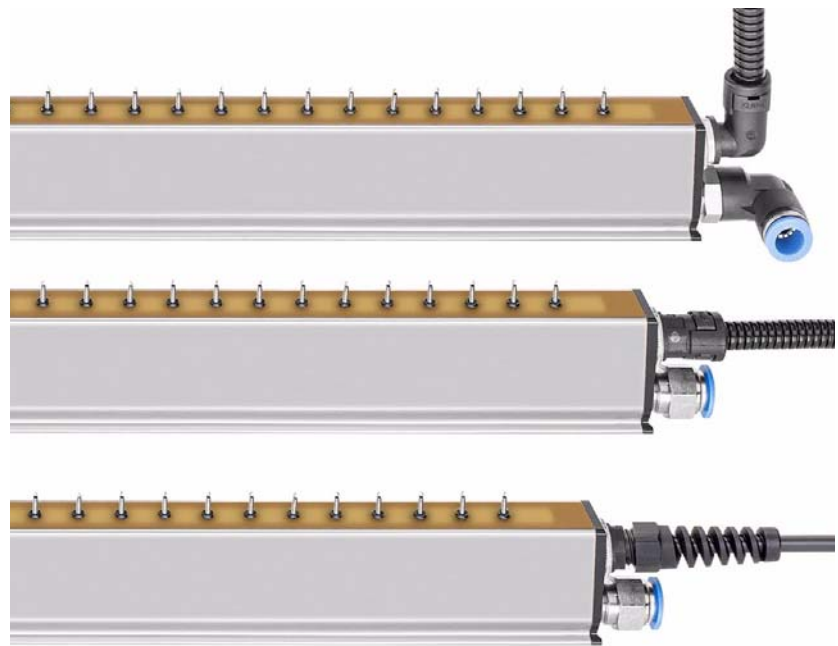
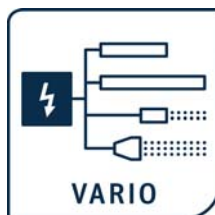


# Operating Instructions



F01052y



## Discharging Bar flexBAR

Series R60L for AC Operation

BA-en-2082-2302





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## Dear customer

The series R60L discharging bars flexBAR are designed for the active discharging of disruptive static charges which develop in production processes. The bars are operated with an alternating voltage of max.5 kV at 50 - 250 Hz and are designed for discharging moving and non moving surfaces.

Due to differences in the surface charge profiles on different materials, charges with both polarities are provided by the discharging bars. The corona section with its optimized geometrical configuration ensures ultimate discharging efficiency.

The advantages of the discharging bar flexBAR:

- high discharge range at minimum operating high voltage, hence great depth effect
- excellent active discharging performance at close and far range due to patented bar design
- flexible, free-standing emission tip with new resistance technology
- high level of safety due to passive discharge even when the power supply is off
- variable use in tight, grounded machine spaces
- safety through function and malfunction monitoring
- continuous assembly slotting guarantees flexible installation
- no health hazards in case of electric shocks when touching individual tips ( $\leq 10$  tips)
- flexible, free-standing emission tips; no danger of injury e.g. during cleaning
- wear-protected emission tip
- 4 times more emission tips compared to other products
- flexible installation due to a lateral continuous mounting groove
- easy to clean thanks to an extremely hard, dirt-resistant surface
- More efficient, best possible ionization of the amount of the aiding air to increase the range of the discharging effect of active discharging bars for medium and long ranges.

The optimum discharging effect is guaranteed in conjunction with the Eltex high voltage power supplies.

Please read the operating instructions carefully before operating the unit. This will help you prevent personal injuries and damage to property.

Please give us a call if you have any suggestions, proposals or ideas for improvements. We greatly appreciate the feedback from the users of our appliances.

# 1. Outline of appliance

## 1.1 Outline of appliance R60L

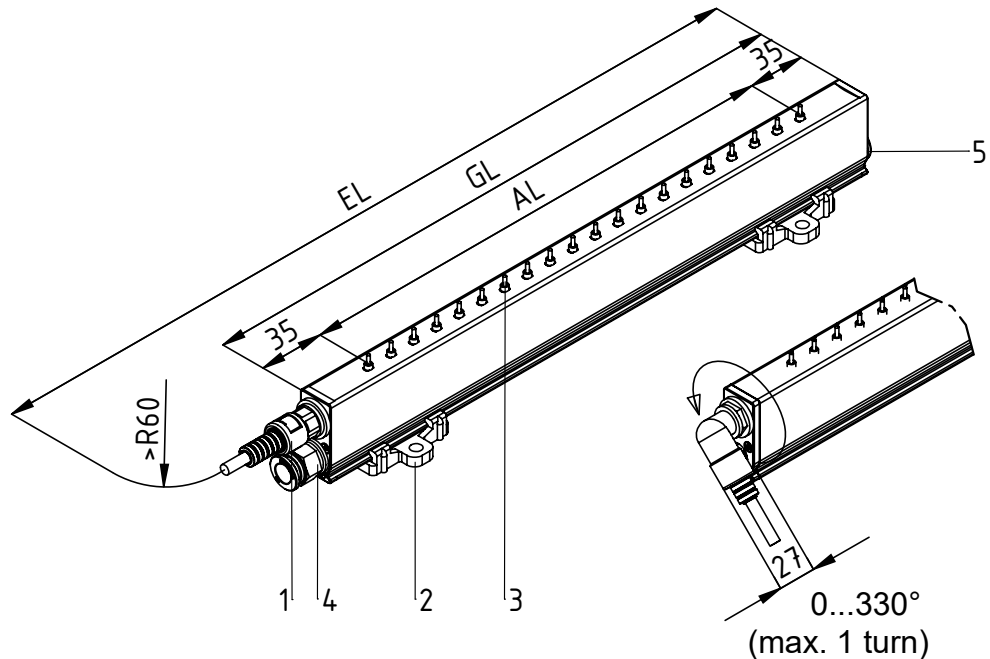


Fig. 1:  
Overview  
Discharging bar  
R60L

- 1 high voltage connection
- 2 bracket
- 3 emission tips / spring tips
- 4 air connection
- 5 additional air connection

EL = installation length

AL = active length

GL = total length

### Discharging bar R60L

- fixed connection of the high voltage cable
- high voltage cable axial and radial design
- radial connection rotatable by 300° and locked by lock nut
- max. active length: 2,715 mm
- grip spacing of the discharging tips: 15 mm  
active length minus 15 must be divisible by 30;  $AL = 15 + (n \times 30)$

## 2. Safety

The units have been designed, built and tested using state-of-the-art engineering, and have left the factory in a technically and operationally safe condition. If used improperly, the units may nevertheless be hazardous to personnel and may cause injury or damage. Read the operating instructions carefully and observe the safety instructions.

For warranty conditions, please refer to the General Terms and Conditions (GTC), see [www.eltex.de](http://www.eltex.de).

