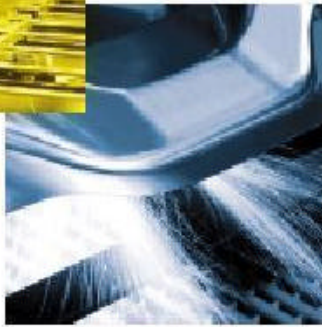


Trip Rails Trip Dogs



More than safety.

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EUCHNER

EUCHNER – Your Partner for Industrial Electrical Equipment and Industrial Electronics

Since its foundation in 1940, EUCHNER has been designing and developing switchgear for controlling diverse motion sequences in the field of machine construction and terotechnology. An innovative development in 1952 was the world's first multiple position switch.

The EUCHNER product range includes everything from electromechanical and electronic equipment through to systems and services.

Reliability, precision and quality are tested continually and maintained at a high level by computer-controlled development, test and inspection systems for hardware and software.

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We therefore can solve specific problems on-site at any time. An overview of our Technical Sales Offices in Germany and abroad is given on the last page.



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Bad Überkingen

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EUCHNER Trip Rails and Trip Dogs for faster precision manufacturing

EUCHNER trip rails and trip dogs have been successfully used in conjunction with EUCHNER multiple limit switches in all areas of general mechanical engineering since 1952.

They are used in linear positioning and controls, e.g. for machine tools, plastics and woodworking machines, transfer lines, loading equipment, etc.

Features of the EUCHNER system include:

Extreme accuracy (up to 0,002 mm).

Long service life (low mechanical wear and high corrosion resistance, thanks to selected materials).

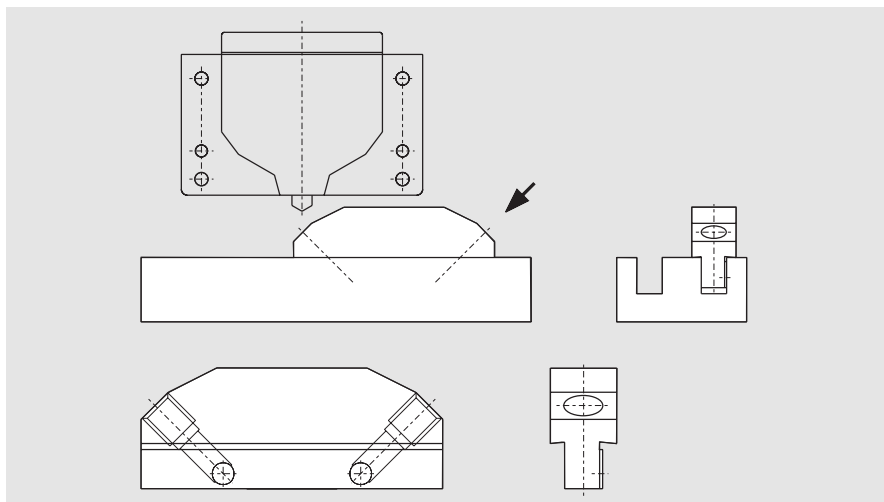
Easy handling (simple mounting and adjustment, thanks to precision engineering).

Two versions of EUCHNER trip rail and trip dog systems are available which fulfil identical functions, but vary in the method the dogs are adjusted.

System U

U-Trip Rails provide for the trip dogs to be adjusted from the switch side. Insertion and adjustment to the dogs can be carried out rapidly and simply at any point. Materials are cast iron and aluminium.

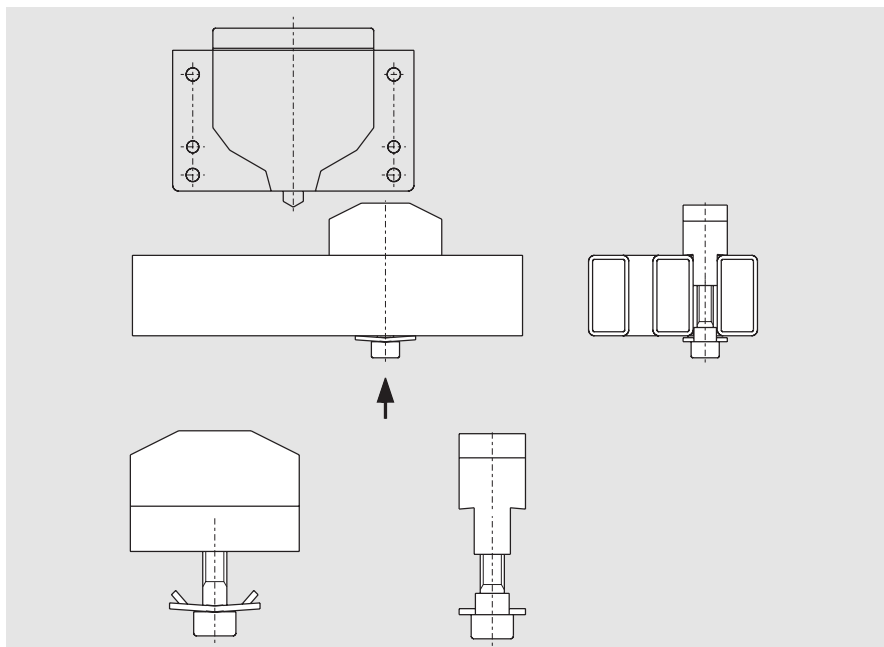
U-Trip Dogs are purpose designed for insertion in the U-trip rails and are fitted with a split-plate clamping mechanism and sensitive, exact adjustment can be effected even with the switch in its actuated state.



System G

G-Trip Rails provide for the trip dogs to be adjusted from the side opposite the switch. They are made of steel which is corrosion protected by a special surface coating. The G-trip rails can be supplied fully-assembled or in kit form for self-assembly.

G-Trip Dogs are purpose designed for insertion in lattice trip rails. They are clamped to the trip rail by means of a hexagon socket screw and a special spring washer which ensures that the dog is friction held in position during the adjustment, even when the trip rail is in a vertical position.



Type series UL...

buttable side by side

Slot spacing

12 or 16 mm

Material:

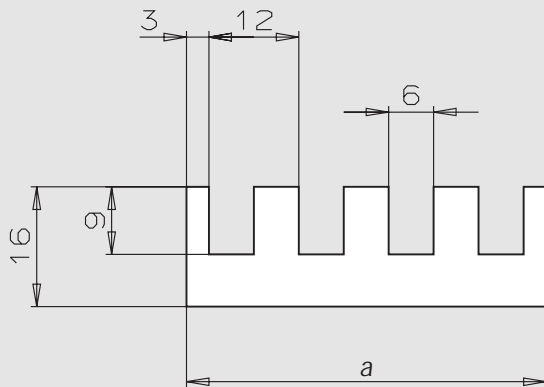
aluminium

Length:

1000 / 2000 / 3000 / 4000 mm

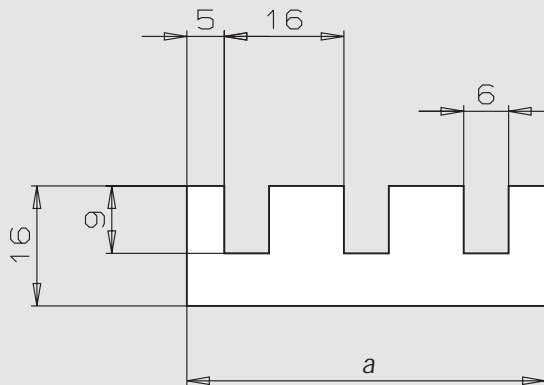
Dimension drawing

Slot spacing 12 mm



| | | | |
|------------------|----|----|----|
| Dimension a [mm] | 24 | 36 | 48 |
| Number of slots | 2 | 3 | 4 |

Slot spacing 16 mm



| | | |
|------------------|----|----|
| Dimension a [mm] | 32 | 48 |
| Number of slots | 2 | 3 |

Ordering table

Type

Number of slots (see tables)

Slot spacing (12 or 16 mm)

Length [mm] (preferable length 1000, 2000, 3000 and 4000 mm)

| | | | | | | | | | |
|---|---|--|---|--|--|---|--|--|--|
| U | L | | - | | | - | | | |
|---|---|--|---|--|--|---|--|--|--|

Type series UF...

according to DIN 69638 form A¹⁾

Slot spacing

8, 12 or 16 mm

Material:

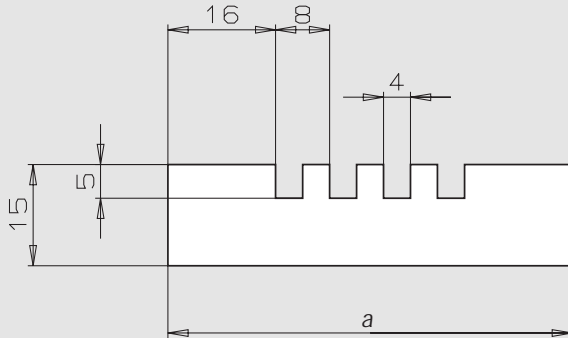
cast iron

Length:

max. 1000 mm

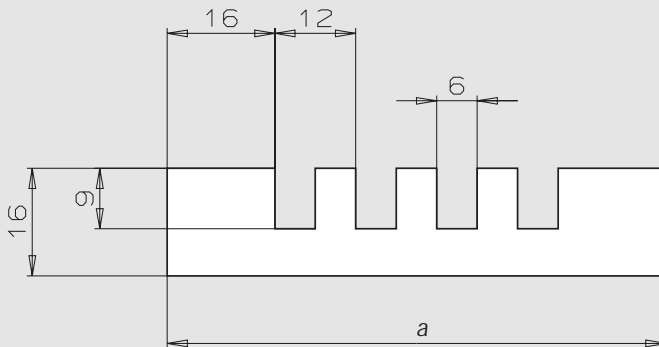
Dimension drawing

Slot spacing 8 mm



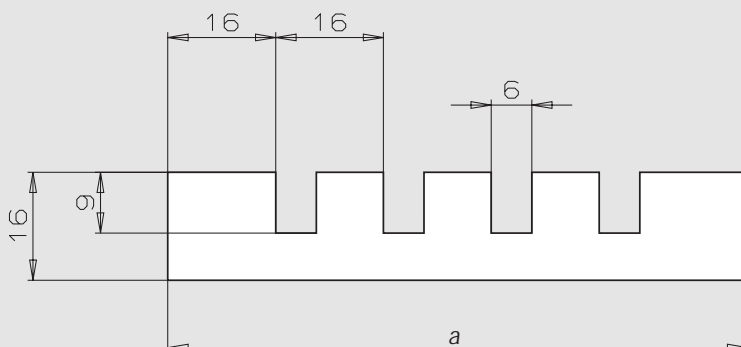
| | | | | | | | | | | | | |
|------------------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|
| Dimension a [mm] | 44 | 52 | 60 | 68 | 76 | 92 | 108 | 124 | 140 | 156 | 172 | 188 |
| Number of slots | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |

Slot spacing 12 mm



| | | | | | | | | | | |
|------------------|----|----|----|----|----|-----|-----|-----|-----|-----|
| Dimension a [mm] | 50 | 62 | 74 | 86 | 98 | 122 | 146 | 170 | 194 | 218 |
| Number of slots | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 14 | 16 |

Slot spacing 16 mm



| | | | | | | | | |
|------------------|----|----|----|-----|-----|-----|-----|-----|
| Dimension a [mm] | 54 | 70 | 86 | 102 | 118 | 150 | 182 | 214 |
| Number of slots | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 |

Ordering table

| | | | | | | | | | | |
|---|---|--|--|---|--|--|---|--|--|--|
| U | F | | | - | | | - | | | |
|---|---|--|--|---|--|--|---|--|--|--|

Type

Number of slots (see tables)

Slot spacing (8, 12 or 16 mm)

Length[mm]

Ordering example: Trip rail with 3 slots, slot spacing 12 mm, length 275 mm
UF03 - 12 - 0275

* Only trip rails UF12 and UF16 are in accordance with DIN 69 638.

Type series UFA8...

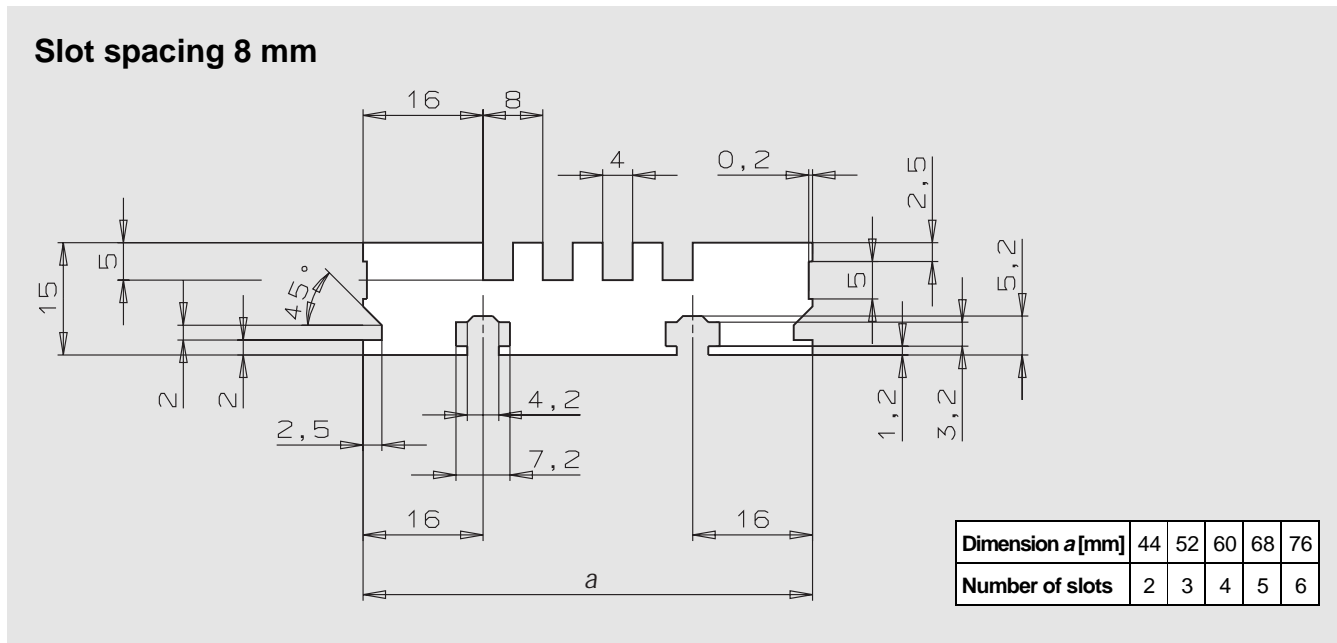
Slot spacing

8 mm

Material:
Length:

aluminium
2010 mm

Dimension drawing



Ordering table

U F A [] - 8 - 2 0 1 0

Type

Number of slots (see tables)

Slot spacing[mm]

Length 2010 mm (minimum order quantity 2010 mm, 1 bar)

Refer to page 19 for assembly instructions and accessories.

