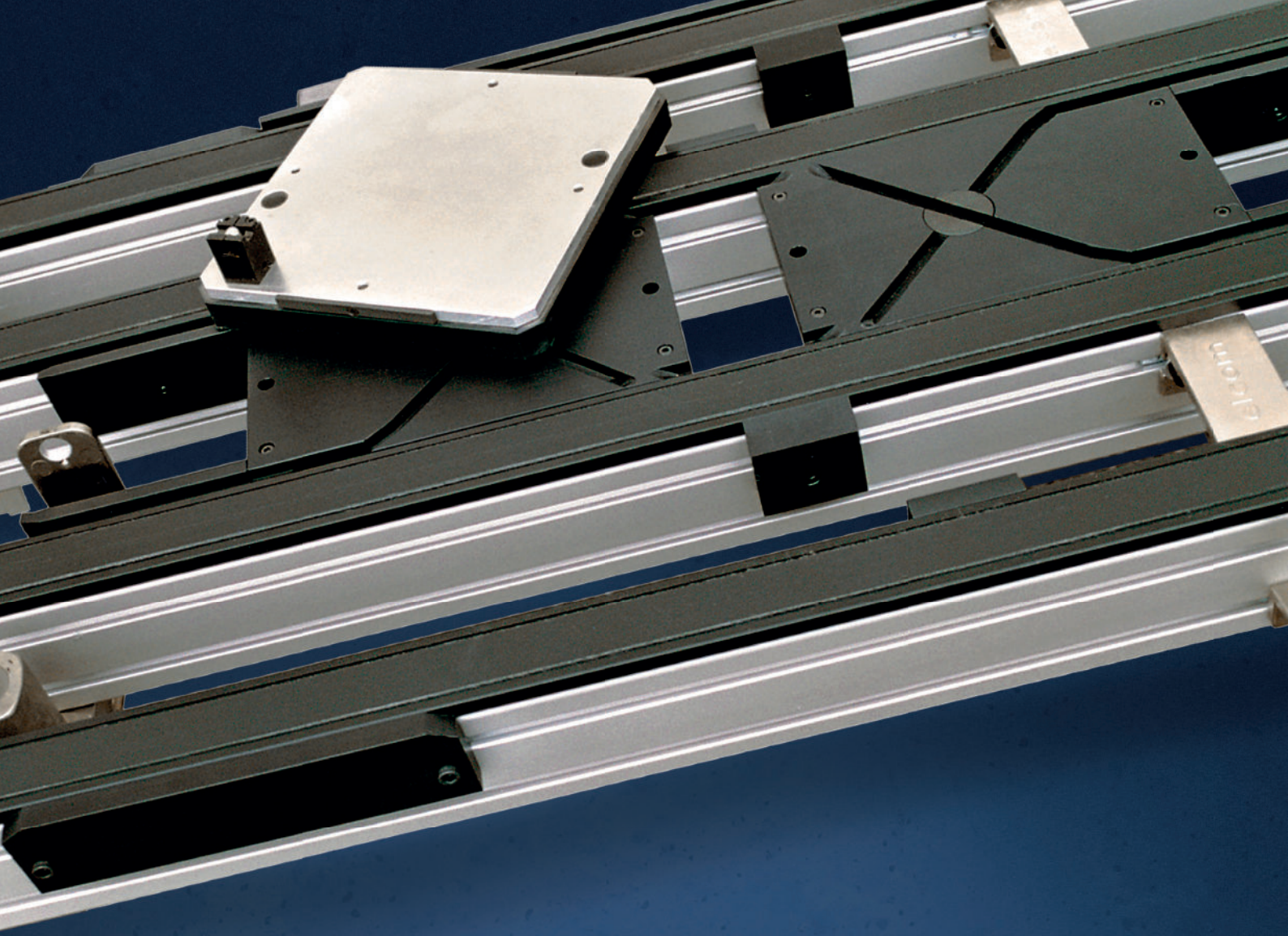
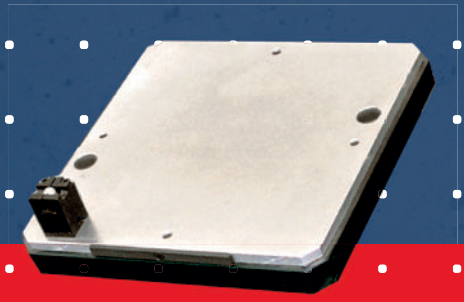


Technical sheet
Pallet transfer system TLM 1000



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by hellomoov'

Conveying unit
24 V
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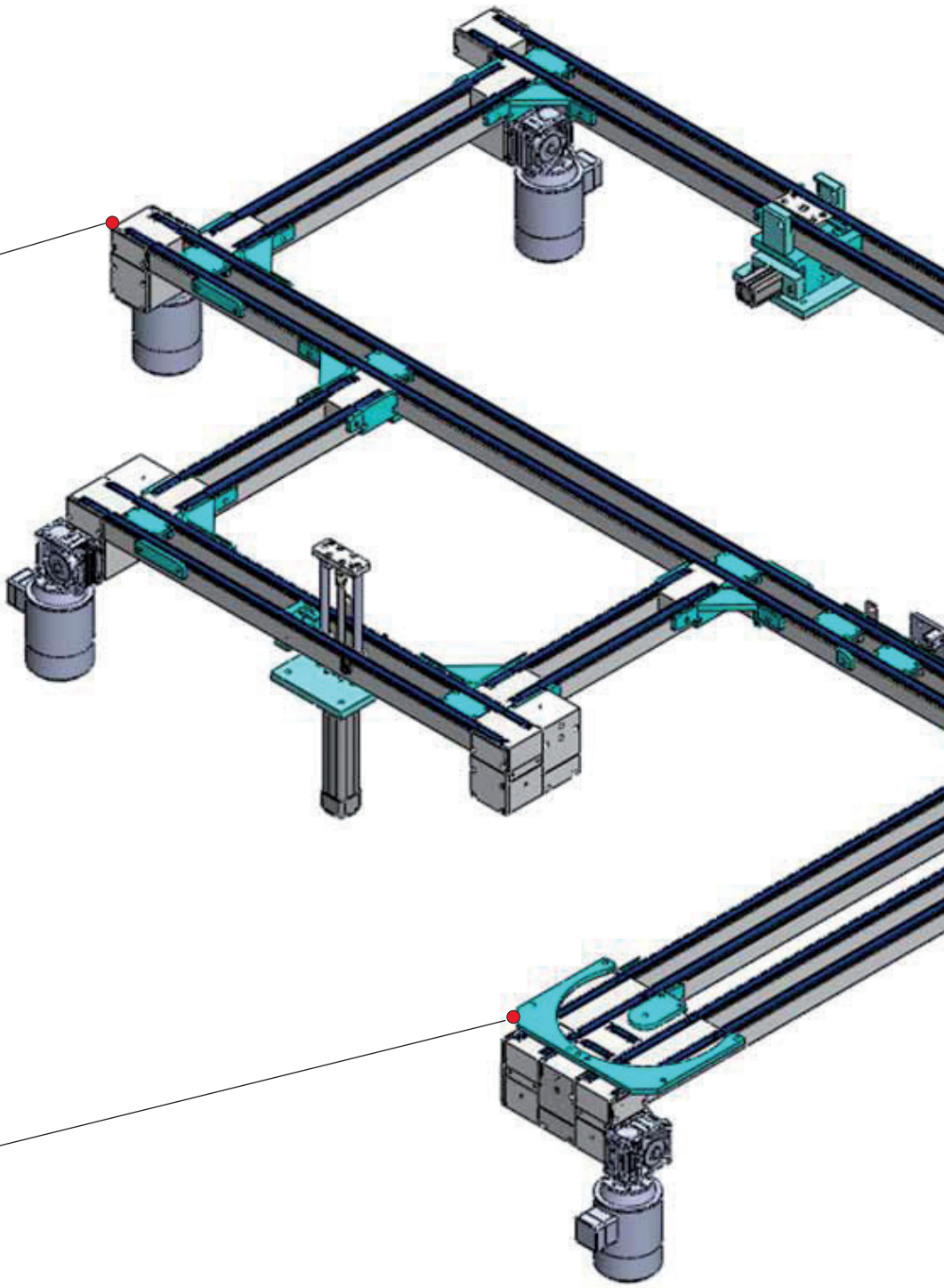
elcom ITS 24 V

Conveying unit
p 24



Return 180°
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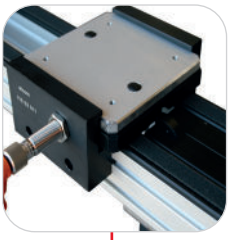

Derivation 24 V
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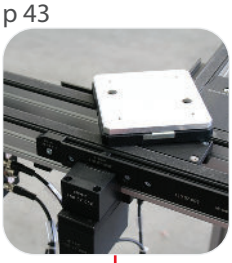

Positioning unit
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Workpiece carrier
p 20

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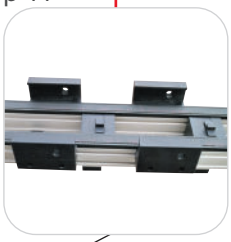
p 44



Derivation
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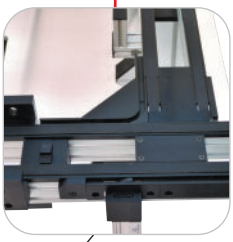

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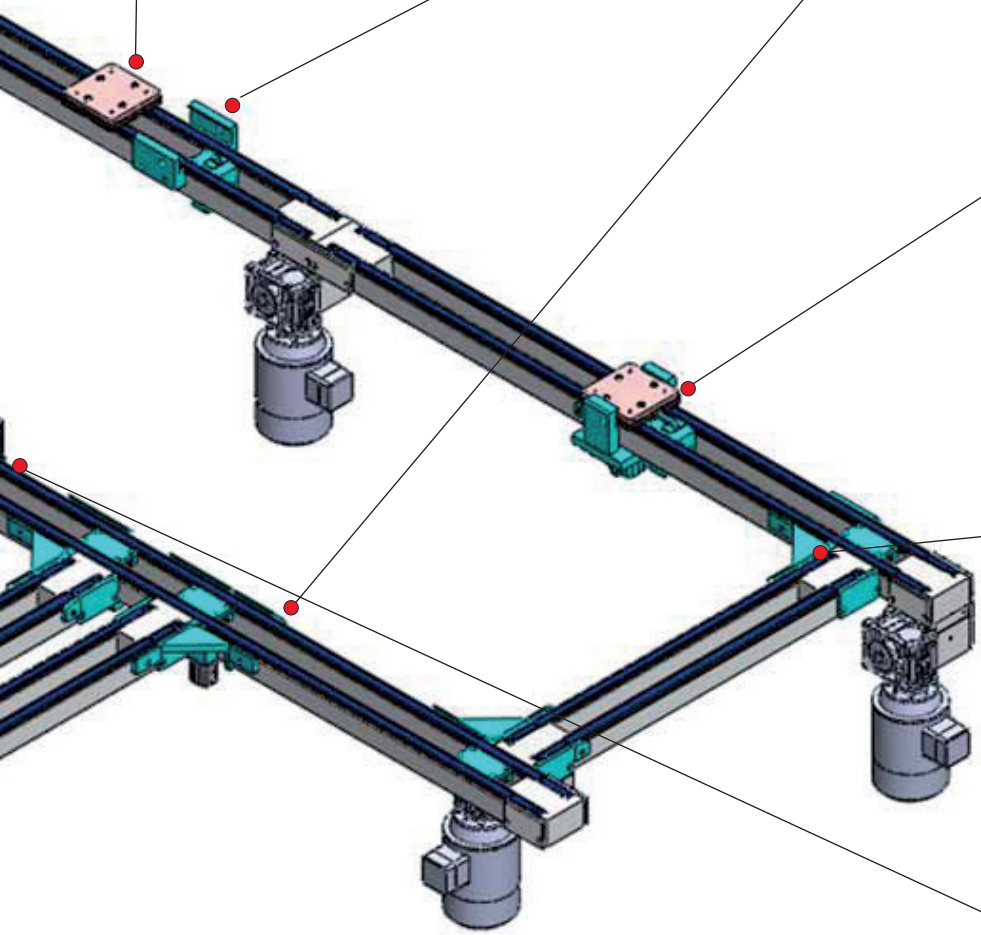

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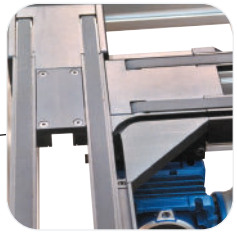
p 40



Swivelling
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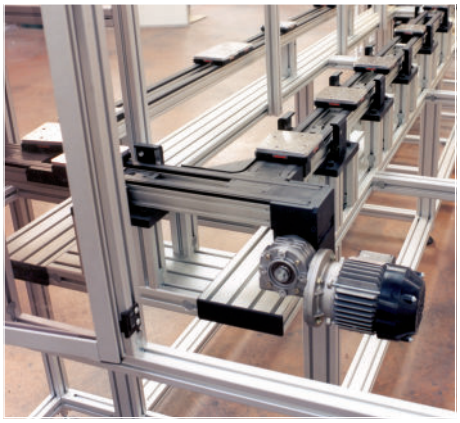
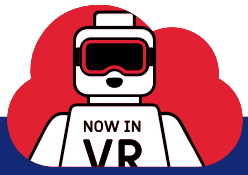
Index TLM 1000





Tip

Download all CAD 3D files

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.

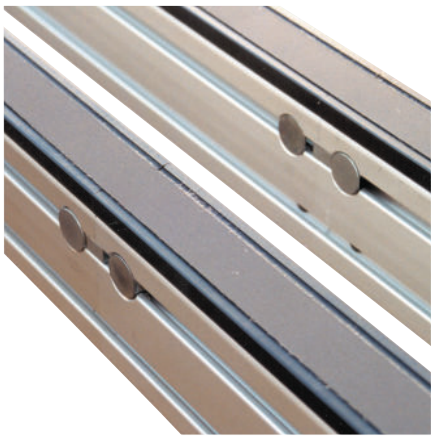
For long spans, several elements can be butted end to end.

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.



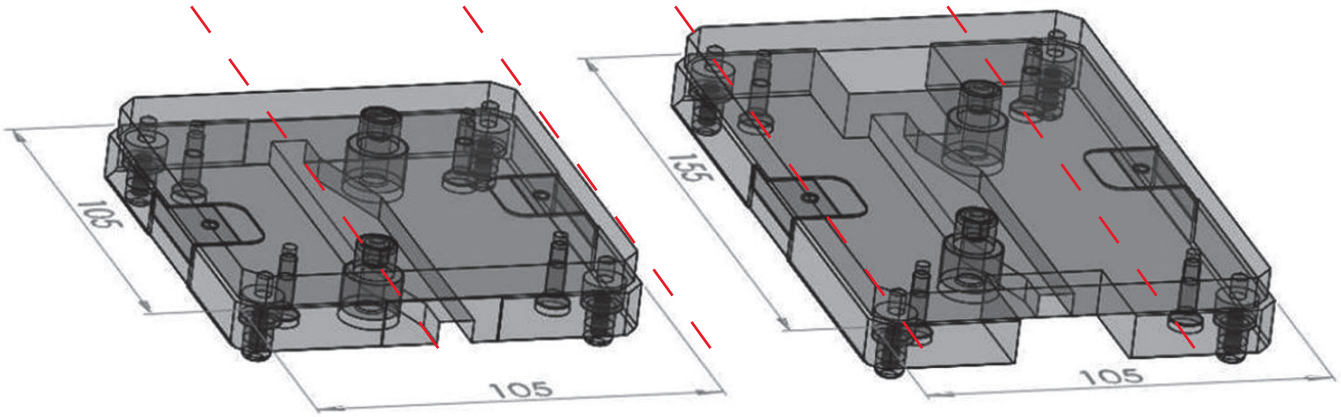
Conveyor's cut profile butted end to end

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 coefficent 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 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.

Workpiece carrier U

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 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.

Workpiece carrier with shock absorber T

⚠ **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 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.

