

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, BC2A2, BIE, AUTO, BAUTO, RS.

Reference: **FT BRO-es**

Date: **19/10/15**

Revision: **9**

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2. ABEI

Self-drilling screw - hexagonal head with embossed washer Stainless Steel A2



Properties



Stainless Steel A2

Base material



Plate assembly



Plate profile



Aluminium

Properties



Hexagonal with embossed washer



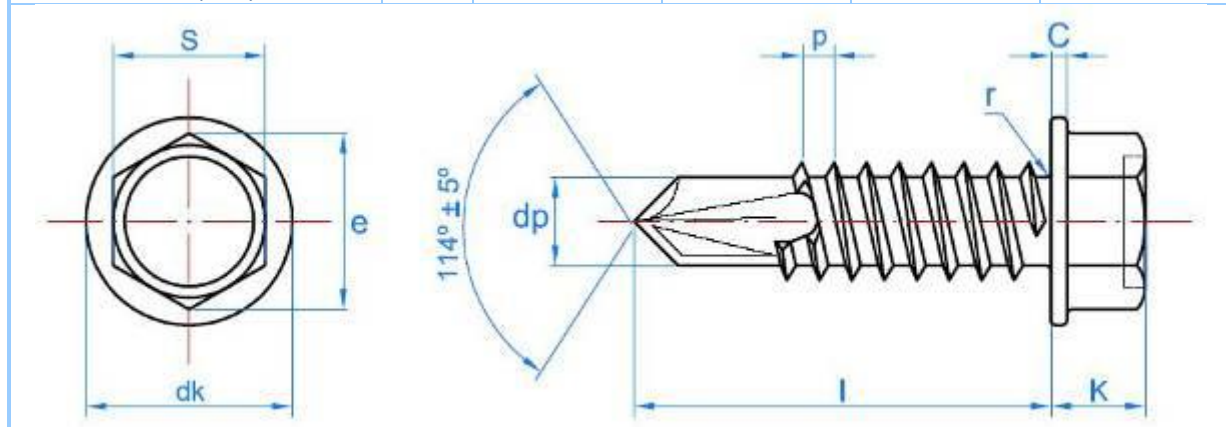
Hexagonal with embossed washer



Reduced screw point

1.2. Details

Code		ST 4.2	ST 4.8	ST 5.5	ST 6.3
d_k : washer head diameter	[mm]	8.5	10	10.5	12.6
k: head thickness	[mm]	4.1	4.3	4.3	6.3
c: washer thickness	[mm]	1.5	1.6	1.9	2
s: spanner	[mm]	7	8	8	10
D: exterior thread diameter	[mm]	4.22	4.80	5.46	6.25
d: interior thread diameter	[mm]	3.10	3.58	4.17	4.88
p: thread	[mm]	1.4	1.6	1.8	1.8
l: lengths	[mm]	13 - 38	13 - 38	19 - 75	19 - 140
l_G : maximum thread length	[mm]	90	90	90	90
Installation bit code (hexagonal magnetic bit)		BOCA007	BOCA008	BOCA008	BOCA010
Drill capacity	[mm]	1.75 - 3.00	1.75 - 4.40	1.75 - 5.25	2.50 - 6.00



- Stainless Steel A2.
- For general plate-plate joints made of aluminium.

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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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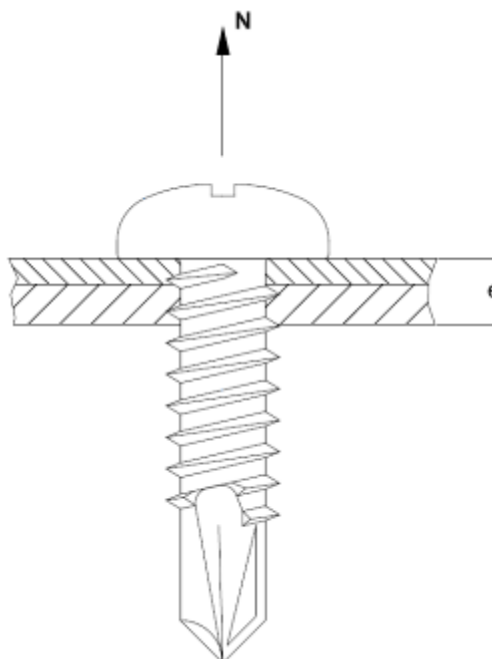
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RECOMMENDED TENSION LOAD IN STEEL PLATE

