

Thread Turning Inserts

Vardex Ordering Code System

Threading Inserts

3

1

2

E

3

R

4

1.5

5

ISO

6

7

8

9

10

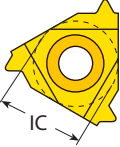
VTX

11








12

1 - Insert Size

5LK - IC5.0L mm
4.0K - IC4.0 mm
5.0K - IC5.0 mm
6.0K - IC6.0 mm
2 - IC1/4"
3 - IC 3/8"
4 - IC 1/2"
5 - IC5/8"
14D - 14D
1616 - Chaser size 16x16



2 - Insert Style

U  V  MG 
U Style Vertical Mega Line
L  J  F 
Mini-L SCB F-Line
D 
D-Line

3 - Type of Insert

E - External
I - Internal
El - External +Internal

4 - RH/LH Insert

R - Right Hand Insert
L - Left Hand Insert
None - Right + Left Insert

5 - Pitch

Full Profile - Pitch Range
mm TPI
0.35-25.0 72-1
Partial Profile - Pitch Range
mm TPI
A 0.5 - 1.5 48 - 16
B 1.75 - 2.0 14 - 11
AG 0.5 - 3.0 48 - 8
G 1.75 - 3.0 14 - 8
N 3.5 - 5.0 7 - 5
U 5.5 - 8.0 4.5 - 3.25
Q 5.5 - 6.0 4.5 - 4
U 6.5 - 9.0 4 - 2.75
V 6.0 - 10.0 4 - 2.5
S 0.5 - 2.0 48 - 13

6 - Standard

60 - Partial Profile 60°
55 - Partial Profile 55°
ISO - ISO Metric
UN - American UN
W - Whitworth for BSW, BSP
BSPT - British Standard Pipe Thread
NPT - NPT
ANPT - ANPT
NPTF - NPTF
NPS - NPS
RD - Round DIN 405
RD20400 - Round DIN 20400
TR - Trapez DIN 103
ACME - ACME
STACME - Stub ACME
UNJ - UNJ
MJ - ISO 5855
ABUT - American Buttress
BBUT - British Buttress
SAGE - Metric Buttress DIN 513
API - API
BUT - API Buttress Casing
APIRD - API Round Casing & Tubing
VAM - VAM
NVAM - New Vam
EL - Extreme Line Casing
H90 - H90
PG - Pg DIN 40430

7 - No. of Cutting Corners

6C - V6 Cutting Corners





8 - API Form

382
383
403
502
503
652

9 - No. of Teeth

(for Multitooth Style)
2, 3, 5, 6, 8

10 - Multitooth Style

M+  T+ 
Z+  S+ 
Multiplus

11 - Coarse Pitch Inserts

158/...

12 - Carbide Grade

VKX, VTX, VCB, VM7, VK2, VK2P,
VBX, VRX, VTXP, VKXP, VRXP

■ Micro Threading Inserts - Double Ended

3	S	I	R	0.5	ISO	VMX
1	2	3	4	5	6	7
1 - Insert Dia.		2 - Insert Style		3 - Type of Insert		4 - RH/LH Insert
3.0 - 3.0 mm 4.0 - 4.0 mm 6.0 - 6.0 mm 8.0 - 8.0 mm 10.0 -10.0 mm		S - Micro Insert		I - Internal		R - Right Hand Insert L - Left Hand Insert
6 - Standard		7 - Carbide Grades				
60 - Partial Profile 60° 55 - Partial Profile 55° ISO - ISO Metric MJ - ISO 5855 NPT - NPT NPTF - NPTF UN - American UN W - Whitworth for BSW, BSP		VMX				
5 - Pitch						
Full Profile - Pitch Range						
mm		TPI				
0.30-1.5		40-16				
Partial Profile - Pitch Range						
mm		TPI				
A	0.5 - 1.5	A	48 - 16			
F	0.5 - 3.0	F	48 - 24			



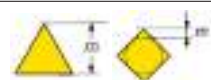
microscope

■ Micro Threading Inserts - Single Ended

M	5	42	TH	0.5	ISO	L16	R	VBX	
1	2	3	4	5	6	7	8	9	
1 - Product Line		2 - Insert Size		3 - Min. Bore Dia.					
M, MS - Microscope		4, 5, 6, 7		3.2, 4.2,...					
4 - Type of Application			5 - Pitch (for Threading)			6 - Threading Standard			
TH - Threading			Full Profile - Pitch Range			60 - Partial Profile 60° 55 - Partial Profile 55° ISO - ISO Metric UN - American UN W - Whitworth for BSW, BSP NPT - NPT TR - Trapez DIN 103			
			mm		TPI				
			0.5-1.5		32-16				
			Partial Profile - Pitch Range						
			mm		TPI				
			A	0.5 - 1.5	A				48 - 16
			F	0.5 - 1.0	F				48 - 24
7 - Overhang			8 - LH or RH			9 - Carbide Grades			
L16			R - RH Helix L - LH Helix			VBX, VTX			

■ CNGA and On Edge Inserts for Oil & Gas

C	N	G	A	6	4	I	R	5	BUT75	VKX
T	N	E	C	4	3	E	R	4	APIRD	VKX
1	2	3	4	5	6	7	8	9	10	11

1- Insert Shape	2 - Clearance Angle on Major Cutting Edge	3 - Tolerances		4 - Clamp Type
		IC	S	m
		Theoretical diameter of inscribed circle	Insert thickness	
		E	±0.025	±0.025
		G	±0.025	±0.13
			±0.13	±0.025

5 - Theoretical diameter of inscribed circle	6 - Thickness	7 - Type of Insert	8 - RH/LH Insert	9 - Pitch
4 - 1/2" (12.7 mm) 5 - 5/8" (15.875 mm) 6 - 6/8" (19.05 mm)	3 - 3/16" (4.76 mm) 4 - 4/16" (6.35 mm) 5 - 5/16" (7.94 mm) 6 - 6/16" (9.525 mm)	E - External I - Internal EI - External + Internal	R - Right Hand Insert L - Left Hand Insert	10-5 TPI

10 - Standard	11 - No. of Teeth	12 - Carbide Grades
ACME - ACME STACME - Stub ACME API - API BUT - API Buttress Casing APIRD - API Round Casing & Tubing	(For Multitooth Style) T3-T5	VKX, VKXP, VTX, VTXP
VAM - VAM NVAM - New VAM EL - Extreme Line Casing H90 - H90		

■ VG-Cut Inserts

VG	D	3.0	ISO	1.50	RH	-	RS	VP
1	2	3	4	5	6		7	8

1 – Line Name	2 – Number of Cutting Corners	3 – Inserts Width	4 – Standard
VG - Deep Grooving, Threading & Parting Off	D - Double	3.0 mm	60 - Partial Profile 60° 55 - Partial Profile 55° ISO - ISO Metric UN - American UN W - Whitworth for BSW, BSP NPT - NPT
5 - Pitch			
Full Profile - Pitch Range			
mm		TPI	
0.5-2.0		32-11.5	
Partial Profile - Pitch Range			
mm		TPI	
A	0.5 - 1.5	48-16	
6 – RH/LH Inserts		7 – Top Rake Geometry	8 – Carbide Grade
RH Helix LH Helix		RS - Close to right shoulder LS - Close to left shoulder	VPG

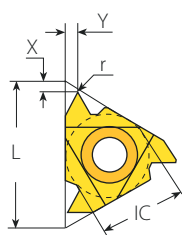
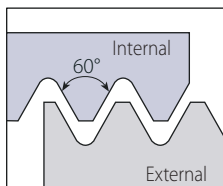
■ Mini-V Inserts

V	08	TH	1.5	ISO	R	VBX
1	2	3	4	5	6	7

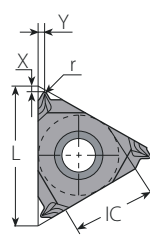
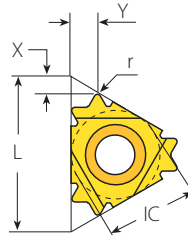
1 - Product Line	2 - Insert Style	3 - Type of Application	4 - Pitch (for Threading)		5 - Threading Standard	
V- Mini-V	08, 11, 14, 16	TH - Threading	Full Profile - Pitch Range		60 - Partial Profile 60° 55 - Partial Profile 55° ISO - ISO Metric UN - American UN W - Whitworth for BSW, BSP BSPT - British Standard Pipe Thread NPT - NPT National Pipe Thread NPTF - NPTF National Seal Pipe Thread TR - Trapez Din 103	
6 - RH	7 - Carbide Grade		mm			TPI
			0.5-2.0			32-12
			Partial Profile - Pitch Range			
				mm		TPI
			H	0.5-.75		48-32
			I	1.0-1.25		24-20
			J	1.5-1.75		16-14
			A	0.5-1.5		48-16
G	1.75-3.0	14-8				
AG	0.5-3.0	48-8				

Partial Profile 60°

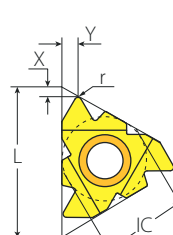
External



Standard

SCB
Sintered
Chipbreaker

V6



F-Line

Standard



SCB



V6



F-Line

Insert Size		Pitch		Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	TPI	RH	LH	r	X	Y	RH	LH	
1/4"	11	0.5-1.5	48-16	2ERA60...	2ELA60...	0.05	0.8	0.9	-	-	NL..-2 (LH)
		0.5-1.5	48-16	3ERA60...	3ELA60...	0.05	0.8	0.9	-	-	NL..-2 (LH)
3/8"	16	1.75-3.0	14-8	3ERG60...	3ELG60...	0.27	1.2	1.7	YE3	YI3	AL..-3 (LH)
		0.5-3.0	48-8	3ERAG60...	3ELAG60...	0.08	1.2	1.7	YE3	YI3	AL..-3 (LH)
3/8" SCB	16	0.5-1.5	48-16	3JERA60...		0.05	0.6	0.8			
		1.75-3.0	14-8	3JERG60...		0.27	1.1	1.5	YE3	-	AL..-3
		0.5-3.0	48-8	3JERAG60...		0.08	0.9	1.5	YE3	-	AL..-3
3/8" V6	16	0.5-2.0	48-13	3ERS60-6C...		0.06	1.9	3.0	YE3-6C	-	AL..-3
1/2"	22	3.5-5.0	7-5	4ERN60...	4ELN60...	0.53	1.7	2.5	YE4	YI4	AL..-4 (LH)
1/2"F	23	3.5-5.0	7-5	4FERN60...		0.53	1.7	2.5	YE4F	-	AL..-4F
5/8"	27	5.5-6.0	4.5-4	5ERQ60...	5ELQ60...	0.64	2.1	3.1	YE5	YI5	AL..-5 (LH)

Partial Profile 60° (con't)

External

U Style

V Style / Slim Throat

U Style

	Insert Size		Pitch		Ordering Code		Dimensions mm			Anvil	
	IC	L mm	mm	TPI	RH+LH		r	X	Y	RH	LH
	1/2"U	22	5.5-8.0	4.5-3.25	4UEIU60...		0.30	0.6	11.0	YE4U	YI4U
	5/8"U	27	6.5-9.0	4-2.75	5UEIU60...		0.37	1.0	13.7	YE5U	YI5U

Slim Throat

	Insert Size		Pitch		Ordering Code		Dimensions mm				Toolholder
	IC	L mm	mm	TPI	RH	LH	r	X	Y	T	
	1/4"V	11	0.5-1.5	48-16	2VERA60...	2VELA60...	0.05	0.69	2.3	3.2	NL...-2V (LH)
			0.5-1.5	48-16	3VERA60...	3VELA60...	0.05	1.10	2.7	3.6	
	3/8"V	16	1.75-3.0	14-8	3VERG60...	3VELG60...	0.27	1.10	1.9	3.6	NL...-3V (LH)
			0.5-3.0	48-8	3VERAG60...	3VELAG60...	0.08	1.10	1.9	3.6	
	1/2"V	22	3.5-5.0	7-5	4VERN60...	4VELN60...	0.53	1.10	2.3	4.8	NL...-4V (LH)

V Style

	Insert Size		Pitch		Ordering Code		Dimensions mm				Toolholder
	IC	L mm	mm	TPI	RH	LH	r	X	Y	T	
	5/8"V	27	6.0-10.0	4-2.5	5VERV60...	5VELV60...	0.75	0.6	5.2	10	NL...-5V-10 (LH)

Partial Profile 60°

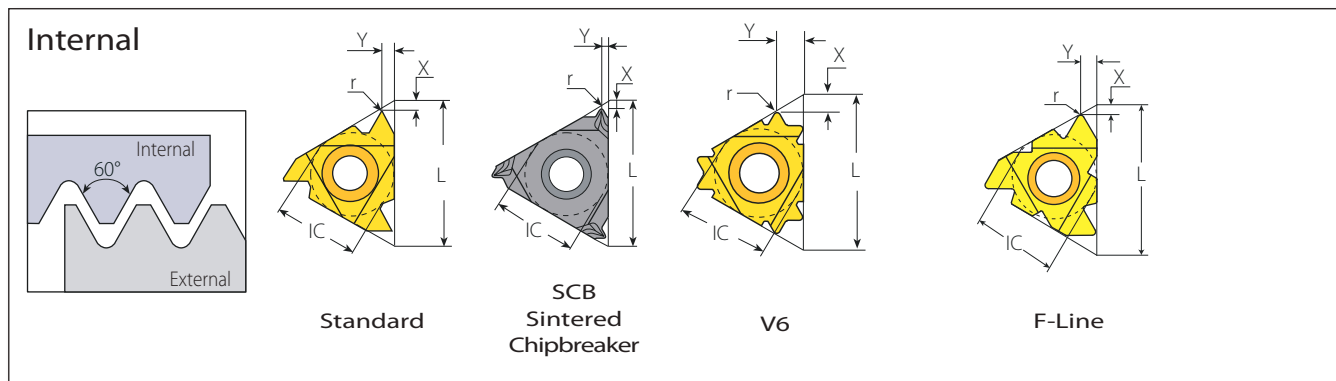
External

VG-Cut

VG-Cut

	Pocket Size	Ordering Code	Dimensions mm				No. of Passes	Helix	Min. Thread Diameter	Toolholder
		RH	W ref	Pitch mm	R	Y	L ref	Deg		Monoblock
	3	VGD3.0A60RH...	3.00	0.5-1.5	0.05	1.68	21.9	5 - 8	1.5°	Partial Profile A60

Partial Profile 60° (con't)



Standard



SCB



V6



F-Line

Insert Size		Pitch		Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	TPI	RH	LH	r	X	Y	RH	LH	
1/4"	11	0.5-1.5	48-16	2IRA60...	2ILA60...	0.05	0.8	0.9	-	-	NVR...-2 (LH)
1/4" SCB	11	0.5-1.5	48-16	2JIRA60...		0.05	0.6	0.8	-	-	NVR...-2
3/8"	16	0.5-1.5	48-16	3IRA60...	3ILA60...	0.05	0.8	0.9	Y13	YE3	AVR...-3 (LH)
		1.75-3.0	14-8	3IRG60...	3ILG60...	0.16	1.2	1.7			
		0.5-3.0	48-8	3IRAG60...	3ILAG60...	0.05	1.2	1.7			
3/8" SCB	16	0.5-1.5	48-16	3JIRA60...		0.05	0.6	0.8	Y13	-	AVR...-3
		1.75-3.0	14-8	3JIRG60...		0.16	1.0	1.5			
		0.5-3.0	48-8	3JIRAG60...		0.05	0.9	1.5			
3/8" V6	16	0.5-2.0	48-14	3IRS60-6C...		0.03	1.6	2.6	Y13-6C	-	AVR...-3 NVRC...-3 206/...
1/2"	22	3.5-5.0	7-5	4IRN60...	4ILN60...	0.30	1.7	2.5	Y14	YE4	AVR...-4 (LH)
1/2"F	23	3.5-5.0	7-5	4FIRN60...		0.3	1.7	2.5	Y14F	-	AVRC...-4F
5/8"	27	5.5-6.0	4.5-4	5IRQ60...	5ILQ60...	0.30	1.8	2.7	Y15	YE5	AVR...-5 (LH)

Partial Profile 60° (con't)

Internal





U Style



V Style

U Style



Insert Size		Pitch		Ordering Code		Dimensions mm			Anvil		
IC	L mm	mm	TPI	RH+LH		r	X	Y	RH	LH	Toolholder
1/2"U	22	5.5-8.0	4.5-3.25	4UEIU60...		0.30	0.6	11.0	YI4U	YE4U	AVR...-4U (LH)
5/8"U	27	6.5-9.0	4-2.75	5UEIU60...		0.37	1.0	13.7	YI5U	YE5U	AVR...-5U (LH)

V Style

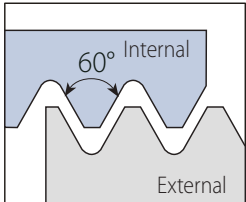


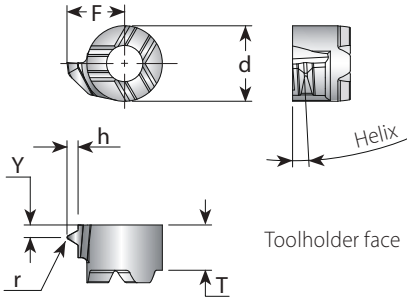
Insert Size		Pitch		Ordering Code		Dimensions mm				
IC	L mm	mm	TPI	RH	LH	r	X	Y	T	Toolholder
5/8"V	27	6.0-10.0	4-2.5	5VIRV60...	5VILV60...	0.35	1.0	4.3	8	NVR..-5V (LH)

Partial Profile 60° (con't)

Mini-V

Internal





Helix

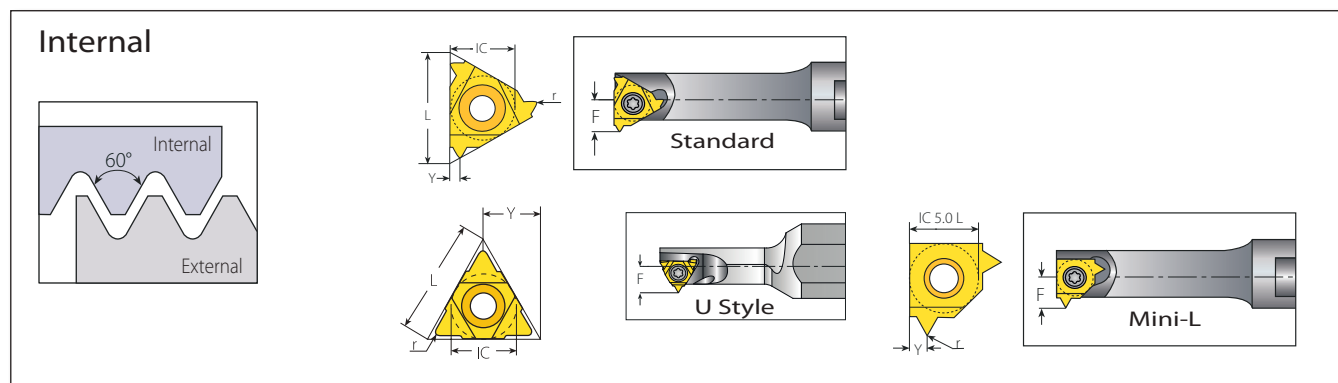
Toolholder face

Mini-V



Insert Style	Pitch		Ordering Code	Dimensions mm						Helix	Toolholder
	TPI	mm	RH	d	T	F	Y	r	Deg.		
V08	48-32	0.5-0.75	V08THH60R...	6	3.8	4.20	0.5	0.03	1.5	.V08-...	
	24-20	1.0-1.25	V08THI60R...			4.46	0.8	0.10	2.5		
	16-14	1.5-1.75	V08THJ60R...			4.76	0.9	0.14	3		
V11	48-32	0.5-0.75	V11THH60R...	8	4.2	5.80	0.5	0.30	1.5	.V11-...	
	24-20	1.0-1.25	V11THI60R...			6.06	0.8	0.10	1.5		
	16-14	1.5-1.75	V11THJ60R...			5.61	0.9	0.14	3		
V14	48-16	0.5-1.5	V14THA60R...	9	5.7	9	0.9	0.05	1.5	.V14-...	
	14-8	1.75-3.0	V14THG60R...			1.7	0.16				
	48-8	0.5-3.0	V14THAG60R...			1.7	0.05				
V16	48-16	0.5-1.5	V16THA60R...	11	5.7	10.2	0.9	0.05	1.5	.V16-...	
	14-8	1.75-3.0	V16THG60R...			1.7	0.16				
	48-8	0.5-3.0	V16THAG60R...			1.7	0.05				

Partial Profile 60° (con't)

MINIPRO


Mini-3 Standard



Insert Size		Pitch		Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	mm	TPI	RH	LH	r	Y	F	mm	
4.0	6	0.5-1.25	48-20	4.0KIRA60...	4.0KILA60...	0.05	0.6	3.7	6.35	.NVR.5-4.0K (LH)
5.0	8	0.5-1.5	48-16	5.0KIRA60...	5.0KILA60...	0.05	0.7	4.7	7.80	.NVRC7-5.0K (LH)
6.0	10	0.5-1.5	48-16	6.0KIRA60...	6.0KILA60...	0.05	0.9	5.3	10.00	.NVR1.-6.0K (LH)

Mini-3 U Style



Insert Size		Pitch		Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	mm	TPI	RH+LH		r	Y	F	mm	
5.0U	8	1.75-2.0	14-11	5.0KUIB60...		0.16	4.0	5.8	9.0	.NVRC8-5.0KU (LH)

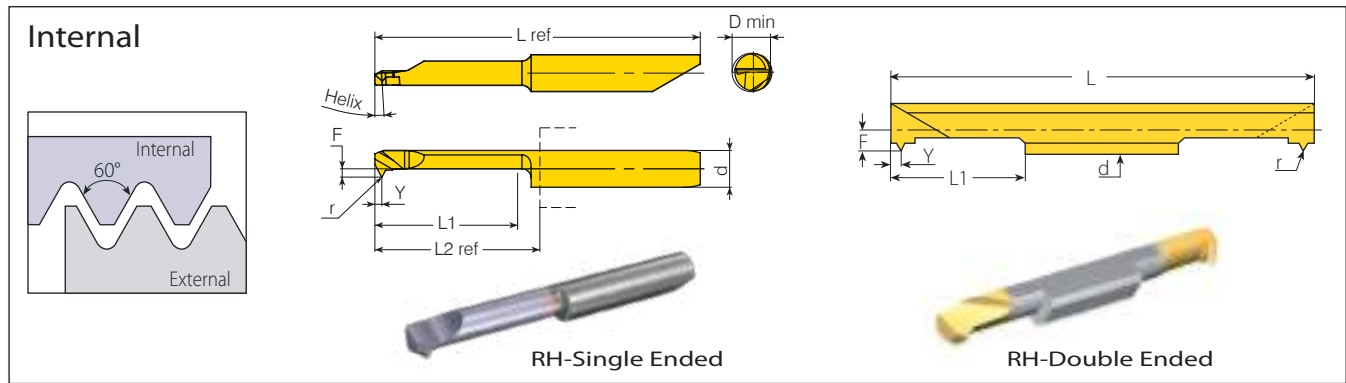
Mini-L



Insert Size		Pitch		Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm		mm	TPI	RH	LH	r	Y	F	mm	
5.0L		0.5-1.5	48-16	5LKIRA60...	5LKILA60...	0.05	0.9	4.65	8.0	.NVRC10-5LK (LH)

Partial Profile 60° (con't)

MINIPRO



Micro - Double Ended

Insert Dia.	Pitch	Ordering Code	Dimensions mm							Min. Bore Dia.	Toolholder
d mm	mm	TPI	RH	r	L1	L	F	Y		mm	
3.0	0.5-1.0	48-24	3.0SIRF60...	0.05	16	50	1.46	0.9		3.3	SMC...-3.0
4.0	0.5-1.0	48-24	4.0SIRF60...	0.05	16	50	1.96	0.9		4.3	SMC...-4.0
6.0	0.5-1.5	48-16	6.0SIRA60...	0.05	16	50	2.50	0.9		6.0	SMC...-6.0

Left handed tool supplied by request (Example: 6.0SILA60...).

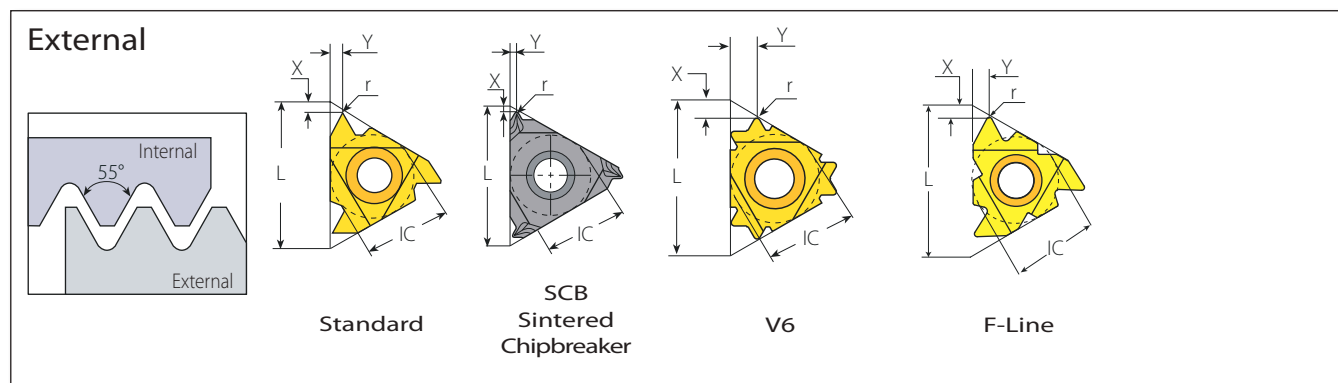
Micro - Single Ended

microscope

Insert Dia.	Pitch	Ordering Code	Dimensions mm										Min. Bore Dia.	Toolholder
Thread	d mm	mm	TPI	RH/LH	Helix °	r	L1	F	Y	h min	L2 ref*	L ref	D mm	
M1-M2x0.25	4.0	0.25		M407TH0.25P60L02R...	4.9	2.5		0.14	0.29				0.73	MH...-4.0
M1.6-M3x0.35		0.35		M412TH0.35P60L04R...	3.8	4		0.18	0.29				1.22	
M2x0.4		0.4		M416TH0.40P60L05R...	4.2	5		0.20	0.41				1.57	
M2.2-M2.5x0.45		0.45		M417TH0.45P60L06R...	4.0	6		0.22	0.46				1.71	
-	4.0	0.5-1.0	48-24	MS429THF60L16R/L...		0.03		0.90			18.4	35.4	3.2	MH...-4.0
		0.5-1.0	48-24	MS439THF60L16R/L...	3.5	0.03	16	1.90	0.90				4.2	
	6.0	0.5-1.5	48-16	M659THA60L16R/L...		0.05		2.90			18.5	42.2	6.2	MH...-6.0

* L2 Ref: Repeatability within +/-0.02.

Partial Profile 55°



Standard



SCB



V6



F-Line

Insert Size		Pitch		Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	TPI	RH	LH	r	X	Y	RH	LH	
1/4"	11	0.5-1.5	48-16	2ERA55...	2ELA55...	0.05	0.8	0.9	-	-	NL...-2 (LH)
		0.5-1.5	48-16	3ERA55...	3ELA55...	0.05	0.8	0.9			
3/8"	16	1.75-3.0	14-8	3ERG55...	3ELG55...	0.21	1.2	1.7	YE3	YI3	AL...-3 (LH)
		0.5-3.0	48-8	3ERAG55...	3ELAG55...	0.07	1.2	1.7			
3/8" SCB	16	0.5-1.5	48-16	3JERA55...		0.05	0.6	0.8			
		1.75-3.0	14-8	3JERG55...		0.21	1.1	1.5	YE3	-	AL...-3
		0.5-3.0	48-8	3JERAG55...		0.07	0.9	1.5			
3/8" V6	16	0.5-1.75	48-14	3ERS55-6C...		0.05	1.8	2.8	YE3-6C	-	AL...-3
1/2"	22	3.5-5.0	7-5	4ERN55...	4ELN55...	0.43	1.7	2.5	YE4	YI4	AL...-4 (LH)
1/2"F	23	3.5-5.0	7-5	4FERN55...		0.43	1.7	2.5	YE4F	-	AL...-4F
5/8"	27	5.5-6.0	4.5-4	5ERQ55...	5ELQ55...	0.60	2.0	2.9	YE5	YI5	AL...-5 (LH)

Partial Profile 55° (con't)

External

U Style

V Style / Slim Throat

U Style

	Insert Size		Pitch		Ordering Code		Dimensions mm			Anvil	
	IC	L mm	mm	TPI	RH+LH		r	X	Y	RH	LH
	1/2"U	22	5.5-8.0	4.5-3.25	4UEIU55...		0.60	0.9	11.0	YE4U	YI4U
	5/8"U	27	6.5-9.0	4-2.75	5UEIU55...		0.80	1.2	13.7	YE5U	YI5U

Slim Throat

	Insert Size		Pitch		Ordering Code		Dimensions mm				Toolholder
	IC	L mm	mm	TPI	RH	LH	r	X	Y	T	
	1/4"V	11	0.5-1.5	48-16	2VERA55...	2VELA55...	0.05	0.8	2.7	3.2	NL...-2V (LH)
			0.5-1.5	48-16	3VERA55...	3VELA55...	0.05	1.1	2.7	3.6	
	3/8"V	16	1.75-3.0	14-8	3VERG55...	3VELG55...	0.21	1.1	1.9	3.6	NL...-3V (LH)
			0.5-3.0	48-8	3VERAG55...	3VELAG55...	0.07	1.1	1.9	3.6	
	1/2"V	22	3.5-5.0	7-5	4VERN55...	4VELN55...	0.43	1.1	2.3	4.8	NL...-4V (LH)

V Style

	Insert Size		Pitch		Ordering Code		Dimensions mm				Toolholder
	IC	L mm	mm	TPI	RH	LH	r	X	Y	T	
	5/8"V	27	6.0-9.0	4-2.75	5VERV55...	5VELV55...	0.70	1.0	4.3	8	NL...-5V-8 (LH)

Partial Profile 55°

External

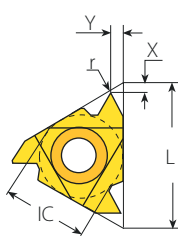
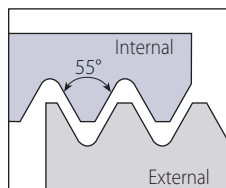
VG-Cut

VG-Cut

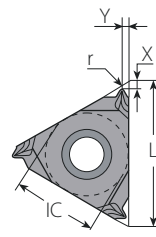
	Pocket Size	Ordering Code	Dimensions mm					No. of Passes	Helix	Min. Thread Diameter	Toolholder
			RH	W ref	Pitch TPI	R	Y	L ref	Deg		
	3	VGD3.0A55RH...		3.00	48-16	0.05	1.68	21.9	5 - 8	1.5°	Partial Profile A55

Partial Profile 55° (con't)

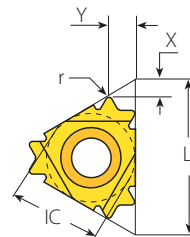
Internal



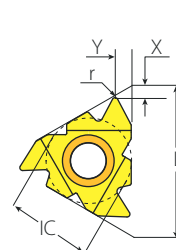
Standard



SCB
Sintered
Chipbreaker



V6



F-Line

Standard



SCB



V6



F-Line

Insert Size		Pitch		Ordering Code		Dimensions mm			Anvil		
IC	L mm	mm	TPI	RH	LH	r	X	Y	RH	LH	Toolholder
1/4"	11	0.5-1.5	48-16	2IRA55...	2ILA55...	0.05	0.8	0.9	-	-	NVR..-2 (LH)
1/4" SCB	11	0.5-1.5	48-16	2JIRA55...		0.05	0.6	0.8	-	-	NVR..-2
3/8"	16	0.5-1.5	48-16	3IRA55...	3ILA55...	0.05	0.8	0.9	YI3	YE3	AVR..-3 (LH)
		1.75-3.0	14-8	3IRG55...	3ILG55...	0.21	1.2	1.7			
		0.5-3.0	48-8	3IRAG55...	3ILAG55...	0.07	1.2	1.7			
3/8" SCB	16	0.5-1.5	48-16	3JIRA55...		0.05	0.6	0.8	YI3	-	AVR..-3
		1.75-3.0	14-8	3JIRG55...		0.21	1.1	1.5			
		0.5-3.0	48-8	3JIRAG55...		0.07	0.9	1.5			
3/8" V6	16	0.5-1.5	48-16	3IRS55-6C...		0.05	1.6	2.6	YI3-6C	-	AVR..-3 NVR..-3 206/...
1/2"	22	3.5-5.0	7-5	4IRN55...	4ILN55...	0.43	1.7	2.5	YI4	YE4	AVR..-4 (LH)
1/2"F	23	3.5-5.0	7-5	4FIRN55...		0.43	1.7	2.5	YI4F	-	AVRC...-4F
5/8"	27	5.5-6.0	4.5-4	5IRQ55...	5ILQ55...	0.60	2.0	2.9	YI5	YE5	AVR..-5 (LH)

Partial Profile 55° (con't)

Internal

U Style

V Style

U Style

	Insert Size		Pitch		Ordering Code	Dimensions mm			Anvil		
	IC	L mm	mm	TPI	RH+LH	r	X	Y	RH	LH	Toolholder
	1/2"U	22	5.5-8.0	4.5-3.25	4UEIU55...	0.60	0.9	11.0	YI4U	YE4U	AVR...4U (LH)
	5/8"U	27	6.5-9.0	4-2.75	5UEIU55...	0.80	1.2	13.7	YI5U	YE5U	AVR...5U (LH)

V Style

	Insert Size		Pitch		Ordering Code		Dimensions mm				
	IC	L mm	mm	TPI	RH	LH	r	X	Y	T	Toolholder
	5/8"V	27	6.0-9.0	4-2.75	5VIRV55...	5VILV55...	0.70	1.0	4.3	8	NVR...5V (LH)

Partial Profile 55° (con't)

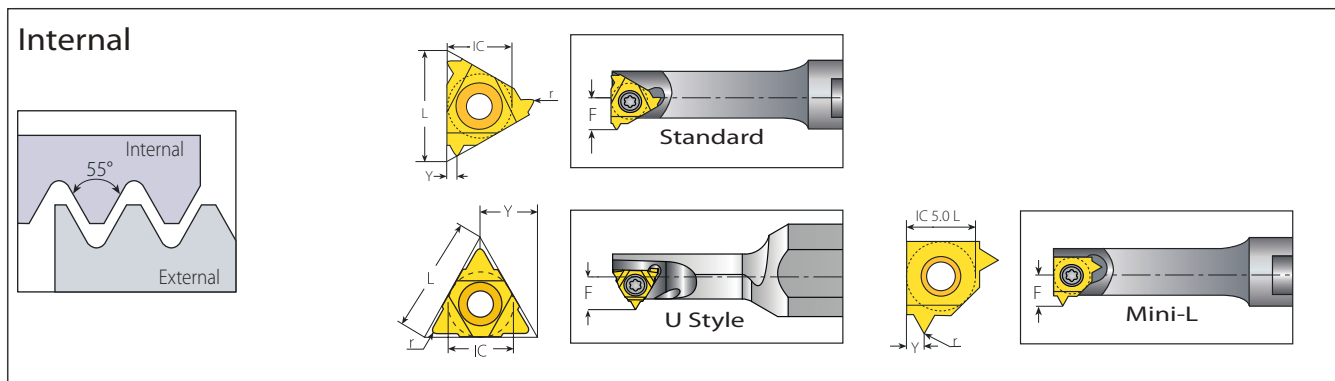
Mini-V

Internal

Mini-V

	Insert Style	Pitch		Ordering Code	Dimensions mm					Helix	Toolholder
		TPI	mm	RH	d	T	F	Y	r	Deg.	
	V14	48-16	0.5-1.5	V14THA55R...	9	5.7	9	0.9	0.05	1.5	.V14-...
		14-8	1.75-3.0	V14THG55R...				1.7	0.21		
		48-8	0.5-3.0	V14THAG55R...				1.7	0.07		
	V16	48-16	0.5-1.5	V16THA55R...	11	5.7	10.2	0.9	0.07	1.5	.V16-...
		14-8	1.75-3.0	V16THG55R...				1.7	0.25		
		48-8	0.5-3.0	V16THAG55R...				1.7	0.07		

Partial Profile 55° (con't)

MINIPRO


Mini-3 Standard



Insert Size		Pitch		Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	mm	TPI	RH	LH	r	Y	F	mm	
4.0	6	0.5-1.25	48-20	4.0KIRA55...	4.0KILA55...	0.05	0.6	3.8	6.45	.NVR.5-4.0K (LH)
5.0	8	0.5-1.5	48-16	5.0KIRA55...	5.0KILA55...	0.05	0.7	4.7	7.80	.NVR.7-5.0K (LH)
6.0	10	0.5-1.50	48-16	6.0KIRA55...	6.0KILA55...	0.05	0.9	5.3	10.00	.NVR.10-6.0K (LH)

Mini-3 U Style



Insert Size		Pitch		Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	mm	TPI	RH+LH		r	Y	F	mm	
5.0U	8	1.75-2.0	14-11	5.0KUIB55...		0.21	4.0	5.7	9.0	.NVR.8-5.0KU (LH)

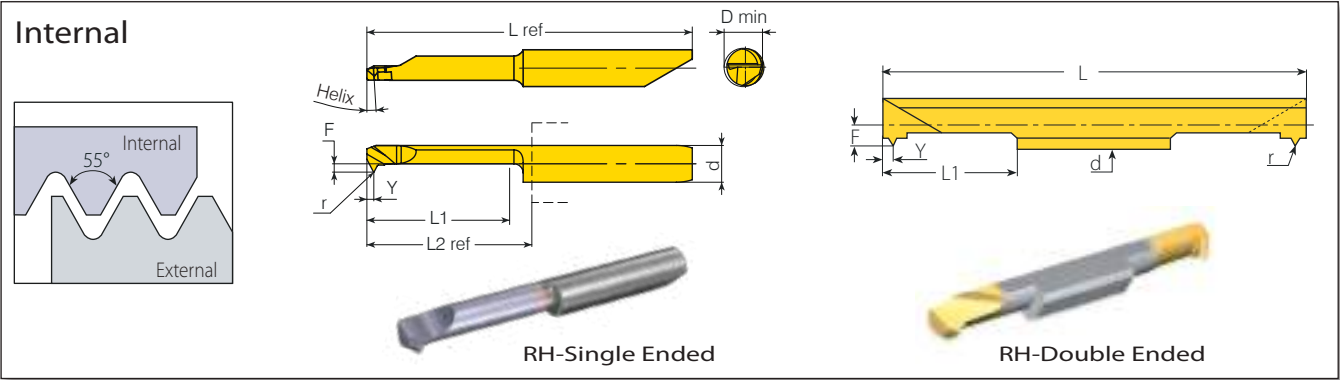
Mini-L



Insert Size		Pitch		Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm		mm	TPI	RH	LH	r	Y	F	mm	
5.0L		0.5-1.5	48-16	5LKIRA55...	5LKILA55...	0.05	0.9	4.65	8.0	.NVR.10-5LK (LH)

Partial Profile 55° (con't)

MINIPRO



Micro - Double Ended

Insert Dia.	Pitch		Ordering Code	Dimensions mm					Min. Bore Dia.	
d mm	mm	TPI	RH	r	L1	L	F	Y	mm	Toolholder
3.0	0.5-1.0	48-24	3.0SIRF55...	0.05	16	50	1.46	0.9	3.3	SMC...-3.0
4.0	0.5-1.0	48-24	4.0SIRF55...	0.05	16	50	1.96	0.9	4.3	SMC...-4.0
6.0	0.5-1.5	48-16	6.0SIRA55...	0.05	16	50	2.50	0.9	6.0	SMC...-6.0

Left handed tool supplied by request (Example: 6.0SILA55...).

Micro - Single Ended

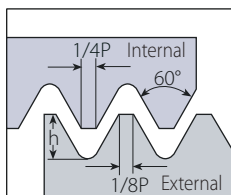
microscope

Insert Dia.		Pitch		Ordering Code			Dimensions mm					Min. Bore Dia.	
d mm	mm	TPI	RH/LH		Helix °	r	L1	F	Y	L2 ref*	L ref	D mm	Toolholder
4.0	0.5-1.0	48-24	MS429THF55L16R/L...		3.5	0.05	16	0.9	0.75	18.4	35.4	3.2	MH...-4.0
	0.5-1.0	48-24	MS439THF55L16R/L...			0.05		1.9				4.2	
6.0	0.5-1.5	48-16	M659THA55L16R/L...			0.06		2.9	0.9	18.5	42.2	6.2	MH...-6.0

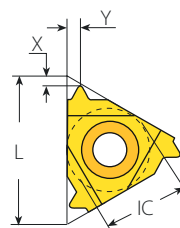
* L2 Ref: Repeatability within +/-0.02.

