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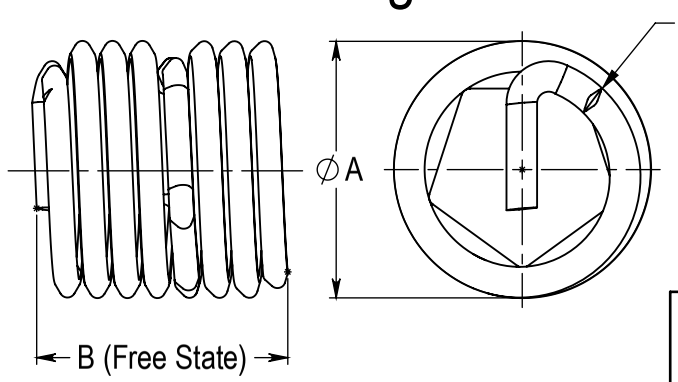
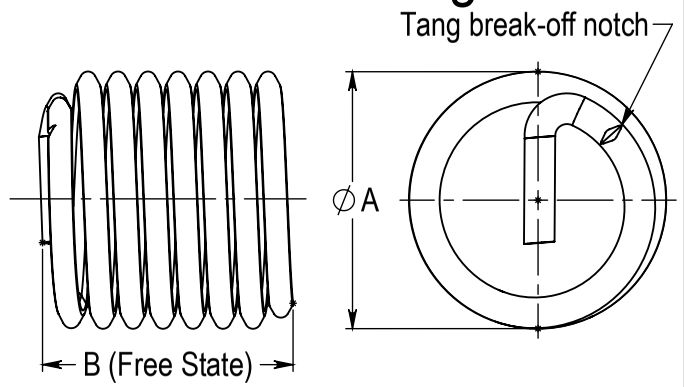
Revision	Revised By	Description	Date	Approval
New	GP	Initial Release	11-12-18	MO

Locking



Non-Locking



TLM	-	3X0.5	C	-	4.5	W	SF
1		2	3		4	5	see note 9

Nominal Thread Size	1 Insert Style: Locking	1 Insert Style: Non-Locking	2 Size	3 Material	4 Nominal Length: 1D	1.5D	2D	2.5D	3D	5 Finish	Free Outer Diameter (A): Min	Max	Number of Coils (B, see note 4): 1D	1.5D	2D	2.5D	3D
M2X0.4	TLM	TNM	2X0.4	B- Phosphor Bronze C- CRES Steel (304 Stainless Steel)[10] N- Nitronic 60® M- Nimonic 90® T- Inconel X-750	2.0	3.0	4.0	5.0	6.0	Blank- No Finish W- Dry Film Lubricant Y- Cadmium V- Silver Plating A- Passivation P- Xylan B- Blue Dye G- Green Dye	2.50	2.70	3-1/4	5-1/2	7-3/4	10-1/8	12-3/8
M2.2X0.45			2.2X0.45		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			2.5X0.45		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			3X0.5		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			3.5X0.6		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			4X0.7		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			5X0.8		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			6X1		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			7X1		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			8X1.25		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			10X1.5		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			12X1.75		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			14X2		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			16X2		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			18X2.5		18.0	27.0	36.0	45.0	54.0		21.30	22.00	5-3/8	8-7/8	12-1/4	15-5/8	19
M20X2.5			20X2.5		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			22X2.5		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			24X3		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			27X3		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

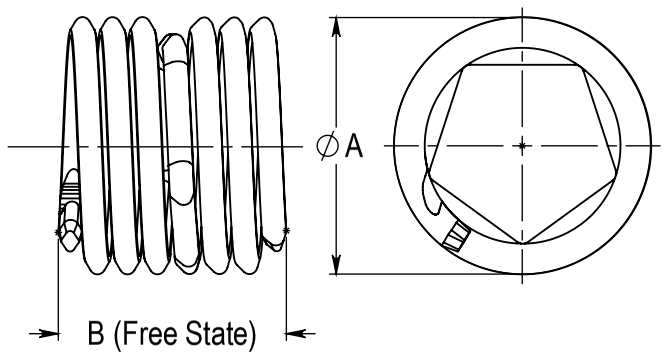
Notes:

1. For each threadsize, complete part number consists of combining columns 1-5 across each row.
2. The nominal length is a calculated number and cannot be used to measure the insert in the free state. It is the actual installed length of the insert plus 0.5 pitch ($L_n = L_a + 0.5P$), see column 4.
3. The nominal length of the insert is a function of the nominal thread size (1.5D x 3 mm = 4.5 mm).
4. The number of free coils is measured 90° from the tang. It is the total number of revolutions ± 0.25 coil.
5. Assembled length of insert is in accordance to MA1567.
6. Locking torque specification conforms to MA1565.
7. As applicable, inserts meet MA3279 through MA3281, or MA3329 through MA3331 specification.
8. Inserts can accomadate external/internal MJ threads in accordance with MA1370 and FED-STD-H28/21.
9. For strip-feed packaged inserts, use "SF" at the end of the part number. Not available for all sizes and all plating options. Leave blank for bulk packaged inserts.
10. 304 Stainless Steel is the most popular wire material and meets AS7245 specification.

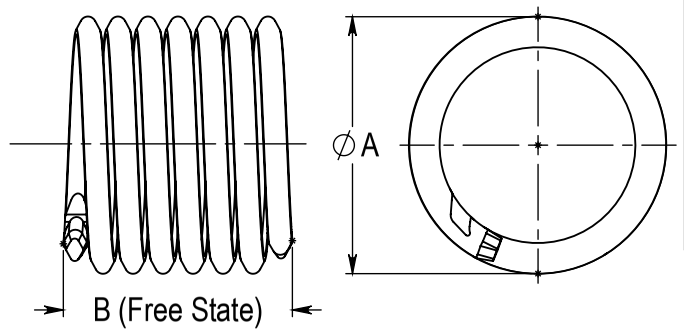
Drawing No.	KSTD-005	Description	KATO Tanged Metric-Coarse Pitch Standard, Locking & Non-Locking Screw Thread Inserts (STI)
Revision	New	Drawn By	G. Patterson
Date	11-12-18	Approved By	M. Oana

Revision	Revised By	Description	Date	Approval
New	GP	Initial Release	11-12-18	MO

Locking



Non-Locking



2TLF	-	3	C	-	0285	W	SF
1		2	3		4	5	see note 9

Nominal Thread Size	1 Insert Style: Locking	1 Insert Style: Non-Locking	2 Size	3 Material	4 Nominal Length: 1D	1.5D	2D	2.5D	3D	5 Finish	Free Outer Diameter (A): Min	Max	Number of Coils (B, see note 4): 1D	1.5D	2D	2.5D	3D
0-80[11]	2TLF	2TNF	00	B- Phosphor Bronze C- CRES Steel (304 Stainless Steel)[10] N- Nitronic 60® M- Nimonic 90® T- Inconel X-750	0.060	0.090	0.120	---	---	Blank- No Finish W- Dry Film Lubricant Y- Cadmium V- Silver Plating A- Passivation P- Xylan B- Blue Dye G- Green Dye	---	---	3	5-1/2	7-3/8	---	---
10-32			3		0.190	0.285	0.380	0.475	0.570		0.236	0.256	4-1/8	6-7/8	9-1/2	12-1/4	14-7/8
1/4-28			4		0.250	0.375	0.500	0.625	0.750		0.306	0.326	5	8-1/4	11-3/8	14-1/2	17-5/8
5/16-24			5		0.312	0.469	0.625	0.781	0.938		0.380	0.400	5-1/2	8-7/8	12-1/4	15-5/8	19
3/8-24			6		0.375	0.562	0.750	0.938	1.125		0.448	0.468	6-7/8	11	15	19-1/8	23-1/8
7/16-20			7		0.438	0.656	0.875	1.094	1.312		0.524	0.549	6-5/8	10-5/8	14-5/8	18-1/2	22-1/2
1/2-20			8		0.500	0.750	1.00	1.250	1.500		0.592	0.617	7-7/8	12-3/8	16-7/8	21-3/8	25-7/8

