Member IMC Group

Ingersoll Cutting Tools

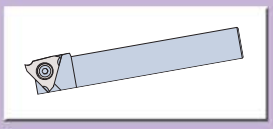
SWISS & LIVE TOOLING

TURNING

CAT-016 7809991 Printed in Israel

TURNING

TAEGUline

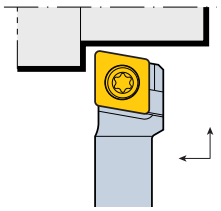


Swiss Tooling Application Guideline

ISO Turning

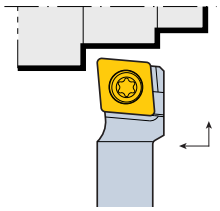
External Turning

SCACR-SH



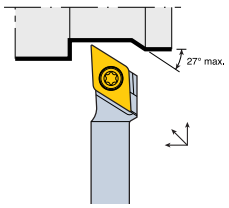
Page 19

SCLCR-SH



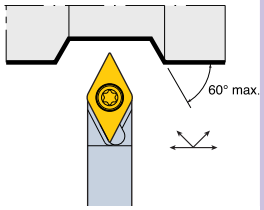
Page 20

SDJCR-SH



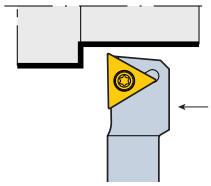
Page 21

SDNCN-SH



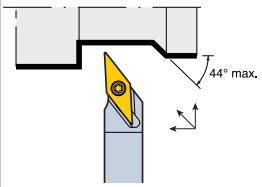
Page 22

STGCR-SH



Page 23

SVJBR-SH



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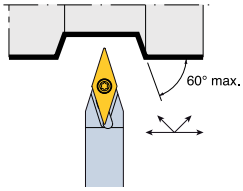
SVVBN-SH



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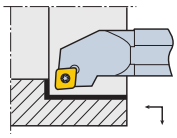
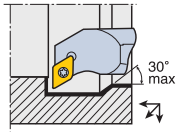
Internal Boring

E-SCLCR
S-SCLCR



Page 26-27

E-SDUCR
S-SDUCR



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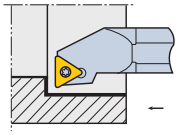
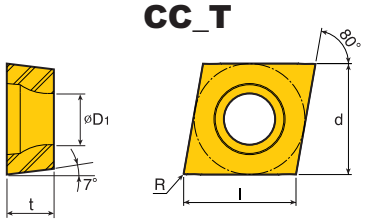
E-STFCR
S-STFCR



Page 29

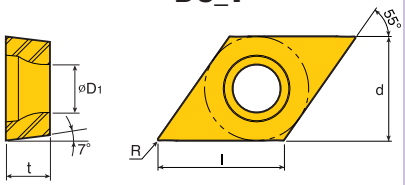
Inserts

CC_T

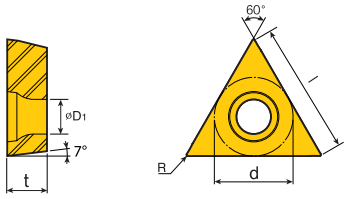


Page 8-11

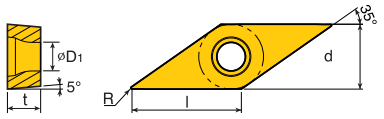
DC_T



Page 12-15



Page 16-17



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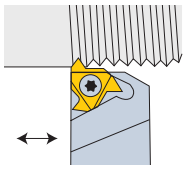
Threading

External



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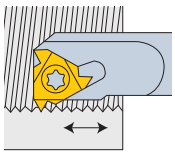
Internal



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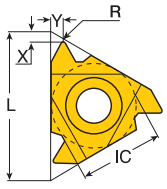
Inserts



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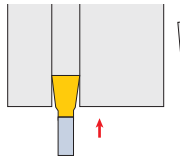
TAEGUline

Parting & Grooving

External Holders



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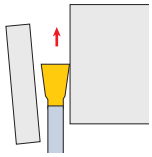

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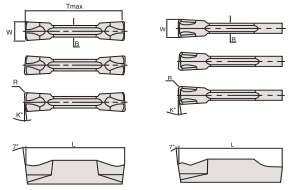
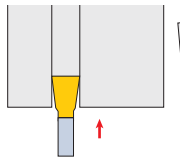
Inserts



Page 44-45

Shallow Grooving Holders



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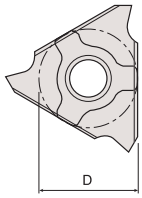
Inserts



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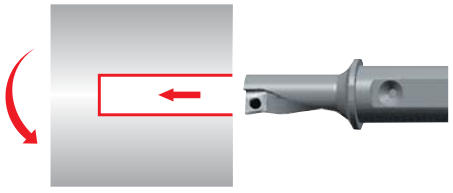
Multifunctional Tools

Drilling



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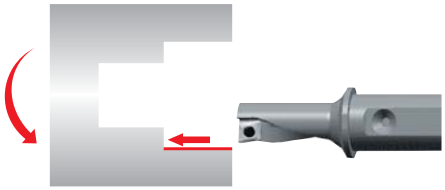
Boring



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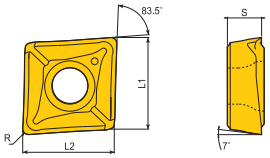
Inserts



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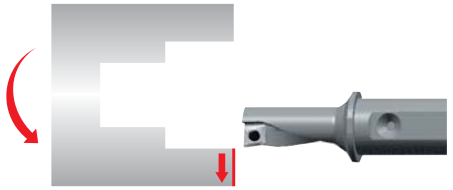
Face Turning



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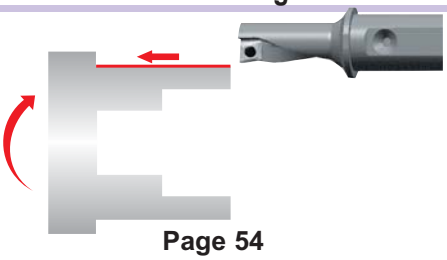
Ext. Turning



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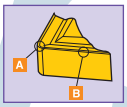
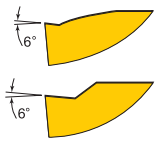
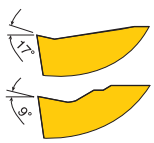
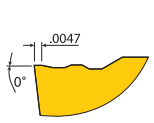
Carbide and Cermet Grades

TaeguTurn Grades	ISO	Characteristics & Applications
TT8115 NEW CVD Coated Replaces TT1500 as stock is depleted	P10 – P25	• For high speed turning of steeL • High crater and flank wear resistance. • First choice for finish machining of steel
TT8125 NEW CVD Coated Replaces TT3500 as stock is depleted	P15 – P35	• Steel turning application. • Very good combination of wear resistance and toughness. • For finish to medium turning of steel.
TT5030 PVD Coated	S05 – S20 M05 – M20	• For a wide range of turning of high-temp alloys. • Very hard submicron substrate with good fracture toughness.
TT5100 CVD Coated	M15 – M35 S15 – S35 P20 – P40	• For a wide range of turning sticky materials such as stainless steel and low carbon steel. • Excellent chipping resistance and sticking resistance. • For finish and medium machining on stainless steel and low carbon steel.
TT9020 **TT9030** PVD Coated	P15 – P30 S15 – S25 M20 – M30	• For medium speed turning of stainless steel, exotic alloys and low carbon steel. • Good combination of toughness and wear resistance.
TT8020 PVD Coated	M30 – M40 S30 – S40 P30 – P45	• For medium to low speed turning of stainless steel, exotic alloys and low carbon steel. • Toughest grade in turning product line. • For interrupted cut on stainless steel and exotic alloys.
PV3010 PVD Coated Cermet	P05 – P15 M05 – M15 K05 – K15	• For high surface finish turning of steel, stainless steel and cast iron. • Excellent wear resistance and low coefficient of friction • Long tool life.
CT3000 Uncoated Cermet	P10 – P15 M10 – M15 K10 – K15	• Excellent surface finish turning on steel, stainless steel and cast iron. • Excellent wear resistance and low coefficient of friction
K10 Carbide	K10 – K20 S10 – S20 N10 – N20	• General turning of cast iron, exotic alloy and non-ferrous materials including aluminum and copper alloy. • Excellent wear resistant grade.

