RADIATING CABLES
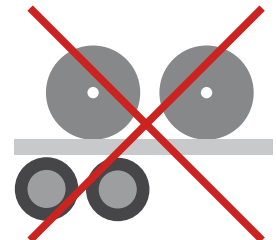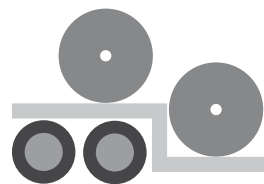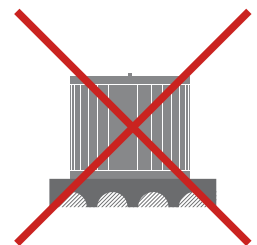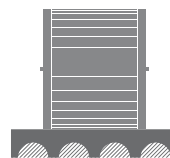
Kabelwerk **EUPEN** AG
cable

SAFETY ON SITE

- Cordoning - off the working area
- Warning Signs
- Warning Cones
- Warning Lights
- Warning Tape

- Keeping the access and emergency routes clear of
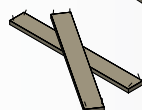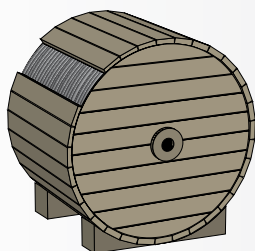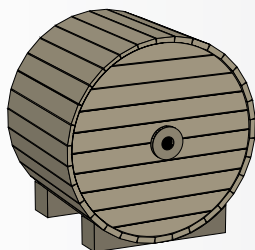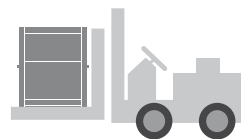- Materials
- Tolls
- Vehicles

- Fire precautions
- Easily inflamable materials should be ...
  - kept to a minimum
  - disposed of immediately if not necessary any longer
  - brought into the tunnel only in the amount required
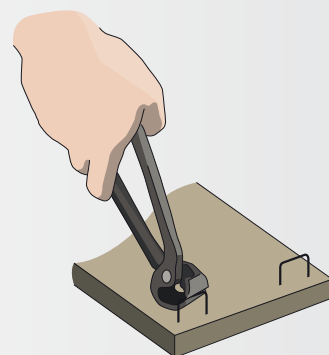
RADIATING CABLE POSITIONING IN TUNNELS

1m

1m

1m

1m

1m

1m

1m

Ducts

No radiating cable in these areas
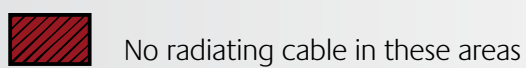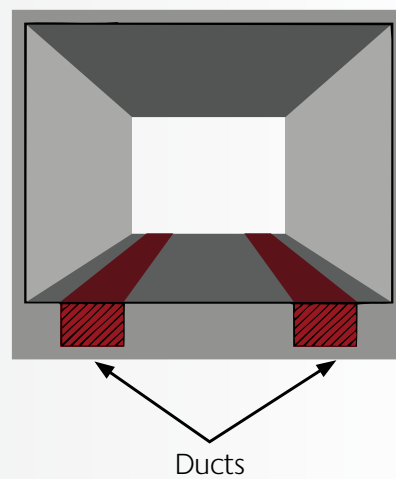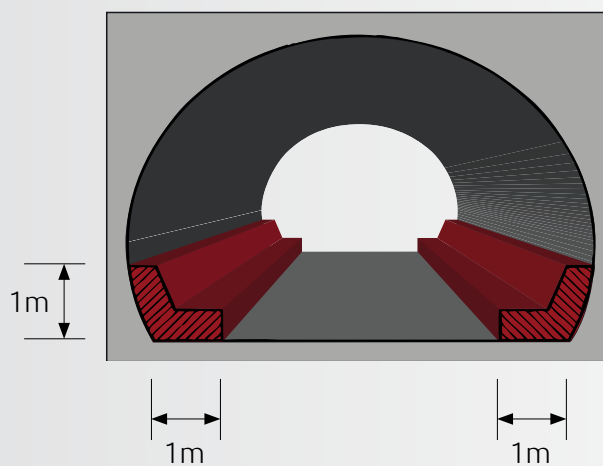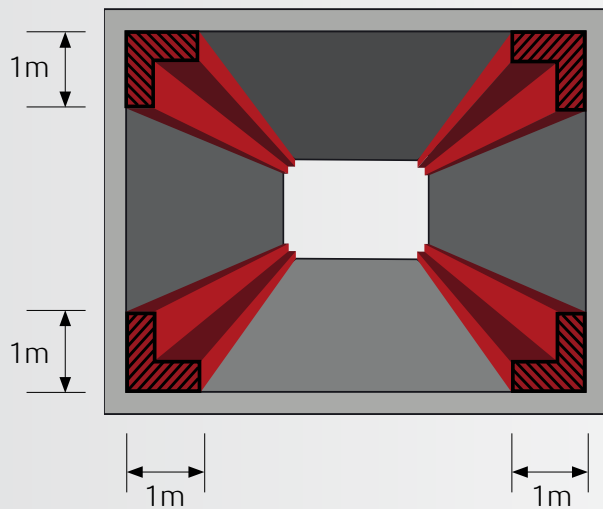
ORIENTATION OF SLOTS FOR RMC CABLES

Apertures oriented towards area to be covered.
The slots are located 180° opposite to an embossed line on the jacket.

+/- 45°

min 1m

A
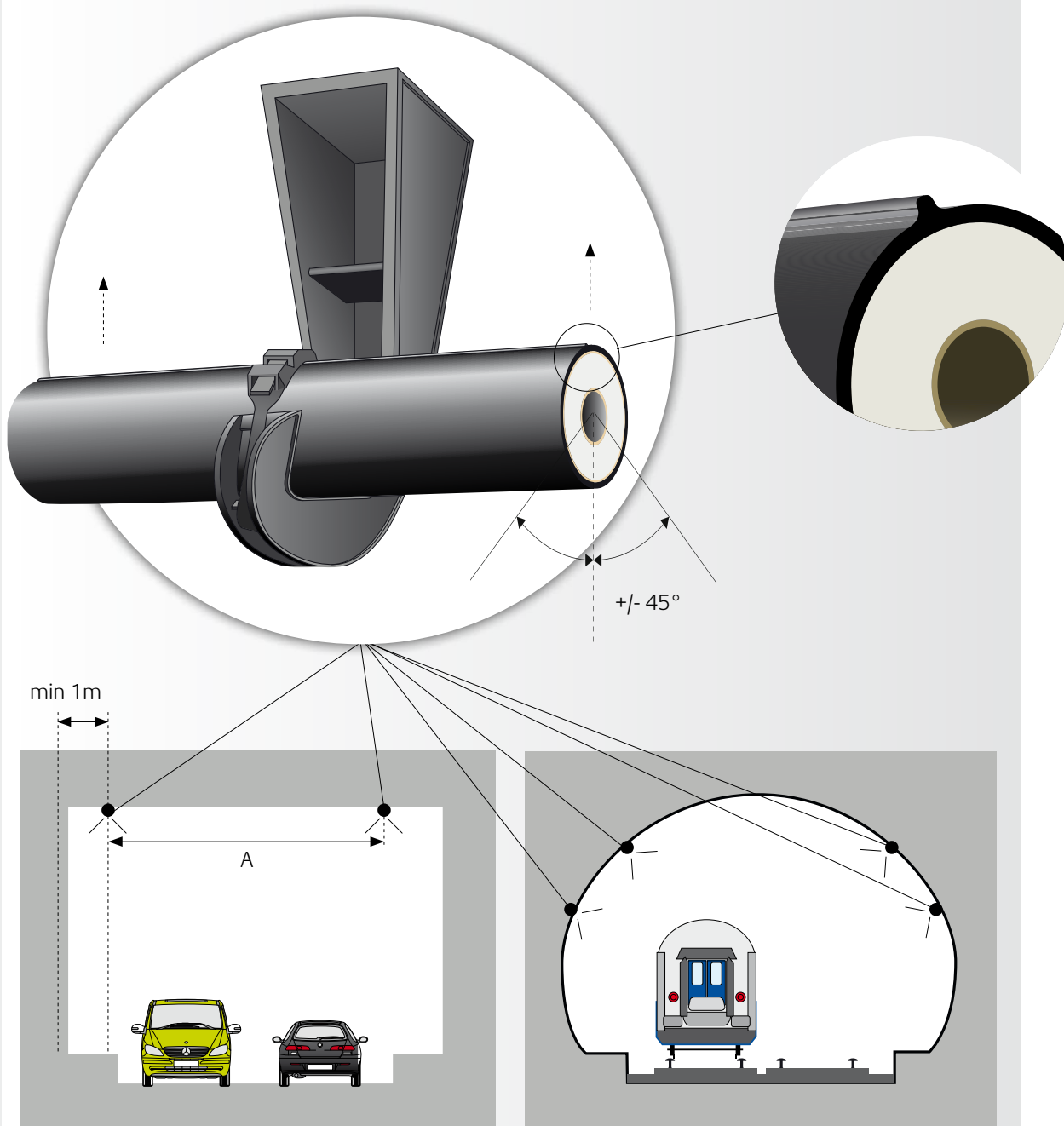
A= Recommended
zone for RMC-
cable

EUPEN

ORIENTATION OF SLOTS FOR RMC CABLES

The slots are located 180° opposite to an embossed line on the jacket.

