

TRANSPORTER ELECTRICAL BLACK LINE CLEAN LINE



MEMBER OF THE LÄPPLE GROUP

ELAPPLE

TRANSPORTER ELECTRICAL



2299.60.10100.00 Control unit BLACK LINE



2299.60.1□100. Transporter BLACK LINE

DESCRIPTION:

The electrically driven and patented transporter has been constructed to provide effective and affordable solutions to problems in parts transport, waste disposal as well as parts sorting. This system conveys punched and waste parts out of the tooling area with a rhythmic movement in a straight line.

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.

Low energy consumption, infinitely variable speed control, simple automation, low noise (60 dB) and the absence of compressed air ensure high economic efficiency whilst improving the working environment.

Its main areas of application are conveying and separating solid materials in metal processing and the automotive sector. The additional "CLEAN LINE" product range can also be used in the food and pharmaceutical industries.

The electric transporter is always operated with the corresponding 2299.6X. control unit. Integration with the PLC on the power press or production machine allows the programming of the transport time or shutdown of the press in the event of faults.



SIMPLE AUTOMATION:













Infeed

Separation

C

Organising

Positioning

Storage

Picking



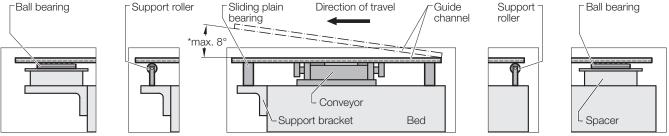
2299.61.1□100.12

Control unit CLEAN LINE

2299.61.1□100. Transporter CLEAN LINE

MOUNTING EXAMPLES:





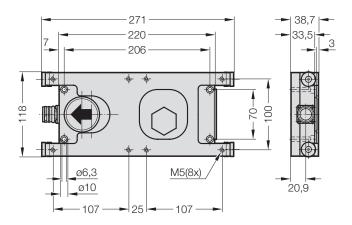
We recommend three options for supporting a long guide channel: 1) Ball bearings 2) Roller supports 3) Sliding plain bearings *A chute incline can reduce the conveyor speed by up to 50%.

TRANSPORTER ELECTRICAL **BLACK LINE, MINI**

2299.60.18100.



Compliant C C



Description:

The electric transporter simplifies automation, increases energy efficiency and reduces noise pollution. The speed can be adjusted mechanically and, depending on the task type, the transporter conveys, sorts or separates electrically. Used predominantly in metal processing and the automotive industry.

Material:

High-strength steel and anodised aluminium

Order example:

Order numbers for electric transporter BLACK LINE, MINI without connection cable (2299.60.82.0x.xx)

2299.60.18100.**00 without** Control unit, 230 V 2299.60.18100.**01 with** Control unit, 230 V

Max. transport weight (excl. channel)	10 kg
Max. channel weight	4 kg
Stroke length	20 mm
Conveying speed (mechanically adjustable)	4 - 8 m/min.
Warning system (motion sensor)	integrated
Start/stop	Controllable via PLC
Motor and overload protection	integrated
Noise emissions	60 dB (A)
Power consumption	0.05 kW
Electrical connection, control unit	M23
Protection type	IP62
Dimensions (LxBxH)	271 mm x 118 mm x 38 mm
Weight	2.65 kg
Temperature operating range (environment temperature)	-20 up to +100 °C

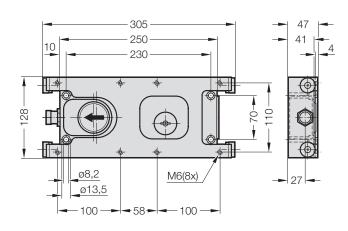
The connection cable, control unit transporter and optionally the signal cable, control unit press are to be ordered separately. For more information on the electrical connection, control unit and guide channel, see Accessories.

Socket head screws DIN EN ISO 4762 M6x40 (x 4) for fastening the transporter are included in delivery.

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TRANSPORTER ELECTRICAL BLACK LINE, COMPACT

2299.60.14100.





