

Declaration of Performance
DoP MOPOSE-en



1. Product type: Styrene free polyester bonded anchor MOPOSE, MOPOSEP, MOPOSEW, MOPOSES
2. Identification:

MOPOSE300	Styrene free polyester bonded anchor 300 ml
MOPOSE410	Styrene free polyester bonded anchor 410 ml
MOPOSEP300	Styrene free polyester bonded anchor stone color 300 ml
MOPOSEP410	Styrene free polyester bonded anchor stone color 410 ml
MOPOSEW300	Styrene free polyester bonded anchor (faster curing time) 300 ml
MOPOSEW410	Styrene free polyester bonded anchor (faster curing time) 410 ml
MOPOSES300	Styrene free polyester bonded anchor (extended curing time) 300 ml
MOPOSES310	Styrene free polyester bonded anchor (extended curing time) 410 ml
3. Intended use 1:

MOPOSE	Generic type:	Bonded anchor for anchorage of threaded rods
MOPOSEP	Base material:	Non cracked concrete C20/25 to C50/60 according to EN 206-1. Dry / wet concrete or flooded holes.
MOPOSEW	Material / durability:	a) Carbon galvanized steel class 5.8, 8.8 and 10.9 according to EN ISO 898-1 for dry internal conditions.
MOPOSES		b) Stainless steel A4-70 and A4-80 according to EN ISO 3506 for dry internal conditions, external atmospheric exposure (including industrial and marine environment) or exposure in permanently damp internal conditions if no particular aggressive conditions exist.
		c) High resistant corrosion stainless steel 1.5429 according to EN 10088 for all conditions.
	Loading:	Static, quasi static loads
	Temperature range:	-40 °C a +80 °C (maximum long term temperature +50 °C; maximum short term temperature +80 °C)
	Fire resistance:	Non declared performance
	Assumed working life:	50 years

Intended use 2:	Generic type:	Bonded anchor for anchorage of threaded rods
MOPOSE	Base material:	Solid masonry, hollow or perforated masonry. The mortar strength class of the masonry has to be M 2,5 according to EN 998-2:2010 at minimum.
	Material / durability:	Carbon galvanized steel class 5.8 according to EN ISO 898-1. Dry internal conditions.
	Loading:	Static, quasi static loads
	Temperature range:	-40 °C a +80 °C (maximum long term temperature +50 °C; maximum short term temperature +80°C)
	Fire resistance:	Non declared performance.
	Assumed working life:	50 years
4. Manufacturer: Index Fixing Systems. Técnicas Expansivas S.L.
Segador, 13
26006 Logroño, La Rioja, SPAIN
5. Authorised representative: Not applicable
6. System of assessment of performance: 1
7. Harmonised standard: Not applicable
8. European technical assessment:

Tech. assessment body:	DIBt: Deutsches Institut für Bautechnik. Notified body 1109. TZUS: Techniky a Zkušební Ústav Stavební Praha s.p. Notified body 1020.
issued:	ETA 12/0306 y ETA 13/0751
on the basis of:	ETAG 001, parts 1, 5, TR029, ETAG 029
performed:	Determination of product type, initial inspection of the manufacturing plant and continuous surveillance of FPC
under system:	1
and issued:	CE certificates 0679-CPD-0809 and 1020-CPD-090-029885.
9. Declared performances:

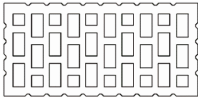
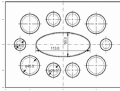
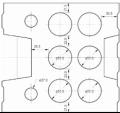
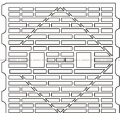
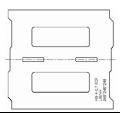
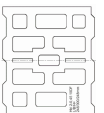
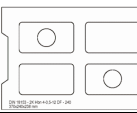
Essential characteristics intended use 1: anchorage of threaded rods in concrete			Performances						Technical specification
			M8	M10	M12	M16	M20	M24	
Installation parameters									ETAG001 p1/5
d_o	Nominal diameter of drill bit:	[mm]	10	12	14	18	22	26	
T_{inst}	Nominal installation torque:	[Nm]	10	20	40	80	150	200	
$h_{ef,min} = 8d$									
h_0	Depth of drilled hole:	[mm]	64	80	96	128	160	192	
s_{min}	Minimum spacing:	[mm]	35	40	50	65	80	96	
c_{min}	Minimum edge distance:	[mm]	35	40	50	65	80	96	
h_{min}	Minimum thickness of concrete member:	[mm]	$h_{ef} + 30 \text{ mm} \geq 100$			$h_{ef} + 2d_0$			
$h_{ef,max} = 12d$									
h_0	Depth of drilled hole:	[mm]	96	120	144	192	240	288	
s_{min}	Minimum spacing:	[mm]	50	60	70	95	120	145	
c_{min}	Minimum edge distance:	[mm]	50	60	70	95	120	145	
h_{min}	Minimum thickness of concrete member:	[mm]	$h_{ef} + 30 \text{ mm} \geq 100$			$h_{ef} + 2d_0$			
Tension load: steel failure									ETAG001 p1/5
$N_{Rk,s}$	Characteristic resistance for galvanized steel class 5.8:	[kN]	18	29	42	79	123	177	
$N_{Rk,s}$	Characteristic resistance for galvanized steel class 8.8:	[kN]	29	46	67	126	196	282	
γ_{Ms}	Partial safety factor for galvanized steel classes 5.8 and 8.8:	[-]	1.5	1.5	1.5	1.5	1.5	1.5	
$N_{Rk,s}$	Characteristic resistance for galvanized steel class 10.9:	[kN]	37	58	84	157	245	353	
γ_{Ms}	Partial safety factor for galvanized steel class 10.9:	[-]	1.4	1.4	1.4	1.4	1.4	1.4	
$N_{Rk,s}$	Characteristic resistance for stainless steels classes A4-70 and 1.4529:	[kN]	26	41	59	110	172	247	
γ_{Ms}	Partial safety factor for stainless steel class A4-70:	[-]	1.9	1.9	1.9	1.9	1.9	1.9	
γ_{Ms}	Partial safety factor for stainless steel class 1.4529:	[-]	1.5	1.5	1.5	1.50	1.50	1.50	
$N_{Rk,s}$	Characteristic resistance for stainless steel class A4-80:	[kN]	29	46	67	126	196	282	
γ_{Ms}	Partial safety factor for stainless steel class A4-80:	[-]	1.6	1.6	1.6	1.6	1.6	1.6	
Tension load: combined pull-out and concrete failure in non cracked concrete C20/25									TR029
τ_{Rk}	Characteristic bond resistance dry/wet concrete or flooded hole:	[N/mm ²]	8.5	8	9	9	8	7.5	
γ_{Mp}	Partial safety factor: ¹⁾	[-]	1.8	1.8	1.8	1.8	1.8	1.8	
ψ_c	C30/37	[-]	1,12	1,12	1,12	1,12	1,12	1,12	
ψ_c	C40/45	[-]	1,19	1,19	1,19	1,19	1,19	1,19	
ψ_c	C50/60	[-]	1,30	1,30	1,30	1,30	1,30	1,30	
Tension load: splitting failure									ETAG001 p1/5
$s_{cr,sp}$	Critical spacing (splitting):	[mm]	$4.0 h_{ef}$	$4.0 h_{ef}$	$4.0 h_{ef}$	$3.0 h_{ef}$	$3.0 h_{ef}$	$3.0 h_{ef}$	
$c_{cr,sp}$	Critical edge distance (splitting):	[mm]	$2.0 h_{ef}$	$2.0 h_{ef}$	$2.0 h_{ef}$	$1.5 h_{ef}$	$1.5 h_{ef}$	$1.5 h_{ef}$	
γ_{Mc}	Partial safety factor: ¹⁾	[-]	1.8	1.8	1.8	1.8	1.8	1.8	
Displacements under tension loads									ETAG001 p1/5
N	Service tension load:	[kN]	6.3	7.9	11.9	23.8	29.8	45.6	
δ_{N0}	Short term displacement	[mm]	0.2	0.2	0.3	0.5	0.7	0.9	
$\delta_{N\infty}$	Long term displacement	[mm]	0.4	0.4	0.4	0.4	0.4	0.4	
Shear load: steel failure									ETAG001 p1/5
$V_{Rk,s}$	Shear steel characteristic resistance for galvanized steel class 5.8:	[kN]	9	15	21	39	61	88	
$V_{Rk,s}$	Shear steel characteristic resistance for galvanized steel class 8.8:	[kN]	15	23	34	63	98	141	
$M^0_{Rk,s}$	Characteristic bending moment for galvanized steel class 5.8:	[Nm]	19	37	66	166	325	561	
$M^0_{Rk,s}$	Characteristic bending moment for galvanized steel class 8.8:	[Nm]	30	60	105	266	519	898	
γ_{Ms}	Partial safety factor for galvanized steel classes 5.8 and 8.8:	[-]	1.25	1.25	1.25	1.25	1.25	1.25	
$V_{Rk,s}$	Shear steel characteristic resistance for galvanized steel class 10.9:	[kN]	18	29	42	79	123	177	
$M^0_{Rk,s}$	Characteristic bending moment for galvanized steel class 10.9:	[Nm]	37	75	131	333	649	1123	
γ_{Ms}	Partial safety factor for galvanized steel class 10.9:	[-]	1.50	1.50	1.50	1.50	1.50	1.50	