Figure 1 : Electric lines of force with the

+/- 45°
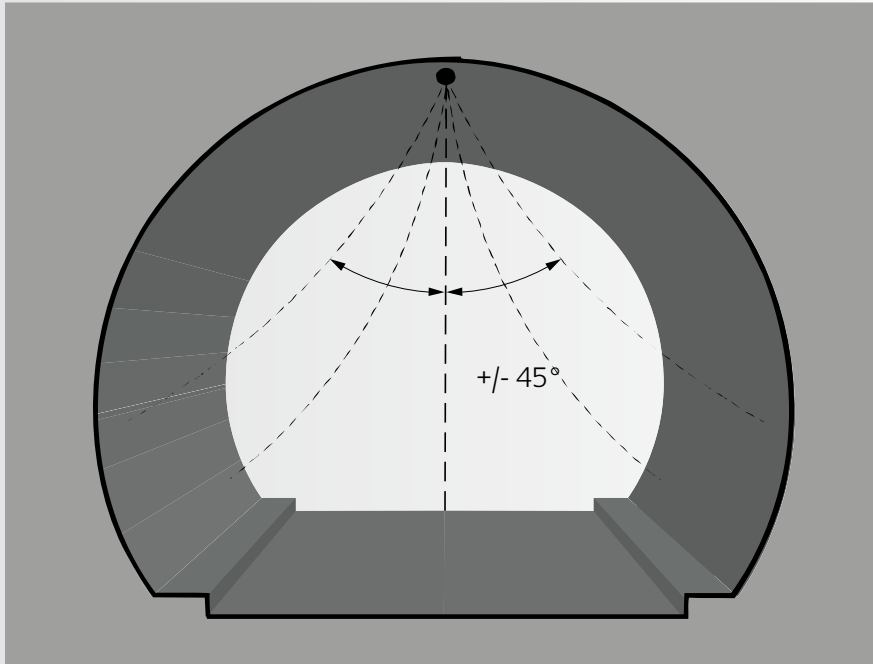
Figure 1:
Electric field lines with the RC hung in the centre of the ceiling

SLOTS FOR RMC AND CMC

e identified by the jacket marking on a do

+/- 45

+/-45°

Figure 2:
Electric field lines with the RC hung at one side

For LSC-and CMC-cables a cable orientation is not needed.

DRILLING AND CLAMPING

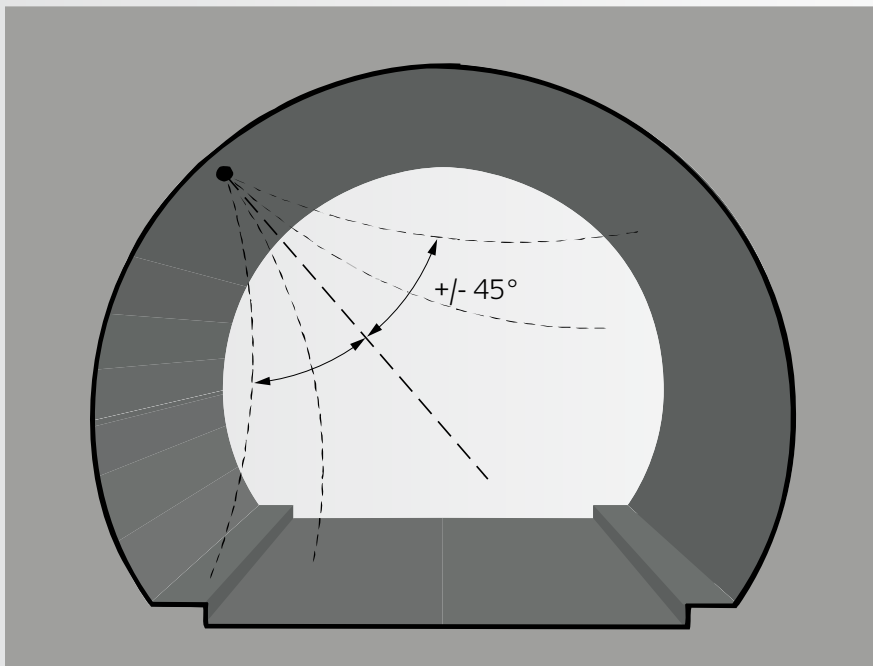Every 1 meter, the recommended hangers can be clic clamps
or hook hangers without fire resistant belt.
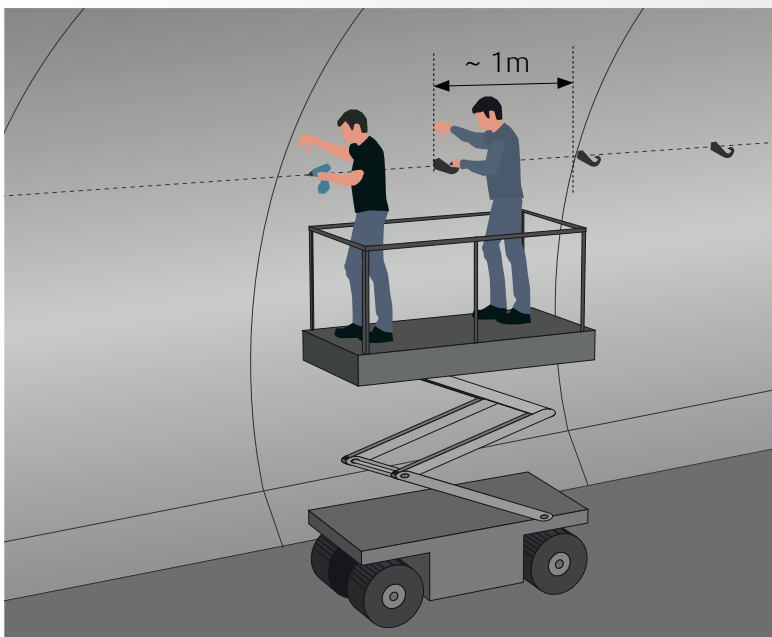
Every 10 meters, the recommended hangers should be of fire resistant type.
They can be hook hangers with metal anchor and fire resistant belt, or clip hangers,
or steel clamps.
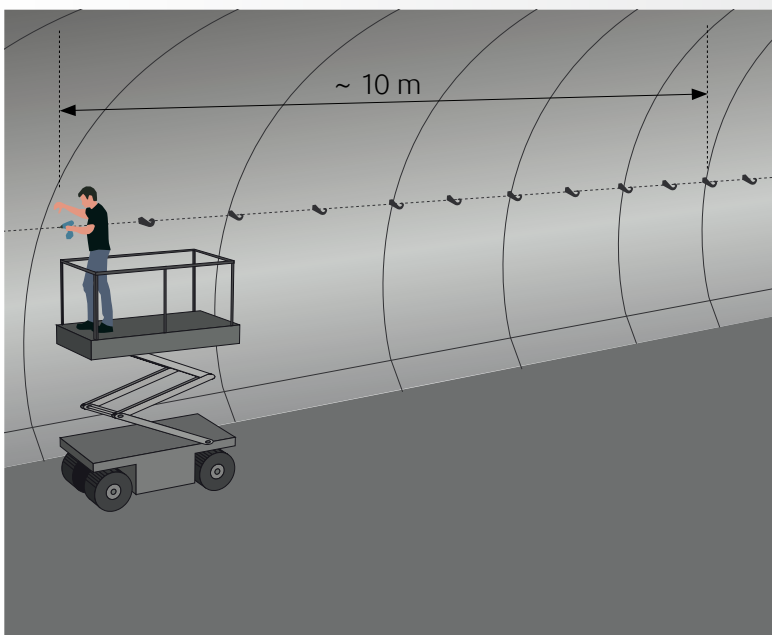
INSTALLATION MATERIAL

Eupen hook hanger for radiating cable installation

Washer

Hammer screw

85 mm

175 mm

Installation instruction for hanger with hammer screw

(recommended every 1 meter)