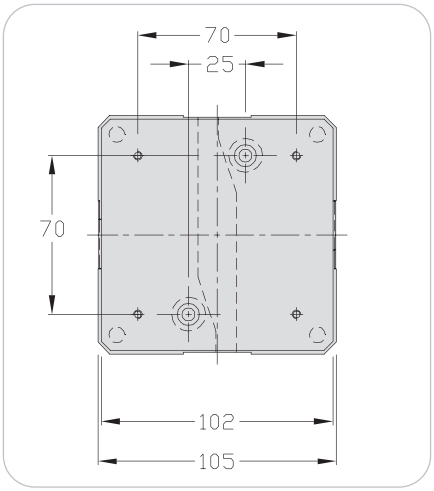
Multidirectional workpiece carrier M

- 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

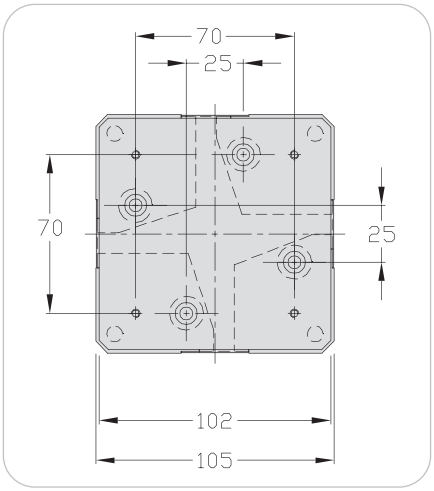
⚠ Maximum load: 2 daN

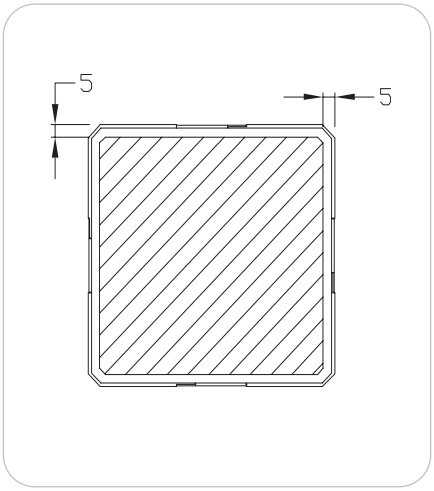
Weight: 0,41 kg

Unidirectional workpiece carrier U



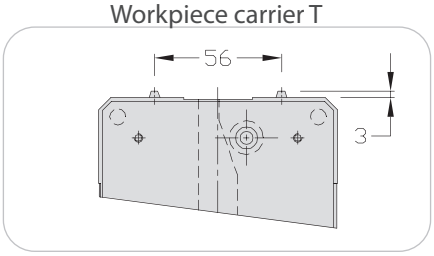
Multidirectional workpiece carrier M

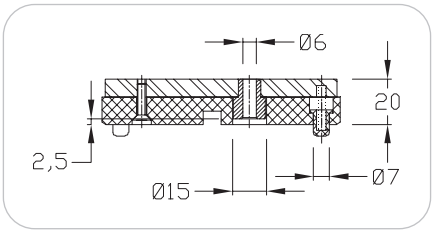


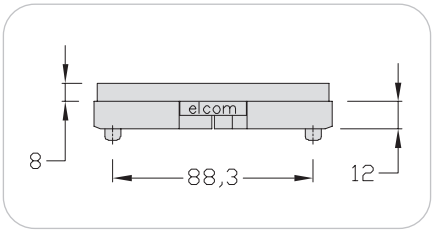


Working area

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

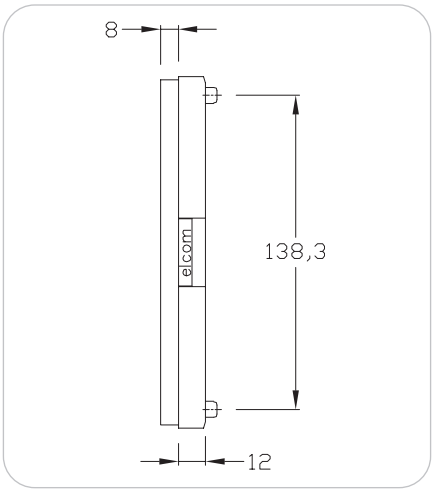
Technical data

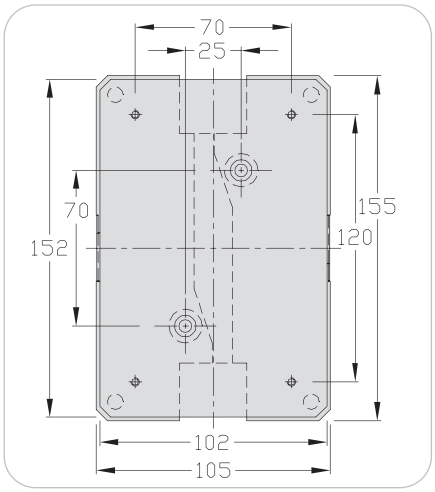
- x Plate Al
- x Base, PA black
- x 2 steel bushes
- x 4 pins PA
- x 4 springs
- x 4 countersunk screws M4x16
- x 2 detection bars
- x 2 plugs

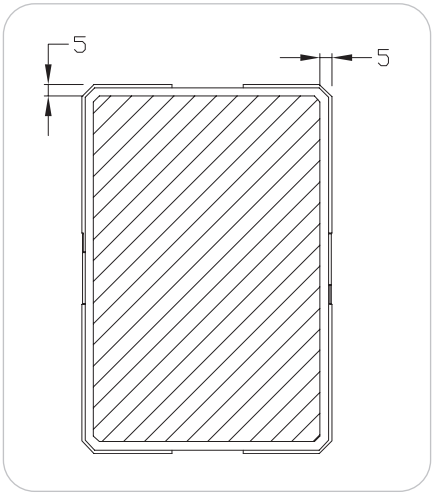
Add T at the end of reference to mention shock absorber option.

⚠ Maximum load: 2 daN

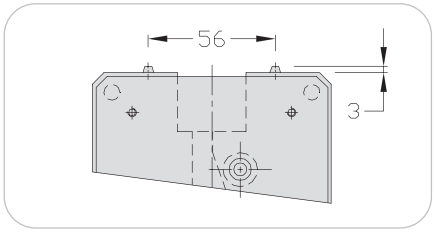
Weight: 0,53 kg

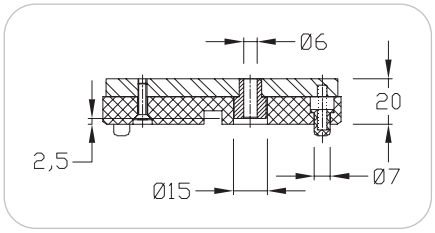






Working area



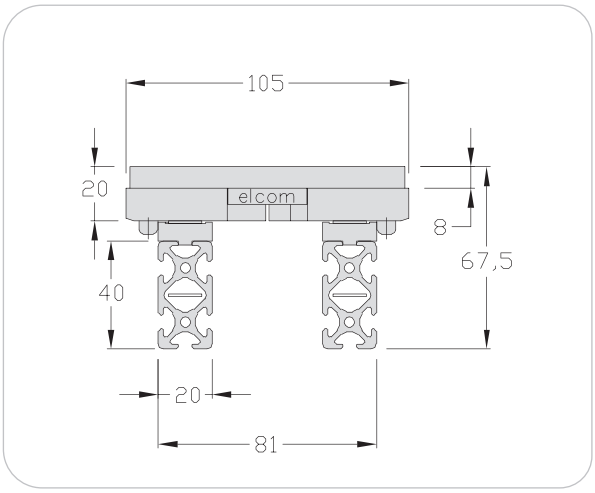


Designation / Dimensions	Order unit	Reference
Workpiece carrier U 100x150	1 pce	115.62.000
Workpiece carrier U 100x150 T	1 pce	115.62.000.T

Conveying unit flat belt

Applications

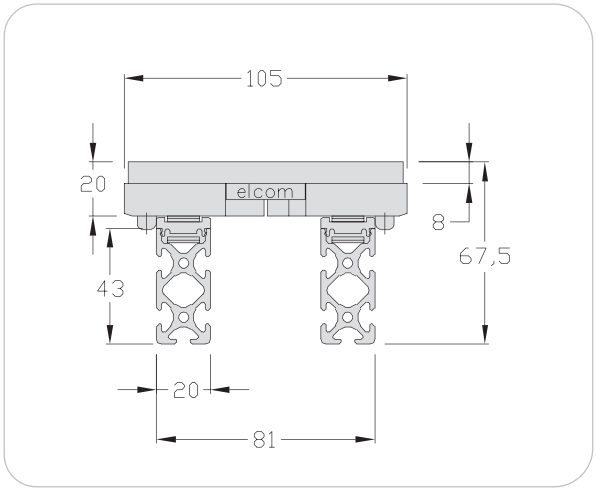
Ensures the motion and accumulation of workpiece carriers 100x100 and 100x150.
The motor can be fitted either vertically or horizontally, on the right or left side.
According to the load, longer spans can be butted end to end by straight joinings.
The cuttings of the conveyors allow division of the length, 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.



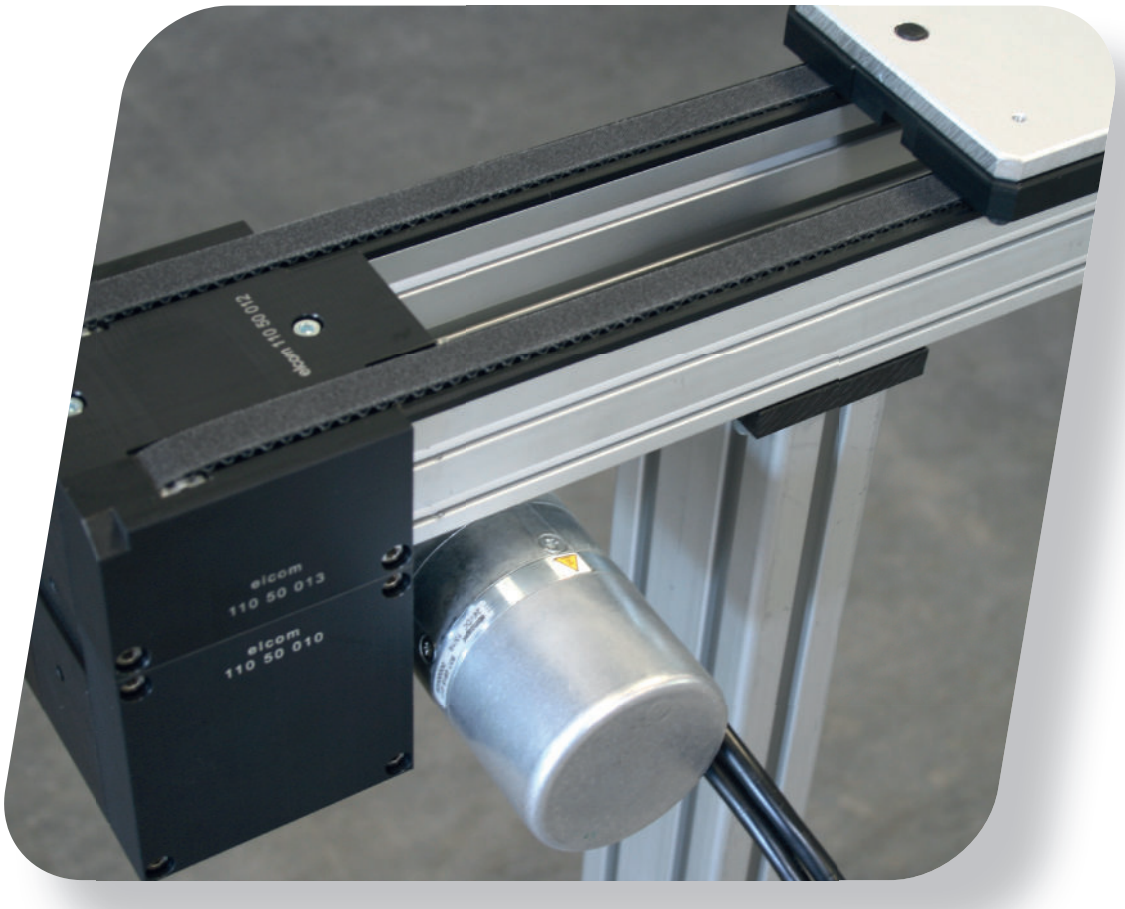
Conveying unit 24 V timing belt

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.



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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

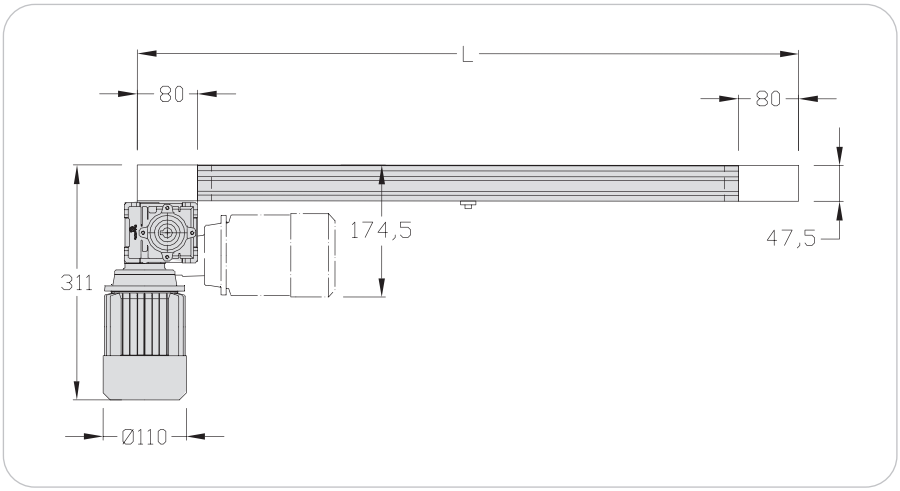
- x 2 profiles 5 40x20, al anodized
- x 2 belt guides, PA black
- x 2 belts width 12,5 mm
  thickness 1 mm, welded

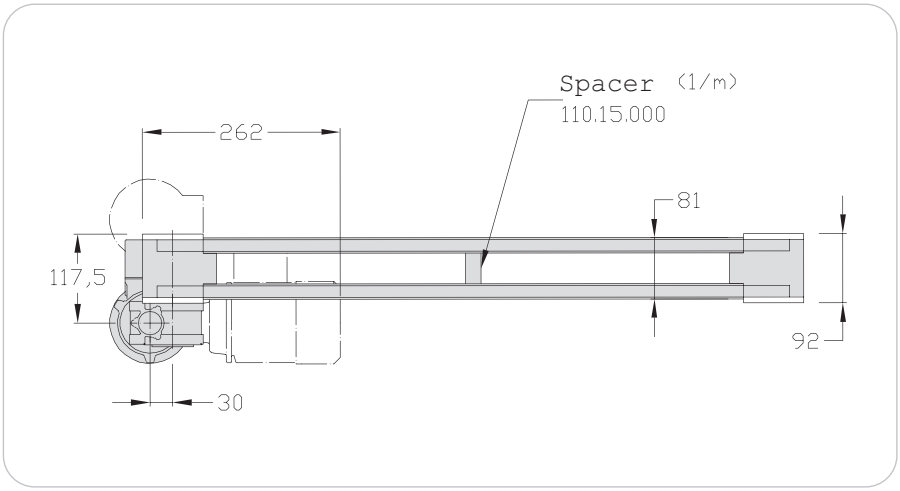
Maximum load /3 m: 50 daN
Maximum accumulation load /3 m: 25 daN

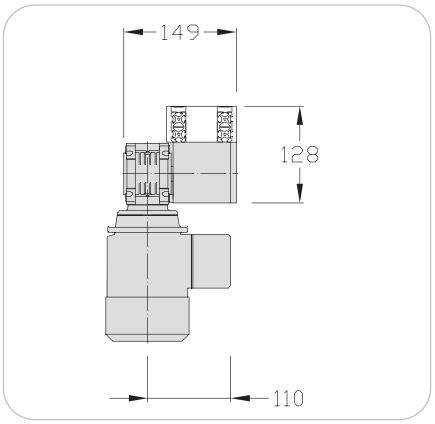
Belt length in mm

L welded=
Lc = [(L-160) x 2 + 490] x 0,97

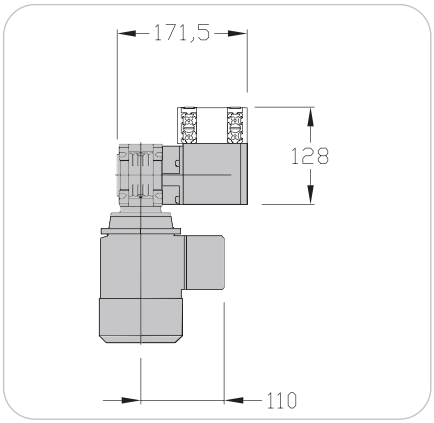
Weight: 8 kg + 2,07 kg /m







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

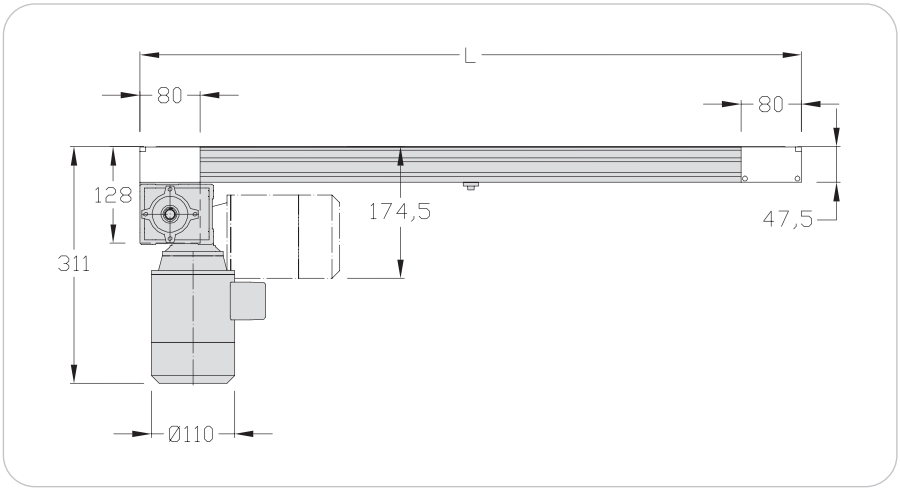
- x 2 profiles 5 43x20, al anodized
- x 2 belt guides, PA black
- x 2 antistatic timing belts width 12 mm, 5 mm pitch

