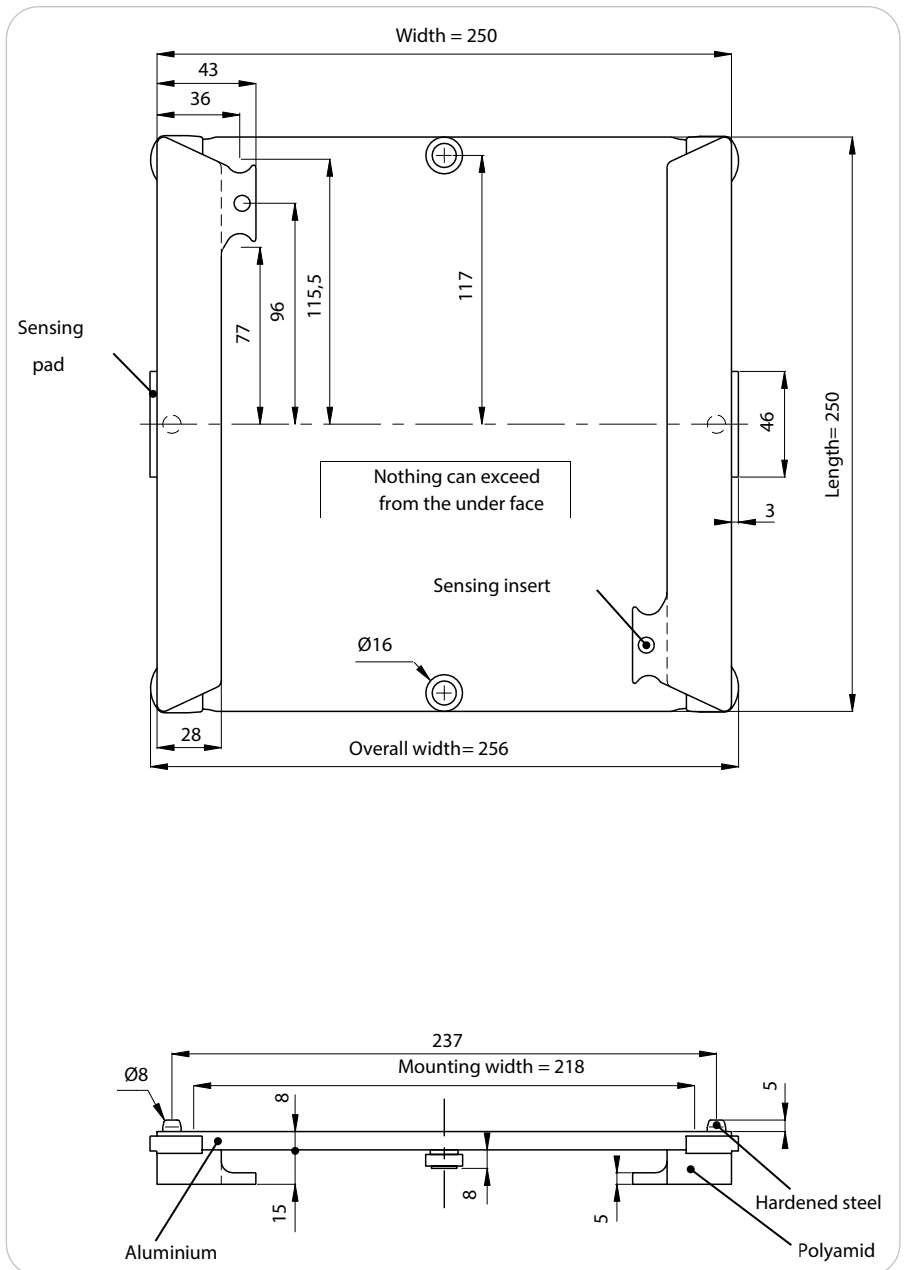
Special contour features within the WPC pad ensures total immobilization at a stop position.

Steel pads on either side allow sensing with conventional inductive sensors. Mechanical data processing can be provided as described in page 262.

Line 250 workpiece carriers (references 8002 and 8003) can accommodate payloads up to **10 kg**.

WPC plate is made of anodized aluminium. Flatness is better than 0.5mm. Detachable molded polyamid pads may be replaced easily. Friction coefficients are 0.25 (carrying) and 0.50 (accumulation).

Empty weight: 1 kg



Designation / Dimensions	Order unit	Reference
Workpiece carrier 250x250 Line 250	1 kit	8002

Workpiece carrier Line 250

Technical data

Workpiece carriers (WPC) are used to locate and transfer parts during the whole production and assembly cycle. Line 250 WPC are made of aluminium plate and polyamid pad and are equipped with ball bearings to ensure perfect guidance through curves and other functions.

For indexing, Ø 8mm pins are provided and allow precise positioning in X, Y and Z axis within a +/- 0.03mm repeatability.

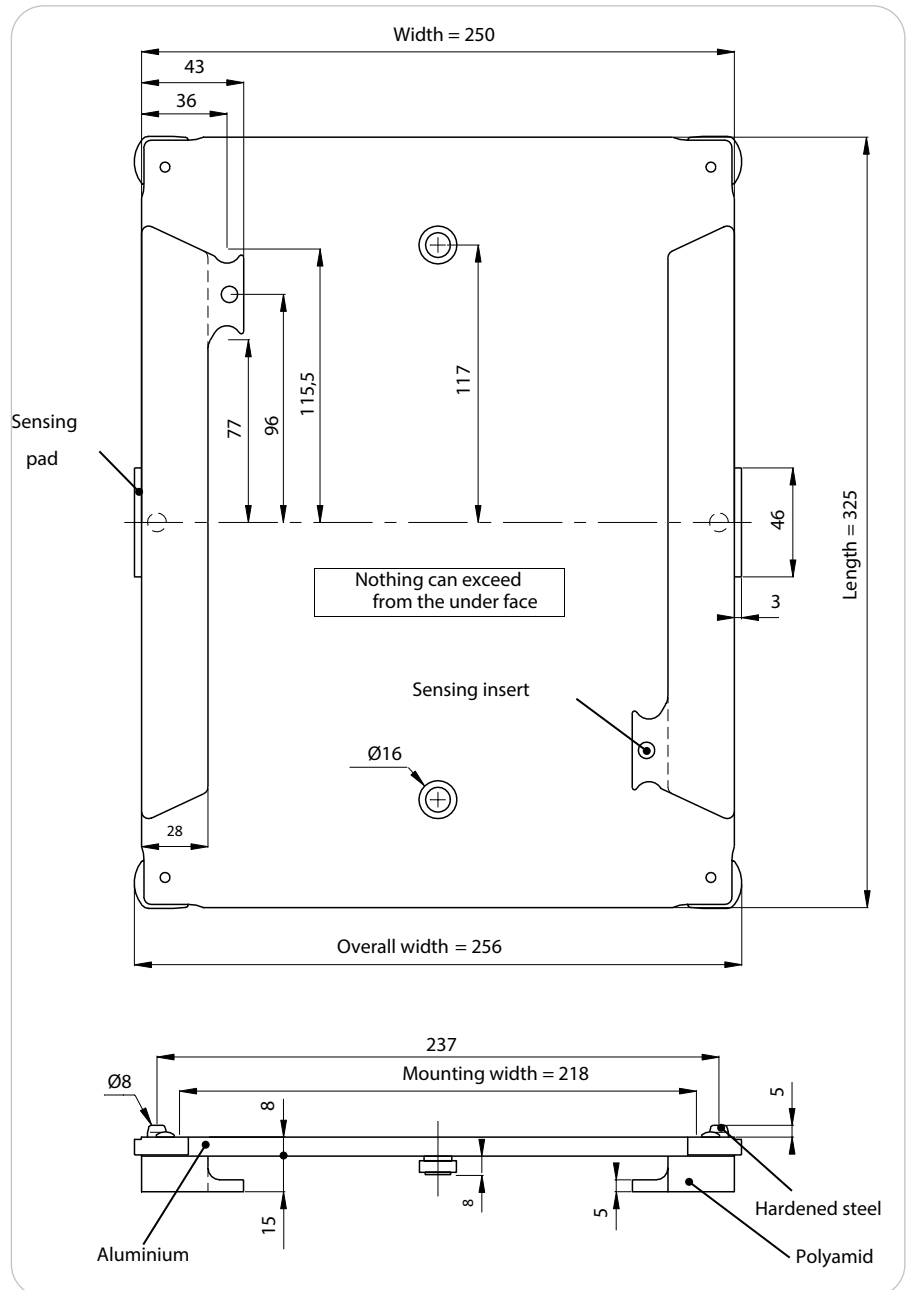
Special contour features within the WPC pad ensures total immobilization at a stop position.

Steel pads on either side allow sensing with conventional inductive sensors. Mechanical data processing can be provided as described in page 262.

Line 250 workpiece carriers (references 8002 and 8003) can accommodate payloads up to **10 kg**.

WPC plate is made of anodized aluminium. Flatness is better than 0.5mm. Detachable molded polyamid pads may be replaced easily. Friction coefficients are 0.25 (carrying) and 0.50 (accumulation).

Empty weight: 2 kg



Designation / Dimensions	Order unit	Reference
Workpiece carrier 250x325 Line 250	1 kit	8003

Workpiece carrier Line 325

Technical data

Workpiece carriers (WPC) are used to locate and transfer parts during the whole production and assembly cycle. Line 325 WPC are made of aluminium plate and polyamid pad and are equipped with ball bearings to ensure perfect guidance through curves and other functions.

For indexing, Ø 8mm pins are provided and allow precise positioning in X, Y and Z axis within a +/- 0.03mm repeatability.

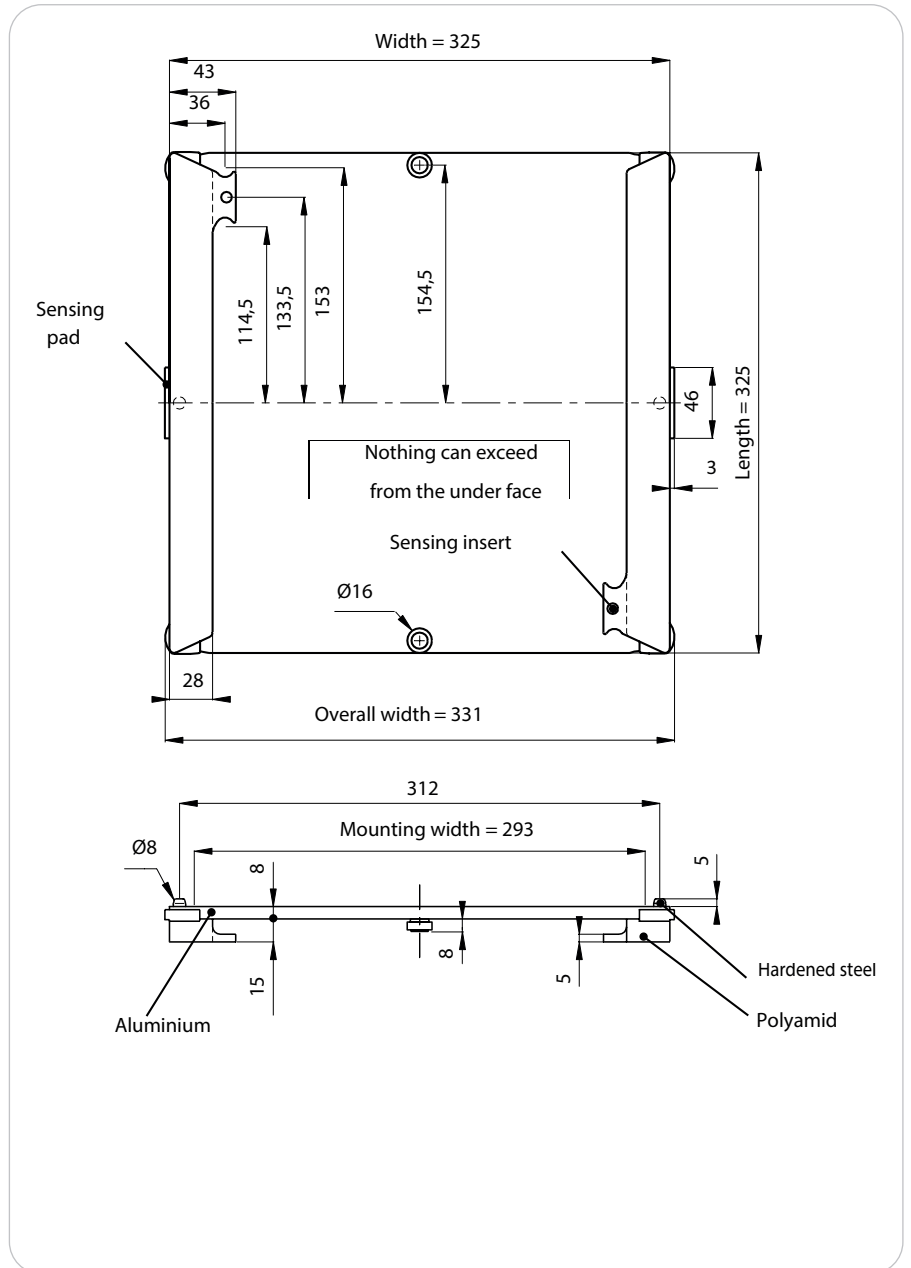
Special contour features within the WPC pad ensures total immobilization at a stop position.

Steel pads on either side allow sensing with conventional inductive sensors. Mechanical data processing can be provided as described in page 262..

Line 325 workpiece carriers (references 8004 and 8005) can accommodate payloads up to **10 kg**.

Friction coefficient:
 - 0,25 (carrying)
 - 0,50 (accumulation).

Empty weight: 2,5 kg



Designation / Dimensions	Order unit	Reference
Workpiece carrier 325x325 Line 325	1 kit	8004

Workpiece carrier Line 325

Technical data

Workpiece carriers (WPC) are used to locate and transfer parts during the whole production and assembly cycle. Line 325 WPC are made of aluminium plate and polyamid pad and are equipped with ball bearings to ensure perfect guidance through curves and other functions.

For indexing, Ø 8mm pins are provided and allow precise positioning in X, Y and Z axis within a +/- 0.03mm repeatability.

Special contour features within the WPC pad ensures total immobilization at a stop position.

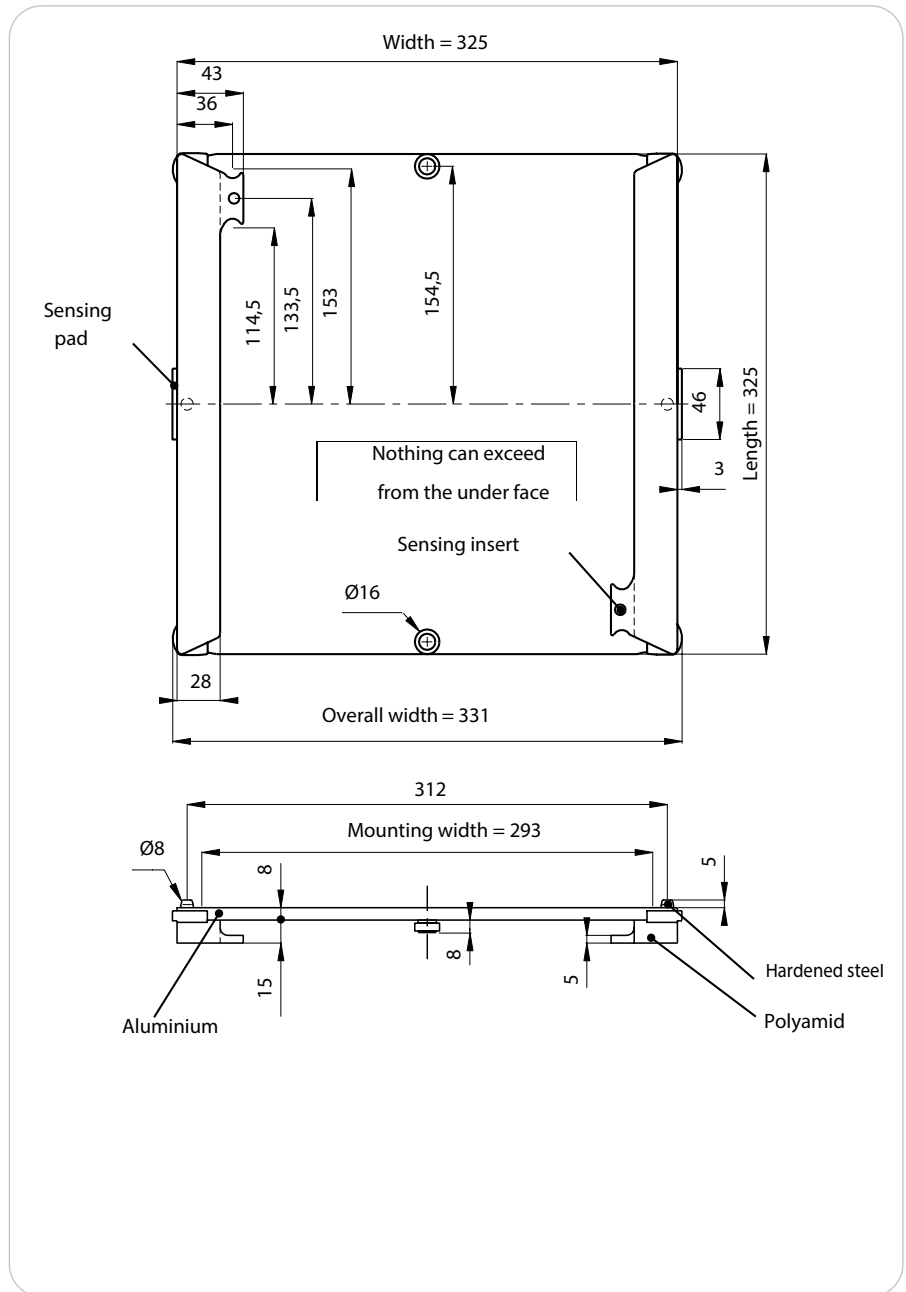
Steel pads on either side allow sensing with conventional inductive sensors. Mechanical data processing can be provided as described in page 262.

Line 325 workpiece carriers (references 8004 and 8005) can accommodate payloads up to **10 kg**.

WPC plate is made of anodized aluminium. Flatness is better than 0.5mm. Detachable molded polyamid pads may be replaced easily.

Friction coefficient:
 - 0,25 (carrying)
 - 0,50 (accumulation).

Empty weight: 3,5 kg



Designation / Dimensions	Order unit	Reference
Workpiece carrier 325x475 Line 325	1 kit	8005

Workpiece carrier Line 400

Technical data

Workpiece carriers (WPC) are used to locate and transfer parts during the whole production and assembly cycle. Line 400 WPC is made of aluminium plate and polyamid pad and is equipped with ball bearings to ensure perfect guidance through curves and other functions.

For indexing, Ø 8mm pins are provided and allow precise positioning in X, Y and Z axis within a +/- 0.03mm repeatability.

Special contour features within the WPC pad ensures total immobilization at a stop position.

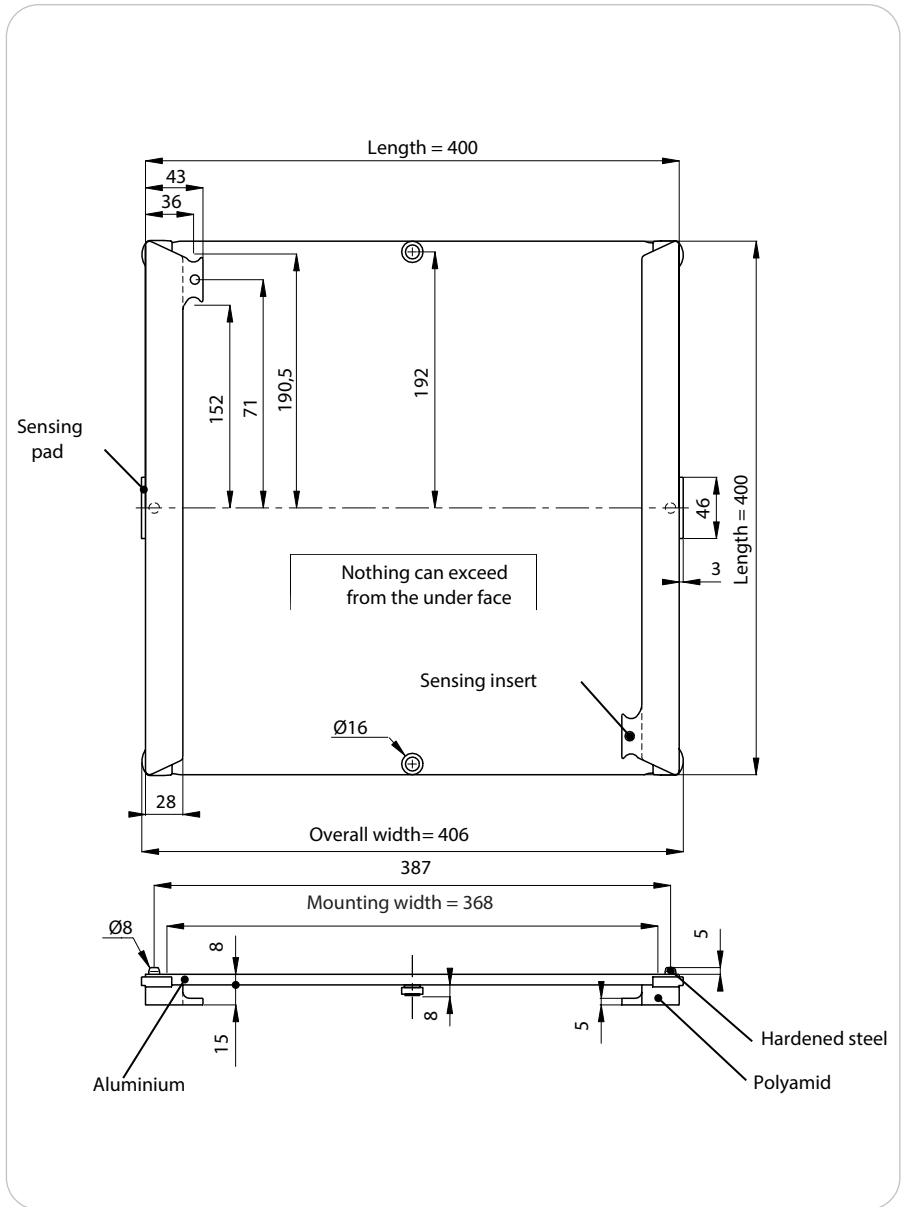
Steel pads on either side allow sensing with conventional inductive sensors. Mechanical data processing can be provided as described in page 262.

Line 400 workpiece carrier (reference 8240) can accommodate payloads up to **10 kg**.

WPC plate is made of anodized aluminium. Flatness is better than 0.5mm. Detachable molded polyamid pads may be replaced easily.

Friction coefficient:
 - 0,25 (carrying)
 - 0,50 (accumulation).

Empty weight: **3,6 kg**



Designation / Dimensions	Order unit	Reference
Workpiece carrier 400x400 Line 400	1 kit	8240

Stop/Pad/Anti-lift/Sensing Lines 175 to 400

Technical data

The stop unit provides a simple stop facility when precise positioning of the workpiece carrier is not necessary. The stop may also be used for flow control and prioritisation of workpiece carriers prior to and after « mobile » functions and precise station stops.

The pad improves the stop precision by limiting the WPC rotation and the efforts on side fuchsia guides. Its use is compulsory.

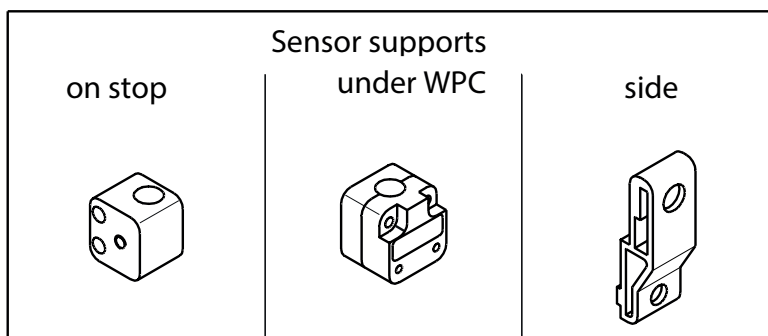
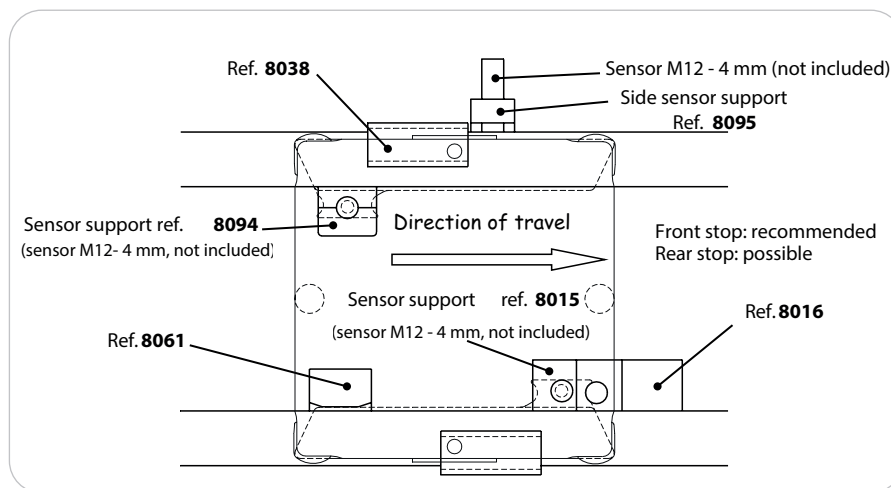
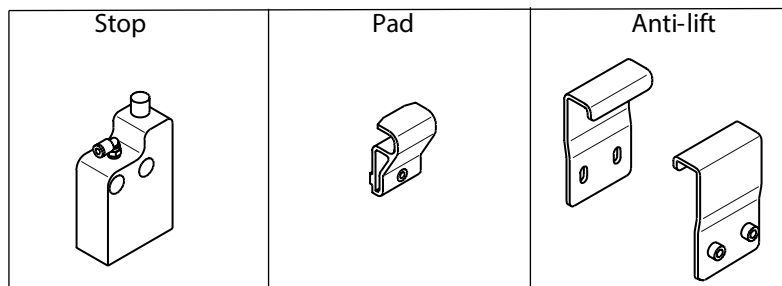
When unloading pieces at manual workstations, the anti-lift kit prevents the operator from lifting of the WPC from the transfer line.

Stop:

- ✗ stop capability: 75 kg
- ✗ stop accuracy +/-0,3mm (with pad)
- ✗ cylinder Ø 25mm, simple acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connector for Ø4 mm pipe (provided)
- ✗ acetal body, stainless steel plunger
- ✗ sensing up/down positions: on request ref. 8014 (M8 sensors not included).

Side sensor support

When stopping within a workstation, workpiece carriers may be detected using inductive sensors M12 (recommended span 4mm), with or without connectors, fitted to supports 8015, 8094 or 8095. These sensors also ensure flow and priority control.



Designation / Dimensions	Order unit	Reference
Stopper Lines 175 to 400	1 kit	8016
Pad Lines 175 to 400	1 kit	8061
Anti-lift Lines 175 to 400	1 kit	8038
Sensor support	1 kit	8015
Sensor support from below	1 kit	8094
Sensor support from side	1 kit	8095

Positioning tool 100 kg (stroke 6 mm) Lines 175 to 400

Technical data

When a process requires precise positioning for the workpiece carriers, the positioning 40 kg tool (stroke 6 mm) ensures a +/- 0.03 mm XYZ repeatability.

The positioning tool is manufactured from high grade aluminium. A double-acting pneumatic cylinder lifts and secures the workpiece carrier in hardened steel jaws.

Two sensors fitted on the cylinder body ensure detection of up/down positions.

Threads in the side of the positioning tool allow the use of M12 sensors (not included).

Vertical central available loading: 100 kg. Provide for 2 stops 8016 and 2 pads 8061.

Cylinder:

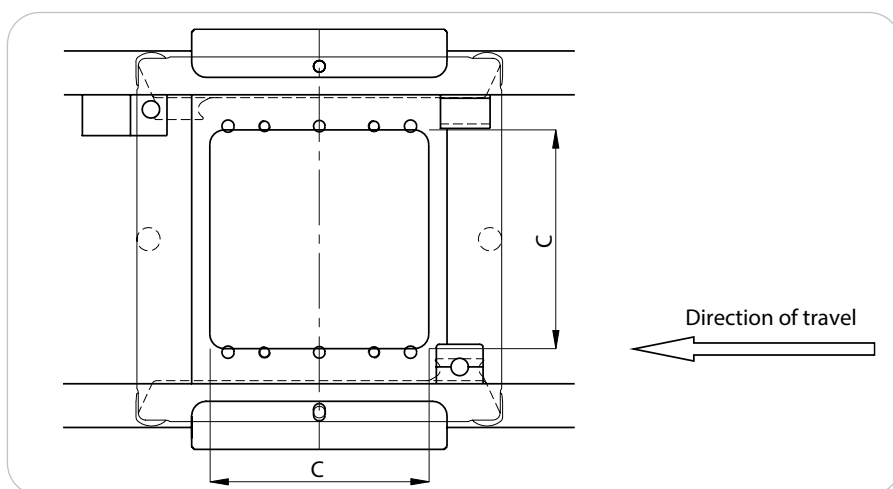
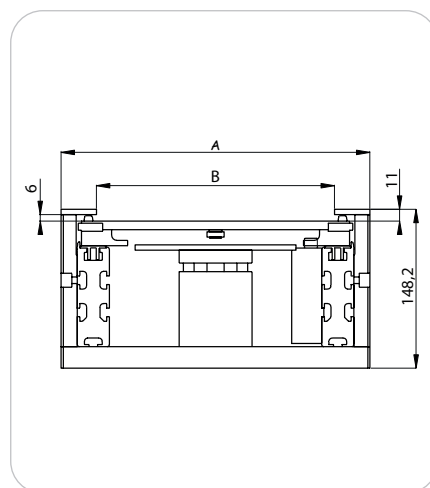
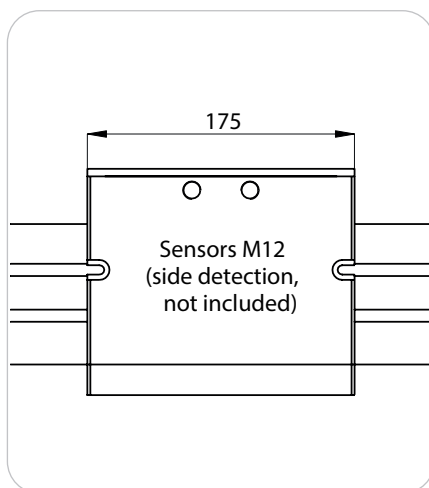
- ✗ Ø 50 mm, double acting
- ✗ lubricated or not, cleaned air, 4 to 6 bars
- ✗ connectors Ø 4 mm pipe (included)
- ✗ 2 sensors (included)

IMPORTANT



✗ The positioning tool must be fitted to a stable and robust structure in order to ensure the accuracy of this function

✗ The positioning tool must be fully guarded once fitted.



	Line 175	Line 250	Line 325	Line 400
Reference :	8417	8418	8419	8424
A (mm)	213	288	363	438
B (mm)	147	222	297	372
C (mm)	85	150	200	270

Designation / Dimensions	Order unit	Reference
Positioning tool 100 kg stroke 6 mm Line 175	1 kit	8417-MW
Positioning tool 100 kg stroke 6 mm Line 250	1 kit	8418-MW
Positioning tool 100 kg stroke 6 mm Line 325	1 kit	8419-MW
Positioning tool 100 kg stroke 6 mm Line 400	1 kit	8424-MW

Positioning tool 100 kg (strokes 50 and 100 mm) Line 175 to 400

Technical data

The 50 mm or 100 mm stroke version of the positioning tool 40 kg ensures a +/- 0.03mm XYZ repeatability.

The positioning tool is manufactured from high grade aluminium. A double-acting pneumatic cylinder lifts and secures the workpiece carrier in hardened steel jaws.

Two sensors fitted on the cylinder body ensure detection of up/down positions.

Threads in the side of the positioning tool allow the use of M12 sensors (not included).

Vertical central available loading: 100 kg. Provide for 2 stops 8016 and 2 pads 8061.

Cylinder:

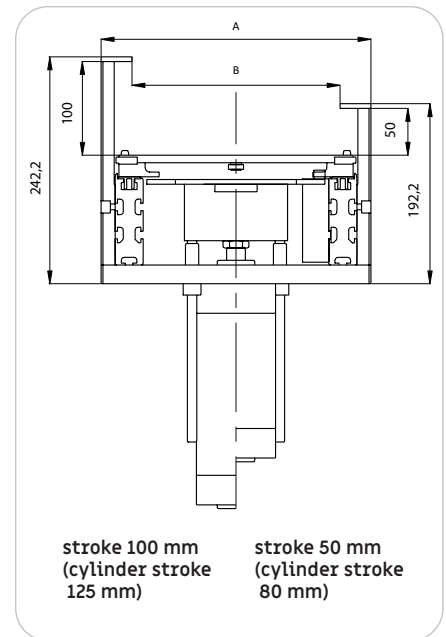
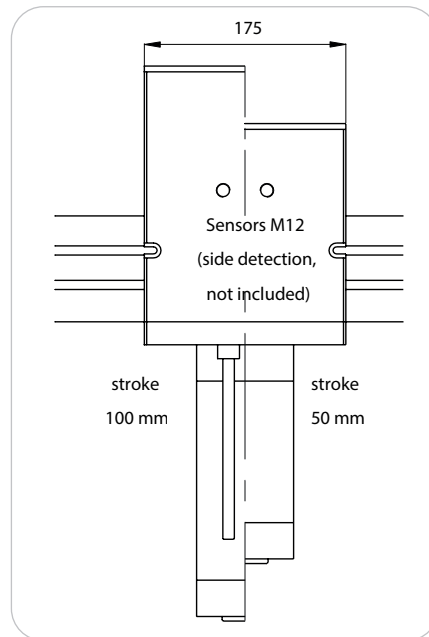
- ✗ Ø 50 mm ISO, double acting
- ✗ lubricated or not, cleaned air, 4 to 6 bars
- ✗ connectors Ø 8 mm pipe (included)
- ✗ 2 sensors (included)

IMPORTANT



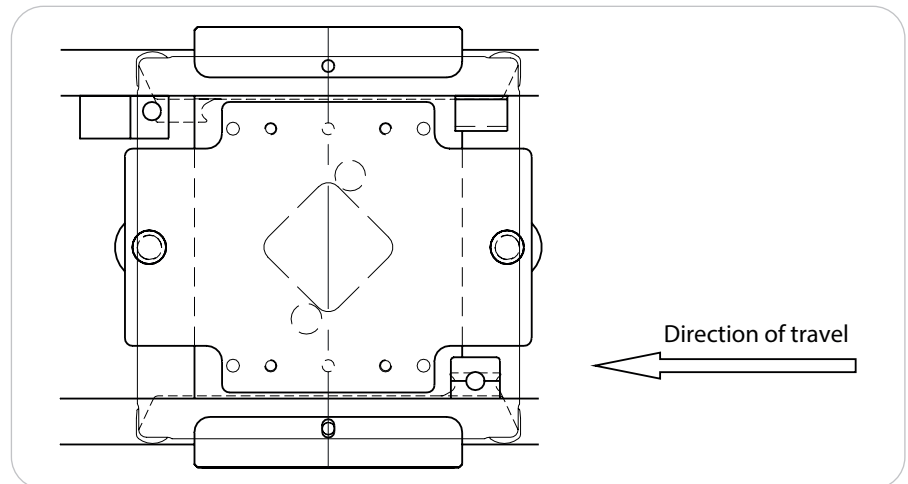
✗ The positioning tool must be fitted to a stable and robust structure in order to ensure the accuracy of this function

✗ The positioning tool must be fully guarded once fitted.



stroke 100 mm
(cylinder stroke
125 mm)

stroke 50 mm
(cylinder stroke
80 mm)



	Line 175	Line 250	Line 325	Line 400
Reference (stroke 50mm)	8117	8118	8119	8124
Reference (stroke 100mm)	8217	8218	8219	8224
A (mm)	213	288	363	438
B (mm)	147	222	297	372

Designation / Dimensions	Order unit	Reference
Positioning tool 100 kg stroke 50 mm Line 175	1 kit	8117
Positioning tool 100 kg stroke 50 mm Line 250	1 kit	8118
Positioning tool 100 kg stroke 50 mm Line 325	1 kit	8119
Positioning tool 100 kg stroke 50 mm Line 400	1 kit	8124
Positioning tool 100 kg stroke 100 mm Line 175	1 kit	8217
Positioning tool 100 kg stroke 100 mm Line 250	1 kit	8218
Positioning tool 100 kg stroke 100 mm Line 325	1 kit	8219
Positioning tool 100 kg stroke 100 mm Line 400	1 kit	8224

Positioning tool anvil (stroke 6 mm) Lines 175 to 400

Technical data

When a process requires precise positioning under strong efforts, the anvil positioning tool ensures a +/- 0.03mm XYZ repeatability. The positioning tool is manufactured from high grade aluminium.