Type series U1216...

according to DIN 69639 form UA / UB

Actuation

Material:
For trip rails:

mechanical

steel, hardened and polished
ULA / UL / UF, 12 or 16 mm

Dimension drawing

Fig. 1

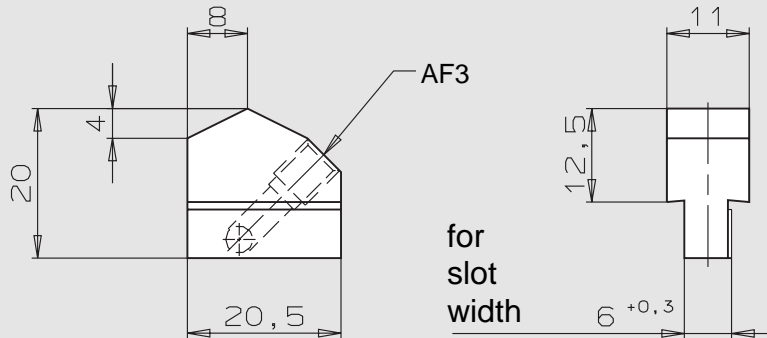
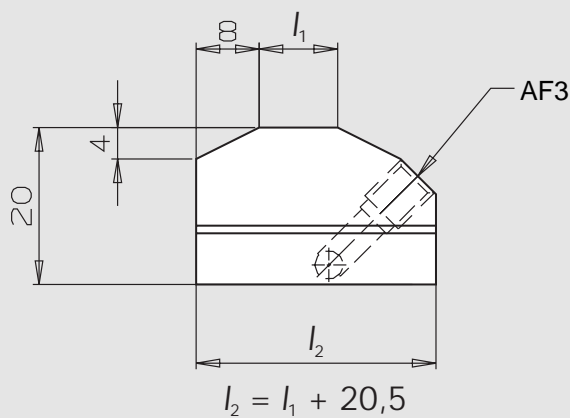
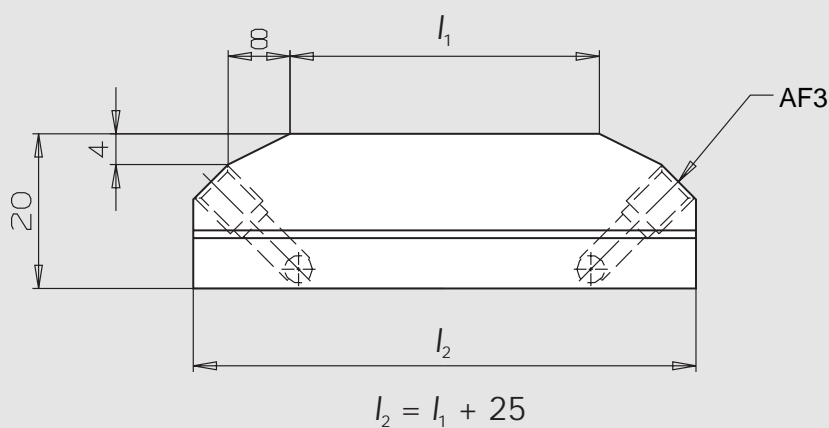


Fig. 2



| l_1 | Fig. | DIN/form |
|-------|------|----------|
| 0 | 1 | UA |
| 4 | 2 | UA |
| 6,3 | 2 | - |
| 10 | 2 | UA |
| 16 | 3 | UB |
| 25 | 3 | UB |
| 40 | 3 | UB |
| 63 | 3 | UB |
| 100 | 3 | UB |
| 125 | 3 | - |

Fig. 3



Ordering table

| | | | | | | | | |
|---|---|---|---|---|---|--|--|--|
| U | 1 | 2 | 1 | 6 | - | | | |
|---|---|---|---|---|---|--|--|--|

Type

Length (l_1)

Type series UZ1216...

