

# Heli-Coil® insert specifications – inch

Nominal Thread Size	Type		Size Designation	"Q" Nominal Length					Outside Diameter		Number of Coils Nominal Length				
	Standard Insert No.	Screw-Lock Insert No.		1 Dia.	1-1/2 Dia.	2 Dia.	2-1/2 Dia.	3 Dia.	Min.	Max.	1 Dia.	1-1/2 Dia.	2 Dia.	2-1/2 Dia.	3 Dia.
UNIFIED COARSE THREAD (UNC)															
1 (.073)-64	1185	3585	01CN	0.073	0.110	0.146	0.182	0.219	.095	.103	2-3/4	4-7/8	6-7/8	8-7/8	10-7/8
2 (.086)-56	1185	3585	02CN	0.086	0.129	0.172	0.215	0.258	.110	.119	3	5-1/4	7-3/8	9-5/8	11-7/8
3 (.099)-48	1185	3585	03CN	0.099	0.148	0.198	0.248	0.297	.128	.139	2-7/8	5	7-1/4	9-3/8	11-1/2
4 (.112)-40	1185	3585	04CN	0.112	0.168	0.224	0.280	0.336	.144	.159	2-3/4	4-3/4	6-3/4	8-7/8	10-7/8
5 (.125)-40	1185	3585	05CN	0.125	0.188	0.250	0.312	0.375	.158	.173	3-1/4	5-1/2	7-3/4	10	12-1/4
6 (.138)-32	1185	3585	06CN	0.138	0.207	0.276	0.345	0.414	.178	.193	2-3/4	4-3/4	6-7/8	8-7/8	10-7/8
8 (.164)-32	1185	3585	2CN	0.164	0.246	0.328	0.410	0.492	.205	.220	3-1/2	6	8-3/8	10-3/4	13-1/4
10 (.190)-24	1185	3585	3CN	0.190	0.285	0.380	0.475	0.570	.244	.259	2-7/8	5	7-1/8	9-1/4	11-3/8
12 (.216)-24	1185	3585	1CN	0.216	0.324	0.432	0.540	0.648	.270	.285	3-1/2	6	8-3/8	10-5/8	13-1/8
1/4 (.2500)-20	1185	3585	4CN	0.250	0.375	0.500	0.625	0.750	.310	.330	3-3/8	5-3/4	8	10-3/8	12-3/4
5/16 (.3125)-18	1185	3585	5CN	0.312	0.469	0.625	0.781	0.938	.380	.400	4	6-5/8	9-1/4	11-7/8	14-5/8
3/8 (.3750)-16	1185	3585	6CN	0.375	0.562	0.750	0.938	1.125	.452	.472	4-3/8	7-1/4	10	12-7/8	15-3/4
7/16 (.4375)-14	1185	3585	7CN	0.438	0.656	0.875	1.094	1.312	.526	.551	4-1/2	7-3/8	10-1/4	13-1/8	16-1/8
1/2 (.5000)-13	1185	3585	8CN	0.500	0.750	1.000	1.250	1.500	.597	.622	4-7/8	7-7/8	11	14-1/8	17-1/8
9/16 (.5625)-12	1185	3585	9CN	0.562	0.844	1.125	1.406	1.688	.669	.694	5-1/8	8-1/4	11-1/2	14-3/4	17-7/8
5/8 (.6250)-11	1185	3585	10CN	0.625	0.938	1.250	1.562	1.875	.742	.767	5-1/4	8-1/2	11-3/4	15	18-3/8
3/4 (.7500)-10	1185	3585	12CN	0.750	1.125	1.500	1.875	2.250	.881	.906	5-7/8	9-3/8	13	16-1/2	20-1/8
7/8 (.8750)-9	1185	3585	14CN	0.875	1.312	1.750	2.188	2.625	1.022	1.052	6-1/4	10	13-3/4	17-1/2	21-1/4
1 (1.000)-8	1185	3585	16CN	1.000	1.500	2.000	2.500	3.000	1.166	1.196	6-3/8	10-1/8	14	17-3/4	21-5/8
1-1/8 (1.1250)-7	1185	3585	18CN	1.125	1.688	2.250	2.812	3.375	1.315	1.355	6-1/8	9-7/8	13-5/8	17-1/2	21-1/4
1-1/4 (1.2500)-7	1185	3585	20CN	1.250	1.875	2.500	3.125	3.750	1.443	1.483	7	11-1/4	15-3/8	19-1/2	23-3/4