The lift mechanism is designed with synthetic material (reduced maintenance) and is actuated by a double-acting pneumatic.

Two sensors fitted on the cylinder body ensure detection of up/down positions. Threads in the side of the positioning tool allow the use of M12 sensors (not included).

Vertical central available loading: 5000kg (irreversible mechanism). Provide for 2 stops 8016 and 2 pads 8061.

Cylinder:

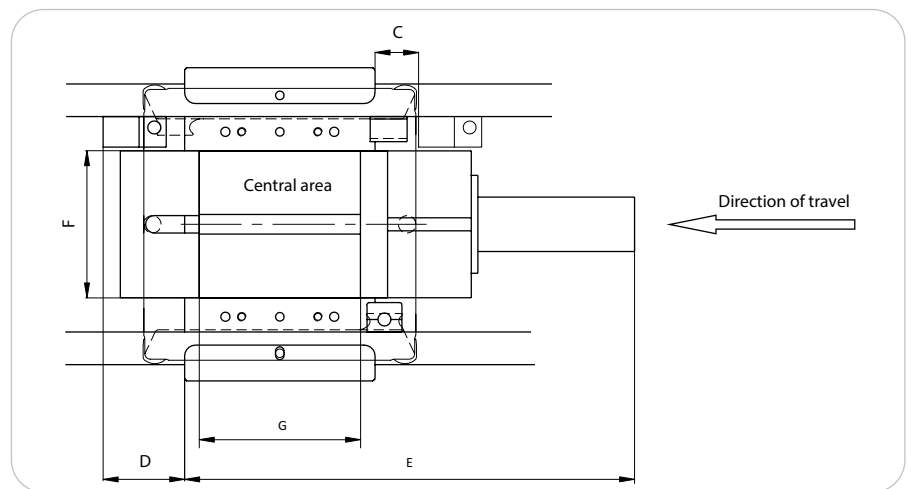
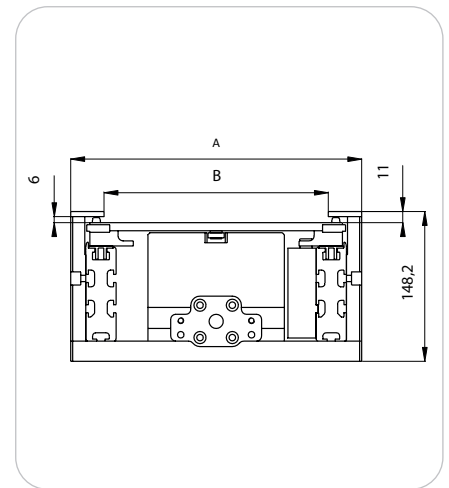
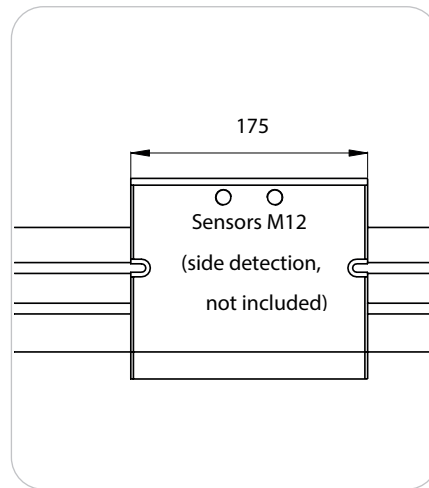
- ✗ Ø 32 mm, double acting
- ✗ lubricated or not, cleaned air, 4 to 6 bars
- ✗ connectors Ø 4 mm pipe (included)
- ✗ 2 sensors (included)

IMPORTANT



✗ The positioning tool must be fitted to a stable and robust structure in order to ensure the accuracy of this function

✗ The positioning tool must be fully guarded once fitted.



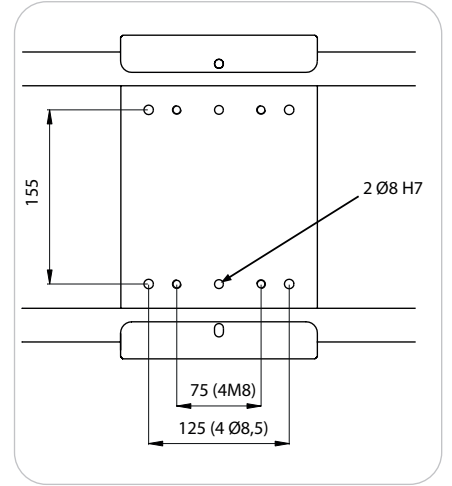
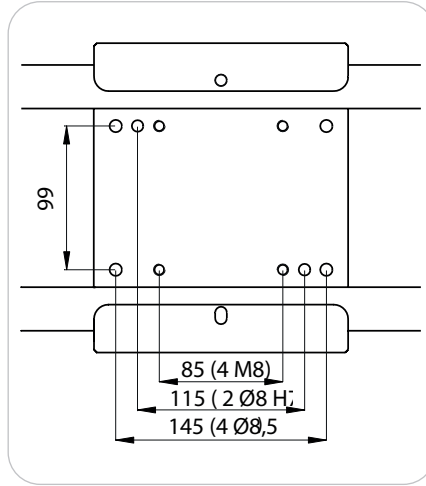
	Line 175	Line 250	Line 325	Line 400
Reference :	8020	8021	8022	8324
A (mm)	213	288	363	438
B (mm)	147	222	297	372
C (mm)	70	40	78	116
D (mm)	38	75	112.5	150
E (mm)	382	413.5		
F (mm)	75	130		
G (mm)	80	140		

Designation / Dimensions	Order unit	Reference
Positioning tool anvil stroke 6 mm Line 175	1 kit	8420
Positioning tool anvil stroke 6 mm Line 250	1 kit	8421
Positioning tool anvil stroke 6 mm Line 325	1 kit	8422
Positioning tool anvil stroke 6 mm Line 400	1 kit	8424

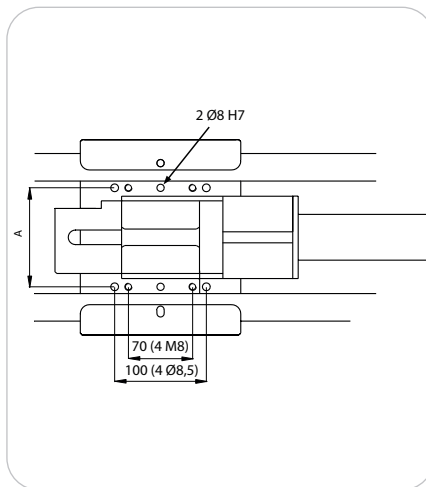
Setting of positioning tools Lines 175 to 400

Technical data

General setting for 100 Kg positioning tools **Lines 175 to 400.**



General setting for anvil positioning tools **Lines 175 to 400.**



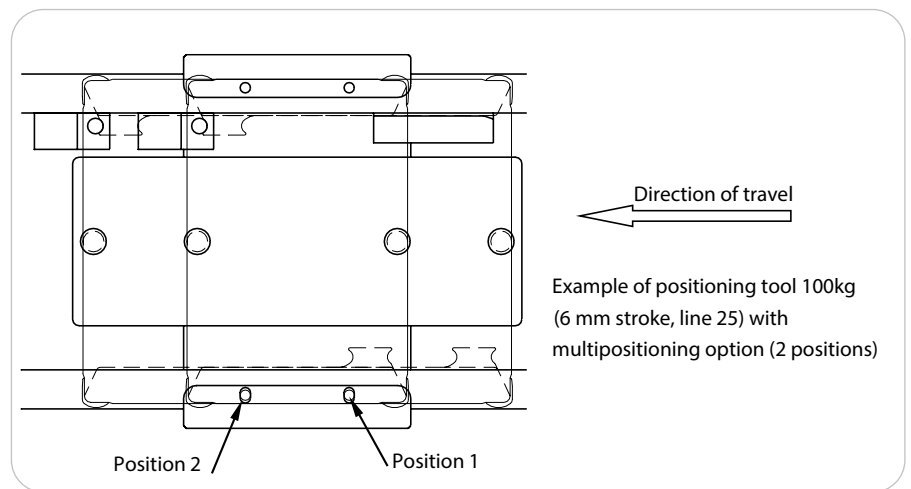
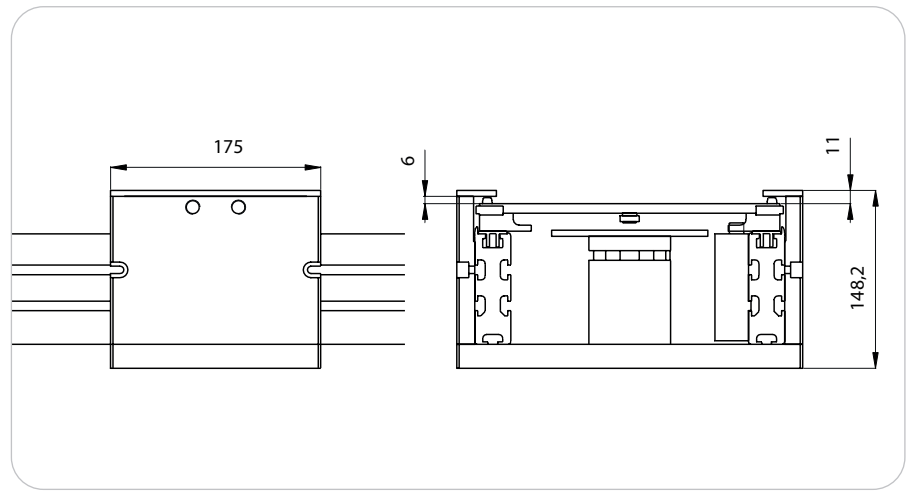
	A (mm)
Voie 175	108
Voie 250	170
Voie 325	
Voie 400	

Multipositioning tool

Technical data

In order to reduce cycle times and to repeat an operation on the same workpiece carrier, 100kg and anvil positioning tools may receive special steel jaws for multiple indexing (2 or 3 positions).

This option is not available for line 100 and is quite difficult to apply to line 175. For lines 250 to 400, it requires a specific study, depending on the number of positions, span and workpiece carrier lifting and sensing.



Technical data

Using the 90° static curve, it is possible to cross from one section perpendicular to another.

Two railwheels beneath the workpiece carriers ensure perfect guidance by fitting into a central 12x22 aluminium rail.

Specially designed claws allow the bed plates to be fitted easily.

In this configuration, accumulation of workpiece carriers is possible. The small content of mechanical elements and features within the 90° curve results in high reliability.

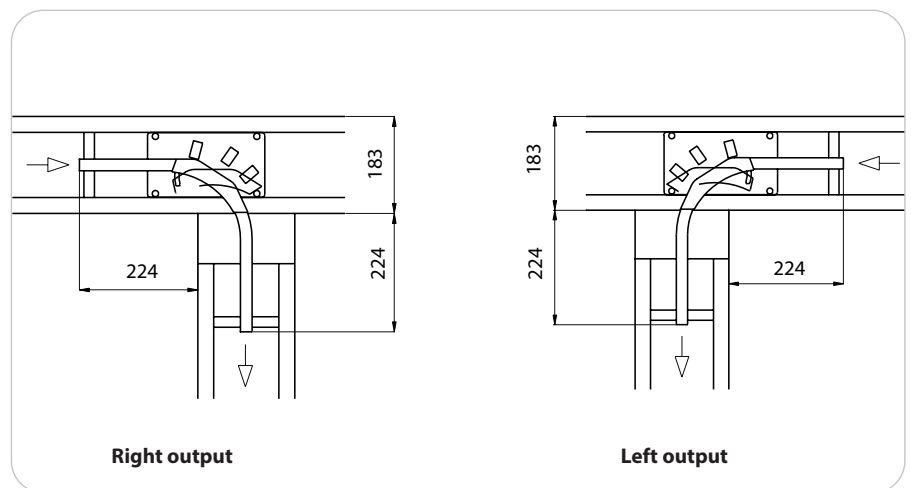
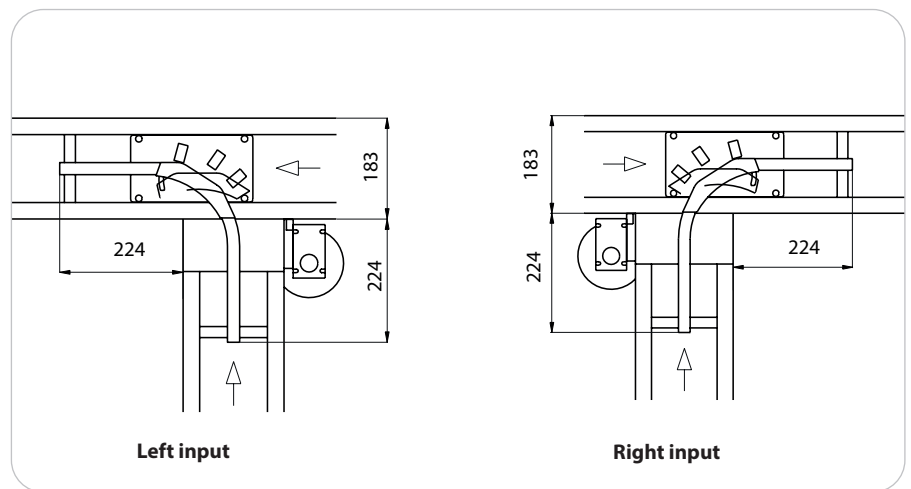
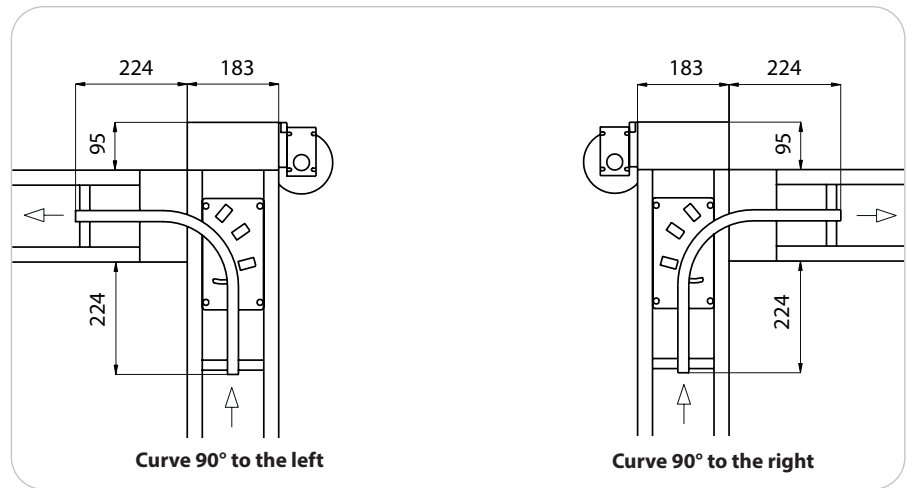
Curve 90° mobile allows workpiece carriers to be introduced from a secondary section to a main one (« input ») or from a main section to a secondary one (« output »). Two railwheels beneath the workpiece carriers ensure perfect guidance by fitting into a central 12x22 aluminium rail.

This function is « mobile » due to the swivel curved central rail.

The curve 90° mobile presents a reduced flow-stoppage rate requiring minimum automation.

Mobile rail cylinder:

- ✗ Ø 15 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø 4mm pipe (included)
- ✗ M8 sensors under mobile rail bearing (not included)

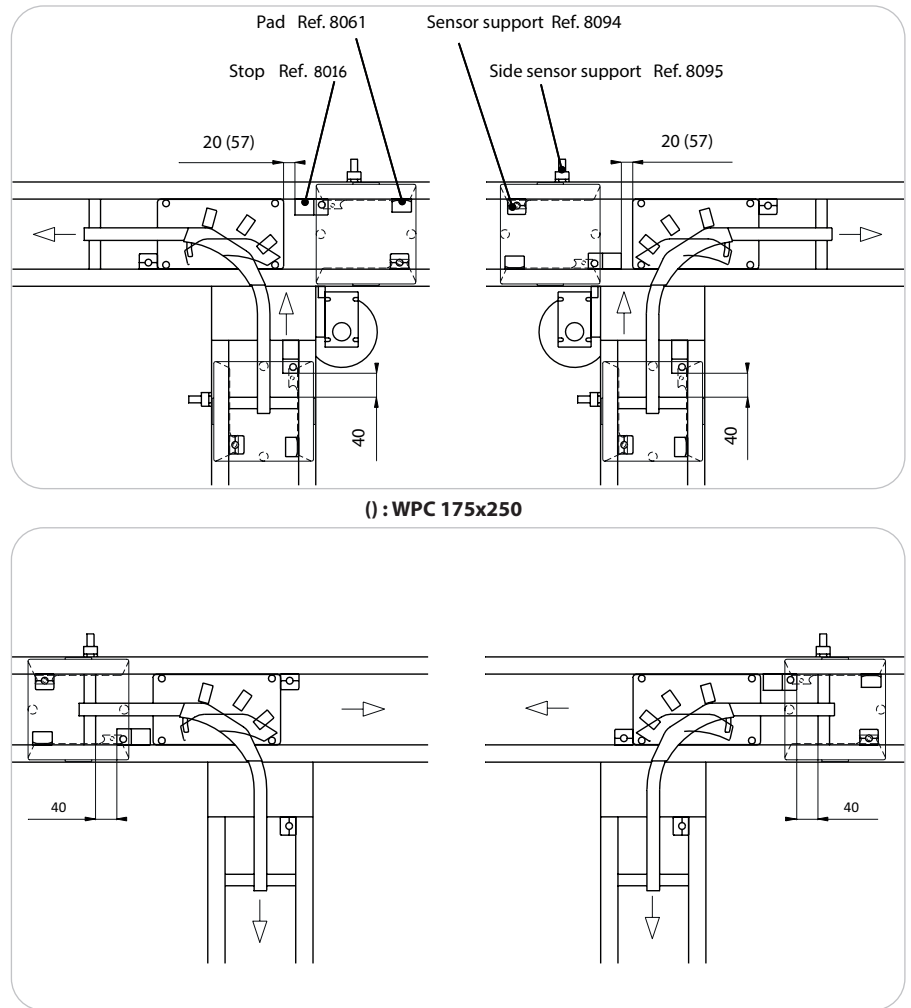


Designation / Dimensions	Order unit	Reference
Curve 90° static to the left Line 175	1 kit	4027
Curve 90° static to the right Line 175	1 kit	4026
Curve 90° mobile left input Line 175	1 kit	4033
Curve 90° mobile Right input Line 175	1 kit	4034
Curve 90° mobile Right output Line 175	1 kit	4033
Curve 90° mobile Left output Line 175	1 kit	4034

Technical data

The minimum distance at which the workpiece carriers may be stopped in relationship to the curve is shown in the drawings below. Both 175x175 and 175x250 workpiece carriers are concerned.

Similarly, to chain up 90° curves (static or mobile), it is compulsory to take care of minimal space as shown in page 261.



Curve 180° Line 175

Technical data

Using the 180° curve, it is possible to cross from one section in parallel to another operating in the opposite direction.

Four combinations cover all possible configurations.

This function is « mobile » due to the swivel curved central rail. In the « static/static » curve, accumulation of workpiece carriers is possible.

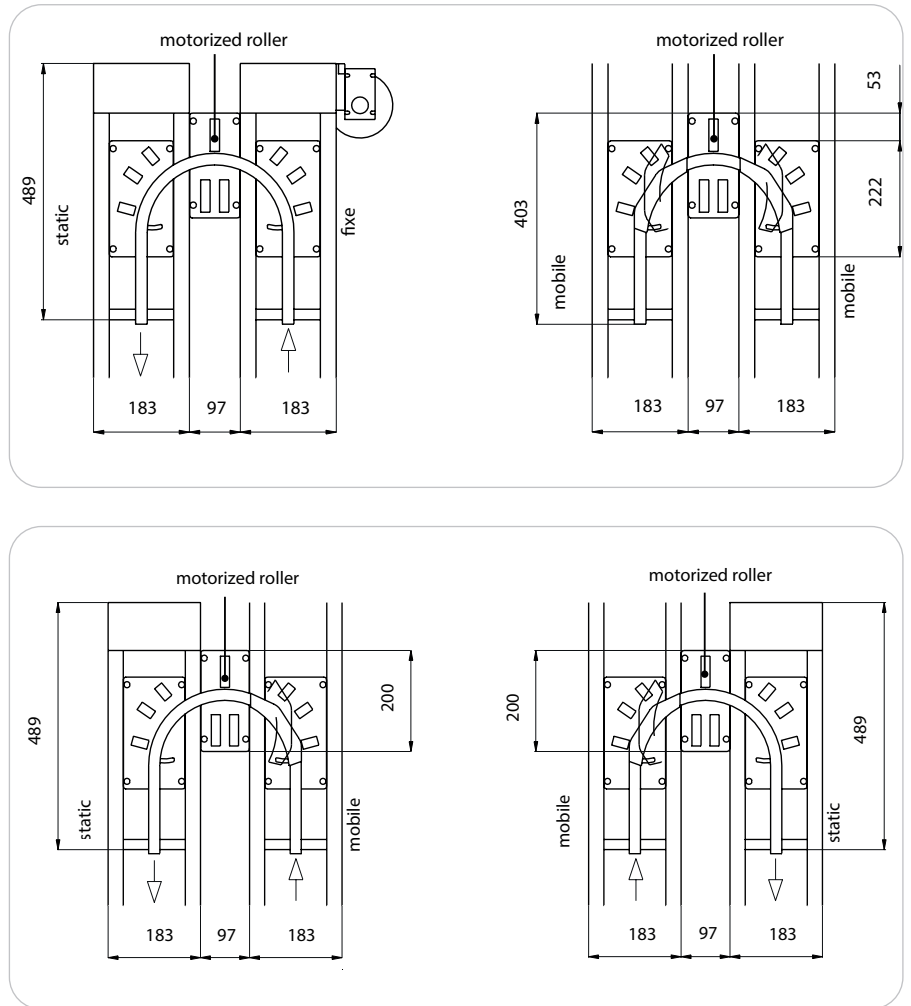
The bed plate between the sections (« middle bed plate ») is equipped with a motorized roller to aid workpiece carriers through the curve.

Mobile rail cylinder:

- ✗ Ø 15 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø4mm pipe (included)
- ✗ M8 sensors under mobile rail bearing (not included)

Motorized roller motor:

- ✗ power: 6,3 W
- ✗ voltage: 220 V single-phase
- ✗ frequency: 50 Hz
- ✗ rated current: 73 mA

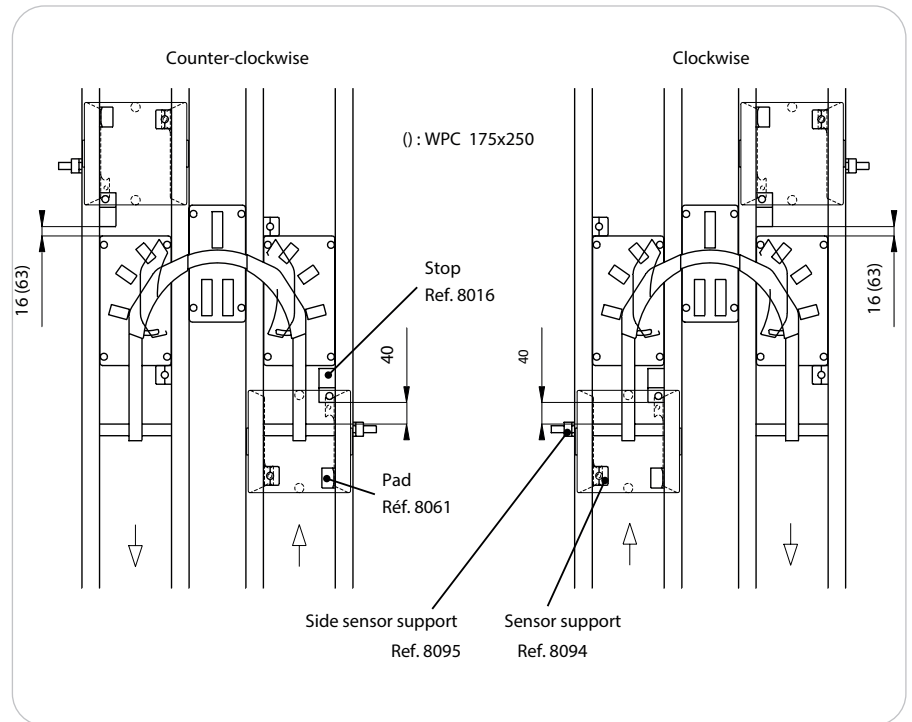


Designation / Dimensions	Order unit	Reference
Curve 180° Static/static Line 175	1 kit	4064
Curve 180° Static/mobile Line 175	1 kit	4067
Curve 180° Mobile/mobile Line 175	1 kit	4073
Curve 180° Mobile/static Line 175	1 kit	4068

Technical data

The minimum distance at which the workpiece carriers may be stopped in relationship to the curve is shown in the drawings below.

Both 175x175 and 175x250 workpiece carriers are concerned.



Combination input/output Line 175

Technical data

The function of the input/output combination is adapted to transfer workpiece carriers from one section to another operating in parallel and running in the same direction.

This function is « mobile » due to the swivel curved 12x22 rail. The bed plate between the sections (« middle bed plate ») is equipped with two motorized rollers (driven by only one motor) to aid workpiece carriers through the transfer sections.

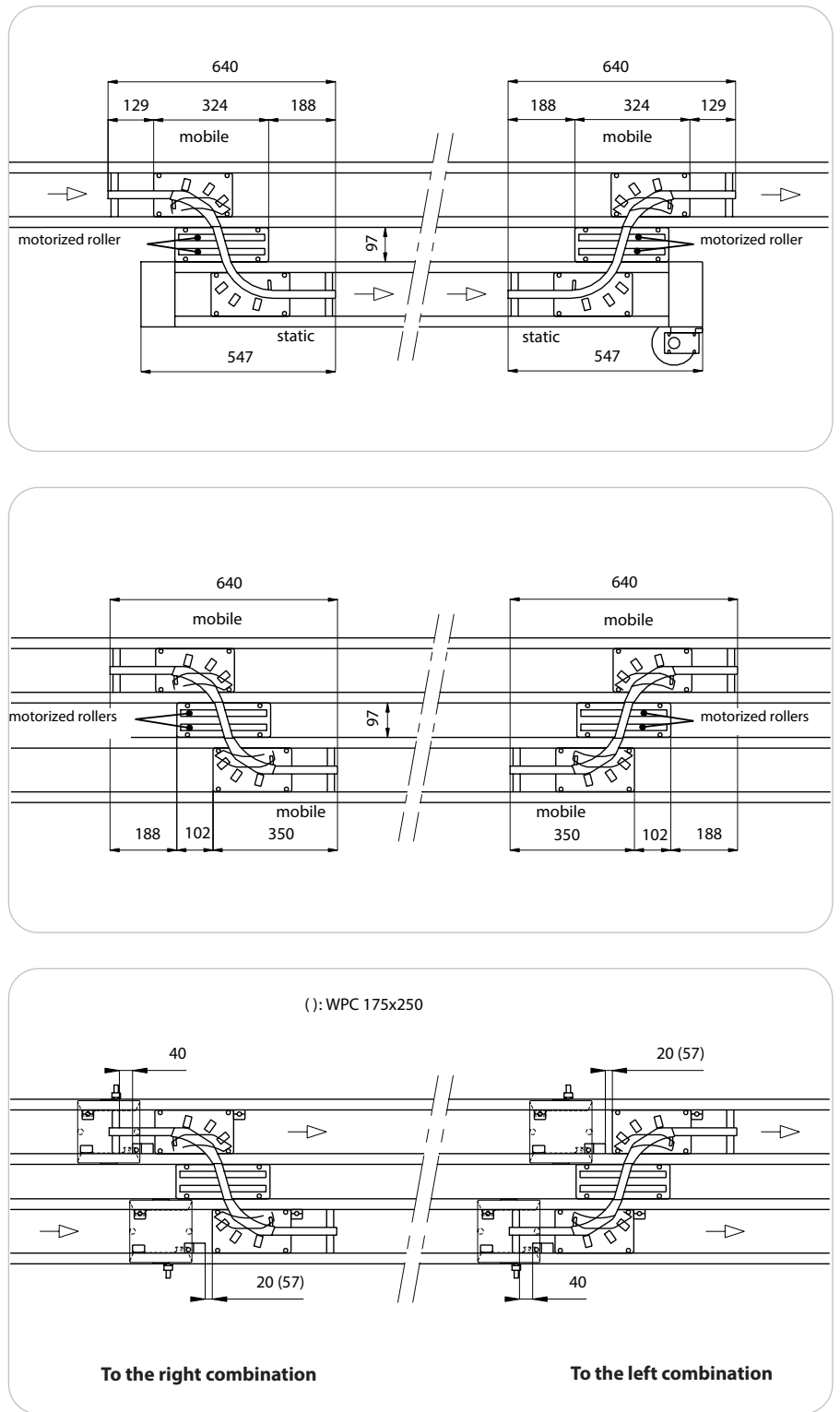
Mobile rail cylinder:

- ✗ Ø 15 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø4mm pipe (included)
- ✗ M8 sensors under mobile rail bearing (not included)

Motorized roller motor:

- ✗ power: 6,3 W
- ✗ voltage: 220 V single-phase
- ✗ frequency: 50 Hz
- ✗ rated current: 73 mA

The minimum distance at which the workpiece carriers may be stopped in relationship to the combination is shown in the drawings below.



Designation / Dimensions	Order unit	Reference
Combination right input/ouput, static/mobile Line 175	1 kit	4077
Combination left input/ouput, static/mobile Line 175	1 kit	4080
Combination right input/ouput, mobile/mobile Line 175	1 kit	4078
Combinationleft input/ouput, mobile/mobile Line 175	1 kit	4081

Technical data

Using the 90° static curve, it is possible to cross from one section perpendicular to another. Two railwheels beneath the workpiece carriers ensure perfect guidance by fitting into a central 12x22 aluminium rail.

Specially designed claws allow the bed plates to be fitted easily.

In this configuration, accumulation of workpiece carriers is possible.

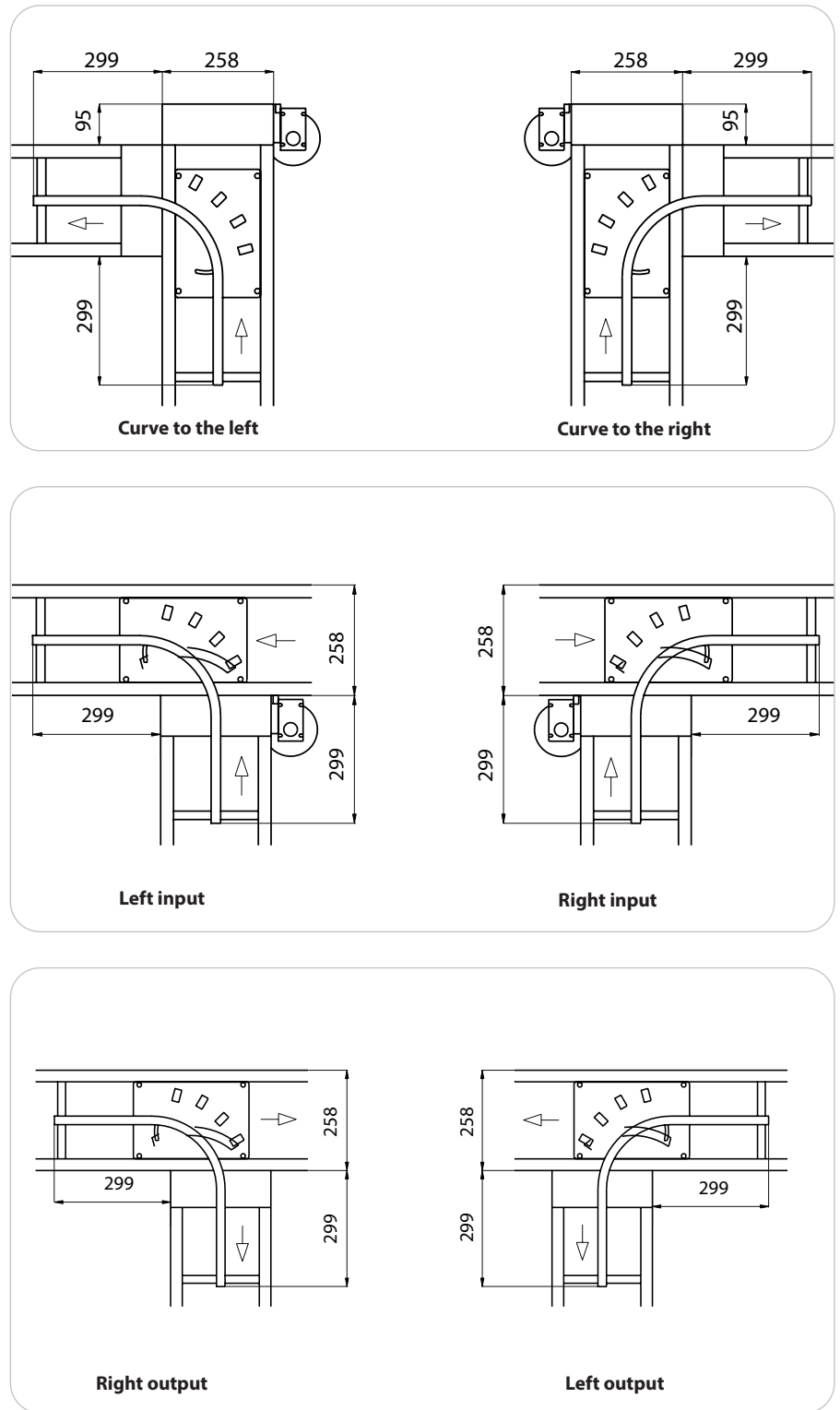
The small content of mechanical elements and features within the 90° curve results in high reliability.

