ELE

WORLD OF SENSORIC

Edges for Switching and Safety Applications

BIRCHER REGLOMAT

Edges for Switching and Safety Applications

ELE

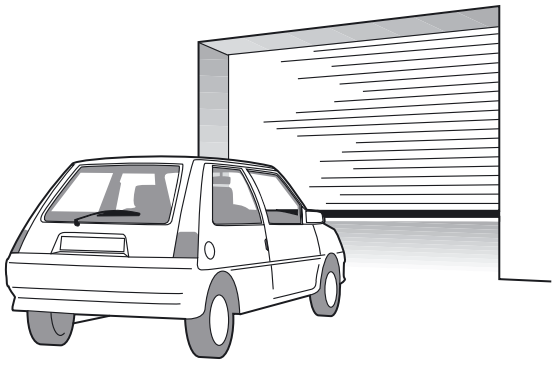
- Customer-configurable
- Direct Switching
- Large choice of Profiles

Safety Edges

Safety Edges consist of a contact strip and a Sensor profile. The contact strips are customer-configurable.
The assembled contact strip reacts to a minimum pressure and transmits a signal to the switching unit. The system operates according to the quiescent-current principle.

Function

Two contact elements are spaced at a defined distance from each other and are equipped with a 8.2 kOhm resistance.
- The space is closed by force of pressure on the upper contact element
- Both contact surfaces make connection
- The resistance falls below the defined value of 8.2 kOhm
- The switching unit evaluates the contact

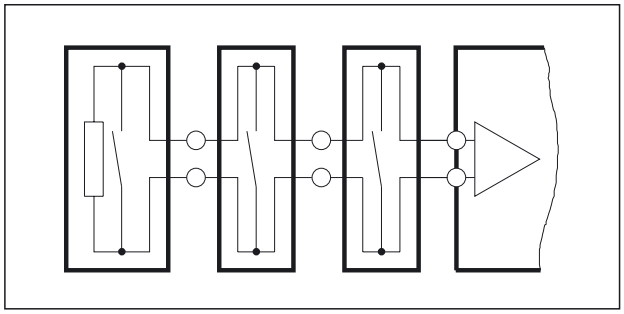


Application Example: Safety Edge and Switching Unit

Connection Possibilities / Wiring

The following is to be observed when wiring and connecting Safety Edges:

- The maximum length of the Safety Edge and connecting cable must not exceed 50 metres
- Multiple Sensors are to be connected in series
- The total resistance must not exceed 8.2 kOhm
- This allows monitoring using the quiescent-current principle
- Direct switching contact strips are not suitable for safety applications



Example: Safety application

Customer-configurable Contact Strips

The contacts strips, which are inserted into the Sensor profile, can be configured on site by the customer.
For the sensor system is needed the contact strip ENT-20, rubber profile EPE (next pages) and accessories like end pieces ENEH and sealing compounds (look order information).

Operating Pressures

The standard operating pressures and overrun travel are measured with various test pieces according to the application. If you require exact information concerning specific profiles, this is available on request.

Chemical Resistance

Index of resistance levels

A = absolute resistance
B = sufficient resistance
C = conditional resistance
D = not resistant

Resistance against	NBR	EPDM
Exhaust gas	C	A
Sewage	B	A
Acetalhedhyd	D	B
Acetone (Dimethyicetone Propanone)	D	A
Magnesiumsuirat	B	A
Corn oil	A	
Maleinsäureanhydrid	C	
Manganese sulfate	A	A
Methane gas	B	C
Methyläthylkaton	D	B
Metholated spirits	B	A
Metholated chloride	D	B
Methylenchlorid	C	
Methylisobutylketon	D	
Methylmethaoxylat	D	C
Methylphthalat	C	A
Methylpyrolidon	D	
Methylsalicylat	D	
Milk	A	B
Milk acid, cold	B	B
Milk acid, hot	B	
Mineral oils	A	C
Mono-brom-benzol	D	
Mono-chlor-benzol	D	D
Motor oils	A	C
Myristylalkohol	A	A
Iaphatha (Waschbenzin)	A	D
Iaphahatin (Steinöl)	D	D

