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THREADING

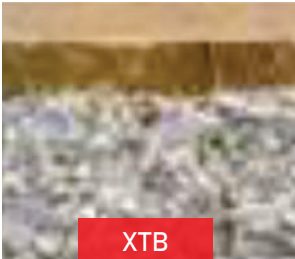
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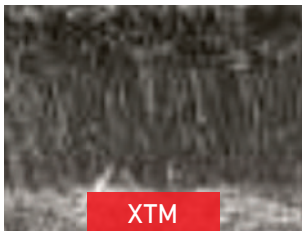


GRADE INFORMATION

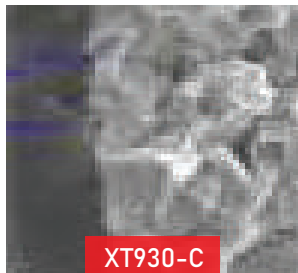
THREADING

**XTB****P20-P35 | M10-M20 | K20-K30**

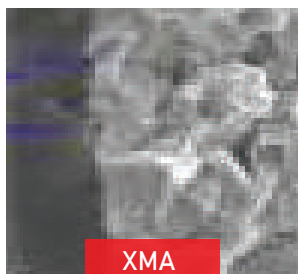
- Grade For Moulded Insert
- SPECIAL TiAlN Coating With added toughness
- Universal grade which work on all materials and all applications
- Wide Variety of threads including ISO, UN, W, NPT, BSPT and partial Profile

**XTM****P10-P25 | M10-M25 | K10-K20**

- Grade For Moulded Insert
- 2-4 μ AlCrN+AlCrSiN PVD Coated, Combining with ultra fine particles substrates with High-Toughness, Suitable for threading.
- Suitable for steels, Stainless steel & High-Temperature hardness alloys. (Less Chromium & Nickel)
- Extremely useful in production applications

**XT930-C****P10-P25 | M10-M25 | S05-S15**

- Grade For Moulded Insert
- Ultrafine grain matrix, newly upgraded nano composite coating with high heat resistance and high toughness
- Suitable for steel, and stainless steel, with better wear resistance.

**XMA****P20-P40 | K20-K30**

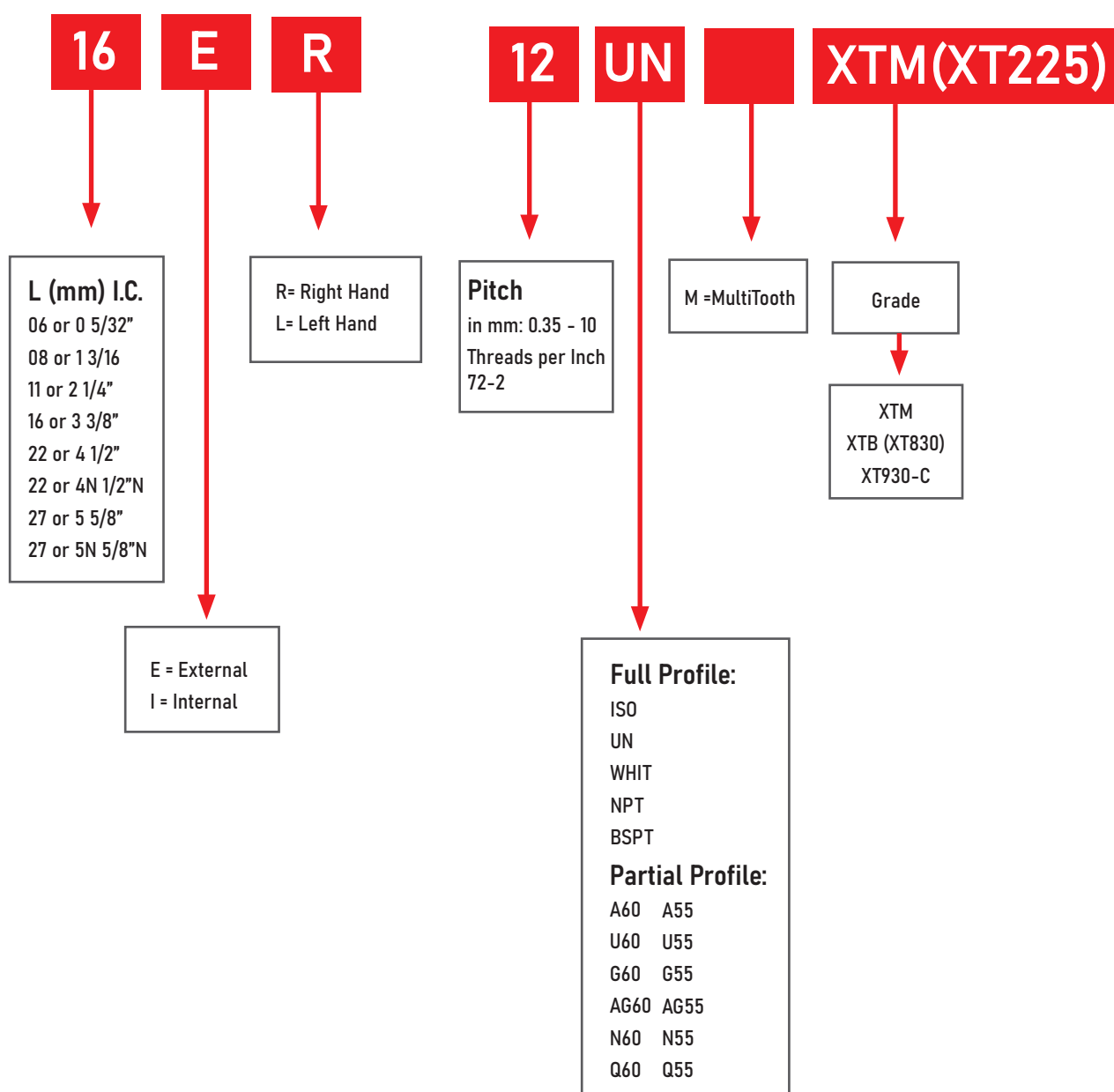
- Ground Insert
- PVD TiAlN coated sub-micrograin grade for steels and sticky/exotic materials, at medium to high cutting speeds

THREAD TURNING INSERTS-MOULDED

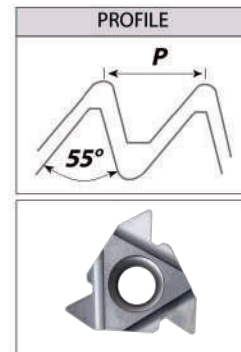
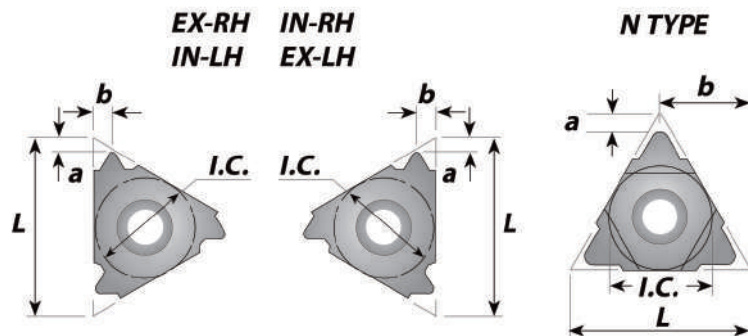
THREAD TURNING NOMENCLATURE

| PRODUCT DESIGNATION

| EXAMPLE: 16ER12UN



PARTIAL PROFILE 55°

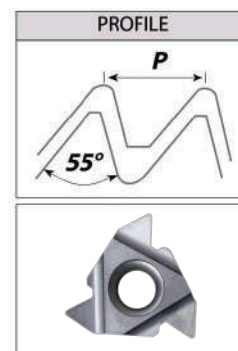
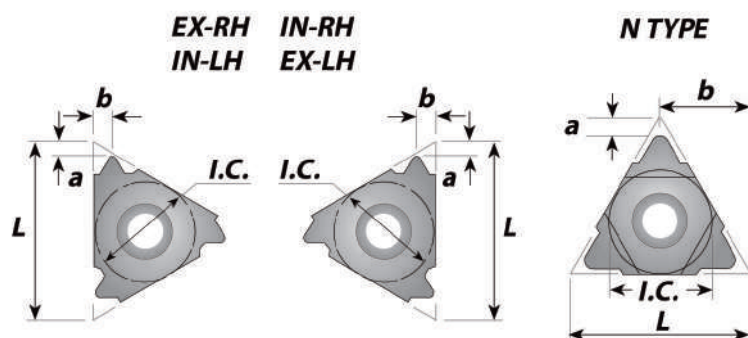


THREADING

(Item Number)	(Pitch)		(Length)	(Dimensions in mm)		XTM	XTB	XT930-C
	mm	(TPI)	L	a	b			
11ERA55	0.5	48	11	0.8	0.9	●	●	○
11IRA55	1.5	16	50	7		●	●	○
16ERAG55	0.5	48						
16IRAG55	- 3.0	- 8	16	1.2	1.7	●	●	●
16ERA55	0.5	48						
16IRA55	- 1.5	- 16	16	0.8	0.9	●	●	●
161ERG55	1.75	14						
16IRG55	- 3.0	- 8	16	1.2	1.7	●	●	●

● STOCKABLE ○ NON STOCKABLE

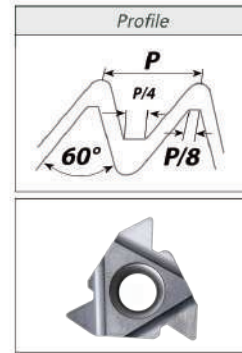
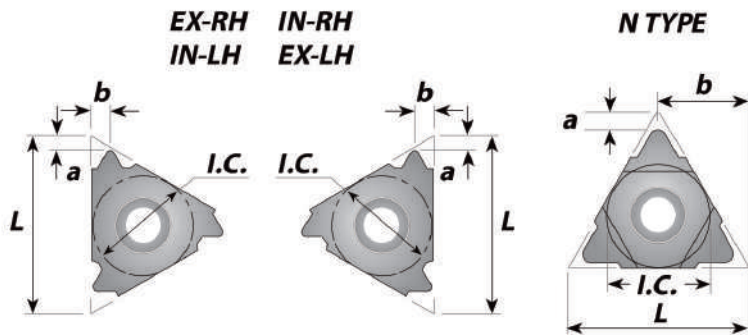
ISO-METRIC



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XTM	XTB	XT930-C
	mm	L	a	b			
11ER1.0ISO	1.0	11	0.7	0.7	●	●	○
11IR1.0ISO			0.6	0.7	●	●	○
11ER1.25ISO	1.25	11	1.2	1.7	●	●	○
11IR1.25ISO							
11ER1.5ISO	1.5	11	0.8	0.9	●	●	○
11IR1.5ISO							
11ER2.0ISO	2.0	11	0.8	1.1	●	●	○
11IR2.0ISO	2.0	11	0.8	0.9	●	●	○

● STOCKABLE ○ NON STOCKABLE

ISO-METRIC

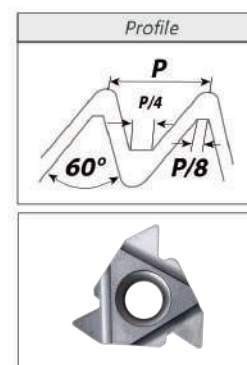
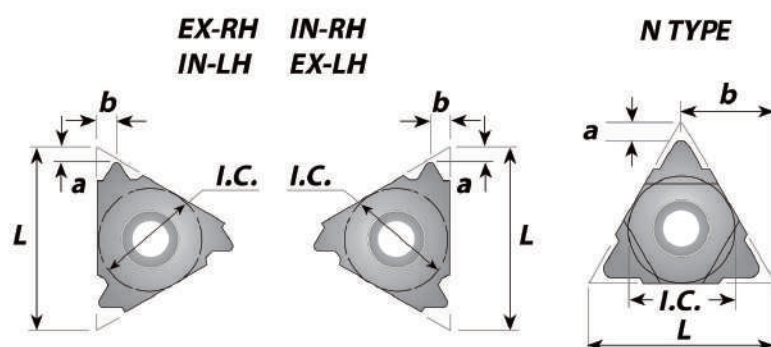


THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XTM	XTB	XT930-C
	mm	L	a	b			
16ER1.0ISO	1.0	16	0.7	0.7	●	●	●
16IR1.0ISO			0.6	0.7	●	●	●
16ER1.25ISO	1.25	16	0.8	0.9	●	●	●
16IR1.25ISO							
16ER1.5ISO	1.5	16	0.8	1.0	●	●	●
16IR1.5ISO							
16ER1.75ISO	1.75	16	0.8	1.2	●	●	●
16IR1.75ISO							
16ER2.0ISO	2.0	16	1.0	1.3	●	●	●
16IR2.0ISO							
16ER2.5ISO	2.5	16	1.1	1.5	●	●	●
16IR2.5ISO							
16ER3.0ISO	3.0	16	1.2	1.6	●	●	●
16IR3.0ISO			1.1	1.5	●	●	●
16ER3.5ISO	3.5	16	1.2	1.7	●	●	●
16IR3.5ISO							

