

## Universal frame fixing FUR

The high-performance facade fixing - locks in each building material.

### OVERVIEW



**FUR-T** - safety screw with countersunk head



**FUR 8-SS** and **FUR 10-SS** - safety screw with hexagon-head



**FUR 10** and **FUR 14 F US** - safety screw with hexagon-head

Frame fixings /  
Stand-off install.

### Approved for:

- Concrete
- Solid brick
- Solid sand-lime brick
- Vertical perforated brick
- Perforated sand-lime block
- Hollow block made from lightweight concrete
- No-fines lightweight concrete
- Multilayer composite concrete wall

### Also suitable for:

- Natural stone with dense structure
- Solid block made from lightweight concrete
- Solid panel made from gypsum



### For fixing of:

- Facade and roof substructures made of wood and metal
- Gates
- Door frames
- Fire protection doors
- Windows
- Kitchen cabinets
- Wardrobes
- Squared timbers
- Facings

### DESCRIPTION

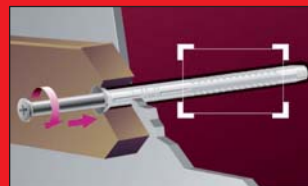
- Universal frame fixing.
- Anchorage in solid materials by means of friction locking.
- The asymmetrical close set teeth expand and formlock in hollow materials.
- Fixing sets with safety screws made of stainless steel for applications in damp conditions.

### Advantages/benefits

- Universal for all building materials.
- All the fixings with pre-installed screw.
- Patented asymmetrical teeth guarantee high load-bearing capacity in solid and perforated brick.
- Integral hammer-in stop prevents the fixing from spreading prematurely during installation.
- The FUR-FUS version does not require additional washers and prevents contact corrosion.
- Large range for wood and metal constructions (in- and out-door) for many applications.



## www.shirazeetraders.in FUR - ADVANTAGES AT A GLANCE



Turning the screw results in varied spreading of teeth.



Even spreading of teeth in solid materials.



In hollow materials:  
Teeth expand in front bar.  
Teeth interlock in cavity.

### FIXING PRINCIPLES

In detail: The general principles for installation, the correct drilling procedure and much more on page 26.

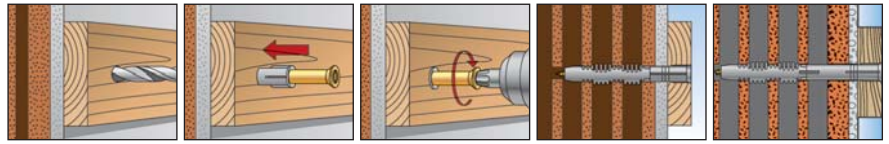
### STANDARDS

You will find everything that has standards on page 34 under the keyword approvals.

**INSTALLATION**

**Type of installation**

- Push-through installation



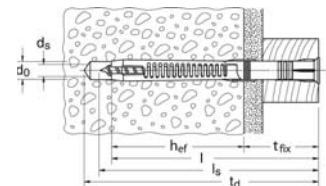
**Installation tips**

- We advise countersunk-head screws for fixing wooden structures, and anchor sleeves with a flat collar and hexagon-head bolts for metal structures.
- The hexagon-head with integral washer also has an integral  $\odot$ -socket.
- With vertical perforated bricks only use rotary drilling (no impact drilling).