NBR = Butatien Acrylnitril (Perbunan N)
EPM/EPDM = Athylene Propylene

Order Information

e. g. **ENT-20 / 1 / 2300 / 2**

Contakt Strip Complete

1 = One cable connection, one termination resistor
2 = One cable connection at both ends, without termination resistor
3 = One cable connection, one end piece, direct switching

Length of switching strip in mm

Cable length in whole metres

e. g. **ELE 025 / 029A0C0 1 / 2490 / 2**

Contact Edge Complete

Material EPDM

Width of profile in mm

High of profile in mm (without rail)

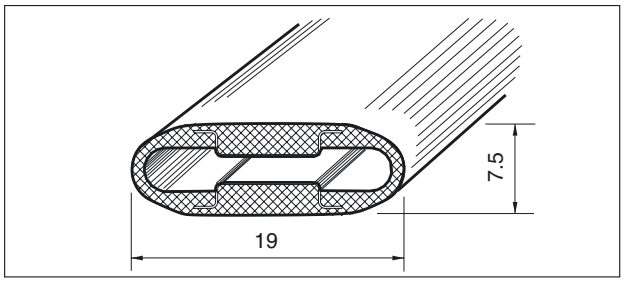
1 = One cable connection, one termination resistor, with aluminium rail
2 = One cable connection at both ends, without termination resistor, with aluminium rail
3 = One cable connection, one end piece, with aluminium rail
4 = One cable connection, one termination resistor
5 = One cable connection at both ends, without termination resistor
6 = One cable connection, one end piece

Length of contact edge in mm

Cable length in whole metres

Additional models are available on request.

Switching Strip



Technical Data

Contact Strip ENT 20

Temperature Range	–25°C to +60°C in operation –25°C to +60°C in storage
Contact Material	Special brass
Switching Capacity	1A/42VACDC
Transit Resistance	0.5 Ohm/m
Actuating Force	10 N measured with 20 mm test piece
Actuating Distance	1 mm
Smallest Possible Radius (longitudinal axis)	125 mm
Smallest Possible Radius (transverse axis)	150 mm
Reaction Time	with ESR-devices <70 ms
Operating Life	Measured at the same position with Ø 80 mm test piece >100'000 switching cycles
Connecting Cable	Twin-cover cable, PVC, 2 x 0.34 mm², Type DM
Insulating Strength	1500 VAC
Bending Angle	Max. 12°

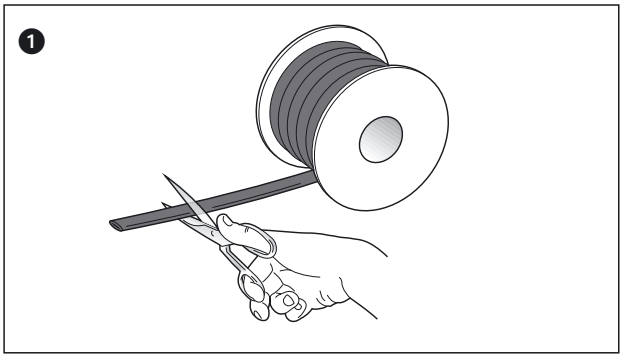
Order Information

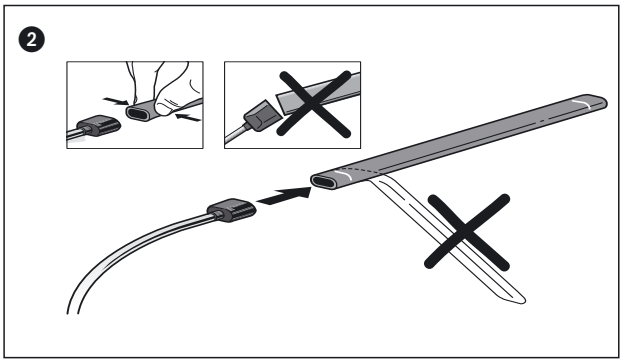
Loose material for customer configuration

