



**Peripheral  
equipment**



## Peripheral equipment

### Press and tools products

#### Ball bearing inserts and rails

If you need fast and reliable tool changing, you will find that equipping or updating your press with ball bearing inserts and rails is the ideal solution.

With ball bearing inserts and rails you can move or change tools fast, and above all accurately - even if they weigh several tons. In the past this has often been an awkward, inconvenient and sometimes even critical process.

Equipping and retrofitting press tables with ball bearing rails is extremely straightforward as virtually every press table has fixing slots. The ball bearing rails are simply inserted and fixed in these slots.

Ball bearing inserts can be used for press tables which do not have fixing slots. These are fitted in the locating sockets.

The ball bearings of the inserts and rails will move in any direction and project only slightly above the surface of the press table. The result is that only slight force is required for movement on the table. When the tool is clamped in place it sits on the table and the clamping pressure causes the ball bearings to retract into their sockets.

#### Roller inserts and roller rails

Roller inserts and rails will carry twice the load of ball bearing inserts and rails and ensure precise linear movement of the tool. This linear technology requires precise positioning of the tool when it is transferred to the tool bench.

Roller rails are used especially on presses with stationary mounting devices.

The special roller bearing technology operates reliably at high temperatures (200 °C).

Unlike ball bearing rails, roller rails can be used in tool base plates, i.e. installed upside down.

### Conveyor belts

Our conveyor belts are designed for use in a wide variety of production applications.

There is a belt width and length to suit almost every application.

The conveyor belts are powered by an electric motor, which is electronically regulated to provide belt speeds from 0.02 to 30 metres per minute.

The motor can be mounted horizontally or vertically, on either side of the belt for either direction of movement. Conveyor belts are available with or without profiles across the belt. Conveyor edge rails are also available in a range of designs.

### Pneumatic conveyors

This pneumatic conveyor is unique and is patented. It was designed to provide an effective and affordable solution to the problems of conveying parts and disposing of waste.

This beltless system conveys stampings and waste from the tool area by vibration alone.

### Electro-mechanical transporters

The FIBRO electro-mechanical transporters have been developed to effectively and inexpensively solve the problems of transporting parts and the removal of stamping and cutting residues from presses.

The principle behind the electro-mechanical transporter is the so-called „table cloth effect“. The slow acceleration during the forward stroke pushes the parts or offcuts forwards. The fast return stroke of the guiding system results in a transport movement in only one direction.

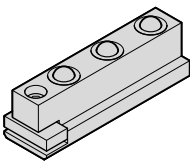
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**2198.32.** **J8**  
 Ball bearing insert without collar



**2198.33.** **J8**  
 Ball bearing insert with collar



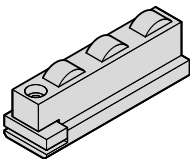
**2198.42.** **J9**  
 Ball bearing rail



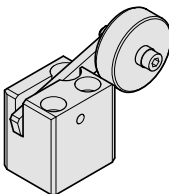
**2198.34.** **J10**  
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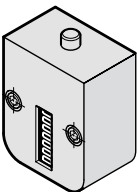
**2198.35.** **J10**  
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**2198.44.** **J11**  
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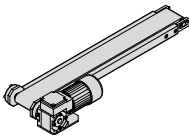


**2198.50.55.** **J12-13**  
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**3710.12.01** **J14**  
 Counter view, mechanical

**3710.00.12.01** **J15**  
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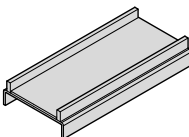


**2195.301.** **J20**  
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**2195.401.** **J22**  
 Conveyor belt, electrically controlled

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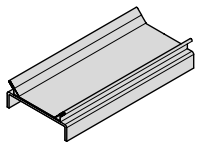
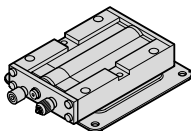
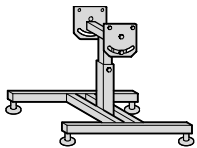


**2195.114.** **J24**  
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 Delimiting guide for conveyor belt

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	Delimiting guide with loss prevention for conveyor belt			Pneumatic conveyor	
	<b>2195.219.</b>	<b>J25</b>		<b>2299.001.</b>	<b>J33</b>
	Delimiting guide with loss prevention for conveyor belt			Electro-mechanical transporter - vertical gear position	
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**2299.221.** **J36**

Electro-mechanical transporter -  
vertical centre gear position, two  
slides, with profile and support

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**2299.510** **J37**

Electro-mechanical transporters -  
Fastening element with height  
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**2299.511** **J37**

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Quick clamp for guiding system

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Angled mounting with adapter plate



# Electronic Thread Moulding

PATENTED

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further information on  
request

## Electronic Thread Moulding

The electronic thread moulding unit, specially designed for punching and forming processes, stands out thanks to its excellent process integration. Regardless of whether the electronic thread moulding unit is used in progressive dies or progression tools, in presses or in automatic punching and bending machines, the desired threads are created in a reliable and controlled fashion. This improves thread quality, increases reliability and ensures quick, cost-effective production.

### Flexibility

The electronic thread moulding unit can be used in a wide variety of presses, progressive dies and automatic punching machines thanks to its independent drive and versatile control unit. If required, a thread cutter can also be operated instead of the non-cutting thread moulder. The compact design allows for the greatest possible flexibility. Integration takes place through installation in existing equipment. The control unit of the electronic thread moulding unit is coupled with the equipment according to requirements. The simple programming facilitates quick calibration of all parameters.

### Quality

The thread moulding unit produces high quality threads in sizes M2-M24. The threads stand out thanks to:

- great strength and stability
- high surface quality

The quality test includes an ongoing check of the thread moulding cycle. The condition of the thread tool, the tolerance of the core hole and the quality of the resulting thread are inferred from the monitored parameters. If limit values are fallen short of or are exceeded, a stop signal is sent to the press or equipment and a corresponding error message is produced. Furthermore, all data sets can be read out from the controls and summarised externally as a report, for instance within a quality assurance system.

### Cost effectiveness

In addition to producing high quality threads, the thread creation is above all extremely cost effective. Cost savings can be achieved through:

- long service life of the tools
- faster processing times
- avoiding rejects
- eliminating the feeding of parts and additional production stages
- a high level of investment security

### At a glance

- Versatile and flexible application
- Autonomous system
- Large spectrum of thread sizes M2-M24 (larger upon request)
- Simple programming and control
- High quality
- Stability and strength
- Surface quality
- Integrated quality control
- Cost effective
- Cost savings
- Short production times
- A high level of investment security

## Sample applications



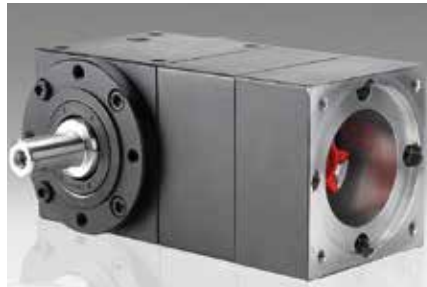
# Electronic Thread Moulding



The controls and the servo regulator for the drives are located in the control box. The size of the control box varies according to the number of systems that must be controlled. The control unit can regulate up to 6 independent drives. 10 programmes per unit allow unrestricted programming of the parameters (rotation speed of the leader, limitation of the torque, number of rotations of the leader, cycle time, batch counter, process data monitoring). Data storage may also take place, which serves to record all the torque values.



The moulding head transforms horizontal rotation into vertical rotation. The feed motion is carried out by a leader. The thread pitch of the leader corresponds to the pitch of the thread to be moulded. The moulding tool is operated with maximum precision with the help of the head spindle sleeve. A clamping sleeve is used to clamp the thread moulder.



The bevel gear serves to limit the length of the installation space required by the drive. Using the bevel gear is optional.



A flexible and compact micro dosing unit with a volumetric dosing pump allows for precise and reliable lubrication. The nozzle technology was developed for punching and forming processes.



The drive shaft transfers the drive's torque to the moulding head. By evening out differences in height and length, the moulding head can be installed in every position within the tool. It is also manoeuvrable on holding-down plates. The maximum clearance between the drive and the moulding head is 500 mm.



The drive consists of one synchronous servomotor for each moulding head that must be powered. The servomotor is configured according to the thread size. This makes it possible to create different thread sizes in a tool using one control. Thanks to the constant cutting speed, significantly longer service lives are achieved than is the case with mechanical, forced piloted systems. The drive is independent from the press stroke and press motion. The maximum rotation speed is 6000 U/min.

## Process comparison

++ excellent + good • satisfactory – adequate -- inadequate	electronic thread moulding	thread cutting*	threaded/ punched nut	weld nut
Possible uses				
Thread sizes	+	++	+	+
Tensile strength of the material	•	•	++	++
Flexibility	++	--	--	--
Quality				
Surface	++	•	•	•
(Pull-out) resistance	++	–	–	–
Load capacity	++	+	+	+
Reliability	++	++	--	--
Time				
Number of process stages	++	+	--	--
Processing time	++	•	--	--
Cost				
Production costs	++	–	•	--

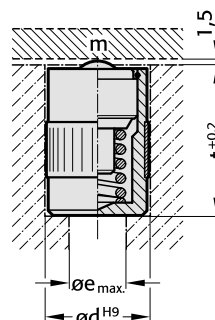
\* as a discrete, downstream process stage



## Ball bearing insert without collar Ball bearing insert with collar



2198.32.



### Note:

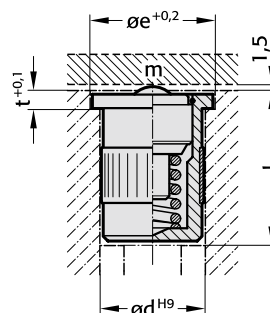
The supporting ball bearings raise the object to be moved (tool) away from the table surface and replace the surface friction with rolling friction. This significantly reduces the force required to move the tool.

### 2198.32. Ball bearing insert without collar

Order No	d	Load capacity m [daN]	Ball diameter	e	t
2198.32.020	20	25	10	10	30
2198.32.024	24	40	12	14	38
2198.32.030	30	63	15	20	44
2198.32.040	40	100	20	30	53



2198.33.



### Note:

The supporting ball bearings raise the object to be moved (tool) away from the table surface and replace the surface friction with rolling friction. This significantly reduces the force required to move the tool.

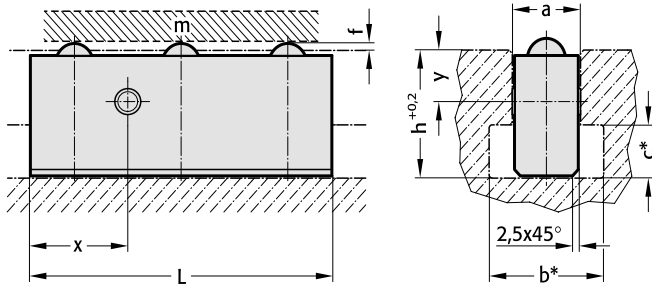
### 2198.33. Ball bearing insert with collar

Order No	d	Load capacity m [daN]	Ball diameter	e	t	l
2198.33.020	20	25	10	25	3.5	31
2198.33.024	24	40	12	30	4	39
2198.33.030	30	63	15	35	5	45
2198.33.040	40	100	20	50	6	54



## Ball bearing rail

2198.42.



### Note:

The ball bearing rails are pushed into the DIN 650 T-shaped grooves in the press table and are fixed in place by the clamping piece. The size and number of the ball bearing rails is determined by the size of the T-shaped groove and the load-bearing capacity required. Once the tool is clamped in place, it lies on the press table and the clamping pressure presses the ball bearings into the holes.

\* T-shaped grooves are not absolutely necessary.

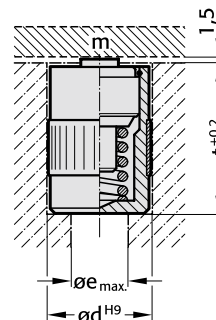
## 2198.42. Ball bearing rail

Order No	a	Load capacity m [daN]	L	Number of balls	Balls diameter	f	b*	c*	h	x	y
2198.42.18.105	18	75	105	3	10	1.5	30	12	30	35	14.5
2198.42.18.140	18	100	140	4	10	1.5	30	12	30	35	14.5
2198.42.18.175	18	125	175	5	10	1.5	30	12	30	35	14.5
2198.42.18.210	18	150	210	6	10	1.5	30	12	30	35	14.5
2198.42.18.280	18	200	280	8	10	1.5	30	12	30	35	14.5
2198.42.18.350	18	250	350	10	10	1.5	30	12	30	35	14.5
2198.42.22.120	22	120	120	3	12	1.5	37	16	38	40	14.5
2198.42.22.160	22	160	160	4	12	1.5	37	16	38	40	14.5
2198.42.22.200	22	200	200	5	12	1.5	37	16	38	40	14.5
2198.42.22.240	22	240	240	6	12	1.5	37	16	38	40	14.5
2198.42.22.320	22	320	320	8	12	1.5	37	16	38	40	14.5
2198.42.22.400	22	400	400	10	12	1.5	37	16	38	40	14.5
2198.42.28.135	28	190	135	3	15	1.5	46	20	48	45	19
2198.42.28.180	28	250	180	4	15	1.5	46	20	48	45	19
2198.42.28.225	28	320	225	5	15	1.5	46	20	48	45	19
2198.42.28.270	28	380	270	6	15	1.5	46	20	48	45	19
2198.42.28.360	28	500	360	8	15	1.5	46	20	48	45	19
2198.42.28.450	28	630	450	10	15	1.5	46	20	48	45	19
2198.42.36.150	36	300	150	3	20	1.5	56	25	61	50	24.5
2198.42.36.200	36	400	200	4	20	1.5	56	25	61	50	24.5
2198.42.36.250	36	500	250	5	20	1.5	56	25	61	50	24.5
2198.42.36.300	36	600	300	6	20	1.5	56	25	61	50	24.5
2198.42.36.400	36	800	400	8	20	1.5	56	25	61	50	24.5
2198.42.36.500	36	1000	500	10	20	1.5	56	25	61	50	24.5

## Roller insert without collar Roller insert with collar



2198.34.



