

Declaration of Performance No 1109-CPD-0037

According to the Regulation EU No 305/2011

DSE01 - DSE11 - DSE07 - DSE10

Manufacturer: Tecfi S.p.A. - S.S. Appia, km 193 - 81050 Pastorano (CE), Italia

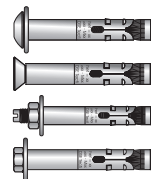
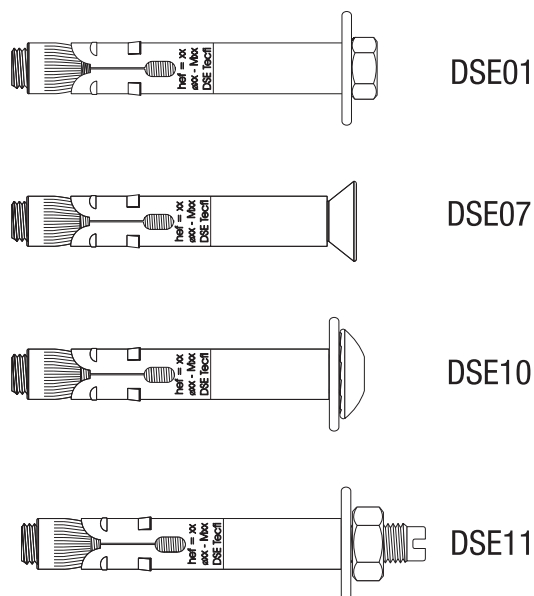
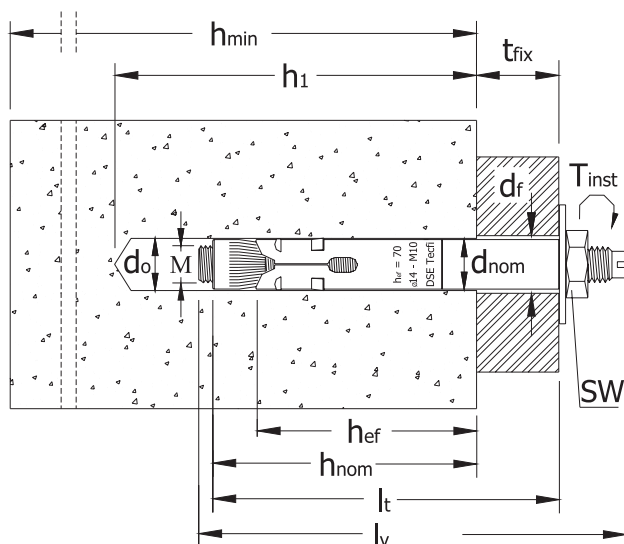


Table 1 - Intended use

Generic type:	Metal anchor for use in concrete, torque controlled expansion anchor
Base material:	Non-cracked concrete C20/25 to C50/60 acc. to EN 206-1:2003
Material:	Galvanised steel
Durability:	Internal dry conditions
Loading:	Static and quasi-static
Fire resistance:	N/A
Fire reaction:	A1 according to EN 13501-1
ETA:	ETA 08/0058, issued by ETA-DANMARK
On the basis of:	Etag 001 part 1 and 2
Attestation of Conformity:	EC number 1109-BPR-0037, issued by IFBT
Under system:	2+

2 - Installation parameters

Item	Description	Finishing
DSE01	Sleeve anchor with hex head screw 8.8 grade and large series washer	zinc plated
DSE11	Sleeve anchor with stud 8.8 grade and large series washer	
DSE07	Sleeve anchor with flat CSK head socket recess screw 8.8 grade	
DSE10	Sleeve anchor with mushroom head screw 8.8 grade (anti-theft with special cap to be hammered)	

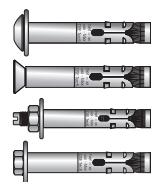


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3 - Installation sequence

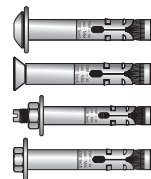
DSE01					
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4 - Declared Performances according to ETAG 001 part 1 and part 2