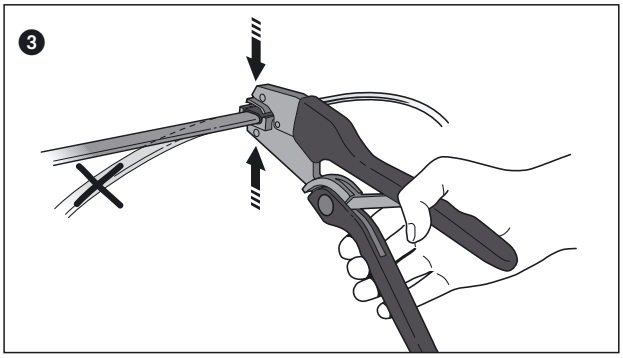
Code	Description	Package Unit (Minimum Order Quantity)
ENT-20/25	Contact Strip	Roll, 25 m
ENT-20/50	Contact Strip	Roll, 50 m
ENT-20/100	Contact Strip	Roll, 100 m
ENEH-8	End Piece 8.2 kOhm	Bag, with 10 pcs
ENEH-0	End Piece without termination resistor	Bag, with 10 pcs
ENEH-K05	End Piece with 0.5 m twin-cover cable	Bag, with 10 pcs
ENEH-K2	End Piece with 2 m twin-cover cable	Bag, with 10 pcs
ENA	End Piece for rubber profile	Roll, 10 m
ES-KLEBER	Contact Adhesive for ENA	Tube, 20 g
ES-PRESS	Pliers for end pieces	Carton of 1 pc
ES-BD	Sealing compound	Carton of 80 pcs, 10 cm each (sufficient for 40 profiles)
EN-DS	Sealing plug for the profile side without cable	Bag of 10 pcs
EN-DL	Sealing plug with hole for profile side with cable	Bag of 10 pcs

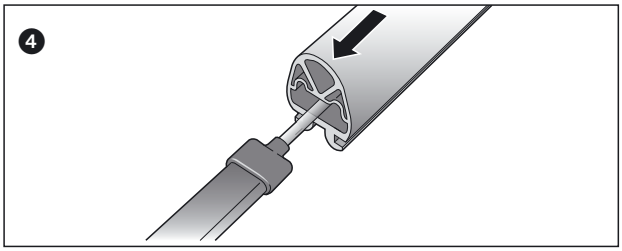
End pieces with other resistances or other cable length on request.

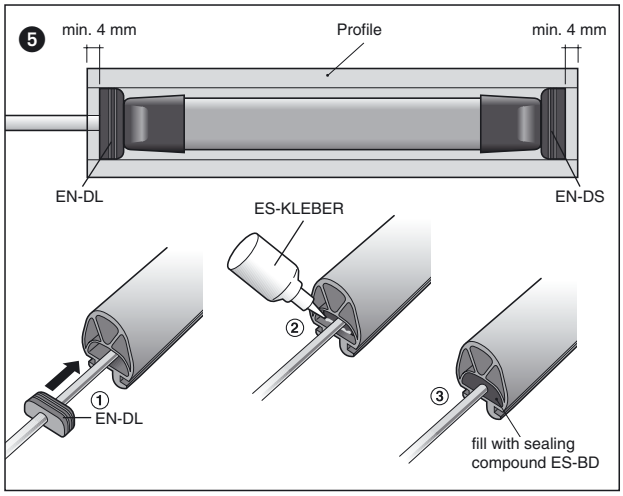
Customer-configurable Switching Strip (short overview)

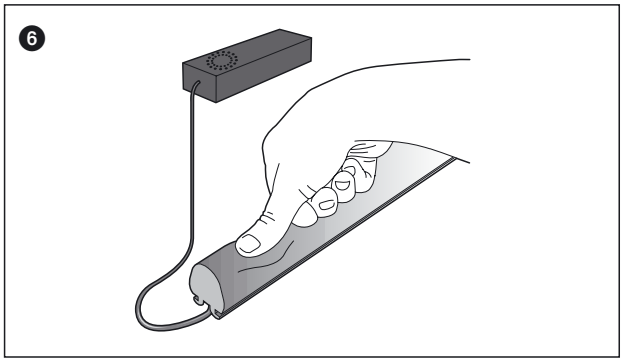








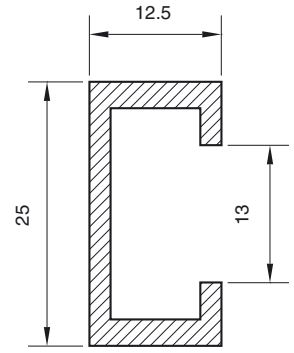




The contacts strips, which are inserted into the Sensor profile, can be configured on site by the customer.

The detailed assembly and operating instructions are described in the Assembly and Operating Manuals supplied with the product.