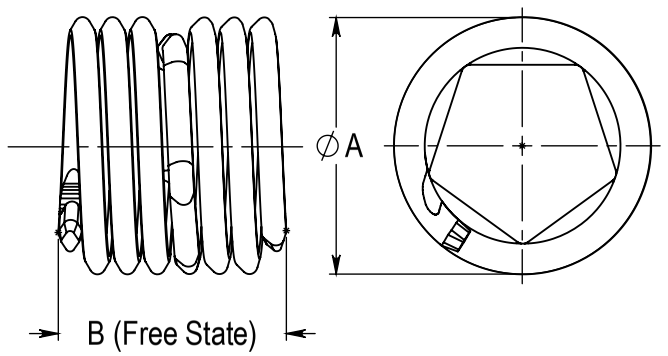
Notes:

1. For each threadsize, complete part number consists of combining columns 1-5 across each row.
2. The nominal length is a calculated number and cannot be used to measure the insert in the free state. It is the actual installed length of the insert plus 0.5 pitch ($L_n = L_a + 0.5P$), see column 4.
3. The nominal length of the insert is a function of the nominal thread size (1.5D x .190 in = .285 in).
4. The number of free coils is measured from notch to notch. It is the total number of revolutions ± 0.25 coil.
5. Assembled length of insert is in accordance to NASM33537.
6. Locking torque specification conforms to NASM8846.
7. Inserts meet NAS130 specification.
8. When assembled in an STI thread, conforming to NASM33537 specification, the finished thread shall conform to FED-STD-H28/21 and shall accept external threads per MIL-S-7742 or AS8879.
9. For strip-feed packaged inserts, use "SF" at the end of the part number. Not available for all plating options. Leave blank for bulk packaged inserts.
10. 304 Stainless Steel is the most popular wire material and meets AS7245 specification.
11. Non-Locking only.

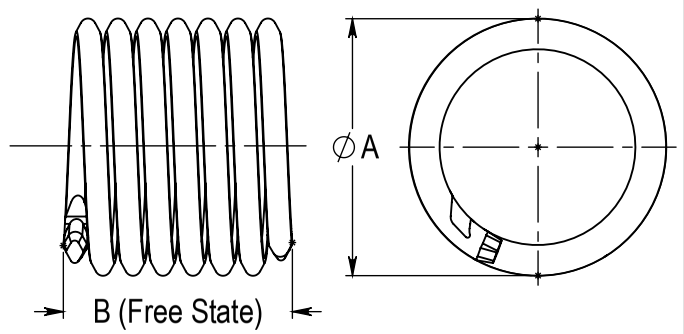
Drawing No.	KSTD-008	Description	KATO Tangless UNF Standard, Locking & Non-Locking Screw Thread Inserts (STI)
Revision	New	Drawn By	G. Patterson
Date	11-12-18	Approved By	M. Oana

Revision	Revised By	Description	Date	Approval
New	GP	Initial Release	11-12-18	MO

Locking



Non-Locking



2TLC	-	3	C	-	0285	W	SF
1		2	3		4	5	see note 9

Nominal Thread Size	1 Insert Style		2 Size	3 Material	4 Nominal Length					5 Finish	Free Outer Diameter (A)		Number of Coils (B, see note 4)				
	Locking	Non-Locking			1D	1.5D	2D	2.5D	3D		Min	Max	1D	1.5D	2D	2.5D	3D
1-64	2TLC	2TNC	01	B- Phosphor Bronze C- CRES Steel (304 Stainless Steel)[10] N- Nitronic 60® M- Nimonic 90® T- Inconel X-750	0.073	0.110	0.146	0.182	0.215	Blank- No Finish W- Dry Film Lubricant Y- Cadmium V- Silver Plating A- Passivation P- Xylan B- Blue Dye G- Green Dye	0.095	0.103	2-3/4	4-7/8	6-7/8	8-7/8	10-7/8
2-56			02		0.086	0.129	0.172	0.215	0.258		0.110	0.119	3	5-1/4	7-3/8	9-5/8	11-7/8
4-40			04		0.112	0.168	0.224	0.280	0.336		0.144	0.159	2-3/4	4-3/4	6-3/4	8-7/8	10-7/8
6-32			06		0.138	0.207	0.276	0.345	0.414		0.178	0.193	2-3/4	4-3/4	6-7/8	8-7/8	10-7/8
8-32			2		0.164	0.246	0.328	0.410	0.492		0.205	0.220	3-1/2	6	8-3/8	10-3/4	13-1/4
10-24			3		0.190	0.285	0.380	0.475	0.570		0.244	0.259	2-7/8	5	7-1/8	9-1/4	11-3/8
1/4-20			4		0.250	0.375	0.500	0.625	0.750		0.310	0.330	3-3/8	5-3/4	8	10-3/8	12-3/4
5/16-18			5		0.312	0.469	0.625	0.781	0.938		0.380	0.400	4	6-5/8	9-1/4	11-7/8	14-5/8
3/8-16			6		0.375	0.562	0.750	0.938	1.125		0.452	0.472	4-3/8	7-1/4	10	12-7/8	15-3/4