● STOCKABLE ○ NON STOCKABLE

ISO-METRIC

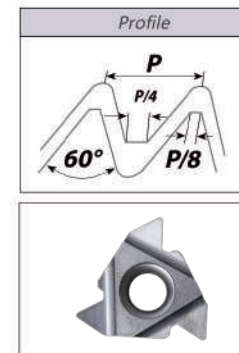
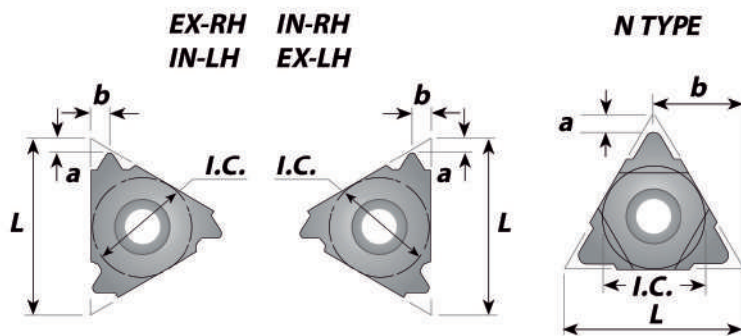


(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XTM	XTB	XT930-C
	mm	L	a	b			
22ER3.5ISO	3.5	22	1.6	2.3	●	●	○
22IR3.5ISO							
22ER4.0ISO	4.0	22	1.6	2.3	●	●	○
22IR4.0ISO							
22ER4.5ISO	4.5	22	1.7	2.4	●	●	○
22IR4.5ISO			1.6	2.4	●	●	○
22ER5.0ISO	5.0	22	1.7	2.5	●	●	○
22IR5.0ISO			1.6	2.3	●	●	○
22IR5.5ISO	5.5	22	1.6	2.3	●	●	○
22ER6.0ISO*	6.0	22	1.9	2.7	●	●	○
22IR6.0ISO			1.6	2.4	●	●	○

● STOCKABLE ○ NON STOCKABLE

UN UNIFIED

UNC, UNF, UNEF, UNS



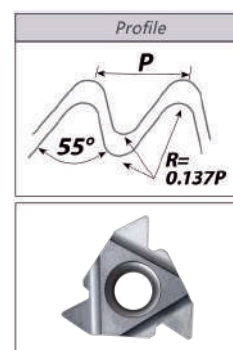
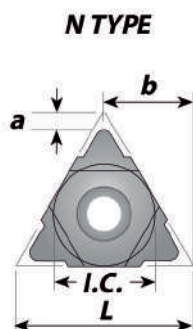
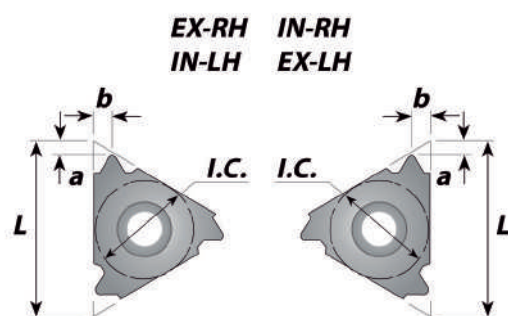
THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XTM	XTB	XT930-C
	mm	L	a	b			
16ER24UN	24	16	0.7	0.8	●	●	●
16IR24UN							
16ER20UN	20	16	0.8	0.9	●	●	●
16IR20UN							
16ER18UN	18	16	0.8	1.0	●	●	●
16IR18UN							
16ER16UN	16	16	0.9	1.1	●	●	●
16IR16UN							
16ER14UN	14	16	1.0	1.2	●	●	●
16IR14UN			0.9	1.2			
16ER12UN	12	16	1.1	1.4	●	●	●
16IR12UN							
16ER10UN	10	16	1.1	1.5	●	●	●
16IR10UN							
16ER8UN	8	16	1.2	1.6	●	●	●
16IR8UN			1.1	1.5			

● STOCKABLE ○ NON STOCKABLE

WHITWORTH 550

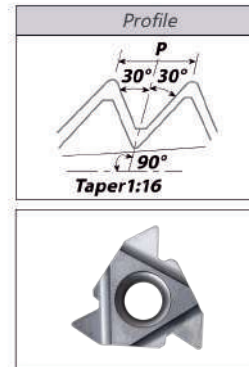
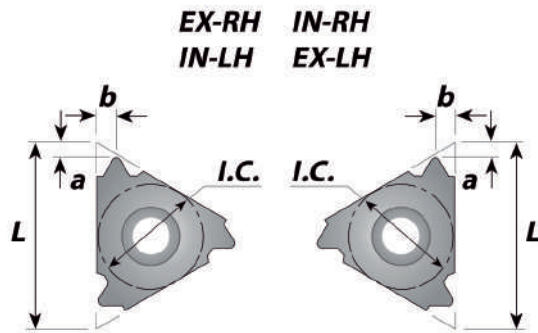
BSW,BSF, BSP, BSB



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XTM	XTB	XT930-C
	(TPI)	L	a	b			
16ER19W	19	16	0.8	1.0	●	●	○
16IR19W	19	16	0.8	1.0	●	●	○
16ER14W	14	16	1.0	1.2	●	●	○
16IR14W	14	16	1.0	1.2	●	●	○
16ER12W	12	16	1.1	1.4	●	●	○
16IR12W	12	16	1.1	1.4	●	●	○
16ER11W	11	16	1.1	1.5	●	●	○
16IR11W	11	16	1.1	1.5	●	●	○

● STOCKABLE ○ NON STOCKABLE

NPT

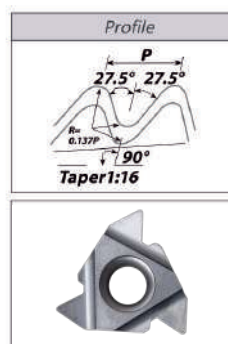
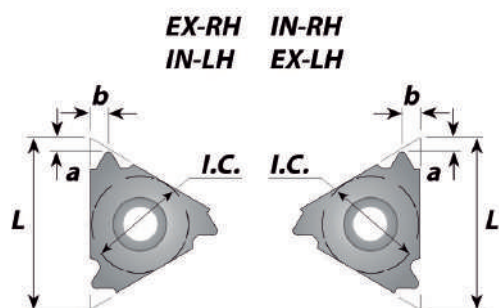


THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XTM	XTB	XT930-C
	mm	L	a	b			
16ER18NPT	18	16	0.8	1.0	●	●	○
16IR18NPT							
16ER14NPT	14	16	0.9	1.2	●	●	○
16IR14NPT							
16ER11.5NPT	11.5	16	1.1	1.5	●	●	○
16IR11.5NPT							
16ER8NPT	8	16	1.3	1.8	●	●	○
16IR8NPT							

● STOCKABLE ○ NON STOCKABLE

BSPT



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XTM	XTB	XT930-C
	mm	L	a	b			
16ER19BSPT	19	16	0.8	0.9	●	●	○
16IR19BSPT	19	16	0.8	0.9	●	●	○
16ER14BSPT	14	16	1.0	1.2	●	●	○
16IR14BSPT	14	16	1.0	1.2	●	●	○
16ER11BSPT	11	16	1.1	1.5	●	●	○
16IR11BSPT	11	16	1.1	1.5	●	●	○

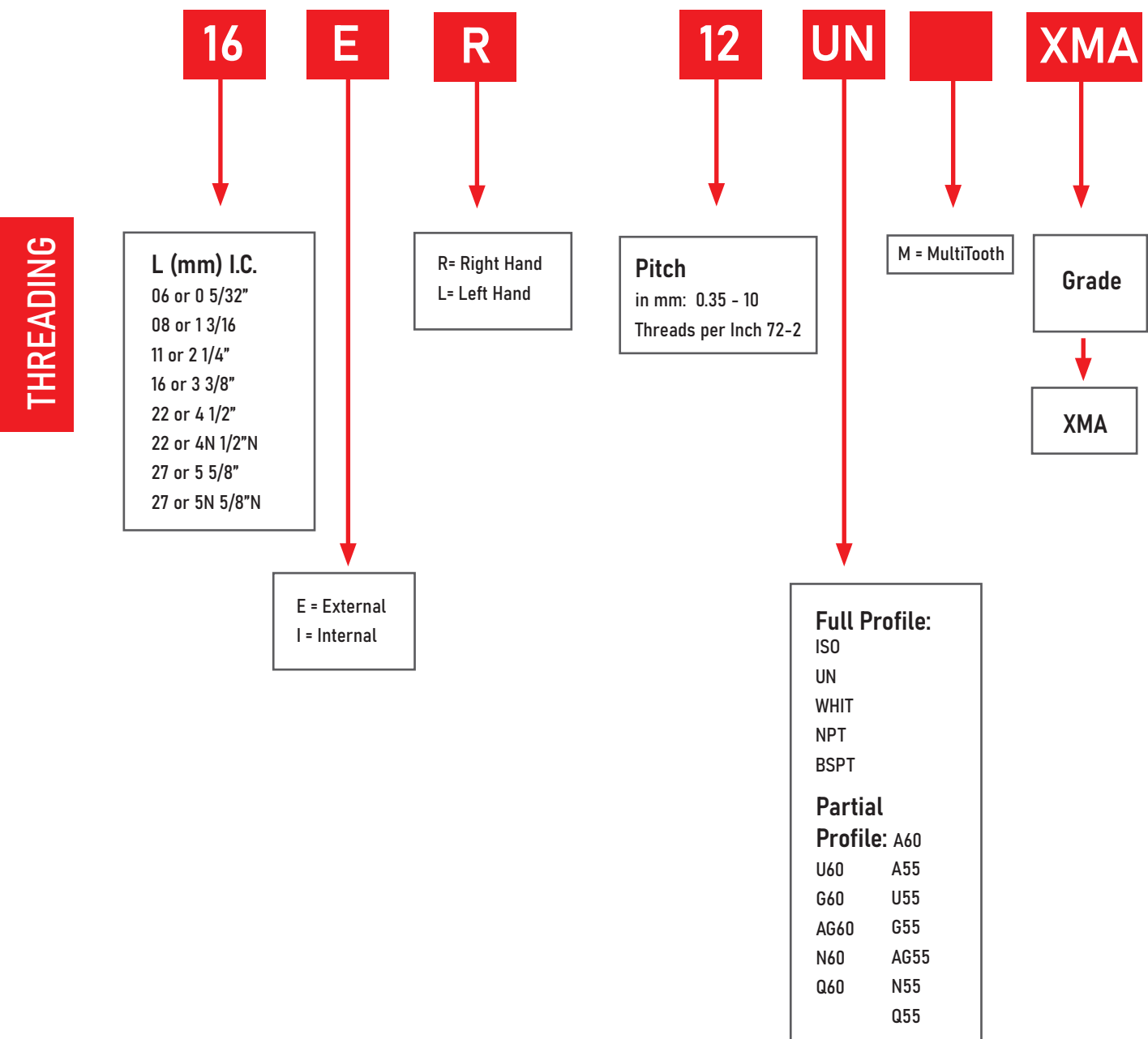
● STOCKABLE ○ NON STOCKABLE

THREAD TURNING INSERTS-GROUND

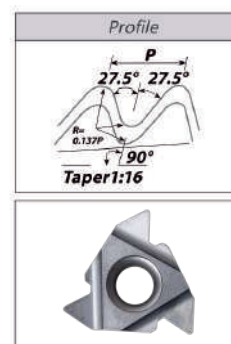
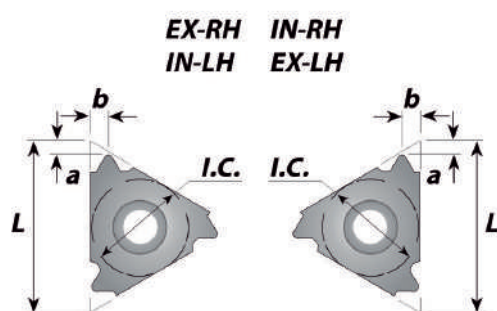
THREAD TURNING NOMENCLATURE

| PRODUCT DESIGNATION

| EXAMPLE: 16ER12UN



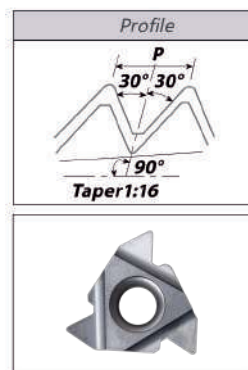
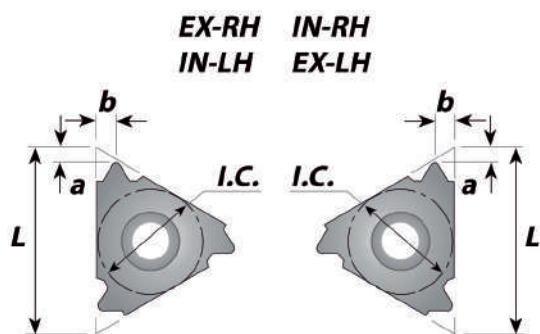
PARTIAL PROFILE 60°



(Item Number)	(Pitch)		(Length) L	(Dimensions in mm)		XMA
	mm	(TPI)		a	b	
06IRA60	0.5 1.25	48 20	6	0.6	0.6	○
08IRA60	0.5 1.5	48 16	8	0.6	0.7	○
11ERA60	0.5 1.5	48 16	11	0.8	0.9	○
11IRA60						
16ERA60	0.5 1.5	48 1.6	16	0.8	0.9	○
16IRA60						
16ERG60	1.75 3.0	14 8	16	1.2	1.7	○
16IRG60						