Profile Selection



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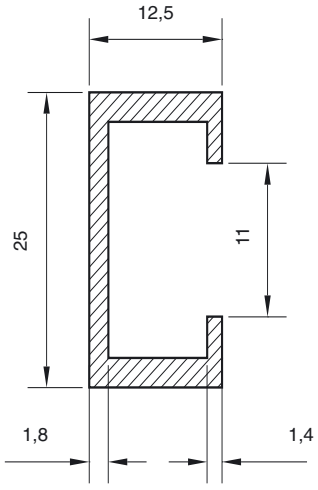

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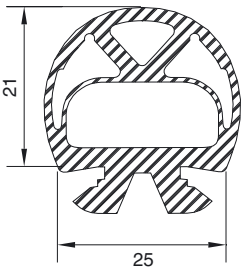

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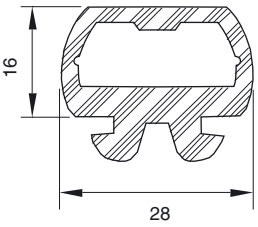

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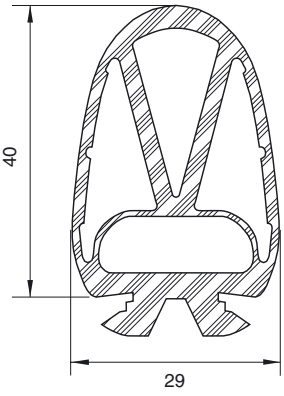

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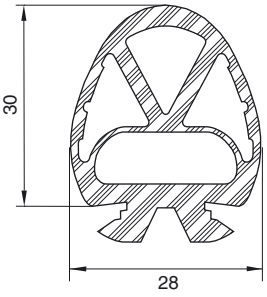

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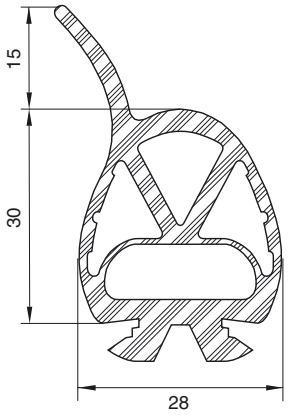

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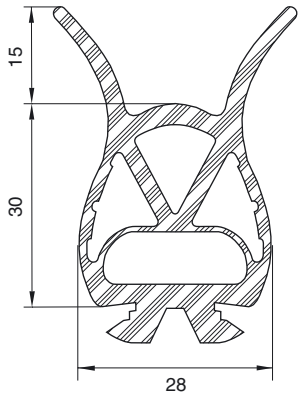

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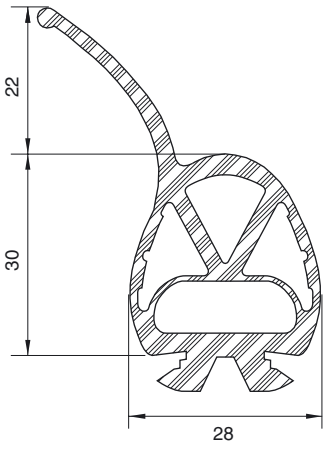

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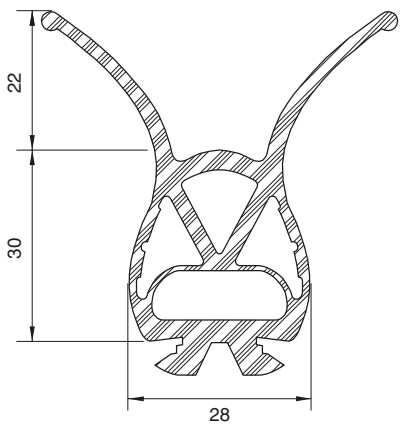

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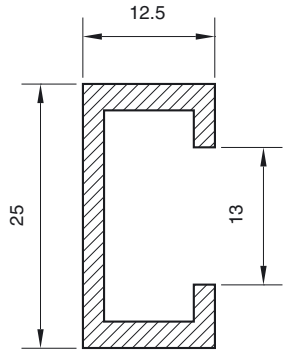