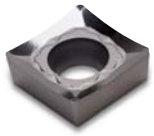
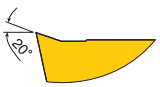
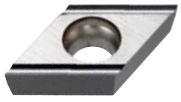
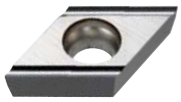
TAEGUline

Chipbreakers - Pressed Inserts



Chipbreaker Name and Geometry			Applications and Features
FA		DCMT 32.5__ 	• For super finish applications • Very tight chipbreaker • Excellent chip control
FG		CCMT 32.5__ 	• For finish to medium light applications • Steel and stainless steel • Low cutting forces • Excellent chip control
MT		CCMT 32.5__ 	• For medium to medium rough applications • Steel, stainless steel and cast iron • Negative rake geometry for general use

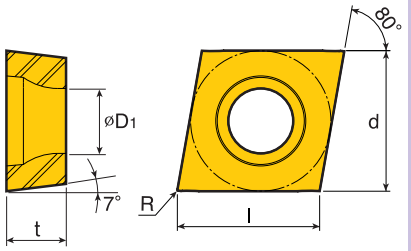
Chipbreakers - Ground Inserts

FL		CCGT 32.5__ 	• For finish to medium applications • Ideal for aluminum and other non-ferous materials • Very high positive rake geometry to minimize built-up-edge • Polished surface
GF		CCET 32.5__ 	• For general to finishing applications • Steels, alloy steels, stainless and high-temp alloys • Accurate E-class tolerance insert
GW		CCET 32.5__ 	• Wiper geometry • Has a small corner radius for excellent machining characteristics for high quality surface finishes • Steels, alloy steels, stainless and high-temp alloys • Accurate E-class tolerance insert

POSITIVE INSERTS - CCET GF CHIPBREAKER

POSITIVE 7° CLEARANCE 80° RHOMBIC GROUND INSERTS FOR SMALL PARTS

Right hand shown



Designation	l	d	t	R	D1
CCET 21.50	.248	.250	.094	.004	.110
CCET 21.50.5	.244	.250	.094	.008	.110
CCET 21.51	.236	.250	.094	.016	.110
CCET 32.50	.374	.375	.156	.004	.173
CCET 32.50.5	.370	.375	.156	.008	.173
CCET 32.51	.362	.375	.156	.016	.173

Designation		Recommended Machining Conditions		Grades & Vc (SFM)								
ANSI	ISO	feed (ipr)	ap (inch)	PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	TT9020	K10
CCET21.50L-GF	CCET 060201 L-GF	.002 (.001-.006)	.024 (.008-.060)									
CCET21.50R-GF	CCET 060201 R-GF	.002 (.001-.006)	.024 (.008-.060)								•	
CCET21.50.5L-GF	CCET 060202 L-GF	.003 (.001-.007)	.031 (.012-.060)									
CCET21.50.5R-GF	CCET 060202 R-GF	.003 (.001-.007)	.031 (.012-.060)								•	
CCET21.51L-GF	CCET 060204 L-GF	.004 (.002-.008)	.031 (.012-.060)									
CCET21.51R-GF	CCET 060204 R-GF	.004 (.002-.008)	.031 (.012-.060)								• 492	
CCET32.50L-GF	CCET 09T301 L-GF	.002 (.001-.006)	.024 (.008-.100)								492	
CCET32.50R-GF	CCET 09T301 R-GF	.002 (.001-.006)	.024 (.008-.100)								•	
CCET32.50.5L-GF	CCET 09T302 L-GF	.003 (.001-.007)	.031 (.012-.100)									
CCET32.50.5R-GF	CCET 09T302 R-GF	.003 (.001-.007)	.031 (.012-.100)								•	
CCET32.51L-GF	CCET 09T304 L-GF	.004 (.002-.008)	.031 (.012-.100)									
CCET32.51R-GF	CCET 09T304 R-GF	.004 (.002-.008)	.031 (.012-.100)								•	

P M K N S H

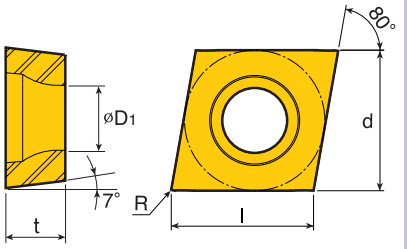
·For toolholders, see pages 19, 20, 26, 27

• Marked: Stocked Standard Items

POSITIVE INSERTS - CCET GW CHIPBREAKER

POSITIVE 7° CLEARANCE 80° RHOMBIC GROUND INSERTS WITH WIPER GEOMETRY FOR SMALL PARTS

Right hand shown



Designation	l	d	t	R	ØD1
CCET 21.5X0	.252	.250	.094	.001	.110
CCET 32.5X0	.378	.375	.156	.001	.173

Designation		Recommended Machining Conditions		Grades & Vc (SFM)								
ANSI	ISO	feed (ipr)	ap (inch)	PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	TT9020	K10
CCET21.5X0L-GW	CCET 0602003 L-GW	.003 (.001-.006)	.012 (.004-.060)									
CCET21.5X0R-GW	CCET 0602003 R-GW	.003 (.001-.006)	.012 (.004-.060)								• 492	
CCET32.5X0L-GW	CCET 09T3003 L-GW	.003 (.001-.006)	.012 (.004-.100)								492	
CCET32.5X0R-GW	CCET 09T3003 R-GW	.003 (.001-.006)	.012 (.004-.100)								•	

P M K N S H

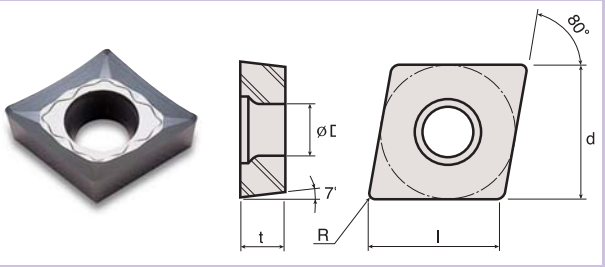
·For toolholders, see pages 19, 20, 26, 27 • Can be applied only in toolholders with 95º approach angle

• Marked: Stocked Standard Items

TAEGUline

INSERTS FOR ALUMINUM - CCGT FL CHIPBREAKER

POSITIVE 7° CLEARANCE 80° RHOMBIC INSERTS



Designation	l	d	t	R	D1
CCGT 21.50.5	.244	.250	.094	.008	.110
CCGT 21.51	.236	.250	.094	.016	.110
CCGT 32.50.5	.370	.375	.156	.008	.173
CCGT 32.51	.362	.375	.156	.016	.173
CCGT 32.52	.346	.375	.156	.031	.173

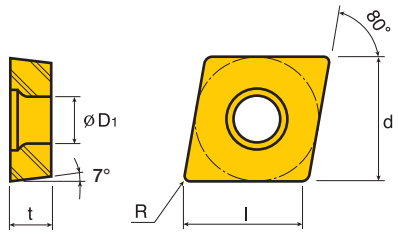
Designation		Recommended Machining Conditions		P M K N S H							
ANSI	ISO	feed (ipr)	ap (inch)	Grades & Vc (SFM)							
				PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	K10
CCGT21.50.5 FL	CCGT 060202 FL	.003 (.002-.006)	.020 (.012-.059)								•
CCGT21.51 FL	CCGT 060204 FL	.004 (.003-.008)	.020 (.012-.059)								•
CCGT32.50.5 FL	CCGT 09T302 FL	.003 (.002-.006)	.028 (.016-.079)								•
CCGT32.51 FL	CCGT 09T304 FL	.004 (.003-.008)	.034 (.020-.079)								•
CCGT32.52 FL	CCGT 09T308 FL	.006 (.006-.010)	.039 (.024-.079)								•