Essential characteristics intended use 1: anchorage of threaded rods in concrete (continued)			Performances						Technical specification
			M8	M10	M12	M16	M20	M24	
$V_{Rk,s}$	Shear steel characteristic resistance for stainless steel classes A4-70 and 1.4529:	[kN]	13	20	30	55	86	124	
$M_{Rk,s}^0$	Characteristic bending moment for stainless steel classes A4-70 and 1.4529:	[Nm]	26	52	92	233	454	786	
γ_{Ms}	Partial safety factor for stainless steel classes A4-70 and 1.4529:	[-]	1.56	1.56	1.56	1.56	1.56	1.56	
γ_{Ms}	Partial safety factor for stainless steel class 1.4529:	[-]	1.25	1.25	1.25	1.25	1.25	1.25	
$V_{Rk,s}$	Shear steel characteristic resistance for stainless steel class A4-80:	[kN]	15	23	34	63	98	141	
$M_{Rk,s}^0$	Characteristic bending moment for stainless steel class A4-80:	[Nm]	30	60	105	266	519	898	
γ_{Ms}	Partial safety factor for stainless steel class A4-80:	[-]	1.33	1.33	1.33	1.33	1.33	1.33	
Shear load: concrete prout failure									ETAG001 p1/5
K	K factor:	[-]	2.0	2.0	2.0	2.0	2.0	2.0	
γ_{Mpr}	Partial safety factor:	[-]	1.5	1.5	1.5	1.5	1.5	1.5	
Shear load: concrete edge failure									ETAG001 p1/5
Ver sección 5.2.3.4 del Technical Report TR029									
γ_{Mc}	Partial safety factor:	[-]	1.5	1.5	1.5	1.5	1.5	1.5	
Displacements under shear loads									ETAG001,p1/5
V	Service shear load:	[kN]	5.2	8.3	12.0	22.4	35.0	50.4	
$\bar{\delta}_{V0}$	Short term displacement	[mm]	0.1	0.1	0.2	0.4	0.8	1.5	
$\bar{\delta}_{V\infty}$	Long term displacement	[mm]	0.2	0.2	0.3	0.6	1.2	2.3	
¹⁾ In absence of other national regulations									

