Declaration of Performance No. 0756-CPR-0216

Throughbolt (Torque controlled expansion anchor made of stainless steel)
JCP Construction Products,
Unit 14 Teddington Business Park, Station Rd, Teddington, Middlesex TW11 9BQ
Telephone +44 (0)208 943 1800

Intended use or uses of the products according to EAD 330232-00-0601	
Generic type	Torque controlled expansion anchor
Base material	Non-cracked concrete C20/25 to C50/60 acc. EN 206-2:2003
Batch Number	Marked on individual boxes
Material	Stainless steel, 1.4401, 1.4404. 1.4571, 1.4578, 1.4362 to EN 10088
Durability	Dry internal conditions Internal and external atmospheric exposure including industrial and marine environment, or exposure in permenantly damp internal conditions, if no particularly aggressive conditions exist.
Loading	Static, quasi-static
ETA 07/0332 issued by	DIBt
On the basis of	EAD 330232-00-0601
Certificate of Conformity 1343-CPR-M 556-1/07.15 issued by	MPA Darmstadt
Under system	1

Declared performances according to EAD 330232-00-0601									
Essential Characteristics			Performance						
			M6	M8	M10	M12	M16	M20	
Installation parameters									
d_o	Nominal diameter of drill bit	[mm]	6	8	10	12	16	20	
d_f	Fixture clearance hole	[mm]	7	9	12	14	18	22	
h_{ef}	Effective anchorage depth	[mm]	40	44	48	65	80	100	
h_1	Depth of drill hole to deepest point	[mm]	55	65	70	90	110	130	
h_{min}	Minimum thickness of concrete member	[mm]	100	100	100	130	160	200	
T_{inst}	Nominal torque moment	[mm]	6	15	25	50	100	160	
Non-Cracked concrete									
S_{min}	Minimum spacing	[mm]	35	35	45	60	80	100	
for C≥	Edge distance	[mm]	40	65	70	100	120	150	
C_{min}	Minimum edged distance	[mm]	35	45	55	70	80	100	
for S≥	Anchor spacing	[mm]	60	110	80	100	140	180	
Tensile Steel failure mode									
$N_{Rk,s}$	Characteristic tensile steel failure	[kN]	10	18	30	44	88	134	
$\gamma M,s$	Partial safety factor	[-]	1.50					1.68	
Pull Out and Splitting for standard thickness of concrete member (The highest resistance of Case 1 and Case 2 may be used)									
Case 1									
N^0Rk,sp	Characteristic Resistance in C20/25 non-cracked concrete	[kN]	6	9	12	20	30	40	
$S_{cr,sp}$	Critical spacing (Splitting)	[mm]	120	132	144	195	240	300	
$C_{cr,sp}$	Critical edge distance (Splitting)	[mm]	60	66	72	98	120	150	
Case 2									
N^0Rk,sp	Characteristic Resistance in C20/25 concrete	[kN]	7.5	12	16	25	(1)	(1)	
$S_{cr,sp}$	Critical spacing (Splitting)	[mm]	160	220	240	340	410	560	
$C_{cr,sp}$	Critical edge distance (Splitting)	[mm]	80	110	120	170	205	280	
Concrete cone failure									
h_{ef}	Effective anchorage depth	[mm]	40	44	48	65	80	100	
$S_{cr,N}$	Critical spacing	[mm]	120	132	144	195	240	300	
$C_{cr,N}$	Critical edge distance	[mm]	60	66	72	97.5	120	150	
Yc	Concrete strength increasing factor	[-]	$(f_{ck.cube} / 25)^{\wedge 0.5}$						

Displacement under tensile loading									
Nu_{cr}	Service tensile loads in uncracked concrete	[kN]	3.6	5.7	7.6	11.9	17.2	24.0	
$\delta N0,u_{cr}$	Short term displacement under tensile loads	[mm]	0.7	0.9	0.5	0.6	0.9	2.1	
$\delta N\infty,_{ucr}$	Long term displacement under tensile loads	[mm]	0.8					4.2	
Shear steel failure									
$V,_{Rk,s}$	Characteristic shear steel failure without lever arm	[kN]	7	12	19	27	50	86	
$M^0_{Rk,s}$	Characteristic shear steel failure with lever arm	[Nm]	10	24	49	85	199	454	
$\gamma m,sV$	Partial safety factor	[-]	1.25						
Concrete pryout failure									
k	Factor in equation 95.6) ETAG 001 Annex C §5.2.3.3	[-]	1.0	1.0	1.0	2.0	2.0	2.0	
$\gamma M,cp$	Partial safety factor	[-]	1.5						
Shear concrete edge failure									
l_{ef}	Effective anchorage length	[mm]	40	44	48	65	80	100	
Displacement on shear load									
V	Service shear load in cracked and non-cracked concrete	[kN]	4.0	6.9	10.9	15.4	28.6	43.7	
δ_{v0}	Short term displacement under shear load	[mm]	1.1	2.0	1.2	2.0	2.2	2.1	
$\delta V\infty$	Long term displacement under shear load	[mm]	1.7	3.0	1.8	3.0	3.3	3.2	

(1) Not decisive

The previous performance data relates to the following product codes

d	Marking d_0/L	L [mm]	t_{fix} [mm]	Product Code
6	B M6/10 A4	67	10	TSS06065
8	B M8/10 A4	75	10	TSS08075
	B M8/30 A4	95	30	TSS08095
	B M8/55 A4	120	55	TSS08120
10	B M10/10 A4	85	10	TSS10080
	B M10/30 A4	105	30	TSS10100
	B M10/50 A4	125	50	TSS10125
	B M10/100 A4	175	100	TSS10175
12	B M12/10 A4	105	10	TSS12100
	B M12/20 A4	115	20	TSS12115
	B M12/50 A4	145	50	TSS12145
	B M12/105 A4	200	105	TSS12200
16	B M16/10 A4	130	10	TSS16125
	B M16/30 A4	150	30	TSS16150
	B M16/60 A74	180	60	TSS16175
20	B M20/35 A4	180	35	TSS20170
	B M20/95 A4	240	95	TSS20220

Ammendments	
(1) ETAG changed to EAD	03/11/2017
(2) CPD changed to CPR	03/11/2017
(3) Increase in concrete strength added	03/11/2017

The performances of the product identified by the above product codes are in conformity with the declared performance

This Declaration of performance is issued under the sole responsibility of JCP Construction products

Signed for and on behalf of the manufacturers

Name and function	Place and date of issue	Signature
Brian Deluce	Teddington	
Technical Manager	03/11/2017	