**TECHNICAL DATA**

Type	Art.No.	ID	approvals	drill $\varnothing$	min. drill-hole depth for through fixings	effect. anchorage depth	anchor length	max. usable length	FUR-T - safety screw with countersunk head		drive	qty. per box
									drive	drive		
				$\bullet$ DIBt	$d_0$	$t_d$	$h_{ef}$	$l$	$t_{fix}$	$d_s \times l_s$		
					[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		pcs.
FUR 8 x 80 T	70110	2	$\bullet$	8	90	70	80	10	6 x 85	T30	50	
FUR 8 x 100 T	70111	9	$\bullet$	8	110	70	100	30	6 x 105	T30	50	
FUR 8 x 120 T	70112	6	$\bullet$	8	130	70	120	50	6 x 125	T30	50	
FUR 10 x 80 T	88756	1	$\bullet$	10	90	70	80	10	7 x 85	T40	50	
FUR 10 x 100 T	88757	8	$\bullet$	10	110	70	100	30	7 x 105	T40	50	
FUR 10 x 115 T	88760	8	$\bullet$	10	125	70	115	45	7 x 120	T40	50	
FUR 10 x 135 T	88758	5	$\bullet$	10	145	70	135	65	7 x 140	T40	50	
FUR 10 x 160 T	88759	2	$\bullet$	10	170	70	160	90	7 x 165	T40	50	
FUR 10 x 185 T	88761	5	$\bullet$	10	195	70	185	115	7 x 190	T40	50	
FUR 10 x 200 T	88764	6	$\bullet$	10	210	70	200	130	7 x 205	T40	50	
FUR 10 x 230 T	88762	2	$\bullet$	10	240	70	230	160	7 x 235	T40	50	
FUR 14 x 100 T	48711	2	$\bullet$	14	115	70	100	30	10 x 110	T50	50	
FUR 14 x 140 T	48712	9	$\bullet$	14	155	70	140	70	10 x 150	T50	50	
FUR 14 x 165 T	48713	6	$\bullet$	14	180	70	165	95	10 x 175	T50	50	
FUR 14 x 180 T	48714	3	$\bullet$	14	195	70	180	110	10 x 190	T50	50	
FUR 14 x 210 T	48844	7	$\bullet$	14	225	70	210	140	10 x 220	T50	50	
FUR 14 x 240 T	48715	0	$\bullet$	14	255	70	240	170	10 x 250	T50	50	
FUR 14 x 270 T	48716	7	$\bullet$	14	285	70	270	200	10 x 280	T50	50	
FUR 14 x 300 T	90759	7	$\bullet$	14	315	70	300	230	10 x 310	T50	20	
FUR 14 x 330 T	90760	3	$\bullet$	14	345	70	330	260	10 x 340	T50	20	
FUR 14 x 360 T	90761	0	$\bullet$	14	375	70	360	290	10 x 370	T50	20	
FUR 8 x 80 T A4	70120	1	$\bullet$	8	90	70	80	10	6 x 85	T30	50	
FUR 8 x 100 T A4	70121	8	$\bullet$	8	110	70	100	30	6 x 105	T30	50	
FUR 8 x 120 T A4	70122	5	$\bullet$	8	130	70	120	50	6 x 125	T30	50	
FUR 10 x 80 T A4	88784	4	$\bullet$	10	90	70	80	10	7 x 85	T40	50	
FUR 10 x 100 T A4	88785	1	$\bullet$	10	110	70	100	30	7 x 105	T40	50	
FUR 10 x 115 T A4	88791	2	$\bullet$	10	125	70	115	45	7 x 120	T40	50	
FUR 10 x 135 T A4	88786	8	$\bullet$	10	145	70	135	65	7 x 140	T40	50	
FUR 10 x 160 T A4	88787	5	$\bullet$	10	170	70	160	90	7 x 165	T40	50	
FUR 10 x 185 T A4	88788	2	$\bullet$	10	195	70	185	115	7 x 190	T40	50	
FUR 10 x 200 T A4	88789	9	$\bullet$	10	210	70	200	130	7 x 205	T40	50	
FUR 10 x 230 T A4	88790	5	$\bullet$	10	240	70	230	160	7 x 235	T40	50	
FUR 14 x 140 T A4	48719	8	$\bullet$	14	155	70	140	70	10 x 150	T50	50	
FUR 14 x 165 T A4	48720	4	$\bullet$	14	180	70	165	95	10 x 175	T50	50	
FUR 14 x 180 T A4	48721	1	$\bullet$	14	195	70	180	110	10 x 190	T50	50	
FUR 14 x 210 T A4	48845	4	$\bullet$	14	225	70	210	140	10 x 220	T50	50	

FUR-T A4 - with safety screw made of stainless steel



For matching cover caps ADT, see page 191.

**FIRE PROTECTION**

Red hot: see page 31 for information about fire protection..

**CORROSION**

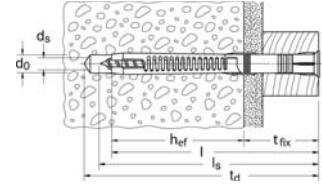
All about corrosion and how you can avoid it is written on page 32.