ISO Metric

External



Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



Standard

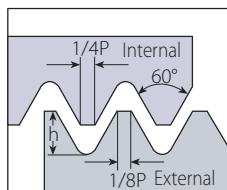
Standard



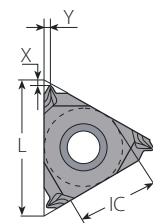
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	
1/4"	11	0.25	2ER0.25ISO...	2EL0.25ISO...	0.14	0.4	0.2	-	-	NL..-2 (LH)
		0.3	2ER0.3ISO...	2EL0.3ISO...	0.19	0.7	0.3			
		0.35	2ER0.35ISO...	2EL0.35ISO...	0.21	0.8	0.4			
		0.4	2ER0.4ISO...	2EL0.4ISO...	0.25	0.7	0.4			
		0.45	2ER0.45ISO...	2EL0.45ISO...	0.28	0.7	0.4			
		0.5	2ER0.5ISO...	2EL0.5ISO...	0.31	0.6	0.4			
		0.6	2ER0.6ISO...	2EL0.6ISO...	0.37	0.6	0.6			
		0.7	2ER0.7ISO...	2EL0.7ISO...	0.43	0.6	0.6			
		0.75	2ER0.75ISO...	2EL0.75ISO...	0.46	0.6	0.6			
		0.8	2ER0.8ISO...	2EL0.8ISO...	0.49	0.6	0.6			
		1.0	2ER1.0ISO...	2EL1.0ISO...	0.61	0.7	0.7			
		1.25	2ER1.25ISO...	2EL1.25ISO...	0.77	0.8	0.9			
		1.5	2ER1.5ISO...	2EL1.5ISO...	0.92	0.8	1.0			
		1.75	2ER1.75ISO...	2EL1.75ISO...	1.07	0.8	1.1			
3/8"	16	0.25	3ER0.25ISO...	3EL0.25ISO...	0.14	0.4	0.2	YE3	YI3	AL..-3 (LH)
		0.3	3ER0.3ISO...	3EL0.3ISO...	0.17	0.73	0.29			
		0.35	3ER0.35ISO...	3EL0.35ISO...	0.21	0.8	0.4			
		0.4	3ER0.4ISO...	3EL0.4ISO...	0.25	0.7	0.4			
		0.45	3ER0.45ISO...	3EL0.45ISO...	0.28	0.7	0.4			
		0.5	3ER0.5ISO...	3EL0.5ISO...	0.31	0.6	0.4			
		0.6	3ER0.6ISO...	3EL0.6ISO...	0.37	0.6	0.6			
		0.7	3ER0.7ISO...	3EL0.7ISO...	0.43	0.6	0.6			
		0.75	3ER0.75ISO...	3EL0.75ISO...	0.46	0.6	0.6			
		0.8	3ER0.8ISO...	3EL0.8ISO...	0.49	0.6	0.6			
		1.0	3ER1.0ISO...	3EL1.0ISO...	0.61	0.7	0.7			
		1.25	3ER1.25ISO...	3EL1.25ISO...	0.77	0.8	0.9			
		1.5	3ER1.5ISO...	3EL1.5ISO...	0.92	0.8	1.0			
		1.75	3ER1.75ISO...	3EL1.75ISO...	1.07	0.9	1.2			
		2.0	3ER2.0ISO...	3EL2.0ISO...	1.23	1.0	1.3			
		2.5	3ER2.5ISO...	3EL2.5ISO...	1.53	1.1	1.5			
		3.0	3ER3.0ISO...	3EL3.0ISO...	1.84	1.2	1.6			
		3.5	3ER3.5ISO...	3EL3.5ISO...	2.15	1.6	1.9			

ISO Metric (con't)

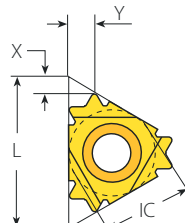
External



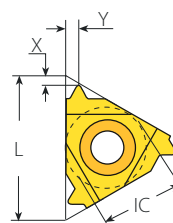
Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



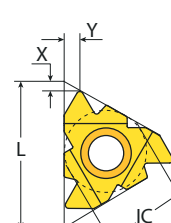
SCB
Sintered
Chipbreaker



V6



Standard



F-Line

Standard



SCB



V6

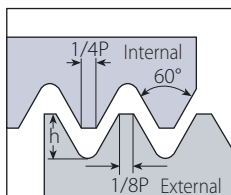


F-Line

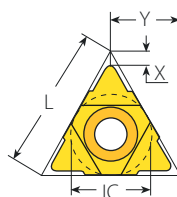
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	
3/8" SCB	16	0.5	3JER0.5ISO...		0.31	1.2	0.5	YE3	-	AL...-3
		0.75	3JER0.75ISO...		0.46	1.2	0.5			
		0.8	3JER0.8ISO...		0.49	1.2	0.5			
		1.0	3JER1.0ISO...		0.61	0.7	0.8			
		1.25	3JER1.25ISO...		0.77	0.7	0.8			
		1.5	3JER1.5ISO...		0.92	0.7	0.8			
		1.75	3JER1.75ISO...		1.07	1.2	1.5			
		2.0	3JER2.0ISO...		1.23	1.2	1.5			
		2.5	3JER2.5ISO...		1.53	1.2	1.5			
		3.0	3JER3.0ISO...		1.84	1.3	1.5			
3/8" V6	16	3.5	3JER3.5ISO...		2.15	1.2	1.5	YE3-6C	-	AL...-3
		0.5	3ER0.5ISO-6C...		0.31	2.2	1.8			
		0.75	3ER0.75ISO-6C...		0.46	2.0	1.8			
		0.8	3ER0.8ISO-6C...		0.49	2.0	1.9			
		1.0	3ER1.0ISO-6C...		0.61	1.9	2.0			
		1.25	3ER1.25ISO-6C...		0.77	1.8	2.1			
		1.5	3ER1.5ISO-6C...		0.92	1.9	2.4			
		1.75	3ER1.75ISO-6C...		1.07	1.8	2.6			
1/2"	22	2.0	3ER2.0ISO-6C...		1.23	1.9	2.8	YE4	Y14	AL...-4 (LH)
		3.5	4ER3.5ISO...	4EL3.5ISO...	2.15	1.6	2.3			
		4.0	4ER4.0ISO...	4EL4.0ISO...	2.45	1.6	2.3			
		4.5	4ER4.5ISO...	4EL4.5ISO...	2.76	1.7	2.4			
		5.0	4ER5.0ISO...	4EL5.0ISO...	3.07	1.7	2.5			
		5.5	4ER5.5ISO...	4EL5.5ISO...	3.37	1.9	2.7			
		6.0	4ER6.0ISO...	4EL6.0ISO...	3.68	1.8	2.7			
1/2"F	23	3.5	4FER3.5ISO...		2.15	1.6	2.3	YE4F	-	AL...-4F
		4.0	4FER4.0ISO...		2.45	1.6	2.3			
		4.5	4FER4.5ISO...		2.76	1.7	2.4			
		5.0	4FER5.0ISO...		3.07	1.7	2.5			
		5.5	4FER5.5ISO...		3.37	1.9	2.7			
		6.0	4FER6.0ISO...		3.68	1.8	2.7			
5/8"	27	5.5	5ER5.5ISO...	5EL5.5ISO...	3.37	1.9	2.7	YE5	Y15	AL...-5 (LH)
		6.0	5ER6.0ISO...	5EL6.0ISO...	3.68	2.0	2.9			

ISO Metric (con't)

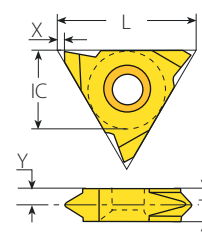
External



Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



U Style



V Style / Slim Throat

U Style



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH+LH		h min	X	Y	RH	LH	
1/2"U	22	5.0	4UE5.0ISO...		3.07	2.2	11.0	YE4U	YI4U	AL...-4U (LH)
		5.5	4UE5.5ISO...		3.37	2.3	11.0			
		6.0	4UE6.0ISO...		3.68	2.6	11.0			
5/8"U	27	8.0	5UE8.0ISO...		4.91	2.4	13.7	YE5U	YI5U	AL...-5U (LH)

Slim Throat



Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	T	
1/4"V	11	0.75	2VER0.75ISO...	2VEL0.75ISO...	0.46	0.7	2.6	3.2	NL...-2V (LH)
		1.0	2VER1.0ISO...	2VEL1.0ISO...	0.61	0.7	2.5	3.2	
		1.5	2VER1.5ISO...	2VEL1.5ISO...	0.92	0.7	2.2	3.2	
		1.75	2VER1.75ISO...	2VEL1.75ISO...	1.07	0.7	2.1	3.2	
		2.0	2VER2.0ISO...	2VEL2.0ISO...	1.23	0.7	1.9	3.2	
3/8"V	16	0.35	3VER0.35ISO...	3VEL0.35ISO...	0.20	1.1	3.25	3.6	NL...-3V (LH)
		0.4	3VER0.4ISO...	3VEL0.4ISO...	0.25	1.1	3.20	3.6	
		0.5	3VER0.5ISO...	3VEL0.5ISO...	0.31	1.1	3.0	3.6	
		0.75	3VER0.75ISO...	3VEL0.75ISO...	0.46	1.1	3.0	3.6	
		0.8	3VER0.8ISO...	3VEL0.8ISO...	0.49	1.1	3.0	3.6	
		1.0	3VER1.0ISO...	3VEL1.0ISO...	0.61	1.1	2.9	3.6	
		1.25	3VER1.25ISO...	3VEL1.25ISO...	0.77	1.1	2.7	3.6	
		1.5	3VER1.5ISO...	3VEL1.5ISO...	0.92	1.1	2.6	3.6	
		1.75	3VER1.75ISO...	3VEL1.75ISO...	1.07	1.1	2.45	3.6	
		2.0	3VER2.0ISO...	3VEL2.0ISO...	1.23	1.1	2.3	3.6	
		2.5	3VER2.5ISO...	3VEL2.5ISO...	1.53	1.1	2.1	3.6	
		3.0	3VER3.0ISO...	3VEL3.0ISO...	1.84	1.1	2.0	3.6	

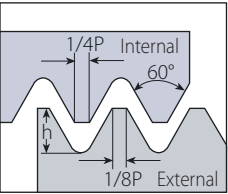
V Style



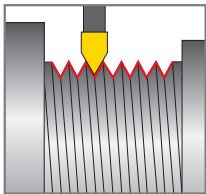
Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	T	
5/8"V	27	5.5	5VER5.5ISO...	5VEL5.5ISO...	3.37	1.0	3.3	6	NL...-5V-6 (LH)
		6.0	5VER6.0ISO...	5VEL6.0ISO...	3.68	1.0	3.3	6	
		8.0	5VER8.0ISO...	5VEL8.0ISO...	4.91	1.0	4.3	8	NL...-5V-8 (LH)
		10.0	5VER10.0ISO...	5VEL10.0ISO...	6.13	1.0	5.2	10	NL...-5V-10 (LH)

ISO Metric (con't)

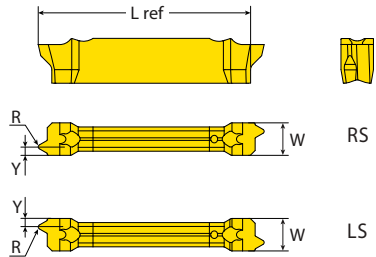
External



Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



RS/LS Varied range of threading standards for machining between shoulders and close to spindle.



VG-Cut



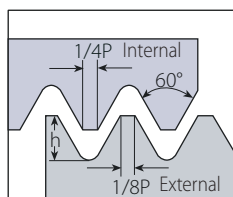
Pocket Size	Ordering Code	Dimensions mm					No. of Passes	Helix	Min. Thread Diameter	Toolholder
		RH	W ref	Pitch mm	h min	Y				
3	VGD3.0ISO0.50RH-RS/LS...			0.50	0.31	0.53	5 - 7		M3x0.5	VGE...-3T...
	VGD3.0ISO0.75RH-RS/LS...			0.75	0.46	0.64	5 - 8		M5x0.75	
	VGD3.0ISO1.00RH-RS/LS...			1.00	0.61	0.74	5 - 9		M6x1	
	VGD3.0ISO1.25RH-RS/LS...			1.25	0.77	0.85	6 - 10		M8x1.25	
	VGD3.0ISO1.50RH-RS/LS...		3.00	1.50	0.92	1.10	7 - 12	2.5°	M10x1.5 Coarse	
	VGD3.0ISO1.75RH-RS/LS...			1.75	1.07	1.20	8 - 14		M12x1.75 Coarse	
	VGD3.0ISO2.00RH-RS/LS...			2.00	1.23	1.30	9 - 14		M16x2.0 Coarse	
	VGD3.0ISO2.50RH-RS/LS...			2.50	1.53	1.55	8 - 14		M18x2.5 Coarse	

LH Helix threads available upon request.

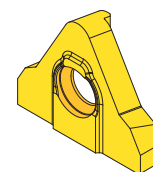
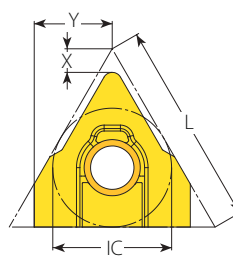
ISO Metric (con't)

MEGA/LINE

External



Defined by: R262 (DIN 13)
Tolerance class: 6g/6H

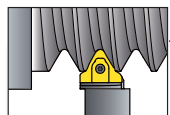


Mega Line

External

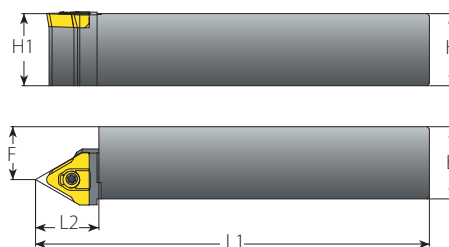
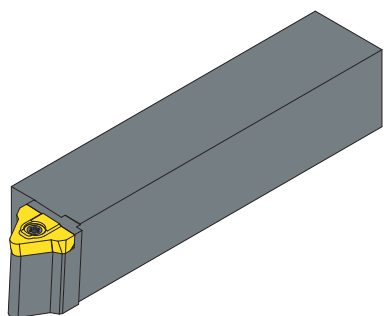


Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	mm	RH	h min	X	Y	0.07mm-Min. Depth of Cut (On radius)	0.15mm-Max. Depth of Cut (On radius)
5/8" MG	27	12.0	5MGER12.0ISO...	7.36	4.08	11.3	105	49
		16.0	5MGER16.0ISO...	9.82	4.66		140	66
		18.0	5MGER18.0ISO...	11.04	4.95		158	74
		20.0	5MGER20.0ISO...	12.27	5.24		175	82
		25.0	5MGER25.0ISO...	15.34	4.46		219	102





External Toolholders for ISO Metric

MEGA/LINE



External

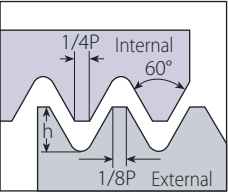
Spare Parts

Insert	Ordering Code	Dimensions mm				Thread Diameter Range (Min.)			
	RH	H=B=H1	F	L1	L2			Insert Screw	Torx Key
5MGER12.0ISO...	NL25-5MG12ISO	25	16.5	155	22	M43x12	S5MG	K6T	
	NL32-5MG12ISO	32	23.5	175					
	NL40-5MG12ISO	40	31.5	205					
5MGER16.0ISO...	NL25-5MG16ISO	25	16.5	155	22	M57x16			
	NL32-5MG16ISO	32	23.5	175					
	NL40-5MG16ISO	40	31.5	205					
5MGER18.0ISO...	NL25-5MG18ISO	25	16.5	155	22	M65x18			
	NL32-5MG18ISO	32	23.5	175					
	NL40-5MG18ISO	40	31.5	205					
5MGER20.0ISO...	NL25-5MG20ISO	25	16.5	155	22	M72x20			
	NL32-5MG20ISO	32	23.5	175					
	NL40-5MG20ISO	40	31.5	205					
5MGER25.0ISO...	NL25-5MG25ISO	25	16.5	155	22	M90x25			
	NL32-5MG25ISO	32	23.5	175					
	NL40-5MG25ISO	40	31.5	205					

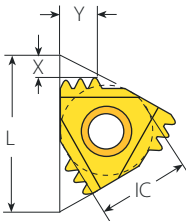
Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.

ISO Metric (con't)

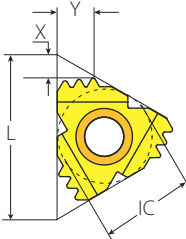
External



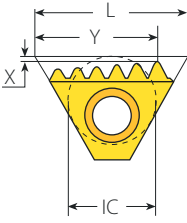
Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



M+ Style



F-Line M+



T+ Style

M+ Style



Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	Toolholder
IC	L mm	mm		RH	h min	X	Y	RH	
3/8"	16	1.0	3	3ER1.0ISO3M+...	0.61	1.8	2.6	YE3M	AL...-3
		1.5	2	3ER1.5ISO2M+...	0.92	1.6	2.4		
		2.0	2	3ER2.0ISO2M+...	1.23	2.1	3.1		
1/2"	22	1.5	3	4ER1.5ISO3M+...	0.92	2.5	3.8	YE4M	AL...-4
		2.0	2	4ER2.0ISO2M+...	1.23	2.1	3.1		
		2.0	3	4ER2.0ISO3M+...	1.23	3.2	5.1		
		2.5	2	4ER2.5ISO2M+...	1.53	2.5	3.9		
1/2"F	23	2.0	2	4FER2.0ISO2M+...	1.23	2.1	3.1	YE4M2F	AL...-4MF
		2.0	3	4FER2.0ISO3M+...	1.23	3.2	5.1	YE4M3F	
5/8"	27	3.0	2	5ER3.0ISO2M+...	1.84	3.0	4.7	YE5M	AL...-5M

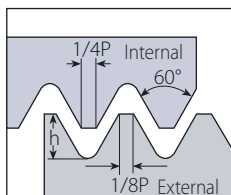
T+ Style



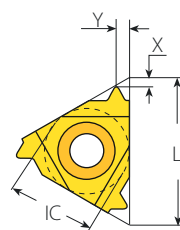
Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	Toolholder
IC	L mm	mm		RH	h min	X	Y	RH	
1/2"T	22	1.5	8	4ER1.5ISO8T+...	0.92	0.2	12.4	Y4T	AL...-4T
		2.0	8	4ER2.0ISO8T+...	1.23	0.2	17.5		

ISO Metric (con't)

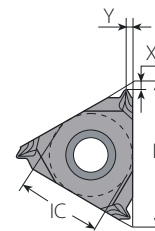
Internal



Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



Standard



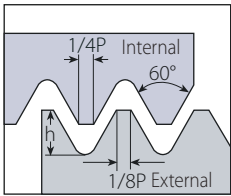
SCB
Sintered
Chipbreaker

Standard

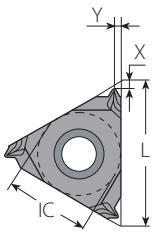
		Insert Size	Pitch	Ordering Code		Dimensions mm			Anvil			
		IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	Toolholder
	1/4"	11	0.35	2IR0.35ISO...	2IL0.35ISO...	0.20	0.8	0.3		-	-	NVR...-2 (LH)
			0.4	2IR0.4ISO...	2IL0.4ISO...	0.23	0.8	0.4				
			0.45	2IR0.45ISO...	2IL0.45ISO...	0.26	0.8	0.4				
			0.5	2IR0.5ISO...	2IL0.5ISO...	0.29	0.6	0.4				
			0.6	2IR0.6ISO...	2IL0.6ISO...	0.35	0.6	0.6				
			0.7	2IR0.7ISO...	2IL0.7ISO...	0.40	0.6	0.6				
			0.75	2IR0.75ISO...	2IL0.75ISO...	0.43	0.6	0.6				
			0.8	2IR0.8ISO...	2IL0.8ISO...	0.46	0.6	0.6				
			1.0	2IR1.0ISO...	2IL1.0ISO...	0.58	0.6	0.7				
			1.25	2IR1.25ISO...	2IL1.25ISO...	0.72	0.8	0.9				
			1.5	2IR1.5ISO...	2IL1.5ISO...	0.87	0.8	1.0				
			1.75	2IR1.75ISO...	2IL1.75ISO...	1.01	0.9	1.1				
			2.0	2IR2.0ISO...	2IL2.0ISO...	1.15	0.9	1.1				
			2.5	2IR2.5ISO...	2IL2.5ISO...	1.44	0.8	1.1				
 SCB	1/4" SCB	11	0.5	2JIR0.5ISO...		0.29	1.2	0.5		-	-	NVR...-2
			0.75	2JIR0.75ISO...		0.43	1.2	0.5				
			0.8	2JIR0.8ISO...		0.46	1.2	0.5				
			1.0	2JIR1.0ISO...		0.58	0.7	0.8				
			1.25	2JIR1.25ISO...		0.72	0.7	0.8				
			1.5	2JIR1.5ISO...		0.87	0.7	0.8				
	3/8"	16	0.35	3IR0.35ISO...	3IL0.35ISO...	0.20	0.8	0.3		YI3	YE3	AVR...-3 (LH)
			0.4	3IR0.4ISO...	3IL0.4ISO...	0.23	0.8	0.4				
			0.45	3IR0.45ISO...	3IL0.45ISO...	0.26	0.8	0.4				
			0.5	3IR0.5ISO...	3IL0.5ISO...	0.29	0.6	0.4				
			0.6	3IR0.6ISO...	3IL0.6ISO...	0.35	0.6	0.6				
			0.7	3IR0.7ISO...	3IL0.7ISO...	0.40	0.6	0.6				
			0.75	3IR0.75ISO...	3IL0.75ISO...	0.43	0.6	0.6				
			0.8	3IR0.8ISO...	3IL0.8ISO...	0.46	0.6	0.6				
			1.0	3IR1.0ISO...	3IL1.0ISO...	0.58	0.6	0.7				
			1.25	3IR1.25ISO...	3IL1.25ISO...	0.72	0.8	0.9				
			1.5	3IR1.5ISO...	3IL1.5ISO...	0.87	0.8	1.0				
			1.75	3IR1.75ISO...	3IL1.75ISO...	1.01	0.9	1.2				
			2.0	3IR2.0ISO...	3IL2.0ISO...	1.15	1.0	1.3				
			2.5	3IR2.5ISO...	3IL2.5ISO...	1.44	1.1	1.5				
			3.0	3IR3.0ISO...	3IL3.0ISO...	1.73	1.1	1.5				
			3.5	3IR3.5ISO...	3IL3.5ISO...	2.02	1.2	1.5				

ISO Metric (con't)

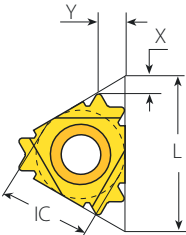
Internal



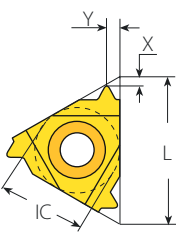
Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



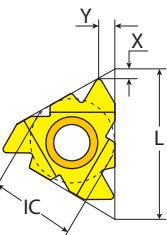
SCB
Sintered
Chipbreaker



V6



Standard



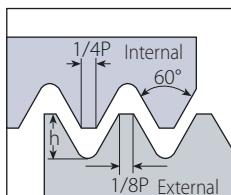
F-Line

Standard

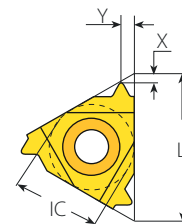
		Insert Size	Pitch	Ordering Code		Dimensions mm			Anvil			
		IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	Toolholder
 SCB	3/8" SCB	16	1.0	3JIR1.0ISO...			0.58	0.7	0.8	Y13	-	AVR...-3
			1.25	3JIR1.25ISO...			0.72	0.7	0.8			
			1.5	3JIR1.5ISO...			0.87	0.7	0.8			
			1.75	3JIR1.75ISO...			1.01	1.1	1.5			
			2.0	3JIR2.0ISO...			1.15	1.1	1.5			
			2.5	3JIR2.5ISO...			1.44	1.1	1.5			
			3.0	3JIR3.0ISO...			1.73	1.1	1.5			
			3.5	3JIR3.5ISO...			2.02	1.2	1.5			
 V6	3/8" V6	16	0.5	3IR0.5ISO-6C...			0.29	2.1	1.7	Y13-6C	-	AVR...-3 NVRC...-3 206/
			0.75	3IR0.75ISO-6C...			0.43	2.0	1.8			
			0.8	3IR0.8ISO-6C...			0.46	1.9	1.8			
			1.0	3IR1.0ISO-6C...			0.58	2.0	2.0			
			1.25	3IR1.25ISO-6C...			0.72	1.8	2.2			
			1.5	3IR1.5ISO-6C...			0.87	1.6	2.3			
			1.75	3IR1.75ISO-6C...			1.01	1.6	2.4			
			2.0	3IR2.0ISO-6C...			1.15	1.7	2.6			
	1/2"	22	3.5	4IR3.5ISO...	4IL3.5ISO...		2.02	1.6	2.3	Y14	YE4	AVR...-4 (LH)
			4.0	4IR4.0ISO...	4IL4.0ISO...		2.31	1.6	2.3			
			4.5	4IR4.5ISO...	4IL4.5ISO...		2.60	1.6	2.4			
			5.0	4IR5.0ISO...	4IL5.0ISO...		2.89	1.6	2.3			
			5.5	4IR5.5ISO...	4IL5.5ISO...		3.17	1.6	2.3			
			6.0	4IR6.0ISO...	4IL6.0ISO...		3.46	1.8	2.5			
	1/2"F	23	3.5	4FIR3.5ISO...			2.02	1.6	2.3	Y14F		AVRC...-4F
			4	4FIR4.0ISO...			2.31	1.6	2.3			
			4.5	4FIR4.5ISO...			2.60	1.6	2.4			
			5	4FIR5.0ISO...			2.89	1.6	2.3			
			5.5	4FIR5.5ISO...			3.18	1.6	2.3			
			6	4FIR6.0ISO...			3.46	1.8	2.5			
 FLINE	5/8"	27	4.5	5IR4.5ISO...	5IL4.5ISO...		2.60	1.6	2.4	Y15	YE5	AVR...-5 (LH)
			5.0	5IR5.0ISO...	5IL5.0ISO...		2.89	1.6	2.3			
			5.5	5IR5.5ISO...	5IL5.5ISO...		3.17	1.6	2.3			
			6.0	5IR6.0ISO...	5IL6.0ISO...		3.46	1.8	2.5			

ISO Metric (con't)

Internal



Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



D-Line

D-Line Deep Rack

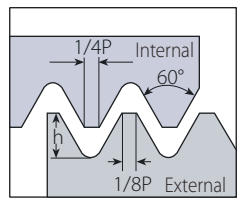
D-Line



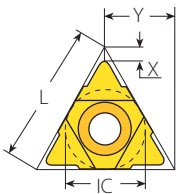
Insert Size		Pitch	Ordering Code	Dimensions mm			Anvil	Toolholder
IC	L mm	mm	RH	h min	X	Y	RH	
1/4"	11	1.0	2DIR1.0ISO...	0.58	0.6	0.7	-	NVR..-2
		1.25	2DIR1.25ISO...	0.72	0.8	0.9		
		1.5	2DIR1.5ISO...	0.87	0.9	1.0		
		2.0	2DIR2.0ISO...	1.15	1.1	0.9		
3/8"	16	1.0	3DIR1.0ISO...	0.58	0.6	0.7	YI3	AVR..-3
		1.5	3DIR1.5ISO...	0.87	0.8	1.0		
		1.75	3DIR1.75ISO...	1.01	0.9	1.2		
		2.0	3DIR2.0ISO...	1.15	1.0	1.3		
		2.5	3DIR2.5ISO...	1.44	1.1	1.5		
1/2"	22	3.0	3DIR3.0ISO...	1.73	1.1	1.5	YI4	AVR..-4
		3.5	4DIR3.5ISO...	2.02	1.6	2.3		
		4.0	4DIR4.0ISO...	2.31	1.6	2.3		

ISO Metric (con't)

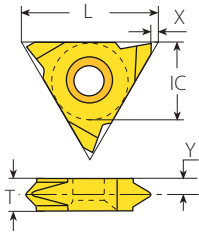
Internal



Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



U Style



V Style

U Style



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH+LH		h min	X	Y	RH	LH	
1/2"U	22	5.5	4UI5.5ISO...		3.17	2.4	11.0	YI4U	YE4U	AVR..-4U (LH)
		6.0	4UI6.0ISO...		3.46	2.1	11.0			
5/8"U	27	8.0	5UI8.0ISO...		4.62	2.4	13.7	YI5U	YE5U	AVR..-5U (LH)

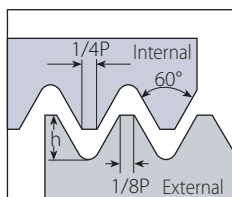
V Style



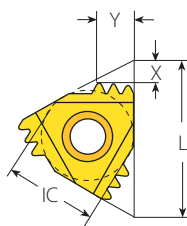
Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	T	
5/8"V	27	6.0	5VIR6.0ISO...	5VIL6.0ISO...	3.46	1.0	3.3	6	NVR..-5V (LH)
		8.0	5VIR8.0ISO...	5VIL8.0ISO...	4.62	1.0	4.3	8	
		10.0	5VIR10.0ISO...	5VIL10.0ISO...	5.77	1.0	5.2	10	

ISO Metric (con't)

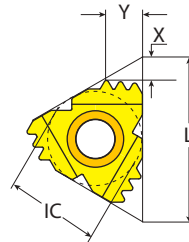
Internal



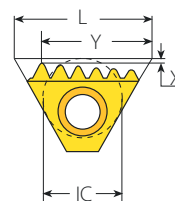
Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



M+ Style



F-Line M+



T+ Style

M+ Style



Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	
IC	L mm	mm		RH	h min	X	Y	RH	Toolholder
3/8"	16	1.0	3	3IR1.0ISO3M+...	0.58	1.7	2.6	YI3M	AVR...-3
		1.5	2	3IR1.5ISO2M+...	0.87	1.6	2.4		
		2.0	2	3IR2.0ISO2M+...	1.15	2.0	3.1		
1/2"	22	1.5	3	4IR1.5ISO3M+...	0.87	2.5	3.8	YI4M	AVR...-4
		2.0	2	4IR2.0ISO2M+...	1.15	2.0	3.1		
		2.0	3	4IR2.0ISO3M+...	1.15	3.2	5.1		
1/2"F	23	2.0	2	4FIR2.0ISO2M+...	1.15	2	3.1	YI4M2F	AVRC...-4MF
5/8"	27	3.0	2	5IR3.0ISO2M+...	1.73	3.0	4.7	YI5M	AVR...-5M

T+ Style

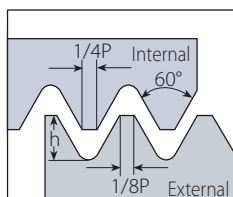


Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	
IC	L mm	mm		RH	h min	X	Y	RH	Toolholder
1/2"	22	1.5	8	4IR1.5ISO8T+...	0.87	0.2	12.4	Y4T	AVR...-4T
		2.0	8	4IR2.0ISO8T+...	1.15	0.2	17.5		

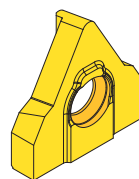
ISO Metric (con't)

MEGALINE

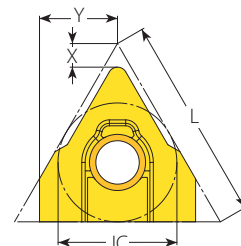
Internal




Defined by: R262 (DIN 13)
Tolerance class: 6g/6H

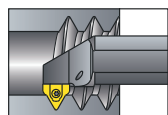


Mega Line



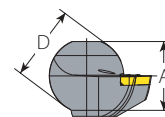
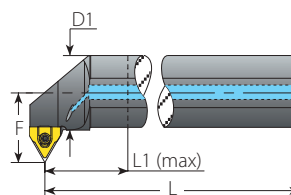
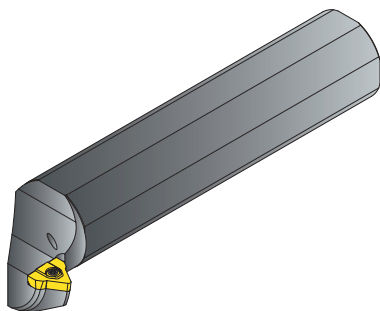
Internal

Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	mm	RH	h min	X	Y	0.07mm-Min. Depth of Cut (On radius)	0.15mm-Max. Depth of Cut (On radius)
	5/8" MG	27	12.0	5MGIR12.0ISO...	6.94	2.65	99	46
		27	16.0	5MGIR16.0ISO...	9.32	3.01	132	62
		27	18.0	5MGIR18.0ISO...	10.49	3.15	149	69
		27	20.0	5MGIR20.0ISO...	11.63	3.29	165	77
		27	25.0	5MGIR25.0ISO...	14.57	3.65	206	96





Internal Toolholders for ISO Metric

MEGALINE



Internal

Spare Parts

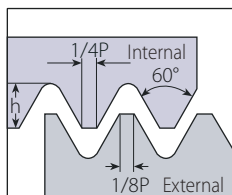
Insert	Ordering Code	Dimensions mm							Min. Bore Dia.	Thread Diameter Range (Min.-Max.)			
	RH	A	L	L1 (max)	D	D1	F	mm	Short Chip Material	Long Chip Material	Insert Screw	Torx Key	
5MGIR12.0ISO...	NVRC40-5MG12ISO	36	232.5	100	40	39.7	41.5	60.0	(M73-90)x12	(M85-90)x12	S5MG	K6T	
	NVRC50-5MG12ISO	46	257.5	125	50	49.7	46.5	70.0	(M83-90)x12	(M83-90)x12			
5MGIR16.0ISO...	NVRC40-5MG16ISO	36	232.5	100	40	39.7	41.5	59.7	(M77-190)x16	(M89-190)x16			
	NVRC50-5MG16ISO	46	257.5	125	50	49.7	46.5	69.7	(M87-190)x16	(M101-190)x16			
	NVRC60-5MG16ISO	57	282.5	150	60	59.7	51.5	79.7	(M97-190)x16	(M113-190)x16			
5MGIR18.0ISO...	NVRC40-5MG18ISO	36	232.5	100	40	39.7	41.5	65.5	(M85-230)x18	(M91-230)x18			
	NVRC50-5MG18ISO	46	257.5	125	50	49.7	46.5	69.5	(M89-230)x18	(M103-230)x18			
	NVRC60-5MG18ISO	57	282.5	150	60	59.7	51.5	79.5	(M99-230)x18	(M115-230)x18			
5MGIR20.0ISO...	NVRC40-5MG20ISO	36	232.5	100	40	39.7	41.5	70.4	(M92-290)x20	(M93-290)x20			
	NVRC50-5MG20ISO	46	257.5	125	50	49.7	46.5	70.4	(M92-290)x20	(M105-290)x20			
	NVRC60-5MG20ISO	57	282.5	150	60	59.7	51.5	79.4	(M101-290)x20	(M117-290)x20			
5MGIR25.0ISO...	NVRC40-5MG25ISO	36	232.5	100	40	39.7	41.5	82.0	(M109-405)x25	(M109-405)x25			
	NVRC50-5MG25ISO	46	257.5	125	50	49.7	46.5	82.0	(M109-405)x25	(M110-405)x25			
	NVRC60-5MG25ISO	57	282.5	150	60	59.7	51.5	82.0	(M109-405)x25	(M122-405)x25			

Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.

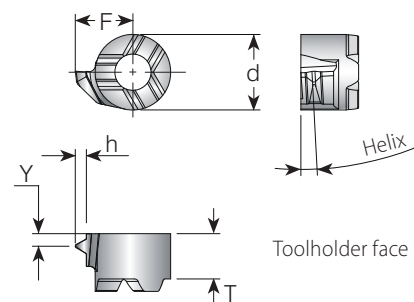
ISO Metric (con't)

Mini-V

Internal



Defined by: R262 (DIN 13)
Tolerance class: 6g/6H



Mini-V

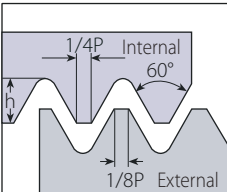


Min. Thread	Insert Style	Pitch	Ordering Code	Dimensions mm					Helix	Toolholder
		mm	RH	d	T	F	Y	h min	Deg.	
M8x0.5	V08	0.5	V08TH0.50ISOR...	6	3.8	3.86	0.35	0.29	1	.V08-...
M8.5x0.75		0.75	V08TH0.75ISOR...			4.19	0.5	0.43	1.5	
M9x1.0		1.0	V08TH1.0ISOR...			4.29	0.5	0.58	2	
M10x1.25		1.25	V08TH1.25ISOR...			4.44	0.8	0.72	2.5	
M10x1.5		1.5	V08TH1.5ISOR...			4.58	0.9	0.87	3	
M12x1.75	V11	1.75	V08TH1.75ISOR...	8	4.2	4.80	0.9	1.01	3	.V11-...
M14x2.0		2.0	V11TH2.0ISOR...			6.47	1.1	1.15	2.5	

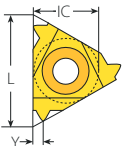
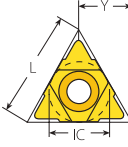
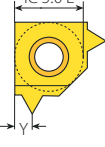
ISO Metric (con't)

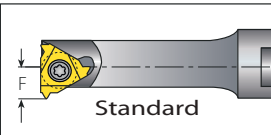
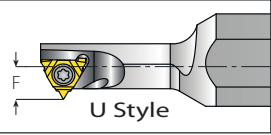
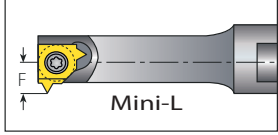
MINIPRO

Internal



Defined by: R262 (DIN 13)
Tolerance class: 6g/6H

Mini-3 Standard

Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	mm	RH	LH	h min	Y	F	mm	
4.0	6	0.25	4.0KIR0.25ISO...	4.0KIL0.25ISO...	0.15	0.25	3.3	5.95	.NVR5-4.0K (LH)
		0.5	4.0KIR0.5ISO...	4.0KIL0.5ISO...	0.29	0.5	3.4	6.05	
		0.75	4.0KIR0.75ISO...	4.0KIL0.75ISO...	0.43	0.5	3.5	6.15	
		1.0	4.0KIR1.0ISO...	4.0KIL1.0ISO...	0.58	0.7	3.6	6.25	
		1.25	4.0KIR1.25ISO...	4.0KIL1.25ISO...	0.72	0.6	3.7	6.35	
5.0	8	0.5	5.0KIR0.5ISO...	5.0KIL0.5ISO...	0.29	0.5	4.7	7.8	.NVRC7-5.0K (LH)
		0.75	5.0KIR0.75ISO...	5.0KIL0.75ISO...	0.43	0.5			
		1.0	5.0KIR1.0ISO...	5.0KIL1.0ISO...	0.58	0.6			
		1.25	5.0KIR1.25ISO...	5.0KIL1.25ISO...	0.72	0.7			
		1.5	5.0KIR1.5ISO...	5.0KIL1.5ISO...	0.87	0.7			
		1.75	5.0KIR1.75ISO...	5.0KIL1.75ISO...	1.01	0.8			
6.0	10	0.5	6.0KIR0.5ISO...	6.0KIL0.5ISO...	0.29	0.6	4.4	9.3	.NVRC1.-6.0K (LH)
		0.75	6.0KIR0.75ISO...	6.0KIL0.75ISO...	0.43	0.6	4.6	9.5	
		1.0	6.0KIR1.0ISO...	6.0KIL1.0ISO...	0.58	0.7	4.7	9.6	
		1.25	6.0KIR1.25ISO...	6.0KIL1.25ISO...	0.72	0.9	4.9	9.8	
		1.5	6.0KIR1.5ISO...	6.0KIL1.5ISO...	0.87	1.0	5.0	9.9	
		1.75	6.0KIR1.75ISO...	6.0KIL1.75ISO...	1.01	1.05	5.2	10.0	
		2.0	6.0KIR2.0ISO...	6.0KIL2.0ISO...	1.15	1.05	5.3	10.0	

Mini-3 U Style

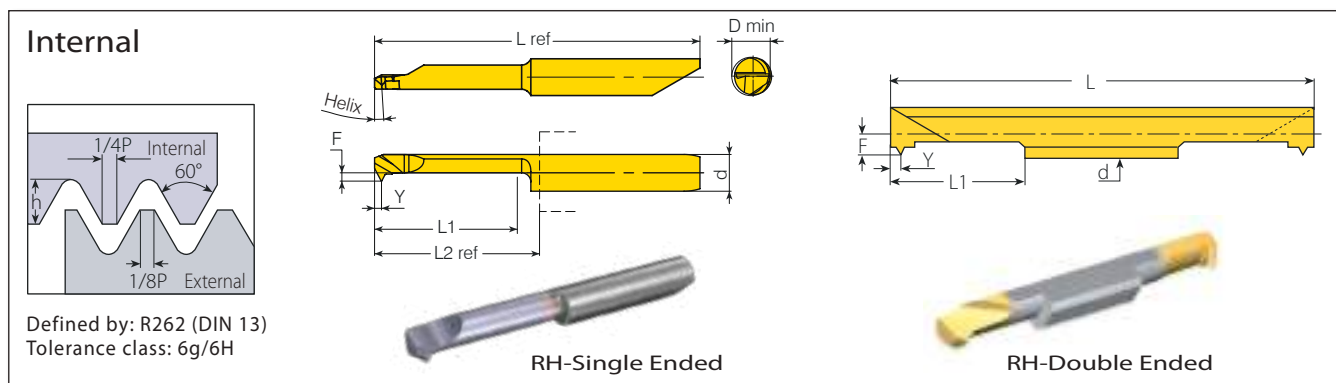
Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	mm	RH+LH		h min	Y	F	mm	
5.0U	8	2	5.0KUI2.0ISO...		1.23	4.0	5.7	9.0	.NVRC8-5.0KU (LH)

Mini-L

Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm		mm	RH	LH	h min	Y	F	mm	
5.0L		0.35	5LKIR0.35ISO...	5LKIL0.35ISO...	0.20	0.3	3.75	7.3	.NVRC10-5LK (LH)
		0.5	5LKIR0.5ISO...	5LKIL0.5ISO...	0.29	0.4	3.75	7.3	
		0.75	5LKIR0.75ISO...	5LKIL0.75ISO...	0.43	0.6	3.91	7.5	
		1.0	5LKIR1.0ISO...	5LKIL1.0ISO...	0.58	0.7	4.06	7.7	
		1.25	5LKIR1.25ISO...	5LKIL1.25ISO...	0.72	0.9	4.21	7.8	
		1.5	5LKIR1.5ISO...	5LKIL1.5ISO...	0.87	1.0	4.35	7.9	
		1.75	5LKIR1.75ISO...	5LKIL1.75ISO...	1.01	1.05	4.51	8.0	
		2.0	5LKIR2.0ISO...	5LKIL2.0ISO...	1.15	1.05	4.65	8.0	

ISO Metric (con't)

MINIPRO



Micro - Double Ended

Thread	Insert Dia. d mm	Pitch mm	Ordering Code RH	L1	L	F	Y	h min	Min. Bore Dia. mm	Toolholder
M4x0.3	3.0	0.3	3.0SIR0.3ISO...	16	50	1.31	0.20	0.17	3.2	SMC...-3.0
M4x0.4		0.4	3.0SIR0.4ISO...	16	50	1.31	0.35	0.22	3.2	
M4x0.5		0.5	3.0SIR0.5ISO...	16	50	1.31	0.40	0.29	3.2	
M4x0.6		0.6	3.0SIR0.6ISO...	16	50	1.34	0.60	0.35	3.2	
M4.5x0.7		0.7	3.0SIR0.7ISO...	16	50	1.43	0.60	0.40	3.3	
M4.5x0.75		0.75	3.0SIR0.75ISO...	16	50	1.45	0.60	0.43	3.3	
M5x0.8	4.0	0.8	3.0SIR0.8ISO...	16	50	1.46	0.60	0.46	3.3	SMC...-4.0
M5x0.4		0.4	4.0SIR0.4ISO...	16	50	1.65	0.35	0.22	4.0	
M5x0.5		0.5	4.0SIR0.5ISO...	16	50	1.65	0.40	0.29	4.0	
M5x0.6		0.6	4.0SIR0.6ISO...	16	50	1.68	0.60	0.35	4.0	
M5x0.7		0.7	4.0SIR0.7ISO...	16	50	1.77	0.60	0.40	4.1	
M5.5x0.75		0.75	4.0SIR0.75ISO...	16	50	1.81	0.60	0.43	4.2	
M5.5x0.8	6.0	0.8	4.0SIR0.8ISO...	16	50	1.80	0.60	0.46	4.2	SMC...-6.0
M6x1		1.0	4.0SIR1.0ISO...	16	50	1.96	0.90	0.58	4.3	
M6x0.5		0.5	6.0SIR0.5ISO...	16	50	1.90	0.60	0.29	5.4	
M6.5x0.75		0.75	6.0SIR0.75ISO...	16	50	2.06	0.60	0.43	5.6	
M7x1		1.0	6.0SIR1.0ISO...	16	50	2.21	0.70	0.58	5.7	
M8x1.25		1.25	6.0SIR1.25ISO...	16	50	2.36	0.90	0.72	5.9	
M10.5x1.5		1.5	6.0SIR1.5ISO...	16	50	2.50	1.00	0.87	6.0	

Left handed tool supplied by request (Example: 3.0SIRL0.3ISO...)

Micro - Single Ended

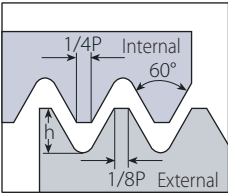
microscope

Thread	Insert Dia. d mm	Pitch mm	Ordering Code RH/LH	Helix °	L1	F	Y	h min	L2 ref*	L ref	D mm	Toolholder
M3-M5x0.5	4.0	0.5	M425TH0.50ISOL08R...	3	7.6	1.95	0.4	0.58	13.0	29.8	2.46	MH...-4.0
M4x0.7		0.7	M432TH0.70ISOL10R...	3.6	10.2	1.95	0.6	0.29			3.24	
M4x0.5		0.5	MS429TH0.50ISOL16R/L...			0.9	0.4	0.29			3.4	
M5x0.5		0.5	MS439TH0.50ISOL16R/L...			1.9	0.4	0.29			4.4	
M4x0.7		0.7	MS429TH0.70ISOL16R/L...			0.9	0.6	0.41	18.4	35.4	3.2	
M4.5-M6x0.75		0.75	M429TH0.75ISOL16R...			1.9	0.6	0.44			3.1	
M5x0.8	5.0	0.8	MS429TH0.80ISOL16R/L...			0.9	0.6	0.46			4.0	MH...-5.0
M6x1.0		1.0	MS439TH1.00ISOL16R/L...			1.9	0.7	0.58			4.8	
M5.5x0.5		0.5	M542TH0.50ISOL16R/L...	3.5	16	1.7	0.4	0.29			4.9	
M5.5x0.75		0.75	M542TH0.75ISOL16R/L...			1.7	0.6	0.43	18.35	41.2	4.6	
M7x1.0		1.0	M549TH1.00ISOL16R/L...			2.4	0.7	0.58			5.8	
M6x0.5		0.5	M649TH0.50ISOL16R/L...			1.9	0.4	0.29			5.4	
M6.5x0.75	6.0	0.75	M649TH0.75ISOL16R/L...			1.9	0.6	0.43			5.6	MH...-6.0
M7.5x1.0		1.0	M659TH1.00ISOL16R/L...			2.9	0.7	0.58	18.5	42.2	6.3	
M8x1.25		1.25	M659TH1.25ISOL16R/L...			2.9	0.9	0.72			6.5	
M10x1.5		1.5	M659TH1.50ISOL16R/L...	3		2.9	1.0	0.87			8.3	

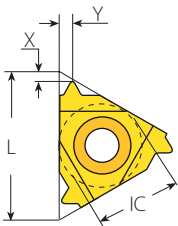
* L2 Ref: Repeatability within +/-0.02.