A hangers for radiating coaxial cable
B hammer screw
C cable fastener band
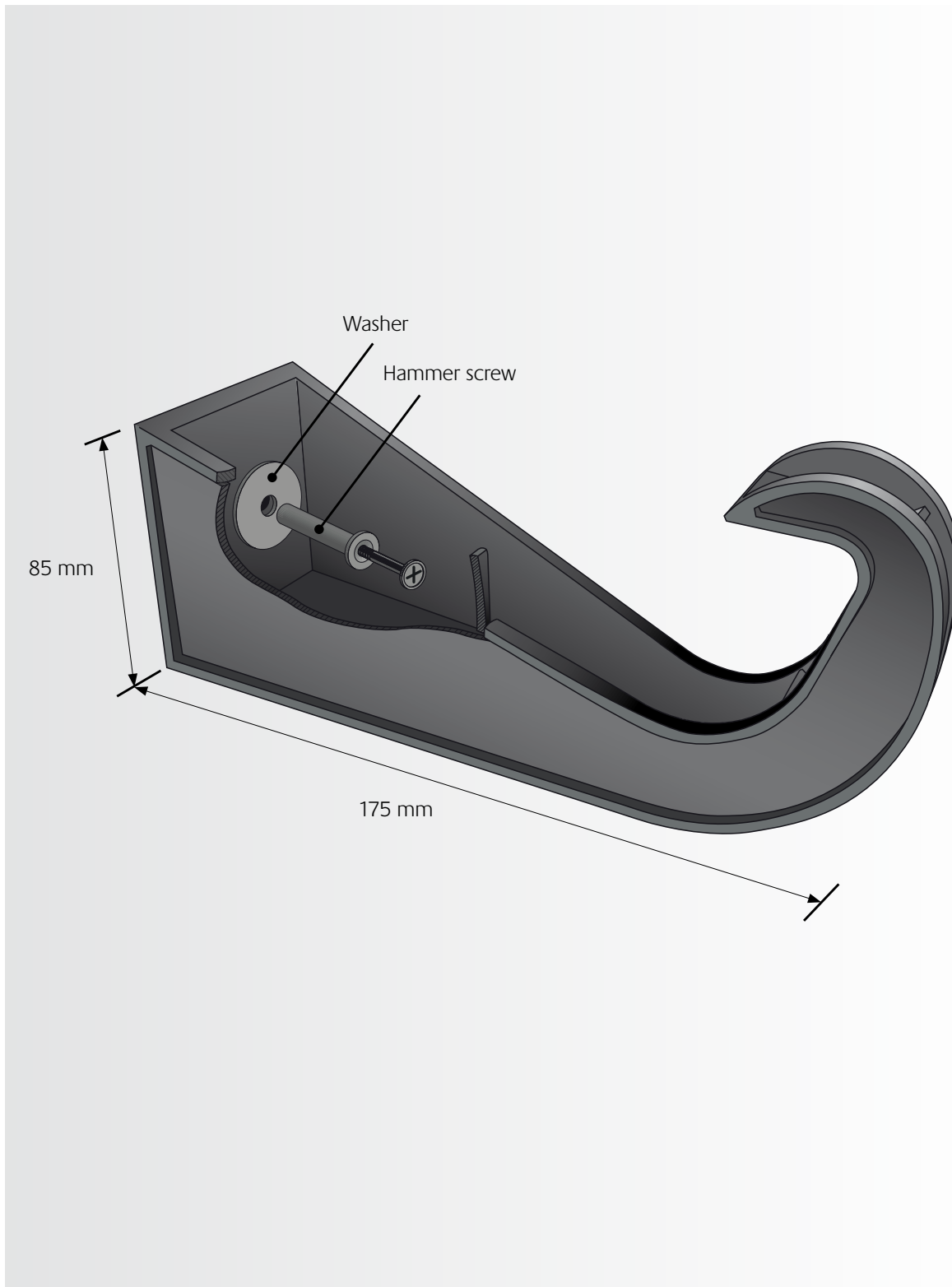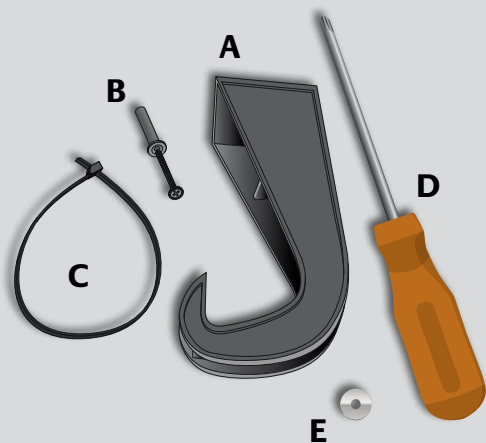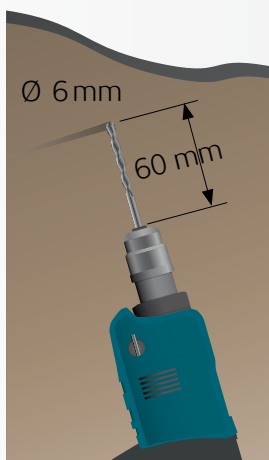**D** adapted tool for hammer screw
E metal washer

Hangers for radiating coaxial cable from 1/2" to 1-5/8", consisting of glass fiber strengthened "Durethan":
  • halogen free, according to DIN VDE 0472 part 815;
  • fire retardant according to UL 94 class V-O;
  • UV-resistant.

1

Drill a hole of 6 mm diameter and minimum 60 mm depth into a solid ground.

Ø 6 mm

60 mm

2

Using an adapted tool, strike the hammer screw through the washer and the hanger into the 6 mm drilling hole.

3

Hook the cable and fix it with cable fastener band.

Installation instruction for hanger with metal anchor and fire resistant belt

(recommended every 10 meters)

A hangers for radiating coaxial cable
B Metallic stud anchor M6 + small washer
C cable fastener band
D adapted tool for metal anchor
E Large metal washer
F FRSB (Fire Resistant Safety Belt)

Hangers for radiating coaxial cable from 1/2" to 1-5/8",
consisting of glass fiber strengthened "Durethan":
- halogen free, according to DIN VDE 0472 part 815;
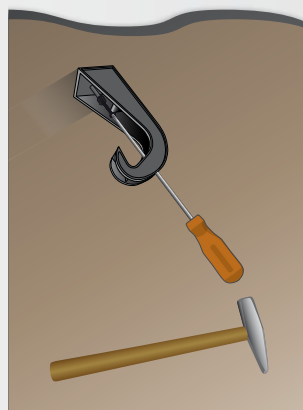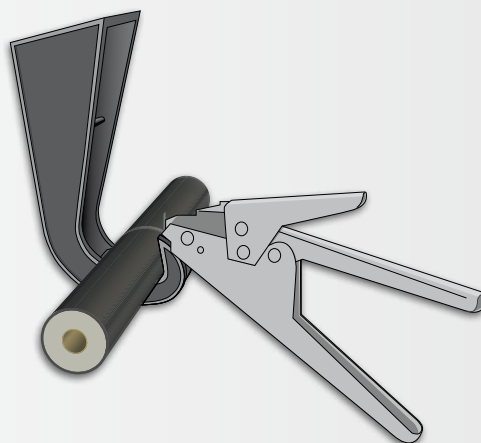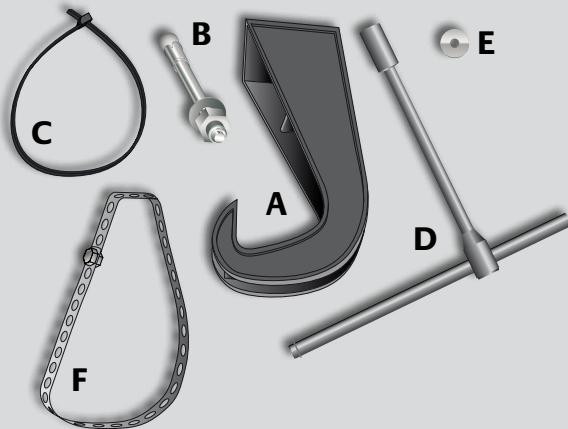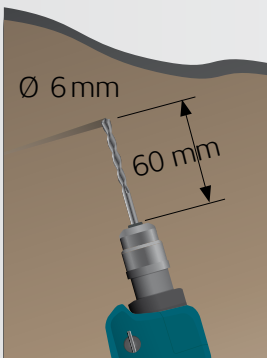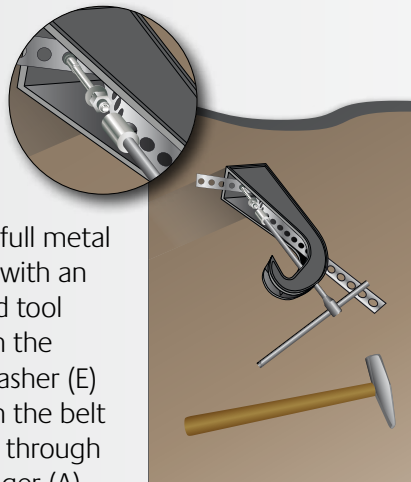- fire retardant according to UL 94 class V-O;
- UV-resistant.

1

Drill a hole of 6 mm diameter and minimum 60 mm depth into a solid ground.
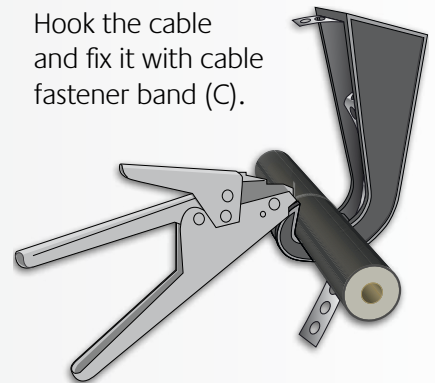
Ø 6 mm

60 mm

3

Drive a full metal anchor with an adapted tool through the large washer (E) through the belt (F), and through the hanger (A)

5

Hook the cable and fix it with cable fastener band (C).

6

Close fire resistant band (F) around cable by tightening the nut and bolt.

2

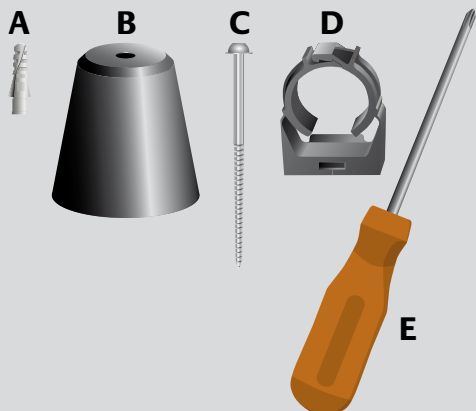Insert the fire resistant band (F) through the bottom of the hanger.