● STOCKABLE ○ NON STOCKABLE

PARTIAL PROFILE 60°

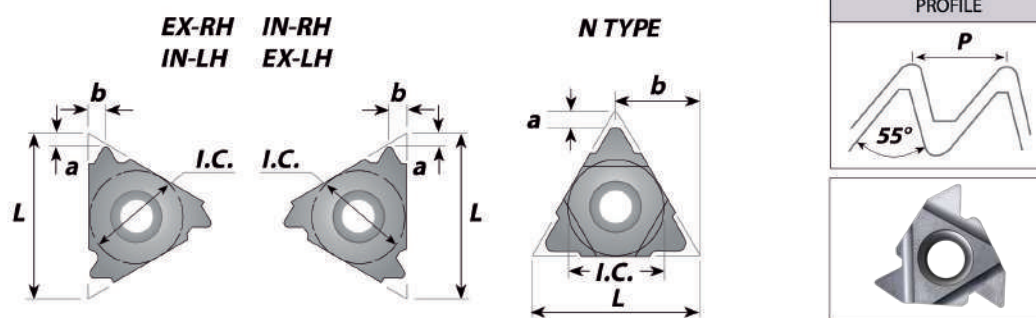


THREADING

(Item Number)	(Pitch)		(Length)	(Dimensions in mm)		XMA
	mm	(TPI)	L	a	b	
16ERAG60	0.5	48	16	1.2	1.7	○
16IRAG60	3.0	8				
22ERN60	3.5	7	22	1.7	2.5	○
22IRN60	5.0	5				
27ERQ60	5.5	4.5	27	2.1	3.1	○
27IRQ60	6.0	2.75				

● STOCKABLE ○ NON STOCKABLE

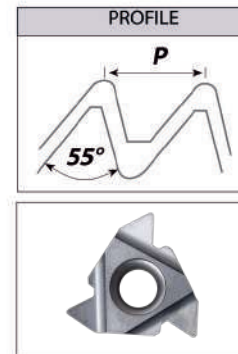
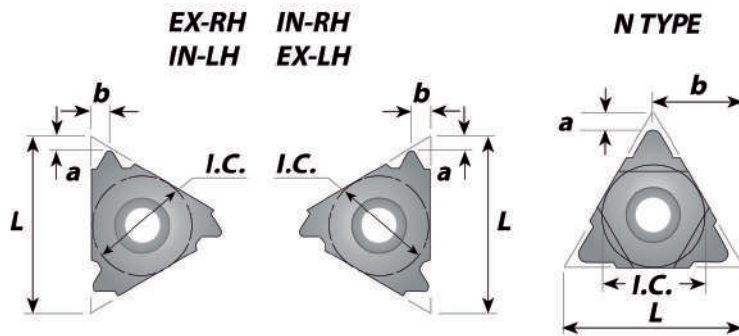
PARTIAL PROFILE 55°



(Item Number)	(Pitch)		(Length) L	(Dimensions in mm)		XMA
	mm	(TPI)		a	b	
06IRA55	0.5 - 3.0	48 - 20	6	0.5	0.6	○
08IRA55	0.5 - 1.5	48 - 16	8	0.6	0.7	○
11ERA55	0.5 - 1.5	48 - 16	11	0.8	0.9	○
11IRA55						
16ERA55	0.5 - 1.5	48 - 16	16	0.8	0.9	○
16IRA55						
16ERG55	1.75 - 3.0	14 - 8	16	1.2	1.7	○
16IRG55						

● STOCKABLE ○ NON STOCKABLE

PARTIAL PROFILE 55°

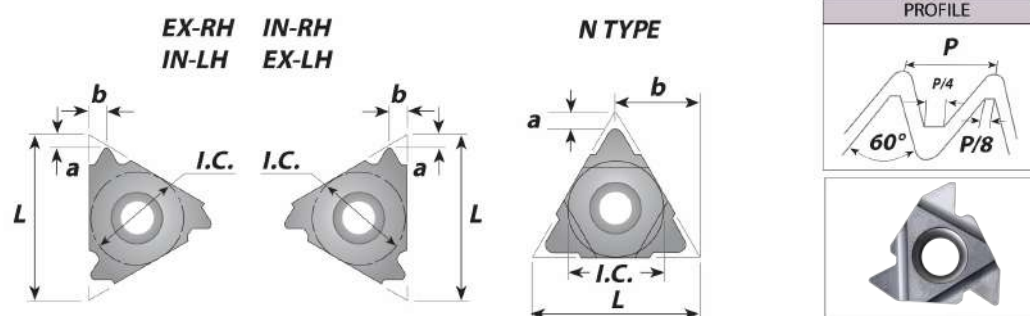


THREADING

(Item Number)	(Pitch)		(Length) L	(Dimensions in mm)		XMA
	mm	(TPI)		a	b	
16ERAG55	0.5	48	16	1.2	1.7	○
16IRAG55	3.0	8				
22ERN55	3.5	7	22	1.7	2.5	○
22IRN55	5.0	5				
27ERQ55	5.5	4.5	27	2.0	2.9	○
27IRQ55	6.0	4				

● STOCKABLE ○ NON STOCKABLE

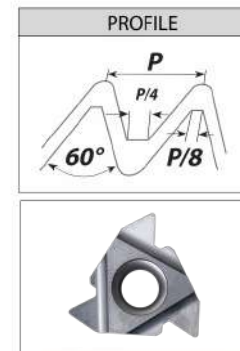
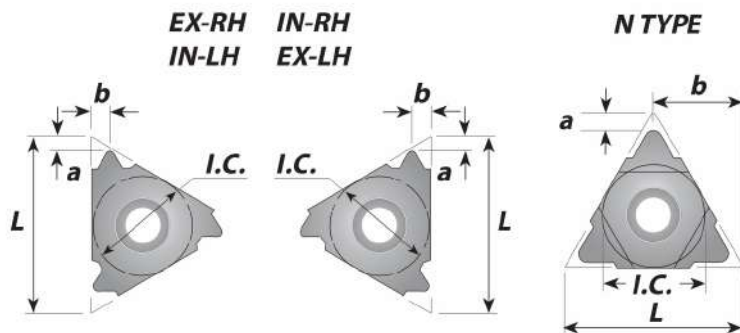
ISO-METRIC



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
06IR0.5ISO	0.5	6	0.9	0.5	○
06IR0.75ISO	0.75	6	0.8	0.5	○
06IR1.0ISO	1.0	6	0.7	0.6	○
06IR1.25ISO	1.25	6	0.6	0.6	○
08IR0.5ISO	0.5	6	0.6	0.5	○
08IR0.75ISO	0.75	8	0.6	0.5	○
08IR1.0ISO	1.0	8	0.6	0.6	○
08IR1.25ISO	1.25	8	0.6	0.7	○
08IR1.5ISO	1.5	8	0.6	0.7	○
08IR1.75ISO	1.75	8	0.6	0.8	○
11ER0.35ISO	0.35	11	0.6	0.4	○
11IR0.35ISO			0.8	0.3	○

● STOCKABLE ○ NON STOCKABLE

ISO-METRIC

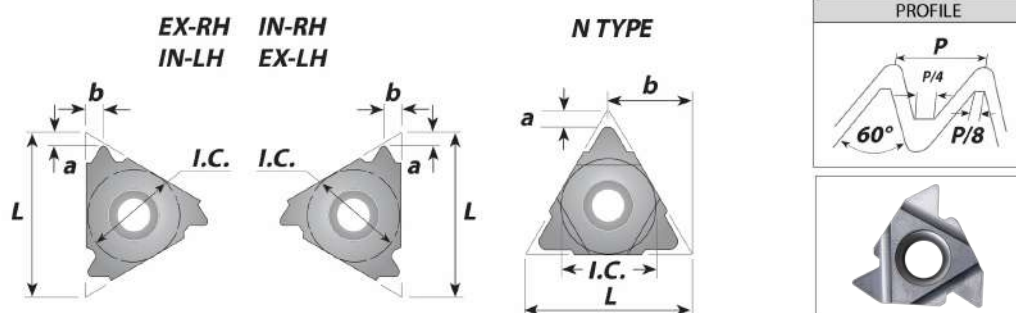


THREADING

(Item Number)	(Pitch)		(Length) L	(Dimensions in mm)		XMA
	mm	(TPI)		a	b	
11ER0.4ISO	0.4	11	16	0.7	0.4	○
11IR0.4ISO				0.8	0.4	○
11ER0.45ISO	0.45	11	22	0.7	0.4	○
11IR0.45ISO				0.8	0.4	○
11ER0.5ISO	0.5	11	27	0.6	0.6	○
11IR0.5ISO				0.6	0.6	○
11ER0.6ISO	0.6	11		0.6	0.6	○
11IR0.6ISO				0.6	0.6	○
11ER0.7ISO	0.7	11		0.6	0.6	○
11IR0.7ISO				0.6	0.6	○
11ER0.75ISO	0.75	11		0.6	0.6	○
11IR0.75ISO				0.6	0.6	○

● STOCKABLE ○ NON STOCKABLE

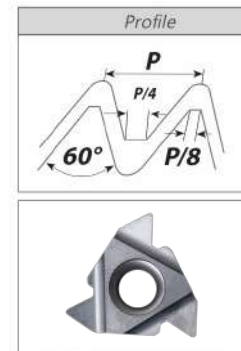
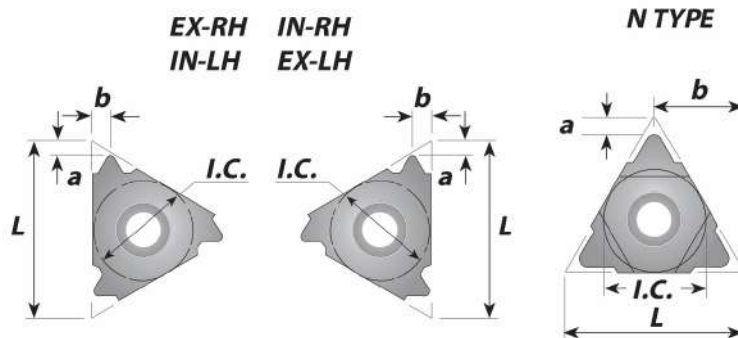
ISO-METRIC



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
11ER0.8ISO	0.8	11	0.6	0.6	○
11IR0.8ISO			0.6	0.6	○
11ER1.0ISO	1.0	11	0.7	0.7	○
11IR1.0ISO			0.6	0.7	○
11ER1.25ISO	1.25	11	0.8	0.9	○
11IR1.25ISO			0.8	0.8	○
11ER1.5ISO	1.5	11	0.8	1.0	○
11IR1.5ISO			0.8	1.0	○
11ER1.75ISO	1.75	11	0.8	1.1	○
11IR1.75ISO			0.8	1.1	○
11ER2.0ISO	2.0	11	0.8	1.1	○
11IR2.0ISO			0.8	0.9	○
11IR2.5ISO	2.5	11	0.8	1.2	○

● STOCKABLE ○ NON STOCKABLE

ISO-METRIC

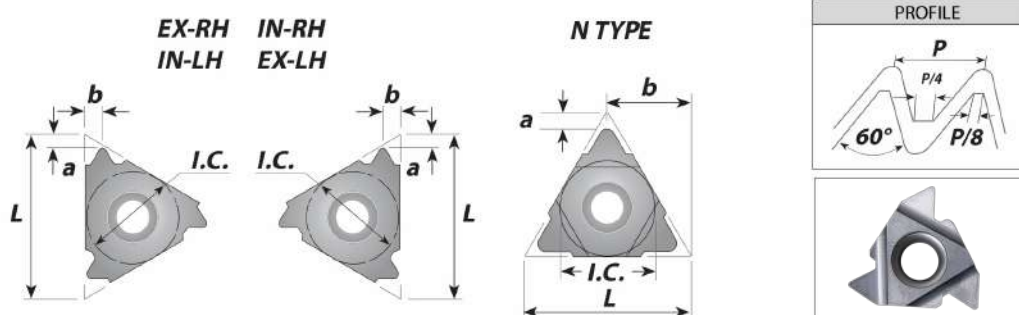


THREADING

(Item Number)	(Pitch)		(Length)	(Dimensions in mm)		XMA
	mm	(TPI)	L	a	b	
16ER0.35ISO	0.35	16	16	0.8	0.4	○
16IR0.35ISO				0.8	0.3	○
16ER0.4ISO	0.4	16	22	0.7	0.4	○
16IR0.4ISO				0.8	0.4	○
16ER0.45ISO	0.45	16	27	0.7	0.4	○
16IR0.45ISO				0.8	0.4	○
16ER0.5ISO	0.5	16		0.6	0.6	○
16IR0.5ISO				0.6	0.6	○
16ER0.6ISO	0.6	16		0.6	0.6	○
16IR0.6ISO				0.6	0.6	○
16ER0.7ISO	0.7	16		0.6	0.6	○
16IR0.7ISO				0.6	0.6	○
16ER0.75ISO	0.75	16		0.6	0.6	○
16IR0.75ISO				0.6	0.6	○
16ER0.8ISO	0.8	16		0.6	0.6	○
16IR0.8ISO				0.6	0.6	○

