



Semblex

TECHNICAL PRODUCT MANUAL

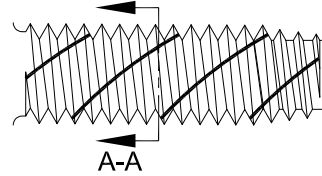
Semblex Corporation
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Toll Free: 800-323-1736 Phone: 630-833-2880
Fax: 630-530-8189 Email: sales@semblex.com

Download Detailed Product Brochures: www.semblex.com

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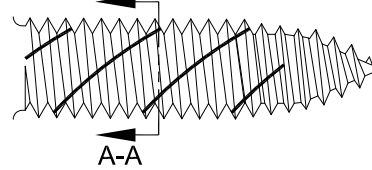
Steel
Thread Rolling

ROLOK®



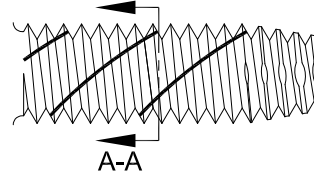
Section A-A

ROLOK®
w/'A' Point



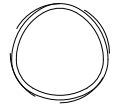
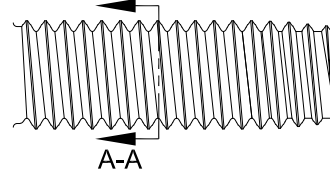
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TRIFORM™



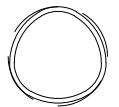
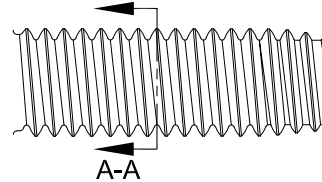
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TAPTITE® PRO™



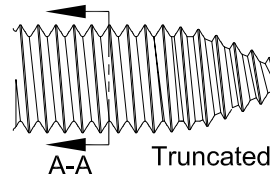
Section A-A

TAPTITE 2000®

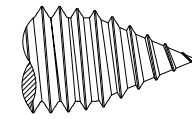


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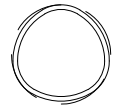
TAPTITE® PRO™
CA™



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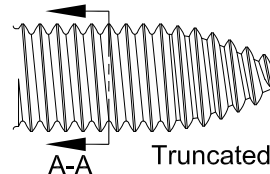


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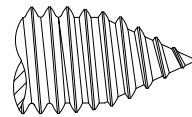


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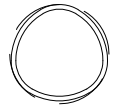
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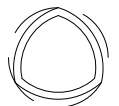
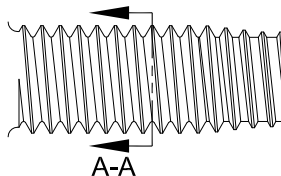


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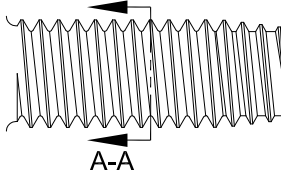
Section A-A

DUO-TAPTITE®



Section A-A

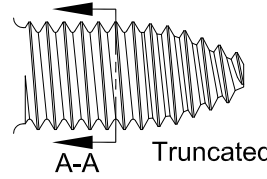
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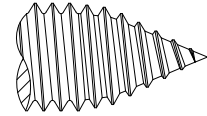
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Steel (Cont.)
Thread Rolling

TAPTITE® CA™



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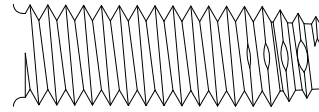


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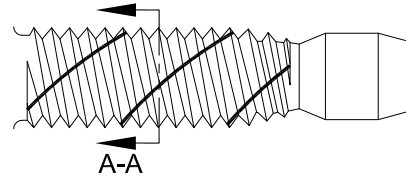


Section A-A

Tapmate™



CAPTIFORM

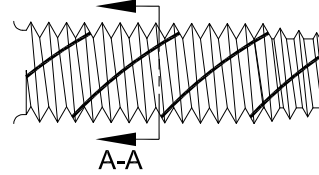


A-A



Section A-A

ROLOK®

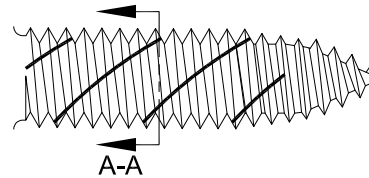


A-A



Section A-A

ROLOK®
w/'A' Point

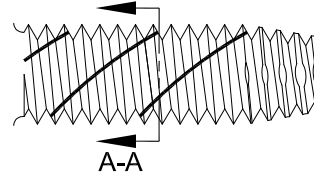


A-A



Section A-A

TRIFORM™

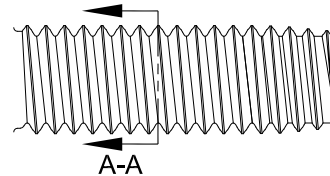


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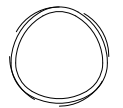


Section A-A

TAPTITE® PRO™

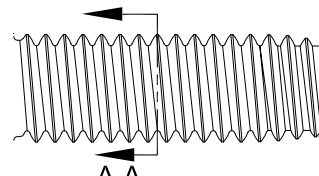


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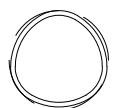


Section A-A

TAPTITE 2000®

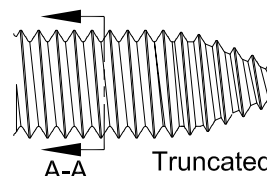


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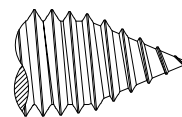
Section A-A

TAPTITE® PRO™
CA™

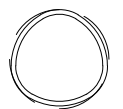


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Sharp

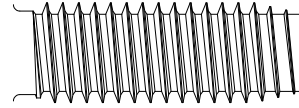


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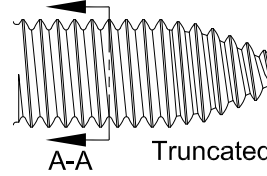
Aluminum & Zinc
Thread Rolling

Aluminum & Zinc (Cont.) Thread Rolling

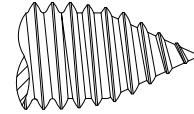
ALtracs[®] Plus



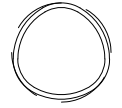
**TAPTITE 2000[®]
CA[™]**



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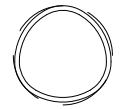
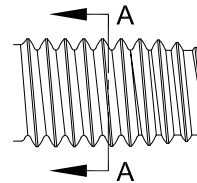


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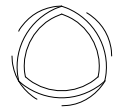
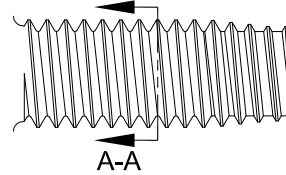
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**TAPTITE 2000[®]
"SP"[™]**



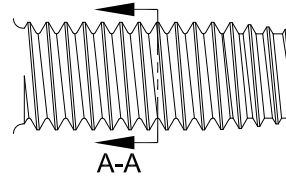
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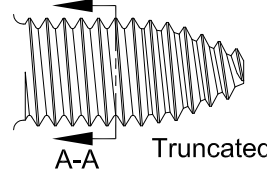
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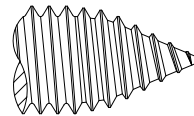


Section A-A

TAPTITE[®] CA[™]



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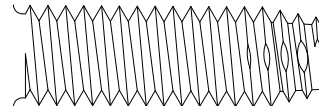


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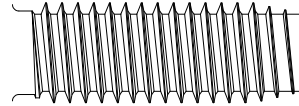
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Tapmate[™]

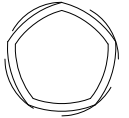
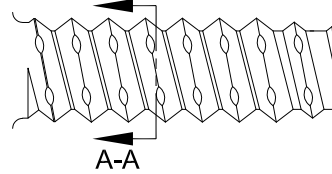


Magnesium Thread Forming

ALtracs® Plus



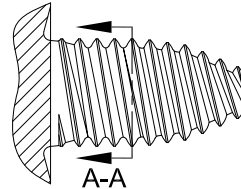
MAG-FORM



Section A-A

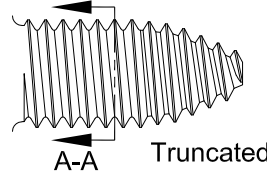
Thin Sheet Metal Extruding

FASTITE® 2000™

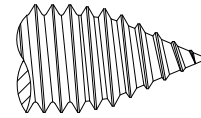


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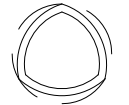
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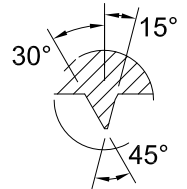
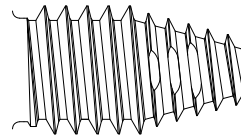


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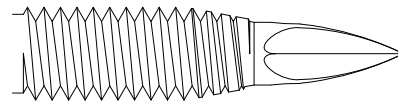


Section A-A

SHEETtracs®

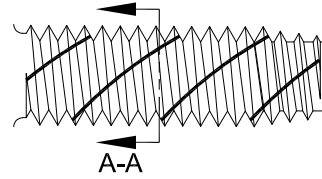


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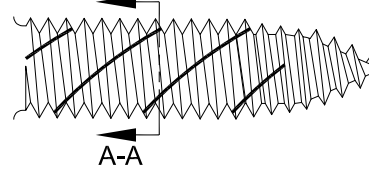
Sheet Metal
Thread Rolling

ROLOK®



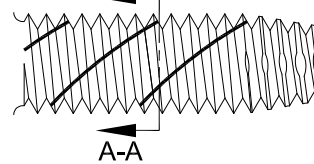
Section A-A

ROLOK®
w/'A' Point



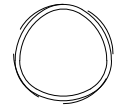
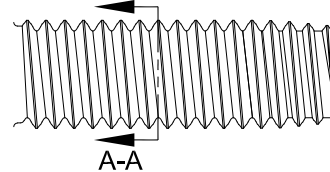
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TRIFORM™



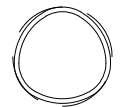
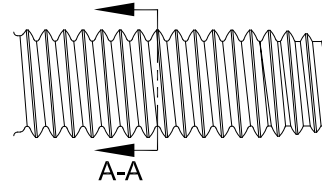
Section A-A

TAPTITE® PRO™



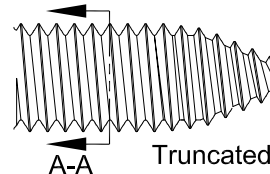
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TAPTITE 2000®

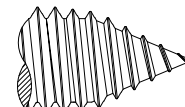


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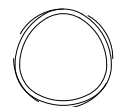
TAPTITE® PRO™
CA™



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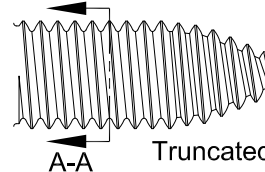


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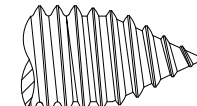


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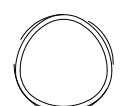
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CA™



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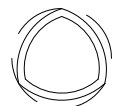
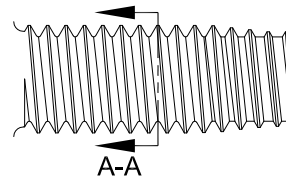


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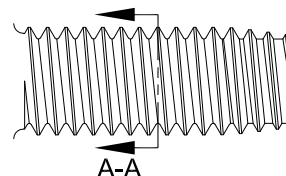
Section A-A

DUO-TAPTITE®



Section A-A

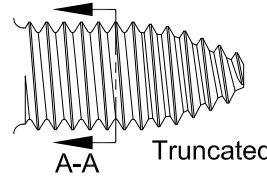
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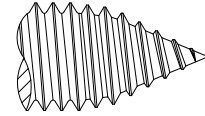
Section A-A

Sheet Metal Tapping

TAPTITE® CA™



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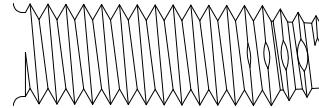


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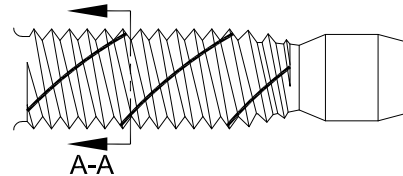


Section A-A

Tapmate™



CAPTIFORM

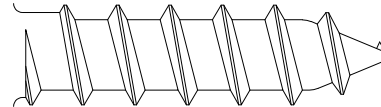


A-A

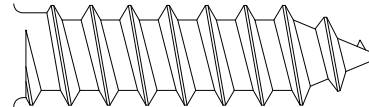


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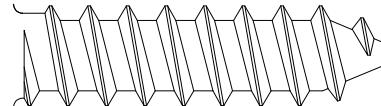
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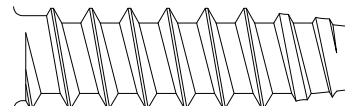
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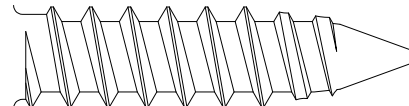
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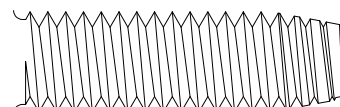
Type B



Type BP

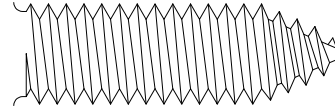


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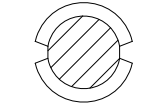
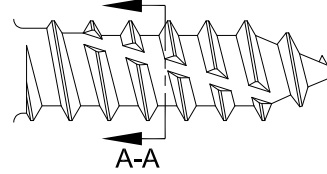


Sheet Metal (Cont.) Tapping

Type CA

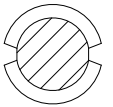
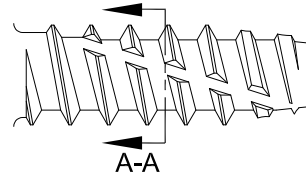


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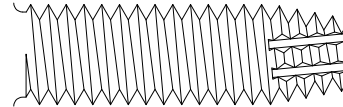
Section A-A

Type VB

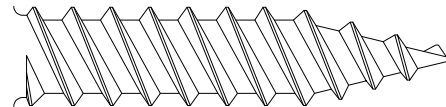


Section A-A

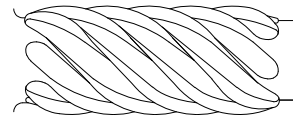
Type F



Self Piercer

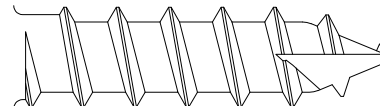


Type U

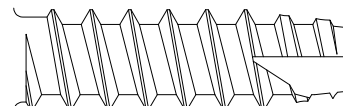


Sheet Metal Thread Cutting

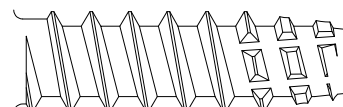
Type 17



Type 25

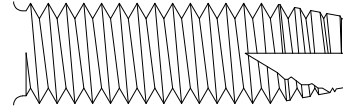


Type BF

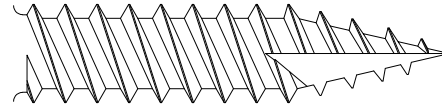


Sheet Metal (Cont.)
Thread Cutting

Type 23

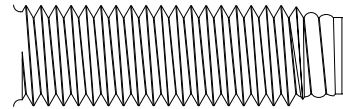


Self Piercer
Type 17

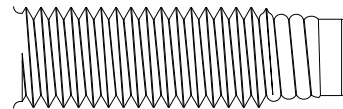


Paint Clearing
Tapped Holes

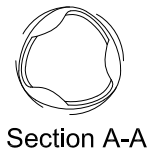
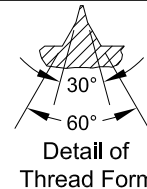
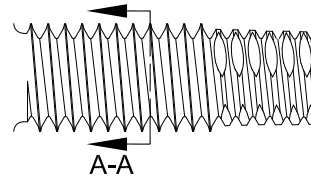
MAThread®
Never-Jam™



MAThread®

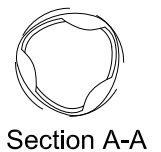
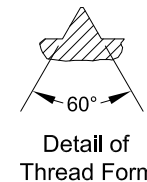
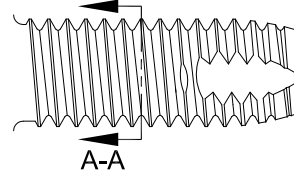


KLEERLOK®

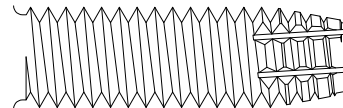


KLEERTITE®

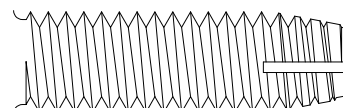
(For pre-tapped and untapped holes)



Paint Scraper



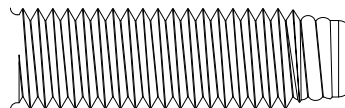
Type 1



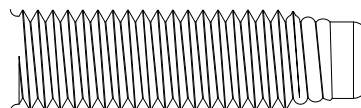
Tapped Holes Anti-Cross Thread

MAThread®

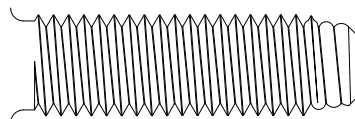
Never-Jam™



MATpoint®

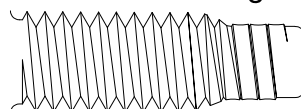


Very Short MATpoint®

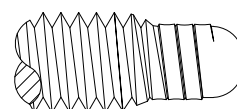


Radius Point

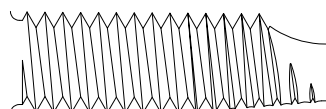
'NP' Design



'P' Design

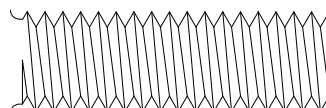


Cross Thread
Prevention

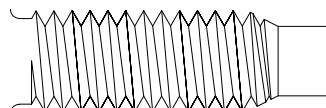


Tapped Holes

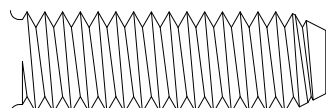
Machine Screw



Machine Screw
w/ Pilot Point

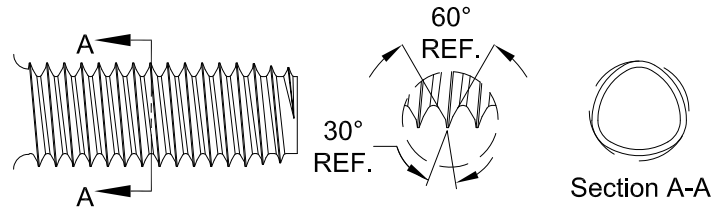


Header Point



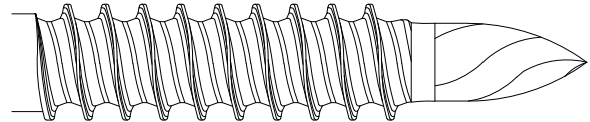
Tapped Holes Thread Locking

POWERLOK® II™



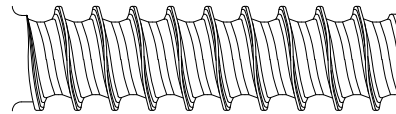
Carbon Fiber Reinforced Plastic

FLOWpoint Delta PT®

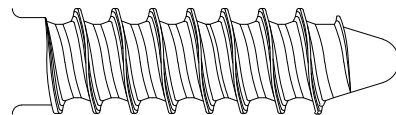


Thermoplastic

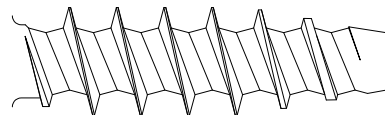
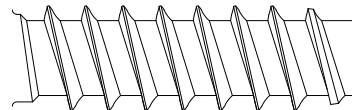
DELTA PT®



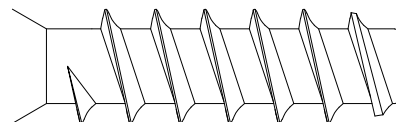
DELTA PT®
Type R



REMFORM® II™ "HS"

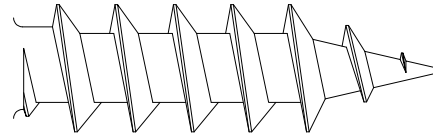


REMFORM® II™

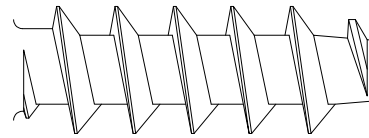


Thermoplastic (Cont.)

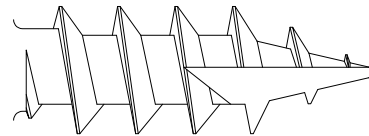
POLYFAST[®]
Type A



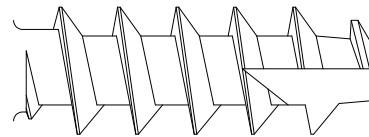
POLYFAST[®]
Type B



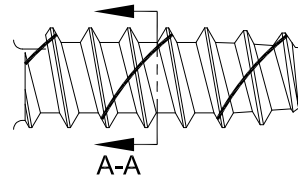
POLYFAST[®]
Type 17



POLYFAST[®]
Type 25

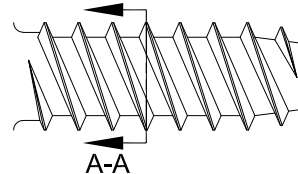


Plastilok[®]



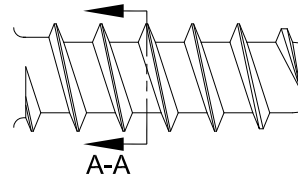
Section A-A

PLASTITE[®] 48-2



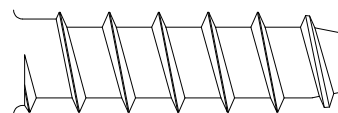
Section A-A

PLASTITE[®] 45

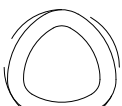
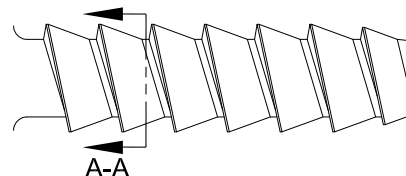


Section A-A

Plasto-Driv[®]
Type B



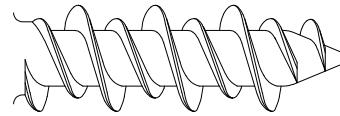
PUSHTITE[®] II
(Press Fit Design)



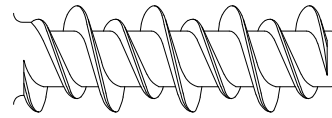
Section A-A

Thermoplastic
(Cont.)

Dual Thread
Type A

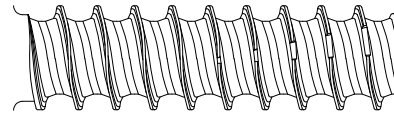


Dual Thread
Type B

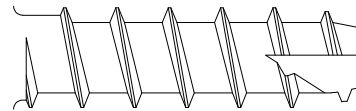


Thermoset

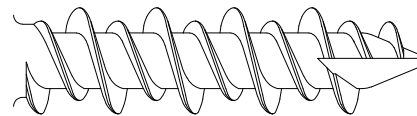
DELTA  **PT**[®]
Type DS



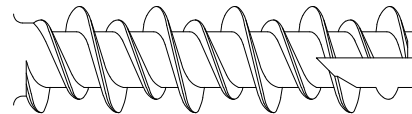
Plasto-Driv[®]
Type 25



Dual Thread
Type 17

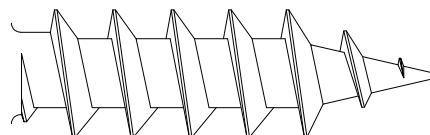


Dual Thread
Type 25

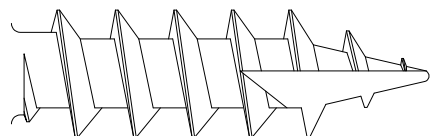


Particle Board

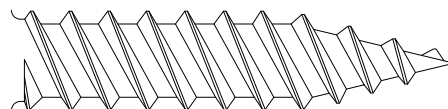
POLYFAST[®]
Type A



POLYFAST[®]
Type 17



Self Piercer



Self Piercer
Type 17



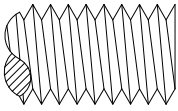
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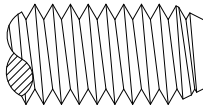
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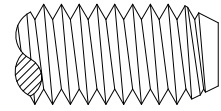
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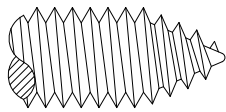
Straight Cut-Off



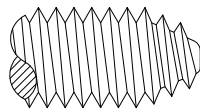
Chamfer Point



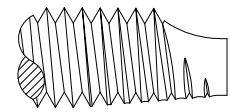
Header Point



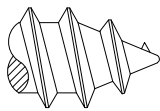
"CA" Point



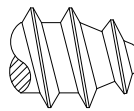
Modified "CA" Point



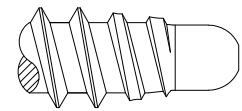
CTP Point



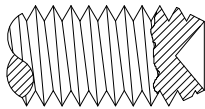
"A" and "AB" Gimlet Point



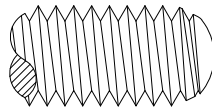
Modified "A" and "AB" Point



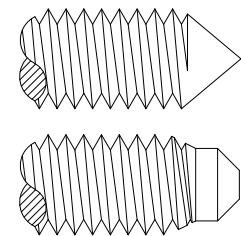
"B" Radius Point



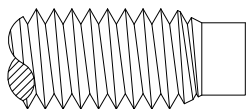
Cup Point



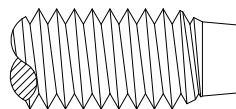
Oval Point



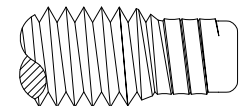
Cone Point



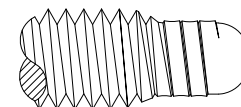
Pilot Point



Lead Point

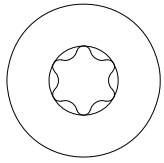


'NP'

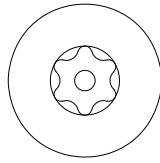


'P'

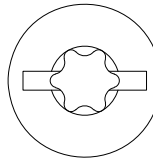
Radius Point



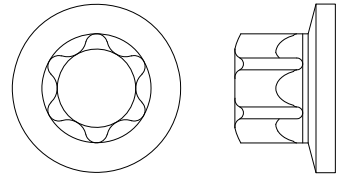
TORX®



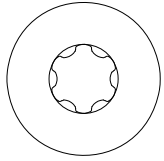
Torx®
Tamper Resistant



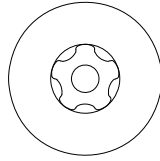
Combo Torx®



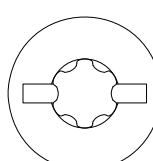
External Torx®



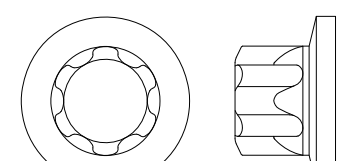
TORXplus®



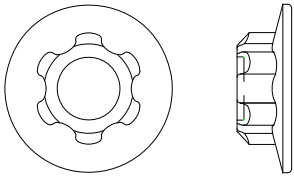
Torx Plus®
Tamper Resistant



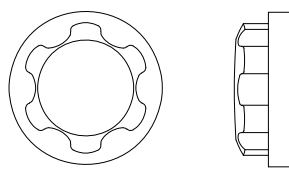
Combo Torx Plus®



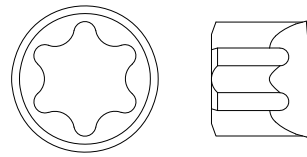
External Torx Plus®



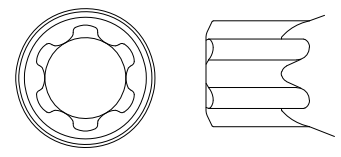
External Torx Plus®
Low Profile



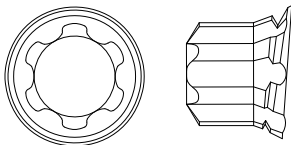
External Torx Plus® Dome



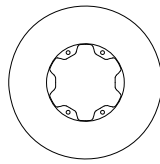
Torx® Stem



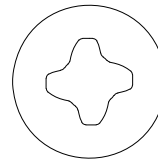
Torx Plus® Stem



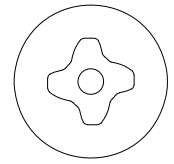
Torx Plus® Maxx



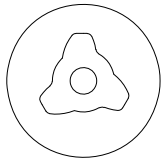
**TORX®
PARALOBE™**



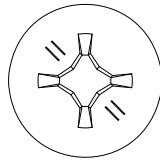
**MORTORQ®
SUPER**



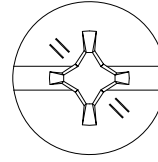
Mortorq® Super
Tamper Resistant



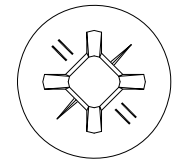
Mortorq® Super 3 Lobe
Tamper Resistant



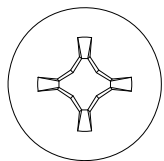
ACR® PHILLIPS II®



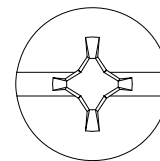
Combo ACR® Phillips II®



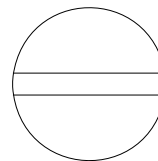
Phillips Square-Drive®



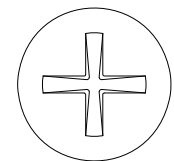
Type 1 (Phillips®)



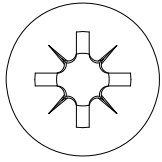
Combo Type 1/Slot



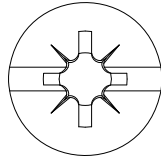
Slotted



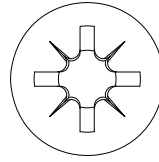
Type II (Frearson)



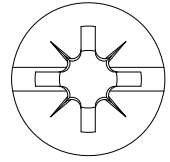
Type 1A (Pozidriv®)



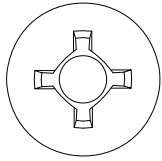
Combo Type 1A/Slot



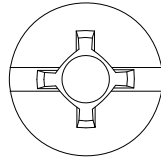
Pozidriv®



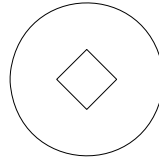
Combo Pozidriv®/Slot



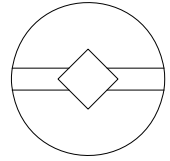
Quadrex®



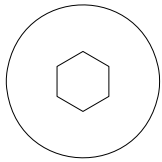
Quadrex® Plus



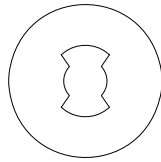
Square



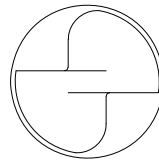
Combo Square/Slot



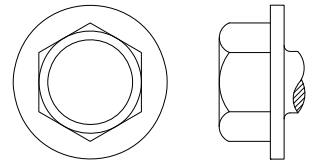
Hex



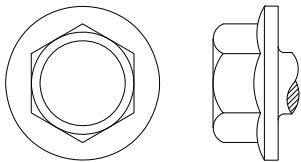
Clutch



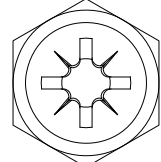
One Way



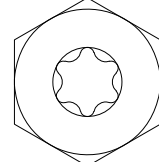
Hex Washer Head



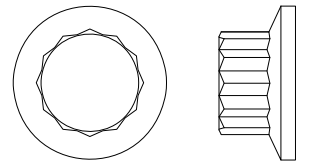
Hex Flange Washer Head



Phillips Combo w/ Hex

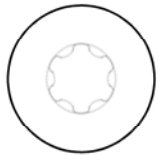


Torx® Combo w/ Hex

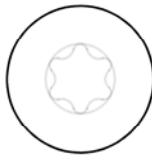


12 Point

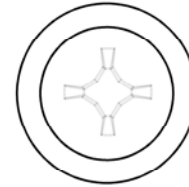
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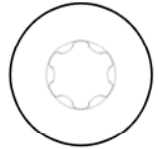
Pan Head
(Full Contour)



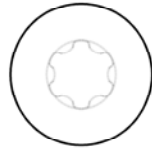
Pan Head
(Flat Top)



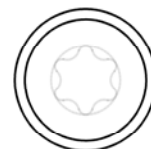
Pan Washer Head



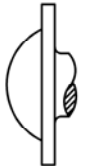
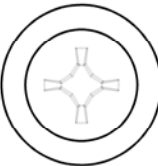
Fillister Head



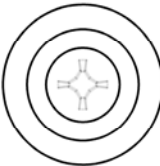
Fillister Head
(Flat Top)



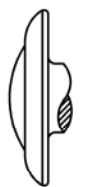
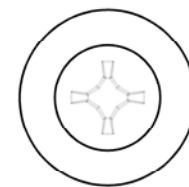
Socket Head



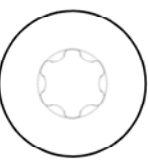
Round Washer Head
(Full Contour)



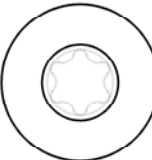
Round Washer Head
(Flat Top)



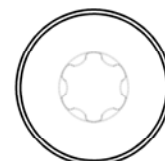
Crown Washer Head



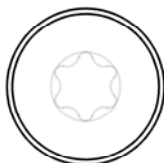
Truss Head
(Full Contour)



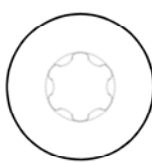
Truss Head
(Flat Top)



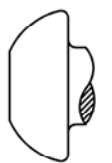
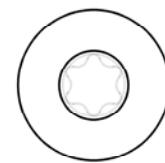
Cheese Head



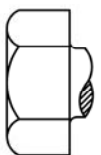
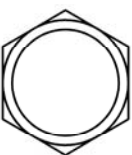
Binding Head



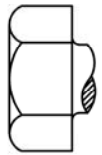
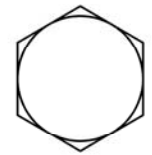
Round Head



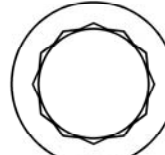
Button Head



Indented Hex Head

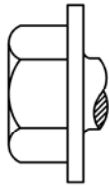
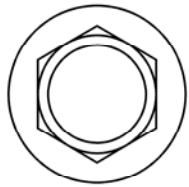


Trimmed Hex Head

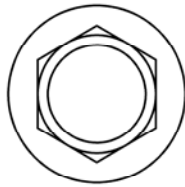


12 Point Flange Head

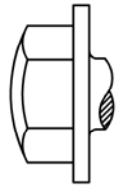
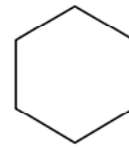
Note: Recess shown for example purposes only.