Safety trip dog

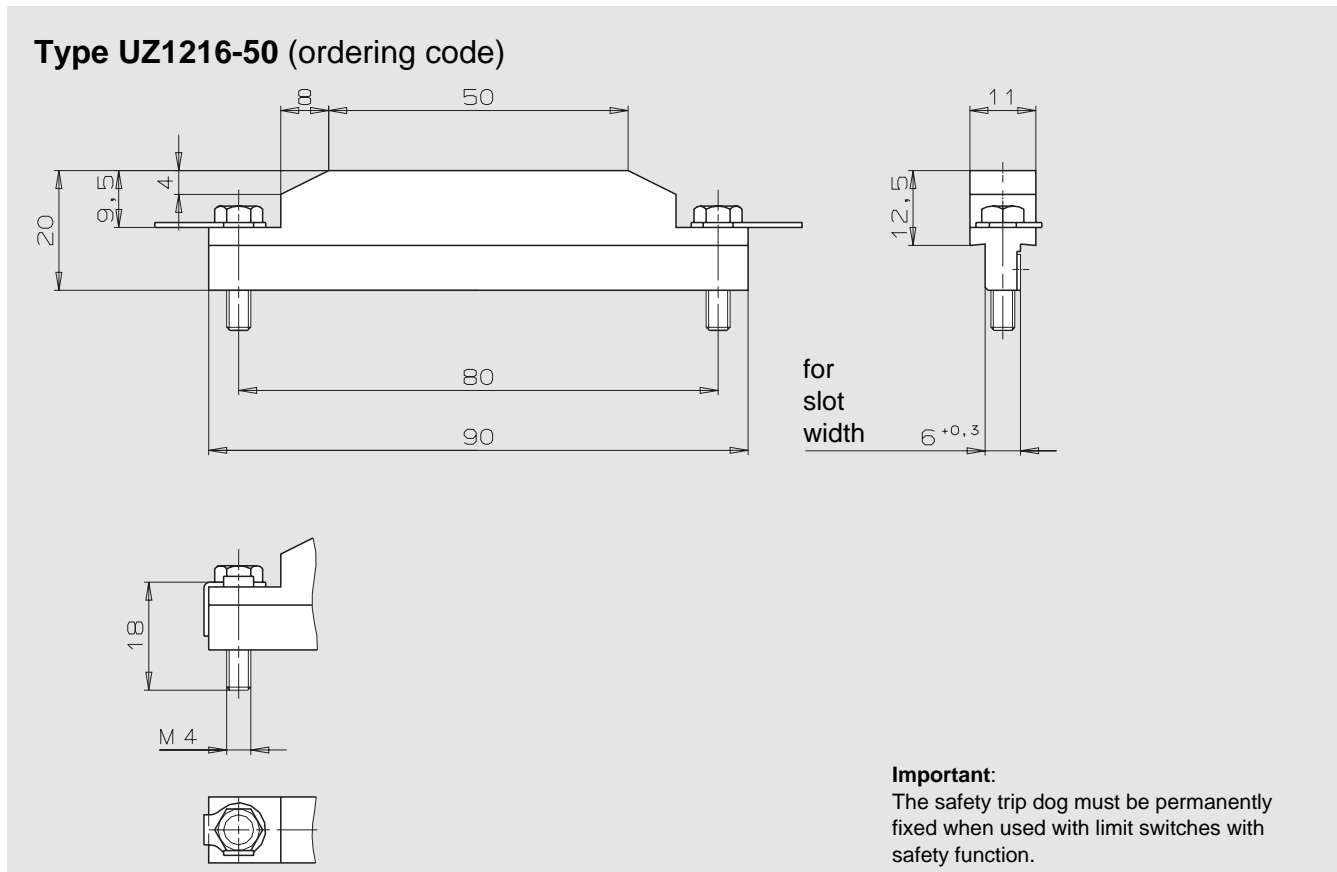
Actuation

Material:
For trip rails:

mechanical

steel, hardened and polished
ULA / UL / UF, 12 or 16 mm

Dimension drawing



Type series UE1216...

Fine adjustment dog

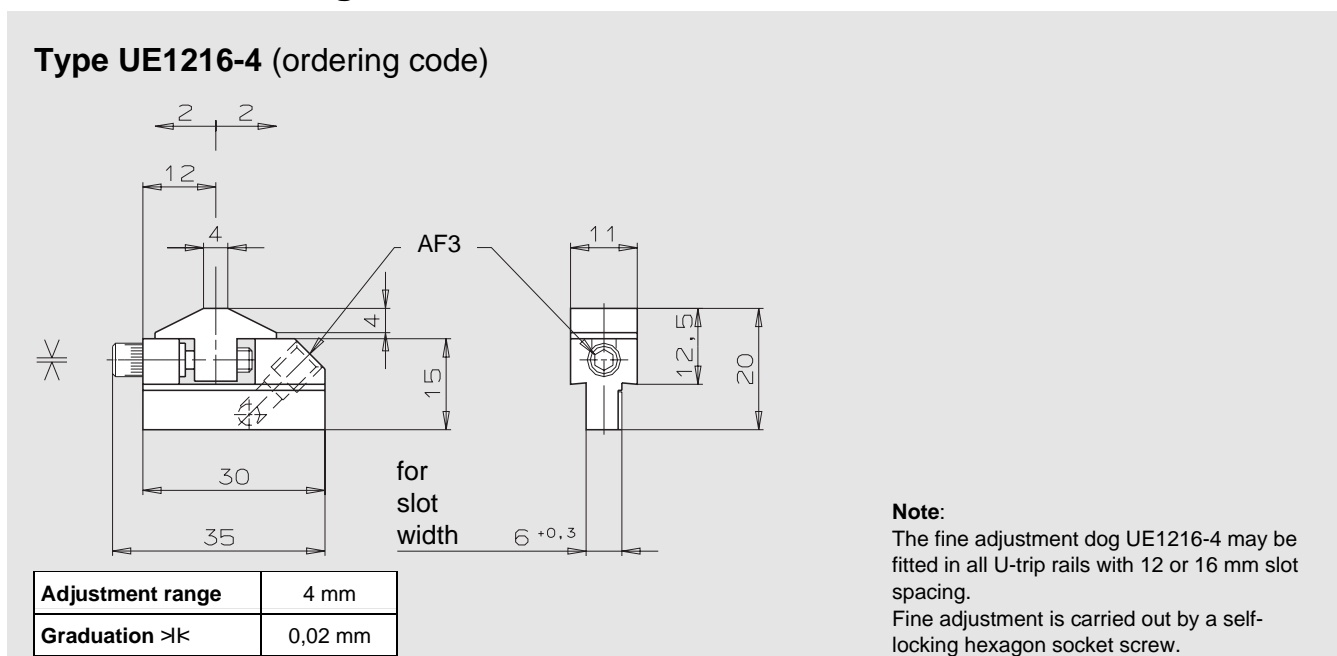
Actuation

Material:
For trip rails:

mechanical

steel, hardened and polished
ULA / UL / UF, 12 or 16 mm

Dimension drawing



Type series U8...

Actuation

mechanical

Material:
For trip rails:

steel, hardened and polished
UF8 / UFA8

Dimension drawing

Type U8

Fig. 1

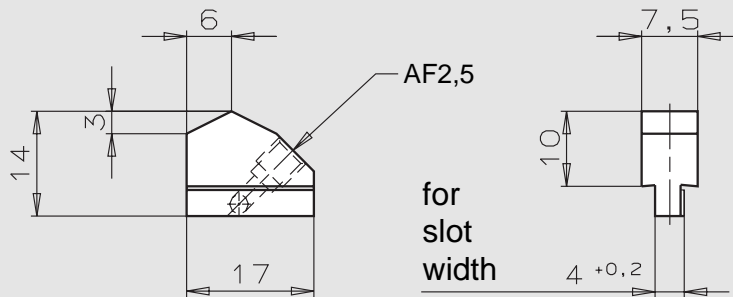
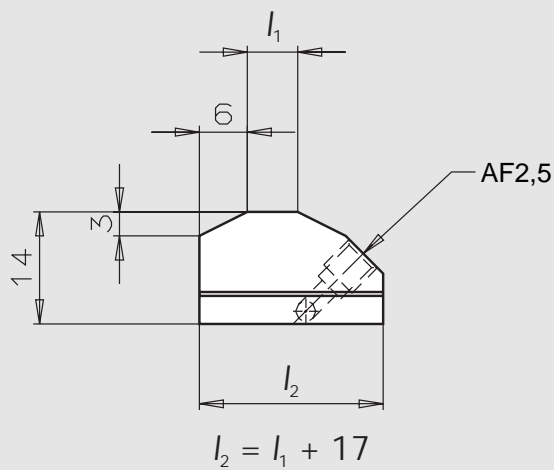
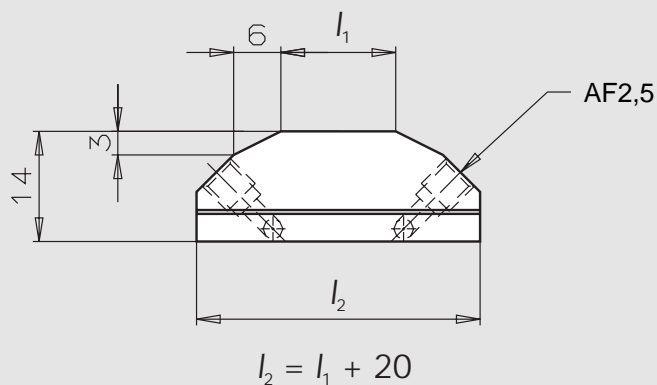


Fig. 2



| l_1 | Fig. |
|-------|------|
| 0 | 1 |
| 4 | 2 |
| 6,3 | 2 |
| 10 | 3 |
| 16 | 3 |
| 25 | 3 |
| 40 | 3 |
| 63 | 3 |
| 100 | 3 |

Fig. 3



Ordering table

| | | | | | |
|---|---|---|--|--|--|
| U | 8 | - | | | |
|---|---|---|--|--|--|

Type

Length (l_1)

Type series UEN... / UEG...

