

Carbide Grinding



Manufacturer of Carbide Cutting Tools

CAT.#3 2020

Carbide Grinding



Applications

Carbide Grinding produces custom inserts for the following industries:

Aerospace
Aviation
Defense
Dental

Electronics
Firearms
Industrial
Medical Equipment

Mining
Oilfield/Energy
Petrochemical
Textiles

Common Thread Forms

"NV" 60° V-Thread	V0.055
"NT" 29° Acme / Stub Acme	Hydril®
"NG" Groover	Hughes® External Flush
American Standard Buttress (ASB)	Mini-V-Loc®
API Threaders (428, 425, 435, 530, 438)	DB/DBP
"5B75", "5Bl", "8B75" Buttress	DG
VAM®, New VAM®, VAM® ACE, Mannesman	VDB
8 & 10 Round	Whitworth / BSP / BSPT
National Pipe / Line Pipe (NPT / LPT)	Back Pressure Valve (BPV)
P.A.C. / American Open Hole	15° Valve Stem
Pittsburg Acme	API Ring Groovers
Atlas Bradford® (DSS)	Wilson Flush Joint
X-Line (Extreme Line)	H90

We also manufacture replacement threading and grooving inserts for:

Seco® / Snap-Tap®
Tool-Flo®
Iscar® (Laydown Threading)

TGI® (Triangle Grinding)
Kennametal®/ Top-Notch®
Vardex®

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ISCAR®/VARDEX®

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ON-EDGE TRIANGLE INSERTS

Identification System

60° "V" Thread, 29° Acme Thread, and Grooving Inserts

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
T N M A 4 3 NGC W.187 .010R

API, Round and Buttress Style Inserts

① ② ③ ④ ⑤ ⑥ ⑧ ⑪
T N M A 4 3 8R Int

① **STYLE**
T - Triangle

② **TOP RAKE**
N - Neutral
P - 5° Positive

③ **TOLERANCE**
M ± .001

④ **TYPE**
A - With hole
B - Hole w/ single countersink
C - Hole w/ double countersink

⑤ **SIZE**
 Number of 1/8ths of the "IC" or inscribed circle

⑥ **THICKNESS**
 Number of 1/16ths of an inch thick

⑦ **INSERT FORM**
NV - 60° "V" Thread
NT - 29° Acme Thread
NGC - Groover Central
NGR - Groover Right Hand
NGL - Groover Left Hand

⑧ **INSERT FORM**
 API Threading - (example: **428**) If there are three numerical digits, the first is the pitch, the second is the taper per foot and the third is the last digit of the root radius. For API thread forms and charts: see pages 56 & 58.

Rounds - (example: **8R**) The digits designate the pitch, R stands for Round.

Buttress - (example: **5B75**) The first digits designate the pitch, B stands for Buttress, the last digits indicate the taper per foot in hundredths of an inch (.75 = 3/4" per foot).

⑨ **NOSE WIDTHS OR THREAD PITCHES**
W - Nose width of grooving insert in decimal form.

Standard Widths
.031 .187
.062 .250
.093 .312
.125 .375
.156

P - One or two numbers precede "P" to designate thread pitch.

Standard Acme and Stub Acme Pitches: 2P - 16P

Standard NT pitches and widths: see page 58.

Standard NV pitches and widths: see page 54.

⑩ **CORNER RADII OR NOSE RADIUS** (optional)
R - Denotes corner radii or nose radius in decimal form.

Standard Radii
.010R .025R
.015R .030R
.020R .038R
FNR (Full Nose Radius)

⑪ **ADDITIONAL INFO**
Int - Internal
Ext - External
M - Multiple Tooth
RH - Right Hand
LH - Left Hand
TPF - Taper per Foot

ON EDGE
TRIANGLES

V-BOTTOMS

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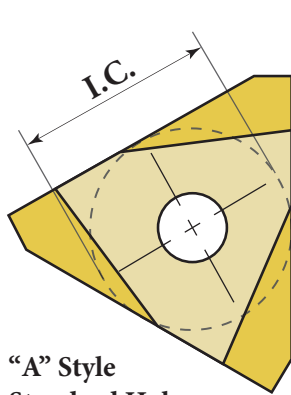
On-Edge 60° “V” Thread Inserts

TNMA __ NV

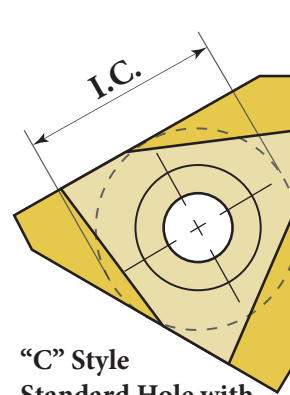
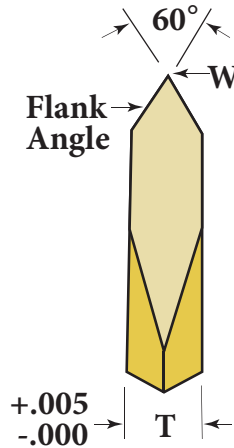
*Precision ground on all surfaces,
for lock-pin assembly*

TNMC __ NV

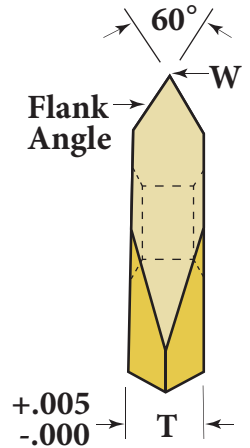
*Precision ground on all surfaces,
for screw assembly*



“A” Style
Standard Hole



“C” Style
Standard Hole with
double countersink



NV (Non-Topping)

INSERT ORDER NUMBER	IC	ROOT FLAT WIDTH “W”	THICKNESS “T”	PITCH RANGE
TNMA 32 NV OR TNMC 32 NV	3/8	.004	.125	11P - 28P
TNMA 43 NV OR TNMC 43 NV	1/2	.010R*	.187	8P - 13P
TNMA 44 NV OR TNMC 44 NV	1/2	.014	.250	4P - 8P
TNMA 54 NV OR TNMC 54 NV	5/8	.014	.250	4P - 8P
TNMA 64 NV OR TNMC 64 NV	3/4	.014	.250	4P - 8P
TNMA 66 NV OR TNMC 66 NV	3/4	.025	.375	3P - 5P

*Std with .010 Radius

This insert can be used both internally and externally.

Standard Stocked Options

5° and 10° positive top rake (example: **TPMA 32 NV-10°**)

.010R, .015R, .020R, .025R, .030R or .038R radii (example: **TNMA 43 NV .010R**)

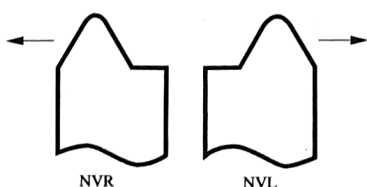
Non-Standard Options Available

Non-standard widths, radii or top rakes

Full topping (example: **TNMA 32 NVT 10P**)

60° Stubs

NVR / NVL - 60° close shoulder:



TNMA/TNMC 43 NVL/NVR 6P - 10P
TNMA/TNMC 43 NVL/NVR 11P - 16P
TNMA/TNMC 43 NVL/NVR 18P - 32P

To order NVs by pitch, see page 54.

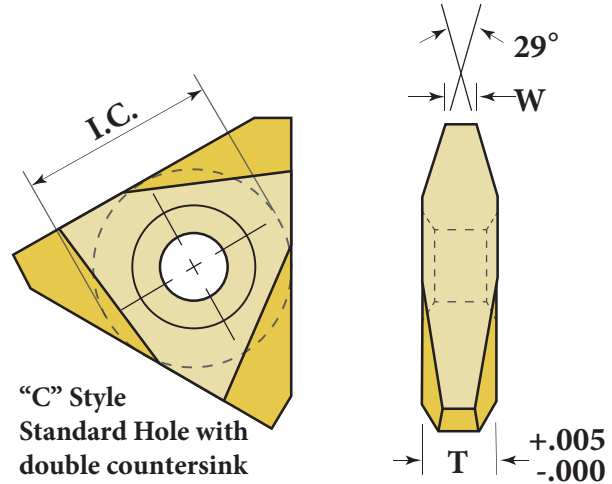
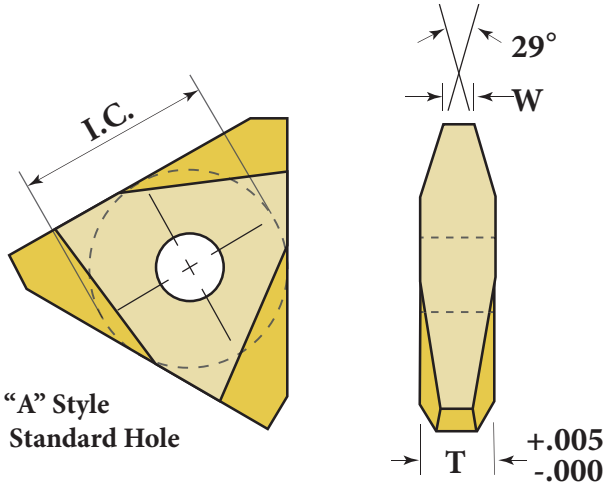
On-Edge 29° Acme & Stub Acme Threading Inserts

TNMA __ NT

*Precision ground on all surfaces,
for lock-pin assembly*

TNMC __ NT

*Precision ground on all surfaces,
for screw assembly*



NT (Non-Topping)

INSERT ORDER NUMBER	IC	THICKNESS "T"	COARSEST STD. PITCH	FINEST STD. PITCH
TNMA 32 NT __P OR TNMC 32 NT __P	3/8	.125	5P	16P
TNMA 43 NT __P OR TNMC 43 NT __P	1/2	.187	4P	16P
TNMA 44 NT __P OR TNMC 44 NT __P	1/2	.250	2.5P	3P
TNMA 54 NT __P OR TNMC 54 NT __P	5/8	.250	2.5P	6P
TNMA 55 NT __P OR TNMC 55 NT __P	5/8	.312	2P	3P
TNMA 66 NT __P OR TNMC 66 NT __P	3/4	.375	2P	2.5P

For widths and depths of Acme and Stub Acme pitches, see page 58.

For thread profile, see page 55, detail D.

This insert can be used both internally and externally.

Standard Stocked Options

5° positive top rake (example: **TPMA 32 NT 8P**)

Non-Standard Options Available

- Radii
- Non-standard widths
- Non-standard top rake
- Partial / full topping

ON EDGE
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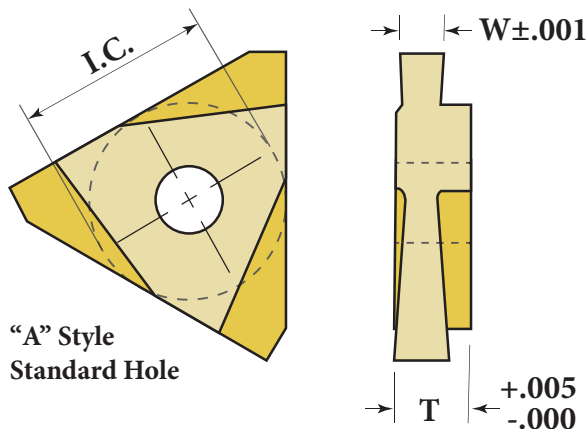
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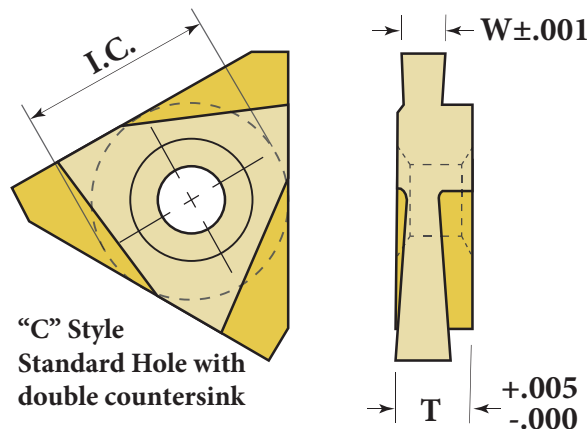
On-Edge Grooving Inserts

TNMA __ NG *

*Precision ground on all surfaces,
for lock-pin assembly*


TNMC __ NG *

*Precision ground on all surfaces,
for screw assembly*


NG (Non-Topping)

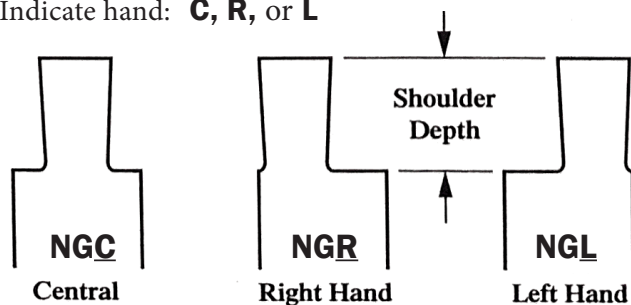
INSERT ORDER NUMBER	IC	THICKNESS "T"	STANDARD WIDTHS "W"
TNMA 32 NG__ W.___ OR TNMC 32 NG__ W.___	3/8	.125	.031 .062 .093 .125
TNMA 43 NG__ W.___ OR TNMC 43 NG__ W.___	1/2	.187	.062 .093 .125 .156 .187
TNMA 54 NG__ W.___ OR TNMC 54 NG__ W.___	5/8	.250	.125 .156 .187 .250
TNMA 66 NG__ W.___ OR TNMC 66 NG__ W.___	3/4	.375	.250 .312 .375

This insert can be used both internally and externally.

Standard Stocked Options

5° positive top rake (ex: **TPMA 32 NGC W.125**)
.010R, .015R, .020R, .025R, .030R or FNR radii

*Indicate hand: **C, R, or L**



Non-Standard Options Available

Modified widths (non-fractional)
Non-standard radii, top-rake, and clearances
Topping
Face grooving (see page 7).
Dovetail style (see page 7).

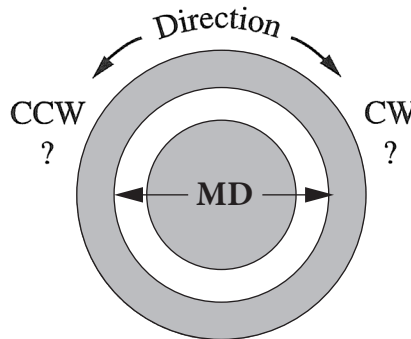
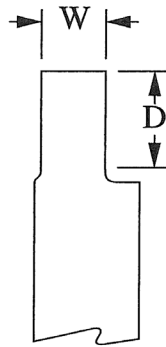
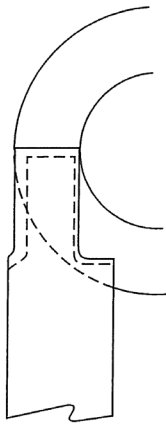
On-Edge Grooving Inserts

Standard Shoulder Depths by Width for Standard On-Edge Grooving Inserts

INSERT ORDER #	W.031	W.062	W.093	W.125	W.156	W.187	W.250	W.312	W.375
TNMA 32 NG__ TNMC 32 NG__	.070	.130	.156	.156					
TNMA 43 NG__ TNMC 43 NG__		.190	.190	.190	.210	.230			
TNMA 54 NG__ TNMC 54 NG__				.250	.270	.297	.297		
TNMA 66 NG__ TNMC 66 NG__							.350	.375	.375

Alternate On-Edge Grooving Forms

Face Groovers

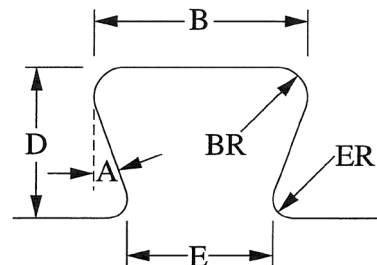
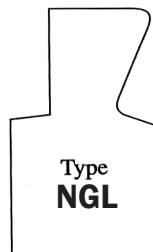


W – Groove Width
D – Groove Depth
MD – Groove Major Diameter for extra side clearance

Dovetails



*Weak



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On-Edge API / Oilfield Threading Inserts

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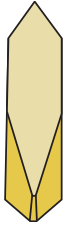
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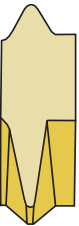
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NV - With Radius (Non-Topping)

INSERT ORDER NUMBER	IC	THICK "T"	RADIUS "R"
TNMA 43 NV .010R OR TNMC 43 NV .010R	½	.187	.010
TNMA 54 NV .010R OR TNMC 54 NV .010R	⅝	.250	.010
TNMA 54 NV .020R OR TNMC 54 NV .020R	⅝	.250	.020
TNMA 54 NV .025R OR TNMC 54 NV .025R	⅝	.250	.025
TNMA 54 NV .038R OR TNMC 54 NV .038R	⅝	.250	.038

To order NVs by pitch, see page 54.

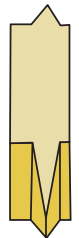


Rotary Shoulder Connections (Full Topping)

INSERT ORDER NUMBER	IC	TPI	TPF	RADIUS "R"	THREAD FORM
TNMA 55 425 Int / Ext OR TNMC 55 425 Int / Ext	⅝	4	2"	.025	V0.050
TNMA 55 428 Int / Ext OR TNMC 55 428 Int / Ext	⅝	4	2"	.038	V0.038
TNMA 55 435 Int / Ext OR TNMC 55 435 Int / Ext	⅝	4	3"	.025	V0.050
TNMA 55 438 Int / Ext OR TNMC 55 438 Int / Ext	⅝	4	3"	.038	V0.038
TNMA 54 530 Int / Ext OR TNMC 54 530 Int / Ext	⅝	5	3"	.020	V0.040

For API charts and tables, see page 58.

For thread profiles, see page 56, details J, K, N and O.



LPT / NPT (Full Topping) Line Pipe Thread / National Pipe Thread

INSERT ORDER NUMBER	TPI	TPF	THREAD FORM
TNMA 43 8LPT Int / Ext TNMC 43 8LPT Int / Ext	8	¾"	Line Pipe
TNMA 43 11.5LPT Int / Ext TNMC 43 11.5LPT Int / Ext	11.5	¾"	Line Pipe
TNMA 43 11.5LPT 2M Int / Ext TNMC 43 11.5LPT 2M Int / Ext	11.5 - 2 Teeth	¾"	Line Pipe

For thread profiles, see page 56, details P and Q.



Mannesman® Style (Full Topping)

INSERT ORDER NUMBER	TPI	TPF	THREAD FORM	CONN. SIZES
TNMA 54 5P Mannesman Int / Ext TNMC 54 5P Mannesman Int / Ext	5	¾"	"BDS" Casing	4½ - 13⅝
TNMA 43 8P Mannesman Int / Ext TNMC 43 8P Mannesman Int / Ext	8	¾"	"TBS" Tubing	2⅜ - 4½



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On-Edge API / Oilfield Threading Inserts

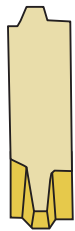
8 & 10 Round (Full Topping)



INSERT ORDER NUMBER	IC	"T"	TPI	TPF	CONN. SIZES	
					TUBING	CASING
TNMA 43 8R Int / Ext OR TNMC 43 8R Int / Ext	½	.187	8	¾"	2⅜-4½	4½-20
TNMA 54 8R Int / Ext OR TNMC 54 8R Int / Ext	⅝	.250	8	¾"	2⅜-4½	4½-20
TNMA 43 10R Int / Ext OR TNMC 43 10R Int / Ext	½	.187	10	¾"	1.050-3¼	--

For thread profile, see page 56, detail L.

Buttress (Full Topping)



INSERT ORDER NUMBER	IC	"T"	TPI	TPF	CONN. SIZES
TNMA 43 8B75 Int / Ext* OR TNMC 43 8B75 Int / Ext*	½	.187	8	¾"	2⅜ - 4½
TNMA 54 5B75 Int / Ext OR TNMC 54 5B75 Int / Ext	⅝	.250	5	¾"	4½ - 13⅜
TNMA 54 5B1 Int / Ext OR TNMC 54 5B1 Int / Ext	⅝	.250	5	1"	16 and up

*Also known as "Improved Buttress"

For thread profile, see page 56, detail R.