· For toolholders, see pages 19, 20, 26, 27

• Marked: Stocked Standard Items

POSITIVE INSERTS - CCMT FA CHIPBREAKER

POSITIVE 7° CLEARANCE 80° RHOMBIC INSERTS FOR SUPER FINISHING



Designation	l	d	t	R	D1
CCMT 21.50.5	.244	.250	.094	.008	.110
CCMT 21.51	.236	.250	.094	.016	.110
CCMT 32.50.5	.370	.375	.156	.008	.173
CCMT 32.51	.362	.375	.156	.016	.173
CCMT 32.52	.346	.375	.156	.031	.173

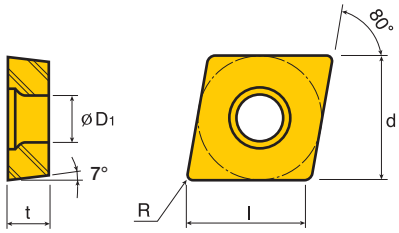
Designation		Recommended Machining Conditions		P M K N S H							
		feed (ipr)	ap (inch)	Grades & Vc (sfm)							
ANSI	ISO			PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	K10
CCMT 21.50.5 FA	CCMT 060202 FA	.003 (.002~.006)	.012 (.004~.059)								
CCMT 21.51 FA	CCMT 060204 FA	.003 (.002~.006)	.016 (.004~.059)					197	787	623	
CCMT 32.50.5 FA	CCMT 09T302 FA	.003 (.002~.006)	.012 (.004~.079)	1181	1115			850	540	426	
CCMT 32.51 FA	CCMT 09T304 FA	.004 (.002~.008)	.016 (.004~.079)								
CCMT 32.52 FA	CCMT 09T308 FA	.006 (.004~.010)	.020 (.008~.079)								

· For toolholders, see pages 19, 20, 26, 27

● Marked: Stocked Standard Items

POSITIVE INSERTS - CCMT FG CHIPBREAKER

POSITIVE 7° CLEARANCE 80° RHOMBIC INSERTS FOR FINISHING



Designation	l	d	t	R	D1
CCMT 21.51	.236	.250	.094	.016	.110
CCMT 32.51	.362	.375	.156	.016	.173
CCMT 32.52	.346	.375	.156	.031	.173

Designation		Recommended Machining Conditions		P M K N S H							
		feed (ipr)	ap (inch)	Grades & Vc (sfm)							
ANSI	ISO			PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	K10
CCMT 21.51 FG	CCMT 060204 FG	.003 (.002~.006)	.020 (.012~.059)					197	787	623	
CCMT 32.51 FG	CCMT 09T304 FG	.004 (.003~.008)	.028 (.016~.079)	1181	1115	1115	1017	850	540	426	
CCMT 32.52 FG	CCMT 09T308 FG	.006 (.004~.010)	.039 (.024~.079)								

· For toolholders, see pages 19, 20, 26, 27

● Marked: Stocked Standard Items

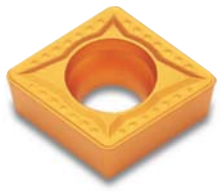
Carbon Steel C: 0.45%
Aluminum
Austenitic Stainless Steel
Inconel
High Tensile Cast Iron
Hardened Steel

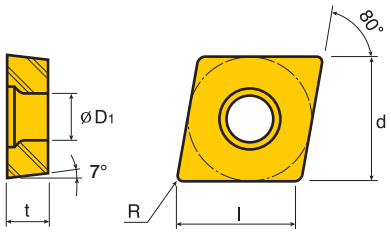
NOTE: TT8125 available after TT3500 stock is depleted

TAEGUline

POSITIVE INSERTS - CCMT MT CHIPBREAKER

POSITIVE 7° CLEARANCE 80°RHOMBIC INSERTS FOR MEDIUM MACHINING





Designation	l	d	t	R	D1
CCMT 21.51	.236	.250	.094	.016	.110
CCMT 21.52	.220	.250	.094	.031	.110
CCMT 32.51	.362	.375	.156	.016	.173
CCMT 32.52	.346	.375	.156	.031	.173

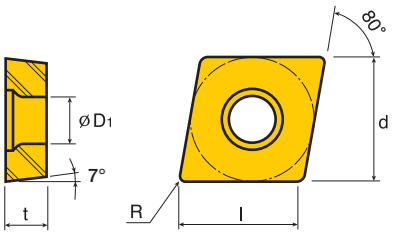
Designation		Recommended Machining Conditions		P M K N S H							
		feed (ipr)	ap (inch)	Grades & Vc (sfm)							
ANSI	ISO			PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	K10
CCMT 21.51 MT	CCMT 060204 MT	.004 (.003~.008)	.028 (.020~.079)	•	•	•	•	•	•	•	•
CCMT 21.52 MT	CCMT 060208 MT	.007 (.005~.012)	.039 (.028~.079)	• 1115	• 1017	• 1017	• 920	• 197	• 705	• 490	
CCMT 32.51 MT	CCMT 09T304 MT	.006 (.004~.010)	.059 (.028~.138)								
CCMT 32.52 MT	CCMT 09T308 MT	.007 (.005~.012)	.059 (.039~.138)								

· For toolholders, see pages 19, 20, 26, 27

• Marked: Stocked Standard Items

POSITIVE INSERTS - CCMT WT CHIPBREAKER

POSITIVE 7° CLEARANCE 80° RHOMBIC WIPER INSERTS FOR MEDIUM ROUGHING



Designation	l	d	t	R	D1
CCMT 32.52	.346	.375	.156	.031	.173

Designation		Recommended Machining Conditions		P M K N S H							
		feed (ipr)	ap (inch)	Grades & Vc (sfm)							
ANSI	ISO			PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	K10
CCMT 32.52 WT	CCMT 09T308 WT	.012 (.004~.016)	.059 (.028~.118)		920	• 920	• 820		• 640 443		

· For toolholders, see pages 19, 20, 26, 27

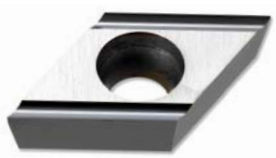
• Marked: Stocked Standard Items

Carbon Steel C: 0.45%
Austenitic Stainless Steel
High Tensile Cast Iron
Aluminum
Inconel
Hardened Steel

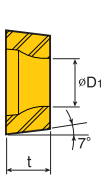
NOTE: TT8125 available after TT3500 stock is depleted

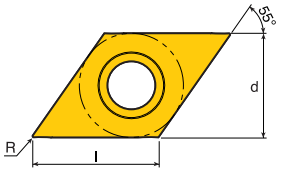
POSITIVE INSERTS - DCET GF CHIPBREAKER

POSITIVE 7° CLEARANCE 55° RHOMBIC GROUND INSERTS FOR SMALL PARTS



Right hand shown





Designation	l	d	t	R	D1
DCET 21.50	.299	.250	.094	.004	.110
DCET 21.50.5	.295	.250	.094	.008	.110
DCET 21.51	.287	.250	.094	.016	.110
DCET 32.50	.449	.375	.156	.004	.173
DCET 32.50.5	.445	.375	.156	.008	.173
DCET 32.51	.441	.375	.156	.016	.173

