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TÜRKCOİL HELİKOİL & İNÖRTLER

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1- DESCRIPTION

Helical coil inserts are screw thread bushings coiled from diamond shaped cross-section wire. They are screwed into

tapped holes to form nominal size internal threads. Inserts are installed by torqueing through a diametric tang which

is notched for tang removal.

2- MATERIAL

As specified on the drawing.

3- THREADS

Assembled inserts, Classes 28 and 38, are controlled by the tolerance range of the tapped hole into which insert is fitted. Due to the radius on the crest of the insert at the minor diameter, the assembled insert will accept external threaded parts which are threaded to ASBB79. The grip coil or coils of the screw locking insert are shaped to provide a prevailing torque when the screw is installed in the assembled insert.

4- TAPPED HOLE

60° Unified Internal thread form with the minimum major diameter based on a truncation to 0.125p.

4.1- Designation for tapped hole

The drawing note for the tapped hole, per table IV, that will accept the helical coil insert shall be in accordance with the following examples:

EXAMPLE 1

,3125-24 UNF-3B HELICAL COIL INSERT THD PER NASM33537 .67 MIN FULL THD DEPTH	,3125.24 UNF-38 HELICAL COIL INSERT THD THRU PER NASM33537 INSTALL INSERT ,75-T,5 TURNS BELOW SURFACE REMOVE TANG - (NOT REQUIRED WITH TANGLESS INSERTS)
For Blind Hole (Based on 2 Diameter Engagement) (Minor Diameter Drill Depth Tolerance approx. .060 or as otherwise appropriate)	For thru hole with Insert being Assembled (Based on 2 Diameter Engagement)

EXAMPLE 1

MINOR DIA .3215-.3288 x .791-.851 DEEP .36-.39 DIA x 115o-125o CSK THD PER NASM33537 FOR ,3125-24 UNF-38 HELICAL COIL INSERT .67 MIN FULL THD DEPTH PITCH DIA ,3395-,3427 MAJOR DIA.3666 MIN	MINOR DIA .3215-.3288 THRU .36-.39 DIA x 115o-125o CSK THD THRU PER NASM33537 FOR ,3125-24 UNF-38 HELICAL COIL INSERT PITCH DIA .3395-.3427 MAJOR DIA .3666 MIN INSTALL INSERT ,75-T,5 TURNS BELOW SURFACE REMOVE TANG - (NOT REQUIRED WITH TANGLESS INSERTS)
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5- REDUCED FIRST COIL

The first coil of the free insert adjacent to the tang has been reduced in diameter on the larger inserts to facilitate starting the insert into the tapped hole.

6- DIMENSIONAL DATA

6.1- For free running and screw locking inserts having a nominal length of 1, 7.5, 2,2.5, and 3 times the nominal major diameter of the screw thread, dimensional data for the following features have been calculated and are listed in Table IV:

Nominal length (L_n)
Length of assembled insert (L)
Tapped hole diameters (V, V1, V2)
Depth of drilling and tapping (FP, FB, and H)
Countersink diameters (M)
Required bolt thread projection (J and K)

For all other nonstandard variations in nominal length, the above dimensions shall be calculated from the formulas given in Table III, using rounding procedures contained in ASTM SI 10.

6.2- See Table I for MS part numbers and nominal lengths of available inserts.

6.3- INSERT LENGTH SELECTION:

For applications where the tensile strength of the installed insert is a consideration, Table II will aid in applying the standard design practice of relating the tensile strength of the bolt material against the shear strength of the parent or boss material to develop the full load value of the bolt rather than stripping the parent or tapped material. In using this table, the following factors must be considered.

6.3.1- Actual bolt tensile strength, particularly in the lower bolt tensile ranges/ may be significantly higher than the nominal values. This should be considered in insert length selection.

6.3.2- The parent material shear strengths are for room temperature. Elevated temperatures significantly reduce shear strength values; compensation should be made when required.

6.3.3- When parent material shear strength falls between two tabulated values, use the lower of the two.

7- DEPTH OF RECOMMENDED MINIMUM TAP DRILL HOLE

The tabulated depth of blind hole for thread tapping allows sufficient depth for assembled insert top coil to be 1.5 pitches below boss surface. For insert sizes .3125 and smaller, drill depth FP provides for minimum full thread depth H, using a plug tap having 4 pitches tap chamfer, plus a length equal to 0.5 x nominal insert size to clear the tap external center (conical end), plus 1 pitch tap end clearance. For insert sizes larger than .3125, drill depth FP is for plug tap having 4 pitches tap chamfer, plus 1 pitch tap end clearance. Drill depth FB is for bottoming taps having 2 pitches tap chamfer, plus 1 pitch tap end clearance. If tap drill holes are not countersunk(the assembled insert top coil may be 0.5 pitch max below boss surface which allows for a 1 pitch reduction in tabulated depth of blind drilled hole dimensions.

8- DEPTH OF FULL THREAD OF TAPPED HOLE

For thru or blind tapped holes with a countersink as specified in Table IV, the Minimum Full Thread, H (also minimum flange thickness for thru hole), equals nominal length of insert, L_n , as specified in the tabulation, plus 1 pitch. For thru or blind tapped holes without countersink, the minimum full thread (also minimum flange thickness for thru hole) shall not be less than the nominal length of insert, L_n .

9- LENGTH OF BOLT THREAD PROJECTION

9.1- INSERT WITH TANG REMOVED

The maximum length of bolt thread projection, J, into the assembled insert in a blind hole is equal to the minimum design depth of the tap drill hole, FP or FB. The minimum length of bolt threads projection to provide full thread engagement and thus to ensure full development of potential joint tensile strength is J min. It is equal to the maximum length, L, of the insert, plus 3 pitch (the maximum depth of the assembled insert top coil from boss surface, 1.5 pitch, plus bolt chamfer 1.5 pitch). Bolt projection, J min, will also ensure full engagement with the grip coil or coils of a screw locking insert.

9.2- INSERT WITHOUT TANG REMOVED

The maximum length of bolt thread projection, K, into the assembled insert when tang is not removed is the minimum length of insert plus 0.25 pitch.

10- COUNTERSINK AND COUNTER BORE

The values given in Table IV for Depth of Hole, FP, FB, Minimum Full Thread H, and Length of Bolt projection, J and K, are measured from the top surface of the boss or piece and are based on installing the insert below the countersink as in 11.1. If a counter bore or countersink other than that shown is required or no countersink is used, the values for FP, FB, H, J, and K must be modified to compensate.

11- INSTALLATION OF INSERT

11.1- WITH COUNTERSUNK HOLE

The top edge of the insert shall be installed 0.75p to 1.5p below top surface of the tapped hole.

11.2- WITHOUT COUNTERSUNK HOLE

The top edge of the insert shall be installed 0.25p to 0.5p below top surface of tapped hole.

11.3-TANG REMOVAL

The tang should be removed from the insert after installation.

12- BLIND HOLE ASSEMBLY (WITHOUT REMOVAL OF TANG)

When the insert tang is not removed, as may be the case with blind hole applications/ an insert 0.5 diameter longer than the required nominal length will fulfill the necessary bolt-insert full thread engagement, provided that the bolt projection satisfies the original J min and the longer insert K max tabulated values.

