CONCA®

ETA 24/0833

TDS | 2035.2

ECONOMY POLYESTER INJECTION SYSTEM

EP

ETA 24/0833

ECONOMY POLYESTER INJECTION SYSTEM EP

The CONCA EP Injection System is a general purpose, two-component bonded anchoring system, ideal for a wide range of construction applications. Formulated with a styrene-free polyester base, the system offers minimal odour, making it well-suited for indoor environments. The CONCA EP system is engineered for low to medium load applications, providing reliable anchorage in both concrete and masonry materials.

- ETA Assessed for Uncracked Concrete: European Technical Assessment (ETA 24/0833).
- Versatile Load Range: Designed for static and quasi-static general-purpose applications, anchor sizes - M8 to M24.
- Rapid Curing: Features a fast-setting formula for quicker installation and reduced downtime.
- Styrene-Free Formula: Safe for indoor use, with very low odour and a styrene-free formulation (SF).
- Broad Base Material Compatibility: Suitable for anchoring in a variety of base materials, including both concrete and masonry.
- Edge and Spacing Flexibility: Allows close-to-edge anchoring and reduced anchor spacing, maximizing the efficiency of the installation.
- Overhead Installation: Can be safely used in overhead applications, offering installation flexibility.
- Wet, Dry, or Flooded Holes: Performs reliably in dry, wet, or even flooded holes, ensuring consistent anchoring in diverse conditions.
- Temperature range: -40°C to +80°C (long term maximum temperature +50°C).

Resin Material

Main constituent	Polyester resin
Appearance (uncured)	Paster
Colour	Grey
Viscosity	Thixotropic, high

Working and loading time

Working time is typical gel time at the highest temperature of the given range. Loading time is setting time at the lowest temperature of the given range.

Polyester Styrene Free (PESF)

Temperature of base material	+5°C	+5°C to 10°C	+10°C to +20°C	+20°C to +25°C	+25°C to +30°C	+30°C
Temperature of cartridge	+5°C	+5°C to 10°C	+10°C to +20°C	+20°C to +25°C	+25°C to +30°C	+30°C
Working time (mins)	18	10	6	5	4	3
Loading time (mins)	150	150	85	50	40	35

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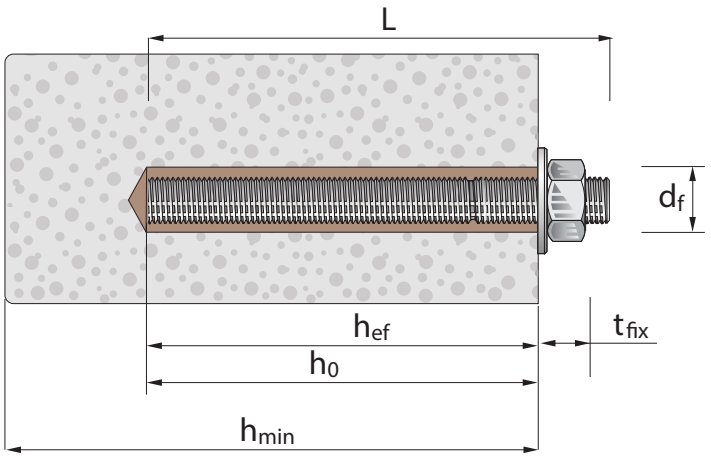
THREADED ROD



Anchor size			M8	M10	M12	M16	M20	M24
d	Diameter of anchor bolt or thread diameter	mm	8	10	12	16	20	24
d_0	Nominal diameter of drill bit	mm	10	12	14	18	24	28
d_f	Diameter of clearance hole in the fixture(≤)	mm	9	12	14	18	22	26
d_b	Diameter of steel brush (≥)	mm	12	14	16	20	26	30
$h_{ef,min}$	Minimum effective anchorage depth	mm	64	80	96	128	160	192
h_{ef}	Standard effective anchorage depth	mm	80	90	110	128	170	210
$h_{ef,max}$	Maximum effective anchorage depth	mm	96	120	144	192	240	288
h_{min}	Minimum thickness of the concrete member	mm	h_{ef} + 30mm ≥ 100mm			h_{ef} + $2d_0$		
T_{inst}	Nominal torque moment	Nm	10	20	40	80	120	160
S_{min}	Minimum spacing (5*d)	mm	40	50	60	80	100	120
$S_{cr,N}$	Spacing	mm	184	252	304	376	506	582
C_{min}	Minimum edge distance (5*d)	mm	40	50	60	80	100	120
$C_{cr,N}$	Edge distance	mm	92	126	152	188	253	291

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Design loads in uncracked concrete - 20 MPa

Anchor size	Drill Dia. (mm)	Embedment Depth (mm)	Tension N_{Rd} (kN)	Shear V_{Rd} (kN)	Concrete Member Thickness min. (mm)
8	10	80	8.4	7.2	110
10	12	90	11.8	11.2	120
12	14	110	17.3	16.8	140
16	18	125	24.4	31.2	165
20	24	170	41.5	48.8	220
24	28	210	57.2	70.4	270

Note: Design loads are based on single anchor, no edge or spacing restrictions and assumes minimum thickness of concrete member. Temperature range I.