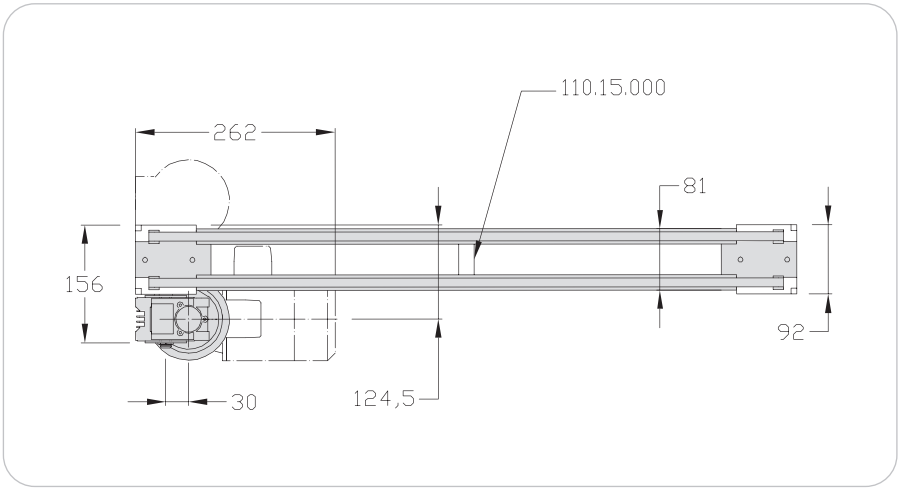
Maximum load /3 m: 70 daN
Maximum accumulation load /3 m: 35 daN

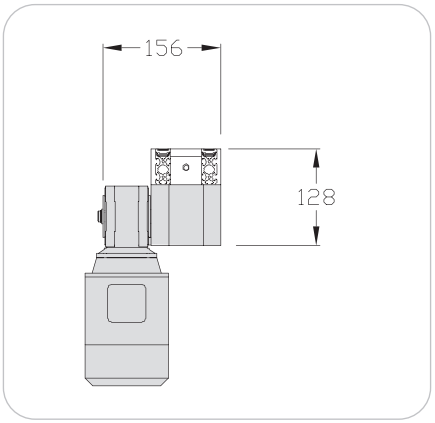
Belt length in mm

Lc = [(L-160) x 2 + 526] x 0,9995

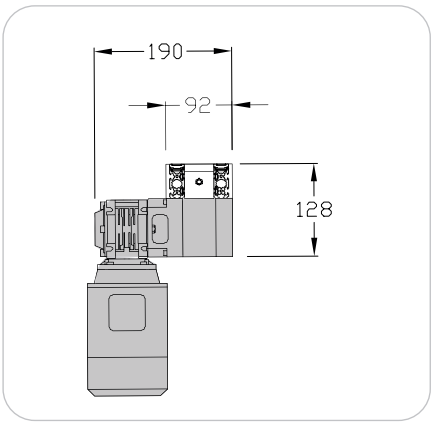
Weight: 7,5 kg + 2,07 kg /m







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

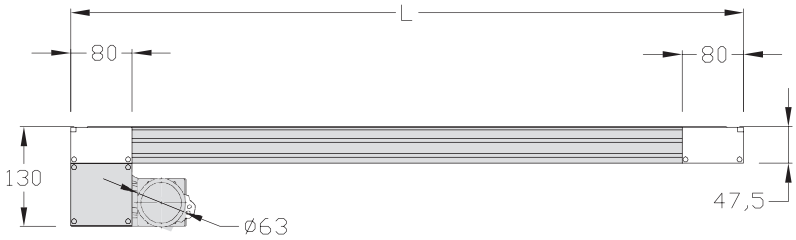
Conveyor length

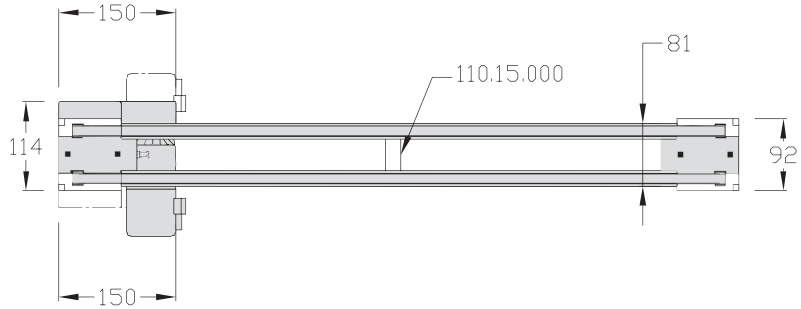
- x 2 profiles 5 43x20, al anodized
- x 2 belt guides, PA black
- x 2 antistatic timing belts width 12 mm, 5 mm pitch

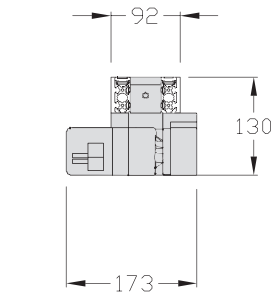
Maximum load / 3 m: 35 daN
Maximum accumulation load / 3 m: 18 daN

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







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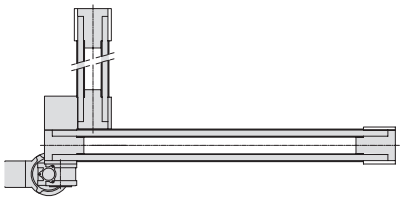
Designation / Dimensions	Order unit	Reference
Conveying unit 24 V 100 timing belt motor Papst right	1 pce	110.50.000.EDP
Conveying unit 24 V 100 timing belt motor Papst left	1 pce	110.50.000.EGP
Conveying length	m	110.50.000.A

Multiple units

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

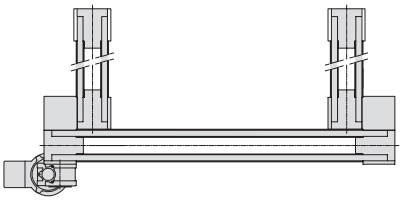
Multiple unit L 100

The use of L unit 100 enables to drive two conveyors with only one motor.
Less electrical wiring and removal of a contactor.



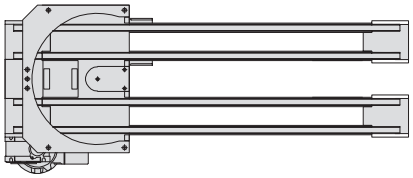
Multiple unit U 100

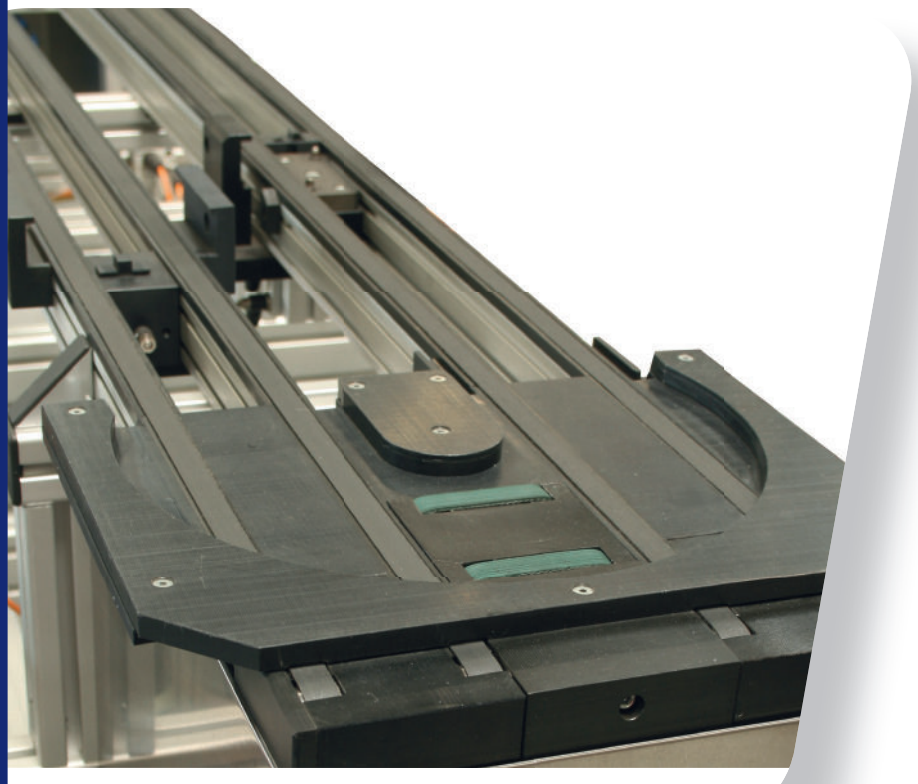
The use of U unit 100 enables to drive three conveyors with only one motor and thus to make a derivation.
Less electrical wiring and removal of two contactors.
Space saving.



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

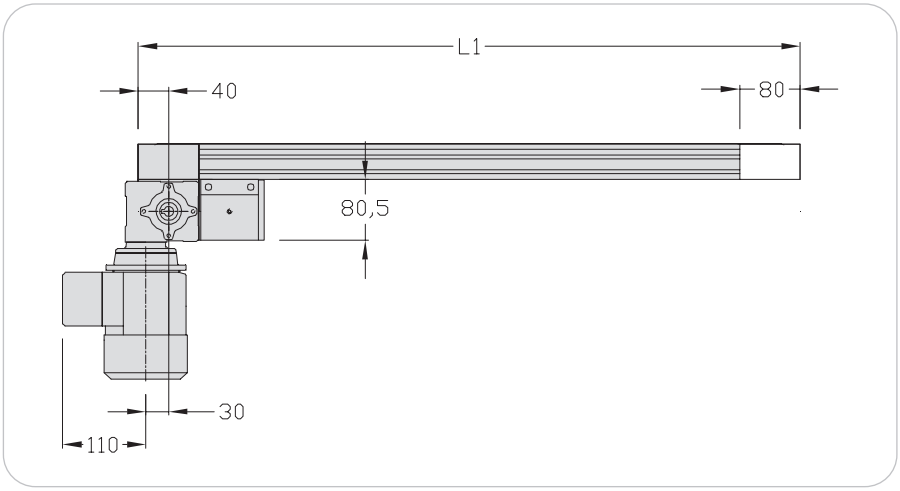
- x 2 profiles 5 40x20, al anodized
- x 2 belt guides, PA black
- x 2 flat belts width 12,5 mm
  thickness 1 mm

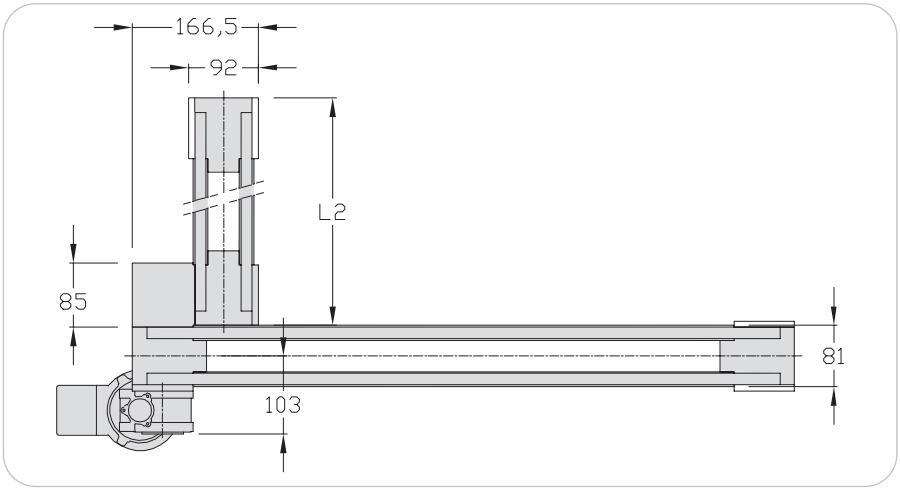
Mention lengths L1 and L2 in meter.

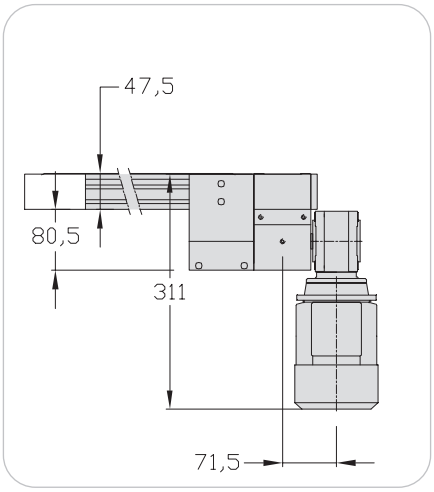
Belt length in mm

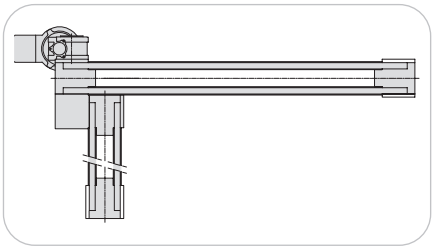
L welded = [(L-160) x 2 + 490] x 0,97

Weight:
13,4 kg + (L1 + L2) x 2,07 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

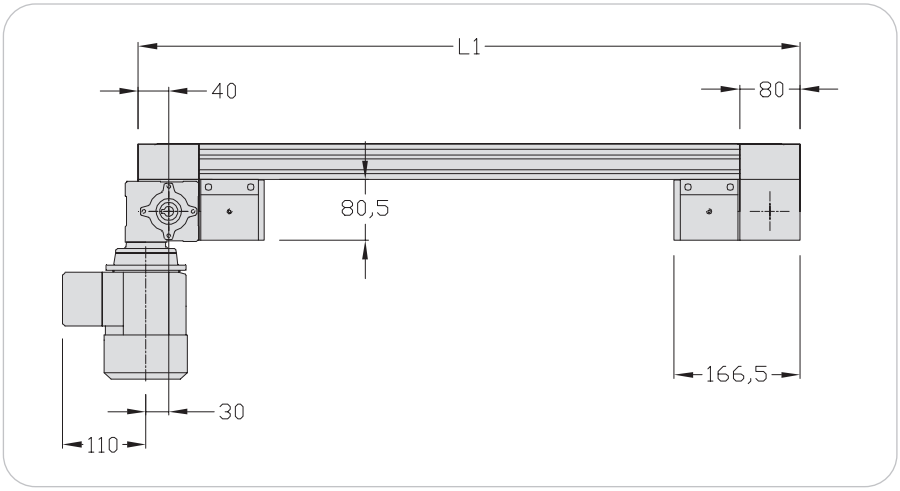
- x 2 profiles 5 40x20, al anodized
- x 2 belt guides, PA black
- x 2 flat belts width 12,5 mm
  thickness 1 mm

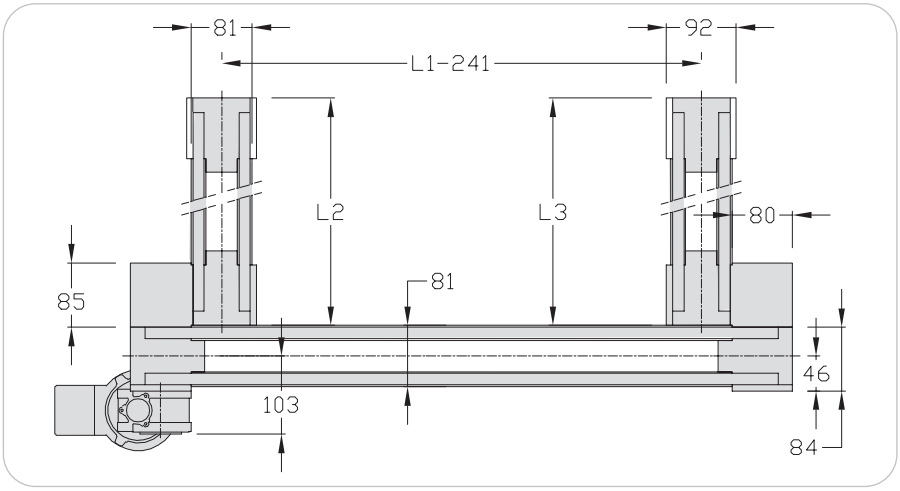
Mention lengths L1, L2 and L3 in meter.

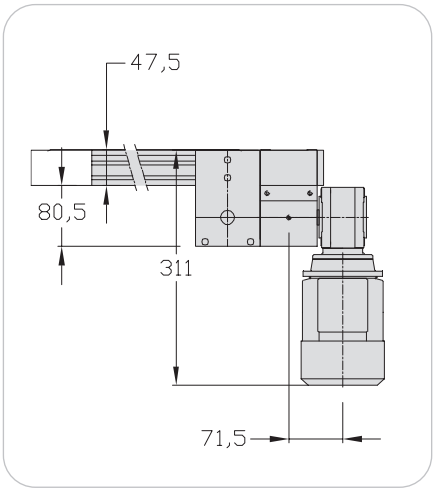
Belt length in mm

For length L1 :
L welded = [(L-160) x 2 + 678] x 0,97
For lengths L2 and L3 :
L welded = [(L-160) x 2 + 490] x 0,97

Weight:
18,8 kg + (L1 + L2 + L3) x 2,07 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.

