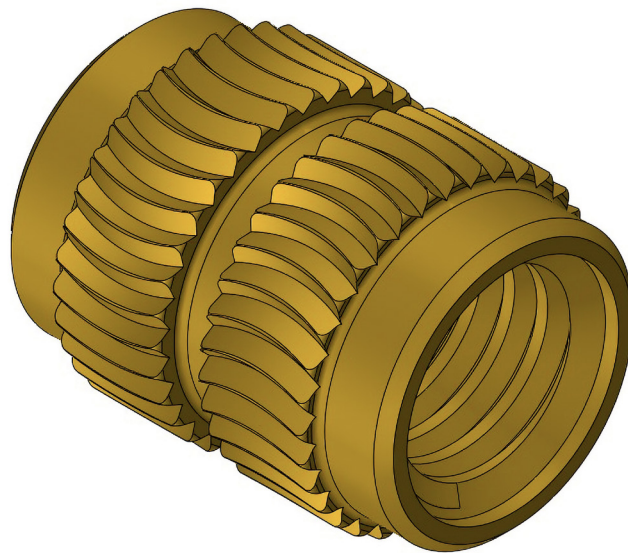


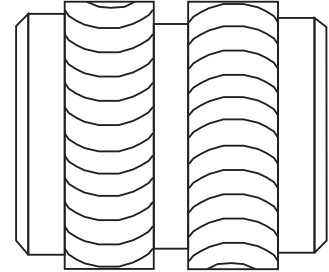
HEAT-LOK[®] INSERTS & STUDS

DESIGNED FOR INSTALLATION INTO NOTCH SENSITIVE
AMORPHOUS THERMOPLASTICS BY HEAT.



HEAT-LOK[®] INSERTS & STUDS

Designed for installation into notch sensitive amorphous Thermoplastics by heat. It features rounded knurls, avoiding the Stress raising sharp crests and roots which typify Knurls used on most inserts.



ADVANTAGES

- Low stress generating characteristics ideal for amorphous thermoplastics
- Double ended - assists automatic feeding
- High torque resistance
- Self-aligning - assists installation Design

DESIGN GUIDE

HOLE PREPARATION

Molded holes are recommended wherever possible. The taper on a molded hole should be 0.5° inclusive and the hole diameter recommended should apply at the point reached by the bottom of the insert. The top of the hole should not be chamfered or counter-bored and care must be taken to avoid bell mouching. Hole diameter tolerance: -0.00 +0.10mm.

MOLDING PRACTICE

Mold design should be arranged to eliminate residual stresses in the area of the boss or hole into which the insert is to be installed.

INSTALLATION

Heat-lok has been designed for installation using heat rather than ultrasonics, since direct heat best suits the plastic flow required by the insert profile.

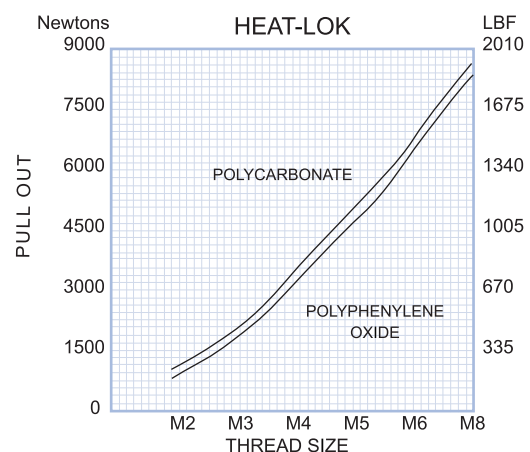
WALL THICKNESS

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, but consultation with Bulten and pre-production testing is strongly advised.