● STOCKABLE ○ NON STOCKABLE

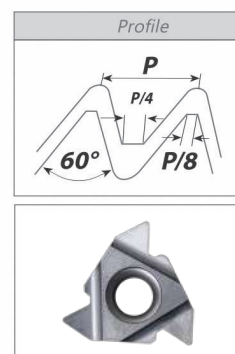
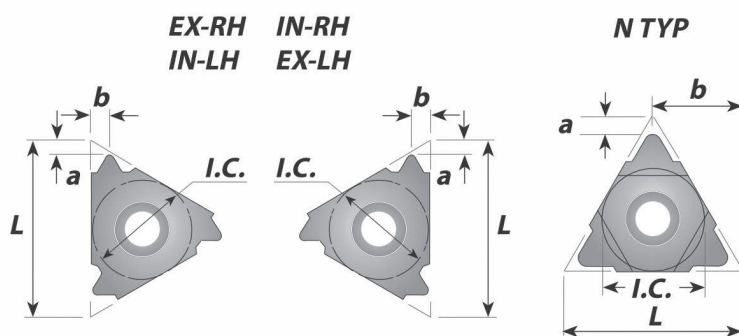
ISO-METRIC



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
16ER0.35ISO	0.35	16	0.8	0.4	○
16IR0.35ISO			0.8	0.3	○
16ER0.4ISO	0.4	16	0.7	0.4	○
16IR0.4ISO			0.8	0.4	○
16ER0.45ISO	0.45	16	0.7	0.4	○
16IR0.45ISO			0.8	0.4	○
16ER0.5ISO	0.5	16	0.6	0.6	○
16IR0.5ISO			0.6	0.6	○
16ER0.6ISO	0.6	16	0.6	0.6	○
16IR0.6ISO			0.6	0.6	○
16ER0.7ISO	0.7	16	0.6	0.6	○
16IR0.7ISO			0.6	0.6	○
16ER0.75ISO	0.75	16	0.6	0.6	○
16IR0.75ISO			0.6	0.6	○
16ER0.8ISO	0.8	16	0.6	0.6	○
16IR0.8ISO			0.6	0.6	○

● STOCKABLE ○ NON STOCKABLE

ISO-METRIC

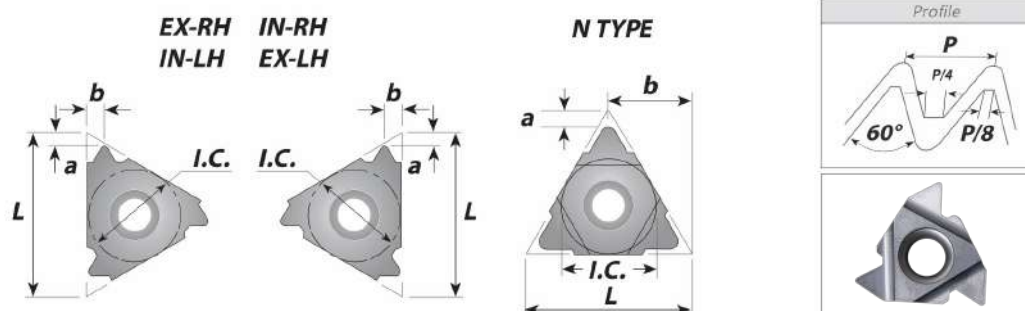


THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
22ER3.5ISO	3.5	22	1.6	2.3	○
22IR3.5ISO					
22ER4.0ISO	4.0	22	1.6	2.3	○
22IR4.0ISO					
22ER4.5ISO	4.5	22	1.7	2.4	○
22IR4.5ISO			1.6	2.4	○
22ER5.0ISO	5.0	22	1.7	2.5	○
22IR5.0ISO			1.6	2.4	○
22IR5.5ISO	5.5	22	1.6	2.3	○
22ER6.0ISO*	6.0	22	1.9	2.7	○
22IR6.0ISO			1.6	2.4	○

● STOCKABLE ○ NON STOCKABLE

ISO-METRIC

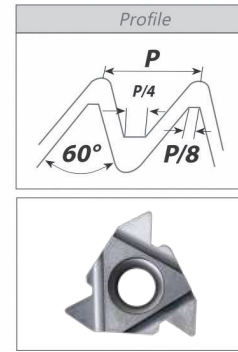
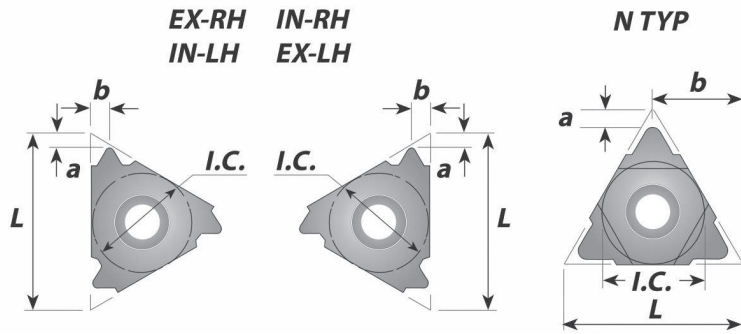


(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
22NER5.5ISO	5.5	22N	2.3	11.0	○
22NIR5.5ISO			2.4	11.0	○
22NER6.0ISO	6.0	22N	2.6	11.0	○
22NIR6.0ISO			2.1	11.0	○
27ER5.5ISO	5.5	27	1.9	2.7	○
27IR5.5ISO			1.6	2.3	○
27ER6.0ISO	6.0	27	2.0	2.9	○
27IR6.0ISO			1.8	2.5	○

● STOCKABLE ○ NON STOCKABLE

UN UNIFIED

UNC, UNF, UNEF, UNS



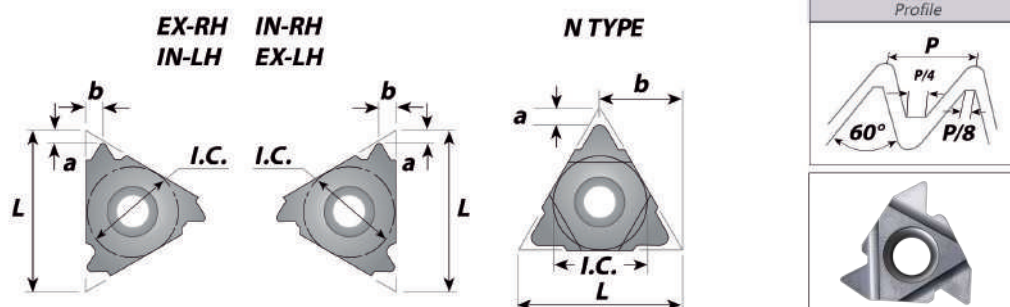
THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
06IR32UN	32	6	0.8	0.5	○
06IR28UN	28	6	0.8	0.6	○
06IR24UN	24	6	0.7	0.6	○
06IR20UN	20	6	0.6	0.6	○
06IR18UN	18	6	0.6	0.7	○

● STOCKABLE ○ NON STOCKABLE

UN UNIFIED

UNC, UNF, UNEF, UNS

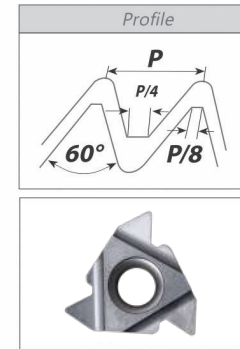
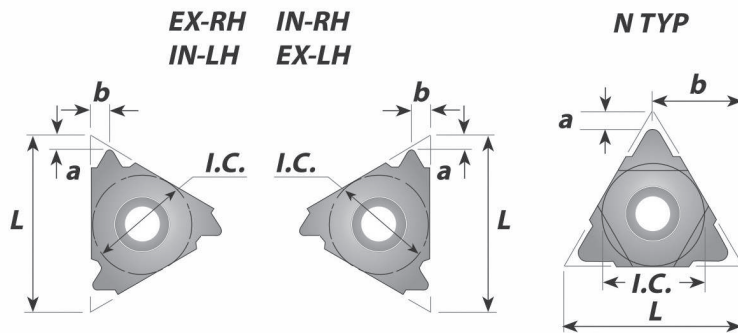


(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
08IR32UN	32	8	0.6	0.5	○
08IR28UN	28	8	0.6	0.6	○
08IR24UN	24	8	0.6	0.6	○
08IR20UN	20	8	0.6	0.7	○
08IR18UN	18	8	0.6	0.7	○
08IR16UN	16	8	0.6	0.7	○
08IR14UN	14	8	0.6	0.8	○
08IR13UN	13	8	0.8	0.9	○
11ER72UN	72	11	0.8	0.4	○
11IR72UN			0.8	0.3	○
11ER64UN	64	11	0.8	0.4	○
11IR64UN			0.8	0.4	○
11ER56UN	56	11	0.7	0.4	○
11IR56UN			0.7	0.4	○

● STOCKABLE ○ NON STOCKABLE

UN UNIFIED

UNC, UNF, UNEF, UNS



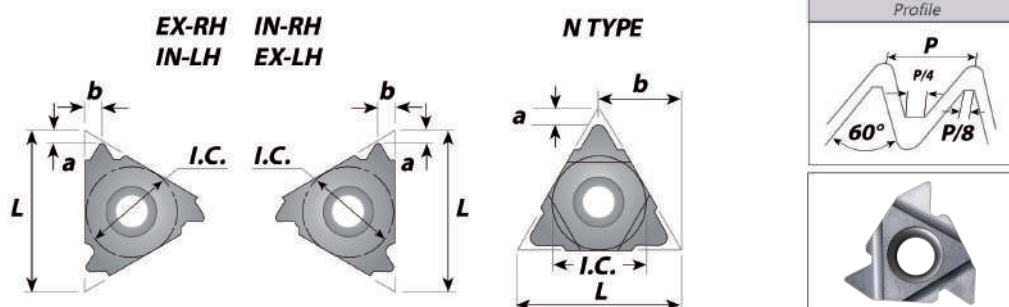
THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
11ER48UN	48	11	0.6	0.6	○
11IR48UN					
11ER44UN	44	11	0.6	0.6	○
11IR44UN					
11ER40UN	40	11	0.6	0.6	○
11IR40UN					
11ER36UN	36	11	0.6	0.6	○
11IR36UN					
11ER32UN	32	11	0.6	0.6	○
11IR32UN					
11ER28UN	28	11	0.6	0.7	○
11IR28UN					
11ER27UN	27	11	0.7	0.8	○
11IR27UN					

● STOCKABLE ○ NON STOCKABLE

UN UNIFIED

UNC, UNF, UNEF, UNS

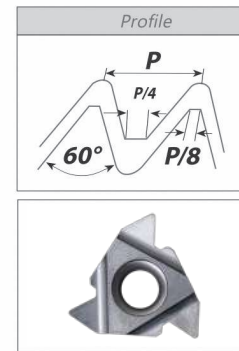
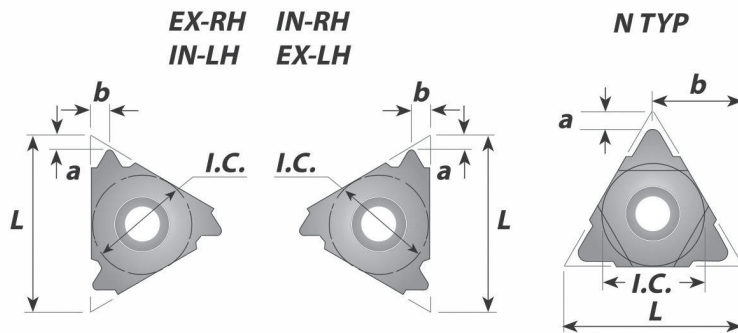


(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
11ER24UN	24	11	0.7	0.8	○
11IR24UN					
11ER20UN	20	11	0.8	0.9	○
11IR20UN					
11ER18UN	18	11	0.8	1.0	○
11IR18UN					
11ER16UN	16	11	0.9	1.1	○
11IR16UN					
11ER14UN	14	11	0.9	1.1	○
11IR14UN					
16ER72UN	72	16	0.8	0.4	○
16IR72UN			0.8	0.3	○
16ER64UN	64	16	0.8	0.4	○
16IR64UN					

● STOCKABLE ○ NON STOCKABLE

UN UNIFIED

UNC, UNF, UNEF, UNS



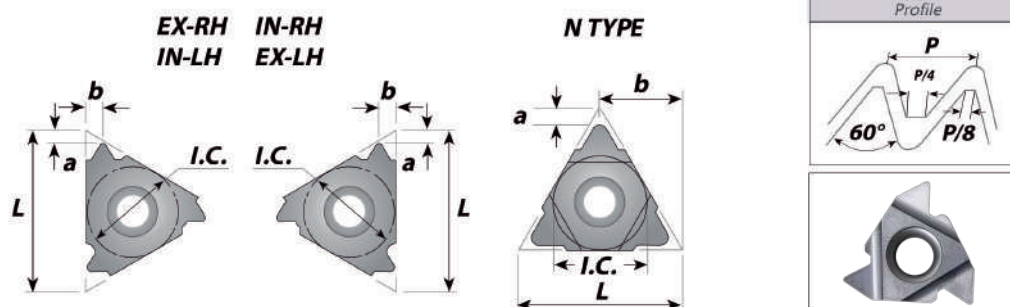
THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
11ER13UN	13	11	0.8	1.0	○
11IR13UN					
11ER12UN	12	11	0.8	1.1	○
11IR12UN					
11ER11UN	11	11	0.8	1.1	○
11IR11UN					
16ER72UN	72	16	0.8	0.4	○
16IR72UN			0.8	0.3	○
16ER64UN	64	16	0.8	0.4	○
16IR64UN					
16ER56UN	56	16	0.7	0.4	○
16IR56UN					
16ER48UN	48	16	0.6	0.6	○
16IR48UN					
16ER44UN	44	16	0.6	0.6	○
16IR44UN					
16ER40UN	40	16	0.6	0.6	○
16IR40UN					