13- GAGING PRACTICE

Accuracy of the finished thread, when the insert is installed, is dependent upon the accuracy of the tapped hole. If the finished tapped hole gages satisfactorily, the installed insert will be within the thread tolerance when the insert meets the drawing requirements. It is, therefore, not necessary to gage the installed insert. After the insert is installed, the GO thread plug gage may not enter freely because the insert may not have been fully seated in the tapped hole; however, the insert should become seated after a bolt or screw is installed and tightened.

14- PERMITTED MODIFICATIONS

Values for FP, FB, H, J, K, M, and installation depth of insert may be modified to suit requirements for production tooling, design, assembly, etc. See Table III for formulas. Countersink included angle may be modified from 120° to 90° provided that for UNC sizes .190-24 and smaller and UNF sizes .4375-20 and smaller, the top edge of the insert shall be installed 1.0 to 1.5p below top surface of the tapped hole.

TABLE I – PART NUMBERS

INSERT NOMINAL LENGTH	FREE RUNNING INSERTS		SCREW LOCKING INSERTS	
	CRES AS7245		CRES NASM8846	
	COARSE	FINE	COARSE	FINE
1 DIA	M5t22076 thru MS122115	MS124651 thru MS124690	M521209C0210 thru t'qs2t209c24t0	M521209F0310 thru MS2L209F24t0
1,5 DIA	MS122116 thru MS122155	MS124691 thru MS124730	MS21209C0215 thru t4s2t209c24t5	MS21209F0315 thru MS2L209F24t5
2 DIA	MS122156 thru MS122195	MSL2473t thru M5t24770	MS21209C0220 thru 1v1521209C2420	M521209F0320 thru M52t209F2420
2,5 DIA	MS122196 thru M5122235	M512477t thru MS124810	MS21209C0225 thru M52t209C2425	MS21209F0325 thru M52t209F2425
3 DIA	M5t22236 thru t4st22275	MS124811 thru MS124850	M521209C0230 thru M521209C2430	MS21209F0330 thru MS21209F2430

NASM21209 offers Cadmium Plating and Dry Film Lubricant Coating options.

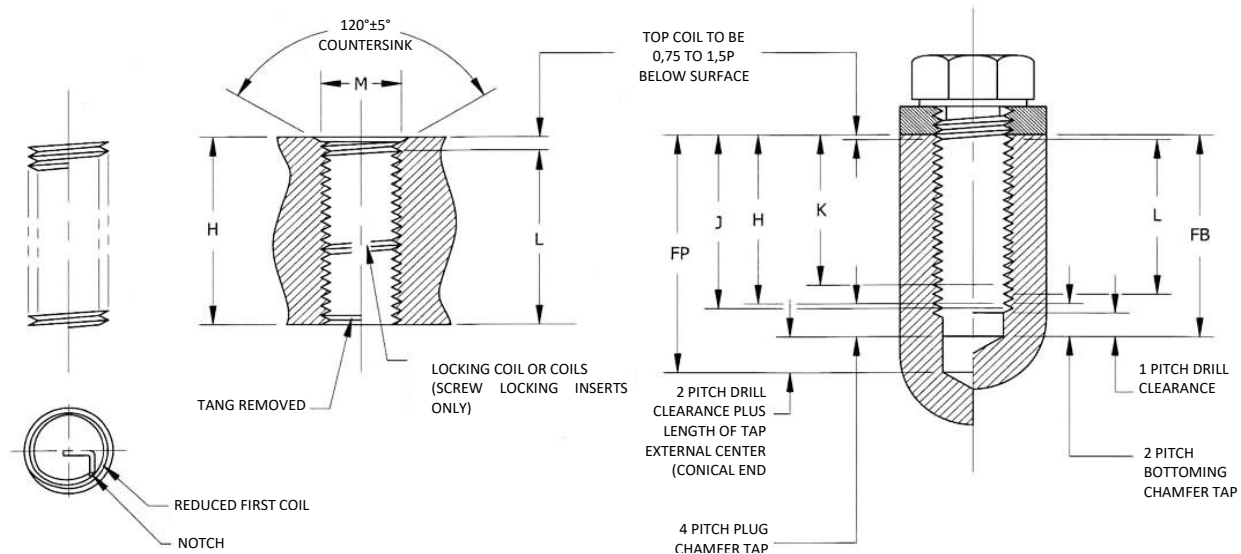


FIGURE I

TABLE II – LENGTHS OF THREAD ENGAGEMENT IN TERMS OF NOMINAL THREAD SIZE

Shear Strength of Material (psi) (Alum., Mag, Steel)	Bolt Material Minimum Ultimate Tensile Strength (psi)								
	54,000	75,000	96,000	108,000	125,000	132,000	160,000	180,000	220,000
10,000	2	2-1/2	3	3	-	-	-	-	-
15,000	1-1/2	1-1/2	2	2-1/2	2-1/2	3	3	-	-
20,000	1	1-1/2	1-1/2	2	2	2	2-1/2	3	3
25,000	1	1	1-1/2	1-1/2	1-1/2	2	2	2-1/2	2-1/2
30,000	1	1	1	1-1/2	1-1/2	1-1/2	2	2	2-1/2
40,000	1	1	1	1	1	1-1/2	1-1/2	1-1/2	2
50,000	1	1	1	1	1	1-	1	1-1/2	1-1/2

TABLE III – FORMULAS FOR DIMENSIONS

INFORMATION REQUIRED (SEE FIGURE 1)	FORMULA
Length of Assembled Insert (L) Free Running and Screw Locking	$L_{min} = L_n - 0,75P$ $L_{max} = L_n - 0,5P$
Depth of Recommended Minimum Tap drill (FP or FB) for Blind Holes (Paragraph 7)	1. For Plug Taps .3125 Nominal Diameter and smaller: $FP = L_n + 6P + 0,5 D_n$ 2. For Plug Taps larger than .3125: $FP = L_n + 6P$ 3. For Bottoming Taps: $FB = L_n + 4P$
Depth or Full Thread of Blind Tapped Hole H (also Min. Flange Thickness for Thru Tapped Hole (Paragraph 8)	$H_{min} = L_n + 1P$
Countersink or Counterbore (M) (Paragraph 10)	$M_{min} = V_2 \max \text{ Class 3B} + B_{max} - D_{min}$ $M_{max} = M_{min} + .030$
Length of Bolt Thread Projection into Assembled Insert (J or K) (Paragraph 9)	1. Insert – Tang Removed $J_{max} = FP_{min}$ (blind hole depth for plug tap) $J_{max} = FB_{min}$ (blind hole depth for bottoming tap) $J_{min} = L_{max} + 3P$ Or $J_{min} = L_n + 2.5P$ 2. Insert – Tang Not Removed $K_{max} = L_{min} + 0.25P$

WHERE:

L_n = Nominal Length of Insert (Table IV)

D = Wire pitch Line from NASM21209

P = Pitch = 1 / Thread per Inch

D_n = Nominal Insert Size (Dimeter)

B = Wire Height from NASM21209

V_2 = Tapped hole Pitch diameter (Table IV)