H90



INSERT ORDER NUMBER	IC	"T"	TPI	TPF	CONN. SIZES
TNMA 55 H902 Int / Ext TNMC 55 H902 Int / Ext	⅝	.312	3½	2"	3½ - 6⅝ Full Topping
TNMA 55 H903 Int / Ext TNMC 55 H903 Int / Ext	⅝	.312	3½	3"	7 - 8⅝ Full Topping
TNMA 55 H90S Int / Ext (Slimline) TNMC 55 H90S Int / Ext (Slimline)	⅝	.312	3	1¼"	2⅜ - 6½ Partial Topping
TNMA 55 H902 / H903 TNMC 55 H902 / H903	⅝	.312	--	--	Hughes H902-H903 Non-Topping

For thread profile, see page 56, detail M.

Hughes External Flush (Full Topping)



INSERT ORDER NUMBER	IC	TPI	TPF	CONN. SIZES
TNMA 43 6P H.E.F. Int / Ext OR TNMC 43 6P H.E.F. Int / Ext	½	6	2"	2⅜ - 2⅞
TNMA 54 4P H.E.F. Int / Ext* OR TNMC 54 4P H.E.F. Int / Ext*	⅝	4	2"	3½ - 4½

*Same as 428 thread form

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On-Edge API / Oilfield Threading Inserts

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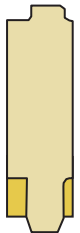
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VAM® Style (Full Topping)

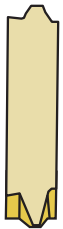
INSERT ORDER NUMBER	TPI	TPF	THREAD FORM	CONN. SIZES
TNMA 54 5P VAM Int / Ext TNMC 54 5P VAM Int / Ext	5	¾"	Casing	5-13⅜
TNMA 54 6P VAM Int / Ext TNMC 54 6P VAM Int / Ext	6	¾"	Tubing	3½-4½
TNMA 43 8P VAM Int / Ext TNMC 43 8P VAM Int / Ext	8	¾"	Tubing	2⅜-2⅞
TNMA 54 5P New VAM Int / Ext TNMC 54 5P New VAM Int / Ext	5	¾"	Casing	5-13⅜
TNMA 54 6P New VAM Int / Ext TNMC 54 6P New VAM Int / Ext	6	¾"	Tubing	3½-4½
TNMA 54 5P VAM ACE Int / Ext TNMC 54 5P VAM ACE Int / Ext	5	¾"	Casing	5-7⅝
TNMA 54 6P VAM ACE Int / Ext TNMC 54 6P VAM ACE Int / Ext	6	¾"	Tubing	3½-4½



HYDRIL® Style (Full Topping)

INSERT ORDER NUMBER	IC	"T"	TPI	THREAD HEIGHT
TNMA 55 3P WPH Int / Ext* OR TNMC 55 3P WPH Int / Ext*	⅝	.250	3	.087
TNMA 55 4P WPH Int / Ext OR TNMC 55 4P WPH Int / Ext	⅝	.312	4	.051
TNMA 43 6P CS Int / Ext OR TNMC 43 6P CS Int / Ext	½	.187	6	.042
TNMA 54 6P CS Int / Ext OR TNMC 54 6P CS Int / Ext	⅝	.250	6	.042
TNMA 43 6P PH Int / Ext OR TNMC 43 6P PH Int / Ext	½	.187	6	.051

*Partial Topping



P.A.C. / American Open Hole (Full Topping)

INSERT ORDER NUMBER	IC	TPI	TPF	CONN. SIZES
TNMA 55 4 P.A.C. Int / Ext OR TNMC 55 4 P.A.C. Int / Ext	⅝	4	1½"	2⅜ - 2⅞



V0.055 (Full Topping)

INSERT ORDER NUMBER	IC	TPI	TPF	CONN. SIZES
TNMA 43 V0.055 Int / Ext OR TNMC 43 V0.055 Int / Ext	½	6	1½"	NC 10 - 16

On-Edge API / Oilfield Threading Inserts

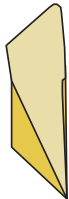


Back Pressure Valve (BPV) (Non-Topping)

INSERT ORDER NUMBER	IC	ROOT FLAT WIDTH	INCLUDED ANGLE
TNMA 43 BPV OR TNMC 43 BPV	1/2	.090	90°
TNMA 54 BPV OR TNMC 54 BPV	5/8	.090	90°

Also available with a 5° positive top rake.

On-Edge Miscellaneous Threading Inserts



American Standard Buttress (ASB) (Non-Topping)

INSERT ORDER NUMBER	IC	STANDARD PITCH	
		FINEST	COARSEST
TNMA 32 __P ASB Int / Ext OR TNMC 32 __P ASB Int / Ext	3/8	20	8
TNMA 43 __P ASB Int / Ext OR TNMC 43 __P ASB Int / Ext	1/2	12	5
TNMA 54 __P ASB Int / Ext OR TNMC 54 __P ASB Int / Ext	5/8	5	4
TNMA 55 __P ASB Int / Ext OR TNMC 55 __P ASB Int / Ext	5/8	3	3
TNMA 66 __P ASB Int / Ext OR TNMC 66 __P ASB Int / Ext	3/4	3	3

For thread table see page 58.

For thread profile, see page 55, detail C.



Pittsburg Acme (Full Topping)

INSERT ORDER NUMBER	IC	TPI	TPF
TNMA 43 8PA75 Int / Ext OR TNMC 43 8PA75 Int / Ext	1/2	8	3/4"



15° Valve Stem Thread (Non-Topping)

INSERT ORDER NUMBER	IC	TPI	INCL. ANGLE	ROOT FLAT WIDTH
TNMA 43 5P 15° Mod. W.088 TNMC 43 5P 15° Mod. W.088	1/2	5	15°	W.088

Also available with a 5° positive top rake.

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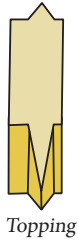
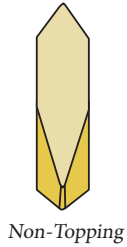
PAGE

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On-Edge Miscellaneous Threading Inserts

BSW / BSP / BSPT (55° Included Angle)

British Standard Whitworth / British Standard Pipe / British Standard Pipe Taper

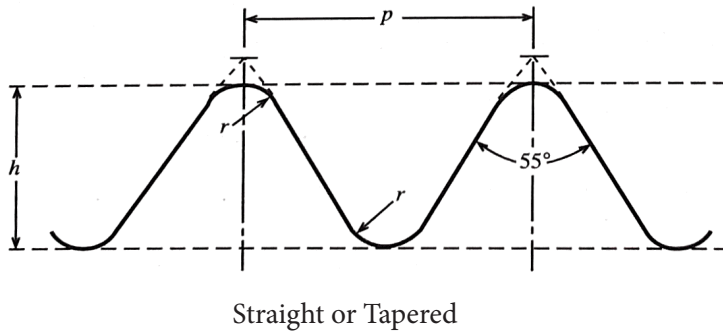


INSERT ORDER NUMBER	IC	PITCH RANGE
TNMA 32 __P BSW Int / Ext OR TNMC 32 __P BSW Int / Ext TNMA 32 __P BSP Int / Ext OR TNMC 32 __P BSP Int / Ext TNMA 32 __P BSPT* Int / Ext OR TNMC 32 __P BSPT* Int / Ext	$\frac{3}{8}$	32-10
TNMA 43 __P BSW Int / Ext OR TNMC 43 __P BSW Int / Ext TNMA 43 __P BSP Int / Ext OR TNMC 43 __P BSP Int / Ext TNMA 43 __P BSPT* Int / Ext OR TNMC 43 __P BSPT* Int / Ext	$\frac{1}{2}$	9-6
TNMA 54 __P BSW Int / Ext OR TNMC 54 __P BSW Int / Ext TNMA 54 __P BSP Int / Ext OR TNMC 54 __P BSP Int / Ext TNMA 54 __P BSPT* Int / Ext OR TNMC 54 __P BSPT* Int / Ext	$\frac{5}{8}$	5-4½
TNMA 55 __P BSW Int / Ext OR TNMC 55 __P BSW Int / Ext TNMA 55 __P BSP Int / Ext OR TNMC 55 __P BSP Int / Ext TNMA 55 __P BSPT* Int / Ext OR TNMC 55 __P BSPT* Int / Ext	$\frac{5}{8}$	4-3½
TNMA 66 __P BSW Int / Ext OR TNMC 66 __P BSW Int / Ext TNMA 66 __P BSP Int / Ext OR TNMC 66 __P BSP Int / Ext TNMA 66 __P BSPT* Int / Ext OR TNMC 66 __P BSPT* Int / Ext	$\frac{3}{4}$	3-3

*Full Topping with $\frac{3}{4}$ " TPF

For thread profiles, see page 55, details F and G.

British 55°



Threads per Inch	Pitch	Depth of Thread	Radius
n	p	h	r
24	0.041667	0.026680	0.005722
22	0.045455	0.029106	0.006242
20	0.050000	0.032016	0.006866
19	0.052632	0.033702	0.007228
18	0.055556	0.035574	0.007629
16	0.062500	0.040020	0.008583
14	0.071429	0.045738	0.009809
12	0.083333	0.053361	0.011444
11	0.090909	0.058212	0.012484
10	0.100000	0.064033	0.013733
9	0.111111	0.071147	0.015259
8	0.125000	0.080041	0.017166
7	0.142857	0.091475	0.019618
6	0.166667	0.106721	0.022888
5	0.200000	0.128065	0.027466
4.5	0.222222	0.142295	0.030518
4	0.250000	0.160082	0.034332
3.5	0.285714	0.182951	0.039237
3.25	0.307692	0.197024	0.042255
3	0.333333	0.213442	0.045776

V-BOTTOM INSERTS

Identification System

60° "V" Threading, 29° Acme Threading and Grooving Inserts

① ② ③ ④ ⑤ ⑦ ⑧
V (P) 8 4 NGC W.187 .010R

API, Round and Buttress Style Inserts

① ③ ④ ⑥ ⑨
V 8 4 5B75 Int

①
STYLE
V - V-Bottom

②
TOP RAKE (optional)
P - 5° Positive

③
LENGTH
 Length of insert given
 in 1/16ths of an inch

④
WIDTH
 Width of insert body given
 in 1/16ths of an inch

⑤
INSERT FORM
NV - 60° "V" Thread
NT - 29° Acme Thread
NGC - Groover Central
NGR - Groover Right Hand
NGL - Groover Left Hand

⑥
INSERT FORM
 API Threading - (example: **428**) If there are three numerical digits, the first is the pitch, the second is the taper per foot and the third is the last digit of the root radius. For API thread forms and charts: see pages 56 & 58.
 Rounds - (example: **8R**) The digits designate the pitch, R stands for Round.
 Buttress - (example: **5B75**) The first digits designate the pitch, B stands for Buttress, the last digits indicate the taper per foot in hundredths of an inch (.75 = 3/4" per foot).

⑦
NOSE WIDTHS OR THREAD PITCHES
W - Nose width of grooving insert in decimal form.
P - One or two numbers precede "P" to designate thread pitch.
Standard Widths
.062 .187
.093 .250
.125 .312
.156 .375
 For wider grooves see page 22.
Standard Acme and Stub Acme Pitches: 2P - 16P
 Standard Acme and Stub Acme pitch widths: see page 58.
 Standard NV pitches, widths, and radii: see page 54.

⑧
CORNER RADII OR NOSE RADIUS (optional)
R - Denotes corner radii or nose radius in decimal form.
Standard Radii
.010R
.015R
.020R
.025R
.030R
.038R
FNR (Full Nose)

⑨
ADDITIONAL INFO
Int - Internal
Ext - External
M - Multiple Tooth
RH - Right Hand
LH - Left Hand

Please Note

V84 INT = LPE 444 (Sandvik®/ Triangle®)
 V84 EXT = LCE 444 (Sandvik®/ Triangle®)
 V85 INT = LPE 454 (Sandvik®/ Triangle®)
 V85 EXT = LCE 454 (Sandvik®/ Triangle®)



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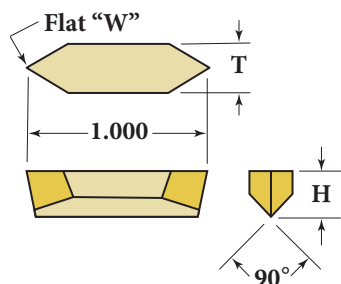
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V-Bottom 60° “V” Threading Inserts



NV (Non-Topping)

INSERT ORDER #	THICK	HEIGHT TO SHARP CRNR	FLAT “W”	PITCH RANGE
V84 NV - Fine	1/4	.250	.003 - .005	32 - 14
V84 NV	1/4	.250	.010R	14 - 8
V85 NV	5/16	.250	.015	8 - 4

These inserts will machine internal and external threads.

Standard Stocked Options

5° positive top rake (example: **VP84 NV**)

.010, .015, .020, .025, .030 and .038 radii

Non-Standard Options Available

Modified flat or radius

Modified top-rake

Full topping (example: **V84 NVT 6P**)

Right hand **NVR** & left hand **NVL** for fine threads & close shoulder applications

By pitches **UN** full topping (example: **V84 8UN Int**)

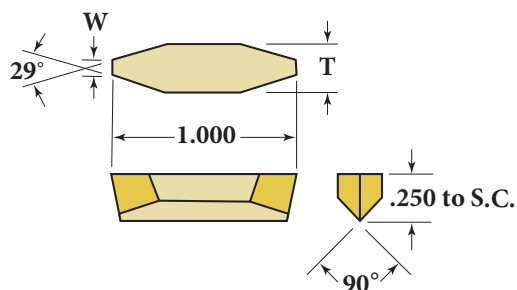
To order NVs (non-topping) by pitch, see page 54, center chart.

To order UNs (topping) by pitch, see page 54, bottom chart.



General Manager
Robin Boyd and
Owner Phil Sanders
at the International
Tool Show Expo in
February 2015.

V-Bottom 29° Acme & Stub Acme Threading Inserts



These inserts will machine internal and external threads.

Standard Stocked Options

5° positive top rake (example: **VP84 NT**)

Non-Standard Options

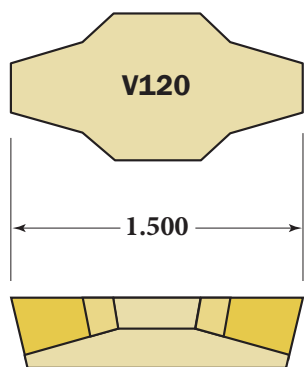
Modified widths
Modified radii
Non-standard top-rake
Full topping
Partial topping

NT (Non-Topping)

INSERT ORDER #	THICKNESS	NOSE WIDTH
V85 NT 2P Stub	5/16	.2060
V85 NT 2P	5/16	.1802
V85 NT 2.5P Stub	5/16	.1638
V85 NT 2.5P	5/16	.1431
V85 NT 3P	5/16	.1184
V84 NT 3P	1/4	.1184
V84 NT 3.5P Stub	1/4	.1155
V84 NT 3.5P	1/4	.1007
V84 NT 4P Stub	1/4	.1004
V84 NT 4P	1/4	.0875
V84 NT 5P Stub	1/4	.0793
V84 NT 5P	1/4	.0689
V84 NT 6P Stub	1/4	.0652
V84 NT 7P	1/4	.0566
V84 NT 7P Stub	1/4	.0551
V84 NT 7P	1/4	.0478
V84 NT 8P Stub	1/4	.0476
V84 NT 8P	1/4	.0411
V84 NT 9P Stub	1/4	.0417
V84 NT 9P	1/4	.0360
V84 NT 10P Stub	1/4	.0370
V84 NT 10P	1/4	.0319
V84 NT 12P Stub	1/4	.0326
V84 NT 12P	1/4	.0283
V84 NT 14P Stub	1/4	.0276
V84 NT 14P	1/4	.0239
V84 NT 4P Stub	1/4	.0238
V84 NT 4P	1/4	.0206

For thread profile, see page 55, details D and E.

Large V-Bottom for Acme



Standard Stocked Options

Non-topping: **1P, 1.5P**

Non-Standard Options

Modified nose widths
Full topping: **2P, 2P Stub, 3P, 3P Stub**
Partial topping: **1.5P, 1.5P Stub, 2P, 2P Stub**
Radii
5° positive top rake

For Tool Holders and Internal Bars for these inserts, see pages 27 and 28.

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V-Bottom API / Oilfield Threading Inserts



NV with Radius (Non-Topping)

INSERT ORDER NUMBER	HEIGHT	LENGTH	RADIUS	THREAD FORM
V84 NV .020R	.250	1.00	.020	V0.040
V84 NV .025R	.250	1.00	.025	V0.050
V84 NV .038R	.250	1.00	.038	V0.038



Rotary Shoulder Connections (Full Topping)

INSERT ORDER #	TPI	TPF	RAD.	THREAD FORM	CONNECTION SIZES
V85 425 Int OR Ext	4	2"	.025	V0.050	6 $\frac{1}{2}$ Reg, 5 $\frac{1}{2}$ FH, 6 $\frac{1}{2}$ FH
V85 428 Int OR Ext	4	2"	.038	V0.038	NC23-50, 2 $\frac{3}{8}$ - 6 $\frac{1}{2}$ IF, 4FH
V85 435 Int OR Ext	4	3"	.025	V0.050	5 $\frac{1}{2}$ Reg, 7 $\frac{1}{8}$ Reg, 8 $\frac{5}{8}$ Reg
V85 438 Int OR Ext	4	3"	.038	V0.038	NC56-77
V85 530 Int OR Ext	5	3"	.020	V0.040	2 $\frac{3}{8}$ Reg, 2 $\frac{1}{8}$ Reg, 4 $\frac{1}{2}$ Reg, 3 $\frac{1}{2}$ FH, 4 $\frac{1}{2}$ FH

See page 58 for API connection charts.

For thread profiles, see page 56, details J, K, N and O.



LPT / NPT (Full Topping) Line Pipe Thread / National Pipe Thread

INSERT ORDER NUMBER	TPI	TPF	THREAD FORM
V84 8LPT Int OR Ext	8	$\frac{3}{4}$ "	1 Tooth
V84 8LPT - 2M Int OR Ext	8	$\frac{3}{4}$ "	2 Teeth
V84 11.5LPT Int OR Ext	11.5	$\frac{3}{4}$ "	1 Tooth
V84 11.5LPT - 2M Int OR Ext	11.5	$\frac{3}{4}$ "	2 Teeth

For thread profiles, see page 56, details P and Q.



8 & 10 Round (Full Topping)

INSERT ORDER NUMBER	TPI	TPF	CONNECTION SIZES	
			TUBING	CASING
V84 8R Int OR Ext	8	$\frac{3}{4}$ "	2 $\frac{3}{8}$ - 4 $\frac{1}{2}$	4 $\frac{1}{2}$ - 20
V84 10R Int OR Ext	10	$\frac{3}{4}$ "	1.050 - 3 $\frac{1}{4}$	--

For thread profile, see page 56, detail L.



Buttress (Full Topping)

INSERT ORDER NUMBER	TPI	TPF	CONNECTION SIZES
V84 8B75 Int OR Ext*	8	$\frac{3}{4}$ "	2 $\frac{3}{8}$ - 4 $\frac{1}{2}$
V84 5B75 Int OR Ext	5	$\frac{3}{4}$ "	4 $\frac{1}{2}$ - 20
V84 5B1 Int OR Ext	5	1"	16 and Larger

*AKA "Improved Buttress"

For thread profile, see page 56, detail R (5B only).

V-Bottom API / Oilfield Threading Inserts



Back Pressure Valve (BPV)

INSERT ORDER #	ROOT WIDTH	INCLUDED ANGLE
V84 BPV	.090	90°

Also available with a 5° positive top rake.



Pittsburg Acme (Full Topping)

INSERT ORDER #	TPI	TPF
V84 8PA75 Int OR Ext	8	¾"



15° Valve Stem Thread (Non-Topping)

INSERT ORDER #	TPI	INCL. ANGLE	NOSE WIDTH "W"
V84 5P 15° Mod.	5	15°	.088



American Standard Buttress (ASB) (Non-Topping)

INSERT ORDER #	FINEST STD. PITCH	COARSEST STD. PITCH
V84 __P ASB Int OR Ext	20	4
V85 __P ASB Int OR Ext	3	3

See page 58 for ASB chart and pitch dimensions.

For thread profile, see page 55, detail C.

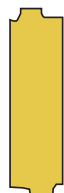
Order by pitch.

Full topping available.