Description:

The electric transporter simplifies automation, increases energy efficiency and reduces noise pollution. The speed can be adjusted mechanically and, depending on the task type, the transporter conveys, sorts or separates electrically. Used predominantly in metal processing and the automotive industry.

Material:

High-strength steel and anodised aluminium

Order example:

Order numbers for electric transporter BLACK LINE, COMPACT without connection cable (2299.60.82.0x.xx)

2299.60.14100.**00 without** Control unit, 230 V 2299.60.14100.**01 with** Control unit, 230 V

Max. transport weight (excl. channel)	20 kg
Max. channel weight	8 kg
Stroke length	20 mm
Conveying speed (mechanically adjustable)	4 - 8 m/min.
Warning system (motion sensor)	integrated
Start/stop	Controllable via PLC
Motor and overload protection	integrated
Noise emissions	60 dB (A)
Power consumption	0.07 kW
Electrical connection, control unit	M23
Protection type	IP62
Dimensions (LxBxH)	305 mm x 128 mm x 47 mm
Weight	3.7 kg
Temperature operating range (environment temperature)	-20 up to +100 °C

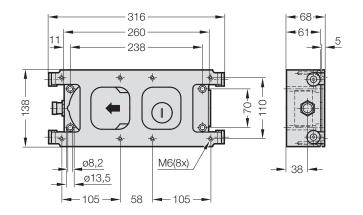
The connection cable, control unit transporter and optionally the signal cable, control unit press are to be ordered separately. For more information on the electrical connection, control unit and guide channel, see Accessories.

Socket head srews DIN EN ISO 4762 M8x50 (x 4) for fastening the transporter are included in delivery.

TRANSPORTER ELECTRICAL BLACK LINE, MAX

2299.60.12100.





Description:

The electric transporter simplifies automation, increases energy efficiency and reduces noise pollution. The speed can be adjusted mechanically and, depending on the task type, the transporter conveys, sorts or separates electrically. Used predominantly in metal processing and the automotive industry.

Material:

High-strength steel and anodised aluminium

Order example:

Order numbers for electric transporter, BLACK LINE, MAX without connection cable (2299.60.82.0x.xx)

2299.60.12100.00 without Control unit, 230 V 2299.60.12100.01 with Control unit, 230 V

Max. transport weight (excl. channel)	40 kg
Max. channel weight	16 kg
Stroke length	20 mm
Conveying speed (mechanically adjustable)	4 - 8 m/min.
Warning system (motion sensor)	integrated
Start/stop	Controllable via PLC
Motor and overload protection	integrated
Noise emissions	60 dB (A)
Power consumption	0.15 kW
Electrical connection, control unit	M23
Protection type	IP62
Dimensions (LxBxH)	316 mm x 138 mm x 68 mm
Weight	6.3 kg
Temperature operating range (environment temperature)	-20 up to +100 °C

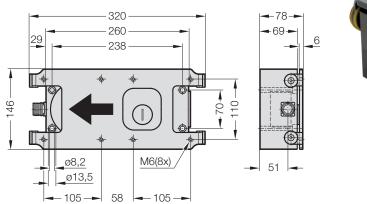
The connection cable, control unit transporter and optionally the signal cable, control unit press are to be ordered separately. For more information on the electrical connection, control unit and guide channel, see Accessories.

Socket head screws DIN EN ISO 4762 M8x70 (x 4) for fastening the transporter are included in delivery.

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TRANSPORTER ELECTRICAL BLACK LINE, ULTRA

2299.60.10100.





Description:

The electric transporter simplifies automation, increases energy efficiency and reduces noise pollution. The speed can be adjusted mechanically and, depending on the task type, the transporter conveys, sorts or separates electrically. Used predominantly in metal processing and the automotive industry.