4

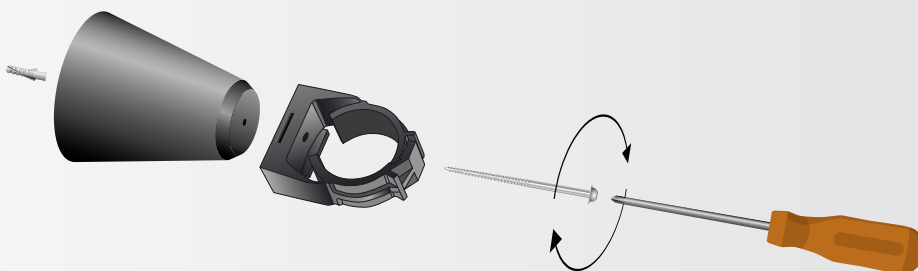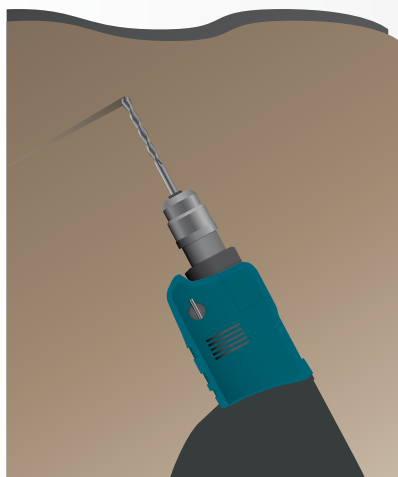Tighten the fixing nut with appropriate tool (D).

Installation instruction for clic clamp with Nylon plug and round base spacer

(recommended every 1 meter)

A Nylon plug P6
B Round base spacer RB80
C Wood screw WS125 ∅ 4,5 mm
D Clic clamp
E Screwdriver (Torx T 25)

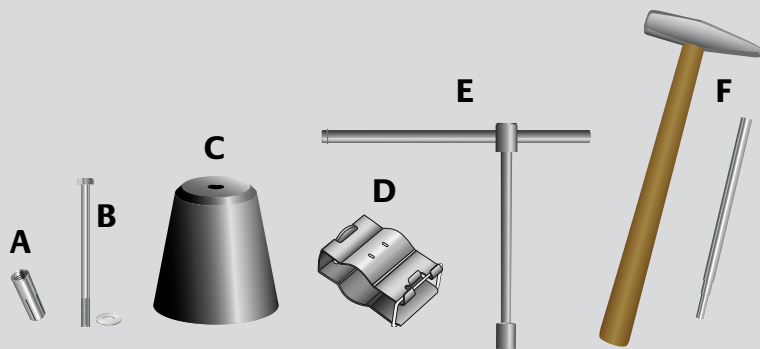**1** Drill a hole of 6 mm and insert the Nylon plug into the wall.
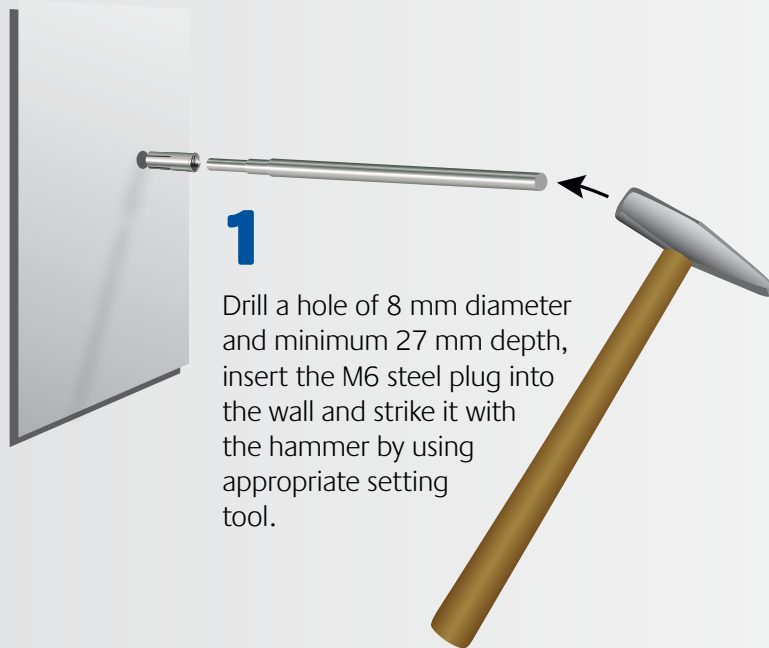
2 Tighten the screw with the screwdriver.

Installation instruction for clip hangers EUCH-xx-NH
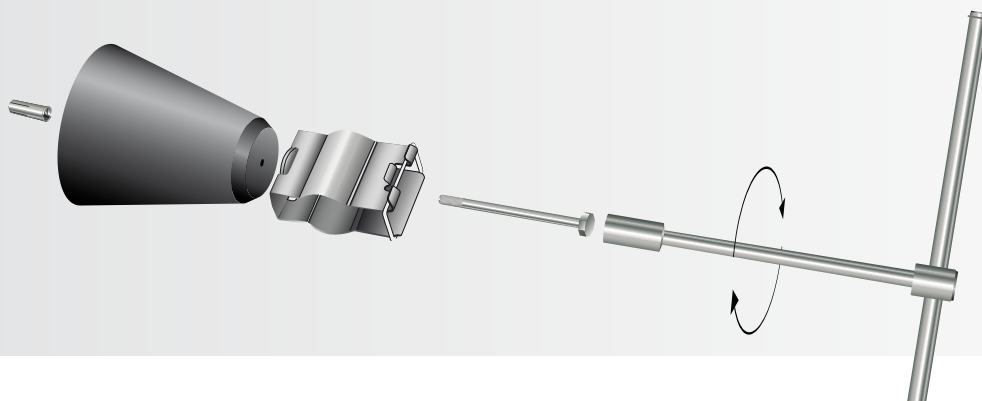
(recommended every 10 meters)

A Stainless steel plug M6 HPM6-SS
B Bolt with metric thread, stainless steel B6/90-SS (M6 x 90, hex socket head), with washer
C Round base spacer RB80
D Clip hanger EUCH-xx-NH
E Tool with hexagonal head 10
F Hammer + setting tool

1 Drill a hole of 8 mm diameter and minimum 27 mm depth, insert the M6 steel plug into the wall and strike it with the hammer by using appropriate setting tool.
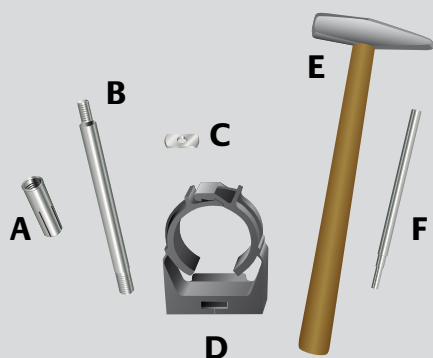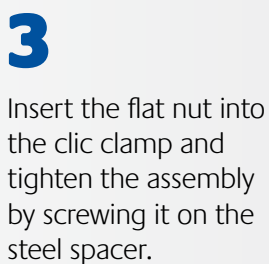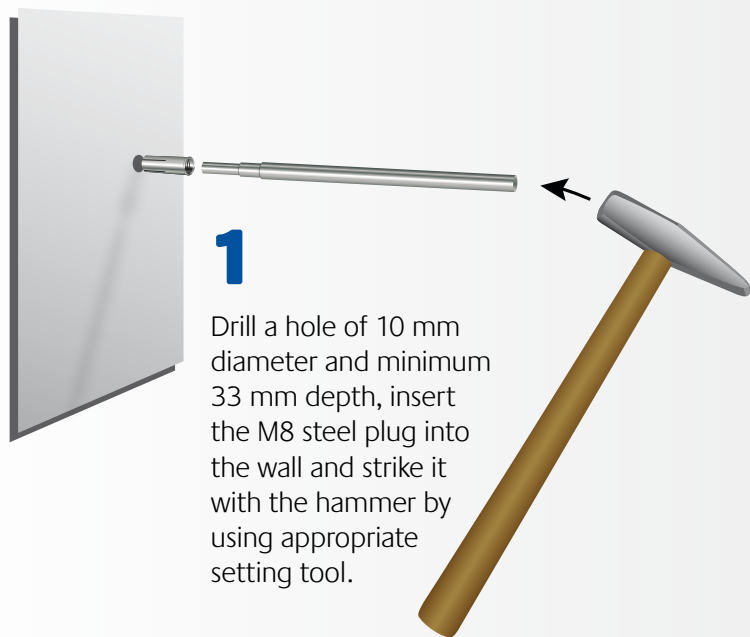
2 Tighten the bolt through the spacer and the hanger (with the washer inside)