TABLE IV –DIMENSIONS

Nominal Inset Size		.073	.086		.099		.112		.125	
Threads Per Inch		64	56	64	48	56	40	48	40	
L _n	Insert Nominal Length, 1 DIA	.073	.086	.086	.099	.099	.112	.112	.125	
	Insert Nominal Length, 1,5 DIA	.110	.129	.129	.148	.148	.168	.168	.188	
	Insert Nominal Length, 2 DIA	.146	.172	.172	.198	.198	.224	.224	.250	
	Insert Nominal Length, 2,5 DIA	.182	.215	.215	.248	.248	.280	.280	.312	
	Insert Nominal Length, 3 DIA	.219	.258	.258	.297	.297	.336	.336	.375	
ASSEMBLED INSERT	L	Min Length of Insert When Nominal Length = 1 DIA	.061	.073	.074	.083	.086	.093	.096	.106
		Nominal Length = 1,5 DIA	.098	.116	.117	.133	.135	.149	.152	.169
		Nominal Length = 2 DIA	.134	.159	.160	.182	.185	.205	.208	.231
		Nominal Length = 2,5 DIA	.170	.202	.203	.232	.234	.261	.264	.293
		Nominal Length = 3 DIA	.207	.245	.246	.281	.284	.317	.320	.356
	D ₂	PD, Max, Class 2B	.0655	.0772	.0786	.0885	.0902	.0991	.1016	.1121
		PD, Max, Class 3B	.0648	.0765	.0779	.0877	.0895	.0982	.1008	.1113
		PD, Min, Class 2B & 3B	.0629	.0744	.0759	.0855	.0874	.0958	.0985	.1088
	D ₁	Minor Dia, Max, Class 2B	.0623	.0737	.0753	.0845	.0865	.0939	.0968	.1062
		Minor Dia, Class 3B	.0623	.0737	.0753	.0845	.0865	.0939	.0968	.1062
		Minor Dia, Class 2B & 3B	.0561	.0667	.0691	.0764	.0797	.0849	.0894	.0979
	TAPPED HOLE	FP	Depth of Blind Hole for Plug Taps, Min When Nominal Length = 1 DIA	.203	.236	.223	.273	.256	.318	.293
Min When Nominal Length = 1,5 DIA			.240	.279	.266	.323	.305	.374	.349	.400
Min When Nominal Length = 2 DIA			.276	.322	.309	.372	.355	.430	.405	.462
Min When Nominal Length = 2,5 DIA			.313	.365	.352	.422	.404	.486	.461	.525
Min When Nominal Length = 3 DIA			.349	.408	.395	.471	.454	.542	.517	.588
FB		Depth of Blind Hole for Bottoming Taps, Min When Nominal Length = 1 DIA	.136	.157	.149	.182	.170	.212	.195	.225
		Min When Nominal Length = 1,5 DIA	.172	.200	.192	.232	.220	.268	.251	.288
		Min When Nominal Length = 2 DIA	.209	.243	.235	.281	.269	.324	.307	.350
		Min When Nominal Length = 2,5 DIA	.245	.266	.278	.331	.319	.380	.363	.412
		Min When Nominal Length = 3 DIA	.282	.329	.321	.380	.368	.436	.419	.475
H		Min Full Thread When Nominal Length = 1 DIA	.090	.100	.100	.120	.120	.140	.130	.150
		Nominal Length = 1,5 DIA	.125	.150	.145	.170	.170	.190	.190	.210
		Nominal Length = 2 DIA	.160	.190	.190	.220	.220	.250	.240	.280
		Nominal Length = 2,5 DIA	.200	.230	.230	.270	.270	.310	.300	.340
		Nominal Length = 3 DIA	.235	.280	.275	.320	.310	.360	.360	.400
V ₂		PD, Max, Class 2B	.0850	.0996	.0981	.1148	.1126	.1308	.1279	.1438
		PD, Max, Class 3B	.0843	.0989	.0974	.1140	.1119	.1299	.1271	.1430
		PD, Min, Class 2B & 3B	.0832	.0976	.0962	.1126	.1106	.1283	.1256	.1413
V ₁		Minor Dia, Max, Class 2B	.0823	.0961	.0947	.1104	.1086	.1252	.1229	.1373
		Minor Dia, Class 3B	.0823	.0961	.0947	.1104	.1086	.1252	.1229	.1373
		Minor Dia, Class 2B & 3B	.0764	.0899	.0894	.1036	.1029	.1175	.1166	.1305
V		Major Dia, Max, Class 2B	.0974	.1138	.1105	.1313	.1268	.1506	.1444	.1636
		Major Dia, Class 3B	.0967	.1131	.1098	.1305	.1261	.1497	.1436	.1628
		Major Dia, Class 2B & 3B	.0933	.1092	.1063	.1261	.1222	.1445	.1391	.1575
M	Countersink, 120° Included Angle Maximum	.100	.110	.110	.140	.140	.170	.170	.190	
	Minimum	.085	.090	.090	.110	.110	.140	.140	.160	
THREAD PROJECTION	J	Min, Tang removed, When Insert Nominal Length = 1 DIA	.112	.131	.125	.151	.144	.174	.164	.188
		Nominal Length = 1,5 DIA	.149	.174	.168	.200	.193	.230	.220	.250
		Nominal Length = 2 DIA	.185	.217	.211	.250	.243	.286	.276	.312
		Nominal Length = 2,5 DIA	.221	.260	.254	.300	.293	.342	.332	.374
		Nominal Length = 3 DIA	.258	.303	.297	.349	.342	.398	.388	.438
	K	Max, tang Not Removed, When Insert Nominal Length = 1 DIA	.065	.077	.078	.088	.090	.100	.102	.112
		Nominal Length = 1,5 DIA	.102	.120	.121	.138	.140	.156	.158	.176
		Nominal Length = 2 DIA	.138	.163	.164	.187	.189	.212	.214	.238
		Nominal Length = 2,5 DIA	.174	.206	.207	.236	.238	.268	.270	.300
		Nominal Length = 3 DIA	.211	.249	.250	.285	.288	.324	.326	.362

TABLE IV –DIMENSIONS (CONTINUED)