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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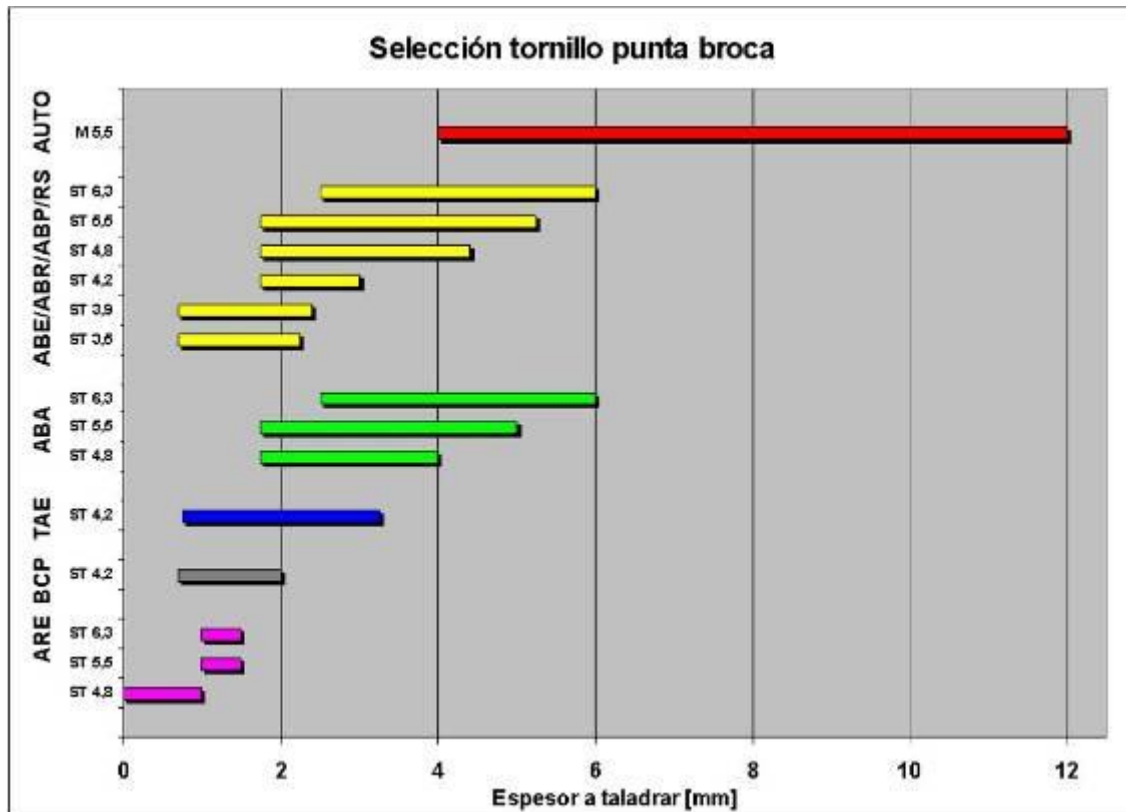
INSTALLATION PARAMETERS