American UN - UNC, UNF, UNEF, UNS

External



Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



Standard

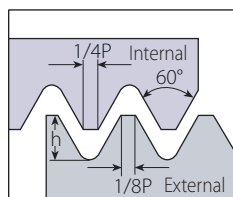
Standard

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	72	2ER72UN...	2EL72UN...	0.22	0.8	0.4	-	-	NL ..-2 (LH)
		64	2ER64UN...	2EL64UN...	0.24	0.8	0.4			
		56	2ER56UN...	2EL56UN...	0.28	0.7	0.4			
		48	2ER48UN...	2EL48UN...	0.32	0.6	0.6			
		44	2ER44UN...	2EL44UN...	0.35	0.6	0.6			
		40	2ER40UN...	2EL40UN...	0.39	0.6	0.6			
		36	2ER36UN...	2EL36UN...	0.43	0.6	0.6			
		32	2ER32UN...	2EL32UN...	0.49	0.6	0.6			
		28	2ER28UN...	2EL28UN...	0.56	0.6	0.7			
		27	2ER27UN...	2EL27UN...	0.58	0.7	0.8			
		24	2ER24UN...	2EL24UN...	0.65	0.7	0.8			
		20	2ER20UN...	2EL20UN...	0.78	0.8	0.9			
		18	2ER18UN...	2EL18UN...	0.87	0.8	1.0			
		16	2ER16UN...	2EL16UN...	0.97	0.9	1.1			
		14	2ER14UN...	2EL14UN...	1.11	0.9	1.1			
3/8"	16	80	3ER80UN...	3EL80UN...	0.18	0.8	0.3	YE3	YI3	AL..-3 (LH)
		72	3ER72UN...	3EL72UN...	0.22	0.8	0.4			
		64	3ER64UN...	3EL64UN...	0.24	0.8	0.4			
		56	3ER56UN...	3EL56UN...	0.28	0.7	0.4			
		48	3ER48UN...	3EL48UN...	0.32	0.6	0.6			
		44	3ER44UN...	3EL44UN...	0.35	0.6	0.6			
		40	3ER40UN...	3EL40UN...	0.39	0.6	0.6			
		36	3ER36UN...	3EL36UN...	0.43	0.6	0.6			
		32	3ER32UN...	3EL32UN...	0.49	0.6	0.6			
		28	3ER28UN...	3EL28UN...	0.56	0.6	0.7			
		27	3ER27UN...	3EL27UN...	0.58	0.7	0.8			
		26	3ER26UN...	3EL26UN...	0.59	0.7	0.8			
		24	3ER24UN...	3EL24UN...	0.65	0.7	0.8			
		20	3ER20UN...	3EL20UN...	0.78	0.8	0.9			
		18	3ER18UN...	3EL18UN...	0.87	0.8	1.0			
		16	3ER16UN...	3EL16UN...	0.97	0.9	1.1			
		14	3ER14UN...	3EL14UN...	1.11	1.0	1.2			
		13	3ER13UN...	3EL13UN...	1.20	1.0	1.3			
		12	3ER12UN...	3EL12UN...	1.30	1.1	1.4			
		11.5	3ER11.5UN...	3EL11.5UN...	1.35	1.1	1.5			
		11	3ER11UN...	3EL11UN...	1.42	1.1	1.5			
		10	3ER10UN...	3EL10UN...	1.56	1.1	1.5			
		9	3ER9UN...	3EL9UN...	1.73	1.2	1.7			
		8	3ER8UN...	3EL8UN...	1.95	1.2	1.6			

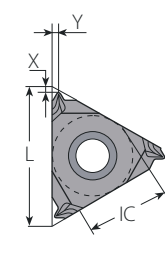


American UN - UNC, UNF, UNEF, UNS (con't)

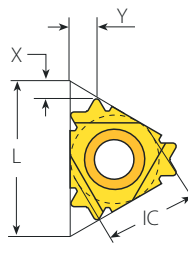
External



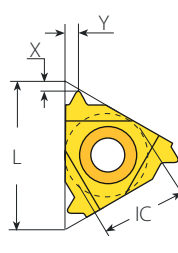
Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



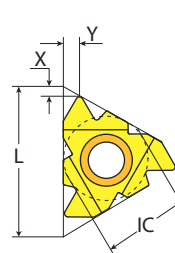
SCB
Sintered
Chipbreaker



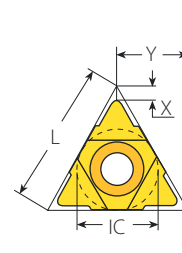
V6



Standard



F-Line



U Style

Standard



SCB



V6



F-Line

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
3/8"	16	36	3JER36UN...		0.43	1.2	0.5	YE3	-	AL...-3
		32	3JER32UN...		0.49	1.2	0.5			
		28	3JER28UN...		0.56	0.7	0.8			
		24	3JER24UN...		0.65	0.7	0.8			
		20	3JER20UN...		0.78	0.7	0.8			
		18	3JER18UN...		0.87	0.7	0.8			
		16	3JER16UN...		0.97	0.8	0.8			
		14	3JER14UN...		1.11	1.2	1.5			
		13	3JER13UN...		1.20	1.2	1.5			
		12	3JER12UN...		1.30	1.3	1.5			
		10	3JER10UN...		1.56	1.2	1.5			
		9	3JER9UN...		1.73	1.2	1.5			
3/8"	16	8	3JER8UN...		1.95	1.3	1.5	YE3-6C	-	AL...-3
		32	3ER32UN-6C...		0.49	2.0	1.9			
		28	3ER28UN-6C...		0.56	2.0	2.0			
		24	3ER24UN-6C...		0.65	1.9	2.0			
		20	3ER20UN-6C...		0.78	1.8	2.1			
		18	3ER18UN-6C...		0.87	1.9	2.3			
		16	3ER16UN-6C...		0.97	1.8	2.4			
		14	3ER14UN-6C...		1.11	1.8	2.7			
1/2"	22	13	3ER13UN-6C...		1.20	1.9	2.9	YE4	YI4	AL...-4 (LH)
		12	3ER12UN-6C...		1.30	1.9	2.3			
		7	4ER7UN...	4EL7UN...	2.22	1.6	2.3			
1/2"	23	6	4ER6UN...	4EL6UN...	2.60	1.6	2.3	YE4F		AL...-4F
		5	4ER5UN...	4EL5UN...	3.12	1.7	2.5			
		7	4FER7UN...		2.22	1.6	2.3			
5/8"	27	6	4FER6UN...		2.60	1.6	2.3	YE5	YI5	AL...-5 (LH)
		5	4FER5UN...		3.12	1.7	2.5			
		4.5	5ER4.5UN...	5EL4.5UN...	3.46	1.9	2.7			
		4	5ER4UN...	5EL4UN...	3.89	2.1	3.0			

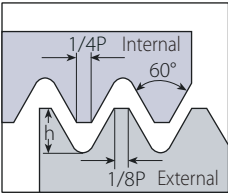
U Style



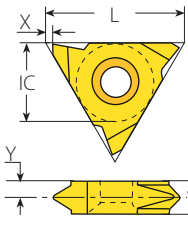
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH+LH		h min	X	Y	RH	LH	
1/2"U	22	4.5	4UE4.5UN...		3.46	2.0	11.0	YE4U	YI4U	AL...-4U (LH)
		4	4UE4UN...		3.89	2.0	11.0			
5/8"U	27	3	5UE3UN...		5.19	2.5	13.7	YE5U	YI5U	AL...-5U (LH)

American UN - UNC, UNF, UNEF, UNS (con't)

External



Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



V Style / Slim Throat

Slim Throat

Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T	
1/4"V	11	20	2VER20UN...	2VEL20UN...	0.78	0.69	2.3	3.2	NL...-2V (LH)
		18	2VER18UN...	2VEL18UN...	0.87	0.69	2.2	3.2	
		16	2VER16UN...	2VEL16UN...	0.97	0.69	2.2	3.2	
		14	2VER14UN...	2VEL14UN...	1.11	0.69	2.0	3.2	
		12	2VER12UN...	2VEL12UN...	1.30	0.69	1.8	3.2	
3/8"V	16	32	3VER32UN...	3VEL32UN...	0.48	1.1	3.0	3.6	NL...-3V (LH)
		28	3VER28UN...	3VEL28UN...	0.56	1.1	3.0	3.6	
		24	3VER24UN...	3VEL24UN...	0.65	1.1	2.9	3.6	
		20	3VER20UN...	3VEL20UN...	0.78	1.1	2.7	3.6	
		18	3VER18UN...	3VEL18UN...	0.87	1.1	2.6	3.6	
		16	3VER16UN...	3VEL16UN...	0.97	1.1	2.55	3.6	
		14	3VER14UN...	3VEL14UN...	1.11	1.1	2.4	3.6	
		12	3VER12UN...	3VEL12UN...	1.30	1.1	2.2	3.6	
		10	3VER10UN...	3VEL10UN...	1.56	1.1	2.1	3.6	
1/2"V	22	7	4VER7UN...	4VEL7UN...	2.22	1.1	2.5	4.8	NL...-4V (LH)



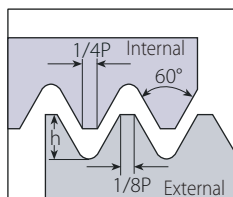
V Style

Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T	
5/8"V	27	4	5VER4UN...	5VEL4UN...	3.89	1.0	3.3	6	NL...-5V-6 (LH)
		3	5VER3UN...	5VEL3UN...	5.19	1.0	4.3	8	NL...-5V-8 (LH)

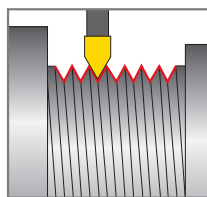


American UN - UNC, UNF, UNEF, UNS (con't)

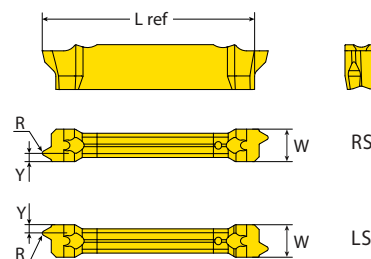
External



Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



RS/LS Varied range of threading standards for machining between shoulders and close to spindle.



VG-Cut

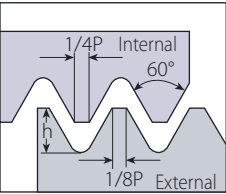


Pocket Size	Ordering Code	Dimensions mm					No. of Passes	Helix	Min. Thread Diameter	Toolholder
	RH	W ref	Pitch TPI	h min	Y	L ref		Deg		Monoblock
3	VGD3.0UN32RH-RS/LS...	3.00	32	0.49	0.66	21.9	5 - 8		5/32"-32 UNC	VGE...-3T...
	VGD3.0UN28RH-RS/LS...		28	0.56	0.71		5 - 9		3/16"-28 UNC	
	VGD3.0UN24RH-RS/LS...		24	0.65	0.77		5 - 9		7/32"-24 UNC	
	VGD3.0UN20RH-RS/LS...		20	0.78	0.86		6 - 10	2.5°	1/4"-20 UNC	
	VGD3.0UN18RH-RS/LS...		18	0.87	0.93		7 - 12		5/16"-18 UNC	
	VGD3.0UN16RH-RS/LS...		16	0.97	1.10		7 - 12		3/8"-16 UNC	
	VGD3.0UN14RH-RS/LS...		14	1.11	1.09		8 - 14		7/16"-14 UNC	
	VGD3.0UN12RH-RS/LS...		12	1.30	1.30		8 - 14		9/16"-14 UNC	

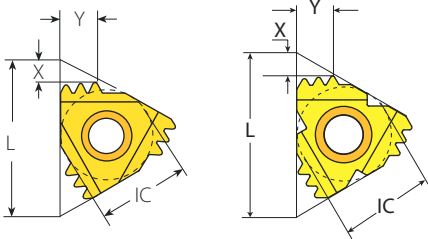
LH Helix threads available upon request.

American UN - UNC, UNF, UNEF, UNS (con't)

External






Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



M+ Style F-Line M+

M+ Style

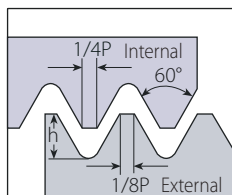


Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	
IC	L mm	TPI		RH	h min	X	Y	RH	Toolholder
	3/8"	16	20	3	3ER20UN3M+...	0.78	2.2	3.3	YE3M AL...-3
			18	2	3ER18UN2M+...	0.87	1.5	2.2	
			18	3	3ER18UN3M+...	0.87	2.3	3.6	
			16	2	3ER16UN2M+...	0.97	1.7	2.5	
			14	2	3ER14UN2M+...	1.11	1.9	2.8	
			12	2	3ER12UN2M+...	1.30	2.2	3.3	
	1/2"	22	16	3	4ER16UN3M+...	0.97	2.6	4.1	YE4M AL...-4
			14	2	4ER14UN2M+...	1.11	1.9	2.8	
			12	2	4ER12UN2M+...	1.30	2.2	3.3	
			12	3	4ER12UN3M+...	1.30	3.4	5.4	
			11	2	4ER11UN2M+...	1.42	2.3	3.6	
			10	2	4ER10UN2M+...	1.56	2.5	3.9	
	1/2"	23	16	3	4FER16UN3M+...	0.97	2.6	4.1	YE4M3F AL...-4MF
			12	3	4FER12UN3M+...	1.30	3.4	5.4	
			12	2	4FER12UN2M+...	1.30	2.2	3.3	
			10	2	4FER10UN2M+...	1.56	2.5	3.9	
	5/8"	27	8	2	5ER8UN2M+...	1.95	3.1	4.9	YE5M AL...-5M

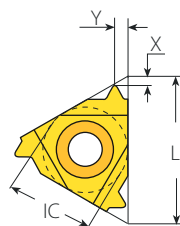
F-LINE

American UN - UNC, UNF, UNEF, UNS (con't)

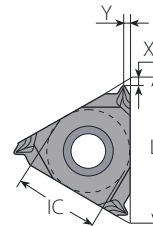
Internal



Defined by: ANSI B1.1:74
Tolerance class: 2A/2B





Standard



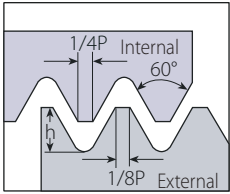
SCB
Sintered
Chipbreaker

Standard

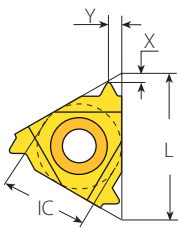
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
	1/4"	72	2IR72UN...	2IL72UN...	0.20	0.8	0.3	-	-	NVR..-2 (LH)
		64	2IR64UN...	2IL64UN...	0.23	0.8	0.4			
		56	2IR56UN...	2IL56UN...	0.26	0.7	0.4			
		48	2IR48UN...	2IL48UN...	0.31	0.6	0.6			
		44	2IR44UN...	2IL44UN...	0.33	0.6	0.6			
		40	2IR40UN...	2IL40UN...	0.37	0.6	0.6			
		36	2IR36UN...	2IL36UN...	0.41	0.6	0.6			
		32	2IR32UN...	2IL32UN...	0.46	0.6	0.6			
		28	2IR28UN...	2IL28UN...	0.52	0.6	0.7			
		27	2IR27UN...	2IL27UN...	0.54	0.7	0.8			
		24	2IR24UN...	2IL24UN...	0.61	0.7	0.8			
		20	2IR20UN...	2IL20UN...	0.73	0.8	0.9			
		18	2IR18UN...	2IL18UN...	0.81	0.8	1.0			
		16	2IR16UN...	2IL16UN...	0.92	0.9	1.1			
	1/4" SCB	36	2JIR36UN...		0.41	1.1	0.5	-	-	NVR..-2
		32	2JIR32UN...		0.46	1.2	0.5			
		28	2JIR28UN...		0.52	0.6	0.8			
		24	2JIR24UN...		0.61	0.7	0.8			
		20	2JIR20UN...		0.73	0.6	0.8			
		18	2JIR18UN...		0.81	0.6	0.8			
		16	2JIR16UN...		0.97	0.7	0.8			
	3/8"	72	3IR72UN...	3IL72UN...	0.20	0.8	0.3	YI3	YE3	AVR..-3 (LH)
		64	3IR64UN...	3IL64UN...	0.23	0.8	0.4			
		56	3IR56UN...	3IL56UN...	0.26	0.7	0.4			
		48	3IR48UN...	3IL48UN...	0.31	0.6	0.6			
		44	3IR44UN...	3IL44UN...	0.33	0.6	0.6			
		40	3IR40UN...	3IL40UN...	0.37	0.6	0.6			
		36	3IR36UN...	3IL36UN...	0.41	0.6	0.6			
		32	3IR32UN...	3IL32UN...	0.51	0.6	0.6			
		28	3IR28UN...	3IL28UN...	0.52	0.6	0.7			
		27	3IR27UN...	3IL27UN...	0.54	0.7	0.8			
		26	3IR26UN...	3IL26UN...	0.56	0.7	0.75			

American UN - UNC, UNF, UNEF, UNS (con't)

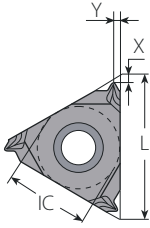
Internal



Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



Standard



SCB
Sintered
Chipbreaker

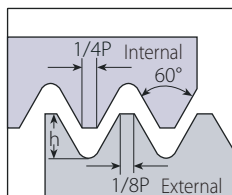
Standard



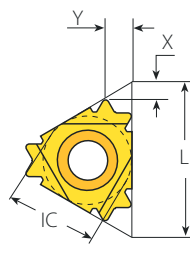
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
3/8"	16	24	3IR24UN...	3IL24UN...	0.61	0.7	0.8	YI3	YE3	AVR..-3 (LH)
		20	3IR20UN...	3IL20UN...	0.73	0.8	0.9			
		18	3IR18UN...	3IL18UN...	0.81	0.8	1.0			
		16	3IR16UN...	3IL16UN...	0.92	0.9	1.1			
		14	3IR14UN...	3IL14UN...	1.05	0.9	1.2			
		13	3IR13UN...	3IL13UN...	1.13	1.0	1.3			
		12	3IR12UN...	3IL12UN...	1.22	1.1	1.4			
		11.5	3IR11.5UN...	3IL11.5UN...	1.28	1.1	1.5			
		11	3IR11UN...	3IL11UN...	1.33	1.1	1.5			
		10	3IR10UN...	3IL10UN...	1.47	1.1	1.5			
		9	3IR9UN...	3IL9UN...	1.63	1.2	1.7			
3/8" SCB	16	8	3IR8UN...	3IL8UN...	1.83	1.1	1.5	YI3	-	AVR..-3
		28	3JIR28UN...		0.52	0.6	0.8			
		24	3JIR24UN...		0.61	0.7	0.8			
		20	3JIR20UN...		0.73	0.6	0.8			
		18	3JIR18UN...		0.81	0.6	0.8			
		16	3JIR16UN...		0.92	0.7	0.8			
		14	3JIR14UN...		1.05	1.1	1.5			
		13	3JIR13UN...		1.13	1.1	1.5			
		12	3JIR12UN...		1.22	1.1	1.5			
		10	3JIR10UN...		1.47	1.1	1.5			
		9	3JIR9UN...		1.63	1.0	1.5			

American UN - UNC, UNF, UNEF, UNS (con't)

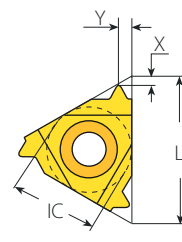
Internal



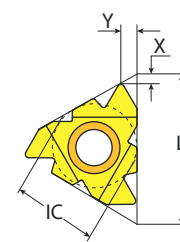
Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



V6



Standard
& D-Line



F-Line

Standard



F-Line

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
3/8" V6	16	32	3IR32UN-6C...		0.51	2.0	1.8	YI3-6C	-	AVR...-3 NVRC...-3 206/...
		28	3IR28UN-6C...		0.52	1.9	1.9			
		24	3IR24UN-6C...		0.61	1.9	1.9			
		20	3IR20UN-6C...		0.73	1.8	2.1			
		18	3IR18UN-6C...		0.81	1.7	2.1			
		16	3IR16UN-6C...		0.92	1.6	2.2			
		14	3IR14UN-6C...		1.05	1.7	2.5			
		13	3IR13UN-6C...		1.13	1.8	2.7			
1/2"	22	7	4IR7UN...	4IL7UN...	2.09	1.6	2.3	YI4	YE4	AVR...-4 (LH)
		6	4IR6UN...	4IL6UN...	2.44	1.6	2.3			
		5	4IR5UN...	4IL5UN...	2.93	1.6	2.3			
1/2"F	23	7	4FIR7UN...		2.09	1.6	2.3	YI4F		AVRC...-4F
		6	4FIR6UN...		2.44	1.6	2.3			
		5	4FIR5UN...		2.93	1.6	2.3			
5/8"	27	4.5	5IR4.5UN...	5IL4.5UN...	3.26	1.7	2.4	YI5	YE5	AVR...-5 (LH)
		4	5IR4UN...	5IL4UN...	3.67	1.8	2.7			

D-Line Deep Rake

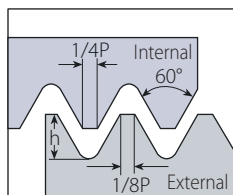
D-Line



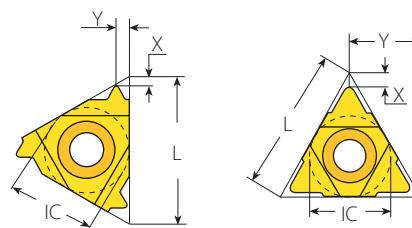
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	24	2DIR24UN...		0.61	0.7	0.8	-		NVR...-2
		20	2DIR20UN...		0.73	0.8	0.9			
		18	2DIR18UN...		0.81	0.8	1.0			
3/8"	16	20	3DIR20UN...		0.73	0.8	0.9	YI3		AVR...-3
		16	3DIR16UN...		0.92	0.9	1.1			
		14	3DIR14UN...		1.05	0.9	1.2			
		12	3DIR12UN...		1.22	1.1	1.4			
		8	3DIR8UN...		1.83	1.1	1.5			

American UNC (con't)

Internal



Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



Coarse Pitch

U Style Coarse Pitch

Coarse Pitch RH



Thread	Insert Size		Ordering Code	Dimensions mm			Toolholder RH	Min Bore Dia.
	IC	L mm	RH	h min	X	Y		mm
1/2"x13UN	6.0	10	6.0KIR13UN158/001...	1.13	0.8	0.9	BNVRC10S-6.0K	10.6
9/16"x12UN	1/4"	11	2IR12UN158/002...	1.22	0.9	1.0	NVRC10-2-156/001	12.0
5/8"x11UN	1/4"U		2UIR11UN158/003...	1.33	1.2	5.5	NVRC11-2U-156/002	13.4
3/4"x10UN	3/8"	16	3IR10UN...	1.47	1.1	1.5	NVRC13-3-156/016	16.3
7/8"x9UN			3IR9UN...	1.63	1.2	1.7	NVRC13-3-156/016	19.2
1"x8UN			3IR8UN...	1.83	1.1	1.5	NVRC16-3	22.0
1 1/8"x7UN	1/2"	22	4IR7UN...	2.09	1.6	2.3	NVRC20-4	24.6
1 1/4"x7UN			4IR7UN...	2.09	1.6	2.3	NVRC20-4	27.8
1 3/8"x6UN			4IR6UN...	2.44	1.6	2.3	NVRC20-4	30.3

Coarse Pitch LH

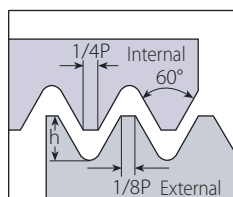


Thread	Insert Size		Ordering Code	Dimensions mm			Toolholder LH	Min Bore Dia.
	IC	L mm	LH	h min	X	Y		mm
1/2"x13UN	6.0	10	6.0KIL13UN158/016...	1.13	0.8	0.9	BNVRC10S-6.0KLH	10.6
9/16"x12UN	1/4"	11	2IL12UN158/017...	1.22	0.9	1.0	NVRC10-2LH-156/036	12.0
5/8"x11UN	1/4"U		2UIR11UN158/003...	1.33	1.2	5.5	NVRC11-2ULH-156/035	13.4
3/4"x10UN	3/8"	16	3IL10UN...	1.47	1.1	1.5	NVRC13-3LH-156/026	16.3
7/8"x9UN			3IL9UN...	1.63	1.2	1.7	NVRC13-3LH-156/026	19.2
1"x8UN			3IL8UN...	1.83	1.1	1.5	NVRC16-3LH	22.0
1 1/8"x7UN	1/2"	22	4IL7UN...	2.09	1.6	2.3	NVRC20-4LH	24.6
1 1/4"x7UN			4IL7UN...	2.09	1.6	2.3	NVRC20-4LH	27.8
1 3/8"x6UN			4IL6UN...	2.44	1.6	2.3	NVRC20-4LH	30.3

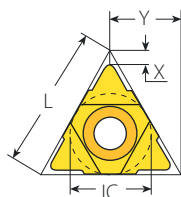
U Type RH inserts can be used for both LH and RH applications.

American UN - UNC, UNF, UNEF, UNS (con't)

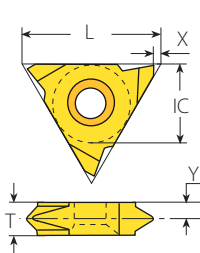
Internal



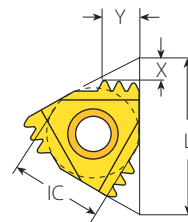
Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



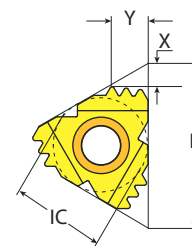
U Style



V Style



M+ Style



F-Line M+

U Style



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		
IC	L mm	TPI	RH+LH		h min	X	Y	RH	LH	Toolholder
1/2"U	22	4.5	4UI4.5UN...		3.26	2.4	11.0	YI4U	YE4U	AVR...-4U (LH)
		4	4UI4UN...		3.67	2.4	11.0			
5/8"U	27	3	5UI3UN...		4.89	2.7	13.7	YI5U	YE5U	AVR...-5U (LH)

V Style



Insert Size		Pitch	Ordering Code		Dimensions mm				
IC	L mm	TPI	RH	LH	h min	X	Y	T	Toolholder
5/8"V	27	4	5VIR4UN...	5VIL4UN...	3.67	1.0	3.3	6	NVR...-5V (LH)
		3	5VIR3UN...	5VIL3UN...	4.89	1.0	4.3	8	

M+ Style

Multiplus



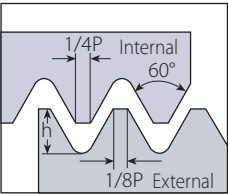
FLINE

Insert Size		Pitch	Teeth	Ordering Code		Dimensions mm			Anvil	
IC	L mm	TPI		RH		h min	X	Y	RH	Toolholder
3/8"	16	12	2	3IR12UN2M+...		1.22	2.2	3.3	YI3M	AVR...-3
		14	2	3IR14UN2M+...		1.05	1.9	2.8		
		16	2	3IR16UN2M+...		0.92	1.7	2.5		
1/2"	22	16	3	4IR16UN3M+...		0.92	2.6	4.1	YI4M	AVR...-4
		14	2	4IR14UN2M+...		1.05	1.9	2.8		
		12	2	4IR12UN2M+...		1.22	2.2	3.3		
		12	3	4IR12UN3M+...		1.22	3.4	5.4		
1/2"F	23	12	2	4FIR12UN2M+...		1.22	2.2	3.3	YI4M2F	AVRC...-4MF
5/8"	27	8	2	5IR8UN2M+...		1.83	3.1	4.9	YI5M	AVR...-5M

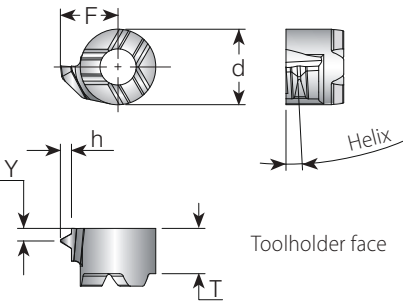
American UN - UNC, UNF, UNEF, UNS (con't)

Mini-V

Internal



Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



Mini-V

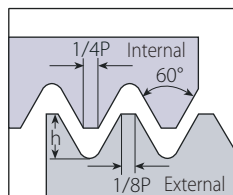


Min. Thread	Insert Style	Pitch	Ordering Code	Dimensions mm						Helix	Toolholder
		TPI	RH	d	T	F	Y	h min	Deg.		
3/8"-32UNEF	V08	32	V08TH32UNR...	6	3.8	4.21	0.5	0.46	1.5		.V08-...
3/8"-28UN		28	V08TH28UNR...			4.28	0.5	0.52	2		
3/8"-24UNF		24	V08TH24UNR...			4.32	0.65	0.61	2		
3/8"-20UN		20	V08TH20UNR...			4.45	0.8	0.73	2.5		
3/8"-18UNS		18	V08TH18UNR...			4.53	0.85	0.81	2.5		
3/8"-16UNC		16	V08TH16UNR...			4.33	0.95	0.92	2.5		
7/16"-14UNC	V11	14	V08TH14UNR...	8	4.2	4.78	1.1	1.05	3		.V11-...
9/16"-12UNC		12	V11TH12UNR...			6.44	1.24	1.22	2.5		

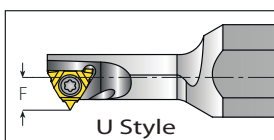
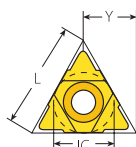
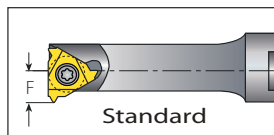
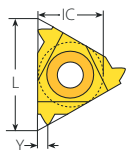
American UN - UNC, UNF, UNEF, UNS (con't)

MINIPRO

Internal



Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



Mini-3 Standard



Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	TPI	RH	LH	h min	Y	F	mm	
4.0	6	32	4.0KIR32UN...	4.0KIL32UN...	0.46	0.5	3.50	6.15	.NVRC5-4.0K (LH)
		28	4.0KIR28UN...	4.0KIL28UN...	0.52	0.6	3.50	6.15	
		24	4.0KIR24UN...	4.0KIL24UN...	0.61	0.6	3.60	6.25	
		20	4.0KIR20UN...	4.0KIL20UN...	0.73	0.6	3.70	6.35	
		18	4.0KIR18UN...	4.0KIL18UN...	0.81	0.7	3.70	6.35	
5.0	8	32	5.0KIR32UN...	5.0KIL32UN...	0.46	0.5			.NVRC7-5.0K (LH)
		28	5.0KIR28UN...	5.0KIL28UN...	0.52	0.6			
		24	5.0KIR24UN...	5.0KIL24UN...	0.61	0.6			
		20	5.0KIR20UN...	5.0KIL20UN...	0.73	0.7	4.7	7.8	
		18	5.0KIR18UN...	5.0KIL18UN...	0.81	0.7			
		16	5.0KIR16UN...	5.0KIL16UN...	0.92	0.7			
6.0	10	14	5.0KIR14UN...	5.0KIL14UN...	1.05	0.8			.NVRC1..-6.0K (LH)
		40	6.0KIR40UN...	6.0KIL40UN...	0.37	0.6	4.50	9.5	
		32	6.0KIR32UN...	6.0KIL32UN...	0.46	0.6	4.60	9.5	
		28	6.0KIR28UN...	6.0KIL28UN...	0.52	0.65	4.70	9.6	
		24	6.0KIR24UN...	6.0KIL24UN...	0.61	0.75	4.80	9.7	
		20	6.0KIR20UN...	6.0KIL20UN...	0.73	0.9	4.90	9.8	
		18	6.0KIR18UN...	6.0KIL18UN...	0.81	1.0	5.00	9.9	
		16	6.0KIR16UN...	6.0KIL16UN...	0.92	1.05	5.10	10.0	
		14	6.0KIR14UN...	6.0KIL14UN...	1.05	1.05	5.20	10.0	

Mini-3 U Style

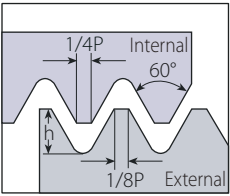


Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	TPI	RH+LH		h min	Y	F	mm	
5.0U	8	13	5.0KUI13UN...		1.20		5.6		.NVRC8-5.0KU (LH)
		12	5.0KUI12UN...		1.30	4.0	5.7	9.0	
		11	5.0KUI11UN...		1.42		5.7		

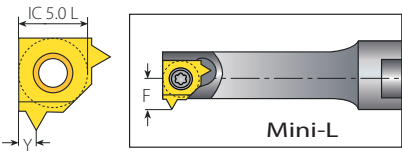
American UN - UNC, UNF, UNEF, UNS (con't)

MINIPRO


Internal



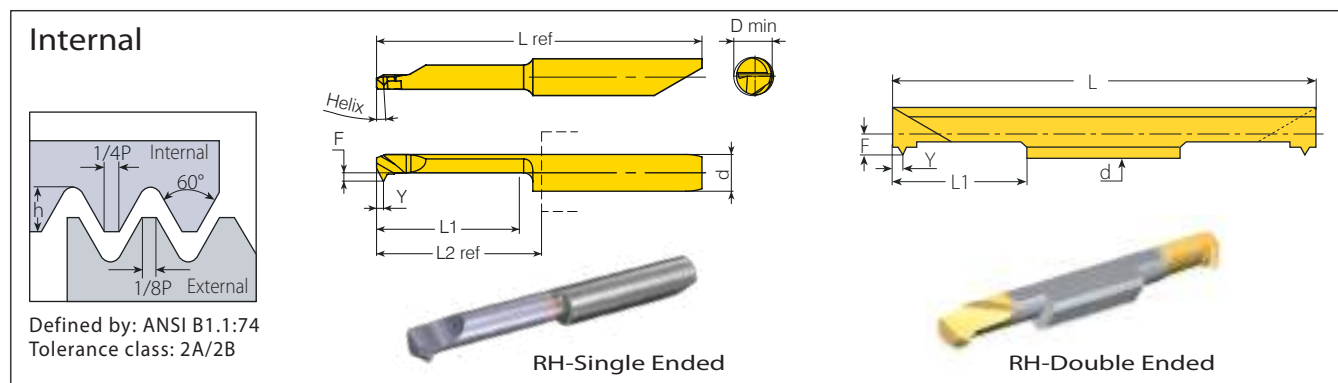
Defined by: ANSI B1.1:74
Tolerance class: 2A/2B



Mini-L

	Insert Size		Pitch		Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
	IC mm		TPI		RH	LH	h min	Y	F	mm	
	5.0L		40		5LKIR40UN...	5LKIL40UN...	0.37	0.6	3.80	7.6	.NVRC10-5LK (LH)
			32		5LKIR32UN...	5LKIL32UN...	0.46	0.6	3.92	7.6	
			28		5LKIR28UN...	5LKIL28UN...	0.52	0.65	3.99	7.6	
			24		5LKIR24UN...	5LKIL24UN...	0.61	0.75	4.09	7.6	
			20		5LKIR20UN...	5LKIL20UN...	0.73	0.9	4.21	7.7	
			18		5LKIR18UN...	5LKIL18UN...	0.81	1.0	4.30	7.8	
			16		5LKIR16UN...	5LKIL16UN...	0.92	1.05	4.41	7.8	
			14		5LKIR14UN...	5LKIL14UN...	1.05	1.05	4.54	7.9	

American UN - UNC, UNF, UNEF, UNS (con't)

MINIPRO


Micro - Double Ended

Thread	Insert Dia. d mm	Pitch mm	Ordering Code RH	Dimensions mm					Min. Bore Dia. mm	Toolholder
10-40UNS	3.0	40	3.0SIR40UN...	L1	L	F	Y	h min	3.2	SMC...-3.0
8-36UNF		36	3.0SIR36UN...	16	50	1.35	0.60	0.37	3.2	
8-32UNF		32	3.0SIR32UN...	16	50	1.46	0.60	0.41	3.3	
10-40UNS	4.0	40	4.0SIR40UN...	16	50	1.40	0.60	0.46	4.0	SMC...-4.0
10-36UNS		36	4.0SIR36UN...	16	50	1.65	0.60	0.37	4.1	
12-32UNEF		32	4.0SIR32UN...	16	50	1.70	0.60	0.41	4.1	
12-28UNF		28	4.0SIR28UN...	16	50	1.76	0.60	0.46	4.2	
1/4"-27UNS	6.0	27	4.0SIR27UN...	16	50	1.83	0.65	0.52	4.2	SMC...-6.0
12-24UNC		24	4.0SIR24UN...	16	50	1.85	0.75	0.54	4.3	
1/4"-20UNC		20	4.0SIR20UN...	16	50	1.93	0.75	0.61	4.3	
1/4"-32UNEF		32	6.0SIR32UN...	16	50	2.03	0.76	0.73	4.3	
5/16"-28UN		28	6.0SIR28UN...	16	50	2.01	0.60	0.46	5.5	
5/16"-27UNS		27	6.0SIR27UN...	16	50	2.08	0.65	0.52	5.6	
5/16"-24UNF		24	6.0SIR24UN...	16	50	2.10	0.75	0.54	5.6	
5/16"-20UN	6.0	20	6.0SIR20UN...	16	50	2.18	0.75	0.61	5.7	SMC...-6.0
5/16"-18UNC		18	6.0SIR18UN...	16	50	2.30	0.90	0.73	5.8	
3/8"-16UNC		16	6.0SIR16UN...	16	50	2.39	1.00	0.81	5.9	
				16	50	2.50	1.05	0.92	6.0	

Left handed tool supplied by request (Example: 6.0SIL16UN...).

Micro - Single Ended

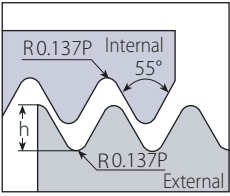
microscope

Thread	Insert Dia. d mm	Pitch TPI	Ordering Code RH/LH	Helix °	Dimensions mm							Min. Bore Dia. D mm	Toolholder
No.8-32UNC	4.0	32	MS429TH32UNL16R/L...	3.5	16	0.92	0.60	0.46	18.4	35.4		3.3	MH...-4.0
No.10-28UNS		28	MS429TH28UNL16R/L...			0.92	0.65	0.52				3.6	
1/4"-27UNS	5.0	27	M549TH27UNL16R/L...			2.4	0.75	0.54	18.35	41.2		5.3	MH...-5.0
1/4"-24UNS		24	M542TH24UNL16R/L...			1.7	0.75	0.61				5.1	
1/4"-20UNC		20	M542TH20UNL16R/L...			1.7	0.90	0.73				4.6	
5/16"-18UNC	6.0	18	M659TH18UNL16R/L...			2.9	1.05	0.81	18.5	42.2		6.3	MH...-6.0
3/8"-16UNC		16	M659TH16UNL16R/L...			2.9	1.00	0.92				7.7	

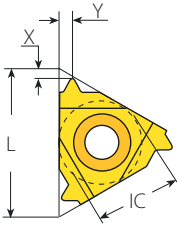
* L2 Ref: Repeatability within +/-0.02.