### Note:

Roller inserts provide double the capacity of ball bearing inserts.

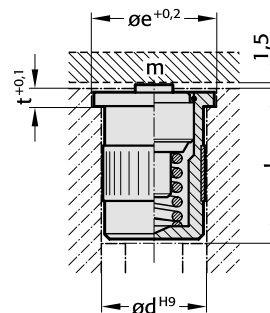
Torsion protection is provided by the customer.

### 2198.34. Roller insert without collar

Order No	d	Load capacity m [daN]	Roller diameter	e	t
2198.34.020	20	50	10	10	30
2198.34.024	24	80	13	14	38
2198.34.030	30	125	16	20	44
2198.34.040	40	200	19	30	53



2198.35.



### Note:

Roller inserts provide double the capacity of ball bearing inserts.

Torsion protection is provided by the customer.

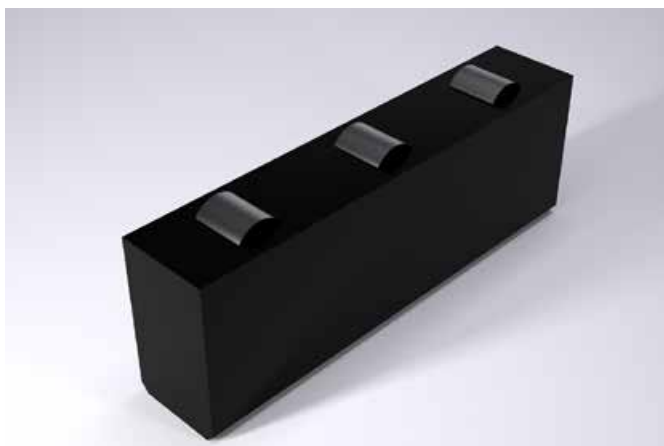
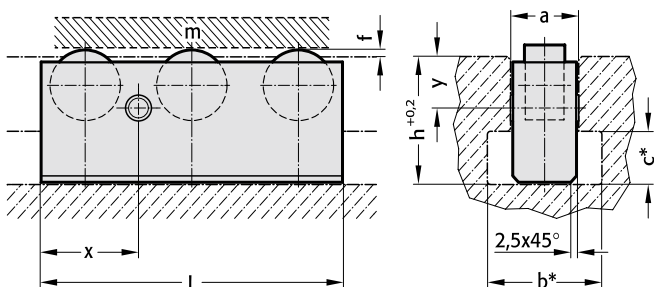
### 2198.35. Roller insert with collar

Order No	d	Load capacity m [daN]	Roller diameter	e	t	l
2198.35.020	20	50	10	25	3.5	31
2198.35.024	24	80	13	30	4	39
2198.35.030	30	125	16	35	5	45
2198.35.040	40	200	19	50	6	54

# Roller rail



2198.44.



## 2198.44. Roller rail

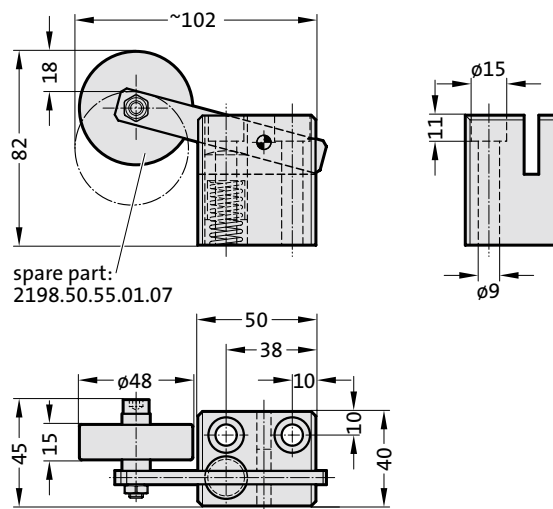
Order No	a	Load capacity m [daN]	L	Number of rollers	Roller diameter	f	b*	c*	h	x	y
2198.44.18.105	18	150	105	3	10	1.5	30	12	30	35	14.5
2198.44.18.140	18	200	140	4	10	1.5	30	12	30	35	14.5
2198.44.18.175	18	250	175	5	10	1.5	30	12	30	35	14.5
2198.44.18.210	18	300	210	6	10	1.5	30	12	30	35	14.5
2198.44.18.280	18	400	280	8	10	1.5	30	12	30	35	14.5
2198.44.18.350	18	500	350	10	10	1.5	30	12	30	35	14.5
2198.44.22.120	22	240	120	3	13	1.5	37	16	38	40	14.5
2198.44.22.160	22	320	160	4	13	1.5	37	16	38	40	14.5
2198.44.22.200	22	400	200	5	13	1.5	37	16	38	40	14.5
2198.44.22.240	22	480	240	6	13	1.5	37	16	38	40	14.5
2198.44.22.320	22	640	320	8	13	1.5	37	16	38	40	14.5
2198.44.22.400	22	800	400	10	13	1.5	37	16	38	40	14.5
2198.44.28.135	28	380	135	3	16	1.5	46	20	48	45	19
2198.44.28.180	28	500	180	4	16	1.5	46	20	48	45	19
2198.44.28.225	28	630	225	5	16	1.5	46	20	48	45	19
2198.44.28.270	28	750	270	6	16	1.5	46	20	48	45	19
2198.44.28.360	28	1000	360	8	16	1.5	46	20	48	45	19
2198.44.28.450	28	1250	450	10	16	1.5	46	20	48	45	19
2198.44.36.150	36	600	150	3	19	1.5	56	25	61	50	24.5
2198.44.36.200	36	800	200	4	19	1.5	56	25	61	50	24.5
2198.44.36.250	36	1000	250	5	19	1.5	56	25	61	50	24.5
2198.44.36.300	36	1200	300	6	19	1.5	56	25	61	50	24.5
2198.44.36.400	36	1600	400	8	19	1.5	56	25	61	50	24.5
2198.44.36.500	36	2000	500	10	19	1.5	56	25	61	50	24.5

## Spring mounted rollers to VW Standard



### 2198.50.55.01 Execution 1

Material: Steel



#### Note:

Screws not included.

#### Application:

For stabilizing the sheet-metal strip in the tool and at the coil entry.

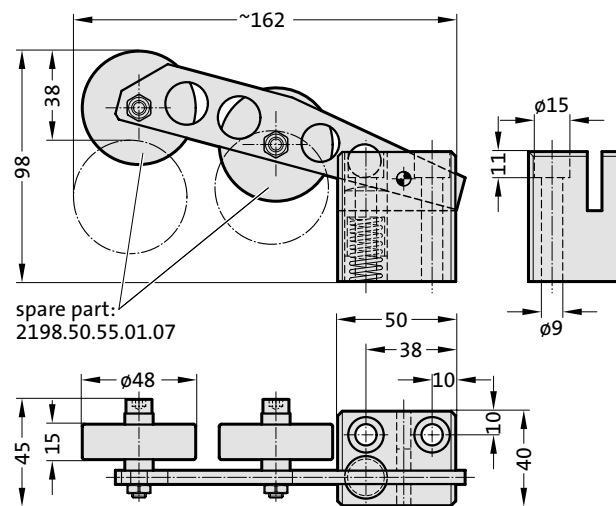
#### Fixing:

Use socket cap screws DIN EN ISO 4762 M8.



### 2198.50.55.02 Execution 2

Material: Steel



#### Note:

Screws not included.

#### Application:

For stabilizing the sheet-metal strip in the tool and at the coil entry.

#### Fixing:

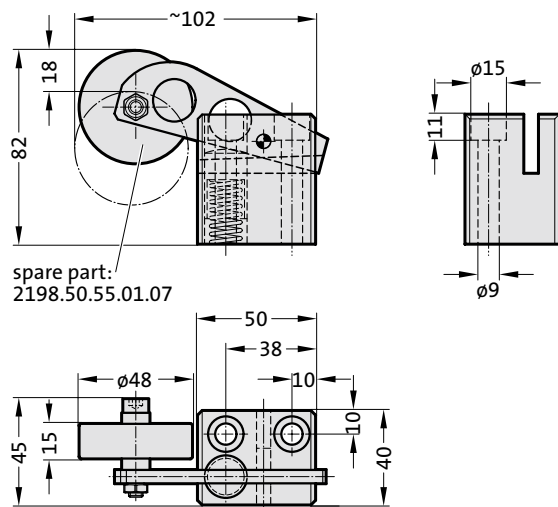
Use socket cap screws DIN EN ISO 4762 M8.



## Spring mounted rollers to VW Standard

### 2198.50.55.03 Execution 3

Material: Steel



#### Note:

Screws not included.

#### Application:

For stabilizing the sheet-metal strip in the tool and at the coil entry.

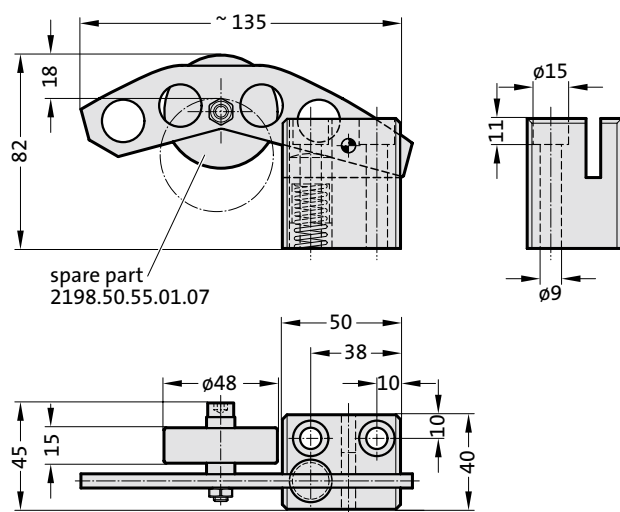
#### Fixing:

Use socket cap screws DIN EN ISO 4762 M8.



### 2198.50.55.04 Execution 4

Material: Steel



#### Note:

Screws not included.

#### Application:

For stabilizing the sheet-metal strip in the tool and at the coil entry.

#### Fixing:

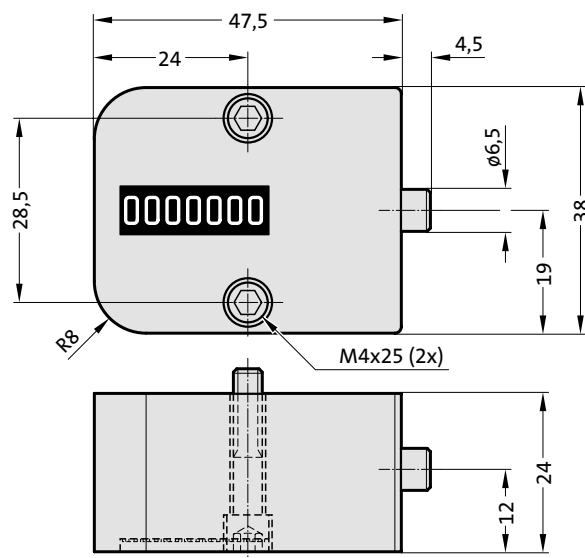
Use socket cap screws DIN EN ISO 4762 M8.



## Counter view, mechanical



3710.12.01



### Description:

- monitors the productivity of a moulding tool

### Note:

- max. operational temperature 120 °C
- seven digit display, non-resettable, allows recording up to 10 million cycles
- splash resistant, corrosion resistant
- incl. mounting screws M4x25

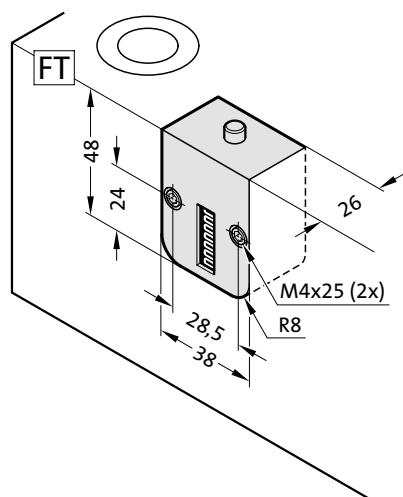
Installation into mould parting surface with 2 cylinder screws M4 x 25 DIN EN ISO 4762.

- An installation in the mould parting surface provides a good reading of the counted values.

3710.12.01 Counter view, mechanical

### Patent

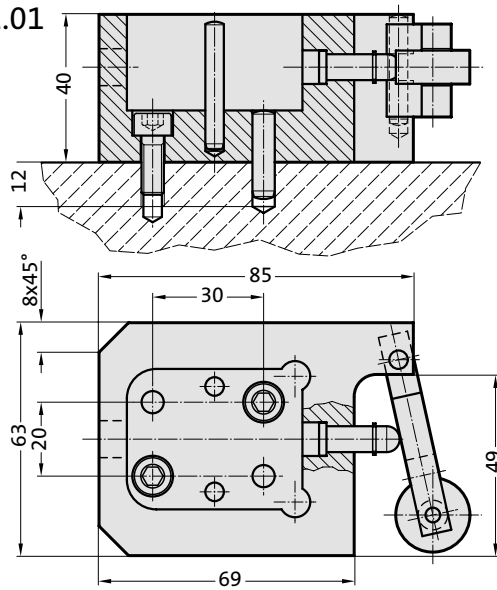
### Mounting example





## Installation frame for counter view

3710.00.12.01



3710.00.12.01 Installation frame for counter view

### Note:

Fasten the installation frame on the tool, then insert the counter view.

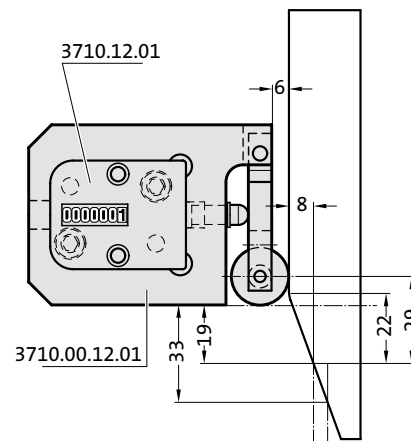
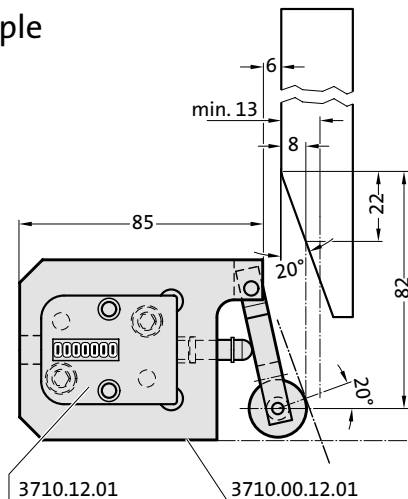
Delivery includes:

2 socket head cap screws M6x16 to DIN EN ISO 4762 and 2 precision parallel pins 2351.0600.024

### Attention:

After installing the counter view into the installation frame, disassembly is no longer possible (manipulation proof).