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 ≈ 1 Kg

10 Nm ≈ 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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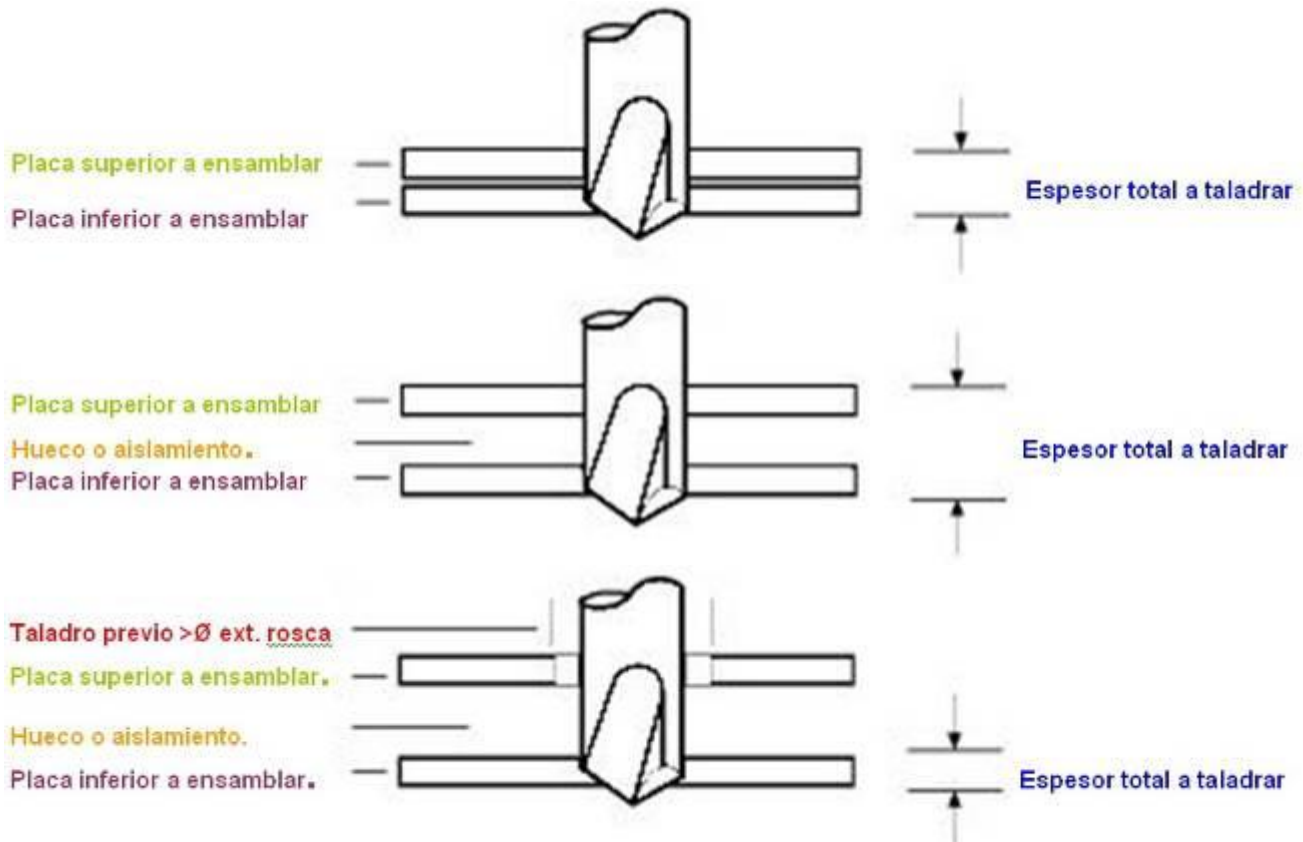
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MATERIALS

Characteristic	ABE, ARE, AUTO, ABR, ABRBL, NBR, ABRC, ABA, FS, ABP, NBP, ABPC, TAEZ, TAEN, BCPZ, BCPN, BCPB, RS	ABRA2, ABRC A2, ABPCA2, 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.