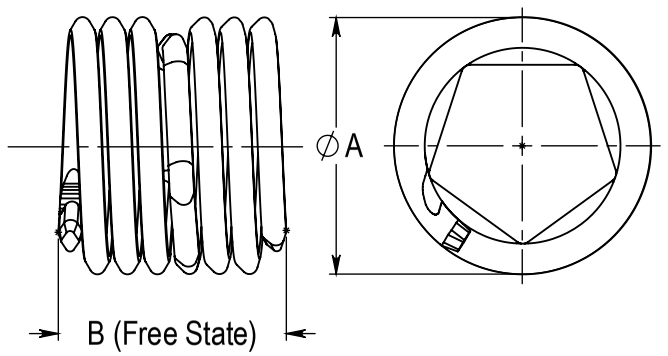
Notes:

1. For each threadsize, complete part number consists of combining columns 1-5 across each row.
2. The nominal length is a calculated number and cannot be used to measure the insert in the free state. It is the actual installed length of the insert plus 0.5 pitch ($L_n = L_a + 0.5P$), see column 4.
3. The nominal length of the insert is a function of the nominal thread size (1.5D x 0.190 in = 0.285 in).
4. The number of free coils is measured from notch to notch. It is the total number of revolutions ± 0.25 coil.
5. Assembled length of insert is in accordance to NASM33537.
6. Locking torque specification conforms to NASM8846.
7. Inserts meet NAS1130 specification.
8. When assembled in an STI thread, conforming to NASM33537 specification, the finished thread shall conform to FED-STD-H28/2 and shall accept external threads per MIL-S-7742 or AS8879 specification.
9. For strip-feed packaged inserts, use "SF" at the end of the part number. Not available for all sizes and all plating options. Leave blank for bulk packaged inserts.
10. 304 Stainless steel is the most popular wire material and meets AS7245 specification.

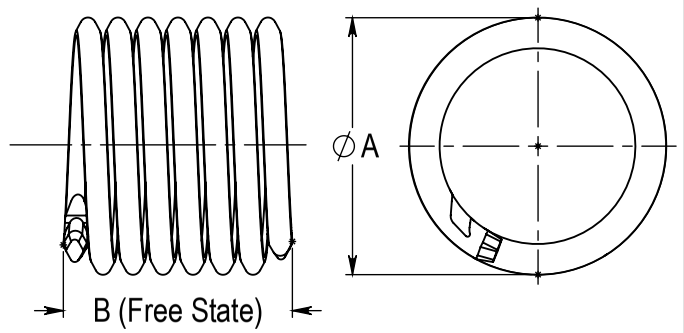
Drawing No.	KSTD-007	Description	KATO Tangless UNC Standard, Locking & Non-Locking Screw Thread Inserts (STI)
Revision	New	Drawn By	G. Patterson
Date	11-12-18	Approved By	M. Oana

Revision	Revised By	Description	Date	Approval
New	GP	Initial Release	11-12-18	MO

Locking



Non-Locking



2TLM	-	3X0.5	C	-	4.5	W	SF
1		2	3		4	5	see note 9

Nominal Thread Size	1 Insert Style		2 Size	3 Material	4 Nominal Length					5 Finish	Free Outer Diameter (A)		Number of Coils (B, see note 4)				
	Locking	Non-Locking			1D	1.5D	2D	2.5D	3D		Min	Max	1D	1.5D	2D	2.5D	3D
M2X0.4	2TLM	2TNM	2X0.4	B- Phosphor Bronze C- CRES Steel (304 Stainless Steel)[10] N- Nitronic 60® M- Nimonic 90® T- Inconel X-750	2.0	3.0	4.0	5.0	6.0	Blank- No Finish W- Dry Film Lubricant Y- Cadmium V- Silver Plating A- Passivation P- Xylan B- Blue Dye G- Green Dye	2.50	2.70	3-1/4	5-1/2	7-3/4	10-1/8	12-3/8
M2.5X0.45			2.5X0.45		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			3X0.5		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
M4X0.7			4X0.7		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			5X0.8		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			6X1		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
M8X1.25			8X1.25		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			10X1.5		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			12X1.75		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