## Mounting example









## Electrically controlled Conveyor belts





# Conveyor belts, electrically controlled

## Description and ordering guidelines



### Belt speed:

The standard speed is 5,5 m/min.

Speeds of 2,7–7,5–11–20 m/min are available on request.

5,5	m/min.
2,7	m/min.
7,5	m/min.
11	m/min.
20	m/min.

An electrical controller enables the belt speed to be set to between

0,02	–10 m/min. (Types 302 and 402 only)
10	–20 m/min.
20	–30 m/min.
0,02	–30 m/min. (Types 302 and 402 only)

with limited control precision.

### Motors: (supply voltage)

Single-phase-motor 230 V–50 HZ

Three-phase-motor 230 V–50 HZ (star delta control)

Three-phase-motor 400 V–50 HZ

### Motor position with gearbox:

Motor axis horizontal relative to direction of belt travel, right

Motor axis horizontal relative to direction of belt travel, left

Motor axis vertical relative to direction of belt travel, right, above

Motor axis vertical relative to direction of belt travel, right, below

Motor axis vertical relative to direction of belt travel, left, above

Motor axis vertical relative to direction of belt travel, left, below

### Controller:

Excluding electrical installation

With manual ON/OFF switch and motor circuit-breaker

With manual ON/OFF switch and motor circuit-breaker, additional emergency stop switch and 3 m cable with IEC 309 plug connector.

Fittings as for 2 + Motor frequency controller to regulate the belt speed, 230 V AC, single phased, with IEC 309 plug connector.

Fittings as for 2 + Motor frequency controller to regulate the belt speed, 400 V AC, three phased, with IEC 309 plug connector.

Code	1
Code	2
Code	3
Code	4
Code	5

Code	6	3	6	4
Code	7	3	7	4
Code	8	3	8	4
Code	9	3	9	4
	230 V AC		400 V AC	
	1-ph.		3-ph.	

Code	1
Code	2
Code	3

Code	1
Code	2
Code	3
Code	4
Code	5
Code	6

Code	0
Code	1
Code	2
Code	3
Code	4

### Description:

The conveyor belts are used to move parts and waste out of the press. They are suitable for any other application involving the movement of parts or waste.

The belt consists of a woven glass fibre fabric with a polyurethane coating.

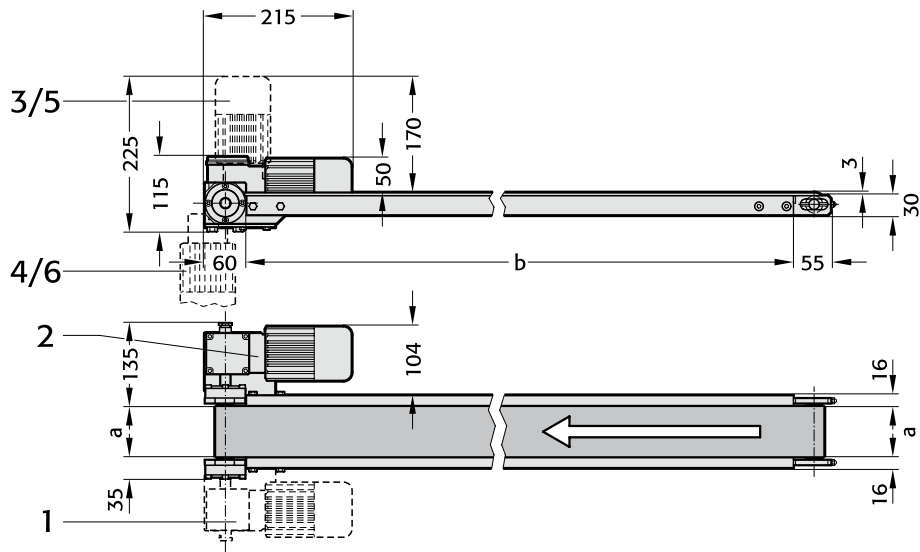
The drives are designed for both continuous and intermittent operation.

### Accessories:

Delimiting guides, loss prevention and stands (see following pages) only in conjunction with a conveyor belt order.

## Conveyor belt, electrically controlled

2195.301.



### 2195.301. Conveyor belt, electrically controlled

a	b	500	750	1000	1250	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000
030		•	•	•	•	•	•	•	•	•						
050		•	•	•	•	•	•	•	•	•						
075		•	•	•	•	•	•	•	•	•						
100		•	•	•	•	•	•	•	•	•						
125		•	•	•	•	•	•	•	•	•						
150		•	•	•	•	•	•	•	•	•						
175		•	•	•	•	•	•	•	•	•						
200		•	•	•	•	•	•	•	•	•						
225		•	•	•	•	•	•	•	•	•						
250		•	•	•	•	•	•	•	•	•						
275		•	•	•	•	•	•	•	•	•						
300		•	•	•	•	•	•	•	•	•						

### Belt load:

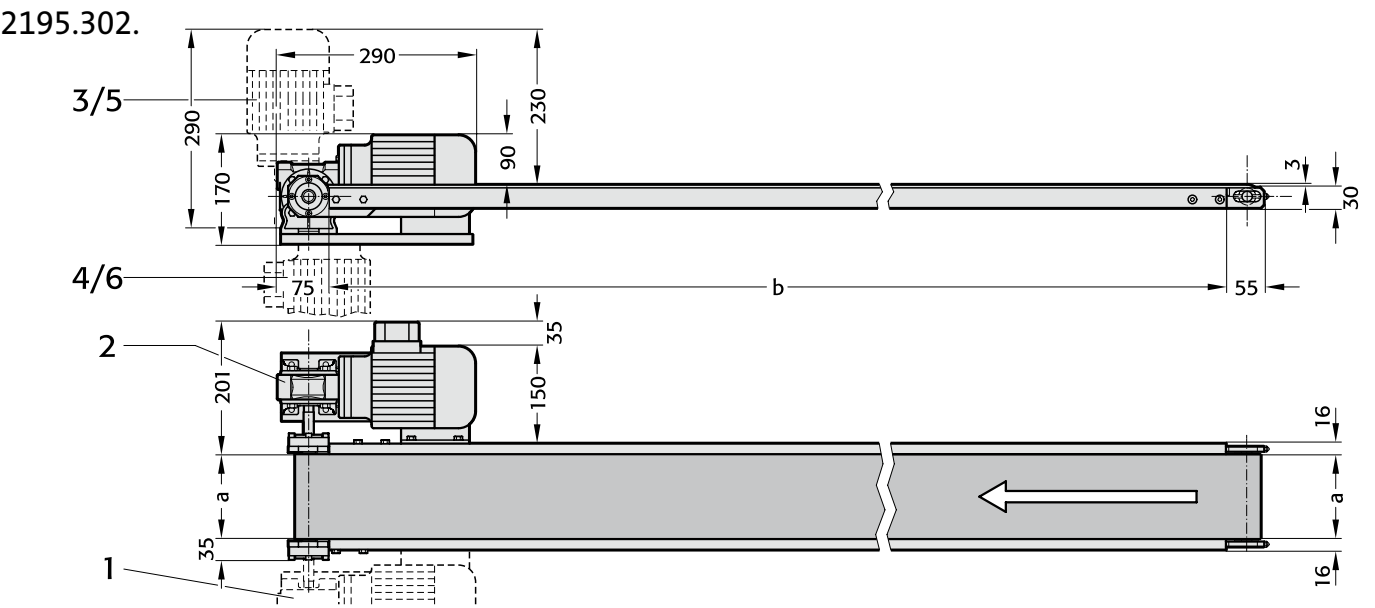
Belt width a	kg per meter conveyed
30– 50– 75	4
100–125–150	7
175–200–225	10
250–275–300	15

For more information refer to description and ordering guidelines.

### Ordering Code (example):

Conveyor belt	= 2195.
Typ 301	= 301.
Belt width	a = 100 mm = 100.
Nominal belt length	b = 1750 mm = 1750.
Belt speed	= 1
Motor voltage 400 V	= 3
Motor position	= 1
Motor controller	= 1
Order No	= 2195.301.100.1750.1311

# Conveyor belt, electrically controlled



2195.302. Conveyor belt, electrically controlled

a	b	500	750	1000	1250	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000
030																
050																
075																
100																
125																
150																
175																
200																
225																
250																
275																
300																

## Belt load:

Belt width a	kg per meter conveyed
30- 50- 75	4
100-125-150	7
175-200-225	10
250-275-300	15

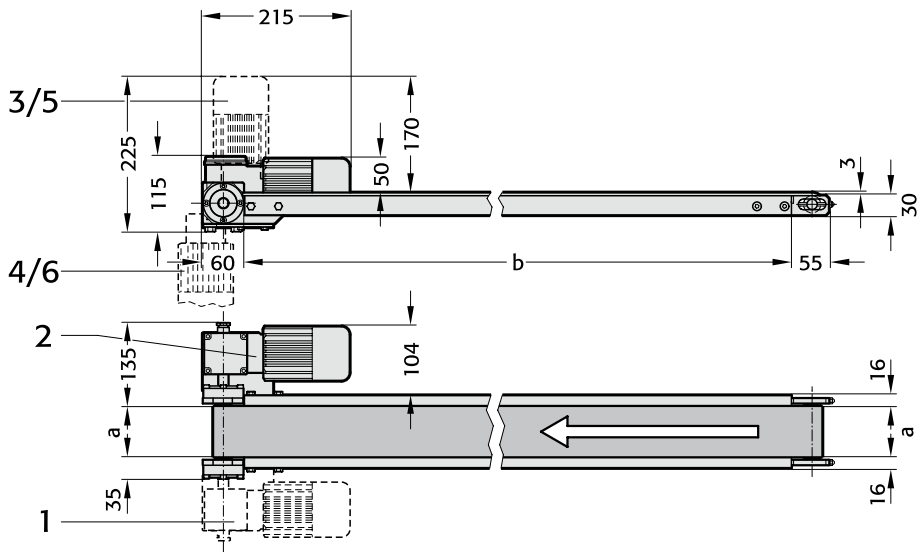
For more information refer to description and ordering guidelines.

## Ordering Code (example):

Conveyor belt	= 2195.
Typ 302	= 302.
Belt width	a = 100 mm = 100.
Nominal belt length	b = 2500 mm = 2500.
Belt speed	= 1
Motor voltage 400 V	= 3
Motor position	= 1
Motor controller	= 1
Order No	= 2195.302.100.2500.1311

## Conveyor belt, electrically controlled

2195.401.



### 2195.401. Conveyor belt, electrically controlled

a	b	500	750	1000	1250	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000
030		•	•	•	•	•	•	•	•	•						
050		•	•	•	•	•	•	•	•	•						
075		•	•	•	•	•	•	•	•	•						
100		•	•	•	•	•	•	•	•	•						
125		•	•	•	•	•	•	•	•	•						
150		•	•	•	•	•	•	•	•	•						
175		•	•	•	•	•	•	•	•	•						
200		•	•	•	•	•	•	•	•	•						
225		•	•	•	•	•	•	•	•	•						
250		•	•	•	•	•	•	•	•	•						
275		•	•	•	•	•	•	•	•	•						
300		•	•	•	•	•	•	•	•	•						

### Belt load:

Belt width a	kg per meter conveyed
30– 50– 75	5
100–125–150	10
175–200–225	14
250–275–300	17

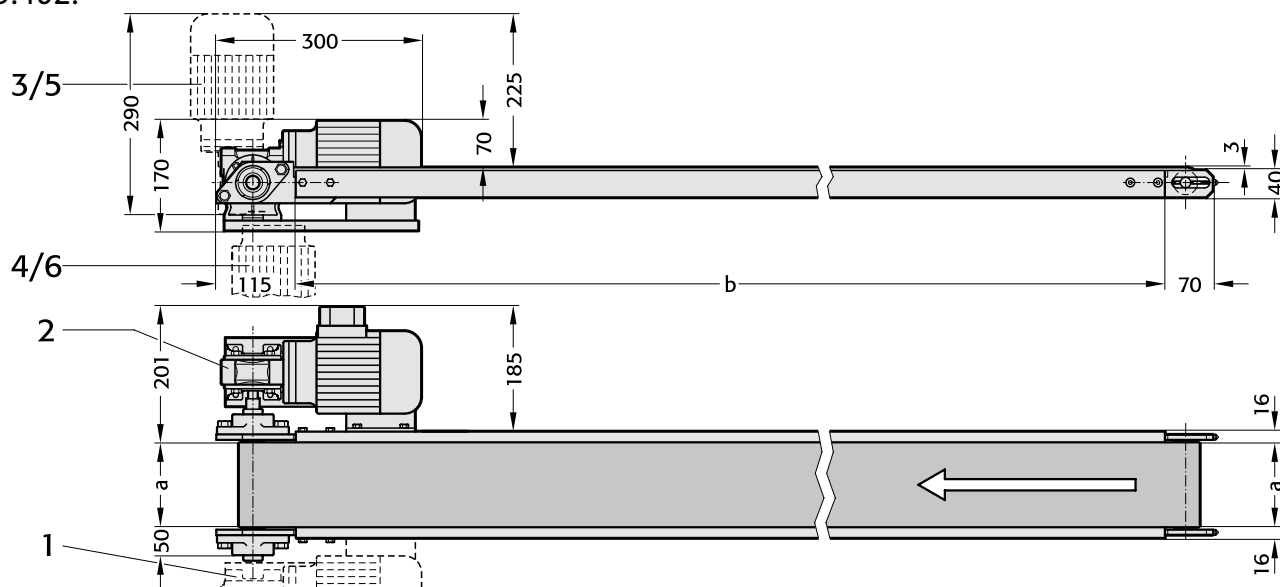
For more information refer to description and ordering guidelines.