Extreme-Line (Full Topping)

INSERT ORDER #	TPI	TPF	CASING SIZES
V84 5P X-Line Int OR Ext	5	1¼"	8⅝ - 10¾
V84 6P X-Line Int OR Ext	6	1½"	5 - 7⅝



Mannesman® Style (Full Topping)

INSERT ORDER #	TPI	TPF	THREAD FORM	CONN. SIZES
V84 5P Mannesman Int OR Ext	5	¾"	"BDS" Casing	4½ - 13⅝
V84 8P Mannesman Int OR Ext	8	¾"	"TDS" Tubing	2⅜ - 4½

For Tool Holders and Internal Bars for these inserts, see pages 27 and 28.

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V-Bottom API / Oilfield Threading Inserts

H90

INSERT ORDER NUMBER	TPI	TPF	CONNECTION
V85 H902 OR H903	--	--	H90 Non-Topping
V85 H902 Int OR Ext	3½	2"	3½ - 6⅝ Full Topping
V85 H903 Int OR Ext	3½	3"	7 - 8⅝ Full Topping
V85 H90S Int OR Ext (Slimline)	3	1¼"	2⅜ - 6½ Partial Topping

For thread profile, see page 58, detail M.

Hydril® Style (Full Topping)

INSERT ORDER NUMBER	TPI	THREAD HEIGHT	ADD'L INFO
V85 3P WPH Int OR Ext	3	.087	Partial Topping
V85 4P WPH Int OR Ext	4	.051	FJWP
V84 6P CS Int OR Ext	6	.042	FJWP, Casing
V84 6P PH Int OR Ext	6	.051	2S Tubing
V84 8P CS Int OR Ext	8	.033	2S

Hughes External Flush (Full Topping)

INSERT ORDER NUMBER	TPI	TPF	CONNECTION SIZES
V85 4P H.E.F. Int OR Ext*	4	2"	3½ - 4½
V85 6P H.E.F. Int OR Ext	6	2"	2⅜ - 2⅞

*Same as a 428 thread form.

P.A.C. / American Open Hole (Full Topping)

INSERT ORDER NUMBER	TPI	TPF	CONNECTION SIZES
V85 4P P.A.C. Int OR Ext	4	1½"	2⅜ - 2⅞

V0.055 (Full Topping)

INSERT ORDER NUMBER	TPI	TPF	CONNECTION SIZES
V84 6P V0.055 Int OR Ext	6	1½"	NC10 - 16

For Tool Holders and Internal Bars for these inserts, see pages 27 and 28.



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V-Bottom API / Oilfield Threading Inserts

VAM® Style (Full Topping)



INSERT ORDER NUMBER	TPI	TPF	THREAD FORM	CONNECTION SIZES
V84 5P VAM Int OR Ext	5	3/4"	Casing	5 - 13 3/8
V84 5P VAM Int OR Ext	5	15.5%	Casing	14
V84 6P VAM Int OR Ext	6	3/4"	Tubing	3 1/2 - 4 1/2
V84 8P VAM Int OR Ext	8	3/4"	Tubing	2 3/8 - 2 7/8
V84 5P New VAM Int OR Ext	5	3/4"	Casing	5 - 13 3/8
V84 6P New VAM Int OR Ext	6	3/4"	Tubing	3 1/2 - 4 1/2
V84 8P New VAM Int OR Ext	8	3/4"	Tubing	2 3/8 - 2 7/8
V84 4P VAM ACE Int OR Ext	4	3/4"	Casing	8 5/8 and Up
V84 5P VAM ACE Int OR Ext	5	3/4"	Casing	5 - 7 5/8
V84 6P VAM ACE Int OR Ext	6	3/4"	Tubing	3 1/2 - 4 1/2
V84 8P VAM ACE Int OR Ext	8	3/4"	Tubing	2 3/8 - 2 7/8

BSW / BSP / BSPT

British Standard Whitworth / British Standard Pipe / British Standard Pipe Taper



Non-Topping

INSERT ORDER NUMBER	FINEST STD. PITCH	COARSEST STD. PITCH	TPF
V84 __P BSW Int OR Ext	32	4.5	--
V84 __P BSP Int OR Ext	32	4.5	--
V84 __P BSPT Int OR Ext	32	4.5	3/4"
V85 __P BSW Int OR Ext	4	3.5	--
V85 __P BSP Int OR Ext	4	3.5	--
V85 __P BSPT Int OR Ext	4	3.5	3/4"

For thread table, see page 12.

For thread profiles, see page 55, details F and G.



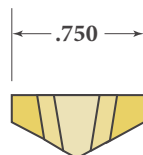
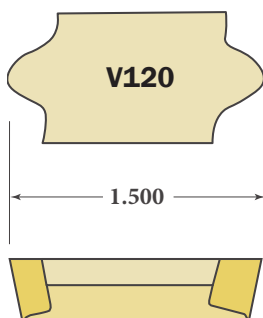
Full Topping

Also Available: Wilson Flush Joint (WFJ)
Square Thread

Trapezoidal Metric
Atlas Bradford®

10° Included Thread
60° Stub
Dovetail

Large V-Bottom for API Forms



Standard and Special API Forms

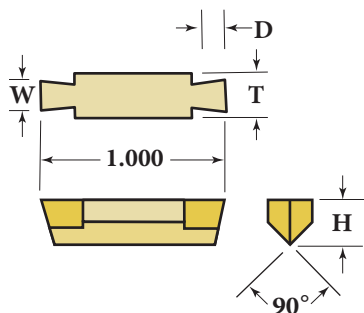
Full Topping

Partial Topping

Made to Order

Call for Tool Holder and Bar Info

V-Bottom Groovers



NG (Non Topping)

INSERT ORDER #	THICKNESS	GROOVE WIDTH	STANDARD GROOVE DEPTH
V84 NGC W.062	1/4	.062	.190
V84 NGC W.093	1/4	.093	.200
V84 NGC W.125	1/4	.125	.250
V84 NGC W.156	1/4	.156	.250
V84 NGC W.187	1/4	.187	.250
V84 NGC W.250	1/4	.250	.250
V85 NGC W.281	5/16	.281	.285
V85 NGC W.312	5/16	.312	.312

This insert can be used both internally and externally.

Standard Stocked Options

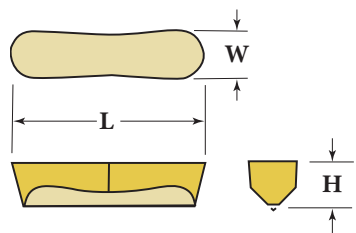
Right hand **NGR** & left hand **NGL** forms (see page 6)
.010, .015, .020, .025, .030 and FNR (full nose) radii

Non-Standard Options Available

Non-fractional widths	Non-standard clearances	Face groovers
Non-standard radii	Non-standard depths	Dovetails
Non-standard top-rake	Topping	

For Tool Holders and Internal Bars for these inserts, see pages 27 and 28.

V-Bottom TGI® Style Dog Bone Groovers



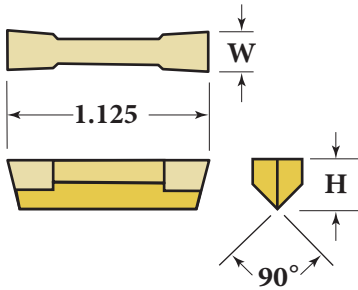
DG Extra Deep Grooving and Profiling (No Shoulder)

INSERT ORDER #	GROOVE WIDTH	HEIGHT "H"	LENGTH "L"	RADIUS
DG-324-R15	.125	.187	1.000	.015
DG-324-R30	.125	.187	1.000	.030
DG-324-FNR	.125	.187	1.000	Full Nose
DG-434-R15	.187	.250	1.000	.015
DG-434-R30	.187	.250	1.000	.030
DG-434-FNR	.187	.250	1.000	Full Nose
DG-444-R15	.250	.250	1.000	.015
DG-444-R30	.250	.250	1.000	.030
DG-444-FNR	.250	.250	1.000	Full Nose
DG-454-R15	.312	.250	1.000	.015
DG-454-R30	.312	.250	1.000	.030
DG-454-FNR	.312	.250	1.000	Full Nose
DG-5645-R15	.375	.312	1.125	.015
DG-5645-R30	.375	.312	1.125	.030
DG-5645-FNR	.375	.312	1.125	Full Nose

Other widths, radii, clearances, and positive top rake available upon request.

V-Bottom Dog Bone Deep Groovers

Identical to Valenite® VDB style / TGI® DB & DBP style



INSERT ORDER #	WIDTH	HEIGHT TO SHARP CRNR	RADIUS
V92 NG W.125	.125	.250	-
V92 NG W.125 .015R	.125	.250	.015
V92 NG W.125 .030R	.125	.250	.030
V92 NG W.125 FNR	.125	.250	Full Nose
V93 NG W.156	.156	.250	-
V93 NG W.156 .015R	.156	.250	.015
V93 NG W.156 .030R	.156	.250	.030
V93 NG W.156 FNR	.156	.250	Full Nose
V93 NG W.188	.188	.250	-
V93 NG W.188 .015R	.188	.250	.015
V93 NG W.188 .030R	.188	.250	.030
V93 NG W.188 FNR	.188	.250	Full Nose
V94 NG W.218	.218	.250	-
V94 NG W.218 .015R	.218	.250	.015
V94 NG W.218 .030R	.218	.250	.030
V94 NG W.218 FNR	.218	.250	Full Nose
V94 NG W.250	.250	.250	-
V94 NG W.250 - Tall	.250	.337	-
V94 NG W.250 .015R	.250	.250	.015
V94 NG W.250 .015R - Tall	.250	.337	.015
V94 NG W.250 .030R	.250	.250	.030
V94 NG W.250 .030R - Tall	.250	.337	.030
V94 NG W.250 FNR	.250	.250	Full Nose
V94 NG W.250 FNR - Tall	.250	.337	Full Nose
V95 NG W.312	.312	.337	-
V95 NG W.312 .015R	.312	.337	.015
V95 NG W.312 .030R	.312	.337	.030
V95 NG W.312 FNR	.312	.337	Full Nose
V96 NG W.344	.344	.337	-
V96 NG W.344 .015R	.344	.337	.015
V96 NG W.344 .030R	.344	.337	.030
V96 NG W.344 FNR	.344	.337	Full Nose
V96 NG W.375	.375	.337	-
V96 NG W.375 .015R	.375	.337	.015
V96 NG W.375 .030R	.375	.337	.030
V96 NG W.375 FNR	.375	.337	Full Nose

Other widths and radii available upon request.

ON EDGE
TRIANGLES

V-BOTTOMS

KENAMETAL®
TOP-NOTCH®

LAYDOWN
TRIANGLES

SNAP-TAP®/SECO
ISCAR®/VARDEX®

MISC. &
APPENDIX



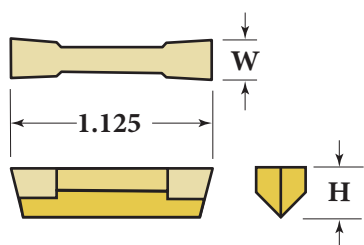
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V-Bottom Valenite® Style Dog Bone Groovers



VDB-A

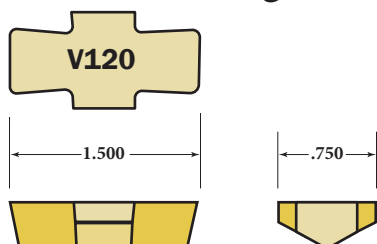
INSERT ORDER #	WIDTH	HEIGHT TO SHARP CRNR	RADIUS
VDB-125-A-015	.125	.250	.015
VDB-125-A-030	.125	.250	.030
VDB-125-RA	.125	.250	Full Nose
VDB-156-A-015	.156	.250	.015
VDB-156-A-030	.156	.250	.030
VDB-156-RA	.156	.250	Full Nose
VDB-188-A-015	.188	.250	.015
VDB-188-A-030	.188	.250	.030
VDB-188-RA	.188	.250	Full Nose
VDB-218-A-015	.218	.250	.015
VDB-218-A-030	.218	.250	.030
VDB-218-RA	.218	.250	Full Nose
VDB-250-A-015	.250	.250	.015
VDB-250-A-030	.250	.250	.030
VDB-250-RA	.250	.250	Full Nose

VDB-B

INSERT ORDER #	WIDTH	HEIGHT TO SHARP CRNR	RADIUS
VDB-250-B-015	.250	.337	.015
VDB-250-B-030	.250	.337	.030
VDB-250-RB	.250	.337	Full Nose
VDB-281-B-015	.281	.337	.015
VDB-281-B-030	.281	.337	.030
VDB-281-RB	.281	.337	Full Nose
VDB-312-B-015	.312	.337	.015
VDB-312-B-030	.312	.337	.030
VDB-312-RB	.312	.337	Full Nose
VDB-344-B-015	.344	.337	.015
VDB-344-B-030	.344	.337	.030
VDB-344-RB	.344	.337	Full Nose
VDB-375-B-015	.375	.337	.015
VDB-375-B-030	.375	.337	.030
VDB-375-RB	.375	.337	Full Nose

Other widths and radii available upon request.

Large V-Bottom Groover for .375 to .750 Widths



Any width, depth, and corner radius available.
Made to Order
Call for Tool Holder and Bar availability.

V-Bottom Sandvik®, TGI® Style, Mini-V-Loc® Inserts

Identification System

① ② ③ ④
MLPE - _ _ _ _ - NT 4S

①
STYLE
MLPE - Mini-V-Loc®
MLPEP - Mini-V-Loc®
 with positive top rake

②
SIZE
2532 or **3425**

③
THREAD FORM
NV - 60° "V" Thread non-topping
NVT - 60° "V" Thread full topping
NT - 29° Acme or Stub Acme
 non-topping
NTP - 29° Acme or Stub Acme
 partial-topping
NGC - Groover Central
NGR - Groover Right Hand
NGL - Groover Left Hand

④
NOSE WIDTHS **OR** **THREAD PITCHES**
W - Nose width of
 grooving insert in
 decimal form.
Standard Widths
.062 .156
.093 .187
.125 .250
 For wider grooves
 see page 22.
P - One or two numbers
 precede "P" to designate thread
 pitch.
Standard Acme and Stub Acme
Pitches: 4 - 12
 For standard Acme and Stub
 Acme pitch widths: page 58.
 For NV pitches/widths: page 54.



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Sharp automatic creep
 feed precision grinders.

ON EDGE
 TRIANGLES

V-BOTTOMS

KENAMETAL®
 TOP-NOTCH®

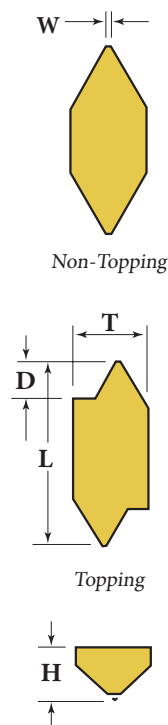
LAYDOWN
 TRIANGLES

SNAP-TAP®/SECO
 ISCAR®/VARDEX®

MISC. &
 APPENDIX

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Mini-V-Loc® Small Hole Threading and Grooving

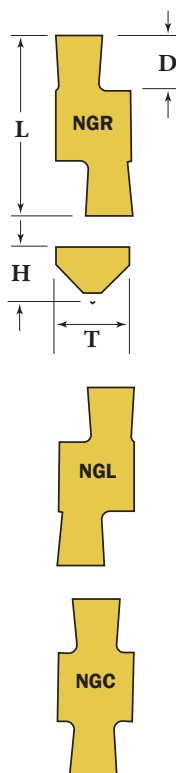


MLPE 60°

Note: Original TGI® MLPE style inserts had form on one end only; these are two-ended.

INSERT ORDER #	PITCH	WIDTH	DEPTH	HEIGHT	LENGTH	THICK
MLPE-2532-NV	10-20	.002-.004	-	.150	.500	³ / ₁₆
MLPE-3425-NV	5-20	.002-.004	-	.188	.625	¹ / ₄
MLPE-2532-NVT6	6	.011-.014	.096	.150	.500	³ / ₁₆
MLPE-2532-NVT7	7	.009-.012	.082	.150	.500	³ / ₁₆
MLPE-2532-NVT8	8	.007-.010	.072	.150	.500	³ / ₁₆
MLPE-2532-NVT9	9	.006-.009	.064	.150	.500	³ / ₁₆
MLPE-2532-NVT10	10	.005-.008	.058	.150	.500	³ / ₁₆
MLPE-2532-NVT11	11	.004-.007	.052	.150	.500	³ / ₁₆
MLPE-2532-NVT12	12	.004-.007	.048	.150	.500	³ / ₁₆
MLPE-2532-NVT13	13	.003-.006	.044	.150	.500	³ / ₁₆
MLPE-2532-NVT14	14	.003-.006	.041	.150	.500	³ / ₁₆
MLPE-2532-NVT16	16	.003-.005	.036	.150	.500	³ / ₁₆
MLPE-2532-NVT18	18	.002-.005	.032	.150	.500	³ / ₁₆
MLPE-2532-NVT20	20	.002-.004	.029	.150	.500	³ / ₁₆
MLPE-3425-NVT5	5	.013-.016	.115	.188	.625	¹ / ₄
MLPE-3425-NVT6	6	.011-.014	.096	.188	.625	¹ / ₄
MLPE-3425-NVT7	7	.009-.012	.082	.188	.625	¹ / ₄
MLPE-3425-NVT8	8	.007-.010	.072	.188	.625	¹ / ₄
MLPE-3425-NVT9	9	.006-.009	.064	.188	.625	¹ / ₄
MLPE-3425-NVT10	10	.005-.008	.058	.188	.625	¹ / ₄
MLPE-3425-NVT11	11	.004-.007	.052	.188	.625	¹ / ₄
MLPE-3425-NVT12	12	.004-.007	.048	.188	.625	¹ / ₄
MLPE-3425-NVT13	13	.003-.006	.044	.188	.625	¹ / ₄
MLPE-3425-NVT14	14	.003-.006	.041	.188	.625	¹ / ₄
MLPE-3425-NVT16	16	.003-.005	.036	.188	.625	¹ / ₄
MLPE-3425-NVT18	18	.002-.005	.032	.188	.625	¹ / ₄
MLPE-3425-NVT20	20	.002-.004	.029	.188	.625	¹ / ₄

Positive top-rakes (MLPEP), special widths, depths, and radii available upon request.

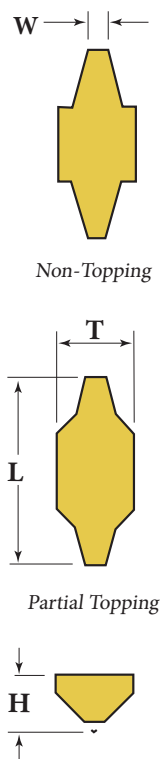


MLPE Groover

INSERT ORDER #	GROOVE W	DEPTH	HEIGHT	LENGTH	THICK
MLPE-2532-NGC .062	.062	.120	.150	.500	³ / ₁₆
MLPE-2532-NGC .093	.093	.150	.150	.500	³ / ₁₆
MLPE-2532-NGC .125	.125	.150	.150	.500	³ / ₁₆
MLPE-2532-NGR .125	.125	.150	.150	.500	³ / ₁₆
MLPE-2532-NGL .125	.125	.150	.150	.500	³ / ₁₆
MLPE-2532-NGC .156	.156	.150	.150	.500	³ / ₁₆
MLPE-2532-NGR .156	.156	.150	.150	.500	³ / ₁₆
MLPE-2532-NGL .156	.156	.150	.150	.500	³ / ₁₆
MLPE-2532-NGC .188	.188	.150	.150	.500	³ / ₁₆
MLPE-3425-NGC .062	.062	.125	.188	.625	¹ / ₄
MLPE-3425-NGC .093	.093	.150	.188	.625	¹ / ₄
MLPE-3425-NGC .125	.125	.150	.188	.625	¹ / ₄
MLPE-3425-NGC .156	.156	.150	.188	.625	¹ / ₄
MLPE-3425-NGC .188	.188	.150	.188	.625	¹ / ₄
MLPE-3425-NGR .188	.188	.150	.188	.625	¹ / ₄
MLPE-3425-NGL .188	.188	.150	.188	.625	¹ / ₄
MLPE-3425-NGC .250	.250	.150	.188	.625	¹ / ₄

Positive top-rakes (MLPEP), special widths, depths, and radii available upon request.