Nominal Inset Size		,138		,164		,190		,216	
Threads Per Inch		32	40	32	36	24	32	24	
L _n	Insert Nominal Length, 1 DIA	.138	.138	.164	.464	.190	.190	.216	
	Insert Nominal Length, 1,5 DIA	.207	.207	.246	.246	.285	.285	.324	
	Insert Nominal Length, 2 DIA	.276	.276	.328	.328	.380	.380	.432	
	Insert Nominal Length, 2,5 DIA	.345	.345	.410	.410	.475	.475	.540	
	Insert Nominal Length, 3 DIA	.414	.414	.492	.492	.370	.570	.648	
ASSEMBLED INSERT	L	Min Length of Insert When Nominal Length = 1 DIA	.115	.119	.141	.143	.459	.467	.485
		Nominal Length = 1,5 DIA	.184	.188	.223	.225	.254	.262	.293
		Nominal Length = 2 DIA	.253	.257	.305	.307	.349	.357	.401
		Nominal Length = 2,5 DIA	.322	.326	.387	.389	.444	.452	.509
		Nominal Length = 3 DIA	.391	.395	.469	.471	.339	.547	.617
	D ₂	PD, Max, Class 2B	.1214	.1252	.1475	.1496	.1672	.1736	.1933
		PD, Max, Class 3B	.1204	.1243	.1465	.1487	.1661	.1726	.1922
		PD, Min, Class 2B & 3B	.1177	.1218	.1437	.1460	.1629	.1697	.1889
	D ₁	Minor Dia, Max, Class 2B	.114	.119	.139	.142	.156	.164	.181
		Minor Dia, Class 3B	.1140	.1186	.1389	.1416	.1555	.1641	.1807
		Minor Dia, Class 2B & 3B	.1040	.1110	.1300	.1340	.1450	.1560	.1710
	TAPPED HOLE	FP	Depth of Blind Hole for Plug Taps, Min When Nominal Length = 1 DIA	.394	.357	.434	.413	.535	.472
Min When Nominal Length = 1,5 DIA			.464	.426	.516	.495	.630	.368	.682
Min When Nominal Length = 2 DIA			.532	.495	.598	.377	.725	.662	.790
Min When Nominal Length = 2,5 DIA			.602	.564	.680	.659	.820	.758	.898
Min When Nominal Length = 3 DIA			.670	.633	.762	.741	.915	.852	1.006
FB		Depth of Blind Hole for Bottoming Taps, Min When Nominal Length = 1 DIA	.263	.238	.289	.275	.357	.315	.383
		Min When Nominal Length = 1,5 DIA	.332	.307	.371	.357	.452	.410	.491
		Min When Nominal Length = 2 DIA	.401	.376	.453	.439	.547	.505	.599
		Min When Nominal Length = 2,5 DIA	.470	.445	.535	.521	.642	.600	.707
		Min When Nominal Length = 3 DIA	.539	.514	.617	.603	.737	.695	.815
H		Min Full Thread When Nominal Length = 1 DIA	.170	.160	.200	.490	.230	.220	.260
		Nominal Length = 1,5 DIA	.240	.230	.280	.270	.330	.320	.370
		Nominal Length = 2 DIA	.310	.300	.360	.360	.420	.410	.470
		Nominal Length = 2,5 DIA	.380	.370	.440	.440	.520	.510	.580
		Nominal Length = 3 DIA	.450	.440	.520	.520	.610	.600	.690
V ₂		PD, Max, Class 2B	.1611	.1569	.1872	.1849	.2203	.2133	.2464
		PD, Max, Class 3B	.1601	.1560	.1862	.1840	.2192	.2123	.2453
		PD, Min, Class 2B & 3B	.1583	.1543	.1843	.1821	.2170	.2103	.2430
V ₁	Minor Dia, Max, Class 2B	.1527	.1503	.1781	.1771	.2087	.2041	.2347	
	Minor Dia, Class 3B	.1527	.1503	.1781	.1771	.2080	.2041	.2340	
	Minor Dia, Class 2B & 3B	.1448	.1435	.1708	.1701	.1990	.1968	.2250	
V	Major Dia, Max, Class 2B	.1859	.1767	.2120	.2069	.2534	.2381	.2795	
	Major Dia, Class 3B	.1849	.1758	.2110	.2060	.2523	.2371	.2784	
	Major Dia, Class 2B & 3B	.1786	.1705	.2046	.2001	.2441	.2306	.2701	
M	Countersink, 120° Included Angle Maximum	.210	.200	.230	.230	.270	.260	.290	
	Minimum	.180	.170	.200	.200	.240	.230	.260	
THREAD PROJECTION	J	Min, Tang removed, When Insert Nominal Length = 1 DIA	.216	.200	.242	.233	.294	.268	.320
		Nominal Length = 1,5 DIA	.285	.270	.324	.315	.389	.363	.428
		Nominal Length = 2 DIA	.354	.338	.406	.397	.484	.458	.536
		Nominal Length = 2,5 DIA	.423	.408	.488	.479	.579	.553	.644
		Nominal Length = 3 DIA	.492	.476	.570	.561	.674	.648	.752
	K	Max, tang Not Removed, When Insert Nominal Length = 1 DIA	.122	.126	.149	.150	.469	.475	.495
		Nominal Length = 1,5 DIA	.191	.194	.231	.232	.264	.270	.303
		Nominal Length = 2 DIA	.260	.264	.313	.314	.359	.365	.411
		Nominal Length = 2,5 DIA	.329	.332	.395	.396	.454	.460	.519
		Nominal Length = 3 DIA	.398	.402	.477	.478	.549	.555	.627

TABLE IV –DIMENSIONS (CONTINUED)