Designation		Recommended Machining Conditions		P M K N S H								
ANSI	ISO	feed (ipr)	ap (inch)	Grades & Vc (sfm)								
				PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	TT9020	K10
DCET21.50L-GF	DCET 070201 L-GF	.002 (.001-.006)	.024 (.008-.060)									
DCET21.50R-GF	DCET 070201 R-GF	.002 (.001-.006)	.024 (.008-.060)								•	
DCET21.50.5L-GF	DCET 070202 L-GF	.003 (.001-.007)	.031 (.012-.060)									
DCET21.50.5R-GF	DCET 070202 R-GF	.003 (.001-.007)	.031 (.012-.060)								•	
DCET21.51L-GF	DCET 070204 L-GF	.004 (.002-.008)	.031 (.012-.060)									
DCET21.51R-GF	DCET 070204 R-GF	.004 (.002-.008)	.031 (.012-.060)								• 492	
DCET32.50L-GF	DCET 11T301 L-GF	.002 (.001-.006)	.024 (.008-.100)								492	
DCET32.50R-GF	DCET 11T301 R-GF	.002 (.001-.006)	.024 (.008-.100)								•	
DCET32.50.5L-GF	DCET 11T302 L-GF	.003 (0.01-.007)	.031 (.012-.100)									
DCET32.50.5R-GF	DCET 11T302 R-GF	.003 (.001-.007)	.031 (.012-.100)								•	
DCET32.51L-GF	DCET 11T304 L-GF	.004 (.002-.008)	.031 (.012-.100)								•	
DCET32.51R-GF	DCET 11T304 R-GF	.004 (.002-.008)	.031 (.012-.100)								•	

·For toolholders, see pages 21, 22, 28

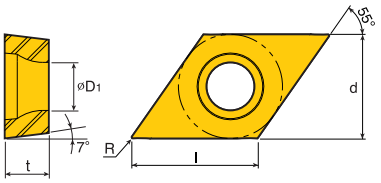
• Marked: Stocked Standard Items

TAEGUline

POSITIVE INSERTS - DCET GW CHIPBREAKER

POSITIVE 7° CLEARANCE 55° RHOMBIC GROUND INSERTS WITH WIPER GEOMETRY FOR SMALL PARTS

Right hand shown



Designation	l	d	t	R	D1
DCET 21.5X0	.295	.250	.094	.001	.110
DCET 32.5X0	.449	.375	.156	.001	.173

Designation		Recommended Machining Conditions		P M K N S H								
ANSI	ISO	feed (ipr)	ap (inch)	Grades & Vc (SFM)								
				PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	TT9020	K10
DCET21.5X0L-GW	DCET 0702003 L-GW	.003 (.001-.006)	.012 (.004-.060)									
DCET21.5X0R-GW	DCET 0702003 R-GW	.003 (.001-.006)	.012 (.004-.060)								• 492	
DCET32.5X0L-GW	DCET 11T3003 L-GW	.003 (.001-.006)	.012 (.004-.100)								492	
DCET32.5X0R-GW	DCET 11T3003 R-GW	.003 (.001-.006)	.012 (.004-.100)								•	

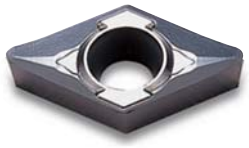
· For toolholders, see pages 21, 22, 28

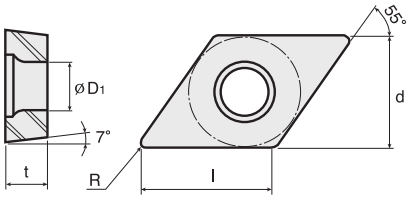
• Can be applied only in toolholders with 93º approach angle

• Marked: Stocked Standard Items

INSERTS FOR ALUMINUM - DCGT FL CHIPBREAKER

POSITIVE 7° CLEARANCE 55° RHOMBIC GROUND INSERTS FOR ALUMINUM MACHINING





Designation	l	d	t	R	D1
DCGT 21.50.5	.295	.250	.094	.008	.110
DCGT 21.51	.287	.250	.094	.016	.110
DCGT 32.50.5	.449	.375	.156	.008	.173
DCGT 32.51	.441	.375	.156	.016	.173
DCGT 32.52	.425	.375	.156	.031	.173

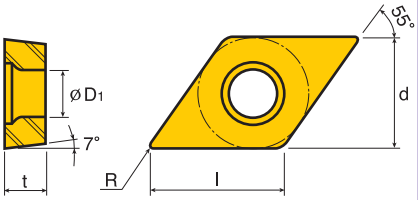
Designation		Recommended Machining Conditions P M K N S H		Grades & Vc (sfm)							
ANSI	ISO	feed (ipr)	ap (inch)	PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	K10
DCGT 21.50.5 FL	DCGT 070202 FL	.003 (.002~.006)	.028 (.016~.059)								•
DCGT 21.51 FL	DCGT 070204 FL	.004 (.003~.008)	.028 (.016~.059)								•
DCGT 32.50.5 FL	DCGT 11T302 FL	.003 (.002~.006)	.028 (.024~.079)								•
DCGT 32.51 FL	DCGT 11T304 FL	.004 (.003~.008)	.034 (.024~.079)								•
DCGT 32.52 FL	DCGT11T308 FL	.006 (.006~.010)	.039 (.024~.079)								•

· For toolholders, see pages 21, 22, 28

• Marked: Stocked Standard Items

POSITIVE INSERTS - DCMT FA CHIPBREAKER

POSITIVE 7° CLEARANCE 55° RHOMBIC INSERTS FOR SUPER FINISHING



Designation	l	d	t	R	D1
DCMT 21.50.5	.295	.250	.094	.008	.110
DCMT 32.50.5	.445	.375	.156	.008	.173

Designation		Recommended Machining Conditions P M K N S H		Grades & Vc (sfm)							
ANSI	ISO	feed (ipr)	ap (inch)	PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	K10
DCMT 21.50.5 FA	DCMT 070202 FA	.003 (.002~.006)	.012 (.006~.060)	• 1181	• 1115	1115	1017	• 197	• 787	623	
DCMT 32.50.5 FA	DCMT 11T302 FA	.003 (.002~.006)	.016 (.006~.060)	•	•			• 850	• 540	426	

·For toolholders, see pages 21, 22, 28

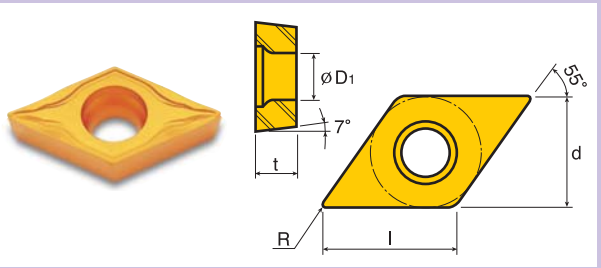
• Marked: Stocked Standard Items

NOTE: TT8125 available after TT3500 stock is depleted

TAEGUline

POSITIVE INSERTS - DCMT FG CHIPBREAKER

POSITIVE 7° CLEARANCE 55° RHOMBIC INSERTS FOR FINISHING



Designation	l	d	t	R	D1
DCMT 21.51	.287	.250	.094	.016	.110
DCMT 21.52	.276	.250	.094	.031	.110
DCMT 32.51	.441	.375	.156	.016	.173
DCMT 32.52	.425	.375	.156	.031	.173

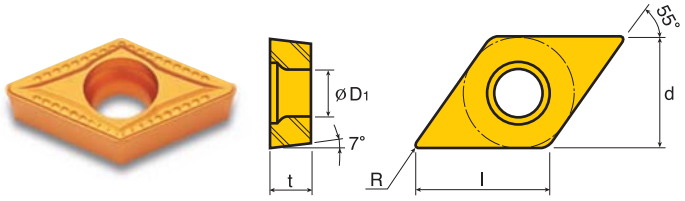
Designation		Recommended Machining Conditions		P M K N S H							
		feed (ipr)	ap (inch)	Grades & Vc (sfm)							
ANSI	ISO			PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	K10
DCMT 21.51 FG	DCMT 070204 FG	.004 (.003~.008)	.028 (.016~.059)	1181	1115	1115	1017	197	787	623	
DCMT 21.52 FG	DCMT 070208 FG	.006 (.004~.009)	.028 (.016~.059)								
DCMT 32.51 FG	DCMT 11T304 FG	.004 (.003~.008)	.028 (.024~.079)					850	540	426	
DCMT 32.52 FG	DCMT 11T308 FG	.006 (.004~.010)	.039 (.024~.079)								