Mini-V-Loc® Small Hole Threading and Grooving



MLPE 29° Acme and Stub Acme

NON-TOPPING	PARTIAL TOPPING	PITCH	NOSE WIDTH	TOPPING DEPTH "D"
MLPE-2532-NT4	MLPE-2532-NTP4	4	.0875	.1350
MLPE-2532-NT4S	MLPE-2532-NTP4S	4S	.1004	.0850
MLPE-2532-NT5	MLPE-2532-NTP5	5	.0689	.1100
MLPE-2532-NT5S	MLPE-2532-NTP5S	5S	.0793	.0700
MLPE-2532-NT6	MLPE-2532-NTP6	6	.0566	.0933
MLPE-2532-NT6S	MLPE-2532-NTP6S	6S	.0652	.0600
MLPE-2532-NT7	MLPE-2532-NTP7	7	.0478	.0814
MLPE-2532-NT7S	MLPE-2532-NTP7S	7S	.0551	.0529
MLPE-2532-NT8	MLPE-2532-NTP8	8	.0411	.0725
MLPE-2532-NT8S	MLPE-2532-NTP8S	8S	.0476	.0475
MLPE-2532-NT9	MLPE-2532-NTP9	9	.0360	.0655
MLPE-2532-NT9S	MLPE-2532-NTP9S	9S	.0417	.0433
MLPE-2532-NT10	MLPE-2532-NTP10	10	.0319	.0600
MLPE-2532-NT10S	MLPE-2532-NTP10S	10S	.0370	.0400
MLPE-2532-NT12	MLPE-2532-NTP12	12	.0283	.0467
MLPE-2532-NT12S	MLPE-2532-NTP12S	12S	.0326	.0300

All **MLPE-2532** inserts have a height of .150, length of .500, and thickness of $\frac{3}{16}$.

MLPE-3425-NT4	MLPE-3425-NTP4	4	.0875	.1350
MLPE-3425-NT4S	MLPE-3425-NTP4S	4S	.1004	.0850
MLPE-3425-NT5	MLPE-3425-NTP5	5	.0689	.1100
MLPE-3425-NT5S	MLPE-3425-NTP5S	5S	.0793	.0700
MLPE-3425-NT6	MLPE-3425-NTP6	6	.0566	.0933
MLPE-3425-NT6S	MLPE-3425-NTP6S	6S	.0652	.0600
MLPE-3425-NT7	MLPE-3425-NTP7	7	.0478	.0814
MLPE-3425-NT7S	MLPE-3425-NTP7S	7S	.0551	.0529
MLPE-3425-NT8	MLPE-3425-NTP8	8	.0411	.0725
MLPE-3425-NT8S	MLPE-3425-NTP8S	8S	.0476	.0475
MLPE-3425-NT9	MLPE-3425-NTP9	9	.0360	.0655
MLPE-3425-NT9S	MLPE-3425-NTP9S	9S	.0417	.0433
MLPE-3425-NT10	MLPE-3425-NTP10	10	.0319	.0600
MLPE-3425-NT10S	MLPE-3425-NTP10S	10S	.0370	.0400
MLPE-3425-NT12	MLPE-3425-NTP12	12	.0283	.0467
MLPE-3425-NT12S	MLPE-3425-NTP12S	12S	.0326	.0300

All **MLPE-3425** inserts have a height of .188, length of .625, and thickness of $\frac{1}{4}$.

Positive top-rake (MLPEP), special widths, depths, etc. are available upon request.
For thread profile, see page 55, detail D.

Original TGI® MLPE style inserts had form on one end only; these are two-ended.

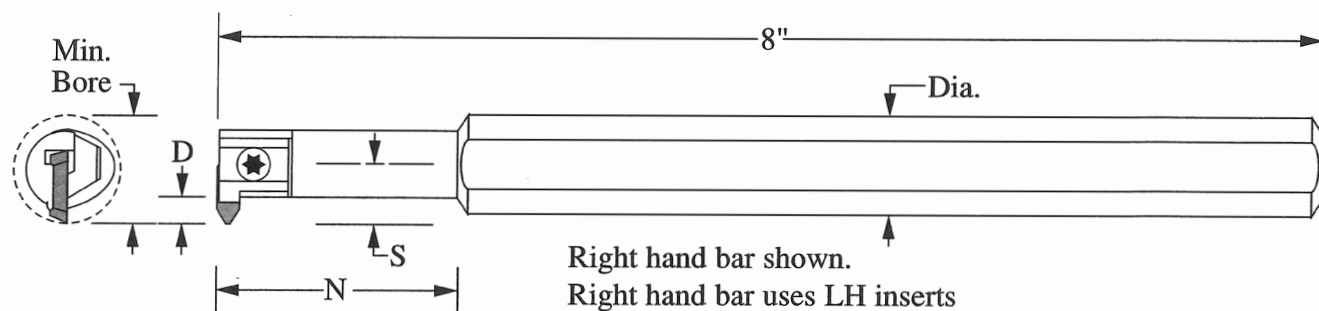
For Mini-V-Loc® Threading and Grooving Bars, see page 26.



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V-Bottom Small Hole Threading and Grooving Bars



Mini-V-Loc® Threading and Grooving Bars

BAR ORDER NUMBER		MINIMUM BORE DIA.	DIA.	INSERT MLPE	"S"	DEPTH "D"	NECK "N"
INT RH	INT LH						
MS-CLHOR-46254	--	.500	.500	1251	.265	.079	.093
MS-CLHOR-6845	MS-CLHOL-6845	.650	.750	2532	.400	.150	1.25
MS-CLHOR-8845	MS-CLHOL-8845	.650	1.000	2532	.400	.150	1.25
MS-CLHOR-6856	MS-CLHOL-6856	.830	.750	3425	.462	.150	1.50
MS-CLHOR-8856	MS-CLHOL-8856	.830	1.000	3425	.462	.150	1.50

Mini-V-Loc® Bar Parts

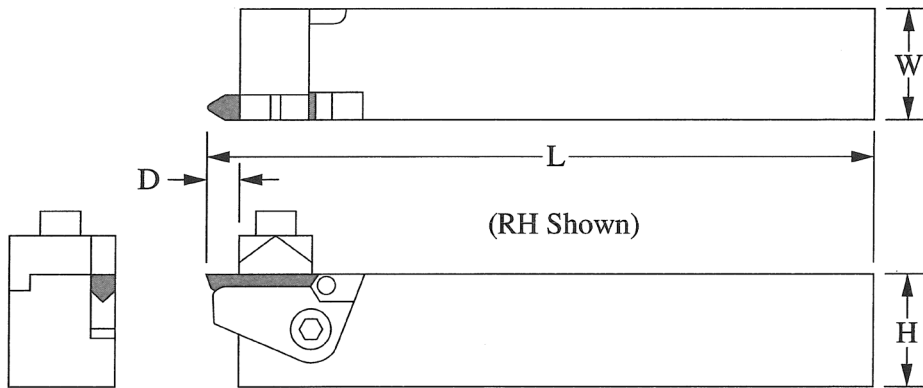
BAR ORDER NUMBER		BAR PARTS				
INT RH	INT LH	RH Anvil	LH Anvil	Torx® Screw	Torx® Key	Insert
MS-CLHOR-46254	--	MCR - 30	--	75020	75080	MLPE-1251
MS-CLHOR-6845	MS-CLHOL-6845	MCR - 40	MCL - 40	75000	75060	MLPE-2532
MS-CLHOR-8845	MS-CLHOL-8845	MCR - 40	MCL - 40	75000	75060	MLPE-2532
MS-CLHOR-6856	MS-CLHOL-6856	MCR - 50	MCL - 50	75010	75070	MLPE-3425
MS-CLHOR-8856	MS-CLHOL-8856	MCR - 50	MCL - 50	75010	75070	MLPE-3425



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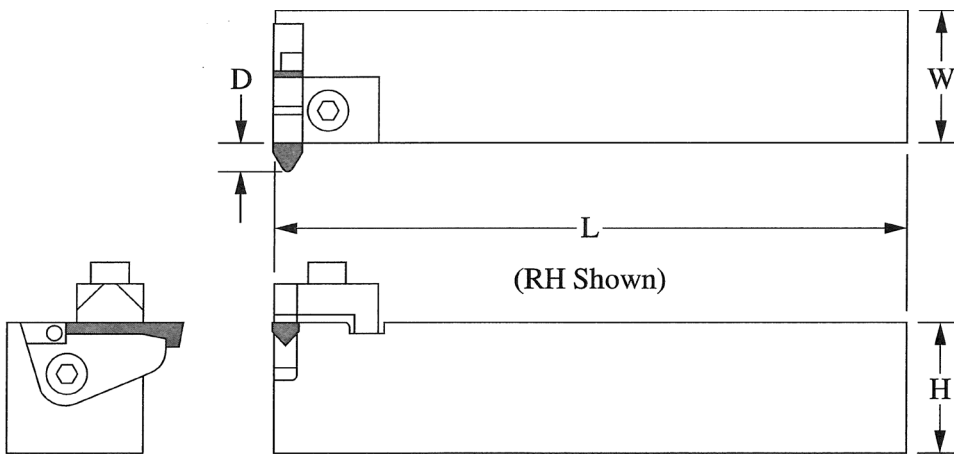


V-Bottom Threading and Grooving Toolholders



Toolholder Uses Inserts: V84 (LPE 444) or V85 (LPE 454)

TOOLHOLDER NUMBER		"W"	"H"	"L"	"D"
RH	LH				
TGR-100-16	TGL-100-16	1.00	1.00	6.00	.31
TGR-100-20	TGL-100-20	1.25	1.25	7.00	.31
TGR-100-24	TGL-100-24	1.50	1.50	7.00	.31



Toolholder Uses Inserts: V84 (LPE 444) or V85 (LPE 454)

TOOLHOLDER NUMBER		"W"	"H"	"L"	"D"
RH	LH				
TGIR-100-16	TGIL-100-16	1.00	1.00	6.00	.31
TGIR-100-20	TGIL-100-20	1.25	1.25	7.00	.31

Toolholder Parts

TOOLHOLDER #	TOOLHOLDER PARTS				
	Anvil	Clamp	Anvil Screw	Clamp Screw	Dowel Pin
TGR & TGIR	AR-100	CL-100	70170M	10210	20130
TGL & TGIL	AL-100	CL-100	70170M	10210	20130

ON EDGE
TRIANGLES

V-BOTTOMS

KENAMETAL®
TOP-NOTCH®

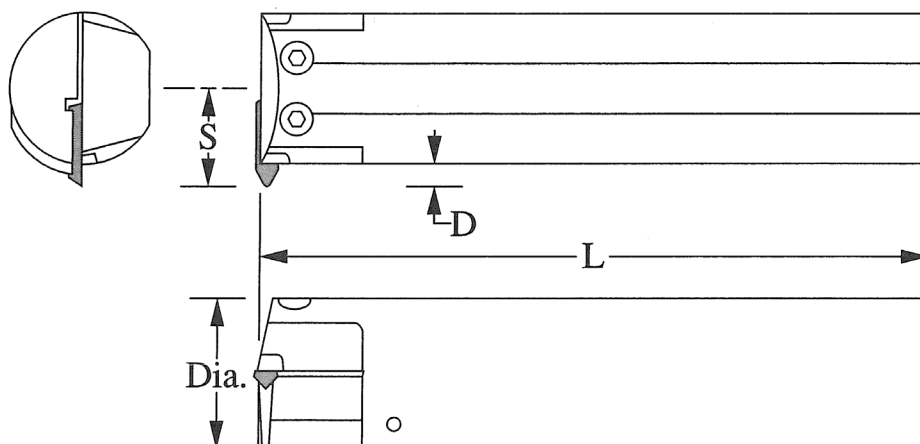
LAYDOWN
TRIANGLES

SNAP-TAP®/SECO
ISCAR®/VARDEX®

MISC. &
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V-Bottom Threading and Grooving Bars

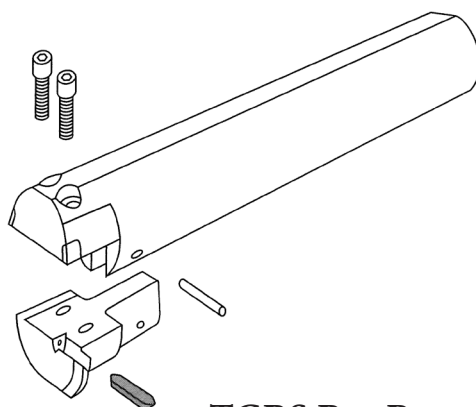


RH Bar Shown

Uses Inserts:
V84 (LPE 444)
V85 (LPE 454)

Internal Threading and Shallow Grooving

BAR NUMBER		MINIMUM BORE DIA.	DIA.	"L"	"S"	"D"
RH	LH					
TGBS - 812R	TGBS - 812L	1.25	1.00	12	.69	.18
TGBS - 1012R	TGBS - 1012L	1.49	1.25	12	.81	.18
TGBS - 1212R	TGBS - 1212L	1.75	1.50	12	.94	.18
TGBS - 1615R	TGBS - 1615L	2.31	2.00	15	1.25	.25
TGBS - 2020R	TGBS - 2020L	2.81	2.50	20	1.50	.25
TGBS - 2420R	TGBS - 2420L	3.30	3.00	20	1.75	.25



NOTE: Ordering a bar plus the opposite hand anvil gives you both RH & LH ability.

TGBS Bar Parts

TOOLHOLDER #	TOOLHOLDER PARTS				
	RH Anvil	LH Anvil	Dowel Pin	Anvil Scrw	Adj. Screw
TGBS - 812	TGBS - 8R	TGBS - 8L	.187 x 3/4	5/16 x 5/8	8/32 x 1/4
TGBS - 1012	TGBS - 10R	TGBS - 10L	.187 x 1	3/8 x 3/4	8/32 x 3/8
TGBS - 1212	TGBS - 12R	TGBS - 12L	.187 x 1 1/4	3/8 x 1	8/32 x 3/8
TGBS - 1615	TGBS - 16R	TGBS - 16L	.250 x 1 1/2	5/16 x 1 1/4	8/32 x 1/2
TGBS - 2020	TGBS - 20R	TGBS - 20L	.312 x 2	3/8 x 1 1/2	8/32 x 1/2
TGBS - 2420	TGBS - 24R	TGBS - 24L	.375 x 2	3/8 x 1 1/2	8/32 x 1/2



ON EDGE
TRIANGLES

V-BOTTOMS

KENNAMETAL®
TOP-NOTCH®

LAYDOWN
TRIANGLES

SNAP-TAP®/SECO
ISCAR®/VARDEX®

MISC. &
APPENDIX

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Cincinnati insert
form grinders in the
Carbide Grinding
East Shop.

TOP-NOTCH® STYLE INSERTS

Identification System

① ② ③ ④ ⑤ ⑥ ⑦ ⑧
N D C - 3 8RD R - 75 —

①

STYLE

N - Top Notch

②

DESCRIPTION

A - 29° Acme
B - Blank (for special forms)
D - Threader (drilling)
F - Face Groover
G - Groover
J - UNJ Thread (controlled root radius)
R - Groover with full nose radius
T - 60° V Thread
U - Undercutting
V - Poly Vee

③

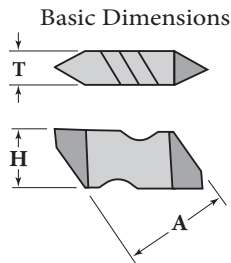
ADDITIONAL INFO

B - Buttress
C - Crest Turning
E - Forms crest radii only
F - Fine Pitch
K - Fine Pitch with positive top rake
P - Positive top rake
S - Stub
U - Utility

④

BODY SIZE

-2
-3
-3.5
-4
-4.5
-5
-6
-6.5



Size	"H"	"T"	"A"
-2	.219	.150	.344
-3	.344	.195	.634
-3.5	.344	.255	.634
-4	.453	.255	.760
-4.5	.453	.312	.760
-5	.688	.383	1.070
-6	.453	.383	.760
-6.5	.453	.500	.760

⑤

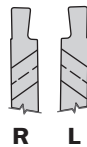
GROOVE WIDTH or INDUSTRY IDENTIFICATION (if applicable)

Identifies width and radii in NG, NF, NR, and NU styles.
 Identifies API designations in API, Round, and Buttress styles.
 Identifies controlled root radii in NJ, NJF, NJP, and NJK styles.

⑥

HAND OF INSERT

R - Right hand notch
L - Left hand notch



⑦

DEFINITION OF INSERT (if applicable)

Depending on the insert, this number identifies the TPI (threads per inch) or TPF (taper per foot).

⑧

ADDITIONAL INFO

Int - Internal
Ext - External
M - Multiple Tooth

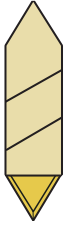
Bars and Holders stocked for these Inserts.



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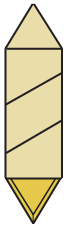


Top-Notch® Style Threading Inserts



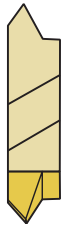
NT (Non-Topping) 60° Vee

INSERT ORDER NUMBER		FLAT	RADIUS	PITCH RANGE
Ext. Right Hand	Int. Right Hand			
NT-2R	NT-2L	.004 - .005	--	28 - 16
NT-3R	NT-3L	--	.010	16 - 8
NT-4R	NT-4L	--	.011	6 - 4
NT-6R	NT-6L	--	.021	3 - 2



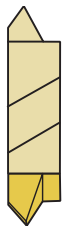
NTP (Non-Topping) 60° Vee, 5° Positive Top Rake

INSERT ORDER NUMBER		FLAT	RADIUS	PITCH RANGE
Ext. Right Hand	Int. Right Hand			
NTP-2R	NTP-2L	.005	--	28 - 16
NTP-3R	NTP-3L	--	.010	16 - 8
NTP-4R	NTP-4L	--	.011	6 - 4
NTP-6R	NTP-6L	--	.021	3 - 2



NTF (Non-Topping) 60° Vee, Fine Pitch, Close to Shoulder

INSERT ORDER NUMBER		FLAT	RADIUS	PITCH RANGE
Ext. Right Hand	Int. Right Hand			
NTF-2R	NTF-2L	.004	--	28 - 20
NTF-3R	NTF-3L	--	.004	20 - 10
NTF-4R	NTF-4L	--	.007	10 - 6



NTK (Non-Topping) 60° Vee, Fine Pitch, Close to Shoulder, 5° Positive Top Rake

INSERT ORDER NUMBER		FLAT	RADIUS	PITCH RANGE
Ext. Right Hand	Int. Right Hand			
NTK-2R	NTK-2L	.004	--	28 - 11
NTK-3R	NTK-3L	--	.004	24 - 11
NTK-4R	NTK-4L	--	.007	10 - 4

Also Available: 10° Included Thread 90° BPV
 15° Included Thread Dovetail (see page 7 for forms)

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Top-Notch® Style Threading Inserts



NTC (Full Topping “UN”) 60° Vee, Crest Turning

INSERT ORDER NUMBER		INT RADIUS	EXT RADIUS	PITCH
Ext. Right Hand	Int. Right Hand			
NTC-3R7	NTC-3L7	.010	.020	7
NTC-3R8	NTC-3L8	.009	.018	8
NTC-3R9	NTC-3L9	.008	.016	9
NTC-3R10	NTC-3L10	.007	.014	10
NTC-3R11	NTC-3L11	.006	.013	11
NTC-3R12	NTC-3L12	.006	.012	12
NTC-3R13	NTC-3L13	.005	.011	13
NTC-3R14	NTC-3L14	.005	.010	14
NTC-3R16	NTC-3L16	.004	.009	16
NTC-3R18	NTC-3L18	.004	.008	18
NTC-3R20	NTC-3L20	.003	.007	20
NTC-3R24	NTC-3L24	.003	.006	24
NTC-3R28	NTC-3L28	.002	.005	28
NTC-4R6	NTC-4L6	.012	.024	6



NJ (Non-Topping) 60° Vee, UNJ Thread, Controlled Root Radius

INSERT ORDER NUMBER		FLAT	RADIUS	PITCH
Ext. Right Hand	Int. Right Hand			
NJ-3020R8	NJ-3020L8	--	.019	8
NJ-3014R12	NJ-3014L12	--	.013	12
NJ-3010R16	NJ-3010L16	--	.010	16



NJP (Non-Topping) 60° Vee, UNJ Thread, Controlled Root Radius, 5° Positive Top Rake