Whitworth - BSW, BSP, BSF, BSB

External



Defined by: B.S.84:1956, DIN 259, ISO228/1:1982
Tolerance class: Medium class A



Standard

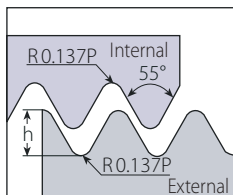
Standard

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	72	2ER72W...	2EL72W...	0.23	0.7	0.4	-	-	NL ..-2 (LH)
		60	2ER60W...	2EL60W...	0.27	0.7	0.4			
		56	2ER56W...	2EL56W...	0.29	0.7	0.4			
		48	2ER48W...	2EL48W...	0.34	0.6	0.6			
		40	2ER40W...	2EL40W...	0.41	0.6	0.6			
		36	2ER36W...	2EL36W...	0.45	0.6	0.6			
		32	2ER32W...	2EL32W...	0.51	0.6	0.6			
		28	2ER28W...	2EL28W...	0.58	0.6	0.7			
		26	2ER26W...	2EL26W...	0.63	0.7	0.8			
		24	2ER24W...	2EL24W...	0.68	0.7	0.8			
		22	2ER22W...	2EL22W...	0.74	0.8	0.9			
		20	2ER20W...	2EL20W...	0.81	0.8	0.9			
		19	2ER19W...	2EL19W...	0.86	0.8	1.0			
		18	2ER18W...	2EL18W...	0.90	0.8	1.0			
		16	2ER16W...	2EL16W...	1.02	0.9	1.1			
		14	2ER14W...	2EL14W...	1.16	1.0	1.2			
3/8"	16	72	3ER72W...	3EL72W...	0.23	0.7	0.4	YE3	YI3	AL..-3 (LH)
		60	3ER60W...	3EL60W...	0.27	0.7	0.4			
		56	3ER56W...	3EL56W...	0.29	0.7	0.4			
		48	3ER48W...	3EL48W...	0.34	0.6	0.6			
		40	3ER40W...	3EL40W...	0.41	0.6	0.6			
		36	3ER36W...	3EL36W...	0.45	0.6	0.6			
		32	3ER32W...	3EL32W...	0.51	0.6	0.6			
		30	3ER30W...	3EL30W...	0.55	0.6	0.7			
		28	3ER28W...	3EL28W...	0.58	0.6	0.7			
		26	3ER26W...	3EL26W...	0.63	0.7	0.8			
		24	3ER24W...	3EL24W...	0.68	0.7	0.8			
		22	3ER22W...	3EL22W...	0.74	0.8	0.9			
		20	3ER20W...	3EL20W...	0.81	0.8	0.9			
		19	3ER19W...	3EL19W...	0.86	0.8	1.0			
		18	3ER18W...	3EL18W...	0.90	0.8	1.0			
		16	3ER16W...	3EL16W...	1.02	0.9	1.1			

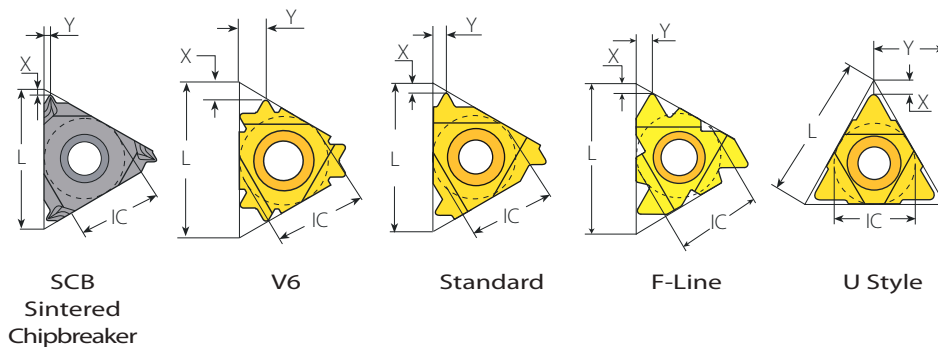


Whitworth - BSW, BSP, BSF, BSB (con't)

External



Defined by: B.S.84:1956,
DIN 259, ISO228/1:1982
Tolerance class: Medium class A



Standard



SCB



V6



F-Line

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
3/8" SCB	16	36	3JER36W...		0.45	1.2	0.5	YE3	-	AL...-3
		32	3JER32W...		0.51	1.2	0.5			
		28	3JER28W...		0.58	0.7	0.8			
		24	3JER24W...		0.68	0.7	0.8			
		20	3JER20W...		0.81	0.7	0.8			
		19	3JER19W...		0.86	0.7	0.8			
		18	3JER18W...		0.90	0.8	0.8			
		16	3JER16W...		1.02	0.8	0.8			
		14	3JER14W...		1.16	1.3	1.5			
		12	3JER12W...		1.36	1.3	1.5			
		11	3JER11W...		1.48	1.3	1.5			
		10	3JER10W...		1.63	1.3	1.5			
3/8" V6	16	8	3JER8W...		2.03	1.3	1.5	YE3-6C	-	AL...-3
		19	3ER19W-6C...		0.86	1.8	2.2			
		16	3ER16W-6C...		1.02	1.6	2.4			
		14	3ER14W-6C...		1.16	1.8	2.7			
1/2"	22	12	3ER12W-6C...		1.36	1.9	3.0	YE4	YI4	AL...-4 (LH)
		7	4ER7W...	4EL7W...	2.41	1.6	2.3			
		6	4ER6W...	4EL6W...	2.71	1.6	2.3			
		5	4ER5W...	4EL5W...	3.25	1.7	2.4			
1/2" F	23	7	4FER7W...		2.41	1.6	2.6	YE4F		AL...-4F
		6	4FER6W...		2.71	1.6	2.3			
		5	4FER5W...		3.25	1.7	2.4			
		4.5	5ER4.5W...	5EL4.5W...	3.61	1.8	2.6			
5/8"	27	4	5ER4W...	5EL4W...	4.07	2.0	2.9	YE5	YI5	AL...-5 (LH)
		4	5ER4W...	5EL4W...	4.07	2.0	2.9			

U Style



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH+LH		h min	X	Y	RH	LH	
1/2" U	22	4.5	4UEI4.5W...		3.61	2.3	11.0	YE4U	YI4U	AL...-4U (LH)
		4	4UEI4W...		4.07	1.8	11.0			
		3.5	4UEI3.5W...		4.65	2.1	11.0			
		3.25	4UEI3.25W...		5.00	2.0	11.0			
5/8" U	27	3.5	5UEI3.5W...		4.65	2.1	13.7	YE5U	YI5U	AL...-5U (LH)
		3.25	5UEI3.25W...		5.00	2.0	13.7			
		3	5UEI3W...		5.42	2.3	13.7			
		2.75	5UEI2.75W...		5.91	2.4	13.7			

Whitworth - BSW, BSP, BSF, BSB (con't)

External



Defined by: B.S.84:1956, DIN 259, ISO228/1:1982
Tolerance class: Medium class A

V Style / Slim Throat


M+ Style

F-Line M+




Slim Throat


Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T	
	11	19	2VER19W...	2VEL19W...	0.86	0.69	2.3	3.2	NL...-2V (LH)
		14	2VER14W...	2VEL14W...	1.16	0.69	2.0	3.2	
		11	2VER11W...	2VEL11W...	1.48	0.69	1.7	3.2	
	16	19	3VER19W...	3VEL19W...	0.86	1.1	2.7	3.6	NL...-3V (LH)
		18	3VER18W...	3VEL18W...	0.90	1.1	2.6	3.6	
		16	3VER16W...	3VEL16W...	1.02	1.1	2.6	3.6	
		14	3VER14W...	3VEL14W...	1.16	1.1	2.4	3.6	
		12	3VER12W...	3VEL12W...	1.36	1.1	2.2	3.6	
		11	3VER11W...	3VEL11W...	1.48	1.1	2.1	3.6	

V Style

Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T	
	27	4	5VER4W...	5VEL4W...	4.07	1.0	3.3	6	NL...-5V-6 (LH)
		3	5VER3W...	5VEL3W...	5.42	1.0	4.3	8	NL...-5V-8 (LH)
		2.5	5VER2.5W...	5VEL2.5W...	6.51	1.0	5.2	10	NL...-5V-10 (LH)

M+ Style

Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil		
IC	L mm	TPI		RH	h min	X	Y	RH	Toolholder	
	3/8"	16	28	2	3ER28W2M+...	0.58	1.2	1.6	YE3M	AL...-3
			19	2	3ER19W2M+...	0.86	1.6	2.3		
			19	3	3ER19W3M+...	0.86	2.2	3.4		
			14	2	3ER14W2M+...	1.16	2.0	3.0		
	1/2"	22	14	3	4ER14W3M+...	1.16	2.9	4.6	YE4M	AL...-4
			11	2	4ER11W2M+...	1.48	2.3	3.5		
	1/2"F	23	11	2	4FER11W2M+...	1.48	2.3	3.5	YE4M2F	AL...-4MF

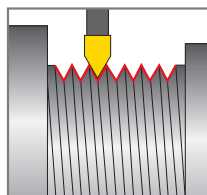
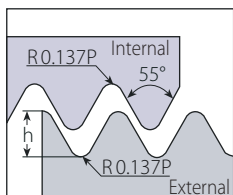


Multiplus

FLINE

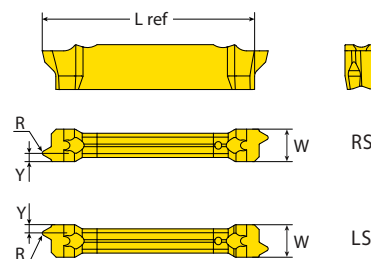
Whitworth - BSW, BSP, BSF, BSB (con't)

External



Defined by: B.S.84:1956, DIN 259, ISO228/1:1982
Tolerance class: Medium class A

RS/LS Varied range of threading standards for machining between shoulders and close to spindle.



VG-Cut

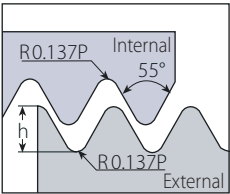


Pocket Size	Ordering Code	Dimensions mm					No. of Passes	Helix	Min. Thread Diameter	Toolholder
	RH	W ref	Pitch TPI	h min	Y	L ref		Deg		Monoblock
3	VGD3.0W19RH-RS/LS...	3.00	19	0.86	0.95	21.9	7 - 12		1/2"-19BSW	VGE...-3T...
	VGD3.0W14RH-RS/LS...		14	1.16	1.15		8 - 14	2.5°	1/2"-14BSW	
	VGD3.0W11RH/LH...		11	1.48	1.68		8 - 14		5/8"-11BSW	

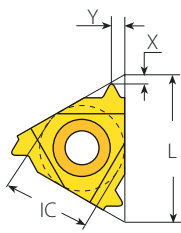
LH Helix threads available upon request.

Whitworth - BSW, BSP, BSF, BSB (con't)

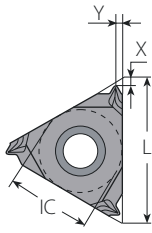
Internal



Defined by: B.S.84:1956, DIN 259, ISO228/1:1982
Tolerance class: Medium class A




Standard



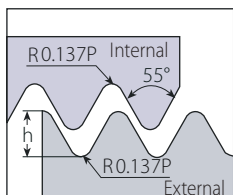
SCB
Sintered
Chipbreaker

Standard

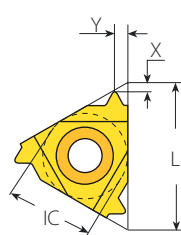
	Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
	IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
	1/4"	11	72	2IR72W...	2IL72W...	0.23	0.7	0.4	-	-	NVR..-2 (LH)
			60	2IR60W...	2IL60W...	0.27	0.7	0.4			
			56	2IR56W...	2IL56W...	0.29	0.7	0.4			
			48	2IR48W...	2IL48W...	0.34	0.6	0.6			
			40	2IR40W...	2IL40W...	0.41	0.6	0.6			
			36	2IR36W...	2IL36W...	0.45	0.6	0.6			
			32	2IR32W...	2IL32W...	0.51	0.6	0.6			
			28	2IR28W...	2IL28W...	0.58	0.6	0.7			
			26	2IR26W...	2IL26W...	0.63	0.7	0.8			
			24	2IR24W...	2IL24W...	0.68	0.7	0.8			
			22	2IR22W...	2IL22W...	0.74	0.8	0.9			
			20	2IR20W...	2IL20W...	0.81	0.8	0.9			
			19	2IR19W...	2IL19W...	0.86	0.8	1.0			
			18	2IR18W...	2IL18W...	0.90	0.8	1.0			
			16	2IR16W...	2IL16W...	1.02	0.9	1.1			
			14	2IR14W...	2IL14W...	1.16	0.9	1.1			
			12	2IR12W...	2IL12W...	1.32	0.9	1.2			
 SCB	1/4" SCB	11	36	2JIR36W...		0.45	1.2	0.5	-	-	NVR..-2
			32	2JIR32W...		0.51	1.2	0.5			
			28	2JIR28W...		0.58	0.7	0.8			
			24	2JIR24W...		0.68	0.7	0.8			
			20	2JIR20W...		0.81	0.7	0.8			
			19	2JIR19W...		0.86	0.6	0.8			
			18	2JIR18W...		0.90	0.8	0.8			
			16	2JIR16W...		1.02	0.8	0.8			
			14	2JIR14W...		1.16	0.7	0.9			
	3/8"	16	72	3IR72W...	3IL72W...	0.23	0.7	0.4	YI3	YE3	AVR..-3 (LH)
			60	3IR60W...	3IL60W...	0.27	0.7	0.4			
			56	3IR56W...	3IL56W...	0.29	0.7	0.4			
			48	3IR48W...	3IL48W...	0.34	0.6	0.6			
			40	3IR40W...	3IL40W...	0.41	0.6	0.6			
			36	3IR36W...	3IL36W...	0.45	0.6	0.6			
			32	3IR32W...	3IL32W...	0.51	0.6	0.6			
			30	3IR30W...	3IL30W...	0.55	0.6	0.7			

Whitworth - BSW, BSP, BSF, BSB (con't)

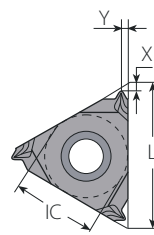
Internal



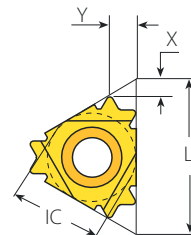
Defined by: B.S.84:1956, DIN 259, ISO228/1:1982
Tolerance class: Medium class A



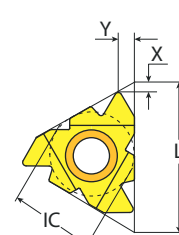
Standard



SCB
Sintered
Chipbreaker



V6



F-Line

Standard

	Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
	IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
	3/8"	16	28	3IR28W...	3IL28W...	0.58	0.6	0.7	Y13	YE3	AVR...-3 (LH)
			26	3IR26W...	3IL26W...	0.63	0.7	0.8			
			24	3IR24W...	3IL24W...	0.68	0.7	0.8			
			22	3IR22W...	3IL22W...	0.74	0.8	0.9			
			20	3IR20W...	3IL20W...	0.81	0.8	0.9			
			19	3IR19W...	3IL19W...	0.86	0.8	1.0			
			18	3IR18W...	3IL18W...	0.90	0.8	1.0			
			16	3IR16W...	3IL16W...	1.02	0.9	1.1			
			14	3IR14W...	3IL14W...	1.16	1.0	1.2			
			12	3IR12W...	3IL12W...	1.36	1.1	1.4			
			11	3IR11W...	3IL11W...	1.48	1.1	1.5			
			10	3IR10W...	3IL10W...	1.63	1.1	1.5			
			9	3IR9W...	3IL9W...	1.81	1.2	1.7			
 SCB	3/8" SCB	16	28	3JIR28W...		0.58	0.7	0.8	Y13	-	AVR...-3
			24	3JIR24W...		0.68	0.7	0.8			
			20	3JIR20W...		0.81	0.7	0.8			
			19	3JIR19W...		0.86	0.6	0.5			
			18	3JIR18W...		0.90	0.8	0.8			
			16	3JIR16W...		1.02	0.8	0.8			
			14	3JIR14W...		1.16	1.3	1.5			
			12	3JIR12W...		1.36	1.3	1.5			
			11	3JIR11W...		1.48	1.3	1.5			
			10	3JIR10W...		1.63	1.3	1.5			
			8	3JIR8W...		2.03	1.3	1.5			
 V6	3/8" V6	16	19	3IR19W-6C...		0.86	1.7	2.2	Y13-6C	-	AVR...-3 NVRC...-3 206/...
			16	3IR16W-6C...		1.02	1.6	2.6			
			14	3IR14W-6C...		1.16	1.8	2.7			
			12	3IR12W-6C...		1.36	1.7	2.6			
	1/2"	22	7	4IR7W...	4IL7W...	2.41	1.6	2.3	Y14	YE4	AVR...-4 (LH)
			6	4IR6W...	4IL6W...	2.71	1.6	2.3			
			5	4IR5W...	4IL5W...	3.25	1.7	2.4			
	1/2"F	23	7	4FIR7W...		2.41	1.6	2.3	Y14F		AVRC...-4F
			6	4FIR6W...		2.71	1.6	2.3			
			5	4FIR5W...		3.25	1.7	2.4			
 F LINE	5/8"	27	4.5	5IR4.5W...	5IL4.5W...	3.61	1.8	2.6	Y15	YE5	AVR...-5 (LH)
			4	5IR4W...	5IL4W...	4.07	2.0	2.9			

Whitworth - BSW, BSP, BSF, BSB (con't)

Internal

Defined by: B.S.84:1956,
DIN 259, ISO228/1:1982
Tolerance class: Medium class A

D-Line

U Style

V Style

M+ Style

F-Line M+

D-Line Deep Rake

D-Line

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil	Toolholder
IC	L mm	TPI	RH		h min	X	Y	RH	
1/4"	11	19	2DIR19W...		0.86	0.8	1.0	-	NVR...-2
		19	3DIR19W...		0.86	0.8	1.0	YI3	AVR...-3
3/8"	16	14	3DIR14W...		1.16	1.0	1.2		
		11	3DIR11W...		1.48	1.1	1.5		

U Style

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH+LH		h min	X	Y	RH	LH	
1/2"U	22	4.5	4UEI4.5W...		3.61	2.3	11.0	YI4U	YE4U	AVR...-4U (LH)
		4	4UEI4W...		4.07	1.8	11.0			
		3.5	4UEI3.5W...		4.65	2.1	11.0			
		3.25	4UEI3.25W...		5.00	2.0	11.0			
5/8"U	27	3.5	5UEI3.5W...		4.65	2.1	13.7	YI5U	YE5U	AVR...-5U (LH)
		3.25	5UEI3.25W...		5.00	2.0	13.7			
		3	5UEI3W...		5.42	2.3	13.7			
		2.75	5UEI2.75W...		5.91	2.4	13.7			

V Style

Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T	
5/8"V	27	4	5VIR4W...	5VIL4W...	4.07	1.0	3.3	6	NVR...-5V (LH)
		3	5VIR3W...	5VIL3W...	5.42	1.0	4.3	8	
		2.5	5VIR2.5W...	5VIL2.5W...	6.51	1.0	5.2	10	

M+ Style

Multiplus

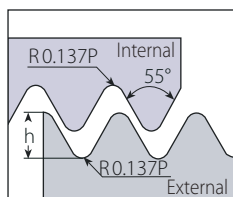
Insert Size		Pitch	Teeth	Ordering Code		Dimensions mm			Anvil	Toolholder
IC	L mm	TPI		RH		h min	X	Y	RH	
3/8"	16	14	2	3IR14W2M+...		1.16	2.0	3.0	YI3M	AVR...-3
1/2"	22	11	2	4IR11W2M+...		1.48	2.3	3.5	YI4M	AVR...-4
1/2"F	23	11	2	4FIR11W2M+...		1.48	2.3	3.5	YI4M2F	AVRC... -4MF



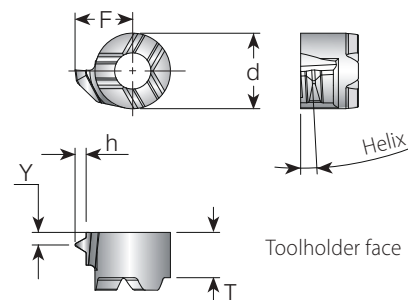
Whitworth - BSW, BSP, BSF, BSB (con't)

Mini-V

Internal



Defined by: B.S.84:1956, DIN 259, ISO228/1:1982
Tolerance class: Medium Class A



Mini-V

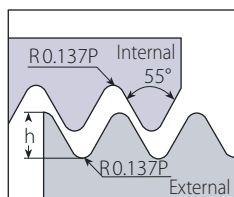


Min. Thread	Insert Style	Pitch	Ordering Code	Dimensions mm						Helix	Toolholder
		TPI	RH	d	T	F	Y	h min	Deg.		
1/2"x19W	V11	19	V11TH19WR...	8	4.2	6.18	0.8	0.86	2	.V11-...	

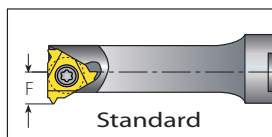
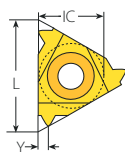
Whitworth - BSW, BSP, BSF, BSB (con't)

MINIPRO

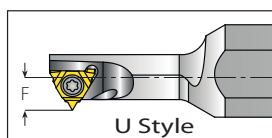
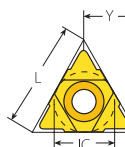
Internal



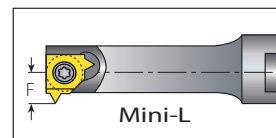
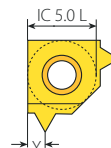
Defined by: B.S.84:1956, DIN 259,
ISO228/1:1982
Tolerance class: Medium class A



Standard




U Style



Mini-L

Mini-3 Standard

Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	TPI	RH	LH	h min	Y	F	mm	
	4.0	6	26	4.0KIR26W...	4.0KIL26W...	0.63	0.6	3.6	.NVR5-4.0K (LH)
		22	4.0KIR22W...	4.0KIL22W...	0.74	0.6	3.7	6.35	
		20	4.0KIR20W...	4.0KIL20W...	0.81	0.7	3.7	6.35	
		19	4.0KIR19W...	4.0KIL19W...	0.86	0.7	3.7	6.35	
		18	4.0KIR18W...	4.0KIL18W...	0.90	0.7	3.7	6.35	
5.0	8	28	5.0KIR28W...	5.0KIL28W...	0.58	0.6	4.7	7.8	.NVR7-5.0K (LH)
		24	5.0KIR24W...	5.0KIL24W...	0.68	0.6			
		20	5.0KIR20W...	5.0KIL20W...	0.81	0.7			
		19	5.0KIR19W...	5.0KIL19W...	0.86	0.7			
		18	5.0KIR18W...	5.0KIL18W...	0.90	0.7			
		16	5.0KIR16W...	5.0KIL16W...	1.02	0.7			
6.0	10	28	6.0KIR28W...	6.0KIL28W...	0.58	0.7	4.7	9.6	.NVR1...-6.0K (LH)
		19	6.0KIR19W...	6.0KIL19W...	0.86	1.0	5.0	9.9	
		14	6.0KIR14W...	6.0KIL14W...	1.16	1.1	5.3	10.0	

Mini-3 U Style



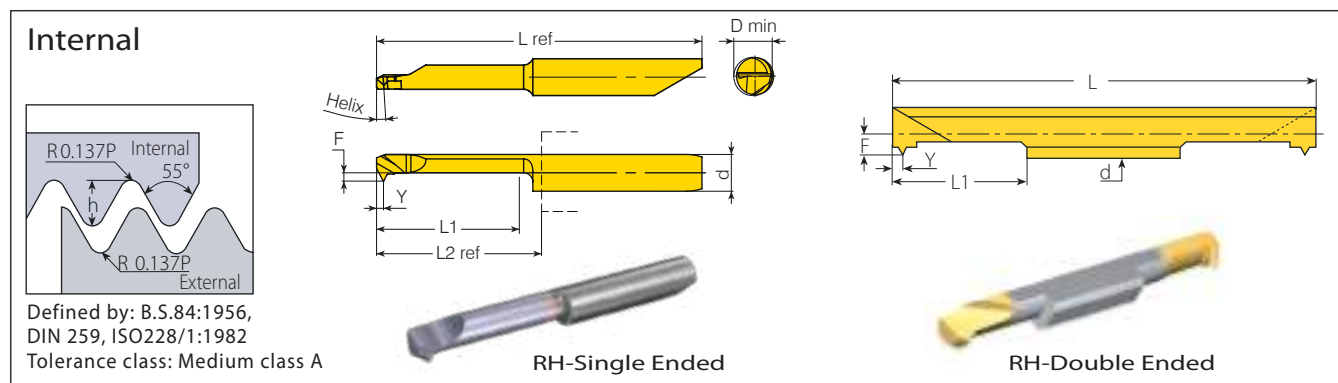
Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	TPI	RH+LH		h min	Y	F	mm	
5.0U	8	14	5.0KUI14W...		1.16	4.0	5.6	9.0	.NVR8-5.0KU (LH)
		12	5.0KUI12W...		1.36		5.7		
		11	5.0KUI11W...		1.48		5.7		

Mini-L



Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm		TPI	RH	LH	h min	Y	F	mm	
5.0L		28	5LKIR28W...	5LKIL28W...	0.58	0.7	4.05	7.6	.NVR10...-5LK (LH)
		19	5LKIR19W...	5LKIL19W...	0.86	1.0	4.35	7.9	
		14	5LKIR14W...	5LKIL14W...	1.16	1.1	4.68	8.0	

Whitworth - BSW, BSP, BSF, BSB (con't)

MINIPRO


Micro - Double Ended

Thread	Insert Dia. d mm	Pitch TPI	Ordering Code RH	Dimensions mm					Min. Bore Dia. mm	Toolholder
1/16"-28BSP	4.0	28	4.0SIR28W...	L1	L	F	Y	h min	4.2	SMC...-4.0
1/4"-26BSF		26	4.0SIR26W...	16	50	1.86	0.65	0.58	4.2	
1/4"-24BSW		24	4.0SIR24W...	16	50	1.93	0.75	0.63	4.3	
1/16"-28BSP	6.0	28	6.0SIR28W...	16	50	1.96	0.75	0.68	4.3	SMC...-6.0
5/16"-28BSW		26	6.0SIR26W...	16	50	2.50	0.65	0.58	6.0	
5/16"-24BSW		24	6.0SIR24W...	16	50	2.50	0.75	0.63	6.0	
5/16"-22BSW		22	6.0SIR22W...	16	50	2.50	0.75	0.68	6.0	
3/8"-20BSF		20	6.0SIR20W...	16	50	2.50	0.90	0.74	6.0	
1/4"-19BSP		19	6.0SIR19W...	16	50	2.50	0.90	0.81	6.0	
				16	50	2.50	0.95	0.86	6.0	

Left handed tool supplied by request (Example: 6.0SIL19W...).

Micro - Single Ended

microscope

Thread	Insert Dia. d mm	Pitch TPI	Ordering Code RH/LH	Helix °	L1	Dimensions mm					Min. Bore Dia. D mm	Toolholder
1/16"-28BSP	6.0	28	M659TH28WL16R/L...	3.5	16	2.9	0.65	0.58	18.5	42.2	6.5	MH...-6.0
1/4"-19BSP		19	M659TH19WL16R/L...								11.4	

* L2 Ref: Repeatability within +/-0.02.

BSPT

External

Defined by: B.S. 21:1985
Tolerance class: Standard BSPT




Standard

SCB
Sintered
Chipbreaker

V6

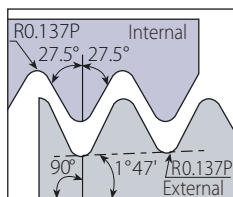
Slim Throat

Standard

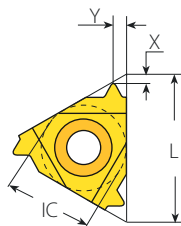
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder	
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH		
	1/4"	11	28	2ER28BSPT...	2EL28BSPT...	0.58	0.6	0.6	-	-	NL...-2 (LH)
			19	2ER19BSPT...	2EL19BSPT...	0.86	0.8	0.9			
			14	2ER14BSPT...	2EL14BSPT...	1.16	0.9	1.0			
	3/8"	16	28	3ER28BSPT...	3EL28BSPT...	0.58	0.6	0.6	YE3	YI3	AL...-3 (LH)
			19	3ER19BSPT...	3EL19BSPT...	0.86	0.8	0.9			
			14	3ER14BSPT...	3EL14BSPT...	1.16	1.0	1.2			
			11	3ER11BSPT...	3EL11BSPT...	1.48	1.1	1.5			
	3/8" SCB	16	28	3JER28BSPT...		0.58	0.7	0.8	YE3	-	AL...-3
			19	3JER19BSPT...		0.86	0.7	0.8			
			14	3JER14BSPT...		1.16	1.3	1.5			
			11	3JER11BSPT...		1.48	1.3	1.5			
	3/8" V6	16	19	3ER19BSPT-6C...		0.86	1.7	2.2	YE3-6C	-	AL...-3
			14	3ER14BSPT-6C...		1.16	1.9	2.8			

Slim Throat

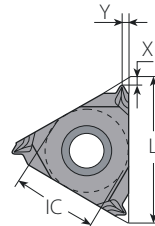
	Insert Size		Pitch	Ordering Code		Dimensions mm				
	IC	L mm	TPI	RH	LH	h min	X	Y	T	Toolholder
	3/8"V	16	28	3VER28BSPT...	3VEL28BSPT...	0.58	1.1	3.0	3.6	NL...-3V (LH)
			19	3VER19BSPT...	3VEL19BSPT...	0.86	1.1	2.7	3.6	
			14	3VER14BSPT...	3VEL14BSPT...	1.16	1.1	2.4	3.6	
11			3VER11BSPT...	3VEL11BSPT...	1.48	1.1	2.1	3.6		

BSPT (con't)**Internal**

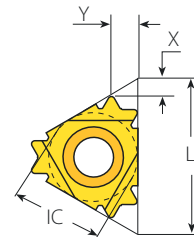
Defined by: B.S. 21:1985
Tolerance class: Standard BSPT



**Standard
& D-Line**



**SCB
Sintered
Chipbreaker**



V6

Standard

SCB



V6

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	28	2IR28BSPT...	2IL28BSPT...	0.58	0.6	0.6	-	-	NVR..-2 (LH)
		19	2IR19BSPT...	2IL19BSPT...	0.86	0.8	0.9			
		14	2IR14BSPT...	2IL14BSPT...	1.16	0.9	1.0			
1/4" SCB	11	28	2JIR28BSPT...		0.58	0.7	0.8	-	-	NVR..-2
		19	2JIR19BSPT...		0.86	0.7	0.8			
3/8"	16	28	3IR28BSPT...	3IL28BSPT...	0.58	0.6	0.6	YI3	YE3	AVR..-3 (LH)
		19	3IR19BSPT...	3IL19BSPT...	0.86	0.8	0.9			
		14	3IR14BSPT...	3IL14BSPT...	1.16	1.0	1.2			
		11	3IR11BSPT...	3IL11BSPT...	1.48	1.1	1.5			
3/8" SCB	16	28	3JIR28BSPT...		0.58	0.7	0.8	YI3	-	AVR..-3
		19	3JIR19BSPT...		0.86	0.7	0.8			
		14	3JIR14BSPT...		1.16	1.3	1.5			
		11	3JIR11BSPT...		1.48	1.3	1.5			
3/8" V6	16	19	3IR19BSPT-6C...		0.86	1.8	2.3	YI3-6C	-	AVR..-3 NVR..-3 206/...
		14	3IR14BSPT-6C...		1.16	1.9	2.7			

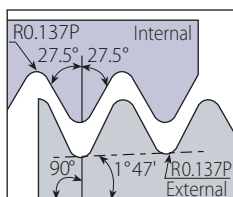
D-Line Deep Rake**D-Line**

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	19	2DIR19BSPT...		0.86	0.8	0.9	-		NVR..-2
		14	2DIR14BSPT...		1.16	0.9	1.0			
3/8"	16	19	3DIR19BSPT...		0.86	0.8	0.9	YI3		AVR..-3
		14	3DIR14BSPT...		1.16	1.0	1.2			
		11	3DIR11BSPT...		1.48	1.1	1.5			

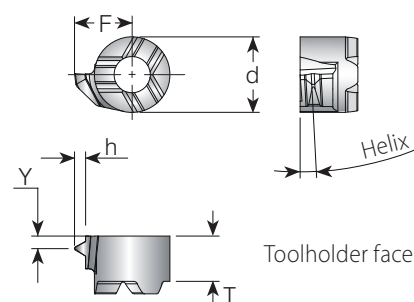
BSPT (con't)

Mini-V

Internal



Defined by: B.S.21:1985
Tolerance class: Standard BSPT



Mini-V

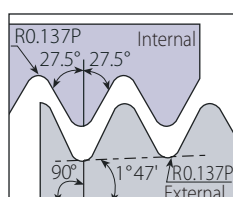


Min. Thread	Insert Style	Pitch	Ordering Code	Dimensions mm					Helix	Toolholder
		TPI	RH	d	T	F	Y	h min	Deg.	
1/4"-19BSPT	V11	19	V11TH19BSPTR...	8	4.2	6.13	0.9	0.86	2.5	.V11-...

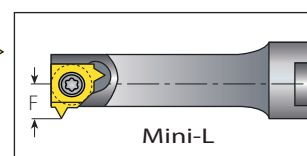
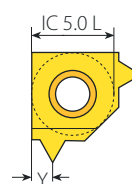
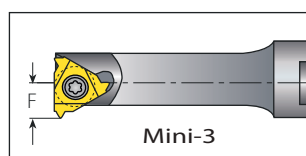
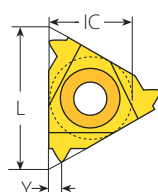
BSPT

MINIPRO

Internal



Defined by: B.S. 21:1985
Tolerance class: Standard BSPT



Mini-3 Standard

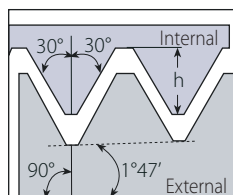
Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	TPI	RH	LH	h min	Y	F	mm	
4.0	6	28	4.0KIR28BSPT...	4.0KIL28BSPT...	0.58	0.6	3.6	6.25	.NVR.5-4.0K (LH)
5.0	8	28	5.0KIR28BSPT...	5.0KIL28BSPT...	0.58	0.6	4.7	7.8	.NVR.7-5.0K (LH)
		19	5.0KIR19BSPT...	5.0KIL19BSPT...	0.86	0.7			
6.0	10	28	6.0KIR28BSPT...	6.0KIL28BSPT...	0.58	0.6	4.7	9.6	.NVR.1-6.0K (LH)
		19	6.0KIR19BSPT...	6.0KIL19BSPT...	0.86	0.9	5.0	9.9	
		14	6.0KIR14BSPT...	6.0KIL14BSPT...	1.16	1.2	5.3	10.0	

Mini-L

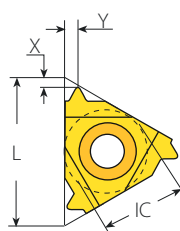
Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm		TPI	RH	LH	h min	Y	F	mm	
5.0L		28	5LKIR28BSPT...	5LKIL28BSPT...	0.58	0.6	4.05	7.6	.NVR.10.-5LK (LH)
		19	5LKIR19BSPT...	5LKIL19BSPT...	0.86	0.9	4.35	7.9	
		14	5LKIR14BSPT...	5LKIL14BSPT...	1.16	1.2	4.68	8.0	

NPT

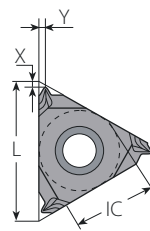
External



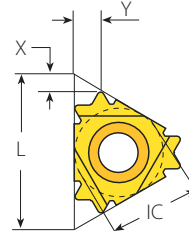
Defined by: USAS B2.1:1968
Tolerance class: Standard NPT



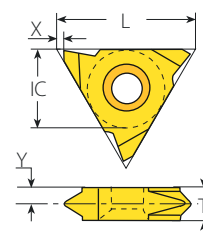
Standard



SCB
Sintered
Chipbreaker



V6



Slim Throat

Standard



SCB



V6

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	27	2ER27NPT...	2EL27NPT...	0.66	0.7	0.8	-	-	NL..-2 (LH)
		18	2ER18NPT...	2EL18NPT...	1.01	0.8	1.0			
		14	2ER14NPT...	2EL14NPT...	1.33	0.8	1.0			
3/8"	16	27	3ER27NPT...	3EL27NPT...	0.66	0.7	0.8	YE3	YI3	AL..-3 (LH)
		18	3ER18NPT...	3EL18NPT...	1.01	0.8	1.0			
		14	3ER14NPT...	3EL14NPT...	1.33	0.9	1.2			
		11.5	3ER11.5NPT...	3EL11.5NPT...	1.64	1.1	1.5			
3/8" SCB	16	8	3ER8NPT...	3EL8NPT...	2.42	1.3	1.8	YE3	-	AL..-3
		27	3JER27NPT...		0.66	0.6	0.8			
		18	3JER18NPT...		1.01	0.6	0.8			
		14	3JER14NPT...		1.33	1.1	1.5			
3/8" V6	16	11.5	3JER11.5NPT...		1.64	1.1	1.5	YE3-6C	-	AL..-3
		8	3JER8NPT...		2.42	1.0	1.5			
		14	3ER14NPT-6C...		1.33	1.9	3.0			

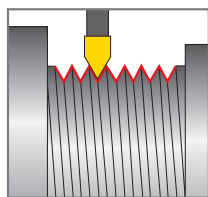
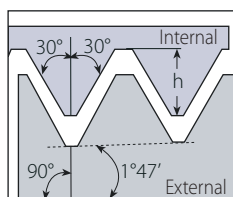
Slim Throat



Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T	
1/4"V	11	27	2VER27NPT...	2VEL27NPT...	0.66	0.7	2.0	3.2	NL..-2V (LH)
		18	2VER18NPT...	2VEL18NPT...	1.01	0.7	1.8	3.2	
		14	2VER14NPT...	2VEL14NPT...	1.33	0.7	1.8	3.2	
		11.5	2VER11.5NPT...	2VEL11.5NPT...	1.64	0.7	2.1	3.2	
3/8"V	16	27	3VER27NPT...	3VEL27NPT...	0.66	1.1	2.9	3.6	NL..-3V (LH)
		18	3VER18NPT...	3VEL18NPT...	1.01	1.1	2.6	3.6	
		11.5	3VER11.5NPT...	3VEL11.5 NPT...	1.64	1.1	2.1	3.6	

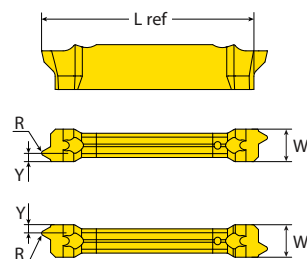
NPT (con't)

External



Defined by: USAS B2.1:1968
Tolerance class: Standard NPT

RS/LS Varied range of threading standards for machining between shoulders and close to spindle.



VG-Cut

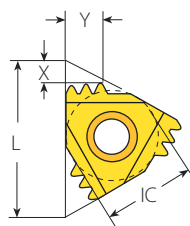
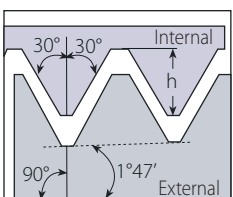


Pocket Size	Ordering Code	Dimensions mm					No. of Passes	Helix	Min. Thread Diameter	Toolholder
	RH	W ref	Pitch TPI	h min	Y	L ref		Deg		Monoblock
3	VGD3.0NPT18RH-RS/LS...		18	1.01	1.20		7 - 12		1/4"-18NPT	
3	VGD3.0NPT14RH-RS/LS...	3.00	14	1.33	1.40	21.9	8 - 14	1.5°	1/2"-14NPT	VGE...-3T...
3	VGD3.0NPT11.5RH-RS/LS...		11.5	1.64	1.60		9 - 15		1"-11.5NPT	

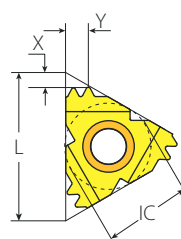
LH Helix threads available upon request.

NPT (con't)

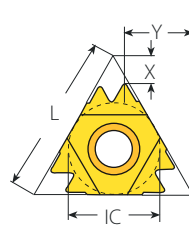
External



M+ Style



F-Line M+



Z+ Style

Defined by: USAS B2.1:1968
Tolerance class: Standard NPT

M+ Style

Multiplus



FLINE

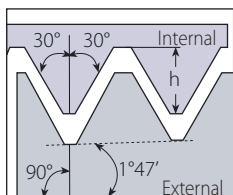
Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	
IC	L mm	TPI		RH	h min	X	Y	RH	Toolholder
3/8"	16	14	2	3ER14NPT2M+...	1.33	2.0	3.0	YE3M	AL...-3
1/2"	22	11.5	2	4ER11.5NPT2M+...	1.64	2.2	3.4	YE4M	AL...-4
1/2"F	23	11.5	2	4FER11.5NPT2M+...	1.64	2.2	3.4	YE4M2F	AL...-4MF
5/8"	27	11.5	3	5ER11.5NPT3M+...	1.64	3.5	5.6	YE5M	AL...-5M
		8	2	5ER8NPT2M+...	2.42	3.1	4.9		

Z+ Style

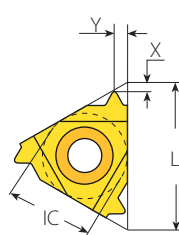
Multiplus



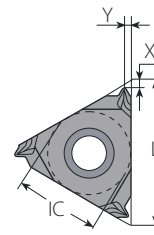
Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	
IC	L mm	TPI		RH	h min	X	Y	RH	Toolholder
1/2"	22	11.5	2	4ER11.5NPT2Z+...	1.64	2.7	10.0	YE4Z	AL...-4Z
		8	2	4ER8NPT2Z+...	2.42	3.4	9.6		

NPT (con't)**Internal**

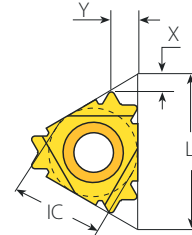
Defined by: USAS B2.1:1968
Tolerance class: Standard NPT



**Standard
& D-Line**



**SCB
Sintered
Chipbreaker**



V6

Standard

SCB



V6

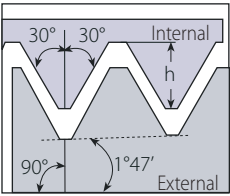
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	27	2IR27NPT...	2IL27NPT...	0.66	0.7	0.8	-	-	NVR..-2 (LH)
		18	2IR18NPT...	2IL18NPT...	1.01	0.8	1.0			
		14	2IR14NPT...	2IL14NPT...	1.33	0.8	1.0			
1/4" SCB	11	27	2JIR27NPT...		0.66	0.6	0.8	-	-	NVR..-2
		18	2JIR18NPT...		1.01	0.6	0.8			
3/8"	16	27	3IR27NPT...	3IL27NPT...	0.66	0.7	0.8	YI3	YE3	AVR..-3 (LH)
		18	3IR18NPT...	3IL18NPT...	1.01	0.8	1.0			
		14	3IR14NPT...	3IL14NPT...	1.33	0.9	1.2			
		11.5	3IR11.5NPT...	3IL11.5NPT...	1.64	1.1	1.5			
		8	3IR8NPT...	3IL8NPT...	2.42	1.3	1.8			
3/8" SCB	16	27	3JIR27NPT...		0.66	0.6	0.8	YI3	-	AVR..-3
		18	3JIR18NPT...		1.01	0.6	0.8			
		14	3JIR14NPT...		1.33	1.1	1.5			
		11.5	3JIR11.5NPT...		1.64	1.1	1.5			
		8	3JIR8NPT...		2.42	1.0	1.5			
3/8" V6	16	14	3IR14NPT-6C...		1.33	1.9	2.8	YI3-6C	-	AVR..-3 NVRC..-3 206/...

D-Line Deep Rake**D-Line**

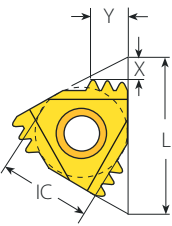
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	18	2DIR18NPT...		1.01	0.7	0.8	-		NVR..-2
		14	2DIR14NPT...		1.33	0.8	1.0			
3/8"	16	18	3DIR18NPT...		1.01	0.8	1.0	YI3		AVR..-3
		14	3DIR14NPT...		1.33	0.9	1.2			
		11.5	3DIR11.5NPT...		1.64	1.1	1.5			

NPT (con't)

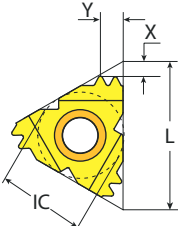
Internal



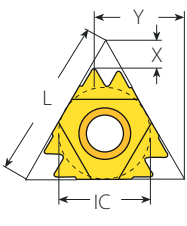
Defined by: USAS B2.1:1968
Tolerance class: Standard NPT



M+ Style



F-Line M+



Z+ Style

M+ Style



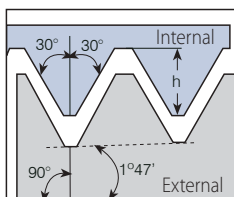
F-Line

Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	
IC	L mm	TPI		RH	h min	X	Y	RH	Toolholder
3/8"	16	14	2	3IR14NPT2M+...	1.33	2.0	3.0	YI3M	AVR..-3
1/2"	22	11.5	2	4IR11.5NPT2M+...	1.64	2.2	3.4	YI4M	AVR..-4
1/2"F	23	11.5	2	4FIR11.5NPT2M+...	1.64	2.2	3.4	YI4M2F	AVRC...-4MF
5/8"	27	11.5	3	5IR11.5NPT3M+...	1.64	3.5	5.6	YI5M	AVR..-5M
		8	2	5IR8NPT2M+...	2.42	3.1	4.9		

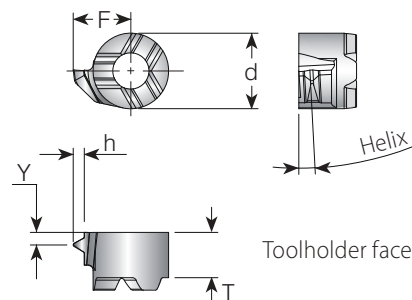
Z+ Style



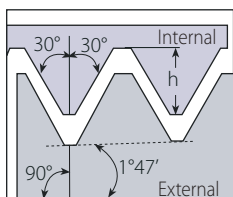
Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	
IC	L mm	TPI		RH	h min	X	Y	RH	Toolholder
1/2"	22	11.5	2	4IR11.5NPT2Z+...	1.64	2.7	10.0	YI4Z	AVR..-4Z
		8	2	4IR8NPT2Z+...	2.42	3.4	9.6		

NPT (con't)**Mini-V****Internal**

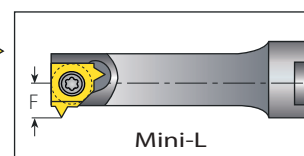
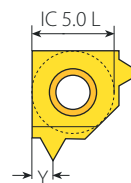
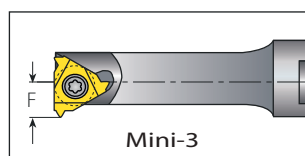
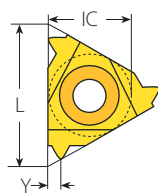
Defined by: USAS B2.1:1968
Tolerance class: Standard NPT

**Mini-V**

Min. Thread	Insert Style	Pitch	Ordering Code	Dimensions mm					Helix	Toolholder
		TPI	RH	d	T	F	Y	h min	Deg.	
1/8"-27NPT	V08	27	V08TH27NPTR...	6	3.8	4.35	0.6	0.64	2	.V08-...
1/4"-18NPT		18	V08TH18NPTR...			4.8	0.9	1.0	2	

NPT**MINIPRO****Internal**

Defined by: USAS B2.1:1968
Tolerance class: Standard NPT

**Mini-3 Standard**

Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	TPI	RH	LH	h min	Y	F	mm	
4.0	6.0	27	4.0KIR27NPT...	4.0KIL27NPT...	0.66	0.6	3.7	6.35	.NVR.5-4.0K (LH)
5.0	8	27	5.0KIR27NPT...	5.0KIL27NPT...	0.66	0.6	4.7	7.8	.NVRC7-5.0K (LH)
		18	5.0KIR18NPT...	5.0KIL18NPT...	1.01	0.8			
6.0	10	27	6.0KIR27NPT...	6.0KIL27NPT...	0.66	0.8	5.3	10.0	.NVRC1.-6.0K (LH)
		18	6.0KIR18NPT...	6.0KIL18NPT...	1.01	1.0	5.3		
		14	6.0KIR14NPT...	6.0KIL14NPT...	1.33	1.1	5.3		

Mini-L

Insert Size	Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	TPI	RH	LH	h min	Y	F	mm	
5.0L	27	5LKIR27NPT...	5LKIL27NPT...	0.66	0.8	4.65	8.0	.NVRC10-5LK (LH)
	18	5LKIR18NPT...	5LKIL18NPT...	1.01	1.0	4.65		
	14	5LKIR14NPT...	5LKIL14NPT...	1.33	1.1	4.65		

NPT (con't)

MINIPRO

Internal

Defined by: USAS B2.1:1968
Tolerance class: Standard NPT

RH-Single Ended

RH-Double Ended

Micro - Double Ended

Insert Dia.		Pitch	Ordering Code		Dimensions mm					Min. Bore Dia.	Toolholder
Thread	d mm	TPI	RH		L1	L	F	Y	h min	mm	
1/16"-27NPT	6.0	27	6.0SIR27NPT...		16	50	2.50	1.00	0.66	5.9	SMC...-6.0
1/4"-18NPT		18	6.0SIR18NPT...		16	50	2.50	0.80	1.01	6.0	

Left handed tool supplied by request (Example: 6.0SIL18NPT...).