### 2.1 Proper Use

The Series R60L discharging bars flexBAR air must be used only for discharging static charges from material surfaces. Other uses are not permitted.

The R60L discharging bars must be operated only together with the dedicated Eltex power supplies. These power supplies guarantee the optimum adaptation to the required operational data for the different active bar lengths. Safe operation of the bars is ensured only by using the Eltex power supplies.

Other uses are not permitted. The manufacturers will not assume any liability and warranty if the units are used improperly or used outside the intended purpose.

Modifications or changes made to the devices are not permitted.

Use only original Eltex spare parts and equipment.

### 2.2 Identification of risks and hazards

Possible risks and hazards resulting from the use of the units are referred to in these operating instructions by the following symbols:



#### **Warning!**

This symbol appearing in the operating instructions refers to operations which, if carried out improperly, may result in serious personal injuries.



#### **Caution!**

This symbol appearing in the operating instructions refers to operations which, if carried out improperly, may result in damage to property.

## 2.3 Work and operational safety



### Warning!

Carefully observe the following notes and the complete [chapter 2 "Safety", page 7!](#)

- Before carrying out repairs, cleaning or maintenance work and before resetting after malfunctions, switch off the power supply and disconnect the mains supply voltage (see [chapter 5 "Maintenance", page 22](#), [chapter 6 "Troubleshooting", page 23](#)).
- Before carrying out any work involving the units, the machine which has the units fitted must not be in operation (see [chapter 5 "Maintenance", page 22](#), [chapter 6 "Troubleshooting", page 23](#)).
- Any work involving the units must be carried out by qualified electricians (see [chapter 5 "Maintenance", page 22](#), [chapter 6 "Troubleshooting", page 23](#)).
- The bars passively absorb energy from the moving substrate web. The high voltage cable must be plugged in or grounded to the power supply. If the high voltage cable is disconnected, the plug is live (high voltage) and applies with full power on the plug; this may cause a spark discharge and may lead to a risk of injury. Disconnected high voltage plugs are not permitted or have to be grounded (see [chapter 5 "Maintenance", page 22](#)).
- The bar must be mounted such that mechanical damage to the bar tips is ruled out (see [chapter 3.1 "Assembling the R60L discharging bar", page 12](#)).
- When routing the cable, select the attachment points such that mechanical damage to the cable (e.g. chafing against rotating machine parts) is ruled out (see [chapter 3.1 "Assembling the R60L discharging bar", page 12](#)).
- To attach the bar, use only the provided brackets made of plastic. It is also recommended to use the mounting material offered by Eltex (see [chapter 3.1 "Assembling the R60L discharging bar", page 12](#)).
- In applications involving moving bars (e.g. film draw strips), the high voltage cable must be attached such that there is no cable movement near the connection zone of the power supply unit (see [chapter 3.1 "Assembling the R60L discharging bar", page 12](#)).
- When metal foils or metal composite materials are processed, the owner must ensure that the metal foil/layer is connected to ground potential (see [chapter 3.1 "Assembling the R60L discharging bar", page 12](#)).
- In bilateral discharging, the bars must not be mounted in opposition to each other. The distance between both bars should be greater than twice the bar distance from the web (see [chapter 3.1 "Assembling the R60L discharging bar", page 12](#)).



- Both the lengths of the high voltage cable and of the active bars are limited, observe maximum lengths (see [chapter 3.2 "Length of the high voltage cable", page 17](#)).
- The maximum permissible angle of turn of the angle coupling is 300° (see [chapter 3.3 "Adjust the angle coupling", page 18](#)).
- The number of air connections depends on the length of the bar. If the air is supplied via both air connections, then all hoses from the distributor to the connections must be of the same length (same pressure conditions), see [chapter 3.5.1 "Number of air connections", page 19](#).
- An internal hose diameter of 10 mm (DN10) is required to connect the air hose to the air hose joint. The operating pressure must not exceed  $1 \times 10^5$  Pa and must be measured at the air distributor. The distributor crosssection must be dimensioned to match the number of hose connections or in compliance with the consumption volume (see [chapter 3.5.2 "Connecting oil and waterfree compressed air supply", page 20](#)).
- The R60L discharging bars must be operated only in connection with the Eltex power supplies with max. 5 kV AC output (see [chapter 4 "Operation", page 21](#)).
- Check the units and the high voltage cables at regular intervals and before startup for any damage. Any damaged components must be repaired or replaced before continuing to operate the unit, or the units must be disabled.
- Make sure that the units are clean at all times.  
Dirt results in malfunctions and in premature wear of the units.
- When cleaning the bars do not soak the bars and the high voltage cable in solvent and do not damage the emission tips; allow the solvent to evaporate completely before restarting the unit (see [chapter 6 "Troubleshooting", page 23](#)), [chapter 5 "Maintenance", page 22](#)).
- Do not touch the emission tips - risk of injury.  
If the high voltage supply is connected, reflex responses to electrical irritation can lead to secondary accidents; the charging bar as such is safe to touch. If contact is made ( $\leq 10$  tips), the energy transferred is so low that there is no risk of injury.
- Potential risk for wearers of cardiac pacemakers:  
Moving the chest closer than 3.5 cm to the emission tips of the discharging bars or making surface contact with several emission tips (touching a single tip is not critical) can result in a temporary switchover of the cardiac pacemaker into the fault mode. Permanent proximity or contact can therefore cause severe problems.  
If it is likely that the chest of such a person comes closer than 3.5 cm to the emission tips of the discharging bar, or if several emission tips are touched at the same time, the appropriate warning notices must be displayed.

- The operation of the bars can generate ozone. The ozone concentration levels developing near the bars depend on many different factors such as site of installation, bar current and voltage, air circulation, etc., and can therefore not be specified in general terms.  
If the maximum allowable concentration of ozone must be observed at the site of installation of the bar, the concentration must be measured on site.  
The AGW value (maximum admissible concentration) serves to assess the ozone concentration at the workplace. The user must make sure that the appropriate national AGW value is at no times exceeded, e.g. in Germany the ozone concentration occurring during the operation of the system must not exceed the recommended value based on international limits of 0.06 ml/m<sup>3</sup> (0.12 mg/m<sup>3</sup>).
- Mechanical or electrical modifications of the discharging bars are not permitted. Shortening the shielded high voltage cable on the connecting side of the power supply is permitted. Extending the cable is permitted only when using the Eltex distributor as well as original high voltage cables and glands.
- If any liquids seep into the spring tips and bar during cleaning, they must dry completely before start-up. Until the components are completely dry, the shock-proofing is temporarily impaired and can lead to a damage of the bar.

## 2.4 Contact protection

The site of installation and/or use of the units is outside the control of Eltex, contact protection against inadvertent contact of the bars and of live components by personnel as specified by the employer's liability insurance association may have to be provided (e.g. DGUV V3 in Germany). Contact protection devices made of conductive material must be grounded.