Installation parameters

Size		Ø8 - M6	Ø10 - M8	Ø12 - M10	Ø14 - M10	Ø16 - M12
Nominal diameter of the drill hole	$d_o = [mm]$	8	10	12	14	16
Diameter of clearance in the fixture	$d_f = [mm]$	9	12	14	16	18
Wrench size (for DSE01 and DSE11 only)	SW = [mm]	10	13	17	17	19
Hexagonal socket size (for DSE07 only)	X = [mm]	-	5	6	6	-
Six lobe recess (for DSE10 only)	T = [-]	-	40	40	40	-
Effective anchorage depth	$h_{ef} = [mm]$	45	60	60	70	90
Overall anchor embedment depth	$h_{nom} = [mm]$	55	70	70	80	100
Minimum thickness of concrete member	$h_{min} = [mm]$	100	120	120	140	180
Depth of drill hole	$h_1 = [mm]$	70	90	90	95	125
Installation torque moment	$T_{inst} = [Nm]$	20	30	50	60	100
Minimum allowable spacing	$s_{min} = [mm]$	90	120	120	140	180
	for $c = [mm] \geq$	67,5	90	90	105	135
Minimum allowable edge distance	$C_{min} = [mm]$	67,5	90	90	105	135
	for $s = [mm] \geq$	90	120	120	140	180

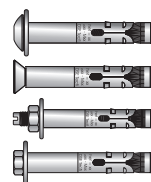
Steel failure to tension load

Characteristic resistance to tension load	$N_{rk,s} = [kn]$	16	29	46	46	67
Partial safety factor	$\gamma_{Ms} = [-]$	1,5 ¹⁾				

Pull-out failure to tension load

Characteristic resistance to tension load in non-cracked concrete	$N_{rk,p} = [kn]$	3	12	16	25	30
Partial safety factor	$\gamma_{Mp} = [-]$	1,8 ^{1) 2)}				
Increasing factor for concrete C30/37	$\psi_c \text{ C30/37} = [-]$	1,22				
Increasing factor for concrete C40/50	$\psi_c \text{ C40/50} = [-]$	1,41				
Increasing factor for concrete C50/60	$\psi_c \text{ C50/60} = [-]$	1,55				

¹⁾ In absence of national regulation



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4.1 - Declared Performances according to ETAG 001 part 1 and part 2

Concrete cone failure

Size		Ø8 - M6	Ø10 - M8	Ø12 - M10	Ø14 - M10	Ø16 - M12
Effective anchorage depth	$h_{ef} = [mm]$	45	60	60	70	90
Critical spacing	$S_{cr,N} = [mm]$	180	240	240	280	360
Critical edge distance	$C_{cr,N} = [mm]$	135	180	180	210	270
Installation safety factor	$\gamma_2 = [-]$	1				

Concrete Splitting failure

Critical spacing (splitting)	$S_{cr,sp} = [mm]$	180	240	240	280	360
Critical edge distance (splitting)	$C_{cr,sp} = [mm]$	135	180	180	210	270

Displacements under tension loads

Service tension load in non-cracked concrete C20/25	$N_{ucr} = [kn]$	1,4	4,8	6,3	9,9	11,9
Short term displacement under tension load in non-cracked concrete C20/25	$\delta_{N0,ucr} = [mm]$	0,14	0,32	0,40	0,62	0,70
Long term displacement under tension load in non-cracked concrete C20/25	$\delta_{N\infty,ucr} = [mm]$	-	-	1,95	-	-

Steel failure to shear load

Steel failure without lever arm	$V_{rk,s} = [kn]$	8	14,6	23,2	23,2	33,7
Steel failure with lever arm	$M_{rk,s} = [Nm]$	12	30	60	60	105
Safety factor	$\gamma_{Mp} = [-]$	1,25 ¹⁾				

Concrete pryout failure

Factor in equation 5.6 of the guideline's Annex C	k = [-]	1	2
Partial safety factor	γ ₂ = [-]	1	

Concrete edge failure

Effective external diameter of the anchor	$d_{nom} = [mm]$	8	10	12	14	16
Effective anchorage length	$l_{ef} = [mm]$	45	60	60	70	90
Installation safety factor	$\gamma_2 = [-]$	1				

Displacements under shear loads

Service tension load in non-cracked concrete C20/25	$V = [kn]$	7,70	12,30	21,00	23,30	52,50
Short term displacement under shear load in non-cracked concrete C20/25	$\delta_{V0} = [mm]$	2,40	2,60	2,50	3,00	4,00
Long term displacement under shear load in non-cracked concrete C20/25	$\delta_{V\infty} = [mm]$	3,60	3,90	3,80	4,50	6,00

