

SELF-DRILLING SCREW FIXINGS

Denomination: **SELF-DRILLING SCREW FIXINGS**

Codes: ABE, ARE, ABR, ABRBLE, NBR, ABRC, ABRC2, ABRA2, ABA, FS, ABP, NBP, ABPC, ABPCA2, TAEZ, TAEN, BCPZ, BZPZBL, BCPN, BCPB, BCPA2, BIE, AUTO, BAUTO, RS.

Reference: **FT BRO-es**

Date: **19/10/15**

Revision: 9

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4. AUTO

Self-drilling screw for girders - screw point no.5 - hexagonal head



Properties



Steel



Zinc-plated coating



Available in different colours

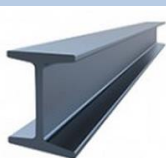
Base material



Plate assembly



Plate profile



IPN

Properties



Hexagonal with embossed washer



Hexagonal with embossed washer



Girder screw point

3.1. Details

Code		M 5.5
d _k : washer head diameter	[mm]	11
k: head thickness	[mm]	5.3
c: washer thickness	[mm]	1.15
s: spanner	[mm]	8
Point		#5
D: exterior thread diameter	[mm]	5.5
d: interior thread diameter	[mm]	4.6
p: thread	[mm]	1.06
l: lengths	[mm]	32 - 38
Installation bit code (hexagonal magnetic bit)		BOCA008
Drill capacity	[mm]	4.0 – 12.0

- Zinc-plated finish.
- For general plate-plate joints for thicknesses up to 12 mm.
- Versions with assembled EPDM washer for sealed joints in façades and roofing (consult ARVUL Technical Data Sheet).



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Reference: **FT BRO-en**Date: **08/01/18**Revision: **10**Page: **6 of 23**

MAXIMUM THICKNESS TO BE FIXED						
Length	ST 3,5	ST 3,9	ST 4,2	ST 4,8	ST 5,5	ST 6,3
9,5	2,85					
11	4,2					
13	6,2	5,8	4,3	3,7		
16	9,2	8,8	7,3	5,5		
19	12,1	11,7	10,3	8,7	8,7	7
22	15,1	14,7	13,3	11,7	11,7	10
25	18,1	17,7	16,3	14,7	14,7	13
32	25,1	24,5	23	21,5	21,5	20
38		30,5	29	27,5	27,5	26
45			36	34,5	34,5	33
50			41	39,5	39,5	38
60				49,5	49,5	48
63				52,5	52,5	51
73				62,5	62,5	61
75				64,5	64,5	63
80				69,5		68
90				79,5		78
100				89,5		88
110						98
120						108
130						118
140						128

SCREW RESISTANCE CHARACTERISTICS*

SIZE	TENSION [kN]	SHEAR [kN]
ST 2.9	2.62	1.31
ST 3.5	3.81	1.91
ST 3.9	4.64	2.32
ST 4.2	5.26	2.63
ST 4.8	7.11	3.56
ST 5.5	9.63	4.82
ST 6.3	13.36	6.68

1 kN ≈ 100 Kg

For tension loads, the inherent resistance of plates to be fixed must be taken into account, which is usually less than the resistance of the screw itself, as the screw will probably tear the plates.

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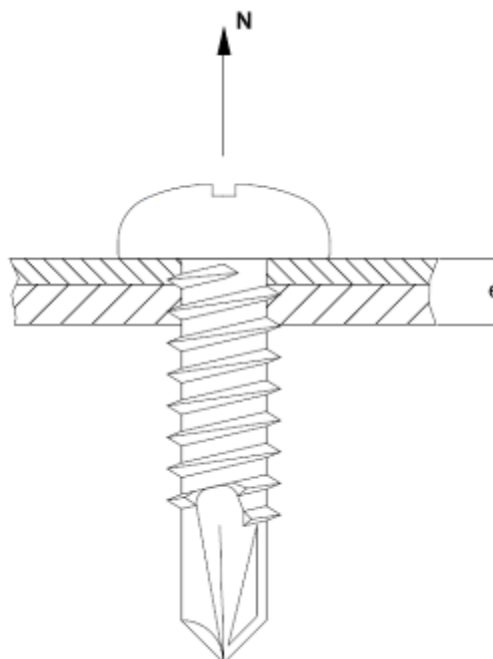
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RECOMMENDED TENSION LOAD IN STEEL PLATE

