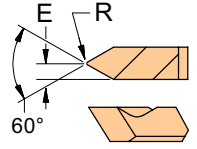
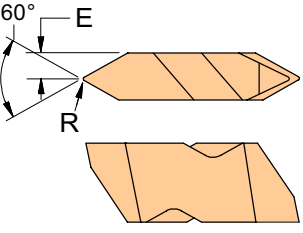
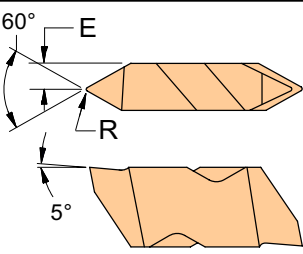
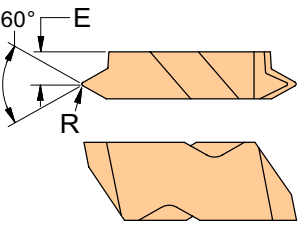
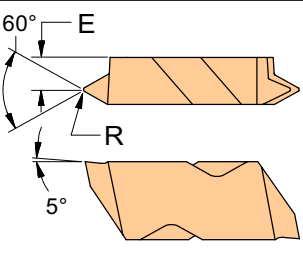


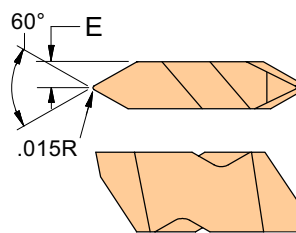
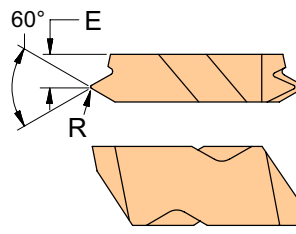
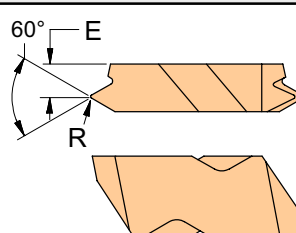
THREADING INSERTS

Style:	Insert Description		Dimensions			Grades					
 <p>Left Hand Shown</p>	Right Hand	Left Hand	PITCH	R	E	C10	110	310			
	N/A		12 - 24 tpi ID	0.003	.045	N/A	N/A	N/A			
		HT 1L		± .001		S	S	S			
 <p>Right Hand Shown</p>	Right Hand	Left Hand	PITCH	R	E	C23	123	156	310	323	356
	HT 2R		8 - 36 tpi OD	.004	.075	S	S	S	S	S	S
		HT 2L	7 - 20 tpi ID	± .001		S	S	S	S	S	S
	HT 3R		6 - 20 tpi OD	.0065	.098	S	S	S	S	S	S
		HT 3L	5 - 12 tpi ID	± .0015		S	S	S	S	S	S
	HT 4R		4 - 20 tpi OD	.0065	.128	S	S	S	S	S	S
		HT 4L	4 - 12 tpi ID	± .0015		S	S	S	S	S	S
Use RH Inserts with RH External Holders - LH Inserts with RH Boring Bars See Pages 31-33											
 <p>Right Hand Shown</p>	Right Hand	Left Hand	PITCH	R	E	C23	123	156	310	323	356
	HTP 2R		8 - 36 tpi OD	.004	.075	S	S	S	S	S	S
		HTP 2L	7 - 20 tpi ID	± .001		S	S	S	S	S	S
	HTP 3R		6 - 20 tpi OD	.0065	.098	S	S	S	S	S	S
		HTP 3L	5 - 12 tpi ID	± .0015		S	S	S	S	S	S
	HTP 4R		4 - 20 tpi OD	.0065	.128	S	S	S	S	S	S
		HTP 4L	4 - 12 tpi ID	± .0015		S	S	S	S	S	S
Use RH Inserts with RH External Holders - LH Inserts with RH Boring Bars See Pages 31-33											
 <p>Right Hand Shown</p>	Right Hand	Left Hand	PITCH	R	E	C23	123	156	310	323	356
	HTF 2R		14-44 tpi OD	.003	.110	S	S	S	S	S	S
		HTF 2L	12-24 tpi ID	± .001		S	S	S	S	S	S
	HTF 3R		10-44 tpi OD	.003	.141	S	S	S	S	S	S
		HTF 3L	9-24 tpi ID	± .0015		S	S	S	S	S	S
	HTF 4R		10-44 tpi OD	.003	.201	S	S	S	S	S	S
		HTF 4L	9-24 tpi ID	± .0015		S	S	S	S	S	S
Use RH Inserts with RH External Holders - LH Inserts with RH Boring Bars See Pages 31-33											
 <p>Right Hand Shown</p>	Right Hand	Left Hand	PITCH	R	E	C23	123	156	310	323	356
	HTK 2R		14-44 tpi OD	.003	.110	S	S	S	S	S	S
		HTK 2L	12-24 tpi ID	± .001		S	S	S	S	S	S
	HTK 3R		10-44 tpi OD	.003	.141	S	S	S	S	S	S
		HTK 3L	9-24 tpi ID	± .0015		S	S	S	S	S	S
	HTK 4R		10-44 tpi OD	.003	.201	S	S	S	S	S	S
		HTK 4L	9-24 tpi ID	± .0015		S	S	S	S	S	S
Use RH Inserts with RH External Holders - LH Inserts with RH Boring Bars See Pages 31-33											