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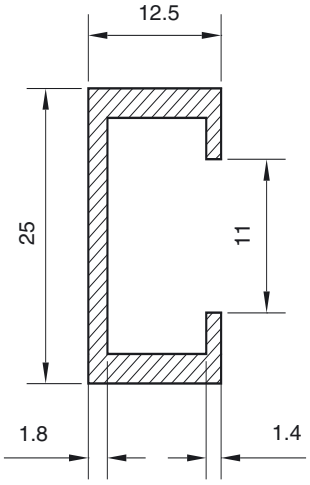

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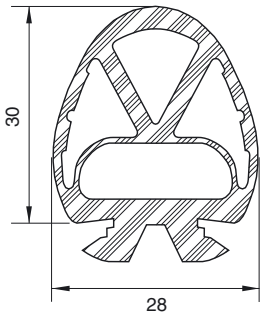

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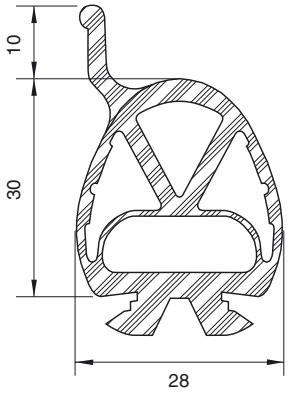

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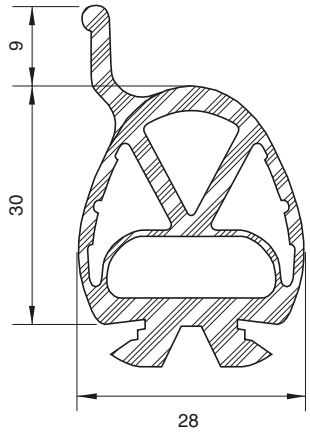

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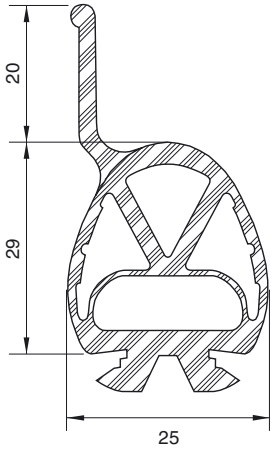

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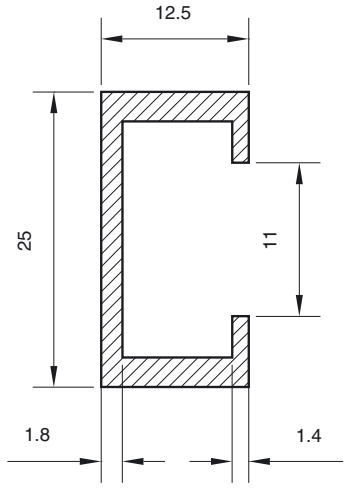

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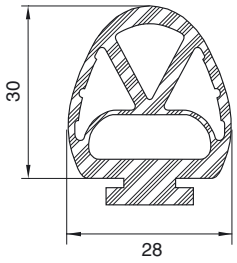

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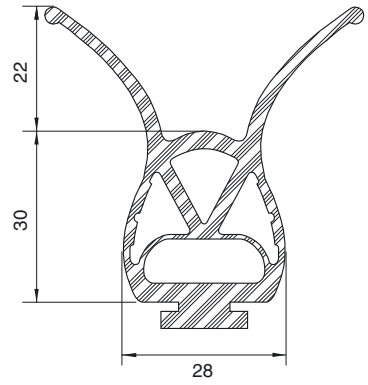

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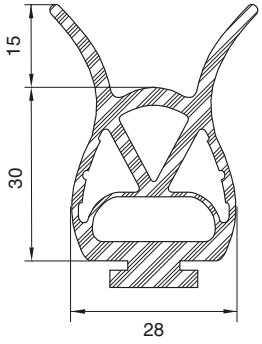

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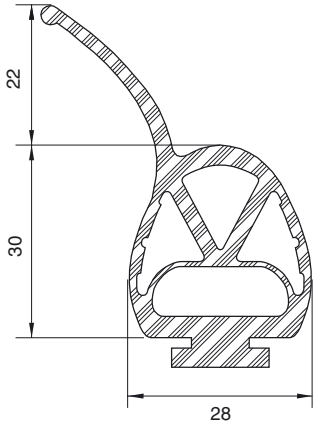