## 2.5 Inspection of the protective resistors - contact protection

The function and the appearance of the protective resistors must be inspected at regular intervals. The inspection intervals are specified in the accident prevention regulations, as amended (e.g. in Germany DGUV V3).

The function of the series resistors must be checked using a suitable measuring device. The measured resistance between the high voltage connection and the individual emission tip must not fall below 105 MOhm and not exceed 195 MOhm.

## 2.6 Technical advance

The manufacturer reserves the right to make changes to the technical specifications without prior notice in order to adapt the units to state-of-the-art engineering. Eltex will provide the latest information on any changes or modifications in the operating instructions on request.

### 3. Installation and assembly

#### 3.1 Assembling the R60L discharging bar

Attach the R60L discharging bars to the machine wall, using special brackets. For easier installation we recommend using the assembly material (see Fig. 2) offered by Eltex. Fig. 3 / Fig. 4 show the installation principle.

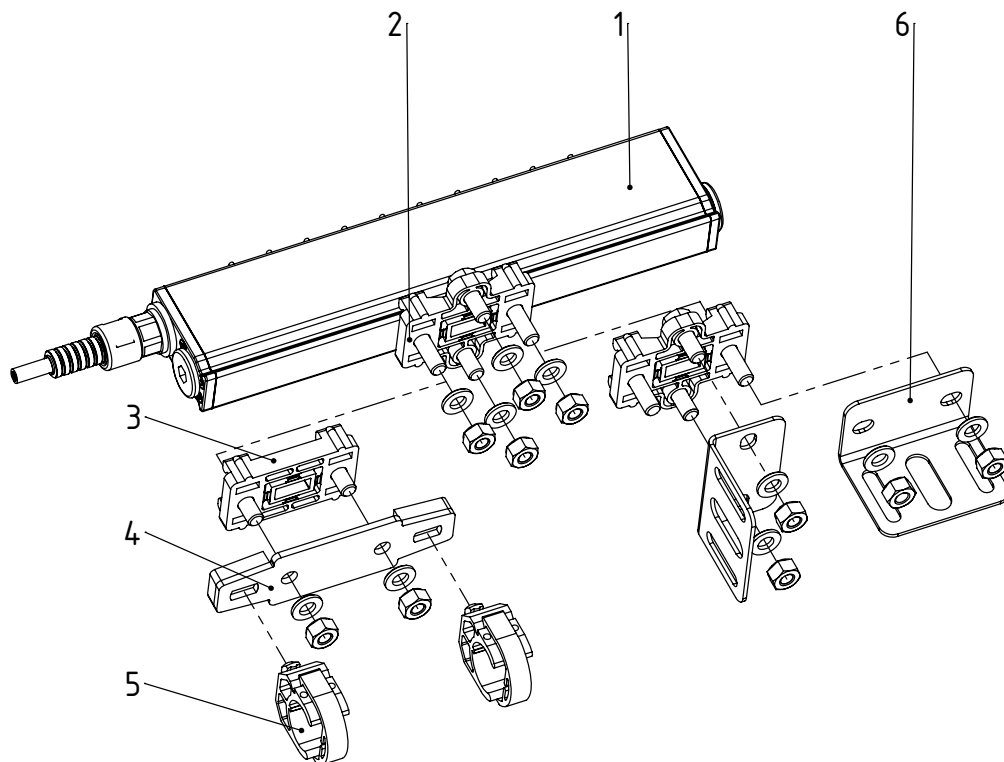


Fig. 2:  
Assembling the  
R60L  
discharging bar

- |                   |                  |
|-------------------|------------------|
| 1 Discharging bar | 4 Adapter        |
| 2 Bracket         | 5 Clip           |
| 3 Bracket small   | 6 Mounting angle |

The profile of the bar features a through-going sideways groove in which the bar holders are positioned at regular distances. The bar is fixed in place simply by tightening two bolts each for every holder; torque: 0.8 Nm.



#### Caution!

Evenly space the brackets across the full length.  
below 1 meter total length: 2 per bar  
over 1 meter total length: 1 per meter

Use plastic mounting materials whenever possible to ensure optimum functionality and discharging performance.

An optional alternative is attaching the bars using a GRP round rod. Fig. 4 shows an assembly example. The bar is attached to the GRP round rod via plastic holders. An additional angle permitting easy fastening of system profiles is available as an option, see Fig. 3.