Micro - Single Ended

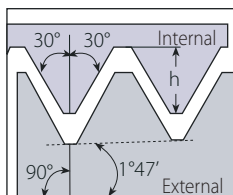
microscope

Insert Dia.		Pitch	Ordering Code		Dimensions mm							Min. Bore Dia.
Thread	d mm	TPI	RH/LH	Helix°	L1	F	Y	h min	L2 ref*	L ref	D mm	Toolholder
1/16"-27NPT	6.0	27	M659TH27NPTL16R/L...	3.5	16	2.9	0.75	0.66	18.5	42.2	6.1	MH...-6.0
1/4"-18NPT		18	M659TH18NPTL16R/L...				1.0	1.01			10.7	
1/2"-14NPT		14	M659TH14NPTL16R/L...				1.05	1.33			17.0	

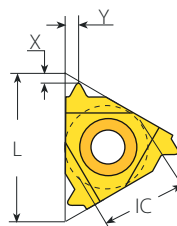
* L2 Ref: Repeatability within +/-0.02.

ANPT

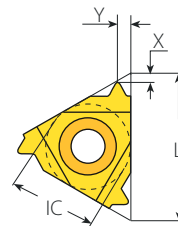
External / Internal



Defined by: MIL-P-7105B
Tolerance class: Standard ANPT



External
Standard



Internal
Standard

Standard - External



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
3/8"	16	18	3ER18ANPT...	3EL18ANPT...	1.08	0.8	1.0	YE3	YI3	AL...-3 (LH)
		14	3ER14ANPT...	3EL14ANPT...	1.39	0.8	1.0			

Standard - Internal



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	18	2IR18ANPT...	2IL18ANPT...	1.08	0.80	1.0	-	-	NVR...-2 (LH)
3/8"	16	14	3IR14ANPT...	3IL14ANPT...	1.39	0.80	1.0	YI3	YE3	AVR...-3 (LH)

NPTF

External




Defined by: ANSI B1.20.3-1976
Tolerance class: Standard NPTF

Standard


SCB
Sintered
Chipbreaker

M+ Style

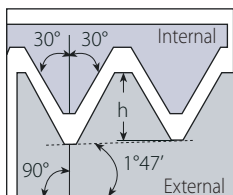
Standard

	Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
	IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
	1/4"	11	27	2ER27NPTF...	2EL27NPTF...	0.64	0.7	0.8	-	-	NL..-2 (LH)
			18	2ER18NPTF...	2EL18NPTF...	1.00	0.8	1.0			
			14	2ER14NPTF...	2EL14NPTF...	1.35	0.8	1.0			
	3/8"	16	27	3ER27NPTF...	3EL27NPTF...	0.64	0.7	0.8	YE3	YI3	AL..-3 (LH)
			18	3ER18NPTF...	3EL18NPTF...	1.00	0.8	1.0			
			14	3ER14NPTF...	3EL14NPTF...	1.35	0.9	1.2			
			11.5	3ER11.5NPTF...	3EL11.5NPTF...	1.63	1.1	1.5			
			8	3ER8NPTF...	3EL8NPTF...	2.38	1.3	1.8			
 SCB	3/8" SCB	16	27	3JER27NPTF...		0.64	0.7	0.8	YE3	-	AL..-3
			18	3JER18NPTF...		1.00	0.6	0.8			
			14	3JER14NPTF...		1.35	1.1	1.5			
			11.5	3JER11.5NPTF...		1.63	1.1	1.5			
			8	3JER8NPTF...		2.38	1.1	1.5			

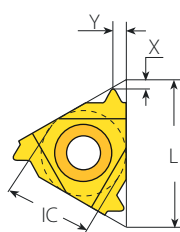
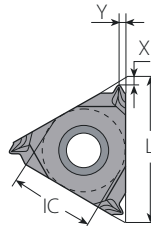
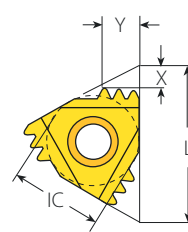
M+ Style

Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil		Toolholder
IC	L mm	TPI		RH	h min	X	Y	RH		
	3/8"	16	14	2	3ER14NPTF2M+...	1.35	2.0	3.0	YE3M	AL...-3



NPTF (con't)**Internal**

Defined by: ANSI B1.20.3-1976
Tolerance class: Standard NPTF

**Standard****SCB
Sintered
Chipbreaker****M+ Style****Standard****SCB**

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	27	2IR27NPTF...	2IL27NPTF...	0.64	0.7	0.8	-	-	NVR..-2 (LH)
		18	2IR18NPTF...	2IL18NPTF...	1.00	0.8	1.0			
		14	2IR14NPTF...	2IL14NPTF...	1.35	0.8	1.0			
1/4" SCB	11	27	2JIR27NPTF...		0.64	0.7	0.8	-	-	NVR..-2
		18	2JIR18NPTF...		1.00	0.6	0.8			
3/8"	16	27	3IR27NPTF...	3IL27NPTF...	0.64	0.7	0.8	YI3	YE3	AVR..-3 (LH)
		18	3IR18NPTF...	3IL18NPTF...	1.00	0.8	1.0			
		14	3IR14NPTF...	3IL14NPTF...	1.35	0.9	1.2			
		11.5	3IR11.5NPTF...	3IL11.5NPTF...	1.63	1.1	1.5			
		8	3IR8NPTF...	3IL8NPTF...	2.38	1.3	1.8			
3/8" SCB	16	27	3JIR27NPTF...		0.64	0.7	0.8	YI3	-	AVR..-3
		18	3JIR18NPTF...		1.00	0.6	0.8			
		14	3JIR14NPTF...		1.35	1.1	1.5			
		11.5	3JIR11.5NPTF...		1.63	1.1	1.5			
		8	3JIR8NPTF...		2.38	1.1	1.5			

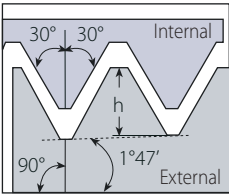
M+ Style**Multiplus**

Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	
IC	L mm	TPI		RH	h min	X	Y	RH	Toolholder
3/8"	16	14	2	3IR14NPTF2M+...	1.35	2.0	3.0	YI3M	AVR..-3

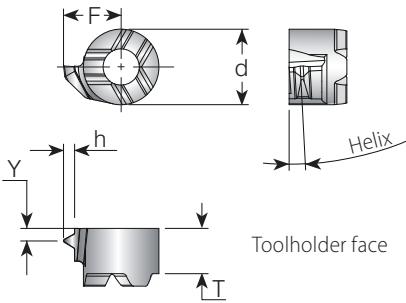
NPTF (con't)

Mini-V

Internal



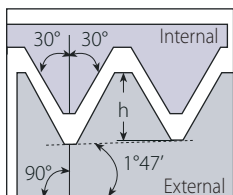
Defined by: ANSI B1.20.3-1976
Tolerance class: Standard NPTF



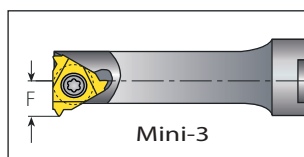
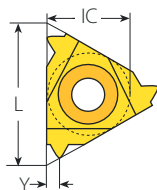
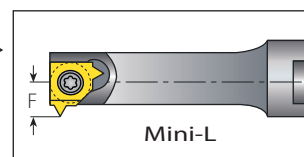
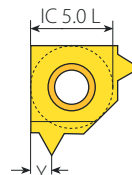
Mini-V



Min. Thread	Insert Style	Pitch	Ordering Code	Dimensions mm						Helix	Toolholder
		TPI	RH	d	T	F	Y	h min	Deg.		
1/4"-18NPTF	V08	18	V08TH18NPTFR...	6	3.8	4.64	0.9	1.0	2.0		.V08-...

NPTF (con't)**MINIPRO****Internal**

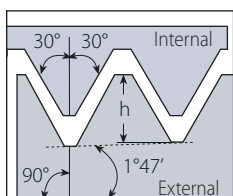
Defined by: ANSI B1.20.3-1976
Tolerance class: Standard NPTF

**Mini-3****Mini-L****Mini-3 Standard**

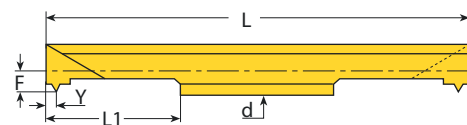
Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	TPI	RH	LH	h min	Y	F	mm	
4.0	6	27	4.0KIR27NPTF...	4.0KIL27NPTF...	0.64	0.6	3.6	6.25	.NVR.5-4.0K (LH)
5.0	8	27	5.0KIR27NPTF...	5.0KIL27NPTF...	0.64	0.6	4.7	7.8	.NVRC7-5.0K (LH)
		18	5.0KIR18NPTF...	5.0KIL18NPTF...	1.00	0.8			
6.0	10	27	6.0KIR27NPTF...	6.0KIL27NPTF...	0.64	0.8	5.3	10.0	.NVRC1..-6.0K (LH)
		18	6.0KIR18NPTF...	6.0KIL18NPTF...	1.00	1.0	5.3		
		14	6.0KIR14NPTF...	6.0KIL14NPTF...	1.35	1.1	5.3		

Mini-L

Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm		TPI	RH	LH	h min	Y	F	mm	
5.0L		27	5LKIR27NPTF...	5LKIL27NPTF...	0.64	0.8	4.65	8.0	.NVRC10..-5LK (LH)
		18	5LKIR18NPTF...	5LKIL18NPTF...	1.00	1.0	4.65		
		14	5LKIR14NPTF...	5LKIL14NPTF...	1.35	1.1	4.65		

NPTF**Internal**

Defined by: ANSI B1.20.3-1976
Tolerance class: Standard NPTF

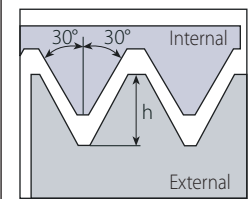
**RH-Double Ended****Micro - Double Ended**

Insert Dia.		Pitch	Ordering Code		Dimensions mm				Min. Bore Dia.	Toolholder
Thread	d mm	TPI	RH	L1	L	F	Y	h min	mm	
1/16"-27NPTF	6.0	27	6.0SIR27NPTF...	16	50	2.50	0.80	0.64	6.0	SMC..-6.0
1/4"-18NPTF		18	6.0SIR18NPTF...	16	50	2.50	1.00	1.00		

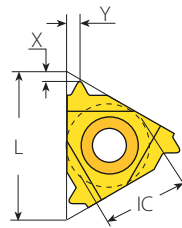
Left handed tool supplied by request (Example: 6.0SIL18NPTF...).

NPS

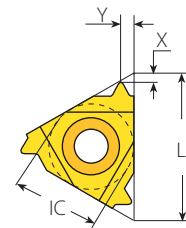
External / Internal



Defined by: USA NBS H28 (1957)
Tolerance class: Standard NPS




External Standard




Internal Standard

Standard - External

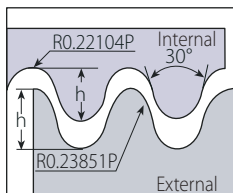
	Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
	IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
	3/8"	16	24	3ER24NPS...	3EL24NPS...	0.79	0.7	0.8	YE3	YI3	AL..-3 (LH)
			16	3ER16NPS...	3EL16NPS...	1.21	0.8	1.1			
			14	3ER14NPS...	3EL14NPS...	1.33	0.9	1.2			
			12	3ER12NPS...	3EL12NPS...	1.63	1.1	1.4			
			11.5	3ER11.5NPS...	3EL11.5NPS...	1.71	1.1	1.5			
			9	3ER9NPS...	3EL9NPS...	2.20	1.2	1.6			
1/2"	22	8	4ER8NPS...	4EL8NPS...	2.46	1.3	1.9	YE4	YI4	AL..-4 (LH)	
		7	4ER7NPS...	4EL7NPS...	2.82	1.6	2.3				
		6	4ER6NPS...	4EL6NPS...	3.31	1.6	2.3				
5/8"	27	5	5ER5NPS...	5EL5NPS...	3.98	1.9	2.8	YE5	YI5	AL..-5 (LH)	

Standard - Internal

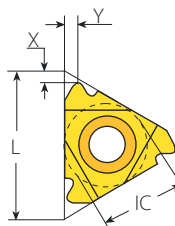
	Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
	IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
	3/8"	16	24	3IR24NPS...	3IL24NPS...	0.79	0.7	0.8	YI3	YE3	AVR..-3 (LH)
			14	3IR14NPS...	3IL14NPS...	1.33	0.9	1.2			
			12	3IR12NPS...	3IL12NPS...	1.63	1.1	1.4			
			11.5	3IR11.5NPS...	3IL11.5NPS...	1.71	1.1	1.5			
			9	3IR9NPS...	3IL9NPS...	2.20	1.2	1.6			
	1/2"	22	8	4IR8NPS...	4IL8NPS...	2.46	1.3	1.9	YI4	YE4	AVR..-4 (LH)
			7	4IR7NPS...	4IL7NPS...	2.82	1.6	2.3			
			6	4IR6NPS...	4IL6NPS...	3.31	1.6	2.3			
5/8"	27	5	5IR5NPS...	5IL5NPS...	3.98	1.9	2.8	YI5	YE5	AVR..-5 (LH)	

Round (DIN 405)

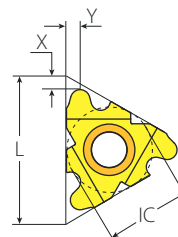
External



Defined by: DIN 405
Tolerance class: 7h/7H



Standard



F-Line

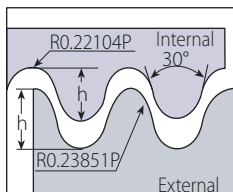
Standard



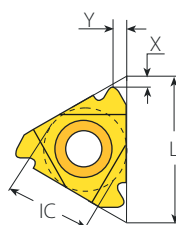
FLINE

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	Toolholder
3/8"	16	10	3ER10RD...	3EL10RD...	1.27	1.1	1.2	YE3	YI3	AL...-3 (LH)
		8	3ER8RD...	3EL8RD...	1.59	1.4	1.3			
		6	3ER6RD...	3EL6RD...	2.12	1.5	1.7			
1/2"	22	6	4ER6RD...	4EL6RD...	2.12	1.5	1.7	YE4	YI4	AL...-4 (LH)
		4	4ER4RD...	4EL4RD...	3.18	2.2	2.3			
1/2"F	23	6	4FER6RD...		2.12	1.5	1.7	YE4F		AL...-4F
		4	4FER4RD...		3.18	2.2	2.3			
5/8"	27	4	5ER4RD...	5EL4RD...	3.18	2.2	2.3	YE5	YI5	AL...-5 (LH)

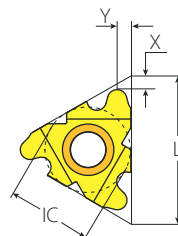
Internal



Defined by: DIN 405
Tolerance class: 7h/7H



Standard



F-Line

Standard

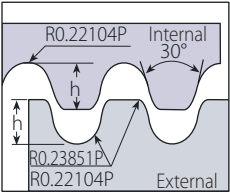


FLINE

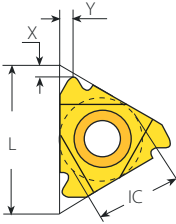
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	Toolholder
3/8"	16	10	3IR10RD...	3IL10RD...	1.27	1.1	1.2	YI3	YE3	AVR...-3 (LH)
		8	3IR8RD...	3IL8RD...	1.59	1.4	1.4			
		6	3IR6RD...	3IL6RD...	2.12	1.4	1.5			
1/2"	22	6	4IR6RD...	4IL6RD...	2.12	1.5	1.7	YI4	YE4	AVR...-4 (LH)
		4	4IR4RD...	4IL4RD...	3.18	2.2	2.3			
1/2"F	23	6	4FIR6RD...		2.12	1.5	1.7	YI4F		AVRC...-4F
		4	4FIR4RD...		3.18	2.2	2.3			
5/8"	27	4	5IR4RD...	5IL4RD...	3.18	2.2	2.3	YI5	YE5	AVR...-5 (LH)

Round (DIN 20400)

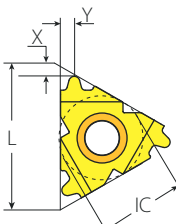
External



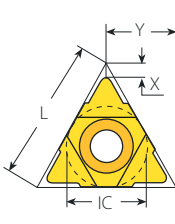
Defined by: DIN 20400
Tolerance class: Standard



Standard



F-Line



U Style

Standard



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	
1/2"	22	3.0	4ER3.0RD20400...	4EL3.0RD20400...	1.65	1.3	1.7	YE4	YI4	AL...-4 (LH)
		4.0	4ER4.0RD20400...	4EL4.0RD20400...	2.20	1.6	2.2			
		5.0	4ER5.0RD20400...	4EL5.0RD20400...	2.75	1.4	1.7			
		6.0	4ER6.0RD20400...	4EL6.0RD20400...	3.30	1.7	2.1			
1/2"F	23	3.0	4FER3.0RD20400...		1.65	1.3	1.7	YE4F		AL...-4F
		4.0	4FER4.0RD20400...		2.2	1.6	2.2			
		5.0	4FER5.0RD20400...		2.75	1.4	1.7			
		6.0	4FER6.0RD20400...		3.3	1.7	2.1			

U Style

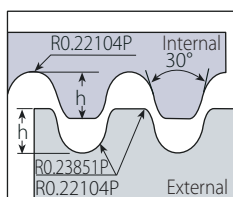


Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH+LH		h min	X	Y	RH	LH	
5/8"U	27	8.0	5UEI8.0RD20400...		4.4	2.9	13.5	YE5U	YI5U	AL...-5U (LH)

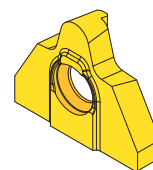
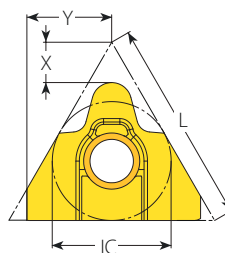
Round (DIN 20400) (con't)

MEGA/LINE

External



Defined by: DIN 20400
Tolerance class: Standard

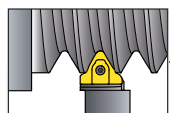


Mega Line

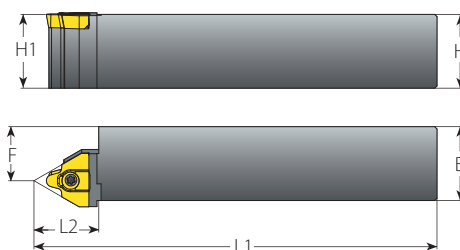
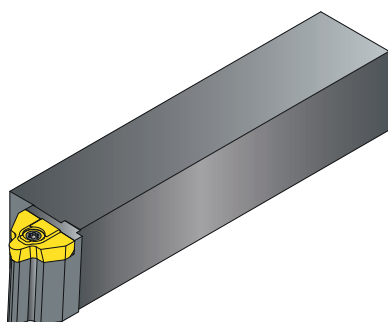
External



Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	mm	RH	h min	X	Y	0.07mm–Min. Depth of Cut (On radius)	0.15mm–Max. Depth of Cut (On radius)
5/8" MG	27	10.0	5MGER10.0RD20400...	5.50	4.12	11.3	78	36
		12.0	5MGER12.0RD20400...	6.60	5.39		93	43
		16.0	5MGER16.0RD20400...	8.80	4.92		124	58





External Toolholders for Round (DIN 20400) **MEGA**/LINE



External

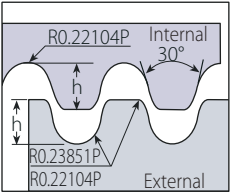
Spare Parts

Insert		Ordering Code	Dimensions mm				Thread Diameter Range (Min.-Max.)					
		RH	H=B=H1	F	L1	L2		Insert Screw	Torx Key			
5MGER10.0RD20400...	NL25-5MG10RD	25	16.5	155	22	(RD132-170)x10	S5MG					
	NL32-5MG10RD	32	23.5	175								
	NL40-5MG10RD	40	31.5	205								
5MGER12.0RD20400...	NL25-5MG12RD	25	16.5	155	22	(RD180-224)x12				K6T		
	NL32-5MG12RD	32	23.5	175								
	NL40-5MG12RD	40	31.5	205								
5MGER16.0RD20400...	NL25-5MG16RD	25	16.5	155	22	(RD236-300)x16						
	NL32-5MG16RD	32	23.5	175								
	NL40-5MG16RD	40	31.5	205								

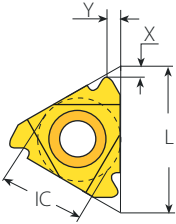
Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.

Round (DIN 20400) (con't)

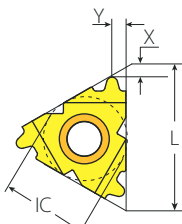
Internal



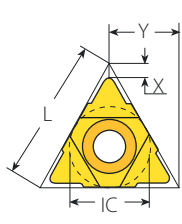
Defined by: DIN 20400
Tolerance class: Standard



Standard



F-Line



U Style

Standard

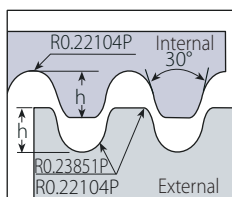


Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	
1/2"	22	3.0	4IR3.0RD20400...	4IL3.0RD20400...	1.65	1.3	1.7	YI4	YE4	AVR...-4 (LH)
		4.0	4IR4.0RD20400...	4IL4.0RD20400...	2.20	1.6	2.2			
		5.0	4IR5.0RD20400...	4IL5.0RD20400...	2.75	1.4	1.7			
		6.0	4IR6.0RD20400...	4IL6.0RD20400...	3.30	1.7	2.1			
1/2"F	23	3.0	4FIR3.0RD20400...		1.65	1.3	1.7	YI4F		AVRC...-4F
		4.0	4FIR4.0RD20400...		2.20	1.6	2.2			
		5.0	4FIR5.0RD20400...		2.75	1.4	1.7			
		6.0	4FIR6.0RD20400...		3.30	1.7	2.1			

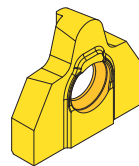
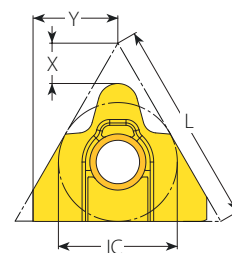
U Style



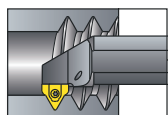
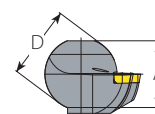
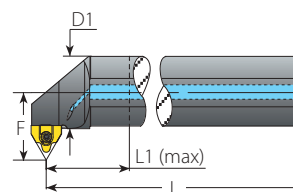
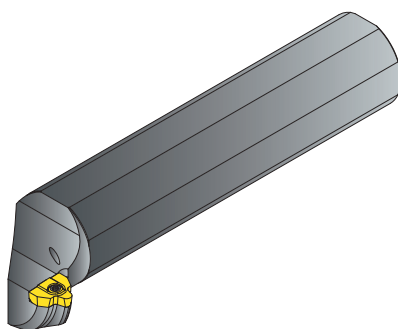
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH+LH		h min	X	Y	RH	LH	
5/8"U	27	8.0	5UEI8.0RD20400...		4.40	2.9	13.5	YI5U	YE5U	AVR...-5U (LH)



Round (DIN 20400) (con't)**MEGA**/LINE**Internal**

Defined by: DIN 20400
Tolerance class: Standard

**Mega Line****Internal**

Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	mm	RH	h min	X	Y	0.07mm–Min. Depth of Cut (On radius)	0.15mm–Max. Depth of Cut (On radius)
5/8" MG	27	10.0	5MGIR10.0RD20400...	5.50	4.12	10.4	78	36
		12.0	5MGIR12.0RD20400...	6.60	5.39		93	43
		16.0	5MGIR16.0RD20400...	8.80	4.92		124	58

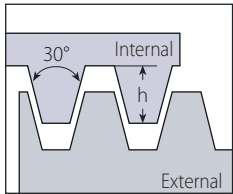
**Internal Toolholders for Round (DIN 20400)****MEGA**/LINE**Internal****Spare Parts**

Insert	Ordering Code	Dimensions mm						Min. Bore Dia.	Thread Diameter Range (Min.-Max.)			
	RH	A	L	L1 (max)	D	D1	F	mm	Short Chip Material	Long Chip Material	Insert Screw	Torx Key
5MGIR10.0RD20400...	NVRC40-5MG10RD	36	232.5	100	40	39.7	41.5	122	(RD132-170)x10	(RD132-170)x10	S5MG	K6T
	NVRC50-5MG10RD	46	257.5	125	50	49.7	46.5					
	NVRC60-5MG10RD	57	282.5	150	60	59.7	51.5					
5MGIR12.0RD20400...	NVRC40-5MG12RD	36	232.5	100	40	39.7	41.5	168	(RD180-224)x12	(RD180-224)x12		
	NVRC50-5MG12RD	46	257.5	125	50	49.7	46.5					
	NVRC60-5MG12RD	57	282.5	150	60	59.7	51.5					
5MGIR16.0RD20400...	NVRC40-5MG16RD	36	232.5	100	40	39.7	41.5	220	(RD236-300)x16	(RD236-300)x16		
	NVRC50-5MG16RD	46	257.5	125	50	49.7	46.5					
	NVRC60-5MG16RD	57	282.5	150	60	59.7	51.5					

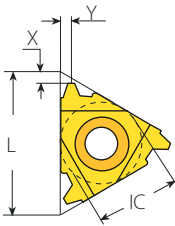
Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.

Trapez

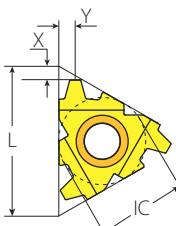
External



Defined by: DIN 103
Tolerance class: 7e/7H



Standard



F-Line

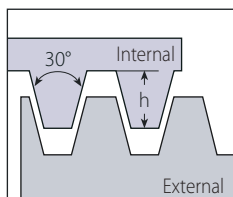
Standard



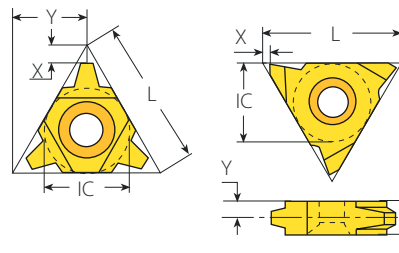
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	
1/4"	11	1.5	2ER1.5TR...	2EL1.5TR...	0.90	0.8	0.9	-	-	NL...-2 (LH)
3/8"	16	1.5	3ER1.5TR...	3EL1.5TR...	0.90	1.0	1.1	YE3	YI3	AL...-3 (LH)
		2.0	3ER2.0TR...	3EL2.0TR...	1.25	1.1	1.3			
		2.5	3ER2.5TR...	3EL2.5TR...	1.55	1.2	1.4			
		3.0	3ER3.0TR...	3EL3.0TR...	1.75	1.3	1.5			
1/2"	22	4.0	4ER4.0TR...	4EL4.0TR...	2.25	1.7	1.9	YE4	YI4	AL...-4 (LH)
		5.0	4ER5.0TR...	4EL5.0TR...	2.75	2.1	2.5			
		6.0	4ER6.0TR...	4EL6.0TR...	3.50	2.3	2.7			
1/2"F	23	4.0	4FER4.0TR...		2.25	1.7	1.9	YE4F		AL...-4F
		5.0	4FER5.0TR...		2.75	2.1	2.5			
		6.0	4FER6.0TR...		3.50	2.3	2.7			
5/8"	27	6.0	5ER6.0TR...	5EL6.0TR...	3.50	2.3	2.7	YE5	YI5	AL...-5 (LH)

Trapez

External



Defined by: DIN 103
Tolerance class: 7e/7H



U Style

V Style

U Style



Insert Size		Pitch	Ordering Code	Dimensions mm			Anvil		
IC	L mm	mm	RH+LH	h min	X	Y	RH	LH	Toolholder
1/2"U	22	6.0	4UE6.0TR...	3.50	2.0	11.0	YE4U	YI4U	AL...-4U (LH)
		7.0	4UE7.0TR...	4.00	2.3	11.0			
		8.0	4UE8.0TR...	4.50	2.6	11.0			
5/8"U	27	8.0	5UE8.0TR...	4.50	2.6	13.7	YE5U	YI5U	AL...-5U (LH)
		9.0	5UE9.0TR...	5.00	3.0	13.7			

V Style

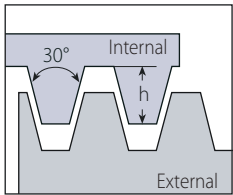


Insert Size		Pitch	Ordering Code		Dimensions mm				
IC	L mm	mm	RH	LH	h min	X	Y	T	Toolholder
5/8"V	27	6.0	5VER6.0TR...	5VEL6.0TR...	3.50	1.0	3.3	6	NL...-5V-6 (LH)
		7.0	5VER7.0TR...	5VEL7.0TR...	4.00	1.0	3.3	6	
		8.0	5VER8.0TR...	5VEL8.0TR...	4.50	1.0	3.3	6	
		9.0	5VER9.0TR...	5VEL9.0TR...	5.00	1.0	4.3	8	NL...-5V-8 (LH)
		10.0	5VER10.0TR...	5VEL10.0TR...	5.50	1.0	4.3	8	
		12.0	5VER12.0TR...	5VEL12.0TR...	6.50	1.0	5.2	10	

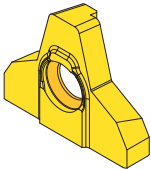
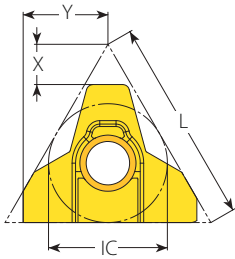
Trapez (con't)

MEGA LINE

External



Defined by: DIN 103
Tolerance class: 7e/7H



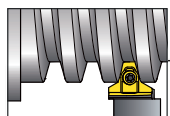
Mega Line

External

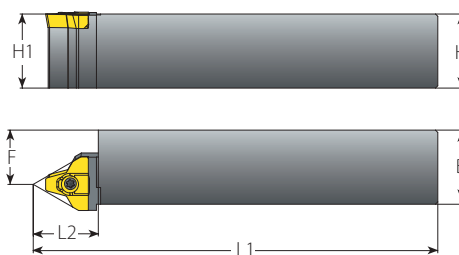
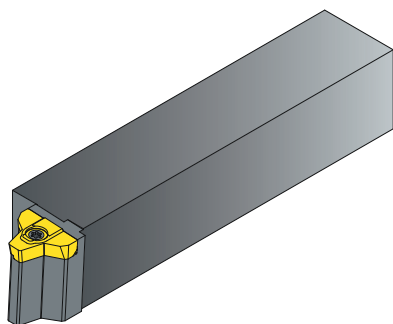


Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	mm	RH	h min	X	Y	0.07mm–Min. Depth of Cut (On radius)	0.15mm–Max. Depth of Cut (On radius)
5/8" MG	27	12.0	5MGER12.0TR...	6.5	5.38	11.3	94	44
		14.0	5MGER14.0TR...	8.0	4.38		115	54
		16.0	5MGER16.0TR...	9.0	5.38		129	60
		18.0	5MGER18.0TR...	10.0	5.38		143	67
		20.0	5MGER20.0TR...	11.0	7.38		158	74
		24.0	5MGER24.0TR...	13.0	7.38		186	87

Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.





External Toolholders for Trapez

MEGA/LINE


External

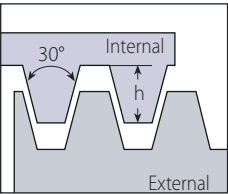
Spare Parts

Insert	Ordering Code	Dimensions mm				Thread Diameter Range (Min.-Max.)			
	RH	H=B=H1	F	L1	L2			Insert Screw	Torx Key
5MGER12.0TR...	NL25-5MG12TR	25	16.5	155	22	(TR44-300)x12	S5MG		K6T
	NL32-5MG12TR	32	23.5	175					
	NL40-5MG12TR	40	31.5	205					
5MGER14.0TR...	NL25-5MG14TR	25	16.5	155	22	(TR55-145)x14			
	NL32-5MG14TR	32	23.5	175					
	NL40-5MG14TR	40	31.5	205					
5MGER16.0TR...	NL25-5MG16TR	25	16.5	155	22	(TR65-175)x16			
	NL32-5MG16TR	32	23.5	175					
	NL40-5MG16TR	40	31.5	205					
5MGER18.0TR...	NL25-5MG18TR	25	16.5	155	22	(TR85-200)x18			
	NL32-5MG18TR	32	23.5	175					
	NL40-5MG18TR	40	31.5	205					
5MGER20.0TR...	NL25-5MG20TR	25	16.5	155	22	(TR100-230)x20			
	NL32-5MG20TR	32	23.5	175					
	NL40-5MG20TR	40	31.5	205					
5MGER24.0TR...	NL25-5MG24TR	25	16.5	155	22	(TR135-300)x24			
	NL32-5MG24TR	32	23.5	175					
	NL40-5MG24TR	40	31.5	205					

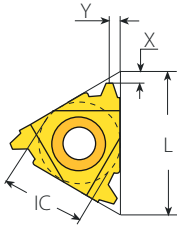
Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.

Trapez (con't)

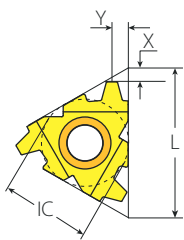
Internal



Defined by: DIN 103
Tolerance class: 7e/7H



Standard



F-Line

Standard

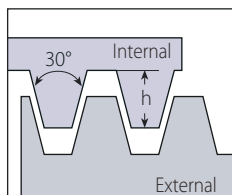


F LINE

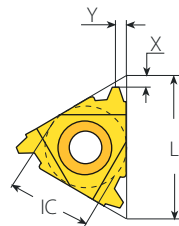
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	
1/4"	11	1.5	2IR1.5TR...	2IL1.5TR...	0.90	0.8	0.9	-	-	NVR..-2 (LH)
3/8"	16	1.5	3IR1.5TR...	3IL1.5TR...	0.90	1.0	1.1	YI3	YE3	AVR..-3 (LH)
		2.0	3IR2.0TR...	3IL2.0TR...	1.25	1.1	1.3			
		2.5	3IR2.5TR...	3IL2.5TR...	1.53	1.2	1.4			
		3.0	3IR3.0TR...	3IL3.0TR...	1.75	1.3	1.5			
1/2"	22	4.0	4IR4.0TR...	4IL4.0TR...	2.25	1.7	1.9	YI4	YE4	AVR..-4 (LH)
		5.0	4IR5.0TR...	4IL5.0TR...	2.75	2.1	2.5			
		6.0	4IR6.0TR...	4IL6.0TR...	3.50	2.3	2.7			
		4.0	4FIR4.0TR...		2.25	1.7	1.9			
1/2"F	23	5.0	4FIR5.0TR...		2.75	2.1	2.5	YI4F		AVRC...-4F
		6.0	4FIR6.0TR...		3.50	2.3	2.7			
5/8"	27	6.0	5IR6.0TR...	5IL6.0TR...	3.50	2.3	2.7	YI5	YE5	AVR..-5 (LH)

Trapez (con't)

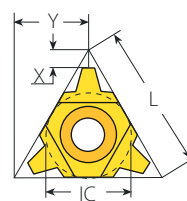
Internal



Defined by: DIN 103
Tolerance class: 7e/7H



Coarse Pitch



U Style Coarse Pitch

Coarse Pitch RH



Thread	Insert Size		Ordering Code	Dimensions mm			Toolholder RH	Min Bore Dia. mm
	IC	L mm		h min	X	Y		
TR18x4	3/8"U	16	3UIR4.0TR158/013...	2.25	2.10	8.0	NVRC11-3U-156/020	14.0
TR20x4	3/8"	16	3IR4.0TR158/012...	2.25	1.53	1.9	NVRC13-3-156/006	16.0
TR22x5	3/8"U	16	3UIR5.0TR158/011...	2.75	1.56	8.0	NVRC14-3U-156/018	17.0
TR24x5			3UIR5.0TR158/011...	2.75	1.56	8.0	NVRC15-3U-156/019	19.0
TR26x5			3UIR5.0TR158/011...	2.75	1.56	8.0	NVRC15-3U-156/019	21.0
TR28x5			4IR5.0TR...	2.75	2.30	2.7	NVRC20-4-156/008	23.0
TR30x6	1/2"U	22	4UIR6.0TR158/007...	3.50	1.94	11.0	NVRC20-4U-156/011	24.0
TR36x6	5/8"	27	5IR6.0TR...	3.50	2.30	2.7	NVRC25-5-156/012	30.0
TR38x7	1/2"U	22	4UIR7.0TR158/008...	4.00	2.27	11.0	NVRC25-4U-156/013	31.0
TR40x7			4UIR7.0TR158/008...	4.00	2.27	11.0	NVRC25-4U-156/013	33.0
TR42x7			4UIR7.0TR158/008...	4.00	2.27	11.0	NVRC32-4U-156/014	35.0
TR44x7			4UIR7.0TR158/008...	4.00	2.27	11.0	NVRC32-4U-156/014	37.0
TR46x8	5/8"U	27	5UIR8.0TR158/010...	4.50	2.59	13.5	NVRC32-5U-156/015	38.0
TR48x8			5UIR8.0TR158/010...	4.50	2.59	13.5	NVRC32-5U-156/015	40.0
TR50x8			5UIR8.0TR158/010...	4.50	2.59	13.5	NVRC32-5U-156/015	42.0
TR52x8			5UIR8.0TR158/010...	4.50	2.59	13.5	NVRC32-5U-156/015	44.0

Coarse Pitch LH

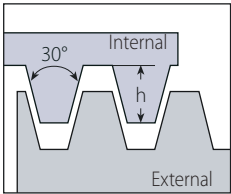


Thread	Insert Size		Ordering Code	Dimensions mm			Toolholder LH	Min Bore Dia. mm
	IC	L mm		h min	X	Y		
TR18x4	3/8"U	16	3UIR4.0TR158/013...	2.25	2.10	8.0	NVRC11-3ULH-156/029	14.0
TR20x4	3/8"	16	3IL4.0TR158/015...	2.25	1.53	1.9	NVRC13-3LH-156/028	16.0
TR22x5	3/8"U	16	3UIR5.0TR158/011...	2.75	1.56	8.0	NVRC14-3ULH-156/030	17.0
TR24x5			3UIR5.0TR158/011...	2.75	1.56	8.0	NVRC15-3ULH-156/031	19.0
TR26x5			3UIR5.0TR158/011...	2.75	1.56	8.0	NVRC15-3ULH-156/031	21.0
TR28x5			4IL5.0TR...	2.75	2.30	2.7	NVRC20-4LH-156/024	23.0
TR30x6	1/2"U	22	4UIR6.0TR158/007...	3.50	1.94	11.0	NVRC20-4ULH-156/021	24.0
TR36x6	5/8"	27	5IL6.0TR...	3.50	2.30	2.7	NVRC25-5LH-156/017	30.0
TR38x7	1/2"U	22	4UIR7.0TR158/008...	4.00	2.27	11.0	NVRC25-4ULH-156/032	31.0
TR40x7			4UIR7.0TR158/008...	4.00	2.27	11.0	NVRC25-4ULH-156/032	33.0
TR42x7			4UIR7.0TR158/008...	4.00	2.27	11.0	NVRC32-4ULH-156/022	35.0
TR44x7			4UIR7.0TR158/008...	4.00	2.27	11.0	NVRC32-4ULH-156/022	37.0
TR46x8	5/8"U	27	5UIR8.0TR158/010...	4.50	2.59	13.5	NVRC32-5ULH-156/027	38.0
TR48x8			5UIR8.0TR158/010...	4.50	2.59	13.5	NVRC32-5ULH-156/027	40.0
TR50x8			5UIR8.0TR158/010...	4.50	2.59	13.5	NVRC32-5ULH-156/027	42.0
TR52x8			5UIR8.0TR158/010...	4.50	2.59	13.5	NVRC32-5ULH-156/027	44.0

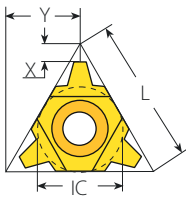
U Type RH inserts can be used for both LH and RH applications.

