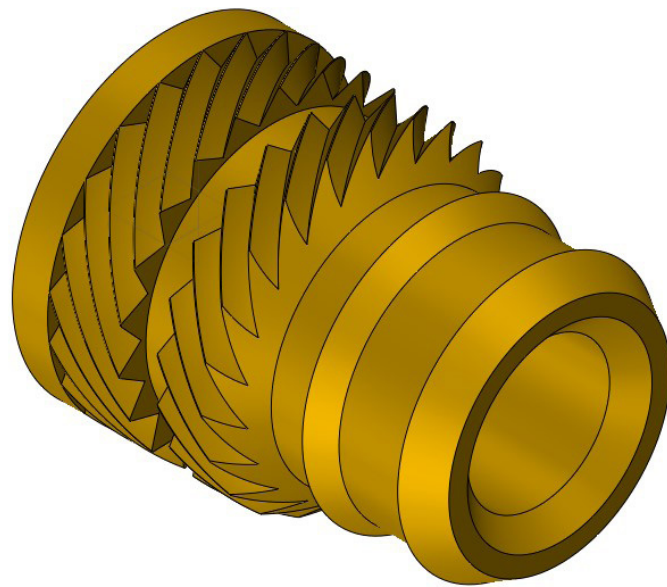


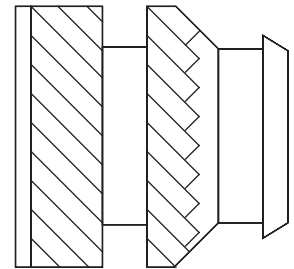
TAPER-X[®] INSERTS

HAS BEEN DESIGNED FOR INSTANCES WHERE FASTENERS
MUST BE INSTALLED INTO A 8° TAPERED HOLE.



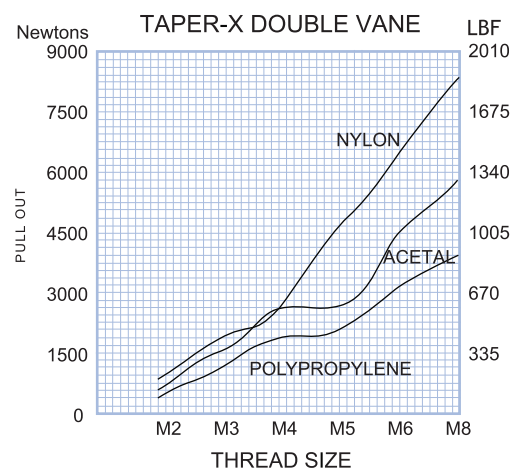
TAPER-X[®] INSERTS

Has been designed for instances where fasteners must be installed into a 8° tapered hole. The combination of angled knurls and upwardly directed vanes provide high torque and pull-out performance.



ADVANTAGES

- Designed for use in an 8° tapered hole
- High pull-out performance
- High torque resistance
- Flange prevents escape of plastic
- Can be installed by heat or ultrasonics
- Self-aligning



DESIGN GUIDE

HOLE PREPARATION

The taper on the hole should be 8° inclusive. The insert is tapered for approximately 1/3 of its length and is parallel for the remainder. Note: Blind Holes - hole depth should be a minimum of 1 mm or 0.039 inches greater than the length of the insert to be installed.

SELECTION OF INSERT TYPE

Depending on the depth of the hole, the holding power can be increased significantly by selecting the double vane version.

INSTALLATION

The fastener may be installed using either a pre-heating process or using heat generated by ultrasonic vibrations. Where pre-heating is used care must be exercised to ensure that the fastener softens but does not melt the plastic. This will avoid any tendency to

generate unsightly “flash” around the top of the insert and could have a detrimental effect on performance. Insert must be installed flush to provide maximum performance.

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 www.bulten.com and preproduction testing is strongly advised.

PERFORMANCE DATA

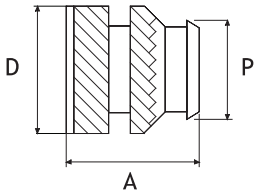
The complexity of materials and variations in service conditions make it impossible to detail fastener performance for specific applications. The chart gives a general guide and shows the relative performance of the insert in the range.