● STOCKABLE ○ NON STOCKABLE

UN UNIFIED

UNC, UNF, UNEF, UNS

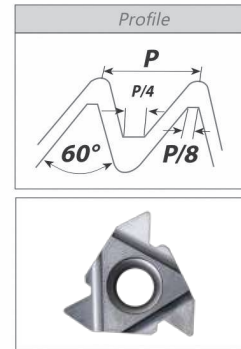
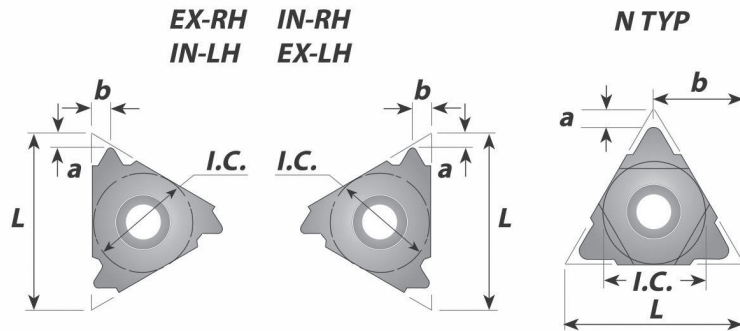


(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
16ER36UN	36	16	0.6	0.6	○
16IR36UN					
16ER32UN	32	16	0.6	0.6	○
16IR32UN					
16ER28UN	28	16	0.6	0.7	○
16IR28UN					
16ER27UN	27	16	0.7	0.8	○
16IR27UN					
16ER24UN	24	16	0.7	0.8	○
16IR24UN					
16ER20UN	20	16	0.8	0.9	○
16IR20UN					
16ER18UN	18	16	0.8	1.0	○
16IR18UN					
16ER16UN	16	16	0.9	1.1	○
16IR16UN					

● STOCKABLE ○ NON STOCKABLE

UN UNIFIED

UNC, UNF, UNEF, UNS



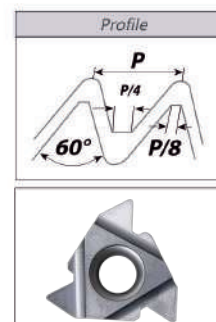
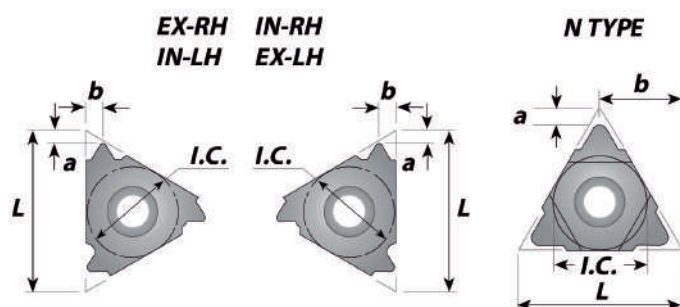
THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
16ER14UN	14	11	1.0	1.2	○
16IR14UN			0.9	1.2	○
16ER13UN	13	11	1.1	1.3	○
16IR13UN					
16ER12UN	12	11	1.1	1.4	○
16IR12UN					
16ER11.5UN	11.5	16	1.1	1.5	○
16IR11.5UN			1.1		
16ER11UN	11	16	1.1	1.5	○
16IR11UN					
16ER10UN	10	16	1.1	1.5	○
16IR10UN					
16ER9UN	9	16	1.1	1.7	○
16IR9UN					
16ER8UN	8	16	1.2	1.6	○
16IR8UN			1.1	1.5	○

● STOCKABLE ○ NON STOCKABLE

UN UNIFIED

UNC, UNF, UNEF, UNS

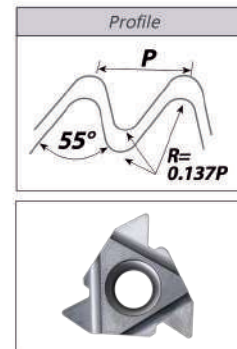
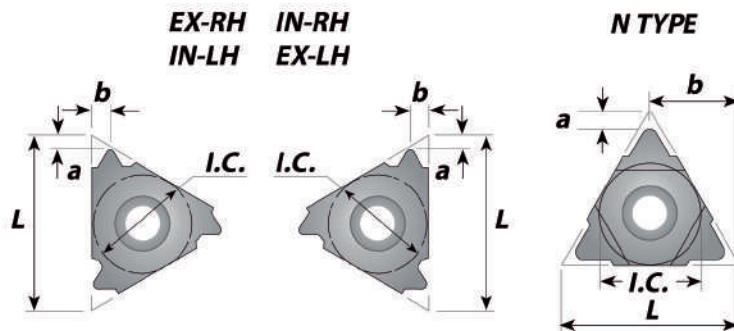


(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
22ER7UN	7	22	1.6	2.3	○
22IR7UN					
22ER6UN	6	22	1.6	2.3	○
22IR6UN					
22ER5UN	5	22	1.7	2.5	○
22IR5UN			1.6	2.3	○
27ER4.5UN	4.5	27	1.9	2.7	○
27IR4.5UN			1.7	2.4	○
27ER4UN	4	27	2.5	13.7	○
27IR4UN			2.8	16.5	○

● STOCKABLE ○ NON STOCKABLE

WHITWORTH 55°

BSW, BSF, BSP, BSB



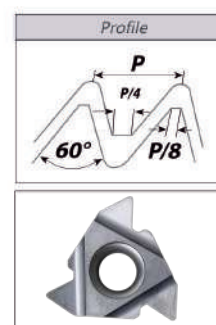
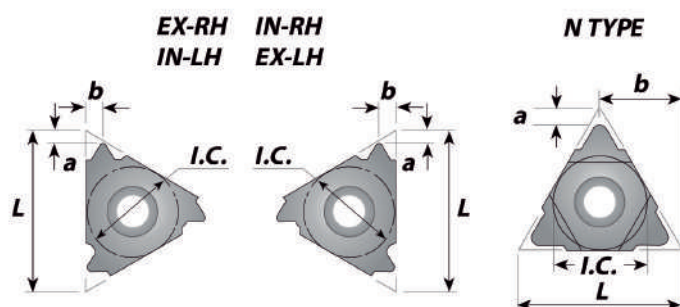
THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
06IR26W	26	6	0.7	0.6	○
06IR22W	22	6	0.6	0.6	○
06IR20W	20	6	0.6	0.7	○
06IR18W	18	6	0.6	0.7	○
08IR28W	28	8	0.6	0.6	○
08IR24W	24	8	0.6	0.6	○
08IR20W	20	8	0.6	0.7	○
08IR19W	19	8	0.6	0.7	○
08IR18W	18	8	0.6	0.7	○
08IR16W	16	8	0.6	0.7	○

● STOCKABLE ○ NON STOCKABLE

WHITWORTH 55°

BSW, BSF, BSP, BSB

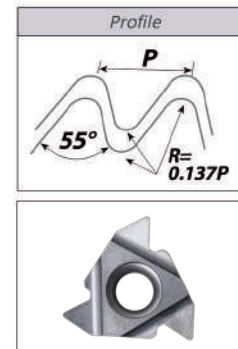
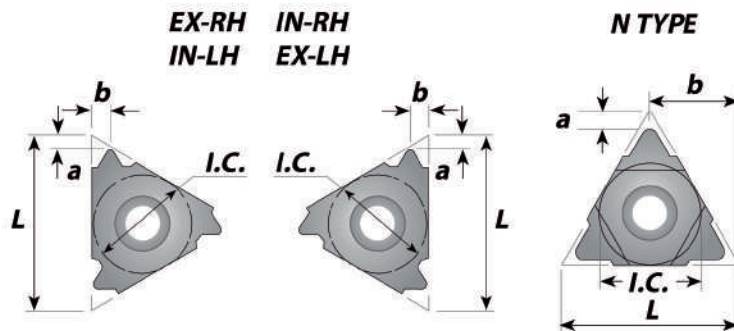


(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
11ER72W	72	11	0.7	0.4	○
11IR72W					
11ER60W	60	11	0.7	0.4	○
11IR60W					
11ER56W	56	11	0.7	0.4	○
11IR56W					
11ER48W	48	11	0.6	0.6	○
11IR48W					
11ER40W	40	11	0.6	0.6	○
11IR40W					
11ER36W	36	11	0.6	0.6	○
11IR36W					
11ER32W	32	11	0.6	0.6	○
11IR32W					
11ER28W	28	11	0.6	0.7	○
11IR28W					

● STOCKABLE ○ NON STOCKABLE

WHITWORTH 55°

BSW, BSF, BSP, BSB



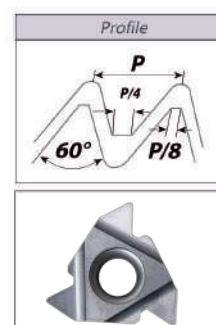
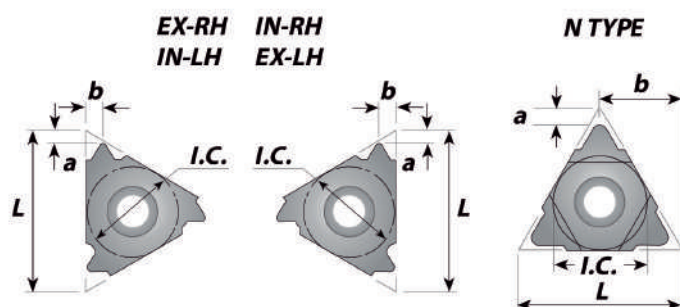
THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
11ER26W	26	11	0.7	0.7	○
11IR26W					
11ER24W	24	11	0.7	0.8	○
11IR24W					
11ER22W	22	11	0.8	0.9	○
11IR22W					
11ER20W	20	11	0.8	0.9	○
11IR20W					
11ER19W	19	11	0.8	1.0	○
11IR40W					
11ER18W	18	11	0.8	1.0	○
11IR18W					
11ER16W	16	11	0.9	1.1	○
11IR16W					

● STOCKABLE ○ NON STOCKABLE

WHITWORTH 55°

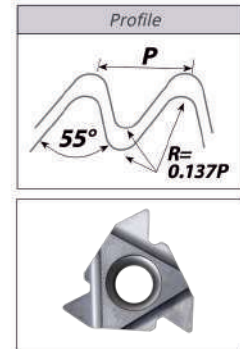
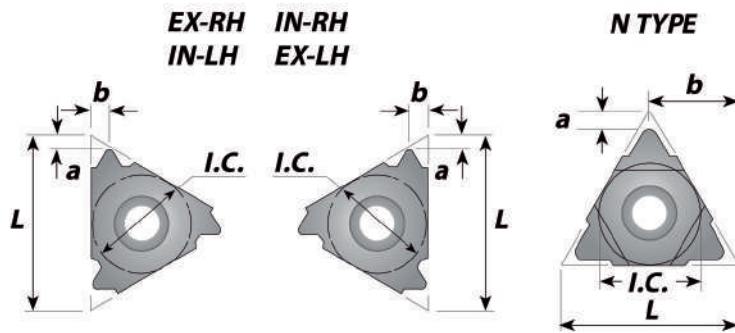
BSW, BSF, BSP, BSB



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
11ER72W	72	11	0.7	0.4	○
11IR72W					
11ER60W	60	11	0.7	0.4	○
11IR60W					
11ER56W	56	11	0.7	0.4	○
11IR56W					
11ER48W	48	11	0.6	0.6	○
11IR48W					
11ER40W	40	11	0.6	0.6	○
11IR40W					
11ER36W	36	11	0.6	0.6	○
11IR36W					
11ER32W	32	11	0.6	0.6	○
11IR32W					
11ER28W	28	11	0.6	0.7	○
11IR28W					

● STOCKABLE ○ NON STOCKABLE

WHITWORTH 55° BSW, BSF, BSP, BSB

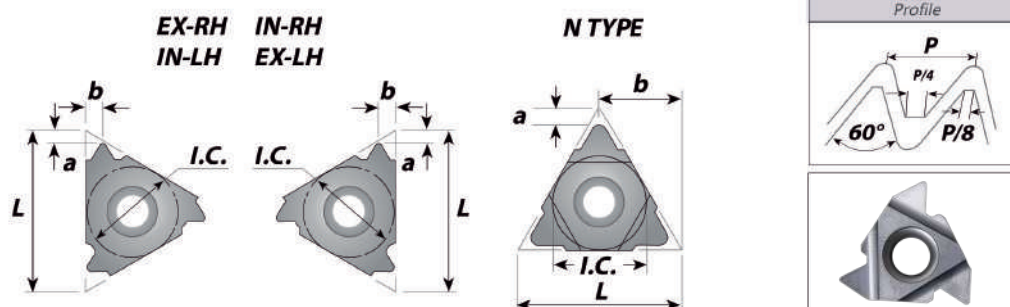


THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
11ER26W	26	11	0.7	0.7	○
11IR26W					
11ER24W	24	11	0.7	0.8	○
11IR24W					
11ER22W	22	11	0.8	0.9	○
11IR22W					
11ER20W	20	11	0.8	0.9	○
11IR20W					
11ER19W	19	11	0.8	1.0	○
11IR19W					
11ER18W	18	11	0.8	1.0	○
11IR18W					
11ER16W	16	11	0.9	1.1	○
11IR16W					