Installation instruction for clip clamp with steel plug and steel spacer
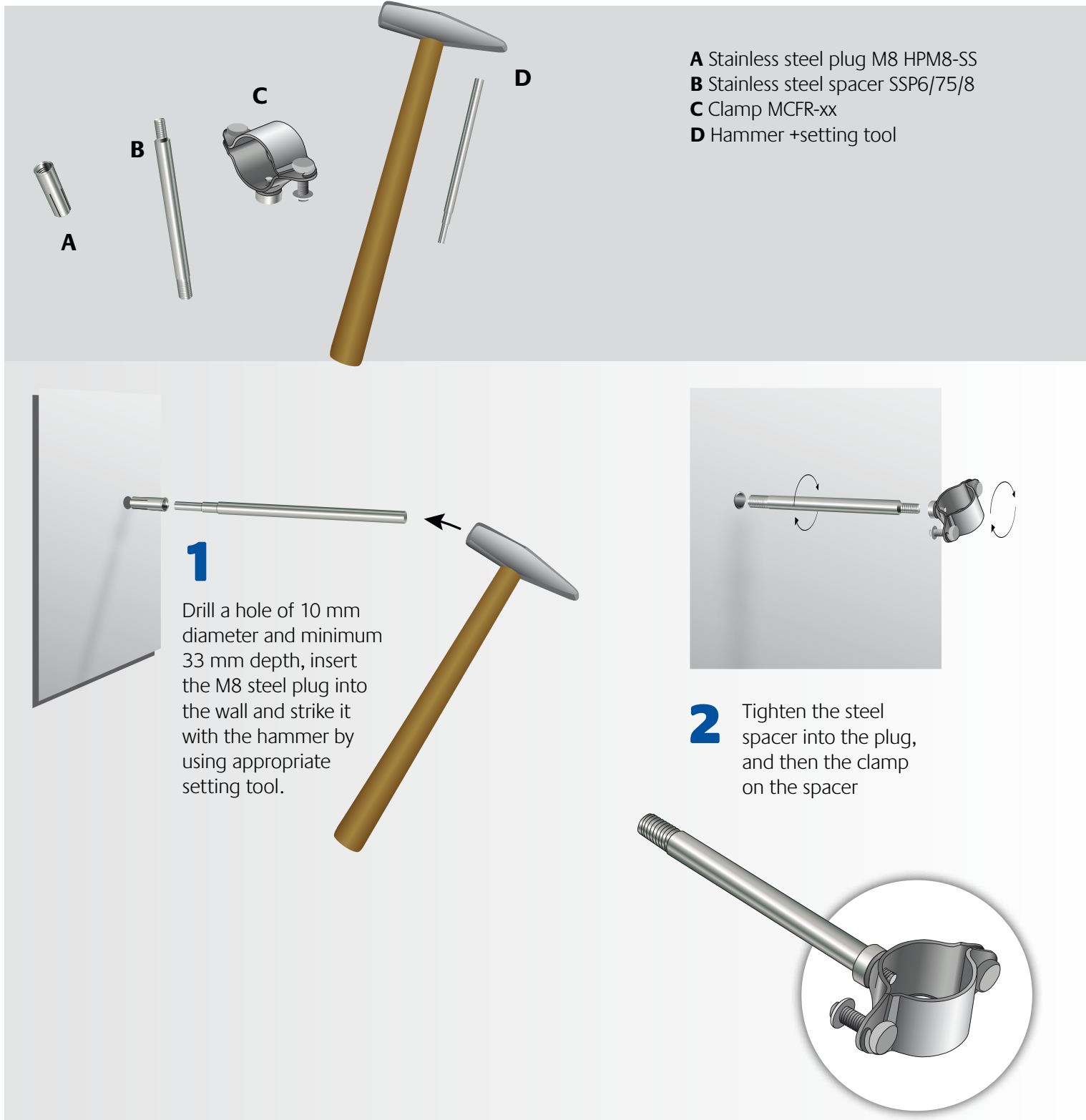
(recommended every 1 meter)

A Stainless steel plug M8 HPM8-SS
B Stainless steel spacer SSP6/75/8
C Flat nut M6 FN6
D Clic clamp
E Hammer
**F** Recommended setting tool

1

Drill a hole of 10 mm diameter and minimum 33 mm depth, insert the M8 steel plug into the wall and strike it with the hammer by using appropriate setting tool.

2

Tighten the spacer into the plug.

3

Insert the flat nut into the clic clamp and tighten the assembly by screwing it on the steel spacer.

Installation instruction for steel clamp MCFRx with steel plug and steel spacer

(recommended every 10 meters)

A Stainless steel plug M8 HPM8-SS
B Stainless steel spacer SSP6/75/8
C Clamp MCFR-xx
D Hammer +setting tool

D
C
B
A

1 Drill a hole of 10 mm diameter and minimum 33 mm depth, insert the M8 steel plug into the wall and strike it with the hammer by using appropriate setting tool.

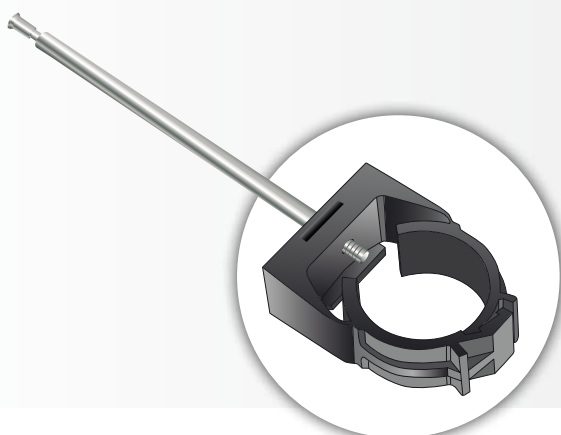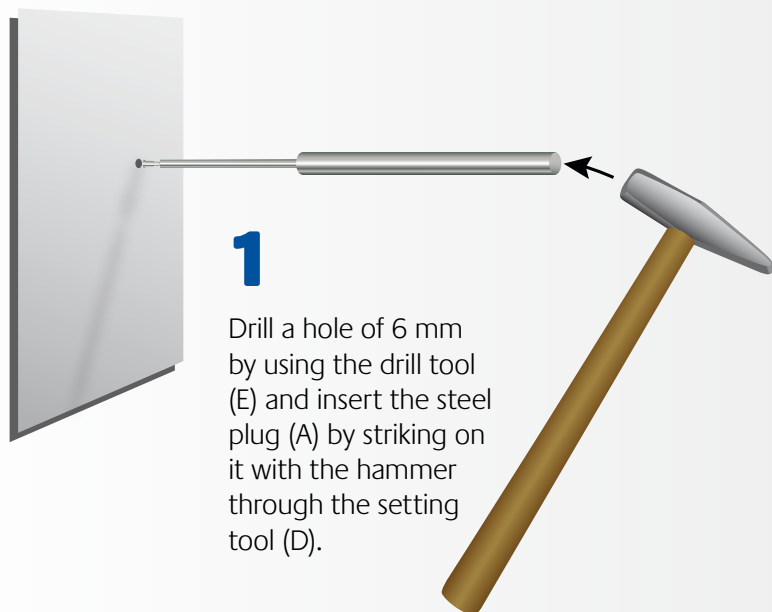**2** Tighten the steel spacer into the plug, and then the clamp on the spacer

Installation instruction for clic clamp with hammer set plug
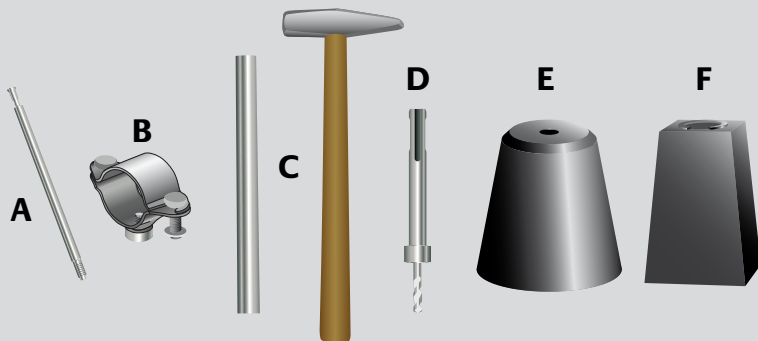
(recommended every 1 meter)
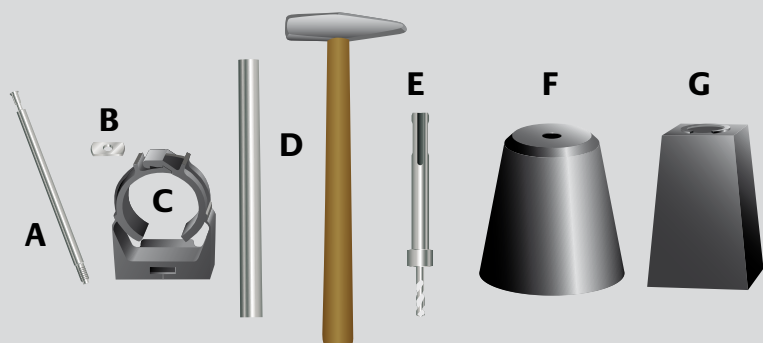
A Stainless steel hammer set plug HSP6/xx
B Flat nut M6 FN6
C Clic clamp
D Hammer + setting tool
E Drill tool HSP
F (optional) round base spacer RB 80 [to be used with HSP6/84]
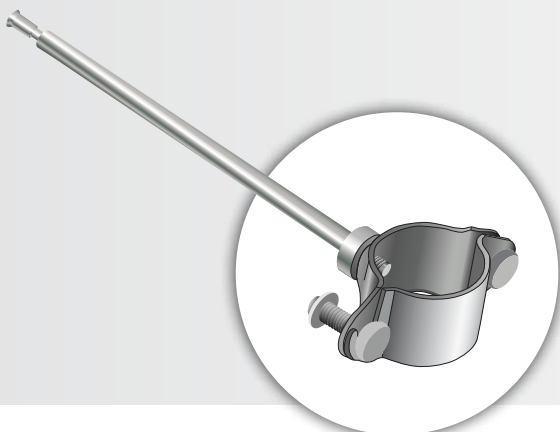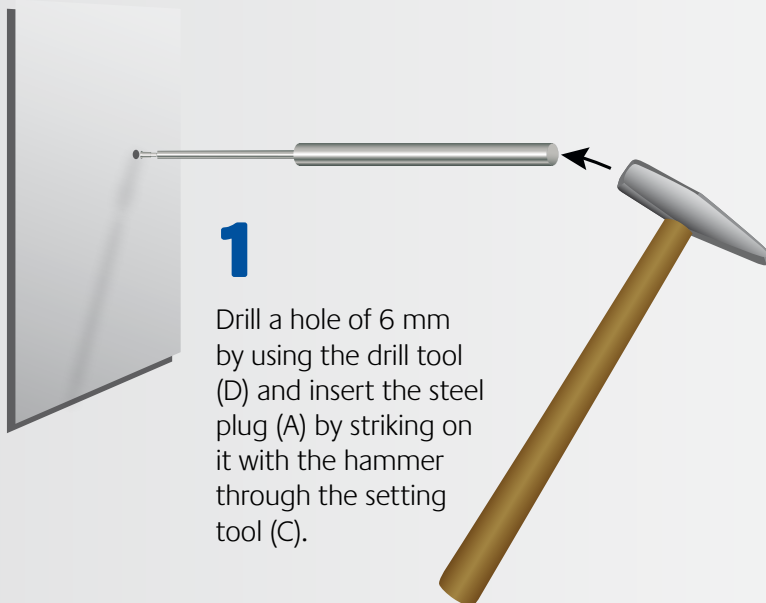**G** (optional) rectangular base spacer SP85 [to be used with HSP6/90]

1

Drill a hole of 6 mm by using the drill tool (E) and insert the steel plug (A) by striking on it with the hammer through the setting tool (D).