Nominal Inset Size		,250		,3125		,375		,4375		
Threads Per Inch		20	28	18	24	16	24	14	20	
L _n	Insert Nominal Length, 1 DIA	.250	.250	.312	.312	.375	.375	.438	.433	
	Insert Nominal Length, 1,5 DIA	.375	.375	.469	.469	.562	.562	.656	.656	
	Insert Nominal Length, 2 DIA	.500	.500	.625	.625	.750	.750	.875	.875	
	Insert Nominal Length, 2,5 DIA	.625	.625	.781	.781	.938	.938	1.094	1.094	
	Insert Nominal Length, 3 DIA	.750	.750	.938	.938	1.125	1.125	1.312	1.312	
ASSEMBLED INSERT	L	Min Length of Insert When Nominal Length = 1 DIA	.212	.223	.271	.281	.328	.344	.384	.400
		Nominal Length = 1,5 DIA	.338	.348	.427	.438	.516	.531	.603	.619
		Nominal Length = 2 DIA	.462	.473	.583	.594	.703	.719	.821	.838
		Nominal Length = 2,5 DIA	.538	.598	.740	.750	.891	.906	1.040	1.056
		Nominal Length = 3 DIA	.712	.723	.896	.906	1.078	1.094	1.259	1.275
	D ₂	PD, Max, Class 2B	.2224	.2311	.2817	.2902	.3401	.3528	.3972	.4104
		PD, Max, Class 3B	.2211	.2300	.2803	.2890	.3387	.3516	.3957	.4091
		PD, Min, Class 2B & 3B	.2175	.2268	.2764	.2854	.3344	.3479	.3911	.4050
	D ₁	Minor Dia, Max, Class 2B	.207	.220	.265	.277	.321	.340	.376	.395
		Minor Dia, Class 3B	.2067	.2190	.2630	.2754	.3182	.3372	.3717	.3916
		Minor Dia, Class 2B & 3B	.1960	.2110	.2520	.2670	.3070	.3300	.3600	.3830
	TAPPED HOLE	FP	Depth of Blind Hole for Plug Taps, Min When Nominal Length = 1 DIA	.675	.589	.801	.718	.750	.625	.867
Min When Nominal Length = 1,5 DIA			.800	.714	.957	.874	.938	.812	1.086	.957
Min When Nominal Length = 2 DIA			.925	.839	1.113	1.030	1.125	1.000	1.305	1.176
Min When Nominal Length = 2,5 DIA			1.050	.964	1.269	1.186	1.312	1.185	1.524	1.395
Min When Nominal Length = 3 DIA			1.175	1.089	1.425	1.342	1.500	1.375	1.743	1.614
FB		Depth of Blind Hole for Bottoming Taps, Min When Nominal Length = 1 DIA	.450	.393	.534	.479	.625	.542	.724	.638
		Min When Nominal Length = 1,5 DIA	.575	.518	.690	.635	.812	.729	.943	.857
		Min When Nominal Length = 2 DIA	.700	.643	.846	.791	1.000	.917	1.162	1.076
		Min When Nominal Length = 2,5 DIA	.825	.768	1.002	.947	1.185	1.104	1.381	1.295
		Min When Nominal Length = 3 DIA	.950	.893	1.158	1.103	1.375	1.292	1.600	1.514
H		Min Full Thread When Nominal Length = 1 DIA	.300	.290	.370	.350	.440	.420	.510	.490
		Nominal Length = 1,5 DIA	.430	.410	.530	.510	.630	.600	.730	.710
		Nominal Length = 2 DIA	.550	.540	.680	.670	.810	.790	.950	.930
		Nominal Length = 2,5 DIA	.680	.660	.840	.820	1.000	.980	1.170	1.140
		Nominal Length = 3 DIA	.800	.790	.990	.980	1.190	1.170	1.380	1.360
V ₂		PD, Max, Class 2B	.2864	.2765	.3529	.3433	.4203	.4059	.4890	.4744
		PD, Max, Class 3B	.2851	.2754	.3515	.3421	.4189	.4047	.4875	.4731
		PD, Min, Class 2B & 3B	.2825	.2732	.3486	.3395	.4156	.4020	.4839	.4700
V ₁		Minor Dia, Max, Class 2B	.2723	.2661	.3372	.3312	.4026	.3937	.4688	.4598
		Minor Dia, Class 3B	.2704	.2646	.3342	.3288	.3987	.3910	.4639	.4561
		Minor Dia, Class 2B & 3B	.2608	.2577	.3245	.3215	.3885	.3840	.4530	.4483
V		Major Dia, Max, Class 2B	.3261	.3049	.3970	.3764	.4699	.4390	.5457	.5141
		Major Dia, Class 3B	.3248	.3038	.3956	.3752	.4685	.4378	.5442	.5128
		Major Dia, Class 2B & 3B	.3150	.2964	.3847	.3666	.4562	.4291	.5303	.5025
M	Countersink, 120° Included Angle Maximum	.340	.320	.410	.390	.480	.450	.550	.530	
	Minimum	.310	.290	.380	.360	.450	.420	.520	.500	
THREAD PROJECTION	J	Min, Tang removed, When Insert Nominal Length = 1 DIA	.375	.339	.451	.416	.531	.479	.617	.563
		Nominal Length = 1,5 DIA	.500	.464	.764	.729	.906	.854	1.054	1.000
		Nominal Length = 2 DIA	.625	.589	.920	.885	1.094	1.042	1.273	1.219
		Nominal Length = 2,5 DIA	.750	.714	1.077	1.042	1.281	1.229	1.491	1.437
		Nominal Length = 3 DIA	.875	.839						
	K	Max, tang Not Removed, When Insert Nominal Length = 1 DIA	.225	.232	.285	.291	.344	.354	.402	.413
		Nominal Length = 1,5 DIA	.351	.357	.441	.448	.532	.541	.621	.632
		Nominal Length = 2 DIA	.475	.482	.597	.604	.719	.729	.840	.851
		Nominal Length = 2,5 DIA	.601	.607	.754	.760	.907	.916	1.058	1.069
		Nominal Length = 3 DIA	.725	.732	.910	.916	1.094	1.104	1.277	1.288

TABLE IV –DIMENSIONS (CONTINUED)

Nominal Inset Size		,500		,5625		,625		,750		
Threads Per Inch		13	20	12	18	11	18	10	16	
L _n	Insert Nominal Length, 1 DIA	.500	.500	.562	.562	.625	.625	.750	.750	
	Insert Nominal Length, 1,5 DIA	.750	.750	.844	.844	.938	.938	1.125	1.125	
	Insert Nominal Length, 2 DIA	1.000	1.000	1.125	1.125	1.250	1.250	1.500	1.500	
	Insert Nominal Length, 2,5 DIA	1.250	1.250	1.406	1.406	1.562	1.562	1.875	1.875	
	Insert Nominal Length, 3 DIA	1.500	1.500	1.688	1.688	1.875	1.875	2.250	2.250	
ASSEMBLED INSERT	L	Min Length of Insert When Nominal Length = 1 DIA	.442	.462	.500	.521	.557	.583	.675	.703
		Nominal Length = 1,5 DIA	.692	.712	.781	.802	.869	.896	1.050	1.078
		Nominal Length = 2 DIA	.942	.962	1.062	1.083	1.182	1.208	1.425	1.453
		Nominal Length = 2,5 DIA	1.192	1.212	1.344	1.365	1.494	1.521	1.800	1.828
		Nominal Length = 3 DIA	1.442	1.462	1.625	1.646	1.807	1.833	2.175	2.203
	D ₂	PD, Max, Class 2B	.4565	.4731	.5152	.5323	.5732	.5949	.6927	.7159
		PD, Max, Class 3B	.4548	.4717	.5135	.5308	.5714	.5934	.6907	.7143
		PD, Min, Class 2B & 3B	.4500	.4675	.5084	.5264	.5660	.5889	.6850	.7094
	D ₁	Minor Dia, Max, Class 2B	.434	.457	.490	.515	.546	.578	.663	.696
		Minor Dia, Class 3B	.4284	.4537	.4843	.5106	.5391	.5730	.6545	.6908
		Minor Dia, Class 2B & 3B	.4170	.4460	.4720	.5020	.5270	.5650	.6420	.6820
	TAPPED HOLE	FP	Depth of Blind Hole for Plug Taps, Min When Nominal Length = 1 DIA	.962	.800	1.062	.895	1.170	.958	1.350
Min When Nominal Length = 1,5 DIA			1.212	1.050	1.343	1.176	1.483	1.271	1.725	1.500
Min When Nominal Length = 2 DIA			1.462	1.300	1.624	1.457	1.795	1.583	2.100	1.875
Min When Nominal Length = 2,5 DIA			1.712	1.550	1.905	1.738	2.108	1.896	2.475	2.250
Min When Nominal Length = 3 DIA			1.962	1.800	2.186	2.019	2.420	2.208	2.850	2.625
FB		Depth of Blind Hole for Bottoming Taps, Min When Nominal Length = 1 DIA	.808	.700	.895	.784	.989	.847	1.150	1.000
		Min When Nominal Length = 1,5 DIA	1.058	.950	1.176	1.065	1.301	1.160	1.525	1.375
		Min When Nominal Length = 2 DIA	1.308	1.200	1.457	1.346	1.614	1.472	1.900	1.750
		Min When Nominal Length = 2,5 DIA	1.558	1.450	1.738	1.627	1.926	1.785	2.275	2.125
		Min When Nominal Length = 3 DIA	1.808	1.700	2.019	1.908	2.239	2.097	2.650	2.500
H		Min Full Thread When Nominal Length = 1 DIA	.580	.550	.650	.620	.720	.680	.850	.810
		Nominal Length = 1,5 DIA	.830	.800	.930	.900	1.030	.990	1.230	1.190
		Nominal Length = 2 DIA	1.080	1.050	1.210	1.180	1.340	1.310	1.600	1.560
		Nominal Length = 2,5 DIA	1.330	1.300	1.490	1.460	1.650	1.620	1.980	1.940
		Nominal Length = 3 DIA	1.580	1.550	1.770	1.740	1.970	1.930	2.350	2.310
V ₂		PD, Max, Class 2B	.5554	.5371	.6225	.6035	.6903	.6661	.8216	.7961
		PD, Max, Class 3B	.5537	.5357	.6208	.6020	.6885	.6646	.8196	.7945
		PD, Min, Class 2B & 3B	.5499	.5325	.6167	.5986	.6841	.6611	.8149	.7906
V ₁		Minor Dia, Max, Class 2B	.5335	.5223	.5986	.5872	.6641	.6497	.7926	.7776
		Minor Dia, Class 3B	.5273	.5186	.5918	.5826	.6564	.6451	.7838	.7720
		Minor Dia, Class 2B & 3B	.5166	.5108	.5806	.5745	.6447	.6370	.7716	.7635
V		Major Dia, Max, Class 2B	.6165	.5768	.6887	.6476	.7625	.7102	.9010	.8457
		Major Dia, Class 3B	.6148	.5754	.6870	.6461	.7607	.7087	.8990	.8441
		Major Dia, Class 2B & 3B	.5999	.5650	.6708	.6347	.7431	.6972	.8799	.8312
M	Countersink, 120° Included Angle Maximum	.620	.590	.690	.660	.760	.720	.900	.850	
	Minimum	.590	.560	.660	.630	.730	.690	.870	.820	
THREAD PROJECTION	J	Min, Tang removed, When Insert Nominal Length = 1 DIA	.692	.625	.770	.701	.852	.764	1.000	.906
		Nominal Length = 1,5 DIA	.942	.875	1.052	.983	1.165	1.077	1.375	1.281
		Nominal Length = 2 DIA	1.192	1.125	1.333	1.264	1.477	1.389	1.750	1.656
		Nominal Length = 2,5 DIA	1.442	1.375	1.614	1.545	1.789	1.701	2.125	2.031
		Nominal Length = 3 DIA	1.692	1.625	1.896	1.827	2.102	2.014	2.500	2.406
	K	Max, tang Not Removed, When Insert Nominal Length = 1 DIA	.461	.475	.521	.535	.580	.597	.700	.719
		Nominal Length = 1,5 DIA	.711	.725	.802	.816	.892	.910	1.075	1.094
		Nominal Length = 2 DIA	.961	.975	1.083	1.097	1.205	1.222	1.450	1.469
		Nominal Length = 2,5 DIA	1.211	1.225	1.365	1.379	1.517	1.535	1.825	1.844
		Nominal Length = 3 DIA	1.461	1.475	1.646	1.660	1.830	1.847	2.200	2.219