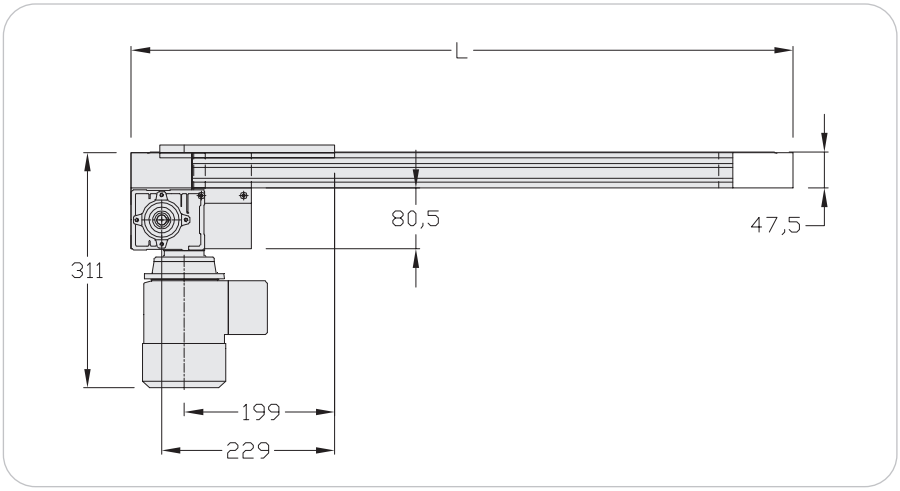
Belt length in mm

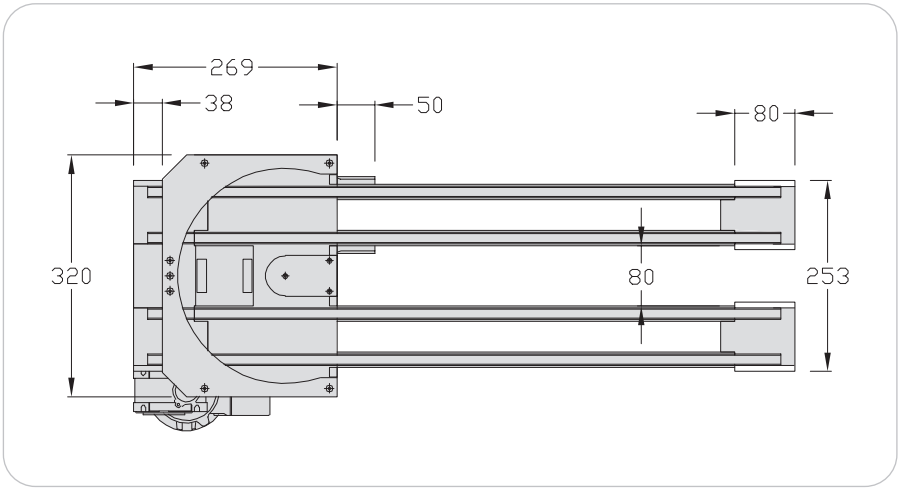
L welded = [(L-160) x 2 + 490] x 0,97

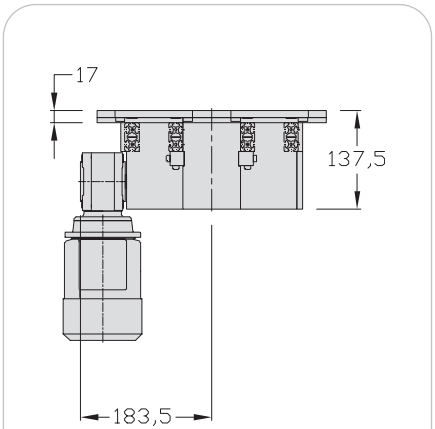
Minimum load on workpiece carrier: 0,3 daN

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)

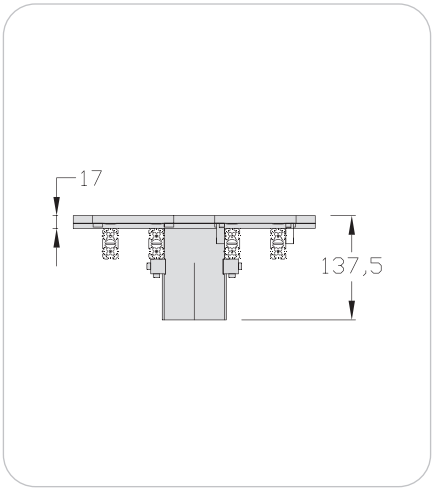
Return 180° Width 100 Length 100

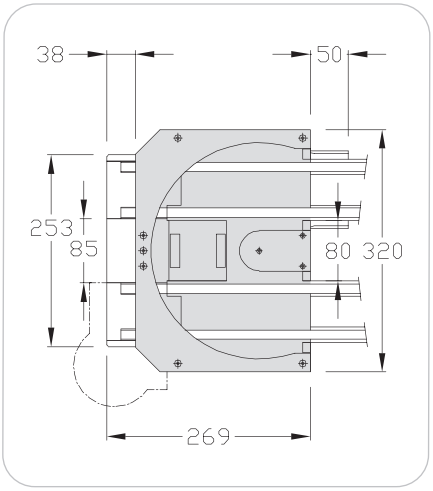
Applications

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.

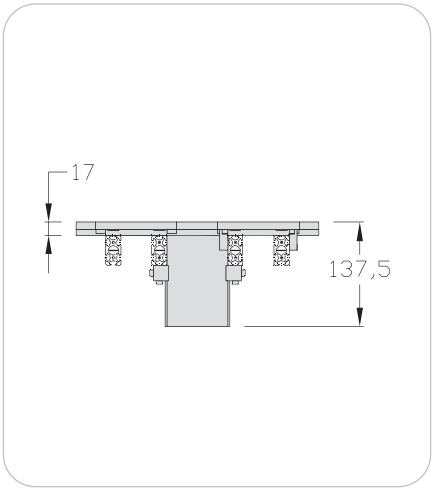
Technical data

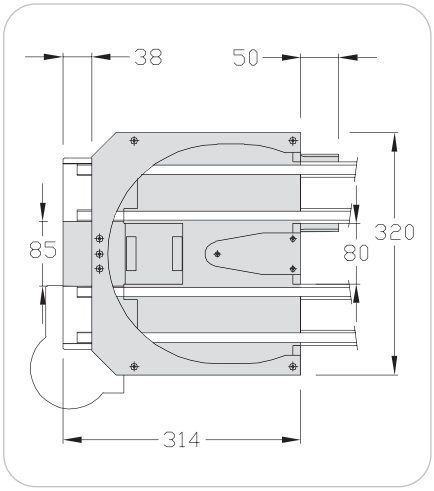
x Aluminium housing
x Conical torque

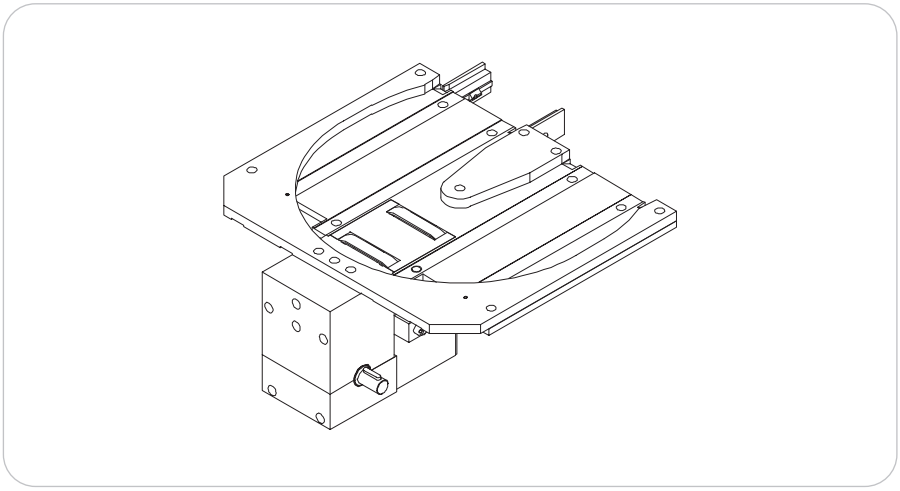
(No additional motor).

⚠ **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

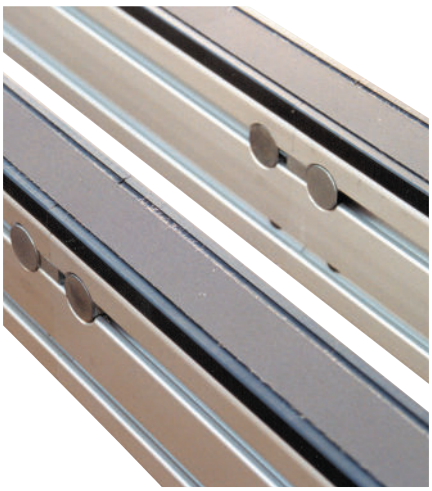
Applications

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

x Maximum length: 5 m



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

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

Spacer Width 100

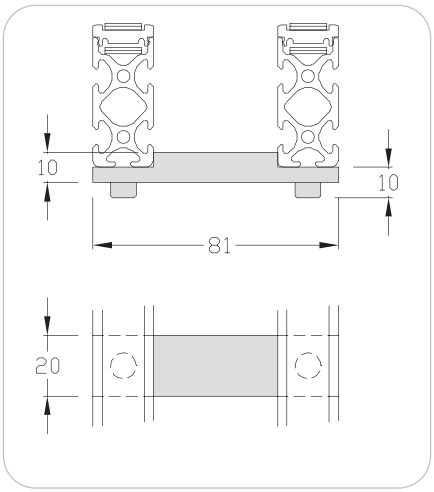
Applications

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

Technical data

x 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 + fasteining parts

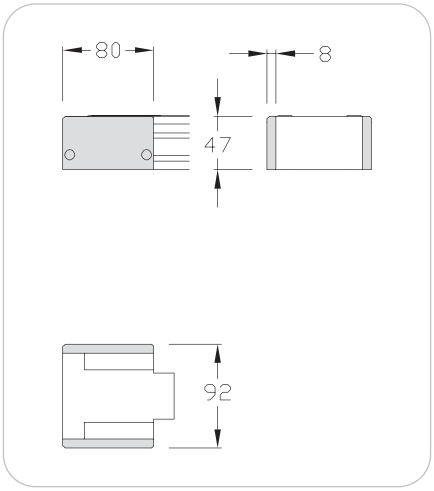
Cap for motorization 100 timing belt

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

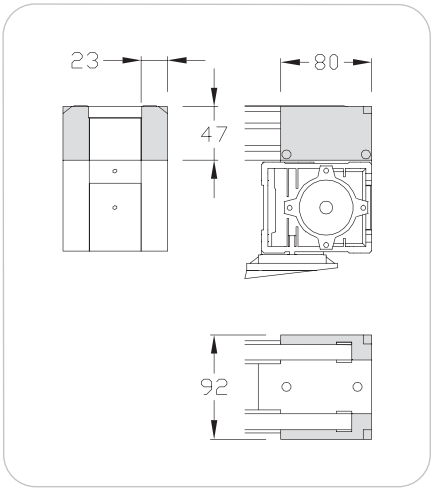
Cap for idling unit 100 timing belt

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

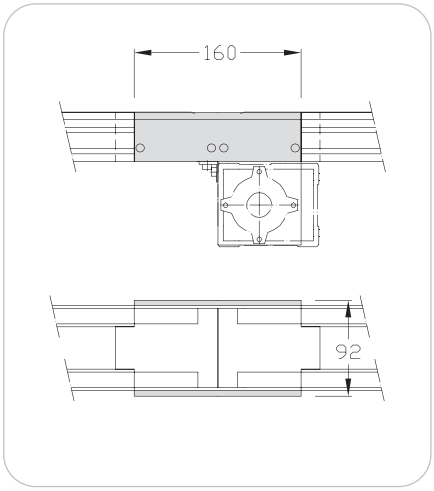
Allow to join end to end two conveying units.

Technical data

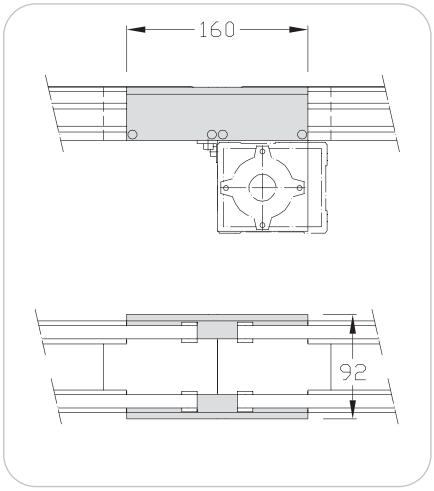
x Guide PA black

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

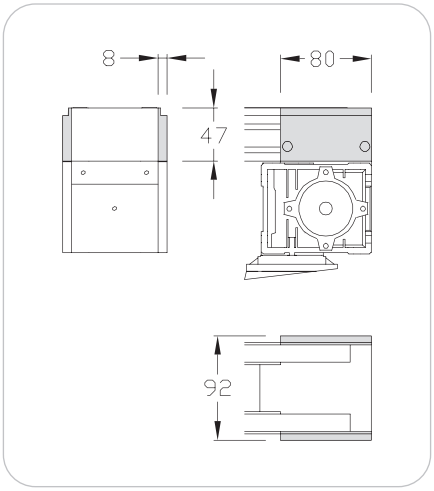
Applications

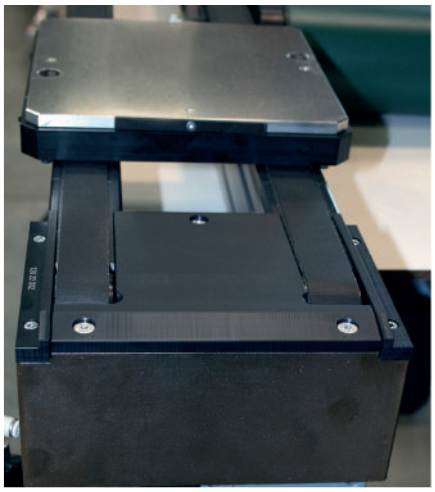
It allows a workpiece carrier to go out of the transfer line on the driving side.

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

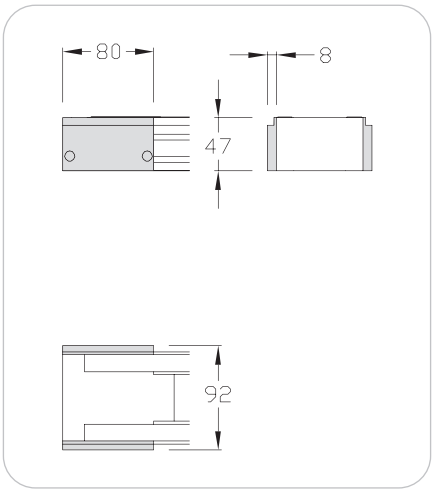
Applications

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

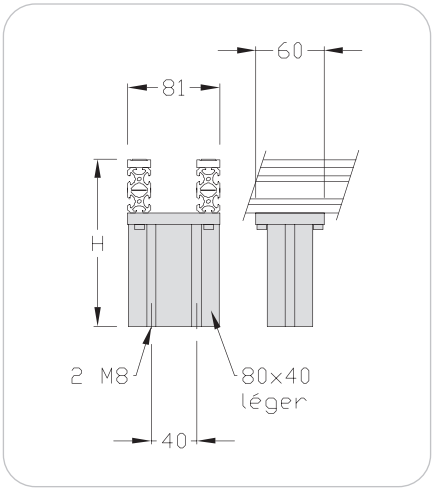


Designation / Dimensions	Order unit	Reference
Half junction idling unit flat belt 100	1 set	110.40.200

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

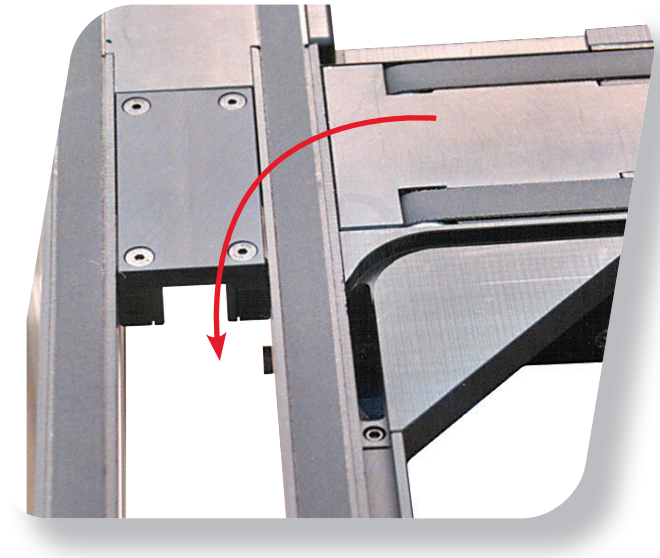
Cams 90° Width 100

Applications

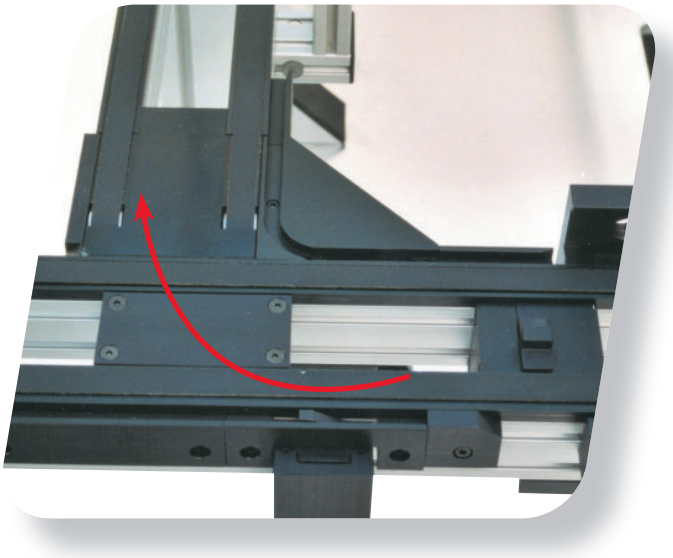
Cams ED, EG, SD, SG allow a perpendicular transfer of wokpiece carriers from one conveying unit to the other without automatism.
The principle is the same for conveying units with flat belts and timing belts.
It's not possible as standard features, to set a cam between two different units.