Curve 90° mobile allows workpiece carriers to be introduced from a secondary section to a main one (« input ») or from a main section to a secondary one (« output »). Two railwheels beneath the workpiece carriers ensure perfect guidance by fitting into a central 12x22 aluminium rail.

This function is « mobile » due to the swivel curved central rail. The 90° curve mobile presents a reduced flow-stoppage rate requiring minimum automation.

Mobile rail cylinder:

- ✗ Ø 15 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø4mm pipe (included)
- ✗ M8 sensors under mobile rail bearing (not included)



Designation / Dimensions	Order unit	Reference
Curve 90° to the left, static Line 250	1 kit	4029
Curve 90° to the right, static Line 250	1 kit	4028
Curve 90° left input, mobile Line 250	1 kit	4035
Curve 90° right input, mobile Line 250	1 kit	4036
Curve 90° right output, mobile Line 250	1 kit	4035
Curve 90° left output, mobile Line 250	1 kit	4036

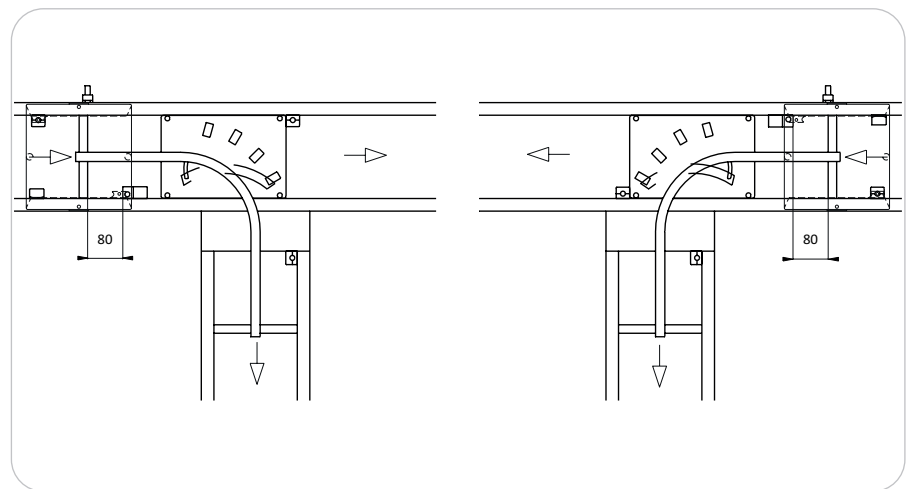
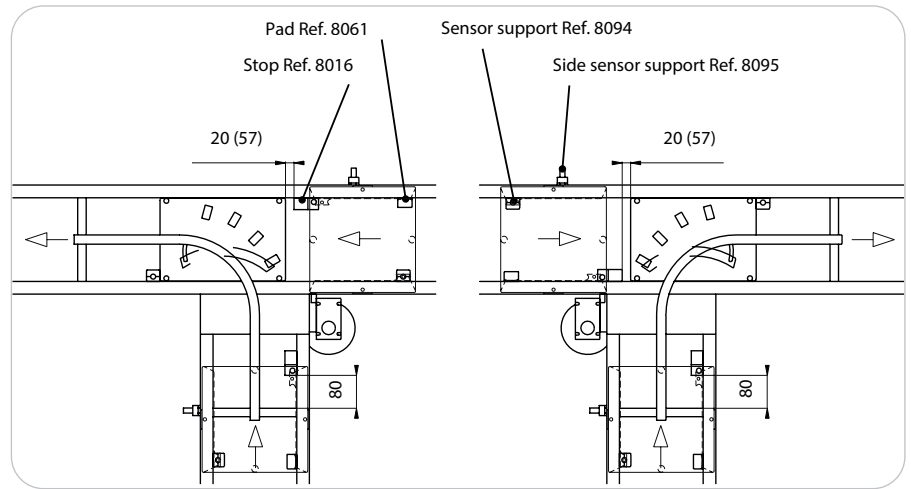
Curve 90° (gestion) Line 250

Technical data

The minimum distance at which the workpiece carriers may be stopped in relationship to the curve is shown in the drawings below.

Both 250x250 and 250x325 workpiece carriers are concerned.

Similarly, to chain up 90° curves (static or mobile), it is compulsory to take care of minimal space as shown in page 261.



() : WPC 250x325

Curve 180° Line 250

Technical data

Using the 180° curve, it is possible to cross from one section in parallel to another operating in the opposite direction.

Four combinations cover all possible configurations.

This function is « mobile » due to the swivel curved central rail. In the « static/static » curve, accumulation of workpiece carriers is possible.

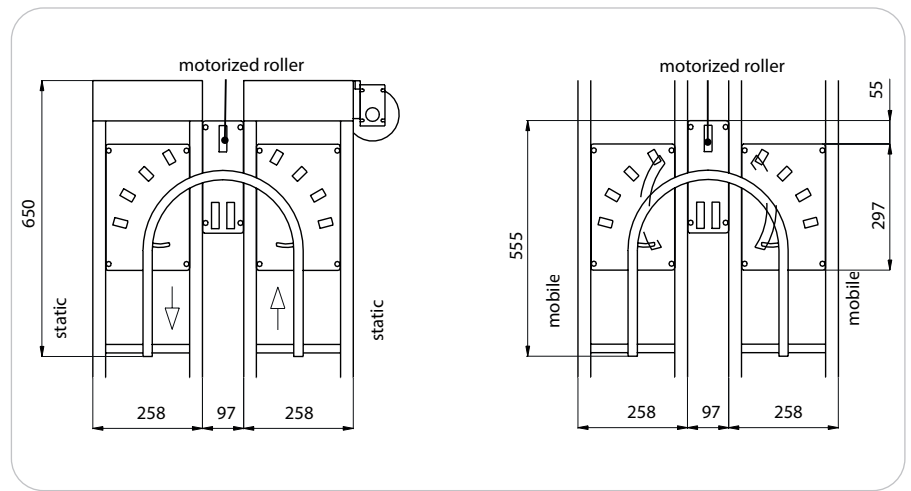
The bed plate between the sections, (« middle bed plate ») is equipped with a motorized roller to aid workpiece carriers through the curve.

Mobile rail cylinder:

- ✗ Ø 15 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø4mm pipe (included)
- ✗ M8 sensors under mobile rail bearing (not included)

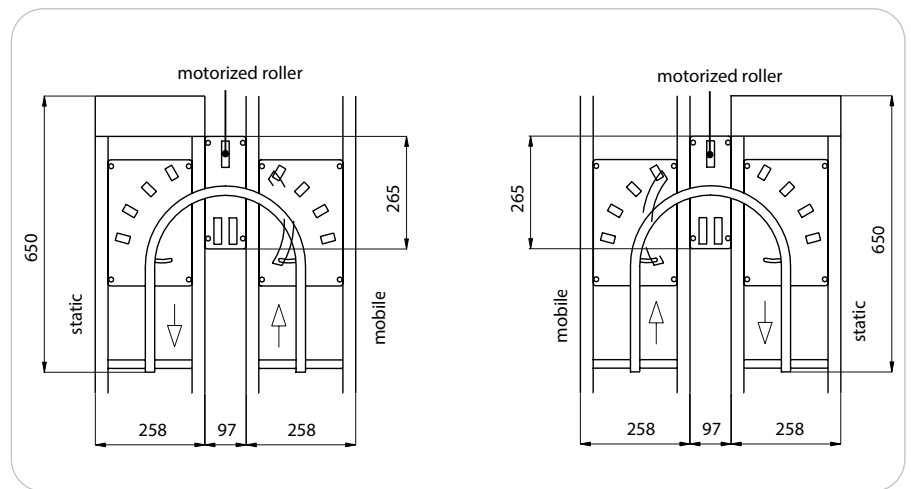
Motorized roller motor:

- ✗ power: 6,3 W
- ✗ voltage: 220 V single-phase
- ✗ frequency: 50 Hz
- ✗ rated current: 73 mA



Curve 180° Static/static

Curve 180° Mobile/mobile



Curve 180° Static/mobile

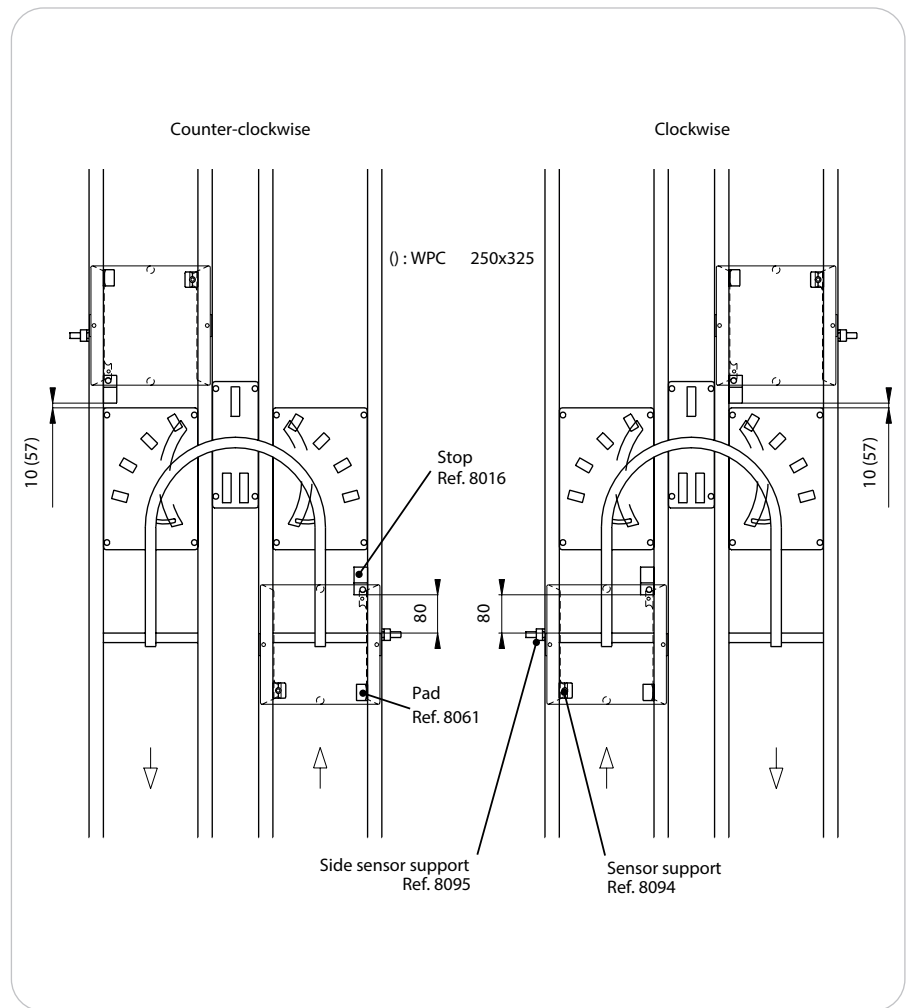
Curve 180° Mobile/static

Designation / Dimensions	Order unit	Reference
Curve 180° static/static Line 250	1 kit	4065
Curve 180° static/mobile Line 250	1 kit	4069
Curve 180° mobile/mobile Line 250	1 kit	4074
Curve 180° mobile/static Line 250	1 kit	4070

Technical data

The minimum distance at which the workpiece carriers may be stopped in relationship to the curve is shown in the drawings below.

Both 250x250 and 250x325 workpiece carriers are concerned.



Combination input/output Line 250

Technical data

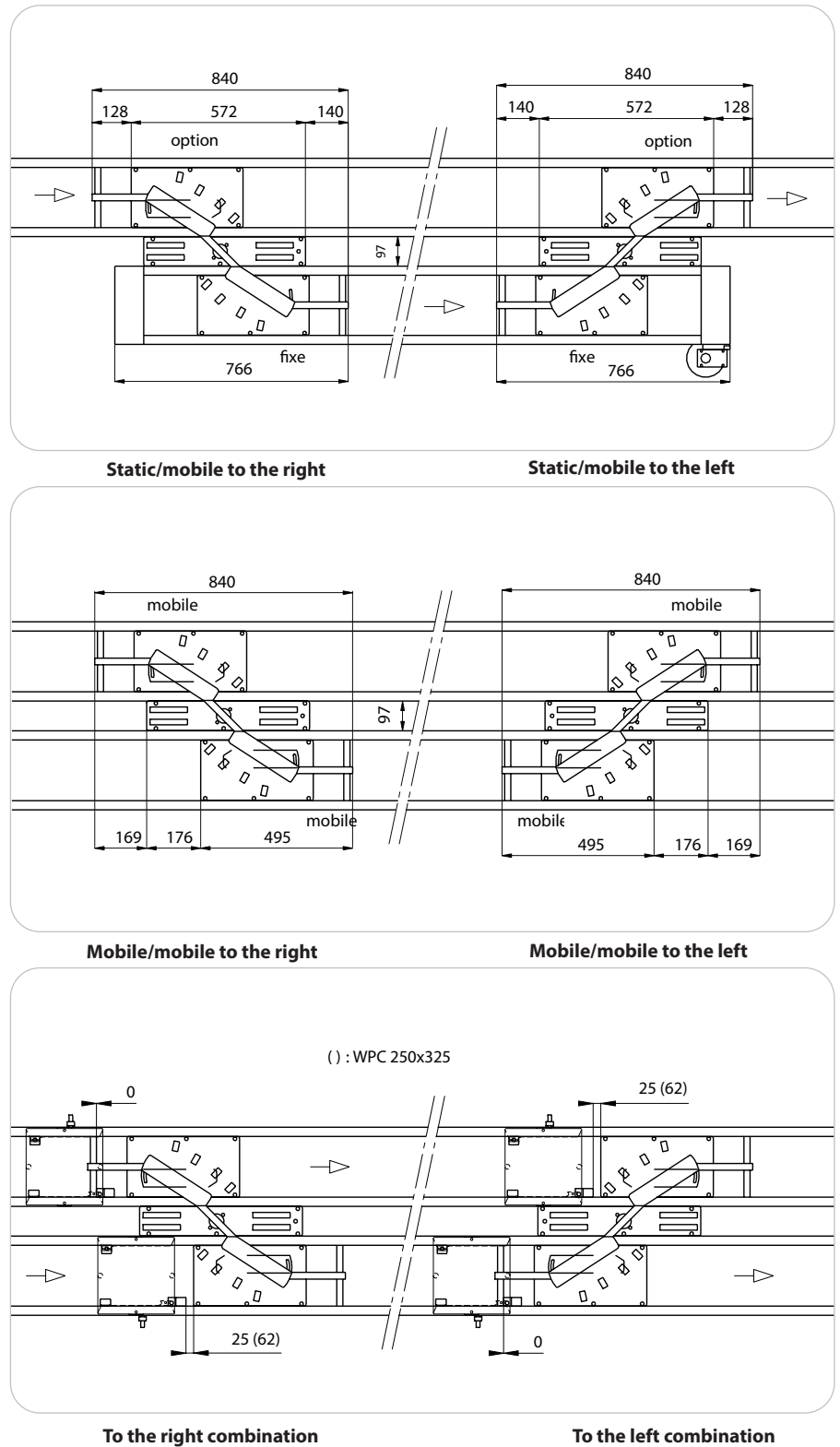
The function of the input/output combination is adapted to transfer workpiece carriers from one section to another operating in parallel and running in the same direction.

This function is « mobile » due to the swivel curved 12x22 rail.

Mobile rail cylinder:

- ✗ Ø 15 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø 4mm pipe (included)
- ✗ M8 sensors under mobile rail bearing (not included)

The minimum distance at which the workpiece carriers may be stopped in relationship to the combination is shown in the drawings below.



Designation / Dimensions	Order unit	Reference
Combination right input/ouput, static/mobile Line 250	1 kit	4083
Combination left input/ouput, static/mobile Line 250	1 kit	4086
Combination right input/ouput, mobile/mobile Line 250	1 kit	4084
Combination left input/ouput, mobile/mobile Line 250	1 kit	4087

Technical data

Using the 90° static curve, it is possible to cross from one section perpendicular to another. Two railwheels beneath the workpiece carriers ensure perfect guidance by fitting into a central 12x22 aluminium rail. Specially designed claws allow the bed plates to be fitted easily.

The bed plate is equipped with a motorized roller to aid workpiece carrier through the curve. In this configuration, accumulation of workpiece carriers is possible. The small content of mechanical elements and features within the 90° curve results in high reliability.

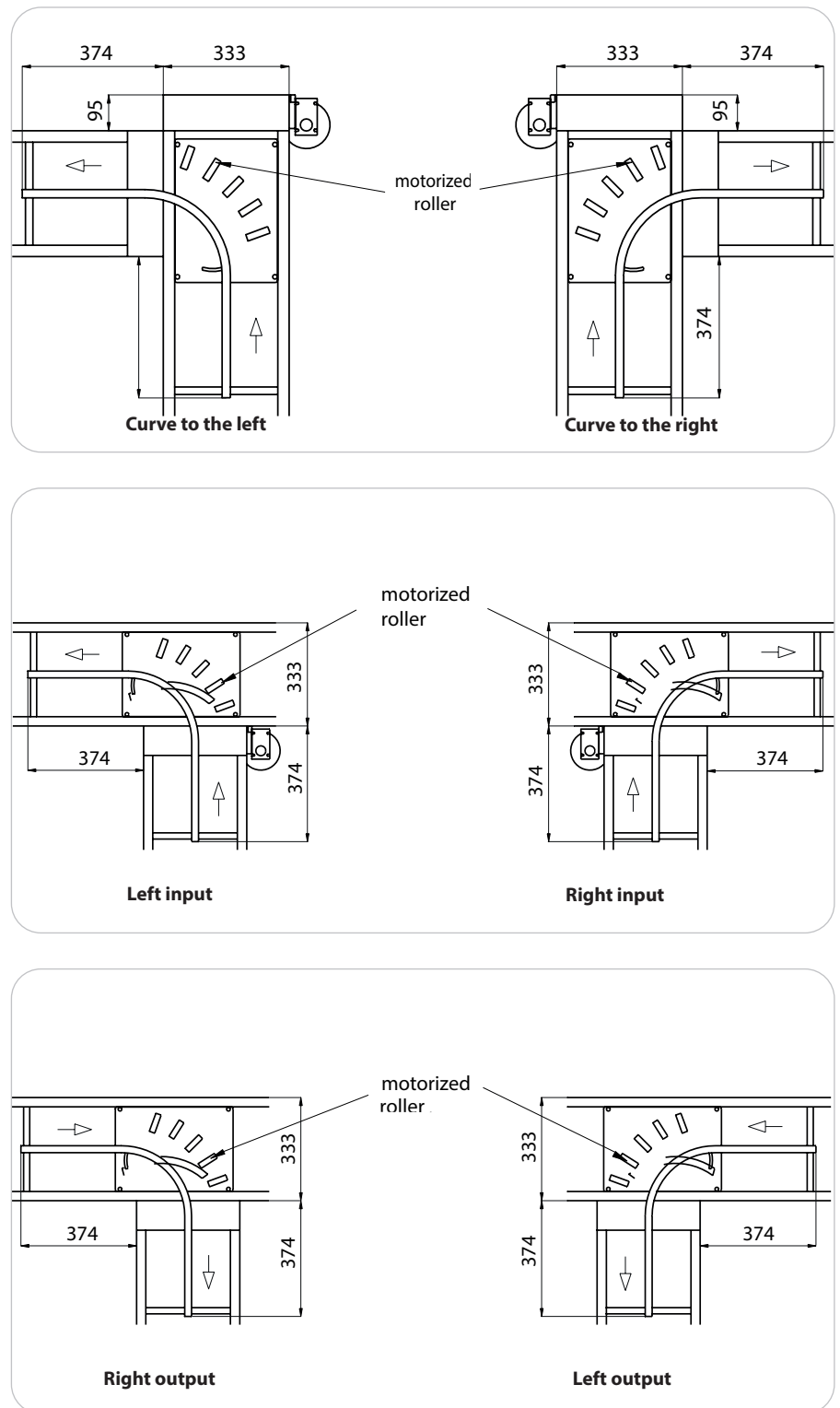
The curve 90° mobile allows workpiece carriers to be introduced from a secondary section to a main one (« input ») or from a main section to a secondary one (« output »). Two railwheels beneath the workpiece carriers ensure perfect guidance by fitting into a central 12x22 aluminium rail. The bed plate is equipped with a motorized roller to aid workpiece carrier through the curve. This function is « mobile » due to the swivel curved central rail. The 90° curve mobile presents a reduced flow-stoppage rate requiring minimum automation.

Mobile rail cylinder:

- ✗ Ø 15 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø 4mm pipe (included)
- ✗ M8 sensors under mobile rail bearing (not included)

Motorized roller motor:

- ✗ power: 6,3 W
- ✗ voltage: 220 V single-phase
- ✗ frequency: 50 Hz
- ✗ rated current: 73 mA



Designation / Dimensions	Order unit	Reference
Curve 90° to the left, static Line 325	1 kit	4031
Curve 90° to the right, static Line 325	1 kit	4030
Curve 90° left input, mobile Line 325	1 kit	4037
Curve 90° right input ,mobile Line 325	1 kit	4038
Curve 90° right output, mobile Line 325	1 kit	4037
Curve 90° left output, mobile Line 325	1 kit	4038

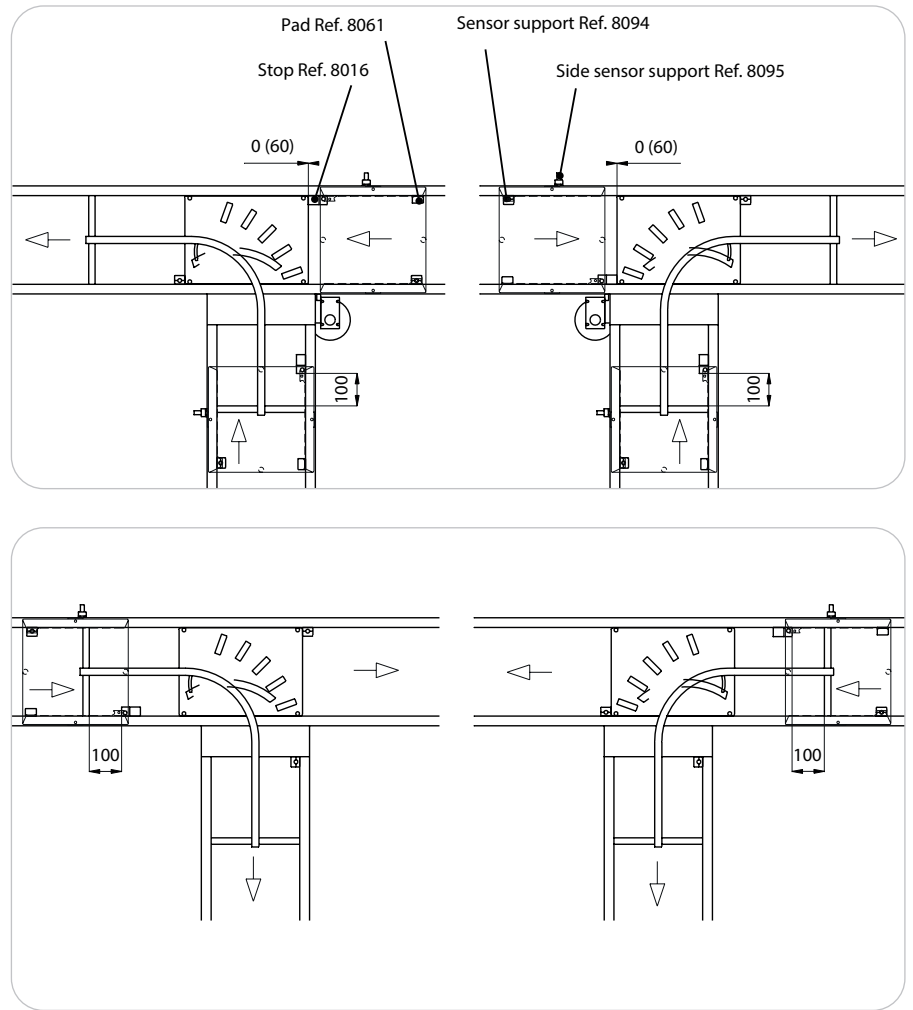
Curve 90° (gestion)

Line 325

Technical data

The minimum distance at which the workpiece carriers may be stopped in relationship to the curve is shown in the drawings below. Both 325x325 and 325x475 workpiece carriers are concerned.

Similarly, to chain up 90° curves (static or mobile), it is compulsory to take care of minimal space as shown in page 261.



() : WPC 325x475

Curve 180° Line 325

Technical data

Using the 180° curve, it is possible to cross from one section in parallel to another operating in the opposite direction.

Four combinations cover all possible configurations.

This function is « mobile » due to the swivel curved central rail. In the « static/static » curve, accumulation of workpiece carriers is possible.

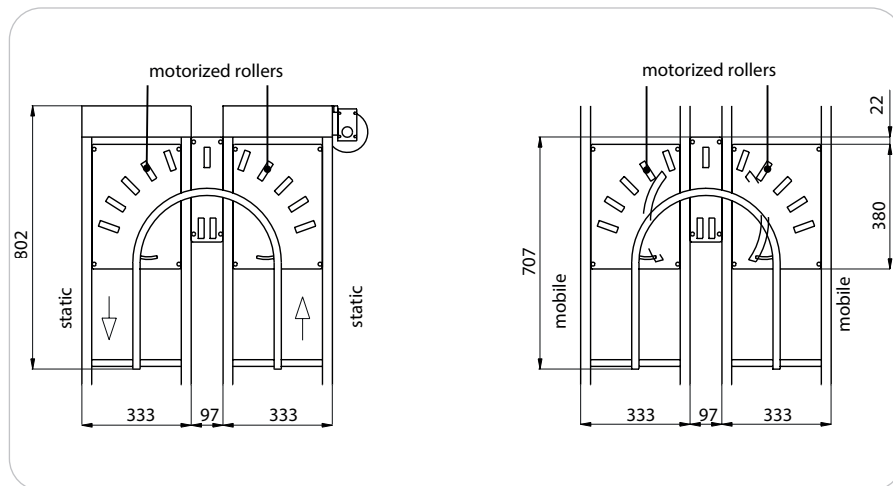
Each input and output bed plate is equipped with a motorized roller to aid workpiece carriers through the curve.

Mobile rail cylinder:

- ✗ Ø 15 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø 4 mm pipe (included)
- ✗ M8 sensors under mobile rail bearing (not included)

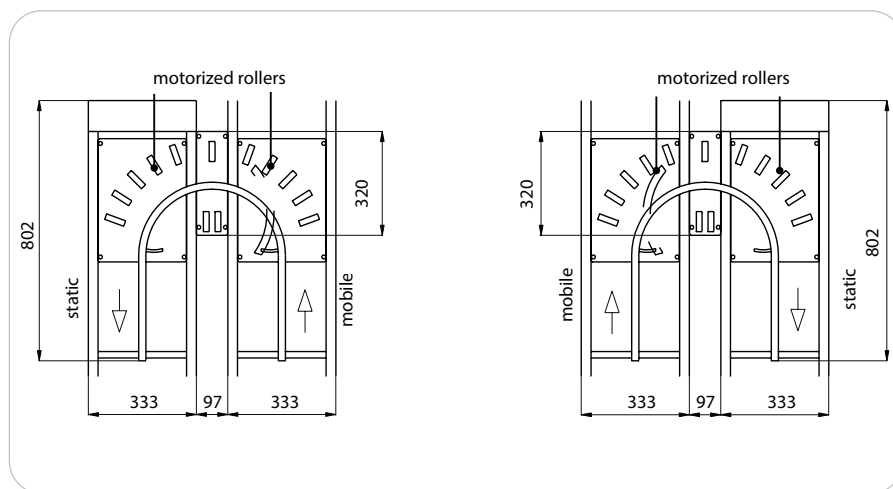
Motorized roller motor:

- ✗ power: 6,3 W
- ✗ voltage: 220 V single-phase
- ✗ frequency: 50 Hz
- ✗ rated current: 73 mA



Curve 180° Static/static

Curve 180° Mobile/mobile



Curve 180° Static/mobile

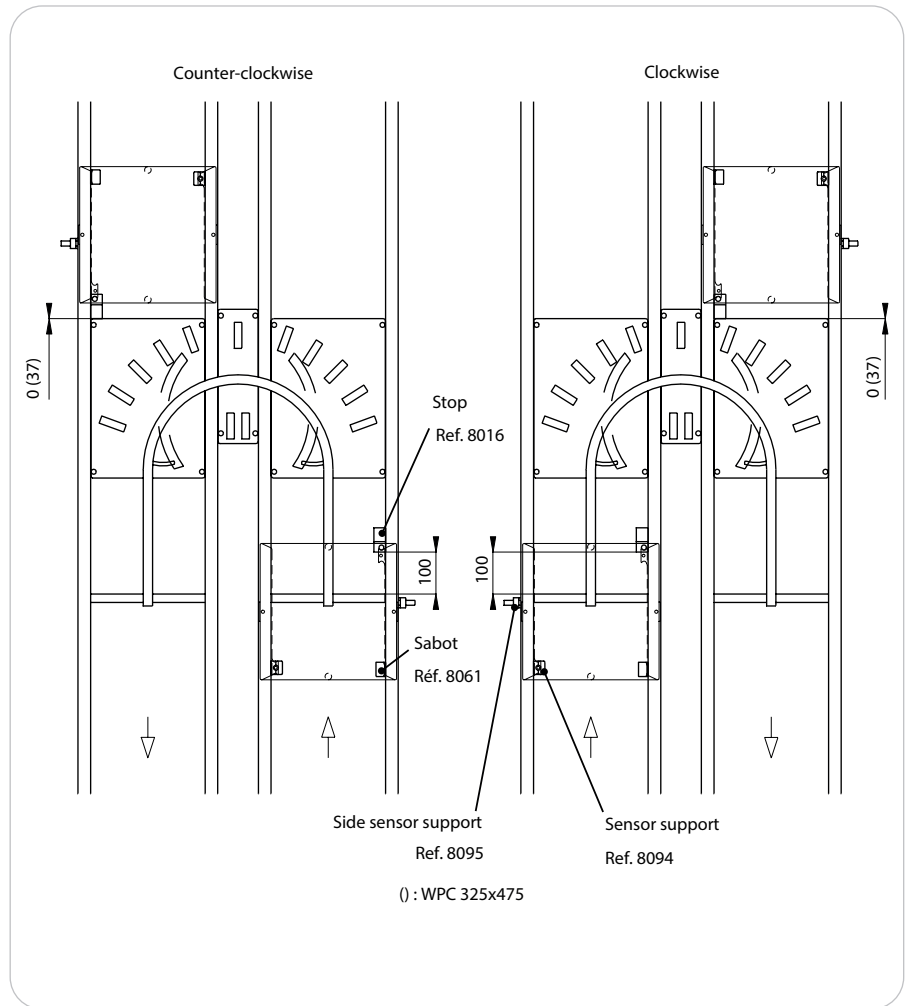
Curve 180° Mobile/static

Designation / Dimensions	Order unit	Reference
Curve 180° Static/static Line 325	1 kit	4066
Curve 180° Static/mobile Line 325	1 kit	4071
Curve 180° Mobile/mobile Line 325	1 kit	4075
Curve 180° Mobile/static Line 325	1 kit	4072

Technical data

The minimum distance at which the workpiece carriers may be stopped in relationship to the curve is shown in the drawings below.

Both 325x325 and 325x475 workpiece carriers are concerned.



Combination input/output Line 325

Technical data

The function of the input/output combination is adapted to transfer workpiece carriers from one section to another operating in parallel and running in the same direction.

This function is « mobile » due to the swivel curved 12x22 rail. Each input and output bed plate is equipped with a motorized roller to aid workpiece carriers through the curve.

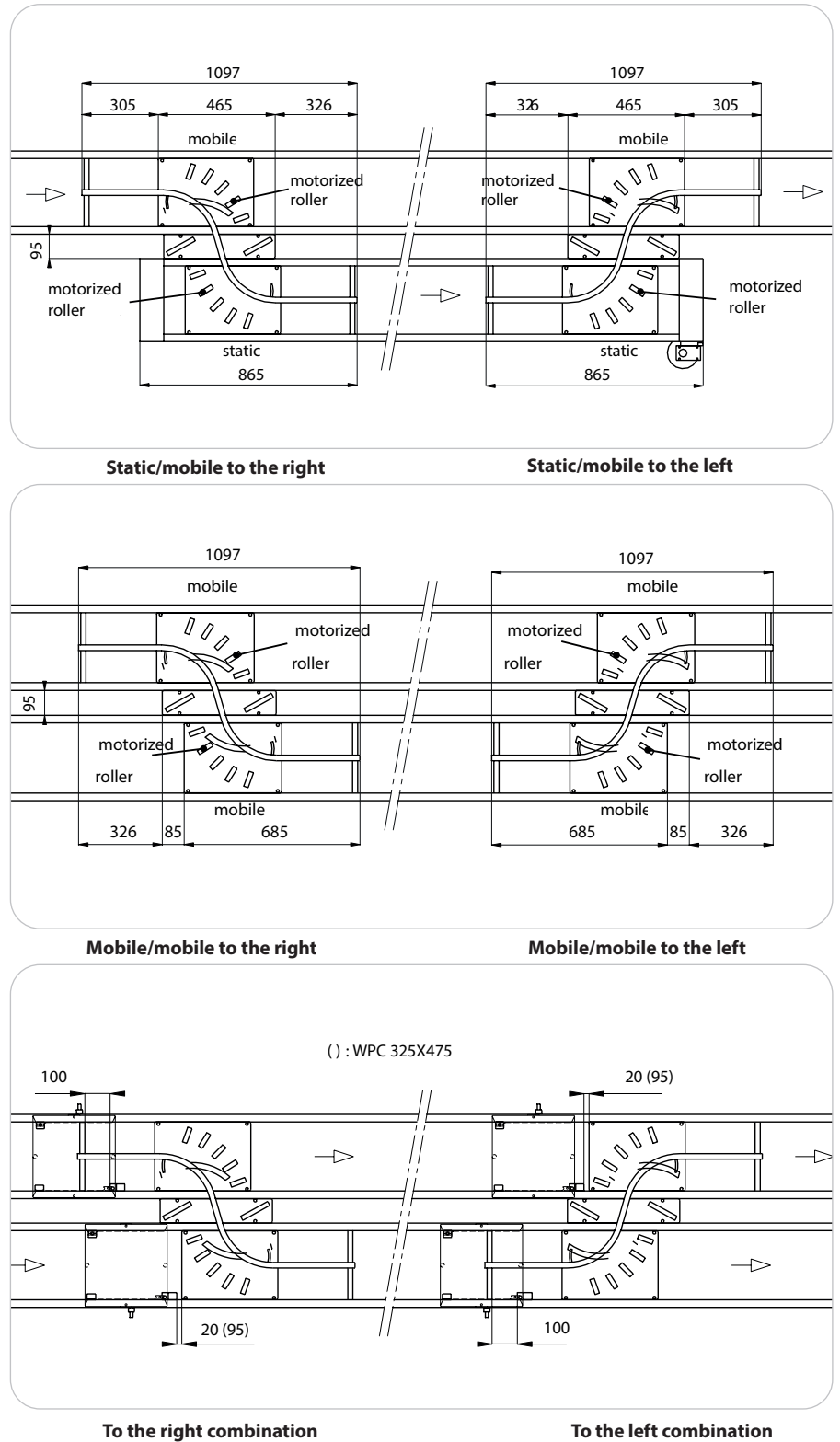
Mobile rail cylinder:

- ✗ Ø 15 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø 4 mm pipe (included)
- ✗ M8 sensors under mobile rail bearing (not included)

Motorized roller motor:

- ✗ power: 6,3 W
- ✗ voltage: 220 V single-phase
- ✗ frequency: 50 Hz
- ✗ rated current: 73 mA

The minimum distance at which the workpiece carriers may be stopped in relationship to the combination is shown in the drawings below.