·For toolholders, see pages 21, 22, 28

• Marked: Stocked Standard Items

POSITIVE INSERTS - DCMT MT CHIPBREAKER

POSITIVE 7° CLEARANCE 55° RHOMBIC INSERTS FOR MEDIUM MACHINING



Designation	l	d	t	R	D1
DCMT 32.51	.441	.375	.156	.016	.173
DCMT 32.52	.425	.375	.156	.031	.173
DCMT 32.53	.413	.375	.156	.047	.173

Designation		Recommended Machining Conditions		P M K N S H							
		feed (ipr)	ap (inch)	Grades & Vc (sfm)							
ANSI	ISO			PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	K10
DCMT 32.51 MT	DCMT 11T304 MT	.006 (.004~.010)	.039 (.028~.118)					197	705	490	
DCMT 32.52 MT	DCMT 11T308 MT	.007 (.005~.012)	.059 (.039~.118)			1017	920				
DCMT 32.53 MT	DCMT 11T312 MT	.009 (.007~.014)	.079 (.059~.118)					771	490	360	

·For toolholders, see pages 21, 22, 28

• Marked: Stocked Standard Items

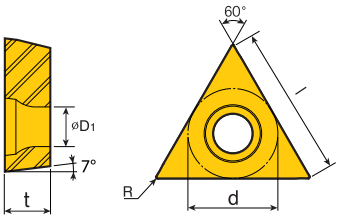
Carbon Steel C: 0.45%
Aluminum
Austenitic Stainless Steel
Inconel
High Tensile Cast Iron
Hardened Steel

NOTE: TT8125 available after TT3500 stock is depleted

POSITIVE INSERTS - TCET GF CHIPBREAKER

POSITIVE 7° CLEARANCE TRIANGULAR GROUND INSERTS FOR SMALL PARTS

Right hand shown



Designation	l	d	t	R	ØD1
TCET 220	.421	.250	.125	.004	.110
TCET 220.5	.413	.250	.125	.008	.110
TCET 221	.394	.250	.125	.016	.110

Designation		Recommended Machining Conditions		P M K N S H								
ANSI	ISO	ap (ipr)	ap (inch)	Grades & Vc (sfm)								
				PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	TT9020	K10
TCET 220L-GF	TCET 110301 L-GF	.002 (.001~.006)	.024 (.008~.060)									
TCET 220R-GF	TCET 110301 R-GF	.002 (.001~.006)	.024 (.008~.060)								• 490	
TCET 220.5L-GF	TCET 110302 L-GF	.003 (.001~.007)	.031 (.012~.060)									
TCET 220.5R-GF	TCET 110302 R-GF	.003 (.001~.007)	.031 (.012~.060)								• 490	
TCET 221R-GF	TCET 110304 R-GF	.004 (.002~.008)	.039 (.020~.060)								•	

• For toolholders, see page 23, 29

• Marked: Stocked Standard Items

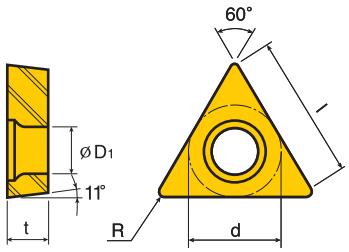
Carbon Steel C: 0.45%
Aluminum
Austenitic Stainless Steel
Inconel
High Tensile Cast Iron
Hardened Steel

NOTE: TT8125 available after TT3500 stock is depleted

TAEGUline

POSITIVE INSERTS - TCMT FG CHIPBREAKER

POSITIVE 7° CLEARANCE TRIANGULAR INSERTS FOR FINISHING



Designation	l	d	t	R	D1
TCMT 21.51	.394	.250	.094	.016	.110
TCMT 21.52	.354	.250	.094	.031	.110

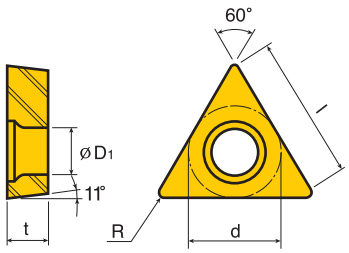
Designation		Recommended Machining Conditions		P M K N S H							
		feed (ipr)	ap (inch)	Grades & Vc (sfm)							
ANSI	ISO			PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	K10
TCMT 21.51 FG	TCMT 110204 FG	.004 (.003~.008)	.039 (.016~.059)	• 1181	• 1115	• 1115	• 1017	• 197	• 787	• 623	
TCMT 21.52 FG	TCMT 110208 FG	.006 (.004~.010)	.039 (.024~.059)	• 1181	• 1115	• 1115	• 1017	• 850	• 540	426	

• For toolholders, see pages 23, 29

• Marked: Stocked Standard Items

POSITIVE INSERTS - TCMT MT CHIPBREAKER

POSITIVE 7° CLEARANCE TRIANGULAR INSERTS FOR MEDIUM MACHINING



Designation	l	d	t	R	D1
TCMT 21.51	.394	.250	.094	.016	.110
TCMT 21.52	.354	.250	.094	.031	.110

Designation		Recommended Machining Conditions		P M K N S H							
		feed (ipr)	ap (inch)	Grades & Vc (sfm)							
ANSI	ISO			PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	K10
TCMT 21.51 MT	TCMT 110204 MT	.006 (.004~.010)	.059 (.024~.118)	1115	• 1017	• 1017	• 920	• 197	• 705	•	•
TCMT 21.52 MT	TCMT 110208 MT	.007 (.005~.012)	.059 (.031~.118)	1115	• 1017	• 1017	• 920	• 820	• 490		

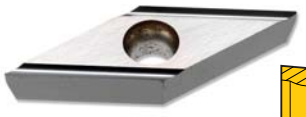
• For toolholders, see pages 23, 29

• Marked: Stocked Standard Items

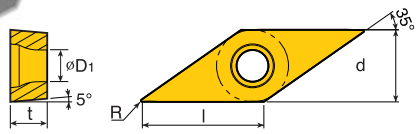
NOTE: TT8125 available after TT3500 stock is depleted

POSITIVE INSERTS - VBET GF CHIPBREAKER

POSITIVE 5° CLEARANCE 35° RHOMBIC INSERTS FOR SMALL PARTS



Right hand shown



Designation	l	d	t	R	D1
VBET 220	.425	.250	.125	.004	.110
VBET 220.5	.417	.250	.125	.008	.110
VBET 221	.390	.250	.125	.016	.110

Designation		Recommended Machining Conditions		P M K N S H								
ANSI	ISO	feed (IPR)	ap (inch)	Grades & Vc (sfm)								
				PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	TT9020	K10
VBET 220L-GF	VBET 110301 L-GF	.002 (.001-.006)	.024 (.008-.060)									
VBET 220R-GF	VBET 110301 R-GF	.002 (.001-.006)	.024 (.008-.060)								•	
VBET 220.5L-GF	VBET 110302 L-GF	.003 (.001-.007)	.031 (.012-.060)								492	
VBET 220.5R-GF	VBET 110302 R-GF	.003 (.001-.007)	.031 (.012-.060)								• 492	
VBET 221L-GF	VBET 110304 L-GF	.004 (.002-.008)	.031 (.012-.060)									
VBET 221R-GF	VBET 110304 R-GF	.004 (.002-.008)	.031 (.012-.060)								•	

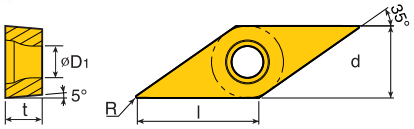
• For toolholders, see pages 24, 25

• Marked: Stocked Standard Items

POSITIVE INSERTS - VBET GW CHIPBREAKER

POSITIVE 5° CLEARANCE 35° RHOMBIC INSERTS WITH WIPER

Right hand shown



Designation	l	d	t	R	ØD1
VBET 22X0	.425	.250	.125	.001	.110

Designation		Recommended Machining Conditions		P M K N S H								
ANSI	ISO	feed (IPR)	ap (inch)	Grades & Vc (sfm)								
				PV3010	CT3000	TT8115	TT8125	TT5030	TT5100	TT8020	TT9020	K10
VBET 22X0L-GW	VBET 1103003 L-GW	.003 (.001-.006)	.012 (.004-.060)								• 425	
VBET 22X0R-GW	VBET 1103003 R-GW	.003 (.001-.006)	.012 (.004-.060)								• 425	

