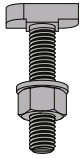
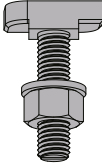
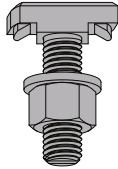
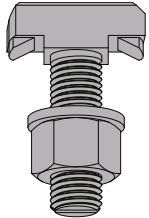


PEC-T
Hammer- and Hook Head Bolts

Technical Datasheet
January 2020

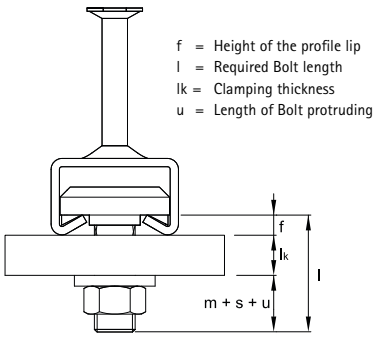


PEC-T-Bolts												
Type	Hammer Head Bolts						Hook Head Bolts					
	PEC-T-28/15		PEC-T-38/17		PEC-T-40/22		PEC-T-50/30					
All bolts are delivered with nuts DIN 934.												
Material ¹⁾	ezp 8.8, hdg 8.8, A4-70		ezp 8.8, hdg 8.8, A4-70		ezp 8.8, hdg 8.8, A4-70		ezp 8.8, hdg 8.8, A4-70					
Diameter	M 8 - M 12		M 10 - M 16		M 10 - M 16		M 12 - M 20					
Matching profiles	28/15		38/17		40/22 & 40/25		49/30, 50/30, 52/34, 54/33					
Length (mm)	15 - 100		20 - 200		20 - 300		30 - 300					
Installation torque												
Diameter	M8	M10	M12	M10	M12	M16	M10	M12	M16	M12	M16	M20
T _{inst} ²⁾ [Nm]	7	10	13	15	25	40	15	25	30	25	60	75

¹⁾ ezp = electro-zinc plated, hdg = hot-dip-galvanized

²⁾ T_{inst} must not be exceeded

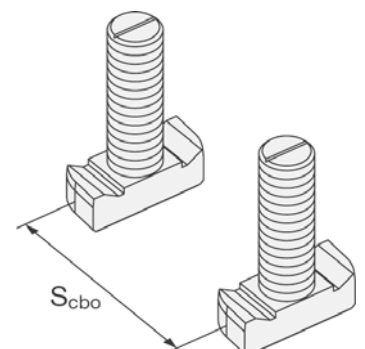
Determining of minimum T-bolt length

Profile	Type	f (mm)	Bolt	m+s+u (mm)	 <p>f = Height of the profile lip l = Required Bolt length lk = Clamping thickness u = Length of Bolt protruding</p>
28/15	cold	2,3	M 6	8,8	$erf\ l = lk + f + (m + s + u)$
38/17	cold	3	M 8	11,3	
40/25	cold	6	M 10	13,9	
49/30	cold	7,5	M 12	17,3	
54/33	cold	8	M 16	21,8	
40/22	hot	6	M 20	27,0	
50/30	hot	8			
52/34	hot	11,5			
			m = Height of the nut (ISO 4032)		
			s = Thickness of the washer (DIN 125 or DIN 9021)		

Minimum spacing for channel bolts

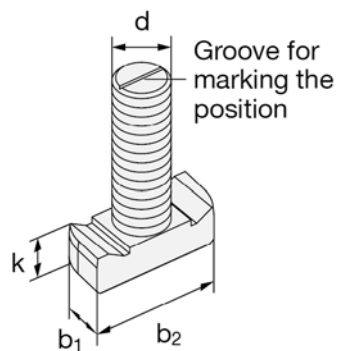
Channel bolt diameter	M8	M10	M12	M16	M20
Minimum spacing between channel bolts	40	50	60	80	100

s_{cbo} = center to center spacing between channel bolts (s_{cbo,min} = 5d)



Channel bolts dimensions

Anchor channel	Channel bolt type	Dimensions			
		d	b ₁	b ₂	k
					[mm]
PEC-TA-CE 28/15	PEC-T-28/15	8	10.1	22.2	5.0
		10			6.0
		12	11.0		
PEC-TA-CE 38/17	PEC-T-38/17	10	13.0	30.5	6.0
		12			7.0
		16	16.0		
PEC-TA-CE 40/22 PEC-TA-CE 40/25	PEC-T-40/22	10	14.0	33.0	10.5
		12			11.5
		16	17.0		
PEC-TA-CE 49/30 PEC-TA-CE 50/30 PEC-TA-CE 52/34 PEC-TA-CE 54/33	PEC-T-50/30	12	17.0	42.0	14.5
		16			
		20	21.0		15.5



Advice for using Hammer-/Hook Head Bolts PEC-T / Disclaimer

- Anchor channels and channel bolts must be designed according to applicable design codes.
- Always consider load bearing capacity of anchor channels (steel failure or concrete failure) as well as local failure risk due to flexure of channel lips.
- Always consider applicable load values for anchor channels which are usually lower than load values for the channel bolts.
- Always consult and install according to manufacturer's instructions for use.
- Minimum spacing between channel bolts must be considered.
- Channel bolts must be orientated rectangular to the channel axis (mind the groove).
- The required installation torques as stated in manufacturer's instructions for use must be applied and must not be exceeded when fastening connection parts.