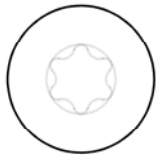
Hex Washer Head



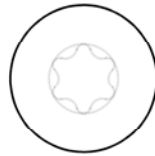
Hex Flange Washer Head



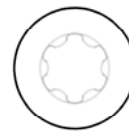
Acorn Hex Washer Head



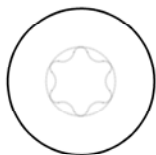
Flat Head



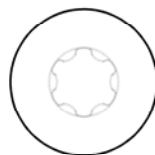
Undercut Flat Head



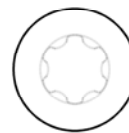
Trim Flat Head



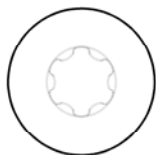
Oval Head



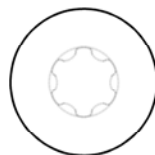
Undercut Oval Head



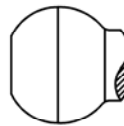
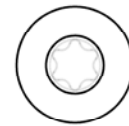
Trim Oval Head



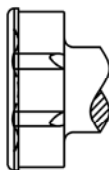
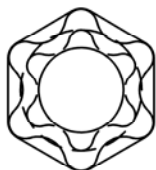
100° Flat Head



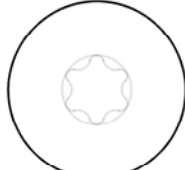
Bugle Head



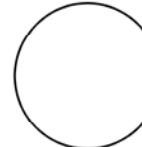
Ball Head



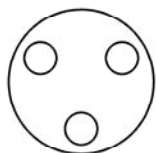
PlasTORX®



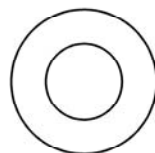
Wafer Head



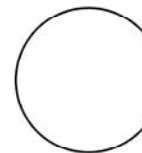
Weld Stud
(Type U3)



Weld Stud
(Type T3)



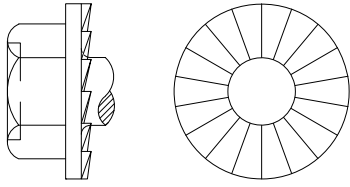
Weld Stud
(Type TD)



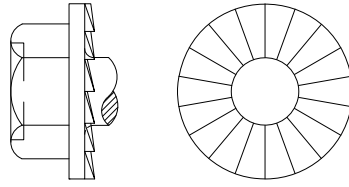
Weld Stud
(Type US3)

Note: Recess shown for example purposes only.

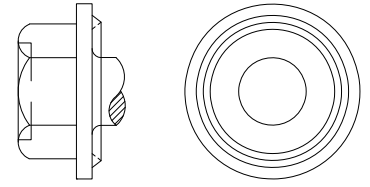
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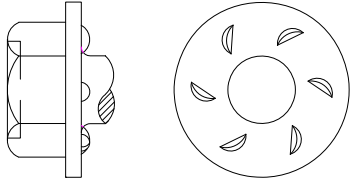
Serrations



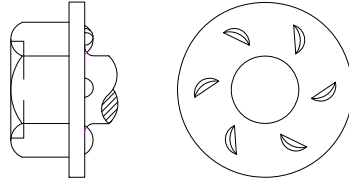
Reverse Serrations



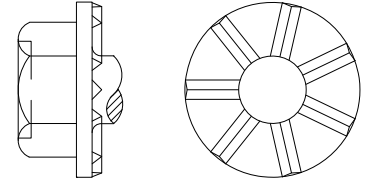
Annular Ring



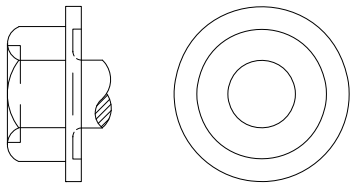
Reverse Nibs



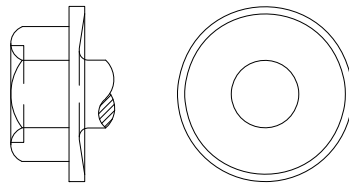
Nibs



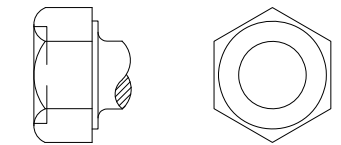
Radial Lines



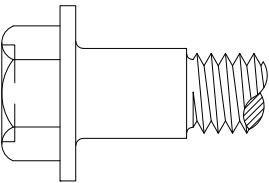
Undercut



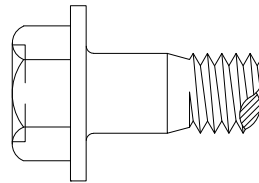
Undercut (Angled)



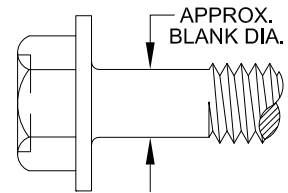
Washer Face



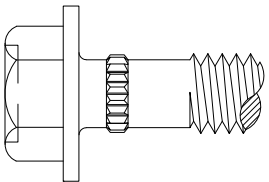
Shoulder



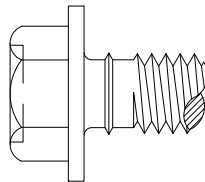
Shoulder w/Angle



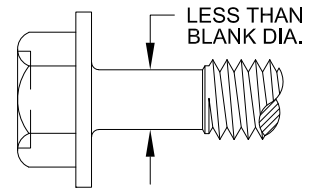
Partial Thread



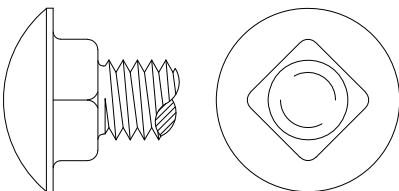
Knurl



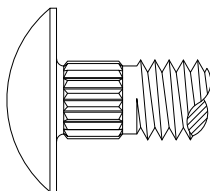
Annular Ring (On Shank)



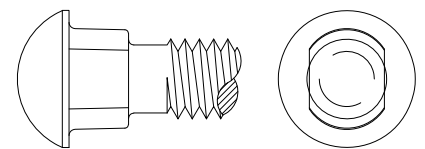
Groove



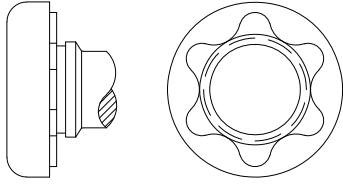
Square Neck



Rib Neck

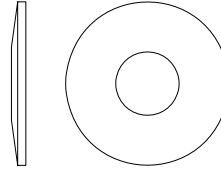


Oval Neck

**Strux®**

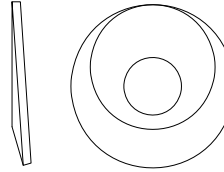
Compression

Conical



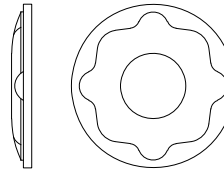
Adds spring to maintain joint tension, distributes load and extends over clearance holes.

Ramp Conical



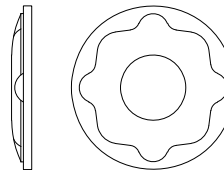
Off center crown adds spring to maintain joint tension, distributes load and extends over clearance holes while utilizing thinner material.

**Semblex Square
Dome®**



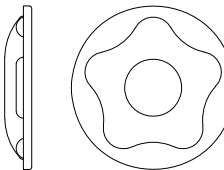
Provides two spring rates in one washer allowing for greater installation control.

Square Cone®



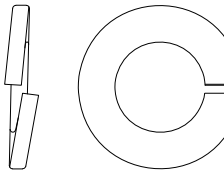
Provides two spring rates in one washer allowing for greater installation control.

Crest Cup™



Provides high retention capability in both soft and hard surfaces.

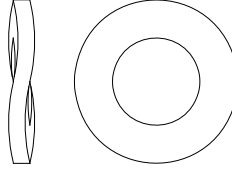
Split Lock



Adds spring to maintain joint tension and provides hardened bearing surface.

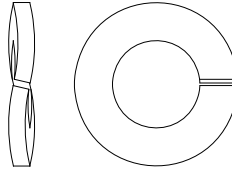
Compression

Wave



Provides high spring rate to improve joint tension.

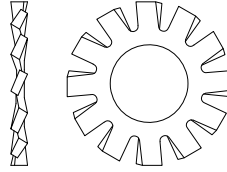
Split Wave



Provides high spring rate to improve joint tension.

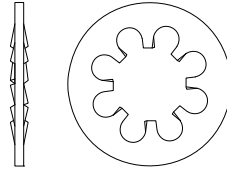
Locking

External Tooth



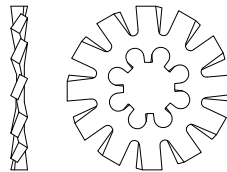
Teeth increase friction and improve spring tension.

Internal Tooth



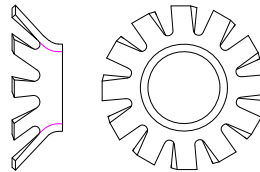
Teeth increase friction and improve spring tension, for use when teeth must be concealed.

Internal/External Tooth



Teeth increase friction, improve spring tension, and extend over clearance holes.

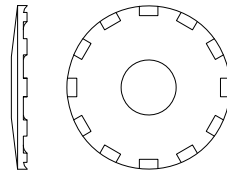
External Tooth Countersunk



Teeth increase friction for use with countersunk heads.

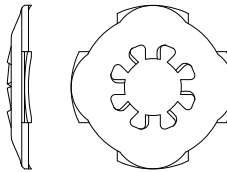
Combination

Conical Tooth



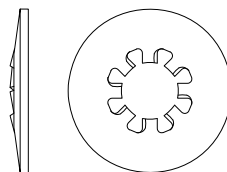
Adds spring to improve tension, teeth increase friction, distributes load and extends over clearance holes.

Dished Tooth



Provides spring to improve tension, distributes load and locking teeth on profile minimize washer shift.

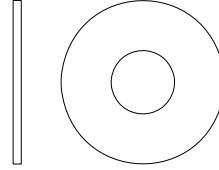
Plain Dished Periphery



Provides spring to improve tension, distributes load, and minimizes surface distortion.

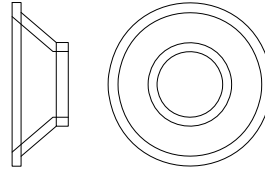
Conventional

Flat



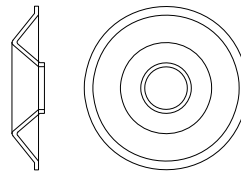
Increases bearing surface, distributes load, extends over clearance holes, and prevents surface abrasion.

Trim Countersunk



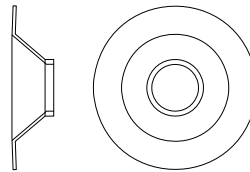
Increases bearing surface and prevents surface abrasion.

**Flange Finishing
& Finishing**



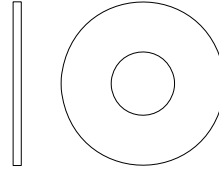
Improves appearance, protects surface, and eliminates need for countersunk hole. For use with countersunk heads.

Fairing



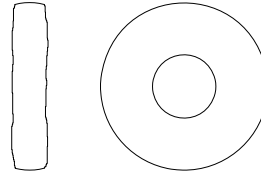
Provides flush fastening and surface protection. For use with countersunk heads.

Non-Metallic Flat



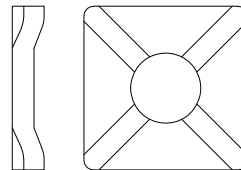
Non-metallic material prevents surface abrasions and insulates

Sealing



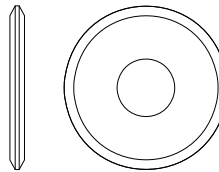
Provides seal on underside of head or SEMS washer in a variety of materials.

Square



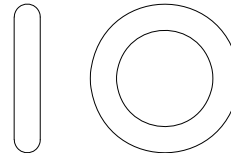
Provides high resistance to wire pull-out in electrical applications.

Flat Beveled



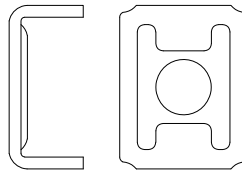
Provides quick assembly of connectors and wire used with multiple washers in electrical applications.

O-Ring



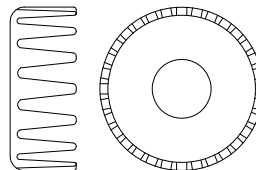
Provides sealing function around fastener.

Saddle Clamp



Provides positive terminal and wire clamping in electrical applications.

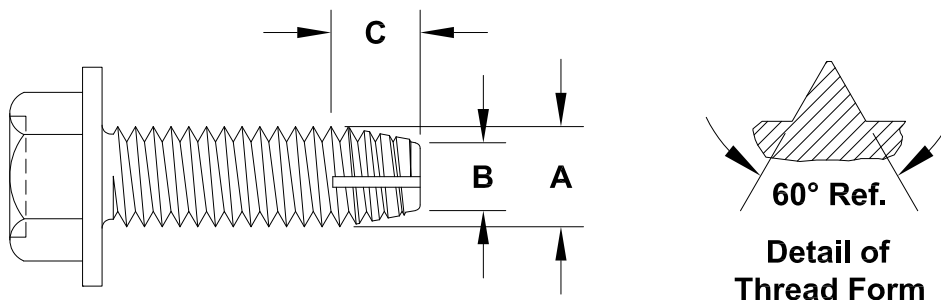
Insulator Piercing



Pierces protective coatings and insulations for electrical contact.

Semblex Square Dome® is a registered trademark of Semblex Corporation.
Square Cone® is a registered trademark of ITW. Crest Cup™ is a trademark of ITW.

PRODUCT STANDARDS



Thread Size	A Major Diameter		B Point Diameter		C Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Ref.	in-lbs
#2-56	.0860	.0813	.068	.061	.062	5
#2-64	.0860	.0816	.070	.064	.055	6
#3-48	.0990	.0938	.078	.070	.073	9
#3-56	.0990	.0942	.081	.074	.062	10
#4-40	.1120	.1061	.087	.078	.088	13
#4-48	.1120	.1068	.091	.083	.073	15
#5-40	.1250	.1191	.100	.091	.088	18
#5-44	.1250	.1195	.102	.094	.080	20
#6-32	.1380	.1312	.107	.096	.109	23
#6-40	.1380	.1321	.113	.104	.088	27
#8-32	.1640	.1571	.132	.122	.109	42
#8-36	.1640	.1577	.136	.126	.097	47
#10-24	.1900	.1818	.148	.135	.146	56
#10-32	.1900	.1831	.158	.148	.109	74
#12-24	.2160	.2078	.174	.161	.146	93
#12-28	.2160	.2085	.180	.168	.125	108
1/4-20	.2500	.2408	.200	.184	.175	140
1/4-28	.2500	.2425	.214	.202	.125	179
5/16-18	.3125	.3026	.257	.239	.194	306
5/16-24	.3125	.3042	.271	.257	.146	370
3/8-16	.3750	.3643	.312	.239	.219	560
3/8-24	.3750	.3667	.333	.319	.146	710
7/16-14	.4375	.4258	.366	.344	.250	700
7/16-20	.4375	.4281	.387	.371	.175	820
1/2-13	.5000	.4876	.423	.399	.269	1075
1/2-20	.5000	.4906	.450	.433	.175	1285

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 3/4": +.000/-.030"
Over 3/4" to 1 1/2": +.000/-.050"
Over 1 1/2": +.000/-.060"

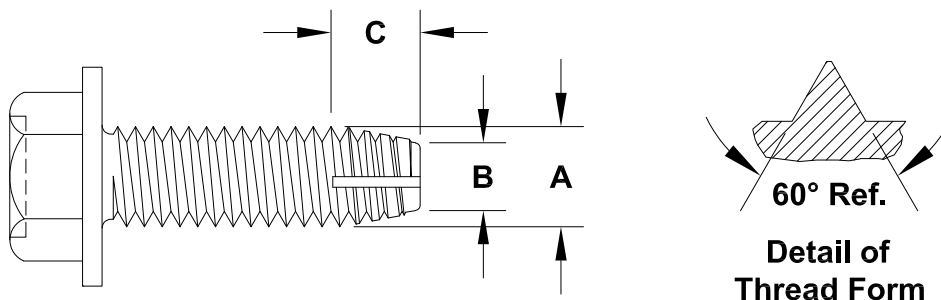
Application:

Thread cutting screw for sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Point Diameter		C Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Ref.	N-m
M2-0.4	2.00	1.88	1.45	1.39	1.40	0.5
M2.5-0.45	2.50	2.37	1.88	1.82	1.60	1.1
M3-0.5	3.00	2.87	2.32	2.26	1.80	2.0
M3.5-0.6	3.50	3.35	2.68	2.60	2.10	3.1
M4-0.7	4.00	3.83	3.07	2.97	2.50	4.6
M5-0.8	5.00	4.82	3.94	3.84	2.80	9.4
M6-1.0	6.00	5.79	4.69	4.55	3.50	16.0
M8-1.25	8.00	7.76	6.40	6.24	4.40	40.0
M10-1.5	10.00	9.73	8.08	7.88	5.30	78.0

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 20mm: +0.0/-0.8mm
Over 20mm to 40mm: +0.0/-1.2mm
Over 40mm: +0.0/-1.5mm

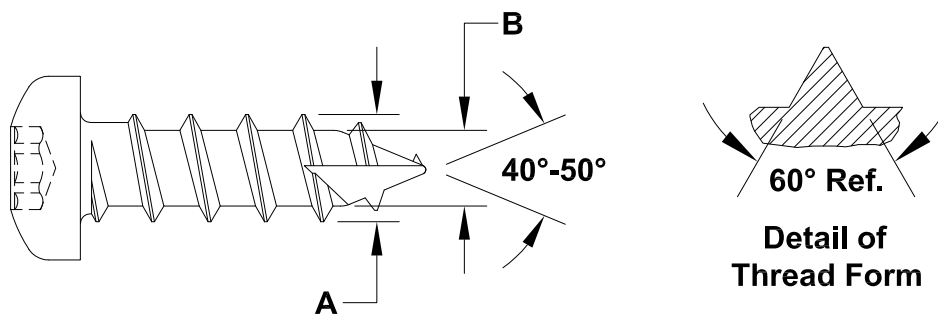
Application:

Thread cutting screw for sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Minor Diameter		Minimum Torsional Strength in-lbs
	Max.	Min.	Max.	Min.	
#2-32	.088	.084	.061	.056	4
#3-28	.101	.097	.076	.071	9
#4-24	.114	.110	.083	.078	12
#5-20	.130	.126	.095	.090	18
#6-18	.141	.136	.102	.096	24
#7-16	.158	.152	.114	.108	30
#8-15	.168	.162	.123	.116	39
#10-12	.194	.188	.133	.126	48
#12-11	.221	.215	.162	.155	83
#14-10	.254	.248	.185	.178	125
#16-10	.280	.274	.197	.189	152
#18-9	.306	.300	.217	.209	196
#20-9	.333	.327	.234	.226	250
#24-9	.390	.383	.291	.282	492

Length Tolerances:

Up to 1": $\pm .030$ "
Over 1": $\pm .050$ "

Application:

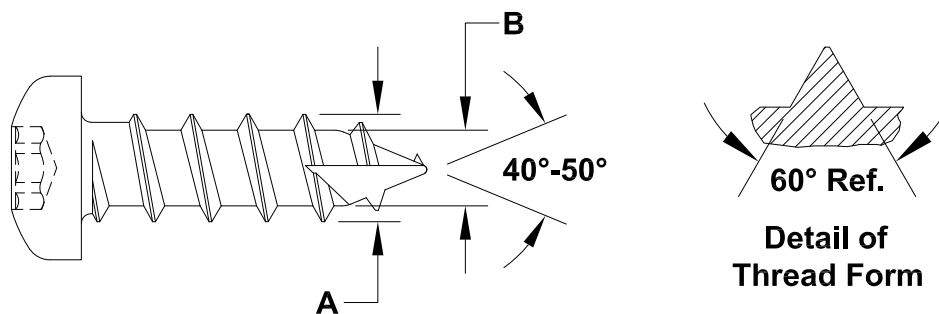
Thread cutting screw for sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).

Metric (Soft Conversion)



Thread Size	A Major Diameter		B Minor Diameter		Minimum Torsional Strength
	Max.	Min.	Max.	Min.	N-m
M2.2-0.79	2.24	2.13	1.55	1.42	0.45
M2.5-0.91	2.57	2.46	1.93	1.80	1.01
M2.9-1.06	2.90	2.79	2.11	1.98	1.35
M3.2-1.27	3.31	3.20	2.42	2.28	2.03
M3.5-1.41	3.58	3.45	2.59	2.43	2.71
M3.8-1.58	4.02	3.86	2.90	2.74	3.39
M4.2-1.69	4.27	4.11	3.13	2.95	4.40
M4.8-2.12	4.93	4.77	3.38	3.20	5.42
M5.5-2.31	5.62	5.46	4.12	3.94	9.38
M6.1-2.54	6.46	6.30	4.70	4.52	14.12
M6.8-2.54	7.11	6.95	5.01	4.80	17.17
M7.5-2.82	7.78	7.62	5.52	5.31	22.15
M8.1-2.82	8.46	8.30	5.95	5.74	28.25
M9.4-2.82	9.91	9.73	7.39	7.16	55.59

Length Tolerances:

Up to 25.4mm: $\pm 0.76\text{mm}$
Over 25.4mm: $\pm 1.27\text{mm}$

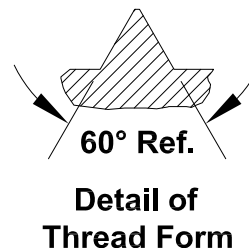
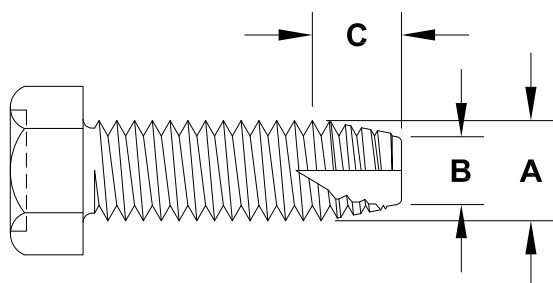
Application:

Thread cutting screw for sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Point Diameter		C Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Ref.	in-lbs
#2-56	.0860	.0813	.068	.061	.062	5
#2-64	.0860	.0816	.070	.064	.055	6
#3-48	.0990	.0938	.078	.070	.073	9
#3-56	.0990	.0942	.081	.074	.062	10
#4-40	.1120	.1061	.087	.078	.088	13
#4-48	.1120	.1068	.091	.083	.073	15
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#6-32	.1380	.1312	.107	.096	.109	23
#6-40	.1380	.1321	.113	.104	.088	27
#8-32	.1640	.1571	.132	.122	.109	42
#8-36	.1640	.1577	.136	.126	.097	47
#10-24	.1900	.1818	.148	.135	.146	56
#10-32	.1900	.1831	.158	.148	.109	74
#12-24	.2160	.2078	.174	.161	.146	93
#12-28	.2160	.2085	.180	.168	.125	108
1/4-20	.2500	.2408	.200	.184	.175	140
1/4-28	.2500	.2425	.214	.202	.125	179
5/16-18	.3125	.3026	.257	.239	.194	306
5/16-24	.3125	.3042	.271	.257	.146	370
3/8-16	.3750	.3643	.312	.239	.219	560
3/8-24	.3750	.3667	.333	.319	.146	710
7/16-14	.4375	.4258	.366	.344	.250	700
7/16-20	.4375	.4281	.387	.371	.175	820
1/2-13	.5000	.4876	.423	.399	.269	1075
1/2-20	.5000	.4906	.450	.433	.175	1285

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 3/4": +.000/-.030"
Over 3/4" to 1 1/2": +.000/-.050"
Over 1 1/2": +.000/-.060"

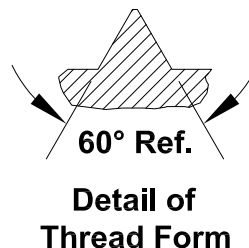
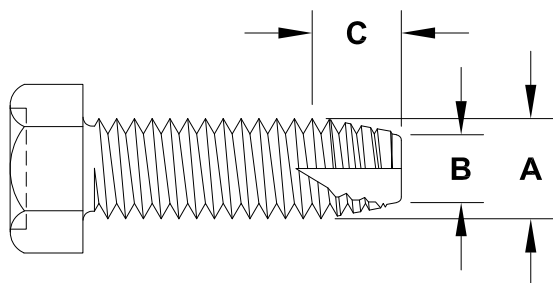
Application:

Thread cutting screw for sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Point Diameter		C Taper Length	Minimum Torsional Strrength
	Max.	Min.	Max.	Min.	Ref.	N-m
M2-0.4	2.00	1.88	1.45	1.39	1.40	0.5
M2.5-0.45	2.50	2.37	1.88	1.82	1.60	1.1
M3-0.5	3.00	2.87	2.32	2.26	1.80	2.0
M3.5-0.6	3.50	3.35	2.68	2.60	2.10	3.1
M4-0.7	4.00	3.83	3.07	2.97	2.50	4.6
M5-0.8	5.00	4.82	3.94	3.84	2.80	9.4
M6-1.0	6.00	5.79	4.69	4.55	3.50	16.0
M8-1.25	8.00	7.76	6.40	6.24	4.40	40.0
M10-1.5	10.00	9.73	8.08	7.88	5.30	78.0

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 20mm: +0.0/-0.8mm
Over 20mm to 40mm: +0.0/-1.2mm
Over 40mm: +0.0/-1.5mm

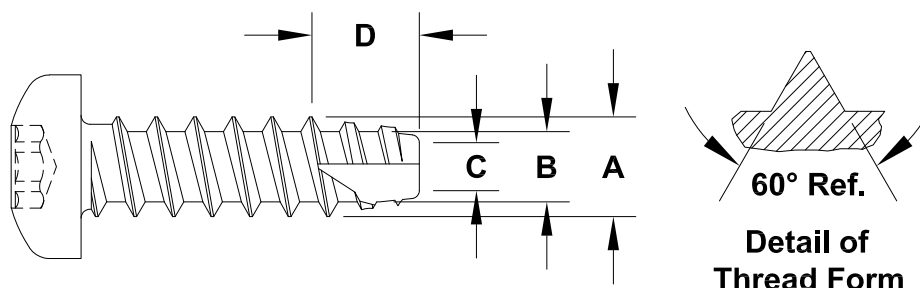
Application:

Thread cutting screw for sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Minor Diameter		C Point Diameter		D Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Max.	Min.	Ref.	in-lbs
#2-32	.088	.082	.064	.060	.058	.054	.062	4
#3-28	.101	.095	.075	.071	.068	.063	.071	9
#4-24	.114	.108	.086	.082	.079	.074	.083	13
#5-20	.130	.123	.094	.090	.087	.082	.100	18
#6-20	.139	.132	.104	.099	.095	.089	.100	24
#7-19	.154	.147	.115	.109	.105	.099	.105	30
#8-18	.166	.159	.122	.116	.112	.106	.111	39
#10-16	.189	.182	.141	.135	.130	.123	.125	56
#12-14	.215	.208	.164	.157	.152	.145	.143	88
1/4-14	.246	.237	.192	.185	.179	.171	.143	142
5/16-12	.315	.306	.244	.236	.230	.222	.167	290
3/8-12	.380	.371	.309	.299	.293	.285	.167	590
7/16-10	.440	.429	.359	.349	.343	.335	.200	620
1/2-10	.504	.493	.423	.413	.407	.399	.200	1020

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 3/4": +.000/-.030"
Over 3/4" to 1 1/2": +.000/-.050"
Over 1 1/2": +.000/-.060"

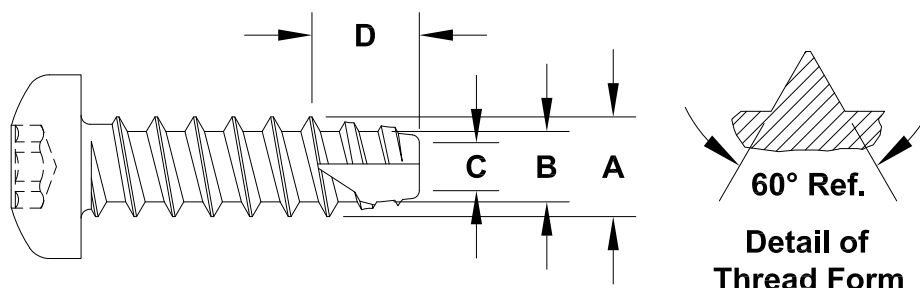
Application:

Thread cutting screw for sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Minor Diameter		C Point Diameter		D Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Max.	Min.	Ref.	N-m
M2.2-0.79	2.24	2.08	1.63	1.52	1.48	1.37	1.57	0.45
M2.5-0.91	2.57	2.41	1.91	1.80	1.73	1.66	1.80	1.01
M2.9-1.06	2.90	2.74	2.19	2.08	2.00	1.88	2.11	1.47
M3.2-1.27	3.30	3.12	2.39	2.28	2.21	2.08	2.54	2.03
M3.5-1.27	3.53	3.35	2.64	2.51	2.42	2.26	2.54	2.71
M3.8-1.34	3.91	3.73	2.92	2.76	2.67	2.51	2.67	3.39
M4.2-1.41	4.22	4.04	3.10	2.94	2.85	2.69	2.82	4.40
M4.8-1.59	4.80	4.62	3.58	3.42	3.30	3.12	3.18	6.33
M5.5-1.81	5.46	5.28	4.17	3.99	3.86	3.68	3.63	9.94
M6.3-1.81	6.25	6.02	4.88	4.70	4.55	4.34	3.63	16.04
M8.0-2.12	8.00	7.77	6.20	5.99	5.84	5.63	4.24	32.77
M9.5-2.12	9.65	9.42	7.85	7.59	7.44	7.24	4.24	66.66
M11.1-2.54	11.18	10.90	9.12	8.86	8.71	8.51	5.08	70.05
M12.7-2.54	12.80	12.52	10.74	10.49	10.34	10.13	5.08	115.24

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 19.05mm: +0.00/-0.76mm
Over 19.05mm to 38.10mm: +0.00/-1.27mm
Over 38.10mm: +0.00/-1.53mm

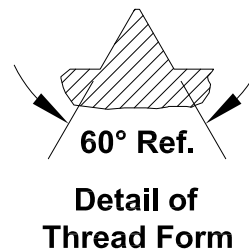
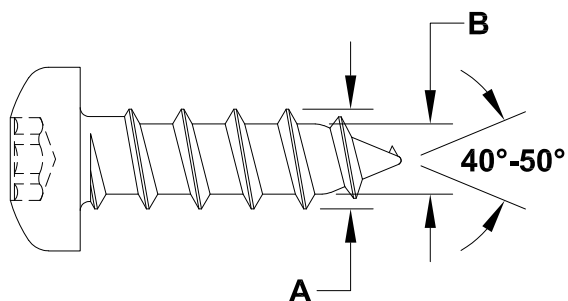
Application:

Thread cutting screw for sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Minor Diameter		Minimum Torsional Strength in-lbs
	Max.	Min.	Max.	Min.	
#0-40	.060	.057	.042	.039	-
#1-32	.075	.072	.051	.048	-
#2-32	.088	.084	.061	.056	4
#3-28	.101	.097	.076	.071	9
#4-24	.114	.110	.083	.078	12
#5-20	.130	.126	.095	.090	18
#6-18	.141	.136	.102	.096	24
#7-16	.158	.152	.114	.108	30
#8-15	.168	.162	.123	.116	39
#10-12	.194	.188	.133	.126	48
#12-11	.221	.215	.162	.155	83
#14-10	.254	.248	.185	.178	125
#16-10	.280	.274	.197	.189	152
#18-9	.306	.300	.217	.209	196
#20-9	.333	.327	.234	.226	250
#24-9	.390	.383	.291	.282	492

Length Tolerances:

Up to 1": $\pm .030"$
Over 1": $\pm .050"$

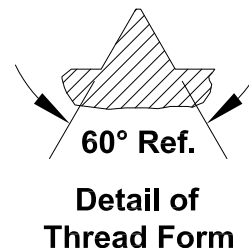
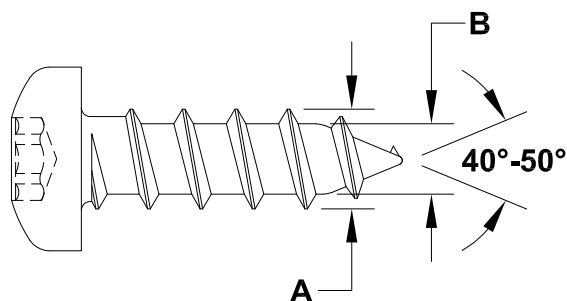
Application:

Tapping screw for sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Minor Diameter		Minimum Torsional Strength N-m
	Max.	Min.	Max.	Min.	
M1.5-0.64	1.52	1.44	1.07	0.99	-
M1.9-0.79	1.91	1.83	1.30	1.22	-
M2.2-0.79	2.24	2.13	1.55	1.42	0.45
M2.5-0.91	2.57	2.46	1.93	1.80	1.01
M2.9-1.06	2.90	2.79	2.11	1.98	1.35
M3.2-1.27	3.31	3.20	2.42	2.28	2.03
M3.5-1.41	3.58	3.45	2.59	2.43	2.71
M3.8-1.58	4.02	3.86	2.90	2.74	3.39
M4.2-1.69	4.27	4.11	3.13	2.95	4.40
M4.8-2.12	4.93	4.77	3.38	3.20	5.42
M5.5-2.31	5.62	5.46	4.12	3.94	9.38
M6.1-2.54	6.46	6.30	4.70	4.52	14.12
M6.8-2.54	7.11	6.95	5.01	4.80	17.17
M7.5-2.82	7.78	7.62	5.52	5.31	22.15
M8.1-2.82	8.46	8.30	5.95	5.74	28.25
M9.4-2.82	9.91	9.73	7.39	7.16	55.59

Length Tolerances:

Up to 25.4mm: $\pm 0.76\text{mm}$
Over 25.4mm: $\pm 1.27\text{mm}$

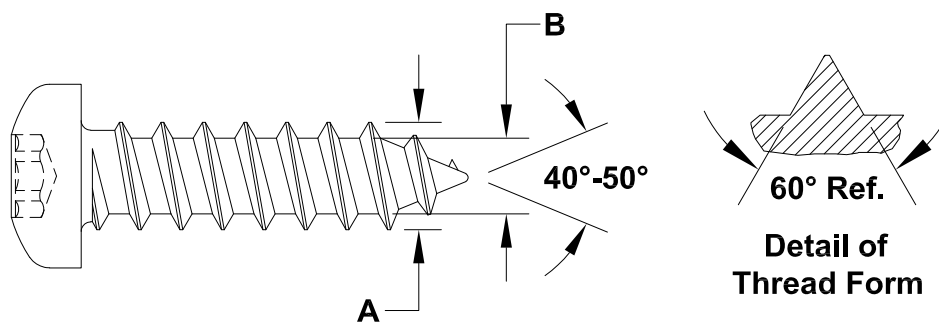
Application:

Tapping screw for sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Minor Diameter		Minimum Torsional Strength in-lbs
	Max.	Min.	Max.	Min.	
#0-48	.060	.054	.036	.033	-
#1-42	.075	.069	.049	.046	-
#2-32	.088	.082	.064	.060	4
#3-28	.101	.095	.075	.071	9
#4-24	.114	.108	.086	.082	13
#5-20	.130	.123	.094	.090	18
#6-20	.139	.132	.104	.099	24
#7-19	.154	.147	.115	.109	30
#8-18	.166	.159	.122	.116	39
#10-16	.189	.182	.141	.135	56
#12-14	.215	.208	.164	.157	88
1/4-14	.246	.237	.192	.185	142
5/16-12	.315	.306	.244	.236	290
3/8-12	.380	.371	.309	.299	590
7/16-10	.440	.429	.359	.349	620
1/2-10	.504	.493	.423	.413	1020

Length Tolerances:

Up to 1": $\pm .030$ "
Over 1": $\pm .050$ "

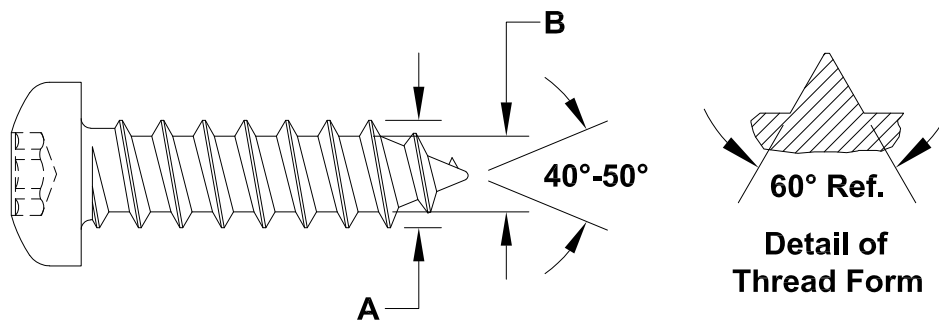
Application:

Tapping screw for sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).

Metric (Soft Conversion)


Thread Size	A Major Diameter		B Minor Diameter		Minimum Torsional Strength N-m
	Max.	Min.	Max.	Min.	
M1.5-0.53	1.53	1.37	0.92	0.84	-
M1.9-0.61	1.91	1.75	1.25	1.17	-
M2.2-0.79	2.24	2.08	1.63	1.52	0.45
M2.5-0.91	2.57	2.41	1.91	1.80	1.01
M2.9-1.06	2.90	2.74	2.19	2.08	1.47
M3.2-1.27	3.30	3.12	2.39	2.28	2.03
M3.5-1.27	3.53	3.35	2.64	2.51	2.71
M3.8-1.34	3.91	3.73	2.92	2.76	3.39
M4.2-1.41	4.22	4.04	3.10	2.94	4.40
M4.8-1.59	4.80	4.62	3.58	3.42	6.33
M5.5-1.81	5.46	5.28	4.17	3.99	9.94
M6.3-1.81	6.25	6.02	4.88	4.70	16.04
M8.0-2.12	8.00	7.77	6.20	5.99	32.77
M9.5-2.12	9.65	9.42	7.85	7.59	66.66
M11.1-2.54	11.18	10.90	9.12	8.86	70.05
M12.7-2.54	12.80	12.52	10.74	10.49	115.24

Length Tolerances:

Up to 25.4mm: $\pm 0.76\text{mm}$
Over 25.4mm: $\pm 1.27\text{mm}$

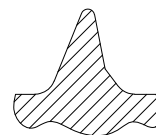
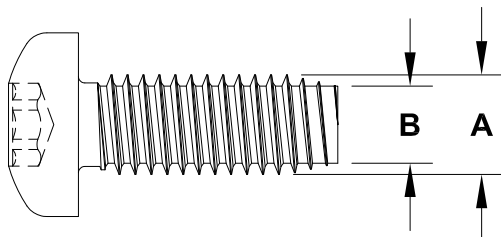
Application:

Tapping screw for sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).


**Detail of
Thread Form**

Thread Size	A Major Diameter	B Core Diameter
	Ref.	Ref.
16-0.35	1.60	1.12
18-0.35	1.80	1.32
20-0.40	2.00	1.45
22-0.45	2.20	1.61
25-0.45	2.50	1.88
30-0.50	3.00	2.30
35-0.60	3.50	2.66
40-0.70	4.00	3.02
50-0.80	5.00	3.87
60-1.00	6.00	4.59
70-1.00	7.00	5.56
80-1.25	8.00	6.23
100-1.50	10.00	7.86

[Click here for more info](#) 

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Length Tolerances:

Over 3mm to 6mm: $\pm 0.24\text{mm}$
Over 6mm to 10mm: $\pm 0.29\text{mm}$
Over 10mm to 18mm: $\pm 0.35\text{mm}$
Over 18mm to 30mm: $\pm 0.42\text{mm}$
Over 30mm to 50mm: $\pm 0.50\text{mm}$
Over 50mm to 80mm: $\pm 0.60\text{mm}$
Over 80mm to 100mm: $\pm 0.70\text{mm}$

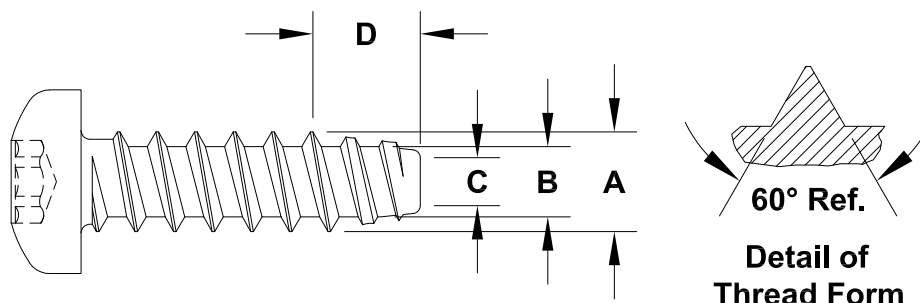
Application:

Thread forming fastener for
light alloys.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Through Harden - 33 to 39 Rc



Thread Size	A Major Diameter		B Minor Diameter		C Point Diameter		D Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Max.	Min.	Ref.	in-lbs
#0-48	.060	.054	.036	.033	.031	.027	.042	-
#1-42	.075	.069	.049	.046	.044	.040	.048	-
#2-32	.088	.082	.064	.060	.058	.054	.062	4
#3-28	.101	.095	.075	.071	.068	.063	.071	9
#4-24	.114	.108	.086	.082	.079	.074	.083	13
#5-20	.130	.123	.094	.090	.087	.082	.100	18
#6-20	.139	.132	.104	.099	.095	.089	.100	24
#7-19	.154	.147	.115	.109	.105	.099	.105	30
#8-18	.166	.159	.122	.116	.112	.106	.111	39
#10-16	.189	.182	.141	.135	.130	.123	.125	56
#12-14	.215	.208	.164	.157	.152	.145	.143	88
1/4-14	.246	.237	.192	.185	.179	.171	.143	142
5/16-12	.315	.306	.244	.236	.230	.222	.167	290
3/8-12	.380	.371	.309	.299	.293	.285	.167	590
7/16-10	.440	.429	.359	.349	.343	.335	.200	620
1/2-10	.504	.493	.423	.413	.407	.399	.200	1020

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 3/4": +.000/-.030"
Over 3/4" to 1 1/2": +.000/-.050"
Over 1 1/2": +.000/-.060"

Application:

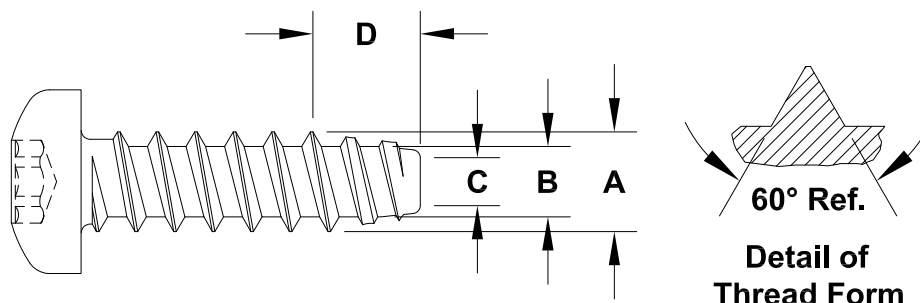
Tapping screw for sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).

Metric (Soft Conversion)



Thread Size	A Major Diameter		B Minor Diameter		C Point Diameter		D Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Max.	Min.	Ref.	N-m
M1.5-0.53	1.53	1.37	0.92	0.84	0.79	0.68	1.07	-
M1.9-0.61	1.91	1.75	1.25	1.17	1.12	1.02	1.22	-
M2.2-0.79	2.24	2.08	1.63	1.52	1.48	1.37	1.57	0.45
M2.5-0.91	2.57	2.41	1.91	1.80	1.73	1.66	1.80	1.01
M2.9-1.06	2.90	2.74	2.19	2.08	2.00	1.88	2.11	1.47
M3.2-1.27	3.30	3.12	2.39	2.28	2.21	2.08	2.54	2.03
M3.5-1.27	3.53	3.35	2.64	2.51	2.42	2.26	2.54	2.71
M3.8-1.34	3.91	3.73	2.92	2.76	2.67	2.51	2.67	3.39
M4.2-1.41	4.22	4.04	3.10	2.94	2.85	2.69	2.82	4.40
M4.8-1.59	4.80	4.62	3.58	3.42	3.30	3.12	3.18	6.33
M5.5-1.81	5.46	5.28	4.17	3.99	3.86	3.68	3.63	9.94
M6.3-1.81	6.25	6.02	4.88	4.70	4.55	4.34	3.63	16.04
M8.0-2.12	8.00	7.77	6.20	5.99	5.84	5.63	4.24	32.77
M9.5-2.12	9.65	9.42	7.85	7.59	7.44	7.24	4.24	66.66
M11.1-2.54	11.18	10.90	9.12	8.86	8.71	8.51	5.08	70.05
M12.7-2.54	12.80	12.52	10.74	10.49	10.34	10.13	5.08	115.24

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 19.05mm: +0.00/-0.76mm
Over 19.05mm to 38.10mm: +0.00/-1.27mm
Over 38.10mm: +0.00/-1.53mm

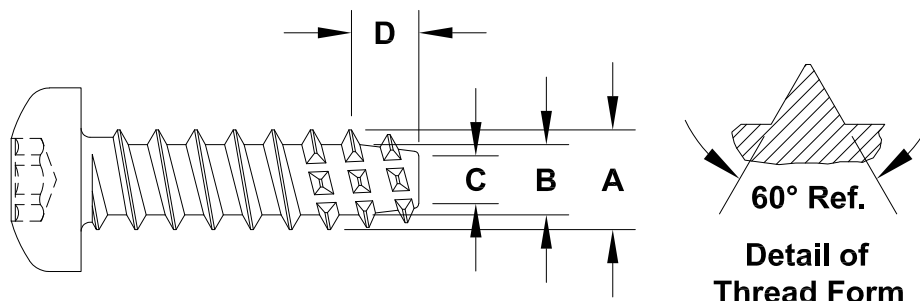
Application:

Tapping screw for sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Minor Diameter		C Point Diameter		D Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Max.	Min.	Ref.	in-lbs
#0-48	.060	.054	.036	.033	.031	.027	.042	-
#1-42	.075	.069	.049	.046	.044	.040	.048	-
#2-32	.088	.082	.064	.060	.058	.054	.062	4
#3-28	.101	.095	.075	.071	.068	.063	.071	9
#4-24	.114	.108	.086	.082	.079	.074	.083	13
#5-20	.130	.123	.094	.090	.087	.082	.100	18
#6-20	.139	.132	.104	.099	.095	.089	.100	24
#7-19	.154	.147	.115	.109	.105	.099	.105	30
#8-18	.166	.159	.122	.116	.112	.106	.111	39
#10-16	.189	.182	.141	.135	.130	.123	.125	56
#12-14	.215	.208	.164	.157	.152	.145	.143	88
1/4-14	.246	.237	.192	.185	.179	.171	.143	142
5/16-12	.315	.306	.244	.236	.230	.222	.167	290
3/8-12	.380	.371	.309	.299	.293	.285	.167	590
7/16-10	.440	.429	.359	.349	.343	.335	.200	620
1/2-10	.504	.493	.423	.413	.407	.399	.200	1020

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 3/4": +.000/-.030"
Over 3/4" to 1 1/2": +.000/-.050"
Over 1 1/2": +.000/-.060"

Application:

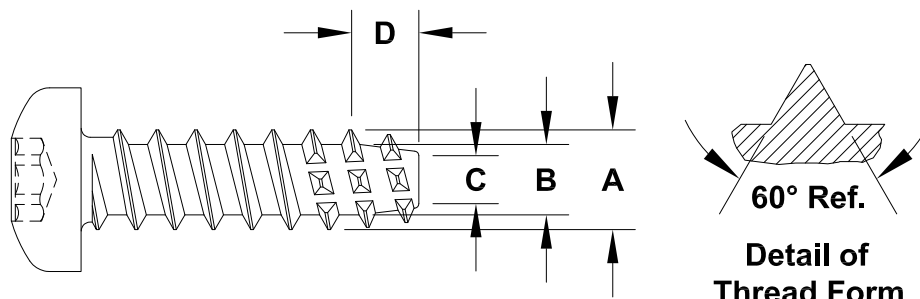
Thread cutting screw for sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).

Metric (Soft Conversion)



Thread Size	A Major Diameter		B Minor Diameter		C Point Diameter		D Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Max.	Min.	Ref.	N-m
M1.5-0.53	1.53	1.37	0.92	0.84	0.79	0.68	1.07	-
M1.9-0.61	1.91	1.75	1.25	1.17	1.12	1.02	1.22	-
M2.2-0.79	2.24	2.08	1.63	1.52	1.48	1.37	1.57	0.45
M2.5-0.91	2.57	2.41	1.91	1.80	1.73	1.66	1.80	1.01
M2.9-1.06	2.90	2.74	2.19	2.08	2.00	1.88	2.11	1.47
M3.2-1.27	3.30	3.12	2.39	2.28	2.21	2.08	2.54	2.03
M3.5-1.27	3.53	3.35	2.64	2.51	2.42	2.26	2.54	2.71
M3.8-1.34	3.91	3.73	2.92	2.76	2.67	2.51	2.67	3.39
M4.2-1.41	4.22	4.04	3.10	2.94	2.85	2.69	2.82	4.40
M4.8-1.59	4.80	4.62	3.58	3.42	3.30	3.12	3.18	6.33
M5.5-1.81	5.46	5.28	4.17	3.99	3.86	3.68	3.63	9.94
M6.3-1.81	6.25	6.02	4.88	4.70	4.55	4.34	3.63	16.04
M8.0-2.12	8.00	7.77	6.20	5.99	5.84	5.63	4.24	32.77
M9.5-2.12	9.65	9.42	7.85	7.59	7.44	7.24	4.24	66.66
M11.1-2.54	11.18	10.90	9.12	8.86	8.71	8.51	5.08	70.05
M12.7-2.54	12.80	12.52	10.74	10.49	10.34	10.13	5.08	115.24

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 19.05mm: +0.00/-0.76mm
Over 19.05mm to 38.10mm: +0.00/-1.27mm
Over 38.10mm: +0.00/-1.53mm

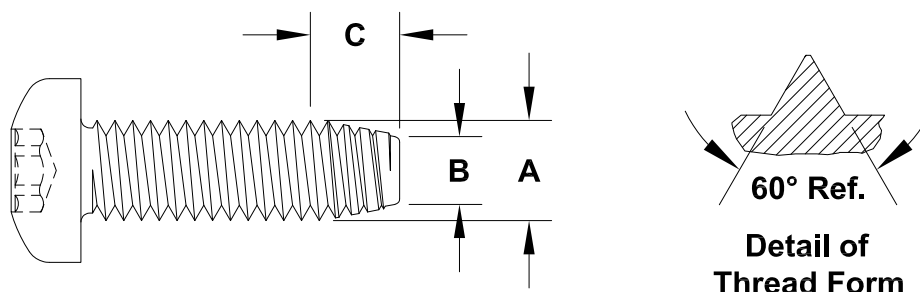
Application:

Thread cutting screw for sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Point Diameter		C Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Ref.	in-lbs
#2-56	.0860	.0813	.068	.061	.062	5
#2-64	.0860	.0816	.070	.064	.055	6
#3-48	.0990	.0938	.078	.070	.073	9
#3-56	.0990	.0942	.081	.074	.062	10
#4-40	.1120	.1061	.087	.078	.088	13
#4-48	.1120	.1068	.091	.083	.073	15
#5-40	.1250	.1191	.100	.091	.088	18
#5-44	.1250	.1195	.102	.094	.080	20
#6-32	.1380	.1312	.107	.096	.109	23
#6-40	.1380	.1321	.113	.104	.088	27
#8-32	.1640	.1571	.132	.122	.109	42
#8-36	.1640	.1577	.136	.126	.097	47
#10-24	.1900	.1818	.148	.135	.146	56
#10-32	.1900	.1831	.158	.148	.109	74
#12-24	.2160	.2078	.174	.161	.146	93
#12-28	.2160	.2085	.180	.168	.125	108
1/4-20	.2500	.2408	.200	.184	.175	140
1/4-28	.2500	.2425	.214	.202	.125	179
5/16-18	.3125	.3026	.257	.239	.194	306
5/16-24	.3125	.3042	.271	.257	.146	370
3/8-16	.3750	.3643	.312	.239	.219	560
3/8-24	.3750	.3667	.333	.319	.146	710
7/16-14	.4375	.4258	.366	.344	.250	700
7/16-20	.4375	.4281	.387	.371	.175	820
1/2-13	.5000	.4876	.423	.399	.269	1075
1/2-20	.5000	.4906	.450	.433	.175	1285

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 3/4": +.000/-.030"
Over 3/4" to 1 1/2": +.000/-.050"
Over 1 1/2": +.000/-.060"

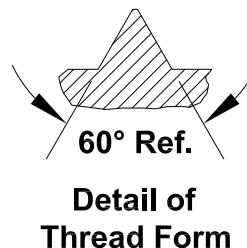
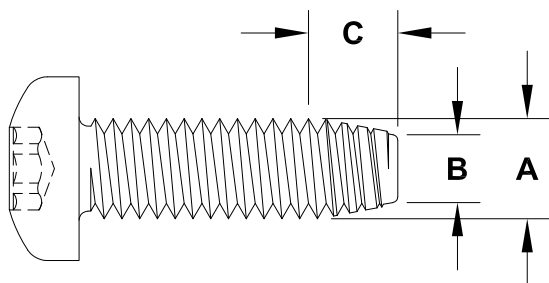
Application:

Tapping screw for sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Point Diameter		C Taper Length	Minimum Torsional Strrength
	Max.	Min.	Max.	Min.	Ref.	N-m
M2-0.4	2.00	1.88	1.45	1.39	1.40	0.5
M2.5-0.45	2.50	2.37	1.88	1.82	1.60	1.1
M3-0.5	3.00	2.87	2.32	2.26	1.80	2.0
M3.5-0.6	3.50	3.35	2.68	2.60	2.10	3.1
M4-0.7	4.00	3.83	3.07	2.97	2.50	4.6
M5-0.8	5.00	4.82	3.94	3.84	2.80	9.4
M6-1.0	6.00	5.79	4.69	4.55	3.50	16.0
M8-1.25	8.00	7.76	6.40	6.24	4.40	40.0
M10-1.5	10.00	9.73	8.08	7.88	5.30	78.0

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 20mm: +0.0/-0.8mm
Over 20mm to 40mm: +0.0/-1.2mm
Over 40mm: +0.0/-1.5mm

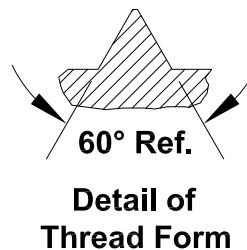
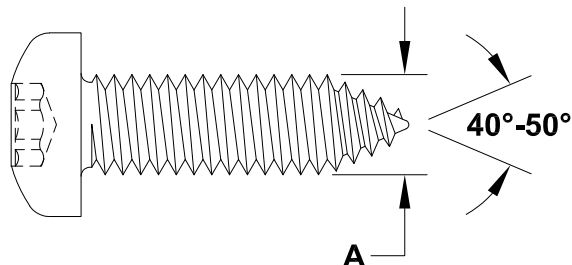
Application:

Tapping screw for sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		Minimum Torsional Strength in-lbs
	Max.	Min.	
#4-40	.1120	.1061	13
#5-40	.1250	.1191	18
#6-32	.1380	.1312	23
#8-32	.1640	.1571	42
#10-24	.1900	.1818	56
#10-32	.1900	.1831	74
#12-24	.2160	.2078	93
1/4-20	.2500	.2408	140
5/16-18	.3125	.3026	306
3/8-16	.3750	.3643	560

Length Tolerances:

Up to 1": $\pm .030$ "
Over 1": $\pm .050$ "

Application:

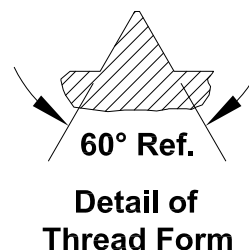
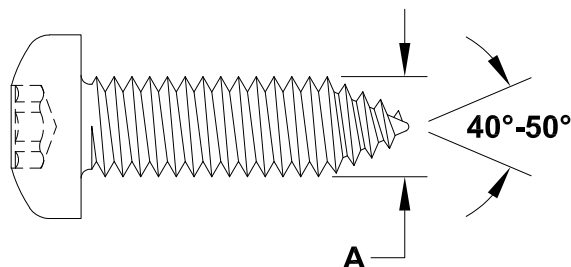
Tapping screw for sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).

Metric (Soft Conversion)



Thread Size	A Major Diameter		Minimum Torsional Strength N-m
	Max.	Min.	
M2-0.4	2.00	1.88	0.5
M2.5-0.45	2.50	2.37	1.1
M3-0.5	3.00	2.87	2.0
M3.5-0.6	3.50	3.35	3.1
M4-0.7	4.00	3.83	4.6
M5-0.8	5.00	4.82	9.4
M6-1.0	6.00	5.79	16.0
M8-1.25	8.00	7.76	40.0
M10-1.5	10.00	9.73	78.0

Length Tolerances:

Up to 25.4mm: $\pm 0.76\text{mm}$
Over 25.4mm: $\pm 1.27\text{mm}$

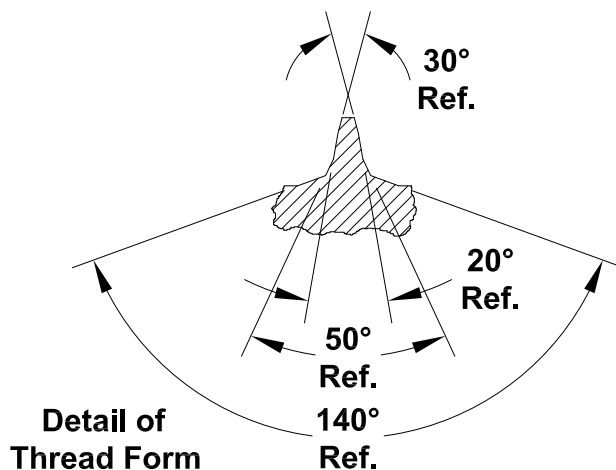
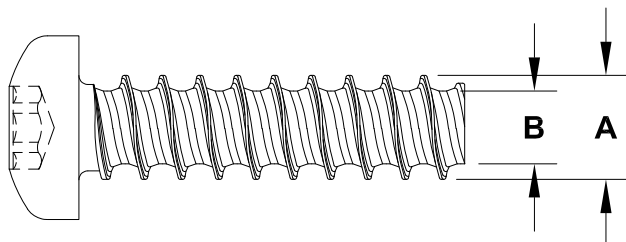
Application:

Tapping screw for sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter	B Core Diameter
	Ref.	Ref.
Δ18-0.71	1.8	1.2
Δ20-0.78	2.0	1.4
Δ22-0.85	2.2	1.5
Δ25-0.95	2.5	1.7
Δ30-1.12	3.0	2.1
Δ35-1.29	3.5	2.5
Δ40-1.46	4.0	2.8
Δ45-1.63	4.5	3.2
Δ50-1.80	5.0	3.5
Δ60-2.14	6.0	4.3
Δ70-2.48	7.0	5.0
Δ80-2.82	8.0	5.7
Δ100-3.50	10.0	7.2

[Click here for more info](#) 

Delta PT® is a registered trademark of EJOT Verbindungstechnik GmbH & Co. KG.

Length Tolerances:

Up to 3mm:	±0.30mm
Over 3mm to 6mm:	±0.38mm
Over 6mm to 10mm:	±0.45mm
Over 10mm to 18mm:	±0.55mm
Over 18mm to 30mm:	±0.65mm
Over 30mm to 50mm:	±0.80mm
Over 50mm to 80mm:	±0.95mm
Over 80mm to 120mm:	±1.10mm

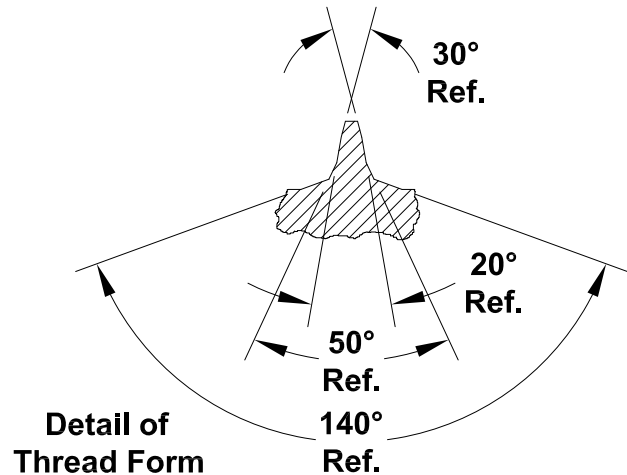
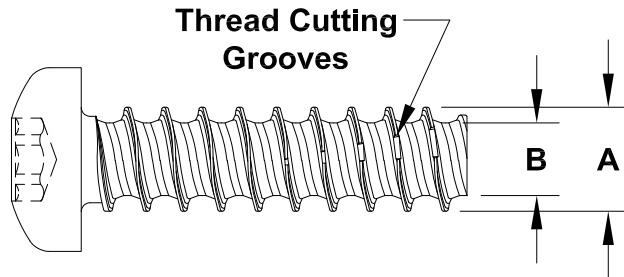
Application:

Thread forming fastener for plastics.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Through Harden - 33 to 39 Rc

Metric


Thread Size	A Major Diameter	B Core Diameter
	Ref.	Ref.
Δ22-0.85	2.2	1.5
Δ25-0.95	2.5	1.7
Δ30-1.12	3.0	2.1
Δ35-1.29	3.5	2.5
Δ40-1.46	4.0	2.8
Δ45-1.63	4.5	3.2
Δ50-1.80	5.0	3.5
Δ60-2.14	6.0	4.3
Δ70-2.48	7.0	5.0
Δ80-2.82	8.0	5.7
Δ100-3.50	10.0	7.2

[Click here for more info](#) 

Delta PT® is a registered trademark of EJOT Verbindungstechnik GmbH & Co. KG.

Length Tolerances:

Over 6mm to 10mm: ±0.45mm
 Over 10mm to 18mm: ±0.55mm
 Over 18mm to 30mm: ±0.65mm
 Over 30mm to 50mm: ±0.80mm
 Over 50mm to 80mm: ±0.95mm
 Over 80mm to 100mm: ±1.10mm

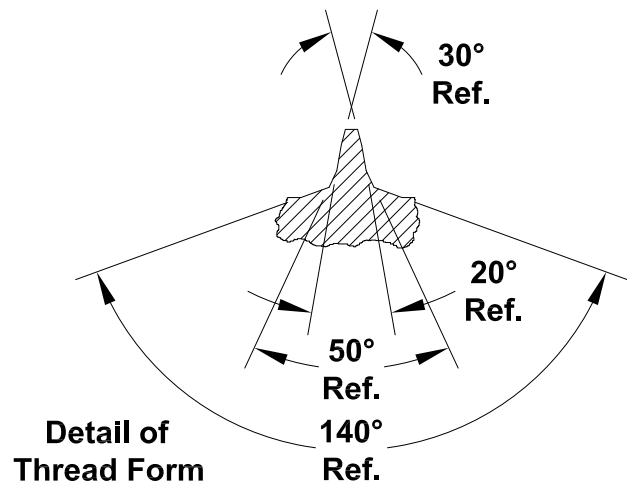
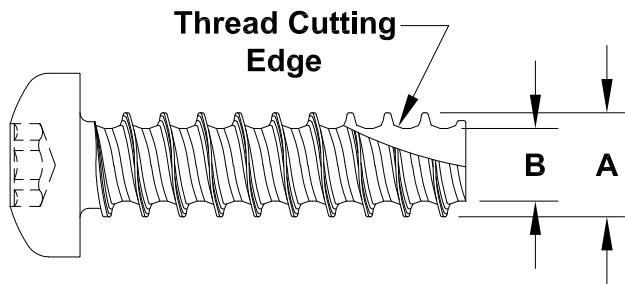
Application:

Thread forming fastener for thermoset plastics.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Through Harden - 33 to 39 Rc

Metric


Thread Size	A Major Diameter	B Core Diameter
	Ref.	Ref.
Δ25-0.95	2.5	1.7
Δ30-1.12	3.0	2.1
Δ35-1.29	3.5	2.5
Δ40-1.46	4.0	2.8
Δ45-1.63	4.5	3.2
Δ50-1.80	5.0	3.5
Δ60-2.14	6.0	4.3

[Click here for more info](#) 

Delta PT® is a registered trademark of EJOT Verbindungstechnik GmbH & Co. KG.