INSERT ORDER NUMBER		FLAT	RADIUS	PITCH
Ext. Right Hand	Int. Right Hand			
NJP-3020R8	NJP-3020L8	--	.019	8
NJP-3014R12	NJP-3014L12	--	.013	12
NJP-3010R16	NJP-3010L16	--	.010	16



NJF (Non-Topping) 60° Vee, UNJ Thread, Controlled Root Radius, Fine Pitch, Close to Shoulder

INSERT ORDER NUMBER		FLAT	RADIUS	PITCH
Ext. Right Hand	Int. Right Hand			
NJF-3012R14	NJF-3012L14	--	.011	14
NJF-3010R16	NJF-3010L16	--	.010	16
NJF-3009R18	NJF-3009L18	--	.009	18
NJF-3008R20	NJF-3008L20	--	.008	20
NJF-3007R24	NJF-3007L24	--	.007	24
NJF-3006R28	NJF-3006L28	--	.006	28
NJF-3005R32	NJF-3005L32	--	.005	32

Top-Notch® Style Threading Inserts



NJK (Non-Topping) 60° Vee, UNJ Thread, Controlled Root Radius, 5° Positive Top Rake, Fine Pitch, Close to Shoulder

INSERT ORDER NUMBER		INT RADIUS	EXT RADIUS	PITCH
Ext. Right Hand	Int. Right Hand			
NJK-2005R32	NJK-2005L32	.002	.005	32
NJK-3012R14	NJK-3012L14	.005	.011	14
NJK-3010R16	NJK-3010L16	.004	.010	16
NJK-3009R18	NJK-3009L18	.004	.009	18
NJK-3008R20	NJK-3008L20	.003	.008	20
NJK-3007R24	NJK-3007L24	.003	.007	24
NJK-3006R28	NJK-3006L28	.002	.006	28
NJK-3005R32	NJK-3005L32	.002	.005	32



NA (Non-Topping) 29° Acme

INSERT ORDER NUMBER		PITCH	EXT. FLAT	INT. FLAT
Ext. Right Hand	Int. Right Hand			
NA-2R16	NA-2L16	16	.0214	.0206
NA-2R14	NA-2L14	14	.0248	.0239
NA-2R12	NA-2L12	12	.0294	.0283
NA-2R10	NA-2L10	10	.0330	.0319
NA-2R8	NA-2L8	8	.0424	.0411
NA-2R6	NA-2L6	6	.0579	.0566
NA-2R5	NA-2L5	5	.0704	.0689
NA-3R16	NA-3L16	16	.0214	.0206
NA-3R14	NA-3L14	14	.0248	.0239
NA-3R12	NA-3L12	12	.0294	.0283
NA-3R10	NA-3L10	10	.0330	.0319
NA-3R8	NA-3L8	8	.0423	.0411
NA-3R6	NA-3L6	6	.0579	.0566
NA-3R5	NA-3L5	5	.0704	.0689
NA-3R4	NA-3L4	4	.0893	.0875
NA-4R8	NA-4L8	8	.0423	.0411
NA-4R6	NA-4L6	6	.0579	.0566
NA-4R5	NA-4L5	5	.0704	.0689
NA-4R4	NA-4L4	4	.0893	.0875
NA-4R3.5	NA-4L3.5	3.5	.1029	.1007
NA-4R3	NA-4L3	3	.1209	.1184
NA-4R2.5	NA-4L2.5	2.5	.1460	.1431
NA-6R3	NA-6L3	3	.1209	.1184
NA-6R2.5	NA-6L2.5	2.5	.1460	.1431
NA-6R2	NA-6L2	2	.1833	.1802

For thread depth, see "Acme/Stub Acme" on page 58.

For thread profiles, see page 55, detail D.

Options Available

Corner radii (root of thread)

Partial topping with 45° chamfer (crest of thread) or crest radius

Full topping (controlled thread height)

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NAS (Non-Topping) 29° Stub Acme

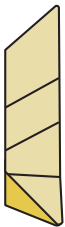
INSERT ORDER NUMBER		PITCH	EXT. FLAT	INT. FLAT
Ext. Right Hand	Int. Right Hand			
NAS-2R16	NAS-2L16	16 Stub	.0248	.0238
NAS-2R14	NAS-2L14	14 Stub	.0289	.0276
NAS-2R12	NAS-2L12	12 Stub	.0341	.0326
NAS-2R10	NAS-2L10	10 Stub	.0384	.0370
NAS-2R8	NAS-2L8	8 Stub	.0493	.0476
NAS-2R6	NAS-2L6	6 Stub	.0670	.0652
NAS-3R16	NAS-3L16	16 Stub	.0248	.0238
NAS-3R14	NAS-3L14	14 Stub	.0289	.0276
NAS-3R12	NAS-3L12	12 Stub	.0341	.0326
NAS-3R10	NAS-3L10	10 Stub	.0384	.0370
NAS-3R8	NAS-3L8	8 Stub	.0493	.0476
NAS-3R6	NAS-3L6	6 Stub	.0670	.0652
NAS-3R5	NAS-3L5	5 Stub	.0812	.0793
NAS-3R4	NAS-3L4	4 Stub	.1029	.1004
NAS-4R8	NAS-4L8	8 Stub	.0493	.0476
NAS-4R6	NAS-4L6	6 Stub	.0670	.0652
NAS-4R5	NAS-4L5	5 Stub	.0812	.0793
NAS-4R4	NAS-4L4	4 Stub	.1029	.1004
NAS-4R3.5	NAS-4L3.5	3.5 Stub	.1185	.1155
NAS-4R3	NAS-4L3	3 Stub	.1389	.1356
NAS-4R2.5	NAS-4L2.5	2.5 Stub	.1670	.1638
NAS-6R3	NAS-6L3	3 Stub	.1389	.1356
NAS-6R2.5	NAS-6L2.5	2.5 Stub	.1670	.1638
NAS-6R2	NAS-6L2	2 Stub	.2102	.2060

For thread depth, see "Acme Table" on page 58.

For thread profiles, see page 55, detail D.

Options Available:

- Corner radii (root of thread)
- Partial topping with 45° chamfer (crest of thread)
- Full topping (controlled thread height)

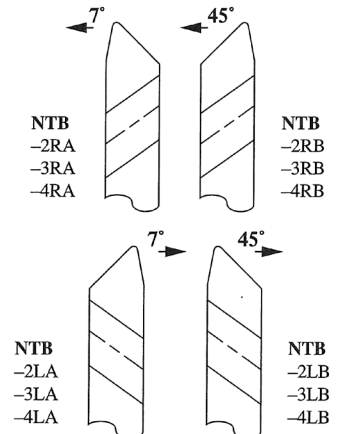


NTB-A / NTB-B (Non-Topping)

American Standard Buttress (ASB)

INSERT ORDER NUMBER		RADII	LEADING FLANK
Ext. Right Hand	Int. Right Hand		
NTB-2RA	NTB-2LA	.002-.004	7°
NTB-2RB	NTB-2LB	.002-.004	45°
NTB-3RA	NTB-3LA	.005-.008	7°
NTB-3RB	NTB-3LB	.005-.008	45°
NTB-4RA	NTB-4LA	.008-.012	7°
NTB-4RB	NTB-4LB	.008-.012	45°

For pitches, see page 58. For thread profiles, see page 55, detail C.



Top-Notch® Style Grooving Inserts



NG (Non-Topping) Groover

INSERT ORDER NUMBER		GROOVING WIDTH	GROOVING DEPTH	RADII
Right Hand	Left Hand			
NG-2031R	NG-2031L	.031	.065	--
NG-2041R	NG-2041L	.041	.100	--
NG-2047R	NG-2047L	.047	.100	--
NG-2058R	NG-2058L	.058	.110	.005-.010
NG-2062R	NG-2062L	.062	.110	.005-.010
NG-2094R	NG-2094L	.094	.110	.005-.010
NG-2125R	NG-2125L	.125	.110	.005-.010
NG-3047R	NG-3047L	.047	.090	--
NG-3062R	NG-3062L	.062	.100	.005-.010
NG-3072R	NG-3072L	.072	.100	.005-.010
NG-3078R	NG-3078L	.078	.100	.005-.010
NG-3088R	NG-3088L	.088	.125	.005-.010
NG-3094R	NG-3094L	.094	.160	.010
NG-3097R	NG-3097L	.097	.160	.010
NG-3105R	NG-3105L	.105	.160	.010
NG-3110R	NG-3110L	.110	.160	.010
NG-3122R	NG-3122L	.122	.160	.010-.015
NG-3125R	NG-3125L	.125	.160	.010-.015
NG-3142R	NG-3142L	.142	.175	.010-.015
NG-3156R	NG-3156L	.156	.175	.010-.015
NG-3178R	NG-3178L	.178	.190	.010-.015
NG-3185R	NG-3185L	.185	.190	.020-.025
NG-3187R	NG-3187L	.187	.190	.020-.025
NG-3189R	NG-3189L	.189	.190	.020-.025
NG-4125R	NG-4125L	.125	.190	.010-.015
NG-4156R	NG-4156L	.156	.200	.010-.015
NG-4187R	NG-4187L	.187	.250	.020-.025
NG-4189R	NG-4189L	.189	.250	.020-.025
NG-4219R	NG-4219L	.219	.250	.020-.025
NG-4250R	NG-4250L	.250	.260	.020-.025
NG-4.5281R	NG-4.5281L	.281	.260	.030
NG-4.5312R	NG-4.5312L	.312	.260	.030
NG-6375R	NG-6375L	.375	.260	.030

Non-Standard Options Available:

Non-standard widths, top rakes, radii
 Non-standard clearances
 Topping
 Dovetails

Metric (mm) widths available.



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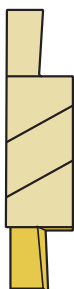
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Top-Notch® Style Grooving Inserts

NGP (Non-Topping) Groover, 5° Positive Top Rake



INSERT ORDER NUMBER		GROOVING WIDTH	GROOVING DEPTH	RADII
Right Hand	Left Hand			
NGP-2031R	NGP-2031L	.031	.065	--
NGP-2062R	NGP-2062L	.062	.110	.005-.010
NGP-2094R	NGP-2094L	.094	.110	.005-.010
NGP-2125R	NGP-2125L	.125	.110	.005-.010
NGP-3062R	NGP-3062L	.062	.100	.005-.010
NGP-3094R	NGP-3094L	.094	.160	.010
NGP-3125R	NGP-3125L	.125	.160	.010-.015
NGP-3156R	NGP-3156L	.156	.175	.010-.015
NGP-3187R	NGP-3187L	.187	.190	.020-.025
NGP-3189R	NGP-3189L	.189	.190	.020-.025
NGP-4125R	NGP-4125L	.125	.190	.010-.015
NGP-4156R	NGP-4156L	.156	.200	.010-.015
NGP-4187R	NGP-4187L	.187	.250	.020-.025
NGP-4189R	NGP-4189L	.189	.250	.020-.025
NGP-4250R	NGP-4250L	.250	.260	.020-.025

Non-standard widths, top rakes, radii, and clearances available. Topping available.

NR (Non-Topping) Groover with Full Nose Radius



INSERT ORDER NUMBER		GROOVING WIDTH	GROOVING DEPTH	RADIUS
Right Hand	Left Hand			
NR-2031R	NR-2031L	.062	.110	.031
NR-2047R	NR-2047L	.094	.110	.047
NR-2062R	NR-2062L	.125	.110	.062
NR-3031R	NR-3031L	.062	.100	.031
NR-3047R	NR-3047L	.094	.160	.047
NR-3062R	NR-3062L	.125	.160	.062
NR-3094R	NR-3094L	.189	.190	.094
NR-4062R	NR-4062R	.125	.190	.062
NR-4094R	NR-4094R	.189	.250	.094
NR-4125R	NR-4125R	.250	.260	.125

Non-standard widths, radii, and clearances available.

NF (Non-Topping) Face Groovers (See Right Hand view center of page 7, Left Hand opposite.)



INSERT ORDER NUMBER		GROOVING WIDTH	GROOVING DEPTH	RADII
Right Hand	Left Hand			
NF-3125R	NF-3125L	.125	.160	.010-.015
NF-3156R	NF-3156L	.156	.175	.010-.015
NF-3189R	NF-3189L	.189	.190	.020-.025
NF-4250R	NF-4250L	.250	.260	.020-.025
NF-4.5312R	NF-4.5312L	.312	.260	.030

Non-standard widths, radii, and clearances available.

Top-Notch® Style Grooving Inserts

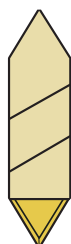


NRP (Non-Topping) Groover with Full Nose Radius, 5° Positive Top Rake

INSERT ORDER NUMBER		GROOVING WIDTH	GROOVING DEPTH	RADIUS
Right Hand	Left Hand			
NRP-2031R	NRP-2031L	.062	.110	.031
NRP-2047R	NRP-2047L	.094	.110	.047
NRP-2062R	NRP-2062L	.125	.110	.062
NRP-3031R	NRP-3031L	.062	.100	.031
NRP-3047R	NRP-3047L	.094	.160	.047
NRP-3062R	NRP-3062L	.125	.160	.062
NRP-3094R	NRP-3094L	.189	.190	.094
NRP-4062R	NRP-4062L	.125	.190	.062
NRP-4094R	NRP-4094L	.189	.250	.094
NRP-4125R	NRP-4125L	.250	.260	.125

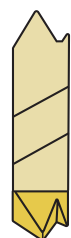
Non-standard widths, radii, and clearances available.

Top-Notch® Style API Inserts



ND (Non-Topping) 60° “V” Thread with Radius, Rotary Shoulder Connection

INSERT ORDER NUMBER		RADIUS	THREAD FORM
Right Hand	Left Hand		
ND-3040R	ND-3040L	.020	V0.040 (Non-topping)
ND-3038R	ND-3038L	.038	V0.038 (Non-topping)
ND-4040R	ND-4040L	.020	V0.040 (Non-topping)
ND-4050R	ND-4050L	.025	V0.050 (Non-topping)
ND-4038R	ND-4038L	.038	V0.038 (Non-topping)

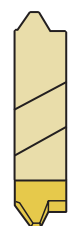


NDC (Full Topping) Rotary Shoulder Connection, Crest Turning

INSERT ORDER NUMBER		TPI	TPF	THREAD FORM	CONNECTION SIZES
Ext. Right Hand	Int. Right Hand				
NDC-3.5040R3	NDC-3.5040L3	5	3"	V0.040 (530)	2 $\frac{3}{8}$ -4 $\frac{1}{2}$ Reg, 3 $\frac{1}{2}$ FH, 4 $\frac{1}{2}$ FH
NDC-4038R2	NDC-4038L2	4	2"	V0.038 (428)	NC23-50, 2 $\frac{3}{8}$ -6 $\frac{5}{8}$ IF
NDC-4038R3	NDC-4038L3	4	3"	V0.038 (428)	NC56-77
NDC-4050R2	NDC-4050L2	4	2"	V0.050 (425)	6 $\frac{5}{8}$ Reg, 5 $\frac{1}{2}$ FH, 6 $\frac{5}{8}$ FH
NDC-4050R3	NDC-4050L3	4	3"	V0.050 (425)	5 $\frac{1}{2}$, 7 $\frac{5}{8}$, 8 $\frac{5}{8}$ Reg

For thread profiles, see page 56, details J, K, N, & O.

For API thread charts, see page 58.



P.A.C. / American Open Hole (Full Topping)

INSERT ORDER NUMBER		TPI	TPF	CONNECTION SIZES
Ext. Right Hand	Int. Right Hand			
NDC-4R P.A.C.	NDC-4L P.A.C.	4	1 $\frac{1}{2}$ "	2 $\frac{3}{8}$ -2 $\frac{7}{8}$

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Top-Notch® Style API Inserts

NDC (Full Topping) National Pipe Thread / Line Pipe Thread (NPT / LPT)

INSERT ORDER NUMBER		TPI	TPF	THREAD FORM
Ext. Right Hand	Int. Right Hand			
NDC-3R-8LPT	NDC-3L-8LPT	8	¾"	1 Tooth
NDC-3R-11.5LPT	NDC-3L-11.5LPT	11.5	¾"	1 Tooth
NDC-3R-11.5LPT-2M	NDC-3L-11.5LPT-2M	11.5	¾"	2 Teeth
NDC-4.5R-8LPT-2M	NDC-4.5L-8LPT-2M	8	¾"	2 Teeth

For thread profiles, see page 56, details P and Q.

NDC (Full Topping) Buttress

INSERT ORDER NUMBER		TPI	TPF	CASING/TUBING SIZES
Ext. Right Hand	Int. Right Hand			
NDC-3.55B75R	NDC-3.55B75L	5	¾"	4½-13¾
NDC-45B75R	NDC-45B75L	5	¾"	4½-13¾
NDC-3.55B1R	NDC-3.55B1L	5	1"	16 and Larger
NDC-45B1R	NDC-45B1L	5	1"	16 and Larger

For thread profile, see page 56, detail R.

NDC-Hydril® Style (Full Topping)

INSERT ORDER NUMBER		TPI	THREAD HEIGHT	ADDITIONAL INFO
Ext. Right Hand	Int. Right Hand			
NDC-4.5R-3WPH	NDC-4.5L-3WPH	3	.087	FJWP
NDC-3.5R-4WPH	NDC-3.5L-4WPH	4	.051	FJWP
NDC-3R-6CS	NDC-3L-6CS	6	.042	FJWP, Casing
NDC-3R-6WPH	NDC-3L-6WPH	6	.051	2S, Tubing
NDC-3R-8CS	NDC-3L-8CS	8	.033	2S

NDC (Full Topping) Rounds

INSERT ORDER NUMBER		TPI	TPF	CONNECTION SIZES
Ext. Right Hand	Int. Right Hand			
NDC-38RDR-75	NDC-38RDL-75	8	¾"	Tubing 2¾-4½, Casing 4½-20
NDC-48RDR-75-2M	NDC-48RDL-75-2M	8	¾"	Tubing 2¾-4½, Casing 4½-20
NDC-310RDR-75	NDC-310RDL-75	10	¾"	Tubing 1.050-3¼

For thread profile, see page 56, detail L.

H90

INSERT ORDER NUMBER		TPI	TPF	CONNECTION SIZES
Ext. Right Hand	Int. Right Hand			
NDC-4.5R-H902	NDC-4.5L-H902	3½	2"	3½-6¾
NDC-4.5R-H903	NDC-4.5L-H903	3½	3"	7-8¾
NDC-4.5R-H90S	NDC-4.5L-H90S	3	1¼"	2¾-3½

For thread profile, see page 56, detail M.

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Cincinnati Grinders and Wit-O-Matic Cam Grinders
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TOP-NOTCH®

LAYDOWN
TRIANGLES

SNAP-TAP®/SECO
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MISC. &
APPENDIX

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LAYDOWN INSERTS

Identification System

“L” Style, 60° “V” Threading, 29° Acme or Stub Acme Threading

① ② ③ ④ ⑥ ⑦
L 4 3 NT 4P Int

API, Round and Buttress Threading

① ② ③ ⑤ ⑦
L 4 3 428 Int

①

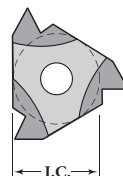
TYPE

L - Laydown Neutral Rake
LN - Laydown Negative Rake

②

SIZE

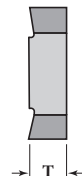
Diameter of the “I.C.” (inscribed circle) in 1/8ths of an inch



③

THICKNESS

Thickness of insert in 1/16ths of an inch



④

INSERT FORM

NV - 60° “V” Thread
NT - 29° Acme/Stub Acme Threading

⑤

INSERT FORM

API Threading - (example: **428**) If there are three numerical digits, the first is the pitch, the second is the taper per foot and the third is the last digit of the root radius.

Rounds - (example: **8R**) The digits designate the pitch, R stands for Round.

Buttress - (example: **5B75**) The first digits designate the pitch, B stands for Buttress, the last digits indicate the taper per foot in hundredths of an inch (.75 = 3/4” per foot).

API thread forms and charts: see page 58.

⑥

THREAD PITCH

P - One or two numbers precede “P” to designate thread pitch.

Standard Acme and Stub Acme Pitches: **4P - 16P**

Standard Acme and Stub Acme pitch widths: see page 58.

Standard NV pitches, widths, and radii: see page 54.

⑦

ADDITIONAL INFO

Int - Internal
Ext - External
M - Multiple Tooth

These Laydown “L” style inserts are for the old style G.E. Carboloy® tooling system only.