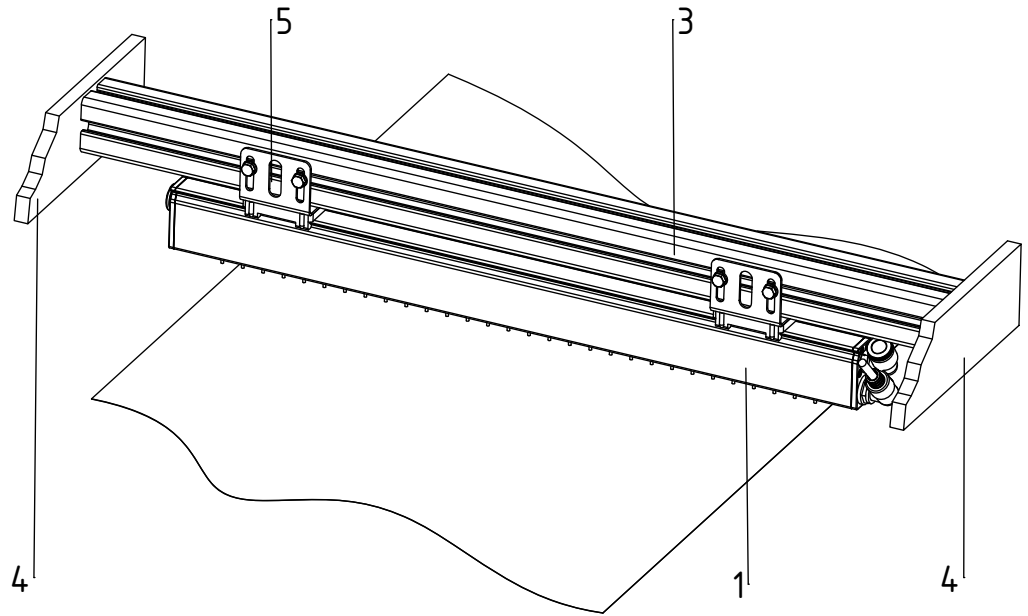


Fig. 3:  
Assembly example  
R60L with steel  
brackets and alu-  
minum profile

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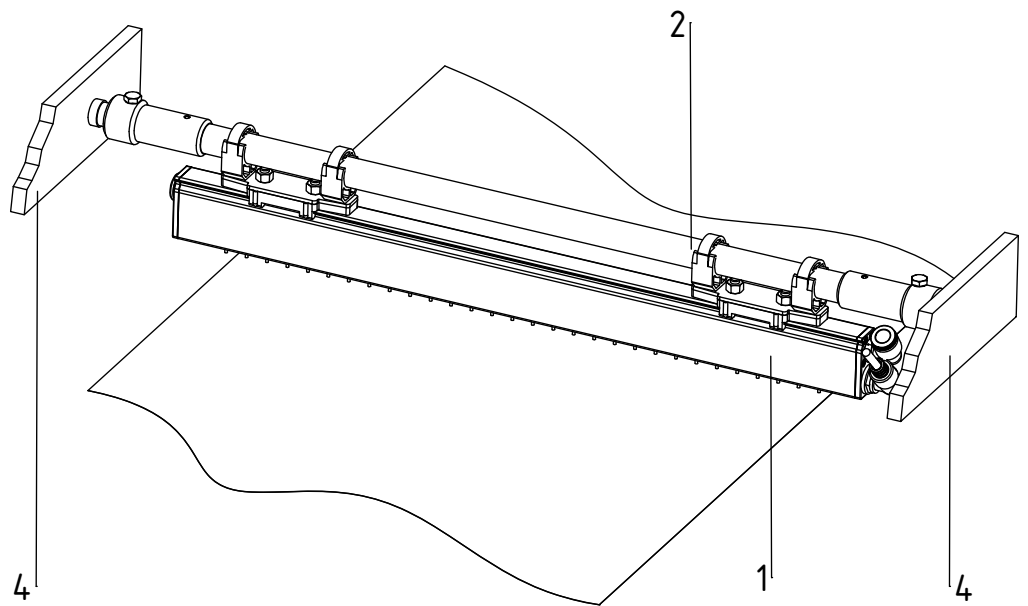


Fig. 4:  
Assembly R60L  
with GRP round  
rod

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- |                    |                  |
|--------------------|------------------|
| 1 Discharging bar  | 4 Maschine wall  |
| 2 GRP round rod    | 5 Mounting angle |
| 3 Aluminum profile |                  |



### **Warning !**

For safety in operation, please note the following:

- The bar must be mounted such that mechanical damage to the bar tips is ruled out.
- When routing the cable, select the attachment points such that mechanical damage to the cable (e.g. chafing against rotating machine parts) is ruled out.
- To attach the bar, use only the provided brackets made of plastic.
- In applications involving moving bars (e.g. film draw strips), the high voltage cable must be attached such that there is no cable movement near the connection zone of the power supply unit.
- When metal foils or metal composite materials are processed, the owner must ensure that the metal foil/layer is connected to ground potential.

## Locating the R60L discharging bar

The best possible discharging results are achieved if the bar is located in areas with minimum web capacities. In practical terms this means placing the bar with maximum distances from the machine environment, i.e. no discharging against the idler roller.

A rough guideline:

A space with the radius  $R$  of the bar distance to the web ought to be kept free of any conductive material (Fig. 5). The distance of the emission points to the conductive, earthed printing press area should be greater than to the substrate to be discharged.

Depending on application, the distance between R60L discharging bar and substrate ought to be 100...1000 mm.

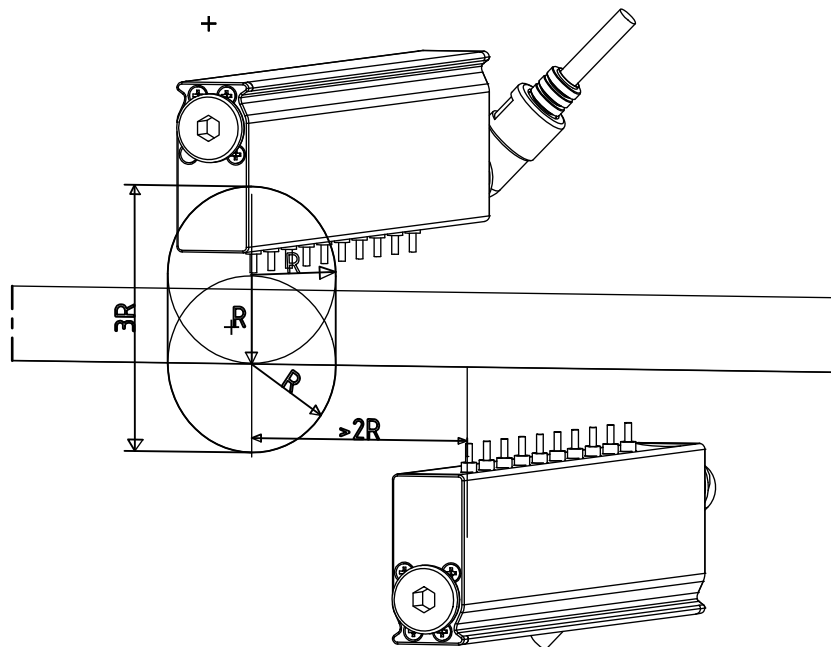


Fig. 5:  
Zone free of con-  
ductive material  
with the dimen-  
sions  $R$



In bilateral discharging, the bars must not be mounted in opposition to each other. The distance between both bars should be greater than twice the bar distance from the web.

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### Protection profile SP (optional)

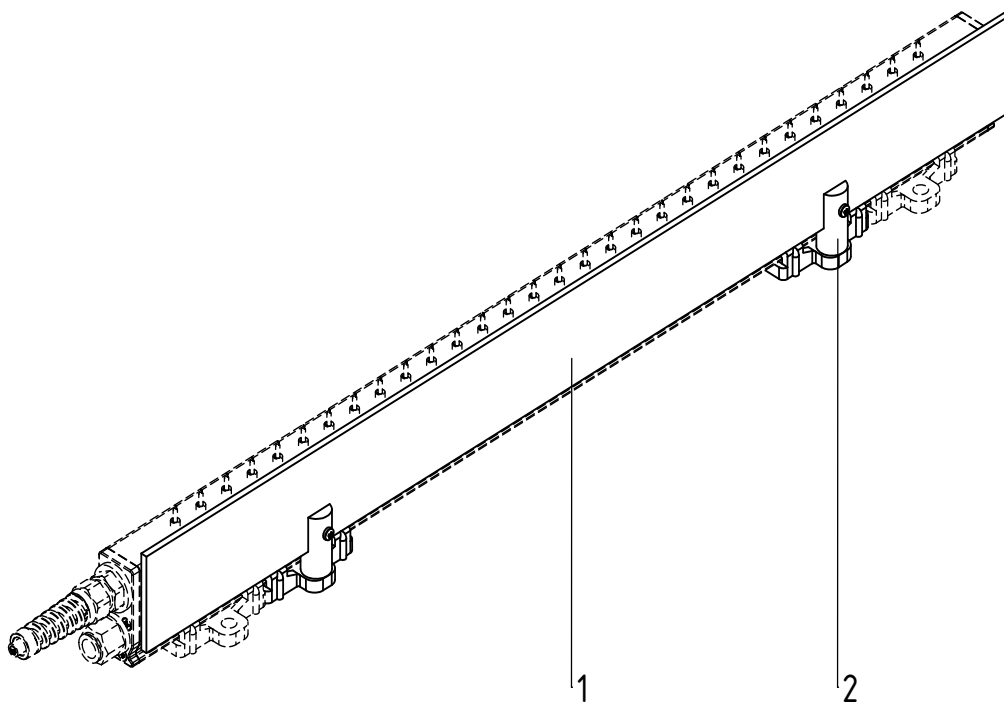
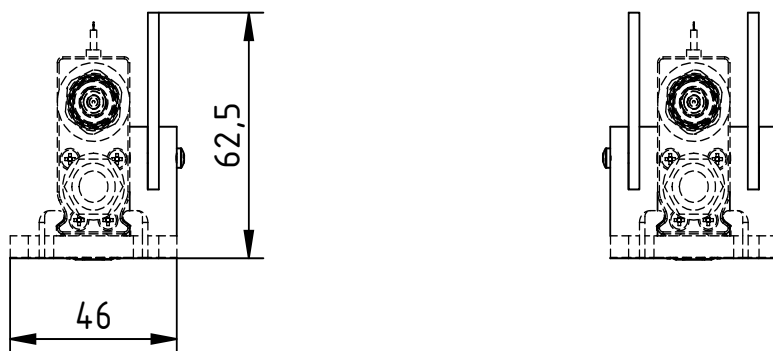