Length Tolerances:

Over 7mm to 10mm: ±0.45mm
 Over 10mm to 18mm: ±0.55mm
 Over 18mm to 30mm: ±0.65mm
 Over 30mm to 50mm: ±0.80mm
 Over 50mm to 60mm: ±0.95mm

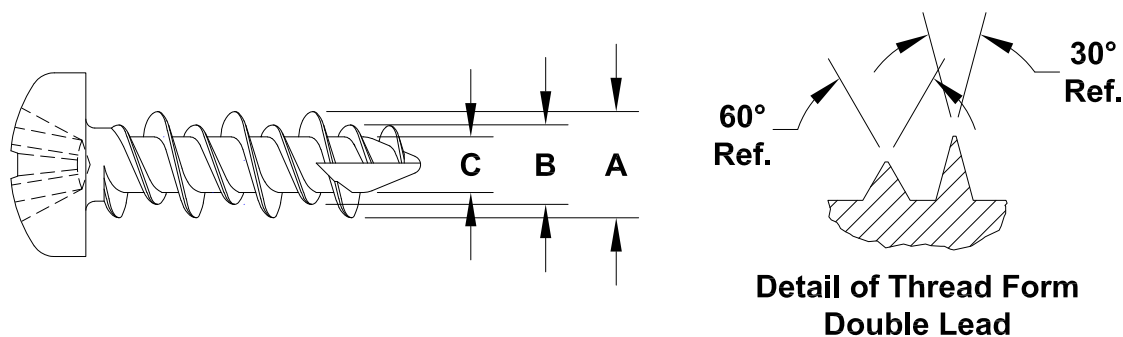
Application:

Thread forming fastener for
thermoset plastics and composites.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Through Harden - 33 to 39 Rc



Thread Size	A Major Diameter High Thread		B Major Diameter Low Thread	C Minor Diameter
	Max.	Min.	Ref.	Ref.
#2-32	.090	.084	.069	.051
#3-28	.105	.095	.078	.058
#4-24	.115	.105	.086	.064
#5-20	.125	.119	.100	.077
#6-19	.145	.135	.108	.080
#7-19	.158	.148	.130	.097
#8-18	.170	.160	.130	.095
#9-18	.185	.175	.145	.108
#10-16	.195	.185	.145	.102
#11-16	.210	.198	.150	.116
#12-16	.220	.210	.167	.128
#13-16	.230	.220	.180	.137
1/4-15	.260	.250	.200	.165
9/32-16	.285	.275	.230	.192
5/16-14	.317	.307	.250	.205
11/32-14	.355	.345	.290	.248

Notes: Major Diameter High Thread to be measured at midpoint of shank.
Thread permitted to be .002" out of round due to thread configuration.

Length Tolerances:

Up to 1": $\pm .030"$
Over 1" to 2": $\pm .050"$
Over 2": $\pm .060"$

Application:

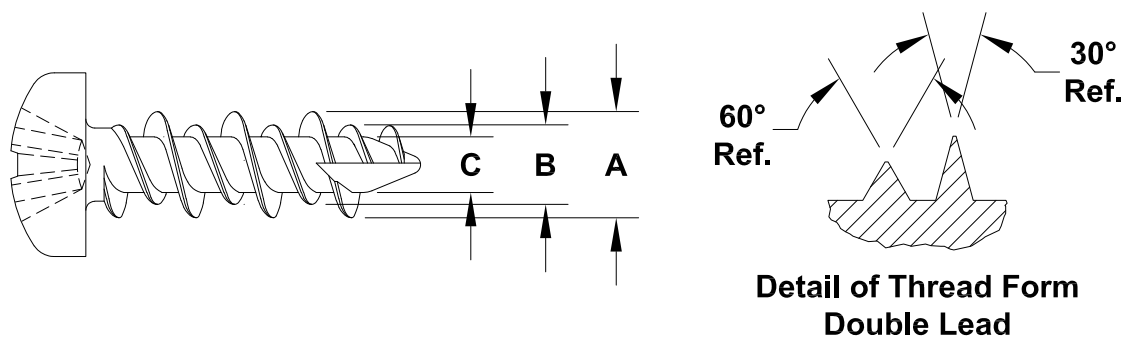
Thread cutting fastener for
plastics, wood, and particle board.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).

Metric (Soft Conversion)



Thread Size	A Major Diameter High Thread		B Major Diameter Low Thread	C Minor Diameter
	Max.	Min.	Ref.	Ref.
M2.2-0.79	2.29	2.13	1.75	1.30
M2.5-0.91	2.67	2.41	1.98	1.47
M2.9-1.06	2.92	2.66	2.18	1.63
M3.2-1.27	3.18	3.02	2.54	1.96
M3.5-1.34	3.69	3.43	2.74	2.03
M3.8-1.34	4.02	3.76	3.30	2.46
M4.2-1.41	4.32	4.06	3.30	2.41
M4.5-1.41	4.70	4.44	3.68	2.74
M4.8-1.59	4.96	4.70	3.68	2.59
M5.1-1.59	5.34	5.03	3.81	2.95
M5.5-1.59	5.59	5.33	4.24	3.25
M5.8-1.59	5.85	5.59	4.57	3.48
M6.3-1.69	6.61	6.35	5.08	4.19
M7.1-1.59	7.24	6.98	5.84	4.88
M8.0-1.81	8.05	7.79	6.35	5.21
M8.7-1.81	9.02	8.76	7.37	6.30

Notes: Major Diameter High Thread to be measured at midpoint of shank.
Thread permitted to be 0.05mm out of round due to thread configuration.

Length Tolerances:

Up to 25.4mm: $\pm 0.76\text{mm}$
Over 25.4mm to 50.8mm: $\pm 1.27\text{mm}$
Over 50.8mm: $\pm 1.53\text{mm}$

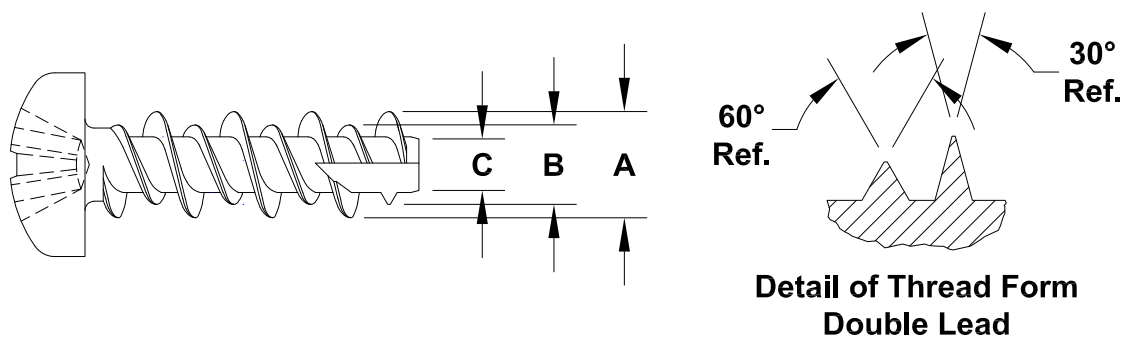
Application:

Thread cutting fastener for plastics, wood, and particle board.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter High Thread		B Major Diameter Low Thread	C Minor Diameter
	Max.	Min.	Ref.	Ref.
#2-32	.090	.084	.069	.051
#3-28	.105	.095	.078	.058
#4-24	.115	.105	.086	.064
#5-20	.125	.119	.100	.077
#6-19	.145	.135	.108	.080
#7-19	.158	.148	.130	.097
#8-18	.170	.160	.130	.095
#9-18	.185	.175	.145	.108
#10-16	.195	.185	.145	.102
#11-16	.210	.198	.150	.116
#12-16	.220	.210	.167	.128
#13-16	.230	.220	.180	.137
1/4-15	.260	.250	.200	.165
9/32-16	.285	.275	.230	.192
5/16-14	.317	.307	.250	.205
11/32-14	.355	.345	.290	.248

Notes: Major Diameter High Thread to be measured at midpoint of shank.
Thread permitted to be .002" out of round due to thread configuration.

Length Tolerances:

Up to 1": +.000/-.050"
Over 1" to 2": +.000/-.060"
Over 2": +.000/-.090"

Application:

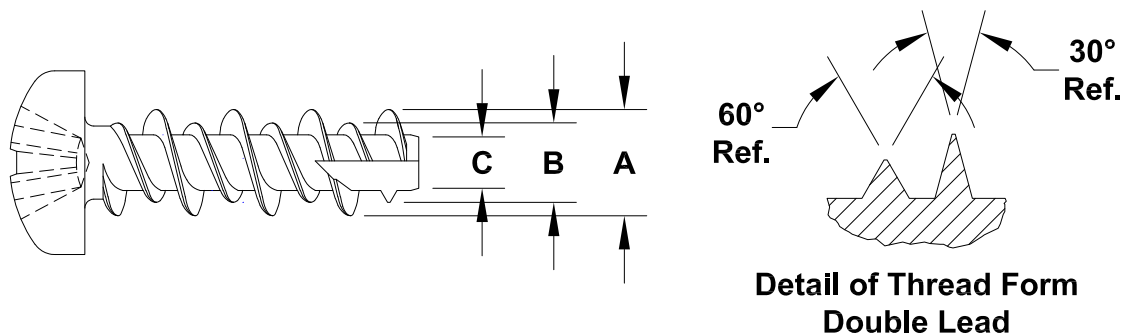
Thread cutting fastener for
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For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).

Metric (Soft Conversion)



Thread Size	A Major Diameter High Thread		B Major Diameter Low Thread	C Minor Diameter
	Max.	Min.	Ref.	Ref.
M2.2-0.79	2.29	2.13	1.75	1.30
M2.5-0.91	2.67	2.41	1.98	1.47
M2.9-1.06	2.92	2.66	2.18	1.63
M3.2-1.27	3.18	3.02	2.54	1.96
M3.5-1.34	3.69	3.43	2.74	2.03
M3.8-1.34	4.02	3.76	3.30	2.46
M4.2-1.41	4.32	4.06	3.30	2.41
M4.5-1.41	4.70	4.44	3.68	2.74
M4.8-1.59	4.96	4.70	3.68	2.59
M5.1-1.59	5.34	5.03	3.81	2.95
M5.5-1.59	5.59	5.33	4.24	3.25
M5.8-1.59	5.85	5.59	4.57	3.48
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M7.1-1.59	7.24	6.98	5.84	4.88
M8.0-1.81	8.05	7.79	6.35	5.21
M8.7-1.81	9.02	8.76	7.37	6.30

Notes: Major Diameter High Thread to be measured at midpoint of shank.
Thread permitted to be 0.05mm out of round due to thread configuration.

Length Tolerances:

Up to 25.4mm: +0.00/-1.27mm
Over 25.4mm to 50.8mm: +0.00/-1.53mm
Over 50.8mm: +0.00/-2.29mm

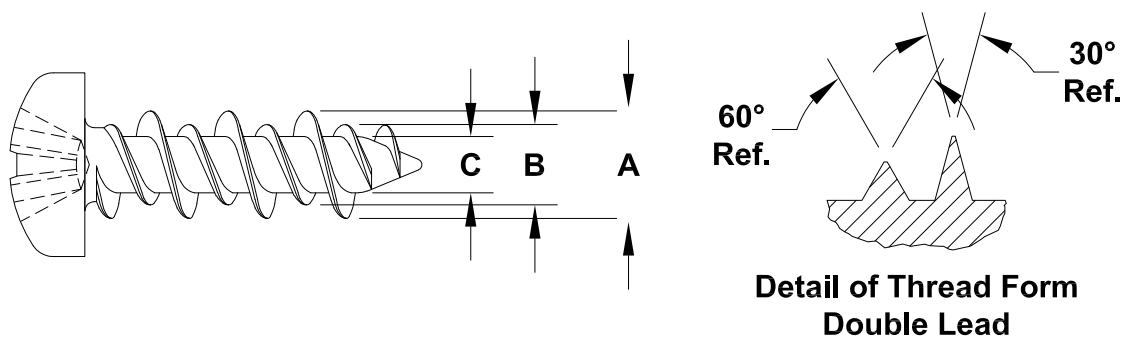
Application:

Thread cutting fastener for plastics, wood, and particle board.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter High Thread		B Major Diameter Low Thread	C Minor Diameter
	Max.	Min.	Ref.	Ref.
#2-32	.090	.084	.069	.051
#3-28	.105	.095	.078	.058
#4-24	.115	.105	.086	.064
#5-20	.125	.119	.100	.077
#6-19	.145	.135	.108	.080
#7-19	.158	.148	.130	.097
#8-18	.170	.160	.130	.095
#9-18	.185	.175	.145	.108
#10-16	.195	.185	.145	.102
#11-16	.210	.198	.150	.116
#12-16	.220	.210	.167	.128
#13-16	.230	.220	.180	.137
1/4-15	.260	.250	.200	.165
9/32-16	.285	.275	.230	.192
5/16-14	.317	.307	.250	.205
11/32-14	.355	.345	.290	.248

Notes: Major Diameter High Thread to be measured at midpoint of shank.
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Length Tolerances:

Up to 1": $\pm .030"$
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Over 2": $\pm .060"$

Application:

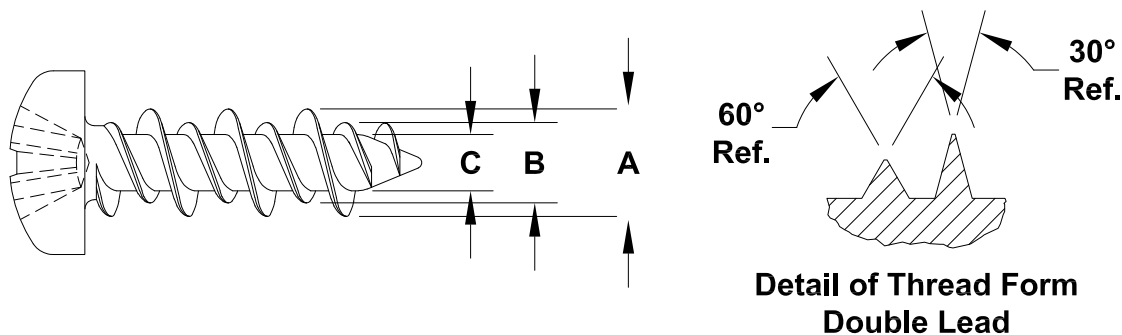
Thread forming fastener for
plastics, wood, and particle board.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).

Metric (Soft Conversion)



Thread Size	A Major Diameter High Thread		B Major Diameter Low Thread	C Minor Diameter
	Max.	Min.	Ref.	Ref.
M2.2-0.79	2.29	2.13	1.75	1.30
M2.5-0.91	2.67	2.41	1.98	1.47
M2.9-1.06	2.92	2.66	2.18	1.63
M3.2-1.27	3.18	3.02	2.54	1.96
M3.5-1.34	3.69	3.43	2.74	2.03
M3.8-1.34	4.02	3.76	3.30	2.46
M4.2-1.41	4.32	4.06	3.30	2.41
M4.5-1.41	4.70	4.44	3.68	2.74
M4.8-1.59	4.96	4.70	3.68	2.59
M5.1-1.59	5.34	5.03	3.81	2.95
M5.5-1.59	5.59	5.33	4.24	3.25
M5.8-1.59	5.85	5.59	4.57	3.48
M6.3-1.69	6.61	6.35	5.08	4.19
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M8.7-1.81	9.02	8.76	7.37	6.30

Notes: Major Diameter High Thread to be measured at midpoint of shank.
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Length Tolerances:

Up to 25.4mm: $\pm 0.76\text{mm}$
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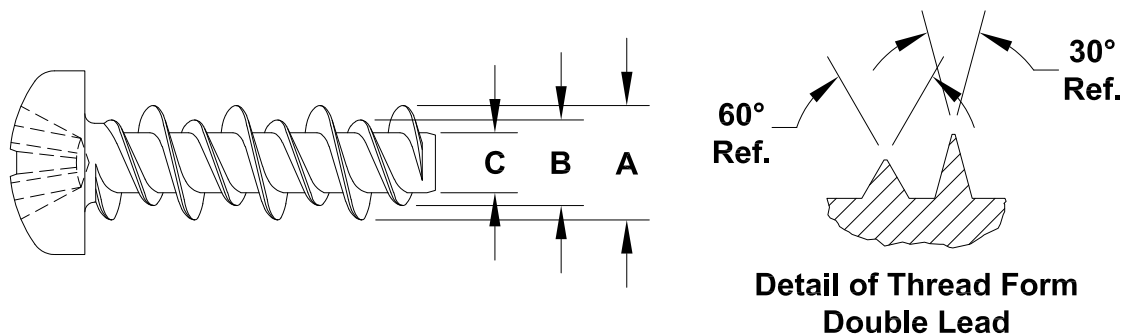
Application:

Thread forming fastener for
plastics, wood, and particle board.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter High Thread		B Major Diameter Low Thread	C Minor Diameter
	Max.	Min.	Ref.	Ref.
#2-32	.090	.084	.069	.051
#3-28	.105	.095	.078	.058
#4-24	.115	.105	.086	.064
#5-20	.125	.119	.100	.077
#6-19	.145	.135	.108	.080
#7-19	.158	.148	.130	.097
#8-18	.170	.160	.130	.095
#9-18	.185	.175	.145	.108
#10-16	.195	.185	.145	.102
#11-16	.210	.198	.150	.116
#12-16	.220	.210	.167	.128
#13-16	.230	.220	.180	.137
1/4-15	.260	.250	.200	.165
9/32-16	.285	.275	.230	.192
5/16-14	.317	.307	.250	.205
11/32-14	.355	.345	.290	.248

Notes: Major Diameter High Thread to be measured at midpoint of shank.
Thread permitted to be .002" out of round due to thread configuration.

Length Tolerances:

Up to 1": +.000/-.050"
Over 1" to 2": +.000/-.060"
Over 2": +.000/-.090"

Application:

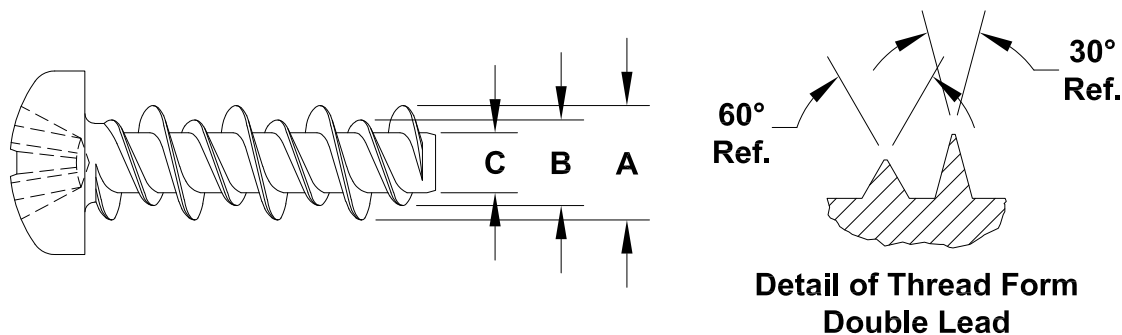
Thread forming fastener for plastics, wood, and particle board.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).

Metric (Soft Conversion)



Thread Size	A Major Diameter High Thread		B Major Diameter Low Thread	C Minor Diameter
	Max.	Min.	Ref.	Ref.
M2.2-0.79	2.29	2.13	1.75	1.30
M2.5-0.91	2.67	2.41	1.98	1.47
M2.9-1.06	2.92	2.66	2.18	1.63
M3.2-1.27	3.18	3.02	2.54	1.96
M3.5-1.34	3.69	3.43	2.74	2.03
M3.8-1.34	4.02	3.76	3.30	2.46
M4.2-1.41	4.32	4.06	3.30	2.41
M4.5-1.41	4.70	4.44	3.68	2.74
M4.8-1.59	4.96	4.70	3.68	2.59
M5.1-1.59	5.34	5.03	3.81	2.95
M5.5-1.59	5.59	5.33	4.24	3.25
M5.8-1.59	5.85	5.59	4.57	3.48
M6.3-1.69	6.61	6.35	5.08	4.19
M7.1-1.59	7.24	6.98	5.84	4.88
M8.0-1.81	8.05	7.79	6.35	5.21
M8.7-1.81	9.02	8.76	7.37	6.30

Notes: Major Diameter High Thread to be measured at midpoint of shank.
Thread permitted to be 0.05mm out of round due to thread configuration.

Length Tolerances:

Up to 25.4mm: +0.00/-1.27mm
Over 25.4mm to 50.8mm: +0.00/-1.53mm
Over 50.8mm: +0.00/-2.29mm

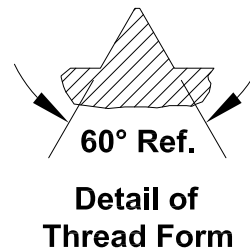
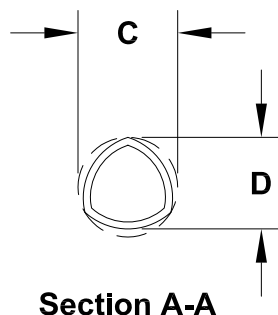
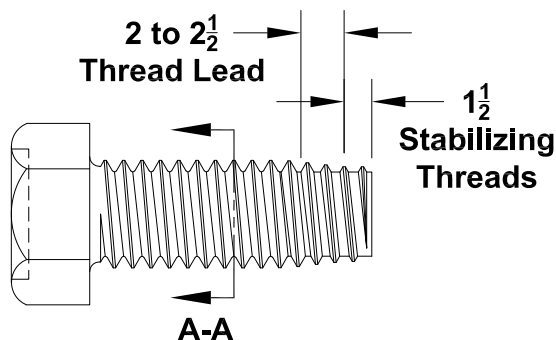
Application:

Thread forming fastener for
plastics, wood, and particle board.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
#00-90	.0481	.0451	.0471	.0441
#0-80	.0613	.0583	.0598	.0568
#1-64	.0745	.0715	.0730	.0700
#1-72	.0744	.0714	.0729	.0699
#2-56	.0875	.0835	.0855	.0815
#2-64	.0875	.0835	.0860	.0820
#3-48	.1010	.0970	.0990	.0950
#3-56	.1005	.0965	.0985	.0945
#4-40	.1145	.1105	.1120	.1080
#4-48	.1140	.1100	.1120	.1080
#5-40	.1275	.1235	.1250	.1210
#6-32	.1410	.1350	.1380	.1320
#6-40	.1405	.1345	.1380	.1320
#8-32	.1670	.1610	.1640	.1580
#8-36	.1665	.1605	.1635	.1575
#10-24	.1940	.1880	.1900	.1840
#10-32	.1930	.1870	.1900	.1840
#12-24	.2200	.2140	.2160	.2100
#12-28	.2195	.2135	.2160	.2100

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
1/4-20	.2550	.2490	.2500	.2440
1/4-28	.2535	.2475	.2500	.2440
5/16-18	.3180	.3120	.3125	.3065
5/16-24	.3165	.3105	.3125	.3065
3/8-16	.3810	.3750	.3745	.3685
3/8-24	.3790	.3730	.3750	.3690
7/16-14	.4445	.4385	.4375	.4315
7/16-20	.4425	.4365	.4375	.4315
1/2-13	.5075	.5015	.5000	.4940
1/2-20	.5050	.4990	.5000	.4940
9/16-12	.5710	.5630	.5625	.5545
5/8-11	.6340	.6260	.6250	.6170
5/8-18	.6310	.6230	.6255	.6175
3/4-10	.7600	.7520	.7500	.7420

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Length Tolerances:

Diameter #4 to #12
 Up to 1/2" +.000/-0.020"
 Over 1/2" to 1": +.000/-0.030"
 Over 1" to 2": +.000/-0.060"
 Over 2" +.000/-0.090"

Diameter 1/4 to 1/2
 Up to 1/2" +.000/-0.030"
 Over 1/2" to 1": +.000/-0.030"
 Over 1" to 2": +.000/-0.060"
 Over 2" +.000/-0.090"

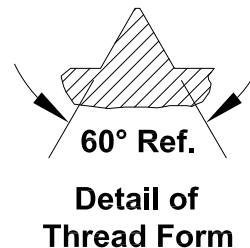
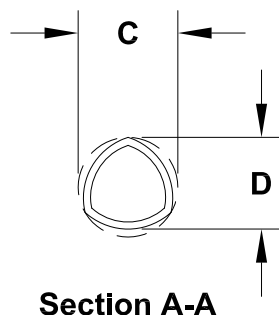
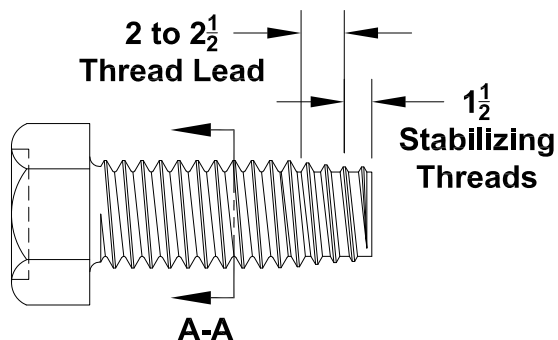
Application:

Thread rolling fastener for metals.

 For design assistance contact
 Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M1.6-0.35	1.66	1.58	1.62	1.55
M2-0.4	2.06	1.98	2.02	1.94
M2.5-0.45	2.57	2.48	2.52	2.44
M3-0.5	3.07	2.98	3.02	2.93
M3.5-0.6	3.58	3.48	3.52	3.42
M4-0.7	4.08	3.98	4.01	3.91
M4.5-0.75	4.59	4.48	4.51	4.41
M5-0.8	5.09	4.98	5.01	4.90
M6-1.0	6.10	5.97	6.00	5.87
M6.3-1.0	6.40	6.27	6.30	6.17
M7-1.0	7.10	6.97	7.00	6.87
M8-1.25	8.13	7.97	8.00	7.85
M10-1.5	10.15	9.97	10.00	9.82
M12-1.75	12.18	11.97	12.00	11.80
M14-2.0	14.20	13.97	14.00	13.77
M16-2.0	16.20	15.97	16.00	15.77

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Length Tolerances:

Up to 3mm:	±0.2
Over 3mm to 10mm:	±0.3
Over 10mm to 16mm:	±0.4
Over 16mm to 50mm:	±0.5
Over 50mm:	±1.0

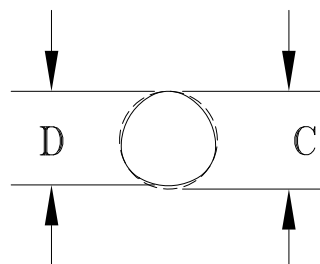
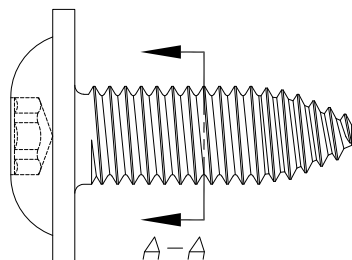
Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



SECTION A-A

Thread Size	C Major Diameter		D Minor Diameter	
	Max.	Min.	Max.	Min.
3-48	.1010	.0970	.0990	.0950
4-40	.1145	.1105	.1120	.1080
5-40	.1275	.1235	.1250	.1210
6-32	.1410	.1350	.1380	.1320
6-40	.1405	.1345	.1380	.1320
8-32	.1670	.1610	.1640	.1580
10-24	.1940	.1880	.1900	.1840
10-32	.1930	.1870	.1900	.1840
12-24	.2200	.2140	.2160	.2100
1/4-20	.2550	.2490	.2500	.2440
1/4-28	.2535	.2475	.2500	.2440
5/16-18	.3180	.3120	.3125	.3065
5/16-24	.3165	.3105	.3125	.3065
3/8-16	.3810	.3750	.3745	.3685
3/8-24	.3790	.3730	.3750	.3690
7/16-14	.4445	.4385	.4375	.4315
7/16-20	.4425	.4365	.4375	.4315
1/2-13	.5075	.5015	.5000	.4940
1/2-20	.5050	.4990	.5000	.4940

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Length Tolerances:

Up to 1": ±0.03"
Over 1": ±0.05"

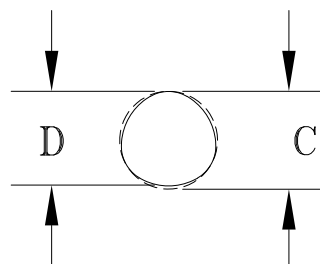
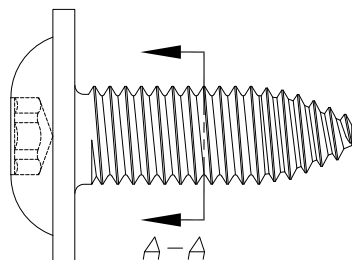
Application:

Thread rolling fastener for thin sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



SECTION A-A

Thread Size	C Major Diameter		D Minor Diameter	
	Max.	Min.	Max.	Min.
M2.5-0.45	2.57	2.48	2.53	2.44
M3-0.5	3.07	2.98	3.02	2.93
M3.5-0.6	3.58	3.48	3.52	3.42
M4-0.7	4.08	3.98	4.01	3.91
M4.5-0.75	4.59	4.48	4.52	4.41
M5-0.8	5.09	4.98	5.01	4.90
M6-1.0	6.10	5.97	6.00	5.87
M7-1.0	7.10	6.97	7.00	6.87
M8-1.25	8.13	7.97	8.01	7.85
M10-1.5	10.15	9.97	10.00	9.82
M12-1.75	12.18	11.97	12.01	11.80

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Length Tolerances:

Up to 25mm: $\pm 0.8\text{mm}$
Over 25mm: $\pm 1.3\text{mm}$

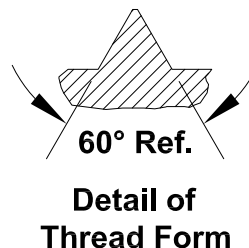
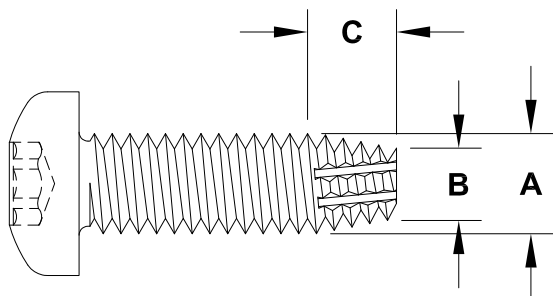
Application:

Thread rolling fastener for thin sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	A Major Diameter		B Point Diameter		C Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Ref.	in-lbs
#2-56	.0860	.0813	.068	.061	.062	5
#2-64	.0860	.0816	.070	.064	.055	6
#3-48	.0990	.0938	.078	.070	.073	9
#3-56	.0990	.0942	.081	.074	.062	10
#4-40	.1120	.1061	.087	.078	.088	13
#4-48	.1120	.1068	.091	.083	.073	15
#5-40	.1250	.1191	.100	.091	.088	18
#5-44	.1250	.1195	.102	.094	.080	20
#6-32	.1380	.1312	.107	.096	.109	23
#6-40	.1380	.1321	.113	.104	.088	27
#8-32	.1640	.1571	.132	.122	.109	42
#8-36	.1640	.1577	.136	.126	.097	47
#10-24	.1900	.1818	.148	.135	.146	56
#10-32	.1900	.1831	.158	.148	.109	74
#12-24	.2160	.2078	.174	.161	.146	93
#12-28	.2160	.2085	.180	.168	.125	108
1/4-20	.2500	.2408	.200	.184	.175	140
1/4-28	.2500	.2425	.214	.202	.125	179
5/16-18	.3125	.3026	.257	.239	.194	306
5/16-24	.3125	.3042	.271	.257	.146	370
3/8-16	.3750	.3643	.312	.239	.219	560
3/8-24	.3750	.3667	.333	.319	.146	710
7/16-14	.4375	.4258	.366	.344	.250	700
7/16-20	.4375	.4281	.387	.371	.175	820
1/2-13	.5000	.4876	.423	.399	.269	1075
1/2-20	.5000	.4906	.450	.433	.175	1285

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 3/4": +.000/- .030"
Over 3/4" to 1 1/2": +.000/- .050"
Over 1 1/2": +.000/- .060"

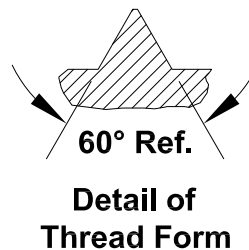
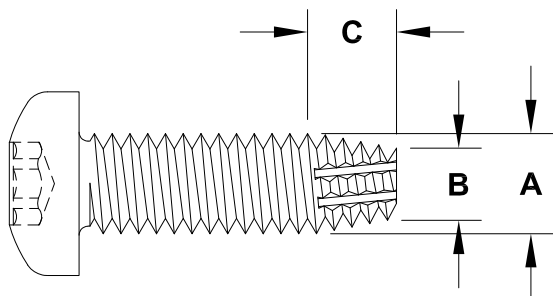
Application:

Thread cutting screw for sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Point Diameter		C Taper Length	Minimum Torsional Strength
	Max.	Min.	Max.	Min.	Ref.	N-m
M2-0.4	2.00	1.88	1.45	1.39	1.40	0.5
M2.5-0.45	2.50	2.37	1.88	1.82	1.60	1.1
M3-0.5	3.00	2.87	2.32	2.26	1.80	2.0
M3.5-0.6	3.50	3.35	2.68	2.60	2.10	3.1
M4-0.7	4.00	3.83	3.07	2.97	2.50	4.6
M5-0.8	5.00	4.82	3.94	3.84	2.80	9.4
M6-1.0	6.00	5.79	4.69	4.55	3.50	16.0
M8-1.25	8.00	7.76	6.40	6.24	4.40	40.0
M10-1.5	10.00	9.73	8.08	7.88	5.30	78.0

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 20mm: +0.0/-0.8mm
Over 20mm to 40mm: +0.0/-1.2mm
Over 40mm: +0.0/-1.5mm

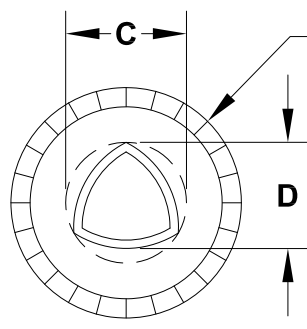
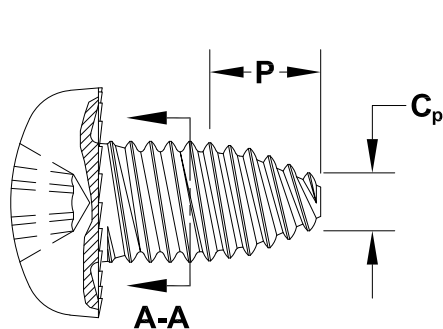
Application:

Thread cutting screw for sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

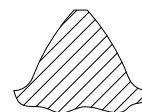
Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).


