

SELF-DRILLING SCREW FIXINGS

13. RS

Self-drilling screw - rivet head



Properties



Steel



Zinc-plated coating

Base material



Metal plate assembly



Plate profile



Aluminium

Properties



Ph



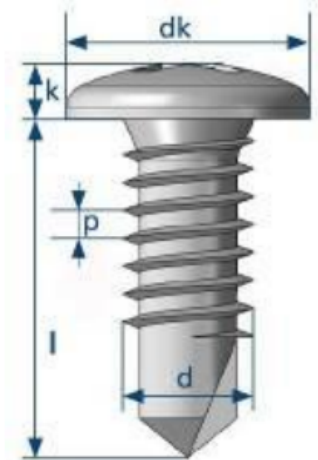
Extra-flat head



Screw point

12.1. Details

CODE		ST 3.5	ST 4.2	ST 4.8
d_k : head diameter	[mm]	6.7	8	9.3
k : head thickness	[mm]	1.2	1.3	1.5
d : exterior thread diameter	[mm]	3.5	4.2	4.8
p : thread	[mm]	1.3	1.4	1.6
l : lengths	[mm]	9 - 16	13 - 32	13 - 38
Ph bit		nº 2	nº 2	nº 2
Installation bit code (Ph bit)		PUPHC02 PUPHL02	PUPHC02 PUPHL02	PUPHC02 PUPHL02
Drill capacity	[mm]	0.7 – 2.25	1.75 – 3.00	1.75 – 4.40



- Self-drilling screw with reduced head height.
- This reduced head height gives it special characteristics:
 - Avoids interference with moving elements.
 - Aesthetic finish as screw is rounded and is concealed once installed.
 - May be used as a substitute for rivets.
 - Wide range of thicknesses to be drilled - from 0.70 mm to 4.40 mm.
 - Wide range of measurements.
 - Cone between thread and head to ensure piece sits perfectly.
 - Complete thread.
 - Annular groove at the bottom of the head which allows the material originated in the drilling process to stay in this area, allowing the screw to sit better.

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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.

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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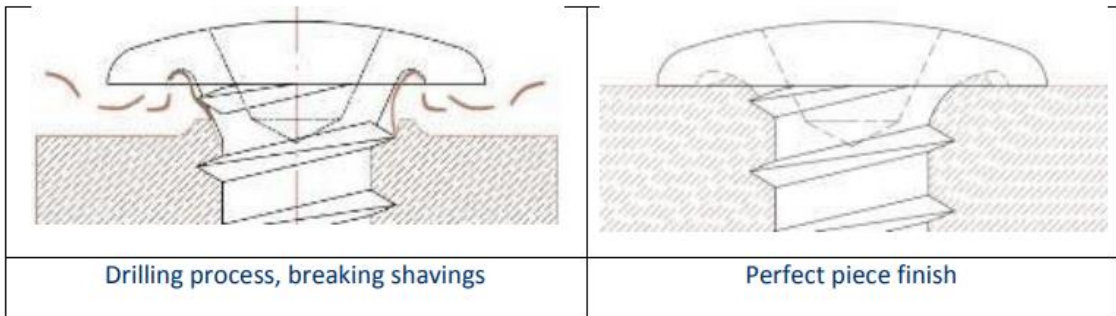
Properties