TABLE IV –DIMENSIONS (CONTINUED)

Nominal Inset Size		,8125	,875		1,000			1,0625	
Threads Per Inch		16	9	14	8	12	14/a/	12	
L _n	Insert Nominal Length, 1 DIA	.812	.875	.875	1.000	1.000	1.000	1.062	
	Insert Nominal Length, 1,5 DIA	1.219	1.312	1.312	1.500	1.500	1.500	1.594	
	Insert Nominal Length, 2 DIA	1.625	1.750	1.750	2.000	2.000	2.000	2.125	
	Insert Nominal Length, 2,5 DIA	2.031	2.188	2.188	2.500	2.500	2.500	2.656	
	Insert Nominal Length, 3 DIA	2.438	2.625	2.625	3.000	3.000	3.000	3.188	
ASSEMBLED INSERT	L	Min Length of Insert When Nominal Length = 1 DIA	.766	.792	.821	.906	.938	.946	1.000
		Nominal Length = 1,5 DIA	1.172	1.229	1.259	1.406	1.438	1.446	1.531
		Nominal Length = 2 DIA	1.578	1.667	1.696	1.906	1.938	1.946	2.062
		Nominal Length = 2,5 DIA	1.984	2.104	2.134	2.406	2.438	2.446	2.594
		Nominal Length = 3 DIA	2.391	2.542	2.571	2.906	2.938	2.946	3.125
	D ₂	PD, Max, Class 2B	.7782	.8110	.8356	.9276	.9535	.9609	1.0158
		PD, Max, Class 3B	.7766	.8089	.8339	.9254	.9516	.9590	1.0139
		PD, Min, Class 2B & 3B	.7719	.8028	.8286	.9188	.9459	.9536	1.0084
	D ₁	Minor Dia, Max, Class 2B	.759	.778	.814	.890	.928	.939	.990
		Minor Dia, Class 3B	.7533	.7681	.8068	.8797	.9198	.9315	.9823
		Minor Dia, Class 2B & 3B	.7450	.7550	.7980	.8650	.9100	.9227	.9720
	TAPPED HOLE	FP	Depth of Blind Hole for Plug Taps, Min When Nominal Length = 1 DIA	1.188	1.542	1.304	1.750	1.500	1.429
Min When Nominal Length = 1,5 DIA			1.594	1.979	1.741	2.250	2.000	1.929	2.094
Min When Nominal Length = 2 DIA			2.000	2.417	2.179	2.750	2.500	2.429	2.625
Min When Nominal Length = 2,5 DIA			2.406	2.854	2.616	3.250	3.000	2.929	3.156
Min When Nominal Length = 3 DIA			2.813	3.292	3.054	3.750	3.500	3.429	3.688
FB		Depth of Blind Hole for Bottoming Taps, Min When Nominal Length = 1 DIA	1.063	1.319	1.161	1.500	1.333	1.286	1.396
		Min When Nominal Length = 1,5 DIA	1.469	1.757	1.598	2.000	1.833	1.786	1.927
		Min When Nominal Length = 2 DIA	1.875	2.194	2.036	2.500	2.333	2.286	2.458
		Min When Nominal Length = 2,5 DIA	2.281	2.632	2.473	3.000	2.833	2.786	2.990
		Min When Nominal Length = 3 DIA	2.688	3.069	2.911	3.500	3.333	3.286	3.521
H		Min Full Thread When Nominal Length = 1 DIA	.880	.990	.950	1.130	1.080	1.070	1.150
		Nominal Length = 1,5 DIA	1.280	1.420	1.380	1.630	1.580	1.570	1.680
		Nominal Length = 2 DIA	1.690	1.860	1.820	2.130	2.080	2.070	2.210
		Nominal Length = 2,5 DIA	2.090	2.300	2.260	2.630	2.580	2.570	2.740
		Nominal Length = 3 DIA	2.500	2.740	2.700	3.130	3.080	3.070	3.270
V ₂		PD, Max, Class 2B	.8584	.9543	.9274	1.0890	1.0603	1.0527	1.1231
		PD, Max, Class 3B	.8568	.9522	.9257	1.0868	1.0589	1.0508	1.1212
		PD, Min, Class 2B & 3B	.8531	.9471	.9214	1.0812	1.0542	1.0464	1.1167
V ₁		Minor Dia, Max, Class 2B	.8401	.9218	.9063	1.0521	1.0361	1.0313	1.0986
		Minor Dia, Class 3B	.8345	.9119	.8994	1.0421	1.0281	1.0243	1.0906
		Minor Dia, Class 2B & 3B	.8260	.8990	.8905	1.0271	1.0181	1.0155	1.0806
V		Major Dia, Max, Class 2B	.9080	1.0425	.9841	1.1882	1.1270	1.1094	1.1893
		Major Dia, Class 3B	.9064	1.0404	.9824	1.1860	1.1251	1.1075	1.1874
		Major Dia, Class 2B & 3B	.8937	1.0193	.9678	1.1624	1.1083	1.0928	1.1708
M	Countersink, 120° Included Angle Maximum	.915	1.030	.990	1.170	1.130	1.110	1.190	
	Minimum	.885	1.000	.960	1.140	1.100	1.080	1.160	
THREAD PROJECTION	J	Min, Tang removed, When Insert Nominal Length = 1 DIA	.968	1.153	1.054	1.312	1.208	1.179	1.270
		Nominal Length = 1,5 DIA	1.375	1.590	1.491	1.812	1.708	1.679	1.802
		Nominal Length = 2 DIA	1.781	2.028	1.929	2.312	2.208	2.179	2.333
		Nominal Length = 2,5 DIA	2.187	2.466	2.367	2.812	2.708	2.679	2.864
		Nominal Length = 3 DIA	2.594	2.903	2.804	3.312	3.208	3.179	3.396
	K	Max, tang Not Removed, When Insert Nominal Length = 1 DIA	.782	.820	.840	.937	.958	.964	1.021
		Nominal Length = 1,5 DIA	1.188	1.257	1.277	1.437	1.458	1.464	1.552
		Nominal Length = 2 DIA	1.594	1.695	1.714	1.937	1.958	1.964	2.083
		Nominal Length = 2,5 DIA	2.000	2.132	2.152	2.437	2.458	2.464	2.615
		Nominal Length = 3 DIA	2.407	2.570	2.589	2.937	2.958	2.964	3.146