### Ordering Code (example):

Conveyor belt	= 2195.
Typ 401	= 401.
Belt width	a = 100 mm = 100.
Nominal belt length	b = 1750 mm = 1750.
Belt speed	= 1
Motor voltage 400 V	= 3
Motor position	= 1
Motor controller	= 1
Order No	= 2195.401.100.1750.1311

# Conveyor belt, electrically controlled

2195.402.



## 2195.402. Conveyor belt, electrically controlled

a	b	500	750	1000	1250	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000
030																
050																
075																
100																
125																
150																
175																
200																
225																
250																
275																
300																
350																
400																
450																
500																

## Belt load:

Belt width a kg per meter conveyed

30- 50- 75	5
100-125-150	10
175-200-225	14
250-275-300	17
350-400-450	20
500	24

For more information refer to description and ordering guidelines.

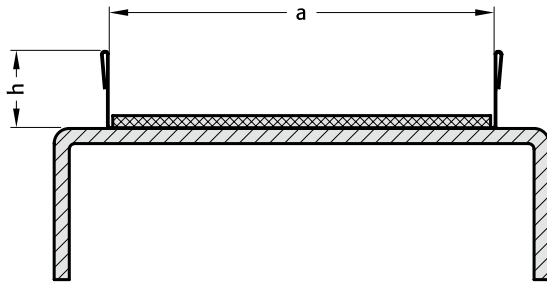
## Ordering Code (example):

Conveyor belt	= 2195.
Typ 402	= 402.
Belt width	a = 100 mm = 100.
Nominal belt length	b = 2500 mm = 2500.
Belt speed	= 1
Motor voltage 400 V	= 3
Motor position	= 1
Motor controller	= 1
Order No	= 2195.402.100.2500.1311



# Delimiting guide for conveyor belt

2195.114.



## Note:

Only in conjunction with a conveyor belt order.

## Delimiting guide for conveyor belt

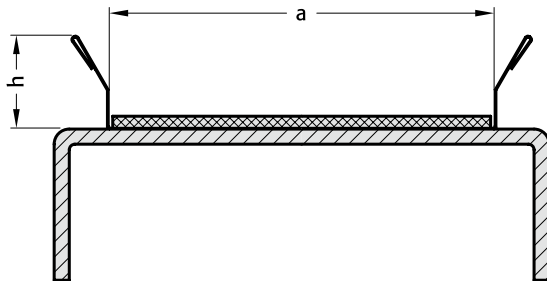
### Description:

Delimiting guide made of stainless steel  
h = 15 - 100 mm (in 5 mm increments)

### Ordering Code (example):

Conveyor belt	=	2195.
Delimiting guide type	=	114.
Guide height	h = 15 mm =	015.
Belt width	a = 100 mm =	100.
Frame length	b = 1500 mm =	1500
Order No	=	2195.114.015.100.1500

2195.115.



## Note:

Only in conjunction with a conveyor belt order.

## Delimiting guide for conveyor belt

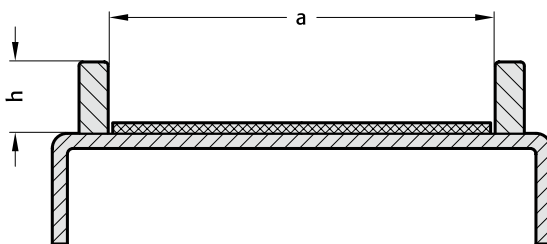
### Description:

Delimiting guide made of stainless steel  
h = 25 - 100 mm (in 5 mm increments)

### Ordering Code (example):

Conveyor belt	=	2195.
Delimiting guide type	=	115.
Guide height	h = 25 mm =	025.
Belt width	a = 150 mm =	150.
Frame length	b = 1500 mm =	1500
Order No	=	2195.115.025.150.1500

2195.116.



## Note:

Only in conjunction with a conveyor belt order.

## Delimiting guide for conveyor belt

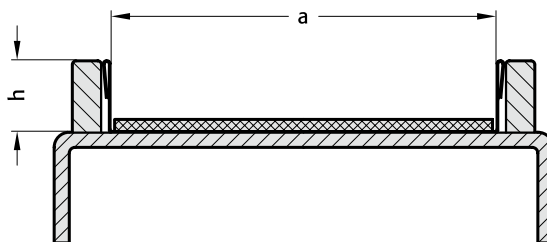
### Description:

Conveyor edge rails of steel, brazed  
h = 10 - 100 mm (in 5 mm increments)

### Ordering Code (example):

Conveyor belt	=	2195.
Delimiting guide type	=	116.
Guide height	h = 10 mm =	010.
Belt width	a = 100 mm =	100.
Frame length	b = 1500 mm =	1500
Order No	=	2195.116.010.100.1500

2195.117.



## Note:

Only in conjunction with a conveyor belt order.

## Delimiting guide for conveyor belt

### Description:

Trough conveyor edge rails of stainless steel,  
with brazed on steel reinforcement walls  
h = 15 - 100 mm (in 5 mm increments)

### Ordering Code (example):

Conveyor belt	=	2195.
Delimiting guide type	=	117.
Guide height	h = 15 mm =	015.
Belt width	a = 100 mm =	100.
Frame length	b = 1500 mm =	1500
Order No	=	2195.117.015.100.1500

## Delimiting guide for conveyor belt with loss prevention

### Delimiting guide for conveyor belt with loss prevention

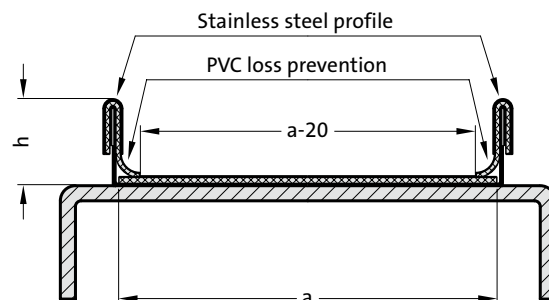
2195.218.

#### Installation example:

with profile on conveyor edge rail 2195.114.  
with loss prevention.  
h = 25 - 50 mm (in 5 mm increments)

#### Ordering Code (example):

Conveyor belt	= 2195.
Delimiting guide type 114 with loss prevention type 218	= 218.
Guide height	h = 25 mm = 025.
Belt width	a = 150 mm = 150.
Frame length	b = 1500 mm = 1500
Order No	= 2195.218.025.150.1500



### Delimiting guide for conveyor belts with loss prevention

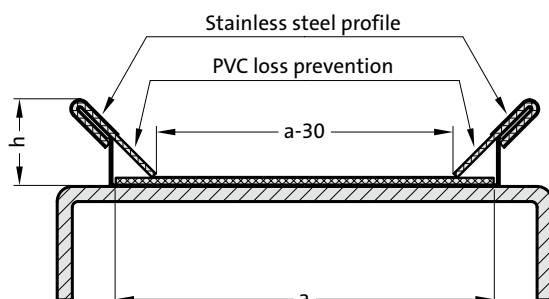
2195.219.

#### Installation example:

with profile on conveyor edge rail 2195.115.  
with loss prevention.  
h = 25 - 50 mm (in 5 mm increments)

#### Ordering Code (example):

Conveyor belt	= 2195.
Delimiting guide type 115 with loss prevention type 219	= 219.
Guide height	h = 25 mm = 025.
Belt width	a = 150 mm = 150.
Frame length	b = 1500 mm = 1500
Order No	= 2195.219.025.150.1500



### Delimiting guide for conveyor belt with loss prevention

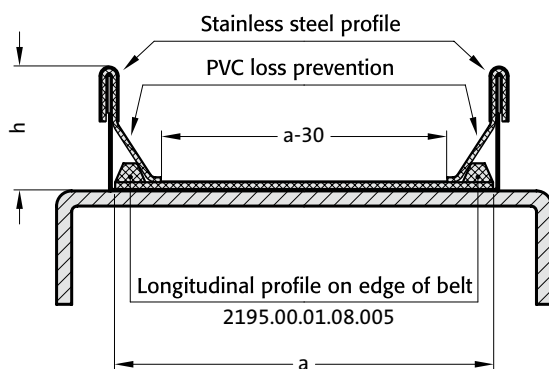
2195.220.

#### Installation example:

with profile on conveyor edge rail 2195.114.  
and longitudinal profile on edge of belt, with loss prevention.  
h = 35 - 50 mm (in 5 mm increments)

#### Ordering Code (example):

Conveyor belt	= 2195.
Delimiting guide type 114 with loss prevention and longitudinal profile 2195.00.01.08.005	= 220.
Guide height	h = 35 mm = 035.
Belt width	a = 150 mm = 150.
Frame length	b = 1500 mm = 1500
Order No	= 2195.220.035.150.1500



### Delimiting guide for conveyor belt with loss prevention

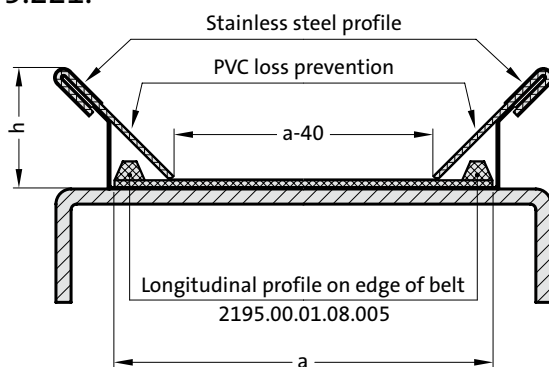
2195.221.

#### Installation example:

with profile on conveyor edge rail 2195.115.  
and longitudinal profile on edge of belt, with loss prevention.  
h = 35 - 50 mm (in 5 mm increments)

#### Ordering Code (example):

Conveyor belt	= 2195.
Delimiting guide type 115 with loss prevention and longitudinal profile 2195.00.01.08.005	= 221.
Guide height	h = 35 mm = 035.
Belt width	a = 150 mm = 150.
Frame length	b = 1500 mm = 1500
Order No	= 2195.221.035.150.1500



## Stand for conveyor belt

### Description:

Stand, tilting with adjustable feet .120.  
Stand, tilting with adjustable castors .121.

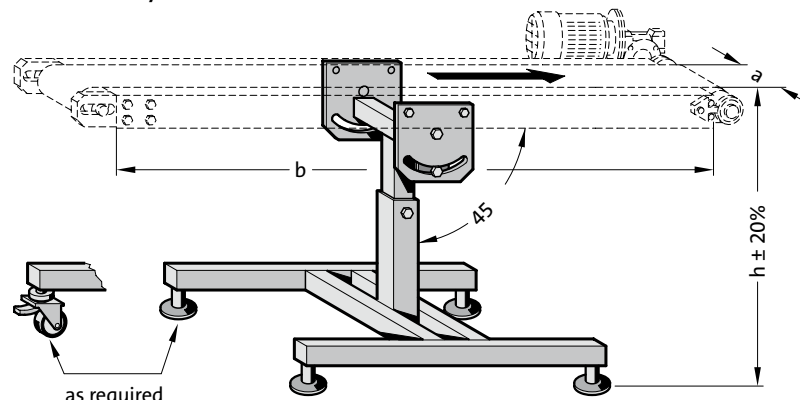
$h$  = height to customer's requirements, min. 450 mm  
 $\pm 20\%$   $h$  = adjustable height range

$a_{\max.} = 350$  mm  
 $b_{\max.} = 2000$  mm

### Ordering Code (example):

Conveyor belt	=	2195.
Stand with adjustable feet	=	120.
Height $h = 450$ mm	=	0450.
Belt width $a = 350$ mm	=	350
Order no	=	2195.120.0450.350

2195.120./2195.121.



### Description:

Table format with adjustable feet .130.  
Table format with adjustable castors .131.

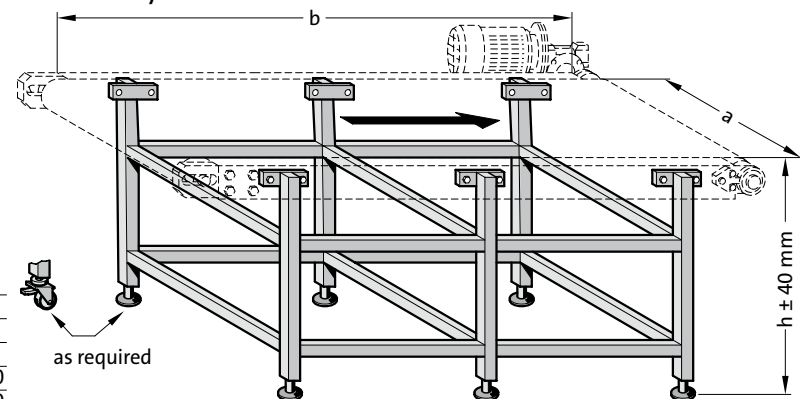
$h$  = height to customer's requirements, min. 450 mm

For use with beltwidths  $a$   
For use with frame length  $b$

### Ordering Code (example):

Conveyor belt	=	2195.
Stand with adjustable castors	=	131.
Height $h = 600$ mm	=	0600.
Belt width $a = 350$ mm	=	350.
Nominal belt length $b = 1000$ mm	=	1000
Order no	=	2195.131.0600.350.1000

2195.130./2195.131.



### Description:

Stand, with adjustable feet .140.  
Stand, with adjustable castors .141.