SIZE	RECOMMENDED LOAD					
	e[mm]	N[kN]	e[mm]	N[kN]	e[mm]	N[kN]
ST 3.5	0.8	0.55	1.5	0.89	2.0	1.13
ST 3.9	0.8	0.54	1.5	0.97	2.0	1.50
ST 4.2	2.0	1.63	2.5	1.51	3.0	2.62
ST 4.8	2.0	1.87	3.0	2.77	4.0	3.71
ST 5.5	2.0	1.77	3.5	2.86	5.0	3.43
ST 6.3	2.5	1.44	4.0	3.19	5.0	4.83

RECOMMENDED TENSION LOAD IN ALUMINIUM PLATE

SIZE	RECOMMENDED LOAD					
	e[mm]	N[kN]	e[mm]	N[kN]	e[mm]	N[kN]
ST 4.8	2.0	0.95	3.0	1.52	4.0	2.10



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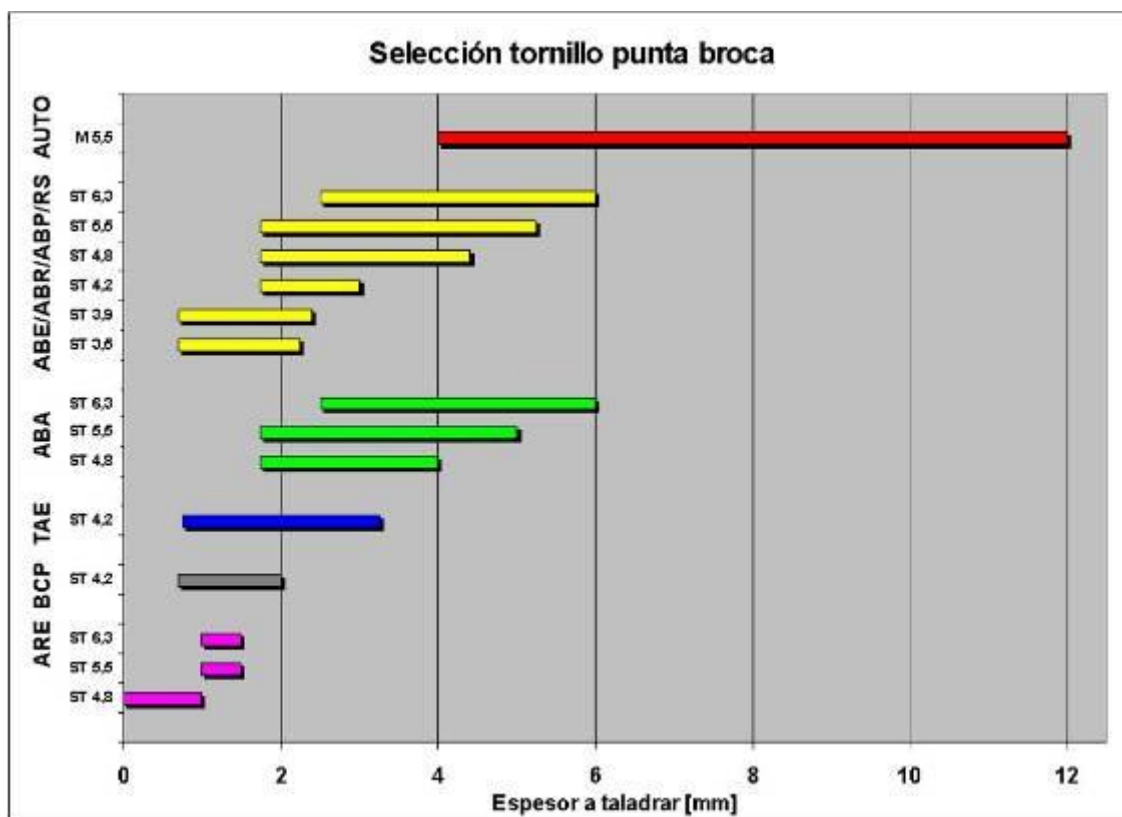
INSTALLATION PARAMETERS