Fig. 6:  
Protection profile  
SP

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In the case of installations on material webs, changes in the distance between the web and the electrode or as a result of a web break can lead to a possible getting caught on the spring tips. This can damage the spring tips. To avoid this, we recommend the optionally available protection profile. This can be easily adapted and is available with a protective strip on one or both sides.

- Type of bracket for R6x discharging bars
- Height of protective strip 45 mm for R60L bars
- one- and two-sided protective strip
- Length adapted to the total length of the bar



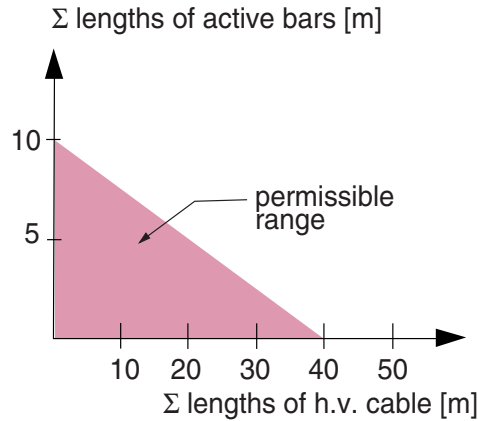
### 3.2 Length of the high voltage cable



The total length of discharging bar and high voltage cable is limited due to the loading capacity of the transformer in the power supply. The maximum loading capacity is a function of the active bar length and the length of the high voltage cables.

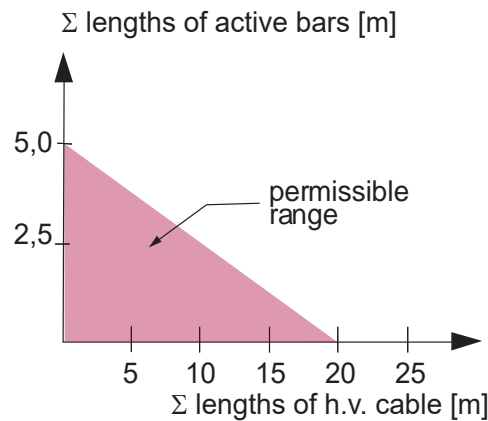
Fig. 7 - Fig. 9 demonstrates this principle for the PI, ES51, ES60, ES50 and ES24 power supplies.

**Fig. 7:**  
Loading capacity of the PI, ES51 and ES60 power supplies as factor of active bar length and total length of the high voltage cable



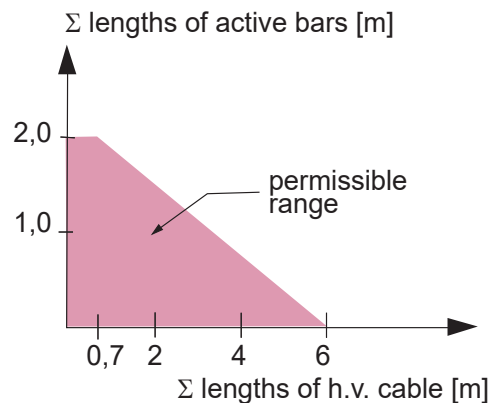
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**Fig. 8:**  
Loading capacity of the ES50 power supply as factor of active bar length and total length of the high voltage cable



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**Fig. 9:**  
Loading capacity of the ES24 power supply as factor of active bar length and total length of the high voltage cable

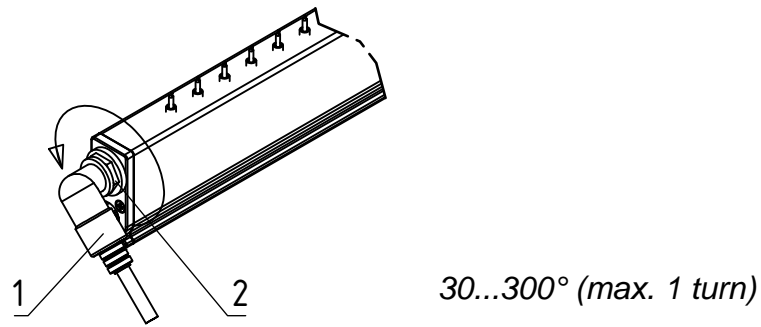


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### 3.3 Adjust the angle coupling

If the bar has a angle coupling, then it is aligned towards the tips during ex factory delivery.

Fig. 10:  
Angle coupling



- 1 Lock nut
- 2 Angle coupling

To turn the angle connection, proceed as follows:

- loosen the lock nut
- align the angle coupling in its desired position
- re-tighten the lock nut



The maximum permissible angle of turn of the angle coupling is 300°.

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### 3.4 Operation without air support

We recommend leaving the air connections on both sides closed with the pre-assembled blind plugs.

### 3.5 Operation with air support

#### 3.5.1 Number of air connections



The number of air connections depends on the length of the bar. If the air is supplied via both air connections, then all hoses from the distributor to the connections must be of the same length (same pressure conditions).