Section A-A

**24 Serrations Equally
Spaced 15° Apart
(Optional Feature)**

Inch

Radius Profile™



**Detail of
Thread Form**

Thread Size	C Circumscribing Diameter		D Micrometer Reading		C _p Point Diameter	P Taper Length
	Max.	Min.	Max.	Min.	Max.	Ref.
#2-56	.0880	.0840	.0862	.0818	.040	.080
#3-48	.1010	.0970	.0989	.0944	.045	.094
#4-40	.1138	.1098	.1113	.1067	.047	.113
#5-40	.1268	.1228	.1243	.1197	.060	.113
#6-32	.1413	.1353	.1382	.1314	.057	.141
#8-32	.1674	.1614	.1643	.1575	.083	.141
#10-24	.1934	.1874	.1892	.1822	.082	.188
#10-32	.1936	.1876	.1905	.1837	.109	.141
#12-24	.2194	.2134	.2152	.2082	.108	.188
1/4-20	.2534	.2474	.2484	.2411	.120	.225

[Click here for more info](#) 

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Length Tolerances:

To be specified.

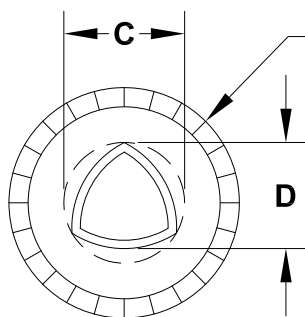
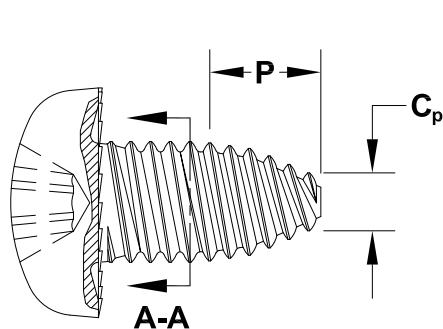
Application:

Thread rolling fastener for thin
sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

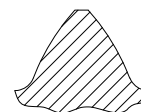
To be specified.


Section A-A

**24 Serrations Equally
Spaced 15° Apart
(Optional Feature)**

Metric

Radius Profile™



**Detail of
Thread Form**

Thread Size	C Circumscribing Diameter		D Micrometer Reading		C _p Point Diameter	P Taper Length
	Max.	Min.	Max.	Min.	Max.	Ref.
M2-0.4	2.01	1.93	1.97	1.89	0.95	1.80
M2.5-0.45	2.52	2.43	2.48	2.39	1.32	2.03
M3-0.5	3.02	2.93	2.97	2.88	1.69	2.25
M3.5-0.6	3.52	3.42	3.46	3.36	1.92	2.70
M4-0.7	4.02	3.92	3.95	3.85	2.16	3.15
M4.5-0.75	4.52	4.41	4.45	4.34	2.52	3.38
M5-0.8	5.02	4.91	4.94	4.83	2.89	3.60
M6-1.0	6.03	5.90	5.93	5.80	3.37	4.50
M7-1.0	7.03	6.90	6.93	6.80	4.37	4.50
M8-1.25	8.03	7.87	7.91	7.75	4.70	5.63
M10-1.50	10.03	9.85	9.88	9.70	6.04	6.75

[Click here for more info](#) 

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Length Tolerances:

To be specified.

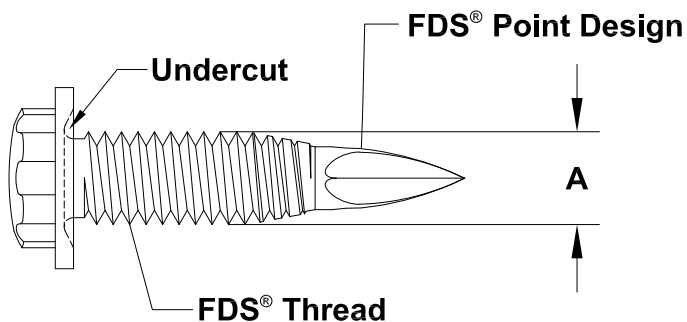
Application:

Thread rolling fastener for thin
sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	A Major Diameter	
	Max.	Min.
M3.5-0.6	3.65	3.5
M4-0.7	4.18	4.0
M5-0.8	5.18	5.0
M6-1	6.18	6.0

Click here for more info 

FDS® is a trademark licensed by EJOT Verbindungstechnik GmbH & Co. KG.

Length Tolerances:

Less than 10mm:	+0.4
10mm to 30mm:	+0.8
Over 30mm:	+1.0

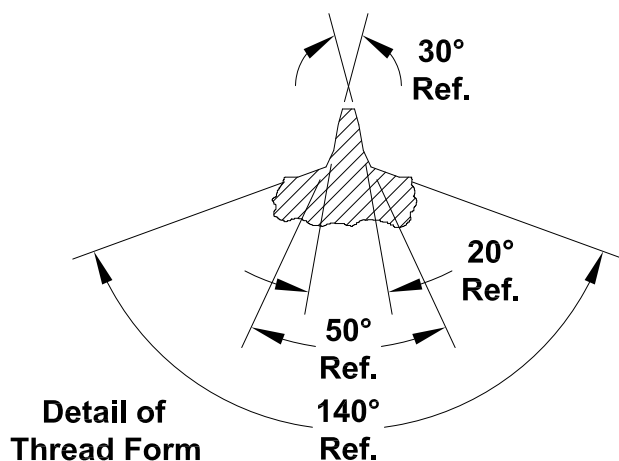
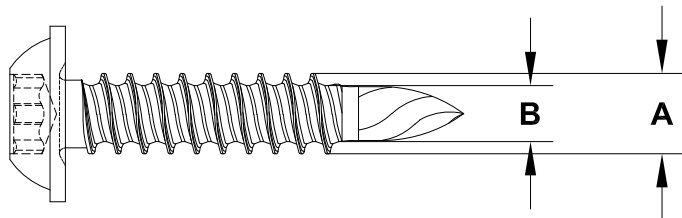
Application:

Self piercing, thread forming for thin sheet aluminum and steel where one sided access is required.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Through Hardened
Case Hardened
Induction Hardened



Thread Size	A Major Diameter		B Minor Diameter	
	Max.	Min.	Max.	Min.
Δ30-0.95	3.10	3.00	2.32	2.22
Δ40-1.05	4.10	4.00	3.19	3.09
Δ50-1.20	5.15	5.00	3.95	3.80
Δ60-1.60	6.15	6.00	4.68	4.53

[Click here for more info](#) 

Flowpoint Delta PT® is a registered trademark of EJOT Verbindungstechnik GmbH & Co. KG.

Length Tolerances:

All lengths: $\pm 1.05\text{mm}$

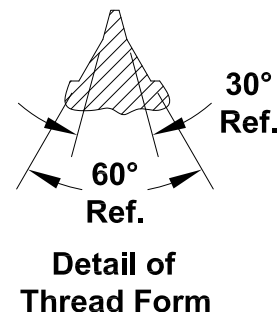
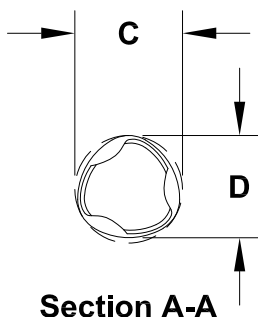
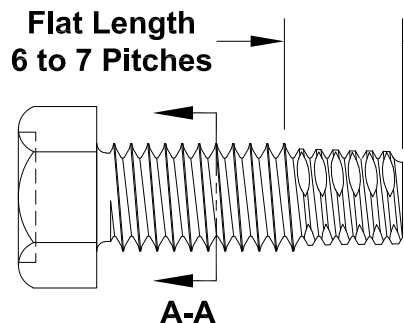
Application:

Self piercing, thread forming for Carbon Fiber Reinforced Plastic (CFRP).

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M3.5-0.6	3.69	3.59	3.57	3.47
M4-0.7	4.22	4.10	4.08	3.96
M5-0.8	5.26	5.13	5.10	4.97
M6-1.0	6.30	6.15	6.10	5.95
M8-1.25	8.35	8.20	8.10	7.95
M10-1.5	10.40	10.25	10.10	9.95
M12-1.75	12.45	12.30	12.10	11.95

KLEERLOK® is a trademark licensed by Research Engineering & Manufacturing Inc. (REMINC).

Length Tolerances:

To be specified.

Application:

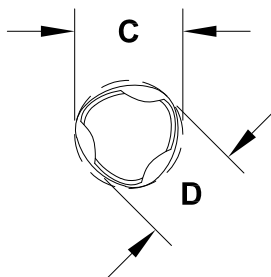
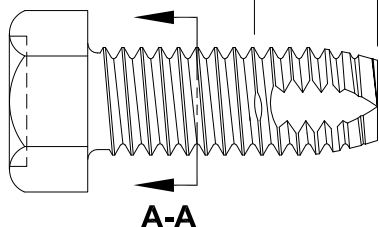
Thread design for thread locking and paint clearing in pre-tapped hole.

For design assistance contact Semblex Engineering Services.

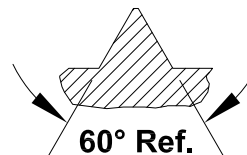
Heat Treatment:

To be specified.

Flat Length
4 to 7 Pitches



Section A-A



Detail of
Thread Form

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M5-0.8	5.09	4.98	5.01	4.90
M6-1.0	6.10	5.97	6.00	5.87
M7-1.0	7.10	6.97	7.00	6.87
M8-1.25	8.13	7.97	8.00	7.85
M10-1.5	10.15	9.97	10.00	9.82

KLEERTITE® is a trademark licensed by Research Engineering & Manufacturing Inc. (REMINC).

Length Tolerances:

To be specified.

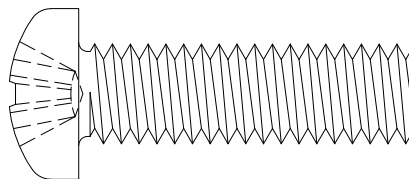
Application:

Thread design for paint clearing
in pre-tapped or untapped holes.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	Major Diameter		Pitch Diameter	
	Max.	Min.	Max.	Min.
#2-56	.0854	.0813	.0738	.0717
#2-64	.0854	.0816	.0753	.0733
#3-48	.0983	.0938	.0848	.0825
#3-56	.0983	.0942	.0867	.0845
#4-40	.1112	.1061	.0950	.0925
#4-48	.1113	.1068	.0978	.0954
#5-40	.1242	.1191	.1080	.1054
#5-44	.1243	.1195	.1095	.1070
#6-32	.1372	.1312	.1169	.1141
#6-40	.1372	.1321	.1210	.1184
#8-32	.1631	.1571	.1428	.1399
#8-36	.1632	.1577	.1452	.1424
#10-24	.1890	.1818	.1619	.1586
#10-32	.1891	.1831	.1688	.1658
#12-24	.2150	.2078	.1879	.1845
#12-28	.2150	.2085	.1918	.1886

Thread Size	Major Diameter		Pitch Diameter	
	Max.	Min.	Max.	Min.
1/4-20	.2489	.2408	.2164	.2127
1/4-28	.2490	.2425	.2258	.2225
5/16-18	.3113	.3026	.2752	.2712
5/16-24	.3114	.3042	.2843	.2806
3/8-16	.3737	.3643	.3331	.3287
3/8-24	.3739	.3667	.3468	.3430
7/16-14	.4361	.4258	.3897	.3850
7/16-20	.4362	.4281	.4037	.3995
1/2-13	.4985	.4876	.4485	.4435
1/2-20	.4987	.4906	.4662	.4619
9/16-12	.5609	.5495	.5068	.5016
9/16-18	.5611	.5524	.5250	.5205
5/8-11	.6234	.6113	.5644	.5589
5/8-18	.6236	.6149	.5875	.5828

Reference dimensional standard ASME B1.1

Length Tolerances:

Diameter #2 to #12
 Up to 1/2" +.000/-.020"
 Over 1/2" to 1": +.000/-.030"
 Over 1" to 2": +.000/-.060"
 Over 2" +.000/-.090"

Diameter 1/4 to 5/8
 Up to 1/2" +.000/-.030"
 Over 1/2" to 1": +.000/-.030"
 Over 1" to 2": +.000/-.060"
 Over 2" +.000/-.090"

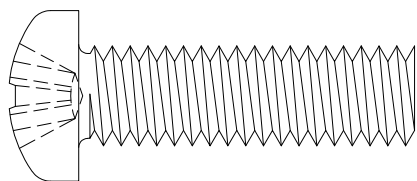
Application:

Machine screw design for
pre-tapped holes.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	Major Diameter	Pitch Diameter
	Max.	Max.
#2-56	.0860	.0744
#2-64	.0860	.0759
#3-48	.0990	.0855
#3-56	.0990	.0874
#4-40	.1120	.0958
#4-48	.1120	.0985
#5-40	.1250	.1088
#5-44	.1250	.1102
#6-32	.1380	.1177
#6-40	.1380	.1218
#8-32	.1640	.1437
#8-36	.1640	.1460
#10-24	.1900	.1629
#10-32	.1900	.1697
#12-24	.2160	.1889
#12-28	.2160	.1928

Thread Size	Major Diameter	Pitch Diameter
	Max.	Max.
1/4-20	.2500	.2175
1/4-28	.2500	.2268
5/16-18	.3125	.2764
5/16-24	.3125	.2854
3/8-16	.3750	.3344
3/8-24	.3750	.3479
7/16-14	.4375	.3911
7/16-20	.4375	.4050
1/2-13	.5000	.4500
1/2-20	.5000	.4675
9/16-12	.5625	.5084
9/16-18	.5625	.5264
5/8-11	.6250	.5660
5/8-18	.6250	.5889

Reference dimensional standard ASME B1.1

Length Tolerances:

Diameter #2 to #12
 Up to 1/2" +.000/-.020"
 Over 1/2" to 1": +.000/-.030"
 Over 1" to 2": +.000/-.060"
 Over 2" +.000/-.090"

Diameter 1/4 to 5/8
 Up to 1/2" +.000/-.030"
 Over 1/2" to 1": +.000/-.030"
 Over 1" to 2": +.000/-.060"
 Over 2" +.000/-.090"

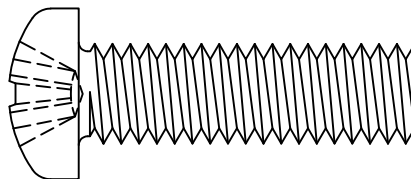
Application:

Machine screw design for pre-tapped holes.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	Major Diameter		Pitch Diameter	
	Max.	Min.	Max.	Min.
M1.6-0.35	1.581	1.496	1.354	1.314
M2-0.4	1.981	1.886	1.721	1.679
M2.5-0.45	2.480	2.380	2.188	2.143
M3-0.5	2.980	2.874	2.655	2.607
M3.5-0.6	3.479	3.354	3.089	3.036
M4-0.7	3.978	3.838	3.523	3.467
M5-0.8	4.976	4.826	4.456	4.396
M6-1.0	5.974	5.794	5.324	5.253
M7-1.0	6.974	6.794	6.324	6.253
M8-1.25	7.972	7.760	7.160	7.085
M8-1.0	7.974	7.794	7.324	7.253
M10-1.5	9.968	9.732	8.994	8.909
M10-1.25	9.972	9.760	9.160	9.085
M12-1.75	11.966	11.701	10.829	10.734
M12-1.25	11.972	11.760	11.160	11.075
M14-2.0	13.962	13.682	12.663	12.563
M14-1.5	13.968	13.732	12.994	12.904
M16-2.0	15.962	15.682	14.663	14.563
M16-1.5	15.968	15.732	14.994	14.904

Reference dimensional standard ASME B1.13M

Length Tolerances:

Up to 3mm: $\pm 0.2\text{mm}$
Over 3mm to 10mm: $\pm 0.3\text{mm}$
Over 10mm to 16mm: $\pm 0.4\text{mm}$
Over 16mm to 50mm: $\pm 0.5\text{mm}$
Over 50mm: $\pm 1.0\text{mm}$

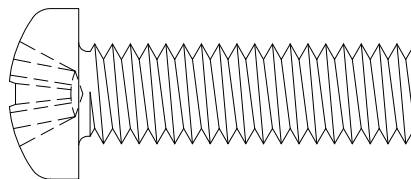
Application:

Machine screw design for pre-tapped holes.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	Major Diameter		Pitch Diameter	
	Max.	Min.	Max.	Min.
M1.6-0.35	1.581	1.496	1.354	1.291
M2-0.4	1.981	1.886	1.721	1.654
M2.5-0.45	2.480	2.380	2.188	2.117
M3-0.5	2.980	2.874	2.655	2.580
M3.5-0.6	3.479	3.354	3.089	3.004
M4-0.7	3.978	3.838	3.523	3.433
M5-0.8	4.976	4.826	4.456	4.361
M6-1.0	5.974	5.794	5.324	5.212
M7-1.0	6.974	6.794	6.324	6.212
M8-1.25	7.972	7.760	7.160	7.042
M8-1.0	7.974	7.794	7.324	7.212
M10-1.5	9.968	9.732	8.994	8.862
M10-1.25	9.972	9.760	9.160	9.042
M12-1.75	11.966	11.701	10.829	10.679
M12-1.25	11.972	11.760	11.160	11.028
M14-2.0	13.962	13.682	12.663	12.503
M14-1.5	13.968	13.732	12.994	12.854
M16-2.0	15.962	15.682	14.663	14.503
M16-1.5	15.968	15.732	14.994	14.854

Reference dimensional standard ASME B1.13M

Length Tolerances:

Up to 3mm: $\pm 0.2\text{mm}$
Over 3mm to 10mm: $\pm 0.3\text{mm}$
Over 10mm to 16mm: $\pm 0.4\text{mm}$
Over 16mm to 50mm: $\pm 0.5\text{mm}$
Over 50mm: $\pm 1.0\text{mm}$

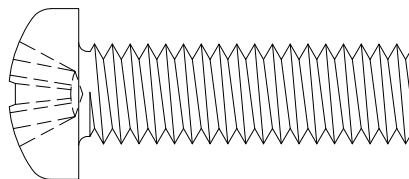
Application:

Machine screw design for pre-tapped holes.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	Major Diameter	Pitch Diameter
	Max.	Max.
M1.6-0.35	1.600	1.373
M2-0.4	2.000	1.740
M2.5-0.45	2.500	2.208
M3-0.5	3.000	2.675
M3.5-0.6	3.500	3.110
M4-0.7	4.000	3.545
M5-0.8	5.000	4.480
M6-1.0	6.000	5.350
M7-1.0	7.000	6.350
M8-1.25	8.000	7.188
M8-1.0	8.000	7.350
M10-1.5	10.000	9.026
M10-1.25	10.000	9.188
M12-1.75	12.000	10.863
M12-1.25	12.000	11.188
M14-2.0	14.000	12.701
M14-1.5	14.000	13.026

Reference dimensional standard ASME B1.13M

Length Tolerances:

Up to 3mm: ±0.2mm
Over 3mm to 10mm: ±0.3mm
Over 10mm to 16mm: ±0.4mm
Over 16mm to 50mm: ±0.5mm
Over 50mm: ±1.0mm

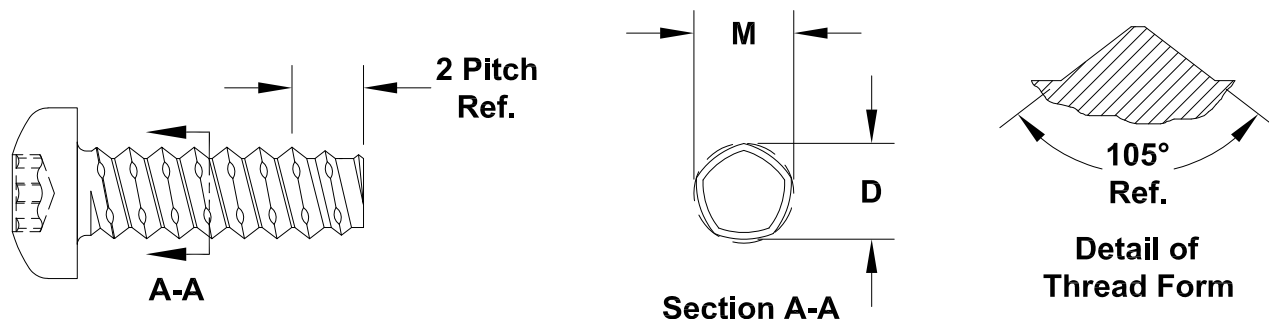
Application:

Machine screw design for
pre-tapped holes.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	M Penta Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
MG1-0.5	1.050	1.000	1.032	0.982
MG1.1-0.5	1.150	1.095	1.132	1.077
MG1.2-0.5	1.250	1.190	1.232	1.172
MG1.4-0.6	1.455	1.385	1.433	1.363
MG1.5-0.6	1.555	1.480	1.533	1.458
MG1.6-0.7	1.660	1.580	1.634	1.554
MG1.8-0.7	1.860	1.780	1.834	1.754
MG2-0.8	2.060	1.980	2.031	1.951
MG2.2-0.9	2.265	2.180	2.232	2.147
MG2.5-0.9	2.570	2.480	2.537	2.447
MG3-1.0	3.070	2.980	3.033	2.943
MG3.5-1.2	3.580	3.480	3.536	3.436
MG4-1.4	4.080	3.980	4.029	3.929
MG4.5-1.5	4.590	4.480	4.535	4.425
MG5-1.6	5.090	4.980	5.032	4.922
MG6-2.0	6.100	5.970	6.027	5.897
MG7-2.0	7.100	6.970	7.027	6.897
MG8-2.5	8.130	7.970	8.039	7.879
MG10-3.0	10.150	9.970	10.040	9.860
MG12-3.5	12.180	11.970	12.052	11.842
MG14-4.0	14.200	13.970	14.054	13.824
MG16-4.0	16.200	15.970	16.054	15.824

[Click here for more info](#) 

Mag-Form® is a registered trademark of Acument Intellectual Properties, LLC.

Length Tolerances:

Up to 10mm: +0.00/-0.40mm
Over 10mm to 20mm: +0.00/-0.80mm
Over 20mm to 40mm: +0.00/-1.20mm
Over 40mm: +0.00/-1.50mm

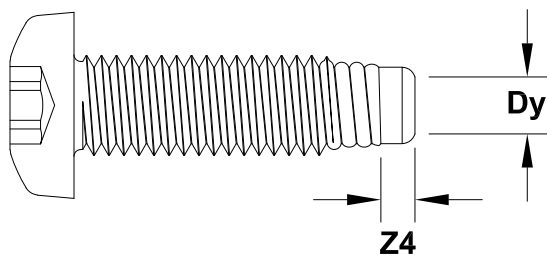
Application:

Thread forming fastener for magnesium.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Through Harden - 33 to 39 Rc



Thread Size	Z4 Point Length	Dy Point Diameter
	Max.	Max.
M4-0.7	2.0	2.7
M5-0.8	2.5	3.4
M6-1.0	3.0	4.1
M8-1.25	4.3	5.4
M10-1.5	5.5	6.8
M12-1.75	6.6	8.2
M14-2.0	7.9	9.6
M16-2.0	7.9	11.5

[Click here for more info](#) 

MAThread® is a registered trademark of MAThread Inc.

Length Tolerances:

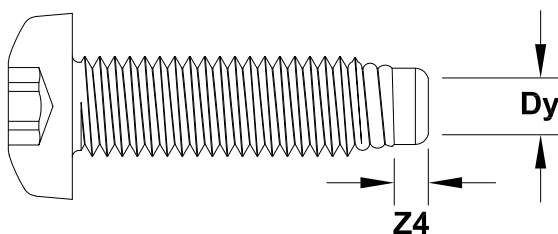
Up to 50mm: ±0.15mm
Over 50mm: ±0.25mm

Application:

Anti-cross thread and paint clearing machine screw design for pre-tapped holes.
For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	Z4 Point Length	Dy Point Diameter
	Max.	Max.
M4-0.7	2.40	2.7
M5-0.8	2.50	3.4
M6-1.0	2.85	4.0
M8-1.25	3.90	5.5
M10-1.5	4.65	6.8
M12-1.75	5.65	8.2
M14-2.0	6.43	9.6
M16-2.0	7.10	10.9

[Click here for more info](#) 

MATpoint® is a registered trademark of MATHread Inc.

Length Tolerances:

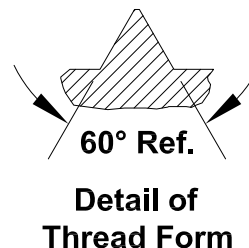
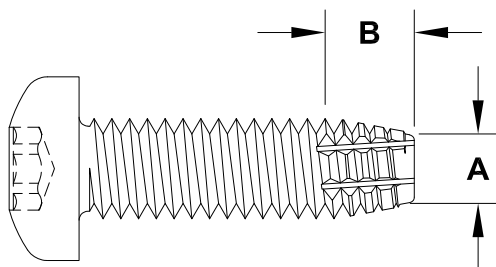
Up to 50mm: $\pm 0.15\text{mm}$
Over 50mm: $\pm 0.25\text{mm}$

Application:

Anti-cross thread and paint clearing machine screw design for pre-tapped holes.
For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	Major Diameter		Pitch Diameter		A Point Diameter		B Taper Length
	Max.	Min.	Max.	Min.	Max.	Min.	Ref.
#2-56	.0854	.0813	.0738	.0717	.068	.061	.062
#2-64	.0854	.0816	.0753	.0733	.070	.064	.055
#3-48	.0983	.0938	.0848	.0825	.078	.070	.073
#3-56	.0983	.0942	.0867	.0845	.081	.074	.062
#4-40	.1112	.1061	.0950	.0925	.087	.078	.088
#4-48	.1113	.1068	.0978	.0945	.091	.083	.073
#5-40	.1242	.1191	.1080	.1054	.100	.091	.088
#5-44	.1243	.1195	.1095	.1070	.102	.094	.080
#6-32	.1372	.1312	.1169	.1141	.107	.096	.109
#6-40	.1372	.1321	.1210	.1184	.113	.104	.088
#8-32	.1631	.1571	.1428	.1399	.132	.122	.109
#8-36	.1632	.1577	.1452	.1424	.136	.126	.097
#10-24	.1890	.1818	.1619	.1586	.148	.135	.146
#10-32	.1891	.1831	.1688	.1658	.158	.148	.109
#12-24	.2150	.2078	.1879	.1845	.174	.161	.146
#12-28	.2150	.2085	.1918	.1886	.180	.168	.125
1/4-20	.2489	.2408	.2164	.2127	.200	.184	.175
1/4-28	.2490	.2425	.2258	.2225	.214	.202	.125
5/16-18	.3113	.3026	.2752	.2712	.257	.239	.194
5/16-24	.3114	.3042	.2843	.2806	.271	.257	.146
3/8-16	.3737	.3643	.3331	.3287	.312	.239	.219
3/8-24	.3739	.3667	.3468	.3430	.333	.319	.146
7/16-14	.4361	.4285	.3897	.3850	.366	.344	.250
7/16-20	.4362	.4281	.4037	.3995	.387	.371	.175
1/2-13	.4985	.4876	.4485	.4435	.423	.399	.269
1/2-20	.4987	.4906	.4662	.4619	.450	.433	.175

Notes: All Point and Taper Dimensions Apply Prior to Thread Rolling.

Length Tolerances:

Up to 3/4": +.000/-.030"
Over 3/4" to 1 1/2": +.000/-.050"
Over 1 1/2": +.000/-.060"

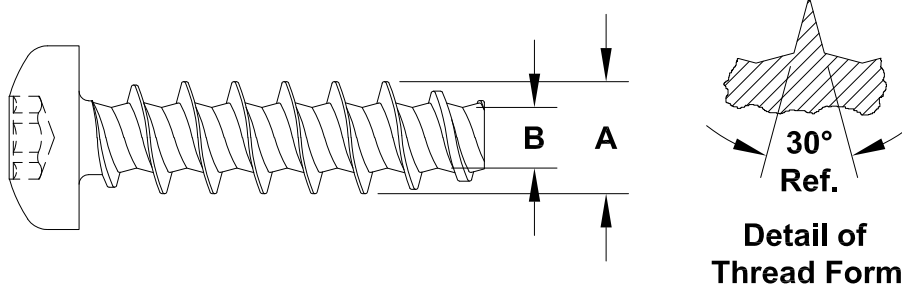
Application:

Thread design for paint clearing of tapped holes.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	A Major Diameter	B Core Diameter
	Ref.	Ref.
K10-0.44	1.0	0.6
K12-0.53	1.2	0.7
K14-0.62	1.4	0.8
K16-0.67	1.6	0.9
K18-0.80	1.8	1.0
K20-0.89	2.0	1.2
K22-0.98	2.2	1.3
K25-1.12	2.5	1.4
K30-1.34	3.0	1.7
K35-1.57	3.5	1.9
K40-1.79	4.0	2.2
K50-2.24	5.0	2.7
K60-2.69	6.0	3.2
K70-3.14	7.0	3.7
K80-3.59	8.0	4.2
K100-4.49	10.0	5.2

[Click here for more info](#) 

PT® is a registered trademark of EJOT Verbindungstechnik GmbH & Co. KG.

Length Tolerances:

Up to 3mm:	±0.30mm
Over 3mm to 6mm:	±0.38mm
Over 6mm to 10mm:	±0.45mm
Over 10mm to 18mm:	±0.55mm
Over 18mm to 30mm:	±0.65mm
Over 30mm to 50mm:	±0.80mm
Over 50mm to 80mm:	±0.95mm
Over 80mm to 120mm:	±1.10mm

Application:

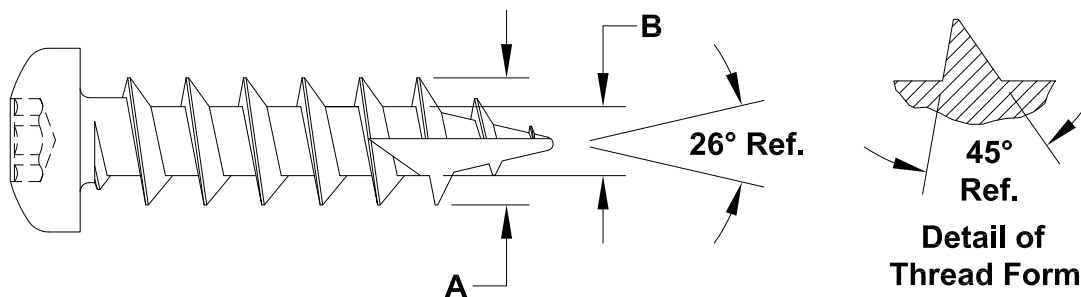
Thread forming fastener for plastics.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Through Harden - 33 to 39 Rc

Inch



Thread Size	A Major Diameter		B Minor Diameter	Head Size	
	Max.	Min.		Flat/Oval	Others*
#2-20	.091	.082	.046	#2	#1
#3-18	.105	.096	.054	#3	#2
#4-16	.117	.108	.063	#4	#3
#5-14	.130	.121	.071	#5	#4
#6-13	.144	.135	.078	#6	#5
#7-12	.157	.147	.082	#7	#6
#8-11	.170	.160	.089	#8	#6
#9-10	.183	.173	.098	#9	#7
#10-9	.196	.186	.102	#10	#8
#11-9	.210	.200	.115	#10	#8
#12-9	.223	.213	.128	#12	#10
#14-7	.248	.238	.132	1/4	#12
1/4-7	.256	.246	.136	1/4	#12
5/16-6	.318	.308	.170	5/16	1/4
3/8-5	.382	.370	.204	3/8	5/16

* Pan, Hex, Hex Washer Head Styles.