1-3/8 (1.3750)-6	1185	3585	22CN	1.375	2.062	2.750	3.438	4.125	1.598	1.643	6-1/2	10-1/2	14-3/8	18-3/8	22-1/4
1-1/2 (1.5000)-6	1185	3585	24CN	1.500	2.250	3.000	3.750	4.500	1.727	1.772	7-1/4	11-1/2	15-7/8	20-1/8	24-1/2
UNIFIED FINE THREAD (UNF)															
2 (.086)-64	1191	3591	02CN	0.086	0.129	0.172	0.215	0.258	.110	.119	3-1/2	5-7/8	8-3/8	10-3/4	13-1/8
3 (.099)-56	1191	3591	03CN	0.099	0.148	0.198	0.248	0.297	.131	.146	3-3/8	5-5/8	8	10-3/8	12-5/8
4 (.112)-48	1191	3591	04CN	0.112	0.168	0.224	0.280	0.336	.147	.162	3-3/8	5-5/8	7-7/8	10-1/4	12-1/2
6 (.138)-40	1191	3591	06CN	0.138	0.207	0.276	0.345	0.414	.173	.193	3-1/2	6	8-3/8	10-3/4	13-1/4
8 (.164)-36	1191	3591	2CN	0.164	0.246	0.328	0.410	0.492	.204	.224	3-7/8	6-1/2	9-1/8	11-5/8	14-1/4
10 (.190)-32	1191	3591	3CN	0.190	0.285	0.380	0.475	0.570	.236	.256	4-1/8	6-7/8	9-1/2	12-1/4	14-7/8
1/4 (.2500)-28	1191	3591	4CN	0.250	0.375	0.500	0.625	0.750	.306	.326	5	8-1/4	11-3/8	14-1/2	17-5/8
5/16 (.3125)-24	1191	3591	5CN	0.312	0.469	0.625	0.781	0.938	.380	.400	5-1/2	8-7/8	12-1/4	15-5/8	19
3/8 (.3750)-24	1191	3591	6CN	0.375	0.562	0.750	0.938	1.125	.448	.468	6-7/8	11	15	19-1/8	23-1/8
7/16 (.4375)-20	1191	3591	7CN	0.438	0.656	0.875	1.094	1.312	.524	.549	6-5/8	10-5/8	14-5/8	18-1/2	22-1/2
1/2 (.5000)-20	1191	3591	8CN	0.500	0.750	1.000	1.250	1.500	.592	.617	7-7/8	12-3/8	16-7/8	21-3/8	25-7/8
9/16 (.5625)-18	1191	3591	9CN	0.562	0.844	1.125	1.406	1.688	.666	.691	8	12-1/2	17-1/8	21-3/4	26-1/4
5/8 (.6250)-18	1191	3591	10CN	0.625	0.938	1.250	1.562	1.875	.733	.758	9	14-1/8	19-1/4	24-1/4	29-3/8
3/4 (.7500)-16	1191	3591	12CN	0.750	1.125	1.500	1.875	2.250	.876	.901	9-3/4	15-1/8	20-5/8	26	31-1/2
7/8 (.8750)-14	1191	3591	14CN	0.875	1.312	1.750	2.188	2.625	1.021	1.051	9-7/8	15-1/2	21-1/8	26-5/8	32-1/4
1 (1.000)-14*	1191	3591	16CN	1.000	1.500	2.000	2.500	3.000	1.156	1.186	11-1/2	17-7/8	24-1/4	30-5/8	37
1 (1.000)-12	1191	3591	161CN	1.000	1.500	2.000	2.500	3.000	1.169	1.199	9-5/8	15	20-1/2	26	31-1/2
1-1/8 (1.1250)-12	1191	3591	18CN	1.125	1.688	2.250	2.812	3.375	1.304	1.334	11-1/8	17-1/4	23-3/8	29-1/2	35-3/4
1-1/4 (1.2500)-12	1191	3591	20CN	1.250	1.875	2.500	3.125	3.750	1.439	1.469	12-1/2	19-3/8	26-1/4	33	39-7/8
1-3/8 (1.3750)-12	1191	3591	22CN	1.375	2.062	2.750	3.438	4.125	1.575	1.610	13-3/4	21-3/8	28-7/8	36-1/2	44
1-1/2 (1.5000)-12	1191	3591	24CN	1.500	2.250	3.000	3.750	4.500	1.710	1.745	15-1/4	23-1/2	31-5/8	39-7/8	48-1/8