Actuation

mechanical

Fine adjustment dog with micrometer

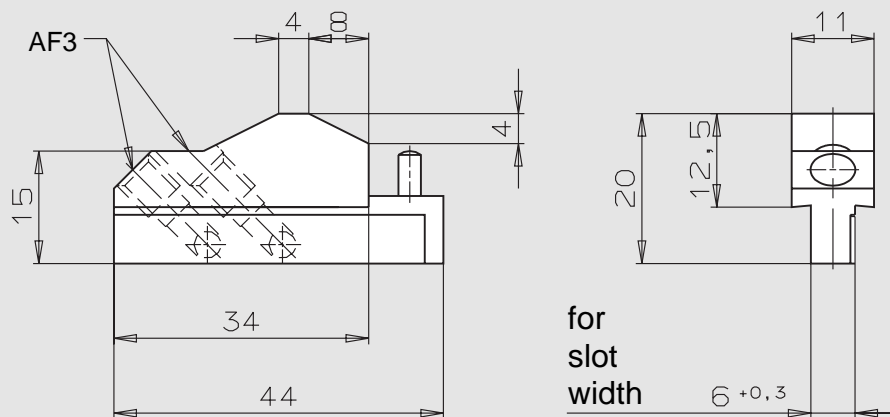
For trip rails:

ULA / UL / UF, 12 or 16 mm

Dimension drawing

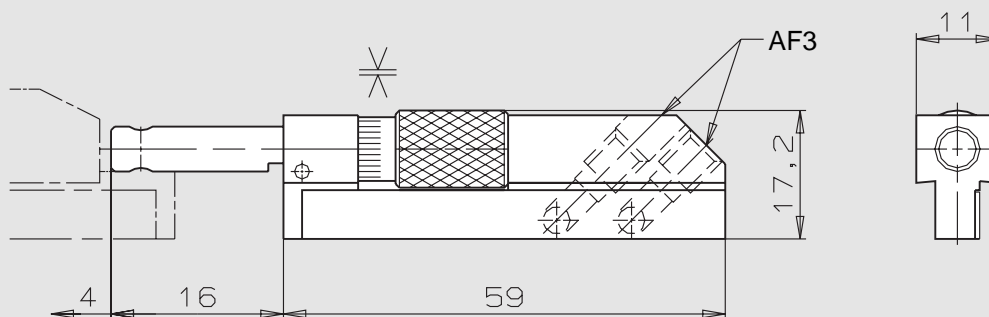
Type UEN1216 (ordering code)

Material



Type UEG1216 (ordering code)

Material



| | |
|------------------|---------|
| Adjustment range | 4 mm |
| Graduation >k | 0,02 mm |

Note:

The fine adjustment combination UEN1216/UEG1216 may be fitted to all U-trip rails with 12 or 16 mm slot spacing. After clamping adjustment micrometer UEG1216 in position, the fine adjustment dog UEN1216 may be moved as required by turning the micrometer screw.

At the desired setting the fine adjustment dog is clamped in position and the adjustment micrometer may be left in position or removed from the trip rail for other uses by unscrewing the locking screw.

Type series UX...

Actuation

proximity

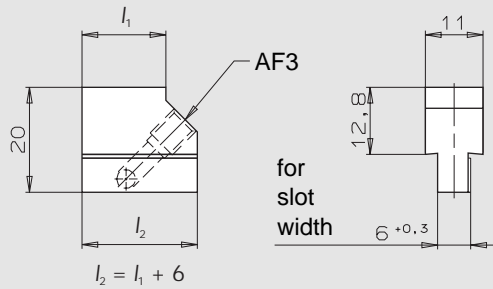
Material:
For trip rails:

steel, black finished
ULA / UL / UF, 8, 12 or 16 mm

Dimension drawing

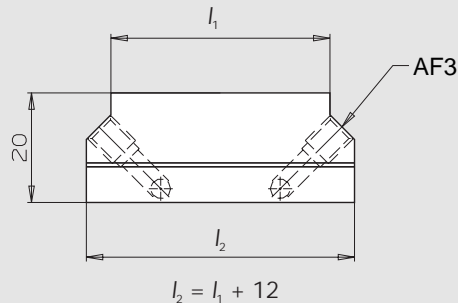
Type UX1216 for trip rails 12 or 16 mm

Fig. 1



| l ₁ | Fig. |
|----------------|------|
| 10 | 1 |
| 16 | 1 |
| 25 | 2 |
| 40 | 2 |
| 63 | 2 |
| 100 | 2 |
| 125 | 2 |

Fig. 2



Ordering table

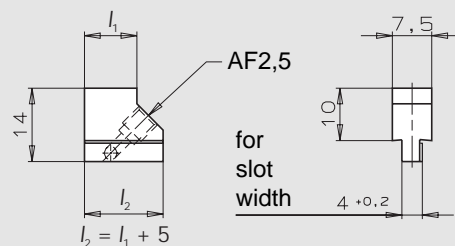
| | | | | | | | | | |
|---|---|---|---|---|---|---|--|--|--|
| U | X | 1 | 2 | 1 | 6 | - | | | |
|---|---|---|---|---|---|---|--|--|--|

Type

Length (l₁)

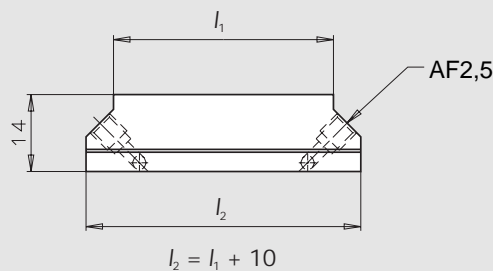
Type UX8 for trip rails 8 mm

Fig. 1



| l ₁ | Fig. |
|----------------|------|
| 6 | 1 |
| 10 | 1 |
| 16 | 1 |
| 25 | 2 |
| 40 | 2 |
| 63 | 2 |
| 100 | 2 |

Fig. 2



Ordering table

| | | | | | | |
|---|---|---|---|--|--|--|
| U | X | 8 | - | | | |
|---|---|---|---|--|--|--|

Type

Length (l₁)

Type series GF...