Material:

High-strength steel and anodised aluminium

Order example:

Order numbers for electric transporter BLACK LINE, ULTRA

without connection cable (2299.60.82.0x.xx)

2299.60.10100.00 without Control unit, 230 V 2299.60.10100.02* with Control unit, 230 V *potential free output

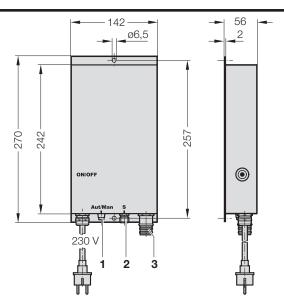
Max. transport weight (excl. channel)	100 kg
Max. channel weight	50 kg
Stroke length	20 mm
Conveying speed (mechanically adjustable)	4 - 8 m/min.
Warning system (motion sensor)	integrated
Start/stop	Controllable via PLC
Motor and overload protection	integrated
Noise emissions	60 dB (A)
Power consumption	0.25 kW
Electrical connection, control unit	M23
Protection type	IP62
Dimensions (LxBxH)	320 mm x 146 mm x 78 mm
Weight	9 kg
Temperature operating range (environment	-20 up to +100 °C
temperature)	·

The connection cable, control unit transporter and optionally the signal cable, control unit press are to be ordered separately. For more information on the electrical connection, control unit and guide channel, see Accessories.

Socket head screws DIN EN ISO 4762 M8x80 (x 4) for fastening the transporter are included in delivery.

TRANSPORTER ELECTRICAL – ACCESSORIES CONTROL UNIT BLACK LINE, SIGNAL CABLE, CONNECTION CABLE

2299.60.1□100.12/13 -CONTROL UNIT BLACK LINE



Order No	Connection	Power requirement
2299.60.10100.13*	230 V	1,8 - 3,5 A
2299.60.12100.12	230 V	1,2 - 2,2 A
2299.60.14100.12	230 V	0,75 - 1,7 A
2299.60.18100.12	230 V	0,55 - 1,3 A

1-phase 110-230 V, 50-60 Hz, earthed connection

*potential free output

Description:

The control unit is the electrical module for controlling the transporter.

Note:

The control unit must be mounted on a metal surface for heat dissipation. Before connecting the electric transporter, check that the channel can move freely in the direction of travel. Included in the delivery,

Mains connection incl. plugs for USA and GB Fixing bolts ISO 7380-1 M6 x 8 (x2)

Material:

Steel IP54

Technical specifications:

Temperature operating range: -20 to +40 °Celsius (environment temperature)



8	FIBRO

1 - Ch	angeover between PLC and manual operation
	PLC mode:
\square	In this position, this start/stop function is controlled via
	the straight signal cable (M12 plug).
	Manual mode:
	In this position, the start/stop function is controlled by

In this position, the start/stop function is controlled by the control unit.

2 - 2299.60.81.01. Signal cable straight, to the press

		,	
	order separately		
	Order No	I	[m]
	2299.60.81.01.03		3
	2299.60.81.01.05		5
	2299.60.81.01.10		10
1	For further information	see catalogue page for straight	signal

For further information, see catalogue page for straight signal cable

3 - 2299.60.82.01. Connection cable straight/straight, control unit - transporter

order separately

Order No	l [m]
2299.60.82.01.03	3
2299.60.82.01.05	5
2299.60.82.01.10	10
2299.60.82.01.15	15

2299.60.82.02. Connection cable straight/90°,

control unit - transporter

order separately

Order No	l [m]
2299.60.82.02.03	3
2299.60.82.02.05	5
2299.60.82.02.10	10
2299.60.82.02.15	15

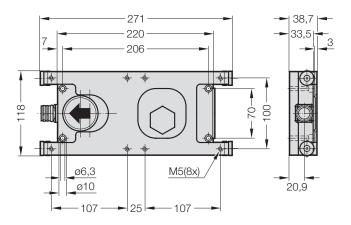
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TRANSPORTER ELECTRICAL CLEAN LINE, MINI

2299.61.18100.



INS Registered Science C C C



Description:

The electric transporter simplifies automation, increases energy efficiency and reduces noise pollution. The speed can be adjusted mechanically and, depending on the task type, the transporter conveys, sorts or separates electrically. Used predominantly in the food and pharmaceutical industries.