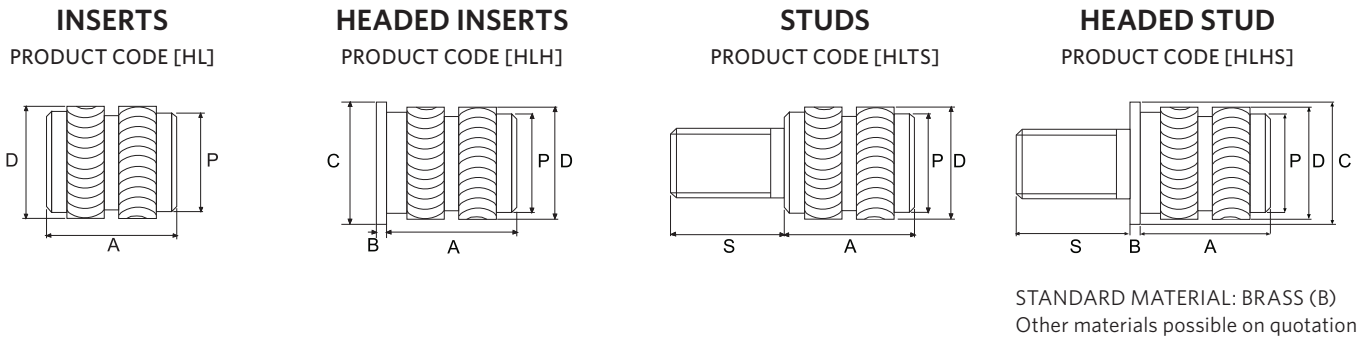
PERFORMANCE DATA

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.



HEAT-LOK[®] INSERTS & STUDS

TECHNICAL DATA



DIMENSIONS

ISO METRIC

Unit: Millimetres

Thread Size	Insert Length A	Stud Lengths (For HLTS & HLHS only)										Head Height B	Head Ø C	Insert Ø D	Pilot End Ø P	Rec.Hole Size -0.00 +0.10	Min. Wall Thickness
		5	6	8	10	12	14	16	18	20	25						
M2	3.9	5	6	8	10	12	14	16	18	20	25	0.51	4.8	3.5	3.1	3.2	1.4
M2.5	5.8	5	6	8	10	12	14	16	18	20	25	0.58	5.5	4.4	3.9	4.0	1.8
M3	5.8	5	6	8	10	12	14	16	18	20	25	0.58	5.5	4.4	3.9	4.0	1.8
M3.5	7.1	5	6	8	10	12	14	16	18	20	25	0.74	6.4	5.2	4.7	4.8	2.1
M4	8.1	5	6	8	10	12	14	16	18	20	25	0.89	7.1	6.1	5.5	5.6	2.4
M5	9.5	5	6	8	10	12	14	16	18	20	25	1.07	7.9	6.9	6.3	6.4	2.8
M6	12.7	5	6	8	10	12	14	16	18	20	25	1.32	9.5	8.5	7.9	8.0	3.6
M8	12.7	5	6	8	10	12	14	16	18	20	25	1.32	11.1	10.0	9.5	9.6	5.0

Other lengths possible on quotation.

UNIFIED

Unit: Inches

Thread Size	Insert Length A	Stud Lengths (For HLTS & HLHS only)										Head Height B	Head Ø C	Insert Ø D	Pilot End Ø P	Rec.Hole Size -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	.155	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.020	.187	.137	.123	.126	.055
4-40	.228	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.023	.217	.174	.154	.157	.071
6-32	.281	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.029	.250	.206	.185	.189	.083
8-32	.320	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.035	.280	.239	.218	.220	.094
10-24	.374	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.042	.312	.270	.249	.252	.110
10-32	.374	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.042	.312	.270	.249	.252	.110
1/4-20	.500	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.375	.333	.312	.315	.142
1/4-28	.500	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.375	.333	.312	.315	.142
5/16-18	.500	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.437	.393	.375	.378	.197
5/16-24	.500	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	.052	.437	.393	.375	.378	.197

Other lengths possible on quotation.

HOW TO SPECIFY

	HL	FLHS	HLTS	HLHS
Product Code	HL-B-M3	HLH -B-M3	HLTS-B-M3-5.0	HLHS-B-M3-5.0
Material Code	HL-B-M3	HLH -B-M3	HLTS-B-M3-5.0	HLHS-B-M3-5.0
Thread Size	HL-B- M3	HLH -B- M3	HLTS-B- M3 -5.0	HLHS-B- M3 -5.0
Stud Length			HLTS-B-M3- 5.0	HLHS-B-M3- 5.0