Not for use in Snap-Tap®/Seco® new style tooling systems.

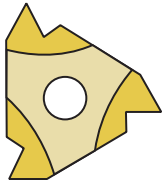
See page 46 for Snap-Tap®/Seco® inserts.



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Laydown Threading Inserts



60° V-Thread (Non-Topping)

INSERT ORDER NUMBER	I.C.	THICKNESS "T"	ROOT FLAT WIDTH "W"
L32 NV Int OR Ext	3/8	.125	.004
L43 NV Int OR Ext	1/2	.187	.009
L53 NV Int OR Ext	5/8	.187	.014

Options Available:

Modified top rake

Radius

Can be ordered by pitch, see page 54.



29° Acme / 29° Stub Acme (Non-Topping)

INSERT ORDER NUMBER	I.C.	THICKNESS "T"	COARSEST STD. PITCH	FINEST STD. PITCH
L32 NT __P Int OR Ext	3/8	.125	10	16
L43 NT __P Int OR Ext	1/2	.187	4	12
L53 NT __P Int OR Ext	5/8	.187	4	6

Order by pitch.

For thread profiles, see page 55, detail D.

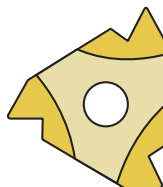
For widths and depths, Standard Acme / Stub Acme pitches, see page 58.

Options Available:

Modified widths

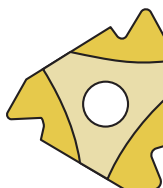
Full / partial topping

Laydown API Inserts



NV with Radius (Non-Topping)

INSERT ORDER NUMBER	I.C.	THICKNESS "T"	RADIUS	THREAD FORM
L53 NV .020R Int OR Ext	5/8	.187	.020	V0.040 (Non-topping)
L53 NV .025R Int OR Ext	5/8	.187	.025	V0.050 (Non-topping)
L53 NV .038R Int OR Ext	5/8	.187	.038	V0.038 (Non-topping)



8 & 10 Round (Full Topping)

INSERT ORDER NUMBER	I.C.	TPI	TPF	CONNECTION SIZES
L43 8R Int OR Ext	1/2	8	3/4"	Tubing 2 3/8-4 1/2, Casing 4 1/2-20
L43 10R Int OR Ext	1/2	10	3/4"	Tubing 1.050-3 1/4
L53 8R Int OR Ext	5/8	8	3/4"	Tubing 2 3/8-4 1/2, Casing 4 1/2-20

For thread profiles, see page 56, detail L.

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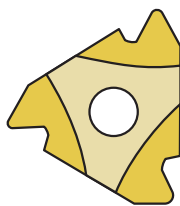
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Laydown API Inserts



Rotary Shoulder Connections (Full Topping)

INSERT ORDER NUMBER	I.C.	TPI	TPF	THREAD FORM	CONNECTION SIZES
L43 425 Int OR Ext	1/2	4	2"	V0.050	6 5/8 Reg, 5 1/2 FH, 6 5/8 FH
L53 425 Int OR Ext	5/8	4	2"	V0.050	6 5/8 Reg, 5 1/2 FH, 6 5/8 FH
L43 428 Int OR Ext	1/2	4	2"	V0.038	NC23-50, 2 3/8-6 5/8 IF
L53 428 Int OR Ext	5/8	4	2"	V0.038	NC23-50, 2 3/8-6 5/8 IF
L43 435 Int OR Ext	1/2	4	3"	V0.050	5 1/2 Reg, 7 5/8 Reg, 8 5/8 Reg
L53 435 Int OR Ext	5/8	4	3"	V0.050	5 1/2 Reg, 7 5/8 Reg, 8 5/8 Reg
L43 438 Int OR Ext	1/2	4	3"	V0.038	NC56-77
L53 438 Int OR Ext	5/8	4	3"	V0.038	NC56-77
L43 530 Int OR Ext	1/2	5	3"	V0.040	2 3/8-4 1/2 Reg, 3 1/2 FH, 4 1/2 FH
L53 530 Int OR Ext	5/8	5	3"	V0.040	2 3/8-4 1/2 Reg, 3 1/2 FH, 4 1/2 FH

For API connections & charts, see page 58. For thread profiles, see page 56, details J, K, N, & O.

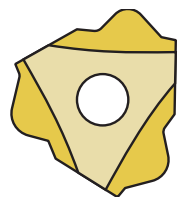


Buttress (Full Topping)

INSERT ORDER NUMBER	I.C.	TPI	TPF	CONNECTION SIZES
L43 5B75 Int OR Ext	1/2	5	3/4"	4 1/2-13 3/8
L53 5B75 Int OR Ext	5/8	5	3/4"	4 1/2-13 3/8
L43 5B1 Int OR Ext	1/2	5	1"	16 and Larger
L53 5B1 Int OR Ext	5/8	5	1"	16 and Larger
L43 8B75* Int OR Ext	1/2	8	3/4"	2 3/8-4 1/2

*Also known as "Improved Buttress"

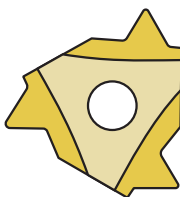
For thread profile, see page 56, detail R.



H90 (Full Topping)

INSERT ORDER NUMBER	I.C.	TPI	TPF	CONNECTION SIZES
L53 H902 Int OR Ext	5/8	3 1/2	2"	3 1/2-6 5/8
L53 H903 Int OR Ext	5/8	3 1/2	3"	7-8 5/8
L53 H90S Int OR Ext (Slimline)	5/8	3	1 1/4"	2 3/8-3 1/2

For thread profile, see page 56, detail M.



LPT / NPT (Full Topping) Line Pipe Thread / National Pipe Thread

INSERT ORDER NUMBER	TPI	TPF	THREAD FORM
L43 8LPT Int OR Ext	8	3/4"	1 Tooth
L43 11.5LPT Int OR Ext	11.5	3/4"	1 Tooth
L43 11.5LPT-2M Int OR Ext	11.5	3/4"	2 Teeth

For thread profiles, see page 56, details P and Q.

Laydown API Inserts



VAM® Style (Full Topping)

INSERT ORDER NUMBER	TPI	TPF	THREAD FORM	CONNECTION SIZES
L43 5P VAM Int OR Ext	5	¾"	Casing	5 - 13¾
L53 5P VAM Int OR Ext	5	¾"	Casing	5 - 13¾
L43 5P VAM Int OR Ext	5	15.5%	Casing	14
L43 6P VAM Int OR Ext	6	¾"	Tubing	3½ - 4½
L43 8P VAM Int OR Ext	8	¾"	Tubing	2¾ - 2⅞
L43 5P New VAM Int OR Ext	5	¾"	Casing	5 - 13¾
L43 6P New VAM Int OR Ext	6	¾"	Tubing	3½ - 4½
L43 8P New VAM Int OR Ext	8	¾"	Tubing	2¾ - 2⅞
L43 4P VAM ACE Int OR Ext	4	¾"	Casing	8⅝ and Up
L43 5P VAM ACE Int OR Ext	5	¾"	Casing	5 - 7⅝
L43 6P VAM ACE Int OR Ext	6	¾"	Tubing	3½ - 4½
L43 8P VAM ACE Int OR Ext	8	¾"	Tubing	2¾ - 2⅞



Mannesman® Style (Full Topping)

INSERT ORDER NUMBER	TPI	TPF	THREAD FORM	CONNECTION SIZES
L43 5P Mannesman Int OR Ext	5	¾"	"BDS" Casing	4½ - 13¾
L43 8P Mannesman Int OR Ext	8	¾"	"TDS" Tubing	2¾ - 4½



Hydрил® Style (Full Topping)

INSERT ORDER NUMBER	I.C.	TPI	THREAD HEIGHT
L53 4P WPH Int OR Ext	⅝	4	.051
L43 6P CS Int OR Ext	½	6	.042
L43 6P PH Int OR Ext	½	6	.051
L32 8P CS Int OR Ext	⅜	8	.033
L43 8P CS Int OR Ext	½	8	.033



Pittsburg Acme (Full Topping)

INSERT ORDER #	I.C.	TPI	TPF
L43 8PA75 Int OR Ext	½	8	¾"
L53 8PA75 Int OR Ext	⅝	8	¾"



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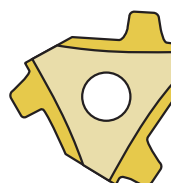
American Open Hole (Full Topping)

INSERT ORDER #	I.C.	TPI	TPF	CONNECTION SIZES
L43 4P A.O.H. Int OR Ext	½	4	1½"	2⅜ - 2⅞
L53 4P A.O.H. Int OR Ext	⅝	4	1½"	2⅜ - 2⅞



Extreme-Line (Full Topping)

INSERT ORDER NUMBER	I.C.	TPI	TPF
L43 5XL1.25 Int OR Ext	½	5	1.25"
L53 5XL1.25 Int OR Ext	⅝	5	1.25"
L43 6XL1.5 Int OR Ext	½	6	1.5"
L53 6XL1.5 Int OR Ext	⅝	6	1.5"



Atlas-Bradford® Style (DSS) (Full Topping)

INSERT ORDER NUMBER	I.C.	TPI	TPF
L43 6P DSS 3/4 Int OR Ext	½	6	¾"
L43 6P DSS 1¼ Int OR Ext	½	6	1⅛"
L32 8P DSS 3/4 Int OR Ext	⅜	8	¾"
L43 8P DSS 3/4 Int OR Ext	½	8	¾"
L32 8P DSS 1¼ Int OR Ext	⅜	8	1⅛"
L43 8P DSS 1¼ Int OR Ext	½	8	1⅛"



V0.055 (Full Topping)

INSERT ORDER NUMBER	I.C.	TPI	TPF	THREAD FORM
L32 6P V0.055 Int OR Ext	⅜	6	1½"	V0.055
L43 6P V0.055 Int OR Ext	½	6	1½"	V0.055



P.A.C. (Full Topping)

INSERT ORDER NUMBER	I.C.	TPI	TPF	THREAD FORM
L43 4 P.A.C. Int OR Ext	½	4	1½"	2⅜ - 2⅞
L53 4 P.A.C. Int OR Ext	⅝	4	1½"	2⅜ - 2⅞



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SNAP-TAP®/ISCAR®/VARDEX® INSERTS

Identification System

Snap-Tap®/Seco® Style Inserts

① ② ③ ④ ⑤
16 ER 14 ACME —

ISCAR® Style Inserts

① ② ③ ④
3/8 ER 14 ACME

VarDEX® Style Inserts

① ② ③ ④ ⑤
3 ER 14 ACME —

①

SIZE

The number or fraction represents the size of the "IC" or inscribed circle.

②

HAND of INSERT

ER - External Right Hand
NR or **IR** - Internal Right Hand
EL - External Left Hand
NL or **IL** - Internal Left Hand

NOTE: Left Hand inserts are considered special and are available upon request

③

THREAD PITCH

One or two numbers or letters designate the thread pitch.

④

INSERT FORM

60 - 60° V-Thread (A60, AG60, G60, N60)
55 - 55° Included Thread
ACME - 29° Acme
API RD - API Round Casing
API 384 - API V0.038 2TPF (428)
API 386 - API V0.038 3TPF (438)
API 404 - API V0.040 3TPF (530)
API 504 - API V0.050 3TPF (435)
API 506 - API V0.050 2TPF (425)
ASB - American Standard Buttress
BSPT - British Standard Pipe Taper
BSW - British Standard Whitworth
BUT 2.5 - 5 pitch buttress
ISO - ISO Metric

LPT - Line Pipe Thread
NG W. — - Groover
NPT - National Pipe Thread
NPTF - National Pipe Thread Dryseal
RD - Round, Din 405
STUB ACME - 29° Stub Acme
TR - Trapezoidal, Din 103
UN - Unified Thread
UNJ - Unified Thread with controlled root radius
VAM - VAM
W - 55° Whitworth
XL - Extreme Line

⑤

MISCELLANEOUS (optional)

The numbers represent the API size and taper.

or

The number of teeth are given:
2M or **2T** - Two teeth.

Bars and Holders stocked for these Inserts.

The inserts in this section will fit in Snap-Tap®, Seco®, ISCAR®, Vardex®, Kennametal®, and RTW toolholders for laydown threading.

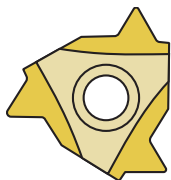
These inserts will **not** fit in Sandvik® or Sumitomo® toolholders.



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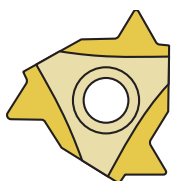
Snap-Tap®/Seco®/ISCAR®/Vardex® Threading Inserts



60° V-Thread (Non-Topping)

INSERT ORDER NUMBER				IC	Radius	Pitch Range
Snap-Tap®	ISCAR®	Vardex®	Thread Form			
11 NR	1/4 NR	2 IR	AA60	1/4	.002	48-36
11 NR	1/4 NR	2 IR	A60	1/4	.003	32-18
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	A60	3/8	.003	32-18
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	AG60	3/8	.004	16-12
16 NR	3/8 NR	3 IR	G60	3/8	.005	11-8
16 ER	3/8 ER	3 ER	G60	3/8	.007	11-8
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	N60	1/2	.010	7-6
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	60	5/8	.015	5-4

Non-standard radii available upon request. LH available.



UN (Full Topping) Unified Thread

INSERT ORDER NUMBER				IC	TPI	Int. Root Radius	Ext. Root Radius
Snap-Tap®	ISCAR®	Vardex®	Thread Form				
11 NR	1/4 NR	2 IR	32UN	1/4	32	.002	--
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	32UN	3/8	32	.002	.004
11 NR	1/4 NR	2 IR	28UN	1/4	28	.002	--
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	28UN	3/8	28	.002	.005
11 NR	1/4 NR	2 IR	24UN	1/4	24	.003	--
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	24UN	3/8	24	.003	.006
11 NR	1/4 NR	2 IR	20UN	1/4	20	.003	--
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	20UN	3/8	20	.003	.007
11 NR	1/4 NR	2 IR	18UN	1/4	18	.004	--
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	18UN	3/8	18	.004	.008
11 NR	1/4 NR	2 IR	16UN	1/4	16	.004	--
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	16UN	3/8	16	.004	.009
11 NR	1/4 NR	2 IR	14UN	1/4	14	.005	--
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	14UN	3/8	14	.005	.010
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	13UN	3/8	13	.005	.011
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	12UN	3/8	12	.006	.012
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	11UN	3/8	11	.006	.013
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	10UN	3/8	10	.007	.014
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	9UN	3/8	9	.008	.016
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	8UN	3/8	8	.009	.018
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	7UN	1/2	7	.010	.020
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	6UN	1/2	6	.012	.024
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	5UN	1/2	5	.014	.028
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	4.5UN	5/8	4.5	.015	.031
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	4UN	5/8	4	.017	.034

For thread profile, see page 55, detail A.

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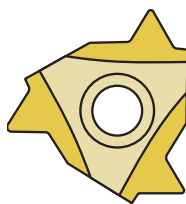
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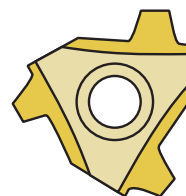
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UNJ (Full Topping) Unified Thread with Controlled Root Radius

INSERT ORDER NUMBER				IC	TPI	Root Radius
Snap-Tap®	ISCAR®	Vardex®	Thread Form			
16 ER	3/8 ER	3 ER	32 UNJ	3/8	32	.0047
16 ER	3/8 ER	3 ER	28 UNJ	3/8	28	.0054
16 ER	3/8 ER	3 ER	24 UNJ	3/8	24	.0063
16 ER	3/8 ER	3 ER	20 UNJ	3/8	20	.0075
16 ER	3/8 ER	3 ER	18 UNJ	3/8	18	.0083
16 ER	3/8 ER	3 ER	16 UNJ	3/8	16	.0094
16 ER	3/8 ER	3 ER	14 UNJ	3/8	14	.0107
16 ER	3/8 ER	3 ER	12 UNJ	3/8	12	.0125
16 ER	3/8 ER	3 ER	10 UNJ	3/8	10	.0150
16 ER	3/8 ER	3 ER	8 UNJ	3/8	8	.0188

Standard internal UN inserts can be used for internal UNJ if correct turned diameter depth is reached before commencing the threading operation. For thread profile, see page 55, detail B.



29° Acme (Partial Topping) Deburrs corners at crest of thread

INSERT ORDER NUMBER				IC	TPI	Int. Root Width	Ext. Root Width
Snap-Tap®	ISCAR®	Vardex®	Thread Form				
11 NR OR ER	1/4 NR OR ER	2 IR OR ER	16 Acme	1/4	16	.0206	.0214
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	16 Acme	3/8	16	.0206	.0214
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	14 Acme	3/8	14	.0239	.0248
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	12 Acme	3/8	12	.0283	.0294
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	10 Acme	3/8	10	.0319	.0330
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	8 Acme	3/8	8	.0411	.0424
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	6 Acme	3/8	6	.0566	.0579
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	6 Acme	1/2	6	.0566	.0579
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	5 Acme	1/2	5	.0689	.0704
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	4 Acme	5/8	4	.0875	.0893
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	3 Acme	5/8	3	.1184	.1209

Non-topping, full topping, non-standard widths, and left hand inserts are available on request.
27 NR 5 Acme available upon request. For thread profile, see page 55, detail D.

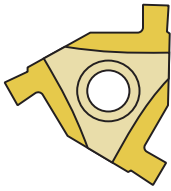


29° Stub Acme (Partial Topping) Deburrs corners at crest of thread

INSERT ORDER NUMBER				IC	TPI	Int. Root Width	Ext. Root Width
Snap-Tap®	ISCAR®	Vardex®	Thread Form				
11 NR OR ER	1/4 NR OR ER	2 IR OR ER	16 Stub	1/4	16	.0238	.0248
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	16 Stub	3/8	16	.0238	.0248
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	14 Stub	3/8	14	.0276	.0289
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	12 Stub	3/8	12	.0326	.0341
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	10 Stub	3/8	10	.0370	.0384
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	8 Stub	3/8	8	.0476	.0493
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	6 Stub	3/8	6	.0652	.0670
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	6 Stub	1/2	6	.0652	.0670
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	5 Stub	1/2	5	.0793	.0812
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	4 Stub	5/8	4	.1004	.1029

Non-topping, full topping, non-standard widths, and left hand inserts are available on request.
For thread profile, see page 55, detail E.

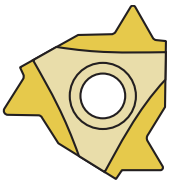
Snap-Tap®/Seco®/ISCAR®/Vardex® Threading Inserts



NG Groovers

INSERT ORDER NUMBER				IC	Nose Width "W"	Max Groove Depth
Snap-Tap®	ISCAR®	Vardex®	Groover Form			
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	NG W.031	3/8	.031	.050
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	NG W.047	3/8	.047	.065
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	NG W.062	3/8	.062	.080
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	NG W.093	3/8	.093	.095
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	NG W.125	3/8	.125	.075
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	NG W.062	1/2	.062	.095
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	NG W.093	1/2	.093	.105
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	NG W.125	1/2	.125	.125

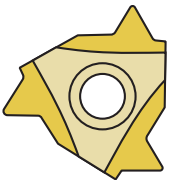
Non-standard widths available upon request.



NPT / LPT (Full Topping) National Pipe Thread / API-Line Pipe Thread

INSERT ORDER NUMBER				IC	TPI	TPF
Snap-Tap®	ISCAR®	Vardex®	Thread Form			
11 NR	1/4 NR	2 IR	27NPT	1/4	27	3/4"
11 NR	1/4 NR	2 IR	18NPT	1/4	18	3/4"
11 NR	1/4 NR	2 IR	14NPT	1/4	14	3/4"
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	27NPT	3/8	27	3/4"
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	18NPT	3/8	18	3/4"
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	14NPT	3/8	14	3/4"
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	11.5NPT	3/8	11.5	3/4"
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	8NPT	3/8	8	3/4"
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	11.5NPT-2M	1/2	11.5	3/4"
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	11.5NPT-2M	5/8	11.5	3/4"
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	8NPT-2M	5/8	8	3/4"

For thread profile, see page 56, detail Q.