\*Inactive for new design per NASM.

1185-4CNY375S					
Complete Part No. Example: Free Running Insert; 1/4-20; Stainless Steel; Cadmium; 1-1/2 dia.; On Strip					
Type	Size	Material	Finish	Length	Packaging
1185 Free Running, Coarse	See Chart	CN – Stainless Steel	Blank – None	See Chart	Blank – Bulk
1191 Free Running, Fine		BN – Phosphor Bronze	Y – Cadmium		S – Strip Feed
3585 Screw-Lock, Coarse		TN – Inconel X	V – Silver		
3591 Screw-Lock, Fine		EN – Nitronic 60	W – Dry Film Lubricant		
		GN – Titanium	PF – Primer Free II		

## Notes on Insert Specifications:

- Nominal Length is a computed value and cannot be measured. It is the actual assembled length + 1/2 pitch.
- The number of coils are counted 90° from the tang.
- Grip Coil(s) Location for 1, 1-1/2 and 2 diameter long inserts, Grip Coil Location = 1/2 the number of free coils. For 2-1/2 and 3 diameter long inserts, Grip Coil Location (distance from the tang) is the same as 2 diameter long inserts.

# Heli-Coil® insert specifications – metric

Nominal Thread Size	Type		Size Designation	"Q" Nominal Length					Outside Diameter		Number of Coils Nominal Length				
	Standard Insert No.	Screw-Lock Insert No.		1 Dia.	1-1/2 Dia.	2 Dia.	2-1/2 Dia.	3 Dia.	Min.	Max.	1 Dia.	1-1/2 Dia.	2 Dia.	2-1/2 Dia.	3 Dia.
METRIC COARSE															
M2x0.4	1084	4184*	2CN	2.0	3.0	4.0	5.0	6.0	2.50	2.70	3-1/2	5-1/2	7-3/4	10-1/8	12-3/8
M2.2x0.45	1084	4184	2.2CN	2.2	3.3	4.4	5.5	6.6	2.80	3.00	3-1/8	5-3/8	7-5/8	9-7/8	12-1/8
M2.5x0.45	1084	4184	2.5CN	2.5	3.8	5.0	6.3	7.5	3.20	3.70	3-3/8	5-3/4	8-1/8	10-1/2	12-3/4
M3x0.5	1084	4184	3CN	3.0	4.5	6.0	7.5	9.0	3.80	4.35	3-3/4	6-3/8	8-7/8	11-3/8	13-7/8
M3.5x0.6	1084	4184	3.5CN	3.5	5.3	7.0	8.8	10.5	4.40	4.95	3-3/4	6-3/8	8-3/4	11-3/8	13-3/4
M4x0.7	1084	4184	4CN	4.0	6.0	8.0	10.0	12.0	5.05	5.60	3-5/8	6-1/8	8-5/8	11-1/8	13-5/8
M5x0.8	1084	4184	5CN	5.0	7.5	10.0	12.5	15.0	6.25	6.80	4-1/8	6-7/8	9-5/8	12-3/8	15-1/8
M6x1	1084	4184	6CN	6.0	9.0	12.0	15.0	18.0	7.40	7.95	4	6-3/4	9-1/2	12-1/8	14-7/8
M7x1	1084	4184	7CN	7.0	10.5	14.0	17.5	21.0	8.65	9.20	4-7/8	8	11-1/8	14-1/8	17-1/4