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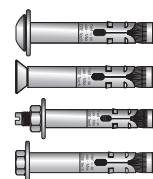


Table 5 - DSE01/DSE11 and DSE10 ranges

Items code	Ø/M	d ₀ [mm]	l [mm]	t _{fix} [mm]
DSE0108060	8/6	8	60	5
DSE0108080, DSE1108080			80	15
DSE0108100			100	35
DSE0108120			120	55
DSE0110080, DSE1110080, DSE1010080	10/8	10	80	10
DSE0110100, DSE1110100, DSE1010100			100	30
DSE0110120, DSE1110120, DSE1010120			120	50
DSE0110140, DSE1110140			140	70
DSE0112080, DSE1012080	12/10	12	80	20
DSE0112100, DSE1112100, DSE1012100			100	40
DSE0112120, DSE1112120, DSE1012120			120	60
DSE0112150, DSE1112150			150	80
DSE0114085	14/10	14	85	20
DSE0114100, DSE1114100, DSE1014100			100	50
DSE0114100, DSE1114100, DSE1014100			120	70
DSE0114150			150	100
DSE0116110	16/12	16	110	20
DSE0116130, DSE1116130			130	50
DSE0116150, DSE1116150			150	80

Table 5 - DSE07 ranges

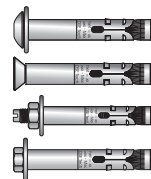
DSE 07 10 085	10/8	10	85	15
DSE 07 10 105			105	35
DSE 07 10 125			125	55
DSE 07 12 080	12/10	12	80	10
DSE 07 12 110			110	40
DSE 07 12 130			130	60
DSE 07 14 105	14/10	14	105	25
DSE 07 14 125			125	45

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5 - Label

Art./Item: DSE yy yy yyy

IT XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXX

EN XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

FR XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

DE XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

ES XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXX
d0: Ø foro/hole

lt

dnom

tfix

Ø XX (ØXX) x XXX /YY
dnom (d0) x lt / tfix

Lotto/Lot: XXXXXXXXXXXXXXXX

DoP: [QR Code]

ETA 1109 Tecfi S.p.A. 10
DSE EAD 330232-00-0601
Metal anchors for use in concrete, option /
(non-cracked concrete, design method A)
Caratteristiche essenziali riportate nel:
DoP No. 1109-CPD-0037
www.tecfi.it/DoP

XX/XXXX

Tecfi **caratterezze per lavorare** ISO 9001 ISO 14001

Art./Item: DSE yy yy yyy

XXXXXXXXXXXX
d0: Ø foro/hole

lt

dnom

tfix

Ø XX (ØXX) x XXX /YY
dnom (d0) x lt / tfix

CE

Pz./Pcs. 10

8 026533 100057

www.tecfi.it info@tecfi.it

- | | |
|---|---|
| 1 Codice articolo / Item Code | 10 Uso del prodotto previsto dallo Standard Europeo applicato, livello di prestazione dichiarato / Intended use of the product as laid down in the European standard applied, level of performance declared |
| 2 Descrizioni / Descriptions | 11 Numero di DoP / DoP Number |
| 3 Immagine / Picture | 12 Link al DoP / Link to DoP |
| 4 Diametro ancorante (d _{nom}) / Anchor Diameter (d _{nom}) | 13 Lotto / Lot Number |
| 5 Lunghezza ancorante (lt) / Anchor Length (lt) | 14 Numero di pezzi per scatola / Number of Pieces per Box |
| 6 Spessore massimo fissabile (t _{fix}) / Maximum Thickness of fixture (t _{fix}) | 15 Dimensione chiave / impronta a 6 lobi |
| 7 Numero identificativo dell'organismo notificato / Identification number of the Notified Body | 16 Numero ETA / ETA Number |
| 8 Le ultime due cifre dell'anno in cui il marchio è stato affisso per la prima volta / Last two digits of the year in which the marking was first affixed | |
| 9 Specifica tecnica armonizzata / European Technical Specification | |

The performances of the product identified by the above identification code are in conformity with the declared performance. This declaration of performance is issued under the sole responsibility of Tecfi S.p.A.

Signed for and behalf of the manufacturer by:

Name and function	Place and date of issue	Signature
President Antonio Guarino	Pastorano, 15 th June 2018	