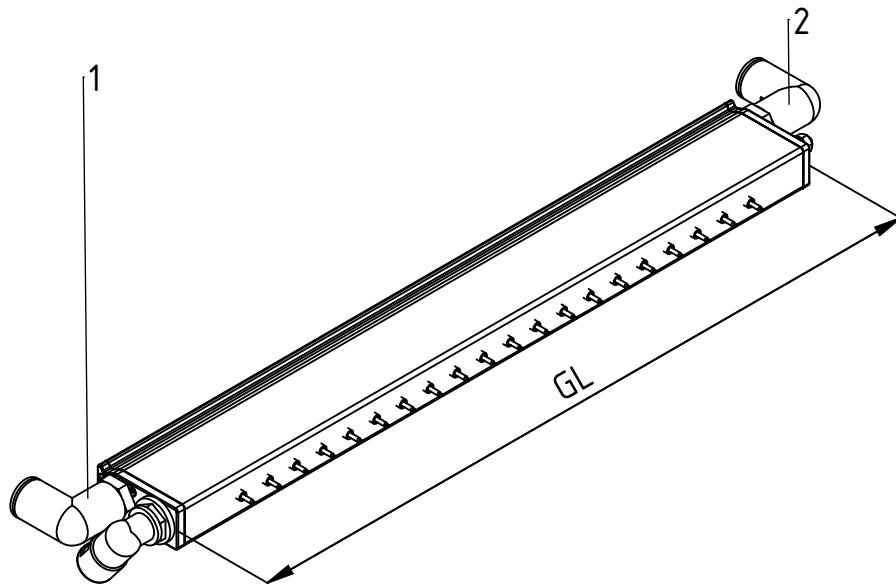


Fig. 11:  
Position of the air connections as factor of total length GL

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No.	Designation
1	Air connection, closed with blind plugs on delivery
2	additional air connection, closed with blind plugs on delivery

GL [mm]	Number of air connections
$GL \leq 1000$	1
$1000 < GL \leq 2800$	2

### 3.5.2 Connecting oil and waterfree compressed air supply

Depending on the air flow, you can connect the air supply parallel to the high voltage cable or on the opposite side or on both sides. For this purpose, please remove the pre-assembled blind plug and screw the air connection nipple into the thread provided (G1/4").



An internal hose diameter of 10 mm (DN10) is required to connect the air hose to the air hose joint. The operating pressure must not exceed  $1 \times 10^5$  Pa and must be measured near the air distributor. The distributor cross section must be dimensioned to match the number of hose connections or in compliance with the consumption volume.

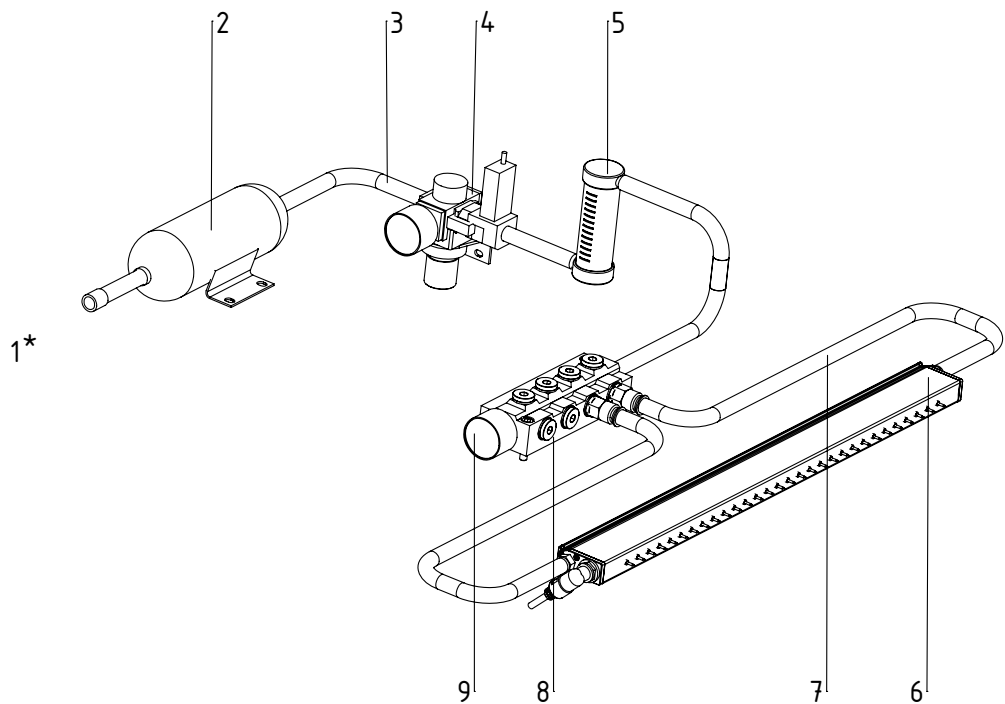


Fig. 12:  
Installation of the  
compressed air  
supply

- |   |                              |   |                            |
|---|------------------------------|---|----------------------------|
| 1 | Pressure gauge (* not shown) | 7 | DN10 hose (e.g. 2 x 2.5 m) |
| 2 | Pressure source              | 8 | Distributor                |
| 3 | DN20 hose                    | 9 | Manometer                  |
| 4 | Throttle valve               |   |                            |
| 5 | Rota flowmeter               |   |                            |
| 6 | R60L discharging bar         |   |                            |

Fig. 12 shows the installation diagram for the air supply.

The air distributor is not included with the delivery.



#### Caution!

If the air supply is realized via both air connections, all hoses from the distributor to the connecting points must have the same length (identical pressure conditions).



## 4. Operation

The R60L discharging bars must be operated only in connection with the Eltex power supplies with max. 5 kV AC output.

These power supplies guarantee the optimum adaptation to the specified operating conditions.

### 4.1 Startup

Once all the connections have been correctly made, the system is operational and the supply voltage can be switched on at the power supply.

### 4.2 Function control

Use the Eltex Volt Stick or a glow-lamp voltage tester to check the proper function of the emission points. Quote Article No. 109136 when ordering the Volt Stick from Eltex.

## 5. Maintenance



### Warning!

Electric shock hazard!

- Do not carry out any maintenance or repair work without first switching off the power supply and disconnecting the supply voltage.
- The bars passively absorb energy from the moving substrate web. The high voltage cable must be plugged in or grounded to the power supply. If the high voltage cable is disconnected, the plug is live (high voltage) and applies with full power on the plug; this may cause a spark discharge and may lead to a risk of injury. Disconnected high voltage plugs are not permitted or have to be grounded.
- The machine which has the units fitted must not be in operation.
- Repairs and maintenance work must be carried out by qualified electricians only.

To ensure the trouble-free function of the discharging bars, clean the bars at least once a week with compressed air free of oil and water (max.  $6 \times 10^5$  Pa and standard compressed air pistol) and a brush with soft plastic bristles.

Clean grease, ink, glue, paper dust, etc. off the discharging bar using a suitable solvent (benzine). Do not soak the bars and the high voltage cable in solvent!



### Caution!

Do not damage the emission tips when cleaning. Brush only in longitudinal direction.

If any liquids seep into the spring tips and bar during cleaning, they must dry completely before start-up. Until the components are completely dry, the shock-proofing is temporarily impaired and can lead to a damage of the bar.



### Warning!

Risk of deflagration!

Allow the solvent to evaporate completely before restarting the unit.