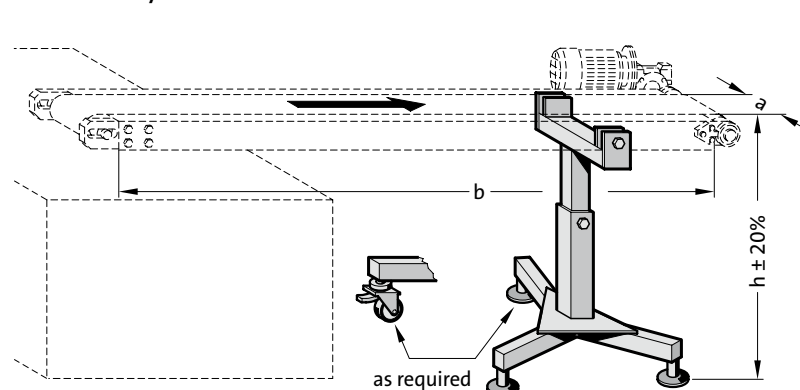
$h$  = height to customer's requirements, min. 450 mm  
 $\pm 20\%$   $h$  = adjustable height range

$a_{\max.} = 350$  mm

### Ordering Code (example):

Conveyor belt	=	2195.
Stand with adjustable castors	=	141.
Height $h = 450$ mm	=	0450.
Belt width $a = 350$ mm	=	350
Order no	=	2195.141.0450.350

2195.140./2195.141.



### Description:

double adjustment with adjustable feet .150.  
double adjustment with adjustable castors .151.

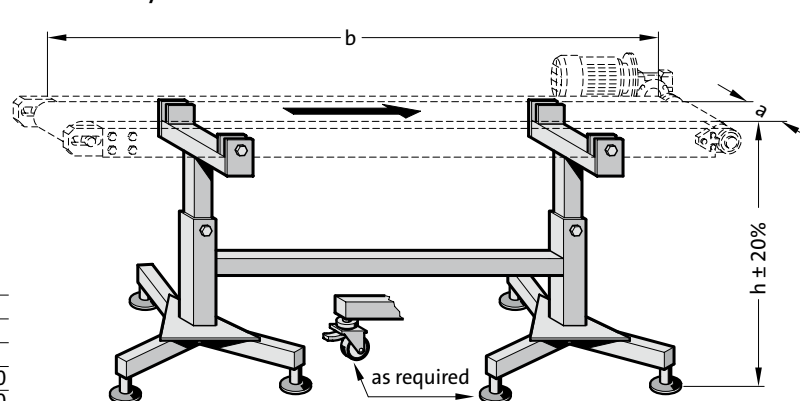
$h$  = height to customer's requirements, min. 450 mm  
 $\pm 20\%$   $h$  = adjustable height range

$a_{\max.} = 400$  mm  
 $b_{\max.} = 3000$  mm

### Ordering Code (example):

Conveyor belt	=	2195.
Stand with adjustable castors	=	151.
Height $h = 450$ mm	=	0450.
Belt width $a = 400$ mm	=	400.
Nominal belt length $b = 3000$ mm	=	3000
Order no	=	2195.151.0450.400.3000

2195.150./2195.151.





# Pneumatic conveyors



# Pneumatic conveyors

## Description

This pneumatic conveyor is unique and is patented. It was designed to provide an effective and affordable solution to the problems of conveying parts and disposing of waste.

This beltless system conveys stampings and waste from the tool area by vibration alone.

A specially designed guide channel which is screwed to the body of the conveyor vibrates rhythmically slowly forwards and fast backwards. The mass inertia of the parts is used to move them forwards. In this way the parts in the guide channel progress gently towards the storage containers.

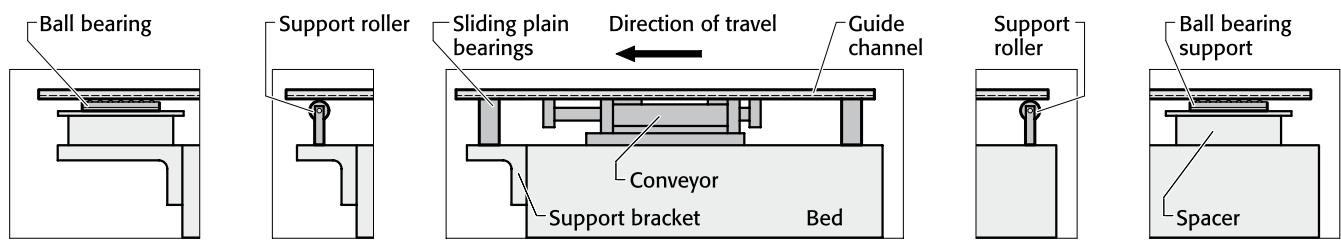
The conveyor is maintenance-free and has a very low air consumption so is extremely economical in operation.

The pneumatic conveyor is quiet running and very user friendly.

The conveyor was originally designed for press room use but can be used as a conveyor with any tool. Blockages are a thing of the past whether the conveyor is feeding parts for assembly or removing and disposing of stampings and waste parts.

## Guides

We recommend three options for supporting a long guide channel:  
 1) Ball bearings 2) Roller supports 3) Sliding plain bearings



## Technical data:

Modell	load, max. [kg]	air consumption [l/min.]	sound level [db-A]	stroke length [mm]	guide channel weight max. [kg]	despatch weight [kg]
2199.03	3	0,55	68	20	1,4	1,4
2199.10	10	1,25	68	25	2,7	2,8
2199.40	40	5,42	70	27	5,4	7,2
2199.70	70	5,42	70	27	11,3	5,5

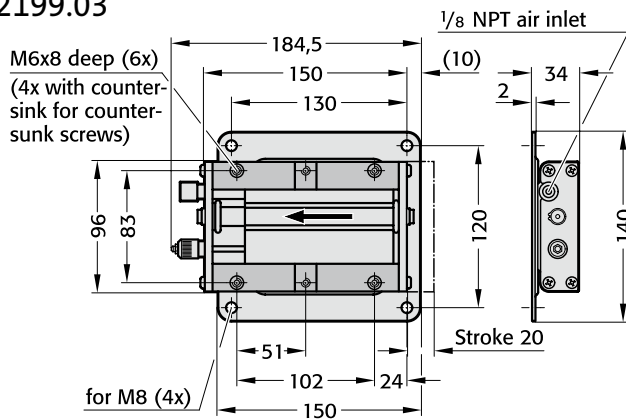
1. Recommended rate of vibration: 120 per minute · 2. Speed of travel: 8 - 10 m / min. · 3. Operating pressure: 4 - 5.5 bar  
 4. Slope of guide channel: max. 8°



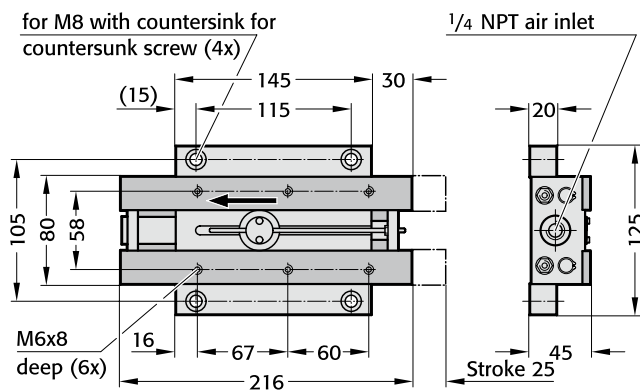
**Note:**  
 Do not exceed 5.5 bar as excess pressure will damage the transporter.  
 Additional protection for the transporter can be provided by including a service unit in the circuit.  
 This consists of a filter, pressure control valve and lubricator.

# Pneumatic conveyor

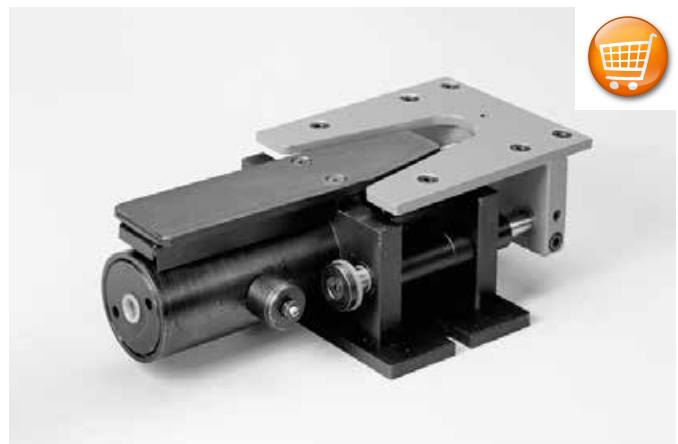
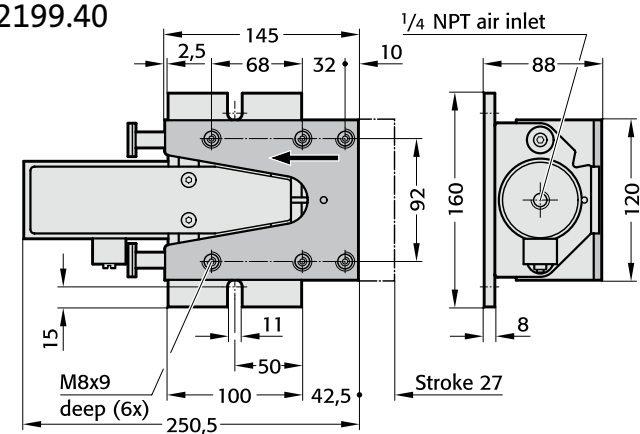
## 2199.03



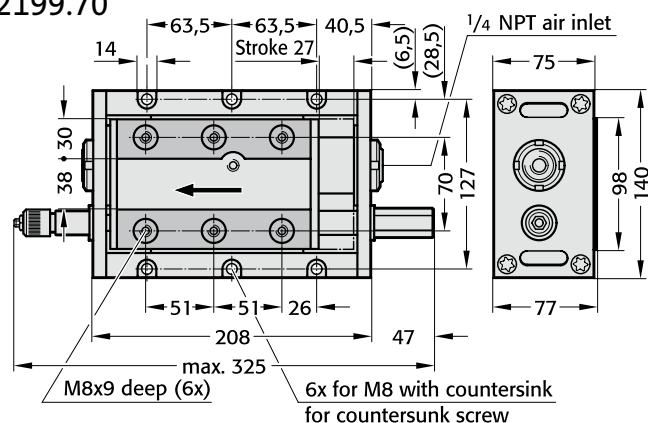
## 2199.10



## 2199.40



## 2199.70



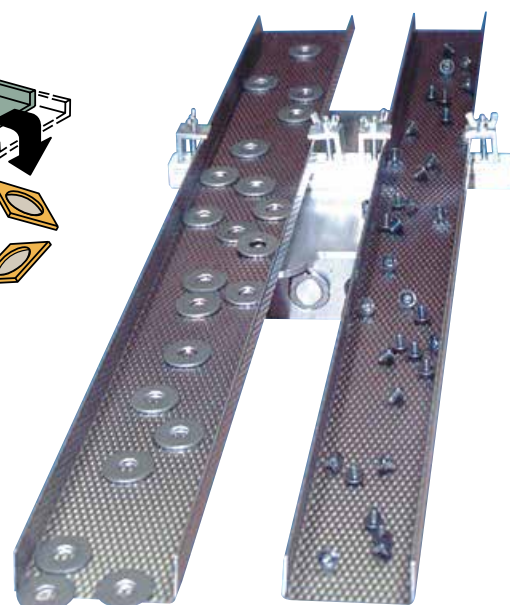
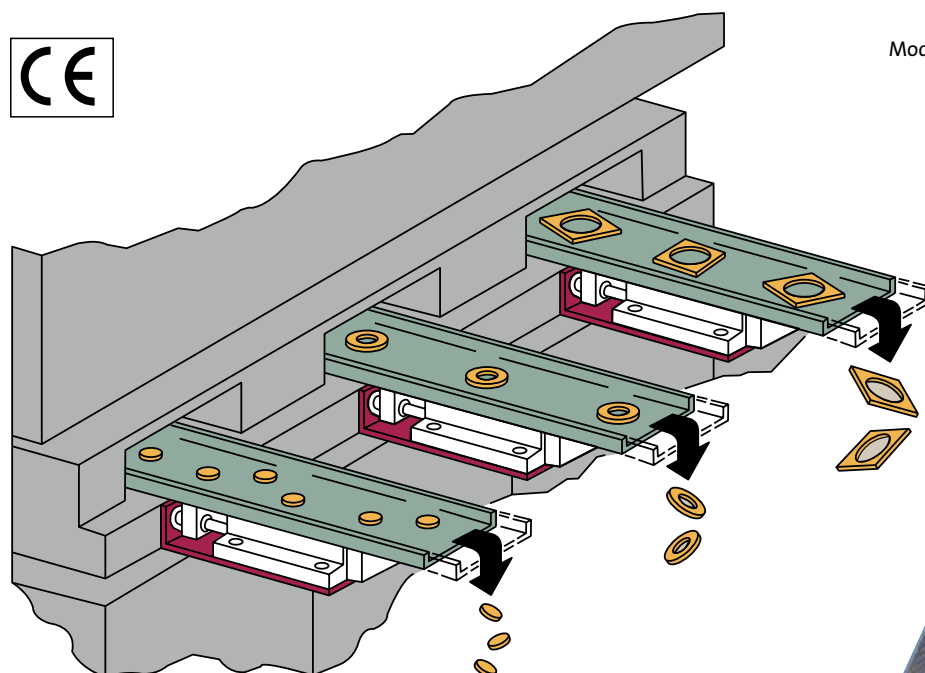
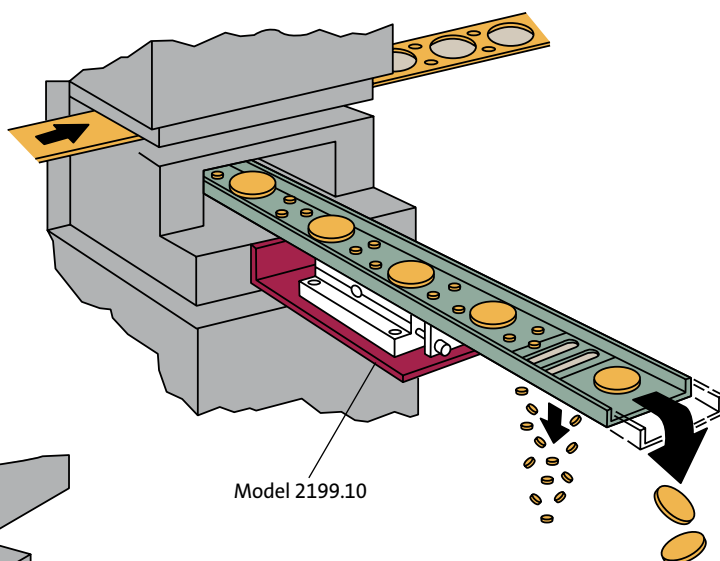