Steel



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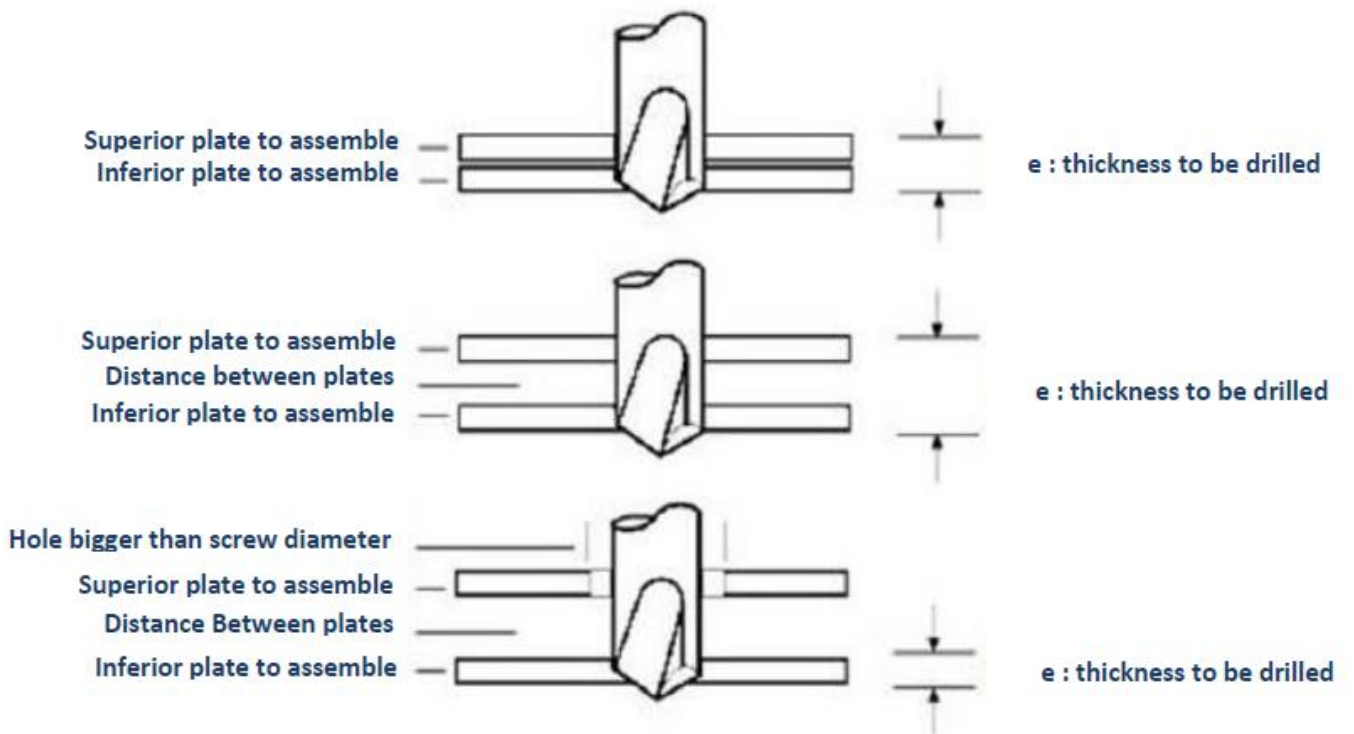


- Different views of the screw:



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.



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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

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

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CODE	SIZE	€/100		MAX. FIXTURE THICKNESS	DRILL CAPACITY		
RSZ3509	3,5 x 9	3,165	PH2	2,8	0,75 - 2,25	500	22.500
RSZ3513	3,5 x 13	3,467	PH2	6,2	0,75 - 2,25	500	22.500
RSZ3516	3,5 x 16	3,833	PH2	9,2	0,75 - 2,25	500	22.500
RSZ4213	4,2 x 13	4,443	PH2	4,3	1,75 - 3,00	500	22.500
RSZ4216	4,2 x 16	4,627	PH2	7,3	1,75 - 3,00	500	12.000
RSZ4219	4,2 x 19	5,329	PH2	10,3	1,75 - 3,00	500	12.000
RSZ4225	4,2 x 25	6,927	PH2	16,3	1,75 - 3,00	250	6.000
RSZ4232	4,2 x 32	7,237	PH2	23	1,75 - 3,00	250	6.000
RSZ4813	4,8 x 13	6,654	PH2	3,7	1,75 - 4,4	500	12.000
RSZ4816	4,8 x 16	6,845	PH2	5,5	1,75 - 4,4	250	11.250
RSZ4819	4,8 x 19	7,766	PH2	8,7	1,75 - 4,4	250	11.250
RSZ4825	4,8 x 25	9,428	PH2	14,7	1,75 - 4,4	250	6.000
RSZ4832	4,8 x 32	10,050	PH2	21,5	1,75 - 4,4	250	3.000
RSZ4838	4,8 x 38	11,440	PH2	27,5	1,75 - 4,4	250	3.000