Material:

made from stainless steel and anodised aluminium

Order example:

Order numbers for electric transporter CLEAN LINE, MINI without connection cable (2299.60.82.0x.xx)

2299.61.18100.00 without Control unit, 230 V 2299.61.18100.01 with Control unit, 230 V

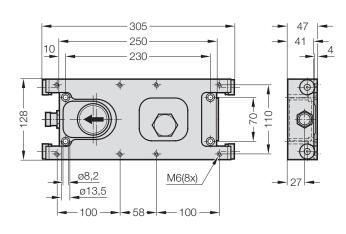
Max. transport weight (excl. channel)	10 kg
Max. channel weight	4 kg
Stroke length	20 mm
Conveying speed (mechanically adjustable)	4 - 8 m/min.
Warning system (motion sensor)	integrated
Start/stop	Controllable via PLC
Motor and overload protection	integrated
Noise emissions	60 dB (A)
Power consumption	0.05 kW
Electrical connection, control unit	M23
Protection type	IP66
Dimensions (LxBxH)	271 mm x 118 mm x 38 mm
Weight	2.65 kg
Temperature operating range (environment temperature)	-20 bis +100 °C

The connection cable, control unit transporter and optionally the signal cable, control unit press are to be ordered separately. For more information on the electrical connection, control unit and guide channel, see Accessories.

Socket head screws DIN ISO 4762 M6x40 (x 4) stainless steel A2 for fastening the transporter are included in delivery.

TRANSPORTER ELECTRICAL CLEAN LINE, COMPACT

2299.61.14100.







Description:

The electric transporter simplifies automation, increases energy efficiency and reduces noise pollution. The speed can be adjusted mechanically and, depending on the task type, the transporter conveys, sorts or separates electrically. Used predominantly in the food and pharmaceutical industries.

Material:

made from stainless steel and anodised aluminium

Order example:

Order numbers for electric transporter CLEAN LINE, COMPACT without connection cable (2299.60.82.0x.xx)

2299.61.14100.00 without Control unit, 230 V 2299.61.14100.01 with Control unit, 230 V

Max. transport weight (excl. channel)	20 kg
Max. channel weight	8 kg
Stroke length	20 mm
Conveying speed (mechanically adjustable)	4 - 8 m/min.
Warning system (motion sensor)	integrated
Start/stop	Controllable via PLC
Motor and overload protection	integrated
Noise emissions	60 dB (A)
Power consumption	0.07 kW
Electrical connection, control unit	M23
Protection type	IP66
Dimensions (LxBxH)	305 mm x 128 mm x 47 mm
Weight	3.7 kg
Temperature operating range (environment temperature)	-20 up to +100 °C

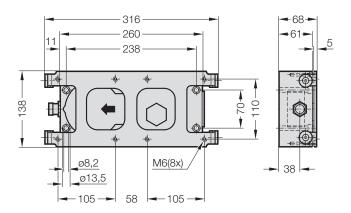
The connection cable, control unit transporter and optionally the signal cable, control unit press are to be ordered separately. For more information on the electrical connection, control unit and guide channel, see Accessories.

Socket head screws DIN ISO 4762 M8x50 (x 4) stainless steel A2 for fastening the transporter are included in delivery.

TRANSPORTER ELECTRICAL CLEAN LINE, MAX

2299.61.12100.





Description:

The electric transporter simplifies automation, increases energy efficiency and reduces noise pollution. The speed can be adjusted mechanically and, depending on the task type, the transporter conveys, sorts or separates electrically. Used predominantly in the food and pharmaceutical industries.