## Pneumatic conveyors

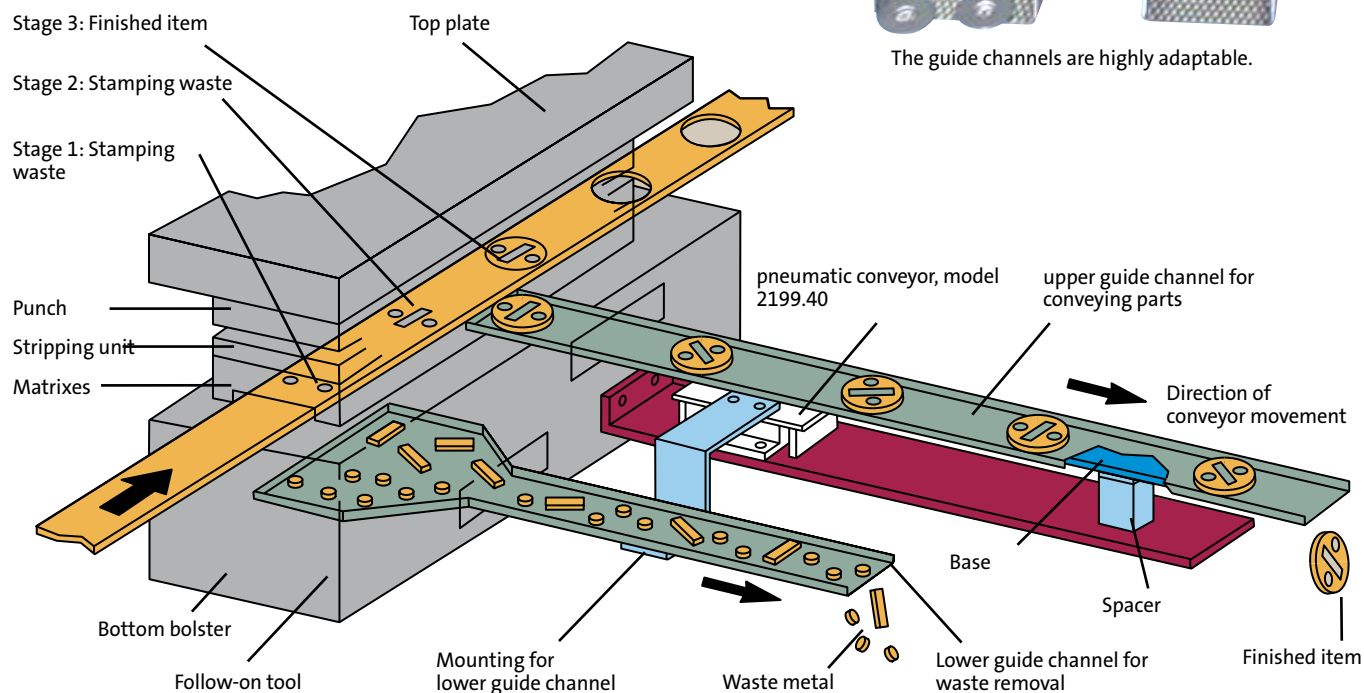
2199.03/.10/.40/.70

### How does the pneumatic conveyor work?

This compact pneumatic conveyor is driven by compressed air. The vibrating rhythmic motion conveys stampings and stamping waste whilst reducing your costs. Guide channels can be matched to any tool opening and used for sorting various types of waste.



The guide channels are highly adaptable.





# Electro- mechanical transporters





## Electro-mechanical transporters

### General Information

The FIBRO electro-mechanical transporters have been developed to effectively and inexpensively solve the problems of transporting parts and the removal of stamping and cutting residues from presses.

The principle behind the electro-mechanical transporter is the so-called „table cloth effect“. The slow acceleration during the forward stroke pushes the parts or offcuts forwards. The fast return stroke of the guiding system results in a transport movement in only one direction.

Due to its compact design, the FIBRO electro-mechanical transporter is also suitable for applications where only limited space is available. The simple, sturdy and flexible design provides a safe, reliable, efficient and a cost efficient solution.

Basic advantages:

- compact design
- low maintenance
- low noise level ( < 70 dB)

Designs:

2299.001 vertical gear position

2299.002 horizontal gear position

2299.011 vertical gear position,  
with profile and support

2299.012 horizontal gear position  
with profile and support

2299.121 vertical gear position,  
with two slides, profile and support

2299.122 horizontal gear position  
with two slides, profile and support

2299.221 vertical centre gear position,  
two slides, with profile and support

2299.222 horizontal centre gear position,  
two slides, with profile and support

Technical data:

Drive: Alternating current (3 phases)  
1375 min-1  
0.09 kW rated capacity  
0.51 A nominal current at 400 V  
Weight 4.4 kg  
Protection class IP55  
(DIN EN 60529)

Delivery stroke:  
20 mm

Conveying speed:  
approx. 4.5m/min

Stroke frequency:  
4 strokes/second

max. guiding system weight (incl. profile):  
35 kg

max. bulk weight (guiding system weight,  
profile, transport items):  
100 kg

Temperature range  
(permissible ambient temperature):  
-20 to +60 °C

Scope of delivery:

The transporters are supplied without connection cable.

Design data (CAD):

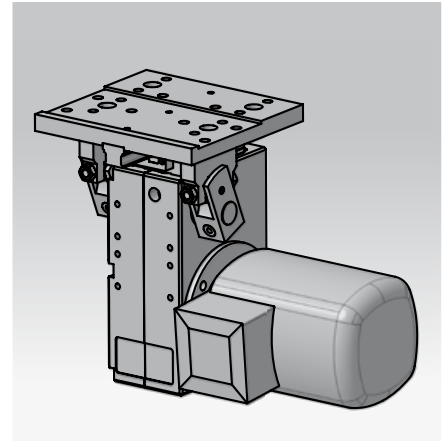
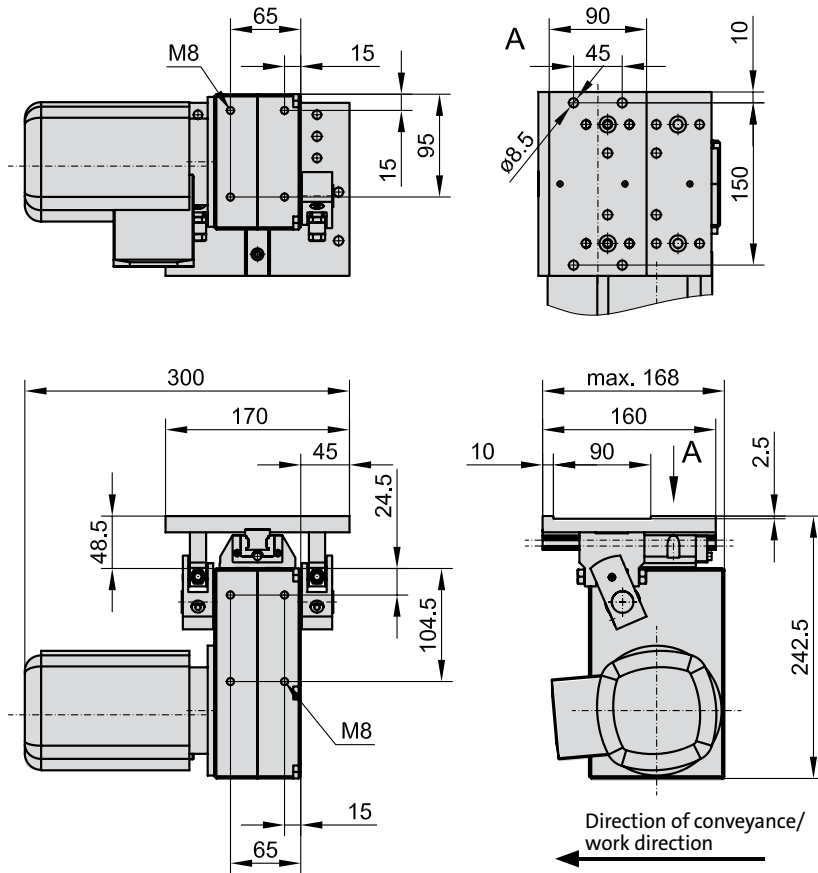
2D + 3D CAD data for various CAD systems as well as system-neutral interfaces are available on the internet at:

<http://fibro.partserver.de>



# Electro-mechanical transporter vertical gear position horizontal gear position

## 2299.001 vertical gear position

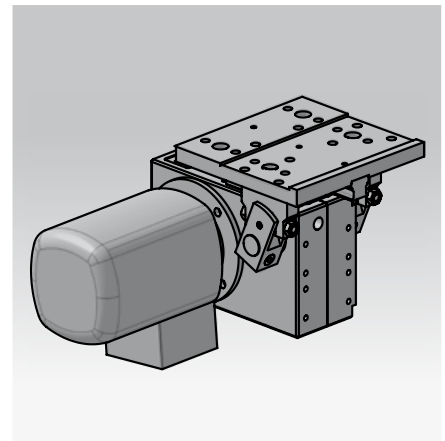
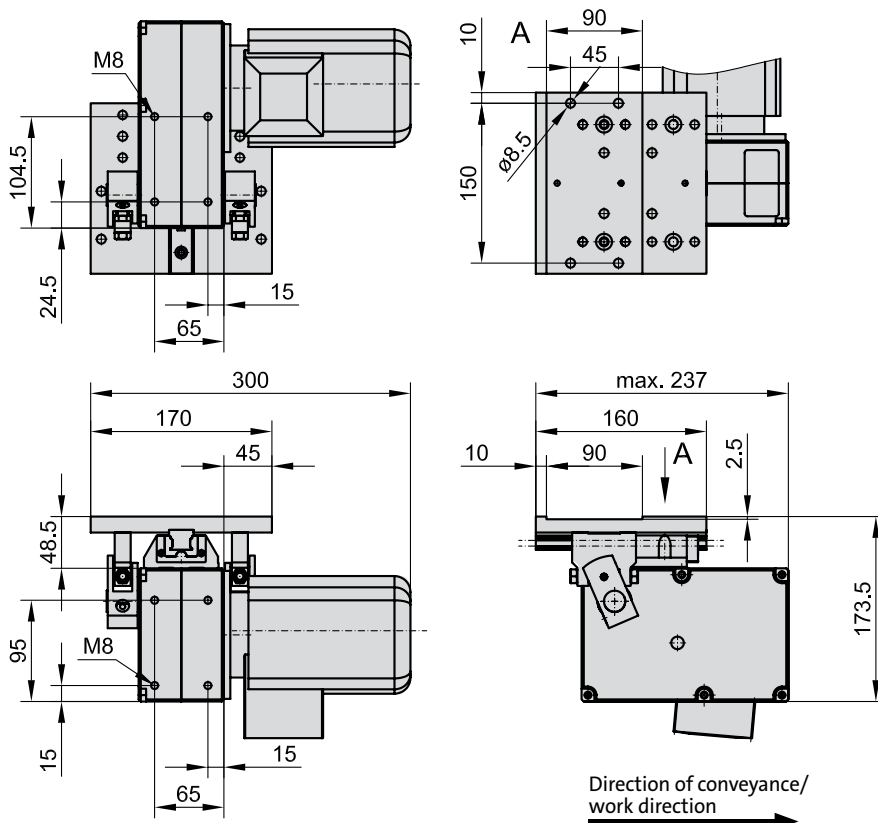


### Note:

The transporter can be attached at two levels.



## 2299.002 horizontal gear position

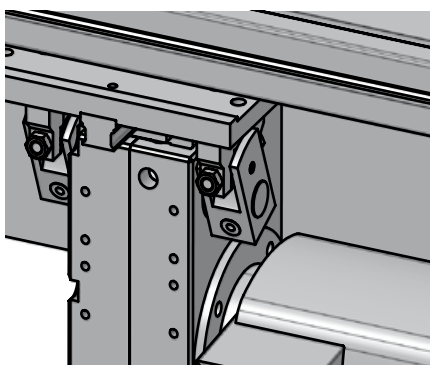
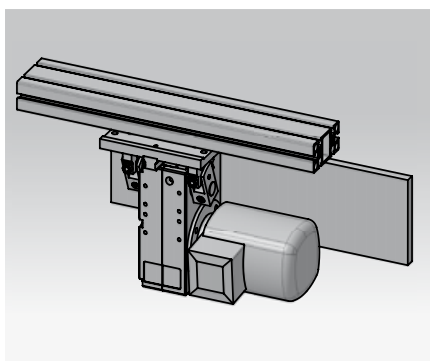


### Note:

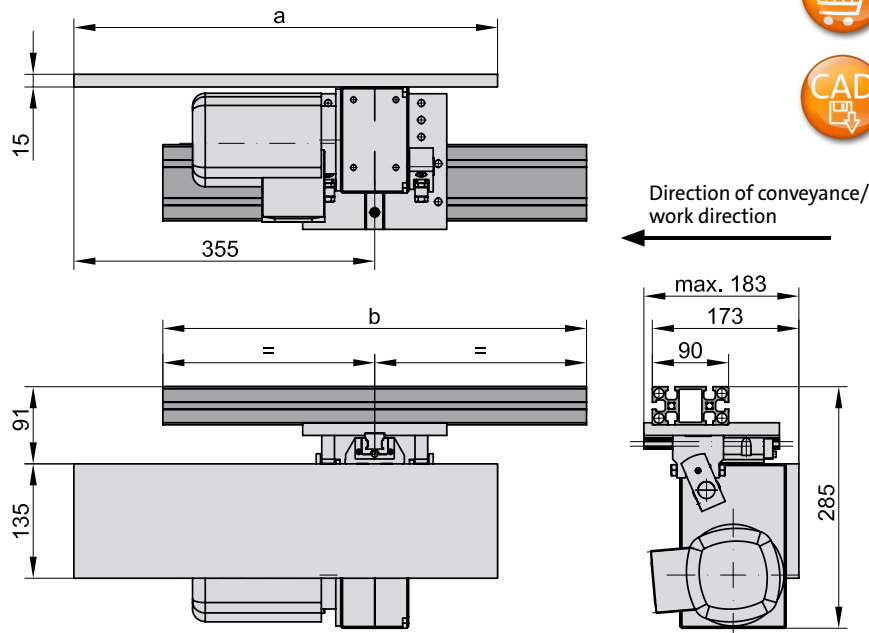
The transporter can be attached at two levels.