Designation / Dimensions	Order unit	Reference
Combination right input/ouput, static/mobile Line 325	1 kit	4089
Combination left input/ouput, static/mobile Line 325	1 kit	4092
Combination right input/ouput, mobile/mobile Line 325	1 kit	4090
Combination left input/ouput, mobile/mobile Line 325	1 kit	4093

Technical data

Using the 90° static curve, it is possible to cross from one section perpendicular to another. Two railwheels beneath the workpiece carriers ensure perfect guidance by fitting into a central 12x22 aluminium rail. Specially designed claws allow the bed plates to be fitted easily. The bed plate is equipped with a motorized roller to aid workpiece carrier through the curve. In this configuration, accumulation of workpiece carriers is possible. The small content of mechanical elements and features within the 90° curve results in high reliability.

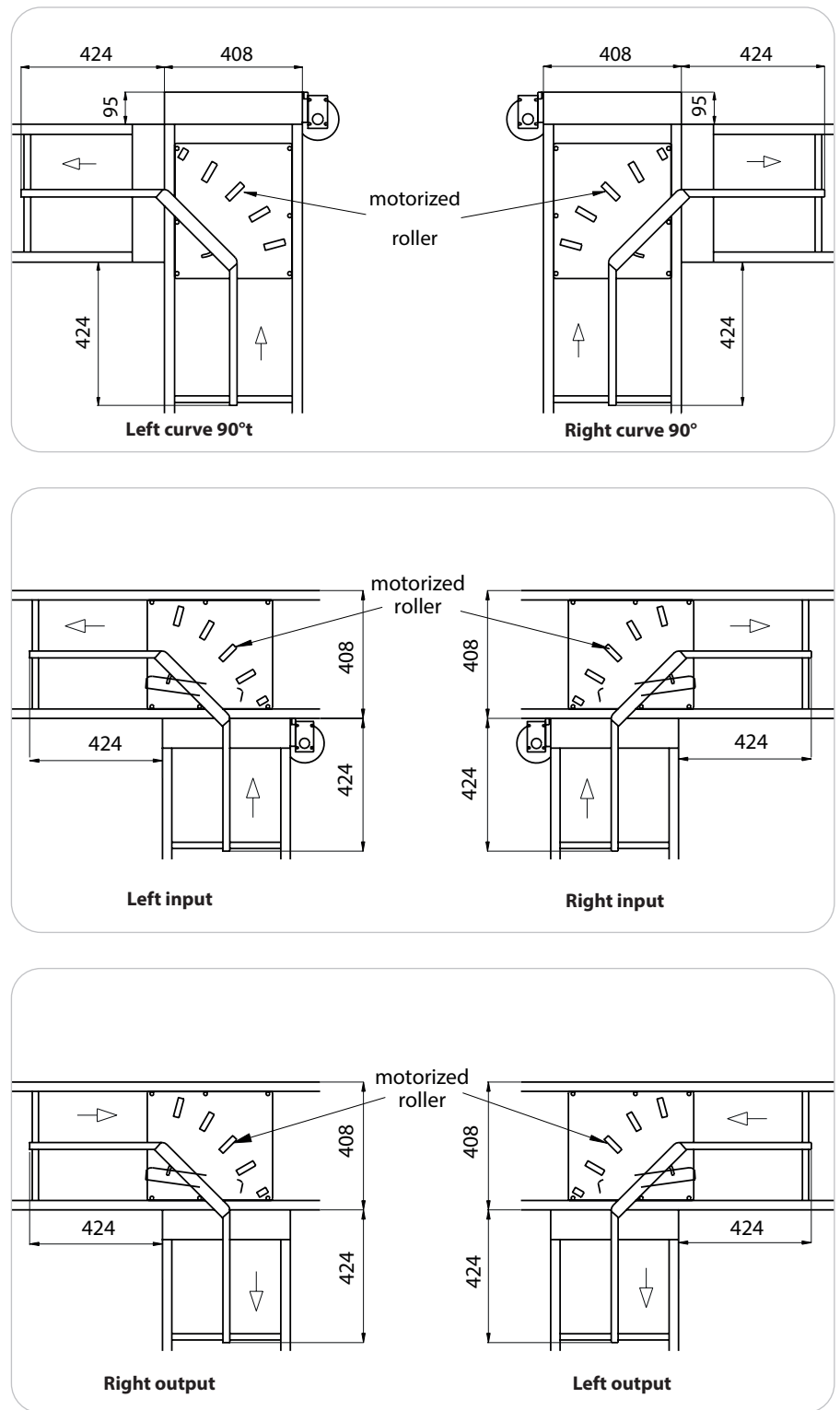
Curve 90° mobile allow workpiece carriers to be introduced from a secondary section to a main one (« input ») or from a main section to a secondary one (« output »). Two railwheels beneath the workpiece carriers ensure perfect guidance by fitting into a central 12x22 aluminium rail. The bed plate is equipped with a motorized roller to aid workpiece carrier through the curve. This function is « mobile » due to the swivel curved central rail. The 90° curve mobile presents a reduced flow-stoppage rate requiring minimum automation.

Mobile rail cylinder:

- x** Ø 15 mm, double acting
- x** lubricated or not, cleaned air, 5 to 6 bars
- x** connectors for Ø 4 mm pipe (included)
- x** M8 sensors under mobile rail bearing (not included)

Motorized roller motor:

- x** power: 6,3 W
- x** voltage: 220 V single-phase
- x** frequency: 50 Hz
- x** rated current: 73 mA



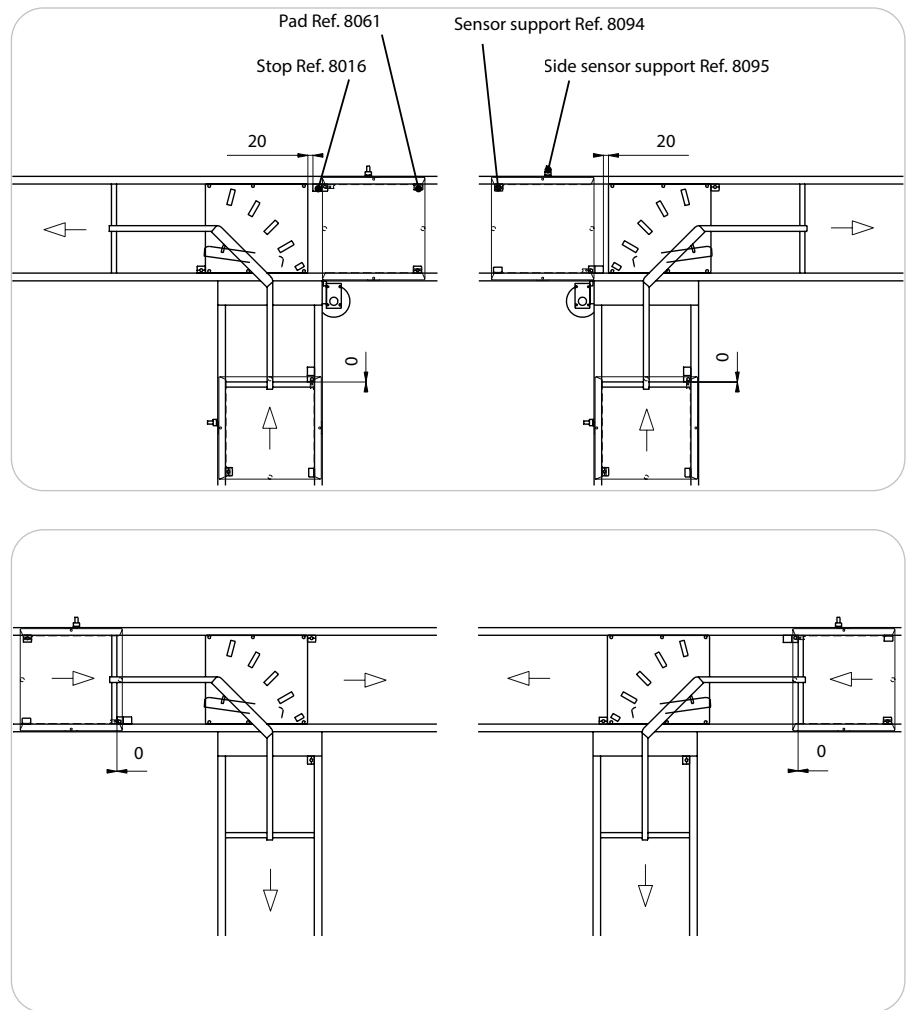
Designation / Dimensions	Order unit	Reference
Curve 90° to the left, static Line 325	1 kit	4111
Curve 90° to the right, static Line 325	1 kit	4110
Curve 90° left input, mobile Line 325	1 kit	4112
Curve 90° right input, mobile Line 325	1 kit	4113
Curve 90° right output, mobile Line 325	1 kit	4112
Curve 90° left output, mobile Line 325	1 kit	4113

Curve 90° (gestion) Line 400

Technical data

The minimum distance at which the workpiece carriers may be stopped in relationship to the curve is shown in the drawings below. 400x400 workpiece carriers are concerned.

Similarly, to chain up 90° curves (static or mobile), it is compulsory to take care of minimal space as shown in page 261.



() : WPC 325x475

Combination input/output Line 400

Technical data

The function of the input/output combination is adapted to transfer workpiece carriers from one section to another operating in parallel and running in the same direction.

This function is « mobile » due to the swivel 12x22 rail. Each input and output bed plate is equipped with a motorized roller to aid workpiece carriers through the curve.

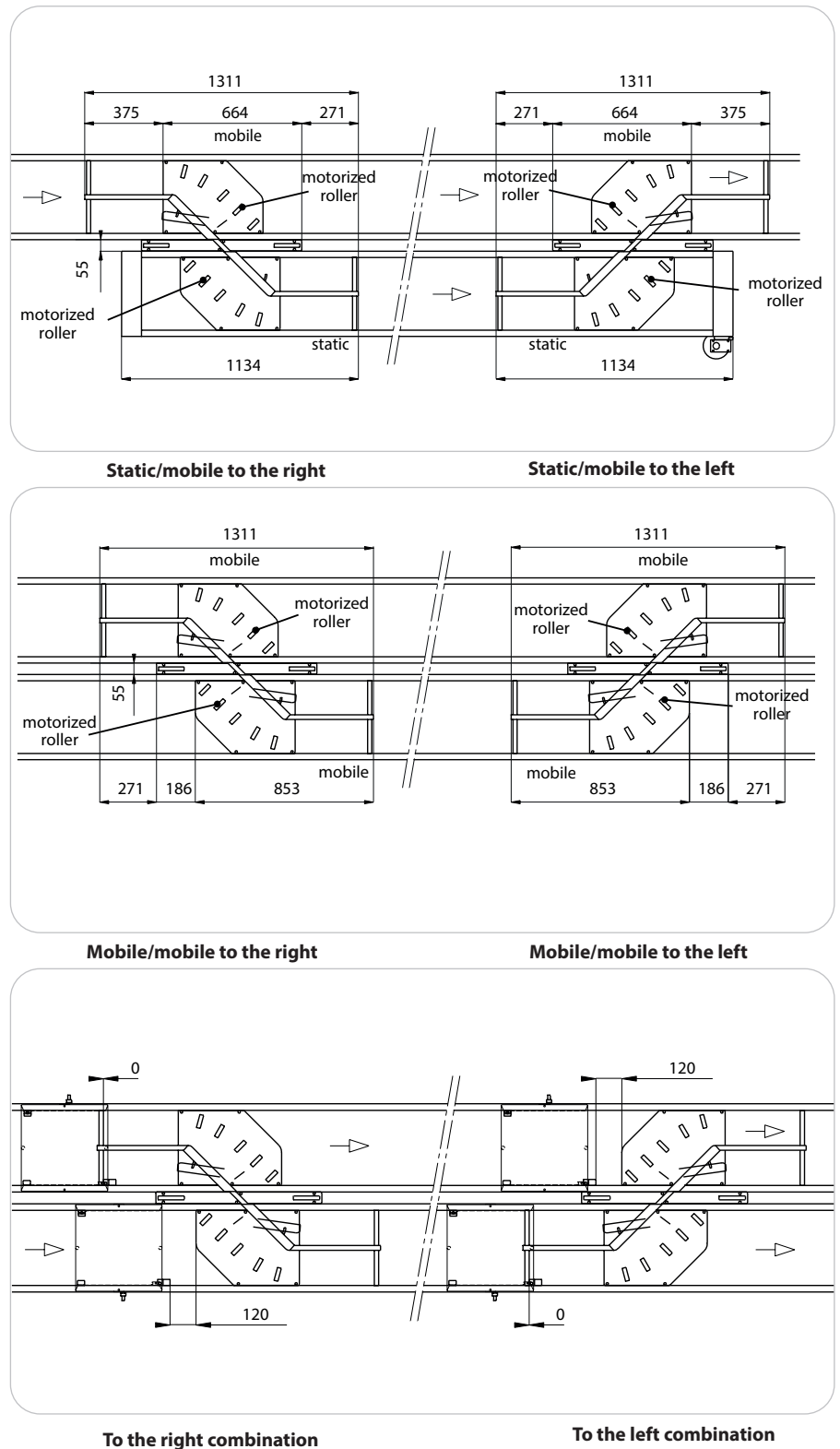
Mobile rail cylinder:

- ✗ Ø 15 mm, double acting
- ✗ lubricated or not, cleaned air, 5 to 6 bars
- ✗ connectors for Ø 4 mm pipe (included)
- ✗ M8 sensors under mobile rail bearing (not included)

Motorized roller motor:

- ✗ power: 6,3 W
- ✗ voltage: 220 V single-phase
- ✗ frequency: 50 Hz
- ✗ rated current: 73 mA

The minimum distance at which the workpiece carriers may be stopped in relationship to the combination is shown in the drawings below.



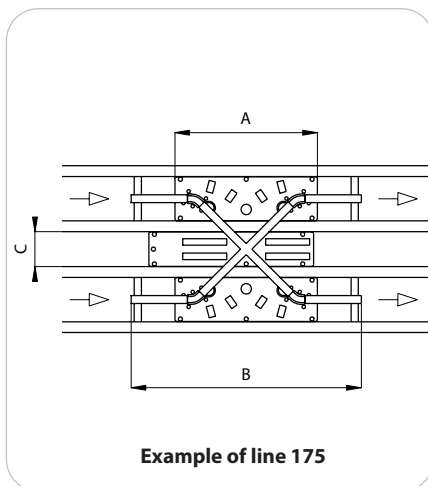
Designation / Dimensions	Order unit	Reference
Combination right input/output, static/mobile Line 400	1 kit	4114
Combination left input/output, static/mobile Line 400	1 kit	4115
Combination right Input/output, mobile/mobile Line 400	1 kit	4117
Combination left input/output, mobile/mobile Line 400	1 kit	4119

Cross combination

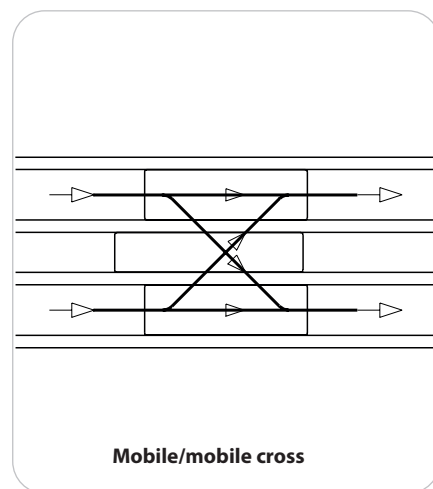
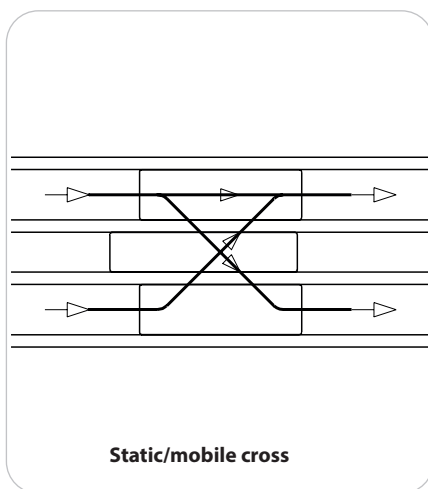
Technical data

The cross combination function may replace two following input/output combination in order to make the transfer system more compact.

This function is available on special request and may be chosen « static/mobile » or « mobile/mobile ».



	A (mm)	B (mm)	C (mm)
Line 175	395	639	97
Line 250	470	864	97
Line 325	545	1089	97
Line 400	578	1272	55

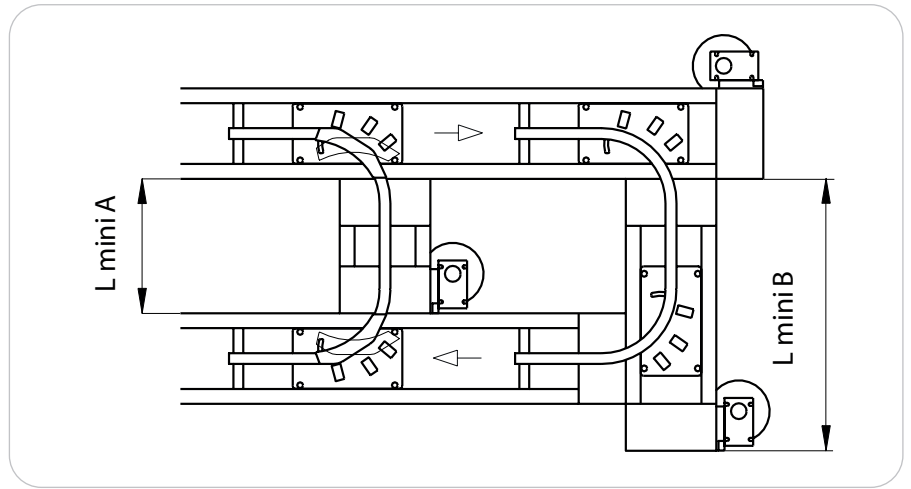


Designation / Dimensions	Order unit	Reference
Cross static/mobile Line 175	1 kit	4183
Cross static/mobile Line 250	1 kit	4181
Cross static/mobile Line 325	1 kit	4185
Cross static/mobile Line 400	1 kit	4187
Cross mobile/mobile Line 175	1 kit	4184
Cross mobile/mobile Line 250	1 kit	4182
Cross mobile/mobile Line 325	1 kit	4186
Cross mobile/mobile Line 400	1 kit	4188

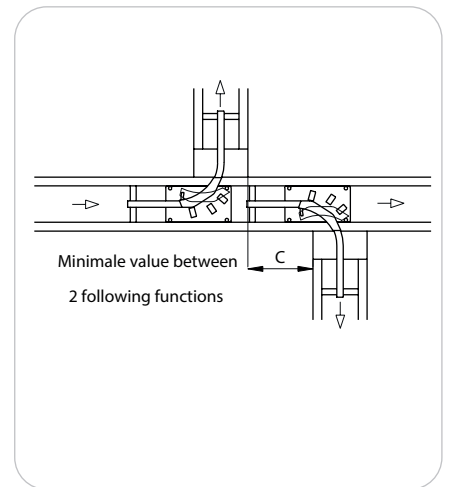
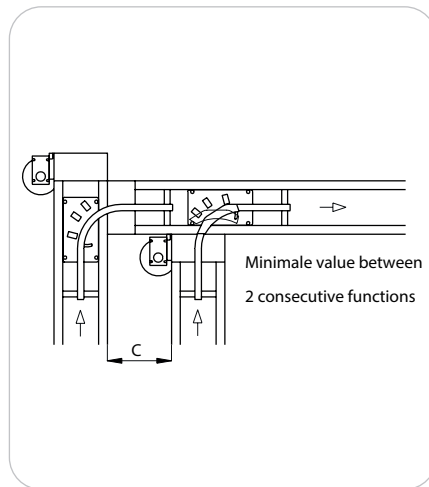
Linking of functions

Technical data

To chain up curves of 90° (static or mobile), it is compulsory to take care of minimal space as shown below.



	Length A (mini, mm)	Length B (mini, mm)
Line 100	330	507
Line 175	272	550
Line 250	347	700
Line 325	422	850
Line 400	447	950



	Cote C (mini, mm)
Line 175	225
Line 250	300
Line 325	375
Line 400	425

Data processing

Technical data

The mechanic data processing system provides accurate means of identification for the status of the products, components or pieces.

Two rockers 7046 can be inserted (on request) in the workpiece carrier pas, which allow four combinations.

A « write » block 6125, equipped with a micro-cylinder, can move a rocker. A « read » block 6124 allows its sensing (M8 sensor not included).

Blocks 6124 and 6125 can be included to provide multiple combinations.

Maximal available number of rockers for each workpiece carrier :

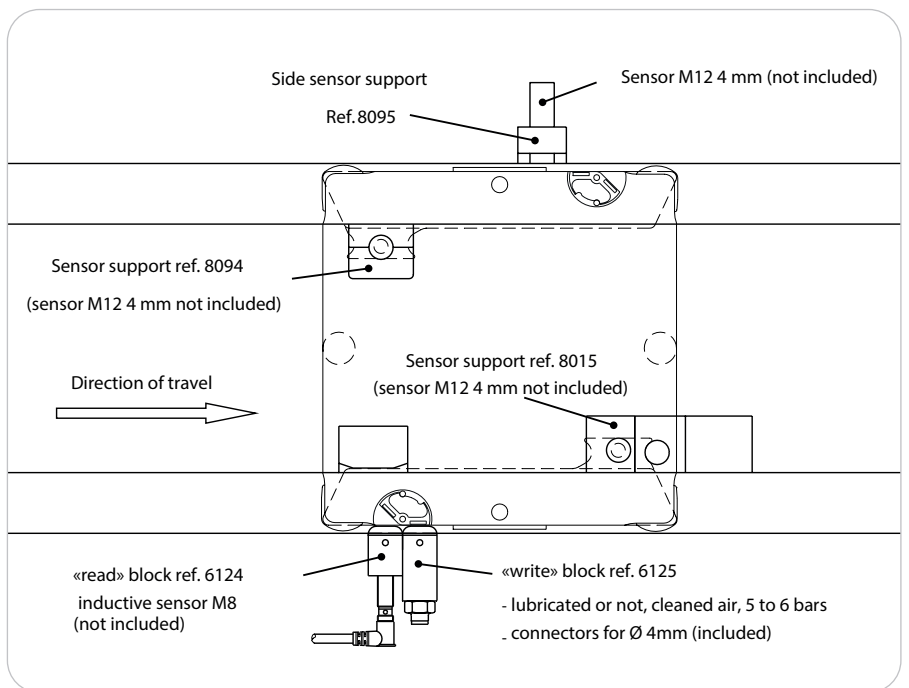
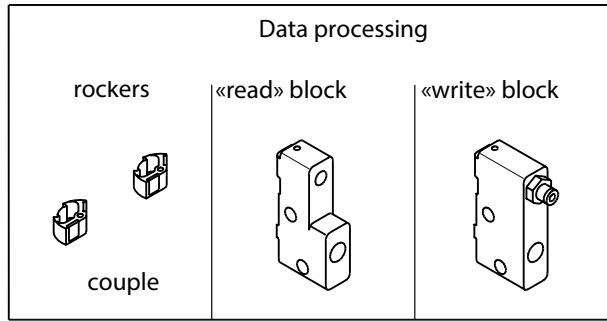
Line 100 : 2 couples

Line 175 : 2 couples

Line 250 : 4 couples

Line 325 : 6 couples

Line 400 : 8 couples



Example with a 175x175 WPC

Miscellaneous, maintenance, accessories

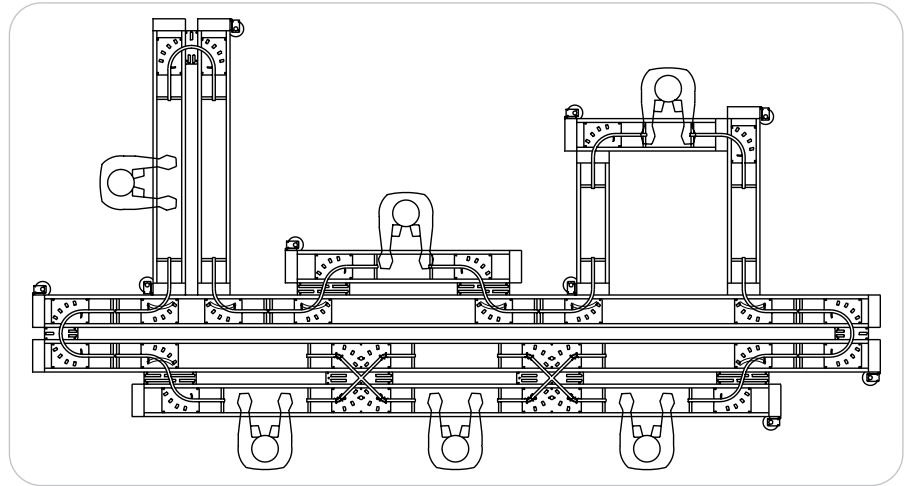
Technical data

Lubrication

Lubricate every 5 000 h with special ELCOM spray lubricant, to be applied at the rear of each straight section.

Maintenance set

Change snapped-pads, ELCOM special spray lubricant, transmission protectors (cover caps), spare sprockets, chain tools.



Data base

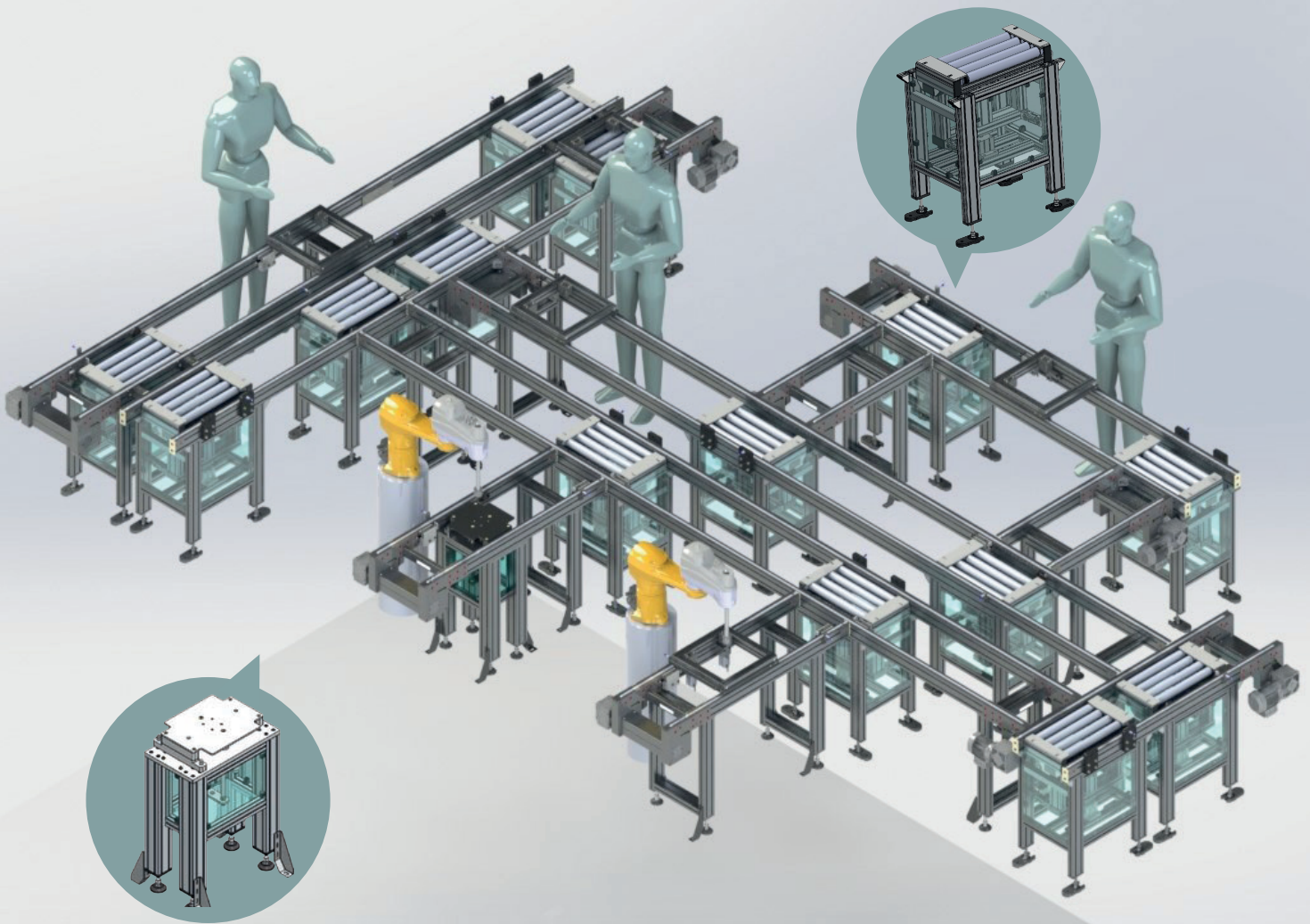
ELCOM modularity allows miscellaneous configurations.

A data base of every function in this catalogue is available through AUTOCAD files TM and gives you the ability to design and choice a lot of implants. Encoded draws ensure too the reliability of the required bill of components.

Designation / Dimensions	Order unit	Reference
Maintenance case	1 kit	7123

/TRM TRANSFER SYSTEM

THE SOLUTION FOR YOUR HEAVY LOADS



TRM

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/ TRM assembly line

The TRM transfer is a conveyor solution for transporting heavy loads up to 100 kg on WPC from 436x436 to 836x836 mm.

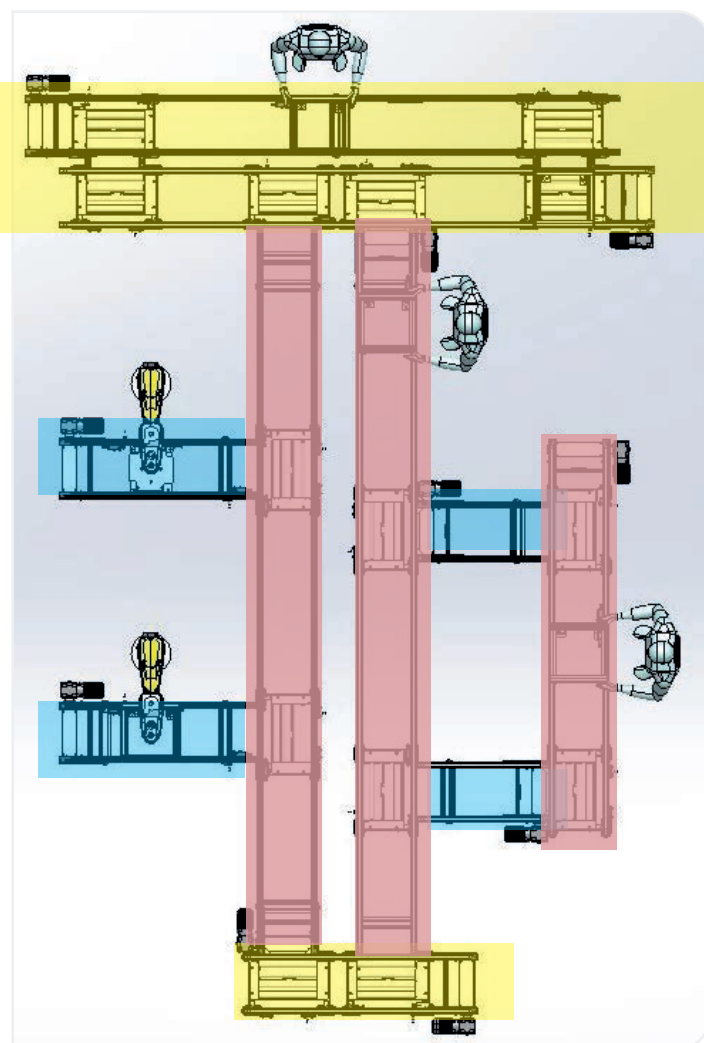
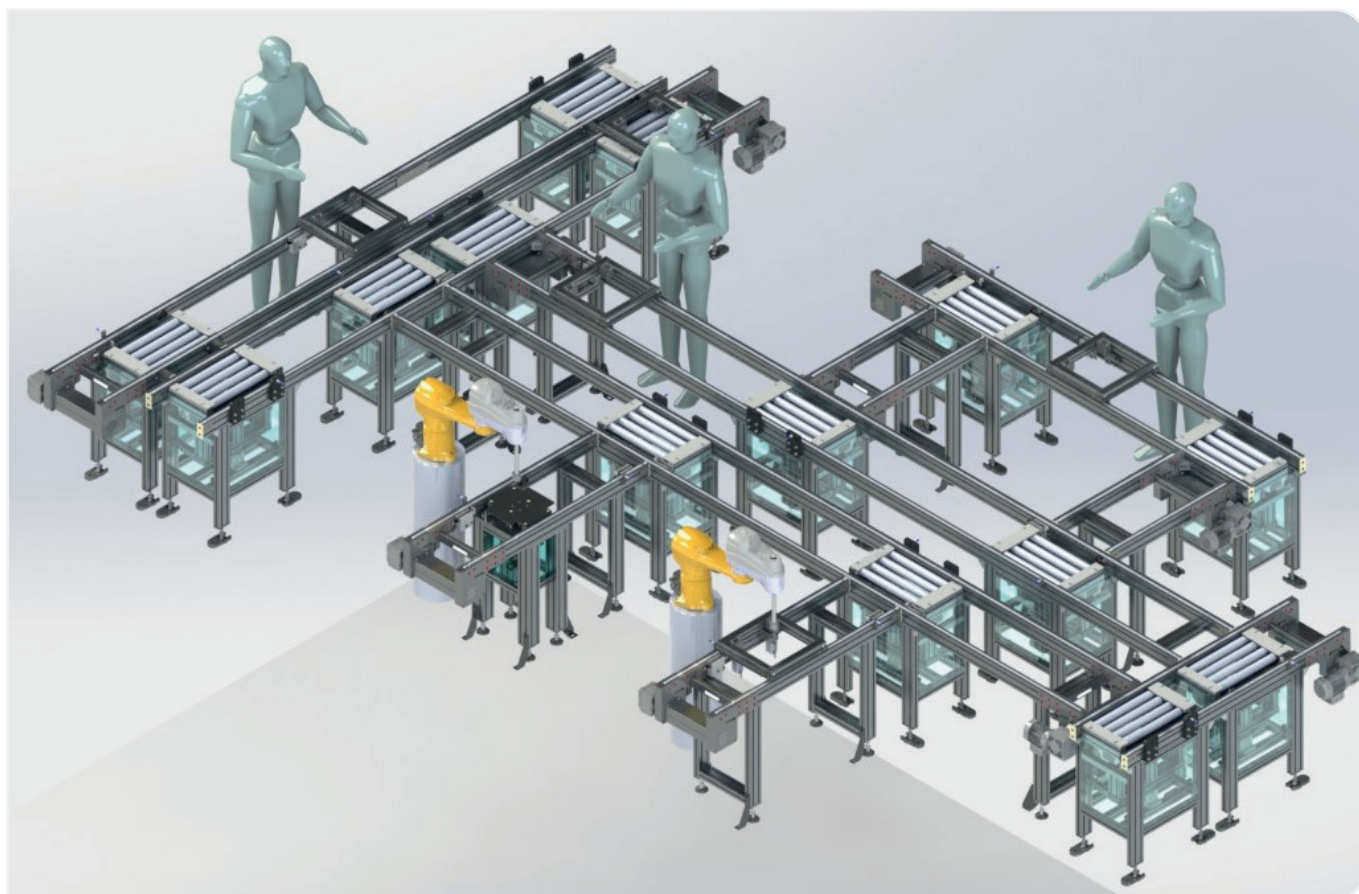
The design is fully modular and can be configured according to the dimensions of your transported products.