M8x1.25	1084	4184	8CN	8.0	12.0	16.0	20.0	24.0	9.80	10.35	4-1/2	7-3/8	10-1/4	13-1/4	16-1/8
M10x1.5	1084	4184	10CN	10.0	15.0	20.0	25.0	30.0	11.95	12.50	4-7/8	8	11-1/8	14-1/4	17-3/8
M12x1.75	1084	4184	12CN	12.0	18.0	24.0	30.0	36.0	14.30	15.00	5	8-1/4	11-1/2	14-5/8	17-7/8
M14x2	1084	4184	14CN	14.0	21.0	28.0	35.0	42.0	16.65	17.35	5-1/8	8-1/2	11-3/4	15	18-3/8
M16x2	1084	4184	16CN	16.0	24.0	32.0	40.0	48.0	18.90	19.60	6-1/8	9-3/4	13-1/2	17-1/4	21
M18x2.5	1084	4184	18CN	18.0	27.0	36.0	45.0	54.0	21.30	22.0	5-3/8	8-7/8	12-1/4	15-5/8	19
M20x2.5	1084	4184	20CN	20.0	30.0	40.0	50.0	60.0	23.55	24.40	6-1/8	9-7/8	13-5/8	17-3/8	21-1/8
M22x2.5	1084	4184	22CN	22.0	33.0	44.0	55.0	66.0	25.90	26.90	6-3/4	10-7/8	14-7/8	19	23-1/8
M24x3	1084	4184	24CN	24.0	36.0	48.0	60.0	72.0	28.00	29.00	6-1/8	10	13-3/4	17-1/2	21-3/8
M27x3	1084	4184	27CN	27.0	40.5	54.0	67.5	81.0	31.40	32.40	7	11-1/4	15-1/2	19-3/4	24
M30x3.5	1084	4184	30CN	30.0	45.0	60.0	75.0	90.0	34.80	36.00	6-3/4	10-3/4	14-7/8	18-7/8	23
M33x3.5	1084	4184	33CN	33.0	49.5	66.0	82.5	99.0	37.80	39.20	7-1/2	12	16-1/2	21	25-3/8
M36x4	1084	4184	36CN	36.0	54.0	72.0	90.0	108.0	41.50	42.90	7-1/8	11-3/8	15-5/8	19-7/8	24-1/4
M39x4	1084	4184	39CN	39.0	58.5	78.0	97.5	117.0	44.60	46.00	7-7/8	12-1/2	17-1/8	21-3/4	26-3/8
METRIC FINE															
M8x1	4255	5255	8CN	8.0	12.0	16.0	20.0	24.0	9.70	10.25	5-7/8	9-3/8	13	16-1/2	20-1/8
M10x1	4255	5255	10CN	10.0	15.0	20.0	25.0	30.0	11.95	12.50	7-5/8	12	16-1/2	21	25-1/2
M10x1.25	4649	5649	10CN	10.0	15.0	20.0	25.0	30.0	12.10	12.65	5-7/8	9-1/2	13-1/8	16-3/4	20-3/8
M12x1.25	4649	5649	12CN	12.0	18.0	24.0	30.0	36.0	14.30	15.00	7-1/4	11-5/8	15-7/8	20-1/4	24-1/2
M12x1.5	3745	5145	12CN	12.0	18.0	24.0	30.0	36.0	14.25	14.95	6	9-5/8	13-3/8	17	20-3/4
M14x1.5	3745	5145	14CN	14.0	21.0	28.0	35.0	42.0	16.55	17.25	7-1/8	11-3/8	15-5/8	20	24-1/4
M16x1.5	3745	5145	16CN	16.0	24.0	32.0	40.0	48.0	18.90	19.60	8-1/4	13-1/8	18	22-3/4	27-5/8
M18x1.5	3745	5145	18CN	18.0	27.0	36.0	45.0	54.0	21.05	21.75	9-1/2	15	20-3/8	25-7/8	31-3/8
M20x1.5	3745	5145	20CN	20.0	30.0	40.0	50.0	60.0	23.15	24.00	10-3/4	16-7/8	22-7/8	28-7/8	35