● STOCKABLE ○ NON STOCKABLE

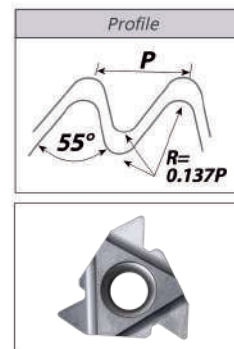
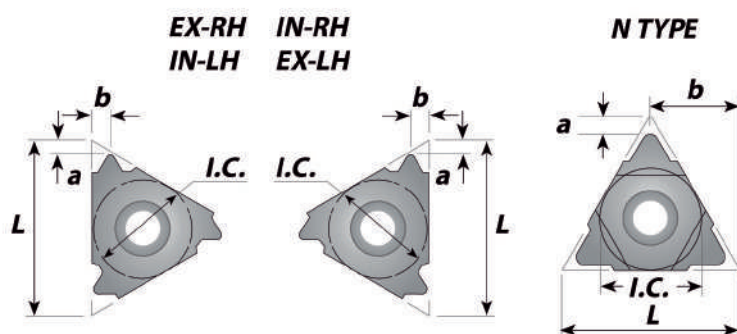
WHITWORTH 55° BSW, BSF, BSP, BSB



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
11ER14W	14	11	0.9	1.1	○
11IR14W					
11IR12W	12	11	1.0	1.1	○
11IR11W	11	11	0.9	1.2	○
16ER72W	72	16	0.7	0.4	○
16IR72W					
16ER60W	60	16	0.7	0.6	○
16IR60W					
16ER56W	56	16	0.7	0.4	○
16IR56W					
16ER48W	48	16	0.6	0.6	○
16IR48W					
16ER40W	40	16	0.6	0.6	○
16IR40W					

● STOCKABLE ○ NON STOCKABLE

WHITWORTH 55° BSW, BSF, BSP, BSB



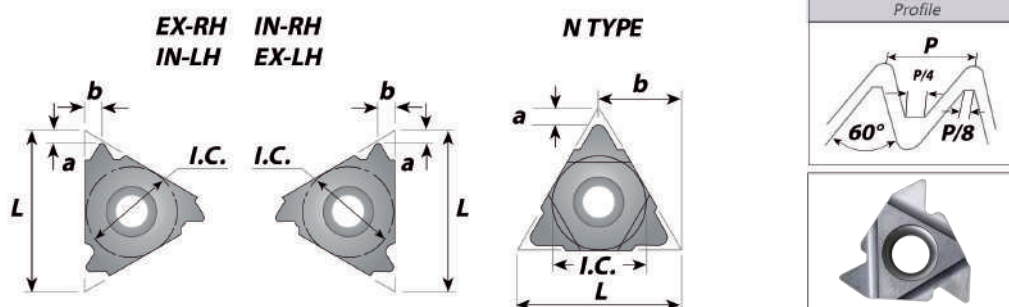
THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
16ER36W	36	16	0.6	0.6	○
16IR36W					
16ER32W	32	16	0.6	0.6	○
16IR32W					
16ER28W	28	16	0.6	0.7	○
16IR28W					
16ER26W	26	16	0.7	0.7	○
16IR26W					
16ER24W	24	16	0.7	0.8	○
16IR24W					
16ER22W	22	16	0.7	0.9	○
16IR22W					
16ER20W	20	16	0.9	0.9	○
16IR20W					

● STOCKABLE ○ NON STOCKABLE

WHITWORTH 55°

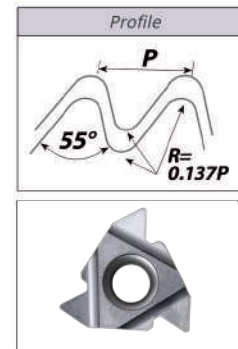
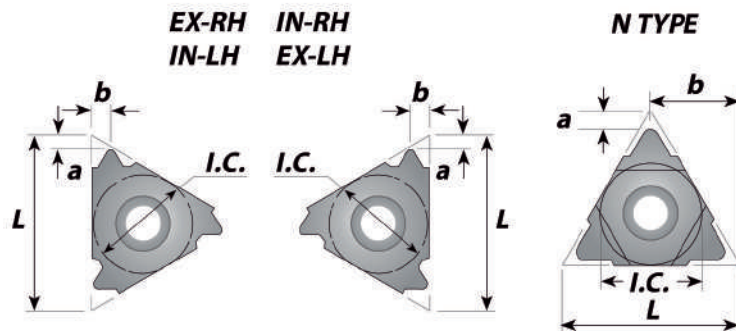
BSW, BSF, BSP, BSB



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
16ER19W	19	16	0.8	1.0	○
16IR19W					
16ER18W	18	16	0.8	1.0	○
16IR18W					
16ER16W	16	16	0.9	1.1	○
16IR16W					
16ER14W	14	16	1.0	1.2	○
16IR14W					
16ER12W	12	16	1.1	1.4	○
16IR12W					
16ER11W	11	16	1.1	1.5	○
16IR11W					
16ER10W	10	16	1.1	1.5	○
16IR10W					
16ER9W	9	16	1.2	1.7	○
16IR9W					

● STOCKABLE ○ NON STOCKABLE

WHITWORTH 55° BSW, BSF, BSP, BSB

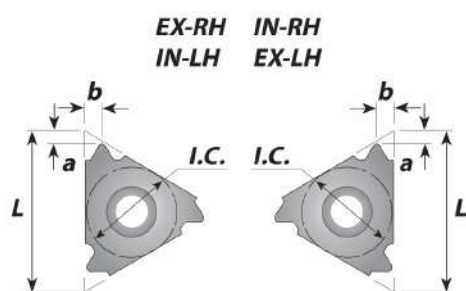


THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
16ER36W	8	16	1.2	1.5	○
16IR8W					
22ER7W	7	22	1.4	2.3	○
22IR7W					
22ER6W	6	22	1.6	2.3	○
22IR6W					
22ER5W	5	22	1.7	2.4	○
22IR5W					
27ER4.5W	4.5	27	1.8	2.6	○
27IR4.5W					
27ER4W	4	27	2.0	2.9	○
27IR4W					

● STOCKABLE ○ NON STOCKABLE

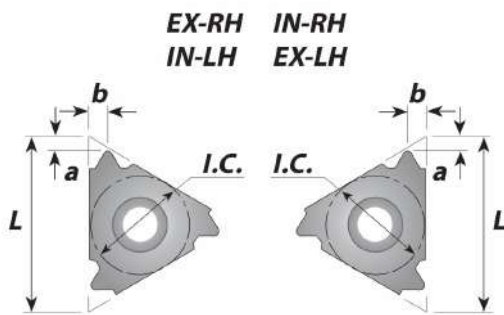
NPT



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
06IR27NPT	27	6	0.6	0.6	○
08IR27NPT	27	8	0.6	0.6	○
08IR18NPT	18	8	0.6	0.6	○
11ER27NPT	27	11	0.7	0.8	○
11IR27NPT					
11ER18NPT	18	11	0.8	1.0	○
11IR18NPT					
11ER14NPT	14	11	0.8	1.0	○
11IR14NPT					
16ER27NPT	27	16	0.7	0.8	○
16IR27NPT					

● STOCKABLE ○ NON STOCKABLE

NPT

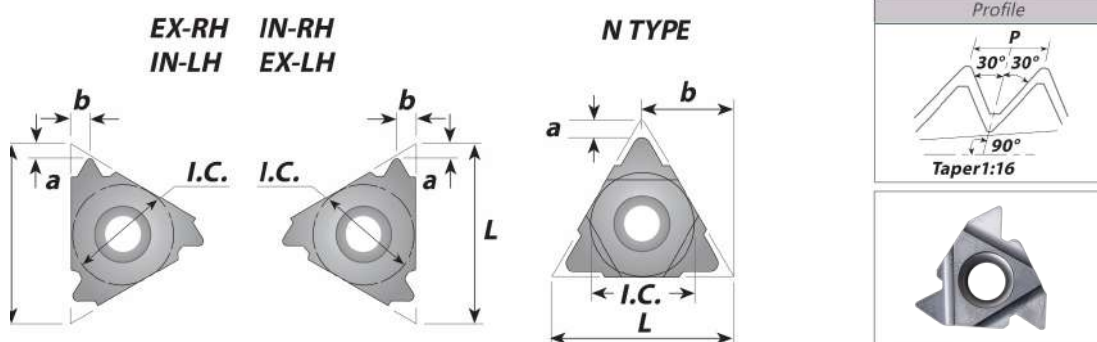


THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
16ER18NPT	18	16	0.8	1.0	○
16IR18NPT					
16ER14NPT	14	16	0.9	1.2	○
16IR14NPT					
16ER11.5NPT	11.5	16	1.1	1.5	○
16IR11.5NPT					
16ER8NPT	8	16	1.3	1.8	○
16IR8NPT					

● STOCKABLE ○ NON STOCKABLE

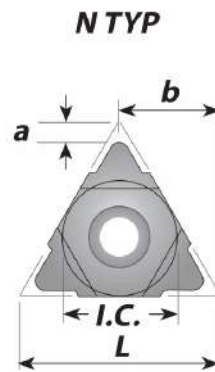
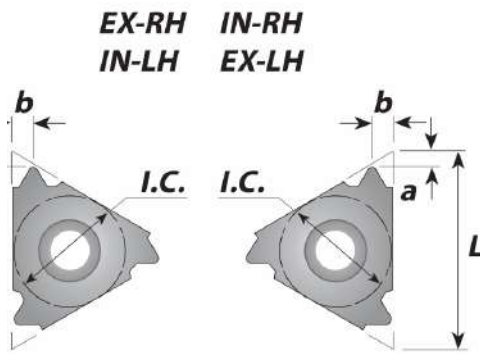
NPTF DRYSEAL



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
06IR27NPTF	27	6	0.7	0.6	○
08IR27NPTF	27	8	0.6	0.6	○
08IR18NPTF	18	8	0.6	0.6	○
11ER27NPTF	27	11	0.7	0.7	○
11IR27NPTF					
11ER18NPTF	18	11	0.8	1.0	○
11IR18NPTF					
11ER14NPTF	14	11	0.8	1.0	○
11IR14NPTF					
11ER14NPTF	14	11	0.8	1.0	○
11IR14NPTF					
16ER27NPTF	18	16	0.8	1.0	○
16IR27NPTF					
16ER18NPTF	14	16	0.9	1.2	○
16IR18NPTF					

● STOCKABLE ○ NON STOCKABLE

NPTF DRYSEAL

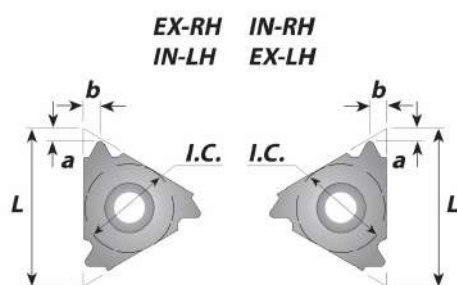


THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
16ER14NPTF	14	16	0.9	1.2	○
16IR14NPTF					
16ER11.5NPTF	11.5	16	1.1	1.5	○
16IR11.5NPTF					
16ER8NPTF	8	16	1.3	1.8	○
16IR8NPTF					

● STOCKABLE ○ NON STOCKABLE

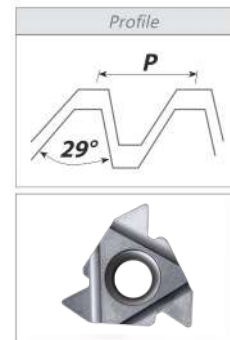
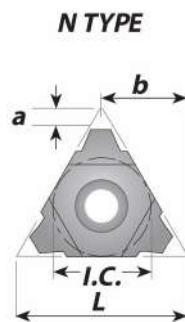
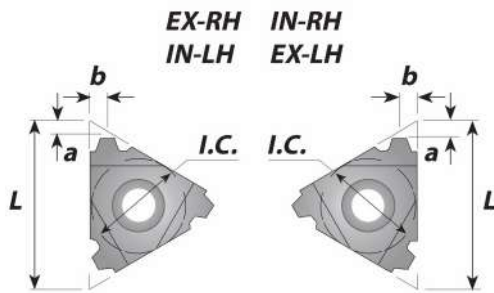
BSPT



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
06IR28BSPT	28	6	0.7	0.6	○
08IR28BSPT	28	8	0.6	0.6	○
08IR19BSPT	19	8	0.6	0.6	○
11IR28BSPT	28	11	0.6	0.6	○
11IR19BSPT	19	11	0.8	0.9	○
11IR14BSPT	14	11	0.8	1.0	○
11IR11BSPT*	11	11	0.9	1.2	○
16ER28BSPT	28	16	0.6	0.6	○
16IR28BSPT					
16ER19BSPT	19	16	0.8	1.0	○
16IR19BSPT					
16ER14BSPT	14	16	1.0	1.2	○
16IR14BSPT					
16ER11BSPT	11	16	1.1	1.5	○
16IR11BSPT					