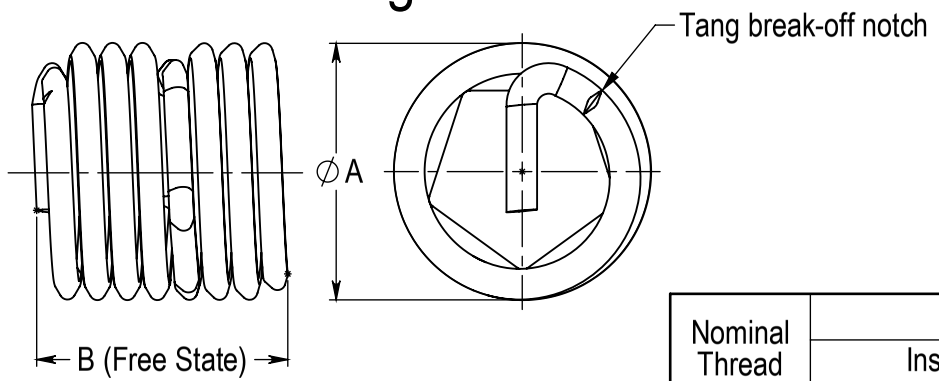
Notes:

1. For each threadsize, complete part number consists of combining columns 1-5 across each row.
2. The nominal length is a calculated number and cannot be used to measure the insert in the free state. It is the actual installed length of the insert plus 0.5 pitch ($L_n = L_a + 0.5P$), see column 4.
3. The nominal length of the insert is a function of the nominal thread size (1.5D x 3 mm = 4.5 mm).
4. The number of free coils is measured from notch to notch. It is the total number of revolutions ± 0.25 coil.
5. Assembled length of insert is in accordance to MA1567.
6. Locking torque specification conforms to MA1565.
7. As applicable, inserts meet NA0276 specification.
8. When assembled in an STI thread, conforming to MA1567 specification, the finished thread shall conform to FED-STD-H28/21 and shall accept external threads per MA1370.
9. For strip-feed packaged inserts, use "SF" at the end of the part number. Not available for all plating options. Leave blank for bulk packaged inserts.
10. 304 Stainless Steel is the most popular wire material and meets AS7245 specification.

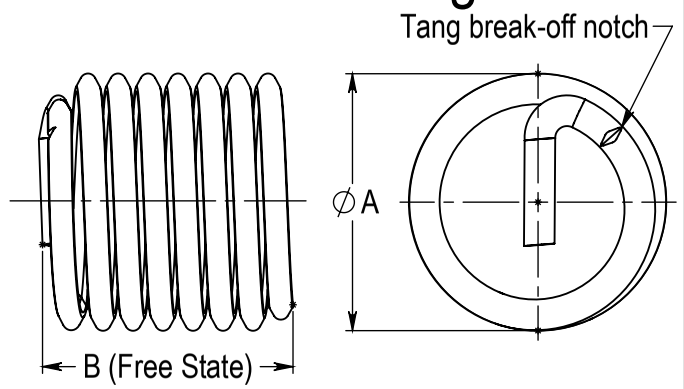
Drawing No.	KSTD-009	Description	KATO Tangless Metric-Coarse Pitch Standard, Locking & Non-locking, Screw Thread Insert (STI)
Revision	New	Drawn By	G. Patterson
Date	11-12-18	Approved By	M. Oana