M22x1.5	3745	5145	22CN	22.0	33.0	44.0	55.0	66.0	25.55	26.45	11-7/8	18-1/2	25-1/8	31-5/8	38-1/4
M18x2	4266	5266	18CN	18.0	27.0	36.0	45.0	54.0	21.15	21.85	7	11-1/8	15-3/8	19-1/2	23-5/8
M20x2	4266	5266	20CN	20.0	30.0	40.0	50.0	60.0	23.20	24.05	7-7/8	12-1/2	17-1/4	21-7/8	26-1/2
M22x2	4266	5266	22CN	22.0	33.0	44.0	55.0	66.0	25.60	26.50	8-3/4	13-3/4	18-7/8	23-7/8	29
M24x2	4266	5266	24CN	24.0	36.0	48.0	60.0	72.0	28.10	29.10	9-1/2	15	20-3/8	25-7/8	31-1/4
M27x2	4266	5266	27CN	27.0	40.5	54.0	67.5	81.0	31.30	32.30	10-7/8	17	23-1/4	29-3/8	35-1/2
M30x2	4266	5266	30CN	30.0	45.0	60.0	75.0	90.0	34.50	35.70	12-1/4	19-1/8	25-7/8	32-3/4	39-1/2
M33x2	4266	5266	33CN	33.0	49.5	66.0	82.5	99.0	37.80	39.20	13-5/8	21-1/8	28-5/8	36	43-1/2
M36x2	4266	5266	36CN	36.0	54.0	72.0	90.0	108.0	41.00	42.40	15	23-1/4	31-3/8	39-1/2	47-3/4
M39x2	4266	5266	39CN	39.0	58.5	78.0	97.5	117.0	44.30	45.70	16-3/8	25-1/4	34-1/8	43	51-7/8
M36x3	4277	5277	36CN	36.0	54.0	72.0	90.0	108.0	41.30	42.70	9-3/4	15-1/4	20-7/8	26-1/2	32
M39x3	4277	5277	39CN	39.0	58.5	78.0	97.5	117.0	44.40	45.80	10-3/4	16-3/4	22-3/4	28-7/8	34-7/8

\*M2 not available in Screen-Lock 1 diameter length

1084-4CNY060S						Complete Part No. Example: Free Running Insert; M4 x 0.7 Stainless Steel; Cadmium; 1 dia.; On Strip					
Type	Size	Material	Finish	Length	Packaging						
1084 Free Running, Coarse	See Chart	CN – Stainless Steel	Blank – None	See Chart	Blank – Bulk						
4255, 4649, 3745, 4266 &		BN – Phosphor Bronze	Y – Cadmium		S – Strip Feed						
4277 Free Running, Fine		TN – Inconel X	V – Silver								
4184 Screw-Lock, Coarse		EN – Nitronic 60	W – Dry Film Lubricant								
5255, 5649, 5145, 5266 &		GN – Titanium	PF – Primer Free II								
5277 Screw-Lock, Fine											

## Notes on Insert Specifications:

- Nominal length is a computed value and cannot be measured. It is the actual assembled length + 1/2 pitch.
- The number of coils are counted from the notch.
- Phosphor Bronze Inserts – **Not available** in sizes M2, M2.2, M2.5, M3, M3.5 and M4.
- Inconel X Inserts – 1 diameter long Screw-Lock inserts **not available** in sizes M2, M2.2, M2.5 and M3.