S = Stock Standard

LS = Limited Stock or Non-Stock - Call for Availability

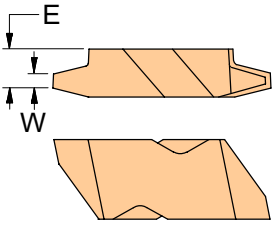
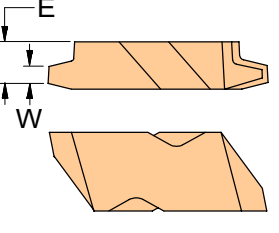
THREADING INSERTS

Style:	Insert Description		Dimensions			Grades					
HT - C and HTP - C Coarse Pitch .015R  Right Hand Shown	Right Hand	Left Hand	PITCH	R	E	C23	123	156	310	323	356
	HT 3RC		6-11 tpi	.015	.098	LS	LS	LS	S	LS	LS
	HT 3LC		6 tpi	-.001	.098	LS	LS	LS	LS	LS	LS
	HTP 3RC		6-11 tpi	.015	.098	LS	LS	LS	S	LS	LS
	HTP 3LC		6 tpi	-.001	.098	LS	LS	LS	LS	LS	LS
	HT 4RC		4.5-11 tpi	.015	.128	LS	LS	LS	LS	LS	LS
	HT 4LC		4.5-6 tpi	-.001	.128	LS	LS	LS	LS	LS	LS
Style:	Insert Description		Dimensions			Grades					
Cresting Style Full Profile 60°  External RH Shown For Removing Burr From Crest of Thread * Use LH Inserts For RH Internal Threads For Tool Holder Information See Pages 31-33	External RH	Internal LH*	PITCH	R	E	C23	123	156	310	323	356
	HTC 3R8E		8	.0150	.107	LS	LS	LS	S	LS	S
	HTC 3L8I		TPI	.0070	.107	LS	LS	LS	S	LS	LS
	HTC 3R10E		10	.0124	.107	LS	LS	LS	LS	LS	LS
	HTC 3L10I		TPI	.0052	.107	LS	LS	LS	LS	LS	LS
	HTC 3R12E		12	.0100	.148	S	S	LS	S	S	S
	HTC 3L12I		TPI	.0040	.148	S	S	LS	S	S	S
	HTC 3R14E		14	.0088	.148	LS	LS	LS	S	LS	S
	HTC 3L14I		TPI	.0037	.148	LS	LS	LS	LS	LS	LS
	HTC 3R16E		16	.0075	.148	S	S	LS	S	S	LS
	HTC 3L16I		TPI	.0030	.148	LS	LS	LS	S	LS	LS
	HTC 3R18E		18	.0070	.148	LS	LS	LS	LS	LS	LS
	HTC 3L18I		TPI	.0030	.148	LS	LS	LS	LS	LS	LS
	HTC 3R20E		20	.0062	.148	S	S	LS	S	S	LS
	HTC 3L20I		TPI	.0026	.148	LS	LS	LS	LS	LS	LS
	HTC 3R24E		24	.0045	.148	LS	LS	LS	S	LS	LS
	HTC 3L24I		TPI	.0015	.148	LS	LS	LS	LS	LS	LS
	HTC 3R28E		12	.0039	.148	LS	LS	LS	LS	LS	LS
HTC 3L28I		TPI	.0013	.148	LS	LS	LS	LS	LS	LS	
HTC 3R32E		10	.0034	.148	LS	LS	LS	S	LS	LS	
HTC 3L32I		TPI	.0010	.148	LS	LS	LS	LS	LS	LS	
Style:	Insert Description		Dimensions			Grades					
Cresting Style NPT  External RH Shown * Use LH Inserts For RH Internal Threads	External RH	Internal LH*	PITCH	R	E	C23	123	156	310	323	356
	HDC 38VR-75		8	.0050	.100	LS	LS	LS	LS	LS	S
	HDC 38VL-75		NPT	.0050	.100	LS	LS	LS	LS	LS	LS
	HDC 3115VR-75		11.5	.0040	.144	LS	LS	LS	S	LS	S
	HDC 3115VL-75		NPT	.0040	.144	LS	LS	LS	S	LS	LS
	HDC 314VR-75		14	.0030	.144	LS	LS	LS	S	LS	LS
	HDC 314VL-75		NPT	.0030	.144	LS	LS	LS	LS	LS	LS
	HDC 318VR-75		18	.0030	.144	LS	LS	LS	LS	LS	LS
HDC 318VL-75		NPT	.0030	.144	LS	LS	LS	LS	LS	LS	
HDC 327VR-75		27	.0020	.144	LS	LS	LS	S	LS	LS	
HDC 327VL-75		NPT	.0020	.144	LS	LS	LS	LS	LS	LS	