Revision	Revised By	Description	Date	Approval
New	GP	Initial Release	11-12-18	MO

Locking



Non-Locking



TLF	-	3	C	-	0285	W	SF
1		2	3		4	5	see note 9

Nominal Thread Size	1 Insert Style: Locking	1 Insert Style: Non-Locking	2 Size	3 Material	4 Nominal Length: 1D	1.5D	2D	2.5D	3D	5 Finish	Free Outer Diameter (A): Min	Max	Number of Coils (B, see note 4): 1D	1.5D	2D	2.5D	3D
3-56	TLF	TNF	03	B- Phosphor Bronze C- CRES Steel (304 Stainless Steel)[10] N- Nitronic 60® M- Nimonic 90® T- Inconel X-750	0.099	0.148	0.198	0.248	0.297	Blank- No Finish W- Dry Film Lubricant Y- Cadmium V- Silver Plating A- Passivation P- Xylan B- Blue Dye G- Green Dye	0.131	0.146	3-3/8	5-5/8	8	10-3/8	12-5/8
4-48			04		0.112	0.168	0.224	0.280	0.336		0.147	0.162	3-3/8	5-5/8	7-7/8	10-1/4	12-1/2
6-40			06		0.138	0.207	0.276	0.345	0.414		0.173	0.193	3-1/2	6	8-3/8	10-3/4	13-1/4
8-36			2		0.164	0.246	0.328	0.410	0.492		0.204	0.224	3-7/8	6-1/2	9-1/8	11-5/8	14-1/4
10-32			3		0.190	0.285	0.380	0.475	0.570		0.236	0.256	4-1/8	6-7/8	9-1/2	12-1/4	14-7/8
1/4-28			4		0.250	0.375	0.500	0.625	0.750		0.306	0.326	5	8-1/4	11-3/8	14-1/2	17-5/8
5/16-24			5		0.312	0.469	0.625	0.781	0.938		0.380	0.400	5-1/2	8-7/8	12-1/4	15-5/8	19
3/8-24			6		0.375	0.562	0.750	0.938	1.125		0.448	0.468	6-7/8	11	15	19-1/8	23-1/8
7/16-20			7		0.438	0.656	0.875	1.094	1.312		0.524	0.549	6-5/8	10-5/8	14-5/8	18-1/2	22-1/2
1/2-20			8		0.500	0.750	1.000	1.250	1.500		0.592	0.617	7-7/8	12-3/8	16-7/8	21-3/8	25-7/8
9/16-18			9		0.562	0.844	1.125	1.406	1.688		0.666	0.691	8	12-1/2	17-1/8	21-3/4	26-1/4
5/8-18			10		0.625	0.938	1.250	1.562	1.875		0.733	0.758	9	14-1/8	19-1/4	24-1/4	29-3/8
3/4-16			12		0.750	1.125	1.500	1.875	2.250		0.876	0.901	9-3/4	15-1/8	20-5/8	26	31-1/2
7/8-14			14		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
1-12			16		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
1-1/8-12			18		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
1-1/4-12			20		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
1-3/8-12			22		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
1-1/2-12			24		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

Notes:

1. For each threadsize, complete part number consists of combining columns 1-5 across each row.
2. The nominal length is a calculated number and cannot be used to measure the insert in the free state. It is the actual installed length of the insert plus 0.5 pitch ($L_n = L_a + 0.5P$), see column 4.
3. The nominal length of the insert is a function of the nominal thread size (1.5D x 0.190 in = 0.285 in).
4. The number of free coils is measured 90° from the tang. It is the total number of revolutions ± 0.25 coil.
5. Assembled length of insert is in accordance to NASM33537.
6. Locking torque specification conforms to NASM8846.
7. As applicable, inserts meet NASM21209, or NASM124651-NASM124850 specification.
8. When assembled in an STI thread, conforming to NASM33537 specification, the finished thread shall conform to FED-STD-H28/2, and shall accept external threads per MIL-S-7792 or AS8879.
9. For strip-feed packaged inserts, use "SF" at the end of the part number. Not available for all sizes and all plating options. Leave blank for bulk packaged inserts.
10. 304 Stainless Steel is the most popular wire material and meets AS7245 specification.

Drawing No.	KSTD-004	Description	KATO Tanged UNF Standard, Locking & Non-Locking Screw Thread Inserts (STI)
Revision	New	Drawn By	G. Patterson
Date	11-12-18	Approved By	M. Oana