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..

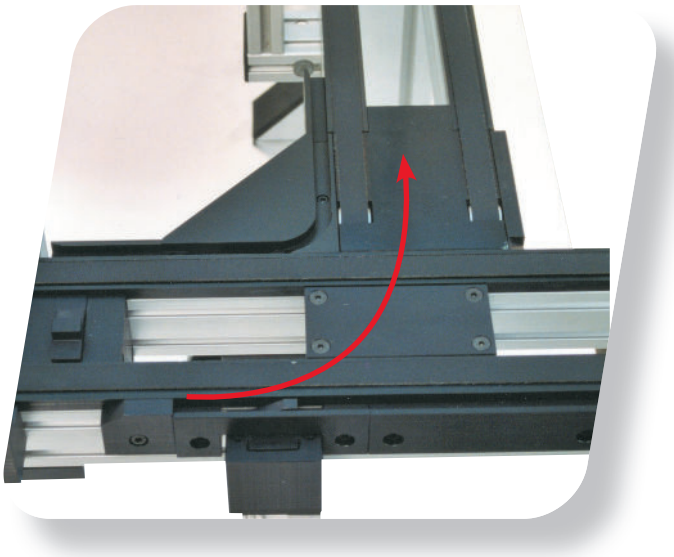
⚠ **Do not accumulate the workpiece carriers in the cams.**



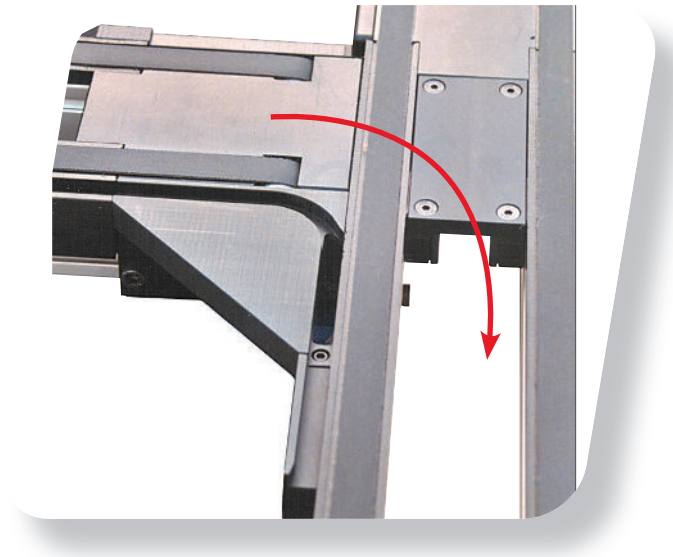
Cam 90° EG



Cam 90° SD



Cam 90° SG



Cam 90° ED

Cams 90° Width 100

Technical data

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

Various cams according to the length of workpiece carriers.

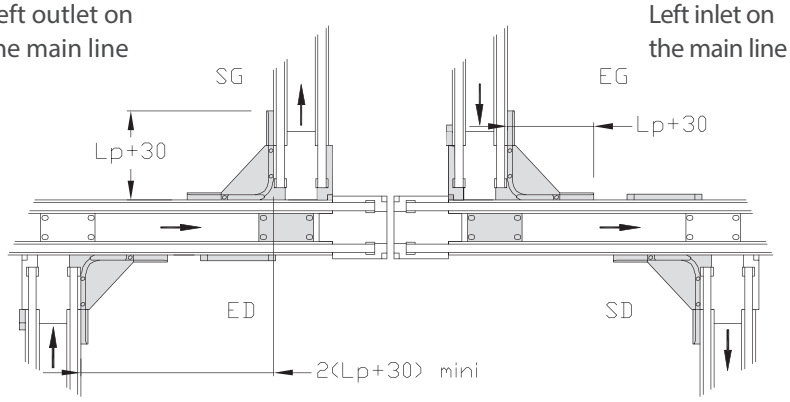
Lp = length of workpiece carriers

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

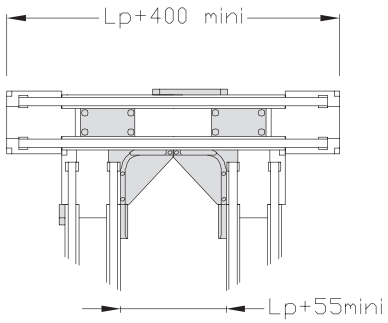
Cam SG
Left outlet on the main line

Cam EG
Left inlet on the main line



Cam ED
Right inlet on the main line

Cam SD
Right outlet on the main line



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.

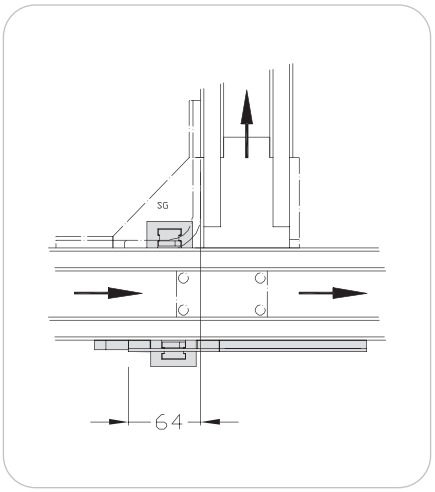
Technical data

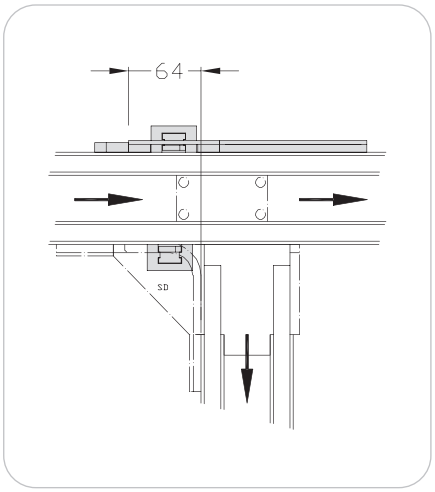
Ensemble comprenant :

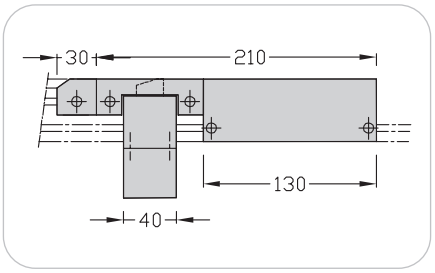
- x 2 plates Al
- x 2 nuts 5 St M4
- x 2 screws M4x10
- x Body, levers and guides PA
- x 2 cylinders ø 16-5 M5, detectable positions

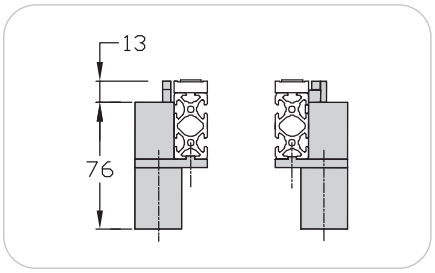
⚠ **Cams are not included (to be ordered separately).**

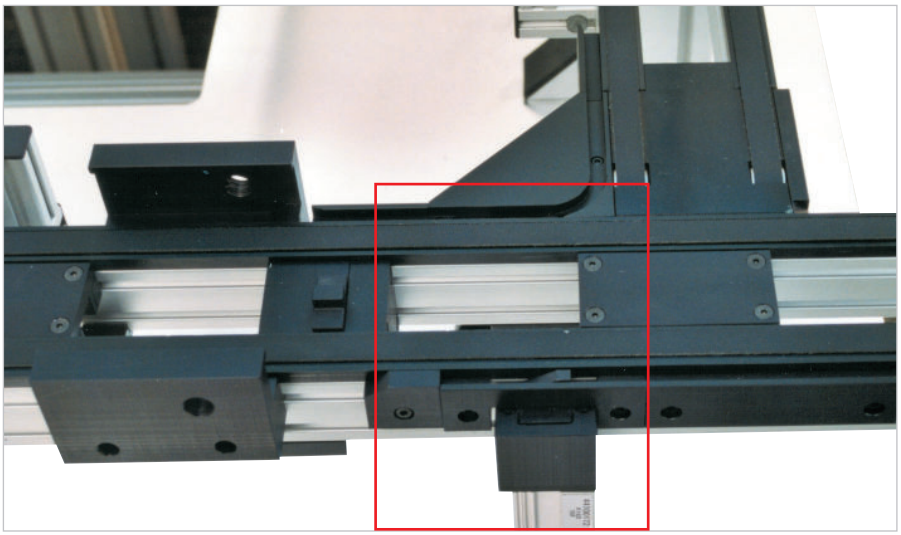
Weight: 0,4 kg











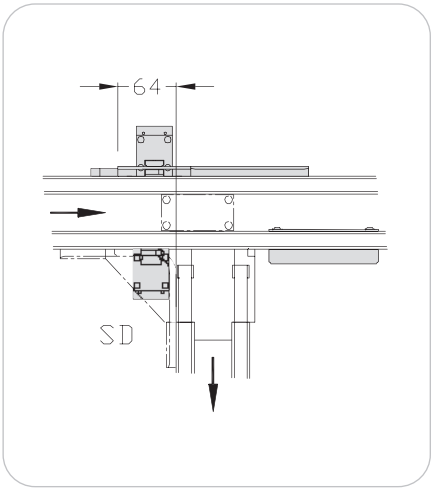
Designation / Dimensions	Order unit	Reference
Derivation 100 SD	1 kit	110.07.000
Derivation 100 SG	1 kit	110.13.000

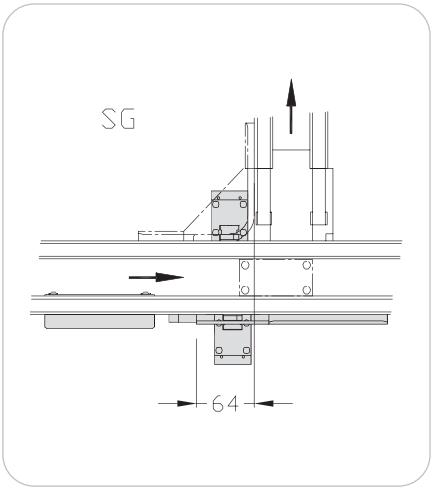
Derivations 24 V Width 100

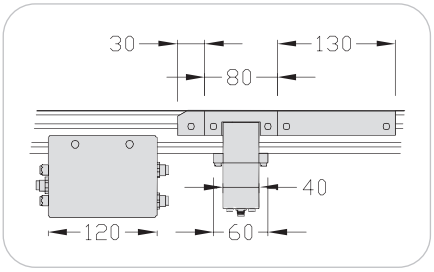
Applications

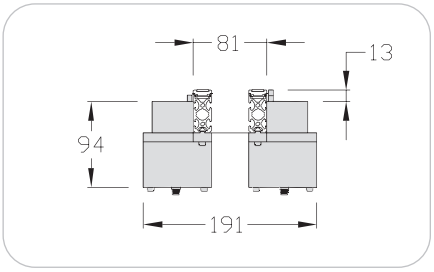
Necessarily combined with a cam, they allow the deviation of workpiece carriers, or not, by retracting the pins on one side or the other of the conveyor.
2 Brushless gear motors controlled by a control box ensure the movement.
A single output for logic controller is necessary.
Cams are not included.
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.









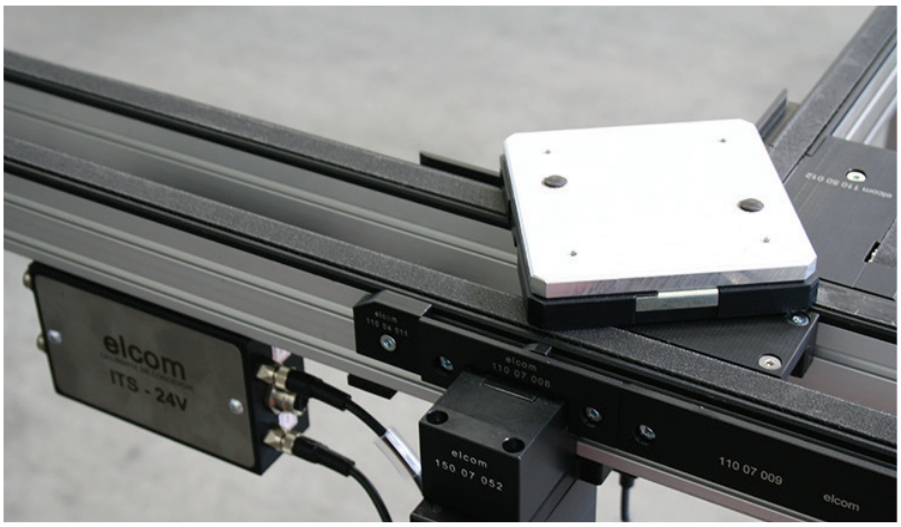
Technical data

Complete set including:
- x 2 plates Al
- x 2 nuts 5 St M4
- x 2 screws M4x10
- x Body, levers and guides PA
- x 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



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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.

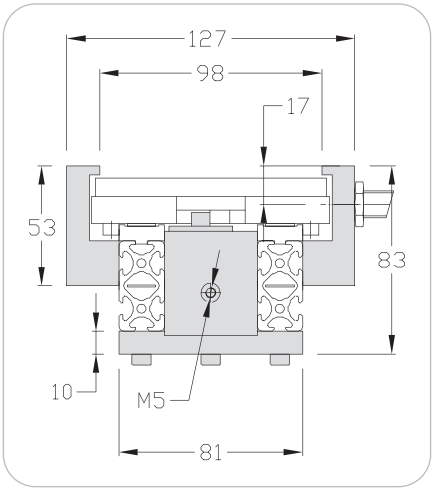
The anti bouncing back is integrated in the lateral guides.

