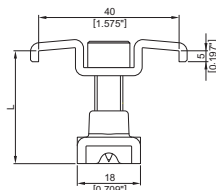


X-GR-RU Grating Fastening System

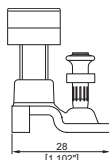
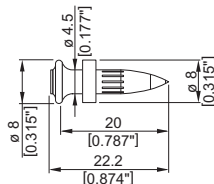
Product data

Dimensions

X-GR-RU



X-CR 20-4.5R Zn P8



General information

Material specifications

Screw:

Carbon steel

Zinc coating: Duplex* coated

Nail:

Stainless steel: CrNiMo Alloy and zinc coated

Upper part:

Carbon steel: DD11

Zinc coating: Duplex* coated

Bottom part:

Carbon steel: S315MC

Zinc coating: Duplex* coated

*) 480 h salt spray test per DIN 50021 and 10 cycles
Kesternich test per DIN 50018/2.0 (comparable to 45 µm HDG steel)

Recommended fastening tools

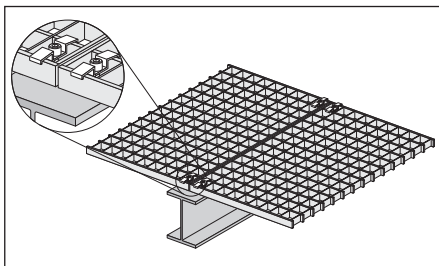
DX 460 GR with **X-460-F8GR**
fastener guide

DX 76 with **X-76-F8-GR**

DX 76 PTR with **X-76-F8-GR-PTR**
fastener guide

See **X-GR-RU fastener program** in the next pages
and **Tools and equipment** chapter for more details.

Application



Fastening of grating

For fastenings exposed to weather and mildly corrosive conditions.

Not for use in marine atmospheres (upstream)!

Load data

Recommended tensile loads N_{rec} [kN]

$N_{\text{rec}} = 0.8 \text{ kN (180 lb)}$

Notes/Conditions:

- Tensile loading is limited by plastic deformation of the saddle clip
- X-GR-RU resists shear by friction and is not suitable for explicit shear load designs

Application requirements

Thickness of base material

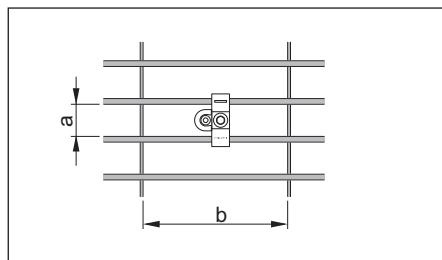
$t_{\text{II}} \geq 4 \text{ mm (0.157")}$

Thickness of fastened material

Grating height: $H_G = 25\text{--}40 \text{ mm (0.98"--1.57")}$

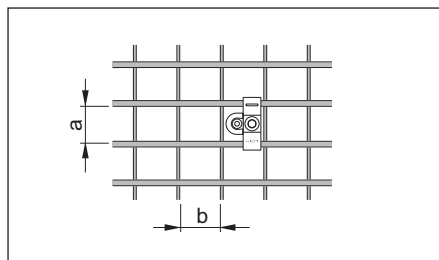
Grating opening types

Bearing bar spacing (a)



a from 25 to 32 mm (1" to 1 1/4")

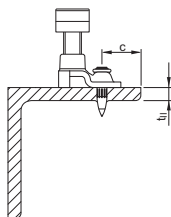
Cross bar spacing (b)



b $\geq 30 \text{ mm (1.18")}$

Edge distances

$c \geq 15 \text{ mm (0.59")}$

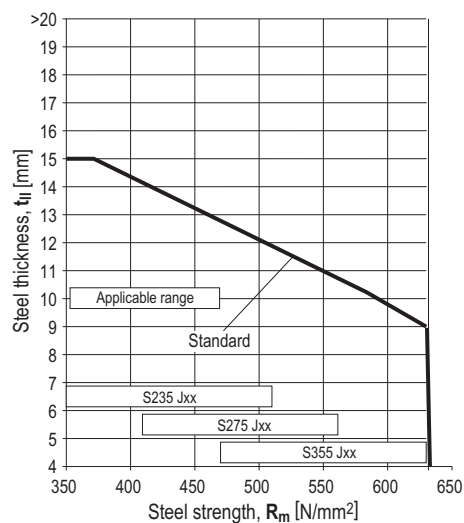


Corrosion information

For fastenings exposed to weather and mildly corrosive conditions. **Not for use in marine atmospheres (upstream)** or in heavily polluted environments.

Application limits

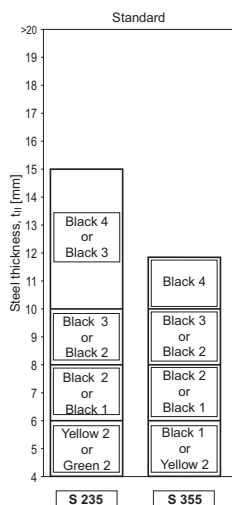
X-GR-RU with DX 460 or DX 76 / DX 76 PTR



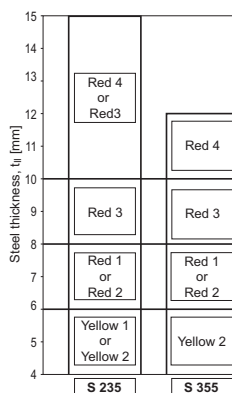
Fastener selection

Fastener	Item no.	L mm (inch)	Grating height mm (inch)
X-GR-RU 25/30	384239	32 (1.26")	25–30 (0.98"–1.18")
X-GR-RU 1 1/4"	385932	34 (1.34")	27–32 (1.06"–1.26")
X-GR-RU 35/40	384240	42 (1.65")	35–40 (1.38"–1.57")

Cartridge selection and tool energy setting



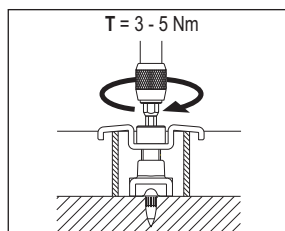
DX 460 with 6.8/11M cartridges



DX 76 PTR with 6.8/18M cartridges

Fastening quality assurance

Tighten the screw



$T_{\text{rec}} = 3-5 \text{ Nm}$ (2.2–3.7 ft-lb)

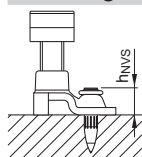
Tightening tool:

- Screwdriver with torque release coupling (TRC)
- 6 mm Allen-type bit

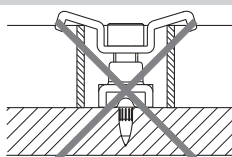
Hilti screwdriver Torque setting

SF 121-A	4–7
SF 150-A	3–5
SF 14	3–5
SFC 14-A	4–7
SF 18-A	3–5
SFC 18-A	3–5

Fastening inspection



$h_{\text{NVS}} = 9-10.5 \text{ mm}$ (0.35"–0.41")



The saddle of the fastener should not be bent, see installation instruction above.