The sections are made from 90x45 aluminium profile fitted with 12.7mm pitch accumulation chain with plastic or steel rollers (on request). The length of a section is configurable from 550 to 6250 mm, with the possibility of making longer lengths with section assembly kits.

The configurations are: racetrack or rectangular, with optional entry/exit (more configurations are available on request).

The compact lift & transfer type direction change system has a 24V motorised roller drive.

This leaflet presents the TRM accessories: stop units, stop pads, sensor brackets, single legs and positioning units (repeatability of 0.1 mm).



The transfer function requires several traffic levels:

- Level - 10mm
- Level 0
- Level + 10 mm

/ Aluminium WPC frames

/ Description

WPC frames support and carry the components to be assembled. The WPC frames are fitted with plastic pads to reduce wear when accumulating. Their dimensioning allows for breaks in flow. Each WPC frame is fitted with 4 lateral sensors and 4 sensors underneath.

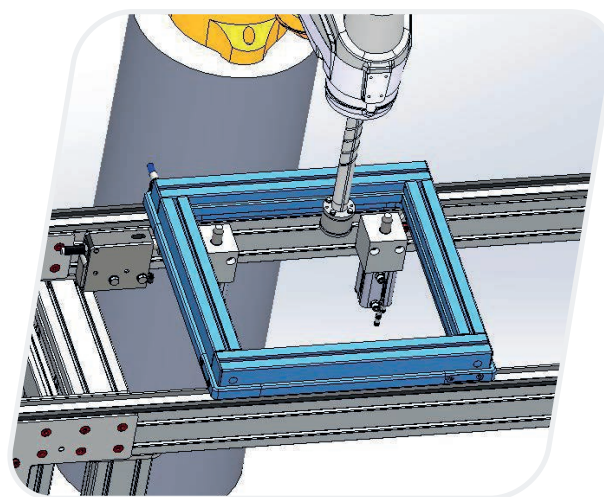
It should be noted that the total weight, WT, allowed for longitudinal transport is different for longitudinal and transverse transport. In transverse transport, the side to be taken into account in the calculation is always the shorter side. The total permissible loads are shown in the table opposite.

Minimum dimensions : 436x436 mm

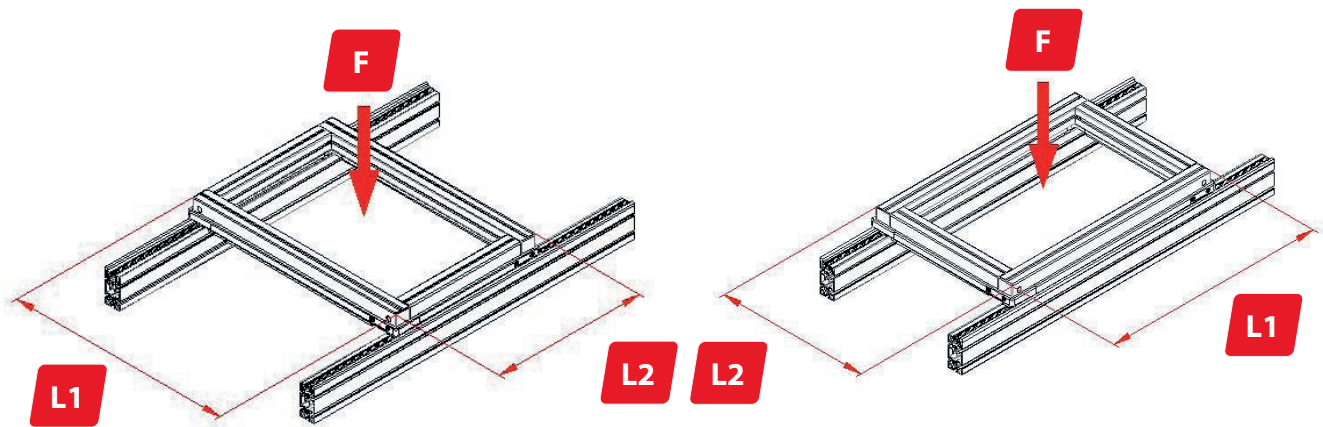
/ Options

3 sets of positioning sleeves available. These sleeves increase the empty weight of the workpiece carrier by 1.3 kg. In combination with the positioning unit, the bushes enable the exact positioning of the workpiece carrier in a processing station.

3DSTEP
Available

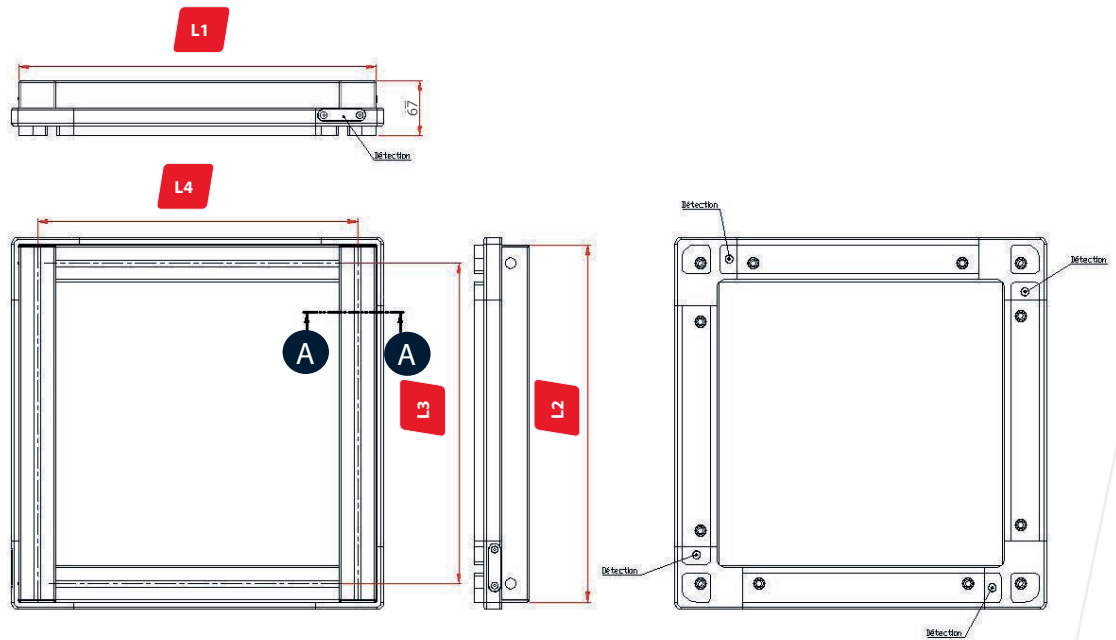


/ Aluminium WPC frames



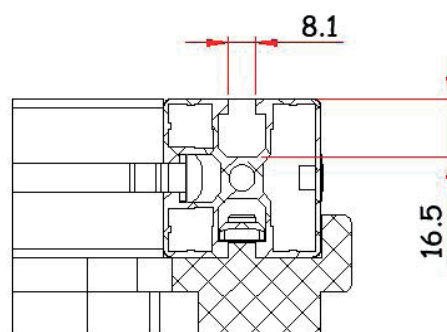
Dimension of WPC frame in mm (L1xL2)	Weight of WPC frame (kg)	Load capacity, plastic transverse chain (F) / Load capacity cross steel chain (F) - permissible loads, including WPC (kg)	Load capacity, longitudinal plastic chain (F) / Load capacity, longitudinal steel chain (F) - permissible loads, including WPC (kg)
436x436	4	40 / 100	40 / 100
436x536	4,5	40 / 100	55 / 143
436x636	5	40 / 100	70 / 182
436x736	5,5	40 / 100	80 / 208
436x836	6	40 / 100	100 / 260
536x536	5	55 / 143	55 / 143
536x636	5,5	55 / 143	70 / 182
536x736	6	55 / 143	80 / 208
536x836	6,5	55 / 143	100 / 260
636x636	6	70 / 182	70 / 182
636x736	6,5	70 / 182	80 / 208
636x836	7	70 / 182	100 / 260
736x736	7	80 / 208	80 / 208
736x836	7,5	80 / 208	100 / 260
836x836	8	100 / 260	100 / 260

/ Aluminium WPC frames



See corresponding dimensional table opposite

Section A A



/ Aluminium WPC frames

WPC FRAMES REFERENCING

WPC frame dimensions in mm (L1xL2) / (L3xL4)	L1	L2	L3	L4	Article number
436x436	436	436	391	391	TRM-WPC1-0436-0436
436x536		536		491	TRM-WPC1-0436-0536
436x636		636		591	TRM-WPC1-0436-0636
436x736		736		691	TRM-WPC1-0436-0736
436x836		836		791	TRM-WPC1-0436-0836
536x536	536	536	491	491	TRM-WPC1-0536-0536
536x636		636		591	TRM-WPC1-0536-0636
536x736		736		691	TRM-WPC1-0536-0736
536x836		836		791	TRM-WPC1-0536-0836
636x636	636	636	591	591	TRM-WPC1-0636-0636
636x736		736		691	TRM-WPC1-0636-0736
636x836		836		791	TRM-WPC1-0636-0836
736x736	736	736	691	691	TRM-WPC1-0736-0736
736x836		836		791	TRM-WPC1-0736-0836
836x836	836	836	791	791	TRM-WPC1-0836-0836

Data table provides by ELCOM Challans - Juin 2020

/ Direct drive section

/ Each section is composed of 2 lanes made of anodised aluminium fitted with side guiding profiles for the guiding of WPC.

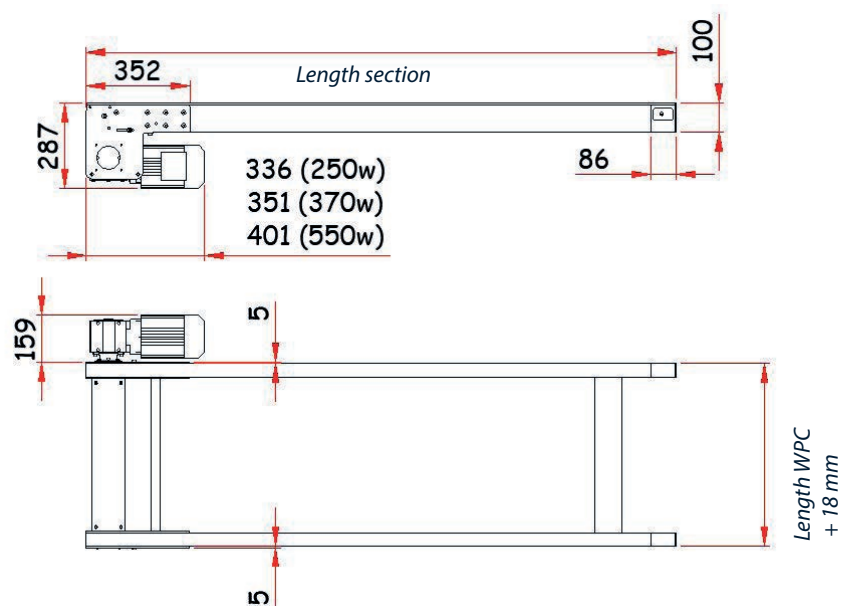
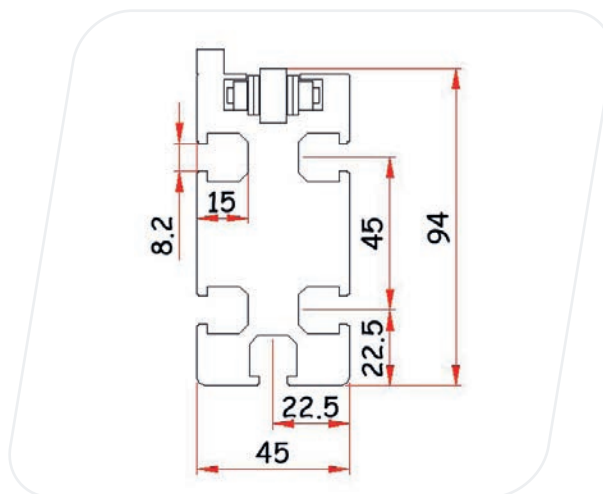
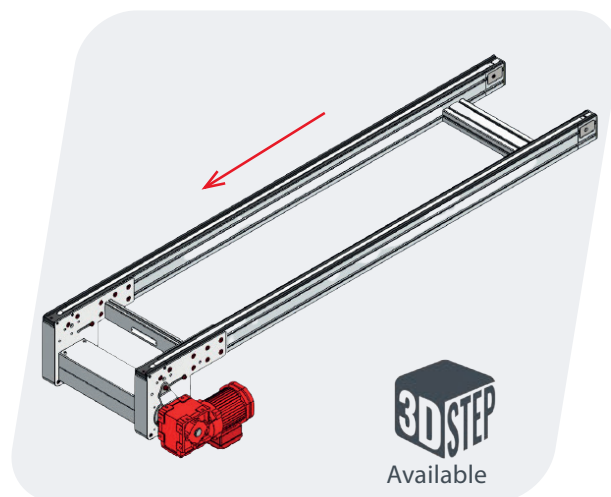
The loading capacity of each section varies according to the speed and power of the drive.

The length of each section varies according to the transported linear load and type of chain.

Minimum length: 550 mm

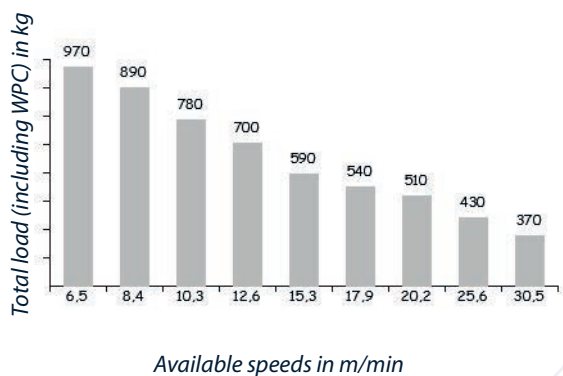
Maximum length without extension: 6250 mm (for bigger sizes, please contact us).

Possible forward/ reverse operation

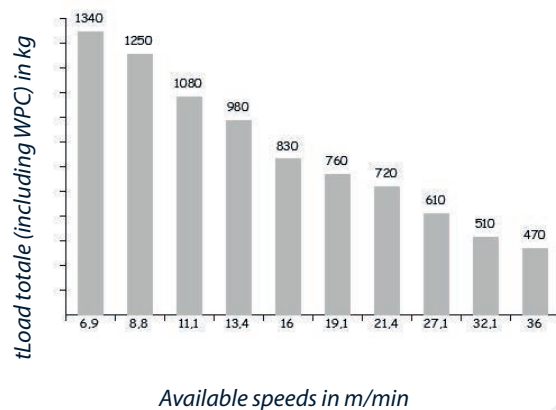


/ Direct drive section

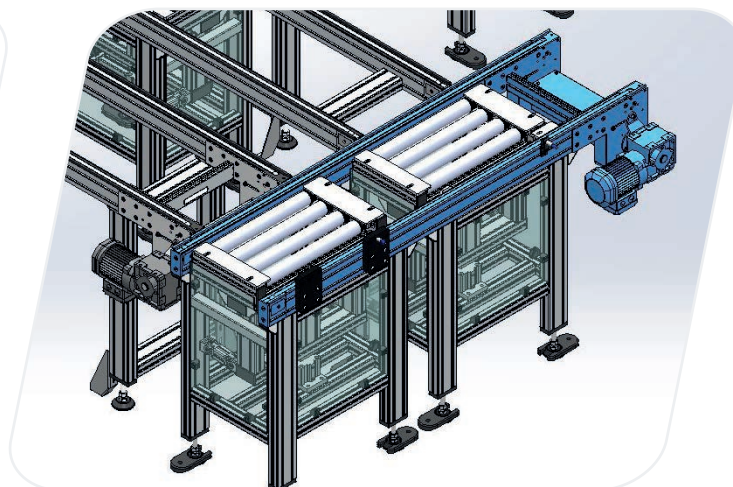
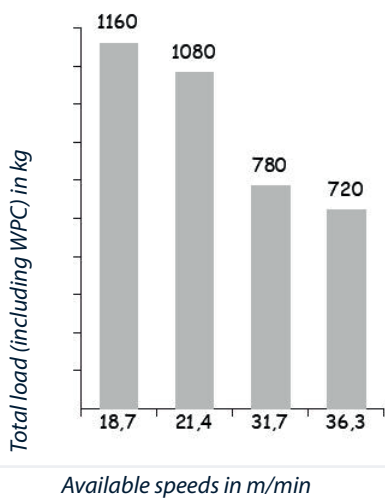
/ Load capacity per section
Motor reducer 250w



/ Load capacity per section
Motor reducer 370w



/ Load capacity per section
Motor reducer 550w



Description	Unit	Reference
Direct drive - right side	piece	4540
Direct drive - left side	piece	4541
Linear section - plastic	meter	TRM-4504
Linear section - steel	meter	TRM-4532

/ Intermediate drive section

/ Each section is composed of 2 lanes made of anodised aluminium fitted with side guiding profiles for the guiding of WPC.

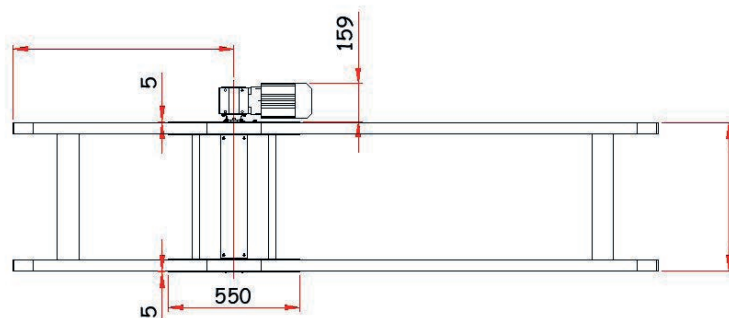
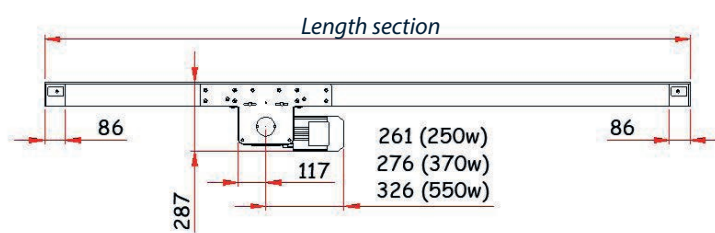
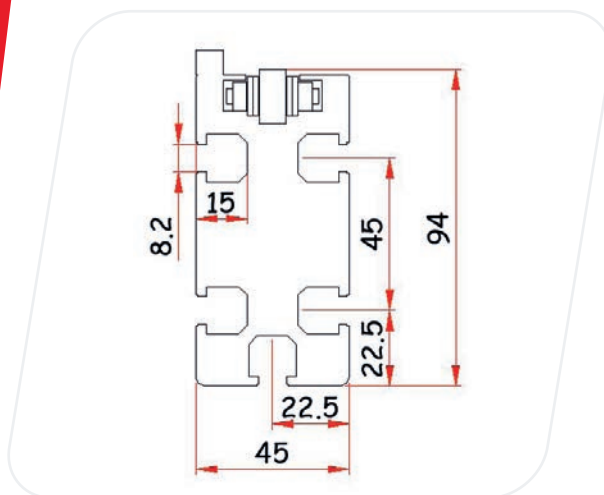
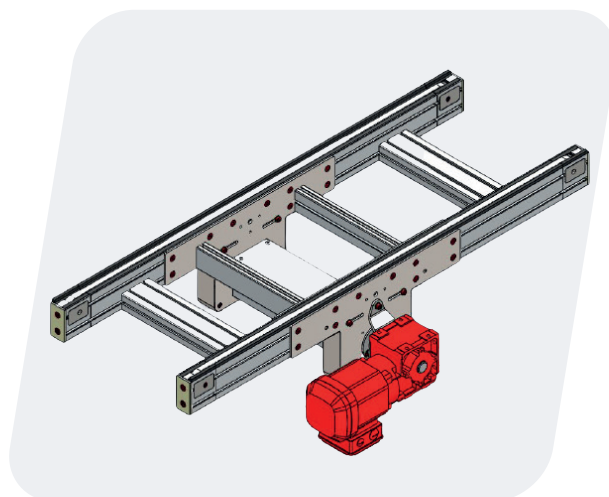
The loading capacity of each section varies according to the speed and power of the drive.

The length of each section varies according to the transported linear load and type of chain.

Minimum length: 550 mm

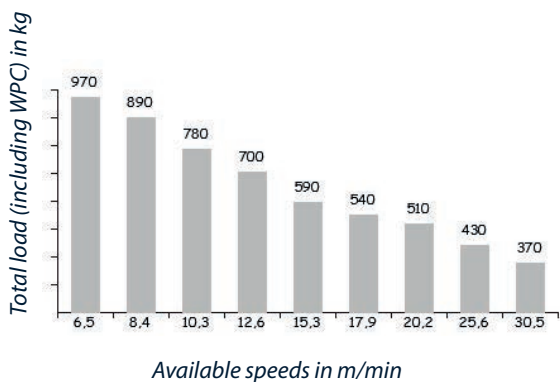
Maximum length without lengthening: 12 000 mm (for bigger sizes, please contact us)

Possible forward/ reverse operation

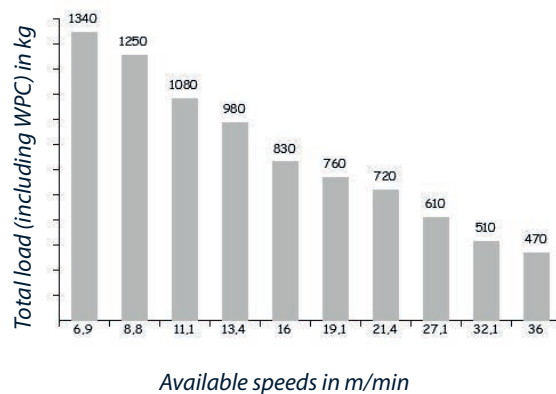


/ Intermediate drive section

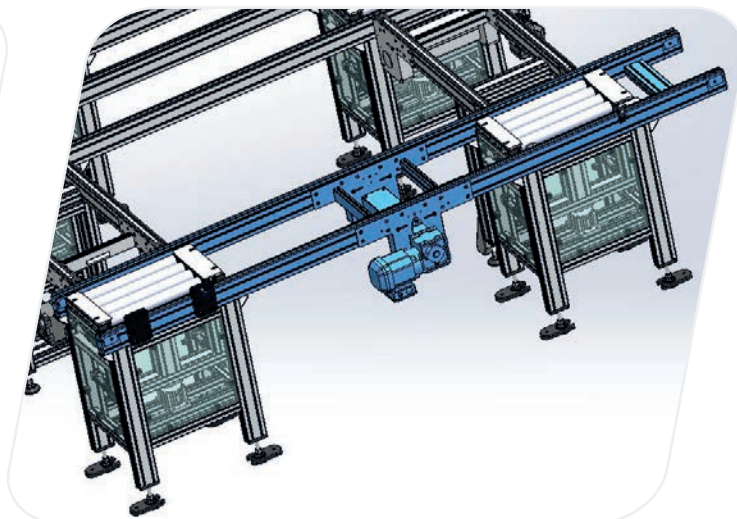
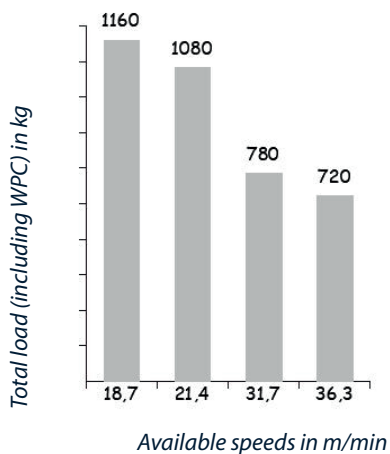
/ Load capacity per section
Motor reducer 250w



/ Load capacity per section
Motor reducer 370w



/ Load capacity per section
Motor reducer 550w



Description	Unit	Reference
Intermediate drive - right or left side	piece	4700
Linear section - plastic chain	meter	TRM-4504
Linear section - steel chain	meter	TRM-4532

/ Chains

/ Linear load for accumulation chain
150daN/m
of section (including WPC)

/ Linear load for steel chain 390daN/m of
section
(including WPC)

/ Split link for TRM chain

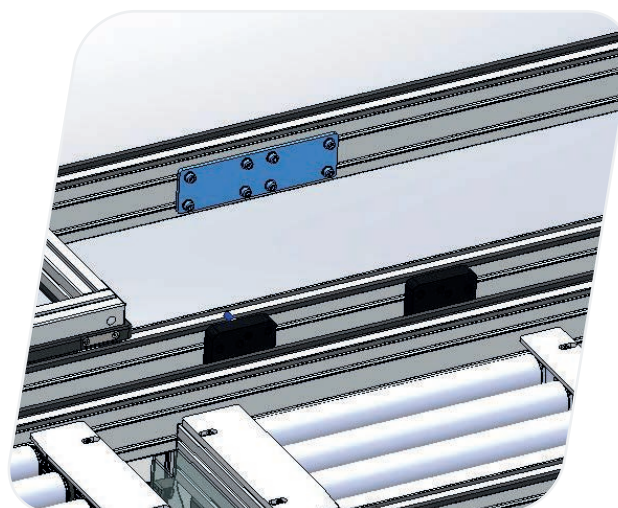
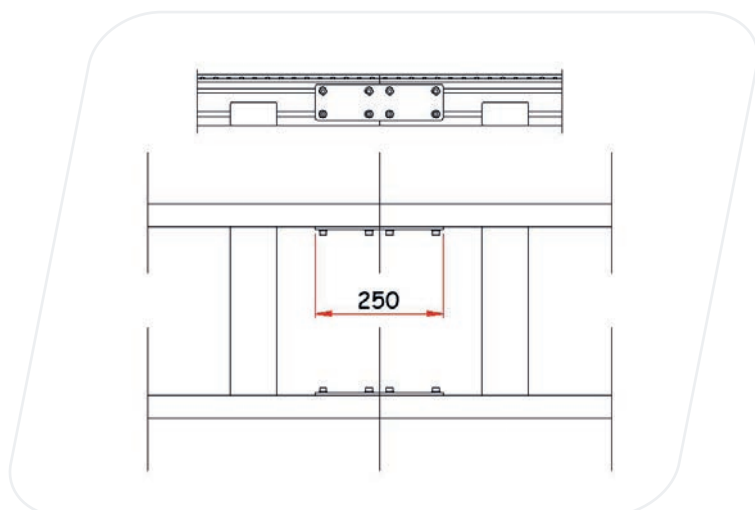
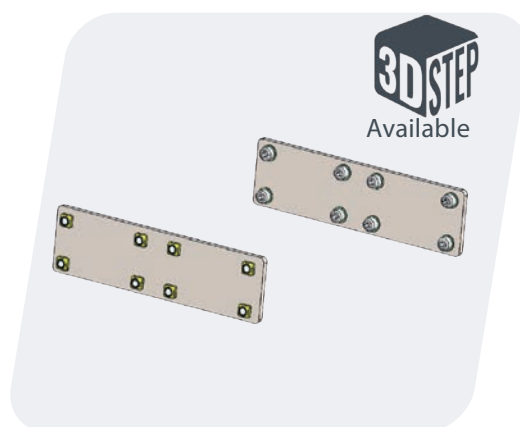


Description	Unit	Reference
Accumulation plastic chain PA	meter	1827-ML
Accumulation steel chain	meter	1827-A-ML
Split link for TRM chain	piece	1854

/ Section lengthening

/ Section lengthening allows:

- for the extension of the section length (longer than 6250 mm)
- for ease of dismantling of the section from both ends of a working place (for transportation purposes for instance).



Description	Unit	Reference
Section lengthening TRM	piece	7180-TRM

/ Transfer device

/ The transfer device raises the WPC and brings it perpendicular to another drive section. A compact double-acting pneumatic cylinder provides the vertical movement. 24v driven rollers provide the WPC transferring movement thanks to an electronic circuit board. Several speeds are available with this board. Each WPC is moved separately. The installation of a stop to break the flow just before the transfer device is advised.

The WPC can be stopped laterally with part no. TRM4523. (To be ordered separately).

The longitudinal stopping of the WPC is done with part numbers 4516 and 4537. (To be ordered separately).

A M12 inductive sensor (not supplied) with a 4mm sweep area allows for detection of the WPC when located on the transfer device (in contact with the rollers).

It can be mounted on the TRM-4523 part.

A M12 inductive sensor (not supplied) with a 4mm sweep area and mounted on side sensor bracket ref.8097 (quoted separately) provides for detection of the WPC when located above the transfer device (without being in contact with the rollers).

Detection of the upper and lower position of the transfer device is done with the sensors of the pneumatic cylinder. Sensors are supplied with an M8 connector.

The support base of the transfer device is provided by its own structure.

Load capacity of the lift (included WPC): 200 daN.

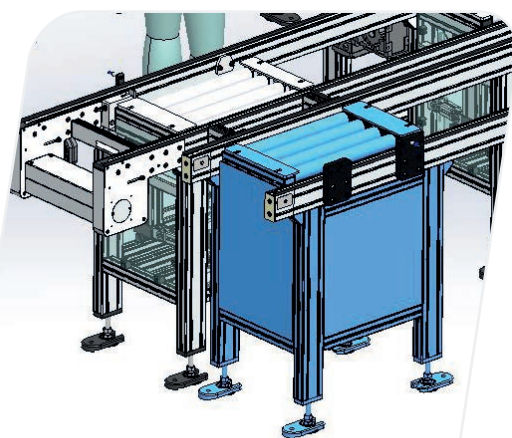
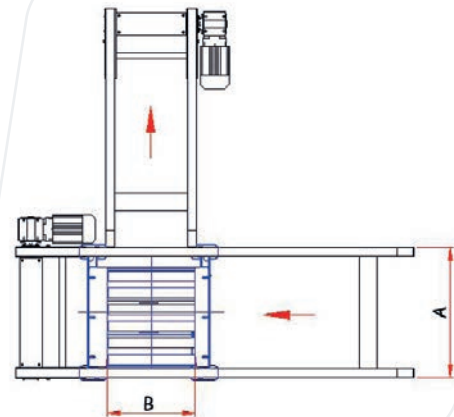
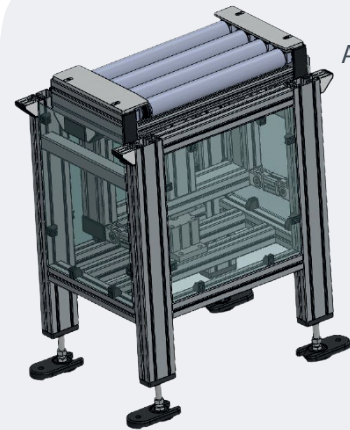
Double-acting pneumatic cylinder Ø 80.

Lubricated or dry, cleaned air, 5 to 6 bars.

Flow limiter, Ø 4mm connector pipe (supplied).

High and low position sensors supplied.

3DSTEP
Available



/ Transfer device

A	B	Reference
436	436	TRM-ST-0436-0436
436	536	TRM-ST-0436-0536
436	636	TRM-ST-0436-0636
436	736	TRM-ST-0436-0736
436	836	TRM-ST-0436-0836
536	436	TRM-ST-0536-0436
536	536	TRM-ST-0536-0536
536	636	TRM-ST-0536-0636
536	736	TRM-ST-0536-0736
536	836	TRM-ST-0536-0836
636	436	TRM-ST-0636-0436
636	536	TRM-ST-0636-0536
636	636	TRM-ST-0636-0636
636	736	TRM-ST-0636-0736
636	836	TRM-ST-0636-0836
736	436	TRM-ST-0736-0436
736	536	TRM-ST-0736-0536
736	636	TRM-ST-0736-0636
736	736	TRM-ST-0736-0736
736	836	TRM-ST-0736-0836
836	436	TRM-ST-0836-0436
836	536	TRM-ST-0836-0536
836	636	TRM-ST-0836-0636
836	736	TRM-ST-0836-0736
836	836	TRM-ST-0836-0836

/ Single leg sets

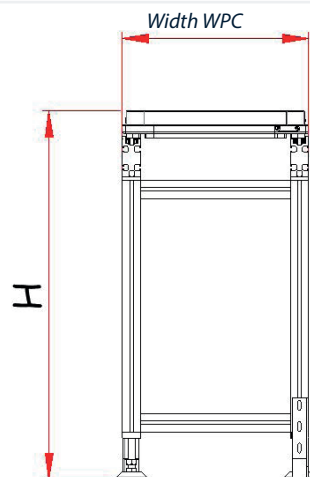
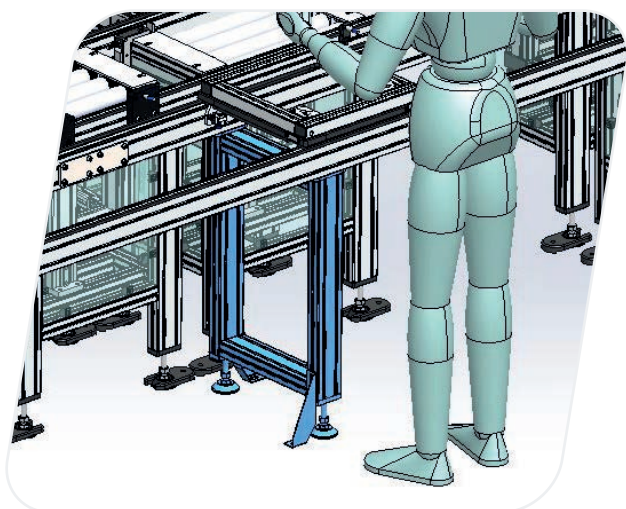
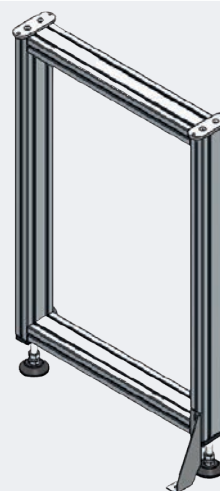
/ Leg sets are supplied at the required working height and provide rigidity and stability to the system.