# Universal frame fixing FUR

## TECHNICAL DATA

**FUR 8-SS and FUR 10-SS** - safety screw with hexagon-head **FUR-SS A4** - with safety screw made of stainless steel

Type	Art.-No.	ID	approvals	drill-Ø	min. drill-hole depth for through fixings	effect. anchorage depth	anchor length	max. usable length	safety screw	width across nut	qty. per box
			DIBt	d <sub>0</sub>	t <sub>d</sub>	h <sub>ef</sub>	l	t <sub>fix</sub>	d <sub>s</sub> x l <sub>s</sub>	SW	pcs.
				[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		
FUR 8 x 80 SS	70130	0	●	8	90	70	80	10	6 x 85	SW10	50
FUR 8 x 100 SS	70131	7	●	8	110	70	100	30	6 x 105	SW10	50
FUR 8 x 120 SS	70132	4	●	8	130	70	120	50	6 x 125	SW10	50
FUR 10 x 80 SS	88776	9	●	10	90	70	80	10	7 x 85	SW13	50
FUR 10 x 100 SS	88777	6	●	10	110	70	100	30	7 x 105	SW13	50
FUR 10 x 115 SS	88783	7	●	10	125	70	115	45	7 x 120	SW13	50
FUR 10 x 135 SS	88778	3	●	10	145	70	135	65	7 x 140	SW13	50
FUR 10 x 160 SS	88779	0	●	10	170	70	160	90	7 x 165	SW13	50
FUR 10 x 185 SS	88780	6	●	10	195	70	185	115	7 x 190	SW13	50
FUR 10 x 200 SS	88781	3	●	10	210	70	200	130	7 x 205	SW13	50
FUR 10 x 230 SS	88782	0	●	10	240	70	230	160	7 x 235	SW13	50
FUR 8 x 80 SS A4	70140	9	●	8	90	70	80	10	6 x 85	SW10	50
FUR 8 x 100 SS A4	70141	6	●	8	110	70	100	30	6 x 105	SW10	50
FUR 10 x 80 SS A4	88792	9	●	10	90	70	80	10	7 x 85	SW13	50
FUR 10 x 100 SS A4	88793	6	●	10	110	70	100	30	7 x 105	SW13	50
FUR 10 x 115 SS A4	88799	8	●	10	125	70	115	45	7 x 120	SW13	50
FUR 10 x 135 SS A4	88794	3	●	10	145	70	135	65	7 x 140	SW13	50
FUR 10 x 160 SS A4	88795	0	●	10	170	70	160	90	7 x 165	SW13	50
FUR 10 x 185 SS A4	88796	7	●	10	195	70	185	115	7 x 190	SW13	50
FUR 10 x 200 SS A4	88797	4	●	10	210	70	200	130	7 x 205	SW13	50
FUR 10 x 230 SS A4	88798	1	●	10	240	70	230	160	7 x 235	SW13	50



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**FUR 14 FUS** - safety screw with hexagon-head **FUR-FUS A4** - with safety screw made of stainless steel