Material:

made from stainless steel and anodised aluminium

Order example:

Order numbers for electric transporter CLEAN LINE, MAX without connection cable (2299.60.82.0x.xx)

2299.61.12100.00 without Control unit, 230 V

2299.61.12100.01 with Control unit, 230 V

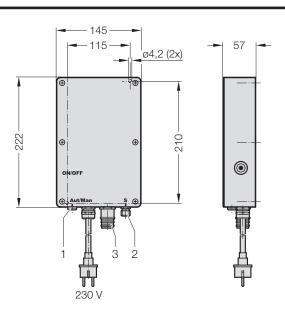
Max. transport weight (excl. channel)	40 kg	
Max. channel weight	16 kg	
Stroke length	20 mm	
Conveying speed (mechanically adjustable)	4 - 8 m/min.	
Warning system (motion sensor)	integrated	
Start/stop	Controllable via PLC	
Motor and overload protection	integrated	
Noise emissions	60 dB (A)	
Power consumption	0.15 kW	
Electrical connection, control unit	M23	
Protection type	IP66	
Dimensions (LxBxH)	316 mm x 138 mm x 68 mm	
Weight	6.3kg	
Temperature operating range (environment temperature)	-20 up to +100 °C	

The connection cable, control unit transporter and optionally the signal cable, control unit press are to be ordered separately. For more information on the electrical connection, control unit and guide channel, see Accessories.

Socket head screws DIN ISO 4762 M8x70 (x 4) stainless steel A2 for fastening the transporter are included in delivery.

TRANSPORTER ELECTRICAL – ACCESSORIES CONTROL UNIT CLEAN LINE, SIGNAL CABLE, CONNECTION CABLE

2299.61.1□100.12 - CONTROL UNIT CLEAN LINE



Order No	Connection	Power requirement
2299.61.12100.12	230 V	1,2 - 2,2 A
2299.61.14100.12	230 V	0,75 - 1,7 A
2299.61.18100.12	230 V	0,55 - 1,3 A

1-phase 110-230 V, 50-60 Hz, earthed connection

Description:

The control unit is the electrical module for controlling the transporter.

Note:

The control unit must be mounted on a metal surface for heat dissipation. Before connecting the electric transporter, check that the channel can move freely in the direction of travel. Included in the delivery,

Mains connection incl. plugs for USA and GB,

Fixing bolts DIN EN ISO 4762 M4 x 20 (x 2) stainless steel A2

Material:

Aluminium die casting IP67

Technical specifications:

Temperature operating range: -20 to +40 °Celsius (environment temperature)

1 - Changeover between PLC and manual operation

7 PLC mode:

In this position, this start/stop function is controlled via the straight signal cable (M12 plug).



In this position, the start/stop function is controlled by the control unit.

2 - 2299.60.81.01. Signal cable straight, to the press order separately

l [m]
3
5
10

For further information, see catalogue page for straight signal cable

3 - 2299.60.82.01. Connection cable straight/straight,

control unit - transporter order separately

Order No	l [m]
2299.60.82.01.03	3
2299.60.82.01.05	5
2299.60.82.01.10	10
2299.60.82.01.15	15

2299.60.82.02. Connection cable straight/90°, control unit - transporter

order separately

Order No	l [m]
2299.60.82.02.03	3
2299.60.82.02.05	5
2299.60.82.02.10	10
2299.60.82.02.15	15

TRANSPORTER ELECTRICAL – ACCESSORIES SIGNAL CABLE STRAIGHT, TO THE PRESS

Assignment:

2299.60.81.01.



Description:

The signal cable connects the control unit to the power press/production machine.

Order No	l [m]
2299.60.81.01.03	3
2299.60.81.01.05	5
2299.60.81.01.10	10

			2
1 (brown)	= Start/stop	Digital input 24 V DC	= Start
2 (white)	= Fault	Digital output 24 V DC	= Fault
3 (blue)	= 0 V DC	Together 0 V DC	= 0 V
4 (black)	= Control unit	Digital output 24 V DC	= OK

M12 - Plug 4-pin /

A-coded

	Output	
Conditions	Pin 2	Pin 4
Fault	24 V / (+) 24 V*	0 V
OK	0 V	24 V / (+) 24 V*
	Input	
Conditions	Pin 1	Pin 3
started	24 V / (+) 24 V*	- 0 V
stopped	0 V	- 0 V

* for control unit with potential-free output

TRANSPORTER ELECTRICAL – ACCESSORIES SEALING CAP

2299.60.82.04.1



Description:

Sealing cap for electric transporter - control unit connection

Material: Nickel-plated copper/zinc alloy

Material:

Sealing cap incl. M4x6 pan head bolt and connection chain IP67 in mounted position

2299.60.82.04.2



Description: Sealing cap for connection cable 2299.60.82.01./02.