G-type trip rail according to DIN 69638 form C

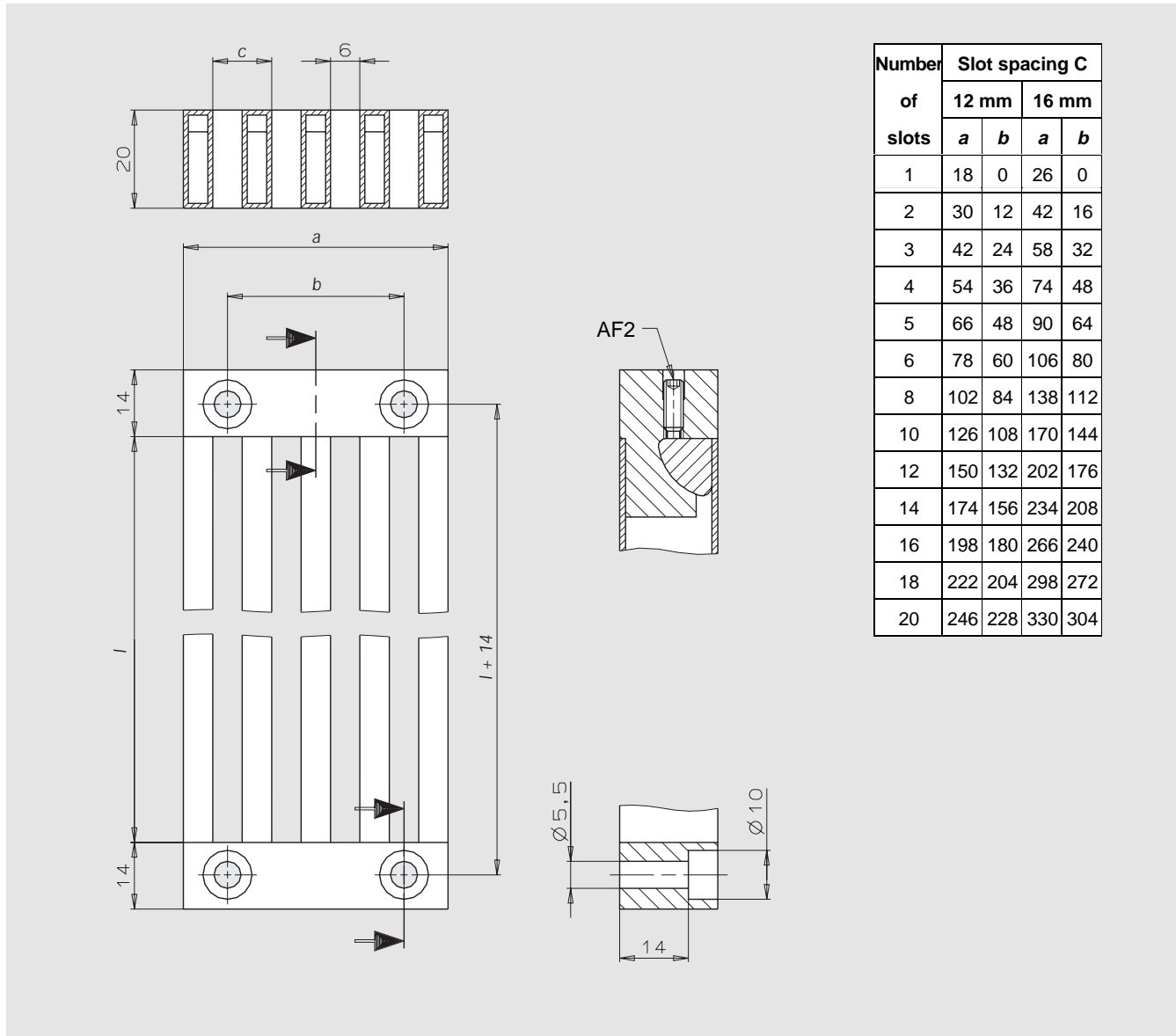
Slot spacing

12 or 16 mm

Material:
Length:

steel, galvanized
max. 2000 mm

Dimension drawing



| Number of slots | Slot spacing C | | | |
|-----------------|----------------|-----|-------|-----|
| | 12 mm | | 16 mm | |
| | a | b | a | b |
| 1 | 18 | 0 | 26 | 0 |
| 2 | 30 | 12 | 42 | 16 |
| 3 | 42 | 24 | 58 | 32 |
| 4 | 54 | 36 | 74 | 48 |
| 5 | 66 | 48 | 90 | 64 |
| 6 | 78 | 60 | 106 | 80 |
| 8 | 102 | 84 | 138 | 112 |
| 10 | 126 | 108 | 170 | 144 |
| 12 | 150 | 132 | 202 | 176 |
| 14 | 174 | 156 | 234 | 208 |
| 16 | 198 | 180 | 266 | 240 |
| 18 | 222 | 204 | 298 | 272 |
| 20 | 246 | 228 | 330 | 304 |

Ordering table

| | | | | | | | | | | |
|----------|----------|--|--|---|--|--|---|--|--|--|
| G | F | | | - | | | - | | | |
|----------|----------|--|--|---|--|--|---|--|--|--|

Type

Number of slots (see tables)

Slot spacing (12 or 16 mm)

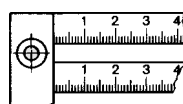
Length * [mm]

Ordering example: Trip rail with 8 slots, slot spacing 16 mm, length 950 mm
GF08 - 16 - 0950 *

* Support brackets are required for lengths over 600 mm. Refer to page 19, accessories.

Note:

Fully-assembled G-type trip rails may be engraved to your specification subject to a surcharge.



Type series GFE... / GFR...

G-type trip rails according to DIN 69638 form C
Self-assembly kit

Slot spacing

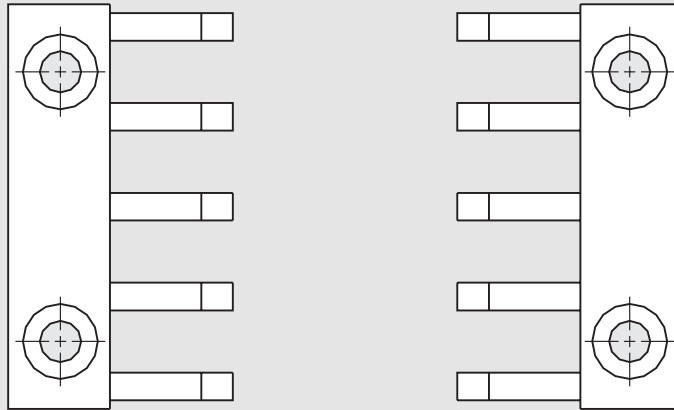
Material:
Length:

12 or 16 mm

steel, galvanized
1000 / 1500 / 2000 mm

Dimension drawing

End piece pairs type GFE



Guide tubes type GFR

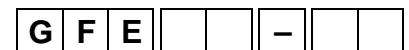


Ordering table

Endpiece pairs type

Number of slots (see table page 16)

Slot spacing (12 or 16 mm)



Guide tubes type

Slot spacing (12 or 16 mm)

Length * (preferable length 1000, 1500 or 2000 mm)



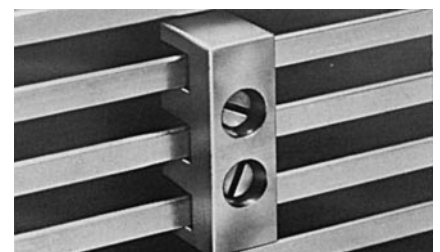
Ordering example: Kit with 8 slots, slot spacing 16 mm, length 1500 mm

End piece pairs: **GFE 08 – 16**

Guide tubes: **GFR 16 – 1500 ***

Refer to page 22 for assembly instructions.

