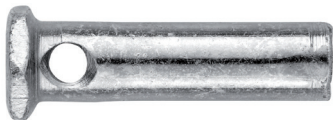


EF ELEPHANT FEET FERRULE



FEATURES

- Stress-free anchoring close to edge and reduced anchor spacing.
- Cast-in placement eliminates the need of drilling, important when the reinforcing is in the fixing zone.
- Ideal for shallow embedment as the anchor can be tied on the reinforcement for better load distribution over a wider area to become an integral part of the reinforcing structure.
- Suitable for high tension, cracked concrete zone areas, pretensioning and post tensioning concrete structures.
- High tension and shear load capacities with high tensile steel grade bolts.
- Cross bar creates "ductile" failure behaviour to increase safety.
- Excellent product replacement to cast-in channel for curtain wall fixings.
- Sizes available up to M30.

APPLICATIONS

- Structural connections, curtain wall and panel surface fixings.
- General cast-in anchoring point for thin panel.
- Anchoring point for post-tensioning or prestressing slabs.
- Use as lifting anchor for precast concrete products and architectural panels.
- Tilt-up panel construction.

RANGE OF CONCRETE QUALITY

C20/25 ~ C50/60

RANGE OF LOADING

6.4 kN ~ 142.4 kN (SWL)



Heavy loads

MATERIAL SPECIFICATIONS

- Hot forged carbon steel; zinc galvanised $\geq 5\mu\text{m}$ & hot dipped galvanised $\geq 40\mu\text{m}$.
- Hot forged stainless steel 304 (A2) & 316 (A4).



BASE MATERIALS

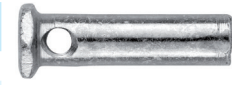


Concrete

► ORDERING DETAILS

EF ELEPHANT FEET FERRULE - ZINC GALVANISED

ANCHOR SIZE	THREAD LENGTH (mm)	OUTER DIAMETER (mm)	BASE DIAMETER (mm)	PACKING CONTENT (PCs.)	PRODUCT PART NO.
M10 x 45	20	16	19	Bulk	EF1045
M12 x 55	25	17	22	Bulk	EF1255
M12 x 70	35	17	22	Bulk	EF1270
M16 x 70	35	22	29	Bulk	EF1670
M16 x 95	40	22	29	Bulk	EF1695
M20 x 70	35	26	32	Bulk	EF2070
M20 x 95	40	26	32	Bulk	EF2095
M24 x 95	50	32	38	Bulk	EF2495
M24 x 120	75	32	38	Bulk	EF24120
M30 x 125	50	42	48	Bulk	EF30125
M30 x 175	75	42	48	Bulk	EF30175



EF ELEPHANT FEET FERRULE - HOT DIPPED GALVANISED

ANCHOR SIZE	THREAD LENGTH (mm)	OUTER DIAMETER (mm)	BASE DIAMETER (mm)	PACKING CONTENT (PCs.)	PRODUCT PART NO.
M10 x 45	20	16	19	Bulk	EF1045GH
M12 x 55	25	17	22	Bulk	EF1255GH
M12 x 70	35	17	22	Bulk	EF1270GH
M16 x 70	35	22	29	Bulk	EF1670GH
M16 x 95	40	22	29	Bulk	EF1695GH
M20 x 70	35	26	32	Bulk	EF2070GH
M20 x 95	40	26	32	Bulk	EF2095GH
M24 x 95	50	32	38	Bulk	EF2495GH
M24 x 120	75	32	38	Bulk	EF24120GH
M30 x 125	50	42	48	Bulk	EF30125GH
M30 x 175	75	42	48	Bulk	EF30175GH



EF ELEPHANT FEET FERRULE - STAINLESS STEEL CLASS 304 (A2)

ANCHOR SIZE	THREAD LENGTH (mm)	OUTER DIAMETER (mm)	BASE DIAMETER (mm)	PACKING CONTENT (PCs.)	PRODUCT PART NO.
M10 x 45	20	16	19	Bulk	EF1045S
M12 x 55	25	17	22	Bulk	EF1255S
M12 x 70	35	17	22	Bulk	EF1270S
M16 x 70	35	22	29	Bulk	EF1670S
M16 x 95	40	22	29	Bulk	EF1695S
M20 x 70	35	26	32	Bulk	EF2070S
M20 x 95	40	26	32	Bulk	EF2095S
M24 x 95	50	32	38	Bulk	EF2495S
M24 x 120	75	32	38	Bulk	EF24120S
M30 x 125	50	42	48	Bulk	EF30125S
M30 x 175	75	42	48	Bulk	EF30175S



EF ELEPHANT FEET FERRULE - STAINLESS STEEL 316 (A4)

