

Technical Sheet

FRÜLSIDER

SIMPSON
StrongTie

FM 753 evo-LW

Pasador de anclaje opción 7 con arandelas anchas

Los pasadores de anclaje FM 753 LW son fijaciones por expansión sobre soporte de hormigón; estos pasadores se suministran con arandelas anchas premontadas, ideales para uniones de madera sobre hormigón.

Features

Materia

- Acero electrocincado.

Ventajas

- Distancia al borde y entre centros mínima
- Instalación rápida y sencilla: tuerca y arandela premontadas y profundidad de anclaje reducida;
- Ø de rosca = Ø de perforación
- Protección de la rosca durante el montaje: punto de impacto reforzado
- Marcado en la cabeza: identificación de las dimensiones del pasador tras la instalación
- Arandela ancha premontada

Applications

Applications

- Timber sill to concrete
- Timber wall plate to concrete

Campos de aplicación

- Hormigón no fisurado



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Datos técnicos

Dimensions

Referencia	Dimensiones de las fijaciones metálicas											Datos de	
	Dimensiones y Valores					Otro							
	Dim										[kg]	Profundidad mínima de perforación [h1][mm]	Prof de : no [h [
75345B1012300	M10x123	G	34	17	50	10	50	12	25.0	100	0.093	70	

Dimensions
See full table online [→](#)



Design capacities - single anchor - no edge distances

Referencia	Dimensiones de las fijaciones metálicas	Metallic fixings loads								Capacidad de cálculo - hormigón fisurado
	Dimensiones y Valores Característicos[mm]	Capacidad de cálculo - hormigón no fisurado (3)[kN]								
	Dimensiones[mm]	Tracción - NRd (1)				Cizallamiento - VRd (1-2)[kN]				Momento de flexión - M _{rd} [Nm]
		C20/25[kN]	C30/37[kN]	C40/50[kN]	C50/60[kN]	C20/25[kN]	C30/37[kN]	C40/50[kN]	C50/60[kN]	
75345B1012300	M10x123	11.6	14.2	16.4	18.3	11.6	11.6	11.6	11.6	37.3
75345B1017300	M10x173	11.6	14.2	16.4	18.3	11.6	11.6	11.6	11.6	37.3
75345B1214900	M12x149	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3
75345B1219900	M12x199	17.2	20.8	23.9	26.7	20.1	20.1	20.1	20.1	65.3

1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing $s \geq 15$ cm (any diameter) or with a rebar spacing $s \geq 10$ cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges ($c \leq \max [10 \text{ hef}; 60d]$) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3 \text{ N/mm}^2$ can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

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Pasador de anclaje opción 7 con arandelas anchas

Recommended capacities - single anchor - no edge distances

Referencia	Dimensiones de las fijaciones metálicas	Metallic fixings loads								
	Dimensiones y Valores Característicos[mm]	Recommended loads - Non-cracked concrete								Capacidad de cálculo - hormigón no fisurado (3)[kN]
		Dimensiones[mm]	Tracción - N _{rec} [kN]				Cizallamiento - V _{rec} [kN]			
	C20/25[kN]		C30/37[kN]	C40/50[kN]	C50/60[kN]	C20/25[kN]	C30/37[kN]	C40/50[kN]	C50/60[kN]	
75345B1012300	M10x123	8.3	10.1	11.7	13.1	8.3	8.3	8.3	8.3	26.6
75345B1017300	M10x173	8.3	10.1	11.7	13.1	8.3	8.3	8.3	8.3	26.6
75345B1214900	M12x149	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4	46.6
75345B1219900	M12x199	12.3	14.9	17.1	19.1	14.4	14.4	14.4	14.4	46.6

1. The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s) and with a partial safety factor for actions of $\gamma_F=1.4$. The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing $s \geq 15$ cm (any diameter) or with a rebar spacing $s \geq 10$ cm, if the rebar diameter is 10 mm or smaller.

2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges ($c \leq \max [10 h_{ef}; 60d]$) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.

3. Concrete is considered non-cracked when the tensile stress within the concrete is $\sigma_L + \sigma_R \leq 0$. In the absence of detailed verification $\sigma_R = 3$ N/mm² can be assumed (σ_L equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design capacities - single anchor - no edge distances - reduced embedment depth

Referencia	Dimensiones de las fijaciones metálicas	Metallic fixings loads	Datos de instalación				
	Dimensiones y Valores Característicos[mm]	Design loads - Tension & Shear - N _d [kN]	Datos de instalación	Separaciones y distancias al borde			
	Dimensiones[mm]		Profundidad de anclaje reducida[mm]	Characteristic spacing for $h_{ef,r}^{(5)}$ [mm]	Profundidad de anclaje mínima [hef]. [mm]	Min. spacing for $h_{ef,r}$ [mm]	Min. edge distance for $h_{ef,r}$
75345B1012300	M10x123	4.7	35	105	55	50	50
75345B1017300	M10x173	4.7	35	105	55	50	50
75345B1214900	M12x149	7.2	50	150	75	70	70
75345B1219900	M12x199	7.2	50	150	75	70	70

Shear value valid with distance from the edge $c > 10 \times h_{ef,r}$

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Recommended capacities - single anchor - no edge distances - reduced embedment depth

Referencia	Dimensiones de las fijaciones metálicas	Metallic fixings loads	Datos de instalación				
	Dimensiones y Valores Característicos[mm]	carga de tracción / cizallamiento Rrec[kN]	Datos de instalación	Separaciones y distancias al borde			
	Dimensiones[mm]		Profundidad de anclaje reducida[mm]	Characteristic spacing for $h_{ef,r}^{(5)}$ [mm]	Profundidad de anclaje mínima [heff.] [mm]	Min. spacing for $h_{ef,r}$ [mm]	Min. edge distance for $h_{ef,r}$
75345B1012300	M10x123	3.4	35	105	55	50	50
75345B1017300	M10x173	3.4	35	105	55	50	50
75345B1214900	M12x149	5.2	50	150	75	70	70
75345B1219900	M12x199	5.2	50	150	75	70	70

The recommended loads N,V and F derive from the mean ultimate loads and are inclusive of the total safety factor $\gamma=4$ (shear $\gamma=3$).

Shear value valid with distance from the edge $c>10 \times h_{ef,r}$

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Instalación

Spacing, Edge Distance and Member Thickness

Referencia	Dimensiones de las fijaciones metálicas				Datos de instalación					
	Dimensiones y Valores Características[mm]		Otro		Datos de instalación			Separaciones y distancias al b		
	Dim							cción stica(5) [mm]	Distancia característica entre bordes[mm]	
75345B1012300									75	
75345B1017300	M10x173	17	10	12	70	30	50	100	150	75

**Spacing, Edge Distance and
Member Thickness**
See full table online →