* Support brackets are required for lengths over 600 mm.
Refer to page 19, accessories.



Type series G1216...

according to DIN 69639 form G

Actuation

Material:
For G-type trip rails:

mechanical

steel, hardened and polished
GF, 12 or 16 mm

Dimension drawing

Type G1216...

Fig. 1

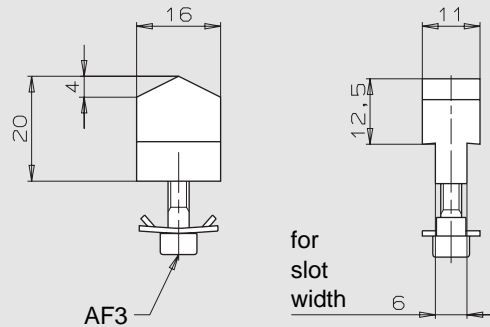
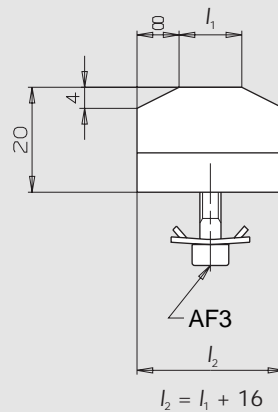
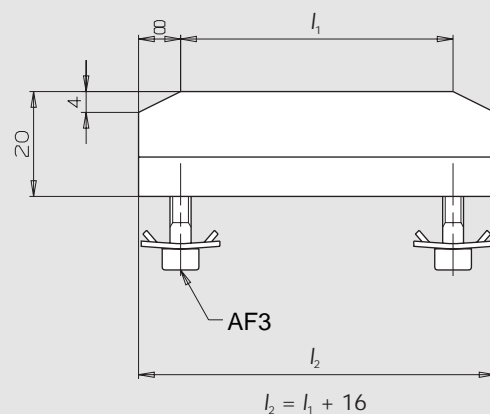


Fig. 2



| l_1 | Fig. | DIN/form |
|-------|------|----------|
| 0 | 1 | G |
| 4 | 2 | G |
| 10 | 2 | G |
| 16 | 2 | G |
| 25 | 2 | G |
| 40 | 2 | G |
| 63 | 3 | G |
| 100 | 3 | G |

Fig. 3



Ordering table

G 1 2 1 6 -

Type

Length (l_1)

Type series GE... / GEN...

Fine adjustment dog with adjustment unit

Actuation

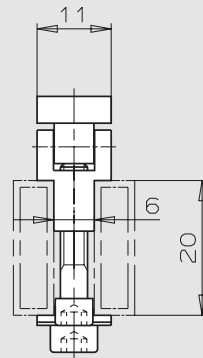
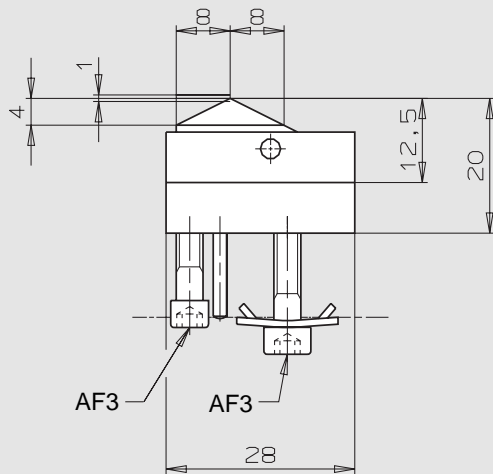
Material:
For G-type trip rails:

mechanical

steel, hardened and polished
GF, 12 or 16 mm

Dimension drawing

Type GE1216-0 (ordering code)

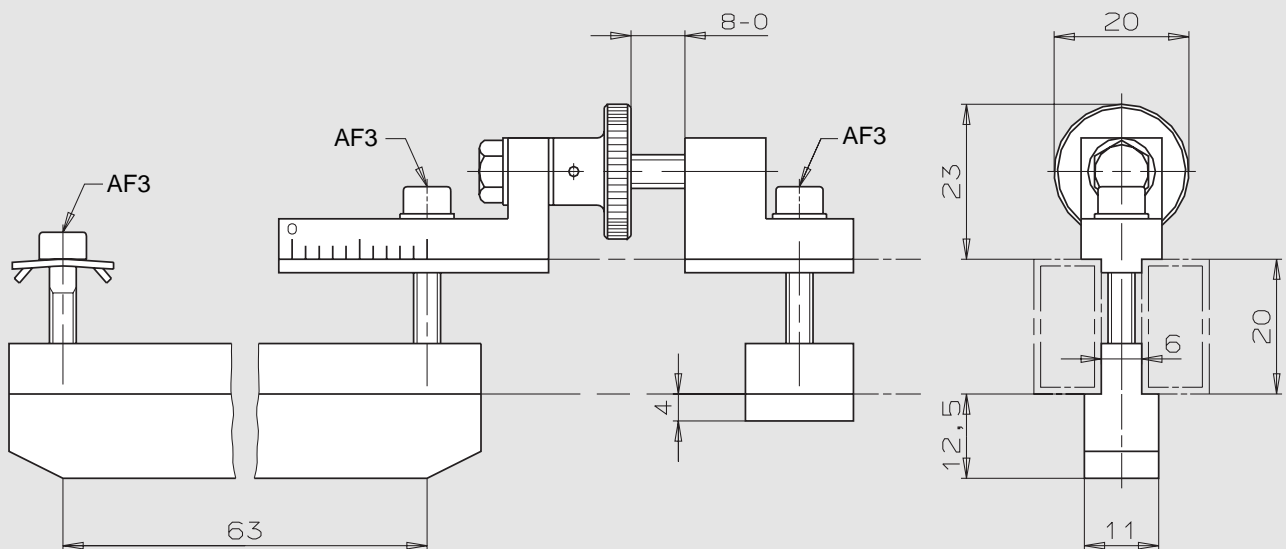


| | |
|------------------|------|
| Adjustment range | 1 mm |
|------------------|------|

Note:

The fine adjustment dog GE1216-0 may be fitted to G-type trip rails with 12 or 16 mm slot spacing. Fine adjustment is carried out by means of a self-locking hexagon socket screw.

Type GEN1216-63 (ordering code)



| | |
|------------------|------|
| Adjustment range | 8 mm |
|------------------|------|

Note:

The fine adjustment dog GEN1216-63 may be fitted to G-type trip rails with 12 or 16 mm slot spacing. Fine adjustment is carried out by means of a knurled screw.

Type series GX... / GEX...