Parameter			ST 3.5	ST 3.9	ST 4.2	ST 4.8	ST 5.5 M 5.5	ST 6.3
Maximum installation strength		[N]	150	200	250	250	350	350
Drill Speed	Steel	[rpm]	1800 - 2500				1000 - 1800	
	Stainless Steel	[rpm]	1000 - 1500				600 - 1000	
Maximum time		[sg]	4	4.5	5	7	11	13
Maximum torque		[Nm]	2.8	3.8	4.7	6.9	10.4	16.9

10 N $\approx$ 1 Kg

10 Nm $\approx$ 1Kg m

With high drilling times or excessive drilling speed there is a risk of burning the drill bit and therefore not drilling the material.



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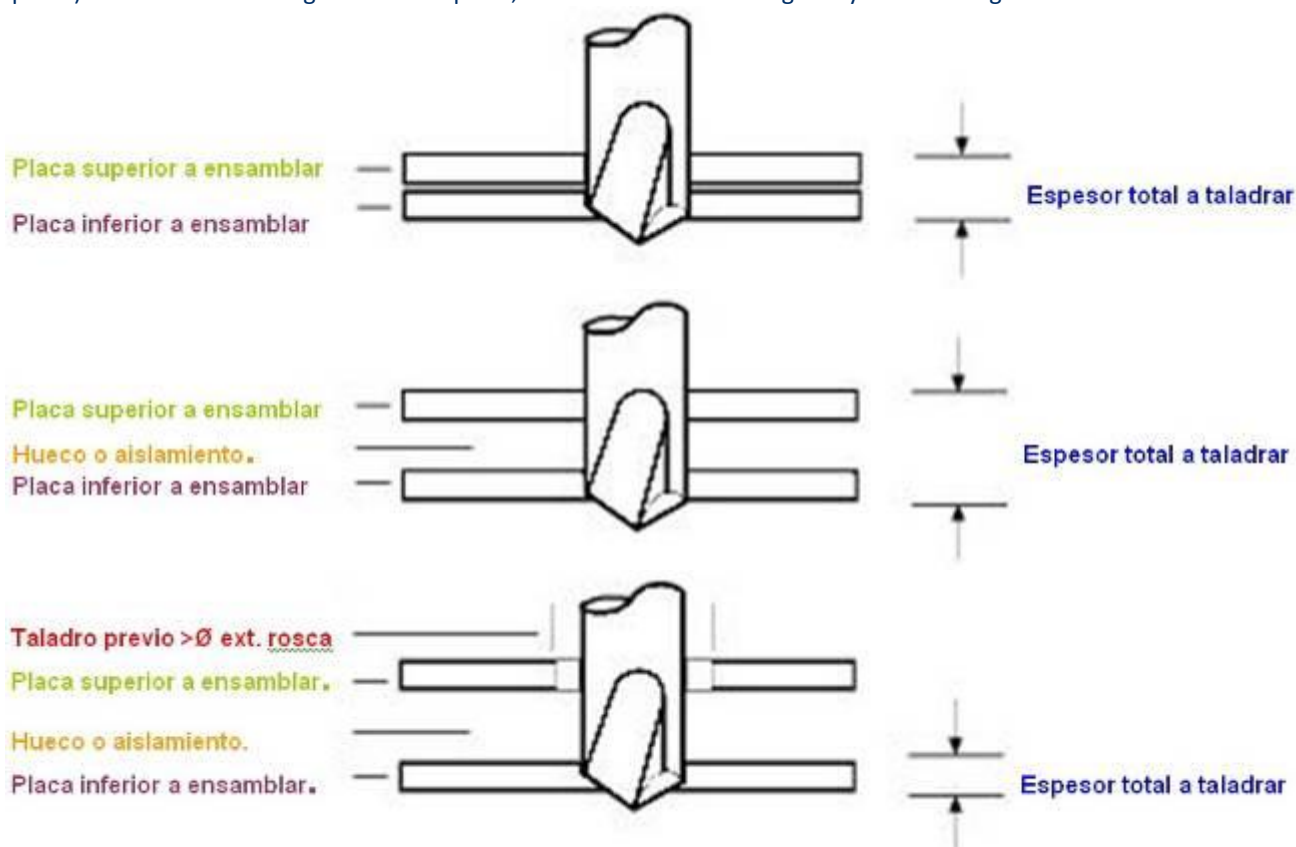
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MATERIALS