● STOCKABLE ○ NON STOCKABLE

ACME

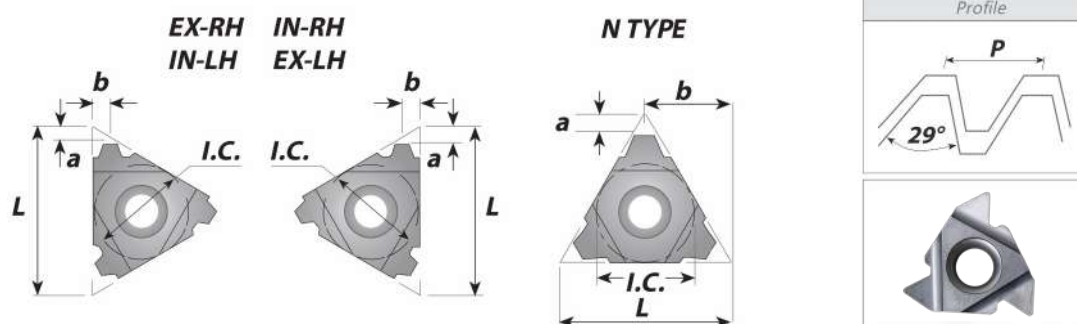


THREADING

(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
11ER16ACME	16	11	0.9	1.0	○
11IR16ACME					
16ER16ACME	16	16	0.9	1.0	○
16IR16ACME					
16ER14ACME	14	16	1.0	1.2	○
16IR14ACME					
16ER12ACME	12	16	1.1	1.2	○
16IR12ACME					
16ER10ACME	10	16	1.3	1.3	○
16IR10ACME					
16ER8ACME	8	16	1.5	1.5	○
16IR8ACME					

● STOCKABLE ○ NON STOCKABLE

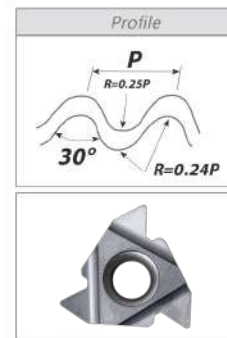
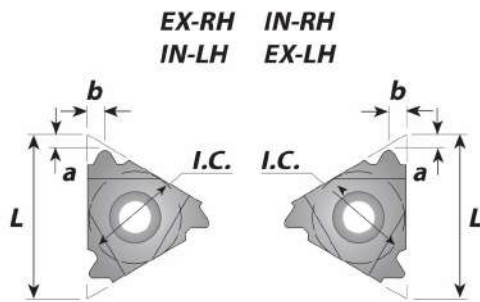
ACME



(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
16ER6ACME*	6	16	1.7	1.8	○
16IR6ACME*					
22ER6ACME	6	22	1.8	2.1	○
22IR6ACME					
22ER5ACME	5	22	2.0	2.3	○
22IR5ACME					
22ER4ACME*	4	22	2.1	2.2	○
22IR4ACME*					
27ER4ACME	4	27	2.3	2.7	○
27IR4ACME					

● STOCKABLE ○ NON STOCKABLE

ROUND DIN 405



THREADING

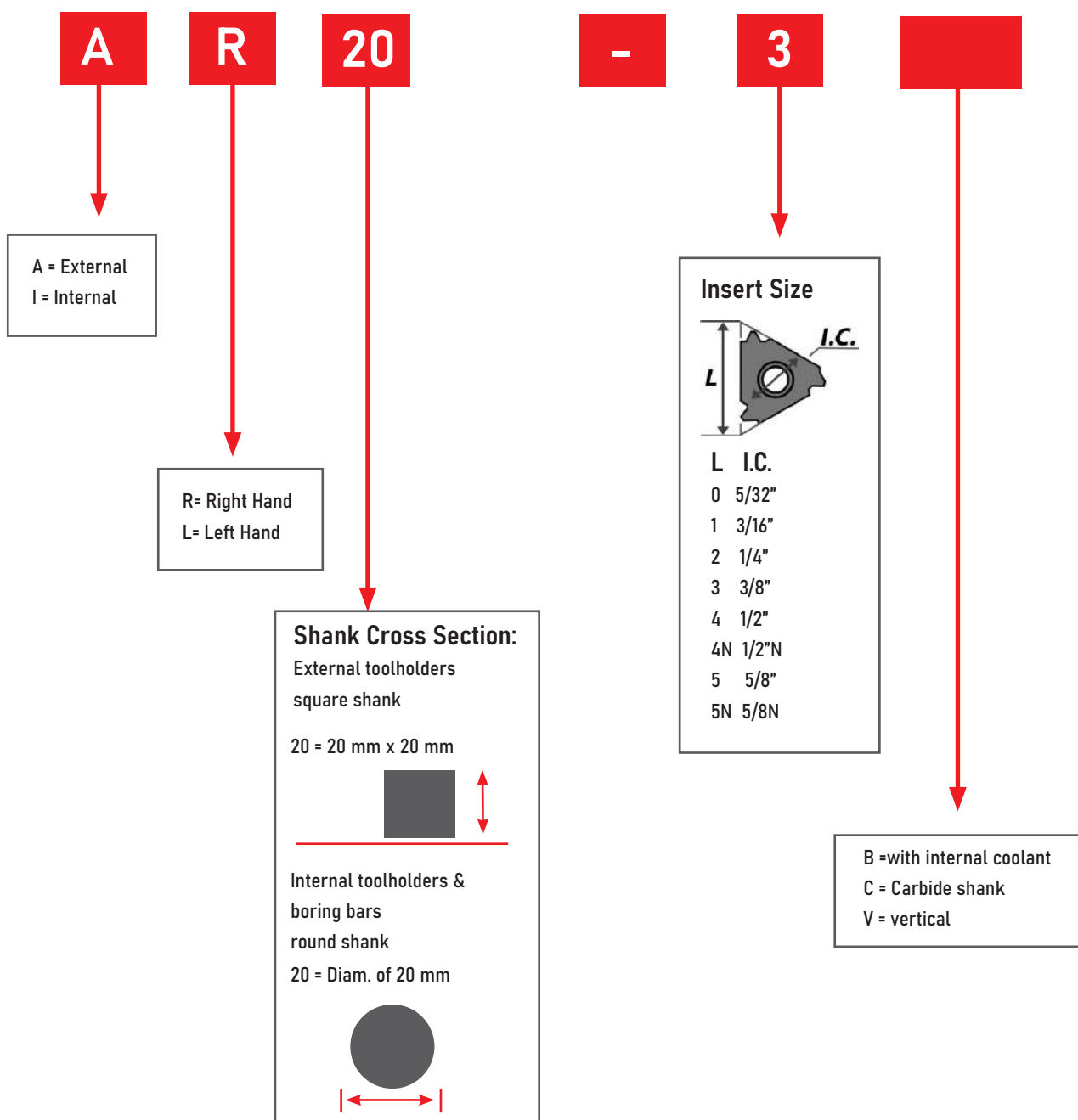
(Item Number)	(Pitch)	(Length)	(Dimensions in mm)		XMA
	mm	L	a	b	
16ER10RD	10	16	1.1	1.2	○
16IR10RD			1.1	1.2	○
16ER8RD	8	16	1.4	1.3	○
16IR8RD			1.4	1.4	○
16ER6RD	6	16	1.5	1.7	○
16IR6RD			1.4	1.5	○
22ER6RD	6	22	1.5	1.7	○
22IR6RD			1.5	1.7	○
22ER4RD	4	22	2.2	2.3	○
22IR4RD			2.2	2.3	○
27ER4RD	4	27	2.2	2.3	○
27IR4RD			2.2	2.3	○

● STOCKABLE ○ NON STOCKABLE

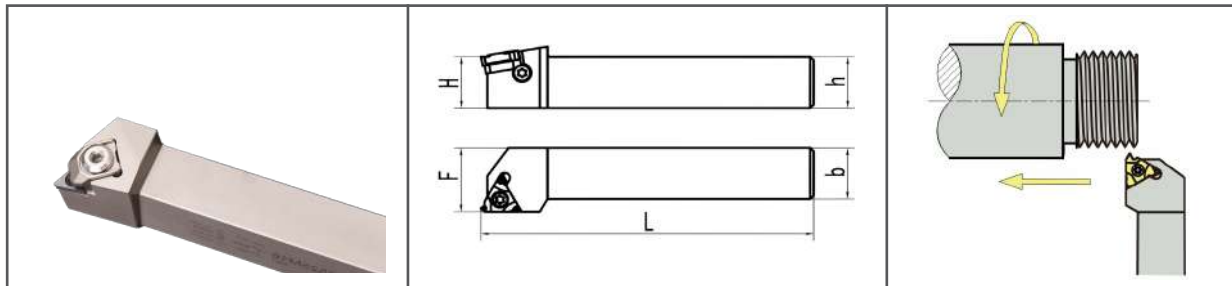
THREAD TURNING TOOLHOLDERS

| PRODUCT DESIGNATION

| EXAMPLE: AR20-3



EXTERNAL TOOLHOLDERS



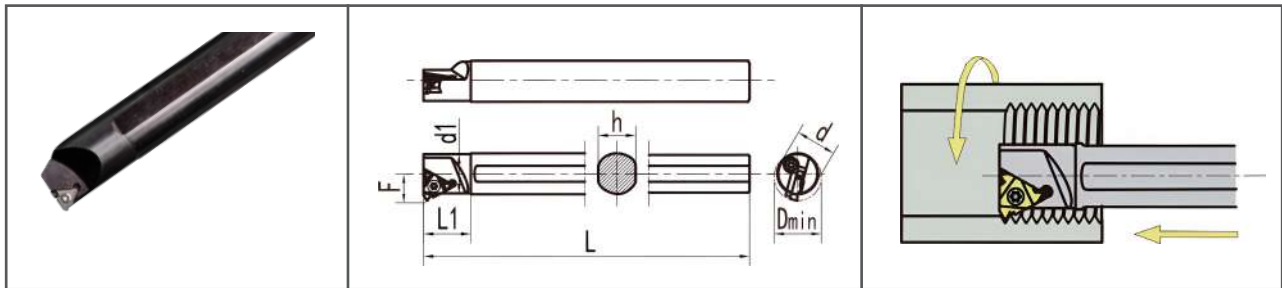
THREADING

Toolholder Type		Insert Type	Dimensions (mm)							Insert Screw	Toru Kay	Anvil	Anvil Screw	Hex Wrench
			Dmin	L1	d1	d	F	L	h					
SER	0612H06	06NR**	6.5	16	5.3	12	3.65	100	11.4	L60M2*4	T-06	-	-	-
	0712H06		7.2	18	6	12	4	100	11.4	L60M2*4	T-06	-	-	-
	0912H06		8.8	24	7.6	12	4.8	100	11.4	L60M2*4	T-06	-	-	-
	0008H08	08NR**	8.5	15	7	8	5	100	7.4	L60M2*5	T-06	-	-	-
	0010H11	11NR** T11N**	12	12	10	10	7.4	100	9	L60M2.5*6	T-08	-	-	-
	3232P16		15	15	12	12	8.4	125	11	L60M2.5*6	T-08	-	-	-
	0013M11		15	25	13	13	8.9	150	12	L60M2.5*6	T-08	-	-	-
	0013M16	16NR** T16N**	16	25	13	16	10.2	150	15	L60M3.5*12	T-15	-	-	-
	0013M16-Z		16	25	13	13	10.2	150	12	L60M3.5*12	T-15	-	-	-
	0016M16		19	25	15	16	11.7	150	15	L60M3.5*12	T-15	-	-	-
	0020Q16		24	24	19	20	13.7	180	18	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0025R16		29	29	24	25	16.2	200	23	L60M3.5*12	T-15	IGM-16	MG030080	T10
	0032S16		36	36	31	32	19.7	250	30	L60M3.5*12	T-15	IGM-16	MG030080	T10
	0040T16		44	44	38	40	23.7	300	37	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0050U16		54	54	47	50	28.7	350	46	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0020Q22	22NR**	24	24	19	20	15.6	180	18	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0025R22		29	29	24	25	18.1	200	23	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0032S22		38	38	31	32	21.6	250	30	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0040T22		46	46	38	40	25.6	300	37	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0050U22		56	56	47	50	30.6	350	350	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0032T27	27NR**	37	65	30	32	21.6	300	30	L60M6*16	T-20	IGM-27	MQ040080	S2.5
	0040U27		46	70	38	40	26.6	350	38	L60M6*16	T-20	IGM-27	MQ040080	S2.5