Trapez (con't)

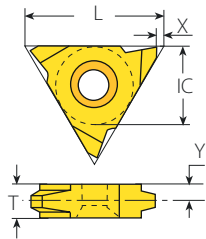
Internal



Defined by: DIN 103
Tolerance class: 7e/7H



U Style



V Style

U Style



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH+LH		h min	X	Y	RH	LH	
1/2"U	22	6.0	4UI6.0TR...		3.50	2.0	11.0	YI4U	YE4U	AVR...-4U (LH)
		7.0	4UI7.0TR...		4.00	2.3	11.0			
		8.0	4UI8.0TR...		4.50	2.6	11.0			
5/8"U	27	8.0	5UI8.0TR...		4.50	2.6	13.7	YI5U	YE5U	AVR...-5U (LH)
		9.0	5UI9.0TR...		5.00	3.0	13.7			

V Style

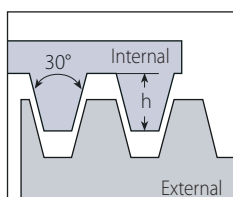


Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	T	
5/8"V	27	6.0	5VIR6.0TR...	5VIL6.0TR...	3.50	1.0	3.3	6	NVR...-5V (LH)
		7.0	5VIR7.0TR...	5VIL7.0TR...	4.00	1.0	3.3	6	
		8.0	5VIR8.0TR...	5VIL8.0TR...	4.50	1.0	3.3	6	
		9.0	5VIR9.0TR...	5VIL9.0TR...	5.00	1.0	4.3	8	
		10.0	5VIR10.0TR...	5VIL10.0TR...	5.50	1.0	4.3	8	
		12.0	5VIR12.0TR...	5VIL12.0TR...	6.50	1.0	5.2	10	

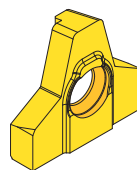
Trapez

MEGALINE

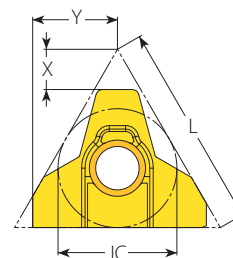
Internal



Defined by: DIN 103
Tolerance class: 7e/7H



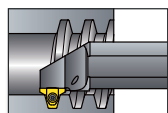
Mega Line



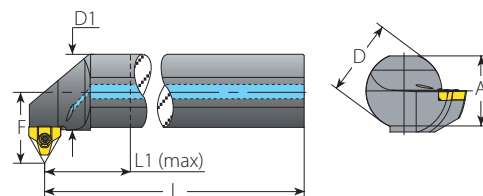
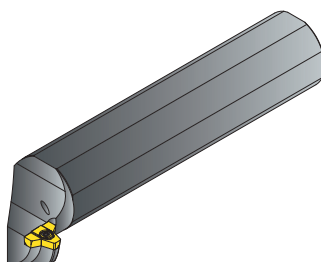
Internal



Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	mm	RH	h min	X	Y	0.07mm–Min. Depth of Cut (On radius)	0.15mm–Max. Depth of Cut (On radius)
5/8" MG	27	12.0	5MGIR12.0TR...	6.5	5.38	10.4	96	45
		14.0	5MGIR14.0TR...	8.0	4.38		118	55
		16.0	5MGIR16.0TR...	9.0	5.38		131	61
		18.0	5MGIR18.0TR...	10.0	5.38		145	68
		20.0	5MGIR20.0TR...	11.0	7.38		160	75
		24.0	5MGIR24.0TR...	13.0	7.38		188	88



Internal Toolholders for Trapez

MEGALINE


Internal

Spare Parts

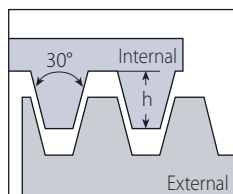
Insert	Ordering Code	Dimensions mm							Thread Diameter Range (Min.-Max.)		Insert Screw	Torx Key
		RH	A	L	L1 (max)	D	D1	F	mm	Short Chip Material	Long Chip Material	
5MGIR12.0TR...	NVRC40-5MG12TR	36	232.5	100	40	39.7	41.5	73	(TR85-300)x12	(TR85-300)x12	S5MG	K6T
	NVRC50-5MG12TR	46	257.5	125	50	49.7	46.5	73	(TR85-300)x12	(TR95-300)x12		
	NVRC60-5MG12TR	57	282.5	150	60	59.7	51.5	83	(TR95-300)x12	(TR105-300)x12		
5MGIR14.0TR...	NVRC40-5MG14TR	36	232.5	100	40	39.7	41.5	101	(TR115-145)x14	(TR115-145)x14		
	NVRC50-5MG14TR	46	257.5	125	50	49.7	46.5	101	(TR115-145)x14	(TR115-145)x14		
	NVRC60-5MG14TR	57	282.5	150	60	59.7	51.5	101	(TR115-145)x14	(TR115-145)x14		
5MGIR16.0TR...	NVRC40-5MG16TR	36	232.5	100	40	39.7	41.5	64	(TR80-175)x16	(TR150-175)x16		
	NVRC50-5MG16TR	46	257.5	125	50	49.7	46.5	134	(TR150-175)x16	(TR150-175)x16		
	NVRC60-5MG16TR	57	282.5	150	60	59.7	51.5	134	(TR150-175)x16	(TR150-175)x16		
5MGIR18.0TR...	NVRC40-5MG18TR	36	232.5	100	40	39.7	41.5	72	(TR85-200)x18	(TR90-200)x18		
	NVRC50-5MG18TR	46	257.5	125	50	49.7	46.5	72	(TR90-200)x18	(TR180-200)x18		
	NVRC60-5MG18TR	57	282.5	150	60	59.7	51.5	162	(TR180-200)x18	(TR180-200)x18		
5MGIR20.0TR...	NVRC40-5MG20TR	36	232.5	100	40	39.7	41.5	80	(TR100-230)x20	(TR100-230)x20		
	NVRC50-5MG20TR	46	257.5	125	50	49.7	46.5	80	(TR100-230)x20	(TR100-230)x20		
	NVRC60-5MG20TR	57	282.5	150	60	59.7	51.5	85	(TR105-230)x20	(TR210-230)x20		
5MGIR24.0TR...	NVRC40-5MG24TR	36	232.5	100	40	39.7	41.5	111	(TR135-300)x24	(TR135-300)x24		
	NVRC50-5MG24TR	46	257.5	125	50	49.7	46.5	111	(TR135-300)x24	(TR135-300)x24		
	NVRC60-5MG24TR	57	282.5	150	60	59.7	51.5	111	(TR135-300)x24	(TR135-300)x24		

Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.

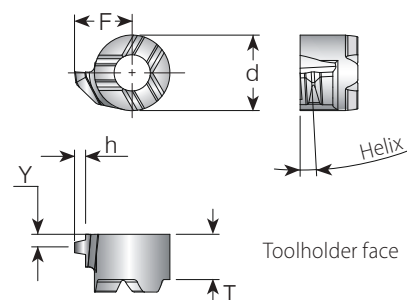
Trapez (con't)

Mini-V

Internal



Defined by: DIN 103
Tolerance class: 7e/7H



Mini-V

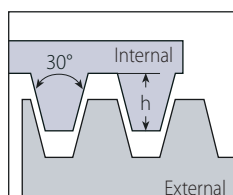


Min. Thread	Insert Style	Pitch	Ordering Code	Dimensions mm						Helix	Toolholder
		mm	RH	d	T	F	Y	h min	Deg.		
TR10x2.0	V08	2.0	V08TH2.0TRR...	6	3.8	4.79	0.90	1.25	3.5		.V08-...
TR11x3.0		3.0	V08TH3.0TRR...			4.95	1.18	1.75	5		
TR16x4.0	V11	4.0	V11TH4.0TRR...	8	4.2	6.53	1.55	2.25	4.5		.V11-...

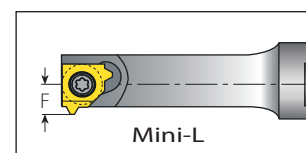
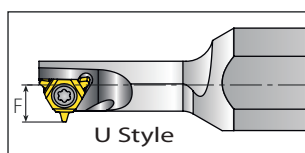
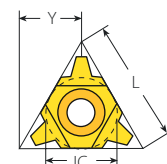
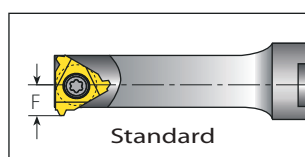
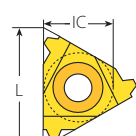
Trapez

MINIPRO

Internal



Defined by: DIN 103
Tolerance class: 7e/7H



Mini-3 Standard



Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	mm	RH	LH	h min	Y	F	mm	
5.0	8	1.5	5.0KIR1.5TR...	5.0KIL1.5TR...	0.85	0.70	4.7	7.8	.NVRC7-5.0K (LH)
6.0	10	1.5	6.0KIR1.5TR...	6.0KIL1.5TR...	0.85	0.85	5.3	10.0	.NVRC1...-6.0K (LH)
		2.0	6.0KIR2.0TR...	6.0KIL2.0TR...	1.25	1.30	5.3	10.0	

Mini-3 U Style



Insert Size		Pitch	Ordering Code	Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	mm	RH+LH	h min	Y	F	mm	
5.0U	8	2.0	5.0KUI2TR...	1.25	4.00	5.7	9.0	.NVRC8-5.0KU (LH)

Mini-L

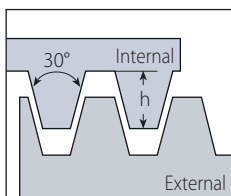


Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm		mm	RH	LH	h min	Y	F	mm	
5.0L		1.5	5LKIR1.5TR...	5LKIL1.5TR...	0.85	0.85	4.65	8.0	.NVRC10...-5LK (LH)
		2.0	5LKIR2.0TR...	5LKIL2.0TR...	1.25	1.30	4.80	9.0	

Trapez

MINIPRO

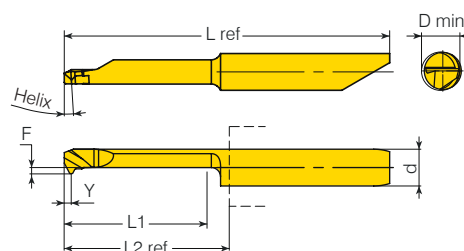
Internal



Defined by: DIN 103
Tolerance class: 7e/7H



RH-Single Ended



Micro - Single Ended

microscope

Insert Dia..		Pitch	Ordering Code		Dimensions mm					Min. Bore Dia.		
Thread	d mm	mm	RH/LH	Helix °	L1	F	Y	h min	L2 ref*	L ref	D mm	Toolholder
TR8-TR10x1.5	6.0	1.5	M662TH1.5TRL20R...	3.3	20.3	2.95	1.1	0.9	23	46.7	6.2	MH...-4.0
TR9-TR12x2.0		2.0	M662TH2.0TRL20R...	4.0		2.95	1.3	1.25				
TR10-TR14x2.0	7.0	2.0	M772TH2.0TRL20R...	3.4		3.45	1.3	1.25			7.2	MH...-7.0
TR11-TR16x3.0		3.0	M772TH3.0TRL20R...	4.75		3.45	1.5	1.75				

* L2 Ref: Repeatability within +/-0.02.

American ACME

External

Defined by: ANSI B1.5:1988
Tolerance class: 3G

Standard
F-Line
U Style
V Style
On Edge

Standard

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	16	2ER16ACME...	2EL16ACME...	0.92	1.0	1.1	-	-	NL...-2 (LH)
3/8"	16	16	3ER16ACME...	3EL16ACME...	0.92	1.0	1.1	YE3	YI3	AL...-3 (LH)
		14	3ER14ACME...	3EL14ACME...	1.03	1.0	1.2			
		12	3ER12ACME...	3EL12ACME...	1.19	1.1	1.2			
		10	3ER10ACME...	3EL10ACME...	1.52	1.3	1.4			
		8	3ER8ACME...	3EL8ACME...	1.84	1.4	1.5			
		7	3ER7ACME...	3EL7ACME...	2.08	1.9	2.2			
1/2"	22	7	4ER7ACME...	4EL7ACME...	2.08	1.9	2.2	YE4	YI4	AL...-4 (LH)
		6	4ER6ACME...	4EL6ACME...	2.37	1.8	2.1			
		5	4ER5ACME...	4EL5ACME...	2.79	2.0	2.3			
1/2"F	23	6	4FER6ACME...		2.37	1.8	2.1	YE4F		AL...-4F
		5	4FER5ACME...		2.79	2.0	2.3			
5/8"	27	4	5ER4ACME...	5EL4ACME...	3.43	2.4	2.7	YE5	YI5	AL...-5 (LH)

U Style

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH+LH		h min	X	Y	RH	LH	
1/2"U	22	4	4UE4ACME...		3.43	2.3	11.0	YE4U	YI4U	AL...-4U (LH)
		3	4UE3ACME...		4.49	3.0	11.0			
5/8"U	27	3	5UE3ACME...		4.49	3.0	13.7	YE5U	YI5U	AL...-5U (LH)

V Style

Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T	
5/8"V	27	4	5VER4ACME...	5VEL4ACME...	3.43	1.0	3.3	6	NL...-5V-6 (LH)
		3.5	5VER3.5ACME...	5VEL3.5ACME...	3.85	1.0	3.3	6	
		3	5VER3ACME...	5VEL3ACME...	4.49	1.0	3.3	6	
		2	5VER2ACME...	5VEL2ACME...	6.60	1.0	5.2	10	NL...-5V-10 (LH)

On Edge

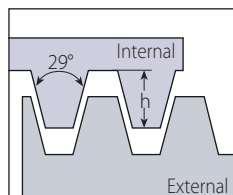
Insert Size		Pitch	Ordering Code		Dimensions mm				
IC	L mm	TPI	RH		h min	T	Ø C	X	Y
1/2"	22	12	TNEC43EI12ACME...		1.19	4.76	5.2	0.5	2.4
		10	TNEC43EI10ACME...		1.52				
		8	TNEC43EI8ACME...		1.83				
		6	TNEC43EI6ACME...		2.36				
		4	TNEC43EI4ACME...		3.43				
5/8"	27	4	TNEC54EI4ACME...		3.43	6.35	6.5		3.2
		3	TNEC54EI3ACME...		4.50				
3/4"	32	2	TNEC56EI2ACME...		6.60	9.53	8.0		4.8

On Edge inserts are suited to existing toolholders on the market.

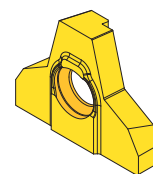
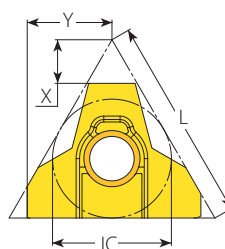
American ACME (con't)

MEGA/LINE

External



Defined by: ANSI B1.5:1988
Tolerance class: 3G

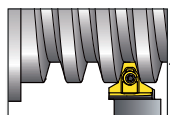


Mega Line

External

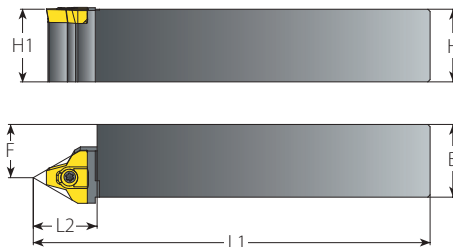
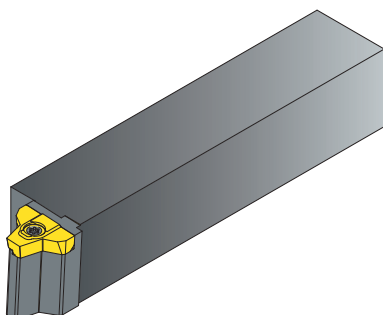


Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	TPI	RH	h min	X	Y	0.07mm-Min. Depth of Cut (On radius)	0.15mm-Max. Depth of Cut (On radius)
5/8" MG	27	2	5MGER2ACME...	6.60	4.81	11.3	95	44
		1 1/2	5MGER1-1/2ACME...	8.72	5.81		125	58
		1 1/3	5MGER1-1/3ACME...	9.78	6.81		140	65
		1	5MGER1ACME...	12.95	8.31		186	87





External Toolholders for American ACME

MEGA/LINE



External

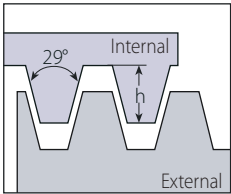
Spare Parts

Insert	Ordering Code	Dimensions			Thread Diameter Range (Min.-Max.)					
	RH	H=B=H1	F	L1	L2		Insert Screw	Torx Key		
5MGER2ACME...	NL25-5MG2ACME	25	16.5	155	22	(3"-5")-2ACME	S5MG	K6T		
	NL32-5MG2ACME	32	23.5	175						
	NL40-5MG2ACME	40	31.5	205						
5MGER1-1/2ACME...	NL25-5MG1-1/2ACME	25	16.5	155	22	(3"-5")-1 1/2ACME				
	NL32-5MG1-1/2ACME	32	23.5	175						
	NL40-5MG1-1/2ACME	40	31.5	205						
5MGER1-1/3ACME...	NL25-5MG1-1/3ACME	25	16.5	155	22	(3"-5")-1 1/3ACME				
	NL32-5MG1-1/3ACME	32	23.5	175						
	NL40-5MG1-1/3ACME	40	31.5	205						
5MGER1ACME...	NL25-5MG1ACME	25	16.5	155	22	(3.5"-5")-1ACME				
	NL32-5MG1ACME	32	23.5	175						
	NL40-5MG1ACME	40	31.5	205						

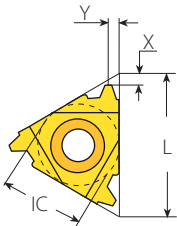
Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.

American ACME (con't)

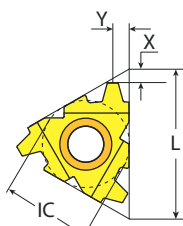
Internal



Defined by: ANSI B1.5:1988
Tolerance class: 3G



Standard



F-Line

Standard

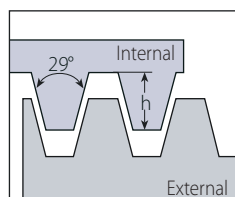


F^{LINE}

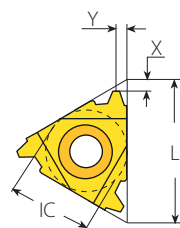
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	16	2IR16ACME...	2IL16ACME...	0.92	0.9	0.9	-	-	NVR...-2 (LH)
3/8"	16	16	3IR16ACME...	3IL16ACME...	0.92	1.0	1.1	YI3	YE3	AVR...-3 (LH)
		14	3IR14ACME...	3IL14ACME...	1.03	1.1	1.2			
		12	3IR12ACME...	3IL12ACME...	1.19	1.2	1.3			
		10	3IR10ACME...	3IL10ACME...	1.52	1.2	1.3			
		8	3IR8ACME...	3IL8ACME...	1.84	1.4	1.5			
1/2"	22	6	4IR6ACME...	4IL6ACME...	2.37	1.8	2.1	YI4	YE4	AVR...-4 (LH)
		5	4IR5ACME...	4IL5ACME...	2.79	2.0	2.3			
1/2"F	23	6	4FIR6ACME...		2.37	1.8	2.1	YI4F		AVRC...-4F
		5	4FIR5ACME...		2.79	2.0	2.3			
5/8"	27	4	5IR4ACME...	5IL4ACME...	3.43	2.3	2.6	YI5	YE5	AVR...-5 (LH)

American ACME (con't)

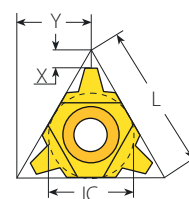
Internal



Defined by: ANSI B1.5:1988
Tolerance class: 3G



Standard



U Style

Coarse Pitch RH



Thread	Insert Size		Ordering Code	Dimensions mm			Anvil	Min Bore Dia.	
TPI	IC	L mm	RH	h min	X	Y	RH	Toolholder RH	mm
1/2"x10	6.0U	10	6.0KUIR10ACME158/005...	1.52	1.0	5.2	-	NVRC8-6.0KU-156/003	10.16
5/8"x8	1/4"U	11	2UIR8ACME158/006...	1.84	1.0	5.5	-	NVRC10-2U-156/004	12.70
3/4"x6	3/8"	16	3IR6ACME...	2.37	1.7	1.8	-	NVRC11-3-156/005	14.82
7/8"x6			3IR6ACME...	2.37	1.7	1.8	-	NVRC13-3-156/006	18.42
1"x5	1/2"	22	4IR5ACME158/018...	2.79	2.0	2.3	-	NVRC17-4-156/039	20.32
1 1/8"x5			4IR5ACME...	2.79	2.0	2.3	-	NVRC20-4-156/008	24.00
1 1/4"x5			4IR5ACME...	2.79	2.0	2.3	-	NVRC20-4-156/009	27.18
1 1/2"x4	5/8"	27	5IR4ACME...	3.43	2.3	2.6	-	NVRC28-5-156/010	32.38
1 3/4"x4			5IR4ACME...	3.43	2.3	2.6	YI5-1P	AVRC32-5	38.74

Coarse Pitch LH



Thread	Insert Size		Ordering Code	Dimensions mm			Anvil	Min Bore Dia.	
TPI	IC	L mm	LH	h min	X	Y	LH	Toolholder LH	mm
1/2"x10	6.0U	10	6.0KUIR10ACME158/005...	1.52	1.0	5.2	-	NVRC8-6.0KULH-156/037	10.16
5/8"x8	1/4"U	11	2UIR8ACME158/006...	1.84	1.0	5.5	-	NVRC10-2ULH-156/038	12.70
3/4"x6	3/8"	16	3IL6ACME...	2.37	1.7	1.8	-	NVRC11-3LH-156/025	14.82
7/8"x6			3IL6ACME...	2.37	1.7	1.8	-	NVRC13-3LH-156/028	18.42
1"x5	1/2"	22	4IL5ACME158/019...	2.79	2.0	2.3	-	NVRC17-4LH-156/040	20.32
1 1/8"x5			4IL5ACME...	2.79	2.0	2.3	-	NVRC20-4LH-156/024	24.00
1 1/4"x5			4IL5ACME...	2.79	2.0	2.3	-	NVRC20-4LH-156/033	27.18
1 1/2"x4	5/8"	27	5IL4ACME...	3.43	2.3	2.6	-	NVRC28-5LH-156/034	32.38
1 3/4"x4			5IL4ACME...	3.43	2.3	2.6	YE5-1P	AVRC32-5LH	38.74

U Type RH Inserts Can Be Used for Both LH and RH Applications.

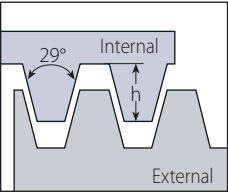
U Style



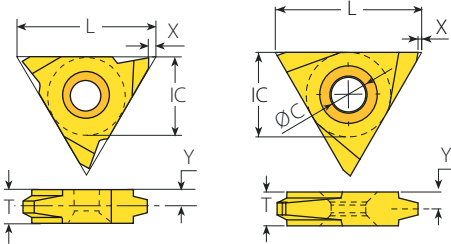
Insert Size		Pitch	Ordering Code	Dimensions mm			Anvil		
IC	L mm	TPI	RH+LH	h min	X	Y	RH	LH	Toolholder
1/2"U	22	4	4UI4ACME...	3.43	2.3	11.0	YI4U	YE4U	AVR...4U (LH)
		3	4UI3ACME...	4.49	2.9	11.0			
5/8"U	27	3	5UI3ACME...	4.49	2.9	13.7	YI5U	YE5U	AVR...5U(LH)

American ACME (con't)

Internal




Defined by: ANSI B1.5:1988
Tolerance class: 3G




V Style On Edge

V Style



Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T	
5/8"V	27	4	5VIR4ACME...	5VIL4ACME...	3.43	1.0	3.3	6	NVR...-5V (LH)
		3.5	5VIR3.5ACME...	5VIL3.5ACME...	3.85	1.0	3.3	6	
		3	5VIR3ACME...	5VIL3ACME...	4.49	1.0	3.3	6	
		2	5VIR2ACME...	5VIL2ACME...	6.60	1.0	5.2	10	

On Edge



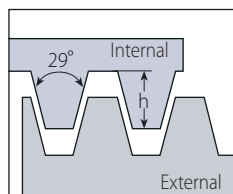
Insert Size		Pitch	Ordering Code		Dimensions mm				
IC	L mm	TPI	RH		h min	T	Ø C	X	Y
1/2"	22	12	TNEC43EI12ACME...		1.19	4.76	5.2	0.5	2.4
		10	TNEC43EI10ACME...		1.52				
		8	TNEC43EI8ACME...		1.83				
		6	TNEC43EI6ACME...		2.36				
		4	TNEC43EI4ACME...		3.43				
5/8"	27	4	TNEC54EI4ACME...		3.43	6.35	6.5		3.2
		3	TNEC54EI3ACME...		4.50				
3/4"	32	2	TNEC56EI2ACME...		6.60	9.53	8.0		4.8

On Edge inserts are suited to existing toolholders on the market.

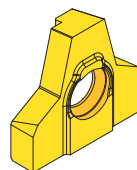
American ACME (con't)

MEGA/LINE

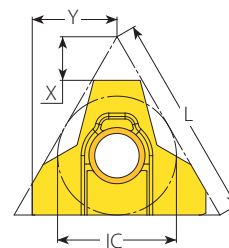
Internal



Defined by: ANSI B1.5:1988
Tolerance class: 3G

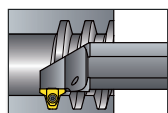


Mega Line



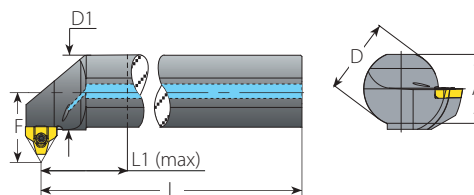
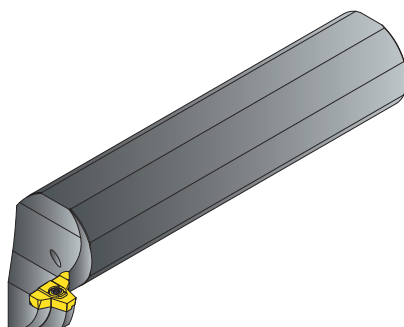
Internal

	Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
	IC	L mm	TPI	RH	h min	X	Y	0.07mm–Min. Depth of Cut (On radius)	0.15mm–Max. Depth of Cut (On radius)
	5/8" MG	27	2	5MGIR2ACME...	6.54	4.81	10.4	94	44
			1 1/2	5MGIR1-1/2ACME...	8.55	5.81		124	58
			1 1/3	5MGIR1-1/3ACME...	9.56	6.81		139	65
			1	5MGIR1ACME...	12.57	8.31		184	86





Internal Toolholders for American ACME

MEGA/LINE



Internal

Internal											Spare Parts	
Insert	Ordering Code	Dimensions mm						Min. Bore Dia.	Thread Diameter Range (Min.-Max.)			
	RH	A	L	L1 (max)	D	D1	F	mm	Short Chip Material	Long Chip Material	Insert Screw	Torx Key
5MGIR2ACME...	NVRC40-5MG2ACME	36	232.5	100	40	39.7	41.5	63.5	(3"-5")-2ACME	(3.5"-5")-2ACME	S5MG	K6T
	NVRC50-5MG2ACME	46	257.5	125	50	49.7	46.5	76.2	(3.5"-5")-2ACME	(4"-5")-2ACME		
	NVRC60-5MG2ACME	57	282.5	150	60	59.7	51.5	88.9	(4"-5")-2ACME	(4.5"-5")-2ACME		
5MGIR1-1/2ACME...	NVRC40-5MG1-1/2ACME	36	232.5	100	40	39.7	41.5	59.3	(3"-5")-1 1/2ACME	(3.5"-5")-1 1/2ACME		
	NVRC50-5MG1-1/2ACME	46	257.5	125	50	49.7	46.5	72.0	(3.5"-5")-1 1/2ACME	(4"-5")-1 1/2ACME		
	NVRC60-5MG1-1/2ACME	57	282.5	150	60	59.7	51.5	84.7	(4"-5")-1 1/2ACME	(4.5"-5")-1 1/2ACME		
5MGIR1-1/3ACME...	NVRC40-5MG1-1/3ACME	36	232.5	100	40	39.7	41.5	57.2	(3"-5")-1 1/3ACME	(3.5"-5")-1 1/3ACME		
	NVRC50-5MG1-1/3ACME	46	257.5	125	50	49.7	46.5	69.9	(3.5"-5")-1 1/3ACME	(4.0"-5")-1 1/3ACME		
	NVRC60-5MG1-1/3ACME	57	282.5	150	60	59.7	51.5	82.6	(4.0"-5")-1 1/3ACME	(4.5"-5")-1 1/3ACME		
5MGIR1ACME...	NVRC40-5MG1ACME	36	232.5	100	40	39.7	41.5	63.5	(3.5"-5")-1ACME	(4"-5")-1ACME		
	NVRC50-5MG1ACME	46	257.5	125	50	49.7	46.5	76.2	(4"-5")-1ACME	(4.5"-5")-1ACME		
	NVRC60-5MG1ACME	57	282.5	150	60	59.7	51.5	76.2	(4"-5")-1ACME	(4.5"-5")-1ACME		

Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.


American ACME (con't)

MINIPRO


Internal

Defined by: ANSI B1.5:1988
Tolerance class: 3G


Mini-3 Standard

	Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
	IC mm	L mm	TPI	RH	LH	h min	Y	F	mm	
	5.0	8	16	5.0KIR16ACME...	5.0KIL16ACME...	0.92	0.7	4.7	7.8	.NVRC7-5.0K (LH)
	6.0	10	12	6.0KIR12ACME...	6.0KIL12ACME...	1.19	1.1	5.1	10.0	.NVRC1..-6.0K (LH)

Mini-3 U Style

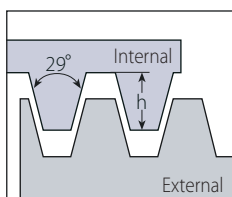
	Insert Size		Pitch	Ordering Code	Dimensions mm			Min. Bore Dia.	Toolholder
	IC mm	L mm	TPI	RH+LH	h min	Y	F	mm	
	5.0U	8	14	5.0KU14ACME...	1.03	4.0	5.8	9.0	
			12	5.0KU12ACME...	1.19				
10			5.0KU10ACME...	1.52					

Mini-L

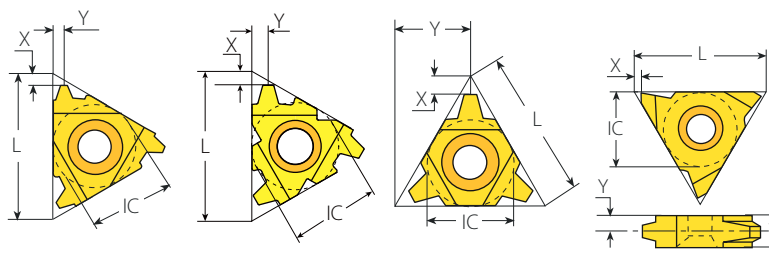
	Insert Size	Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	
	IC mm	TPI	RH	LH	h min	Y	F	mm	Toolholder
	5.0L	12	5LKIR12ACME...	5LKIL12ACME...	1.19	1.1	4.42	8.0	.NVRC10.-5LK (LH)

American ACME (2G)

External



Defined by: ANSI B1.5:1988
Tolerance class: 2G



Standard

F-Line

U Style

V Style

Standard



F-LINE

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
3/8"	16	10	3ER10ACME-2G...	3EL10ACME-2G...	1.52	1.3	1.4	YE3	YI3	AL...-3 (LH)
		8	3ER8ACME-2G...	3EL8ACME-2G...	1.84	1.4	1.5			
1/2"	22	5	4ER5ACME-2G...	4EL5ACME-2G...	2.79	2.0	2.3	YE4	YI4	AL...-4 (LH)
1/2"F	23	5	4FER5ACME-2G...		2.79	2.0	2.3	YE4F		AL...-4F

U Style



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH+LH		h min	X	Y	RH	LH	
1/2"U	22	4	4UE4ACME-2G...		3.43	2.3	11.0	YE4U	YI4U	AL...-4U (LH)
		3.5	4UE3.5ACME-2G...		3.85	2.6	11.0			
		3	4UE3ACME-2G...		4.49	3.0	11.0			

V Style



Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T	
5/8"V	27	4	5VER4ACME-2G...	5VEL4ACME-2G...	3.43	1.0	3.3	6	NL...-5V-6 (LH)
		3.5	5VER3.5ACME-2G...	5VEL3.5ACME-2G...	3.85	1.0	3.3	6	
		3	5VER3ACME-2G...	5VEL3ACME-2G...	4.49	1.0	3.3	6	

American ACME (2G) (con't)

Internal

Defined by: ANSI B1.5:1988
Tolerance class: 2G

Standard

F-Line

U Style

V Style

Standard

F-LINE

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
3/8"	16	10	3IR10ACME-2G...	3IL10ACME-2G...	1.52	1.2	1.3	YI3	YE3	AVR...-3 (LH)
		8	3IR8ACME-2G...	3IL8ACME-2G...	1.84	1.4	1.5		YE4	AVR...-4 (LH)
1/2"	22	5	4IR5ACME-2G...	4IL5ACME-2G...	2.79	2.0	2.3	YI4	YE4	AVR...-4 (LH)
1/2"F	23	5	4FIR5ACME-2G...		2.79	2.0	2.3	YI4F		AVRC...-4F

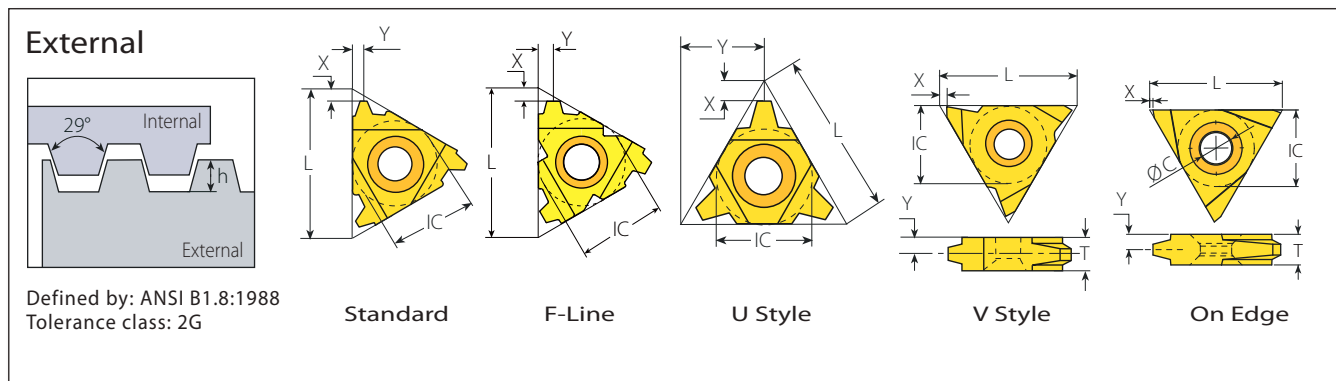
U Style

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH+LH		h min	X	Y	RH	LH	
1/2"U	22	4	4UI4ACME-2G...		3.43	2.3	11.0	YI4U	YE4U	AVR...-4U (LH)
		3.5	4UI3.5ACME-2G...		3.85	2.6	11.0		YE4U	
		3	4UI3ACME-2G...		4.49	2.9	11.0		YE4U	

V Style

Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T	
5/8"V	27	4	5VIR4ACME-2G...	5VIL4ACME-2G...	3.43	1.0	3.3	6	NVR...-5V (LH)
		3.5	5VIR3.5ACME-2G...	5VIL3.5ACME-2G...	3.85	1.0	3.3	6	
		3	5VIR3ACME-2G...	5VIL3ACME-2G...	4.49	1.0	3.3	6	

Stub ACME



Standard

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	16	2ER16STACME...	2EL16STACME...	0.60	1.0	1.0	-	-	NL...-2 (LH)
3/8"	16	16	3ER16STACME...	3EL16STACME...	0.60	1.0	1.0	YE3	YI3	AL...-3 (LH)
		14	3ER14STACME...	3EL14STACME...	0.67	1.1	1.1			
		12	3ER12STACME...	3EL12STACME...	0.76	1.2	1.2			
		10	3ER10STACME...	3EL10STACME...	1.02	1.2	1.3			
		8	3ER8STACME...	3EL8STACME...	1.21	1.4	1.5			
		6	3ER6STACME...	3EL6STACME...	1.52	1.7	1.8			
1/2"	22	6	4ER6STACME...	4EL6STACME...	1.52	1.7	1.8	YE4	YI4	AL...-4 (LH)
		5	4ER5STACME...	4EL5STACME...	1.78	2.1	2.3			
1/2"F	23	4	4ER4STACME...	4EL4STACME...	2.16	2.3	2.3	YE4F		AL...-4F
		6	4FER6STACME...		1.52	1.7	1.8			
		5	4FER5STACME...		1.78	2.1	2.3			
5/8"	27	4	5ER4STACME...	5EL4STACME...	2.16	2.3	2.4	YE5	YI5	AL...-5 (LH)
		3	5ER3STACME...	5EL3STACME...	2.79	2.9	2.9			

U Style

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH+LH		h min	X	Y	RH	LH	
1/2"U	22	4	4UE4STACME...		2.16	2.6	11.0	YE4U	YI4U	AL...-4U (LH)
		3	4UE3STACME...		2.79	3.4	11.0			

V Style

Insert Size		Pitch	Ordering Code		Dimensions mm					Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T		
5/8"V	27	4	5VER4STACME...	5VEL4STACME...	2.16	1.0	3.3	6		NL...-5V-6 (LH)
		3	5VER3STACME...	5VEL3STACME...	2.79	1.0	3.3	6		
		2	5VER2STACME...	5VEL2STACME...	4.06	1.0	4.3	8		NL...-5V-8 (LH)

On Edge

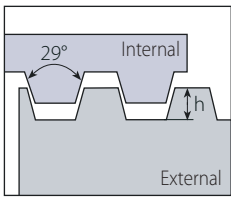
Insert Size		Pitch	Ordering Code		Dimensions mm					Toolholder
IC	L mm	TPI	RH		h min	T	Ø C	X	Y	
3/8"	16	12	TNEC32EI2STACME...		0.76					3.18 3.8 1.0 1.6
		10	TNEC32EI10STACME...		1.02					
		8	TNEC32EI8STACME...		1.22					
1/2"	22	12	TNEC43EI12STACME...		0.76					4.76 5.2 0.5 2.4
		10	TNEC43EI10STACME...		1.02					
		8	TNEC43EI8STACME...		1.22					
		6	TNEC43EI6STACME...		1.52					
		4	TNEC43EI4STACME...		2.16					
5/8"	27	4	TNEC54EI4STACME...		2.16	6.35	6.5			3.2

On Edge inserts are suited to existing toolholders on the market.

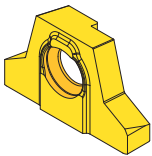
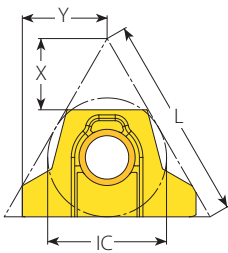
Stub ACME (con't)

MEGA LINE

External



Defined by: ANSI B1.8:1988
Tolerance class: 2G

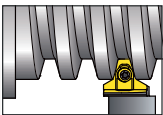


Mega Line

External

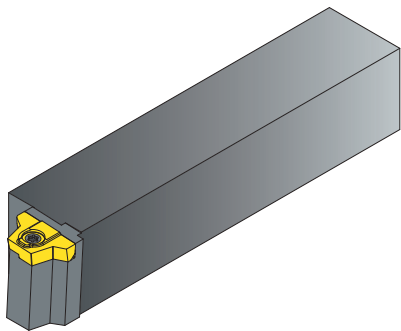


Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	TPI	RH	h min	X	Y	0.07mm–Min. Depth of Cut (On radius)	0.15mm–Max. Depth of Cut (On radius)
5/8" MG	27	1	5MGER1STACME...	7.87	9.51	11.3	113	53





External Toolholders for Stub ACME

MEGA LINE



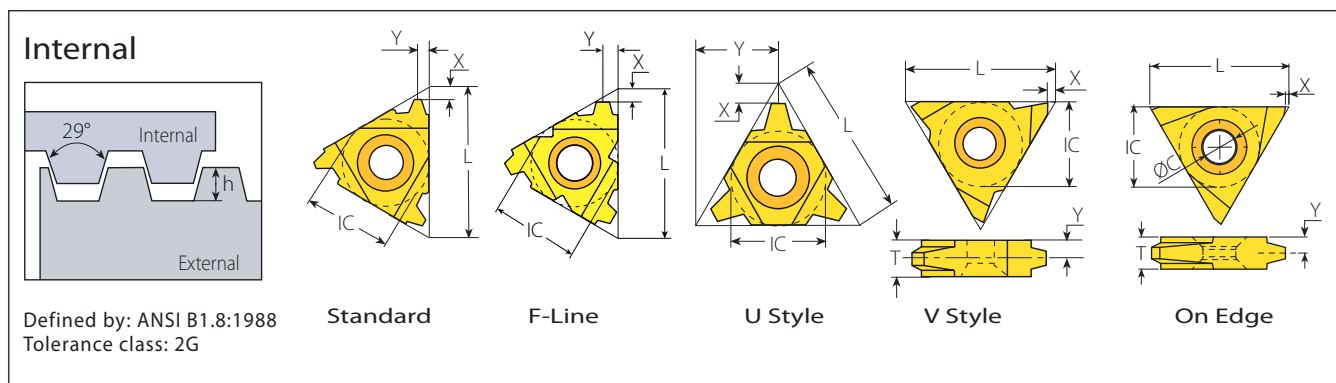
External

Spare Parts

Insert	Ordering Code	Dimensions mm				Thread Diameter Range (Min.-Max.)		
	RH	H=B=H1	F	L1	L2		Insert Screw	Torx Key
5MGER1STACME...	NL25-5MG1STACME	25	16.5	155	22	(3.5"-5")-1STACME	S5MG	K6T
	NL32-5MG1STACME	32	23.5	175				
	NL40-5MG1STACME	40	31.5	205				

Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.

Stub ACME (con't)



Standard



F LINE

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	16	2IR16STACME...	2IL16STACME...	0.60	1.0	1.0	-	-	NVR...-2 (LH)
		16	3IR16STACME...	3IL16STACME...	0.60	1.0	1.0			
		14	3IR14STACME...	3IL14STACME...	0.67	1.1	1.1			
	16	12	3IR12STACME...	3IL12STACME...	0.76	1.1	1.2	YI3	YE3	AVR...-3 (LH)
		10	3IR10STACME...	3IL10STACME...	1.02	1.2	1.3			
		8	3IR8STACME...	3IL8STACME...	1.21	1.4	1.5			
1/2"	22	6	3IR6STACME...	3IL6STACME...	1.52	1.7	1.8	YI4	YE4	AVR...-4 (LH)
		6	4IR6STACME...	4IL6STACME...	1.52	1.7	1.8			
		5	4IR5STACME...	4IL5STACME...	1.78	2.1	2.3			
		4	4IR4STACME...	4IL4STACME...	2.16	2.3	2.3			
1/2"F	23	6	4FIR6STACME...		1.52	1.7	1.8	YI4F		AVRC...-4F
		5	4FIR5STACME...		1.78	2.1	2.3			
		4	4FIR4STACME...		2.16	2.3	2.3			
5/8"	27	4	5IR4STACME...	5IL4STACME...	2.16	2.3	2.4	YI5	YE5	AVR...-5 (LH)
		3	5IR3STACME...	5IL3STACME...	2.79	2.9	2.9			

U Style



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH+LH		h min	X	Y	RH	LH	
1/2"U	22	4	4UI4STACME...		2.16	2.5	11.0	YI4U	YE4U	AVR...-4U (LH)
		3	4UI3STACME...		2.79	3.3	11.0			

V Style



Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T	
5/8"V	27	4	5VIR4STACME...	5VIL4STACME...	2.16	1.0	3.3	6	NVR...-5V (LH)
		3	5VIR3STACME...	5VIL3STACME...	2.79	1.0	3.3	6	
		2	5VIR2STACME...	5VIL2STACME...	4.06	1.0	4.3	8	

On Edge



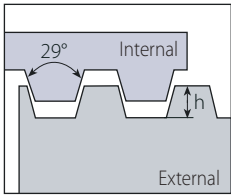
Insert Size		Pitch	Ordering Code		Dimensions mm				
IC	L mm	TPI	RH		h min	T	Ø C	X	Y
3/8"	16	12	TNEC32EI12STACME...		0.76	3.175	3.8	1	1.6
		10	TNEC32EI10STACME...		1.02				
		8	TNEC32EI8STACME...		1.22				
1/2"	22	12	TNEC43EI12STACME...		0.76	4.76	5.2	0.5	2.4
		10	TNEC43EI10STACME...		1.02				
		8	TNEC43EI8STACME...		1.22				
		6	TNEC43EI6STACME...		1.52				
		4	TNEC43EI4STACME...		2.16				
5/8"	27	4	TNEC54EI4STACME...		2.16	6.35	6.5		3.2

On Edge inserts are suited to existing toolholders on the market.