The maximum distance between 2 leg sets is 2 meters.

Anchoring links and sections fixing parts are supplied.

Leg set height adjustment is +/- 40 mm

3DSTEP
Available

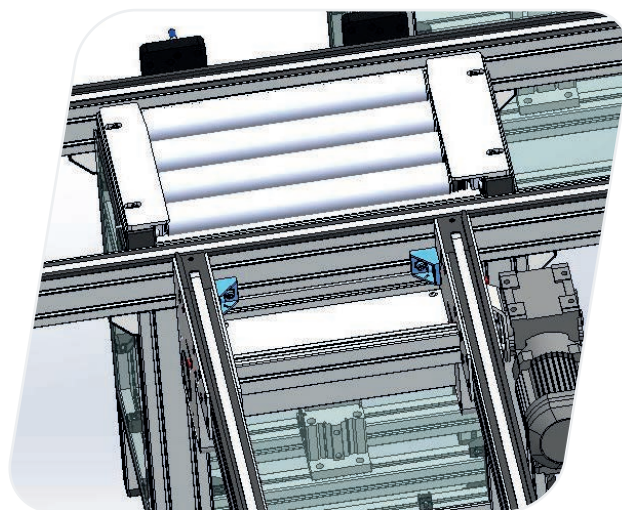
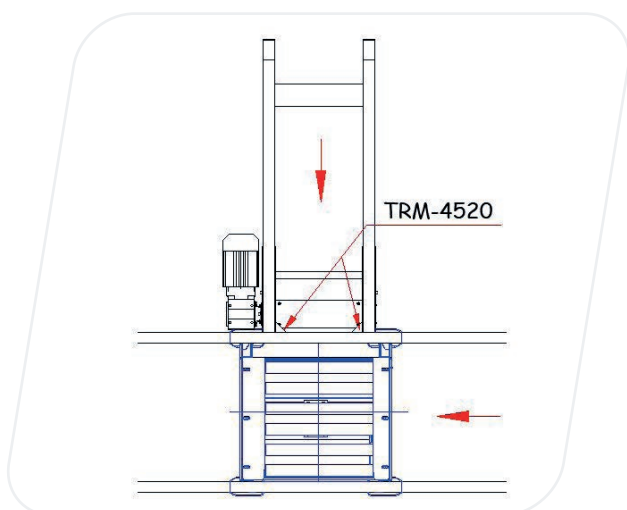


H = height working (from the floor to the top of WPC)

Description	Unit	Reference
Single leg 436mm	piece	TRM-LG-0436 (indicate height H)
Single leg 536mm	piece	TRM-LG-0536 (indicate height H)
Single leg 636mm	piece	TRM-LG-0636 (indicate height H)
Single leg 736mm	piece	TRM-LG-0736 (indicate height H)
Single leg 836mm	piece	TRM-LG-0836 (indicate height H)

/ Connection between perpendicular sections

/ The installation of connectors is necessary when erecting the line to get a proper configuration.



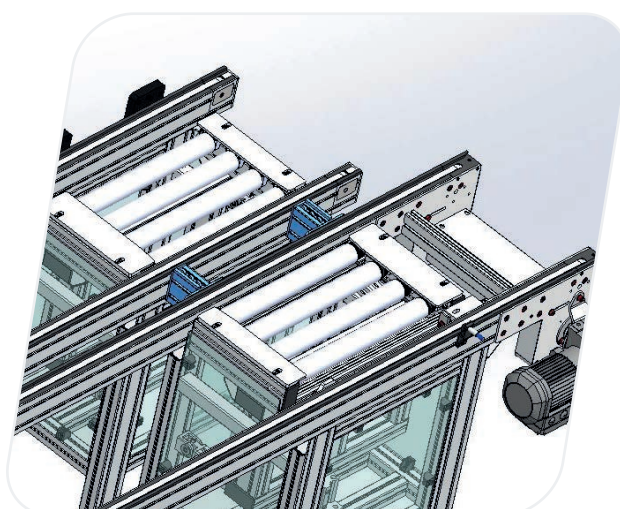
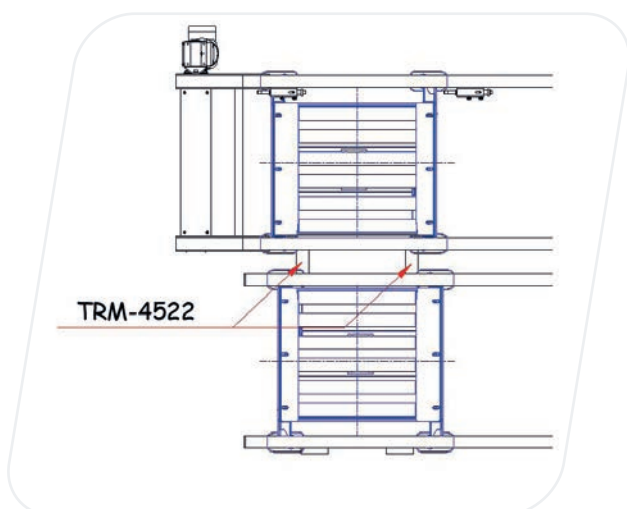
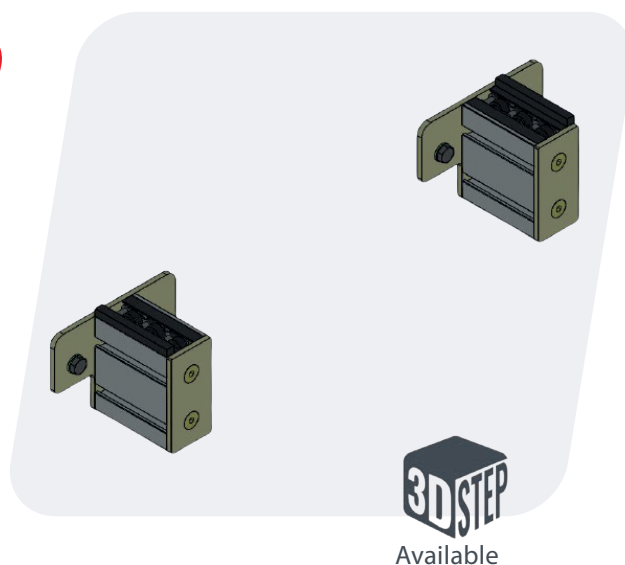
Description	Unit	Reference
Side stop	piece	TRM-4520

/ Connection between parallel sections

/ This connection ensures correct transfer of the WPC between 2 parallel sections.

It is composed of free running rollers and it guides the WPC during transfer.

This connection is the same whatever the WPC dimensions are.



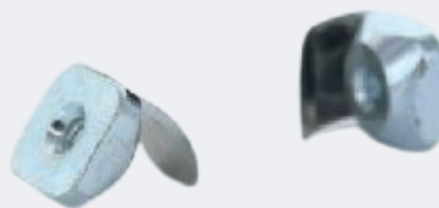
Description	Unit	Reference
Connection between parallel sections	piece	TRM-4522

/ Locking nuts for the t-slots

/ Nuts enable the mounting of accessories on all the slots available on the TRM.



Square nuts



Spring loaded square nuts

Description	Unit	Reference
Square nut M4	piece	NSCAR8M4
Square nut M5	piece	NSCAR8M5
Square nut M6	piece	NSCAR8M6
Square nut M8	piece	NSCAR8M8
Spring loaded square nut M4	piece	NSCL8M4
Spring loaded square nut M5	piece	NSCL8M5
Spring loaded square nut M6	piece	NSCL8M6
Spring loaded square nut M7	piece	NSCL8M8

/ Dampened pneumatic stop unit

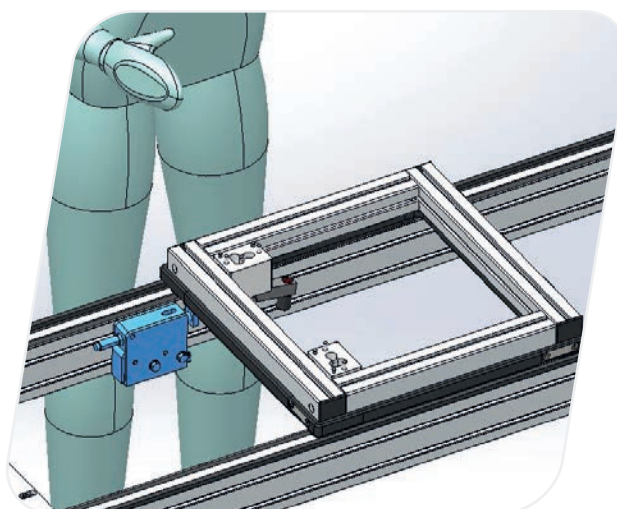
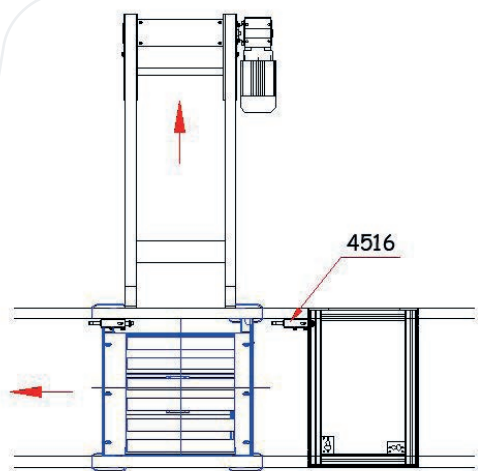
3DSTEP

Available

/ Stop unit allows for the stopping of WPC at the work stations and before entering transfer devices.

A sliding mechanism dampens the WPC stop by actuating a hydraulic shock absorber. This mechanism resets again once the WPC has been released.

Single effect pneumatic stop unit.
Lubricated or dry, cleaned air, 5 to 6 bars.
Ø 4 mm connector pipe (supplied).



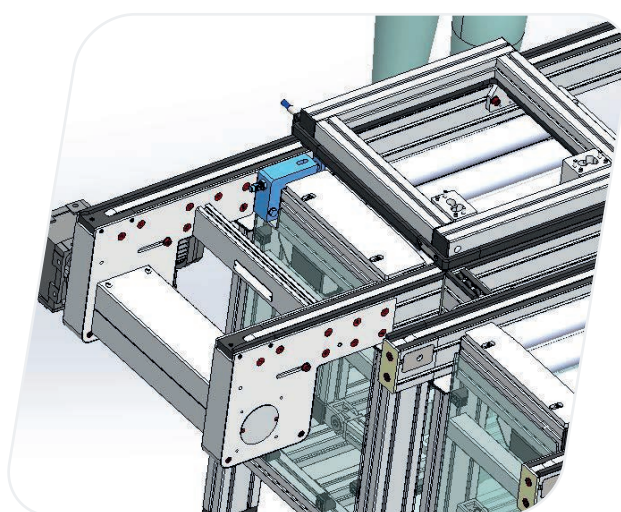
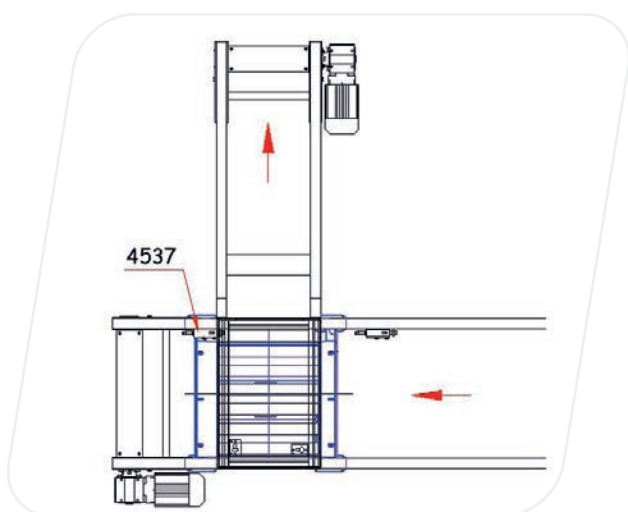
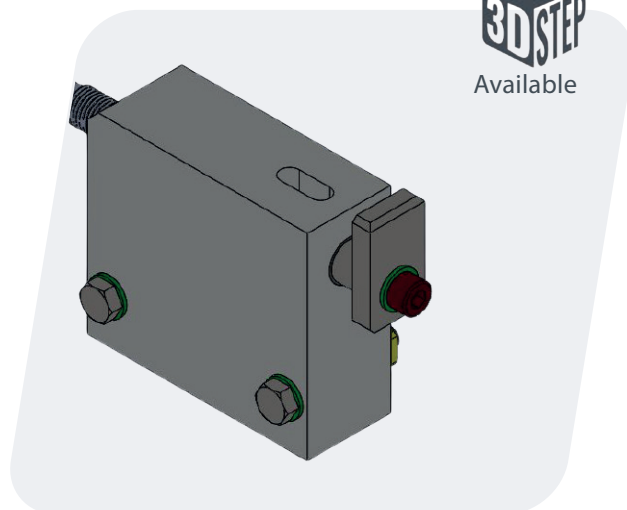
Description	Unit	Reference
Dampened pneumatic stop unit	piece	4516

/ Dampened stop unit at section end

/ Stop unit allows for the stopping of WPC at the end of a section when it is on a transfer device.

A sliding mechanism dampens the WPC stop by actuating a hydraulic shock absorber.

This mechanism resets again after the WPC has been raised by the transfer device.



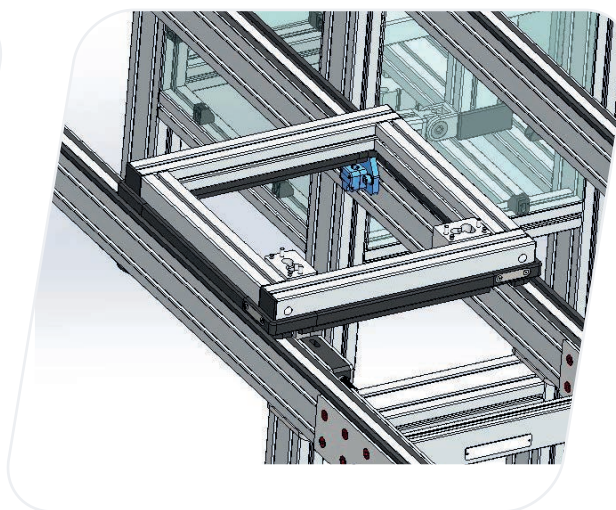
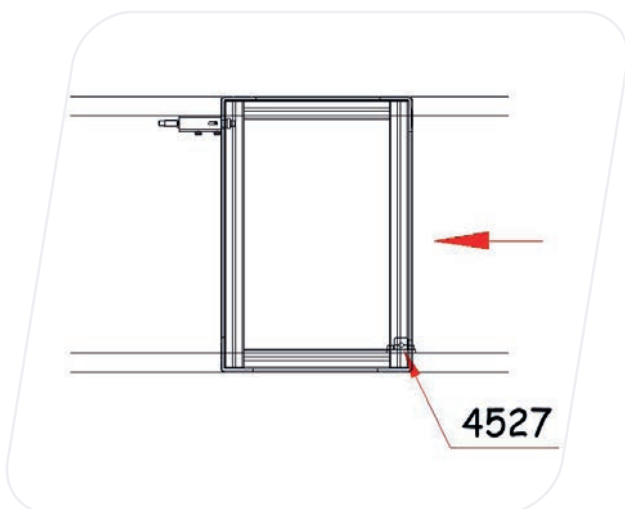
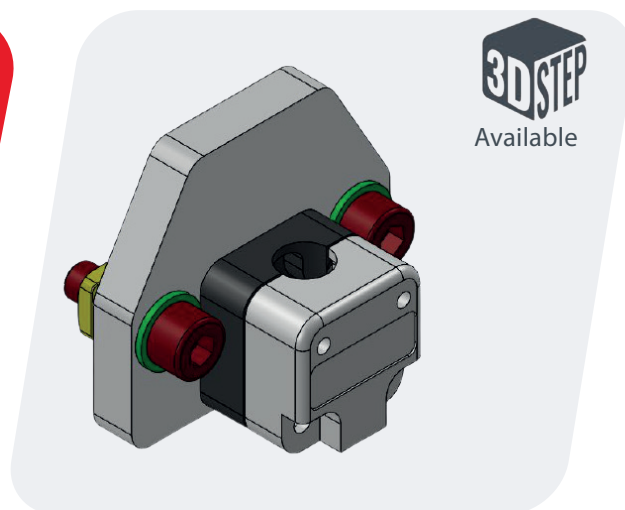
Description	Unit	Reference
Dampened stop unit at section end	piece	4537

/ Sensor bracket and WPC stop pad

/ Detection of the WPC at the work stations can be provided by M12 inductive sensors (not supplied), with or without connector, with a 4 mm sweep area, mounted on a bracket combined with a stop pad.

The WPC stop pad improves the stopping accuracy reducing the movement of the WPC and wear on the side guiding profile.

Its setting is advisable but becomes necessary when load is above 30 daN

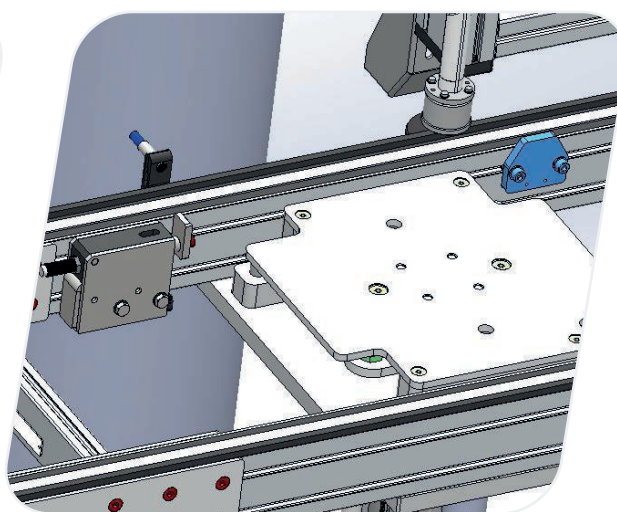
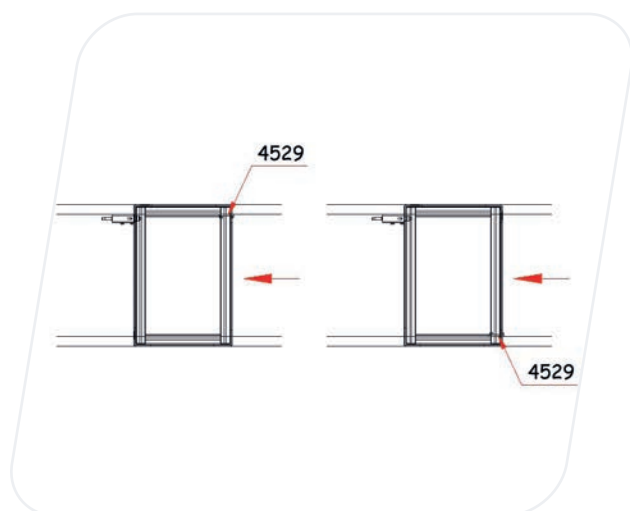
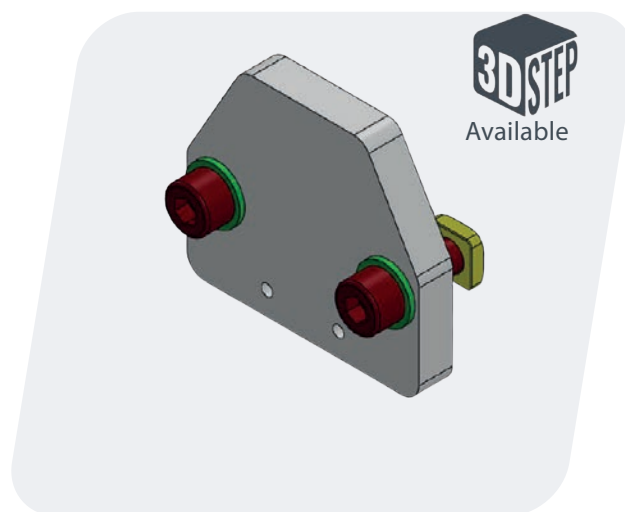


Description	Unit	Reference
Sensor bracket and WPC stop pard	piece	4527

/ WPC stop pad

/ The WPC stop pad improves the stopping accuracy reducing WPC movement and wear on the side guiding profile.

Its setting is advisable but becomes necessary when load is above 30 daN.

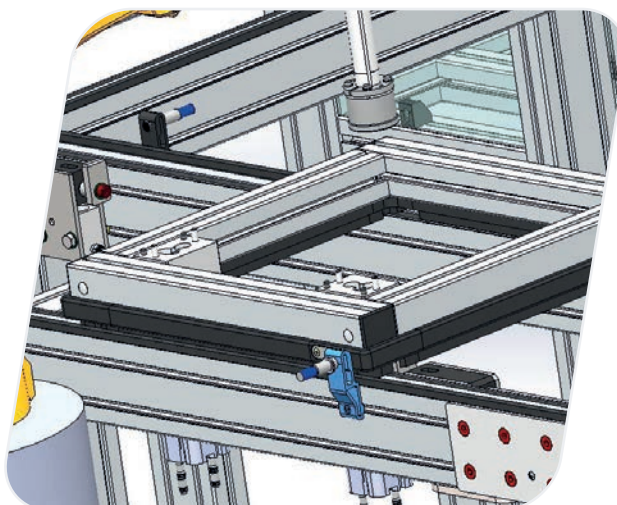
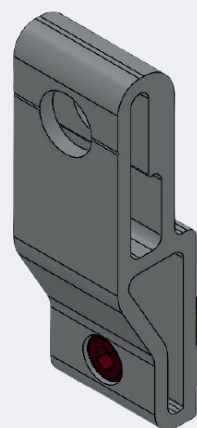


Description	Unit	Reference
WPC stop pad	piece	4529

/ Side sensor bracket

/ Detection of the WPC when stopped at the work station and the control of flow and priorities are provided by M12 inductive sensors (not supplied), with a 4mm sweep area (fitted with or without connector), fixed on the frame.

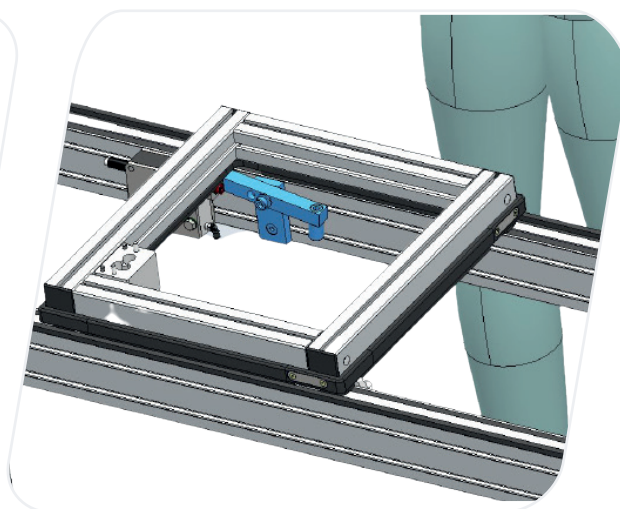
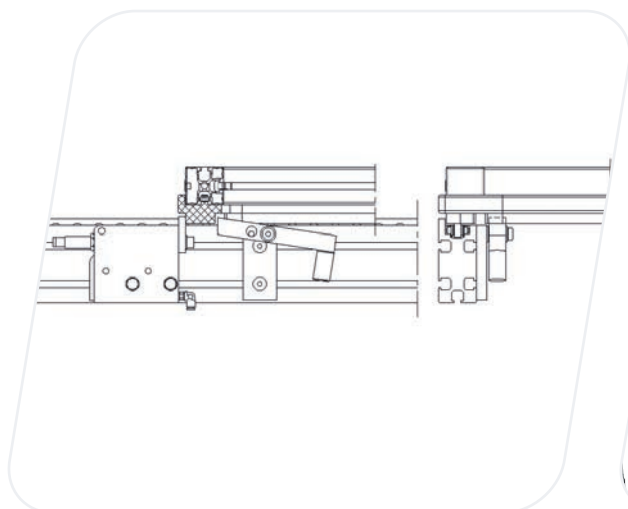
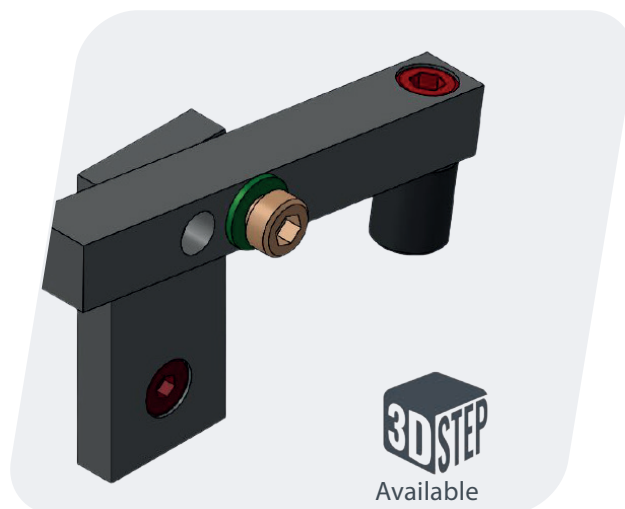
3DSTEP
Available



Description	Unit	Reference
Side sensor bracket	piece	4515

/ Mechanical anti-return device

/ The anti-return device is located under the WPC and prevents the return of the WPC during the assembly process at the workstation or when stopped along the line.

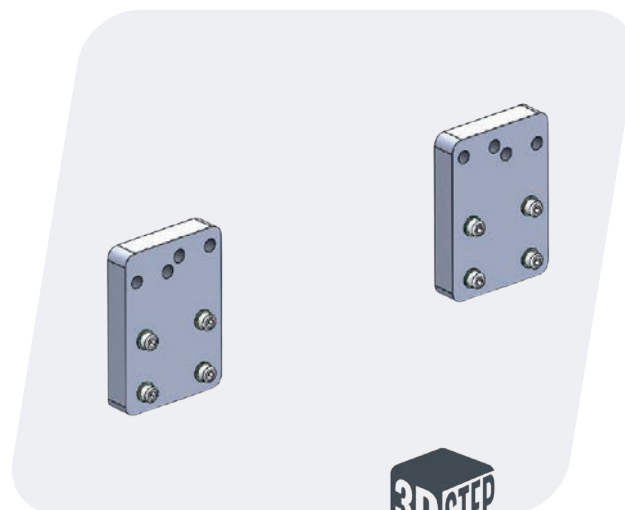


Description	Unit	Reference
Mechanical anti-return device	piece	8097

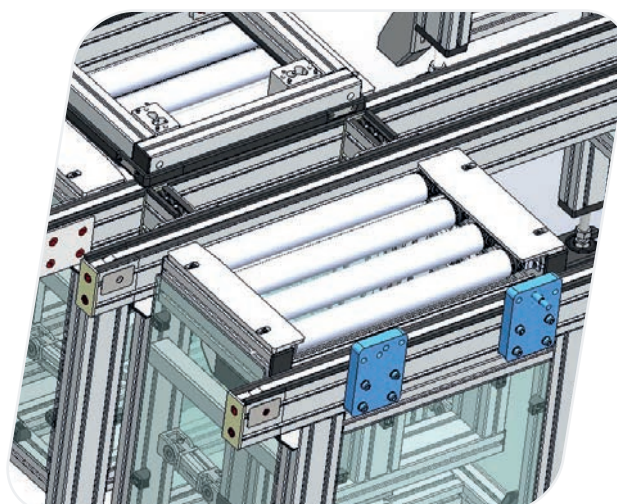
/ Undamped side stop

/ The side stop is located at the end of the transfer device (outside the section) and allows for the WPC to stop on that same device.

M12 screws allow inductive sensors to be mounted (recommended range of 4mm) for the detection of the WPC in the upper and lower position (sensors not supplied).



3DSTEP
Available



Description	Unit	Reference
Side stop	piece	TRM-4523

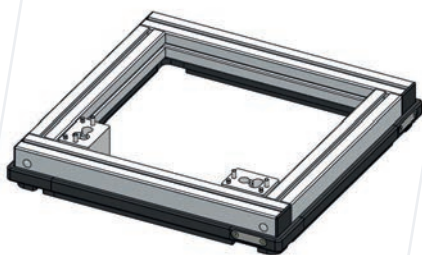
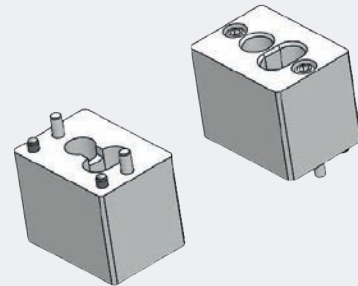
/ WPC positioning blocks

/ The optionally available positioning blocks, in combination with the TRM-PT and 4401 positioning units, enable exact positioning of the workpiece carrier pallet.

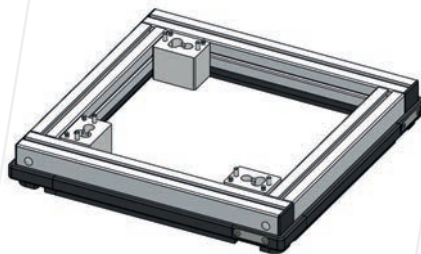
The blocks are fixed directly to the workpiece carrier WPC (optional).

The number of blocks used depends on the path of the workpiece carrier WPC and the configuration of the assembly line

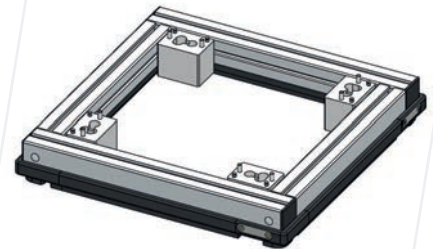
3DSTEP
Available



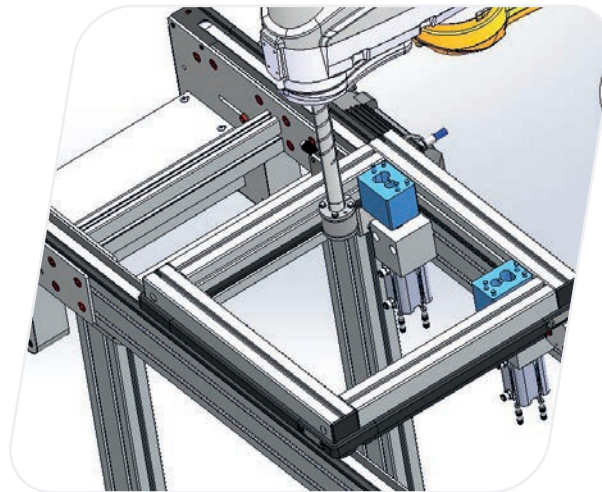
2 blocks



3 blocks



4 blocks



Description	Unit	Reference
WPC kit (2 blocks)	piece	TRM-WPC1-4400-2
WPC kit (3 blocks)	piece	TRM-WPC1-4400-3
WPC kit (4 blocks)	piece	TRM-WPC1-4400-4

/ XY positioning unit

/ The positioning of the workpiece carrier pallet is done by means of the positioning rods and positioning blocks of the workpiece carrier pallet (sold separately).

The spacing of the XY positioning blocks is adjustable along the drive section according to the length of the tray.

The positioned WPC remains in contact with the chains.

Never exceed the load allowed by the chains (WPC + workpiece carrier + pieces + additional force).

The positioning repeatability on the X and Y axis is +/- 0.1 mm.

Double acting Ø 32mm pneumatic cylinder.

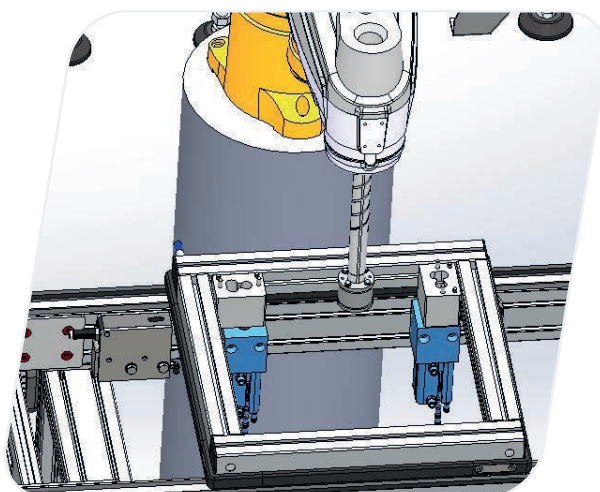
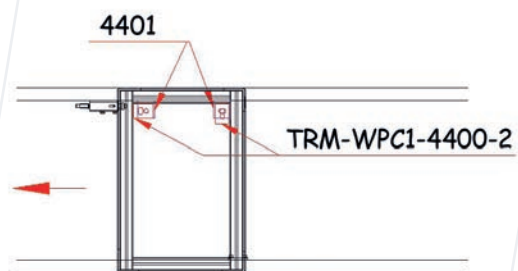
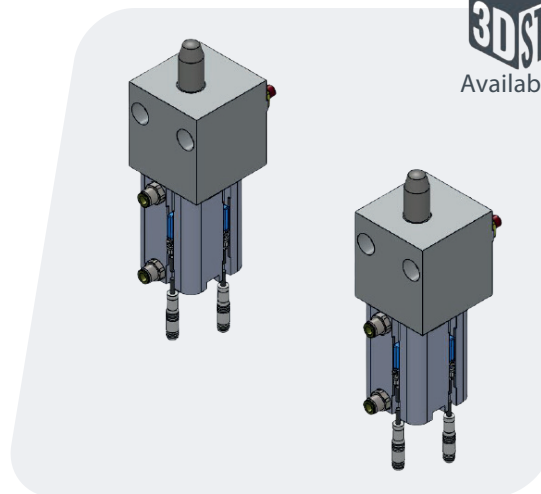
Lubricated or dry, cleaned air, 5 to 6 bars.

Ø 6 mm connector pipe (supplied).

High and low position sensors supplied.

Connectors M8

3DSTEP
Available



Description	Unit	Reference
Positioning tool XY	piece	4401

/ XYZ positioning unit

/ The positioning of the workpiece carrier pallet is done by means of the positioning rods and positioning blocks of the workpiece carrier pallet (sold separately) and by lifting the pallet.

The support plate of the positioner is adapted to the size of the pallet and supports the positioning plate.

It also absorbs vertical processing forces.

The positioner can accommodate 250 daN under 5 bars.

The positioned plate is no longer in contact with the chains.

The positioning repeatability on 3 axes is 0.1 mm.

The absorption of the forces must be borne by a machine frame or by the structure proposed as an option. Under no circumstances should the drive section take up the forces.

Operator protection must be provided.

Double acting pneumatic cylinder \varnothing 80 mm.

Lubricated or dry, cleaned air, 5 to 6 bars.