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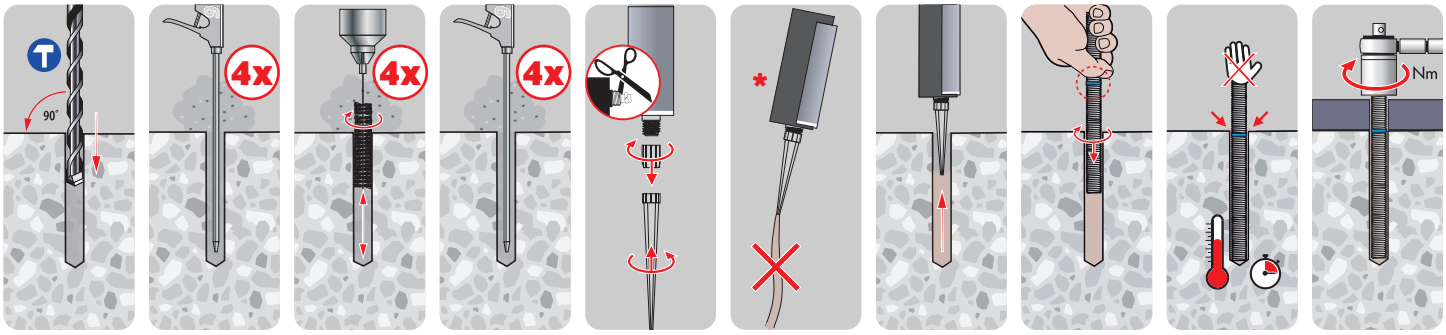
Physical Properties

Density (at +20°C)	ASTM D1875	g/mL	1.7
HDT (at +20°C)	ASTM D648	°C	83
Tensile Strength (at +20°C)	ASTM D638	N/mm²	12.1
Tensile Modulus	ASTM D638	GN/mm²	4.2
Compressive strength	BS 6319	N/mm²	82
Chloride ion content	EN 1015-17	%	0.0056
Service temperature	-	-	-40°C - + 80°C* *maximum long term temperature is 50°C

THREADED RODS SUITABLE ANCHOR RODS M8-M24

- Steel 5.8 and 8.8 Zinc Plated, Hot Dip Galvanised or Sherardised
- Stainless Steel A2 and A4
- High Corrosion Resistant Steel 1.4529 and 1.4565

Installation Procedure



Min. 6 bar **Min. 6 bar** **Min. 3 full strokes. Equal to 10-15 cm** **Min. 2/3**

Notes:

1. Standing Water in the drilled hole must be removed before cleaning
2. Hand pump can only be used for anchor sizes in uncracked concrete up to drilled hole diameter 20mm or embedment depth up to 240mm

Storage and shelf life

Keep product in its original container and avoid direct sunlight. Store between 5°C and 25°C away from direct sunlight.
Shelf Life: 18 Months (If stored below 22°C)

Health and safety

For further information please refer to SDS available at www.iccons.com.au

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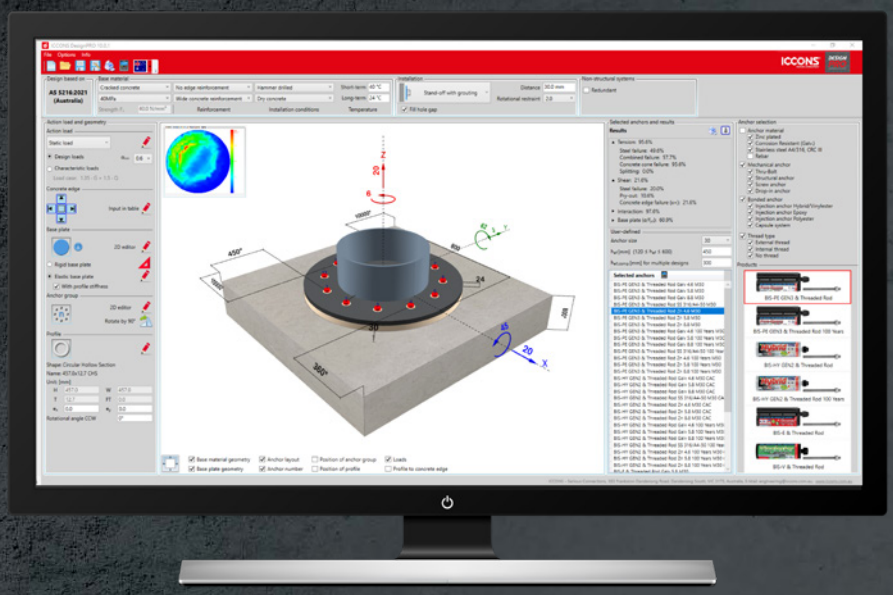
ADVANCED ANCHOR DESIGN SOFTWARE



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