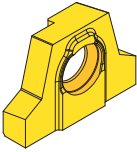
Stub ACME (con't)

MEGALINE

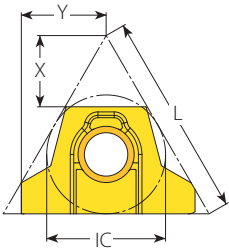
Internal



Defined by: ANSI B1.8:1988
Tolerance class: 2G



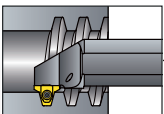
Mega Line



Internal

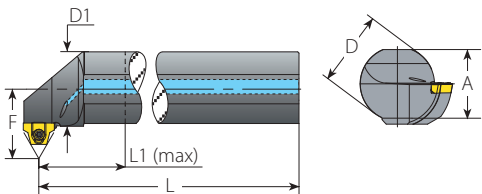
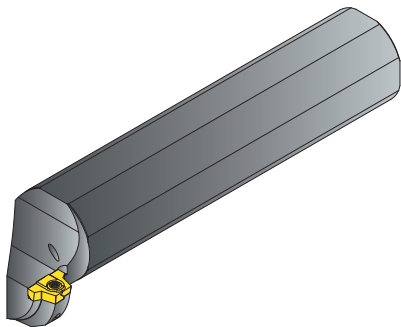


Insert Size		Pitch	Ordering Code		Dimensions mm			Number of Passes	
IC	L mm	TPI	RH		h min	X	Y	0.07mm-Min. Depth of Cut (On radius)	0.15mm-Max. Depth of Cut (On radius)
5/8" MG	27	1	5MGIR1STACME...		7.82	9.51	10.4	113	53





Internal Toolholders for Stub ACME

MEGALINE

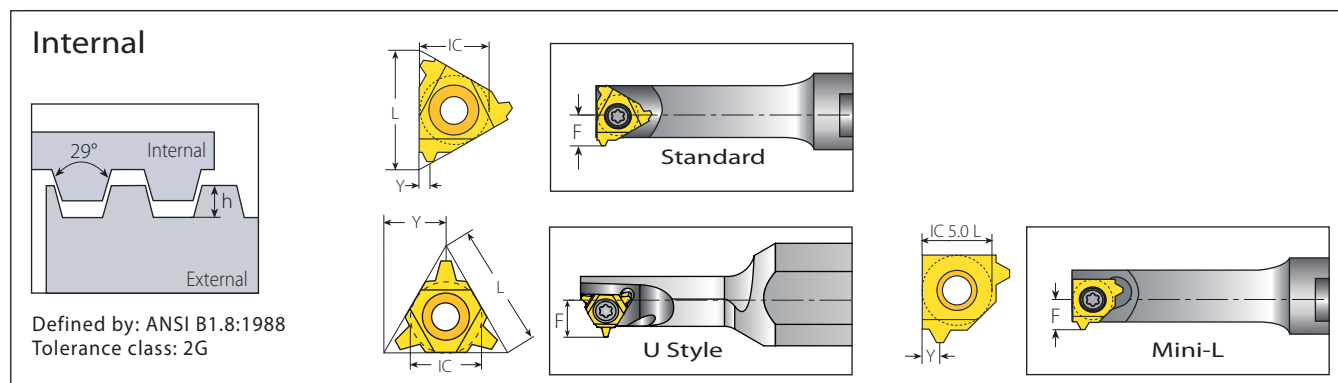


Internal

Internal											Spare Parts	
Insert	Ordering Code	Dimensions				Min. Bore Dia.	Thread Diameter Range (Min.-Max.)					
	RH	A	L	L1 (max)	D	D1	F	mm	Short Chip Material	Long Chip Material	Insert Screw	Torx Key
5MGIR 1STACME...	NVRC40-5MG1STACME	36	232.5	100	40	39.7	41.5	73.7	(3.5"-5")-1STACME	(3.5"-5")-1STACME	S5MG	K6T
	NVRC50-5MG1STACME	46	257.5	125	50	49.7	46.5	73.7	(3.5"-5")-1STACME	(4.0"-5")-1STACME		
	NVRC60-5MG1STACME	57	282.5	150	60	59.7	51.5	86.4	(4.0"-5")-1STACME	(4.5"-5")-1STACME		

Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.

Stub ACME (con't)

MINIPRO


Mini-3 Standard



Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	TPI	RH	LH	h min	Y	F	mm	
5.0	8	16	5.0KIR16STACME...	5.0KIL16STACME...	0.60	0.7	4.7	7.8	.NVRC7-5.0K (LH)
6.0	10	12	6.0KIR12STACME...	6.0KIL12STACME...	0.76	1.2	5.1	10.0	.NVRC1.-6.0K (LH)

Mini-3 U Style



Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	TPI	RH+LH		h min	Y	F	mm	
5.0U	8	14	5.0KUI14STACME...		0.67		5.8		
		12	5.0KUI12STACME...		0.76	4.0	5.7	9.0	.NVRC8-5.0KU (LH)
		10	5.0KUI10STACME...		1.02		5.6		

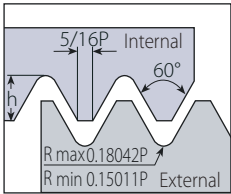
Mini-L



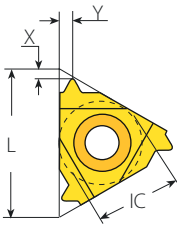
Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm		TPI	RH	LH	h min	Y	F	mm	
5.0L		12	5LKIR12STACME...	5LKIL12STACME...	0.76	1.2	4.42	8.0	.NVRC10.-5LK (LH)

UNJ - UNJC, UNJF, UNJEF, UNJS

External



Defined by: MIL-S-8879C
Tolerance class: 3A/3B

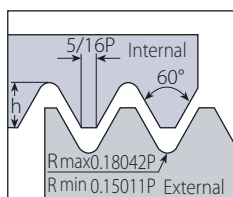


Standard

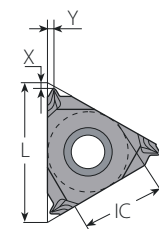
Standard

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	48	2ER48UNJ...	2EL48UNJ...	0.31	0.6	0.5	-	-	NL...-2 (LH)
		44	2ER44UNJ...	2EL44UNJ...	0.33	0.6	0.6			
		40	2ER40UNJ...	2EL40UNJ...	0.37	0.6	0.6			
		36	2ER36UNJ...	2EL36UNJ...	0.41	0.6	0.6			
		32	2ER32UNJ...	2EL32UNJ...	0.46	0.6	0.7			
		28	2ER28UNJ...	2EL28UNJ...	0.52	0.7	0.7			
		24	2ER24UNJ...	2EL24UNJ...	0.61	0.7	0.8			
		20	2ER20UNJ...	2EL20UNJ...	0.73	0.8	0.9			
		18	2ER18UNJ...	2EL18UNJ...	0.81	0.8	1.0			
		16	2ER16UNJ...	2EL16UNJ...	0.92	0.9	1.1			
3/8"	16	14	2ER14UNJ...	2EL14UNJ...	1.05	1.0	1.2	YE3	YI3	AL...-3 (LH)
		48	3ER48UNJ...	3EL48UNJ...	0.31	0.6	0.5			
		44	3ER44UNJ...	3EL44UNJ...	0.33	0.6	0.6			
		40	3ER40UNJ...	3EL40UNJ...	0.37	0.6	0.6			
		36	3ER36UNJ...	3EL36UNJ...	0.41	0.6	0.6			
		32	3ER32UNJ...	3EL32UNJ...	0.46	0.6	0.7			
		28	3ER28UNJ...	3EL28UNJ...	0.52	0.7	0.7			
		24	3ER24UNJ...	3EL24UNJ...	0.61	0.7	0.8			
		20	3ER20UNJ...	3EL20UNJ...	0.73	0.8	0.9			
		18	3ER18UNJ...	3EL18UNJ...	0.81	0.8	1.0			
		16	3ER16UNJ...	3EL16UNJ...	0.92	0.9	1.1			
		14	3ER14UNJ...	3EL14UNJ...	1.05	1.0	1.2			
		13	3ER13UNJ...	3EL13UNJ...	1.13	1.0	1.3			
		12	3ER12UNJ...	3EL12UNJ...	1.22	1.1	1.3			
		11	3ER11UNJ...	3EL11UNJ...	1.33	1.2	1.5			
		10	3ER10UNJ...	3EL10UNJ...	1.47	1.2	1.5			
		9	3ER9UNJ...	3EL9UNJ...	1.63	1.3	1.7			
		8	3ER8UNJ...	3EL8UNJ...	1.83	1.2	1.6			

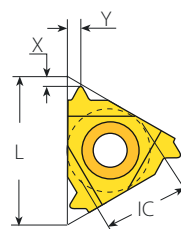


UNJ - UNJC, UNJF, UNJEF, UNJS (con't)**External**

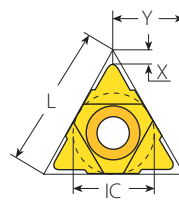
Defined by: MIL-S-8879C
Tolerance class: 3A/3B



SCB
Sintered
Chipbreaker



Standard



U Style

Standard

SCB

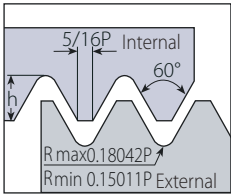
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
3/8" SCB	16	36	3JER36UNJ...		0.41	1.3	0.5	YE3	-	AL...-3
		32	3JER32UNJ...		0.46	1.2	0.5			
		28	3JER28UNJ...		0.52	0.7	0.8			
		24	3JER24UNJ...		0.61	0.7	0.8			
		20	3JER20UNJ...		0.73	0.7	0.8			
		18	3JER18UNJ...		0.81	0.7	0.8			
		16	3JER16UNJ...		0.92	0.8	0.8			
		14	3JER14UNJ...		1.05	1.3	1.5			
		12	3JER12UNJ...		1.22	1.3	1.5			
		10	3JER10UNJ...		1.47	1.3	1.5			
1/2"	22	7	4ER7UNJ...	4EL7UNJ...	2.09	1.7	2.3	YE4	YI4	AL...-4 (LH)
		6	4ER6UNJ...	4EL6UNJ...	2.44	1.7	2.3			
		5	4ER5UNJ...	4EL5UNJ...	2.93	1.8	2.5			
5/8"	27	4.5	5ER4.5UNJ...	5EL4.5UNJ...	3.26	2.0	2.7	YE5	YI5	AL...-5 (LH)
		4	5ER4UNJ...	5EL4UNJ...	3.67	2.2	3.1			

**U Style**

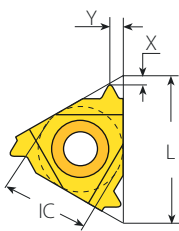
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH+LH		h min	X	Y	RH	LH	
1/2"U	22	4.5	4UE4.5UNJ...		3.26	2.1	11.0	YE4U	YI4U	AL...-4U (LH)
		4	4UE4UNJ...		3.67	2.2	11.0			

UNJ - UNJC, UNJF, UNJEF, UNJS (con't)

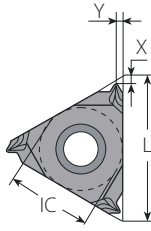
Internal



Defined by: MIL-S-8879C
Tolerance class: 3A/3B



Standard



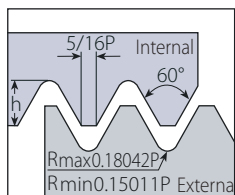
SCB
Sintered
Chipbreaker

Standard

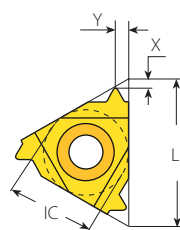
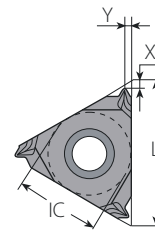


SCB

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	48	2IR48UNJ...	2IL48UNJ...	0.28	0.6	0.5	-	-	NVR..-2 (LH)
		44	2IR44UNJ...	2IL44UNJ...	0.30	0.6	0.6			
		40	2IR40UNJ...	2IL40UNJ...	0.33	0.6	0.6			
		36	2IR36UNJ...	2IL36UNJ...	0.37	0.6	0.6			
		32	2IR32UNJ...	2IL32UNJ...	0.42	0.6	0.7			
		28	2IR28UNJ...	2IL28UNJ...	0.47	0.7	0.7			
		24	2IR24UNJ...	2IL24UNJ...	0.55	0.7	0.8			
		20	2IR20UNJ...	2IL20UNJ...	0.66	0.8	0.9			
		18	2IR18UNJ...	2IL18UNJ...	0.74	0.8	1.0			
		16	2IR16UNJ...	2IL16UNJ...	0.83	0.9	1.1			
		14	2IR14UNJ...	2IL14UNJ...	0.95	1.0	1.2			
1/4" SCB	11	36	2JIR36UNJ...		0.37	1.1	0.5	-	-	NVR..-2
		32	2JIR32UNJ...		0.42	1.2	0.5			
		28	2JIR28UNJ...		0.47	0.6	0.8			
		24	2JIR24UNJ...		0.55	0.6	0.8			
		20	2JIR20UNJ...		0.66	0.6	0.8			
		18	2JIR18UNJ...		0.74	0.6	0.8			
		16	2JIR16UNJ...		0.83	0.6	0.8			
		14	2JIR14UNJ...		0.95	0.6	0.8			

UNJ - UNJC, UNJF, UNJEF, UNJS (con't)**Internal**

Defined by: MIL-S-8879C
Tolerance class: 3A/3B

**Standard****SCB**
Sintered
Chipbreaker**Standard**

3/8"

16



SCB

3/8"
SCB

16



1/2"

22

5/8"

27

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
3/8"	16	48	3IR48UNJ...	3IL48UNJ...	0.28	0.6	0.5	YI3	YE3	AVR...-3 (LH)
		44	3IR44UNJ...	3IL44UNJ...	0.30	0.6	0.6			
		40	3IR40UNJ...	3IL40UNJ...	0.33	0.6	0.6			
		36	3IR36UNJ...	3IL36UNJ...	0.37	0.6	0.6			
		32	3IR32UNJ...	3IL32UNJ...	0.42	0.6	0.7			
		28	3IR28UNJ...	3IL28UNJ...	0.47	0.7	0.7			
		24	3IR24UNJ...	3IL24UNJ...	0.55	0.7	0.8			
		20	3IR20UNJ...	3IL20UNJ...	0.66	0.8	0.9			
		18	3IR18UNJ...	3IL18UNJ...	0.74	0.8	1.0			
		16	3IR16UNJ...	3IL16UNJ...	0.83	0.9	1.1			
		14	3IR14UNJ...	3IL14UNJ...	0.95	1.0	1.2			
		13	3IR13UNJ...	3IL13UNJ...	1.02	1.0	1.3			
		12	3IR12UNJ...	3IL12UNJ...	1.11	1.1	1.3			
		11	3IR11UNJ...	3IL11UNJ...	1.21	1.2	1.5			
		10	3IR10UNJ...	3IL10UNJ...	1.33	1.2	1.5			
		9	3IR9UNJ...	3IL9UNJ...	1.48	1.3	1.7			
		8	3IR8UNJ...	3IL8UNJ...	1.66	1.2	1.6			
3/8" SCB	16	28	3JIR28UNJ...		0.47	0.6	0.8	YI3	-	AVR...-3
		24	3JIR24UNJ...		0.55	0.6	0.8			
		20	3JIR20UNJ...		0.66	0.6	0.8			
		18	3JIR18UNJ...		0.74	0.6	0.8			
		16	3JIR16UNJ...		0.83	0.6	0.8			
		14	3JIR14UNJ...		0.95	1.1	1.5			
		12	3JIR12UNJ...		1.11	1.1	1.5			
		10	3JIR10UNJ...		1.33	1.1	1.5			
		8	3JIR8UNJ...		1.66	1.0	1.5			
1/2"	22	7	4IR7UNJ...	4IL7UNJ...	1.90	1.7	2.3	YI4	YE4	AVR...-4 (LH)
		6	4IR6UNJ...	4IL6UNJ...	2.21	1.7	2.3			
		5	4IR5UNJ...	4IL5UNJ...	2.66	1.8	2.5			
5/8"	27	4.5	5IR4.5UNJ...	5IL4.5UNJ...	2.95	2.0	2.7	YI5	YE5	AVR...-5 (LH)
		4	5IR4UNJ...	5IL4UNJ...	3.32	2.2	2.4			

UNJ - UNJC, UNJF, UNJEF, UNJS (con't)

Internal




Defined by: MIL-S-8879C
Tolerance class: 3A/3B



U Style

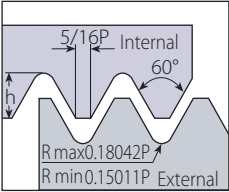
U Style

	Insert Size		Pitch	Ordering Code	Dimensions mm			Anvil		Toolholder
	IC	L mm	TPI	RH+LH	h min	X	Y	RH	LH	
1/2"U	22		4.5	4UI4.5UNJ...	2.95	2.1	11.0	YI4U	YE4U	AVR...-4U (LH)
			4	4UI4UNJ...	3.32	2.2	11.0			

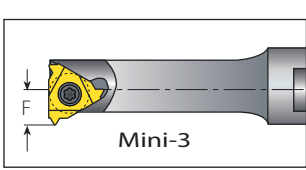
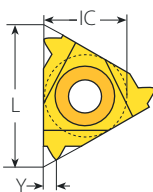
UNJ - UNJC, UNJF, UNJEF, UNJS

MINIPRO

Internal




Defined by: MIL-S-8879C
Tolerance class: 3A/3B




Mini-3

Mini-L

Mini-3 Standard

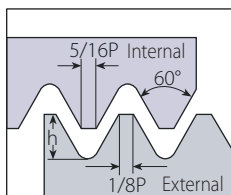
	Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
	IC mm	L mm	TPI	RH	LH	h min	Y	F	mm	
	6.0	10	20	6.0KIR20UNJ...	6.0KIL20UNJ...	0.66	0.9	4.90	9.8	.NVR1...-6.0K (LH)

Mini-L

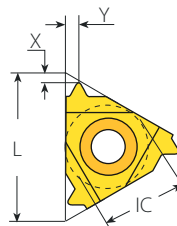
	Insert Size	Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
	IC mm	TPI	RH	LH	h min	Y	F	mm	
	5.0L	32	5LKIR32UNJ...	5LKIL32UNJ...	0.42	0.6	3.92	7.6	.NVR10...-5LK (LH)
		28	5LKIR28UNJ...	5LKIL28UNJ...	0.47	0.6	3.99	7.6	
		24	5LKIR24UNJ...	5LKIL24UNJ...	0.55	0.8	4.20	7.6	
		20	5LKIR20UNJ...	5LKIL20UNJ...	0.66	0.9	4.21	7.7	
		18	5LKIR18UNJ...	5LKIL18UNJ...	0.74	1.0	4.30	7.8	
		16	5LKIR16UNJ...	5LKIL16UNJ...	0.83	1.0	4.41	7.8	
		14	5LKIR14UNJ...	5LKIL14UNJ...	0.95	1.0	4.54	7.9	

MJ

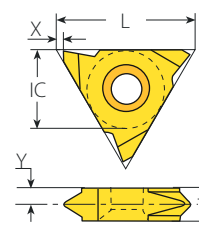
External



Defined by: ISO 5855
Tolerance class: 4h/6h-4H/5H



Standard



Slim Throat

Standard



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	
1/4"	11	1.0	2ER1.0MJ...	2EL1.0MJ...	0.58	0.7	0.7	-	-	NL..-2 (LH)
		1.25	2ER1.25MJ...	2EL1.25MJ...	0.72	0.8	0.9			
		1.5	2ER1.5MJ...	2EL1.5MJ...	0.87	0.8	1.0			
3/8"	16	0.7	3ER0.7MJ...	3EL0.7MJ...	0.40	0.6	0.6	YE3	YI3	AL..-3 (LH)
		0.8	3ER0.8MJ...	3EL0.8MJ...	0.45	0.7	0.7			
		1.0	3ER1.0MJ...	3EL1.0MJ...	0.58	0.7	0.7			
		1.25	3ER1.25MJ...	3EL1.25MJ...	0.72	0.8	0.9			
		1.5	3ER1.5MJ...	3EL1.5MJ...	0.87	0.8	1.0			
		2.0	3ER2.0MJ...	3EL2.0MJ...	1.15	1.0	1.3			
		2.5	3ER2.5MJ...	3EL2.5MJ...	1.49	1.1	1.5			
		3.0	3ER3.0MJ...	3EL3.0MJ...	1.73	1.2	1.6			

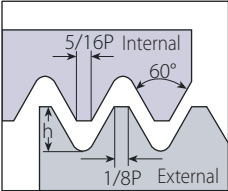
Slim Throat



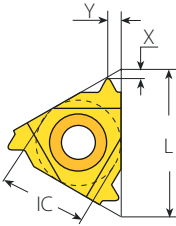
Insert Size		Pitch	Ordering Code		Dimensions mm				Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	T	
1/4"V	11	0.7	2VER0.7MJ...	2VEL0.7MJ...	0.40	0.7	2.5	3.2	NL..-2V (LH)
		0.8	2VER0.8MJ...	2VEL0.8MJ...	0.44	0.7	2.5	3.2	
		0.9	2VER0.9MJ...	2VEL0.9MJ...	0.53	0.7	2.6	3.2	
		1.0	2VER1.0MJ...	2VEL1.0MJ...	0.58	0.7	2.5	3.2	
		1.25	2VER1.25MJ...	2VEL1.25MJ...	0.72	0.7	2.3	3.2	
		1.5	2VER1.5MJ...	2VEL1.5MJ...	0.87	0.7	2.2	3.2	

MJ (con't)

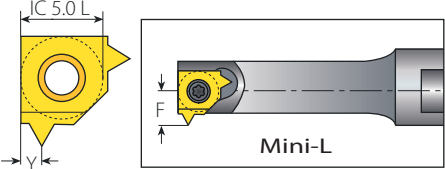
Internal



Defined by: ISO 5855
Tolerance class: 4h/6h-4H/5H




Standard




Mini-L

Standard

	Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
	IC mm	L mm	mm	RH	LH	h min	X	Y	RH	LH	
	1/4"	11	1.0	2IR1.0MJ...	2IL1.0MJ...	0.49	0.6	0.7	-	-	NVR..-2 (LH)
			1.25	2IR1.25MJ...	2IL1.25MJ...	0.61	0.8	0.9			
			1.5	2IR1.5MJ...	2IL1.5MJ...	0.73	0.8	1.0			
			2.0	2IR2.0MJ...	2IL2.0MJ...	0.97	0.8	1.0			
	3/8"	16	0.75	3IR0.75MJ...	3IL0.75MJ...	0.37	0.6	0.6	Y13	YE3	AVR..-3 (LH)
			0.8	3IR0.8MJ...	3IL0.8MJ...	0.44	0.7	0.7			
			1.0	3IR1.0MJ...	3IL1.0MJ...	0.49	0.6	0.7			
			1.25	3IR1.25MJ...	3IL1.25MJ...	0.61	0.8	0.9			
1.5			3IR1.5MJ...	3IL1.5MJ...	0.73	0.8	1.0				
2.0			3IR2.0MJ...	3IL2.0MJ...	0.97	0.8	1.3				
2.5			3IR2.5MJ...	3IL2.5MJ...	1.23	1.1	1.5				
3.0			3IR3.0MJ...	3IL3.0MJ...	1.46	1.2	1.6				

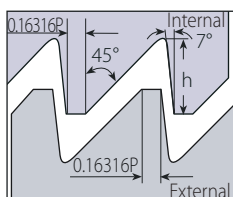
Mini - L

MINIPRO

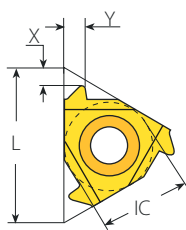
Insert Size		Pitch	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm		mm	RH	LH	h min	Y	F	mm	
	5.0L	1.0	5LKIR1.0MJ...	5LKIL1.0MJ...	0.49	0.7	4.06	7.6	.NVRC10.-5LK (LH)
		1.25	5LKIR1.25MJ...	5LKIL1.25MJ...	0.61	0.9	4.21	7.6	
		1.5	5LKIR1.50MJ...	5LKIL1.50MJ...	0.73	1.0	4.35	7.7	

American Buttress

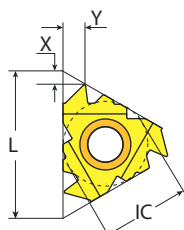
External



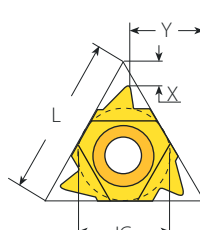
Defined by: ANSI B1.9.1973
Tolerance class: Class 2



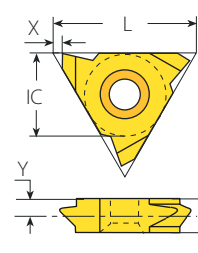
Standard



F-Line



U Style



V Style

Standard



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	20	2ER20ABUT...	2EL20ABUT...	0.84	1.0	1.4	-	-	NL...-2 (LH)
		16	2ER16ABUT...	2EL16ABUT...	1.05	1.3	1.9	-	-	
3/8"	16	20	3ER20ABUT...	3EL20ABUT...	0.84	1.0	1.4	YE3	YI3	AL...-3 (LH)
		16	3ER16ABUT...	3EL16ABUT...	1.05	1.3	1.9			
		12	3ER12ABUT...	3EL12ABUT...	1.40	1.4	2.0			
		10	3ER10ABUT...	3EL10ABUT...	1.68	1.5	2.3			
1/2"	22	8	4ER8ABUT...	4EL8ABUT...	2.10	2.0	3.2	YE4	YI4	AL...-4 (LH)
		6	4ER6ABUT...	4EL6ABUT...	2.80	2.2	3.5			
1/2"F	23	8	4FER8ABUT...		2.10	2.0	3.2	YE4F		AL...-4F
		6	4FER6ABUT...		2.80	2.2	3.5			

U Style



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/2"U	22	4	4UER4ABUT...	4UEL4ABUT...	4.21	2.4	9.8	YE4U-BUT4	YI4U-BUT4	AL...-4U (LH)
5/8"U	27	3	5UER3ABUT...	5UEL3ABUT...	5.61	3.1	12.1	YE5U-BUT3	YI5U-BUT3	AL...-5U (LH)

V Style

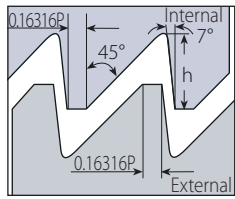


Insert Size		Pitch	Ordering Code		Dimensions mm					Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T		
5/8"V	27	4	5VER4ABUT...	5VEL4ABUT...	4.21	0.6	1.8	6		NL...-5V-6 (LH)
		3	5VER3ABUT...	5VEL3ABUT...	5.61	0.6	2.2	8		NL...-5V-8 (LH)
		2.5	5VER2.5ABUT...	5VEL2.5ABUT...	6.73	0.6	2.7	10		NL...-5V-10ABUT (LH)

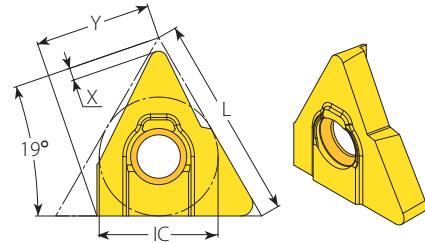
American Buttress (con't)

MEGALINE

External



Defined by: ANSI B1.9.1973
Tolerance class: Class 2



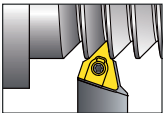
Mega Line



External

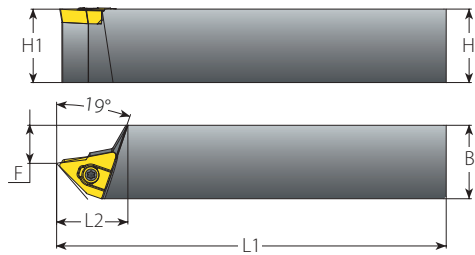
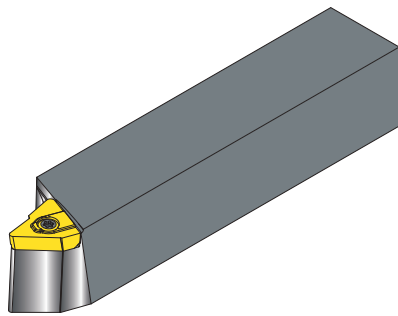


Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	TPI	RH	h min	X	Y	0.07mm–Min. Depth of Cut (On radius)	0.15mm–Max. Depth of Cut (On radius)
5/8" MG	27	2	5MGER2ABUT...	8.42	1.58	15.55	120	56
		1.5	5MGER1.5ABUT...	11.22	1.64		160	75





External Toolholders for American Buttress

MEGALINE



External

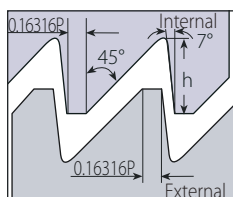
Spare Parts

Insert	Ordering Code	Dimensions mm			Thread Diameter Range (Min.-Max.)			
	RH	H=B=H1	F	L1	L2		Insert Screw	Torx Key
5MGER2ABUT...	NL25-5MG2ABUT	25	9.5	150	31	(7"-24")-2ABUT	S5MG	K6T
	NL32-5MG2ABUT	32	16.5	170				
	NL40-5MG2ABUT	40	24.5	200				
5MGER1.5ABUT...	NL25-5MG1.5ABUT	25	9.5	150	31	(11"-24")-1.5ABUT		
	NL32-5MG1.5ABUT	32	16.5	170				
	NL40-5MG1.5ABUT	40	24.5	200				

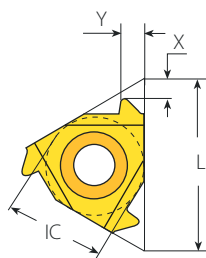
Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.

American Buttress (con't)

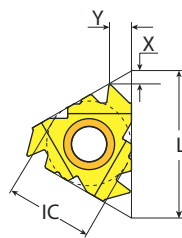
Internal



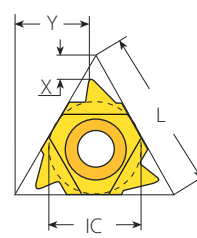
Defined by: ANSI B1.9.1973
Tolerance class: Class 2



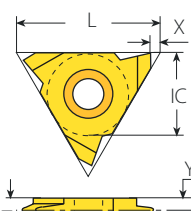
Standard



F-Line



U Style



V Style

Standard



F-LINE

Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/4"	11	20	2IR20ABUT...	2IL20ABUT...	0.84	1.0	1.4	-	-	NVR...-2 (LH)
		16	2IR16ABUT...	2IL16ABUT...	1.05	1.3	1.9			
3/8"	16	20	3IR20ABUT...	3IL20ABUT...	0.84	1.0	1.4	YI3	YE3	AVR...-3 (LH)
		16	3IR16ABUT...	3IL16ABUT...	1.05	1.3	1.9			
		12	3IR12ABUT...	3IL12ABUT...	1.40	1.4	2.0			
		10	3IR10ABUT...	3IL10ABUT...	1.68	1.5	2.3			
1/2"	22	8	4IR8ABUT...	4IL8ABUT...	2.10	2.0	3.2	YI4	YE4	AVR...-4 (LH)
		6	4IR6ABUT...	4IL6ABUT...	2.80	2.2	3.5			
1/2"F	23	8	4FIR8ABUT...		2.10	2.0	3.2	YI4F		AVRC...-4F
		6	4FIR6ABUT...		2.80	2.2	3.5			

U Style



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
1/2"U	22	4	4UIR4ABUT...	4UIL4ABUT...	4.21	2.4	9.8	YI4U-4B	YE4U-4B	AVR...-4U (LH)
5/8"U	27	3	5UIR3ABUT...	5UIL3ABUT...	5.61	3.1	12.1	YI5U-3B	YE5U-3B	AVR...-5U (LH)

V Style

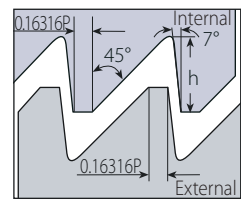


Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	T		
5/8"V	27	4	5VIR4ABUT...	5VIL4ABUT...	4.21	0.6	1.8	6		NVR...-5V (LH)
		3	5VIR3ABUT...	5VIL3ABUT...	5.61	0.6	2.2	8		
		2.5	5VIR2.5ABUT...	5VIL2.5ABUT...	6.73	0.6	2.7	10		

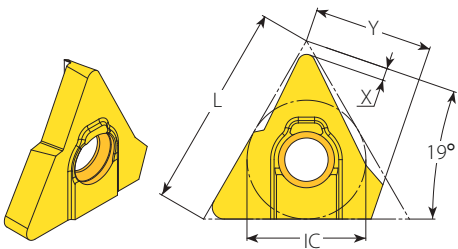
American Buttress (con't)

MEGALINE

Internal



Defined by: ANSI B1.9.1973
Tolerance class: Class 2



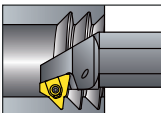
Mega Line



Internal

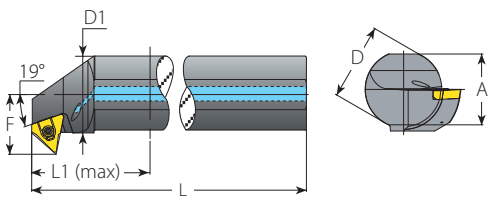
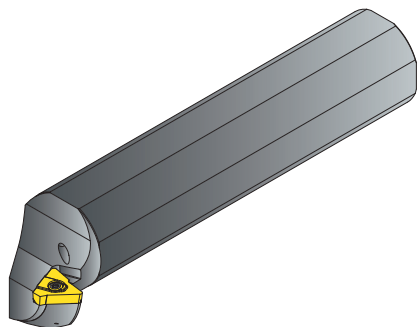


Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	TPI	RH	h min	X	Y	0.07mm-Min. Depth of Cut (On radius)	0.15mm-Max. Depth of Cut (On radius)
5/8" MG	27	2	5MGIR2ABUT...	8.94	1.58	15.9	128	60
		1.5	5MGIR1.5ABUT...	11.92	1.64		170	79




Internal Toolholders for American Buttress

MEGALINE



Internal

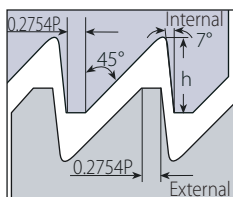
Spare Parts

Insert	Ordering Code	Dimensions mm						Min. Bore Dia.	Thread Diameter Range (Min.-Max.)			
	RH	A	L	L1 (max)	D	D1	F	mm	Short Chip Material	Long Chip Material	Insert Screw	Torx Key
5MGIR2ABUT...	NVRC40-5MG2ABUT	36	230.5	100	40	39.7	35.0	162.6	(7"-16")-2ABUT	(7"-16")-2ABUT	S5MG	K6T
	NVRC50-5MG2ABUT	46	255.5	125	50	49.7	39.5					
	NVRC60-5MG2ABUT	57	280.5	150	60	59.7	44.0					
5MGIR1.5ABUT...	NVRC40-5MG1.5ABUT	36	230.5	100	40	39.7	35.0	259.1	(11"-22")-1.5ABUT	(11"-22")-1.5ABUT		
	NVRC50-5MG1.5ABUT	46	255.5	125	50	49.7	39.5					
	NVRC60-5MG1.5ABUT	57	280.5	150	60	59.7	44.0					

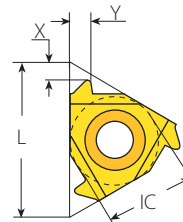
Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.

British Buttress

External



Defined by: B.S. 1657: 1950
Tolerance class: Medium Class



Standard

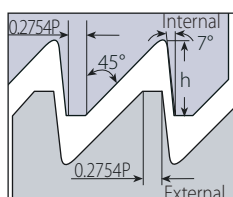
Standard



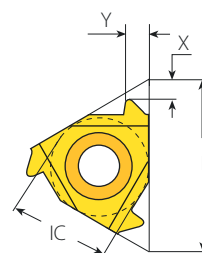
Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
3/8"	16	16	3ER16BBUT...	3EL16BBUT...	0.80	1.1	1.6	YE3	YI3	AL..-3 (LH)
		12	3ER12BBUT...	3EL12BBUT...	1.07	1.4	2.1			
		10	3ER10BBUT...	3EL10BBUT...	1.28	1.4	2.2			
		8	3ER8BBUT...	3EL8BBUT...	1.61	1.6	2.5			
1/2"	22	8	4ER8BBUT...	4EL8BBUT...	1.61	1.6	2.5	YE4	YI4	AL..-4 (LH)

British Buttress

Internal

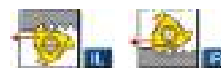


Defined by: B.S. 1657: 1950
Tolerance class: Medium Class



Standard

Standard



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI	RH	LH	h min	X	Y	RH	LH	
3/8"	16	16	3IR16BBUT...	3IL16BBUT...	0.80	1.1	1.6	YI3	YE3	AVR..-3 (LH)
		12	3IR12BBUT...	3IL12BBUT...	1.07	1.4	2.1			
		10	3IR10BBUT...	3IL10BBUT...	1.28	1.4	2.2			
		8	3IR8BBUT...	3IL8BBUT...	1.61	1.6	2.5			
1/2"	22	8	4IR8BBUT...	4IL8BBUT...	1.61	1.6	2.5	YI4	YE4	AVR..-4 (LH)

Metric Buttress (Sägewinde)

External

Defined by: DIN 513
Tolerance class: Medium Class

Standard

F-Line

U Style

Standard - External



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	
3/8"	16	2.0	3ER2.0SAGE...	3EL2.0SAGE...	1.74	1.5	2.1	YE3	YI3	AL...-3 (LH)
		2.0	4ER2.0SAGE...	4EL2.0SAGE...	1.74	1.5	2.1			
1/2"	22	3.0	4ER3.0SAGE...	4EL3.0SAGE...	2.60	1.8	2.6	YE4	YI4	AL...-4 (LH)
		4.0	4ER4.0SAGE...	4EL4.0SAGE...	3.55	1.75	3.1			
1/2"F	23	3.0	4FER3.0SAGE...		2.60	1.8	2.6	YE4F		AL...-4F
		4.0	4FER4.0SAGE...		3.55	1.75	3.1			
5/8"	27	4.0	5ER4.0SAGE...	5EL4.0SAGE...	3.55	1.9	3.2	YE5 082/038	YI5 082/039	AL...-5 (LH)

U Style - External

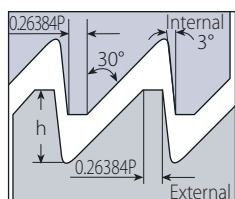


Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	
1/2"U	22	5.0	4UER5.0SAGE...	4UEL5.0SAGE...	4.41	1.27	10.35	YE4U-SAGE5	YI4U-SAGE5	AL...-4U (LH)
		6.0	4UER6.0SAGE...	4UEL6.0SAGE...	5.29	1.25	10.28	YE4U-SAGE6	YI4U-SAGE6	

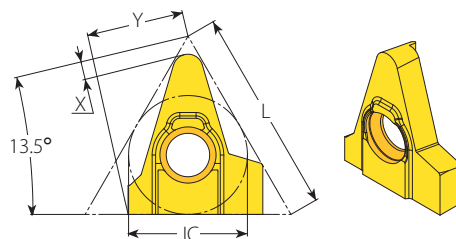
Metric Buttress (Sägewinde) (con't)

MEGALINE

External



Defined by: DIN 513
Tolerance class: Medium Class

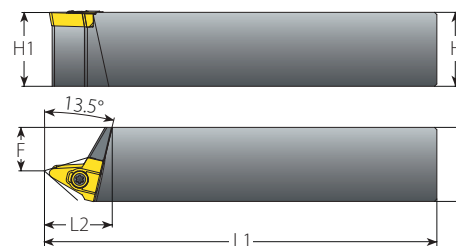
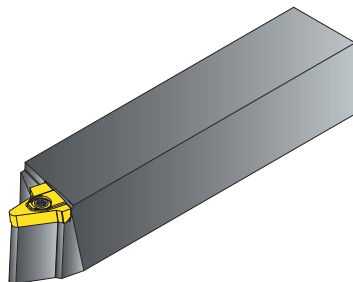
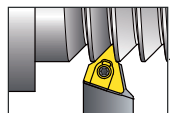

Mega Line


External





Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	mm	RH	h min	X	Y	0.07mm–Min. Depth of Cut (On radius)	0.15mm–Max. Depth of Cut (On radius)
5/8" MG	27	10.0	5MGER10.0SAGE...	8.68	1.57	13.3	124	58
		12.0	5MGER12.0SAGE...	10.41	1.81		149	69
		14.0	5MGER14.0SAGE...	12.15	2.05		174	81
		16.0	5MGER16.0SAGE...	13.88	3.27		198	93
		20.0	5MGER20.0SAGE...	17.36	2.56		248	116

External Toolholders for Metric Buttress (Sägewinde)

MEGALINE


External

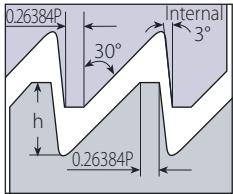
Spare Parts

Insert	Ordering Code	Dimensions mm			Thread Diameter Range (Min.-Max.)			
	RH	H=B=H1	F	L1	L2		Insert Screw	Torx Key
5MGER10.0SAGE...	NL25-5MG10SAGE	25	11.8	150	30	(S65-80)x10	S5MG	K6T
	NL32-5MG10SAGE	32	18.8	170				
	NL40-5MG10SAGE	40	26.8	200				
5MGER12.0SAGE...	NL25-5MG12SAGE	25	11.8	150	30	(S85-146)x12		
	NL32-5MG12SAGE	32	18.8	170				
	NL40-5MG12SAGE	40	26.8	200				
5MGER14.0SAGE...	NL25-5MG14SAGE	25	11.8	150	30	(S115-145)x14		
	NL32-5MG14SAGE	32	18.8	170				
	NL40-5MG14SAGE	40	26.8	200				
5MGER16.0SAGE...	NL25-5MG16SAGE	25	11.8	150	30	(S150-175)x16		
	NL32-5MG16SAGE	32	18.8	170				
	NL40-5MG16SAGE	40	26.8	200				
5MGER20.0SAGE...	NL25-5MG20SAGE	25	11.8	150	30	(S210-230)x20		
	NL32-5MG20SAGE	32	18.8	170				
	NL40-5MG20SAGE	40	26.8	200				

Recommended thread infeed method for Mega Line: Flank or Modified Flank 1°.