## Electro-mechanical transporters vertical gear position, with profile and support horizontal gear position, with profile and support



2299.011.

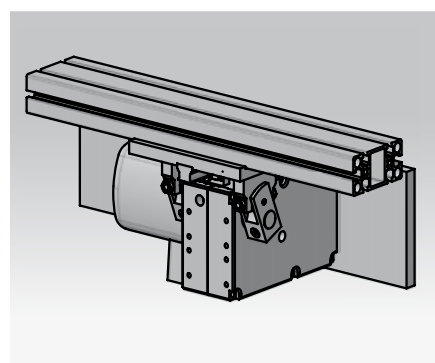


### Ordering example:

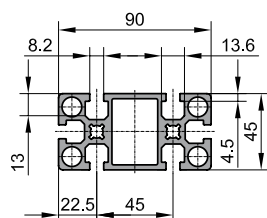
Transporter	= 2299.
Type 011	= 011.
b = 1100 mm	= 1100.
a = 500 mm	= 0500
Order No	= 2299.011.1100.0500

2299.011. vertical gear position, with profile and support

b 500 600 700 800 900 1000 1100 1200

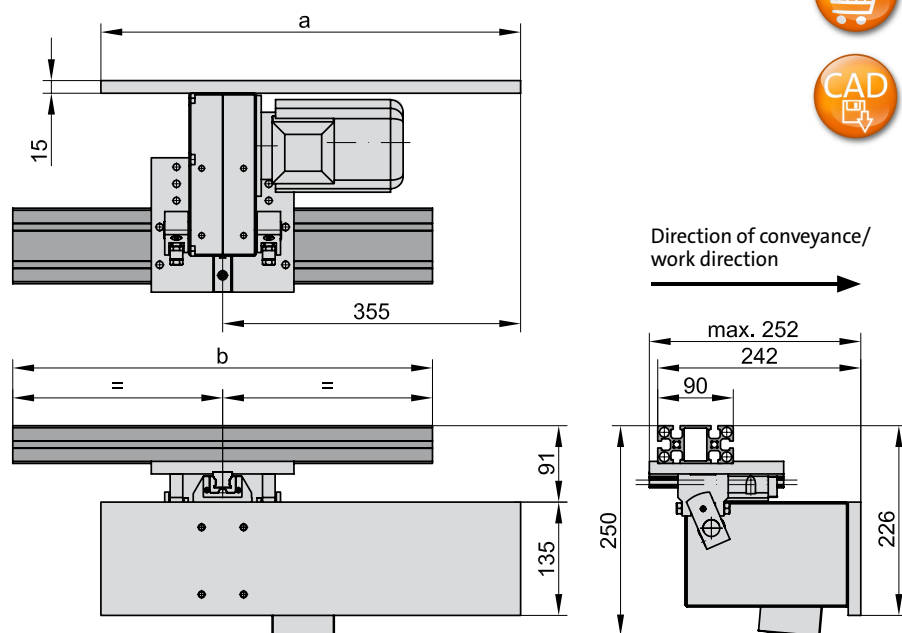


Profile cross-section



Suitable screw for T-slot  
2140.30.08.08.□□

2299.012.

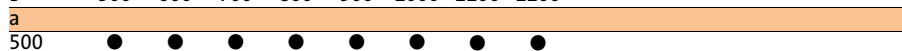


### Ordering example:

Transporter	= 2299.
Type 012	= 012.
b = 1100 mm	= 1100.
a = 500 mm	= 0500
Order No	= 2299.012.1100.0500

2299.012. horizontal gear position, with profile and support

b 500 600 700 800 900 1000 1100 1200

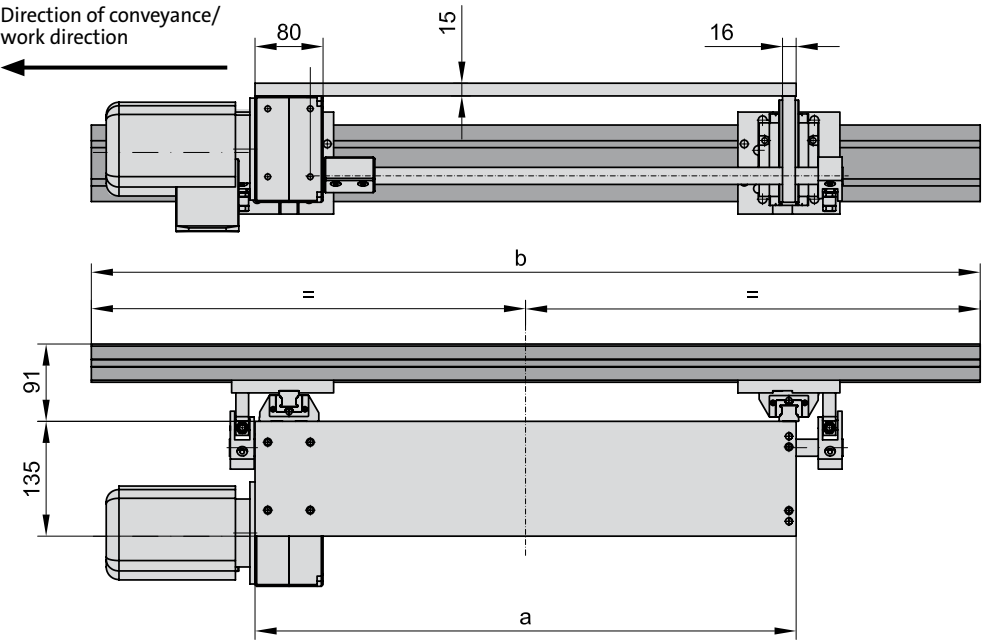


# Electro-mechanical transporters

## vertical gear position, two slides, with profile and support

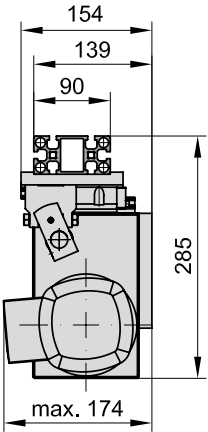
## horizontal gear position, two slides, with profile and support

2299.121.



Ordering example:

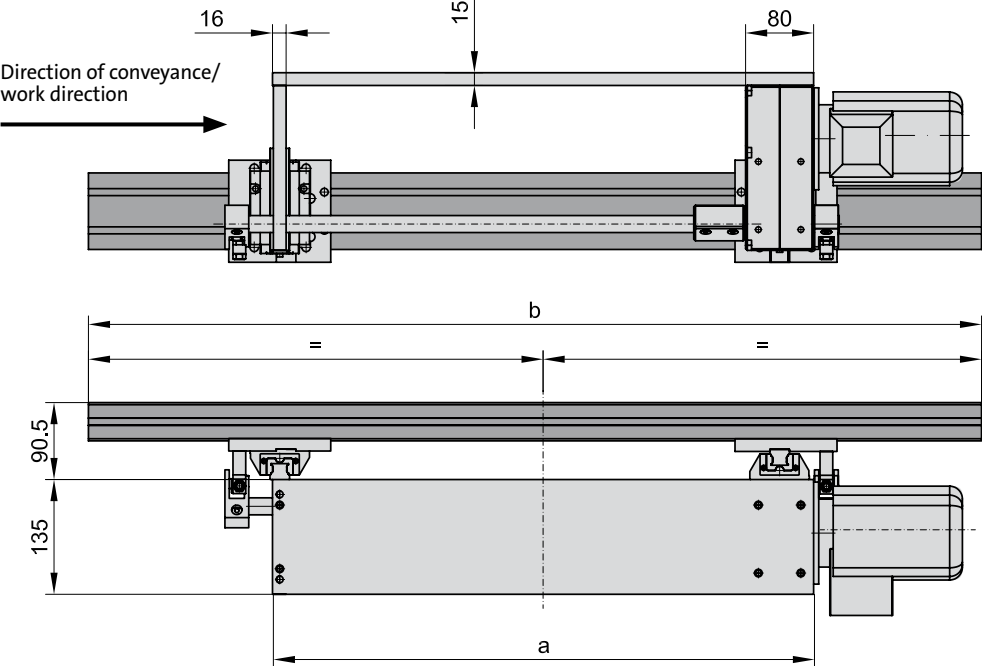
Transporter	= 2299.
Type 121	= 121.
b = 1400 mm	= 1400.
a = 900 mm	= 0900
Order No	= 2299.121.1400.0900



2299.121. vertical gear position, two slides, with profile and support

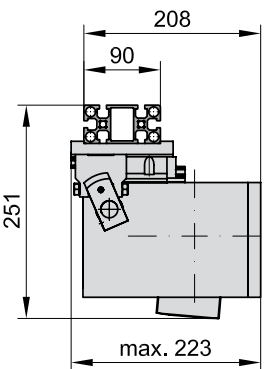
b	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
a	900	1200	1500															

2299.122.



Ordering example:

Transporter	= 2299.
Type 122	= 122.
b = 2200 mm	= 2200.
a = 1200 mm	= 1200
Order No	= 2299.122.2200.1200



2299.122. horizontal gear position, two slides, with profile and support

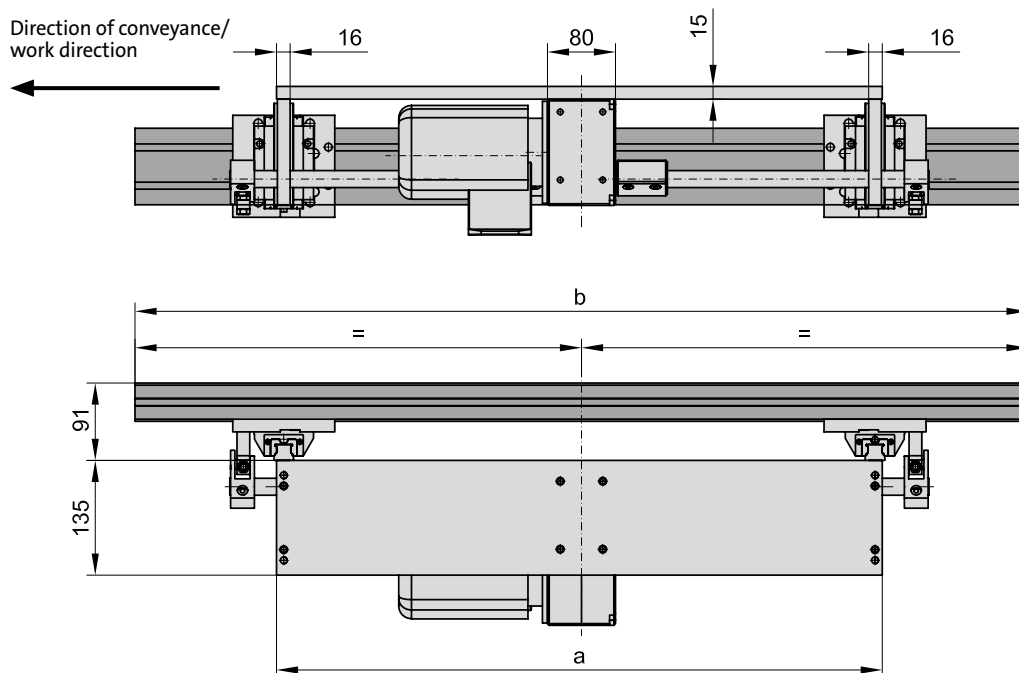
b	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
a	900	1200	1500															

# Electro-mechanical transporters

## vertical centre gear position, two slides, with profile and support

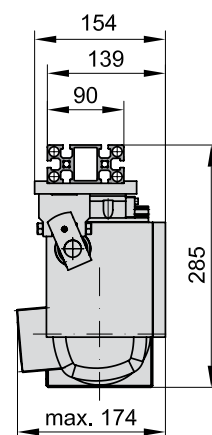
## horizontal centre gear position, two slides, with profile and support

2299.221.

Direction of conveyance/  
work direction

Ordering example:

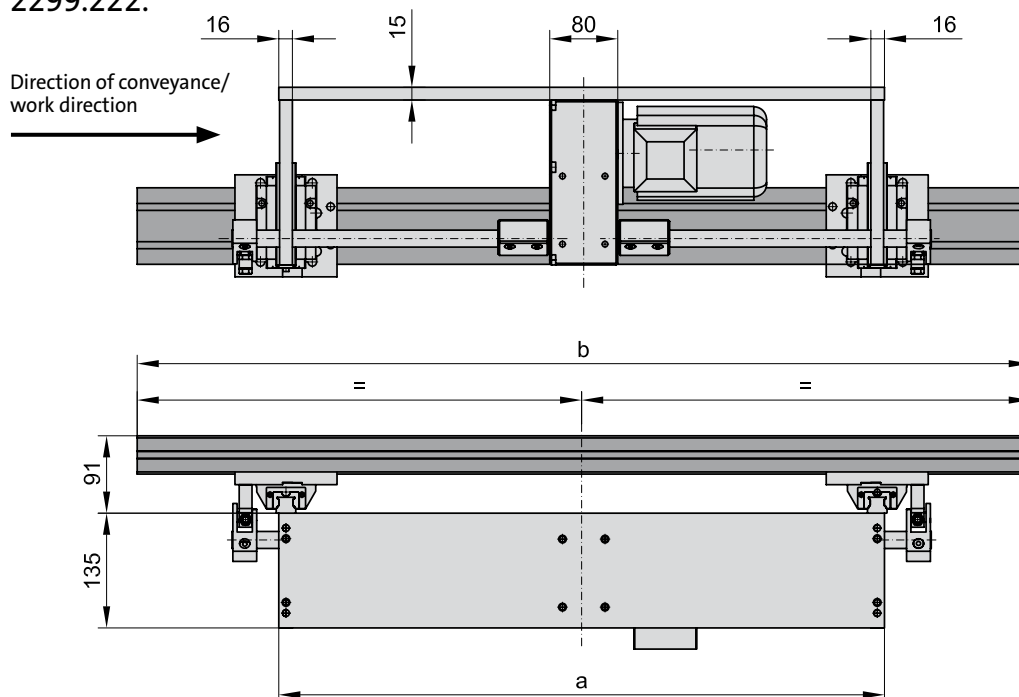
Transporter	= 2299.
Type 221	= 221.
b = 3400 mm	= 3400.
a = 1720 mm	= 1720
Order No	= 2299.221.3400.1720



2299.221. vertical centre gear position, two slides, with profile and support

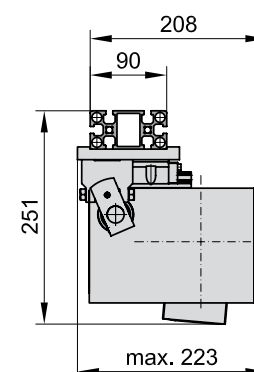
b	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000	4100	4200	4300	4400	4500	4600	4700	4800	4900	5000
a																				
1720	●	●	●	●	●	●														
2320							●	●	●	●	●	●	●							
2920														●	●	●	●	●	●	●

2299.222.

