

A self-tapping insert suitable for installation into a wide range of thermoplastic and thermosetting plastic materials.

They are particularly suitable for applications involving high jack-out loading and materials with low core strengths.



ADVANTAGES

- HIGH PULL-OUT RESISTANCE
- IDEAL WHERE JACK-OUT LOADING IS UNAVOIDABLE
- CAN CARRY HIGH LOADS IN WEAK PLASTICS

DESIGN GUIDE

HOLE PREPARATION

Hole diameter will vary with the type of plastic material used - hard plastics will require larger holes than softer plastics etc. For this reason, the data table shows the hole size ranges recommended for thermoplastics and thermosetting plastics. Exact hole size is best determined by pre-production trials - please consult P.S.M. It is recommended that molded holes are used. A 60° countersink at the top of the hole is strongly recommended in order to avoid the risk of chipping to the surrounding surface. The depth of the countersink should be equal to the external thread pitch of the insert. Tapers on molded holes should be 1° inclusive.

TYPE OF LOADING

Direct torque loads should be avoided with this type of insert.

INSTALLATION

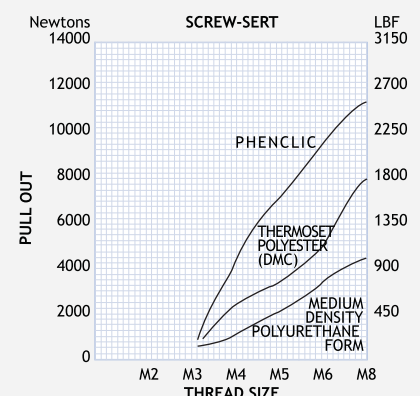
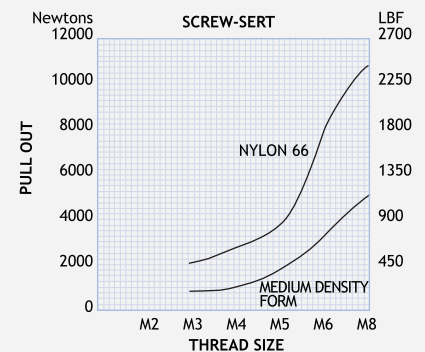
The insert is installed using traditional tapping principles. Installation can be carried out using a hand tool (for low volumes), a tapping head attachment for a pillar drill, a standard tapping machine or fully automatic installation equipment.

WALL THICKNESS

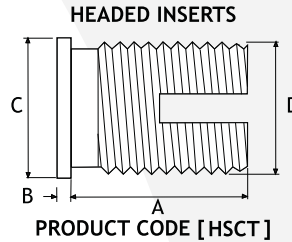
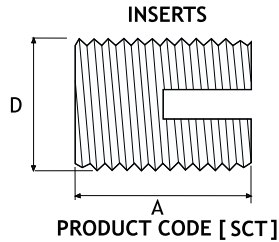
A general guide to minimum wall thickness is given in the technical data table but this will vary dependant upon the nature of the plastic. Where thinner walls are required these can often be accommodated, this must be evaluated by pre-production tests in conjunction with P.S.M.

PERFORMANCE DATA

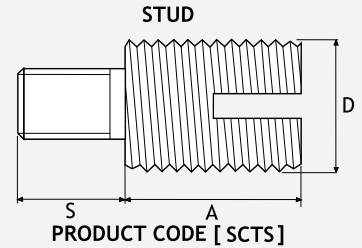
The complexity of materials and variations in service conditions make it impossible to detail fastener performance for specific applications. The chart gives a general guide and shows the relative performance of the insert in the range.



TECHNICAL DATA



STANDARD MATERIAL: BRASS (B)
Other materials possible on quotation



DIMENSIONS

ISO METRIC

Unit: Millimetres

Thread Size	Insert Length A	Stud Length (For SCTS only) S										Head Height B	Head ø C	Insert ø D MAX	For Thermoplastics Rec.Hole Size -0.00+0.10	Rec.Hole Size For Thermosetting -0.00+0.10	Min. Wall Thickness
		5	6	8	10	12	14	16	18	20	25						
M2.5	6.0	5	6	8	10	12	14	16	18	20	25	0.58	6.0	4.5	4.0-4.1	4.1-4.3	Evaluated by pre-production tests
M3	6.0	5	6	8	10	12	14	16	18	20	25	0.58	6.5	5.0	4.5-4.6	4.6-4.8	
M3.5	8.0	5	6	8	10	12	14	16	18	20	25	0.73	8.5	6.0	5.3-5.4	5.5-5.7	
M4	8.0	5	6	8	10	12	14	16	18	20	25	0.89	8.0	6.5	5.8-5.9	6.0-6.2	
M5	10.0	5	6	8	10	12	14	16	18	20	25	1.06	9.5	8.0	7.1-7.2	7.3-7.6	
M6	14.0	5	6	8	10	12	14	16	18	20	25	1.32	12.0	10.0	8.6-8.8	9.0-9.4	
M8	15.0	5	6	8	10	12	14	16	18	20	25	1.32	14.0	12.0	10.6-10.8	11.0-11.4	
M10	18.0	5	6	8	10	12	14	16	18	20	25	1.57	16.0	14.0	12.6-12.8	13.0-13.4	
M12	22.0	5	6	8	10	12	14	16	18	20	25	1.57	18.0	16.0	14.6-14.8	15.0-15.4	

Other lengths possible on quotation.

UNIFIED

Unit: Inches

Thread Size	Insert Length A	Stud Length (For SCTS only) S										Head Height B	Head ø C	Insert ø D MAX	For Thermoplastics Rec.Hole Size -0.000 +0.004	Rec.Hole Size For Thermosetting -0.000 +0.004	Min. Wall Thickness
		3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1						
2-56	.236	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.023	.236	.177	.157-.161	.161-.169	Evaluated by pre-production tests
4-40	.236	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.023	.236	.177	.157-.161	.161-.169	
6-32	.315	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.029	.295	.236	.209-.213	.217-.224	
8-32	.315	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.035	.312	.256	.228-.232	.236-.244	
10-24	.394	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.042	.374	.315	.283-.283	.287-.299	
10-32	.394	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.042	.374	.315	.280-283	.287-.299	
1/4-20	.551	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.472	.394	.339-.346	.354-.370	
1/4-28	.551	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.472	.394	.339-.346	.354-.370	
5/16-18	.591	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.551	.472	.417-.425	.433-.449	
5/16-24	.591	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.551	.472	.417-.425	.433-.449	
3/8-16	.709	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.062	.630	.551	.496-.504	.512-.528	
3/8-24	.709	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.062	.630	.551	.496-.504	.512-.528	
1/2	.866	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.062	.709	.630	.575-.583	.591-.606	

Other lengths possible on quotation.

HOW TO SPECIFY

	SCT	HSCT	SCTS
PRODUCT CODE	SCT-B-M3-5.0	HSCT-B-M3	SCTS-B-M3-5.0
MATERIAL CODE	SCT-B-M3	HSCT-B-M3	SCTS-B-M3-5.0
THREAD SIZE	SCT-B-M3	HSCT-B-M3	SCTS-B-M3-5.0
STUD LENGTH			SCTS-B-M3-5.0