Metric Buttress (Sägewinde) (con't)

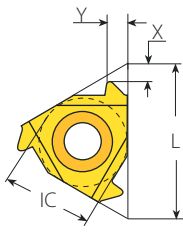
Internal



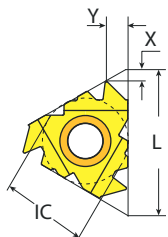
Defined by: DIN 513
Tolerance class: Medium Class

External

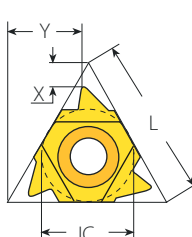




Standard

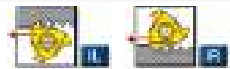


F-line



U Style

Standard - Internal



Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	
3/8"	16	2.0	3IR2.0SAGE...	3IL2.0SAGE...	1.50	1.5	2.2	YI3	YE3	AVR...-3 (LH)
1/2"	22	3.0	4IR3.0SAGE...	4IL3.0SAGE...	2.25	1.7	2.9	YI4	YE4	AVR...-4 (LH)
		4.0	4IR4.0SAGE...	4IL4.0SAGE...	3.09	2.03	3.25			
1/2"F	23	3.0	4FIR3.0SAGE...		2.25	1.7	2.9	YI4F		AVRC...-4F
		4.0	4FIR4.0SAGE...		3.09	2.03	3.25			
5/8"	27	4.0	5IR4.0SAGE...	5IL4.0SAGE...	3.09	2.1	3.2	YI5 082/039	YE5 082/038	AVR...-5 (LH)

FLINE

U Style - Internal

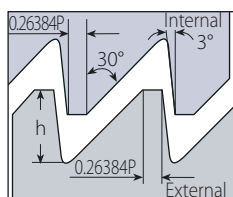


Insert Size		Pitch	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	mm	RH	LH	h min	X	Y	RH	LH	
1/2"U	22	5.0	4UIR5.0SAGE...	4UIL5.0SAGE...	3.76	1.8	10.3	YI4U-5S	YE4U-5S	AVR...-4U (LH)
		6.0	4UIR6.0SAGE...	4UIL6.0SAGE...	4.54	1.9	10.15	YI4U-6S	YE4U-6S	

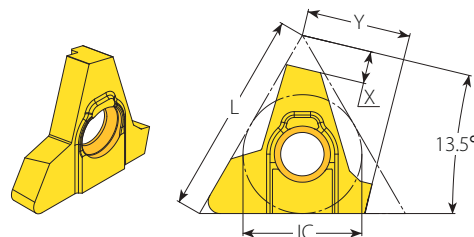
Metric Buttress (Sägewinde) (con't)

MEGA/LINE

Internal



Defined by: DIN 513
Tolerance class: Medium Class



Mega Line



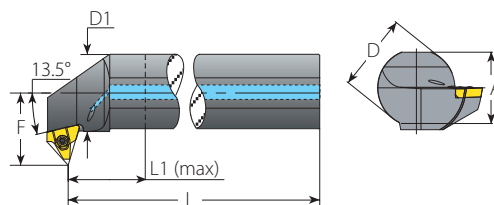
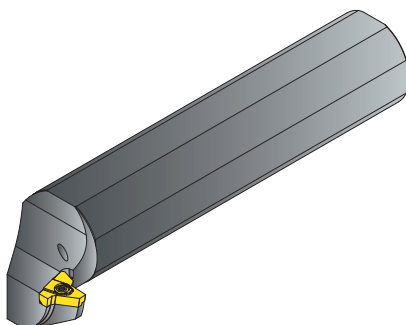
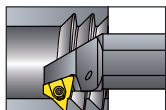
Internal



Insert Size		Pitch	Ordering Code	Dimensions mm			Number of Passes	
IC	L mm	mm	RH	h min	X	Y	0.07mm–Min. Depth of Cut (On radius)	0.15mm–Max. Depth of Cut (On radius)
5/8" MG	27	10.0	5MGIR10.0SAGE...	7.21	2.86	13.7	103	48
		12.0	5MGIR12.0SAGE...	8.67	3.34		124	58
		14.0	5MGIR14.0SAGE...	10.12	3.83		145	67
		16.0	5MGIR16.0SAGE...	11.58	4.30		165	77
		20.0	5MGIR20.0SAGE...	14.50	5.16		207	97


Internal Toolholders for
Metric Buttress (Sägewinde)

MEGA/LINE



Internal

Spare Parts

Insert	Ordering Code	Dimensions mm							Min. Bore Dia.	Thread Diameter Range (Min.-Max.)			
	RH	A	L	L1 (max)	D	D1	F	mm	Short Chip Material	Long Chip Material	Insert Screw	Torx Key	
5MGIR10.0SAGE...	NVRC40-5MG10SAGE	36	230.5	100	40	39.7	29.0	50	(S65-80)x10	(S75-80)x10	S5MG	K6T	
5MGIR12.0SAGE...	NVRC40-5MG12SAGE	36	230.5	100	40	39.7	41.5	67	(S85-400)x12	(S90-400)x12			
	NVRC50-5MG12SAGE	46	255.5	125	50	49.7	46.5	72	(S90-400)x12	(S105-400)x12			
	NVRC60-5MG12SAGE	57	280.5	150	60	59.7	51.5	82	(S100-400)x12	(S250-400)x12			
5MGIR14.0SAGE...	NVRC40-5MG14SAGE	36	230.5	100	40	39.7	41.5	94	(S115-145)x14	(S115-145)x14			
	NVRC50-5MG14SAGE	46	255.5	125	50	49.7	46.5	94	(S115-145)x14	(S115-145)x14			
	NVRC60-5MG14SAGE	57	280.5	150	60	59.7	51.5	94	(S115-145)x14	(S120-145)x14			
5MGIR16.0SAGE...	NVRC40-5MG16SAGE	36	230.5	100	40	39.7	41.5	126	(S150-175)x16	(S150-175)x16			
	NVRC50-5MG16SAGE	46	255.5	125	50	49.7	46.5	126	(S150-175)x16	(S150-175)x16			
	NVRC60-5MG16SAGE	57	280.5	150	60	59.7	51.5	126	(S150-175)x16	(S150-175)x16			
5MGIR20.0SAGE...	NVRC40-5MG20SAGE	36	230.5	100	40	39.7	41.5	75	(S105-230)x20	(S105-230)x20			
	NVRC50-5MG20SAGE	46	255.5	125	50	49.7	46.5	75	(S105-230)x20	(S210-230)x20			
	NVRC60-5MG20SAGE	57	280.5	150	60	59.7	51.5	80	(S110-230)x20	(S210-230)x20			

Recommended thread infed method for Mega Line: Flank or Modified Flank 1°.

API

External




Defined by: API SPEC. 7:1990
Tolerance class: Standard API

Standard


F-Line

On Edge

Standard

Insert Size		Pitch	Thread	Taper	Ordering Code		Size	Dimensions mm			Anvil	Toolholder
IC	L mm	TPI		IPF	RH			h min	X	Y	RH	
	1/2"	22	4	V-0.038R	2	4ER4API382...	NC23-NC50	3.09	2.1	2.8	YEI 4-API-1P or YE4	AL...-4 5BUT/API or AL...-4
			4	V-0.038R	3	4ER4API383...	NC56-NC77	3.08	2.1	2.8		
			4	V-0.050	2	4ER4API502...	6 5/8" REG, 5 1/2" FH, 6 5/8" FH	3.75	2.0	2.9		
			4	V-0.050	3	4ER4API503...	5 1/2", 7 5/8", 8 5/8" REG	3.74	2.0	2.9		
			5	V-0.040	3	4ER5API403...	2 3/8"-4 1/2" REG	2.99	1.8	2.6		
			6	V-0.055	1.5	4ER6API551...	NC10-NC16	1.41	2.6	2.0		
	1/2"	23	4	V-0.038R	2	4FER4API382...	NC23-NC50	3.09	2.1	2.8	YE4F	AL...-4F
			4	V-0.038R	3	4FER4API383...	NC56-NC77	3.08	2.1	2.8		
			4	V-0.050	2	4FER4API502...	6 5/8" REG, 5 1/2" FH, 6 5/8" FH	3.75	2.0	2.9		
			4	V-0.050	3	4FER4API503...	5 1/2", 7 5/8", 8 5/8" REG	3.74	2.0	2.9		
			5	V-0.040	3	4FER5API403...	2 3/8"-4 1/2" REG	2.99	1.8	2.6		
			6	V-0.055	1.5	4FER6API551...	NC10-NC16	1.41	2.6	2.0		
	5/8"	27	4	V-0.038R	2	5ER4API382...	NC23-NC50	3.09	2.1	2.8	YE5OIL	AL...-5 OIL
			4	V-0.038R	3	5ER4API383...	NC56-NC77	3.08	2.1	2.8		
			4	V-0.050	2	5ER4API502...	6 5/8" REG, 5 1/2" FH, 6 5/8" FH	3.75	2.1	3.1		
			4	V-0.050	3	5ER4API503...	5 1/2", 7 5/8", 8 5/8" REG	3.74	2.1	3.1		
			5	V-0.040	3	5ER5API403...	2 3/8"-4 1/2" REG	2.99	1.9	2.7		
			4	V-0.065	2	5ER4API652...	2 3/8" IF- 5 1/2 IF	2.81	2.3	2.8		

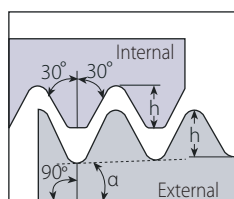
On Edge

Insert Size		Pitch	Thread	Taper	Ordering Code		Size	Dimensions mm				Position	
IC	L mm	TPI		IPF	RH			R	h min	T	Ø C	X	Y
	5/8"	27	5	V-0.040	3	TNEC54ER5API403...	2 3/8"-4 1/2" REG	0.51	3.00	6.35	6.50	23.4	3.9
			4	V-0.050	2	TNEC55ER4API502...	6 5/8" REG, 5 1/2 FH, 6 5/8 FH	0.64	3.76	7.94			5.0
			4	V-0.050	3	TNEC55ER4API503...	5 1/2", 7 5/8", 8 5/8" REG	0.64	3.76	7.94			5.0
			4	V-0.038	2	TNEC55ER4API382...	NC23-NC50, 2 3/8 - 6 5/8 IF	0.97	3.10	7.94			5.0
			4	V-0.038	3	TNEC55ER4API383...	NC56-NC77	0.97	3.10	7.94			5.0

On Edge inserts are compatible with most commonly used toolholders in the market.

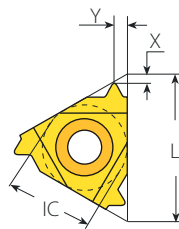
API (con't)

Internal

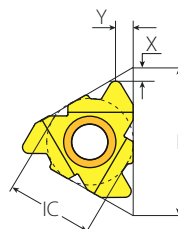


$$\alpha = \arctg (IPF/24)$$

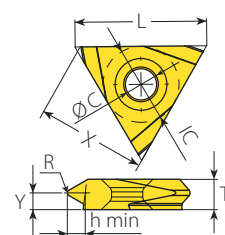
Defined by: API SPEC. 7:1990
Tolerance class: Standard API



Standard



F-Line



On Edge

Standard



F-Line

Insert Size		Pitch	Thread	Taper	Ordering Code		Size	Dimensions mm			Anvil	Toolholder
IC	L mm	TPI	IPF	RH				h min	X	Y	RH	
1/2"	22	4	V-0.038R	2	4IR4API382...	NC23-NC50		3.09	2.1	2.8	YEI 4-API-1P or Y14	AVRC...-4 5BUT/API or AVR...-4
		4	V-0.038R	3	4IR4API383...	NC56-NC77		3.08	2.1	2.8		
		4	V-0.050	2	4IR4API502...	6 5/8" REG, 5 1/2" FH, 6 5/8" FH		3.75	2.1	3.1		
		4	V-0.050	3	4IR4API503...	5 1/2", 7 5/8", 8 5/8" REG		3.74	2.0	2.9		
		5	V-0.040	3	4IR5API403...	2 3/8"-4 1/2" REG		2.99	1.8	2.6		
		6	V-0.055	1.5	4IR6API551...	NC10-NC16		1.41	2.6	2.0		
1/2" F	23	4	V-0.038R	2	4FIR4API382...	NC23-NC50		3.09	2.1	2.8	Y14F	AVRC...-4F
		4	V-0.038R	3	4FIR4API383...	NC56-NC77		3.08	2.1	2.8		
		4	V-0.050	2	4FIR4API502...	6 5/8" REG, 5 1/2" FH, 6 5/8" FH		3.75	2.1	3.1		
		4	V-0.050	3	4FIR4API503...	5 1/2", 7 5/8", 8 5/8" REG		3.74	2.0	2.9		
		5	V-0.040	3	4FIR5API403...	2 3/8"-4 1/2" REG		2.99	1.8	2.6		
		6	V-0.055	1.5	4FIR6API551...	NC10-NC16		1.41	2.6	2.0		
5/8"	27	4	V-0.038R	2	5IR4API382...	NC23-NC50		3.09	2.1	2.8	Y15OIL	AVR...-5 OIL
		4	V-0.038R	3	5IR4API383...	NC56-NC77		3.08	2.1	2.8		
		4	V-0.050	2	5IR4API502...	6 5/8" REG, 5 1/2" FH, 6 5/8" FH		3.75	2.1	3.1		
		4	V-0.050	3	5IR4API503...	5 1/2", 7 5/8", 8 5/8" REG		3.74	2.1	3.1		
		5	V-0.040	3	5IR5API403...	2 3/8"-4 1/2" REG		2.99	1.9	2.7		
		4	V-0.065	2	5IR4API652...	2 3/8" IF- 5 1/2" IF		2.81	2.3	2.8		

On Edge



Insert Size		Pitch	Thread	Taper	Ordering Code		Size	Dimensions mm				Position	
IC	L mm	TPI	IPF	RH				R	h min	T	ØC	X	Y
5/8"	27	5	V-0.040	3	TNEC54IR5API403...	2 3/8"-4 1/2" REG		0.51	3.00	6.35	6.50	23.4	3.9
		4	V-0.050	2	TNEC55IR4API502...	6 5/8" REG, 5 1/2" FH, 6 5/8" FH		0.64	3.76	7.94			5.0
		4	V-0.050	3	TNEC55IR4API503...	5 1/2", 7 5/8", 8 5/8" REG		0.64	3.76	7.94			5.0
		4	V-0.038	2	TNEC55IR4API382...	NC23-NC50, 2 3/8 - 6 5/8 IF		0.97	3.10	7.94			5.0
		4	V-0.038	3	TNEC55IR4API383...	NC56-NC77		0.97	3.10	7.94			5.0

On Edge inserts are compatible with most commonly used toolholders in the market.

API Buttress Casing

External

Defined by: STD.5B.1979
Tolerance class: Standard API

Standard



F-Line

M+ Style

T+ Style

14D
2 Cutting Edges


Standard



F LINE


Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF	RH		h min	X	Y	RH	Toolholder
1/2"	22	5	0.75	4ER5BUT75...	4 1/2"-13 3/8"	1.55	3.1	1.9	YEI 4-BUT or YE4	AL...-4 5BUT/API or AL...-4
		5	1	4ER5BUT1...	16"-20"	1.55	3.1	1.9		
1/2"F	23	5	0.75	4FER5BUT75...	4 1/2"-13 3/8"	1.55	3.1	1.9	YE4F	AL...-4F
		5	1	4FER5BUT1...	16"-20"	1.55	3.1	1.9		

M+ Style




Insert Size		Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF		RH		h min	X	Y	RH	Toolholder
5/8"	27	5	0.75	2	5ER5BUT752M+...	4 1/2"-13 3/8"	1.55	4.8	6.8	YE5M	AL...-5M

T+ Style



Insert Size		Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF		RH		h min	X	Y	RH	Toolholder
1/2"T	22	5	0.75	3	4ER5BUT753T+...	4 1/2"-13 3/8"	1.55	2.5	16.1	Y4T	AL...-4T
			1		4ER5BUT13T+...	16"-20"					

14D



Insert Size		Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Anvil	
IC		TPI	IPF		RH		h min	Y		RH	Toolholder
14D		5	0.75	2	14DER5BUT752T+...	4 1/2"-9 5/8"	1.55	10.0		Y14DER-5 BUT	AL...-14D
						10 3/4"-13 3/8"				Y14DER-5BUT-0.4N	
		5	1	2	14DER5BUT12T+...	16"-20"				Y14DER-5BUT-0.4N	AL...-14D

API Buttress Casing (con't)

External

Defined by: STD.5B.1979
Tolerance class: Standard API

On Edge

CNGA

Chaser

On Edge



Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Position	
IC	L mm	TPI	IPF	RH		h min	T	Ø C	X	Y
5/8"	27	5	0.75	TNEC54ER5BUT75...	4 1/2"-13 3/8"	1.55	6.35	6.5	23.4	4.0
		5	1	TNEC54ER5BUT1...	16"-20"					

On Edge inserts are compatible with most commonly used toolholders in the market.

CNGA

Multiplus



Insert Size	Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Position	
IC	TPI	IPF		RH		h min	T	Ø C	X	Y
3/4"	5	0.75	3	CNGA64ER5BUT75T3...	4 1/2"-13 3/8"	1.55	6.35	8.0	18.9	5.6
	5	1	3	CNGA64ER5BUT1T3...	16"-20"					5.5

CNGA inserts are compatible with most commonly used toolholders in the market.

Chaser

Multiplus



Insert Size	Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Position	
L	TPI	IPF		RH		h min	T		X	Y
16	5	0.75	3	1616ER5BUT753S+...	4 1/2"-13 3/8"	1.55	4.76		15.7	3.2
	5	1	3	1616ER5BUT13S+...	16"-20"					

Chaser inserts are compatible with most commonly used toolholders in the market.

API Buttress Casing (con't)

Internal

Defined by: STD.5B:1979
Tolerance class: Standard API

Standard

F-Line M+

M+ Style

T+ Style

14D
2 Cutting Edges

Standard

Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF	RH		h min	X	Y	RH	Toolholder
1/2"	22	5	0.75	4IR5BUT75...	4 1/2"-13 3/8"	1.55	2.8	1.9	YEI 4-BUT or YI4	AVRC...-4 5BUT/API or AVR...-4
		5	1	4IR5BUT1...	16"-20"	1.55	2.8	1.9		
1/2"F	23	5	0.75	4FIR5BUT75...	4 1/2"-13 3/8"	1.55	2.8	1.9	YI4F	AVRC...-4F
		5	1	4FIR5BUT1...	16"-20"	1.55	2.8	1.9		

M+ Style

Insert Size		Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF		RH		h min	X	Y	RH	Toolholder
5/8"	27	5	0.75	2	5IR5BUT752M+...	4 1/2"-13 3/8"	1.55	4.8	6.7	YI5M	AVR...-5M

T+ Style

Insert Size		Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF		RH		h min	X	Y	RH	Toolholder
1/2"T	22	5	0.75	3	4IR5BUT753T+...	4 1/2"-13 3/8"	1.55	2.5	16.1	Y4T	AVR...-4T
			1		4IR5BUT13T+...	16"-20"					

14D

Insert Size		Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Anvil	
IC		TPI	IPF		RH		h min	Y		RH	Toolholder
14D		5	0.75	2	14DIR5BUT752T+...	4 1/2"-9 5/8"	1.55	10.0		Y14DIR-5 BUT	AVRC...-14D
						10 3/4"-13 3/8"				Y14DIR-5BUT-0.4N	
		5	1	2	14DIR5BUT12T+...	16"-20"	1.55	10.0		Y14DIR-5BUT-0.4N	AVRC...-14D

API Buttress Casing (con't)

Internal

Defined by: STD.5B:1979
Tolerance class: Standard API

On Edge
CNGA
Chaser

On Edge



Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Position	
IC	L mm	TPI	IPF	RH		h min	T	Ø C	X	Y
5/8"	22	5	0.75	TNEC54IR5BUT75...	4 1/2"-13 3/8"	1.55	6.35	6.5	23.4	4.3
		5	1	TNEC54IR5BUT1...	16"-20"					

On Edge inserts are compatible with most commonly used toolholders in the market.

CNGA

Multiplus



Insert Size	Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Position	
IC	TPI	IPF		RH		h min	T	Ø C	X	Y
3/4"	5	0.75	3	CNGA64IR5BUT75T3...	4 1/2"-13 3/8"	1.55	6.35	8.0	18.9	5.6
	5	0.75	2	CNGA64IR5BUT75T2...	4 1/2"-13 3/8"					10.4
	5	1	3	CNGA64IR5BUT1T3...	16"-20"					5.5

CNGA inserts are compatible with most commonly used toolholders in the market.

Chaser

Multiplus



Insert Size	Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Position	
L	TPI	IPF		RH		h min	T		X	Y
16	5	0.75	3	1616IR5BUT753S+...	4 1/2"-13 3/8"	1.55	4.76		15.7	3.2
	5	1	3	1616IR5BUT13S+...	16"-20"					

Chaser inserts are compatible with most commonly used toolholders in the market.

API Round Casing & Tubing

External

Defined by: API STD. 5B:1979
Tolerance class: Standard API RD

Standard

SCB Sintered Chipbreaker

M+ Style

F-Line M+

Z+ Style

Standard

Insert Size		Pitch	Ordering Code	Dimensions mm			Anvil	Toolholder
IC	L mm	TPI	RH	h min	X	Y	RH	
3/8"	16	10	3ER10APIRD...	1.41	1.2	1.4	YEI3-APIRD or YE3	AL...-3 APIRD or AL...-3
		8	3ER8APIRD...	1.81	1.3	1.5		
3/8" SCB	16	10	3JER10APIRD...	1.41	1.2	1.5		
		8	3JER8APIRD...	1.81	1.3	1.5		

M+ Style

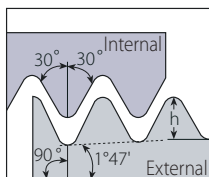
Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	Toolholder
IC	L mm	TPI		RH	h min	X	Y	RH	
1/2"	22	10	2	4ER10APIRD2M+...	1.41	2.3	3.8	YE4M	AL...-4
1/2"F	23	10	2	4FER10APIRD2M+...	1.41	2.3	3.8	YE4M2F	AL...-4MF
5/8"	27	10	3	5ER10APIRD3M+...	1.41	3.9	6.3	YE5M	AL...-5M
		8	2	5ER8APIRD2M+...	1.81	2.9	4.5		

Z+ Style

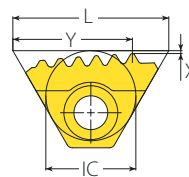
Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	Toolholder
IC	L mm	TPI		RH	h min	X	Y	RH	
1/2"	22	10	2	4ER10APIRD2Z+...	1.41	3.0	9.9	YE4Z	AL...-4Z
		8	2	4ER8APIRD2Z+...	1.81	3.7	9.6		

API Round Casing & Tubing (con't)

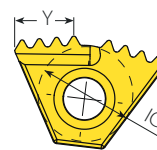
External



Defined by: API STD. 5B:1979
Tolerance class: Standard API RD



T+ Style



14D -
2 Cutting Edges

T+ Style

Multiplus



Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	
IC	L mm	TPI		RH	h min	X	Y	RH	Toolholder
1/2" T	22	10	6	4ER10APIRD6T+...	1.41	0.2	16.2	Y4T	AL...-4T
		8	3	4ER8APIRD3T+...	1.81	0.2	14.2		
		8	5	4ER8APIRD5T+...	1.81	0.2	16.7		

14D

Multiplus



Insert Size		Pitch	Teeth	Ordering Code	Size	Dimensions mm		Anvil	
IC	TPI			RH		h min	Y	RH	Toolholder
14D	10	4		14DER10APIRD4T+...	2 3/8" and up	1.41	8.7	Y14DER-10 APIRD	AL...-14D
	10	3		14DER10APIRD3T+...	2 3/8" and up		8.8	Y14DER-10 APIRD-3+	
	8	3		14DER8APIRD3T+...	2 3/8" and up	1.81	8.1	Y14DER-8 APIRD	

API Round Casing & Tubing (con't)

External


Defined by: API STD. 5B:1979
Tolerance class: Standard API RD

On Edge

CNGA

Chaser


On Edge



Insert Size		Pitch	Ordering Code	Dimensions mm			Position	
IC	L mm	TPI	RH	h min	T	Ø C	X	Y
1/2"	22	10	TNEC43ER10APIRD...	1.41	4.76	5.2	18.6	3.2
		8	TNEC43ER8APIRD...	1.81				

On Edge inserts are compatible with most commonly used toolholders in the market.


CNGA



Insert Size	Pitch	Teeth	Ordering Code	Dimensions mm			Position	
IC	TPI		RH	h min	T	Ø C	X	Y
3/4"	10	5	CNGA64ER10APIRDT5...	1.41	6.35	8.0	18.9	4.5
	8	4	CNGA64ER8APIRDT4...	1.81				

CNGA inserts are compatible with most commonly used toolholders in the market.

Chaser

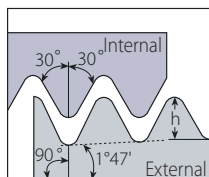


Insert Size	Pitch	Teeth	Ordering Code	Dimensions mm			Position	
L	TPI		RH	h min	T		X	Y
16	10	4	1616ER10APIRD4S+...	1.41	4.76		15.4	4.4
	8	3	1616ER8APIRD3S+...	1.81			15.9	

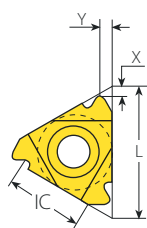
Chaser inserts are compatible with most commonly used toolholders in the market.

API Round Casing & Tubing (con't)

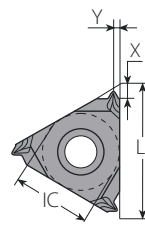
Internal



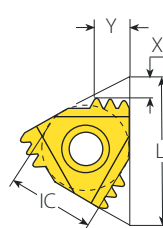
Defined by: API STD. 5B:1979
Tolerance class: Standard
API RD



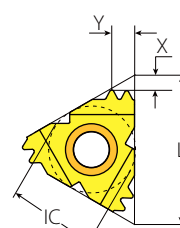
Standard



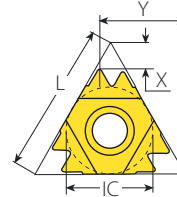
SCB
Sintered
Chipbreaker



M+ Style



F-Line M+



Z+ Style

Standard



SCB

Insert Size		Pitch	Ordering Code	Dimensions mm			Anvil	
IC	L mm	TPI	RH	h min	X	Y	RH	Toolholder
3/8"	16	10	3IR10APIRD...	1.41	1.2	1.4	YEI3-APIRD or YI3	AVRC... 3APIRD or AVRC...-3
		8	3IR8APIRD...	1.81	1.3	1.5		
3/8" SCB	16	10	3JIR10APIRD...	1.41	1.2	1.5		
		8	3JIR8APIRD...	1.81	1.3	1.5		

Multiplus

M+ Style



FLINE

Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	
IC	L mm	TPI		RH	h min	X	Y	RH	Toolholder
1/2"	22	10	2	4IR10APIRD2M+...	1.41	2.4	3.7	YI4M	AVR...-4
		8	2	4IR8APIRD2M+...	1.81	2.9	4.5		
1/2"F	23	10	2	4FIR10APIRD2M+...	1.41	2.4	3.7	YI4M2F	AVRC...-4MF
5/8"	27	10	3	5IR10APIRD3M+...	1.41	3.9	6.3	YI5M	AVR...-5M
		8	2	5IR8APIRD2M+...	1.81	2.9	4.5		

Multiplus

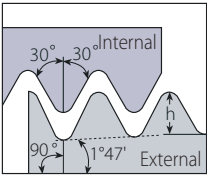
Z+ Style



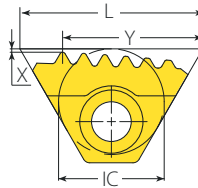
Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	
IC	L mm	TPI		RH	h min	X	Y	RH	Toolholder
1/2"	22	10	2	4IR10APIRD2Z+...	1.41	3.0	9.9	YI4Z	AVR...-4Z
		8	2	4IR8APIRD2Z+...	1.81	3.7	9.6		

API Round Casing & Tubing (con't)

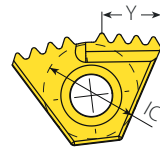
Internal



Defined by: STD. 5B:1979
Tolerance class: Standard API RD



Z+ Style



14D -
2 Cutting Edges

T+ Style



Insert Size		Pitch	Teeth	Ordering Code	Dimensions mm			Anvil	Toolholder
IC	L mm	TPI		RH	h min	X	Y	RH	
1/2" T	22	10	6	4IR10APIRD6T+...	1.41	0.2	16.8	Y4T	AVR...-4T
		8	3	4IR8APIRD3T+...	1.81	0.2	14.2		
		8	5	4IR8APIRD5T+...	1.81	0.2	16.7		

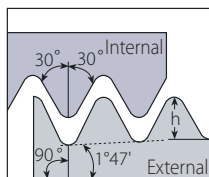
14D



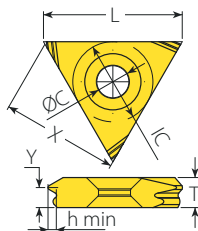
Insert Size		Pitch	Teeth	Ordering Code	Size	Dimensions mm		Anvil	Toolholder
IC	TPI					h min	Y		
14D	10	4		14DIR10APIRD4T+...	2 3/8" and up	1.41	8.71	Y14DIR-10 APIRD	AVRC...-14D
	10	3		14DIR10APIRD3T+...	2 3/8" and up		8.79	Y14DIR-10 APIRD-3+	
	8	3		14DIR8APIRD3T+...	2 3/8" and up		8.10	Y14DIR-8 APIRD	

API Round Casing & Tubing (con't)

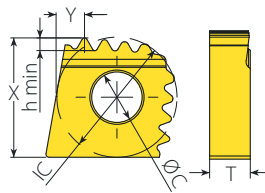
Internal



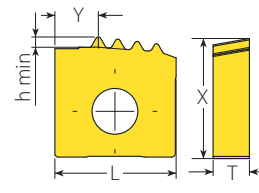
Defined by: STD. 5B:1979
Tolerance class: Standard API RD



On Edge



CNGA



Chaser

On Edge



Insert Size		Pitch	Ordering Code	Dimensions mm			Position	
IC	L mm	TPI	RH	h min	T	Ø C	X	Y
1/2"	22	10	TNEC43IR10APIRD...	1.41	4.76	5.2	18.6	3.2
		8	TNEC43IR8APIRD...	1.81				

On Edge inserts are compatible with most commonly used toolholders in the market.

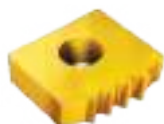
CNGA



Insert Size	Pitch	Teeth	Ordering Code	Dimensions mm			Position	
IC	TPI		RH	h min	T	Ø C	X	Y
3/4"	10	5	CNGA64IR10APIRDT5...	1.41	6.35	8.0	18.9	4.5
	8	4	CNGA64IR8APIRDT4...	1.81				

CNGA inserts are compatible with most commonly used toolholders in the market.

Chaser

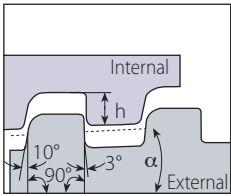


Insert Size	Pitch	Teeth	Ordering Code	Dimensions mm			Position	
L	TPI		RH	h min	T	Ø C	Y	
16	10	4	1616IR10APIRD4S+...	1.41	4.76	15.4	5.7	4.4
	8	3	1616IR8APIRD3S+...	1.81				

Chaser inserts are compatible with most commonly used toolholders in the market.

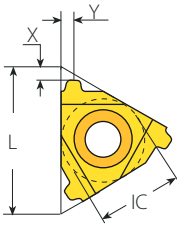
VAM

External

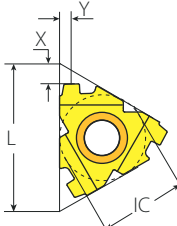


$\alpha = \arctg (IPF/24)$

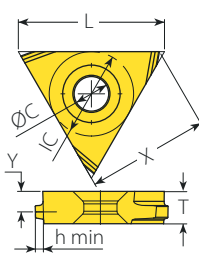
Defined by: VAM
Tolerance class: Standard VAM



Standard



F-Line



On Edge

Standard



F-LINE

Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF	RH		h min	X	Y	RH	Toolholder
3/8"	16	8	0.75	3ER8VAM...	2 3/8", 2 7/8"	0.97	1.7	1.80	YE3	AL...-3
1/2"	22	6		4ER6VAM...	3 1/2"	0.97	2.4	2.40	YE4	AL...-4
		5		4ER5VAM...	5"-9 5/8"	1.55	2.4	2.70		
1/2"F	23	6	5	4FER6VAM...	3 1/2"	0.97	2.4	2.40	YE4F	AL...-4F
		5		4FER5VAM...	5"-9 5/8"	1.55	2.4	2.70		

On Edge



Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Position	
IC	L mm	TPI	IPF	RH		h min	T	Ø C	X	Y
1/2"	22	8	0.75	TNEC43ER8VAM...	2 3/8", 2 7/8"	0.97	4.76	5.2	18.6	3.30
		6		TNEC43ER6VAM...	3 1/2"	0.97	4.76			2.90
5/8"	27	5		TNEC54ER5VAM...	5"- 9 5/8"	1.55	6.35	6.5	23.4	4.00

On Edge inserts are compatible with most commonly used toolholders in the market.

VAM (con't)

Internal

Defined by: VAM
Tolerance class: Standard VAM

Standard **F-Line** **On Edge** **CNGA**

Standard**F**LINE

Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF	RH		h min	X	Y	RH	Toolholder
3/8"	16	8	0.75	3IR8VAM...	2 3/8", 2 7/8"	1.02	1.7	1.8	YI3	AVR...-3
1/2"	22	6		4IR6VAM...	3 1/2"	1.02	2.5	2.5	YI4	AVR...-4
		5		4IR5VAM...	5"-9 5/8"	1.55	2.4	2.5		
1/2"F	23	6		4FIR6VAM...	3 1/2"	1.02	2.5	2.5	YI4F	AVRC...-4F
		5		4FIR5VAM...	5"-9 5/8"	1.55	2.4	2.5		

On Edge

Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Position	
IC	L mm	TPI	IPF	RH		h min	T	Ø C	X	Y
1/2"	22	8	0.75	TNEC43IR8VAM...	2 3/8", 2 7/8"	1.02	4.78	5.2	18.6	3.2
		6		TNEC43IR6VAM...	3 1/2"	1.02	4.78			3.1
5/8"	27	5		TNEC54IR5VAM...	5"- 9 5/8"	1.55	6.35	6.5	23.4	4.2

On Edge inserts are compatible with most commonly used toolholders in the market.

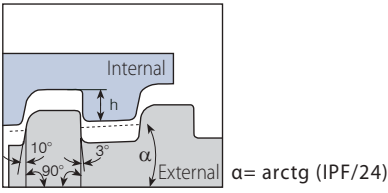
CNGA**Multi**plus

Insert Size	Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Position	
IC	TPI	IPF		RH		h min	T	Ø C	X	Y
3/4"	5	3/4	2	CNGA64IR5VAM75T2...	5"- 9 5/8"	1.55	6.35	8.0	18.9	9.3

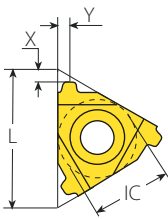
CNGA inserts are compatible with most commonly used toolholders in the market.

New VAM

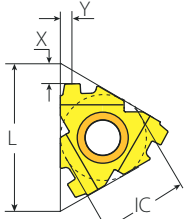
External



Defined by: VAM
Tolerance class: Standard VAM



Standard



F-Line

Standard



F LINE

Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF	RH		h min	X	Y	RH	Toolholder
3/8"	16	8	0.75	3ER8NVAM...	2 3/8" , 2 7/8"	0.97	1.8	1.8	YE3	AL...-3
1/2"	22	6		4ER6NVAM...	3 1/2"	0.97	2.3	2.3	YE4	AL...-4
		5		4ER5NVAM...	5"-9 5/8"	1.55	2.3	2.3		
1/2"F	23	6		4FER6NVAM...	3 1/2"	0.97	2.2	2.1	YE4F	AL...-4F
		5		4FER5NVAM...	5"-9 5/8"	1.55	2.5	2.3		

New VAM (con't)

Internal

Defined by: VAM
Tolerance class: Standard VAM

Standard **F-Line** **On Edge** **CNGA**

Standard



Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF	RH		h min	X	Y	RH	Toolholder
3/8"	16	8	0.75	3IR8NVAM...	2 3/8", 2 7/8"	1.23	1.8	1.8	Y13	AVR...-3
1/2"	22	6		4IR6NVAM...	3 1/2"	1.23	2.5	2.5	Y14	AVR...-4
		5		4IR5NVAM...	5"-9 5/8"	1.77	2.3	2.5		
1/2"F	23	6		4FIR6NVAM...	3 1/2"	1.23	2.0	1.8	Y14F	AVRC...-4F
		5		4FIR5NVAM...	5"-9 5/8"	1.77	2.1	2.1		

On Edge



Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm				
IC	L mm	TPI	IPF	RH		h min	T	Ø C	X	Y
1/2"	22	8	0.75	TNEC43IR8NVAM...	2 3/8" - 2 7/8"	1.23	4.76	5.2	18.6	3.2
		6		TNEC43IR6NVAM...	3 1/2" - 4 1/2"	1.23	4.76	5.2	23.4	3.1
5/8"	27	5		TNEC54IR5NVAM...	5"-16"	1.77	6.35	6.5		4.2

On Edge inserts are compatible with most commonly used toolholders in the market.

CNGA



Insert Size		Pitch	Taper	Teeth	Ordering Code	Size	Dimensions mm			Position
IC	TPI	IPF			RH		h min	T	Ø C	X Y
3/4"	6	0.75	2		CNGA64IR6NVAM75T2...	3 1/2" - 4 1/2"	1.23	6.35	8	18.9 9.3
	5				CNGA64IR5NVAM75T2...	5"-16"	1.77	6.35		

CNGA inserts are compatible with most commonly used toolholders in the market.

Multiplus

EL-Extreme Line

External / Internal

Defined by: API STD,5B:1979
Tolerance class: Standard


Standard External

Standard Internal

On Edge External


On Edge Internal

Standard - External



Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF	RH		h min	X	Y	RH	Toolholder
1/2"	22	6	1.5	4ER6EL15...	5"-7 5/8"	1.21	1.9	1.9	YE4	AL..-4
		5	1.25	4ER5EL125...	8 5/8"-10 3/4"	1.71	2.3	2.4		


On Edge - External



Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Position	
IC	L mm	TPI	IPF	RH		h min	T	Ø C	X	Y
5/8"	27	6	1.5	TNEC54ER6EL15...	5 "-7 5/8"	1.21	6.35	6.5	23.4	4.8
		5	1.25	TNEC54ER5EL125...	8 5/8"-10 3/4"	1.71	6.35			4.3


On Edge inserts are compatible with most commonly used toolholders in the market.

Standard - Internal



Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Anvil	
IC	L mm	TPI	IPF	RH		h min	X	Y	RH	Toolholder
1/2"	22	6	1.5	4IR6EL15...	5"-7 5/8"	1.39	1.8	1.9	Y14	AVR..-4
		5	1.25	4IR5EL125...	8 5/8"-10 3/4"	1.91	2.2	2.4		

On Edge - Internal

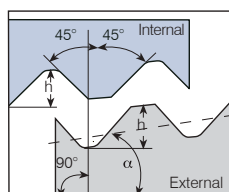


Insert Size		Pitch	Taper	Ordering Code	Size	Dimensions mm			Position	
IC	L mm	TPI	IPF	RH		h min	T	Ø C	X	Y
5/8"	27	6	1.5	TNEC54IR6EL15...	5 "-7 5/8"	1.39	6.35	6.5	23.4	4.8
		5	1.25	TNEC54IR5EL125...	8 5/8"-10 3/4"	1.91	6.35			4.3

On Edge inserts are compatible with most commonly used toolholders in the market.

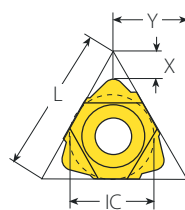
Hughes H-90

External / Internal

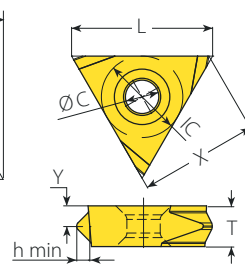


$$\alpha = \arctg (IPF/24)$$

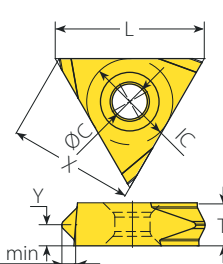
Defined by: API specification 7-2/ISO 10242-2



U Style



On Edge
External



On Edge
Internal

U Style - External



Insert Size	Pitch		Taper	Ordering Code		Size	Dimensions mm			Anvil	
	IC	L mm		TPI	IPF	RH	h min	X	Y	RH	Toolholder
1/2" U	22		3.5	2		4UER3.5H902...	3 1/2"-6 5/8"	2.50	4.2	11	YE4U-H90 AL...-4U
5/8" U	27		3.5	3		4UER3.5H903...	7"-8 5/8"	2.50	4.2	11	YE5U-H90 AL...-5UH90
			3	1.25*		5UER3H90SL...	2 3/8"-3 1/2"	2.24	5.5	13.7	

On Edge - External



Insert Size	Pitch		Taper	Ordering Code		Size	Dimensions mm			Position	
	IC	L mm		TPI	IPF	RH	h min	T	Ø C	X	Y
5/8"	27		3.5	2		TNEC55ER3.5H902...	3 1/2"-6 5/8"	2.50	7.93	6.5	4.3
			3.5	3		TNEC55ER3.5H903...	7"-8 5/8"	2.50	7.93		4.3
			3	1.25*		TNEC56ER3H90SL...	2 3/8"-3 1/2"	2.24	9.53		5.7

On Edge inserts are compatible with most commonly used toolholders in the market.

U Style - Internal



Insert Size	Pitch		Taper	Ordering Code		Size	Dimensions mm			Anvil	
	IC	L mm		TPI	IPF	RH	h min	X	Y	RH	Toolholder
1/2" U	22		3.5	2		4UIR3.5H902...	3 1/2"-6 5/8"	2.50	4.2	11	YI4U-H90 AVR...-4U
5/8" U	27		3.5	3		4UIR3.5H903...	7"-8 5/8"	2.50	4.2	11	YI5U-H90 AVR...-5UH90
			3	1.25*		5UIR3H90SL...	2 3/8"-3 1/2"	2.24	5.5	13.7	

On Edge - Internal



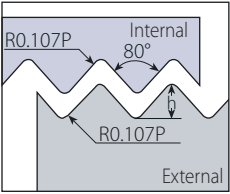
Insert Size	Pitch		Taper	Ordering Code		Size	Dimensions mm			Position	
	IC	L mm		TPI	IPF	RH	h min	T	Ø C	X	Y
5/8"	27		3.5	2		TNEC55IR3.5H902...	3 1/2"-6 5/8"	2.49	7.93	6.5	4.3
			3.5	3		TNEC55IR3.5H903...	7"-8 5/8"	2.49	7.93		4.3
			3	1.25*		TNEC56IR3H90SL...	2 3/8"-3 1/2"	2.24	9.53		5.7

On Edge inserts are compatible with most commonly used toolholders in the market.

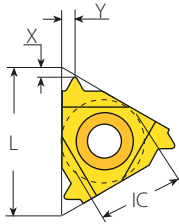
* H-90 Slimline.

Pg

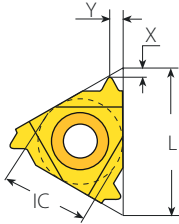
External / Internal



Defined by: DIN 40430
Tolerance class: Standard



Standard External



Standard Internal

Standard - External

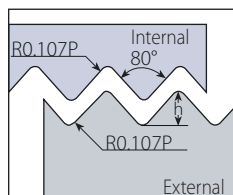


Insert Size		Pitch	Thread	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI		RH	LH	h min	X	Y	RH	LH	
1/4"	11	20	Pg7	2ER20PG...	2EL20PG...	0.61	0.8	0.9	-	-	NL...-2 (LH)
		18	Pg9/11/13.5/16	2ER18PG...	2EL18PG...	0.67	0.8	1.0			
		16	Pg21/29/36/42/48	2ER16PG...	2EL16PG...	0.76	0.9	1.1			
3/8"	16	20	Pg7	3ER20PG...	3EL20PG...	0.61	0.8	0.9	YE3	YI3	AL...-3 (LH)
		18	Pg9/11/13.5/16	3ER18PG...	3EL18PG...	0.67	0.8	1.0			
		16	Pg21/29/36/42/48	3ER16PG...	3EL16PG...	0.76	0.9	1.1			

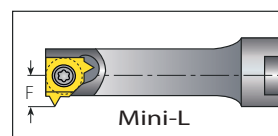
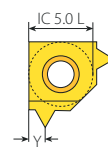
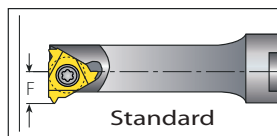
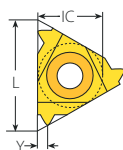
Standard - Internal



Insert Size		Pitch	Thread	Ordering Code		Dimensions mm			Anvil		Toolholder
IC	L mm	TPI		RH	LH	h min	X	Y	RH	LH	
1/4"	11	20	Pg7	2IR20PG...	2IL20PG...	0.64	0.8	0.9	-	-	NVR...-2 (LH)
		18	Pg9/11/13.5/16	2IR18PG...	2IL18PG...	0.67	0.8	1.0			
		16	Pg21/29/36/42/48	2IR16PG...	2IL16PG...	0.76	0.9	1.1			
3/8"	16	20	Pg7	3IR20PG...	3IL20PG...	0.64	0.8	0.9	YI3	YE3	AVR...-3 (LH)
		18	Pg11/13.5/16	3IR18PG...	3IL18PG...	0.67	0.8	1.0			
		16	Pg21/29/36/42/48	3IR16PG...	3IL16PG...	0.76	0.8	1.1			

Pg (con't)**MINIPRO****Internal**

Defined by: DIN 40430
Tolerance class: Standard

**Mini-3 Standard**

Insert Size		Pitch	Thread	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm	L mm	TPI		RH	LH	h min	Y	F	mm	
5.0	8	20	Pg7	5.0KIR20PG...	5.0KIL20PG...	0.61	0.7	4.7	7.8	(C)NVRC7-5.0K (LH)
6.0	10	20	Pg7	6.0KIR20PG...	6.0KIL20PG...	0.61	0.8	5.3	10.0	.NVRC1...-6.0K (LH)
		18	Pg9/11/13.5/16	6.0KIR18PG...	6.0KIL18PG...	0.67	0.9	5.3		

Mini-L

Insert Size		Pitch	Thread	Ordering Code		Dimensions mm			Min. Bore Dia.	Toolholder
IC mm		TPI		RH	LH	h min	Y	F	mm	
5.0L		20	Pg7	5LKIR20PG...	5LKIL20PG...	0.61	0.8	4.65	8.0	.NVRC10...-5LK (LH)
		18	Pg9/11/13.5/16	5LKIR18PG...	5LKIL18PG...	0.67	0.9	4.65		

