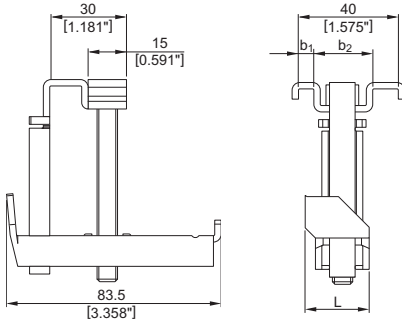


X-MGR Grating Fastening System

Product data

Dimensions



General information

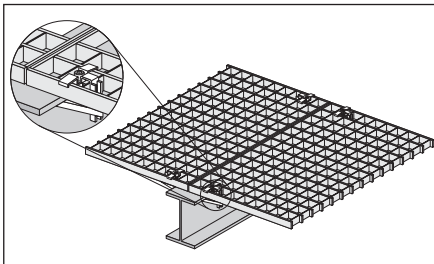
Material specifications

Screw:	
Carbon steel	
Zinc coating:	60 µm HDG
Upper part:	
Carbon steel:	SPCC-S
Zinc coating:	65 µm HDG
Bottom part:	
Carbon steel:	SPCC-S
Zinc coating:	65 µm HDG
Nut:	
Carbon steel	
Zinc coating:	45 µm HDG
Nut-holder:	
Stainless steel:	SS304

Fastening tool

SF 121-A, SF 150-A

Application



Fixing 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]

$N_{rec} = 0.6 \text{ kN (135 lb)}$

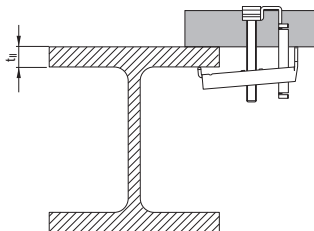
Notes/Conditions:

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

Application requirements

Thickness of base material

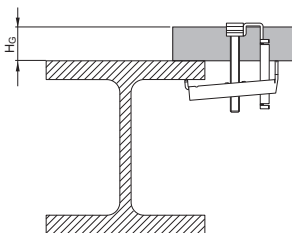
$t_{II} = 3 - 25 \text{ mm (0.118 - 0.984")}$



Thickness of fastened material

Grating height:

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

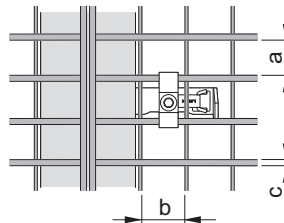


Total fastening height

$H_G + t_{II} \leq 65 \text{ mm (2.56")}$

Grating opening types

Fastener	a mm (inch)	b mm (inch)	c mm (inch)
X-MGR M60	30 (1.18")	≥ 30 (1.18")	≤ 3 (0.118")
X-MGR W60	25 (0.98")	≥ 30 (1.18")	≤ 4.8 ($\frac{3}{16}$ ")



Spacing and edge distances

No general restriction exists.

Corrosion information

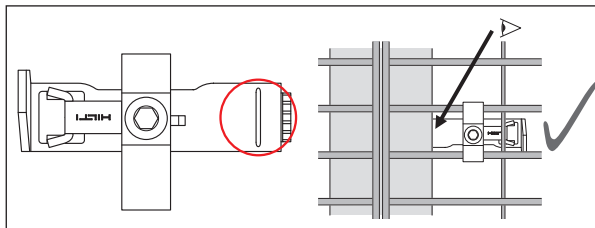
For fastenings exposed to weather and mildly corrosive conditions. **Not for use in marine atmosphere (Upstream)** or in heavily polluted environment.

Fastener selection and system recommendation

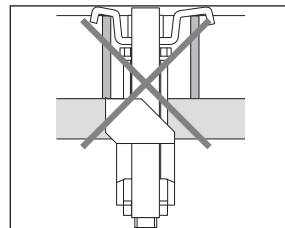
Fastener	Item-no.	b ₁	b ₂	L	Steel flange thickness t _{fl}	Grating height	Fastening tool
		mm (inch)	mm (inch)	mm (inch)	mm (inch)	mm (inch)	
X-MRG-M60	384233	4	20	29	3–25	25–40	SF 121-A, SF 150-A
		(0.16")	(0.79")	(1.14")	(0.12"–0.98")	(0.98"–1.57")	
X-MRG-W60	384234	6	24	25	3–25	25–40	SF 121-A, SF 150-A
		(0.24")	(0.94")	(0.98")	(0.12"–0.98")	(0.98"–1.57")	

Fastening quality assurance

Fastening inspection



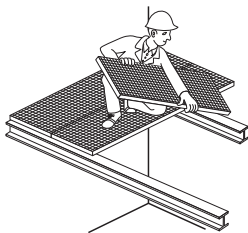
The sign on the clip has to be positioned under the steel flange



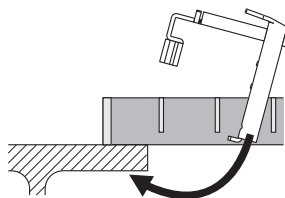
The saddle of the fastener should not be bent, see installation instructions below.

Installation

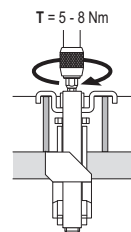
Place the grating sections



Place the X-MGR fastener



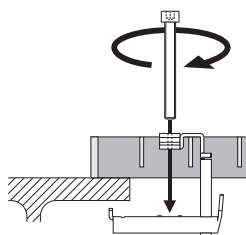
Tighten the screw



$T_{rec} = 5-8 \text{ Nm}$ (3.7-5.9 ft-lb)

Tightening tool:

- Screwdriver with torque release coupling (TRC)
- 6 mm / 1/4" Allen-type bit



Hilti screwdriver Torque setting

SF 121-A TRC 7-11

SF 150-A TRC 5-9