TABLE IV – DIMENSIONS (CONTINUED)

Nominal Inset Size		1,125		1,1875	1,250		1,3125	1,375		
Threads Per Inch		7	12	12	7	12	12	6	12	
L _n	Insert Nominal Length, 1 DIA	1.125	1.125	1.488	1.250	1.250	1.312	1.375	1.375	
	Insert Nominal Length, 1,5 DIA	1.688	1.688	1.781	1.875	1.875	1.969	2.062	2.062	
	Insert Nominal Length, 2 DIA	2.250	2.250	2.375	2.500	2.500	2.625	2.750	2.750	
	Insert Nominal Length, 2,5 DIA	2.812	2.812	2.969	3.425	3.125	3.281	3.438	3.438	
	Insert Nominal Length, 3 DIA	3.375	3.375	3.562	3.750	3.750	3.938	4.125	4.125	
ASSEMBLED INSERT	L	Min Length of Insert When Nominal Length = 1 DIA	1.018	1.062	1.125	1.143	1.188	1.250	1.250	1.312
		Nominal Length = 1,5 DIA	1.580	1.625	1.719	1.768	1.812	1.906	1.938	2.000
		Nominal Length = 2 DIA	2.443	2.188	2.312	2.393	2.438	2.562	2.625	2.688
		Nominal Length = 2,5 DIA	2.705	2.750	2.906	3.018	3.062	3.219	3.312	3.375
		Nominal Length = 3 DIA	3.268	3.312	3.500	3.643	3.688	3.875	4.000	4.062
	D ₂	PD, Max, Class 2B	1.0416	1.0787	1.1409	1.4668	1.2039	1.2659	1.2771	1.3291
		PD, Max, Class 3B	1.0393	1.0768	1.4390	1.1644	1.2019	1.2640	1.2745	1.3270
		PD, Min, Class 2B & 3B	1.0322	1.0709	1.4334	1.4572	1.4959	1.2584	1.2667	1.3209
	D ₁	Minor Dia, Max, Class 2B	.998	1.053	1.415	1.123	1.178	1.240	1.225	1.303
		Minor Dia, Class 3B	.9875	1.0448	1.1073	1.1125	1.1698	1.2323	1.2146	1.2948
		Minor Dia, Class 2B & 3B	.9700	1.0350	1.0970	1.0950	1.1600	1.2220	1.1950	1.2850
	TAPPED HOLE	FP	Depth of Blind Hole for Plug Taps, Min When Nominal Length = 1 DIA	1.982	1.625	1.688	2.107	1.750	1.812	2.375
Min When Nominal Length = 1,5 DIA			2.545	2.188	1.281	2.732	2.375	2.469	3.062	2.562
Min When Nominal Length = 2 DIA			3.407	2.750	2.875	3.357	3.000	3.125	3.750	3.250
Min When Nominal Length = 2,5 DIA			3.670	3.312	3.469	3.982	3.625	3.781	4.438	3.938
Min When Nominal Length = 3 DIA			4.232	3.875	4.062	4.607	4.250	4.438	5.125	4.625
FB		Depth of Blind Hole for Bottoming Taps, Min When Nominal Length = 1 DIA	1.696	1.458	1.521	1.821	1.583	1.646	2.042	1.708
		Min When Nominal Length = 1,5 DIA	2.259	2.021	2.115	2.446	2.208	2.302	2.729	2.396
		Min When Nominal Length = 2 DIA	2.821	2.583	2.708	3.071	2.833	2.958	3.417	3.083
		Min When Nominal Length = 2,5 DIA	3.384	3.146	3.302	3.696	3.458	3.615	4.104	3.771
		Min When Nominal Length = 3 DIA	3.946	3.708	3.896	4.321	4.083	4.271	4.792	4.458
H		Min Full Thread When Nominal Length = 1 DIA	1.270	1.210	1.270	1.390	1.330	1.400	1.540	1.460
		Nominal Length = 1,5 DIA	1.830	1.770	1.870	2.020	1.960	2.050	2.230	2.150
		Nominal Length = 2 DIA	2.390	2.330	2.460	2.640	2.580	2.710	2.920	2.831
		Nominal Length = 2,5 DIA	2.960	2.900	3.050	3.270	3.210	3.360	3.600	3.520
		Nominal Length = 3 DIA	3.520	3.460	3.650	3.890	3.830	4.020	4.290	4.210
V ₂		PD, Max, Class 2B	1.2262	1.4860	1.2482	1.3514	1.3112	1.3732	1.4926	1.4364
		PD, Max, Class 3B	1.2239	1.4841	1.2463	1.3490	1.3092	1.3713	1.4900	1.4343
		PD, Min, Class 2B & 3B	1.2178	1.1792	1.2417	1.3428	1.3042	1.3667	1.4832	1.4292
V ₁		Minor Dia, Max, Class 2B	1.1834	1.1611	1.2236	1.3084	1.2861	1.3486	1.4416	1.4111
		Minor Dia, Class 3B	1.1730	1.1531	1.2156	1.2980	1.2781	1.3406	1.4310	1.4031
		Minor Dia, Class 2B & 3B	1.1559	1.1431	1.2056	1.2809	1.2681	1.3306	1.4110	1.3931
V		Major Dia, Max, Class 2B	1.3396	1.2522	1.3144	1.4648	1.3774	1.4394	1.6248	1.5026
		Major Dia, Class 3B	1.3373	1.2503	1.3125	1.4624	1.3754	1.4375	1.6223	1.5005
		Major Dia, Class 2B & 3B	1.3106	1.2333	1.2958	1.4356	1.3583	1.4208	1.5915	1.4833
M	Countersink, 120° Included Angle Maximum	1.320	1.250	1.315	1.440	1.380	1.440	1.590	1.500	
	Minimum	1.290	1.220	1.285	1.410	1.350	1.410	1.560	1.470	
THREAD PROJECTION	J	Min, Tang removed, When Insert Nominal Length = 1 DIA	1.482	1.333	1.396	1.607	1.458	1.520	1.792	1.583
		Nominal Length = 1,5 DIA	2.045	1.896	1.989	2.232	2.083	2.177	2.479	2.270
		Nominal Length = 2 DIA	2.607	2.458	2.583	2.857	2.708	2.833	3.167	2.958
		Nominal Length = 2,5 DIA	3.469	3.020	3.177	3.482	3.333	3.489	3.855	3.646
		Nominal Length = 3 DIA	3.732	3.583	3.770	4.407	3.958	4.146	4.542	4.333
	K	Max, tang Not Removed, When Insert Nominal Length = 1 DIA	1.054	1.083	1.146	1.179	1.208	1.271	1.292	1.333
		Nominal Length = 1,5 DIA	1.616	1.646	1.740	1.804	1.833	1.927	1.979	2.021
		Nominal Length = 2 DIA	2.479	2.208	2.333	2.429	2.458	2.583	2.667	2.708
		Nominal Length = 2,5 DIA	2.741	2.771	2.927	3.054	3.083	3.239	3.354	3.396
		Nominal Length = 3 DIA	3.304	3.333	3.521	3.679	3.708	3.896	4.042	4.083

