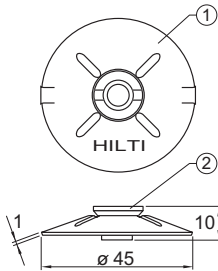


X-FCP Checker Plate Fastening System

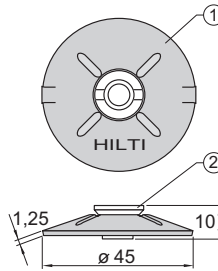
Product data

Dimensions

X-FCP-R 5/10



X-FCP-F 5/10



General Information

Material specifications

See fastener selection for more details.

Fastening tool

See fastener selection for more details.

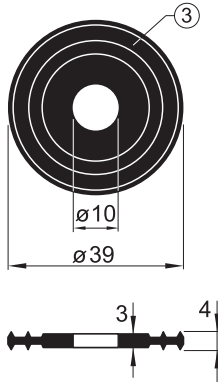
Approvals

ABS: X-FCP-R

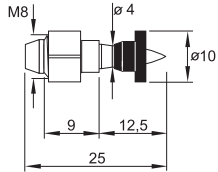
LR: X-FCP-R



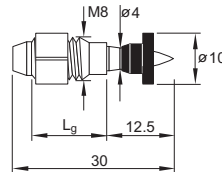
X-FCP Sealing ring



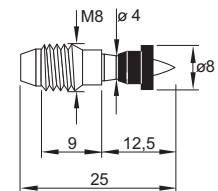
X-CRM8-9-12 FP10



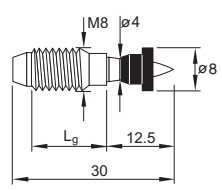
X-CRM8-15-12 FP10



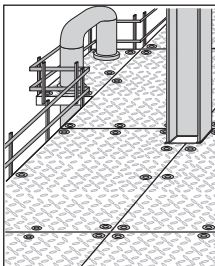
X-CRM8-9-12 P8



X-CRM8-15-12 P8



Application



Checker plate

Load data

Recommended loads:

$N_{rec} = 1.8 \text{ [kN]}$

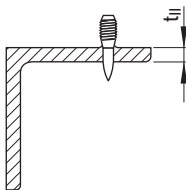
Conditions:

- Limited by the strength of the X-CRM8 threaded stud.
- Recommended loads are valid for fastenings of steel and aluminium with 20 mm pre-drilling.
- **X-FCP-F** and **X-FCP-R** are not intended for shear loading.

Application requirements

Thickness of base material

X-CRM8



Minimum steel thickness $t_{II} \geq 6 \text{ mm}$

Thickness of fastened material

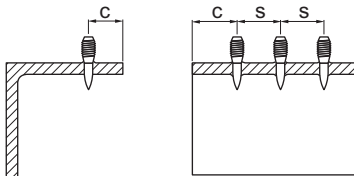
Thickness of chequer plates: $t_1 \approx 5.0\text{--}13.0 \text{ mm}$

Spacing and edge distances

X-CRM8

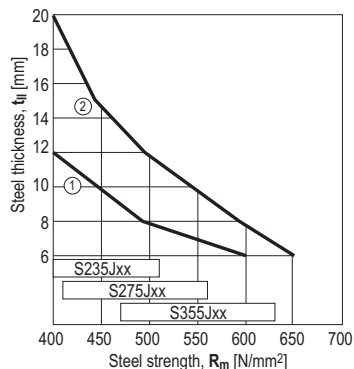
Edge distances: $c \geq 15 \text{ mm}$

Spacing: $s \geq 15 \text{ mm}$



Application limits

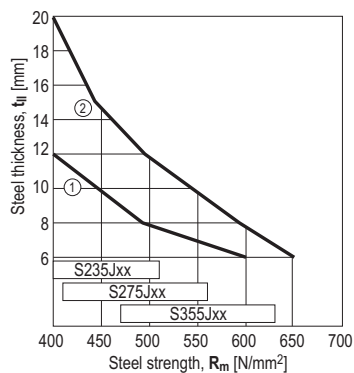
DX 76, DX 76 PTR



- ① **X-CRM8-__-12 FP10** / DX 76 (impact)
- ② **X-CRM8-__-12 FP10** / DX 76 (co-acting)

$t_{II} \geq 6$ mm

DX 460



- ① **X-CRM8-__-12 P8** / DX 460 (impact)
- ② **X-CRM8-__-12 P8** / DX 460 (co-acting)

$t_{II} \geq 6$ mm

Note:

For co-acting operation push the fastener all the way back against the piston with a ramrod.