2

Insert the flat nut into the clic clamp and tighten the assembly by screwing it on the plug.

[picture of the assembly without F nor G]

14

Installation instruction for steel clamp MCFRx with hammer set plug

(recommended every 10 meters)
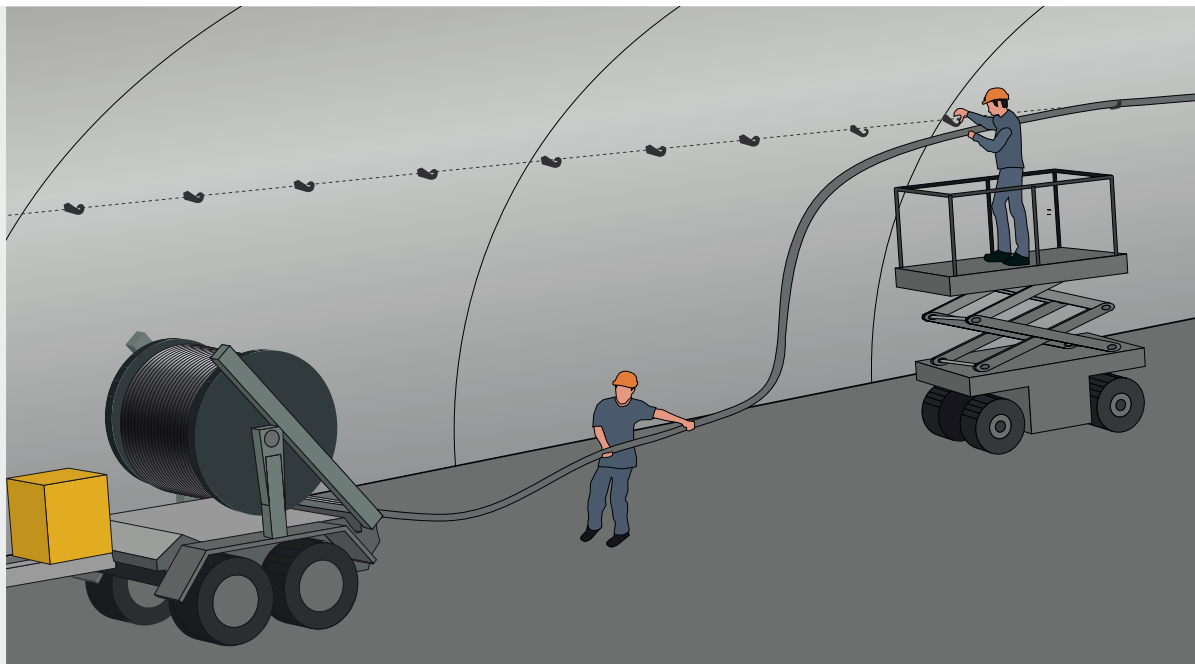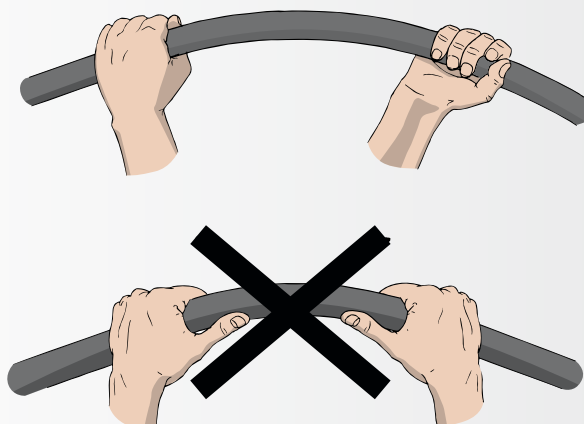
A Stainless steel hammer set plug HSP6/xx
B Clamp MCFR - XX
C Hammer + setting tool
D Drill tool HSP
E (optional) round base spacer RB 80
    [to be used with HSP6/84]
F (optional) rectangular base spacer SP85
    [to be used with HSP6/90]

A **B** **C** **D** **E** **F**

1
Drill a hole of 6 mm by using the drill tool (D) and insert the steel plug (A) by striking on it with the hammer through the setting tool (C).

2
Tighten the clamp by screwing it on the plug.

[picture of the assembly without E nor F]

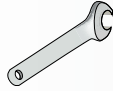# CABLE HANGING AND FIXING

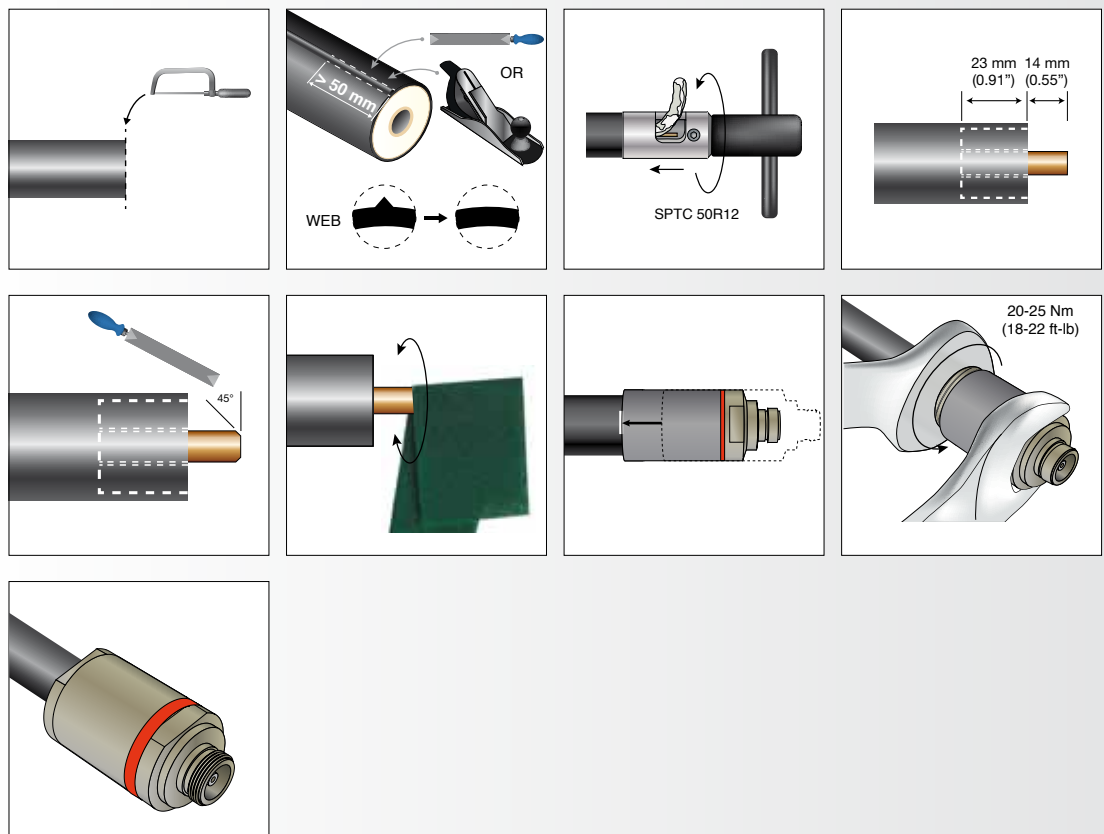## BENDING OF RF-CABLES

EXPANSION LOOPS

Connector   Device   Expansion loop   Connectors

Radiating cable   Jumper cable   Radiating cable
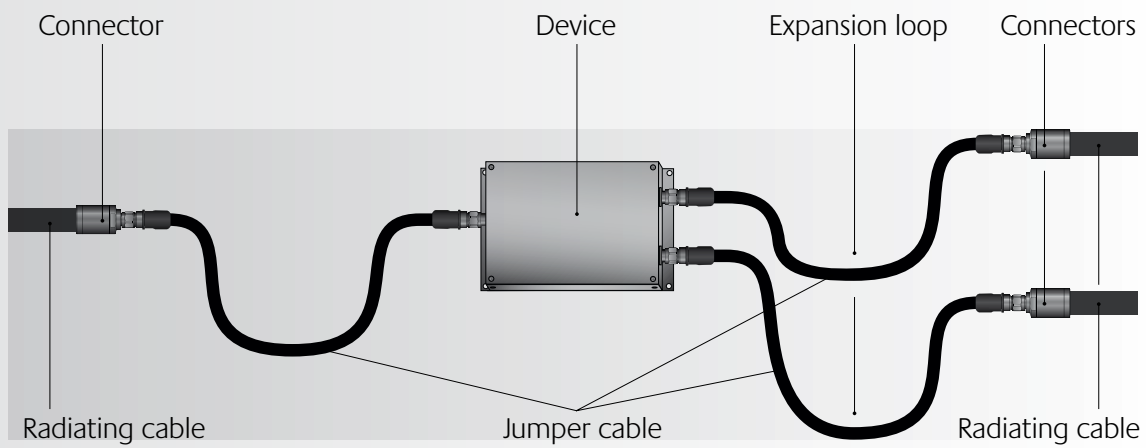
CONNECTORS INSTALLATION FOR RADIATING CABLES 1/2"