S = Stock Standard LS = Limited Stock or Non-Stock - Call for Availability

THREADING INSERTS - ACME

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Style:	Insert Description		Dimensions			Grades					
HA - Acme	Right Hand	Left Hand*	PITCH	W	E	C23	123	156	310	323	356
 <p>Right Hand Shown</p> <p>* Use LH Inserts For RH Internal Threads</p> <p>For Tool Holder Information See Pages 31-33</p>		HA 3R16	16	.0206	.149	LS	LS	LS	LS	LS	LS
		HA 3L16	ACME			LS	LS	LS	LS	LS	LS
		HA 3R14	14	.0239	.149	LS	LS	LS	LS	LS	LS
		HA 3L14	ACME			LS	LS	LS	LS	LS	LS
		HA 3R12	12	.0283	.149	LS	LS	LS	LS	LS	LS
		HA 3L12	ACME			LS	LS	LS	LS	LS	LS
		HA 3R10	10	.0319	.149	LS	LS	LS	S	LS	LS
		HA 3L10	ACME			LS	LS	LS	LS	LS	LS
		HA 3R8	8	.0411	.149	S	S	LS	S	LS	LS
		HA 3L8	ACME			S	S	LS	S	LS	LS
		HA 3R6	6	.0566	.149	S	LS	LS	LS	LS	LS
		HA 3L6	ACME			LS	LS	LS	LS	LS	LS
		HA 3R5	5	.0689	.133	S	S	LS	S	LS	LS
		HA 3L5	ACME			S	S	LS	S	LS	LS
		HA 3R4	4	.0875	.133	LS	LS	LS	LS	LS	LS
		HA 3L4	ACME			LS	LS	LS	LS	LS	LS
		HA 4R10	10	.0319	.202	LS	LS	LS	LS	LS	LS
		HA 4L10	ACME			LS	LS	LS	LS	LS	LS
		HA 4R8	8	.0411	.202	LS	LS	LS	LS	LS	LS
		HA 4L8	ACME			LS	LS	LS	LS	LS	LS
		HA 4R6	6	.0566	.202	LS	LS	LS	LS	LS	LS
		HA 4L6	ACME			LS	LS	LS	LS	LS	LS
		HA 4R5	5	.0689	.202	LS	LS	LS	LS	LS	LS
		HA 4L 5	ACME			LS	LS	LS	LS	LS	LS
		HA 4R4	4	.0875	.202	LS	LS	LS	LS	LS	LS
		HA 4L4	ACME			LS	LS	LS	LS	LS	LS
		HA 6R3	3	.1184	.283	LS	LS	LS	LS	LS	LS
		HA 6L3	ACME			LS	LS	LS	LS	LS	LS
	HA 6R25	2.5	.1431	.283	LS	LS	LS	LS	LS	LS	
	HA 6L25	ACME			LS	LS	LS	LS	LS	LS	
	HA 6R2	2	.1802	.283	LS	LS	LS	LS	LS	LS	
	HA 6L2	ACME			LS	LS	LS	LS	LS	LS	
Style:	Insert Description		Dimensions			Grades					
HAS - Stub Acme	Right Hand	Left Hand*	PITCH	W	E	C23	123	156	310	323	356
 <p>Right Hand Shown</p> <p>* Use LH Inserts For RH Internal Threads</p>		HAS 3R16	16	.0238	.149	LS	LS	LS	LS	LS	LS
		HAS 3L16	S ACME			LS	LS	LS	LS	LS	LS
		HAS 3R14	14	.0276	.149	LS	LS	LS	LS	LS	LS
		HAS 3L14	S ACME			LS	LS	LS	LS	LS	LS
		HAS 3R12	12	.0326	.149	LS	LS	LS	LS	LS	LS
		HAS 3L12	S ACME			LS	LS	LS	LS	LS	LS
		HAS 3R10	10	.0370	.149	S	LS	LS	LS	S	LS
		HAS 3L10	S ACME			LS	LS	LS	LS	LS	LS
		HAS 3R8	8	.0476	.149	LS	LS	LS	LS	LS	LS
		HAS 3L8	S ACME			LS	LS	LS	LS	LS	LS
		HAS 3R6	6	.0652	.149	LS	LS	LS	LS	LS	LS
		HAS 3L6	S ACME			LS	LS	LS	LS	LS	LS
		HAS 3R5	5	.0793	.149	LS	LS	LS	S	LS	LS
		HAS 3L5	S ACME			LS	LS	LS	S	LS	LS
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