### Inspection of the protective resistors - contact protection

The function and the appearance of the protective resistors must be inspected at regular intervals. The inspection intervals are specified in the accident prevention regulations, as amended (e.g. in Germany DGUV V3).

The function of the series resistors must be checked using a suitable measuring device. The measured resistance between the high voltage connection and the individual emission tip must not fall below 105 MOhm and not exceed 195 MOhm.

## 6. Troubleshooting



### **Warning!**

Electric shock hazard!

- Do not carry out any maintenance or repair work without first switching off the power supply and disconnecting the supply voltage.
- The machine which has the units fitted must not be in operation.
- Repairs and maintenance work must be carried out by qualified electricians only.

### **Malfunction:**

Effectiveness of the application declining.

### **Cause:**

Dirty discharging bars.

### **Measure:**

Clean bar with compressed air and a brush. Clean grease, ink, oil, etc. off the bar with a suitable solvent (benzine).

For further malfunctions, refer to the operating instructions for the power supplies.



### **Caution!**

Do not leave the discharging bar to soak in the solvent!

If any liquids seep into the spring tips and bar during cleaning, they must dry completely before start-up. Until the components are completely dry, the shock-proofing is temporarily impaired and can lead to a damage of the bar.



### **Warning!**

Risk of deflagration!

Allow the solvent to evaporate completely before restarting the unit.

## 7. Technical specifications R60L

Bar element	aluminum with special coating
Encapsulation material	polyurethane, UL-94 V-0
Emission tips	stainless steel, flexible
Installation material	glas fiber reinforced plastic bracket
Operating ambient temperature	0...+80 °C (+32...+176 °F)
Ambient humidity	max. 70 % RH, non-dewing
Dimensions profile	20 x 45 mm, max. length: 2,785 mm see Fig. 13
Weight	approx. 1.6 kg/m
Operating voltage	max. 5 kV AC, 50 - 250 Hz
High voltage supply	via Eltex power supplies
High voltage connection	high voltage cable encapsulated, axial or radial lead out, 300° rotatable
Short-circuit current/tip	max. 0.046 mA
Contact protection	according to EN 61140
Air supply	integrated air profile, air outlet apertures Ø 1mm, spacing 15 mm
Air connection	DN10 mm hose, apparatus air free of oil and water
Air pressure	max. $1 \times 10^5$ Pa
Air consumption	see the table below



### Air consumption R60L / meter (standard values)

Air connection	single-sided			double-sided		
	0.05	0.1	0.2	0.05	0.1	0.2
Pressure [ $1 \times 10^5$ Pa]						
Air consumption [Nm <sup>3</sup> /h]	0.55	1.1	2.2	0.95	1.95	3.8



## 8. Dimensions

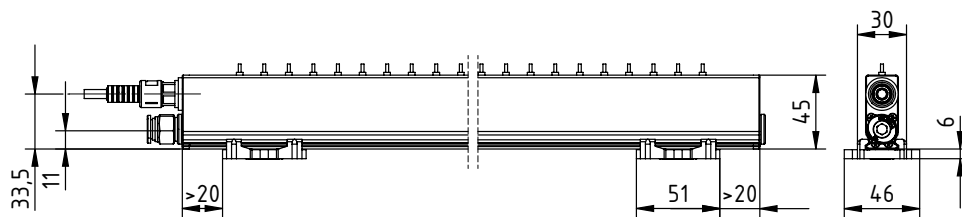
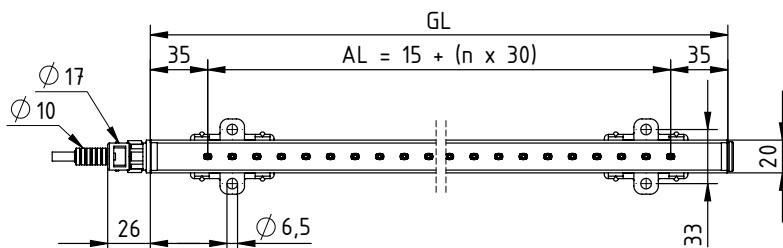