Fastener selection and system recommendation

Application areas

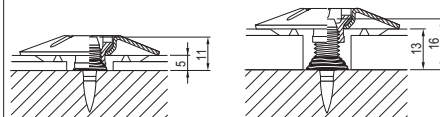
Marine, offshore, petrochemical, calorific (coal, oil) power plants, etc.	Indoors, mildly corrosive environment, or for limited lifetime use
---	--

X-FCP system

X-FCP-R Item no. 308860	X-FCP-F Item no. 308859	Sealing ring	Tools SF 100-A, SF 120-A
Note: Not for use in automobile tunnels, swimming pools or similar environments	Note: Not for use in marine atmosphere or in heavily polluted environment.	Drip-through of water/oil needs to be prevented	

Threaded studs

Designation	Chequer plate thickness	Tools
X-CRM8-15-12	9–13 mm	DX 460, DX 76, DX 76 PTR
X-CRM8-9-12	5– 8 mm	DX 460, DX 76, DX 76 PTR



Cartridge selection and tool energy setting

Designation	Tools
6.8/11M red cartridges	DX 460
6.8/18M yellow cartridges	DX 76, DX 76 PTR

Tool energy adjustment by setting tests on site.

Material and coatings

X-FCP system

	X-FCP-R		X-FCP-F		All Systems
	① Disk	② Screw	① Disk	② Screw	③ Sealing ring
Material designation	X5CrNiMo17122	X2CrNiMo17132	ST2K40 BK	9SMnPb28 K	Neoprene, black
Coating	none	none	Duplex *	Duplex *	

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

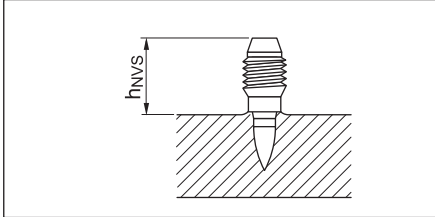
Threaded studs CRM8

	X-CR shank	CRM8 threaded sleeve
Material designation	Stainless steel wire, CR 500 (A4 / AISI316)	X2CrNiMo17132 X5CrNiMo17122+2H (A4 / AISI316)
Coating	none	none

Fastening quality assurance

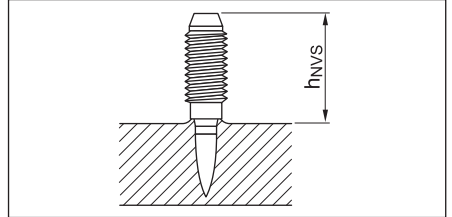
Fastening inspection

X-CRM8-9-12



$h_{NVS} = 13 \pm 2 \text{ mm}$

X-CRM8-15-12

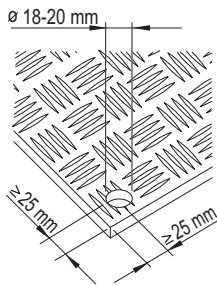


$h_{NVS} = 18 \pm 2 \text{ mm}$

Installation

Installation procedure for chequer plates

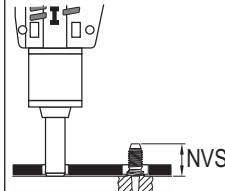
Plates must be pre-drilled or pre-punched



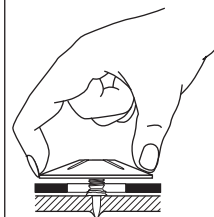
1. Place and align the plate section



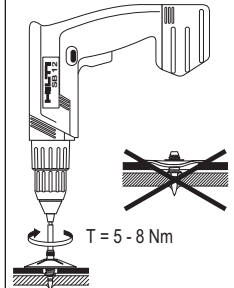
2. Drive the X-CRM threaded stud through the pre-drilled hole



3. Screw the X-FCP on the stud by hand



4. Tighten the disk



Tightening torque

$T_{rec} = 5-8 \text{ Nm}$

Tightening tool:

- Screwdriver with torque release coupling (TRC)
- S-NSX 2.8 x 15 bit

Hilti Torque
Screwdriver setting
SF 120-A TRC 5.5-7
SF 150-A TRC 8-9