Actuation

proximity

Material:
For G-type trip rails:

steel, black finished
GF, 12 or 16 mm

Dimension drawing

Type GX1216

Fig. 1

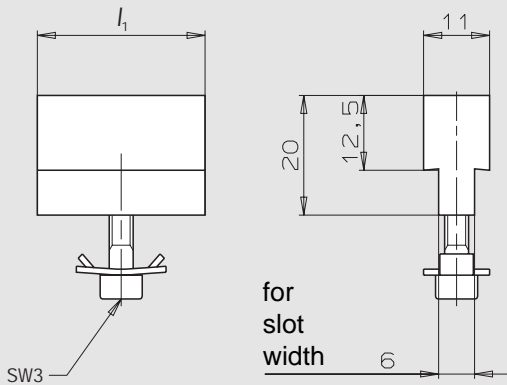
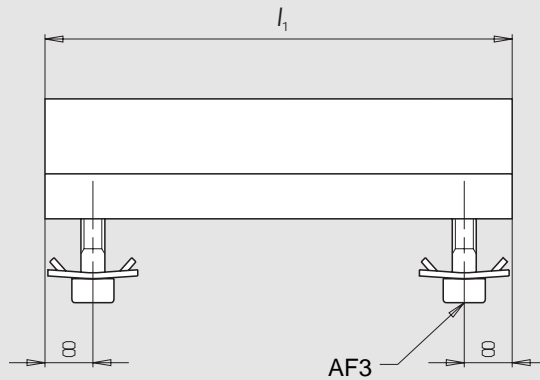


Fig. 2



| l ₁ | Fig. |
|----------------|------|
| 10 | 1 |
| 16 | 1 |
| 25 | 1 |
| 40 | 1 |
| 63 | 2 |
| 100 | 2 |

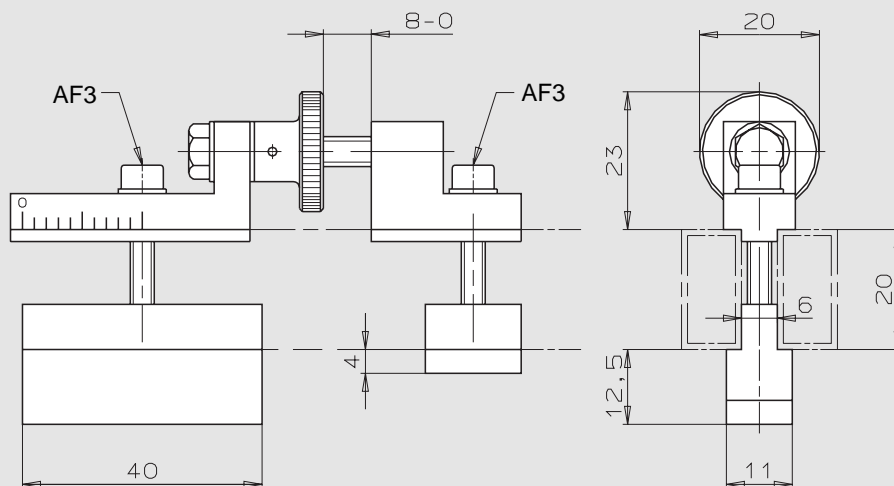
Ordering table

| | | | | | | | | | |
|---|---|---|---|---|---|---|--|--|--|
| G | X | 1 | 2 | 1 | 6 | - | | | |
|---|---|---|---|---|---|---|--|--|--|

Type

Length (l₁)

Type GEX1216-40 (ordering code)



| | |
|------------------|------|
| Adjustment range | 8 mm |
|------------------|------|

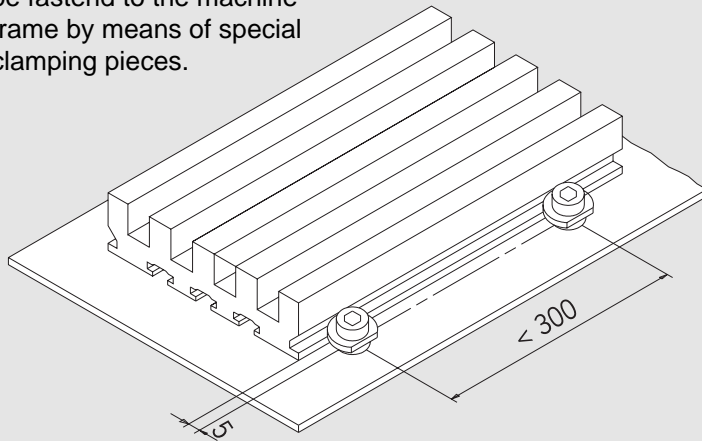
Note:

The fine adjustment dog GEX1216-40 may be fitted to G-type trip rails with 12 or 16 mm slot spacing. Fine adjustment is carried out by means of a knurled screw.

Accessories / Assembly Parts

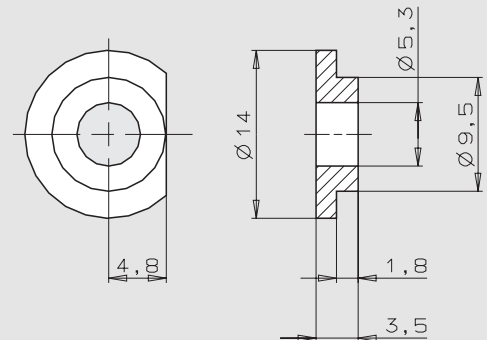
Trip rails type ULA/UFA

The trip rail types ULS/UFA (aluminium) should preferably be fastened to the machine frame by means of special clamping pieces.



Clamping piece

(Cat. No. 025 519)

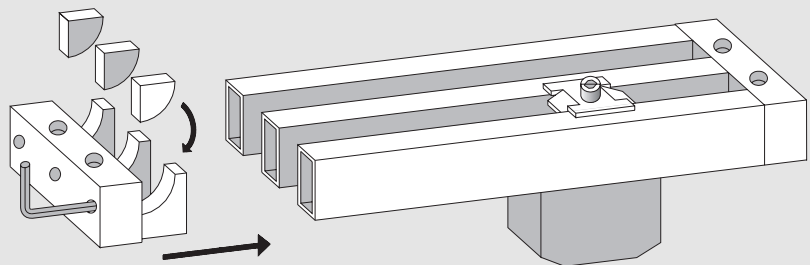


Trip rail system-G kit for self-assembly.

The kit comprises two end pieces, the pressure segments and the appropriate number of guide tubes. All parts are corrosion protected by a special surface coating. The kit allows the user to assemble trip rails of any length up to 2000 mm (special support brackets are required for length over 600 mm, refer to drawings).

Guide tubes are cut to the required length and using the end pieces,

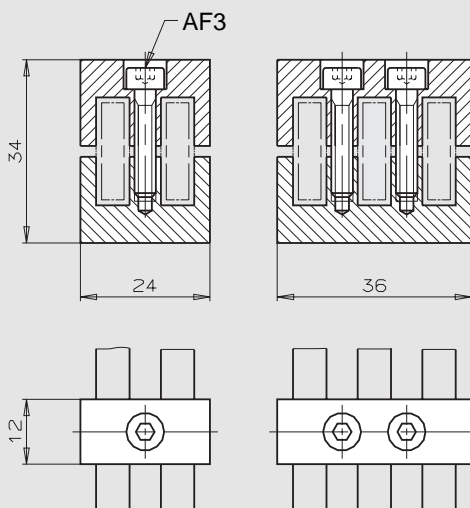
screwed together to form a trip rail (see illustration).



For slot spacing 12 mm

Support bracket
Cat. No. 027 459

Support bracket
Cat. No. 027 460



For slot spacing 16 mm

Support bracket
Cat. No. 027 461

Support bracket
Cat. No. 027 462