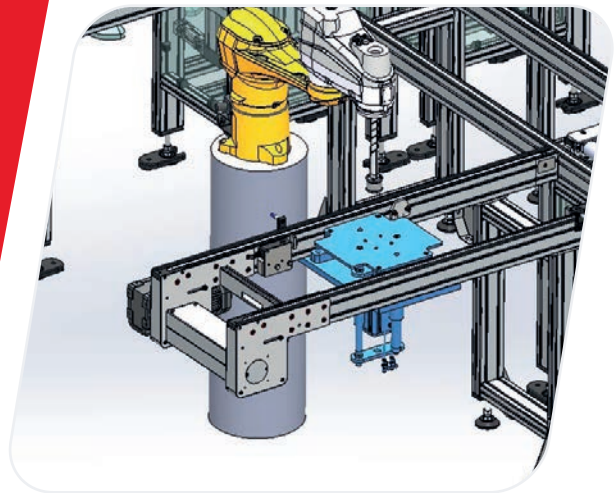
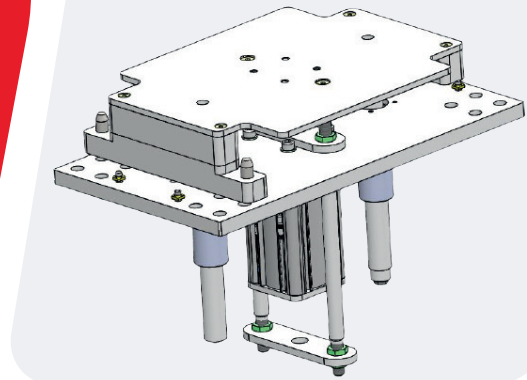
\varnothing 6 mm connector pipe (supplied).

Flow limiter supplied

High and low position sensors supplied.

Connectors M8.

3DSTEP
Available



/ XYZ positioning tool

A Width WPC / section	B Length WPC	Reference
436	436	TRM-PT-0436-0436
436	536	TRM-PT-0436-0536
436	636	TRM-PT-0436-0636
436	736	TRM-PT-0436-0736
436	836	TRM-PT-0436-0836
536	436	TRM-PT-0536-0436
536	536	TRM-PT-0536-0536
536	636	TRM-PT-0536-0636
536	736	TRM-PT-0536-0736
536	836	TRM-PT-0536-0836
636	436	TRM-PT-0636-0436
636	536	TRM-PT-0636-0536
636	636	TRM-PT-0636-0636
636	736	TRM-PT-0636-0736
636	836	TRM-PT-0636-0836
736	436	TRM-PT-0736-0436
736	536	TRM-PT-0736-0536
736	636	TRM-PT-0736-0636
736	736	TRM-PT-0736-0736
736	836	TRM-PT-0736-0836
836	436	TRM-PT-0836-0436
836	536	TRM-PT-0836-0536
836	636	TRM-PT-0836-0636
836	736	TRM-PT-0836-0736
836	836	TRM-PT-0836-0836

/ XYZ positioning unit

/ The positioner support frame is necessary to absorb the vertical processing forces.

It is made of large-section aluminum profile and also serves as a leg stand.

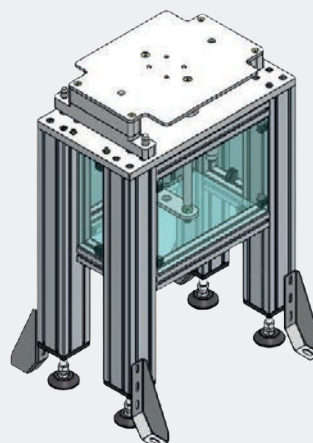
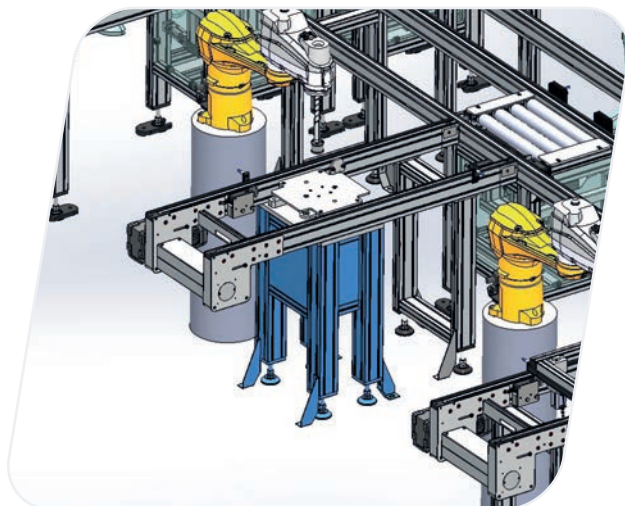
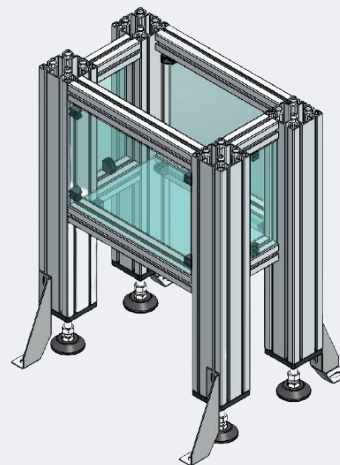
Height adjustment +/- 50 mm is possible.

Operator protection in the lower part of the frame is included.

Sealing brackets supplied.



Available



Description	Unit	Reference
Positioning unit width 436	piece	TRM-PT-0436-CHASSIS
Positioning unit width 536	piece	TRM-PT-0536-CHASSIS
Positioning unit width 636	piece	TRM-PT-0636-CHASSIS
Positioning unit width 736	piece	TRM-PT-0736-CHASSIS
Positioning unit width 836	piece	TRM-PT-0836-CHASSIS

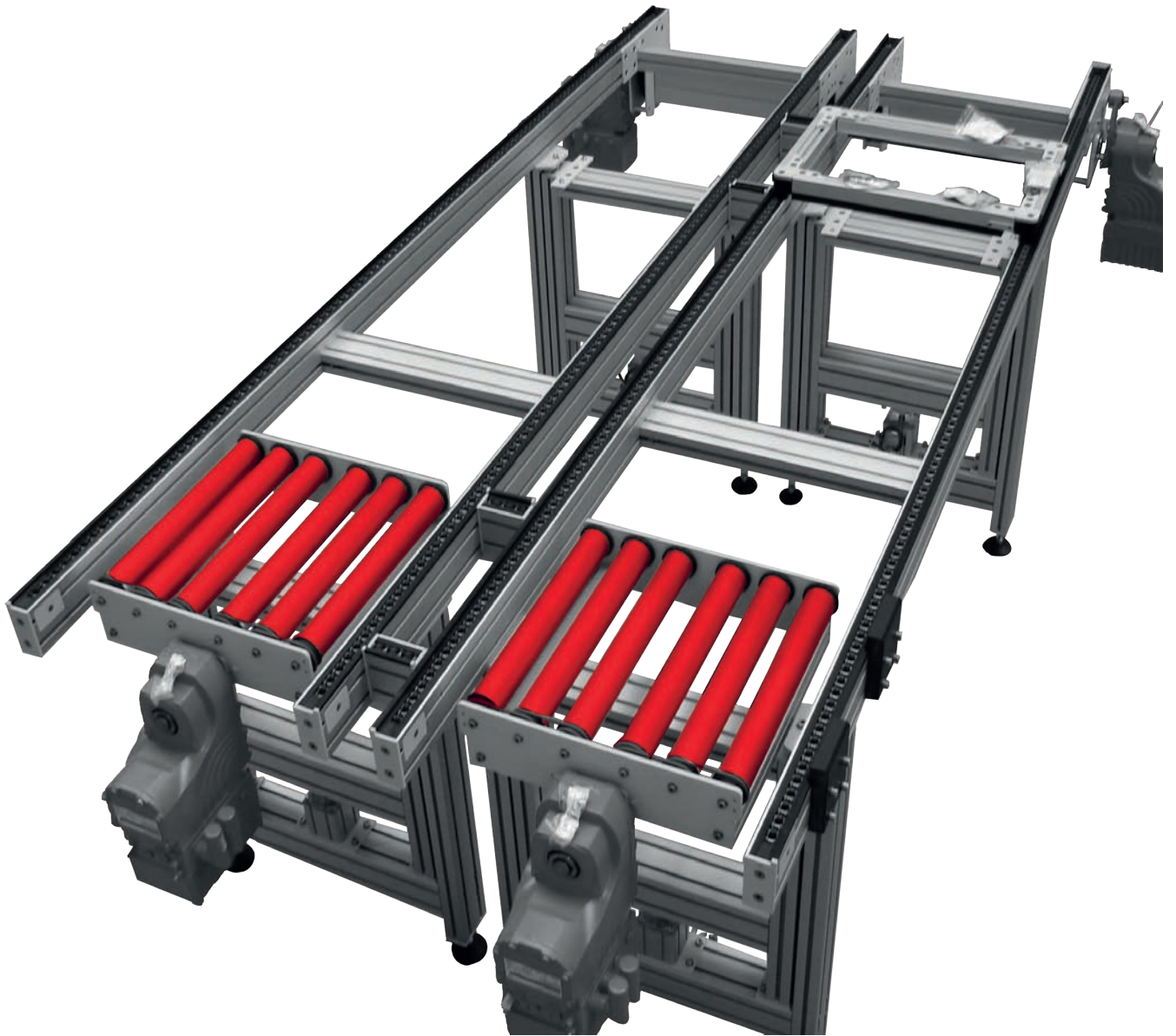
/ Lift solutions

/ Various lift solutions for the transport of goods at different levels are possible.

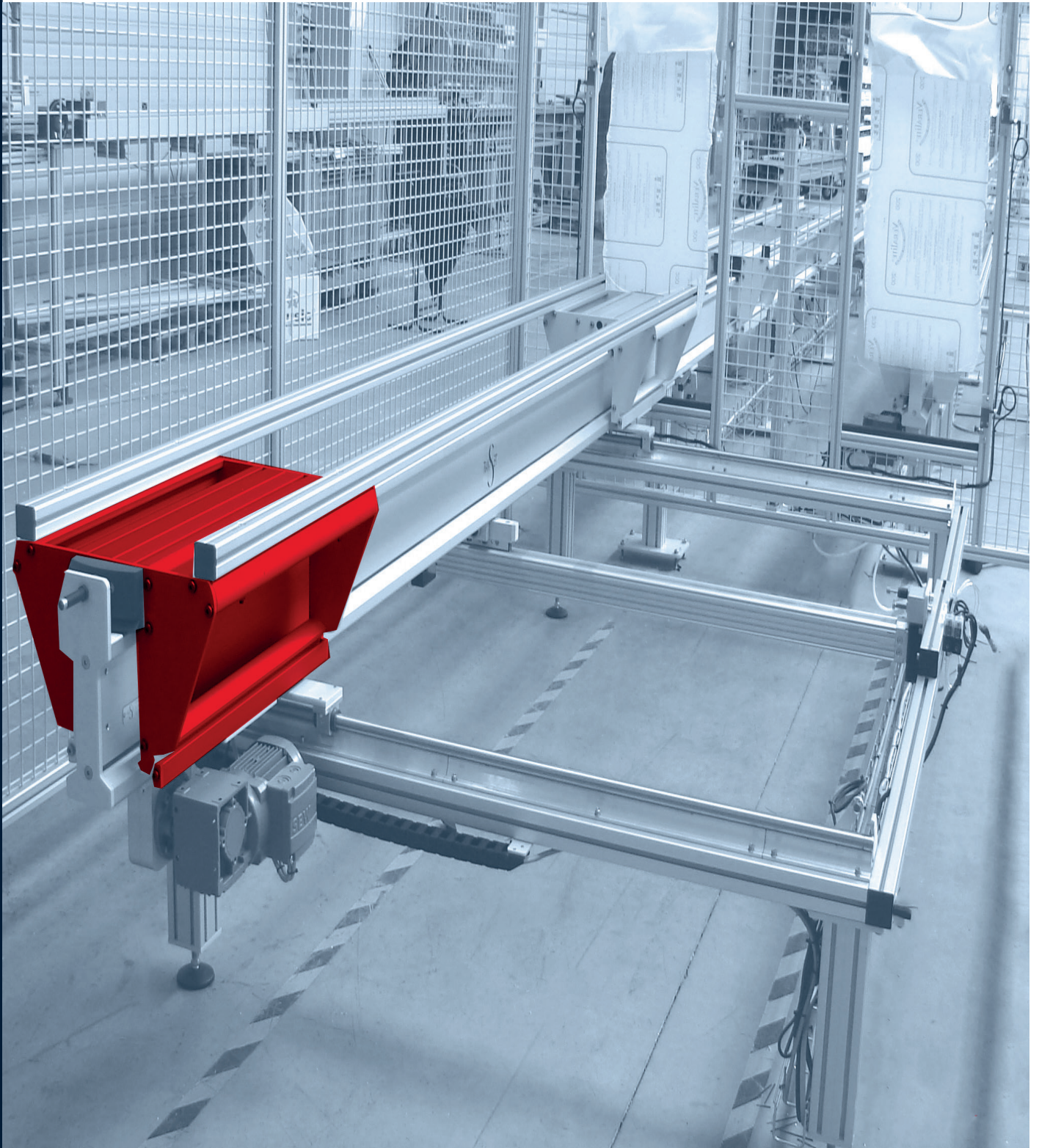
Thus, it is possible to install floor systems as in the pictures below.

Obtain your solution proposal on request.





/ MONORAIL TRANSFER TM SYSTEM



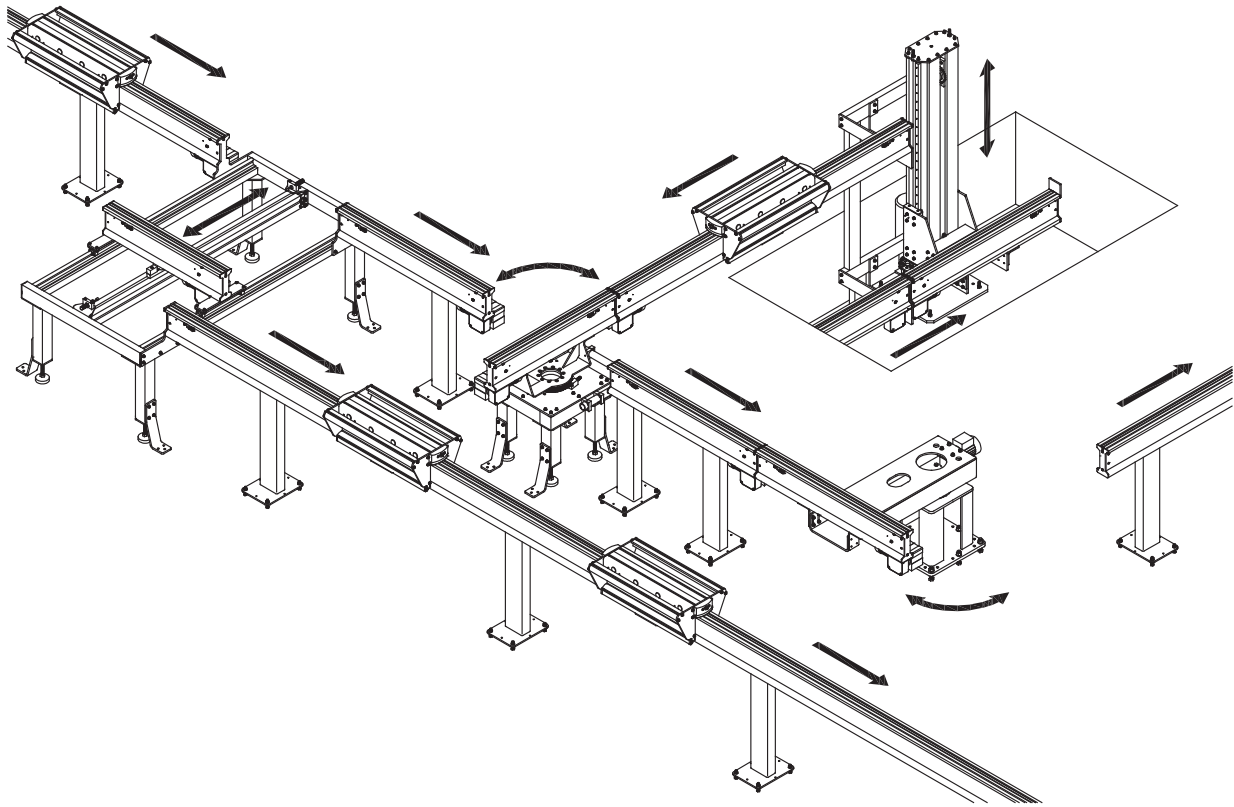
TM

Index TM

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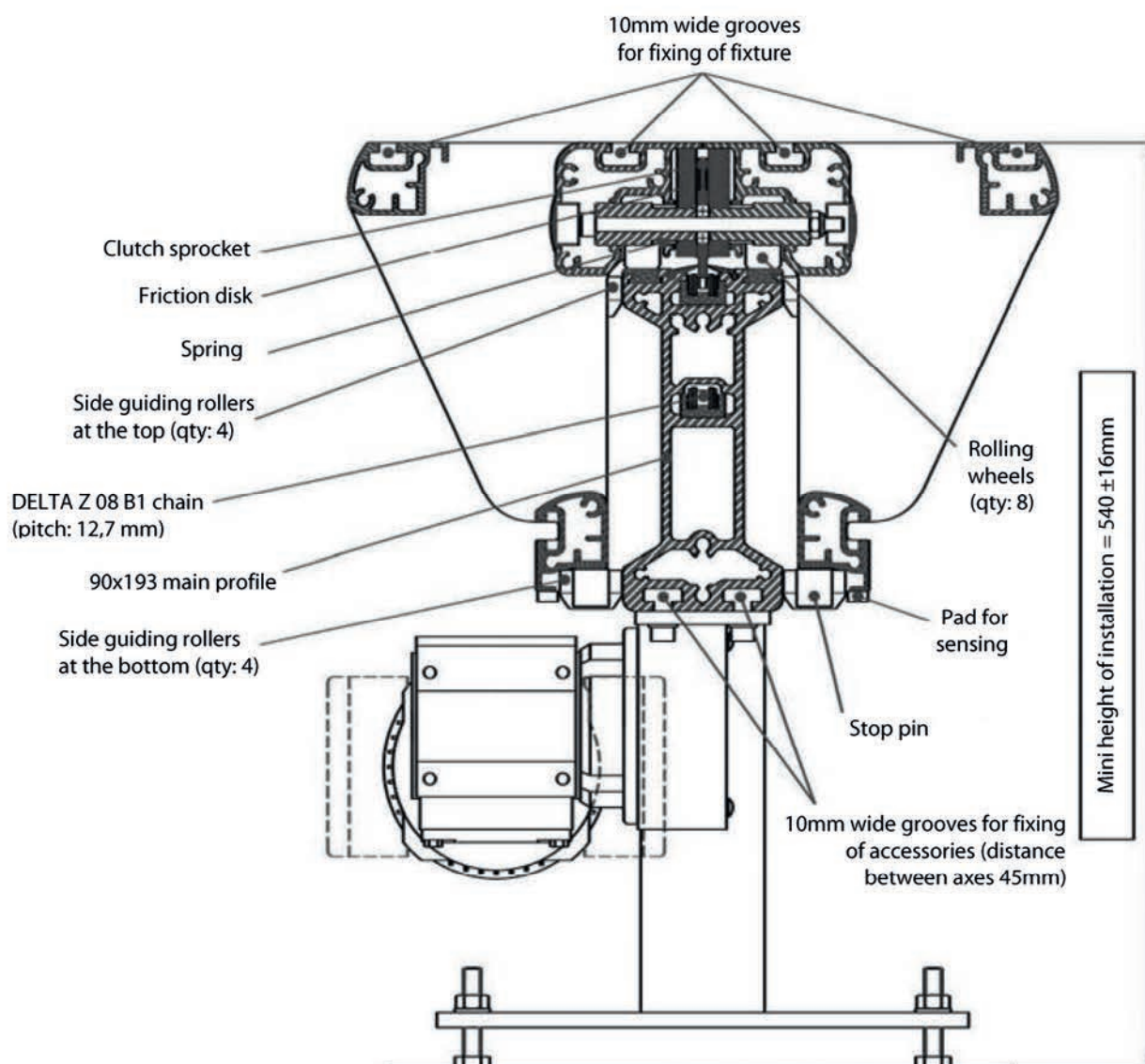
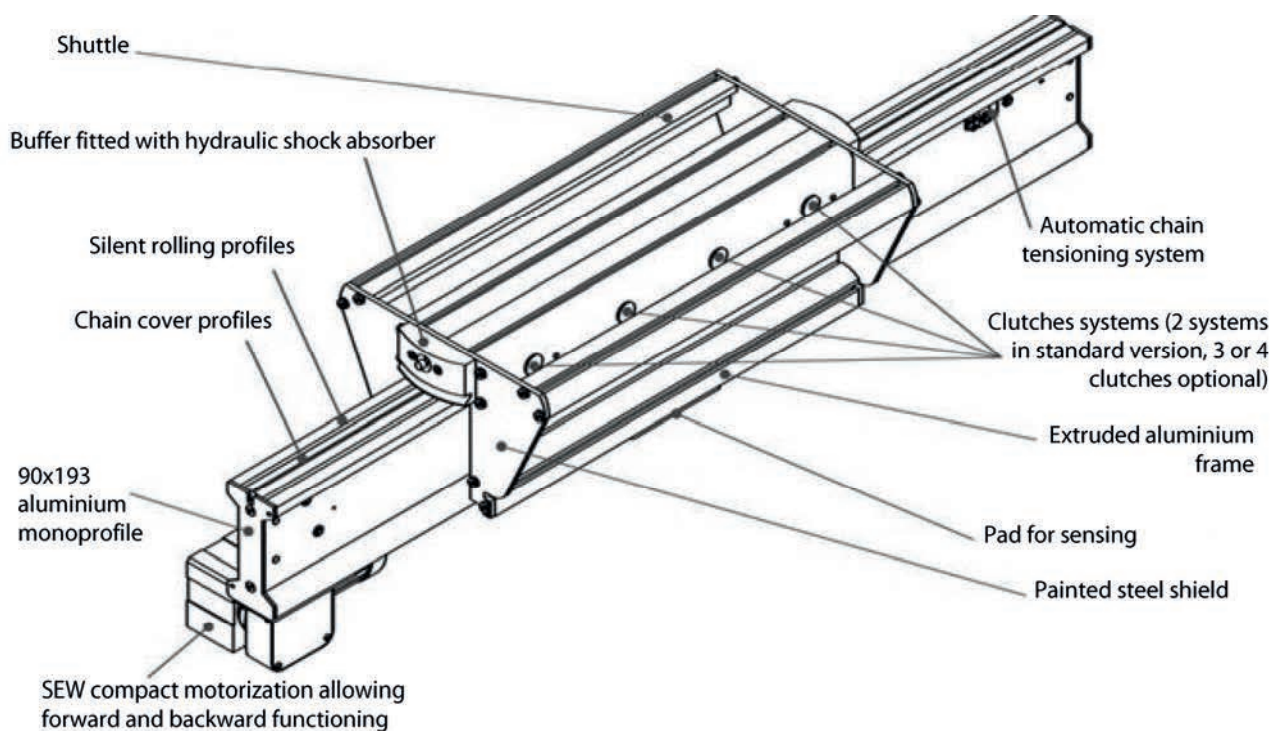
/ Monorail TM system

Ergonomics at the assembly workstation

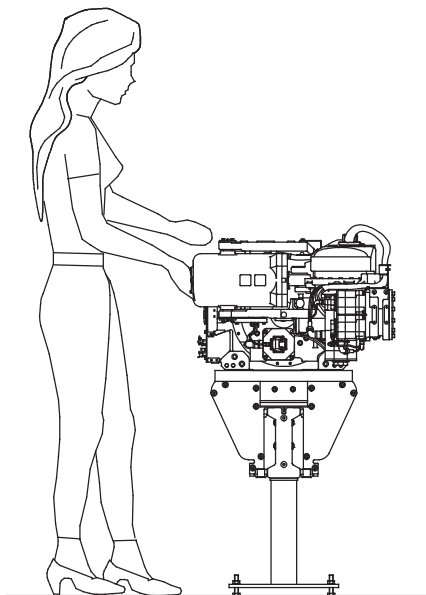


TM

/ Main features

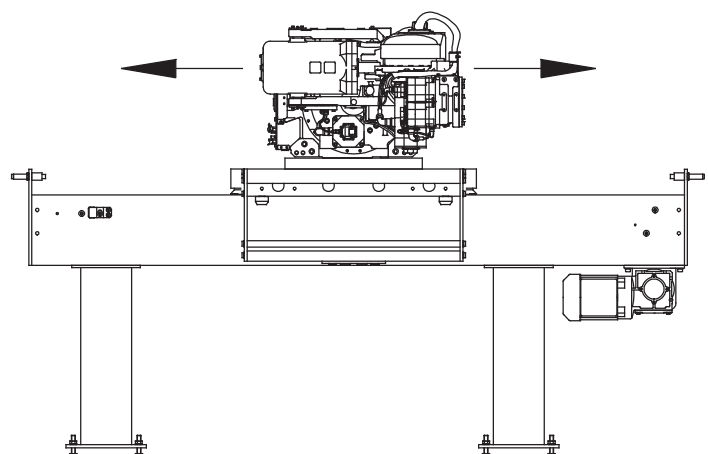


/ Applications

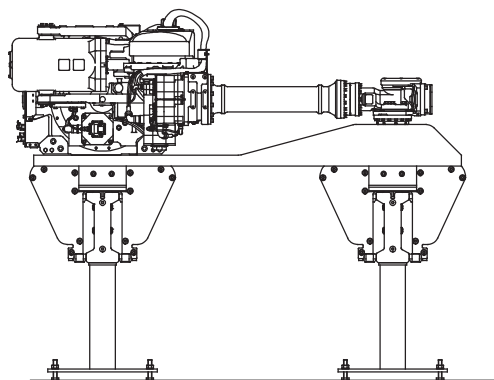


Its compact overall dimensions and the optimal ergonomies provided by the system facilitate the arrangement of the du workstation.

Sections are motorized and shuttles are driven by a passive and progressive and clutch system. The operator can anytime safely stop the soft and smooth flow.



The forward and backward functioning of the system allows specific applications such as loading and unloading.



Transportation of voluminous and/or heavy products is also possible thanks to a twin arrangement of the sections.

/ Motorized section

Technical data

x Nominal speed of the line
15m / min (standard speed)
On request: 3 to 35 m/min

x Automatic chain tensioning

x Possible forward and backward functioning

x W20 type SEW motor reducer 180w
230/400V 3-phase

The loading capacity of the section will depend on the quantity of shuttles stopped in accumulation.

Speed and capacity

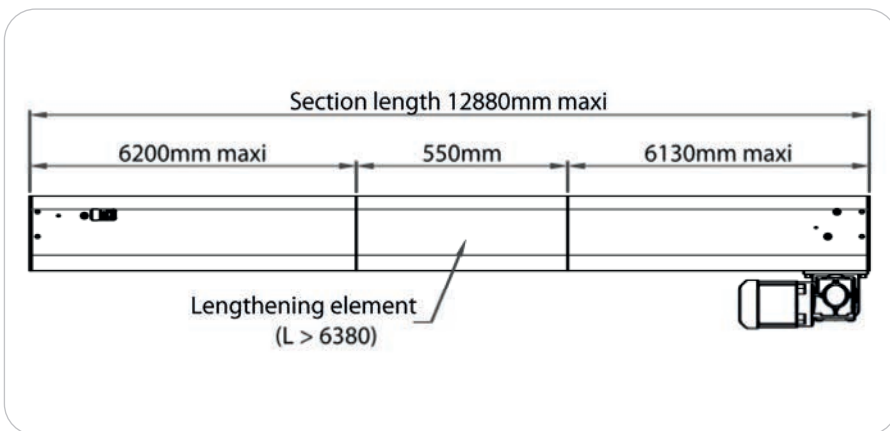
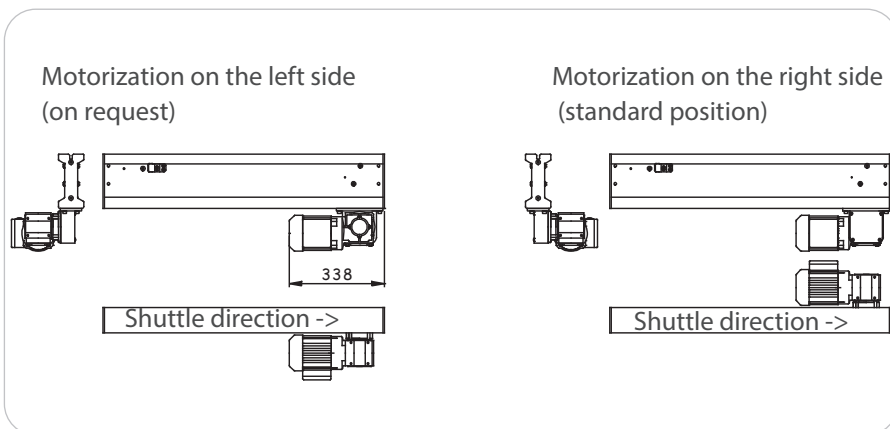
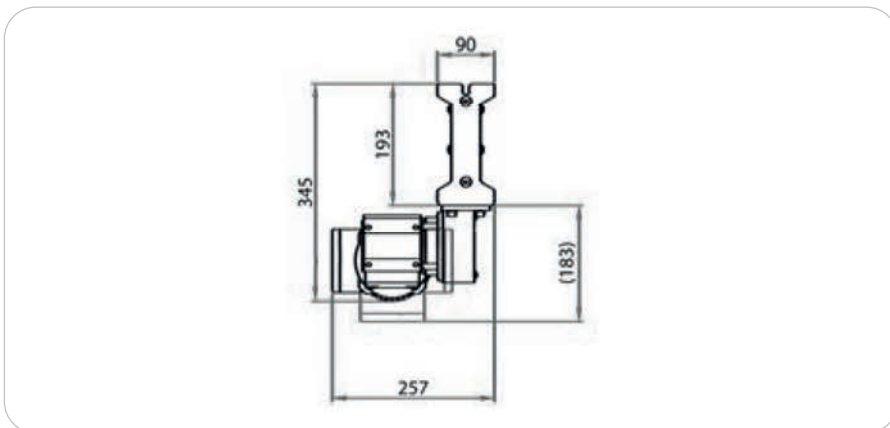
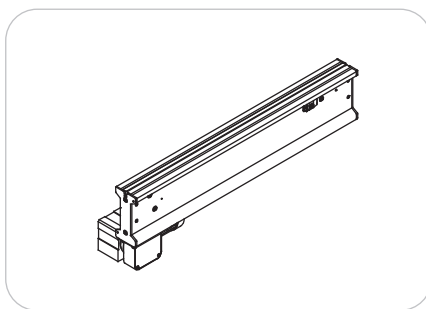
- 10 m/min: 40 shuttle clutches
- 15 m/min: 30 shuttle clutches
- 20 m/min: 25 shuttle clutches
- 24 m/min: 20 shuttle clutches

Mini section length: **600 mm**

Maxi section length: **12 880 mm**

Reference to be ordered:

Example of a section length 3500 mm:
Motorization on the left side, standard speed, standard position of the terminal.
Ref. 2288 Left - 3500

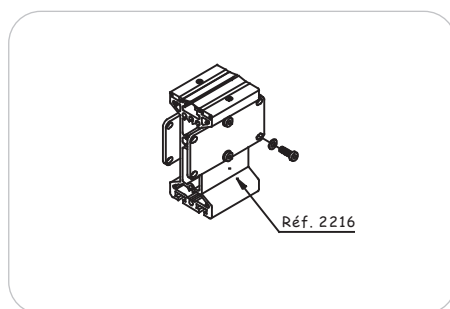
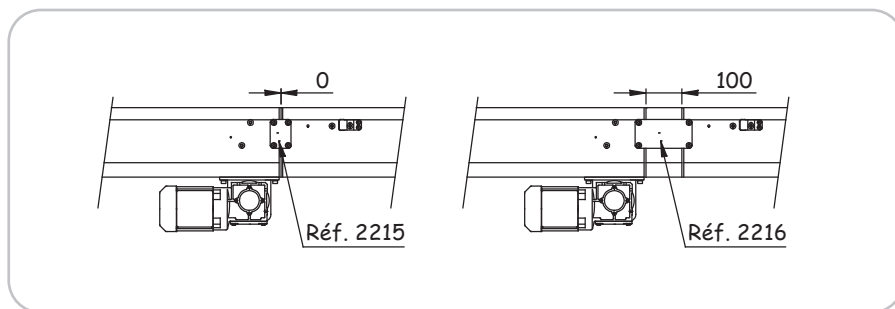


Designation / Dimensions	Order unit	Reference
Motorized section not fitted with lengthening element (L ≤ 6 380 mm)	1 set	2288
Motorized section fitted with lengthening element (L > 6 380 mm)	1 set	2298

/ Fixing kits for alignment of sections

By assembly of sections in series (aligned), fixing kits ref. 2215 and 2216 ensure perfect alignment of the sections.

Fixing kit ref.2216 eases access to the sections ends (maintenance).

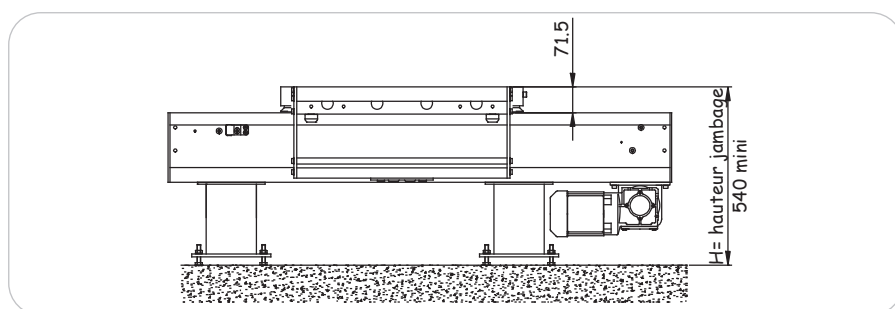
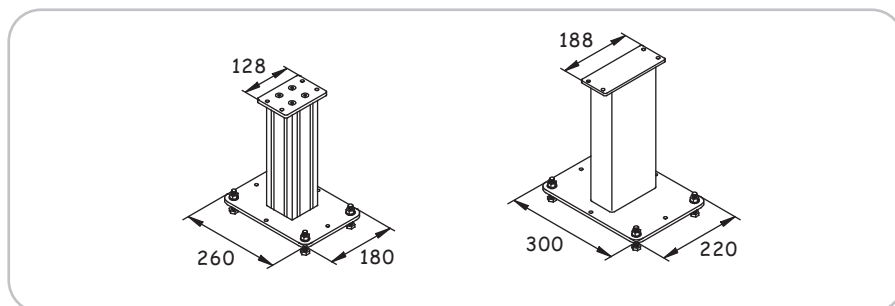


/ Leg sets

The leg sets are supporting the sections (section fixing bolting is supplied).