[Click here for more info](#) 

Polyfast® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 1": $\pm .030$ "
Over 1": $\pm .050$ "

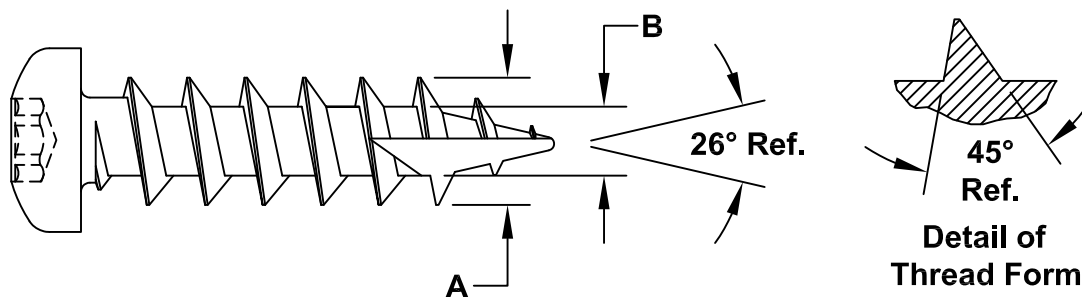
Application:

Thread cutting fastener for plastic and particle board.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc

Metric (Soft Conversion)


Thread Size	A Major Diameter		B Minor Diameter	Head Size	
	Max.	Min.		Flat/Oval	Others*
M2.2-1.27	2.31	2.08	1.17	M2	M1
M2.5-1.41	2.67	2.44	1.37	M2.5	M2
M2.9-1.59	2.97	2.74	1.60	M3	M2.5
M3.2-1.81	3.30	3.07	1.80	M3	M3
M3.5-1.95	3.66	3.43	1.98	M3.5	M3
M3.8-2.12	3.99	3.74	2.08	M3.5	M3.5
M4.2-2.31	4.32	4.06	2.26	M4	M3.5
M4.5-2.54	4.65	4.39	2.48	M4	M3.5
M4.8-2.82	4.98	4.72	2.60	M5	M4
M5.1-2.82	5.34	5.08	2.92	M5	M4
M5.5-2.82	5.67	5.41	3.26	M5.5	M5
M6.1-3.63	6.30	6.04	3.45	M6	M5.5
M6.3-3.63	6.50	6.24	3.35	M6	M5.5
M8.0-4.23	8.08	7.82	4.32	M8	M6
M9.5-5.08	9.70	9.40	5.18	M8	M8

* Pan, Hex, Hex Washer Head Styles.

[Click here for more info](#) 

Polyfast® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 25.4mm: $\pm 0.76\text{mm}$
Over 25.4mm: $\pm 1.27\text{mm}$

Application:

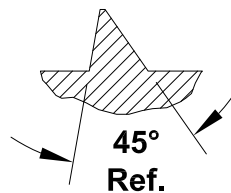
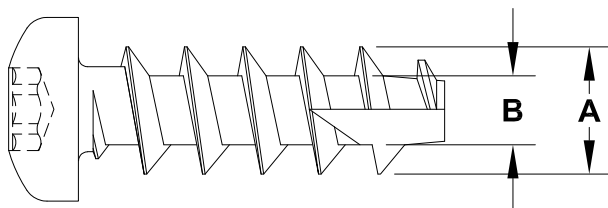
Thread cutting fastener for plastic and particle board.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc

Inch


**Detail of
Thread Form**

Thread Size	A Major Diameter		B Minor Diameter	Head Size		Hole Size
	Max.	Min.		Flat/ Oval	Others*	
#2-20	.091	.082	.046	#2	#1	.064
#3-18	.105	.096	.054	#3	#2	.074
#4-16	.117	.108	.063	#4	#3	.086
#5-14	.130	.121	.071	#5	#4	.094
#6-13	.144	.135	.078	#6	#5	.110
#7-12	.157	.147	.082	#7	#6	.115
#8-11	.170	.160	.089	#8	#6	.120
#9-10	.183	.173	.098	#9	#7	.128
#10-9	.196	.186	.102	#10	#8	.136
#11-9	.210	.200	.115	#10	#8	.151
#12-9	.223	.213	.128	#12	#10	.165
#14-7	.248	.238	.132	1/4	#12	.175
1/4-7	.256	.246	.136	1/4	#12	.181
5/16-6	.318	.308	.170	5/16	1/4	.225
3/8-5	.382	.370	.204	3/8	5/16	.270

* Pan, Hex, Hex Washer Head Styles.

[Click here for more info](#) 

Polyfast® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 3/4": +.000/-.030"
Over 3/4" to 1 1/2": +.000/-.050"
Over 1 1/2": +.000/-.060"

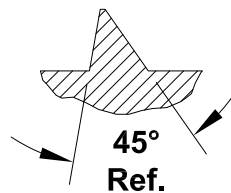
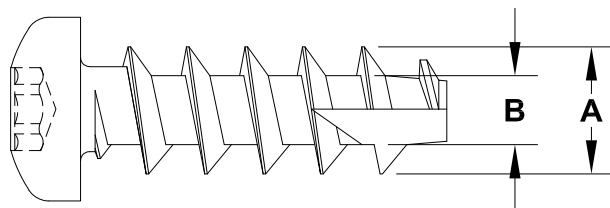
Application:

Thread cutting fastener for
plastic and particle board.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc

Metric (Soft Conversion)

**Detail of
Thread Form**

Thread Size	A Major Diameter		B Minor Diameter	Head Size		Hole Size
	Max.	Min.		Flat/Oval	Others*	
M2.2-1.27	2.31	2.08	1.17	M2	M1	1.63
M2.5-1.41	2.67	2.44	1.37	M2.5	M2	1.88
M2.9-1.59	2.97	2.74	1.60	M3	M2.5	2.18
M3.2-1.81	3.30	3.07	1.80	M3	M3	2.38
M3.5-1.95	3.66	3.43	1.98	M3.5	M3	2.79
M3.8-2.12	3.99	3.74	2.08	M3.5	M3.5	2.92
M4.2-2.31	4.32	4.06	2.26	M4	M3.5	3.05
M4.5-2.54	4.65	4.39	2.48	M4	M3.5	3.25
M4.8-2.82	4.98	4.72	2.60	M5	M4	3.45
M5.1-1.41	5.34	5.08	2.92	M5	M4	3.84
M5.5-2.82	5.67	5.41	3.26	M5.5	M5	4.19
M6.1-3.63	6.30	6.04	3.35	M6	M5.5	4.45
M6.3-3.63	6.50	6.24	3.45	M6	M5.5	4.60
M8.0-4.23	8.08	7.82	4.32	M8	M6	5.72
M9.5-5.08	9.70	9.40	5.18	M8	M8	6.85

* Pan, Hex, Hex Washer Head Styles.

[Click here for more info](#) 

Polyfast® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 19mm: +0.00/-0.76mm
Over 19mm to 38mm: +0.00/-1.27mm
Over 38mm: +0.00/-1.52mm

Application:

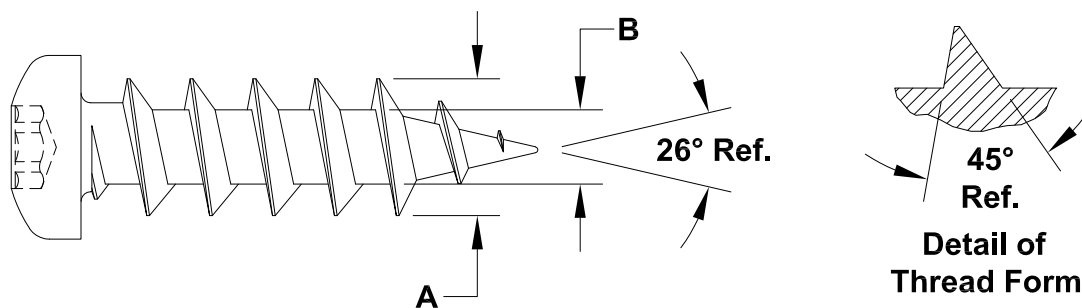
Thread cutting fastener for plastic and particle board.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc

Inch



Thread Size	A Major Diameter		B Minor Diameter	Head Size	
	Max.	Min.		Flat/Oval	Others*
#2-20	.091	.082	.046	#2	#1
#3-18	.105	.096	.054	#3	#2
#4-16	.117	.108	.063	#4	#3
#5-14	.130	.121	.071	#5	#4
#6-13	.144	.135	.078	#6	#5
#7-12	.157	.147	.082	#7	#6
#8-11	.170	.160	.089	#8	#6
#9-10	.183	.173	.098	#9	#7
#10-9	.196	.186	.102	#10	#8
#11-9	.210	.200	.115	#10	#8
#12-9	.223	.213	.128	#12	#10
#14-7	.248	.238	.132	1/4	#12
1/4-7	.256	.246	.136	1/4	#12
5/16-6	.318	.308	.170	5/16	1/4
3/8-5	.382	.370	.204	3/8	5/16

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 Over 1": $\pm .050$ "

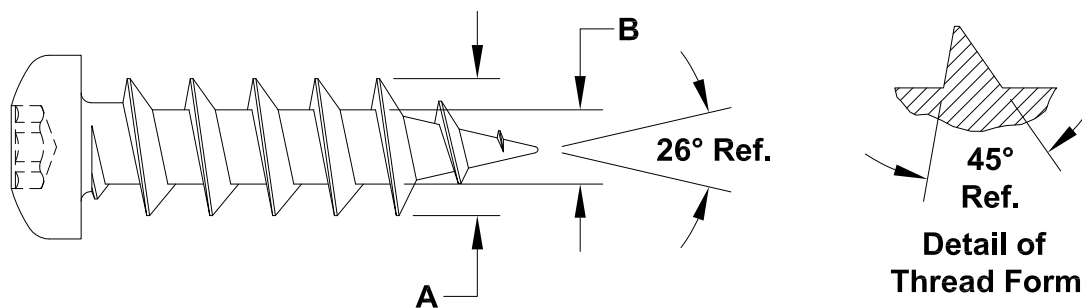
Application:

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plastic and particle board.

 For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc

Metric (Soft Conversion)


Thread Size	A Major Diameter		B Minor Diameter	Head Size	
	Max.	Min.		Flat/Oval	Others*
M2.2-1.27	2.31	2.08	1.17	M2	M1
M2.5-1.41	2.67	2.44	1.37	M2.5	M2
M2.9-1.59	2.97	2.74	1.60	M3	M2.5
M3.2-1.81	3.30	3.07	1.80	M3	M3
M3.5-1.95	3.66	3.43	1.98	M3.5	M3
M3.8-2.12	3.99	3.74	2.08	M3.5	M3.5
M4.2-2.31	4.32	4.06	2.26	M4	M3.5
M4.5-2.54	4.65	4.39	2.48	M4	M3.5
M4.8-2.82	4.98	4.72	2.60	M5	M4
M5.1-2.82	5.34	5.08	2.92	M5	M4
M5.5-2.82	5.67	5.41	3.26	M5.5	M5
M6.1-3.63	6.30	6.04	3.45	M6	M5.5
M6.3-3.63	6.50	6.24	3.35	M6	M5.5
M8.0-4.23	8.08	7.82	4.32	M8	M6
M9.5-5.08	9.70	9.40	5.18	M8	M8

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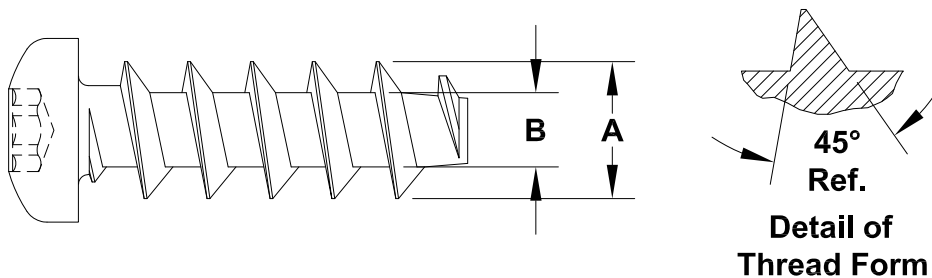
Application:

Thread forming fastener for plastic and particle board.

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Heat Treatment:

Through Harden - 30 to 40 Rc



Thread Size	A Major Diameter		B Minor Diameter	Head Size		Hole Size
	Max.	Min.		Flat/Oval	Others*	
#2-20	.091	.082	.046	#2	#1	.064
#3-18	.105	.096	.054	#3	#2	.074
#4-16	.117	.108	.063	#4	#3	.086
#5-14	.130	.121	.071	#5	#4	.094
#6-13	.144	.135	.078	#6	#5	.110
#7-12	.157	.147	.082	#7	#6	.115
#8-11	.170	.160	.089	#8	#6	.120
#9-10	.183	.173	.098	#9	#7	.128
#10-9	.196	.186	.102	#10	#8	.136
#11-9	.210	.200	.115	#10	#8	.151
#12-9	.223	.213	.128	#12	#10	.165
#14-7	.248	.238	.132	1/4	#12	.175
1/4-7	.256	.246	.136	1/4	#12	.181
5/16-6	.318	.308	.170	5/16	1/4	.225
3/8-5	.382	.370	.204	3/8	5/16	.270

* Pan, Hex, Hex Washer Head Styles.

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Up to 3/4": +.000/-.030"
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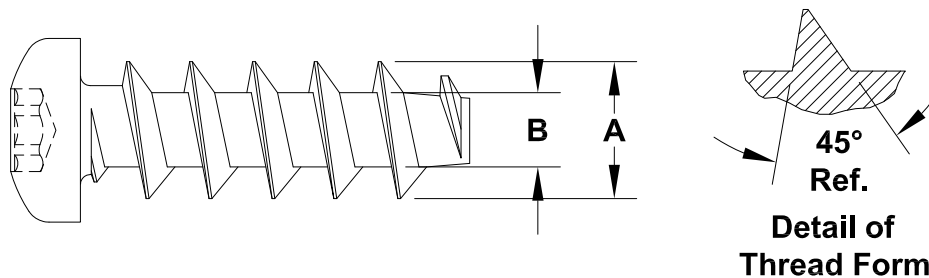
Application:

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For design assistance contact Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc

Metric (Soft Conversion)


Thread Size	A Major Diameter		B Minor Diameter	Head Size		Hole Size
	Max.	Min.		Flat/ Oval	Others*	
M2.2-1.27	2.31	2.08	1.17	M2	M1	1.63
M2.5-1.41	2.67	2.44	1.37	M2.5	M2	1.88
M2.9-1.59	2.97	2.74	1.60	M3	M2.5	2.18
M3.2-1.81	3.30	3.07	1.80	M3	M3	2.38
M3.5-1.95	3.66	3.43	1.98	M3.5	M3	2.79
M3.8-2.12	3.99	3.74	2.08	M3.5	M3.5	2.92
M4.2-2.31	4.32	4.06	2.26	M4	M3.5	3.05
M4.5-2.54	4.65	4.39	2.48	M4	M3.5	3.25
M4.8-2.82	4.98	4.72	2.60	M5	M4	3.45
M5.1-1.41	5.34	5.08	2.92	M5	M4	3.84
M5.5-2.82	5.67	5.41	3.26	M5.5	M5	4.19
M6.1-3.63	6.30	6.04	3.35	M6	M5.5	4.45
M6.3-3.63	6.50	6.24	3.45	M6	M5.5	4.60
M8.0-4.23	8.08	7.82	4.32	M8	M6	5.72
M9.5-5.08	9.70	9.40	5.18	M8	M8	6.85

* Pan, Hex, Hex Washer Head Styles.

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Length Tolerances:

Up to 19mm: +0.00/-0.76mm
Over 19mm to 38mm: +0.00/-1.27mm
Over 38mm: +0.00/-1.52mm

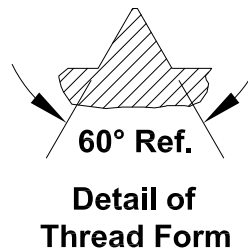
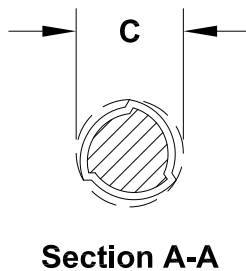
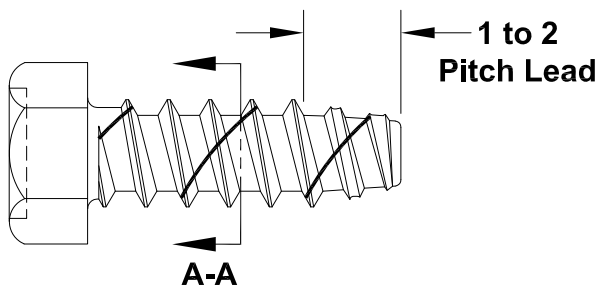
Application:

Thread forming fastener for
plastic and particle board.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc



Thread Size	C Circumscribing Diameter		Hole Size
	Max.	Min.	
#2-28	.0915	.0875	.078
#3-28	.1080	.1020	.089
#4-20	.1270	.1220	.103
#6-18	.1470	.1410	.124
#8-16	.1850	.1790	.153
#10-14	.2120	.2060	.179
#12-14	.2320	.2260	.197
1/4-10	.2760	.2700	.230

Plastilok® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 3/4": +.000/-.030"
 Over 3/4" to 1 1/2": +.000/-.050"
 Over 1 1/2": +.000/-.060"

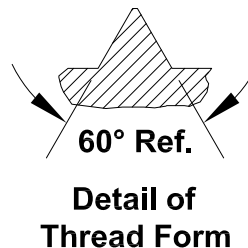
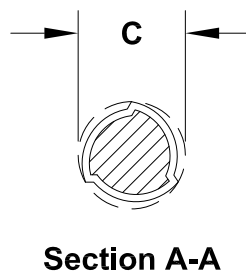
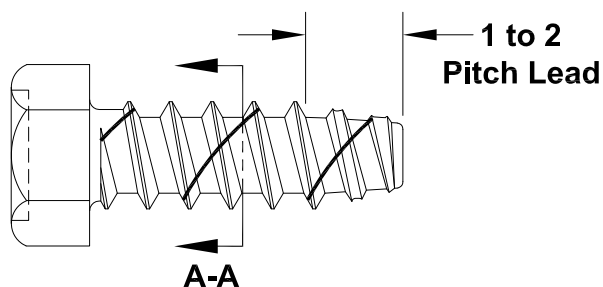
Application:

Thread forming fastener for
plastics.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc

Metric (Soft Conversion)


Thread Size	C Circumscribing Diameter		Hole Size
	Max.	Min.	
M2.2-0.91	2.33	2.22	1.98
M2.5-0.91	2.75	2.59	2.26
M2.9-1.27	3.23	3.10	2.62
M3.5-1.41	3.74	3.58	3.15
M4.2-1.59	4.70	4.54	3.89
M4.8-1.81	5.39	5.23	4.55
M5.5-1.81	5.90	5.74	5.00
M6.3-2.54	7.01	6.85	5.84

Plastilok® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 19.05mm: +0.00/-0.76mm
 Over 19.05mm to 38.10mm: +0.00/-1.27mm
 Over 38.10mm: +0.00/-1.53mm

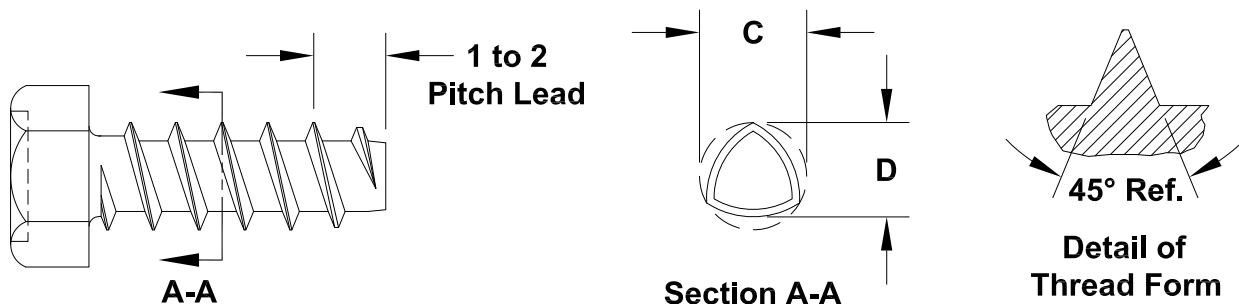
Application:

Thread forming fastener for
plastics.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
#00-38	.0490	.0450	.0475	.0435
#0-30	.0620	.0580	.0595	.0555
#1-25	.0750	.0710	.0725	.0685
#2-19	.0875	.0835	.0845	.0805
#3-18	.1010	.0970	.0980	.0940
#4-17	.1145	.1095	.1110	.1060
#5-15	.1275	.1225	.1235	.1185
#6-13	.1410	.1360	.1370	.1320
#7-12	.1530	.1480	.1485	.1435
#8-11	.1670	.1610	.1620	.1560
#9-10	.1790	.1730	.1740	.1680
#10-9	.1940	.1880	.1890	.1830
#12-9	.2200	.2140	.2145	.2085
1/4-8	.2530	.2470	.2470	.2410
9/32-8	.2840	.2780	.2780	.2720
5/16-8	.3160	.3080	.3090	.3010
21/64-8	.3320	.3240	.3250	.3170
11/32-8	.3490	.3410	.3420	.3340
3/8-7	.3790	.3710	.3710	.3630

[Click here for more info](#) 

PLASTITE® is a trademark licensed by Research Engineering & Manufacturing Inc. (REMINC).

Length Tolerances:

#12 Diameter & Below:
Up to 3/4": $\pm .030$ "
Over 3/4": $\pm .050$ "

1/4 Diameter & Above:
All Lengths: $\pm .050$ "

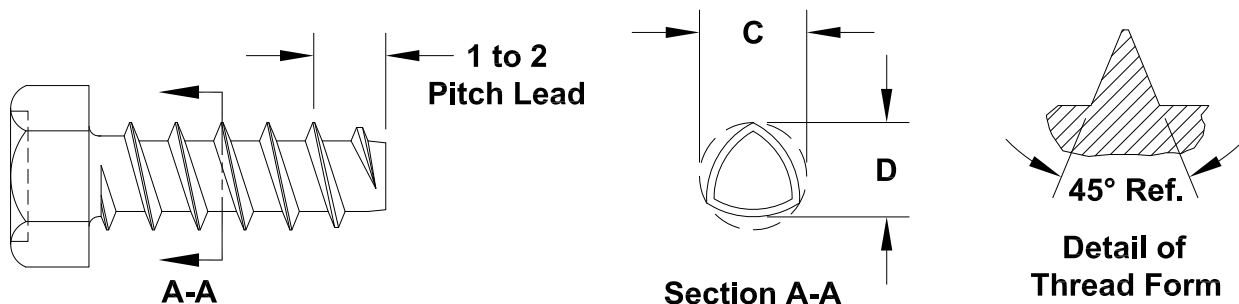
Application:

Thread forming fastener for plastics.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M1.0-0.55	1.04	0.92	1.02	0.90
M1.2-0.70	1.24	1.12	1.21	1.09
M1.4-0.80	1.44	1.32	1.41	1.29
M1.6-1.00	1.64	1.52	1.60	1.48
M1.8-1.10	1.84	1.72	1.80	1.68
M2.0-1.35	2.04	1.92	1.99	1.87
M2.5-1.40	2.53	2.41	2.48	2.36
M3.0-1.50	3.04	2.92	2.99	2.87
M3.5-1.85	3.54	3.42	3.46	3.34
M4.0-1.75	4.04	3.89	3.94	3.79
M4.5-2.00	4.54	4.39	4.43	4.28
M5.0-2.20	5.04	4.89	4.94	4.79
M5.0-2.30	5.04	4.89	4.94	4.79
M6.0-2.50	6.04	5.89	5.93	5.78
M8.0-3.00	8.04	7.86	7.89	7.71

[Click here for more info](#) 

PLASTITE® is a trademark licensed by Research Engineering & Manufacturing Inc. (REMINC).

Length Tolerances:

M5 Diameter & Below:
Up to 20mm: $\pm 0.8\text{mm}$
Over 20mm: $\pm 1.3\text{mm}$

M5 Diameter & Above:
All Lengths: $\pm 1.3\text{mm}$

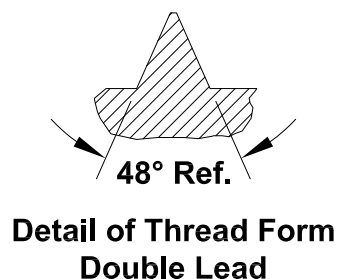
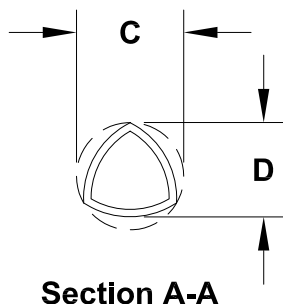
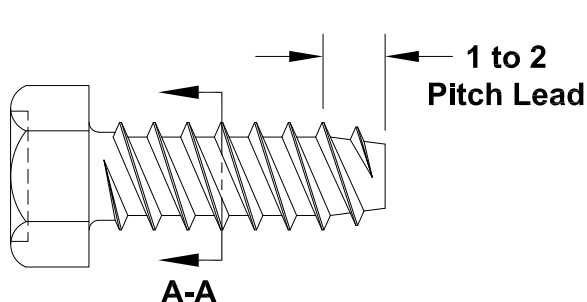
Application:

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For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
#000-70	.0360	.0340	.0345	.0325
#00-51	.0496	.0466	.0475	.0445
#0-42	.0665	.0635	.0635	.0605
#1-32	.0810	.0780	.0780	.0750
#2-28	.0920	.0860	.0890	.0830
#3-24	.1100	.1040	.1060	.1000
#4-20	.1270	.1210	.1230	.1170
#6-19	.1470	.1410	.1430	.1370
#7-18	.1660	.1600	.1600	.1540
#8-16	.1850	.1790	.1790	.1730
#9-15	.1990	.1930	.1930	.1870
#10-14	.2120	.2060	.2080	.2020
#12-11	.2350	.2290	.2300	.2240
#12-14	.2320	.2260	.2260	.2200
1/4-10	.2760	.2700	.2680	.2620
5/16-9	.3450	.3350	.3350	.3250

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Length Tolerances:

#12 Diameter & Below:
Up to 3/4": $\pm .030$ "
Over 3/4": $\pm .050$ "

1/4 Diameter & Above:
All Lengths: $\pm .050$ "

Application:

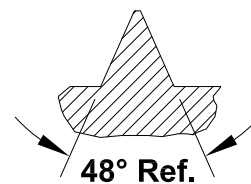
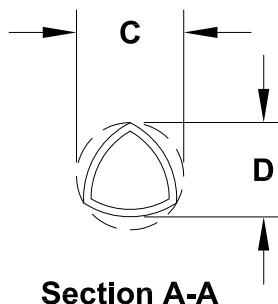
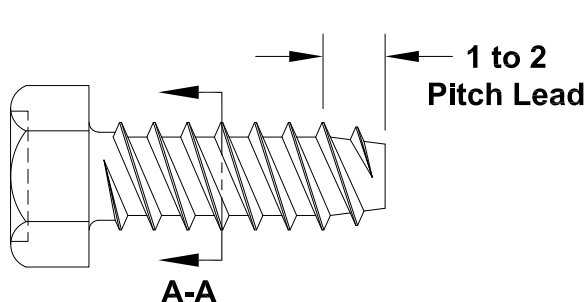
Thread forming fastener for plastics.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.

Metric (Soft Conversion)



Detail of Thread Form
Double Lead

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M0.85-0.36	0.91	0.86	0.88	0.83
M1.2-0.50	1.26	1.18	1.21	1.13
M1.5-0.60	1.69	1.61	1.61	1.54
M1.85-0.79	2.06	1.98	1.98	1.91
M2.2-0.90	2.34	2.18	2.26	2.11
M2.5-1.06	2.79	2.64	2.69	2.54
M2.9-1.27	3.23	3.07	3.12	2.97
M3.5-1.34	3.73	3.58	3.63	3.48
M3.8-1.41	4.22	4.06	4.06	3.91
M4.2-1.59	4.70	4.55	4.55	4.39
M4.5-1.70	5.05	4.90	4.90	4.75
M4.8-1.81	5.38	5.23	5.28	5.13
M5.5-2.30	5.97	5.82	5.84	5.69
M5.5-1.81	5.89	5.74	5.74	5.59
M6.3-2.54	7.01	6.86	6.81	6.65
M8.0-2.82	8.76	8.51	8.51	8.26

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Length Tolerances:

M5 Diameter & Below:
Up to 20mm: $\pm 0.8\text{mm}$
Over 20mm: $\pm 1.3\text{mm}$

M5 Diameter & Above:
All Lengths: $\pm 1.3\text{mm}$

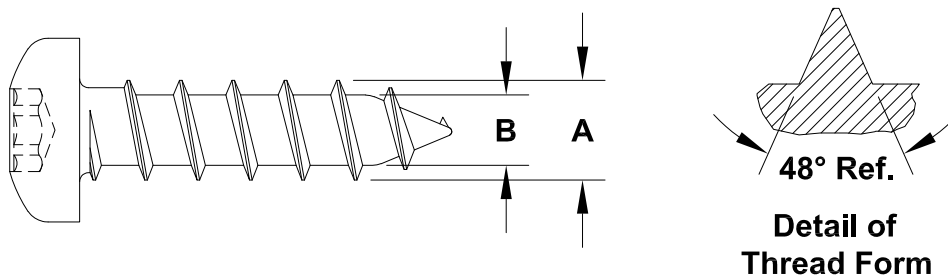
Application:

Thread forming fastener for plastics.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	A Major Diameter		B Minor Diameter
	Max.	Min.	Ref.
#4-10	.125	.115	.080
#6-10	.158	.148	.093
#8-10	.175	.165	.115
#10-10	.195	.185	.120
#12-8	.210	.200	.125
#14-8	.230	.220	.135

Plasto-Driv® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 1": $\pm .030$ "
Over 1": $\pm .050$ "

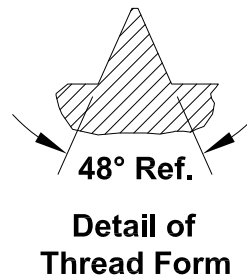
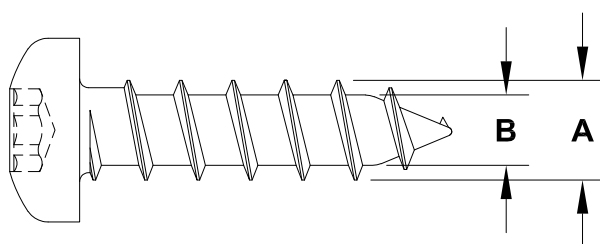
Application:

Thread forming fastener for plastics.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc



Thread Size	A Major Diameter		B Minor Diameter
	Max.	Min.	Ref.
M2.9-2.54	3.18	2.92	2.03
M3.5-2.54	4.02	3.76	2.36
M4.2-2.54	4.45	4.19	2.92
M4.8-2.54	4.96	4.70	3.05
M5.5-3.18	5.34	5.08	3.18
M6.1-3.18	5.85	5.59	3.43

Plasto-Driv® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 25mm: $\pm 0.76\text{mm}$
Over 25mm: $\pm 1.27\text{mm}$

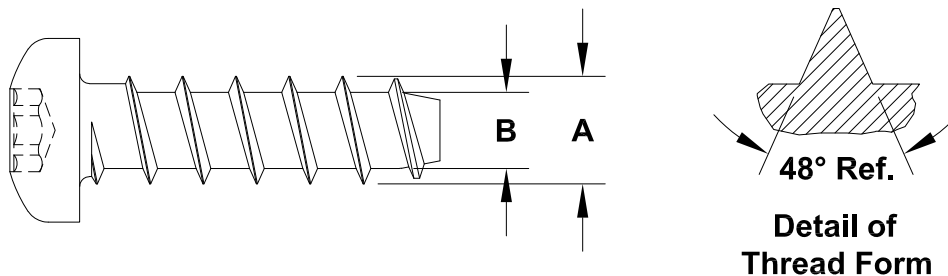
Application:

Thread forming fastener for plastics.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc



Thread Size	A Major Diameter		B Minor Diameter
	Max.	Min.	Ref.
#4-10	.125	.115	.080
#6-10	.158	.148	.093
#8-10	.175	.165	.115
#10-10	.195	.185	.120
#12-8	.210	.200	.125
#14-8	.230	.220	.135

Plasto-Driv® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 3/4": +.000/-0.030"
Over 3/4" to 1 1/2": +.000/-0.050"
Over 1 1/2": +.000/-0.060"

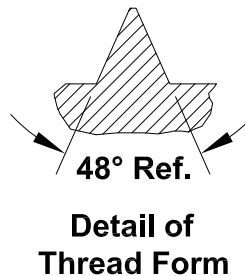
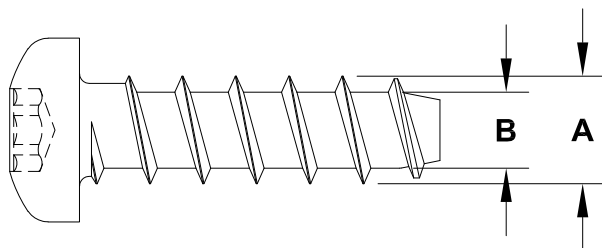
Application:

Thread forming fastener for
plastics.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc



Thread Size	A Major Diameter		B Minor Diameter
	Max.	Min.	Ref.
M2.9-2.54	3.18	2.92	2.03
M3.5-2.54	4.02	3.76	2.36
M4.2-2.54	4.45	4.19	2.92
M4.8-2.54	4.96	4.70	3.05
M5.5-3.18	5.34	5.08	3.18
M6.1-3.18	5.85	5.59	3.43

Plasto-Driv® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 19.05mm: +0.00/-0.76mm
Over 19.05mm to 38.10mm: +0.00/-1.27mm
Over 38.10mm: +0.00/-1.53mm

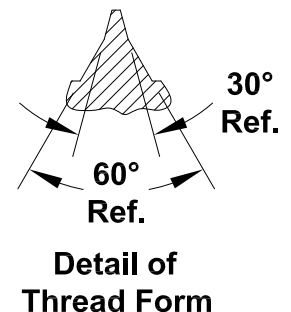
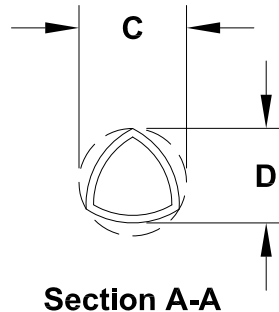
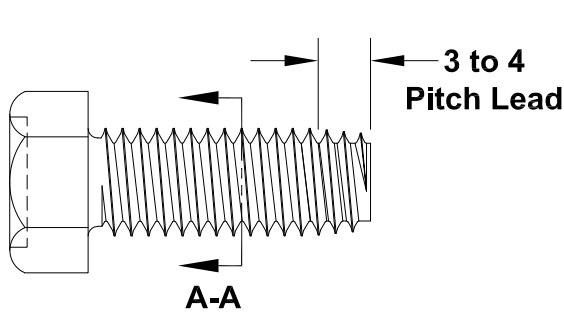
Application:

Thread forming fastener for plastics.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Through Harden - 30 to 40 Rc



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
#4-40	.1170	.1120	.1120	.1070
#5-40	.1310	.1250	.1260	.1200
#6-32	.1470	.1410	.1410	.1350
#8-32	.1725	.1665	.1665	.1605
#10-24	.2050	.1980	.1970	.1900
#10-32	.1995	.1925	.1935	.1865
#12-24	.2310	.2240	.2230	.2160
1/4-20	.2695	.2615	.2595	.2515
1/4-28	.2625	.2545	.2555	.2475
5/16-18	.3315	.3235	.3205	.3125
3/8-16	.3945	.3865	.3820	.3740
7/16-14	.4595	.4515	.4455	.4375
1/2-13	.5235	.5155	.5080	.5000

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Length Tolerances:

Diameter #4 to #12
 Up to 1/2" +.000/-.020"
 Over 1/2" to 1": +.000/-.030"
 Over 1" to 2": +.000/-.060"
 Over 2" +.000/-.090"

Diameter 1/4 to 1/2
 Up to 1/2" +.000/-.030"
 Over 1/2" to 1": +.000/-.030"
 Over 1" to 2": +.000/-.060"
 Over 2" +.000/-.090"

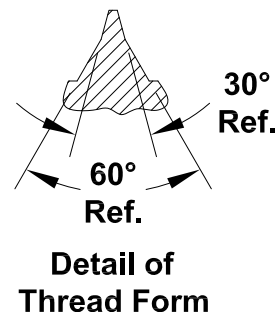
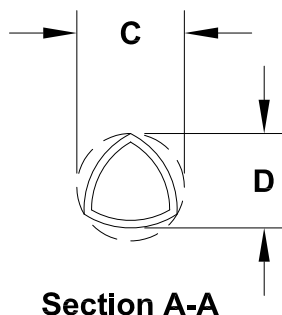
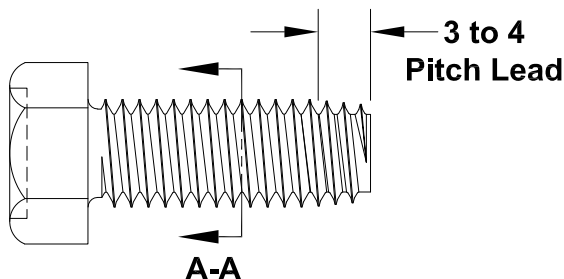
Application:

Thread design for thread locking in pre-tapped hole.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M2-0.4	2.15	2.05	2.07	1.97
M2.5-0.45	2.66	2.56	2.57	2.47
M3-0.5	3.18	3.08	3.08	2.98
M3.5-0.6	3.69	3.59	3.57	3.47
M4-0.7	4.22	4.10	4.08	3.96
M5-0.8	5.26	5.13	5.10	4.97
M6-1.0	6.30	6.15	6.10	5.95
M8-1.25	8.35	8.20	8.10	7.95
M10-1.5	10.40	10.25	10.10	9.95
M12-1.75	12.45	12.30	12.10	11.95

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Length Tolerances:

Up to 3mm: ±0.2mm
 Over 3mm to 10mm: ±0.3mm
 Over 10mm to 16mm: ±0.4mm
 Over 16mm to 50mm: ±0.5mm
 Over 50mm: ±1.0mm

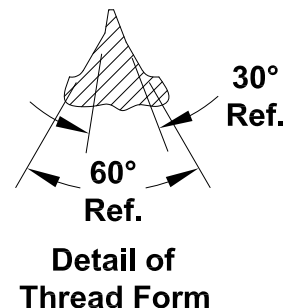
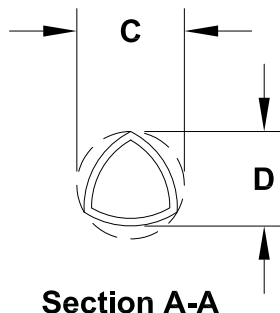
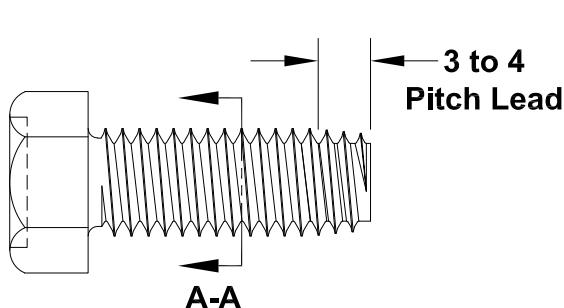
Application:

Thread design for thread locking
in pre-tapped hole.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
#4-40	.1170	.1120	.1145	.1095
#5-40	.1310	.1250	.1285	.1225
#6-32	.1470	.1410	.1439	.1379
#8-32	.1725	.1665	.1694	.1634
#10-24	.2050	.1980	.2008	.1938
#10-32	.1995	.1925	.1964	.1894
#12-24	.2310	.2240	.2268	.2198
1/4-20	.2695	.2615	.2645	.2565
1/4-28	.2625	.2545	.2589	.2509
5/16-18	.3315	.3235	.3259	.3179
3/8-16	.3945	.3865	.3883	.3803
7/16-14	.4595	.4515	.4524	.4444
1/2-13	.5235	.5155	.5158	.5078

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Length Tolerances:

Diameter #4 to #12	
Up to 1/2"	+.000/-.020"
Over 1/2" to 1":	+.000/-.030"
Over 1" to 2":	+.000/-.060"
Over 2"	+.000/-.090"

Diameter 1/4 to 1/2	
Up to 1/2"	+.000/-.030"
Over 1/2" to 1":	+.000/-.030"
Over 1" to 2":	+.000/-.060"
Over 2"	+.000/-.090"

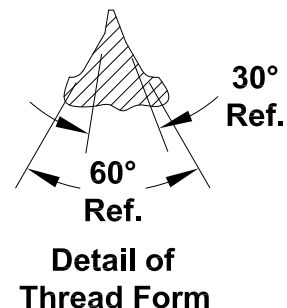
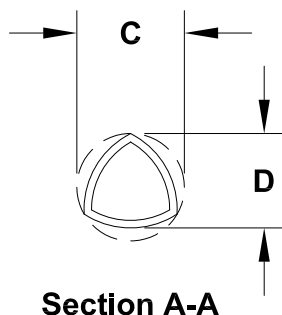
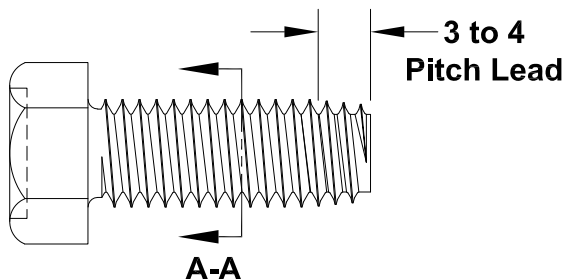
Application:

Thread design for thread locking in pre-tapped hole.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M2-0.4	2.15	2.05	2.11	2.01
M2.5-0.45	2.66	2.56	2.62	2.52
M3-0.5	3.18	3.08	3.13	3.03
M3.5-0.6	3.69	3.59	3.63	3.53
M4-0.7	4.22	4.10	4.15	4.03
M5-0.8	5.26	5.13	5.18	5.05
M6-1.0	6.30	6.15	6.20	6.05
M8-1.25	8.35	8.20	8.23	8.08
M10-1.5	10.40	10.25	10.25	10.10
M12-1.75	12.45	12.30	12.28	12.13

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Length Tolerances:

Up to 3mm: ±0.2mm
Over 3mm to 10mm: ±0.3mm
Over 10mm to 16mm: ±0.4mm
Over 16mm to 50mm: ±0.5mm
Over 50mm: ±1.0mm

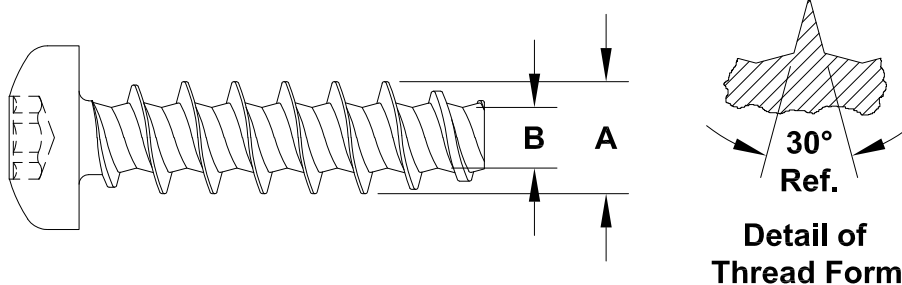
Application:

Thread design for thread locking
in pre-tapped hole.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	A Major Diameter	B Core Diameter
	Ref.	Ref.
K10-0.44	1.0	0.6
K12-0.53	1.2	0.7
K14-0.62	1.4	0.8
K16-0.67	1.6	0.9
K18-0.80	1.8	1.0
K20-0.89	2.0	1.2
K22-0.98	2.2	1.3
K25-1.12	2.5	1.4
K30-1.34	3.0	1.7
K35-1.57	3.5	1.9
K40-1.79	4.0	2.2
K50-2.24	5.0	2.7
K60-2.69	6.0	3.2
K70-3.14	7.0	3.7
K80-3.59	8.0	4.2
K100-4.49	10.0	5.2

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PT® is a registered trademark of EJOT Verbindungstechnik GmbH & Co. KG.

Length Tolerances:

Up to 3mm:	±0.30mm
Over 3mm to 6mm:	±0.38mm
Over 6mm to 10mm:	±0.45mm
Over 10mm to 18mm:	±0.55mm
Over 18mm to 30mm:	±0.65mm
Over 30mm to 50mm:	±0.80mm
Over 50mm to 80mm:	±0.95mm
Over 80mm to 120mm:	±1.10mm

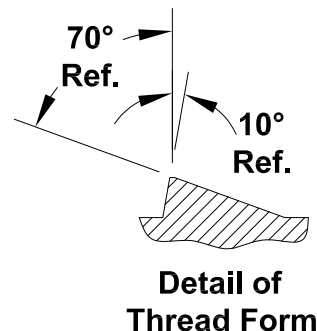
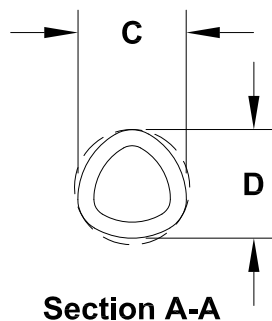
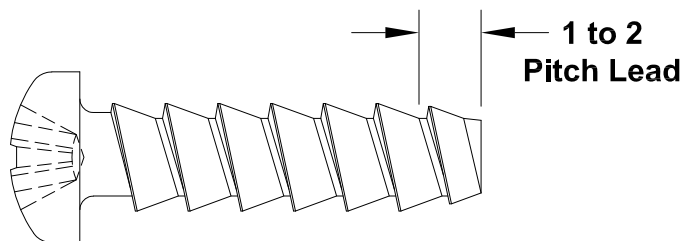
Application:

Thread forming fastener for plastics.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Through Harden - 33 to 39 Rc



Inch

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
#2-22	.0875	.0845	.0835	.0805
#3-20	.1010	.0980	.0970	.0940
#4-18	.1145	.1115	.1095	.1065
#6-16	.1410	.1370	.1350	.1310
#7-15	.1520	.1480	.1460	.1420
#8-14	.1670	.1630	.1610	.1570
#9-13	.1800	.1760	.1730	.1690
#10-12	.1940	.1900	.1850	.1810
#12-11	.2200	.2160	.2100	.2060
1/4-9	.2550	.2510	.2440	.2400

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PUSHTITE® is a trademark licensed by Research Engineering & Manufacturing Inc. (REMINC).

Length Tolerances:

To be specified.

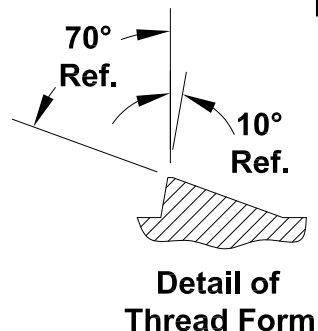
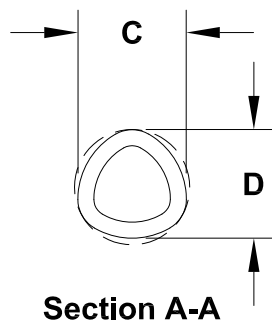
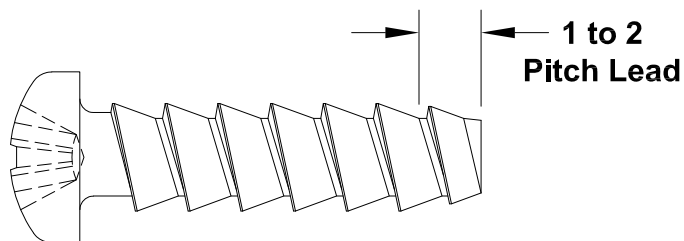
Application:

Thread design for press fit
installation into thermoplastics.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M2.0-1.05	2.06	2.00	1.98	1.92
M2.5-1.15	2.57	2.50	2.48	2.41
M3.0-1.20	3.07	3.00	2.97	2.90
M3.5-1.35	3.58	3.50	3.46	3.38
M4.0-1.55	4.08	4.00	3.94	3.86
M4.5-1.70	4.59	4.50	4.44	4.35
M5.0-1.80	5.09	5.00	4.92	4.83
M6.0-2.10	6.10	6.00	5.90	5.80

[Click here for more info](#) 

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Length Tolerances:

To be specified.

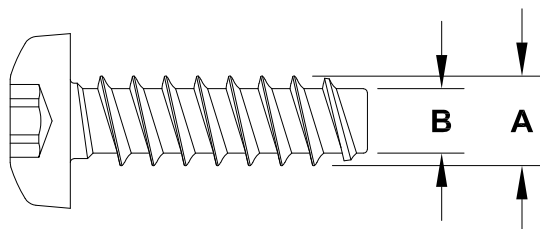
Application:

Thread design for press fit
installation into thermoplastics.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	A Major Diameter		B Minor Diameter
	Max.	Min.	Min.
M1.0-0.44	1.08	1.00	0.56
M1.2-0.51	1.28	1.20	0.70
M1.4-0.57	1.48	1.40	0.85
M1.6-0.64	1.68	1.60	0.99
M1.8-0.71	1.88	1.80	1.14
M2.0-0.78	2.08	2.00	1.28
M2.2-0.85	2.28	2.20	1.43
M2.5-0.95	2.60	2.50	1.64
M3.0-1.12	3.10	3.00	2.01
M3.5-1.29	3.60	3.50	2.37
M4.0-1.46	4.10	4.00	2.73
M4.5-1.63	4.60	4.50	3.09
M5.0-1.80	5.15	5.00	3.43
M6.0-2.14	6.15	6.00	4.16
M7.0-2.48	7.18	7.00	4.86
M8.0-2.82	8.18	8.00	5.58
M9.0-3.16	9.25	9.00	6.28
M10.0-3.50	10.25	10.00	7.00

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Remform® II™ "HS" is a registered trademark of REMINC.

Length Tolerances:

To be specified.

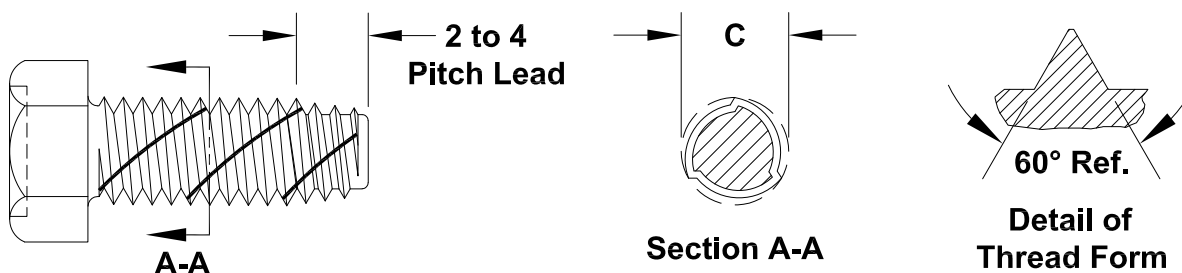
Application:

Thread forming fastener for plastics.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		Point Diameter	Minimum Torsional Strength
	Max.	Min.	Ref.	in-lbs
#2-56	.0875	.0835	.070	6
#3-48	.1010	.0970	.081	10
#4-40	.1145	.1105	.090	14
#5-40	.1275	.1235	.103	22
#6-32	.1410	.1350	.111	24
#8-32	.1670	.1610	.137	48
#10-24	.1940	.1880	.153	65
#10-32	.1930	.1870	.163	81
#12-24	.2200	.2140	.179	105
1/4-20	.2550	.2490	.206	160
5/16-18	.3180	.3120	.264	340
3/8-16	.3810	.3750	.320	620
7/16-14	.4450	.4370	.375	950
1/2-13	.5080	.4990	.433	1450

[Click here for more info](#) 

Rolok® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 3/4": +.000/-.030"
 Over 3/4" to 1 1/2": +.000/-.050"
 Over 1 1/2": +.000/-.060"

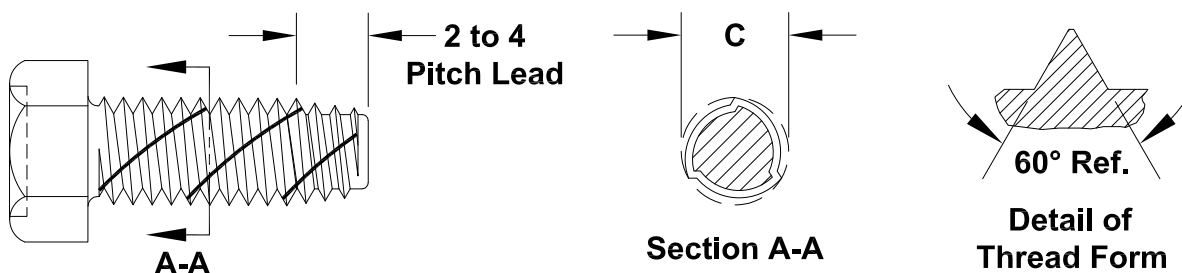
Application:

Thread rolling fastener for metals.

 For design assistance contact
 Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
 Surface 45 Rc (Min).



Thread Size	C Circumscribing Diameter		Point Diameter	Minimum Torsional Strength
	Max.	Min.	Ref.	N-m
M2-0.4	2.06	1.98	1.70	0.6
M2.5-0.45	2.57	2.47	2.10	1.2
M3-0.5	3.07	2.97	2.60	2.2
M3.5-0.6	3.58	3.43	3.00	3.5
M4-0.7	4.09	3.93	3.40	5.2
M4.5-0.75	4.60	4.44	3.90	7.5
M5-0.8	5.09	4.94	4.30	10.5
M6-1.0	6.10	5.95	5.10	17.7
M7-1.0	7.12	6.97	6.10	31.0
M8-1.25	8.13	7.98	6.90	43.0
M10-1.5	10.15	9.98	8.70	87.0
M12-1.75	12.18	11.95	10.50	152.0

[Click here for more info](#) 

Rolok® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 20mm: +0.0/-0.8mm
Over 20mm to 40mm: +0.0/-1.3mm
Over 40mm: +0.0/-1.5mm

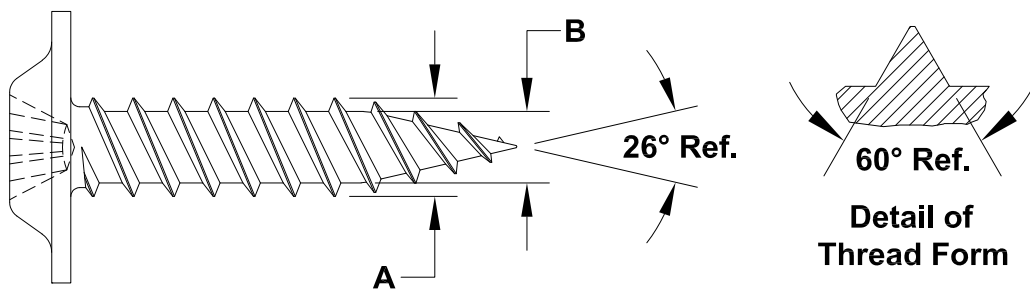
Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Minor Diameter		Minimum Torsional Strength in-lbs
	Max.	Min.	Max.	Min.	
#6-18	.141	.136	.102	.096	24
#8-15	.166	.161	.122	.116	39
#10-16	.189	.183	.141	.135	56
#12-14	.215	.209	.164	.157	88
1/4-14	.246	.240	.192	.185	142

Length Tolerances:

Up to 1": $\pm .030$ "
Over 1": $\pm .050$ "

Application:

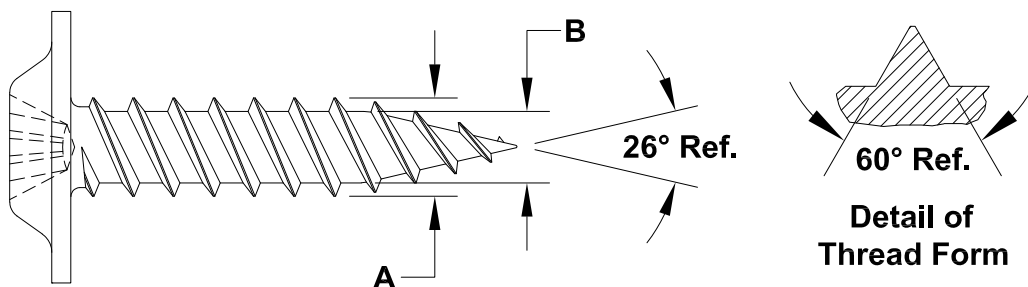
Thread design for piercing and tapping into thin sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).

Metric (Soft Conversion)



Thread Size	A Major Diameter		B Minor Diameter		Minimum Torsional Strength
	Max.	Min.	Max.	Min.	N-m
M3.5-1.41	3.58	3.45	2.59	2.43	2.71
M4.2-1.69	4.27	4.11	3.13	2.95	4.40
M4.8-1.59	4.80	4.62	3.58	3.42	6.33
M5.5-1.81	5.46	5.28	4.17	3.99	9.94
M6.3-1.81	6.25	6.02	4.88	4.70	16.04

Length Tolerances:

Up to 25.4mm: $\pm 0.76\text{mm}$
Over 25.4mm: $\pm 1.27\text{mm}$

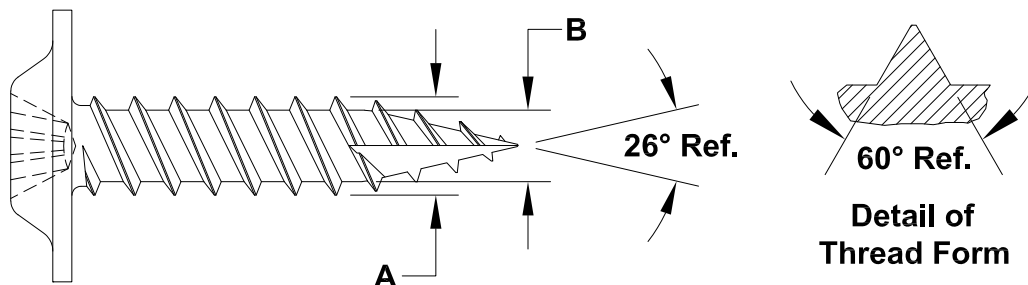
Application:

Thread design for piercing and tapping into thin sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Thread Size	A Major Diameter		B Minor Diameter	
	Max.	Min.	Max.	Min.
#2-32	.088	.084	.061	.056
#3-28	.101	.097	.076	.071
#4-24	.114	.110	.083	.078
#5-20	.130	.126	.095	.090
#6-18	.141	.136	.102	.096
#7-16	.158	.152	.114	.108
#8-15	.168	.162	.123	.116
#10-12	.194	.188	.133	.126
#12-11	.221	.215	.162	.155
#14-10	.254	.248	.185	.178
#16-10	.280	.274	.197	.189
#18-9	.306	.300	.217	.209
#20-9	.333	.327	.234	.226
#24-9	.390	.383	.291	.282

Length Tolerances:

Up to 1": $\pm .030$ "
Over 1": $\pm .050$ "

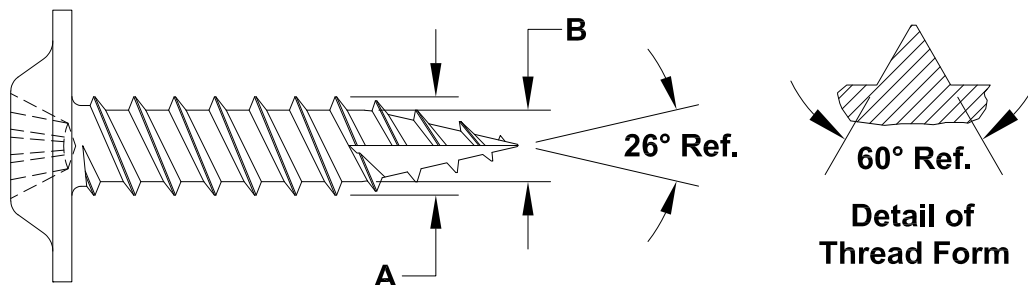
Application:

Thread design for piercing and cutting into thin sheet metal.

For design assistance contact Semblex Engineering Services.

Heat Treatment:

To be specified



Thread Size	A Major Diameter		B Minor Diameter	
	Max.	Min.	Max.	Min.
M2.2-0.79	2.24	2.13	1.55	1.42
M2.5-0.91	2.57	2.46	1.93	1.80
M2.9-1.06	2.90	2.79	2.11	1.98
M3.2-1.27	3.31	3.20	2.42	2.28
M3.5-1.41	3.58	3.45	2.59	2.43
M3.8-1.58	4.02	3.86	2.90	2.74
M4.2-1.69	4.27	4.11	3.13	2.95
M4.8-2.12	4.93	4.77	3.38	3.20
M5.5-2.31	5.62	5.46	4.12	3.94
M6.1-2.54	6.46	6.30	4.70	4.52
M6.8-2.54	7.11	6.95	5.01	4.80
M7.5-2.82	7.78	7.62	5.52	5.31
M8.1-2.82	8.46	8.30	5.95	5.74
M9.4-2.82	9.91	9.73	7.39	7.16

Length Tolerances:

Up to 25.4mm: $\pm 0.76\text{mm}$
Over 25.4mm: $\pm 1.27\text{mm}$

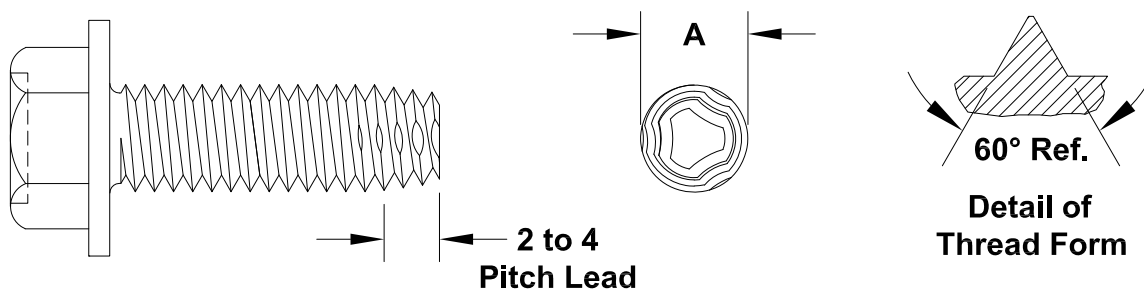
Application:

Thread design for piercing and cutting into thin sheet metal.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified



Thread Size	A Major Diameter		Point Diameter	Minimum Torsional Strength
	Max.	Min.	Ref.	in-lbs
#4-40	.1120	.1072	.090	14
#5-40	.1250	.1202	.103	22
#6-32	.1380	.1326	.111	24
#8-32	.1640	.1586	.137	48
#10-24	.1900	.1834	.153	65
#10-32	.1900	.1846	.163	81
#12-24	.2160	.2094	.179	105
1/4-20	.2500	.2428	.206	156
5/16-18	.3125	.3043	.264	330
3/8-16	.3750	.3660	.320	600

Tapmate™ is a trademark of Semblex Corporation.

Length Tolerances:

Up to 3/4": +.000/-.030"
 Over 3/4" to 1 1/2": +.000/-.050"
 Over 1 1/2": +.000/-.060"

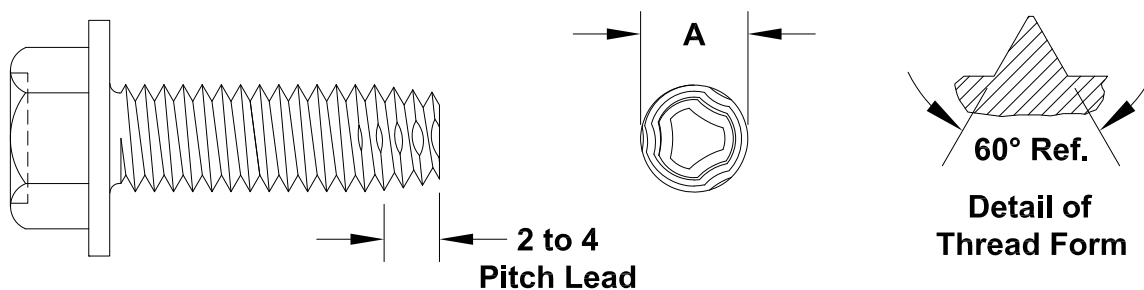
Application:

Thread rolling fastener for metals.

 For design assistance contact
 Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
 Surface 45 Rc (Min).



Thread Size	A Major Diameter		Point Diameter	Minimum Torsional Strength
	Max.	Min.	Ref.	N-m
M2.5-0.45	2.48	2.38	2.10	1.2
M3-0.5	2.98	2.87	2.60	2.2
M3.5-0.6	3.48	3.35	3.00	3.5
M4-0.7	3.98	3.83	3.40	5.2
M5-0.8	4.98	4.82	4.30	10.5
M6-1.0	5.98	5.79	5.10	17.7
M8-1.25	7.98	7.76	6.90	43.0
M10-1.5	9.97	9.73	8.70	87.0
M12-1.75	11.97	11.70	10.50	152.0

Tapmate™ is a trademark of Semblex Corporation.

Length Tolerances:

Up to 20mm: +0.0/-0.8mm
 Over 20mm to 40mm: +0.0/-1.3mm
 Over 40mm: +0.0/-1.5mm

Application:

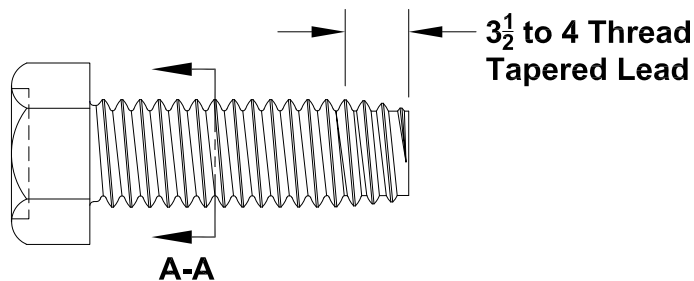
Thread rolling fastener for metals.

 For design assistance contact
 Semblex Engineering Services.

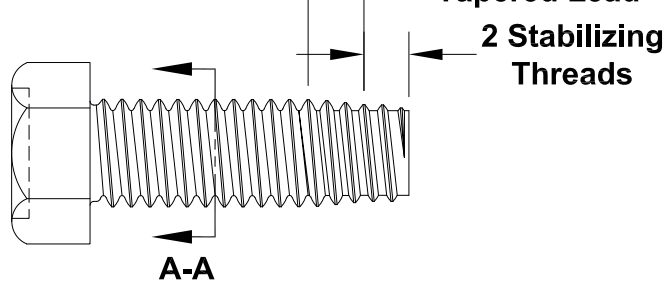
Heat Treatment:

Case Harden - Core 28 to 38 Rc,
 Surface 45 Rc (Min).