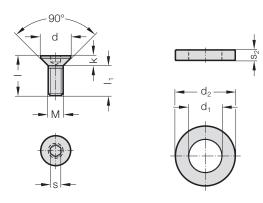
Material: Nickel-plated copper/zinc alloy

Note: Sealing cap incl. connection chain IP67 in mounted position

TRANSPORTER ELECTRICAL – ACCESSORIES CHANNEL FASTENING STANDARD CHANNEL FASTENING INCL. SLOT STONE

2299.69.10.1 . - Channel fastening standard





Description:

The standard channel fastening is a mounting kit for fastening the channel directly to the electric transporter. It consists of 4 flat head screws and 4 washers, self-adhesive.

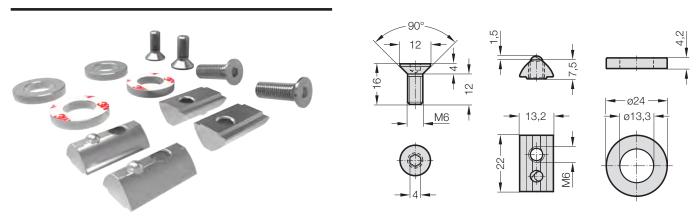
Order No	М	d	k	I	I_1	s	d ₁	d ₂	s ₂ for electric transporter
2299.69.10.10.05	M5	10	2.8	8	5.2	3	13.3	24	4.22299.60.18100.
2299.69.10.10.06	M6	12	3.3	10	6.7	4	13.3	24	4.22299.60.12100./14100.
2299.69.10.10.06.012	2 M6	12	3.3	12	8.7	4	13.3	24	4.22299.60.10100.
2299.69.10.11.05	M5	10	2.8	8	5.2	3	13.3	24	4.22299.61.18100.
2299.69.10.11.06	M6	12	3.3	10	6.7	4	13.3	24	4.22299.61.12100./14100.

Material:

2299.69.10.10. Steel, zinc-plated 2299.69.10.11. Stainless steel A2

Note:

Gutter fastening can be used for gutters with sheet thickness < 1.5 mm.



2299.69.10.20 - Channel fastening incl. slot stone

Description:

The channel fastening, incl. slot stone, is a mounting kit for fastening the channel on the profiled beam. It consists of four slot stones, four countersunk screws and four washers, self-adhesive, which allows continuous adjustment of the channel on the profiled beam after mounting.

Material: Steel, zinc-plated

Note: 2299.69.10.20 use only for electric transporter, BLACK LINE 2299.60.10100., 2299.60.12100. and 2299.60.14100.

TRANSPORTER ELECTRICAL – ACCESSORIES **MOUNTING TOOL**

2299.69.10.00.01.05 / 2299.69.10.00.01.06



Application example:



Description:

The mounting tool is used for chamfering the mounting holes in the channel.

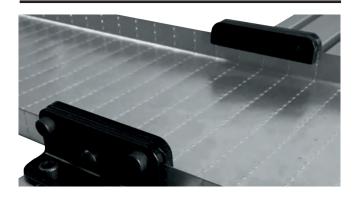
Note:

2299.69.10.00.01.05 use only for electric transporter BLACK LINE 2299.60.18100. CLEAN LINE 2299.61.18100.

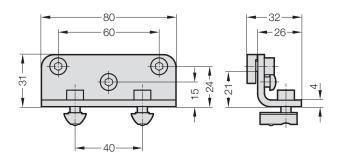
2299.69.10.00.01.06 use only for electric transporter BLACK LINE 2299.60.10100. BLACK LINE 2299.60.12100. CLEAN LINE 2299.61.12100. BLACK LINE 2299.60.14100. CLEAN LINE 2299.61.14100.

