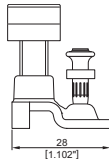
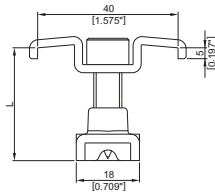


# X-GR-RU Grating Fastening System

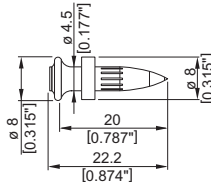
## Product data

### 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

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)

#### Fastening tool

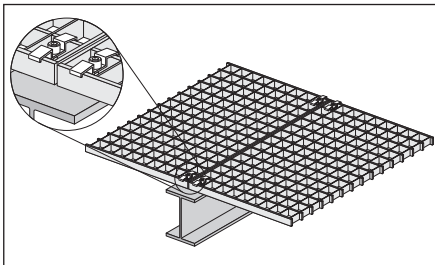
**DX 460 GR** with **X-460-F8GR**  
fastener guide

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

See fastener selection for more details.

Note: Pre-drilled version with DX 460 tool only

## 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]

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

#### 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

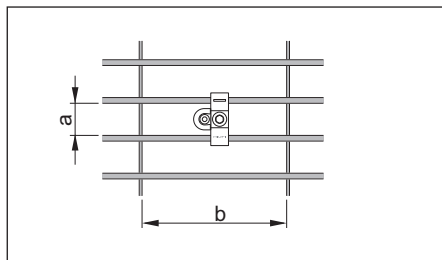
$t_{II} \geq 4 \text{ mm (0.157")}$

#### Thickness of fastened material

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

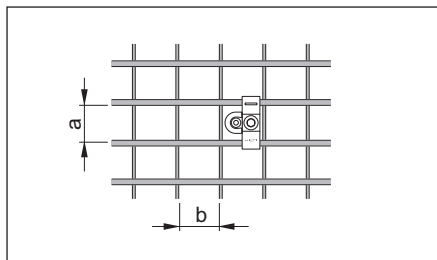
#### Grating opening types

##### Bearing bar spacing (a)



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

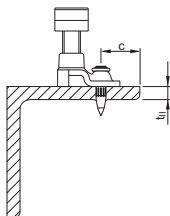
##### Cross bar spacing (b)



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

#### Edge distances

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

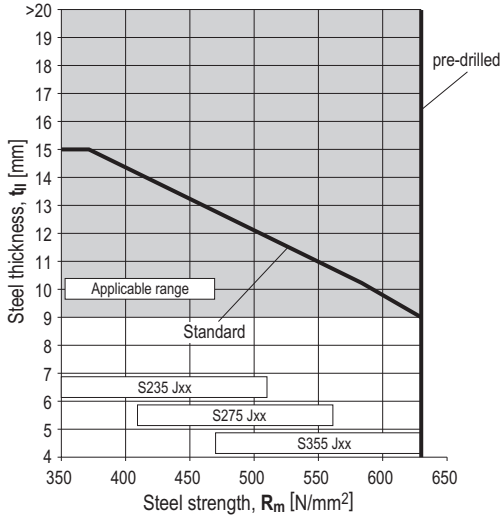


#### Corrosion information

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

**Application limits**

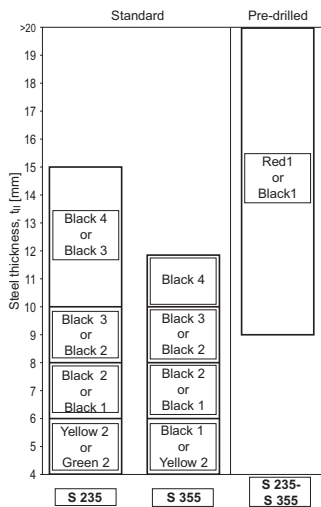
X-GR-RU with DX 460 or DX 76 / DX 76 PTR (pre-drilled only DX 460)



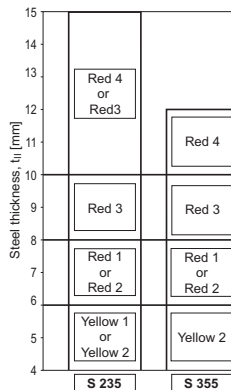
**Fastener selection and system recommendation**

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

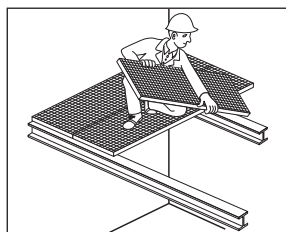


DX 76 PTR with 6.8/18M cartridges

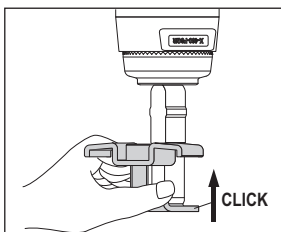
### Fastening quality assurance

#### Installation

Place the grating sections

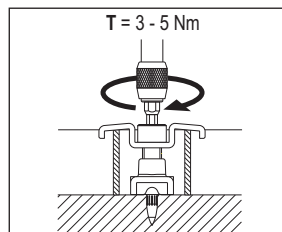


Drive the X-GR-RU fastener



Note: position the flat side of the fastener guide to the saddle!

Tighten the screw



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

Tightening tool:

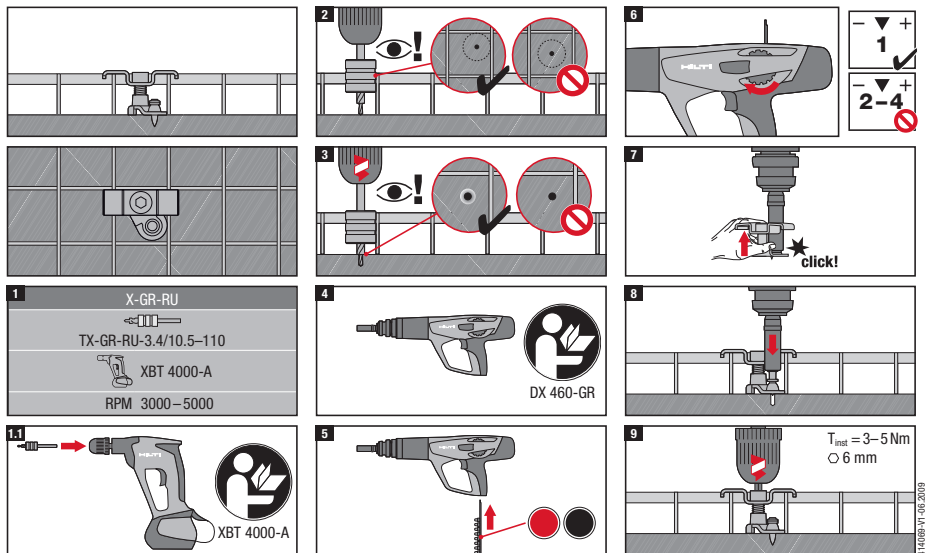
- Screwdriver with torque release coupling (TRC)
- 6 mm Allen-type bit

Hilti screwdriver      Torque setting

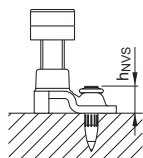
**SF 121-A**              TRC 5-7

**SF 150-A**              TRC 3-5

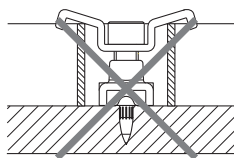
## Installation details in case of pre-drilling



## Fastening inspection



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



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