TABLE IV –DIMENSIONS (CONTINUED)

Nominal Inset Size		1,500	1,625	1,875	2,250	2,500		
Threads Per Inch		6	12	12	12	12		
L _n	Insert Nominal Length, 1 DIA	1.500	1.500	1.625	1.875	2.250	2.500	
	Insert Nominal Length, 1,5 DIA	2.250	2.250	2.438	2.812	3.375	3.750	
	Insert Nominal Length, 2 DIA	3.000	3.000	3.250	3.750	4.500	5.000	
	Insert Nominal Length, 2,5 DIA	3.750	3.750	4.062	4.688	5.625	6.250	
	Insert Nominal Length, 3 DIA	4.500	4.500	4.875	5.625	6.750	7.500	
ASSEMBLED INSERT	L	Min Length of Insert When Nominal Length = 1 DIA	1.375	1.438	1.562	1.812	2.188	2.438
		Nominal Length = 1,5 DIA	2.125	2.188	2.375	2.750	3.312	3.688
		Nominal Length = 2 DIA	2.875	2.938	3.188	3.688	4.438	4.938
		Nominal Length = 2,5 DIA	3.625	3.688	4.000	4.625	5.562	6.188
		Nominal Length = 3 DIA	4.375	4.438	4.812	5.562	6.688	7.438
	D ₂	PD, Max, Class 2B	1.4022	1.4542	1.5785	1.8287	2.2038	2.4540
		PD, Max, Class 3B	1.3996	1.4522	1.5766	1.8267	2.2018	2.4519
		PD, Min, Class 2B & 3B	13917	1.4459	1.5709	1.8209	2.1959	2.4459
	D ₁	Minor Dia, Max, Class 2B	1.350	1.428	1.553	1.803	2.178	2.428
		Minor Dia, Class 3B	1.3396	1.4198	1.5448	1.7948	2.1698	2.4198
		Minor Dia, Class 2B & 3B	13200	1.4100	1.5350	1.7850	2.1600	2.4100
	TAPPED HOLE	FP	Depth of Blind Hole for Plug Taps, Min When Nominal Length = 1 DIA	2.500	2.000	2.125	2.375	2.750
Min When Nominal Length = 1,5 DIA			3.250	2.750	2.938	3.312	3.875	4.250
Min When Nominal Length = 2 DIA			4.000	3.500	3.750	4.250	5.000	5.500
Min When Nominal Length = 2,5 DIA			4.750	4.250	4.562	5.188	6.125	6.750
Min When Nominal Length = 3 DIA			5.500	5.000	5.375	6.125	7.250	8.000
FB		Depth of Blind Hole for Bottoming Taps, Min When Nominal Length = 1 DIA	2.167	1.833	1.958	2.208	2.583	2.833
		Min When Nominal Length = 1,5 DIA	2.917	2.583	2.771	3.146	3.708	4.083
		Min When Nominal Length = 2 DIA	3.667	3.333	3.583	4.083	4.833	5.333
		Min When Nominal Length = 2,5 DIA	4.417	4.083	4.396	5.021	5.958	6.583
		Min When Nominal Length = 3 DIA	5.167	4.833	5.208	5.958	7.083	7.833
H		Min Full Thread When Nominal Length = 1 DIA	1.670	1.580	1.710	1.960	2.330	2.580
		Nominal Length = 1,5 DIA	2.420	2.330	2.520	2.900	3.460	3.830
		Nominal Length = 2 DIA	3.170	3.080	3.330	3.830	4.580	5.080
		Nominal Length = 2,5 DIA	3.920	3.830	4.150	4.770	5.710	6.330
		Nominal Length = 3 DIA	4.670	4.580	4.960	5.710	6.830	7.580
V ₂		PD, Max, Class 2B	1.6177	1.5615	1.6858	1.9360	2.3111	2.5613
		PD, Max, Class 3B	1.6151	1.5595	1.6839	1.9340	2.3091	2.5592
		PD, Min, Class 2B & 3B	1.6082	1.5542	1.6792	1.9292	2.3042	2.5542
V ₁		Minor Dia, Max, Class 2B	1.5666	1.5361	1.6611	1.9111	2.2861	2.5361
		Minor Dia, Class 3B	1.5560	1.5281	1.6531	1.9031	2.2781	2.5281
		Minor Dia, Class 2B & 3B	1.5360	1.5181	1.6431	1.8931	2.2681	2.5181
V		Major Dia, Max, Class 2B	1.7500	1.6277	1.7520	2.0022	2.3773	2.6275
		Major Dia, Class 3B	1.7474	1.6257	1.7501	2.0002	2.3753	2.6254
		Major Dia, Class 2B & 3B	1.7165	1.6083	1.7333	1.9833	2.3583	2.6083
M	Countersink, 120° Included Angle Maximum	1.720	1.630	1.750	2.000	2.380	2.630	
	Minimum	1.690	1.600	1.720	1.970	2.350	2.600	
THREAD PROJECTION	J	Min, Tang removed, When Insert Nominal Length = 1 DIA	1.917	1.708	1.833	2.083	2.458	2.708
		Nominal Length = 1,5 DIA	2.667	2.458	2.646	3.020	3.583	3.958
		Nominal Length = 2 DIA	3.417	3.208	3.458	3.958	4.708	5.208
		Nominal Length = 2,5 DIA	4.167	3.958	4.270	4.896	5.833	6.458
		Nominal Length = 3 DIA	4.917	4.708	5.083	5.833	6.958	7.708
	K	Max, tang Not Removed, When Insert Nominal Length = 1 DIA	1.417	1.458	1.583	1.833	2.209	2.458
		Nominal Length = 1,5 DIA	2.167	2.208	2.396	2.771	3.333	3.708
		Nominal Length = 2 DIA	2.917	2.958	3.209	3.708	4.459	4.958
		Nominal Length = 2,5 DIA	3.667	3.708	4.021	4.646	5.583	6.208
		Nominal Length = 3 DIA	4.417	4.458	4.833	5.583	6.709	7.458