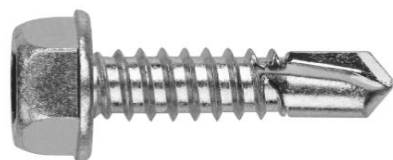
Self-drilling screw with hexagonal washer head



DIN-7504-K A2

Screw. Stainless steel A2

Material for use:



Metal
sheet -
heavy
profiles

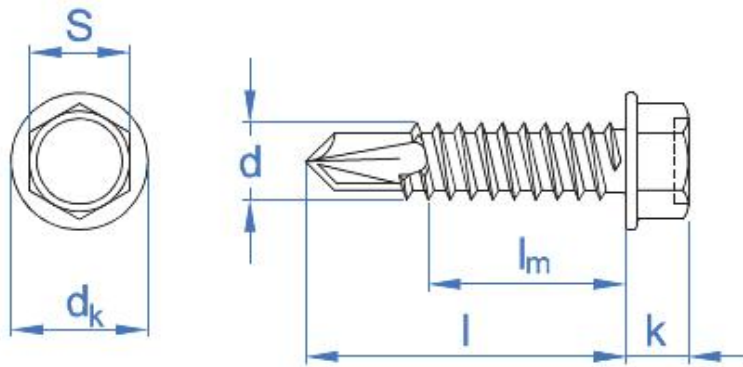
Product Material / Covering:

Stainless steel A2

PROFESSIONAL BOX

CODE	DIMENSIONS	EAN		
ABEI4213	4,2 x 13	8423533814364	1000	12000
ABEI4216	4,2 x 16	8423533814371	1000	8000
ABEI4219	4,2 x 19	8423533814388	1000	8000
ABEI4813	4,8 x 13	8423533814395	1000	8000
ABEI4816	4,8 x 16	8423533447388	500	6000
ABEI4819	4,8 x 19	8423533808929	500	6000
ABEI4825	4,8 x 25	8423533814401	500	6000
ABEI4832	4,8 x 32	8423533814418	500	3000
ABEI5519	5,5 x 19	8423533814425	500	6000
ABEI5522	5,5 x 22	8423533814432	500	4000
ABEI5525	5,5 x 25	8423533814449	500	6000
ABEI6319	6,3 x 19	8423533814456	500	3000
ABEI6325	6,3 x 25	8423533805393	500	3000

TECHNICAL INFORMATION



CODE	DIMENSIONS	tam_huella	Installation key	Length	Head Ø	Head thickness	Drill capacity	Metric
ABEI4213	4,2 x 13	7	7	13	8,5	4,1	1,75-3,00	4.2
ABEI4216	4,2 x 16	7	7	16	8,5	4,1	1,75-3,00	4.2
ABEI4219	4,2 x 19	7	7	19	8,5	4,1	1,75-3,00	4.2
ABEI4813	4,8 x 13	8	8	13	10	4,3	1,75-4,40	4.8
ABEI4816	4,8 x 16	8	8	16	10	4,3	1,75-4,40	4.8
ABEI4819	4,8 x 19	8	8	19	10	4,3	1,75-4,40	4.8
ABEI4825	4,8 x 25	8	8	25	10	4,3	1,75-4,40	4.8
ABEI4832	4,8 x 32	8	8	32	10	4,3	1,75-4,40	4.8
ABEI5519	5,5 x 19	8	8	19	10,5	5,3	1,75 -5.25	5.5
ABEI5522	5,5 x 22	8	8	22	10,5	5,3	1,75 -5.25	5.5
ABEI5525	5,5 x 25	8	8	25	10,5	5,3	1,75 -5.25	5.5
ABEI6319	6,3 x 19	10	10	19	12,6	6,3	2,50-6,00	6.3
ABEI6325	6,3 x 25	10	10	25	12,6	6,3	2,50-6,00	6.3

CARACTERÍSTICAS



Stainless steel A2

RECOMMENDED FOR



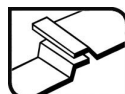
Shelving anchor



Fire extinguisher anchor



Shopping mall sign



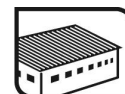
Sheet profiles



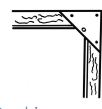
Sandwich plates with overhead



Signs



Iron roofing



Decking screws



DATA SHEET

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



DATA SHEET

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