EXTERNAL TOOLHOLDERS

SNL	0008H08	08NL**	8.5	15	7	8	5	100	7.4	L60M2*5	T-06	-	-	-
	0010H11	11NL**	12	12	10	10	7.4	100	9	L60M2.5*6	T-08	-	-	-
	0012K11		15	15	12	12	8.4	125	11	L60M2.5*6	T-08	-	-	-
	0013M11		15	25	13	16	8.9	150	15	L60M2.5*6	T-08	-	-	-
	0013M16	16NL**	16	25	13	16	10.2	150	15	L60M3.5*12	T-15	-	-	-
	0016M16		19	25	15	16	11.7	150	15	L60M3.5*12	T-15	-	-	-
	0020Q16		24	24	19	20	13.7	180	18	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0025R16		29	29	24	25	16.2	200	23	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0032S16		36	36	31	32	19.7	250	30	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0040T16		44	44	38	40	23.7	300	37	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0050U16		54	54	47	50	28.7	350	46	L60M3.5*12	T-15	IGM-16	MQ040080	T10
	0020Q22	22NL**	24	24	19	20	15.6	180	18	L60M4.5*14	T-20	IGM-22	MQ040080	T10
	0025R22		29	29	24	25	18.1	200	23	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0032S22		38	38	31	32	21.6	250	30	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0040T22		46	46	38	40	25.6	300	37	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0050U22		56	56	47	50	30.6	350	46	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0040T27	27NL**	48	46	38	40	25.6	300	37	L60M6*16	T-20	IGM-27	MQ040080	S2.5
	0050U27		58	56	47	50	30.6	350	46	L60M6*16	T-20	NGM-27	MQ040080	S2.5

INTERNAL TOOL HOLDER



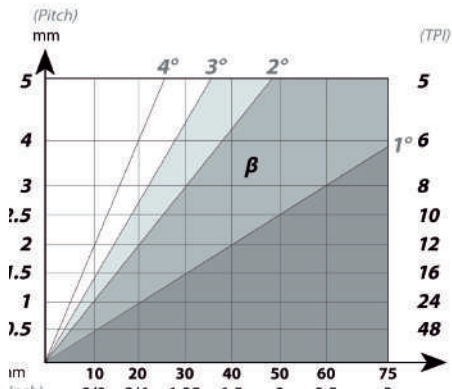
THREADING

Toolholder Type		Insert Type	Dimensions (mm)							Insert Screw	Toru Kay	Anvil	Anvil Screw	Hex Wrench
			Dmin	L1	di	d	F	L	h					
SNR	0612H06	061R**	6.5	16	5.3	12	3.65	100	11.4	L60M2*4	T-06	-	-	-
	0712H06		7.2	18	6	12	4	100	11.4	L60M2*4	T-06	-	-	-
	0912H06		8.8	24	7.6	12	4.8	100	11.4	L60M2*4	T-06	-	-	-
	0008H08	081R**	8.5	15	7	8	5	100	7.4	L60M2*5	T-06	-	-	-
		11R** T111**	12	12	10	10	7.4	100	9	L60M2.5*6	T-08	-	-	-
	0012K11	T111**	15	15	12	12	8.4	125	11	L60M2.5*6	T-08	-	-	-
	0013M11	T111**	15	25	13	13	8.9	150	12	L60M2.5*6	T-08	-	-	-
	0013M16	161R** T161** T161**	16 25	25	13	16	10.2	150	15	L60M3.5*12	T-15	-	-	-
	0013M16-Z		16	25	13	13	10.2	150	12	L60M3.5*12	T-15	-	-	-
	0016M16		19	25	15	16	11.7	150	15	L60M3.5*12	T-15	-	-	-
	0020016		24	24	19	20	13.7	180	18	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0025R16		29	29	24	25	16.2	200	23	L60M3.5*12	T-15	IGM-16	MG030080	T10
	0032516		36	36	31	32	19.7	250	30	L60M3.5*12	T-15	IGM-16	MG030080	T10
	0040T16		44	44	38	40	23.7	300	37	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0050U16		54	54	47	50	28.7	350	46	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0020022		221R**	24	24	19	20	15.6	180	18	L60M4.5*14	T-20	IGM-22	MG040080
	0025R22	29		29	24	25	18.1	200	23	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0032522	38		38	31	32	21.6	250	30	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0040T22	46		46	38	40	25.6	300	37	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0050U22	56		56	47	50	30.6	350	350	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0032T27	271R**	37	65	30	32	21.6	300	30	L60M6*16	T-20	IGM-27	MQ040080	S2.5
	0040027		46	70	38	40	26.6	350	38	L60M6*16	T-20	IGM-27	MQ040080	S2.5

INTERNAL TOOL HOLDER

SNL	0008H08	08IL**	8.5	15	7	8	5	100	7.4	L60M2*5	T-06	-	-	-
	0010H11	11IL**	12	12	10	10	7.4	100	9	L60M2.5*6	T-08	-	-	-
	0013M11		15	15	12	12	8.4	125	11	L60M2.5*6	T-08	-	-	-
	0013M16		15	25	13	16	8.9	150	15	L60M2.5*6	T-08	-	-	-
	0016M16	16IL**	16	25	13	16	10.2	150	15	L60M3.5*12	T-15	-	-	-
	0020Q16		19	25	15	16	11.7	150	15	L60M3.5*12	T-15	-	-	-
	0025R16		24	24	19	20	13.7	180	18	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0032S16		29	29	24	25	16.2	200	23	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0040T16		36	36	31	32	19.7	250	30	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0050U16		44	44	38	40	23.7	300	37	L60M3.5*12	T-15	IGM-16	MQ030080	T10
	0020U16		54	54	47	50	28.7	350	46	L60M3.5*12	T-15	IGM-16	MQ040080	T10
	0020Q22	22IL**	24	24	19	20	15.6	180	18	L60M4.5*14	T-20	IGM-22	MQ040080	T10
	0025R22		29	29	24	25	18.1	200	23	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0032S22		38	38	31	32	21.6	250	30	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0040T22		46	46	38	40	25.6	300	37	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0050U22		56	56	47	50	30.6	350	46	L60M4.5*14	T-20	IGM-22	MQ040080	S2.5
	0040T27	22IL**	48	46	38	40	25.6	300	37	L60M6*16	T-20	IGM-27	MQ040080	S2.5
	0050U27		58	56	47	50	30.6	350	46	L60M6*16	T-20	NGM-27	MQ040080	S2.5

(THREAD HELIX ANGLE)



$$\tan \beta = \frac{P}{\pi \times D}$$

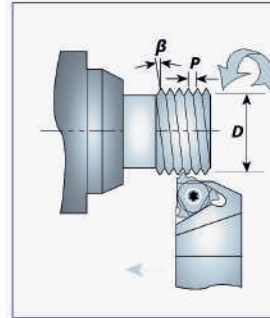
(Simplified formula)

$$\beta = 20P/D$$

(Example)

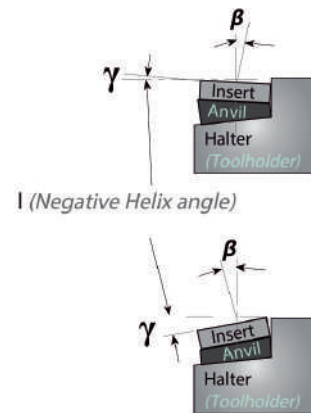
D = 30 mm (1.18")
P = 1.5 mm (16 TPI)

$$\beta = \frac{20 \times 1.5}{30} = 1^\circ$$



(STANDARD AND SLANTED ANVILS)

(Toolholder Pockets have a built in 1.5° helix angle. This angle may be adjusted to better match the thread helix angle by simply changing the anvil. Negative helix angle is usually used when threading RH thread with LH Holder or LH thread with RH holder.)



L	IC	(Pocket Angle) γ	4.5°	3.5°	2.5°	1.5° Standard	0.5°	-0.5°	-1.5°
16	3/8	EX-RH OR IN-LH	AE3+4.5	AE3+3.5	AE3+2.5	AE3	AE3+0.5	AE3-0.5	AE3-1.5
16	3/8	EX-LH OR IN-RH	AI3+4.5	AI3+3.5	AI3+2.5	AI3	AI3+0.5	AI3-0.5	AI3-1.5
22	1/2	EX-LH OR IN-RH	AE4+4.5	AE4+3.5	AE4+2.5	AE4	AE4+0.5	AE4-0.5	AE4-1.5
22	1/2	EX-LH OR IN-RH	AI4+4.5	AI4+3.5	AI4+2.5	AI4	AI4+0.5	AI4-0.5	AI4-1.5
22N	1/2N	EX-RH OR IN-LH	AE4N+4.5	AE4N+3.5	AE4N+2.5	AE4N	AE4N+0.5	AE4N-0.5	AE4N-1.5
22N	1/2N	EX-LH OR IN-RH	AI4N+4.5	AI4N+3.5	AI4N+2.5	AI4N	AI4N+0.5	AI4N-0.5	AI4N-1.5
27	5/8	EX-RH OR IN-LH	AE5+4.5	AE5+3.5	AE5+2.5	AE5	AE5+0.5	AE5-0.5	AE5-1.5
27	5/8	EX-LH OR IN-RH	AI5+4.5	AI5+3.5	AI5+2.5	AI5	AI5+0.5	AI5-0.5	AI5-1.5
27N	5/8N	EX-RH OR IN-LH	AE5N+4.5	AE5N+3.5	AE5N+2.5	AE5N	AE5N+0.5	AE5N-0.5	AE5N-1.5
27N	5/8N	EX-LH OR IN-RH	AI5N+4.5	AI5N+3.5	AI5N+2.5	AI5N	AI5N+0.5	AI5N-0.5	AI5N-1.5

THREAD TURNING TECHNICAL SECTION

(Coated Grades):

XMA (P20-P40, K20-K30):

PVD TiAlN coated sub-micrograin grade for steel, stainless steels and exotic materials at medium to high cutting speeds
PVD TiAlN coated sub-micrograin grade for steel, stainless steels and exotic materials at medium to high cutting speeds

(Uncoated Grades):

upon Request :

Grade	XMA
(Insert sizes)	0(06), 1(08), 2(11) 3(16), 4(22), 5(27)

RECOMMENDED CUTTING CONDITIONS

THREADING

ISO	Material		Condition	XTM XTB XT930-C XMA
P	Non-Alloy Steel and Cast Steel, Free Cutting Steel	<0.25%C	Annealed	30 - 80
		≥0.25%C	Annealed	
		<0.55%C	Quenched & Tempered	
		≥0.55%C	Annealed	
		≥0.55%C	Quenched & Tempered	
	Low Alloy Steel and Cast Steel (less than 5% alloying elements)		Annealed	25 - 90
			Quenched & Tempered	
	High Alloy Steel, Cast Steel and Tool Steel		Annealed	25 - 90
			Quenched & Tempered	
M	Stainless Steel and Cast Steel		Martensitic	30 - 70
			Martensitic	
			Austenitic	
K	Nodular Cast Iron (GGG)		Pearlitic	30 - 80
			Pearlitic	
	Grey Cast Iron (GG)		Ferritic	30 - 100
			Pearlitic	
	Malleable Cast Iron		Ferritic	20 - 50
			Pearlitic	
N	Aluminum-Wrought Alloy		Not Hardened	60 - 120
			Precipitation Hardened	
	Aluminum-Cast, Alloyed	≤12% S	Not Hardened	50 - 90
			Precipitation Hardened	
		>12% Si	High Temperature	
	Copper Alloys	>1% Pb	Free Cutting	30 - 70
			Brass	
			Electrolytic Copper	
	Copper Alloys		Thermoplastics, Fiber Plastics	
			Hard Rubber	

RECOMMENDED CUTTING CONDITIONS

ISO	Material		Condition	XTM XTB XT930-C XMA
S	Hardended steel		Annealed	15 - 40
			Cured	
		Ni or Co based	Annealed	
			Cured	
			Cast	
H	Hardened Steel		Alpha + Beta Alloys Cured	10 - 30
			Hardened 45-50 HRc	15 - 40
			Hardened 51-55 HRc	
			Hardened 56-62 HRc	
	Chilled Cast Iron		Cast	10 - 30
	Cast Iron		Hardened	10 - 20

(Pitch):	mm (TPI):	0.5 48	0.7 36	0.8 32	1.0 24	1.25 20	1.5 16	2-5 14-5
(Number of Passes):		6-12	7-14	7-16	8-18	8-20	10-22	20-38

THREAD TURNING TECHNICAL SECTION

(Thread Profile)	Standard	(Thread tolerance class)
ISO	DIN 13	6g / 6H
UN	ANSI B1.1-1989	2A / 2B
WHITWORTH	B.S. 84: 1956	Medium Class
NPT	ANSI B1.20.1-1983	-
NPTF	ANSI B1.20.3-1976	-
BSPT	B.S. 21: 1957	-
ACME	ANSI B1.5-1988	3G
STUB ACME	ANSI B1.5-1988	2G
TRAPEZ	DIN 103	7e / 7H
Rund	DIN 405	Class 7
UNJ	MIL-S-8879C	3A / 3B
MJ	ISO 5855	4h/6h 4H/5H
AMERICAN BUTTRESS	ANSI B1.9-1973	
SÄGENGEWINDE	DIN 513	Class 2
PG	DIN 40430	-
V-0.040	API Spec7	-
V-0.038R	API Spec7	-
V-0.050	API Spec7	-
V-0.055	API Spec7	-
API Rund	API Spec Standard 5B	-
EXTREME - LINE CASING	API Spec Standard 5B	-
BUTTRESS CASING	API Spec Standard 5B	-

DIN: Deutsches Institut Normung
 ANSI: American National Standards Institute
 API: American Petroleum Institute
 B.S.: British Standards
 ISO: Internationale Organisation Normung