• For toolholders, see page 24

• Can be applied only in toolhoders with 93º approach angle

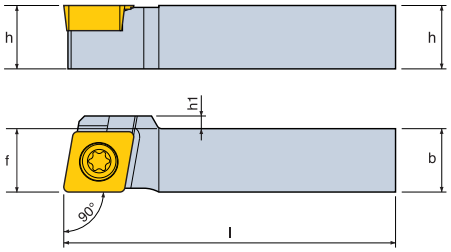
• Marked: Stocked Standard Items

Carbon Steel C: 0.45%
Aluminum
Austenitic Stainless Steel
Inconel
High Tensile Cast Iron
Hardened Steel

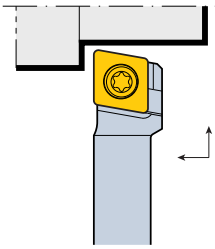
TAEGUline

SCREW HELD/EXTERNAL TURNING TOOL HOLDERS

POSITIVE 7°CLEARANCE 80° RHOMBIC INSERTS



SCACR-SH



METRIC

Designation	Stock		Dimension (mm)					Insert	Components	
									Screw	Wrench
	R	L	h	b	l	f	h1	80°		
SCACR/L 0808 K06-SH	•		8	8	125	8	0	CC ☐T 21.5 ☐ (CC ☐T 0602 ☐☐)	SO 25065I	T 7
SCACR/L 1010 K06-SH	•		10	10	125	10	0			
SCACR/L 1010 K09-SH	•		10	10	125	10	2	CC ☐T 32.5 ☐ (CC ☐T 09T3 ☐☐)	SO 35080I	T 15
SCACR/L 1212 K09-SH	•		12	12	125	12	0			
SCACR/L 1616 K09-SH	•		16	16	125	16	0			

•Marked: Stocked Standard Items

INCH

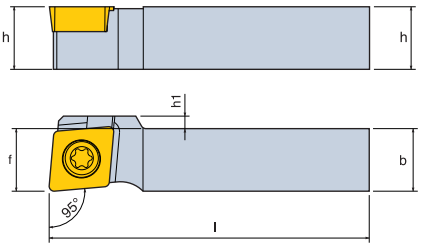
Designation	Stock		Dimension (inch)					Insert	Components	
									Screw	Wrench
	R	L	h	b	l	f	h1	80°		
SCACR/L 06-2C-SH	•		.375	.375	5.0	.375	0	CC ☐T 21.5 ☐	SO 25065I	T 7
SCACR/L 08-3C-SH	•		.500	.500	5.0	.500	0	CC ☐T 32.5 ☐	SO 35080I	T 15
SCACR/L 10-3C-SH	•		.625	.625	5.0	.625	0			

• For inserts, see page 8-11

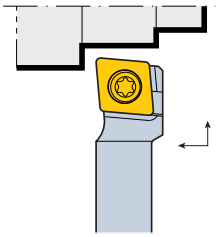
•Marked: Stocked Standard Items

SCREW HELD/EXTERNAL TURNING TOOL HOLDERS

POSITIVE 7°CLEARANCE 80°RHOMBIC INSERTS



SCLCR-SH



METRIC

Designation	Stock		Dimension (mm)					Insert	Components	
									Screw	Wrench
	R	L	h	b	l	f	h1	80°		
SCLCR/L 0808 K06-SH	•		8	8	125	8	0	CC ☐T 21.5 ☐ CC ☐T 0602 ☐☐	SO 25065I	T 7
SCLCR/L 1010 K06-SH	•		10	10	125	10	0			
SCLCR/L 1010 K09-SH	•		10	10	125	10	2	CC ☐T 32.5 ☐☐ CC☐T 09T3 ☐☐	SO 35080I	T 15
SCLCR/L 1212 K09-SH	•		12	12	125	12	0			
SCLCR/L 1616 K09-SH	•		16	16	125	16	0			

•Marked: Stocked Standard Items

INCH

Designation	Stock		Dimension (inch)					Insert	Components	
									Screw	Wrench
	R	L	h	b	l	f	h1	80°		
SCLCR/L 06-2C-SH	•		.375	.375	5.0	.375	0	CC ☐T 21.5 ☐	SO 25065I	T 7
SCLCR/L 08-3C-SH	•		.500	.500	5.0	.500	0	CC ☐T 32.5 ☐	SO 35080I	T 15
SCLCR/L 10-3C-SH	•		.625	.625	5.0	.625	0			

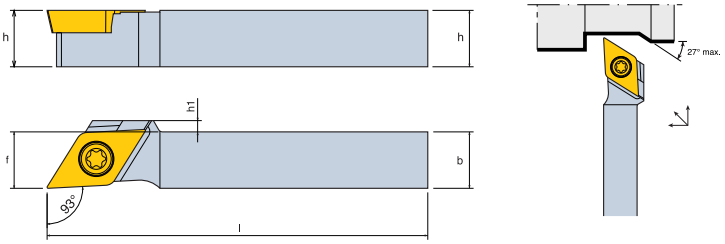
• For inserts, see pages 8-11

•Marked: Stocked Standard Items

SCREW HELD/EXTERNAL TURNING TOOL HOLDERS

POSITIVE 7° CLEARANCE 55°RHOMBIC INSERTS

SDJCR-SH



METRIC

Designation	Stock		Dimension (mm)					Insert	Components	
									Screw	Wrench
	R	L	h	b	l	f	h1	55°		
SDJCR/L 0808 K07-SH	•		8	8	125	8	0	DC □T 21.5□ (DC □T 0702 □□)	SO 25065I	T 7
SDJCR/L 1010 K07-SH	•		10	10	125	10	0			
SDJCR/L 1010 K11-SH	•		10	10	125	10	2	DC □T 32.5 □ (DC □T 11T3 □□)	SO 35080I	T 15
SDJCR/L 1212 K11-SH	•	•	12	12	125	12	0			
SDJCR/L 1616 K11-SH	•		16	16	125	16	0			

INCH

Designation	Stock		Dimension (inch)					Insert	Components	
									Screw	Wrench
	R	L	h	b	l	f	h1	55°		
SDJCR/L 06-2C-SH	•		.375	.375	5.0	.375	0	DC □T 21.5 □	SO 25065I	T 7
SDJCR/L 08-3C-SH	•		.500	.500	5.0	.500	0			
SDJCR/L 10-3C-SH	•		.625	.625	5.0	.625	0	DC □T 32.5 □	SO 35080I	T 15

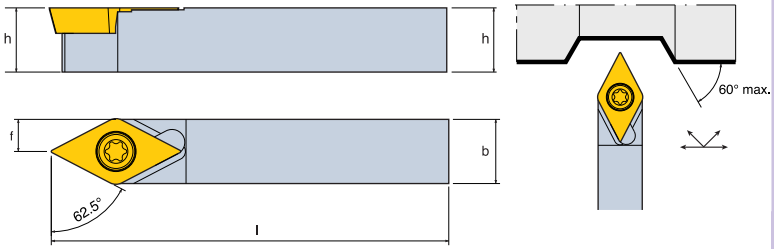
• For inserts, see pages 12-15

•Marked: Stocked Standard Items

SCREW HELD/EXTERNAL TURNING TOOL HOLDERS

POSITIVE 7° CLEARANCE 55° RHOMBIC INSERTS

SDNCN-SH



METRIC

Designation	Stock	Dimension (mm)				Insert	Components	
							Screw	Wrench
		h	b	l	f	55°		
SDNCN 0808 K07-SH	•	8	8	125	4	DC □T 21.5 □ (DC □T 0702 □□)	SO 25065I	T 7
SDNCN 1010 K07-SH	•	10	10	125	5			
SDNCN 1010 K11-SH	•	10	10	125	5	DC □T 32.5 □ (DC □T 11T3 □□)	SO 35080I	T 15
SDNCN 1212 K11-SH	•	12	12	125	6			
SDNCN 1616 K11-SH	•	16	16	125	8			