Characteristic	ABE, ARE, AUTO, ABR, ABRBL, NBR, ABRC, ABA, FS, ABP, NBP, ABPC, TAEZ, TAEN, BCPZ, BCPN, BCPB, RS	ABRA2, ABRC2, ABPC2, BCPA2	BIE, BAUTO (silver ruspert coating)
Material	Special steel for SAE J403 1022 thermal treatment	A2 Stainless Steel	A2 Stainless Steel head and shaft. Special steel point for SAE J403 1022 thermal treatment
Surface hardness	> 500 HV	---	Head and shaft --- Point > 500 HV
Core hardness	240 - 450 HV	---	Head and shaft --- Point 240 - 450 HV
Depth hardness	ST 2.5 - 3.5: 0.05 - 0.18 mm. ST 3.9 - 5.5: 0.10 - 0.23 mm. ST 6.3: 0.15 - 0.28 mm.	---	Head and shaft --- Point: ST 4.8 - 5.5: 0.10 - 0.23 mm. ST 6.3: 0.15 - 0.28 mm.

POINT SELECTION

The choice of screw point must be such that the total thickness of materials to be joined (including any intermediate spaces) is lower than the edge of the drill point; otherwise screw breakage may occur during installation.





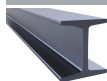
Self-drilling screw, point no. 5, hexagonal washer head



AUTO Screw

Material for use:

METAL



I-beam



Metal sheet - heavy profiles



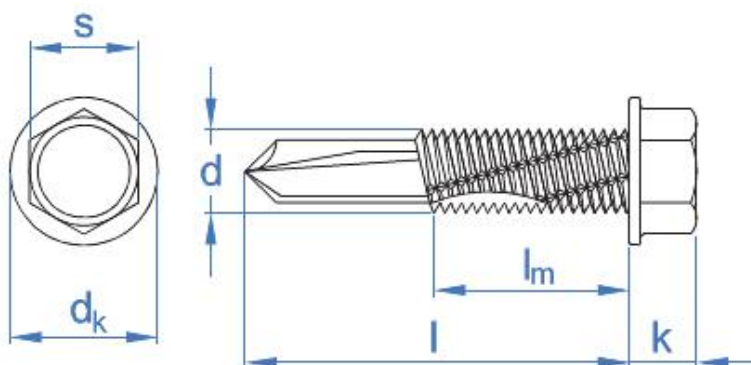
Product Material / Covering:

Zinc-plated

PROFESSIONAL BOX

CODE	DIMENSIONS	EAN		
AUTO532	5,5 x 32	8423533106070	500	3000
AUTO538	5,5 x 38	8423533105974	500	3000

TECHNICAL INFORMATION



CODE	DIMENSIONS	tam_huella	Installation key	Length	Head Ø	Head thickness	Drill capacity	Metric
AUTO532	5,5 x 32	8	8	32	11	5,3	4,00-12,00	5.5
AUTO538	5,5 x 38	8	8	38	11	5,3	4,00-12,00	5.5

CARACTERÍSTICAS



Zinc-plated



RECOMMENDED FOR



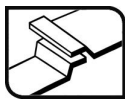
Shelving anchor



Fire extinguisher anchor



Shopping mall sign



Sheet profiles



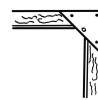
Sandwich plates with overhead



Signs



Iron roofing



Decking screws

TECHNICAL DOCUMENTATION



DATA SHEET

https://www.indexfix.com/docs/FT_BRO_en.pdf

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