Direction of conveyance/  
work direction

Ordering example:

Transporter	= 2299.
Type 222	= 222.
b = 3400 mm	= 3400.
a = 1720 mm	= 1720
Order No	= 2299.222.3400.1720



2299.222. horizontal centre gear position, two slides, with profile and support

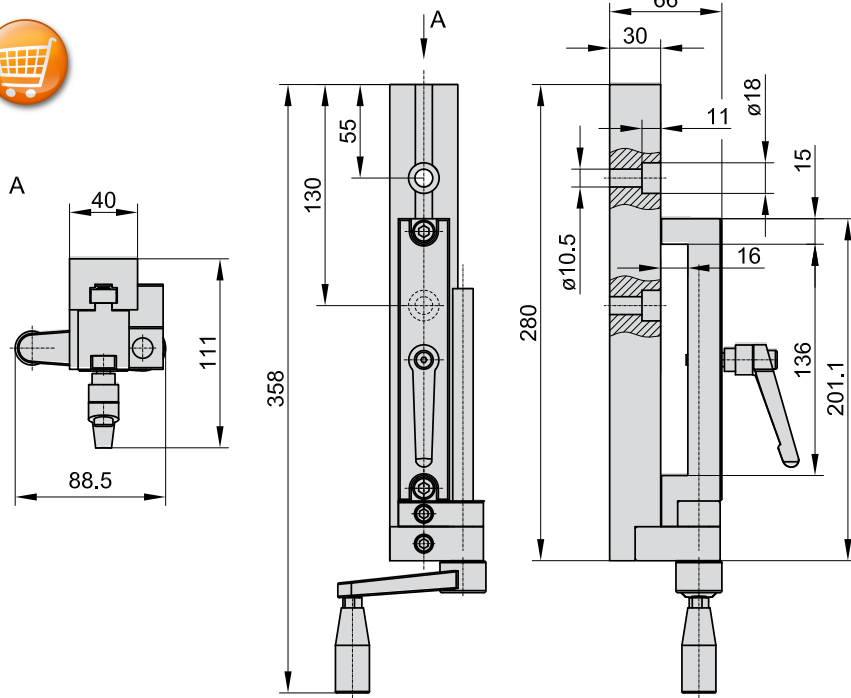
b	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000	4100	4200	4300	4400	4500	4600	4700	4800	4900	5000		
a																						
1720	●	●	●	●	●	●																
2320							●	●	●	●	●	●	●									
2920														●	●	●	●	●	●	●	●	●

# Electro-mechanical transporters

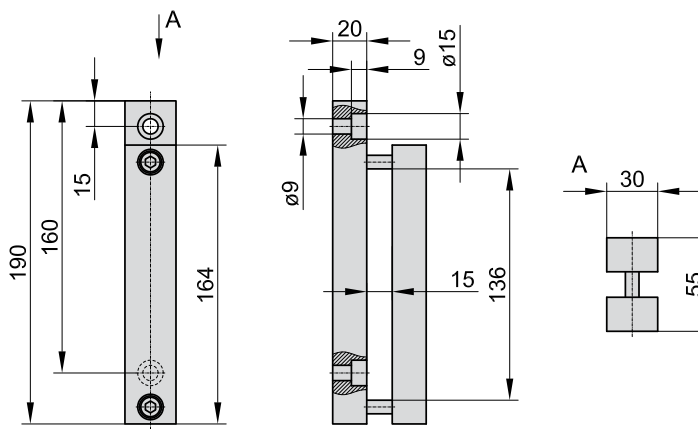
## Fastening element with height adjustment system

### Fastening element

#### 2299.510 Fastening element with height adjustment system



#### 2299.511 Fastening element



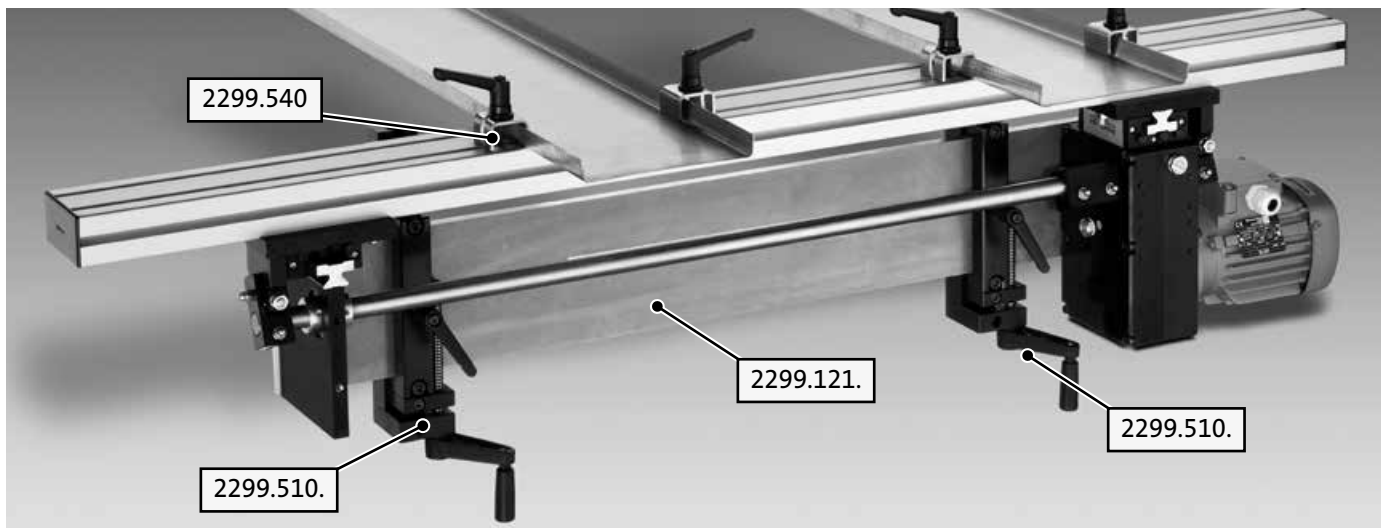
#### Note:

Fastening of the transporters  
2299.011./012./121./122./221./222.  
with or without height adjustment system.

2299.510 2x M10

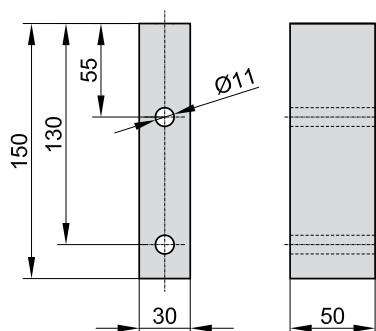
2299.511 2x M8

Fastening screws are not included in scope of delivery.

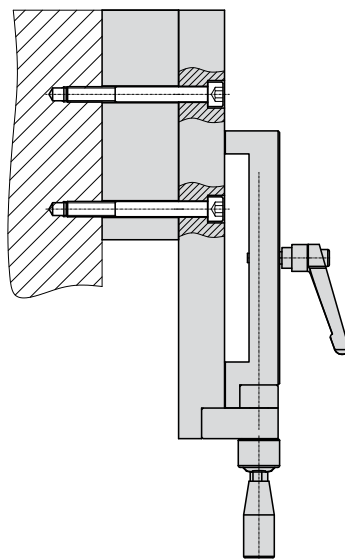


## Electro-mechanical transporters Distance Quick clamp for guiding system

2299.520 Distance



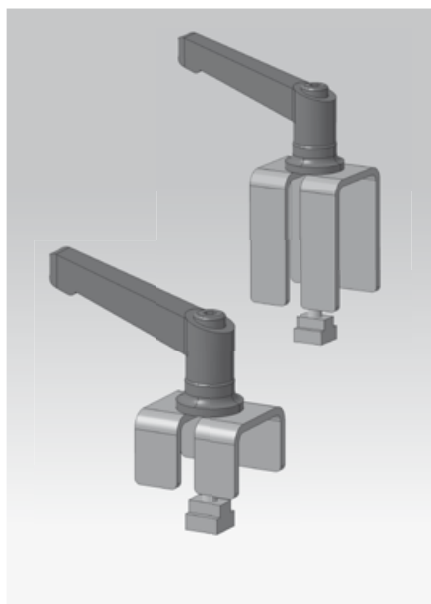
Application example



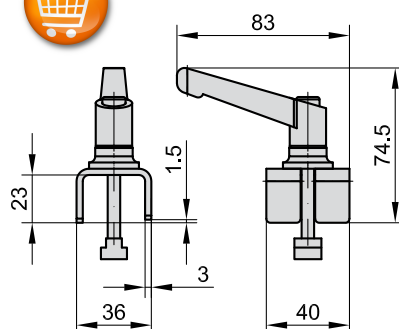
**Note:**

Distance for fastening element with height adjustment system 2299.510

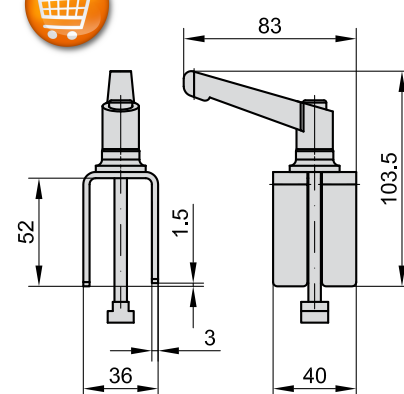
Fastening screws are not included in scope of delivery.



2299.540  
Quick clamp for guiding system  
low version



2299.541  
Quick clamp for guiding system  
high version



**Note:**

The guiding system tensioners fit the T-slots of the profile used for the transporters.

Max. side wall height of the guiding system ( $h_1$ ):

2299.540 = 23 mm

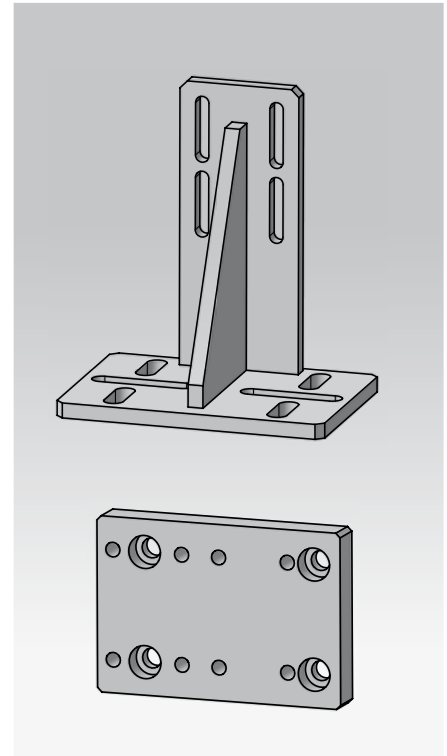
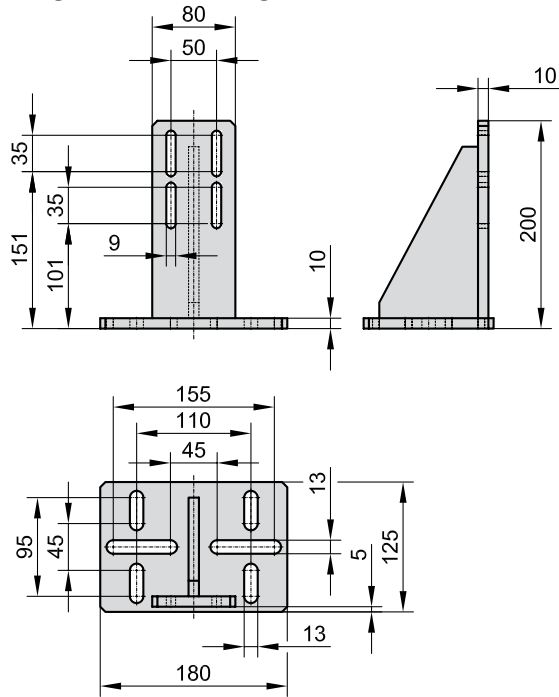
2299.541 = 52 mm



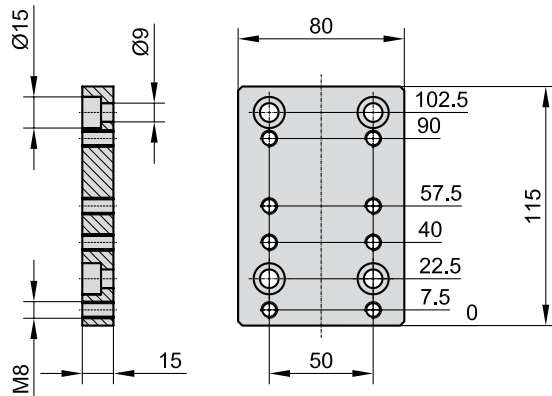
## Electro-mechanical transporters

### Angled mounting with adapter plate

2299.530 Angeled mounting



Adapter plate



Note:

The angled mounting and the adapter together allow individual mounting of the transporters 2299.001 and 2299.002.

Fastening screws are not included in scope of delivery.