TAPER-X[®] INSERTS

TECHNICAL DATA

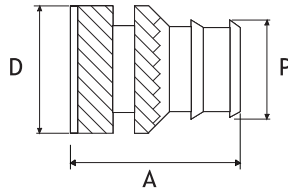
SINGLE VANE INSERTS

PRODUCT CODE [TX] (SHORT)

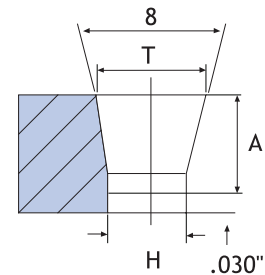


DOUBLE VANE INSERTS

PRODUCT CODE [TX] (LONG)



HOLE CONFIGURATION



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

DIMENSIONS

"SINGLE VANE" METRIC

Unit: Millimetres

Thread Size	Insert Length A	Insert Ø D	Pilot End Ø P	Rec.Hole Size + / - 0.025		Min. Wall Thickness
				T	H	
M1	2.9	3.45	3.10	3.12	3.00	2.0
M2	2.9	4.37	3.10	3.12	3.00	2.0
M2.5	3.4	4.37	3.98	4.03	3.88	2.4
M3	3.8	5.58	5.15	5.23	5.05	3.0
M3.5	3.8	5.58	5.15	5.23	5.05	3.0
M4	4.7	6.35	5.84	5.94	5.74	3.4
M5	6.7	8.33	7.82	8.00	7.69	4.4
M6	7.6	9.53	8.99	9.22	8.86	4.9
M8	8.5	11.9	11.15	11.38	10.95	6.2
M10	9.5	14.3	13.46	13.71	13.28	7.5

Other lengths possible on quotation.

"SINGLE VANE" UNIFIED

Unit: Inches

Thread Size	Insert Length A	Insert Ø D	Pilot End Ø P	Rec.Hole Size + / - .001		Min. Wall Thickness
				T	H	
0-80	.115	.136	.122	.123	.118	.080
2-56	.115	.136	.122	.123	.118	.080
4-40	.135	.172	.157	.159	.153	.093
6-32	.150	.220	.203	.206	.199	.116
8-32	.185	.250	.230	.234	.226	.133
10-24	.225	.296	.272	.277	.267	.159
10-32	.225	.296	.272	.277	.267	.159
1/4-20	.300	.375	.354	.363	.349	.194
1/4-28	.300	.375	.354	.363	.349	.194
5/16-18	.335	.469	.439	.448	.431	.245
5/16-24	.335	.469	.439	.448	.431	.245
3/8-16	.375	.563	.530	.540	.523	.293
3/8-24	.375	.563	.530	.540	.523	.293

Other lengths possible on quotation.

TAPER-X[®] INSERTS

DIMENSIONS

“DOUBLE VANE” METRIC

Unit: Millimetres

Thread Size	Insert Length A	Insert Ø D	Pilot End Ø P	Rec.Hole Size + / - 0.025		Min. Wall Thickness
				T	H	
M1	4.8	3.45	2.92	3.12	2.72	2.0
M2	4.8	3.45	2.92	3.12	2.75	2.0
M2.5	5.6	4.37	3.66	4.04	3.58	2.4
M3	6.4	5.59	4.82	5.23	4.70	3.0
M3.5	6.4	5.59	4.82	5.23	4.70	3.0
M4	7.9	6.35	5.38	5.94	5.28	3.4
M5	11.1	8.33	7.19	8.00	7.06	4.4
M6	12.7	9.53	8.43	9.22	8.15	4.9
M8	14.3	11.9	10.31	11.38	10.18	6.2
M10	15.9	14.3	12.52	13.71	12.39	7.5

Other lengths possible on quotation.

“DOUBLE VANE” UNIFIED

Unit: Inches

Thread Size	Insert Length A	Insert Ø D	Pilot End Ø P	Rec.Hole Size + / - .001		Min. Wall Thickness
				T	H	
0-80	.188	.136	.115	.123	.107	.080
2-56	.188	.136	.115	.123	.107	.080
4-40	.219	.172	.144	.159	.141	.093
6-32	.250	.220	.190	.206	.185	.116
8-32	.312	.250	.212	.234	.208	.133
10-24	.375	.297	.251	.277	.246	.159
10-32	.375	.297	.251	.277	.246	.159
1/4-20	.500	.375	.332	.363	.321	.194
1/4-28	.500	.375	.332	.363	.321	.194
5/16-18	.562	.469	.406	.448	.401	.245
5/16-24	.562	.469	.406	.448	.401	.245
3/8-16	.625	.563	.493	.540	.488	.293
3/8-24	.625	.563	.493	.540	.488	.293

Other lengths possible on quotation.

HOW TO SPECIFY

TX	
Product Code	TX-B-M3-3.8
Material Code	TX- B -M3-3.8
Thread Size	TX-B- M3 -3.8
Length	TX-B-M3- 3.8