Typical installation of radiating cables.
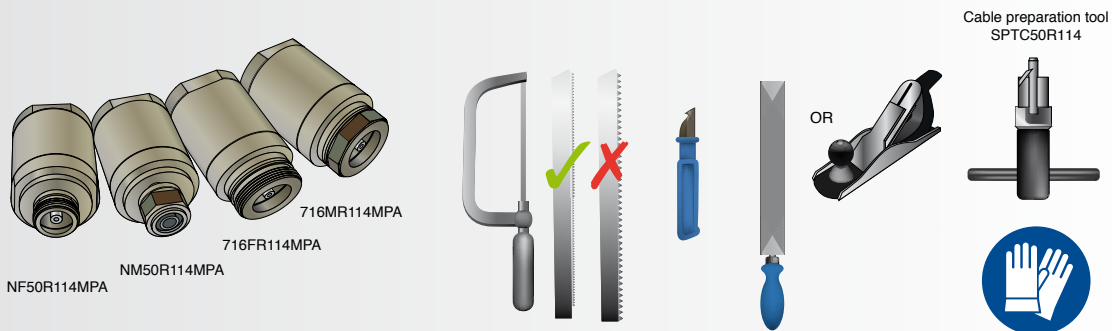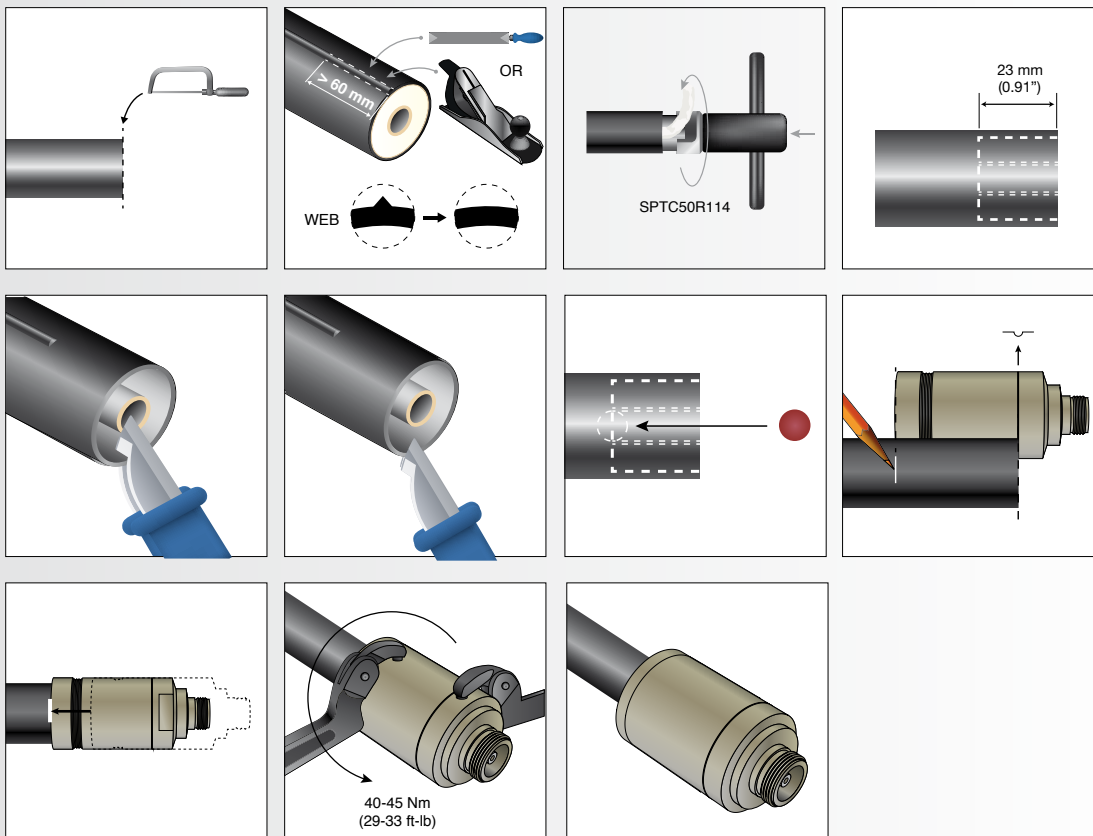
716FR12

NF50R12   NM50R12

Cable preparation tool
SPTC 50R12

scouring tape
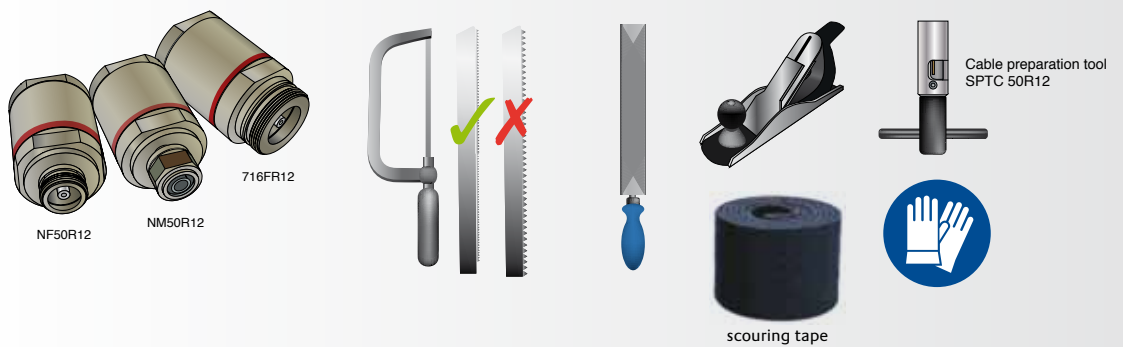
	NF, 7-16F	NM	7-16M
	2 x 22 mm	2 x 22 mm & 19 mm	2 x 22 mm & 32 mm

> 50 mm

OR

WEB

SPTC 50R12

23 mm   14 mm
(0.91") (0.55")

45°

20-25 Nm
(18-22 ft-lb)

CONNECTORS INSTALLATION FOR RADIATING CABLES 5/8"
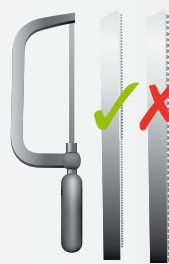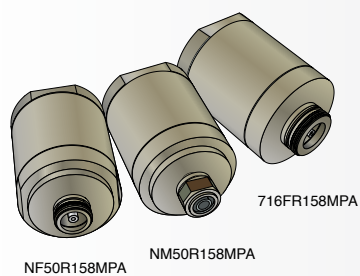
Typical installation of radiating cables.

NF50R58
NM50R58
716FR58

OR

Cable preparation tool
SPTC 50R58

scouring tape

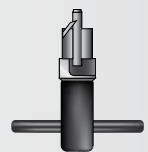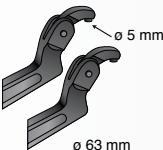|	NM	7-16F/NF
	2 x 28 mm & 19 mm	2 x 28 mm

≥ 50 mm

OR

WEB

SPTC 50R58

23 mm (0.91")   14 mm (0.55")

30-35 Nm (22-26 ft-lb)
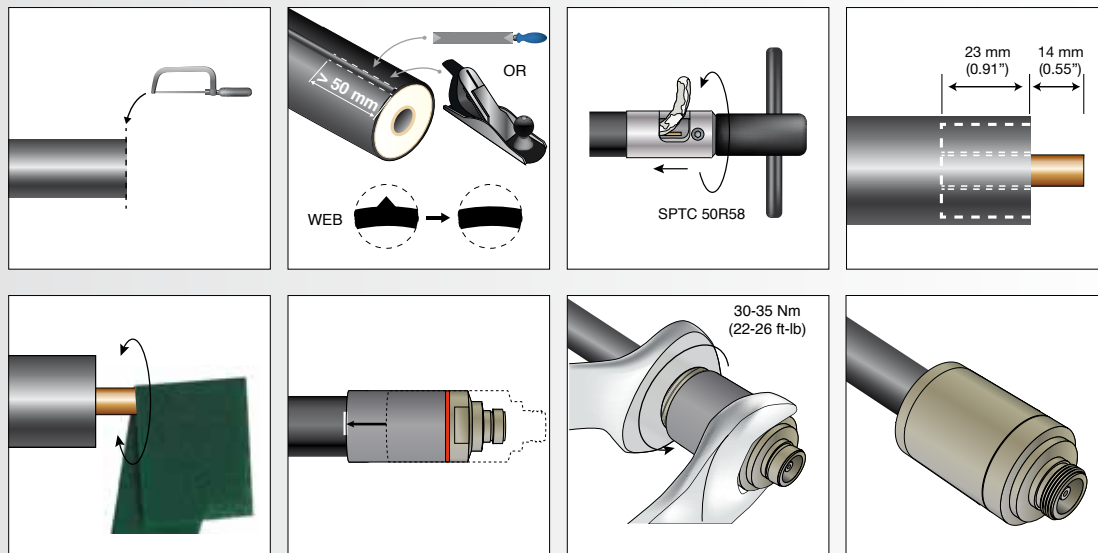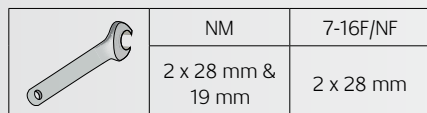
CONNECTORS INSTALLATION FOR RADIATING CABLES 7/8"

Typical installation of radiating cables.