NPTF (Full Topping) National Pipe Thread Dryseal

INSERT ORDER NUMBER				IC	TPI	TPF
Snap-Tap®	ISCAR®	Vardex®	Thread Form			
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	27NPTF	3/8	27	3/4"
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	18NPTF	3/8	18	3/4"
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	14NPTF	3/8	14	3/4"
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	11.5NPTF	3/8	11.5	3/4"
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	8NPTF	3/8	8	3/4"

For thread profile, see page 56, detail P.



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TRIANGLES

V-BOTTOMS

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TOP-NOTCH®

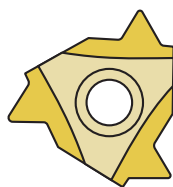
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SNAP-TAP®/SECO
ISCAR®/VARDEX®

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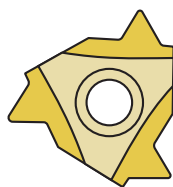
Snap-Tap®/Seco®/ISCAR®/Vardex® Threading Inserts



55° BSW / BSP (Non-Topping) British Std. Whitworth / British Std. Pipe

INSERT ORDER NUMBER				IC	Radius	Pitch Range
Snap-Tap®	ISCAR®	Vardex®	Thread Form			
11 NR	1/4 NR	2 IR	A55	1/4	.003	48-16
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	A55	3/8	.003	48-16
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	AG55	3/8	.008	16-8
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	G55	3/8	.009	14-8
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	N55	1/2	.019	7-5
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	Q55	5/8	.030	4.5-4

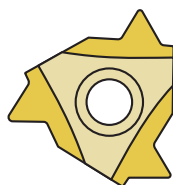
For thread table, see page 12.



Whitworth / BSW / BSP 55° (Full Topping) British Std. Whitworth / Pipe

INSERT ORDER NUMBER				IC	TPI	Root Radius
Snap-Tap®	ISCAR®	Vardex®	Thread Form			
11 NR	1/4 NR	2 IR	28W	1/4	28	.0049
11 NR	1/4 NR	2 IR	19W	1/4	19	.0072
11 NR	1/4 NR	2 IR	14W	1/4	14	.0098
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	28W	3/8	28	.0049
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	26W	3/8	26	.0053
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	20W	3/8	20	.0069
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	19W	3/8	19	.0072
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	18W	3/8	18	.0076
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	16W	3/8	16	.0086
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	14W	3/8	14	.0098
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	12W	3/8	12	.0114
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	11W	3/8	11	.0125
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	10W	3/8	10	.0137
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	9W	3/8	9	.0152
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	8W	3/8	8	.0172
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	7W	1/2	7	.0196
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	6W	1/2	6	.0229
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	5W	1/2	5	.0275
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	4.5W	5/8	4.5	.0305
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	4W	5/8	4	.0343

For thread profile, see page 55, detail F.



BSPT 55° 3/4 Taper (Full Topping) British Standard Pipe Taper

INSERT ORDER NUMBER				IC	TPI	Root Radius
Snap-Tap®	ISCAR®	Vardex®	Thread Form			
11 NR	1/4 NR	2 IR	28BPST	1/4	28	.0049
11 NR	1/4 NR	2 IR	19BPST	1/4	19	.0072
11 NR	1/4 NR	2 IR	14BPST	1/4	14	.0098
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	28BPST	3/8	28	.0049
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	19BPST	3/8	19	.0072
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	14BPST	3/8	14	.0098
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	11BPST	3/8	11	.0125
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	8BPST	3/8	8	.0172

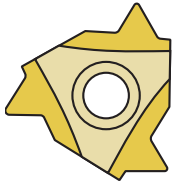
For thread profile, see page 55, detail G.



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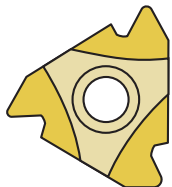


ISO Metric (Full Topping)

INSERT ORDER NUMBER				IC	M M Pitch	Int. Root Width	Ext. Root Width
Snap-Tap®	ISCAR®	Vardex®	Thread Form				
11 NR	1/4 NR	2 IR	0.5 ISO	1/4	.5	.0025	--
11 NR	1/4 NR	2 IR	0.75 ISO	1/4	.75	.0037	--
11 NR	1/4 NR	2 IR	1.0 ISO	1/4	1.0	.0049	--
11 NR	1/4 NR	2 IR	1.25 ISO	1/4	1.25	.0062	--
11 NR	1/4 NR	2 IR	1.5 ISO	1/4	1.5	.0074	--
11 NR	1/4 NR	2 IR	1.75 ISO	1/4	1.75	.0086	--
11 NR	1/4 NR	2 IR	2.0 ISO	1/4	2.0	.0098	--
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	0.5 ISO	3/8	.5	.0025	.0049
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	0.75 ISO	3/8	.75	.0037	.0074
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	1.0 ISO	3/8	1.0	.0049	.0098
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	1.25 ISO	3/8	1.25	.0062	.0123
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	1.5 ISO	3/8	1.5	.0074	.0148
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	1.75 ISO	3/8	1.75	.0086	.0172
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	2.0 ISO	3/8	2.0	.0098	.0197
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	2.5 ISO	3/8	2.5	.0123	.0246
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	3.0 ISO	3/8	3.0	.0148	.0295
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	3.5 ISO	1/2	3.5	.0172	.0345
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	4.0 ISO	1/2	4.0	.0197	.0394
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	4.5 ISO	1/2	4.5	.0222	.0443
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	5.0 ISO	1/2	5.0	.0246	.0492
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	5.5 ISO	5/8	5.5	.0273	.0541
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	6.0 ISO	5/8	6.0	.0295	.0591

Non-standard widths also available.

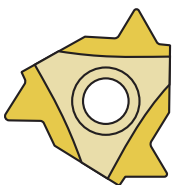
For thread profile, see page 55, detail A.



8 & 10 API Round 3/4 Taper (Full Topping) API

INSERT ORDER NUMBER				IC	TPI	Connection Sizes
Snap-Tap®	ISCAR®	Vardex®	Thread Form			
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	10 API	3/8	10	Tubing 1.050-3 1/4
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	8 API	3/8	8	Tub. 2 3/8-4 1/2 Cas. 4 1/2-20
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	10 API	1/2	10	Tubing 1.050-3 1/4
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	8 API	1/2	8	Tub. 2 3/8-4 1/2 Cas. 4 1/2-20
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	8 API-2M	1/2	8	Tub. 2 3/8-4 1/2 Cas. 4 1/2-20

For thread profile, see page 56, detail L.



ASB (Full Topping) American Standard Buttress

INSERT ORDER NUMBER				IC	TPI	Root Radius	Thread Depth
Snap-Tap®	ISCAR®	Vardex®	Thread Form				
11 NR OR ER	1/4 NR OR ER	2 IR OR ER	20 ASB	1/4	20	.0036	.0331
11 NR OR ER	1/4 NR OR ER	2 IR OR ER	16 ASB	1/4	16	.0045	.0414
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	20 ASB	3/8	20	.0036	.0331
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	16 ASB	3/8	16	.0045	.0414
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	12 ASB	3/8	12	.0059	.0552
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	10 ASB	3/8	10	.0071	.0663
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	8 ASB	1/2	8	.0089	.0828
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	6 ASB	1/2	6	.0119	.1105

Other pitches and radii available upon request.

For thread profile, see page 55, detail C.

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Snap-Tap®/Seco®/ISCAR®/Vardex® Threading Inserts

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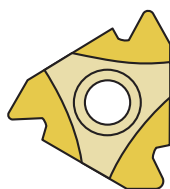
VAM® Style & Buttress (Full Topping) API

INSERT ORDER NUMBER				IC	TPI	TPF	Connection Sizes
Snap-Tap®	ISCAR®	Vardex®	Thread Form				
16 NR OR ER	3/8 NR OR ER	3 IR OR ER	8VAM	3/8	8	3/4"	2 3/8 - 2 7/8
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	8VAM	1/2	8	3/4"	2 3/8 - 2 7/8
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	6VAM	1/2	6	3/4"	3 1/2 - 4 1/2
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	5VAM*	1/2	5	3/4"	5 - 13 3/8
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	5B75	1/2	5	3/4"	4 1/2 - 13 3/8
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	5B1	1/2	5	1"	16 and Larger
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	8B75**	1/2	8	3/4"	2 3/8 - 4 1/2

*5VAM can be used for an external 5B75.

For buttress profile, see page 56, detail R.

**Also known as "Improved Buttress".



Rotary Shoulder Connections (Full Topping) API

INSERT ORDER NUMBER				TPI	TPF	Rad.	Thread Form	Connection Sizes
Snap-Tap®	IS-CAR®	Var-dex®	Insert Form					
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	5API404	5	3"	.020	V0.040 (530)	2 3/8-4 1/2 Reg, 3 1/2 & 4 1/2 FH
			4API386*	4	2"	.038	V0.038R (428)	NC23-50, 2 3/8-6 5/8 IF
			4API384	4	3"	.038	V0.038R (438)	NC56-77
			4API504	4	3"	.025	V0.050 (435)	5 1/2 Reg, 7 7/8 Reg, 8 7/8 Reg
			4API506	4	2"	.025	V0.050 (425)	6 7/8 Reg, 5 1/2 FH, 5 7/8 FH
			4P.A.C.**	4	1.5"	.015	V0.076	2 3/8-2 7/8
			V0.055	6	1.5"	.015	V0.055	NC10-16
27 NR OR ER	5/8 NR OR ER	5 IR OR ER	4API384	4	3"	.038	V0.038R (438)	NC56-77
			4API386*	4	2"	.038	V0.038R (428)	NC23-50, 2 3/8-6 5/8 IF
			4API504	4	3"	.025	V0.050 (435)	5 1/2 Reg, 7 7/8 Reg, 8 7/8 Reg
			4API506	4	2"	.025	V0.050 (425)	6 7/8 Reg, 5 1/2 FH, 6 7/8 FH

*Replacement for obsolete "42F"

For API thread profiles, see page 56, details J, K, N, O.

**Also known as "American Open Hole".



Extreme-Line (Full Topping) "X-Line" Casing, API

INSERT ORDER NUMBER				IC	TPI	TPF	Connection Sizes
Snap-Tap®	ISCAR®	Vardex®	Thread Form				
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	6XL1.5	1/2	6	1.5"	5 - 5 7/8
22 NR OR ER	1/2 NR OR ER	4 IR OR ER	5XL1.25	1/2	5	1.25"	8 7/8 - 10 3/4

Also Available:

H90 Series: 27NR & 27ER

4 P.A.C.

Trapezoidal Metric (30° included): TR-DIN 103

60° Stub

Wilson Flush Joint: 7WFJ 2TPF

V0.055



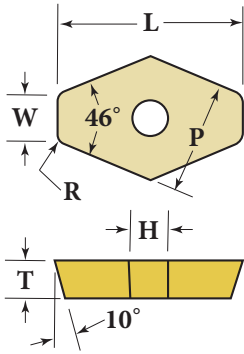
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MISCELLANEOUS INSERTS



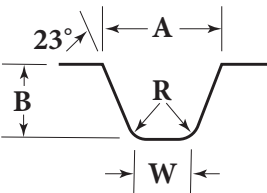
API Ring Groove Inserts

INSERT ORDER #	Nose Width	Length	Thickness	Radii	"P"	Hole Diameter
PGN-1A	.131	.750	.187	.031	.414	--
APIP-162-3 (PGN-6A)	.156	.750	.187	.031	.437	--
APIP-203-3 (PGN-2A)	.197	1.000	.187	.031	.574	--
APIP-162-4	.156	1.500	.250	.031	.730	.250
APIP-203-4	.203	1.500	.250	.031	.773	.250

Other API ring groovers will be added with demand.

API Groove Numbers

PGN-1A		PGN-2A APIP-203-3			PGN-6A APIP-162-3 APIP-162-4		APIP-203-4		
R19	R48	RX21	R35	R61	RX210		RX215	R37	R65
R20	R52	RX215	R37	R65			R21	R39	R69
R22	R56	R23	R39	R69			R23	R41	R84
R25	R59	R24	R41	R82			R24	R44	R92
R29	R64	R26	R44	R84			R27	R45	R99
R33	R67	R27	R45	R92			R30	R49	
R36	R68	R30	R49	R99			R31	R53	
R40	R72	R31	R53				R34	R57	
R43	R76	R34	R57				R35	R61	



Groove Details for API Flanges

A	B	W*	R	For API Groove Number
7/32	5/32	.079	1/64	RX201, RX205
11/32	1/4	.125	1/32	R19, 20, 22, 25, 29, 33, 36, 40, 43, 48, 52, 56, 59, 64, 68, 72, 76
3/8	1/4	.156	1/32	RX210
15/32	5/16	.197	1/32	RX215, R21, 23, 24, 26, 27, 30, 31, 34, 35, 37, 39, 41, 44, 45, 49, 53, 57, 61, 65, 69, 84, 92, 99
17/32	3/8	.206	1/16	R28, 32, 46, 73, 85
21/32	7/16	.278	1/16	R38, 50, 54, 62, 66, 77, 86, 87
25/32	1/2	.350	1/16	R42, 47, 70, 74, 83, 88, 89, 93
29/32	9/16	.422	1/16	R51, 58, 90
1 1/16	5/8	.525	3/32	R63, 78
1 3/16	1 1/16	.597	3/32	R55, 67, 71
1 5/16	1 1/16	.722	3/32	R60, 75, 91
1 7/16	1 3/16	.741	3/32	R79
.452	7/32	.260	1/32	BX150
.468	7/32	.277	1/32	BX151
.498	15/64	.295	1/32	BX152
.554	17/64	.324	1/32	BX153
.606	19/64	.350	1/32	BX154
.698	21/64	.415	1/32	BX155

*Calculated at sharp corner with A, B, and 23 at their means.

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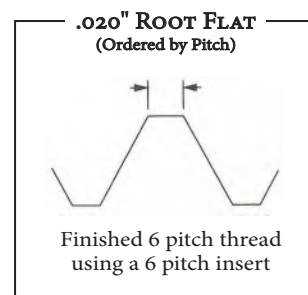
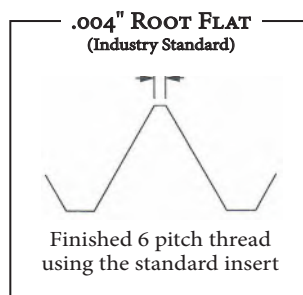
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APPENDIX

Buying 60° "V" Thread Inserts by Pitch

PROBLEM: "Industry standard" NV inserts ($3/8"$ IC, $1/2"$ IC, $5/8"$ IC, and $3/4"$ IC) are supplied with a .003-.005 nose (root flat). This is ideal for a 24 or 28 pitch thread but not correct for any of the larger threads.



FACT: All NV thread pitches have different root flats:

Advantages of ordering & stocking by pitch:

1. The insert has a much longer life than a so-called "standard" insert, which dulls sooner due a smaller insert nose, causing "standard" insert to self-destruct prematurely.
2. The thread geometry is correct.
3. Pitch insert has less wear distortion thus giving consistent parts.
4. The part is much stronger, less apt to develop fatigue cracks at the less sharp roots and break through the threads.

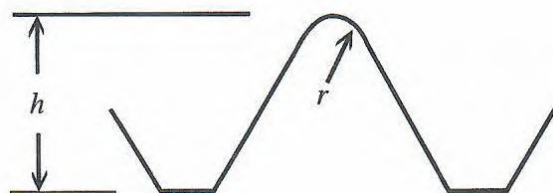
Pitch (TPI)	Root Flat*	Decimal Pitch
4	.030	.250
5	.024	.200
6	.020	.166
7	.017	.143
8	.014	.125
9	.013	.111
10	.012	.100
12	.010	.0833
13	.009	.0769
14	.008	.0714
16	.007	.0625
18	.006	.0555
20	.006	.0500
24	.005	.0416
28	.004	.0357

*Maximum flat for internal standard threads.

SOLUTION: Order NVs by pitch for a correct thread & longer life. Ex: **TNMA 32 NV 12P**

Also Available:

For even longer insert life, use optional radius at root instead of a flat.

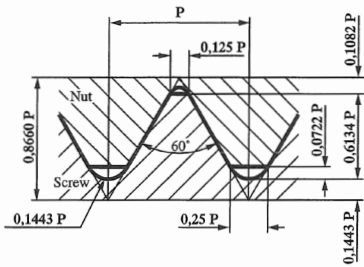


Pitch (TPI)	INT		EXT	
	r	h	r	h
4	.017R	.145	.034R	.153
5	.014R	.116	.028R	.123
6	.012R	.096	.024R	.102
7	.010R	.083	.020R	.088
8	.009R	.072	.018R	.077
9	.008R	.064	.016R	.068
10	.007R	.058	.014R	.061
12	.006R	.048	.012R	.051
13	.005R	.045	.011R	.047
14	.005R	.041	.010R	.044
16	.004R	.036	.009R	.038
18	.004R	.032	.008R	.034
20	.003R	.029	.007R	.031
24	.003R	.024	.006R	.017

APPENDIX

Common Thread Profiles

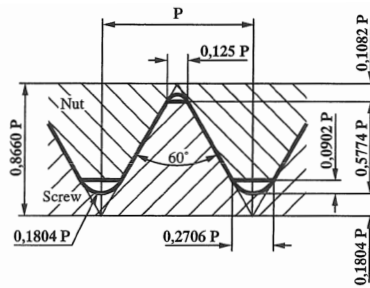
ISO, M, and UN



USE: All branches in mechanical industry

A

UNJ

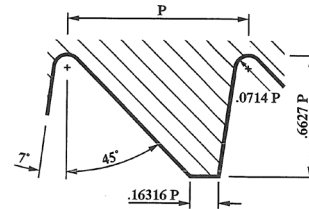


USE: Aircraft and space industries

B

ASB

American Standard Buttress

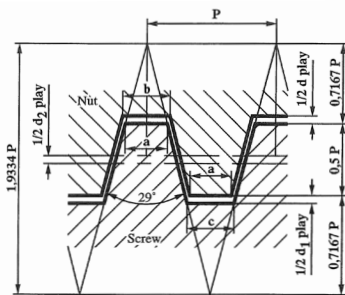


USE: Mechanical industry for motion transmission screws when the load is acting from one direction.

C

See table on page 58.

Acme

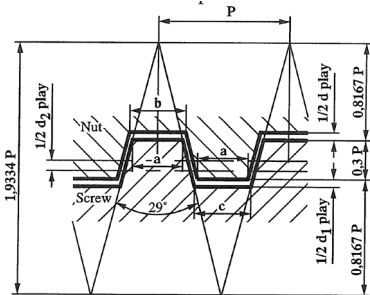


$$\begin{aligned} a &= 0,3707 P \\ b &= 0,3707 P - 0,259 \times D \text{ play} \\ c &= 0,3707 P - 0,259 (d_1 \text{ play} - d_2 \text{ play}) \end{aligned}$$

USE: Mechanical industry for motion transmission screws

D

Stub Acme



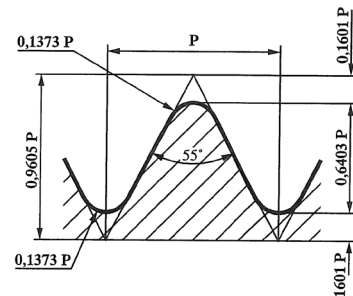
$$\begin{aligned} a &= 0,4224 P \\ b &= 0,4224 P - 0,259 \times D \text{ play} \\ c &= 0,4224 P - 0,259 (d_1 \text{ play} - d_2 \text{ play}) \end{aligned}$$

USE: Control valves and in cases when it is important to combine a large lead with a shallow thread.

E

Whitworth/BSP

British Standard Whitworth

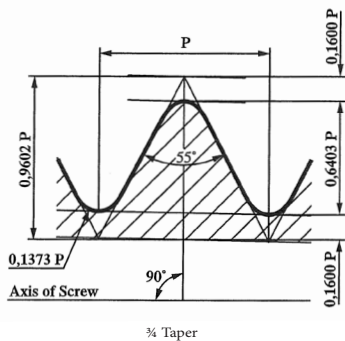


USE: Fittings and pipe couplings. Used in most branches, also for gas, water, and sewer.

F

BSPT

British Standard Pipe Taper

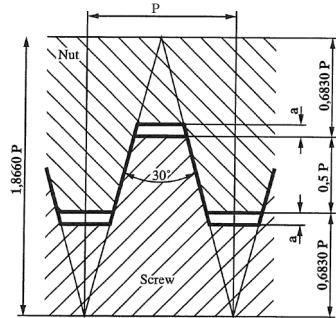


USE: The most common pipe thread for steam, gas, and water lines.