TRANSPORTER ELECTRICAL – ACCESSORIES CHANNEL FASTENING TOPMOUNT CHANNEL FASTENING UNDERMOUNT

2299.69.10.30 - CHANNEL FASTENING TOPMOUNT



2299.69.10.30



Description:

The topmount channel fastening, with its simple clamping principle, allows flexible mounting of the channel (without additional processing) on the top of the 2299.69.20.80 profiled beam.

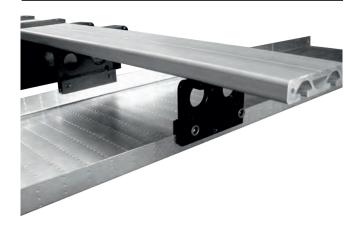
Material:

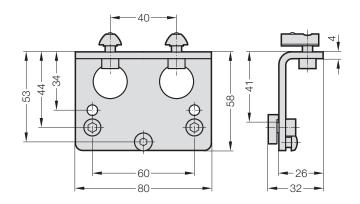
High-strength steel, black zinc-plated Weight: 0.4 kg (per pair)

Note:

Included in the scope of delivery are the topmount channel fixings, in pairs, socket head screws and slot stones. Construction height above beam: 30 mm

2299.69.10.40 – CHANNEL FASTENING UNDERMOUNT





Material:

High-strength steel, black zinc-plated Weight: 0.6 kg (per pair)

Note:

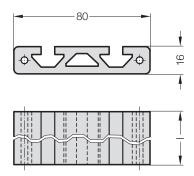
Included in the scope of delivery are the undermount channel fastenings, in pairs, socket head screws and slot stones. Construction height below beam: 58.5 mm

Description:

The undermount channel fastening, with its simple clamping principle, allows flexible mounting of the channel (without additional processing) underneath the 2299.69.20.80 profiled beam, as well as mounting of the electric transporter at the same construction height.

TRANSPORTER ELECTRICAL – ACCESSORIES **PROFILED BEAM RETAINER BAR**

2299.69.20.80. - PROFILED BEAM



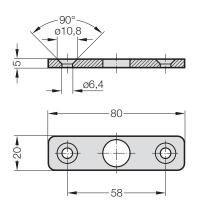
Description:

Flexible set-up of multiple channel sections is possible using the profiled beam.

Material:

Aluminium, anodised (corrosion-resistant) Weight: 2.2 kg/m

2299.69.20.01.06 - RETAINER BAR



Description:

The retainer bar is used to fasten the 2299.69.20.80 profiled bar to the electric transporter.

Material:

High-strength steel, black zinc-plated Weight: 0.16 kg/per pair



Order No	l [mm]	
2299.69.20.80.1000	1000	
2299.69.20.80.2000	2000	

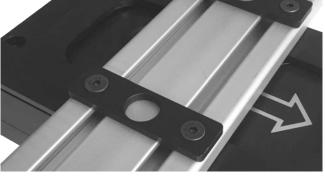
Note:

Only use for transporter,

BLACK LINE 2299.60.10100./12100./14100.

Profiled shape SP3100N profile 8 16 x 80

For fastening the profiled bar onto the electric transporter, the 2299.69.20.02.06 flat head screw (M6x20) or the 2299.69.20.01.06 retainer strip must be ordered separately.



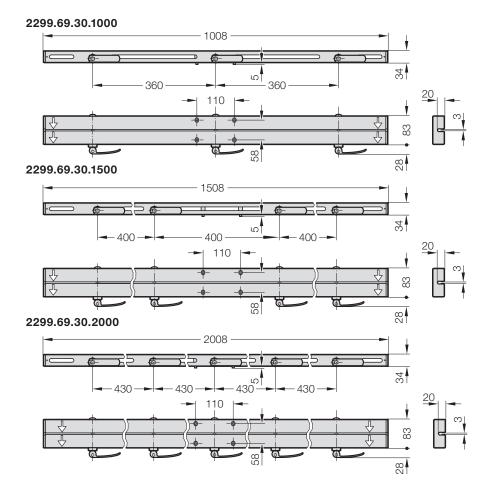
Note:

Included in the scope of delivery are two retainer bars with 4 x flat head screws ISO 10642 - 8.8 M6x20. Only use for transporter, electric BLACK LINE 2299.60.10100./12100./14100.