Essential characteristics intended use 2: anchorage of threaded rods in masonry			Performances						Technical specification			
			M8	M10	M12	M8	M10	M12				
Installation parameters									ETAG 029			
Anchor rod												
$d_s \times l_s$	Sieve sleeve:	[mm]	---	---	---	15x85 16x85	15x85 16x85	20x85				
d_o	Nominal diameter of drill bit:	[mm]	15	15	20	15 16	15 16	20				
h_0	Depth of drilled hole:	[mm]	90	90	90	90	90	90				
h_{ef}	Effective anchorage depth:	[mm]	85	85	85	85	85	85				
$d_f \leq$	Diameter of clearance hole in the fixture:	[mm]	9	12	14	9	12	14				
T_{inst}	Nominal installation torque:	[Nm]	2	2	2	2	2	2				
Internal threaded socket												
$d_{to} \times l_t$	Internal threaded socket:	[mm]	12x80	14x80	16x80	--	--	--				
$d_s \times l_s$	Sieve sleeve:	[mm]	15x85 16x85	20x85	20x85	--	--	--				
d_o	Nominal diameter of drill bit:	[mm]	15 16	20	20	--	--	--				
h_0	Depth of drilled hole:	[mm]	90	90	90	--	--	--				
h_{ef}	Effective anchorage depth:	[mm]	85	85	85	--	--	--				
$d_f \leq$	Diameter of clearance hole in the fixture:	[mm]	9	12	14	--	--	--				
T_{inst}	Nominal installation torque:	[Nm]	2	2	2	--	--	--				
Edge distances and spacings									ETAG 029			
Base material	Anchor rods						Internal threaded socket					
	M8		M10		M12		M8		M10		M12	
	s_{min} c_{min}	s_{cr}	s_{min} c_{min}	s_{cr}	s_{min} c_{min}	s_{cr}	s_{min} c_{min}	s_{cr}	s_{min} c_{min}	s_{cr}	s_{min} c_{min}	s_{cr}
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
Brick no 1:	100	235	100	235	120	235	50	235	120	235	120	235
Brick no 2:	100	250	100	250	120	250	--	--	120	250	120	250
Brick no 3:	50	160	50	200	60	240	50	240	60	280	60	320
Brick no 4:	50	160	50	200	60	240	50	240	60	280	60	320
Brick no 5:	100	250	100	250	120	250	100	250	120	250	120	250
Brick no 6:	100	250	100	250	---	--	100	250	120	250	120	250
Brick no 7:	100	250	100	250	120	250	--	--	120	250	120	250
Brick no 8:	100	370	100	370	120	370	100	370	120	370	120	370
Characteristic bending momento									ETAG 029			
$M_{Rk,s}^0$	Bending moment characteristic resistance for galvanized steel class 5.8:	[Nm]	M8	M10	M12							
γ_{Ms}	Partial safety factor for galvanized steel class 5.8: ¹⁾	[-]	1.5	1.5	1.5	--	--	--				

Characteristic resistance under tension and shear loading							ETAG 029
Base material	Anchor rod $N_{Rk} = V_{Rk}$ [kN]			Internal threaded socket $N_{Rk} = V_{Rk}$ [kN]			β - factors for job site tests according to ETAG 029, Annex B
	M8	M10	M12	M8	M10	M12	
Brick no 1:	2,5	2,0	2,0	1,5	2,5	2,5	0.53
Brick no 2:	0.75	1.2	1.5	--	0.75	0.4	0.09
Brick no 3:	1.5	1.5	3.0	2.0	3.0	4.0	0.12
Brick no 4:	0.75	0.9	1.5	2.0	1.5	0.9	0.09
Brick no 5:	1.2	1.2	0.9	0.9	1.5	0.6	0.41
Brick no 6:	0.6	0.2	--	0.5	0.3	0.75	0.21
Brick no 7:	0.6	1.5	1.2	--	0.4	0.6	0.53
Brick no 8:	2.5	1.5	2.5	0.6	1.2	0.9	0.41
Partial safety coefficient γ_M ¹⁾	2.5	2.5	2.5	2.5	2.5	2.5	--
Displacements							ETAG 029
Base material	F [kN] $N_{Rk} / (1.4 \gamma_M)$	δ_{N0} [mm]	$\delta_{N\infty}$ [mm]	δ_{V0} [mm]	$\delta_{V\infty}$ [mm]		
Solid bricks		0.6	1.2	1.0 ²⁾	1.5 ²⁾		
Perforated and hollow bricks		0.14	1.28	1.0 ²⁾	1.5 ²⁾		