Aluminium leg set (80x80)
Ref. 2100

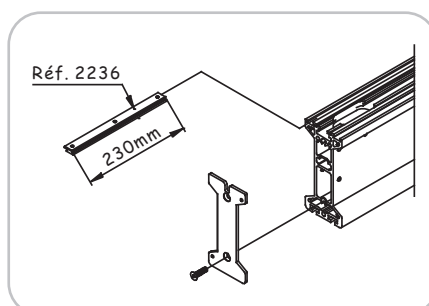
Coated steel leg set (140x70)
Ref. 2110



/ Hardened steel rolling profiles

In standard version, the motorized sections of rotary, transfer, sliding tables and lifts are fitted with hardened steel rolling profiles.

These profiles can also be set at working stations on the motorized sections of the main line in order to reduce wear generated by external efforts.



/ Electrically operated rotary table

Rotation by means of a SEW motor reducer 120w 230V or 400V 3-phase (monovoltage).

Hydraulic shock absorber (2) and M12x100 (2) end travel sensors (2) (supplied).

Rotation position: 90° and 180°.

Other position on request

Reference 2013 :

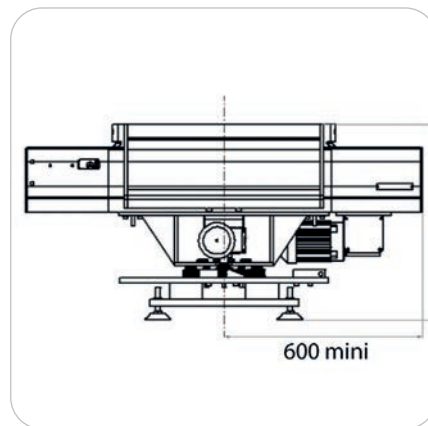
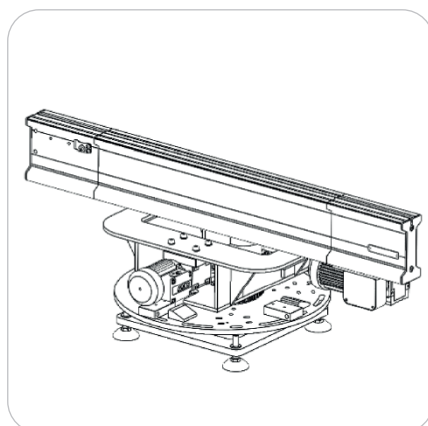
(section to be ordered separately)
 (stop unit to be ordered separately)
 (sensor support to be ordered separately)



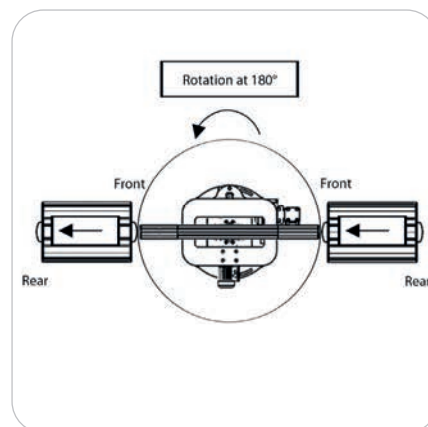
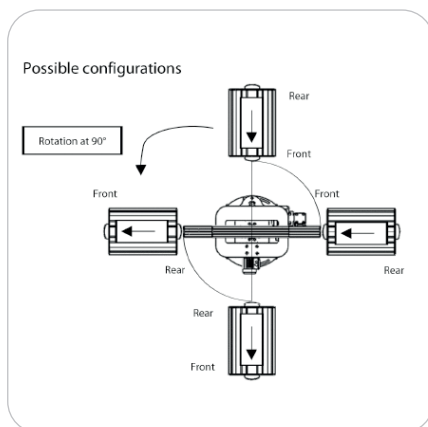
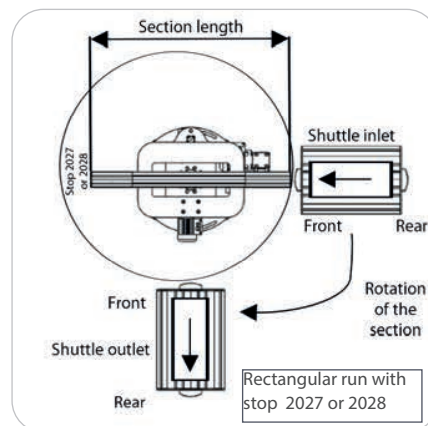
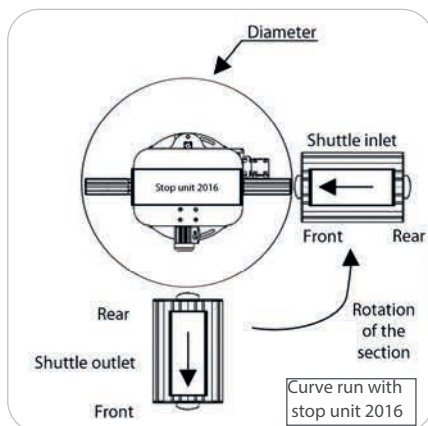
IMPORTANT

Foresee a protection around the table.

Note: the motorized section is delivered fitted with hardened steel rolling profiles



Shuttle	Section length	
	With stop unit 2016	With stop 2027 or 2028
500mm	1050mm Diameter: 1055mm	830mm Diameter: 1055mm
600mm	1050mm Diameter: 1055mm	880mm Diameter: 1055mm
800mm	1050mm Diameter: 1055mm	980mm Diameter: 1055mm
1000mm	1110mm Diameter: 1155mm	1110mm Diameter: 1115mm
1200mm	1310mm Diameter: 1315mm	1310mm Diameter: 1315mm



/ Pneumatically operated sliding table

Movement by means of a rodless pneumatic cylinder Ø50 mm.

Flow limiters connections Ø8 mm (supplied).

2 sensors located on the cylinder (supplied).

End travel hydraulic shock absorbers (supplied).

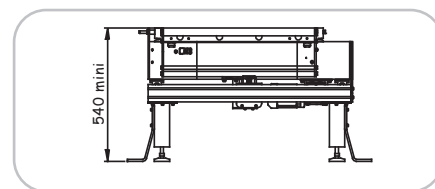
Example of reference of shuttle 800 mm, section 1050 mm, travel (distance between axes) 1500 mm :

Ref: 2014 - 800 - 1050 - 1500

(section to be ordered separately)

(stop unit to be ordered separately)

(sensor support to be ordered separately)



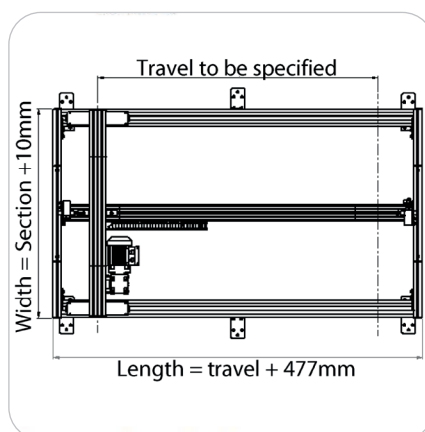
Shuttle	Section length	
	With stop unit 2016	With stop 2027 or 2028
500mm	950	900
600mm	1000	950
800mm	1100	1050
1000mm	1200	1200
1200mm	1400	1400

IMPORTANT

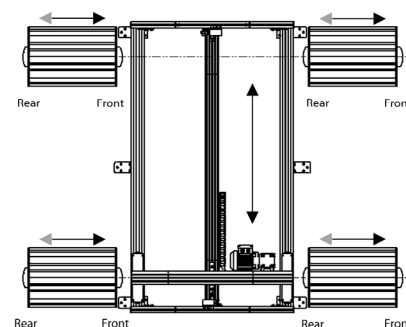
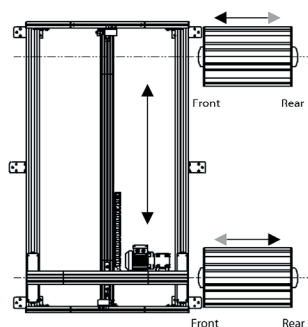


Foresee a protection around the table.

Note: the motorized section is delivered fitted with hardened steel rolling profiles



Possible configurations



/ Electrically operated lift

Movement by motor SEW 550W motor
brake 230/400V 3-phase.

Nominale speed: 13 m/min.

4 end travel sensors (supplied).

The use of a frequency inverter is
advisable.

Reference to be ordered:

(section to be ordered separately)

(stop unit to be ordered separately)

(sensor support to be ordered separately)

Reference 2030

indicating:

The height of installation (distance
from the ground to the top of the
shuttle)

Lift travel

Fixture width

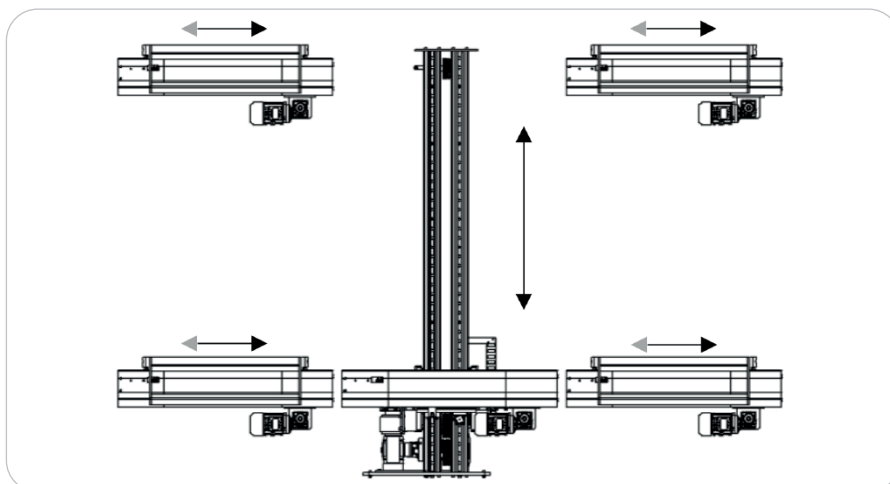
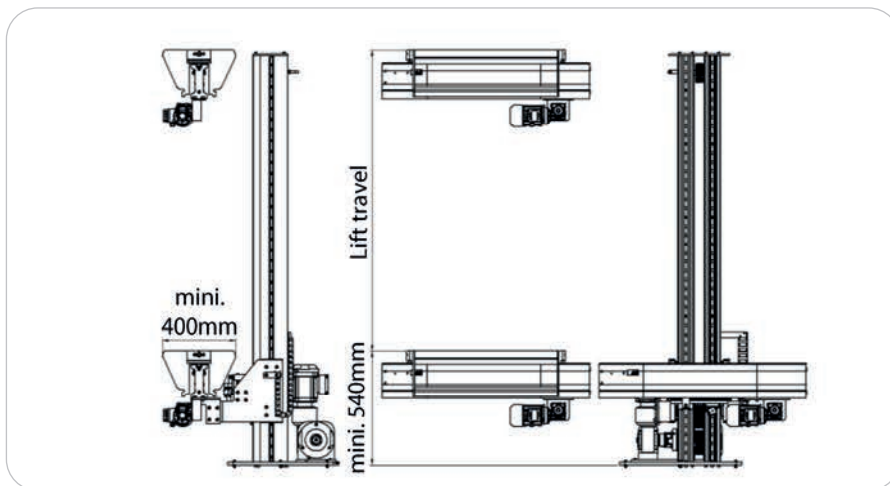
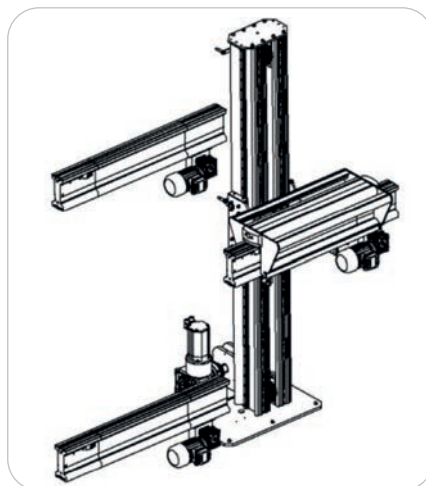
IMPORTANT



**Foresee a protection around
the table.**

Note: the motorized section is
delivered fitted with hardened steel
profiles

Possible configurations:



/ Electrically operated rotary transfer table

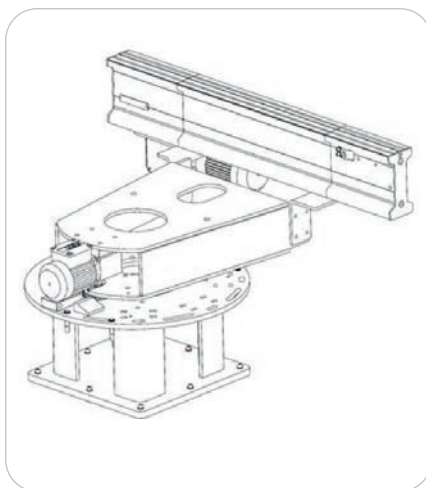
Rotation by means of a SEW motor reducer 180w 230/400V 3-phase.

Rotation position 180° (other position on request).

4 end travel sensors (supplied on request).

2 end travel hydraulic shock absorbers (supplied).

The use of a frequency inverter is advisable



Reference to be ordered:

(section to be ordered separately)

(stop unit to be ordered separately)

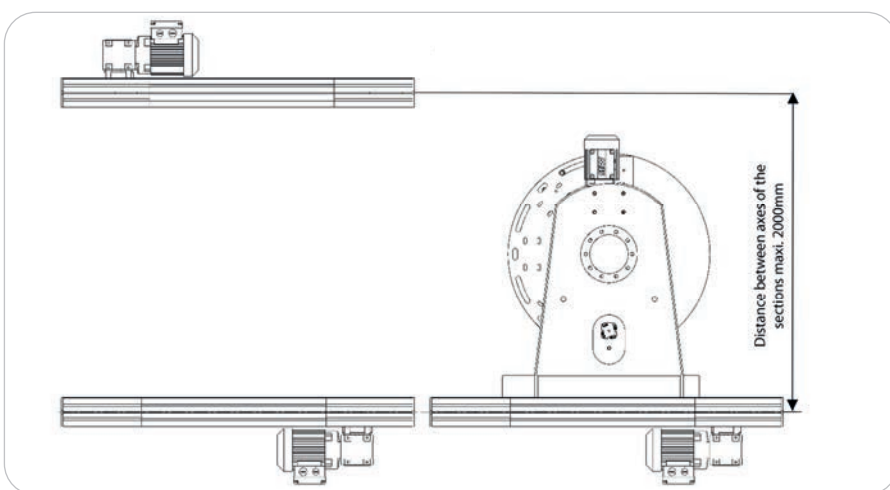
(sensor support to be ordered separately)

Reference 2032

indicating:

The height of installation (distance from the ground to the top of the shuttle).

Distance between axes of the sections.
Length of the shuttle.

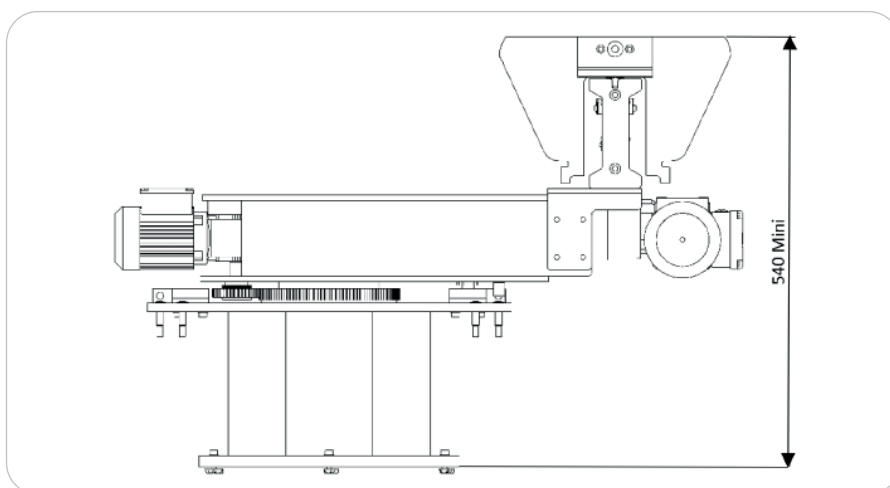


IMPORTANT



Foresee a protection around the table.

Note: the motorized section is delivered fitted with hardened steel profiles.



/ Shuttle

Maxi. payload 100kg (above, on request).

Available lengths:
500, 600, 800, 1000, 1200 mm.

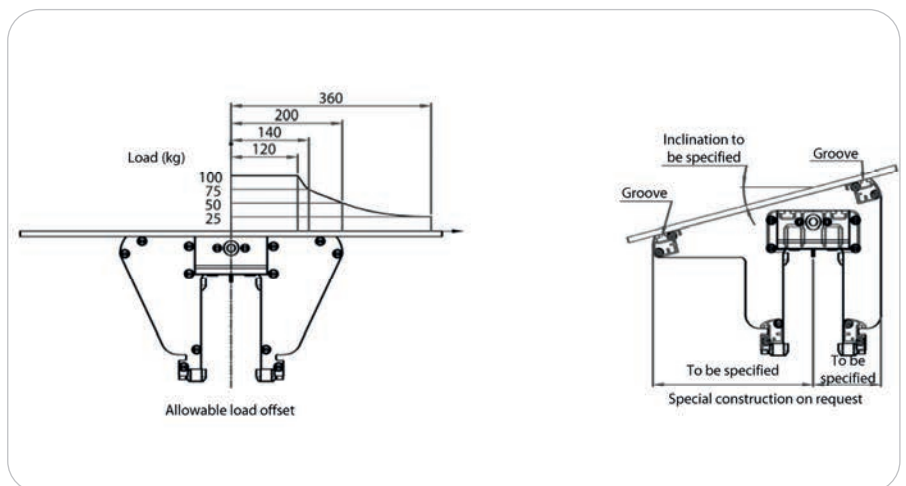
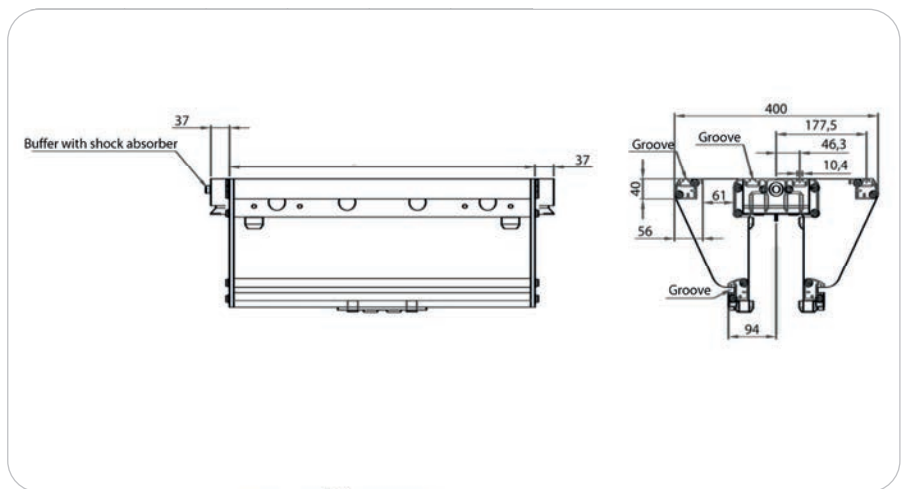
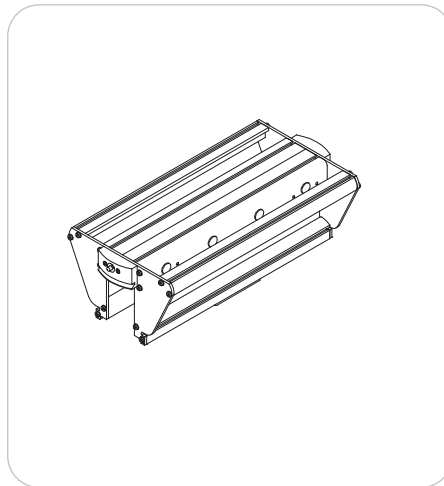
Adjustment and maintenance-free friction clutch.

2 clutches are set in standard version.

Extra clutches, offset or inclined shuttles.

Specific length: on request.

Note: empty shuttle weight=
14 kg/m + 10 kg.



Designation / Dimensions	Order unit	Reference
Shuttle length 500 mm	1 kit	2000
Shuttle length 600 mm	1 kit	2001
Shuttle length 800 mm	1 kit	2002
Shuttle length 1000 mm	1 kit	2003
Shuttle length 1200 mm	1 kit	2004

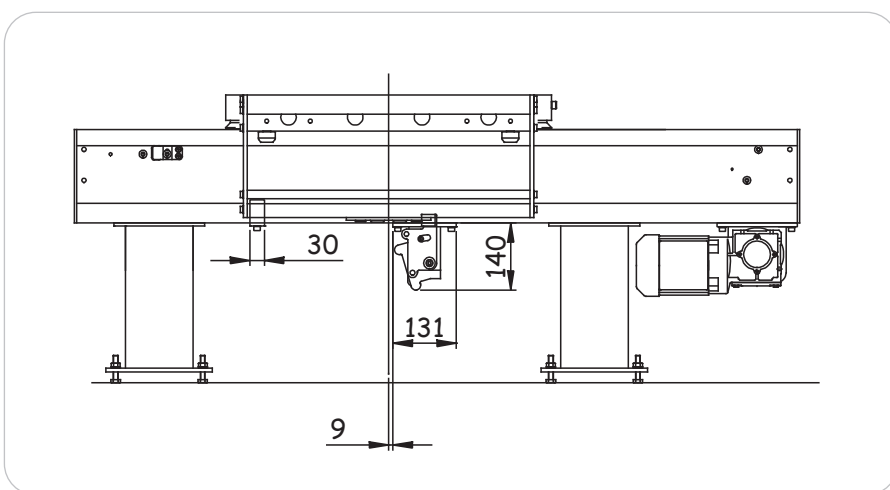
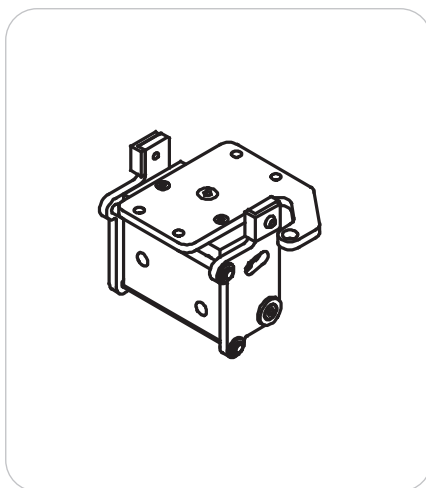
/ Dampened stop unit

Stop unit provides shuttle stop and detection at the workstations and when approaching tables or lifts. A swinging mechanism dampens the shuttles stop by acting on a hydraulic shock absorber which is incorporated and protected in the stop unit body. This mechanism will be re-armed as soon as the shuttle has been released by the stop unit.

Simple effect pneumatically actuated stop unit (load capacity: 5 shuttles). Lubricated or not lubricated, cleaned air, 5 to 6 bars.

Connection for $\varnothing 6\text{mm}$ pipe (supplied). Shuttle detection by means of M12x100 sensor (not supplied). Advisable swept area 4mm.

Detection of stop unit high and low positions by means of M8x100 sensors (not supplied).



Designation / Dimensions

Dampened stop unit

Order unit

1 pce

Reference

2016

/ Shuttle positioning at the workstation

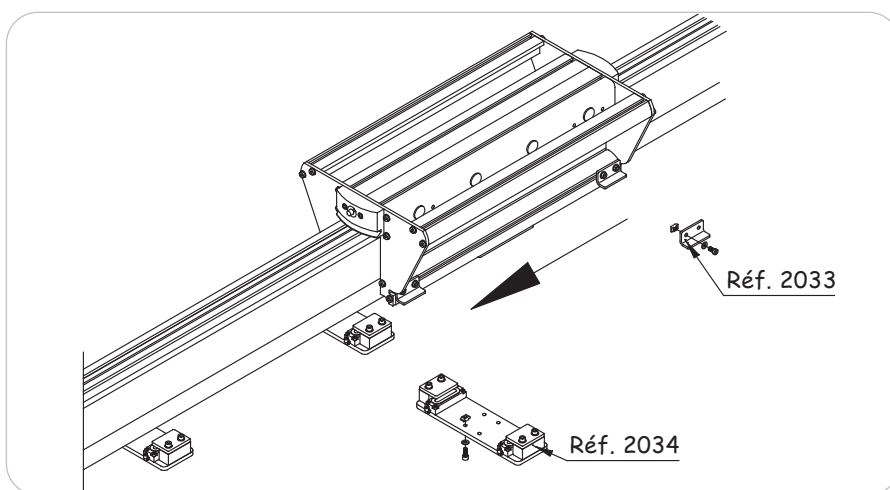
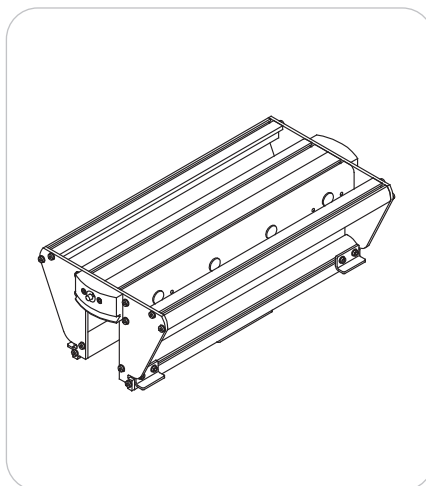
This system keeps the shuttle in position at the working place. The shuttle is stopped by stop unit 2016 (not supplied).

Positioning links ref. 2033 located on the shuttle get inserted inside rising devices ref. 2034.

The membrane cylinders of these devices rise the shuttle above the section (4mm) and allow a vertical effort of 240daN (including shuttle) at an accuracy of $\pm 3\text{mm}$.

Ref. 2033 : suitable for one shuttle (4 positioning links)

Ref. 2034 : suitable for one working place (supply of 2 rising devices)

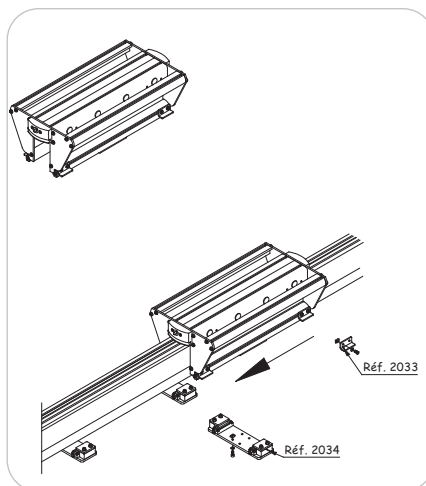


/ Stop at the end section

Stop unit ref. 2016 is necessary for «curve run» (rotary or transfer table) and for «sliding run» (sliding table or lift) because the shuttle direction remains unchanged.

But for «rectangular run» (rotary, sliding table or lift) stop unit ref. 2016 can be replaced by a stop at the section end ref. 2027 (without shock absorber) or ref.2028 (with shock absorber) because the shuttle direction is reversed after passing through the tables or lift.

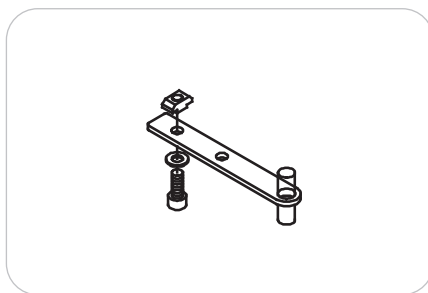
Shuttle detection is provided by sensor support ref. 2017.



Designation / Dimensions	Order unit	Reference
Stop at the end section without shock absorber	1 pce	2027
Stop at the end section with shock absorber	1 pce	2028

Sensor support

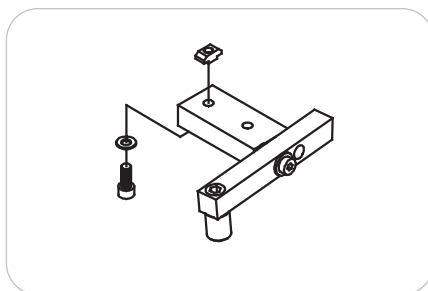
Suitable for M12x100 sensor (not supplied).
Advisable swept area 4 mm.



Designation / Dimensions	Order unit	Reference
Sensor support	1 pce	2017

Mechanical anti-return device

This device is located between stop unit ref.2 016 and the anti-lift device. It avoids unexpected movements of shuttle when operating at the working place.

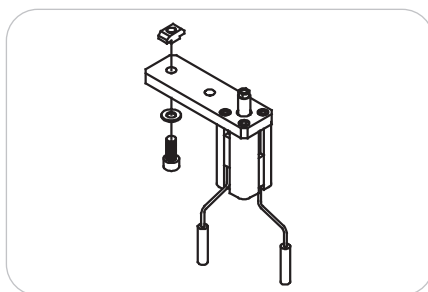


Designation / Dimensions	Order unit	Reference
Mechanical anti-return device	1 pce	2015

Pneumatical anti-return device

This device is located between stop unit ref. 2016 and the anti-lift device. It avoids unexpected movements of shuttle during lift rising and lowering.

Simple effect pneumatic cylinder.
Lubricated or not lubricated, cleaned air, 5 to 6 bars.
Connection for Ø6 mm pipe (supplied).
Detection of high and low positions by means of sensors located on the cylinder (supplied).



Designation / Dimensions	Order unit	Reference
Pneumatical anti-return device	1 pce	2036

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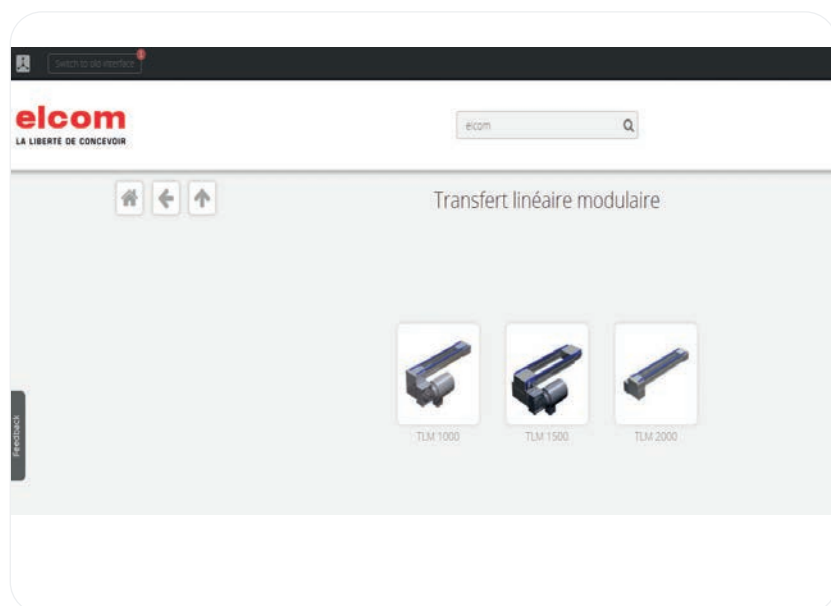
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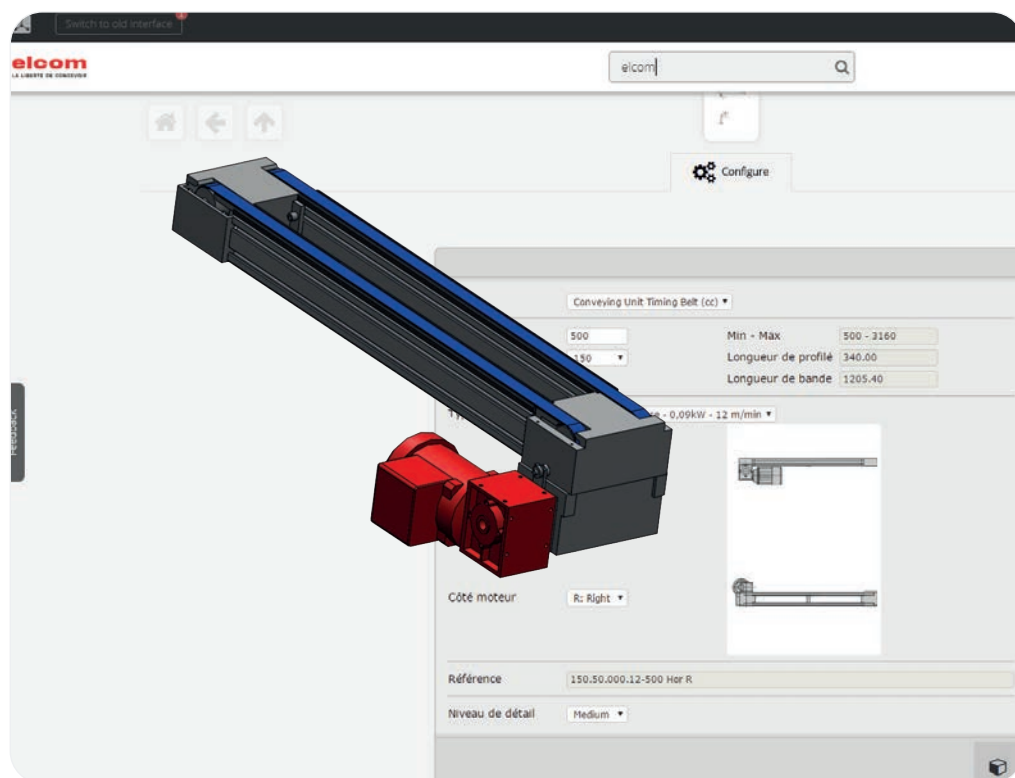
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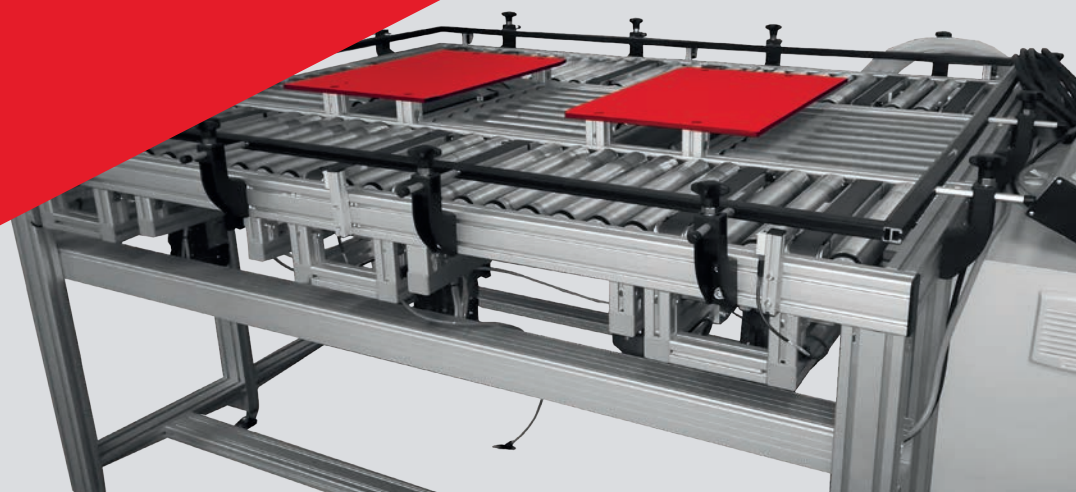
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