TRANSPORTER ELECTRICAL – ACCESSORIES CLAMPING BAR

2299.69.30.





Description:

The clamping bar is used for rapid changeover between multiple transport channels.

The mechanical clamping lever securely clamps the channel to the 2299.69.30.00.01.1230 angled profile in the slot without tools.

Material:

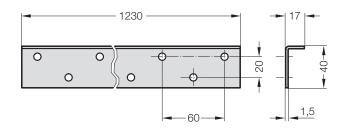
High-strength steel (laser-cut), Black zinc-plated

		weight [kg]
Order No	for electric transporter	Clamping bar
2299.69.30.1000	2299.60.10100.00/	2.5
	2299.60.12100.00	
2299.69.30.1500	2299.60.10100.00/	4.5
	2299.60.12100.00	
2299.69.30.2000	2299.60.10100.00/	6.5
	2299.60.12100.00	

Woight [kg]

TRANSPORTER ELECTRICAL – ACCESSORIES ANGLED SECTION FOR CLAMPING BAR

2299.69.30.00.01.1230





Description:

Angled section for welded connection underneath the channel when using the clamping bar.

Material:

High-strength steel

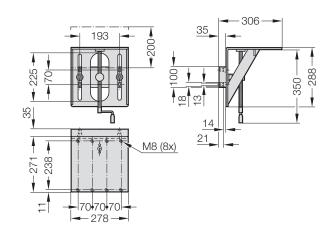
Note:

Dimensions: 1230 mm x 17 mm x 40 mm Weight: 0.7 Kg Only use for 2299.60.10100./2299.60.12100. Electric transporter, BLACK LINE, ULTRA/MAX

TRANSPORTER ELECTRICAL – ACCESSORIES HEIGHT-ADJUSTABLE MOUNTING BRACKET

2299.69.40





Description:

The height-adjustable mounting bracket is attached to the power press/production machine using four bolts. The mounting bracket has three pre-defined mounting options on the top (left, centre and right) for the transporter.

Material:

Steel, black zinc-plated

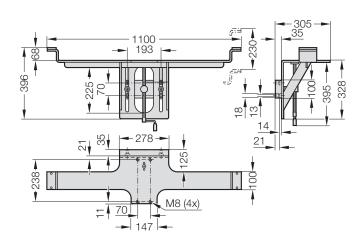
Max. load	100 kg
Height adjustment of the angled	200 mm
support	
(with ball bearing-mounted crank)	
Weight	18,2 kg

Note:

Only use for 2299.60.10100./2299.60.12100. Electric transporter, BLACK LINE, ULTRA/MAX Included in the delivery scope: socket head screws DIN EN ISO 4762 4x M12x50 -12.9.

TRANSPORTER ELECTRICAL – ACCESSORIES HEIGHT-ADJUSTABLE MOUNTING BRACKET, FOR BEAM MOUNTING

2299.69.41





Description:

The height-adjustable mounting bracket is attached to the power press/production machine using four bolts. The lateral outriggers prevent the profiled beam from bending with a larger span.

Material:

Steel, black zinc-plated

Max. load	100 kg
Max. length of aluminium bar	3000 mm
Max. length of clamping bar	2000 mm
Height adjustment of the angled	230 mm
support	
(with ball bearing-mounted crank)	
Weight	28.5 kg

Note:

Only use for 2299.60.10100./12100. Electric transporter, BLACK LINE, ULTRA/MAX Replacement slide element: 2299.69.41.00.01 Included in the delivery scope: socket head screws DIN EN ISO 4762 4x M12x50 -12.9.

WE LOVE TECHNOLOGY

Further information at

www.fibro.de/en/electrictransporterblacklinecleanline/



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