

## LOADS

### Frame fixing FUR 10<sup>4)</sup>

Highest permissible loads<sup>1)2)</sup> of a single anchor as part of a multiple fixing of non-structural systems.

For the design the complete approval ETA-13/O235 has to be considered.

Product			FUR 10
Anchorage depth	$h_{nom}$	[mm]	70
<b>Anchorage in concrete <math>\geq</math> C12/15</b>			
Permissible tensile load		[kN]	1,79
Permissible shear load	Zinc-plated steel	[kN]	5,37
	Stainless steel A4	[kN]	4,98
Minimum member thickness	$h_{min}$	[mm]	110
Characteristic edge distance	$c_{cr,N}$	[mm]	140
Characteristic spacing	$a$ resp. $s_{cr,N}$	[mm]	90
Minimum spacing	$s_{min}$	[mm]	70
with an edge distance	$c \geq$	[mm]	140
Minimum edge distance	$c_{min}$	[mm]	70
with a spacing	$s \geq$	[mm]	210
<b>Anchorage in masonry</b>			
Permissible load <sup>3)</sup> in solid brick	$\geq$ Mz 12 a. $\geq$ NF	[kN]	0,86
	$\geq$ Mz 20 a. $\geq$ NF	[kN]	0,86
Permissible load <sup>3)</sup> in solid sand-lime brick	$\geq$ KS 10 a. $\geq$ NF	[kN]	0,57
	$\geq$ KS 20 a. $\geq$ NF	[kN]	0,71
Permissible load <sup>3)</sup> in lightweight concrete block	$\geq$ V 6; $\rho \geq 1,6$ kg/dm <sup>3</sup>	[kN]	0,57
Permissible load <sup>3)5)</sup> in vertically perforated brick (e.g. Poroton)	$\geq$ HLz 10; $\rho \geq 1,0$ kg/dm <sup>3</sup>	[kN]	0,37
Permissible load <sup>3)</sup> in perforated sand-lime brick	$\geq$ KSL 12	[kN]	0,57
Minimum member thickness	$h_{min}$	[mm]	110
Minimum spacing (single anchor)	$a_{min}$	[mm]	250
Minimum spacing (anchor group)	$s_{min}$	[mm]	100
Minimum edge distance (anchor group)	$c_{min}$	[mm]	100

<sup>1)</sup> The required partial safety factors for material resistance as well as a partial safety factor for load actions  $\gamma_F = 1,4$  are considered.

As a single anchor counts e.g. an anchor with a minimum spacing according to table 8 resp. table 10 of the approval.

<sup>2)</sup> Valid for temperatures in the substrate up to +50 °C (resp. short term up to +80 °C).

<sup>3)</sup> Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile loads, shear loads and bending moments see approval.

<sup>4)</sup> Valid for zinc coated screws and for screws made of stainless steel. For exterior use of the zinc coated screws measures against incoming humidity according to approval have to be taken.

<sup>5)</sup> Rotary drilling.

## LOADS

### Frame fixing FUR 8<sup>3)</sup>

Highest recommended loads<sup>1)</sup> for a single anchor for multiple fixings of non-structural systems.

The given loads are valid for fischer safety screws included in delivery.

Type			FUR 8
Anchorage depth	$h_{nom}$	[mm]	70
Diameter of the safety screw	$\emptyset$	[mm]	6,0
Min. edge distance concrete	$a_r$	[mm]	50
<b>Recommended loads in the respective base material <math>F_{rec}</math><sup>2)</sup></b>			
Concrete	$\geq$ C12/15	[kN]	1,0
Solid brick	$\geq$ Mz 12	[kN]	0,60
Solid sand-lime brick	$\geq$ KS 12	[kN]	0,60

<sup>1)</sup> Required safety factors are considered.

<sup>2)</sup> Valid for tensile load, shear load and oblique load under any angle.

<sup>3)</sup> Valid for zinc coated screws and for screws made of stainless steel. For exterior use of the zinc coated screws measures against incoming humidity have to be taken.