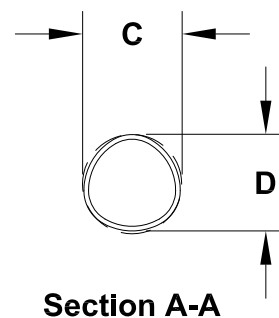
#12-24 And Below



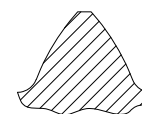
1/4-20 And Above



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
#0-80	.0626	.0586	.0613	.0570
#2-56	.0880	.0840	.0862	.0818
#3-48	.1010	.0970	.0989	.0944
#4-40	.1138	.1098	.1113	.1067
#5-40	.1268	.1228	.1243	.1197
#6-32	.1413	.1353	.1382	.1314
#8-32	.1674	.1614	.1643	.1575
#10-24	.1934	.1874	.1892	.1822
#10-32	.1936	.1876	.1905	.1837
#12-24	.2194	.2134	.2152	.2082
1/4-20	.2534	.2474	.2484	.2411
5/16-18	.3158	.3098	.3102	.3029
3/8-16	.3784	.3724	.3721	.3646
7/16-14	.4409	.4349	.4338	.4260
7/16-20	.4412	.4352	.4362	.4289
1/2-13	.5033	.4973	.4956	.4877
9/16-12	.5668	.5588	.5585	.5484
5/8-11	.6294	.6214	.6203	.6100



Radius Profile™



Detail of Thread Form

[Click here for more info](#) 

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Length Tolerances:

Diameter #4 to #12
 Up to 1/2" +.000/-0.020"
 Over 1/2" to 1": +.000/-0.030"
 Over 1" to 2": +.000/-0.060"
 Over 2" +.000/-0.090"

Diameter 1/4 to 1/2
 Up to 1/2" +.000/-0.030"
 Over 1/2" to 1": +.000/-0.030"
 Over 1" to 2": +.000/-0.060"
 Over 2" +.000/-0.090"

Application:

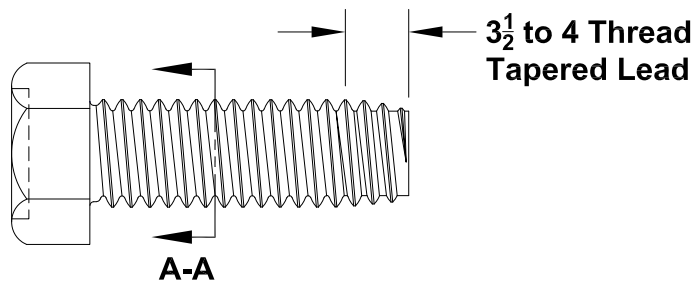
Thread rolling fastener for metals.

 For design assistance contact
 Semblex Engineering Services.

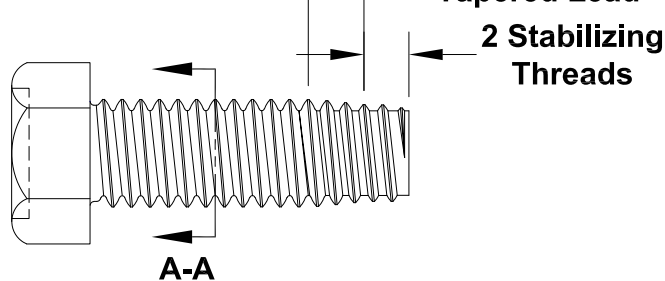
Heat Treatment:

To be specified.

M5-0.8 And Below

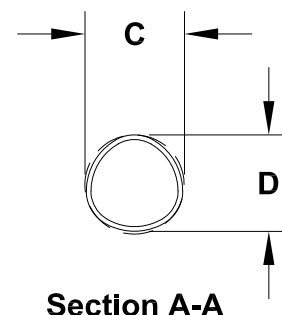


M6-1.0 And Above



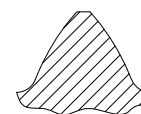
Metric

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M0.8-0.2	0.800	0.770	0.780	0.745
M1.0-0.25	1.000	0.955	0.975	0.924
M1.2-0.25	1.200	1.155	1.175	1.124
M1.4-0.30	1.405	1.355	1.375	1.317
M1.6-0.35	1.61	1.53	1.58	1.49
M1.8-0.35	1.81	1.73	1.78	1.69
M2.0-0.40	2.01	1.93	1.97	1.88
M2.2-0.45	2.21	2.12	2.17	2.06
M2.5-0.45	2.52	2.43	2.48	2.37
M3.0-0.50	3.02	2.93	2.97	2.87
M3.5-0.60	3.52	3.42	3.46	3.35
M4.0-0.70	4.02	3.92	3.95	3.83
M4.5-0.75	4.52	4.41	4.45	4.32
M5.0-0.80	5.02	4.91	4.94	4.81
M6.0-1.00	6.03	5.90	5.93	5.78
M7.0-1.00	7.03	6.90	6.93	6.78
M8.0-1.25	8.03	7.87	7.91	7.71
M9.0-1.25	9.03	8.87	8.91	8.71
M10.0-1.50	10.03	9.85	9.88	9.66
M12.0-1.75	12.04	11.83	11.87	11.61
M14.0-2.00	14.04	13.81	13.84	13.56
M16.0-2.00	16.04	15.81	15.84	15.56



Section A-A

Radius Profile™



Detail of Thread Form

[Click here for more info](#) 

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Length Tolerances:

Up to 3mm:	±0.2
Over 3mm to 10mm:	±0.3
Over 10mm to 16mm:	±0.4
Over 16mm to 50mm:	±0.5
Over 50mm:	±1.0

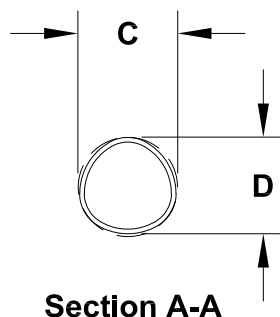
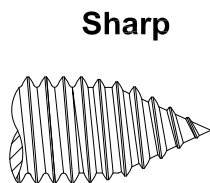
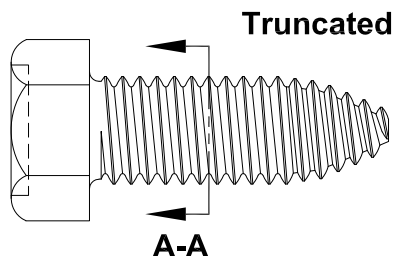
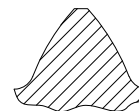
Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.


Radius Profile™

**Detail of
Thread Form**

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
#3-48	.1010	.0970	.0989	.0944
#4-40	.1138	.1098	.1113	.1067
#6-32	.1413	.1353	.1382	.1314
#8-32	.1674	.1614	.1643	.1575
#10-24	.1934	.1874	.1892	.1822
#10-32	.1936	.1876	.1905	.1837
#12-24	.2194	.2134	.2152	.2082
1/4-20	.2534	.2474	.2484	.2411
5/16-18	.3158	.3098	.3102	.3029
3/8-16	.3784	.3724	.3721	.3646
7/16-14	.4409	.4349	.4338	.4260
7/16-20	.4412	.4352	.4362	.4289
1/2-13	.5033	.4973	.4956	.4877

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Length Tolerances:

Up to 1": $\pm .030$ "
Over 1": $\pm .050$ "

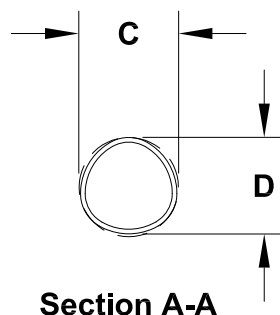
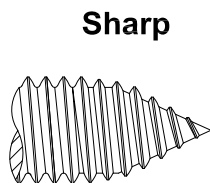
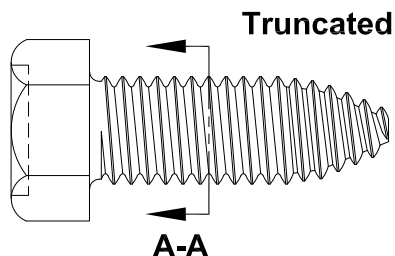
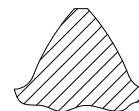
Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.


Radius Profile™

**Detail of
Thread Form**

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M0.8-0.20	0.800	0.770	0.780	0.745
M1.0-0.25	1.000	0.955	0.975	0.924
M1.2-0.25	1.200	1.155	1.175	1.124
M1.4-0.30	1.405	1.355	1.375	1.318
M1.6-0.35	1.61	1.53	1.58	1.49
M1.8-0.35	1.81	1.73	1.78	1.69
M2.0-0.40	2.01	1.93	1.97	1.88
M2.2-0.45	2.21	2.12	2.17	2.06
M2.5-0.45	2.52	2.43	2.48	2.37
M3.0-0.50	3.02	2.93	2.97	2.87
M3.5-0.60	3.52	3.42	3.46	3.35
M4.0-0.70	4.02	3.92	3.95	3.83
M4.5-0.75	4.52	4.41	4.45	4.32
M5.0-0.80	5.02	4.91	4.94	4.81
M6.0-1.00	6.03	5.90	5.93	5.78
M7.0-1.00	7.03	6.90	6.93	6.78
M8.0-1.25	8.03	7.87	7.91	7.71
M9.0-1.25	9.03	8.87	8.91	8.71
M10.0-1.50	10.03	9.85	9.88	9.66
M12.0-1.75	12.04	11.83	11.87	11.61
M14.0-2.00	14.04	13.81	13.84	13.56
M16.0-2.00	16.04	15.81	15.84	15.56

[Click here for more info](#) 

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Length Tolerances:

Up to 25mm: $\pm 0.8\text{mm}$
Over 25mm: $\pm 1.3\text{mm}$

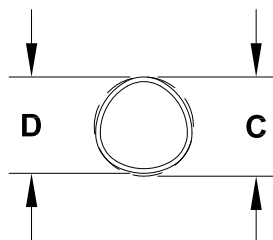
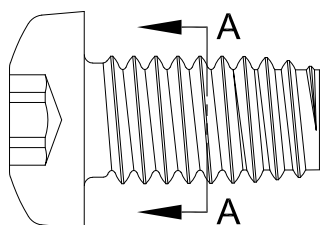
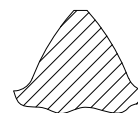
Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.


SECTION A-A
Radius Profile™

**Detail of
Thread Form**

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
#2-56	.0880	.0840	.0862	.0818
#3-48	.1010	.0970	.0989	.0944
#4-40	.1138	.1098	.1113	.1067
#5-40	.1268	.1228	.1243	.1197
#6-32	.1413	.1353	.1382	.1314
#8-32	.1674	.1614	.1643	.1575
#10-24	.1934	.1874	.1892	.1822
#10-32	.1936	.1876	.1905	.1837
#12-24	.2194	.2134	.2152	.2082
1/4-20	.2534	.2474	.2484	.2411
5/16-18	.3158	.3098	.3102	.3029
3/8-16	.3784	.3724	.3721	.3646
7/16-14	.4409	.4349	.4338	.4260
7/16-20	.4412	.4352	.4362	.4289
1/2-13	.5033	.4973	.4956	.4877
9/16-12	.5668	.5588	.5585	.5484
5/8-11	.6294	.6214	.6203	.6100

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Length Tolerances:

To be specified.

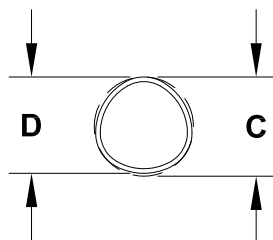
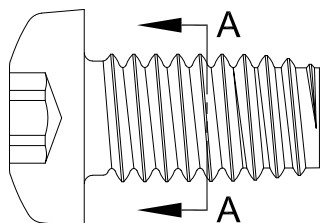
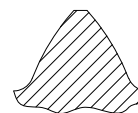
Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.


SECTION A-A
Radius Profile™

**Detail of
Thread Form**

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M0.8-0.2	0.800	0.770	0.780	0.745
M1-0.25	1.000	0.955	0.975	0.924
M1.2-0.25	1.200	1.155	1.175	1.124
M1.4-0.30	1.405	1.355	1.375	1.317
M1.6-0.35	1.61	1.53	1.58	1.49
M1.8-0.35	1.81	1.73	1.78	1.69
M2.0-0.40	2.01	1.93	1.97	1.88
M2.2-0.45	2.21	2.12	2.17	2.06
M2.5-0.45	2.52	2.43	2.48	2.37
M3.0-0.50	3.02	2.93	2.97	2.87
M3.5-0.60	3.52	3.42	3.46	3.35
M4.0-0.70	4.02	3.92	3.95	3.83
M4.5-0.75	4.52	4.41	4.45	4.32
M5.0-0.80	5.02	4.91	4.94	4.81
M6.0-1.00	6.03	5.90	5.93	5.78
M7.0-1.00	7.03	6.90	6.93	6.78
M8.0-1.25	8.03	7.87	7.91	7.71
M9.0-1.25	9.03	8.87	8.91	8.71
M10.0-1.50	10.03	9.85	9.88	9.66
M12.0-1.75	12.04	11.83	11.87	11.61
M14.0-2.00	14.04	13.81	13.84	13.56
M16.0-2.00	16.04	15.81	15.84	15.56

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Length Tolerances:

Up to 25mm: $\pm 0.8\text{mm}$
Over 25mm: $\pm 1.3\text{mm}$

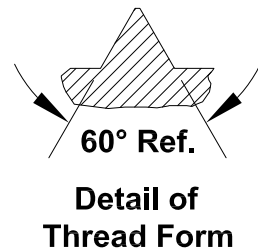
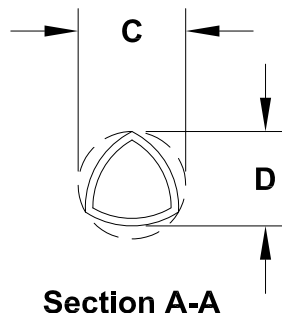
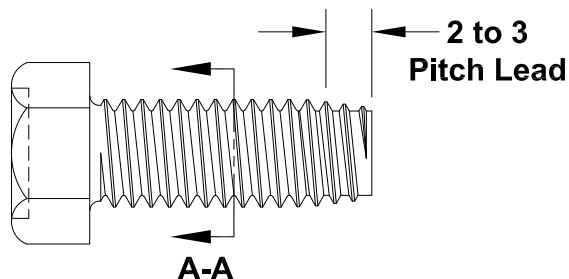
Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
#00-90	.0481	.0451	.0461	.0431
#0-80	.0613	.0583	.0588	.0558
#1-64	.0745	.0725	.0715	.0695
#1-72	.0744	.0714	.0714	.0684
#2-56	.0875	.0835	.0840	.0800
#2-64	.0875	.0835	.0845	.0805
#3-48	.1010	.0970	.0970	.0930
#3-56	.1005	.0965	.0970	.0930
#4-40	.1145	.1105	.1095	.1055
#4-48	.1140	.1100	.1100	.1060
#5-40	.1275	.1235	.1225	.1185
#6-32	.1410	.1350	.1350	.1290
#6-40	.1405	.1345	.1355	.1295
#8-32	.1670	.1610	.1610	.1550
#8-36	.1665	.1605	.1605	.1545
#10-24	.1940	.1880	.1860	.1800
#10-32	.1930	.1870	.1870	.1810
#12-24	.2200	.2140	.2120	.2060
#12-28	.2195	.2135	.2125	.2065

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
1/4-20	.2550	.2490	.2450	.2390
1/4-28	.2535	.2475	.2465	.2405
5/16-18	.3180	.3120	.3070	.3010
5/16-24	.3165	.3105	.3085	.3025
3/8-16	.3810	.3750	.3685	.3625
3/8-24	.3790	.3730	.3710	.3650
7/16-14	.4445	.4385	.4305	.4245
7/16-20	.4425	.4365	.4325	.4265
1/2-13	.5075	.5015	.4920	.4860
1/2-20	.5050	.4990	.4950	.4890
9/16-12	.5710	.5630	.5540	.5460
5/8-11	.6340	.6260	.6160	.6080
5/8-18	.6310	.6230	.6200	.6120
3/4-10	.7600	.7520	.7400	.7320

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Length Tolerances:

Diameter #4 to #12
 Up to 1/2" +.000/-0.020"
 Over 1/2" to 1": +.000/-0.030"
 Over 1" to 2": +.000/-0.060"
 Over 2" +.000/-0.090"

Diameter 1/4 to 1/2
 Up to 1/2" +.000/-0.030"
 Over 1/2" to 1": +.000/-0.030"
 Over 1" to 2": +.000/-0.060"
 Over 2" +.000/-0.090"

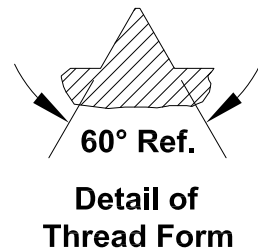
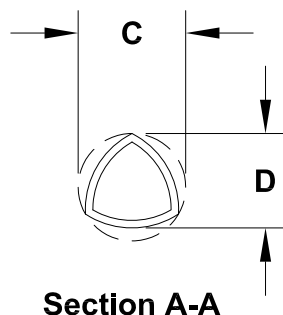
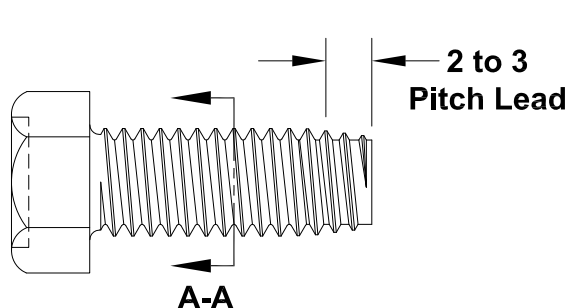
Application:

Thread rolling fastener for metals.

 For design assistance contact
 Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M1-0.25	1.05	0.98	1.00	0.93
M1.2-0.25	1.25	1.18	1.20	1.13
M1.4-0.30	1.45	1.38	1.39	1.32
M1.6-0.35	1.66	1.58	1.59	1.51
M2-0.4	2.06	1.98	1.98	1.90
M2.5-0.45	2.57	2.48	2.48	2.39
M3-0.5	3.07	2.98	2.97	2.88
M3.5-0.6	3.58	3.48	3.46	3.36
M4-0.7	4.08	3.98	3.94	3.84
M4.5-0.75	4.59	4.48	4.44	4.33
M5-0.8	5.09	4.98	4.93	4.82
M6-1.0	6.10	5.97	5.90	5.77
M6.3-1.0	6.40	6.27	6.20	6.07
M7-1.0	7.10	6.97	6.90	6.77
M8-1.25	8.13	7.97	7.88	7.72
M10-1.5	10.15	9.97	9.85	9.67
M12-1.75	12.18	11.97	11.83	11.62
M14-2.0	14.20	13.97	13.80	13.57
M16-2.0	16.20	15.97	15.80	15.57

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Length Tolerances:

Up to 3mm:	±0.2
Over 3mm to 10mm:	±0.3
Over 10mm to 16mm:	±0.4
Over 16mm to 50mm:	±0.5
Over 50mm:	±1.0

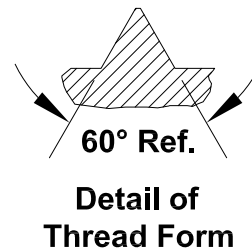
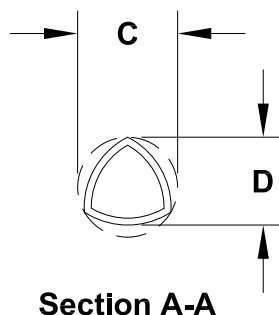
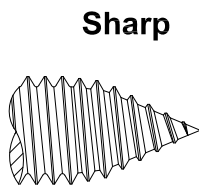
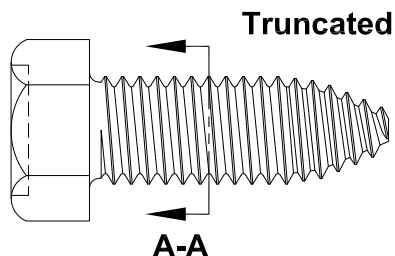
Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
#3-48	.1010	.0970	.0970	.0930
#4-40	.1145	.1105	.1095	.1055
#5-40	.1275	.1235	.1225	.1185
#6-32	.1410	.1350	.1350	.1290
#6-40	.1405	.1345	.1355	.1295
#8-32	.1670	.1610	.1610	.1550
#8-36	.1665	.1605	.1605	.1545
#10-24	.1940	.1880	.1860	.1800
#10-32	.1930	.1870	.1870	.1810
#12-24	.2200	.2140	.2120	.2060
1/4-20	.2550	.2490	.2450	.2390
1/4-28	.2535	.2475	.2465	.2405
5/16-18	.3180	.3120	.3070	.3010
5/16-24	.3165	.3105	.3085	.3025
3/8-16	.3810	.3750	.3685	.3625
3/8-24	.3790	.3730	.3710	.3650
7/16-14	.4445	.4385	.4305	.4245
7/16-20	.4425	.4365	.4325	.4265
1/2-13	.5075	.5015	.4920	.4860
1/2-20	.5050	.4990	.4950	.4890

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Length Tolerances:

Up to 1": $\pm .030$ "
Over 1": $\pm .050$ "

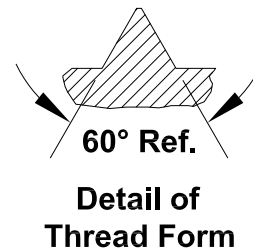
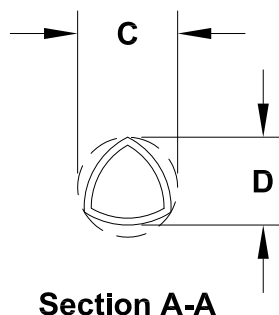
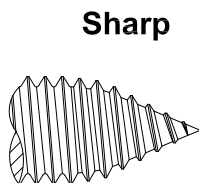
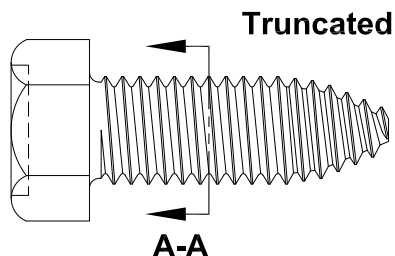
Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.



Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M2.5-0.45	2.57	2.48	2.48	2.39
M3-0.5	3.07	2.98	2.97	2.88
M3.5-0.6	3.58	3.48	3.46	3.36
M4-0.7	4.08	3.98	3.94	3.84
M4.5-0.75	4.59	4.48	4.44	4.33
M5-0.8	5.09	4.98	4.93	4.82
M6-1.0	6.10	5.97	5.90	5.77
M7-1.0	7.10	6.97	6.90	6.77
M8-1.25	8.13	7.97	7.88	7.72
M10-1.5	10.15	9.97	9.85	9.67
M12-1.75	12.18	11.97	11.83	11.62

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Length Tolerances:

Up to 25mm: $\pm 0.8\text{mm}$
Over 25mm: $\pm 1.3\text{mm}$

Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.

UNDER REVISION

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
0-80	.0626	.0586	.0613	.0570
2-56	.0880	.0840	.0862	.0818
3-48	.1010	.0970	.0989	.0944
4-40	.1138	.1098	.1113	.1067
5-40	.1268	.1228	.1243	.1197
6-32	.1413	.1353	.1382	.1314
8-32	.1674	.1614	.1643	.1575
10-24	.1934	.1874	.1892	.1822
10-32	.1936	.1876	.1905	.1837
12-24	.2194	.2134	.2152	.2082
1/4-20	.2550	.2490	.2500	.2440
5/16-18	.3180	.3120	.3125	.3065
3/8-16	.3810	.3750	.3745	.3685
7/16-14	.4445	.4385	.4375	.4315
7/16-20	.4425	.4365	.4375	.4315
1/2-13	.5075	.5015	.5000	.4940
9/16-12	.5710	.5630	.5625	.5545
5/8-11	.6340	.6260	.6250	.6170

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Length Tolerances:

To be specified.

Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.

UNDER REVISION

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M1.0-0.25	1.000	0.955	0.975	0.924
M1.2-0.25	1.200	1.155	1.175	1.124
M1.4-0.30	1.405	1.355	1.375	1.317
M1.6-0.35	1.610	1.530	1.580	1.490
M1.8-0.35	1.810	1.730	1.780	1.690
M2-0.4	2.010	1.930	1.970	1.880
M2.2-0.45	2.210	2.120	2.170	2.060
M2.5-0.45	2.520	2.430	2.480	2.370
M3-0.5	3.020	2.930	2.970	2.870
M3.5-0.6	3.520	3.420	3.460	3.350
M4-0.7	4.020	3.920	3.950	3.830
M4.5-0.75	4.520	4.410	4.450	4.320
M5-0.8	5.020	4.910	4.940	4.810
M6-1.0	6.100	5.970	6.000	5.850
M7-1.0	7.100	6.970	7.000	6.850
M8-1.25	8.130	7.970	8.000	7.810
M9-1.25	9.130	8.970	9.000	8.810
M10-1.5	10.150	9.970	10.000	9.780
M12-1.75	12.180	11.970	12.000	11.750
M14-2.0	14.200	13.970	14.000	13.720
M16-2.0	16.200	15.970	16.000	15.720
M18-2.5	18.250	17.970	18.000	17.660
M20-2.5	20.250	19.970	20.000	19.660

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Length Tolerances:

To be specified.

Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.

UNDER REVISION

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
0-80	.0626	.0586	.0613	.0570
2-56	.0880	.0840	.0862	.0818
3-48	.1010	.0970	.0989	.0944
4-40	.1138	.1098	.1113	.1067
5-40	.1268	.1228	.1243	.1197
6-32	.1413	.1353	.1382	.1314
8-32	.1674	.1614	.1643	.1575
10-24	.1934	.1874	.1892	.1822
10-32	.1936	.1876	.1905	.1837
12-24	.2194	.2134	.2152	.2082
1/4-20	.2550	.2490	.2500	.2440
5/16-18	.3180	.3120	.3125	.3065
3/8-16	.3810	.3750	.3745	.3685
7/16-14	.4445	.4385	.4375	.4315
7/16-20	.4425	.4365	.4375	.4315
1/2-13	.5075	.5015	.5000	.4940
9/16-12	.5710	.5630	.5625	.5545
5/8-11	.6340	.6260	.6250	.6170

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Length Tolerances:

To be specified.

Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.

UNDER REVISION

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M1.0-0.25	1.000	0.955	0.975	0.924
M1.2-0.25	1.200	1.155	1.175	1.124
M1.4-0.30	1.405	1.355	1.375	1.317
M1.6-0.35	1.610	1.530	1.580	1.490
M1.8-0.35	1.810	1.730	1.780	1.690
M2-0.4	2.010	1.930	1.970	1.880
M2.2-0.45	2.210	2.120	2.170	2.060
M2.5-0.45	2.520	2.430	2.480	2.370
M3-0.5	3.020	2.930	2.970	2.870
M3.5-0.6	3.520	3.420	3.460	3.350
M4-0.7	4.020	3.920	3.950	3.830
M4.5-0.75	4.520	4.410	4.450	4.320
M5-0.8	5.020	4.910	4.940	4.810
M6-1.0	6.100	5.970	6.000	5.850
M7-1.0	7.100	6.970	7.000	6.850
M8-1.25	8.130	7.970	8.000	7.810
M9-1.25	9.130	8.970	9.000	8.810
M10-1.5	10.150	9.970	10.000	9.780
M12-1.75	12.180	11.970	12.000	11.750
M14-2.0	14.200	13.970	14.000	13.720
M16-2.0	16.200	15.970	16.000	15.720
M18-2.5	18.250	17.970	18.000	17.660
M20-2.5	20.250	19.970	20.000	19.660

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Length Tolerances:

To be specified.

Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.

UNDER REVISION

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
0-80	.0626	.0586	.0613	.0570
2-56	.0880	.0840	.0862	.0818
3-48	.1010	.0970	.0989	.0944
4-40	.1138	.1098	.1113	.1067
5-40	.1268	.1228	.1243	.1197
6-32	.1413	.1353	.1382	.1314
8-32	.1674	.1614	.1643	.1575
10-24	.1934	.1874	.1892	.1822
10-32	.1936	.1876	.1905	.1837
12-24	.2194	.2134	.2152	.2082
1/4-20	.2550	.2490	.2500	.2427
5/16-18	.3180	.3120	.3124	.3051
3/8-16	.3810	.3750	.3747	.3672
7/16-14	.4445	.4385	.4374	.4296
7/16-20	.4425	.4365	.4375	.4302
1/2-13	.5075	.5015	.4998	.4919
9/16-12	.5710	.5630	.5627	.5526
5/8-11	.6340	.6260	.6249	.6146

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Length Tolerances:

To be specified.

Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.

UNDER REVISION

Thread Size	C Circumscribing Diameter		D Micrometer Reading	
	Max.	Min.	Max.	Min.
M1.0-0.25	1.000	0.955	0.975	0.924
M1.2-0.25	1.200	1.155	1.175	1.124
M1.4-0.30	1.405	1.355	1.375	1.317
M1.6-0.35	1.610	1.530	1.580	1.490
M1.8-0.35	1.810	1.730	1.780	1.690
M2-0.4	2.010	1.930	1.970	1.880
M2.2-0.45	2.210	2.120	2.170	2.060
M2.5-0.45	2.520	2.430	2.480	2.370
M3-0.5	3.020	2.930	2.970	2.870
M3.5-0.6	3.520	3.420	3.460	3.350
M4-0.7	4.020	3.920	3.950	3.830
M4.5-0.75	4.520	4.410	4.450	4.320
M5-0.8	5.020	4.910	4.940	4.810
M6-1.0	6.100	5.970	6.000	5.850
M7-1.0	7.100	6.970	7.000	6.850
M8-1.25	8.130	7.970	8.000	7.810
M9-1.25	9.130	8.970	9.000	8.810
M10-1.5	10.150	9.970	10.000	9.780
M12-1.75	12.180	11.970	12.000	11.750
M14-2.0	14.200	13.970	14.000	13.720
M16-2.0	16.200	15.970	16.000	15.720
M18-2.5	18.250	17.970	18.000	17.660
M20-2.5	20.250	19.970	20.000	19.660

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Length Tolerances:

To be specified.

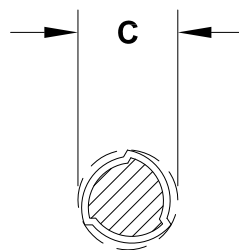
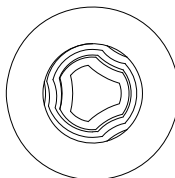
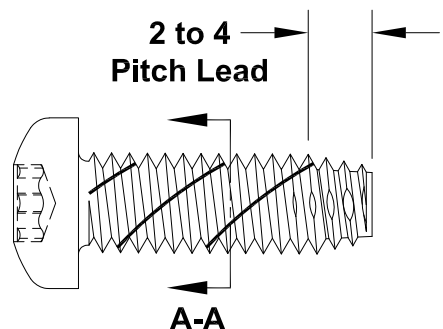
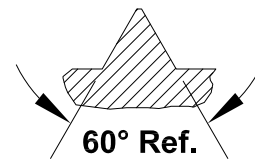
Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

To be specified.


Section A-A

**Detail of
Thread Form**
Inch

Thread Size	C Circumscribing Diameter		Point Diameter	Minimum Torsional Strength
	Max.	Min.	Ref.	in-lbs
#2-56	.0875	.0835	.070	6
#3-48	.1010	.0970	.081	10
#4-40	.1145	.1105	.090	14
#5-40	.1275	.1235	.103	22
#6-32	.1410	.1350	.111	24
#8-32	.1670	.1610	.137	48
#10-24	.1940	.1880	.153	65
#10-32	.1930	.1870	.163	81
#12-24	.2200	.2140	.179	105
1/4-20	.2550	.2490	.206	160
5/16-18	.3180	.3120	.264	340
3/8-16	.3810	.3750	.320	620
7/16-14	.4450	.4370	.375	950
1/2-13	.5080	.4990	.433	1450

Triform® is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 3/4": +.000/-0.030"
 Over 3/4" to 1 1/2": +.000/-0.050"
 Over 1 1/2": +.000/-0.060"

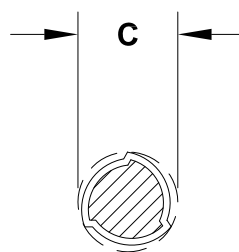
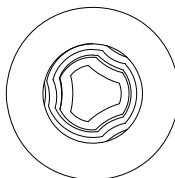
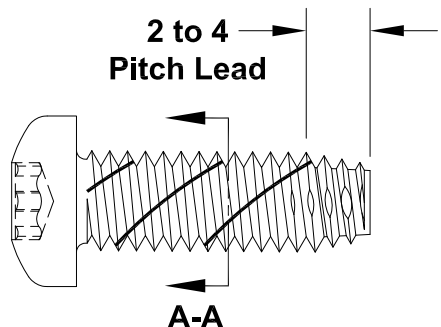
Application:

Thread rolling fastener for metals.

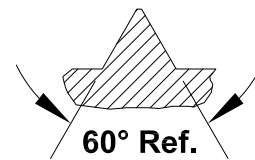
 For design assistance contact
 Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
 Surface 45 Rc (Min).



Section A-A



Detail of Thread Form

Thread Size	C Circumscribing Diameter		Point Diameter	Minimum Torsional Strength
	Max.	Min.	Ref.	N-m
M2-0.4	2.06	1.98	1.70	0.6
M2.5-0.45	2.57	2.47	2.10	1.2
M3-0.5	3.07	2.97	2.60	2.2
M3.5-0.6	3.58	3.43	3.00	3.5
M4-0.7	4.09	3.93	3.40	5.2
M4.5-0.75	4.60	4.44	3.90	7.5
M5-0.8	5.09	4.94	4.30	10.5
M6-1.0	6.10	5.95	5.10	17.7
M7-1.0	7.12	6.97	6.10	31.0
M8-1.25	8.13	7.98	6.90	43.0
M10-1.5	10.15	9.98	8.70	87.0
M12-1.75	12.18	11.95	10.50	152.0

Triform[®] is a registered trademark of Semblex Corporation.

Length Tolerances:

Up to 20mm: +0.0/-0.8mm
Over 20mm to 40mm: +0.0/-1.3mm
Over 40mm: +0.0/-1.5mm

Application:

Thread rolling fastener for metals.

For design assistance contact
Semblex Engineering Services.

Heat Treatment:

Case Harden - Core 28 to 38 Rc,
Surface 45 Rc (Min).



Value Through Solutions®