716FR78

NF50R78

NM50R78

OR

Cable preparation tool
SPTC 50R78

	NF, 7-16F	NM	7-16M
	2 x 34 mm	2 x 34 mm & 19 mm	2 x 34 mm & 32 mm

> 50 mm

OR

WEB

SPTC 50R78

23 mm
(0.91")

Radiating cables with fire barrier tape

Fire barrier tape

25-30 Nm
(18-22 ft-lb)
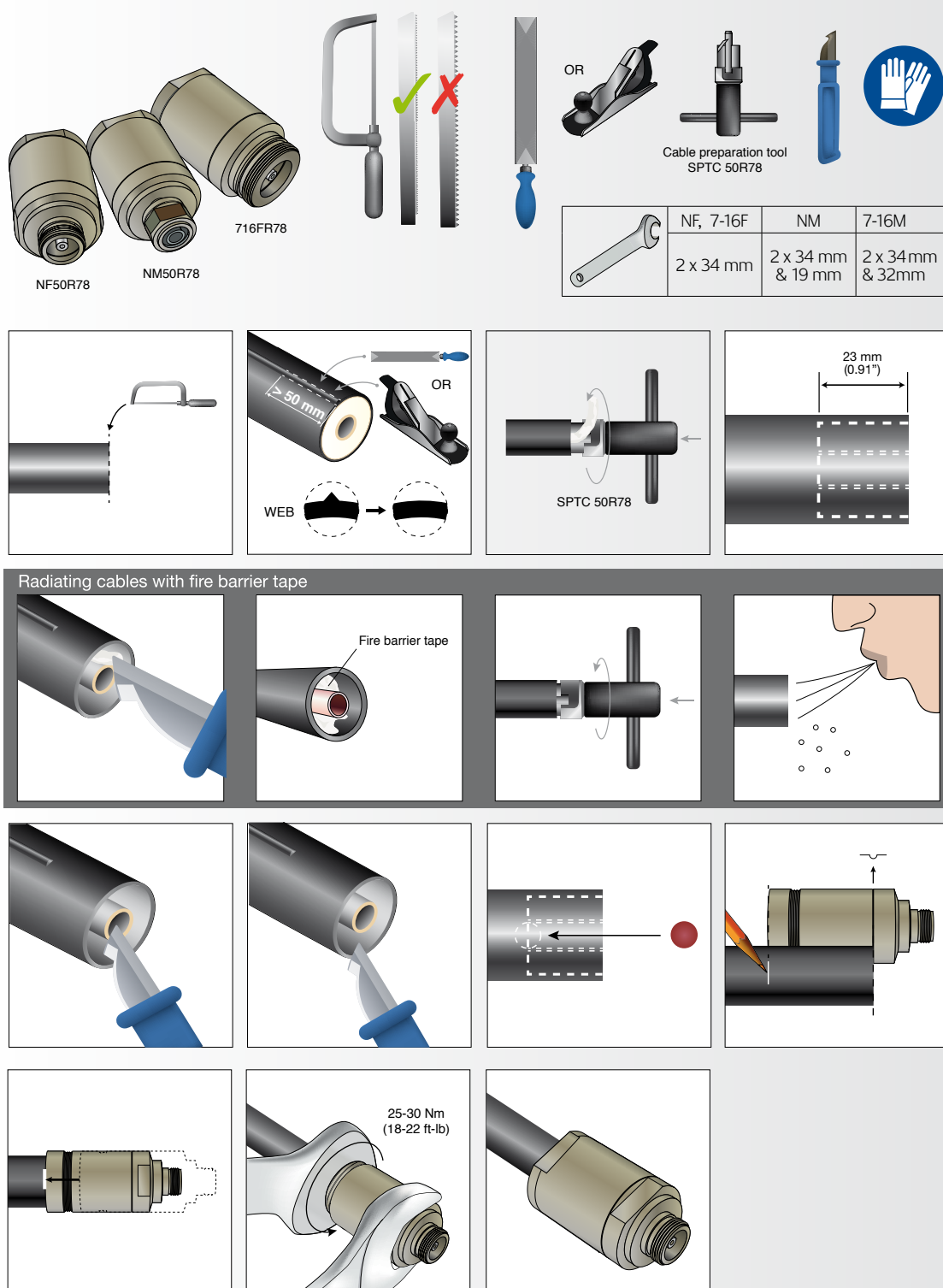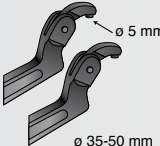
CONNECTORS INSTALLATION FOR RADIATING CABLES 1-1/4"

Typical installation of radiating cables.

Cable preparation tool
SPTC50R114

716MR114MPA

716FR114MPA

NM50R114MPA

NF50R114MPA

	NM	7-16M
ø 5 mm ø 35-50 mm	19 mm	32 mm

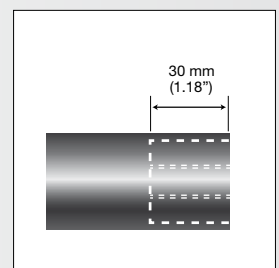OR

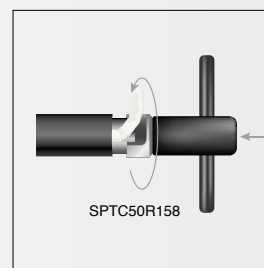> 60 mm

OR

WEB

SPTC50R114

23 mm
(0.91")

40-45 Nm
(29-33 ft-lb)

Typical installation of radiating cables.

Cable preparation tool
SPTC50R158

716FR158MPA

NM50R158MPA

NF50R158MPA

OR

	NM	7-16M
ø 5 mm ø 63 mm	19 mm	32 mm

> 60 mm

OR

WEB

SPTC50R158

30 mm
(1.18")

10,5 - 11 mm

< 30 Nm
(22 ft-lb)

Fot further information, you can refer to
our catalogue for Radiating Cables:
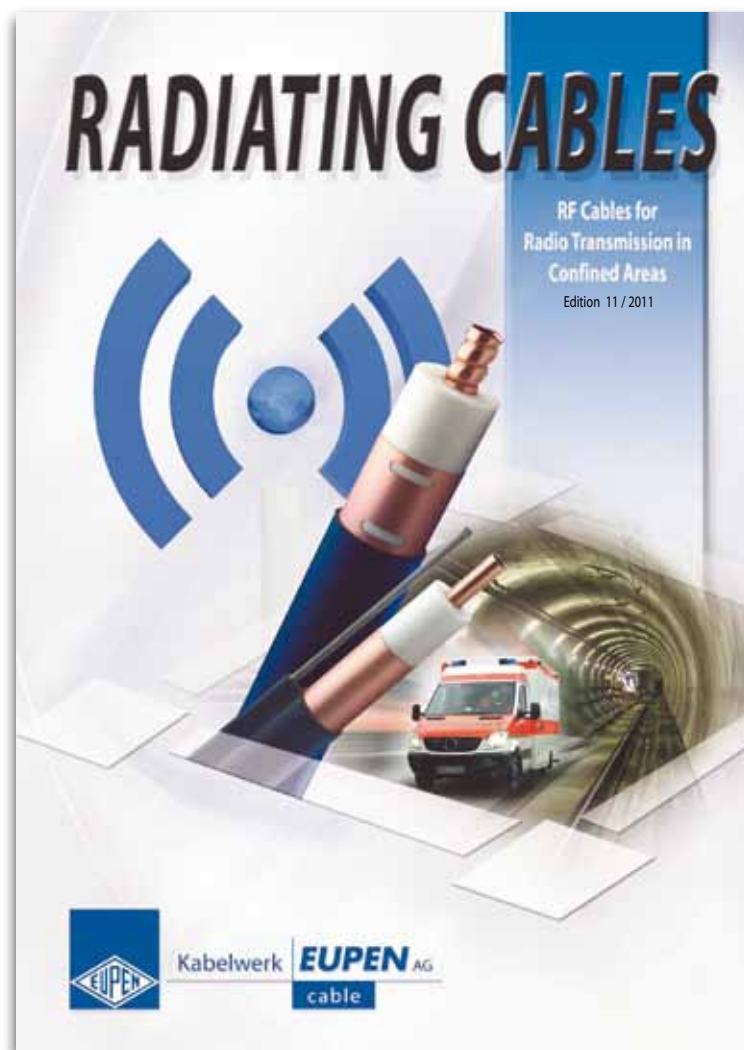
Malmedyer Str. 9 - 4700 EUPEN - BELGIUM

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http://www.eupen.com   e-mail: info@eupen.com   ISO Certified Company