INCH

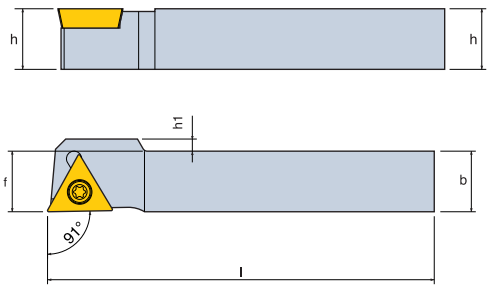
Designation	Stock	Dimension (inch)				Insert	Components	
							Screw	Wrench
		h	b	l	f	55°		
SDNCN 06-2C-SH	•	.375	.375	5.0	.1875	DC □T 21.5 □	SO 25065I	T 7
SDNCN 08-3C-SH	•	.500	.500	5.0	.250			
SDNCN 10-3C-SH	•	.625	.625	5.0	.375	DC □T 32.5 □	SO 35080I	T 15

• For inserts, see pages 12, 14, 15

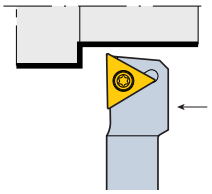
•Marked: Stocked Standard Items

SCREW HELD/EXTERNAL TURNING TOOL HOLDERS

POSITIVE 7° CLEARANCE TRIANGULAR INSERTS



STGCR-SH



METRIC

Designation	Stock		Dimension (mm)					Insert	Components	
									Screw	Wrench
	R	L	h	b	l	f	h1			
STGCR/L 1010 K11-SH	•		10	10	125	10	2	TC ☐T 22 ☐ (TC ☐T 1103 ☐☐)	SO 25065I	T 7
STGCR/L 1212 K11-SH	•		12	12	125	12	0			
STGCR/L 1616 K11-SH	•		16	16	125	16	0			

INCH

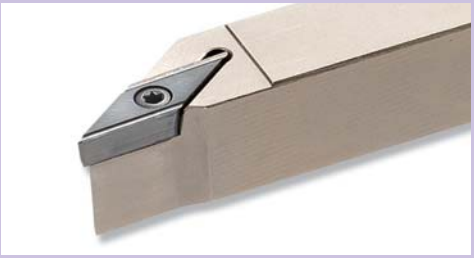
Designation	Stock		Dimension (inch)					Insert	Components	
									Screw	Wrench
	R	L	h	b	l	f	h1			
STGCR/L 06-2C-SH	•		.375	.375	5.0	.375	.079	TC ☐T 22 ☐ (TC ☐T 1103 ☐☐)	SO 25065I	T 7
STGCR/L 08-2C-SH	•		.500	.500	5.0	.500	0			
STGCR/L 10-2C-SH	•		.625	.625	5.0	.625	0			

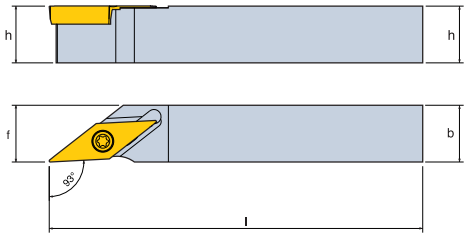
• For inserts, see pages 16-17

•Marked: Stocked Standard Items

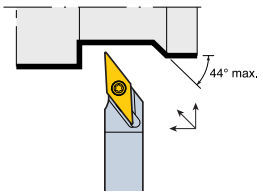
SCREW HELD/EXTERNAL TURNING TOOL HOLDERS

POSITIVE 5° CLEARANCE 35° RHOMBIC INSERTS





SVJBR-SH



METRIC

Designation	Stock		Dimension (mm)					Insert	Components	
									Screw	Wrench
	R	L	h	b	l	f		35°		
SVJBR/L 1010 K11-SH	•		10	10	125	10		VB □T 22 □□ (VB □T 1103 □□)	SO 25065I	T 7
SVJBR/L 1212 K11-SH	•	•	12	12	125	12				
SVJBR/L 1616 K11-SH	•		16	16	125	16				

INCH

Designation	Stock		Dimension (mm)					Insert	Components	
									Screw	Wrench
	R	L	h	b	l	f		35°		
SVJBR/L 06-2C-SH	•		.375	.375	5.0	.375		VB □T 22□□	SO 25065I	T 7
SVJBR/L 08-2C-SH	•	•	.500	.500	5.0	.500				
SVJBR/L 10-2C-SH	•		.625	.625	5.0	.625				

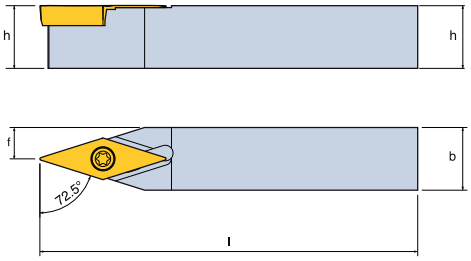
• For inserts, see pages 18

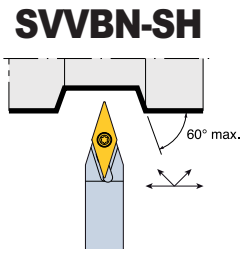
•Marked: Stocked Standard Items

TAEGUline

SCREW HELD/EXTERNAL TURNING TOOL HOLDERS

POSITIVE 5° CLEARANCE 35° RHOMBIC INSERTS





METRIC

Designation	Stock	Dimension (mm)				Insert	Components	
							Screw	Wrench
		h	b	l	f	35°		
SVVBN 1010 K11-SH	•	10	10	125	5	VB □T 22□ (VB □T 1103 □□)	SO 25065I	T 7
SVVBN 1212 K11-SH	•	12	12	125	6			
SVVBN 1616 K11-SH	•	16	16	125	8			

INCH

Designation	Stock	Dimension (inch)				Insert	Components	
							Screw	Wrench
		h	b	l	f	35°		
SVVBN 06-2C-SH	•	.375	10	5.0	.1875	VB □T 22 □ (VB □T 1103 □□)	SO 25065I	T 7
SVVBN 08-2C-SH	•	.500	12	5.0	.250			
SVVBN 10-2C-SH	•	.625	16	5.0	.3125			

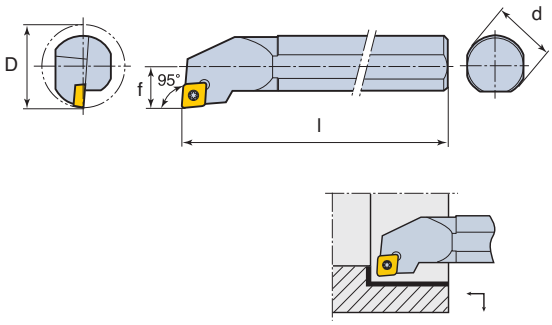
• For inserts, see pages 18

•Marked: Stocked Standard Items

POSITIVE 7° CLEARANCE 80° RHOMBIC INSERTS

CARBIDE SHANK

E-SCLCR
(coolant thru)



Designation	Stock		Dimensions (inch)				Insert	Screw	Wrench
	R	L	d	Dmin	l	f	80°		
E06M-SCLCR/L-2	•		0.375	0.500	6.00	0.250	CC□T21.5□	SO25065I	DS-T07F
E08M-SCLCR/L-2	•		0.500	0.625	6.00	0.312			
E08R-SCLCR/L-3	•		0.500	0.625	8.00	0.312	CC□T32.5□	SO35080I	DS-T15S
E10R-SCLCR/L-3	•		0.625	0.780	8.00	0.438			
E12S-SCLCR/L-3	•		0.750	0.985	10.00	0.500			