Type	Art.-No.	ID	approvals	drill-Ø	min. drill-hole depth for through fixings	effect. anchorage depth	anchor length	max. usable length	safety screw	width across nut	qty. per box
			DIBt	d <sub>0</sub>	t <sub>d</sub>	h <sub>ef</sub>	l	t <sub>fix</sub>	d <sub>s</sub> x l <sub>s</sub>	SW	pcs.
				[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		
FUR 10 x 80 FUS	3) 4) 93527	9	●	10	90	70	80	10	7 x 85	SW13	50
FUR 10 x 100 FUS	3) 4) 97797	2	●	10	80	70	100	30	7 x 105	SW13	50
FUR 14 x 80 FUS	1) 2) 48724	2	●	14	95	70	80	10	10 x 90	SW17	50
FUR 14 x 100 FUS	1) 2) 48725	9	●	14	115	70	100	30	10 x 110	SW17	50
FUR 14 x 140 FUS	1) 2) 48726	6	●	14	155	70	140	70	10 x 150	SW17	50
FUR 14 x 165 FUS	1) 2) 48727	3	●	14	180	70	165	95	10 x 175	SW17	50
FUR 14 x 180 FUS	1) 2) 48728	0	●	14	195	70	180	110	10 x 190	SW17	50
FUR 14 x 210 FUS	1) 2) 48842	3	●	14	225	70	210	140	10 x 220	SW17	50
FUR 14 x 240 FUS	1) 2) 48729	7	●	14	255	70	240	170	10 x 250	SW17	50
FUR 14 x 270 FUS	1) 2) 48730	3	●	14	285	70	270	200	10 x 280	SW17	50
FUR 14 x 300 US	1) 2) 5) 90762	7	●	14	315	70	300	225	10 x 305	SW17	20
FUR 14 x 330 US	1) 2) 5) 90763	4	●	14	345	70	330	255	10 x 335	SW17	20
FUR 14 x 360 US	1) 2) 5) 90764	1	●	14	375	70	360	285	10 x 365	SW17	20
FUR 10 x 80 FUS A4	3) 4) 93528	6	●	10	90	70	80	10	7 x 85	SW13	50
FUR 14 x 80 FUS A4	1) 48731	0	●	14	95	70	80	10	10 x 90	SW17	50
FUR 14 x 100 FUS A4	1) 48732	7	●	14	115	70	100	30	10 x 110	SW17	50
FUR 14 x 140 FUS A4	1) 48733	4	●	14	155	70	140	70	10 x 150	SW17	50
FUR 14 x 165 FUS A4	1) 48734	1	●	14	180	70	165	95	10 x 175	SW17	50
FUR 14 x 180 FUS A4	1) 48735	8	●	14	195	70	180	110	10 x 190	SW17	50
FUR 14 x 210 FUS A4	1) 48843	0	●	14	225	70	210	140	10 x 220	SW17	50
FUR 14 x 240 FUS A4	1) 48736	5	●	14	255	70	240	170	10 x 250	SW17	50
FUR 14 x 270 FUS A4	1) 48737	2	●	14	285	70	270	200	10 x 280	SW17	50

- 1) Collar: Ø 26 x 3 mm.
- 3) Collar: Ø 18 x 2 mm.
- 5) not pre-assembled

- 2) Additional Bit T50 is integrated into the hexagon head.
- 4) Additional Bit T40 is integrated into the hexagon head.

## LOADS

Recommended loads  $N_{rec}^{1)}$  [kN] and mean ultimate loads  $N_U$  [kN] with large axial spacing and edge distance

Fixing type		FUR 8		FUR 10		FUR 14	
		$N_{rec}^{1)}$	$N_U$	$N_{rec}^{1)}$	$N_U$	$N_{rec}^{1)}$	$N_U$
Substrate							
Concrete $\geq$ C12/15	[kN]	1.2	8.1	2.1	10.0	3.1	21.9
Solid brick $\geq$ Mz12 (DIN 105)	[kN]	0.7	5.0	1.4	10.0	1.8	12.5
Solid sand lime brick $\geq$ KS12 (DIN 106)	[kN]	1.1	7.8	1.6	12.8	2.8	19.7
Vertical perforated brick $\geq$ Hlz12 ( $\rho \geq 1.0$ kg/dm <sup>3</sup> , DIN 105)	[kN]	0.13	0.9	0.37	2.6	0.5	<sup>2)</sup>
Perforated sand lime brick $\geq$ KSL12 (DIN 106)	[kN]	0.63	4.4	0.48	3.3	0.6	<sup>2)</sup>
Hollow block $\geq$ Hbl2 (lightweight concrete, DIN 18151) <sup>3)</sup>	[kN]	0.17	1.2	0.46	3.2	0.31	2.2
Solid block $\geq$ V2 (lightweight concrete, DIN 18152)	[kN]	0.56	3.9	0.71	5.0	0.5	<sup>2)</sup>

1) Safety factor for the material ( $\gamma_M$ ) and for the load ( $\gamma_L$ ) included.

2) Due to large range of scatter of test results not suitable, the failure of the substrate varies so greatly that no reproducible values can be given.

3) The expanding part of the fixing must anchor in the wall of the brick.

Frame fixings /  
Stand-off install.

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