¹⁾ In absence of other national regulations ²⁾ the hole gap between bolt and fixture shall be considered additionally

Brick no 1 Hollow clay brick HLz 12-1,0-2DF according to EN 771-1 Length / width / height = 235 mm / 112 mm / 115 mm $b \geq 12 \text{ N/mm}^2 / \rho \geq 1,0 \text{ kg/dm}^3$ 	Brick no 2a Hollow sand lime brick KSL 12-1,4-3DF according to EN 771-2 Length / width / height = 240 mm / 175 mm / 113 mm $b \geq 12 \text{ N/mm}^2 / \rho \geq 1,4 \text{ kg/dm}^3$ 
Brick no 2b Hollow sand lime brick KSL 12-1,4-8DF according to EN 771-2 Length / width / height = 250 mm / 240 mm / 237 mm $b \geq 12 \text{ N/mm}^2 / \rho \geq 1,4 \text{ kg/dm}^3$ 	Brick no 3 Solid clay brick Mz 12-2,0-NF according to EN 771-1 Length / width / height = 240 mm / 116 mm / 71 mm $b \geq 12 \text{ N/mm}^2 / \rho \geq 2,0 \text{ kg/dm}^3$
Brick no 5 Hollow clay brick HLzW 6-0,7-8DF according to EN 771-1 Length / width / height = 250 mm / 240 mm / 240 mm $b \geq 6 \text{ N/mm}^2 / \rho \geq 0,8 \text{ kg/dm}^3$ 	Brick no 4 Solid sand lime brick KS 12-2,0-NF according to EN 771-2 Length / width / height = 240 mm / 115 mm / 70 mm $b \geq 12 \text{ N/mm}^2 / \rho \geq 2,0 \text{ kg/dm}^3$
Brick no 7 Lightweight concrete hollow block Hbl 4-0,7-8DF according to EN 771-3 Length / width / height = 250 mm / 240 mm / 248 mm $b \geq 4,0 \text{ N/mm}^2 / \rho \geq 0,7 \text{ kg/dm}^3$ 	Brick no 6 Lightweight concrete hollow block Hbl 2-0,45-10DF according to EN 771-3 Length / width / height = 250 mm / 300 mm / 248 mm $b \geq 2,0 \text{ N/mm}^2 / \rho \geq 0,45 \text{ kg/dm}^3$ 
Brick no 8 Concrete masonry unit Hbn 4-12DF according to EN 771-3 Length / width / height = 370 mm / 240 mm / 238 mm $b \geq 4 \text{ N/mm}^2 / \rho \geq 1,2 \text{ kg/dm}^3$ 	

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

11. Reach Directive EC 1907/2006 declaration:

We inform you that Técnicas Expansivas S.L. is classified in the EC 1907/2006 Reach Directive as a downstream-user of substances.

The product supplied does not contain substances classified as SVHC according to the Candidate List in a concentration equal or greater than 0.1% (weight / weight).

Material safety data sheet can be requested to the mail address: info@indexfix.com

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed on behalf of the manufacturer by:



Santiago Reig. Technical manager
Logroño. 30.06.2013