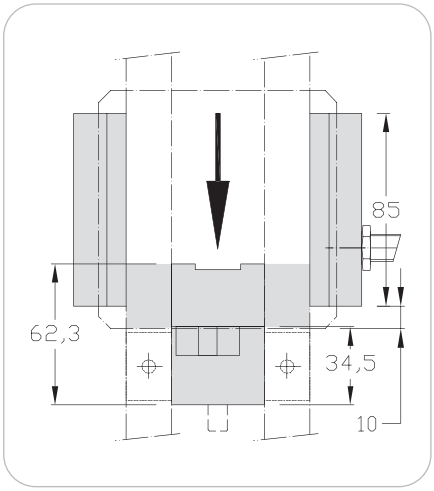
Technical data

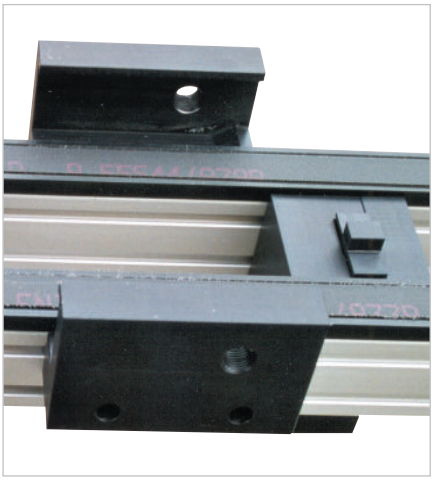
- x Plate, al black
- x Body and stopper PA
- x Nuts 5 St M5 + screws
- x Hole for shielded mounting sensor M12x100
- x Detection range: 4 mm

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:

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

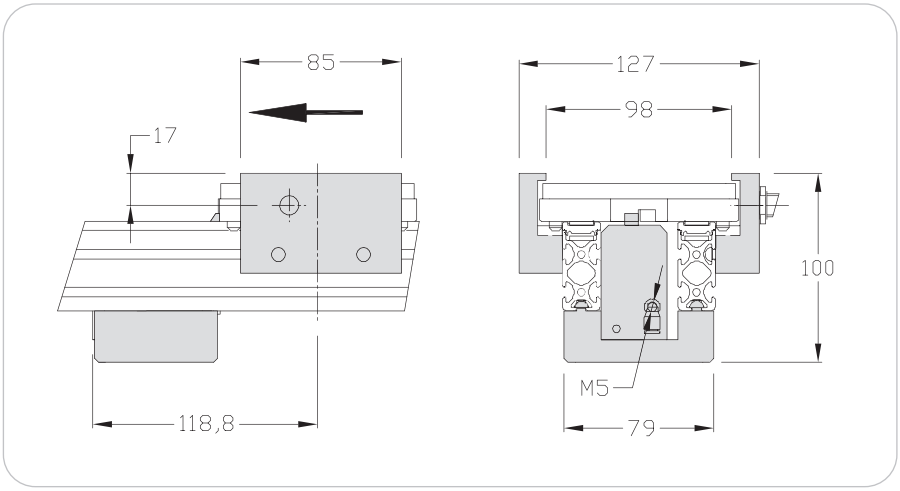
Maximum load/workpiece carrier (workpiece carrier included):

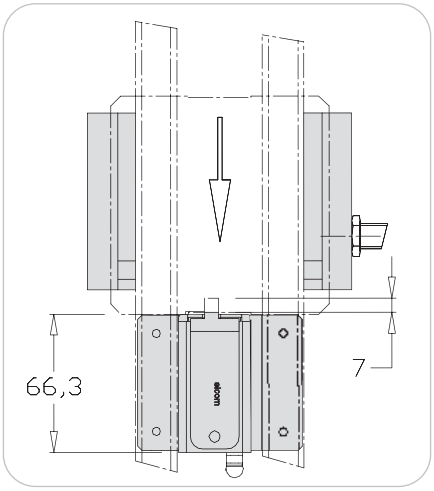
- 10 m/min: 9,5 kg
- 12 m/min: 9 kg
- 15 m/min: 8 kg
- 16 m/min: 7,5 kg
- 20 m/min: 6,5 kg

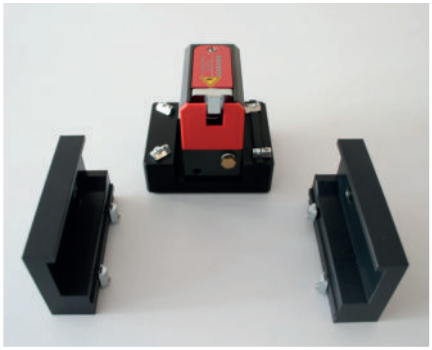
Air consumption: 0.036 l to 6 bars.
Operating pressure: 4 to 8 bars.
Longitudinal damping stroke: 7 mm

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

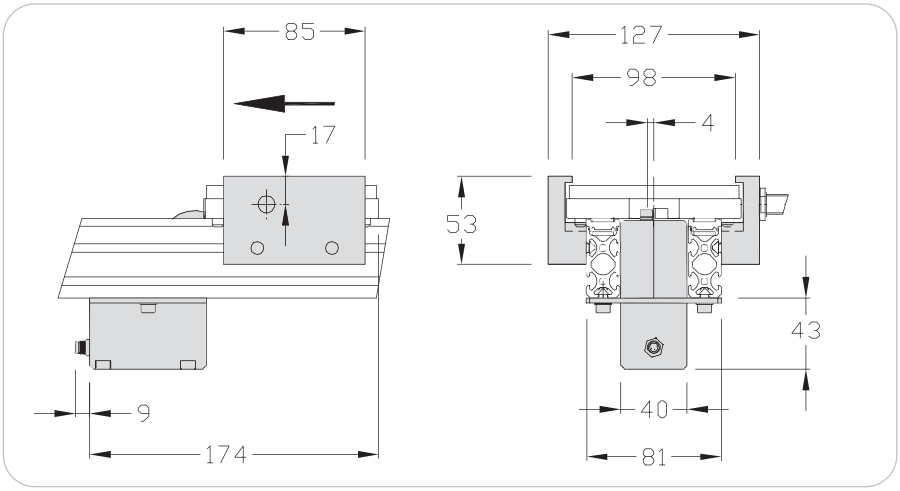
It stops workpiece carriers requiring no accuracy during processing, perfectly adapted to manual work stations.
Workpiece carriers are stopped to respect conveying priorities at the end of the derivation.

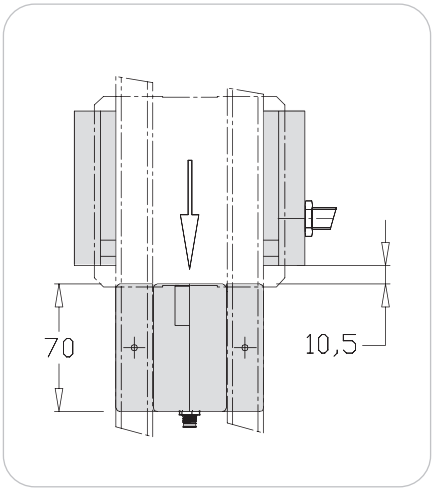
Simple effect stopper with spring return. Supplied with lateral guides and sensor bracket for the detection of workpiece carriers.

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.





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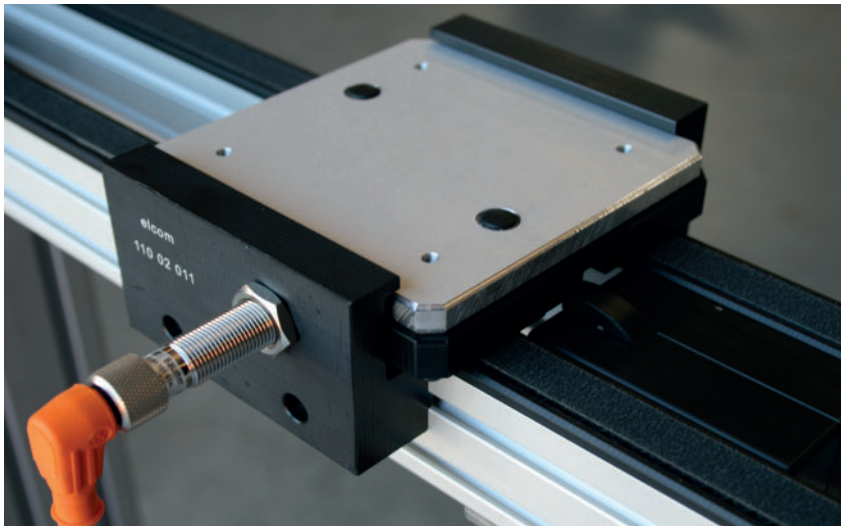


Technical data

- 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 : 15 daN
(in accumulation)

Weight: 0,6 kg

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

Applications TLM 1000

Positioning units

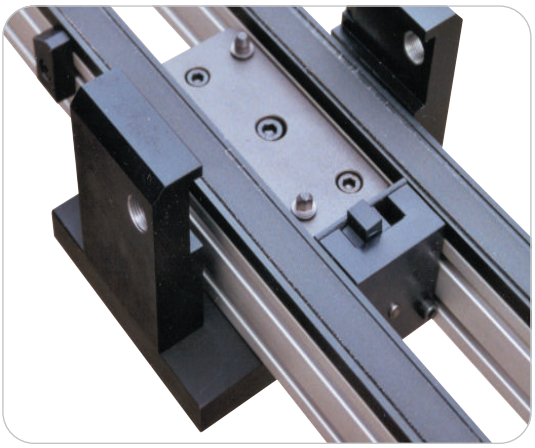
Stopping and positioning workpiece carriers for operations requiring accuracy.
The workpiece carrier is stopped, then lifted off the belts and positioned by a pin / locating system.
An automatic stopper is available for some positioning units. The vertical movement of the positioning unit plate unlocks 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.

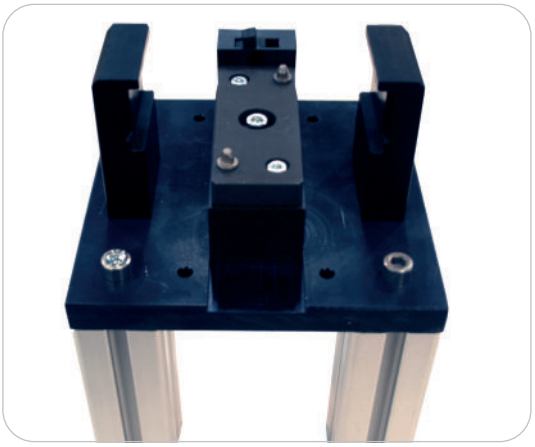


Positioning units for station

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.

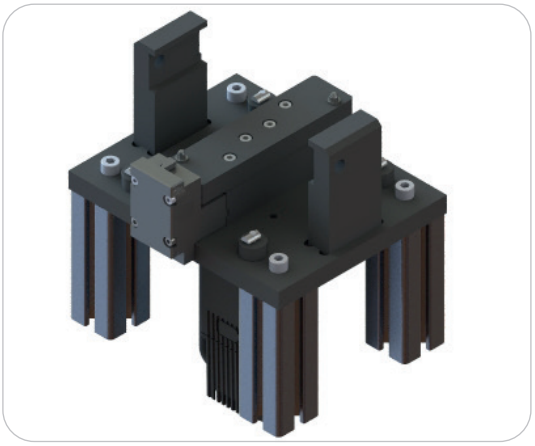


Positioning unit for station 24 V Automatic stopper

elcom ITS 24 V

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.

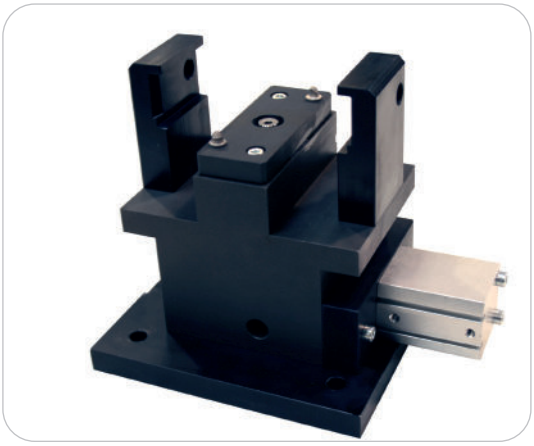
The stopper of workpiece carriers is positioned by the vertical movement (unnecessary stopper control). A Brushless gear motor ensures the control of the stopper and the positioning unit. Irreversible system.



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.

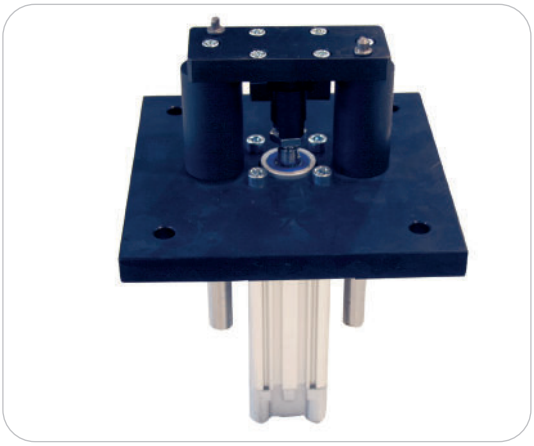


Positioning units, lift

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.

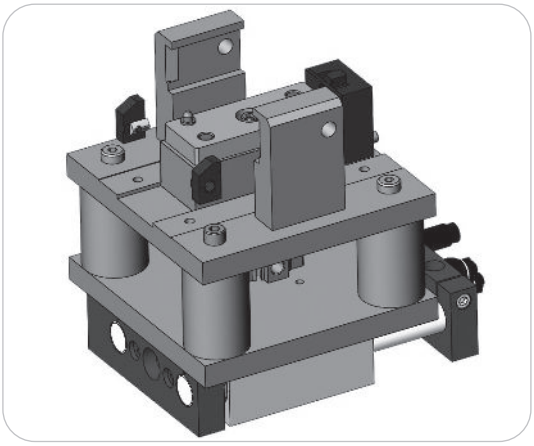


Multi-positioning unit

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:

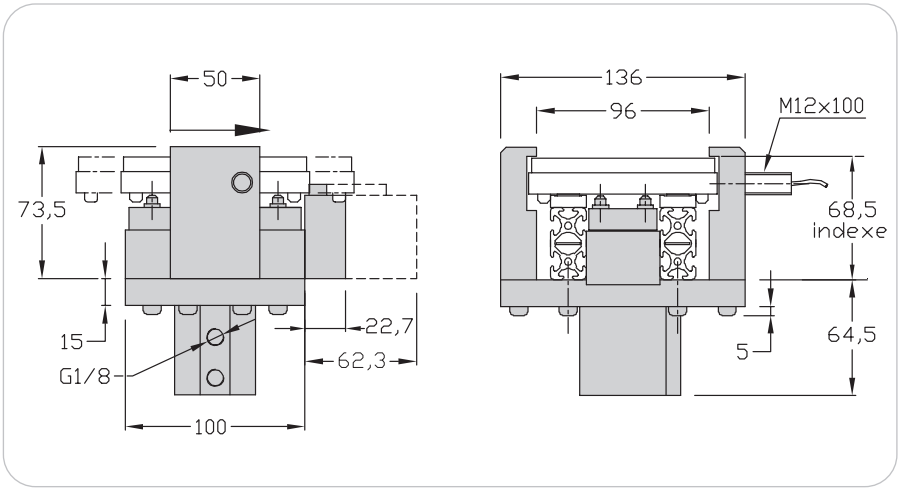
- x Stopper
- x Positioning unit
- x 1 double effect cylinder ø 32, detectable positions
- x Holes for shielded mounting sensor M12x 100
- x Detection range: 4 mm

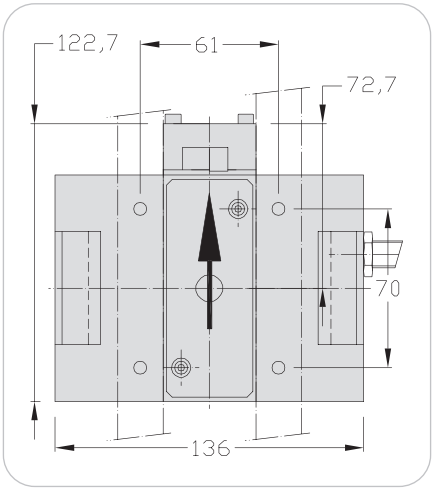
Maximum vertical strain: 40 daN for a pressure of 6 bars

Repeatability: +/- 0,03 mm

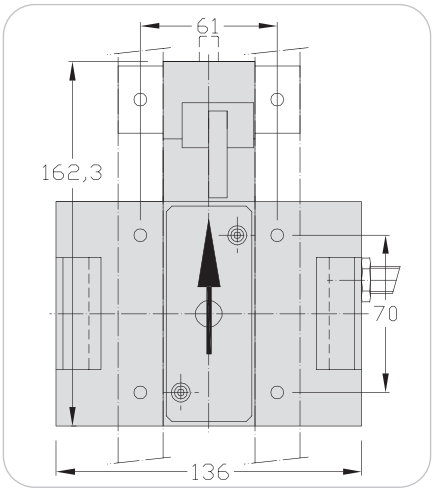
⚠ **2 flow rate controllers G 1/8 for positioning unit cylinder and controllers for the stopper should be adapted.**

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 stoppert	1 pce	110.25.000

Positioning unit, damped pneumatic stopper Width 100

Technical data

Complete set including:

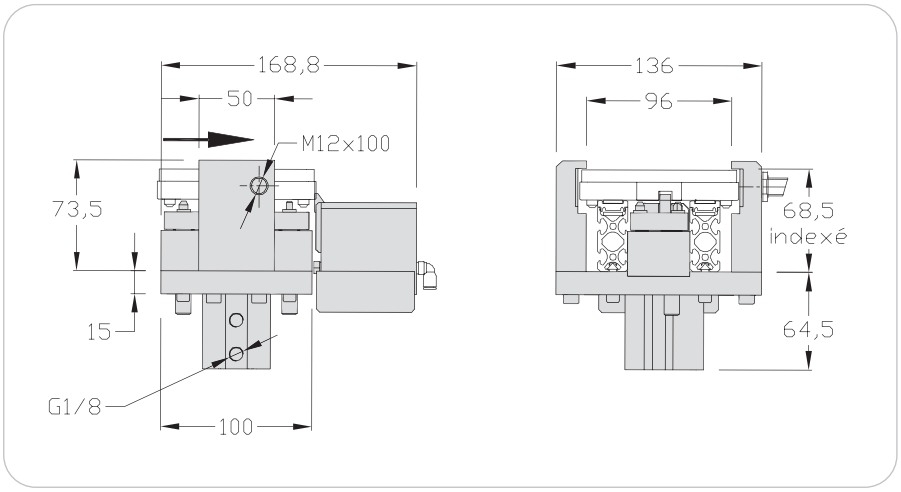
- x Stopper
- x Positioning unit
- x 1 double effect cylinder ø 32, detectable positions
- x Holes for shielding mounting sensors M12x100
- x Detection range: 4 mm
- x Fastening parts