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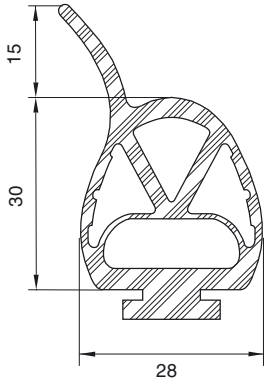

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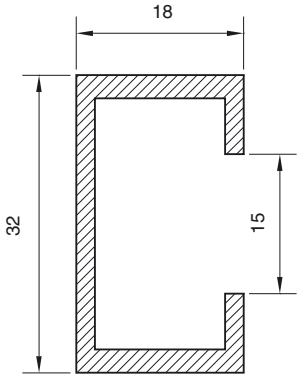

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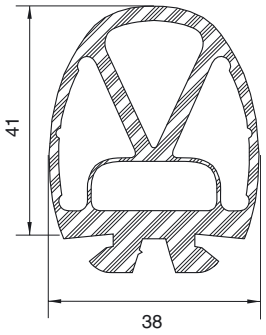

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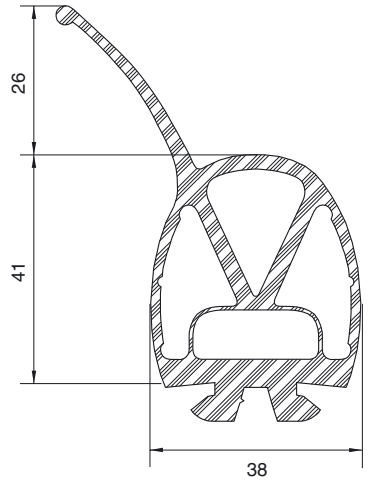

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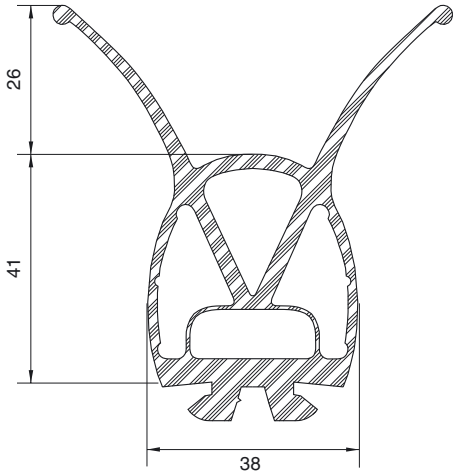

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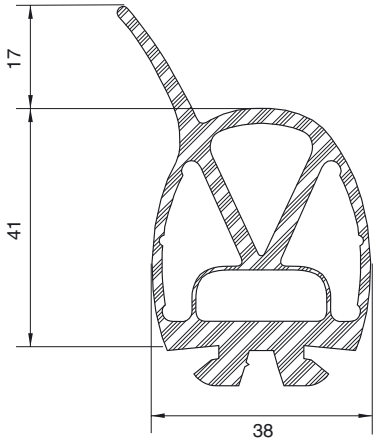

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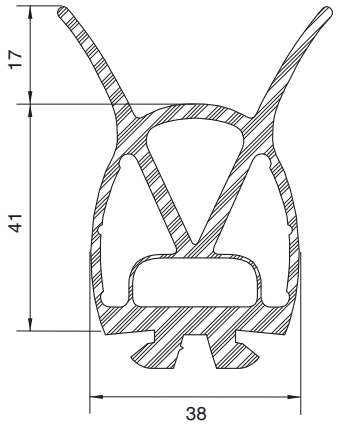

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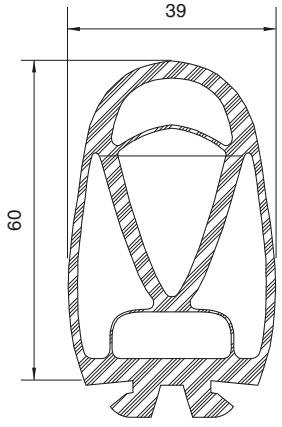

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Bircher Reglomat AG, Wiesengasse 20, CH-8222 Beringen, Switzerland, Phone +41 (0)52 687 11 11, Fax +41 (0)52 687 11 12