G

TR DIN 103

Trapezoidal Metric

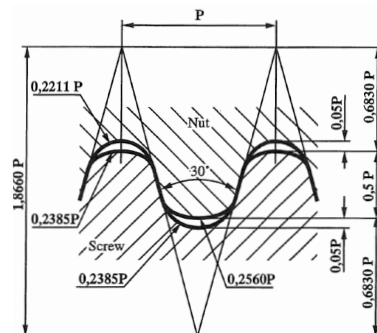


$$\begin{aligned} P &= 3 - 5 \quad 6 - 12 > 12 \text{ mm} \\ a_{0,25} &= 0,5 \quad 1,0 \text{ mm} \end{aligned}$$

USE: Mechanical industry for motion transmission screws

H

RD DIN 405

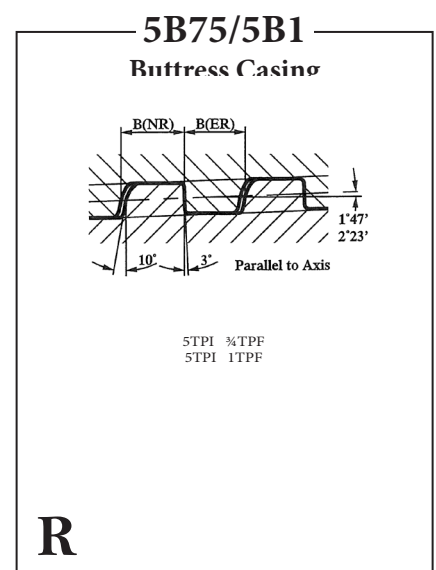
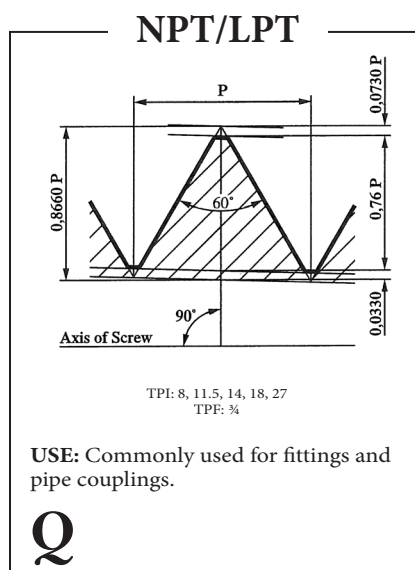
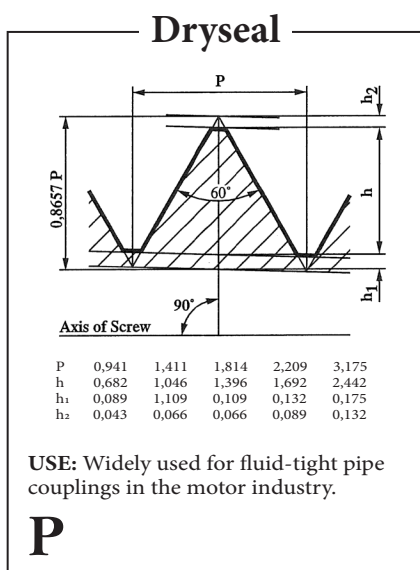
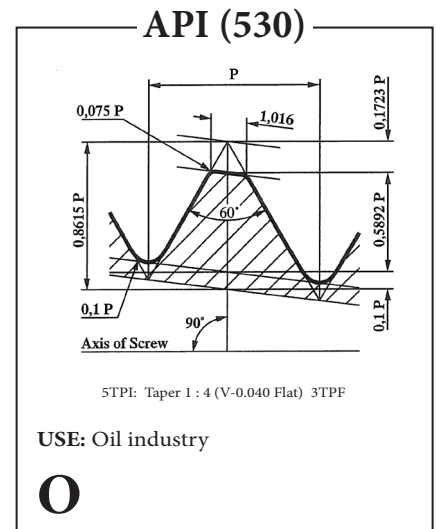
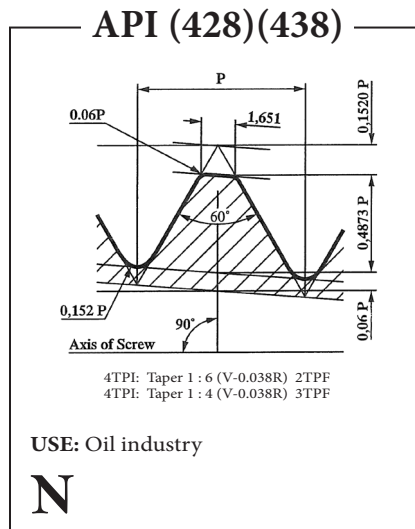
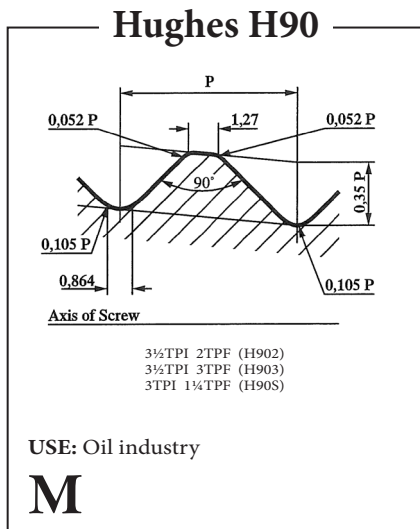
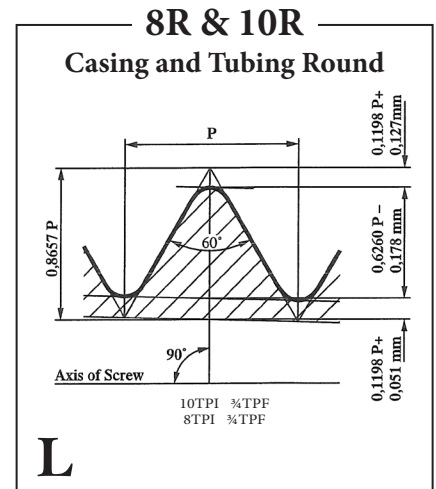
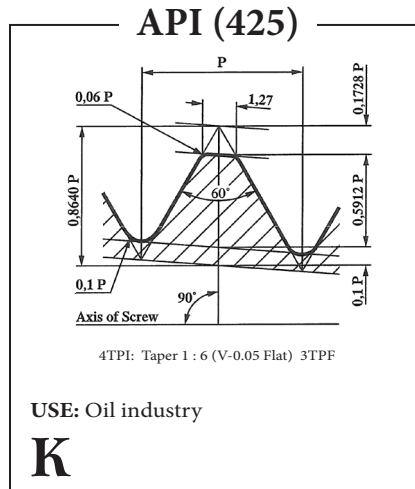
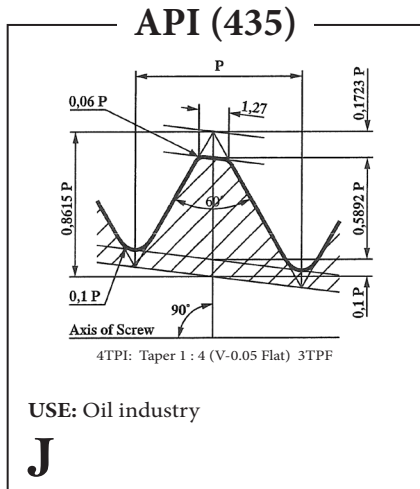


USE: Pipe couplings in fire protection and food industries.

I

APPENDIX

Common Thread Profiles





Our second EWAG CNC Tool and Cutter Grinder with Robotic Loader. December 2018



APPENDIX

Insert Tables & Thread Charts

API

Thread Form	TPI	TPF	Width of Flat		Root Radius	API#
			Crest	Root		
V0.038R	4	2"	.065	--	.038	428
V0.038R	4	3"	.065	--	.038	438
V0.040R	5	3"	.040	--	.020	530
V0.050R	4	3"	.050	--	.025	435
V0.050R	4	2"	.050	--	.025	425
V0.076R	4	1½"	.076	.067	--	PAC
V0.055R	6	1½"	.055	.047	--	V0.055

Full Hole (FH) Style

Connect. # or Size	Thread Form	TPI	TPF	API Number
3½FH	V0.040	5	3"	530
4FH*	V0.065	4	2"	42F/428
4½FH	V0.040	5	3"	530
5½FH	V0.050	4	2"	425
6½FH	V0.050	4	2"	425

*42F is an obsolete thread form; API 428 can be used as a replacement.

Acme / Stub Acme

Pitch	Acme Inserts		Stub Acme Inserts	
	Int / Ext (3G)	Depth	Int / Ext (2G)	Depth
16	.0206 / .0214	.0362	.0238 / .0248	.0238
14	.0239 / .0248	.0407	.0276 / .0289	.0264
12	.0283 / .0294	.0467	.0326 / .0341	.0300
10	.0319 / .0330	.0600	.0370 / .0384	.0400
9	.0360 / .0370	.0656	.0417 / .0423	.0433
8	.0411 / .0424	.0725	.0476 / .0493	.0475
7	.0478 / .0490	.0814	.0551 / .0527	.0529
6	.0566 / .0579	.0933	.0652 / .0670	.0600
5	.0689 / .0704	.1100	.0793 / .0812	.0700
4	.0875 / .0893	.1350	.1004 / .1029	.0850
3.5	.1007 / .1020	.1529	.1155 / .1185	.0957
3	.1184 / .1209	.1767	.1356 / .1389	.1100
2.5	.1431 / .1460	.2100	.1638 / .1670	.1300
2	.1802 / .1833	.2600	.2060 / .2102	.1600

Internal Flush (IF) Style

Connect. # or Size	Thread Form	TPI	TPF	API Number
2¾IF	V0.065*	4	2"	42F/428
2¾IF	V0.065*	4	2"	42F/428
3½IF	V0.065*	4	2"	42F/428
4IF	V0.065*	4	2"	42F/428
4½IF	V0.065*	4	2"	42F/428
5½IF	V0.065*	4	2"	42F/428

*42F is an obsolete thread form; API 428 can be used as a replacement.

Regular (Reg) Style

Connect. # or Size	Thread Form	TPI	TPF	API Number
2¾Reg	V0.040	5	3"	530
2¾Reg	V0.040	5	3"	530
3½Reg	V0.040	5	3"	530
4½Reg	V0.040	5	3"	530
5½Reg	V0.050	4	3"	435
6½Reg	V0.050	4	2"	425
7½Reg	V0.050	4	3"	435
8½Reg	V0.050	4	3"	435

Number (NC) Style

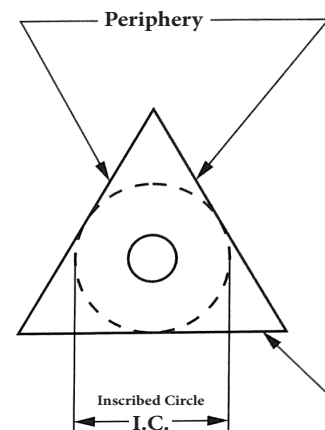
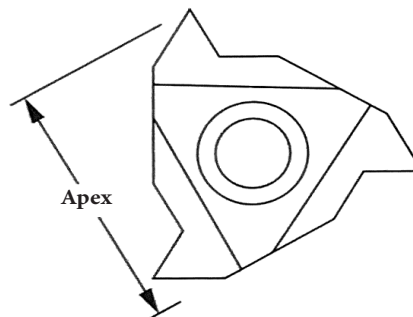
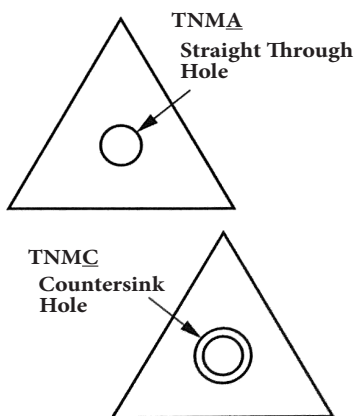
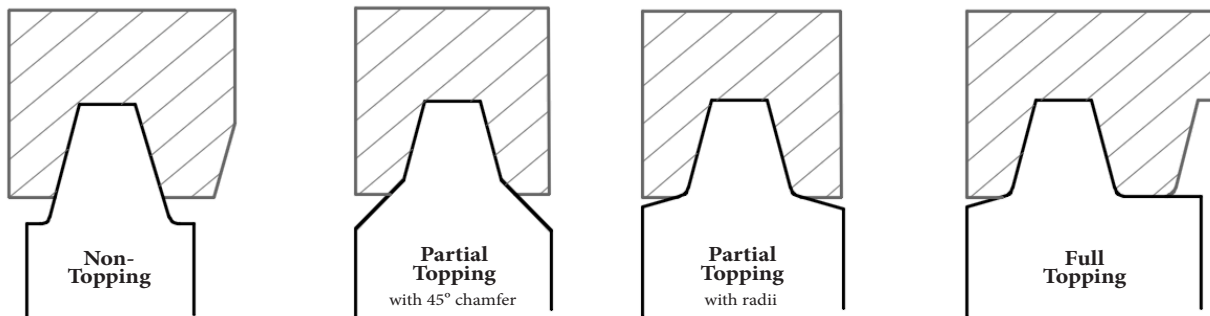
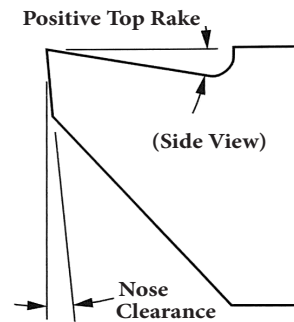
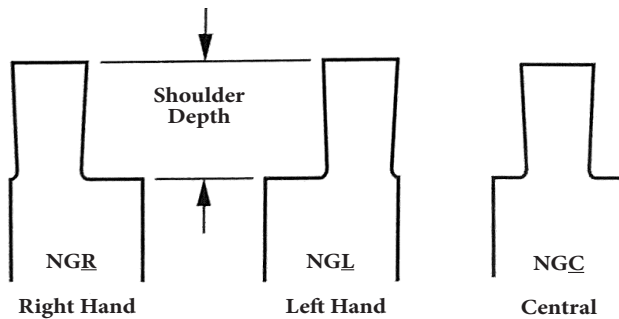
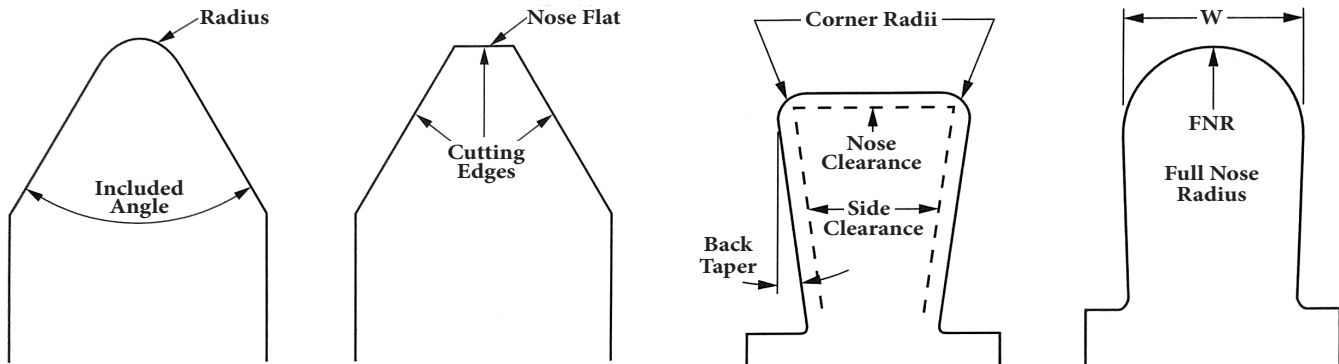
Connect. # or Size	Thread Form	TPI	TPF	API Number
NC10	V0.055	6	1½"	V0.055
NC12	V0.055	6	1½"	V0.055
NC13	V0.055	6	1½"	V0.055
NC16	V0.055	6	1½"	V0.055
NC23	V0.038R	4	2"	428
NC26	V0.038R	4	2"	428
NC31	V0.038R	4	2"	428
NC35	V0.038R	4	2"	428
NC38	V0.038R	4	2"	428
NC40	V0.038R	4	2"	428
NC44	V0.038R	4	2"	428
NC46	V0.038R	4	2"	428
NC50	V0.038R	4	2"	428
NC56	V0.038R	4	3"	438
NC61	V0.038R	4	3"	438
NC70	V0.038R	4	3"	438
NC71	V0.038R	4	3"	438

American Standard Buttress (ASB)

Threads per Inch	Pitch	Depth of Thread	Radius	Crest Flat
20	.0500	.0331	.0036	.0082
16	.0625	.0414	.0045	.0102
12	.0833	.0552	.0059	.0136
10	.1000	.0663	.0071	.0163
8	.1250	.0828	.0089	.0204
6	.1667	.1105	.0119	.0271
5	.2000	.1325	.0143	.0326
4	.2500	.1657	.0179	.0408
3	.3333	.2209	.0238	.0543
2.5	.4000	.2651	.0286	.0653
2	.5000	.3314	.0357	.0816

APPENDIX

Glossary

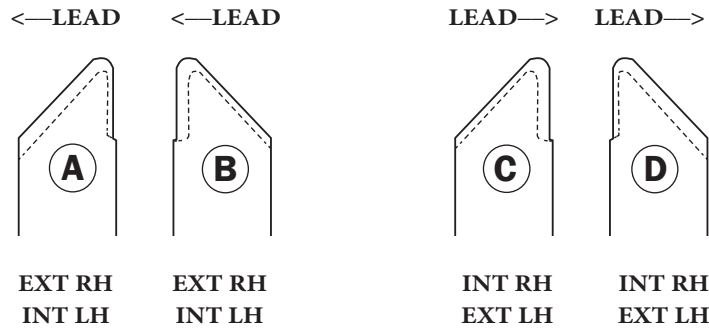


APPENDIX

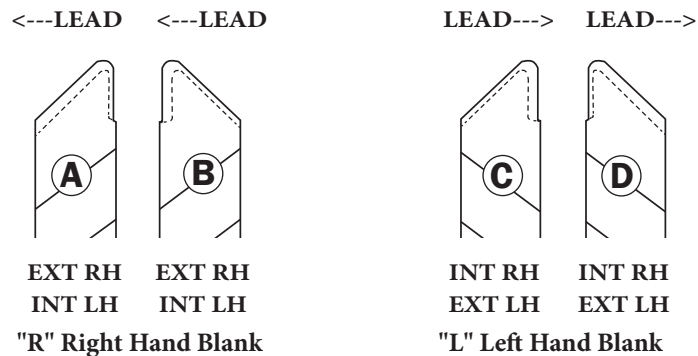
THE DREADED Which Way Drawings

Select style and include in your order. Example: "Style B".

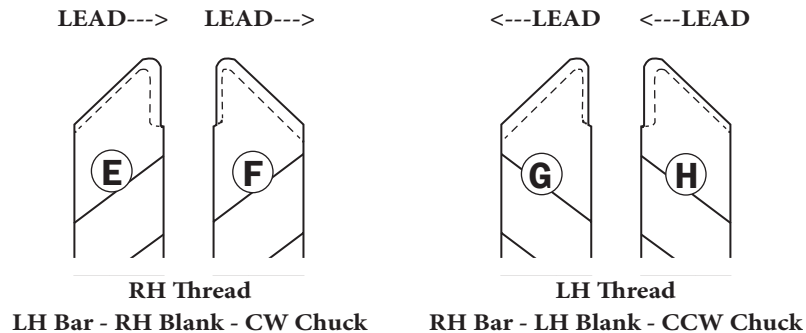
On Edge Triangle or V-Bottom Inserts



Top-Notch® Style Inserts



Internal Pull Threading Inserts



Carbide Grinding



Carbide Grinding was established in 1981 as a manufacturer of carbide threading and grooving inserts. We supply our customers a quality product and dependable delivery at a fair price. We provide engineering for modified inserts and new tooling applications. We stock standard and modified insert forms in a variety of body styles.

Applications

We produce custom inserts for the following industries:

Aerospace

Aviation

Defense

Dental

Electronics

Firearms

Industrial

Medical Equipment

Mining

Oilfield/Energy

Petrochemical

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