ANCHOR SIZE	THREAD LENGTH (mm)	OUTER DIAMETER (mm)	BASE DIAMETER (mm)	PACKING CONTENT (PCs.)	PRODUCT PART NO.
M10 x 45	20	16	19	Bulk	EF1045SS
M12 x 55	25	17	22	Bulk	EF1255SS
M12 x 70	35	17	22	Bulk	EF1270SS
M16 x 70	35	22	29	Bulk	EF1670SS
M16 x 95	40	22	29	Bulk	EF1695SS
M20 x 70	35	26	32	Bulk	EF2070SS
M20 x 95	40	26	32	Bulk	EF2095SS
M24 x 95	50	32	38	Bulk	EF2495SS
M24 x 120	75	32	38	Bulk	EF24120SS
M30 x 125	50	42	48	Bulk	EF30125SS
M30 x 175	75	42	48	Bulk	EF30175SS



► INSTALLATION PERIMETER & LOADING DATA

EF ELEPHANT FEET FERRULE - ZINC GALVANISED & HOT DIPPED GALVANISED

ANCHOR SIZE	ANCHOR LENGTH (mm)	EMBEDMENT DEPTH (mm)	CROSS HOLE BAR SIZE (mm)	TIGHTENING TORQUE (Nm)	RECOMMENDED SPACING & EDGE DISTANCE TO FULL LOADS (mm)		ABSOLUTE MINIMUM SPACING & EDGE DISTANCE (mm)		RECOMMENDED LOAD (KN)	
					TENSION	SHEAR	TENSION	SHEAR	TENSION ¹⁾	SHEAR ²⁾
M10 x 45	45	50	R8	17	117	59	39	39	6.4	15.9
M12 x 55	55	60	R8	30	141	71	47	47	8.6	23.1
M12 x 70	70	75	R8	30	186	93	62	62	12.4	23.1
M16 x 70	70	75	R10	75	180	90	60	60	15.4	43.1
M16 x 95	95	100	R10	75	255	128	85	85	24.3	43.1
M20 x 70	70	75	R10	144	180	90	60	60	16.7	67.2
M20 x 95	95	100	R10	144	255	128	85	85	26.4	67.2
M24 x 95	95	100	Y12	250	240	120	80	80	33.1	96.8
M24 x 120	120	125	Y12	250	315	158	105	105	43.8	96.8
M30 x 125	125	130	Y12	300	315	158	105	105	50.6	142.4
M30 x 175	175	180	Y12	300	465	233	155	155	59.9	142.4

¹⁾ Loading based on standard embedment depth and non-cracked concrete, $f_{ck,cube} = 25 \text{ N/mm}^2$ (C20/25)

²⁾ Shear load based on high tensile steel class 8.8. Loading will be reduced if lower carbon steel grade is used.

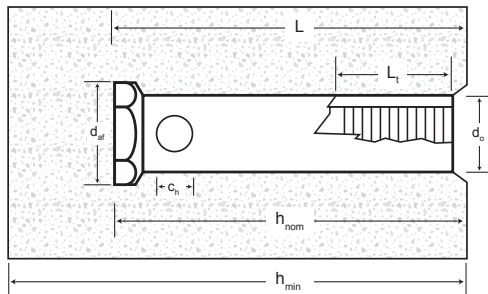
EF ELEPHANT FEET FERRULE - STAINLESS STEEL CLASS 304 (A2) & CLASS 316 (A4)

ANCHOR SIZE	ANCHOR LENGTH (mm)	EMBEDMENT DEPTH (mm)	CROSS HOLE BAR SIZE (mm)	TIGHTENING TORQUE (Nm)	RECOMMENDED SPACING & EDGE DISTANCE TO FULL LOADS (mm)		ABSOLUTE MINIMUM SPACING & EDGE DISTANCE (mm)		RECOMMENDED LOAD (KN)	
					TENSION	SHEAR	TENSION	SHEAR	TENSION ¹⁾	SHEAR ²⁾
M10 x 45	45	50	R8	17	117	59	39	39	6.4	11.2
M12 x 55	55	60	R8	30	141	71	47	47	8.6	16.2
M12 x 70	70	75	R8	30	186	93	62	62	12.4	16.2
M16 x 70	70	75	R10	75	180	90	60	60	15.4	30.2
M16 x 95	95	100	R10	75	255	128	85	85	24.3	30.2
M20 x 70	70	75	R10	144	180	90	60	60	16.7	47.1
M20 x 95	95	100	R10	144	255	128	85	85	26.4	47.1
M24 x 95	95	100	Y12	250	240	120	80	80	33.1	67.9
M24 x 120	120	125	Y12	250	315	158	105	105	43.8	67.9
M30 x 125	125	130	Y12	300	315	158	105	105	50.6	99.8
M30 x 175	175	180	Y12	300	465	233	155	155	59.9	99.8

¹⁾ Loading based on standard embedment depth and non-cracked concrete, $f_{ck,cube} = 25 \text{ N/mm}^2$ (C20/25)

²⁾ Shear load based on stainless steel 304 or 316.

► SETTING DIAGRAM



► INSTALLATION PROCEDURE