Fig. 13:  
R60L  
discharging bar  
shown with  
standard bracket



AL = active length  
GL = total length

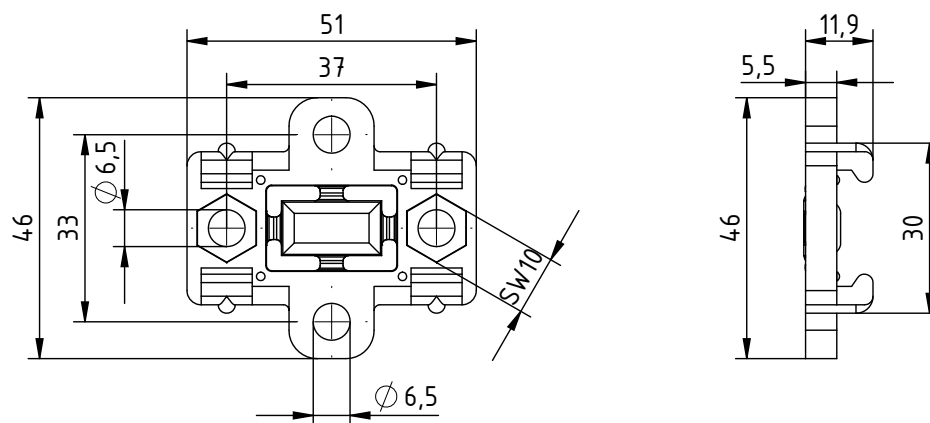


Fig. 14:  
Bracket - standard

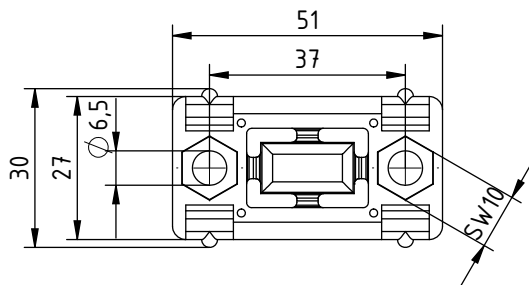


Fig. 15:  
Bracket - small

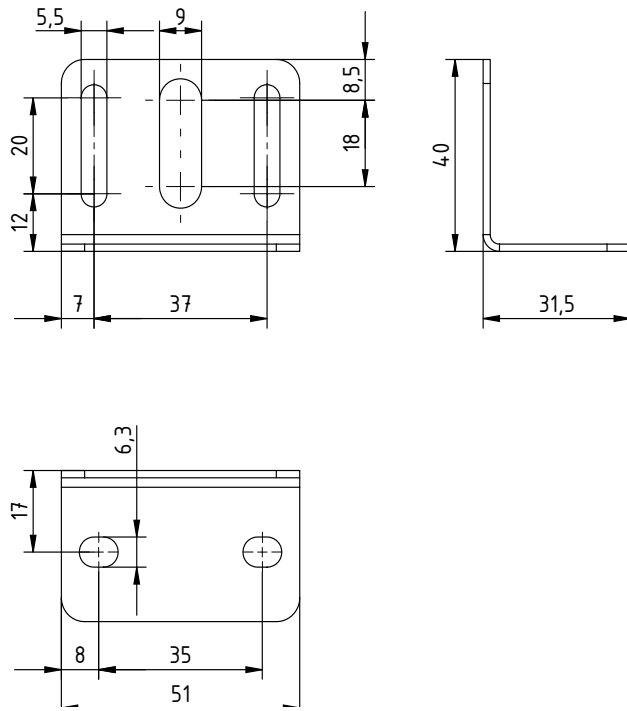


Fig. 16:  
Angle bracket

Z-115665ay\_6

## 9. Spare parts and accessories

Article	Article No.
High voltage distributor, discharging 4 terminals (1 high voltage cable, 4 outputs) (specify plug type, socket type and cable length)	ESV61/___
High voltage distributor, discharging 2 terminals (1 high voltage cable, 2 outputs) (specify plug type, socket type and cable length)	ESVY61/___
Extension cable	KE/LB__
Plug "L" Set for prefabricating the high voltage cable with flexible tube for power supply ES5x / ES6x / PI and distributor ESV61/_S / ESVY61/_S	103289
Plug "S" Set for prefabricating the high voltage cable without flexible tube for power supply ES5x / ES6x /PI and distributor ESV61/_S / ESVY61/_S	101366
Plug "Y" Set for prefabricating the high voltage cable with flexible tube for power supply ES24 and distributor ESV61/_S / ESVY61/_S	111602
Plug "Z" Set for prefabricating the high voltage cable without flexible tube for power supply ES24 and distributor ESV61/_S / ESVY61/_S	101406
<b>Mounting material for bars R6x:</b>	
Mounting material for bars R6x, standard	115410
Mounting material for bars R6x, small	115411
Mounting material for fixing the GRP round rod, Ø 20 mm	115412
Mounting angel cf. Fig. 2, Fig. 3	115465
GRP round rod Ø 20 mm	100864
Bar holder for round rod	101075
Attachment clip for round rod	MCH02434

Article	Article No.
<b>Kit - Bar holder R6x:</b>	
Bar holder with clamps	HA01/___
Bar holder with perforated plate	HA02/___
Bar holder for frame attachment	HA03/___
Bar holder for shaft attachment	HA04/___
When ordering a bar holder kit, please state whether you are using a discharging bar with reference code "G". Alternatively, please order an appropriate quantity of mounting material no. 115412 (calculation see chapter 3.1).	
<b>Protective strip (optional)</b>	SP/_____
<b>Air supply for discharging bars R60L:</b>	
Air nipple straight G1/4", DN8	101617
Air nipple straight G1/4", DN10	MCH00915
Angle air nipple G1/4", DN8	102074
Angle air nipple G1/4", DN10	104952
Y-hose socket DN8	103391
Y-hose socket DN10	MCH00602
T-reducing socket NW10-13-10	MCH02417
Hose with inlay, d10x3	MCH00126
Hose clamp with fastening lug S20	108513
Plug-in screw connection G1/4", DN6	105250
Plug-in screw connection G1/4", DN8	110309
Plug-in screw connection G1/4", DN10	110054
Ball valve with plug-in connection, DN8	110155
L-Plug-in screw connection G1/4", DN8	116295
L-Plug-in screw connection G1/4", DN10	105375
L-Plug-in screw connection G1/4", DN12	110817
Plastic tube, with standard external diameter DN8	110310
Plastic tube, with standard external diameter DN10	109064
Plastic tube, with standard external diameter DN12	115769
Blind plug G1/4"	111930

<b>Article</b>	<b>Article No.</b>
Compressed air unit with pressure switch, consisting of: <ul style="list-style-type: none"> <li>• Pressure regulator</li> <li>• Fixing element</li> <li>• Manometer</li> <li>• Pressure switch, open contact, 3 m cable length</li> <li>• Angle air nipple DN10, L-plug-in screw connection, DN10</li> </ul>	110407
Pressure regulator, pressure control range 0.05 - 0.85 MPa, connection thread G1/4"	110402
Fixing element for pressure regulator	110403
Manometer, G1/8", 0.02 bis 0.2 MPa	110404
<b>Volt Stick</b>	<b>109136</b>
<b>Operating Instructions (specify language)</b>	<b>BA-xx-2082</b>

Please specify the article number when ordering.

# EU-Declaration of Conformity

CE-2082-en-2207

Eltex-Elektrostatik-Gesellschaft mbH  
Blauenstraße 67 - 69  
D-79576 Weil am Rhein



declares in its sole responsibility that the product

## Discharging Bar R60L (according to Eltex reference code)

complies with the following directives and standards.

Relevant EU-Directive:

**2014/35/EU**

Low Voltage Directive

Harmonized standard applied:

EN 60204-1:2018

Safety of machinery – Electrical equipment of machines –  
General requirements

Relevant EU-Directive:

**2014/30/EU**

EMC Directive

Harmonized standards applied:

EN IEC 61000-6-2:2019

Electromagnetic compatibility (EMC)  
Generic standards – Immunity for industrial environments

EN 55011:2016 + A1:2017

Industrial scientific and medical equipment –  
Radio-frequency disturbance characteristics – limits and methods  
of measurement

Relevant EU-Directive:

**2011/65/EU**

RoHS Directive

in the version effective at the time of delivery.

Eltex-Elektrostatik-Gesellschaft mbH keep the following documents for inspection:

- proper operating instructions
- plans
- other technical documentation

Weil am Rhein, 28.07.2022  
Place/Date



Lukas Hahne, Managing Director

# UKCA Declaration of Conformity

CA-2082-en-2208

Eltex-Elektrostatik-Gesellschaft mbH  
Blauenstraße 67 - 69  
D-79576 Weil am Rhein



declares in its sole responsibility that the product

## **Discharging Bar R60L** (according to Eltex reference code)

complies with the following directives and standards.

Applicable Regulation:

**S.I. 2016 No. 1101**

Electrical Equipment (Safety) Regulations

Used Designated Standard:

BS EN 60204-1:2018

Applicable Regulation:

**S.I. 2016 No. 1091**

Electromagnetic Compatibility Regulations

Used Designated Standard:

BS EN IEC 61000-6-2:2019

BS EN 55011+A2:2016

Applicable Regulation:

**S.I. 2012 No. 3032**

RoHS Regulations

in the version effective at the time of delivery.

Eltex-Elektrostatik-Gesellschaft mbH keep the following documents for inspection:

- proper operating instructions
- plans
- other technical documentation

Weil am Rhein, 30.08.2022  
Place/Date



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Lukas Hahne, Managing Director

# Eltex offices and agencies

The addresses of all  
Eltex agencies can be  
found on our website at  
[www.eltex.de](http://www.eltex.de)



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