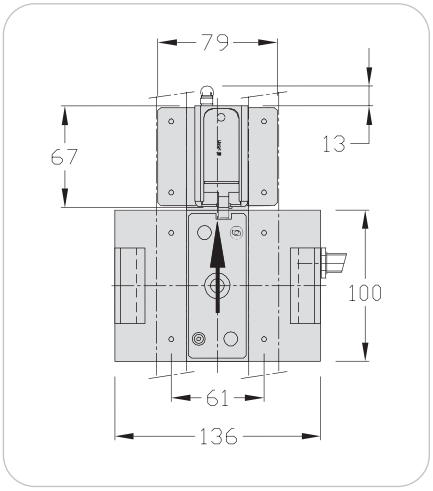
Maximum vertical strain: 40 daN to 6 bars

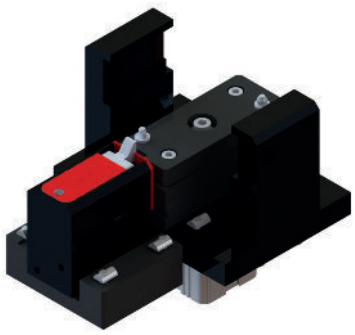
Repeatability: +/- 0,03 mm

⚠ **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:

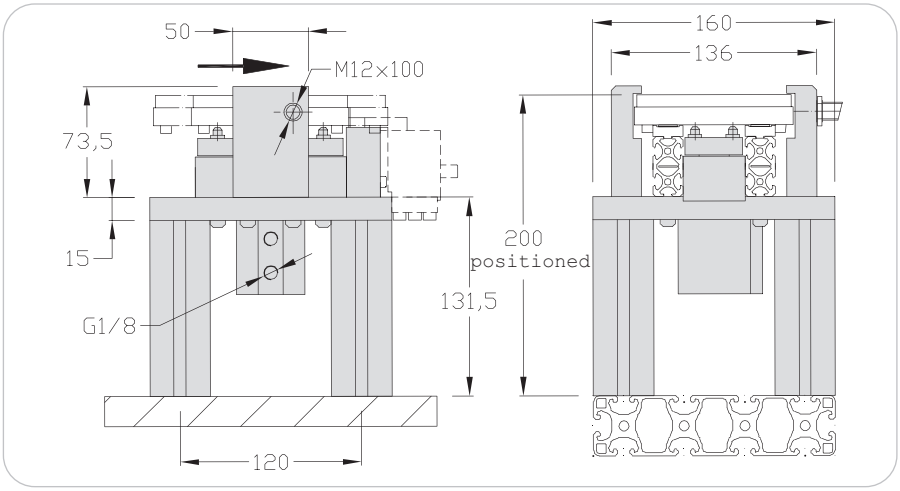
- x Stopper
- x Positioning unit
- x 1 double effect cylinder ø 32, detectable positions
- x Holes for shielded mounting sensor M12x100
- x Detection range: 4 mm
- x 4 supports in profile 40x40
- x Fastening elements

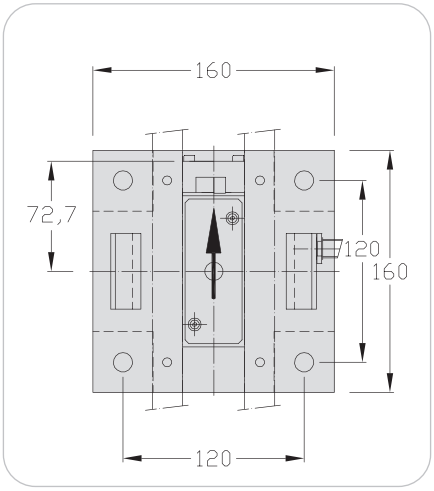
Maximum vertical strain: 40 daN for a pressure of 6 bars.

Repeatability: +/- 0,03 mm

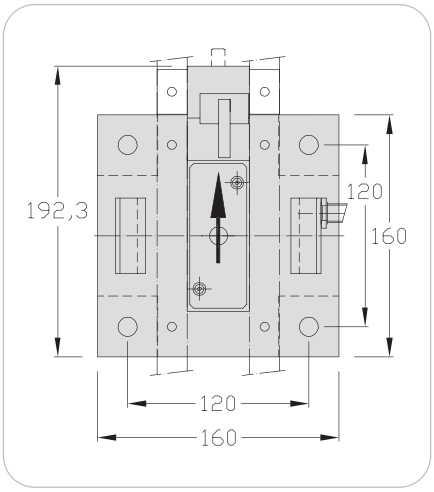
⚠ **2 flow rate controllers G 1/8 for positioning unit cylinder and controllers for the stopper should be adapted.**

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:

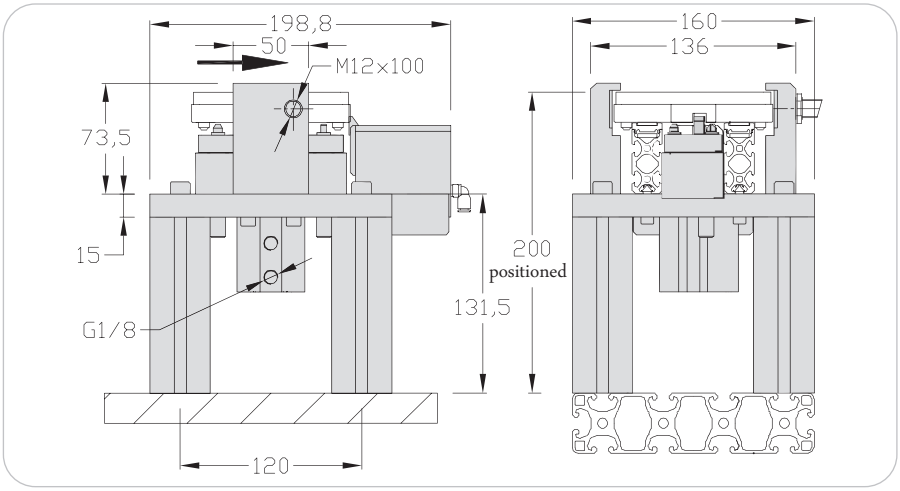
- x Stopper
- x Positioning unit
- x 1 double effect cylinder ø 32, detectable positions
- x Holes for shielding mounting sensors M12x100
- x Detection range: 4 mm
- x 4 profile stand 8 40x40
- x Fastening parts

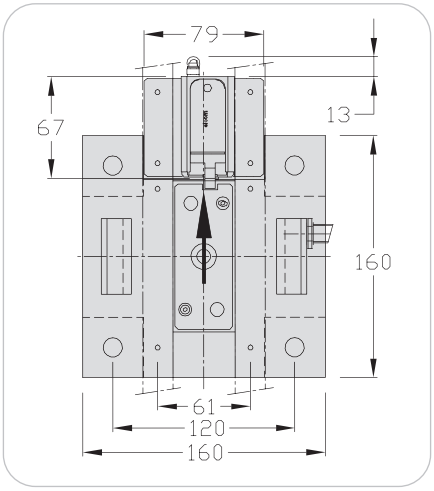
Maximum vertical strain: 40 daN to 6 bars

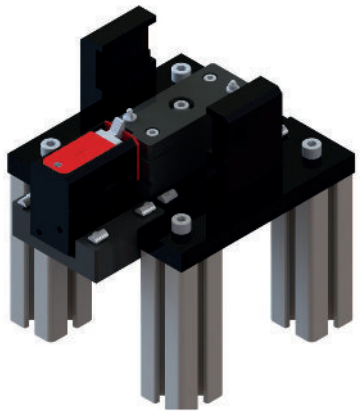
Repeatability: +/- 0,03 mm

⚠ **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:

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

Maximum vertical strain: 100 daN.

Repeatability: +/- 0.03 mm

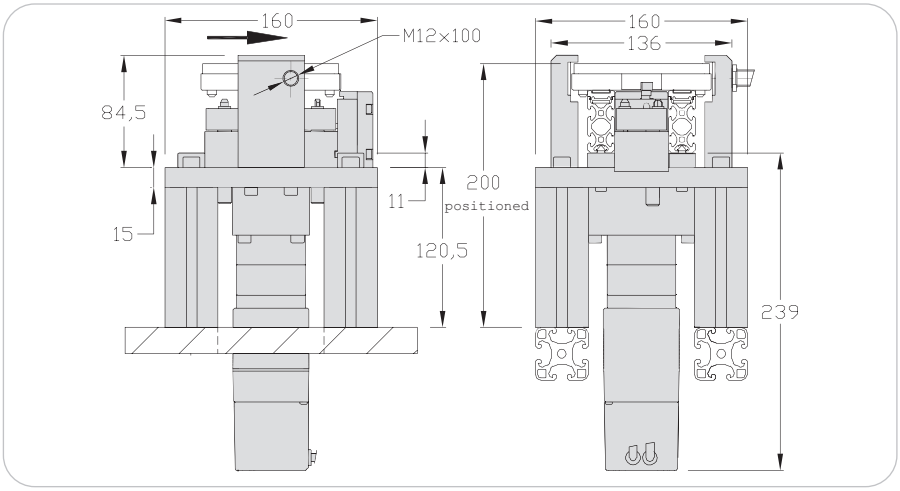
Motor supply voltage: 24 VDC
Motor supply current: 5 A
Control voltage: 24 VDC
Control current: 10 mA

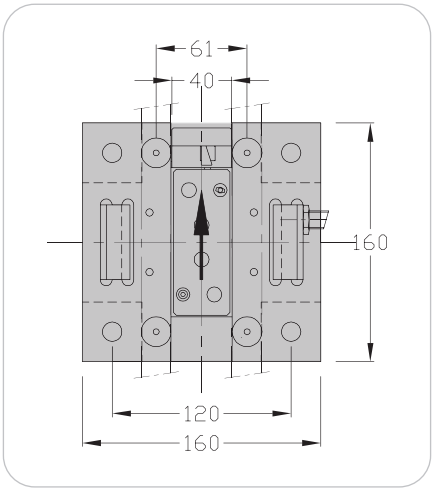
5 positioning input status
4 output status

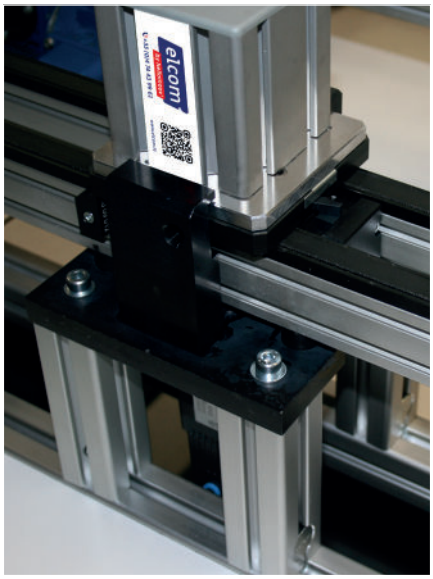
The stopper of workpiece carriers is positioned by the vertical movement (unnecessary stopper control).
A Brushless gear motor ensures the control of the stopper and the positioning unit.

Irreversible system.

Weight: 7 kg







elcom ITS 24 V

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:

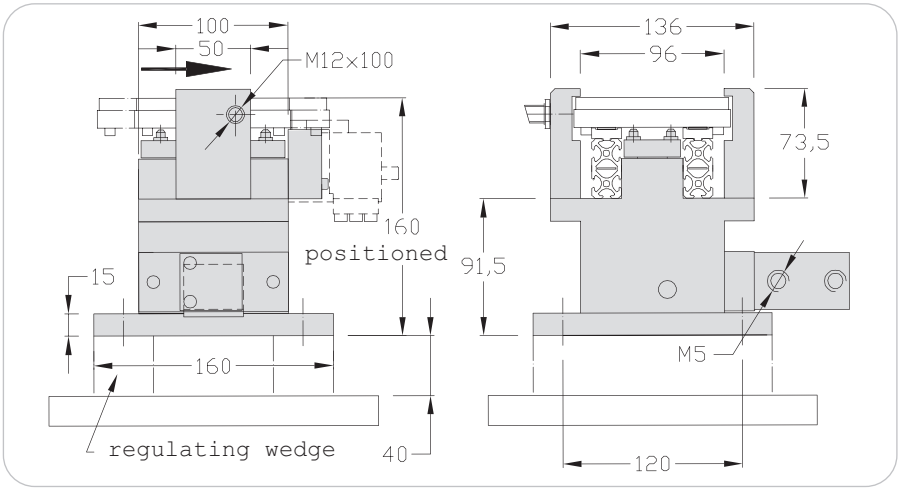
- x Stopper
- x Positioning unit
- x 1 double effect cylinder ø 25, detectable positions
- x Holes for shielded mounting sensor M12x100
- x Detection range: 4 mm

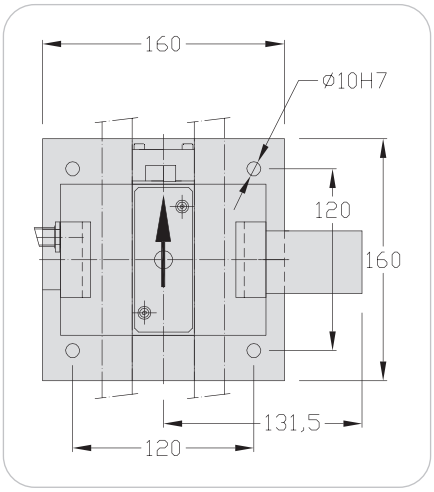
Maximum vertical strain: 500 daN at the centre of the workpiece carrier.

Repeatability: +/- 0,03 mm

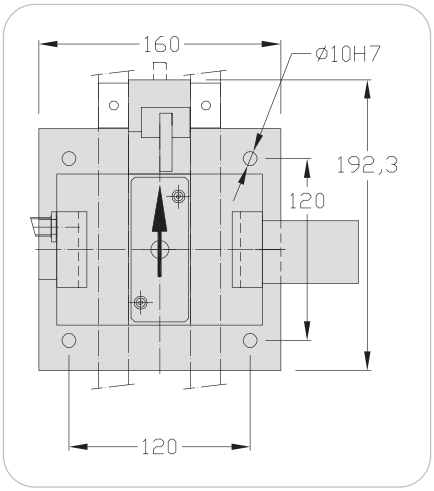
2 flow rate controllers M5 for positioning unit cylinder and controllers for the stopper should be adapted.

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:

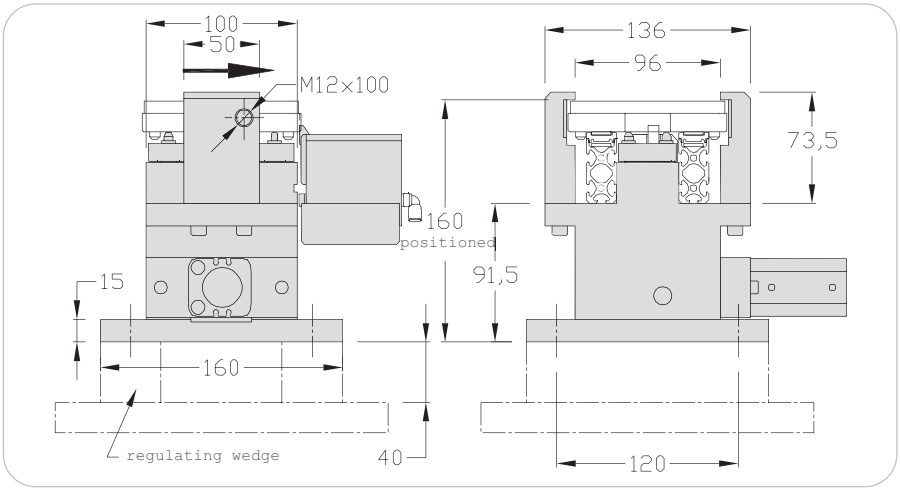
- x Stopper
- x Positioning unit
- x 1 pneumatic cylinder double effect ø 25, detectable positions
- x Holes for shielding mounting sensors M12x100
- x Detection range: 4 mm

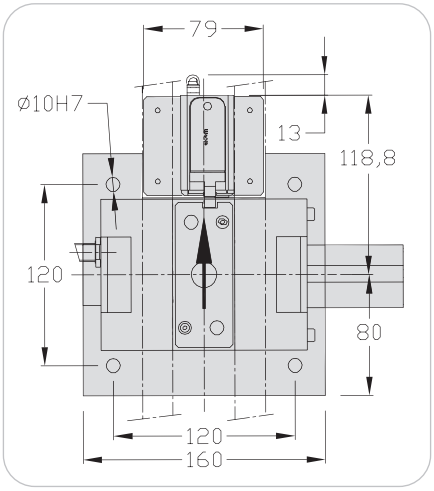
Maximum vertical strain: 500 daN
at the center of the workpiece carrier.