Performance data for channel bolts PEC-T carbon steel 8.8

Characteristic resistances under tension and shear load – Steel failure of channel bolts PEC-T

Channel bolt PEC-T carbon steel 8.8				M8	M10	M12	M16	M20
Steel failure								
Characteristic tension resistance	$N_{Rk,s}^{1)}$	[kN]	28/15	22.4	35.4	-	-	-
			38/17	-		35.4	55.8	
			40/22					
			50/30					
Partial safety factor	$\gamma_{Ms}^{2)}$	[-]	28/15 38/17 40/22 50/30	1.50				
Characteristic shear resistance	$V_{Rk,s}^{1)}$	[kN]	28/15	14.6	23.2	-	-	-
			38/17	-		33.7	62.8	
			40/22					
			50/30					
Partial safety factor	$\gamma_{Ms}^{2)}$	[-]	28/15 38/17 40/22 50/30	1.25				

¹⁾ In conformity to EN ISO 898-1:1999

²⁾ In conformity to ETA in absence of other national regulations

Attention: Always consider the applicable load values for anchor channels.

Remark: The recommended load values for anchor channels usually are lower than load values for the channel bolts.

Performance data for channel bolts PEC-T stainless steel A4-70

Characteristic resistances under tension and shear load – Steel failure of channel bolts PEC-T

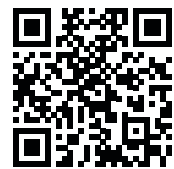
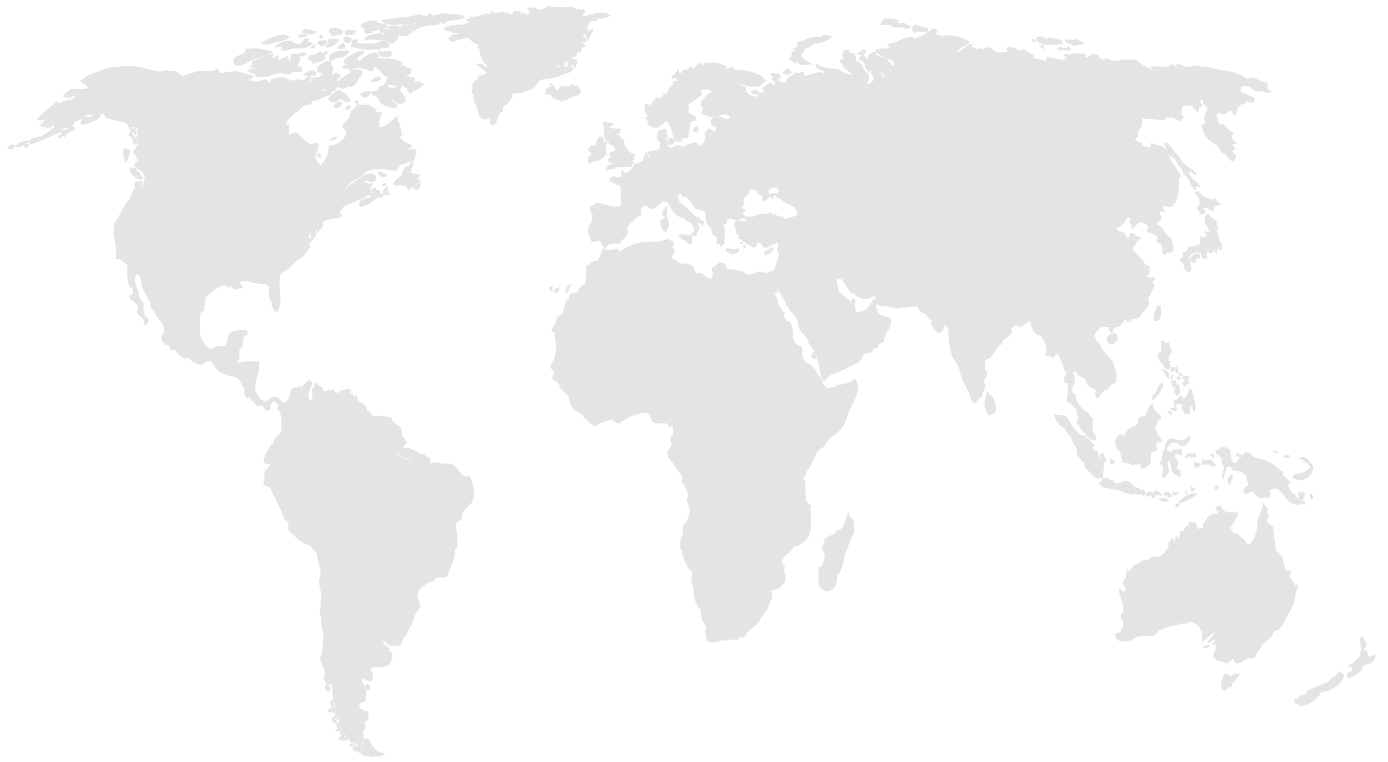
Channel bolt PEC-T stainless steel A4-70				M8	M10	M12	M16	M20
Steel failure								
Characteristic tension resistance	$N_{Rk,s}^{1)}$	[kN]	28/15	20.5	20.5	47.2	53.0	-
			38/17	-				
			40/22			58.6	109.0	
			50/30					
Partial safety factor	$\gamma_{Ms}^{2)}$	[-]	28/15	1,87				
			38/17					
			40/22					
			50/30					
Characteristic tension resistance	$V_{Rk,s}^{1)}$	[kN]	28/15	15.4	24.4	35.4	-	-
			38/17	-			65.9	
			40/22					
			50/30					
Partial safety factor	$\gamma_{Ms}^{2)}$	[-]	28/15	1.56				
			38/17					
			40/22					
			50/30					

¹⁾ In conformity to EN ISO 898-1:1999

²⁾ In conformity to ETA in absence of other national regulations

Attention: Always consider the applicable load values for anchor channels.

Remark: The recommended load values for anchor channels usually are lower than load values for the channel bolts.



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