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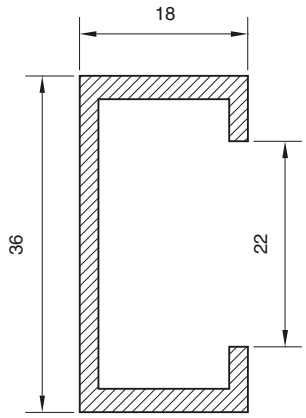
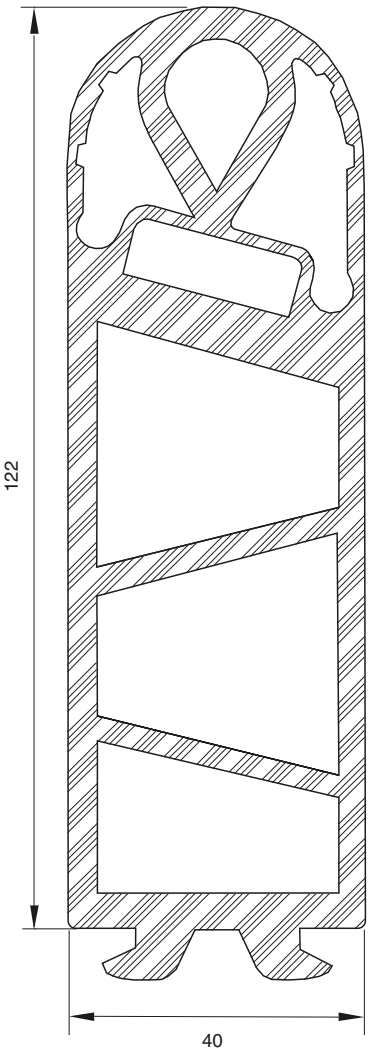


AP-1



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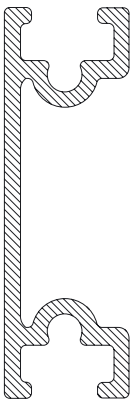

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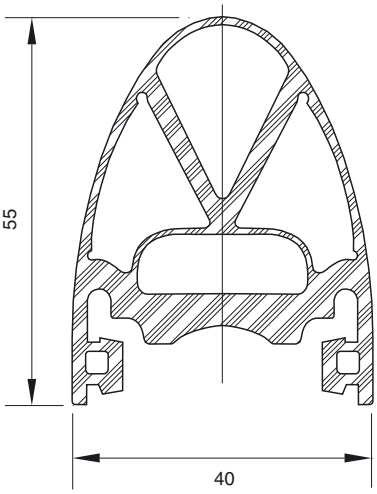

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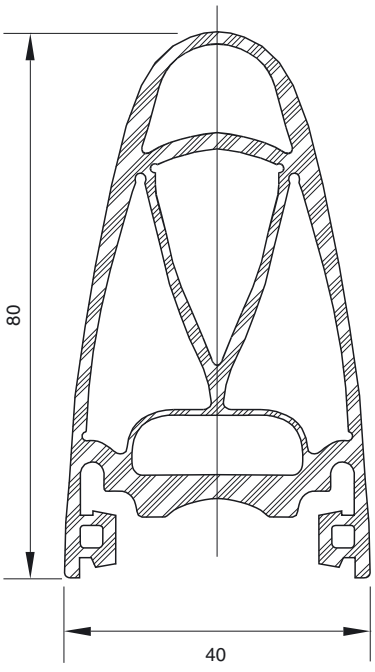

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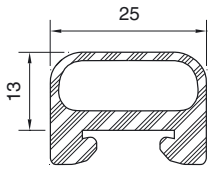
Special Profiles

Special rails



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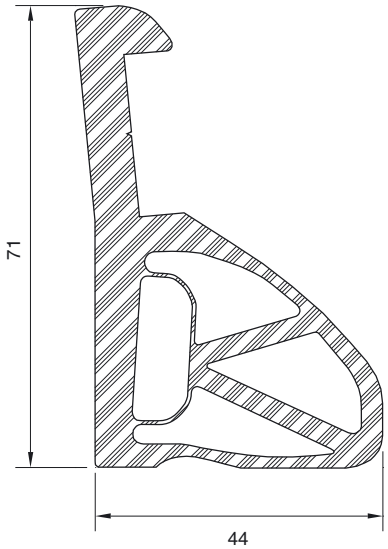
EPP 025/013A0M0



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