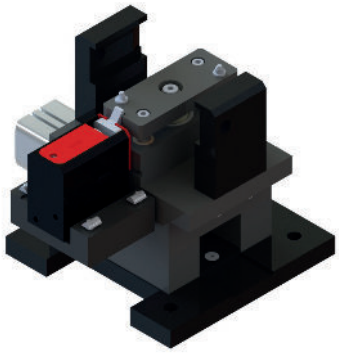
Repeatability: +/- 0,03 mm

⚠ **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:

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

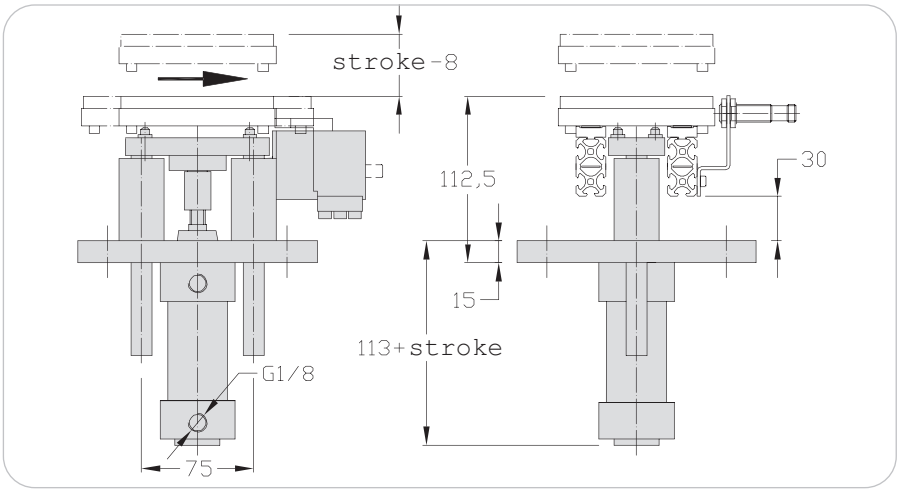
Available cylinder strokes:
25-50-100-160-200 mm

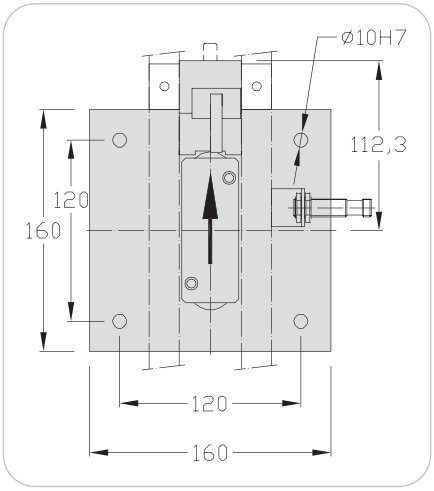
Maximum vertical strain: 40 daN

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 ø 32
- x 1 ball bearing guide bush ø 14
- x 1 bracket for shielded mounting sensor M12x10
- x Detection range: 4 mm

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

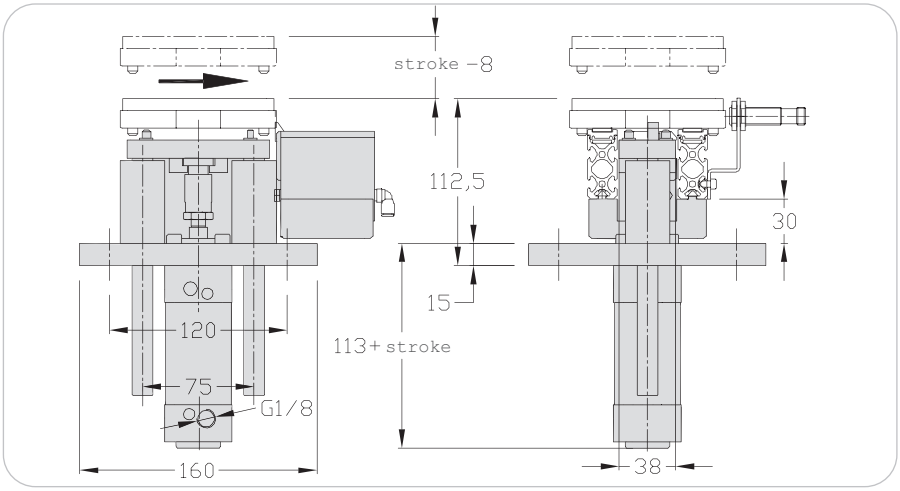
Maximum vertical strain: 40 daN

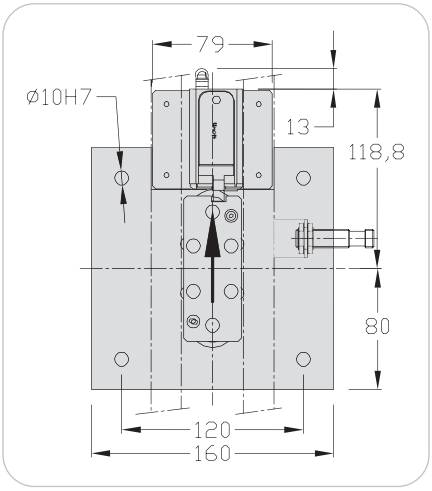
Repeatability: +/- 0,06 mm

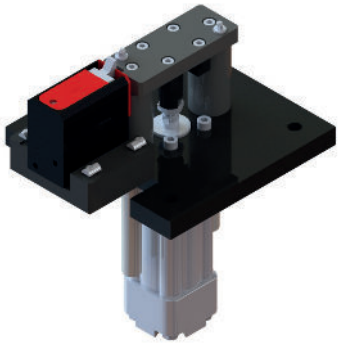
An upstream stopper is required to prevent the inlet of a workpiece carrier during the lifting.

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.

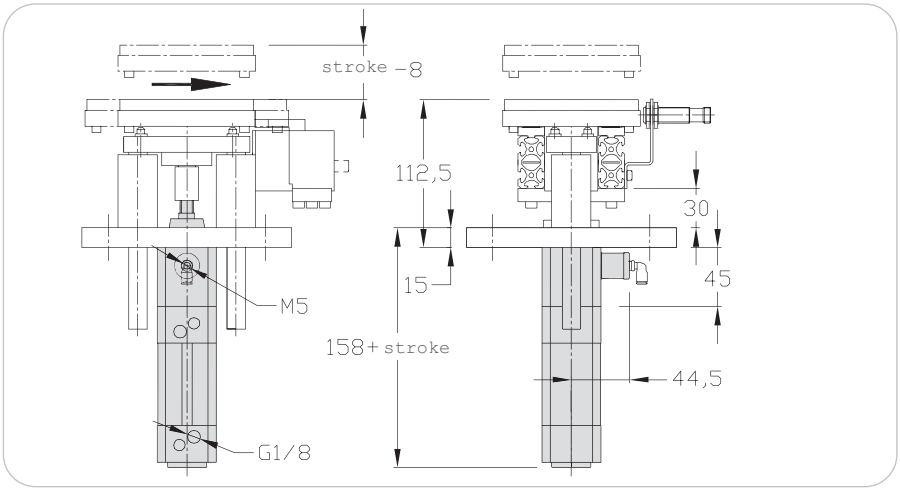
Locking by springs.

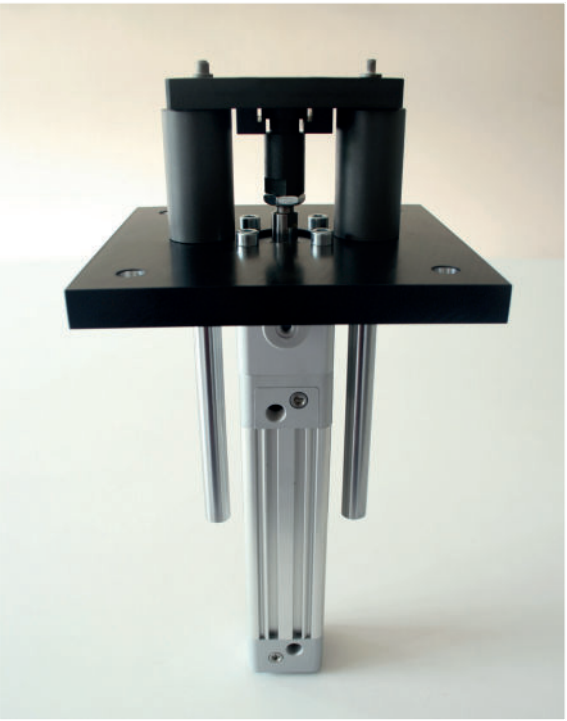
Retaining force: 600 N

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:
- x Automatic stopper
- x Positioning unit 100
- x Slide PS 20
- x 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

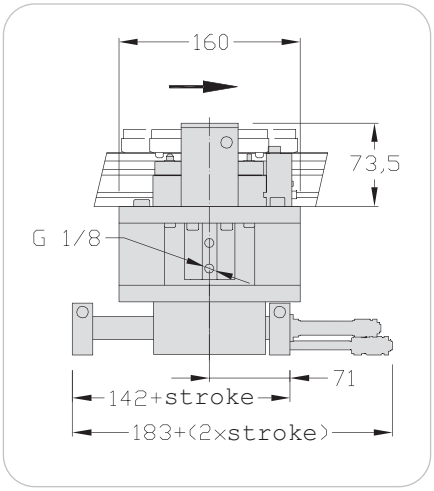
Repeatability: +/- 0,04 mm

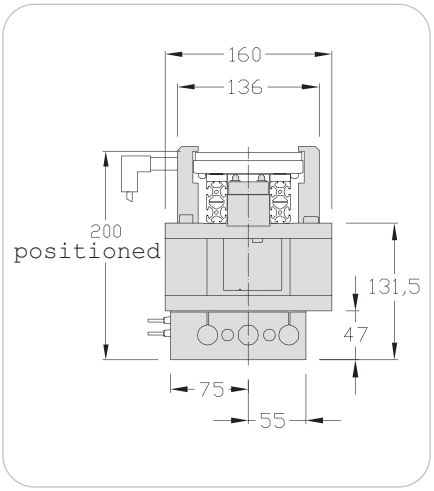
A stopper located before the lift unit is generally necessary to avoid the arrival of another workpiece carriers during the slide moving.

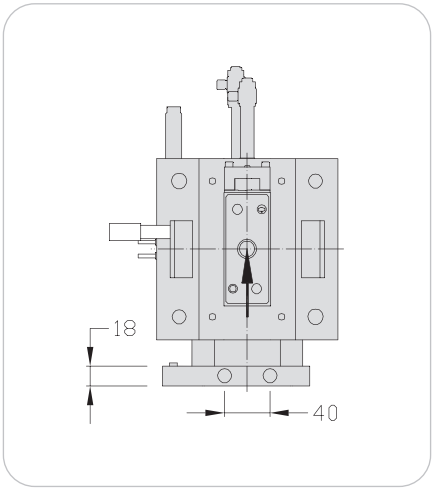
Different multi-positioning units on request.

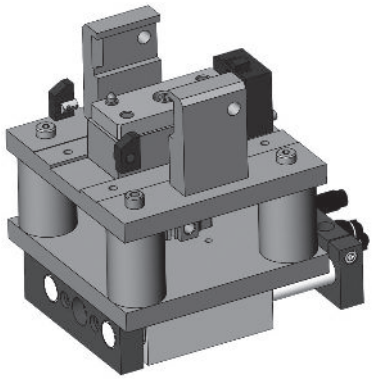
⚠ **2 flow rate controllers G 1/8 for positioning unit cylinder should be adapted**

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

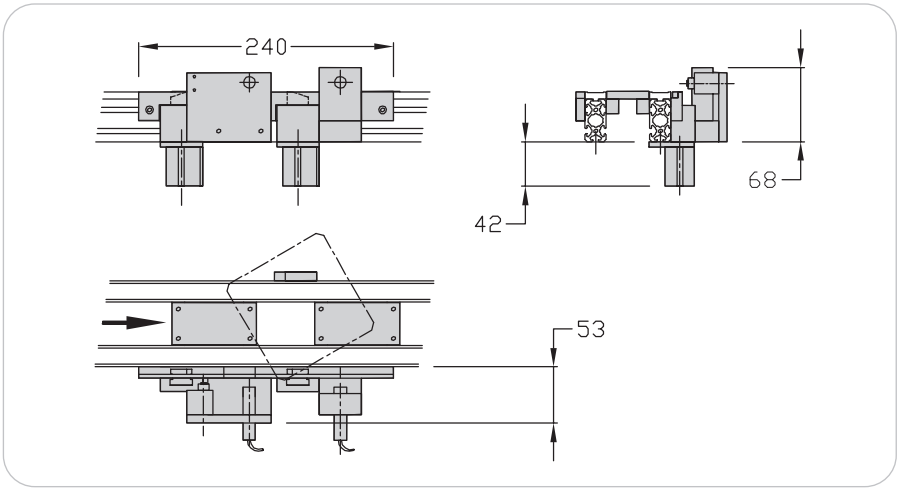
Technical data

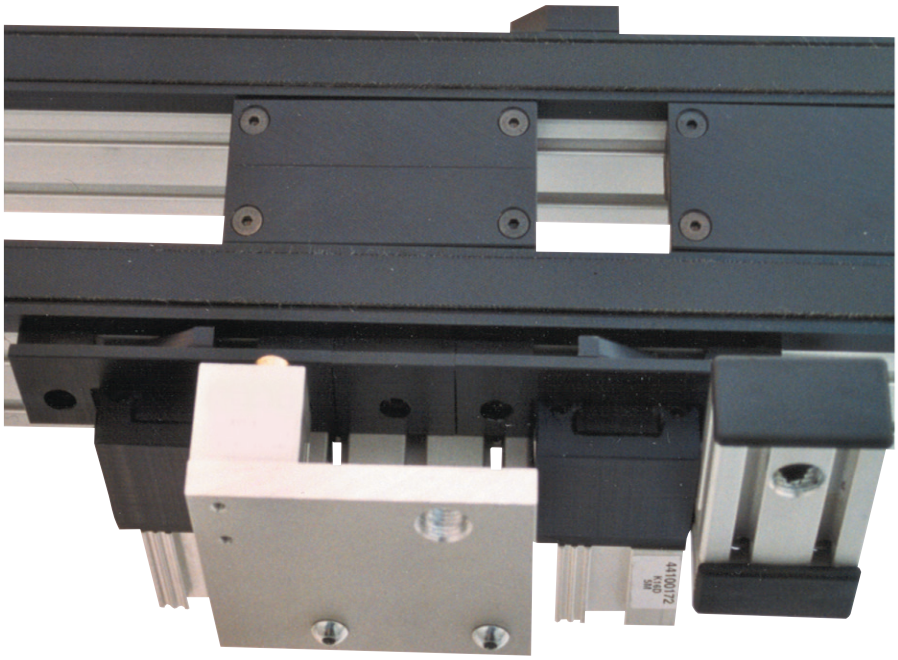
- Plates and guides, PA black
- 2 cylinders ø 16-5 (M5)
- 2 bracket supports for shielded mounting sensor M12x100
- 1 cylinder ø 12-10 M5

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	Order unit	Reference
90° swivelling 100	1 set	110.14.000

Sensor bracket M12x100

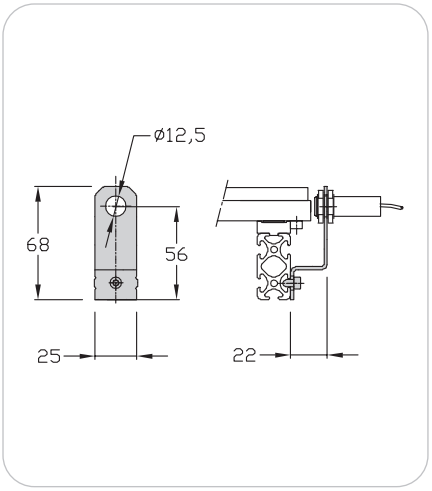
Applications

Bracket for workpiece carrier M12x100 sensor.

Technical data

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

Weight: 0,035 kg



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

Anti bouncing back

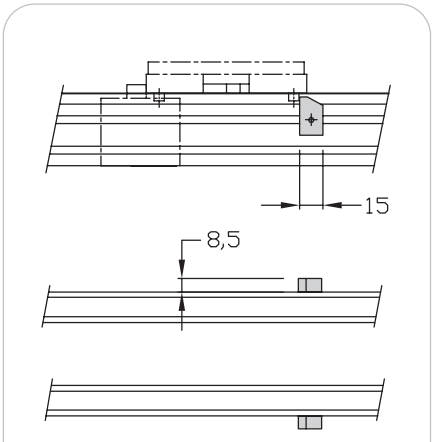
Applications

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

- x Parts, PA black
- x Fastening parts

Weight: 0,1 kg



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

Positioning kit

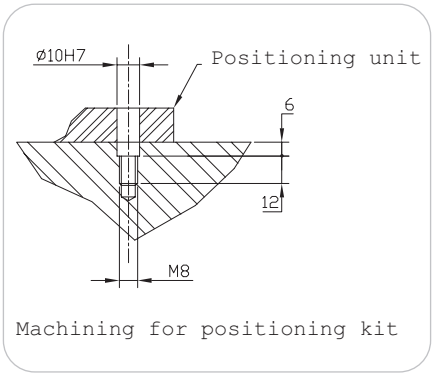
Applications

Allows accurate positioning unit on station.

Technical data

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

Weight: 0,08 kg



Machining for positioning kit

Designation / Dimensions	Order unit	Reference
Positioning kit	1 set	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 M12x100	1 set	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