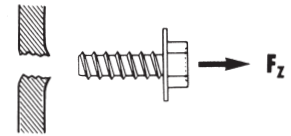


SD6-T15-
5,5xL

SD6-L12-T15-
5,5xL

SD6-5,5xL

Pull-out load F_z (N)



Part II (Subconstruction)

Material steel grade	Sheet thickness (mm)	\bar{x}	s
S280 GD, 388 N/mm ²	1,5	2343	133
S235 GD, 368 N/mm ²	2,0	3764	91
S235 GD, 368 N/mm ²	2,5	5320	174
S235 GD, 400 N/mm ²	3,0	7261	228
S235 GD, 390 N/mm ²	4,0	12016	319

Material

Fastener:

- carbon steel with corrosion protected surface

Washer:

- carbon steel with vulcanized EPDM

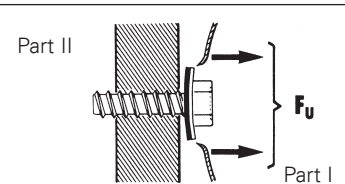
Size

Head type/drive:

- hexagonal head, 8 mm A/F



Pull-over load F_u (N)



Washer T15

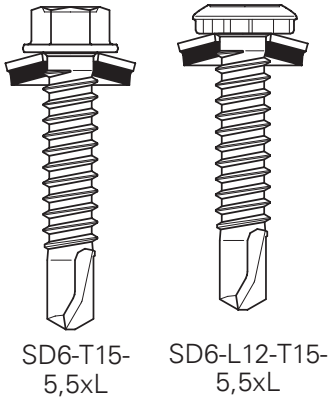
Material steel grade	Thickness Part I (mm)	\bar{x}	s
DC01, 320 N/mm ²	0,50	3570	191
S280 GD, 379 N/mm ²	0,63	4527	334
S280 GD, 348 N/mm ²	0,75	5825	239
S280 GD, 374 N/mm ²	0,82	7283	339

Washer T19

Material steel grade	Thickness Part I (mm)	\bar{x}	s
DC01, 320 N/mm ²	0,50	4268	318
S280 GD, 379 N/mm ²	0,63	5589	334
S280 GD, 348 N/mm ²	0,75	7324	163
S280 GD, 374 N/mm ²	0,82	8640	296

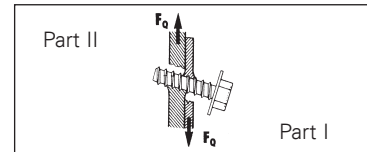
\bar{x} = arithmetical mean value
s = Standard deviation

All stated values are \bar{x} values, representing the arithmetical mean value from laboratory testing concluded up to now, appropriate safety margins should be applied for field conditions. Consult also your country's approval documents.



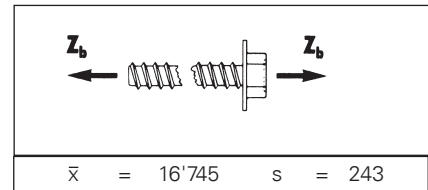
Shear load: Figures obtained with displacement of 3 mm between purlin and sheet.

Shear load F_Q (N)

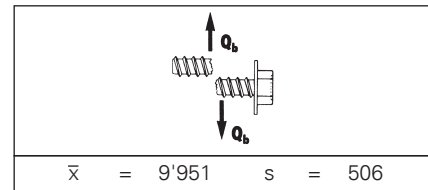


Material Steel grade		Thickness (mm)		\bar{x}	s
		Part I	Part II		
Washer T15					
S 280 GD / S 280 GD		0,75 348 N/mm ²	1,5 388 N/mm ²	3398	380
S 280 GD / S 235		0,75 348 N/mm ²	2,0 369 N/mm ²	3878	241
S 280 GD / S 235		0,75 348 N/mm ²	3,0 450 N/mm ²	4155	218
S 280 GD / S 355		0,75 348 N/mm ²	3,0 521 N/mm ²	4324	145
Washer T19					
Material Steel grade		Thickness (mm)		\bar{x}	s
		Part I	Part II		
S 280 GD / S 280 GD		0,75 348 N/mm ²	1,5 388 N/mm ²	3450	255
S 280 GD / S 235		0,75 348 N/mm ²	2,0 369 N/mm ²	3868	200
S 280 GD / S 235		0,75 348 N/mm ²	3,0 450 N/mm ²	3996	408
S 280 GD / S 355		0,75 348 N/mm ²	3,0 521 N/mm ²	4153	336

Tensile breaking load Z_b (N)



Shear breaking load Q_b (N)



\bar{x} = arithmetical mean value
s = Standard deviation

All stated values are \bar{x} values, representing the arithmetical mean value from laboratory testing concluded up to now, appropriate safety margins should be applied for field conditions. Consult also your country's approval documents.