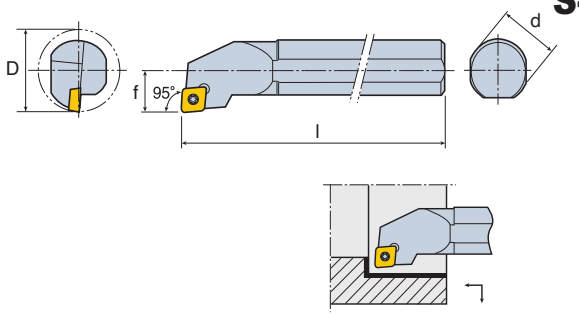
• For inserts, see pages 8-11

•Marked: Stocked Standard Items

SCREW HELD/BORING BARS

POSITIVE 7° CLEARANCE 80° RHOMBIC INSERTS

S-SCLCR



Designation	Stock		Dimensions (inch)				Insert	Screw	Wrench
	R	L	d	Dmin	l	f	80°		
S06H-SCLCR/L-2	•		0.375	0.394	4.00	0.236	CC□T21.5□	TS-25.45-6M1	DS-T07F
S06M-SCLCR/L-2	•	•	0.375	0.500	6.00	0.250	CC□T21.5□	1425	5507
S08K-SCLCR/L-2			0.500	0.550	5.00	0.275	CC□T21.5□	TS-25.45-6M1	DS-T07F
S08M-SCLCR/L-2	•		0.500	0.602	6.00	0.312			
S10M-SCLCR/L-2	•		0.625	0.708	6.00	0.354			
S10R-SCLCR/L-2			0.625	0.812	8.00	0.406			
S08M-SCLCR/L-3	•		0.500	0.625	6.00	0.312	CC□T32.5□	TS-4.7-8M1	DS-T15S
S10R-SCLCR/L-3	•	•	0.625	0.812	8.00	0.406	CC□T32.5□	1440	5515
S12S-SCLCR/L-3	•	•	0.750	0.954	10.00	0.500	CC□T32.5□	TS-4.7-10M1	DS-T15S

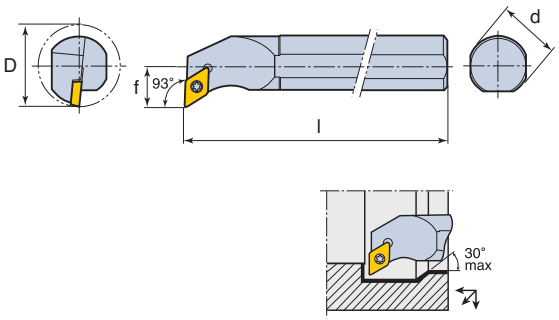
• For inserts, see pages 8-11

• Marked: Stocked Standard Items

SCREW HELD/BORING BARS

POSITIVE 7° CLEARANCE 55° RHOMBIC INSERTS

CARBIDE SHANK



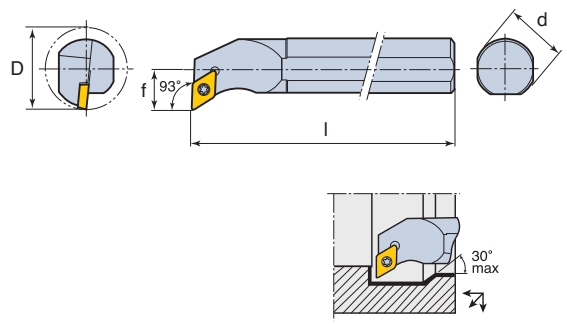
E-SDUCR
(coolant thru)

Designation	Stock		Dimensions (inch)				Insert	Screw	Wrench
	R	L	d	Dmin	l	f	55°		
E06M-SDUCR/L-2	•		0.375	0.625	6.00	0.375	DC□T21.5□	SO25065I	DS-T07F
E08M-SDUCR/L-2	•		0.500	0.780	6.00	0.437			
E10R-SDUCR/L-2	•		0.625	0.840	8.00	0.500			
E12S-SDUCR/L-3	•		0.750	1.250	10.00	0.625	DC□T32.5□	SO35080I	DS-T15S

• For inserts, see pages 12-15

•Marked: Stocked Standard Items

POSITIVE 7° CLEARANCE 55° RHOMBIC INSERTS



S-SDUCR

Designation	Stock		Dimensions (inch)				Insert	Screw	Wrench
	R	L	d	Dmin	l	f	55°		
S06M-SDUCR/L-2	•		0.375	0.625	6.00	0.375	DC□T21.5□	TS-25.45-6M1	DS-T07F
S08M-SDUCR/L-2	•		0.500	0.780	6.00	0.437			
S10R-SDUCR/L-2	•		0.625	0.840	8.00	0.500			
S12S-SDUCR/L-3	•		0.750	1.250	10.00	0.625	DC□T32.5□	1440	5515

• For inserts, see pages 12-15

•Marked: Stocked Standard Items

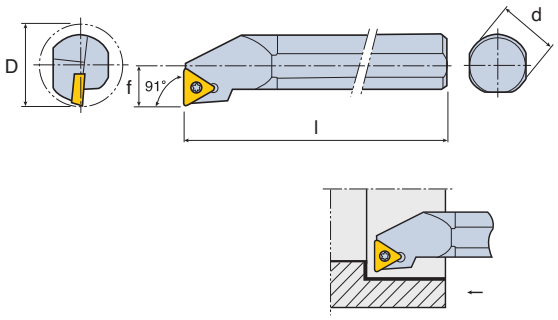
TAEGUline

SCREW HELD/BORING BARS

POSITIVE 7° CLEARANCE TRIANGULAR INSERTS

CARBIDE SHANK

E-STFCR
(coolant thru)



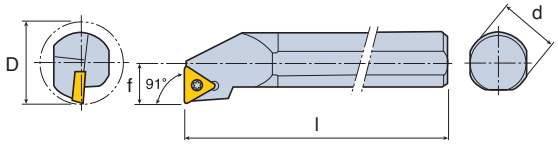
Designation	Stock		Dimensions (inch)				Insert	Insert Screw	Driver
	R	L	d	Dmin	l	f			
E06M-STFCR/L-2	•		0.375	0.500	6.00	0.250	TC□T21.5□	SO25065I	DS-T07F
E08R-STFCR/L-2	•		0.500	0.625	8.00	0.312			
E10R-STFCR/L-2	•		0.625	0.812	8.00	0.406			
E12S-STFCR/L-2	•		0.750	1.000	10.00	0.500			

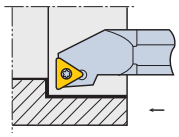
• For inserts, see pages 16-17

•Marked: Stocked Standard Items

POSITIVE 7° CLEARANCE TRIANGULAR INSERTS

S-STFCR





Designation	Stock		Dimensions (inch)				Insert	Insert Screw	Driver
	R	L	d	Dmin	l	f			
S06M-STFCR/L-2	•		0.375	0.500	6.00	0.250	TC□T21.5□	1425	5507
S08M-STFCR/L-2	•		0.500	0.625	6.00	0.312			
S10R-STFCR/L-2	•		0.625	0.812	8.00	0.406			
S12S-STFCR/L-2	•		0.750	1.000	10.00	0.500	TC□T21.5□	TS-25.45-6M1	DS-T07F

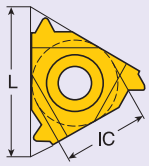
• For inserts, see pages 16-17

•Marked: Stocked Standard Items

THREADING INSERT NOMENCLATURE

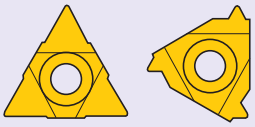
1 Insert Size

L (inch)	IC
06	5/32"
08	3/16"
11	1/4"
16	3/8"



2 Application

E - External
I - Internal
UE - U-Type, External
UI - U-Type, Internal
UEI - U-Type, External and Internal



U-Type **Regular Type**

3 Hand of Tool

R - Right-hand
L - Left-hand

4 Type

M - Pressed chipbreaker
n - No indication regular type

16	E	R	M	1.50	ISO	TT9030
1	2	3	4	5	6	7

5 Pitch

Full Profile
(Value by number)
0.35 - 9.0 **mm**
72 - 2 **TPI**

Partial Profile
(Range by letter)

	mm	TPI
A	0.5 - 1.5	48 - 16
AG	0.5 - 3.0	48 - 8
G	1.75 - 3.0	14 - 8

6 Thread Standard

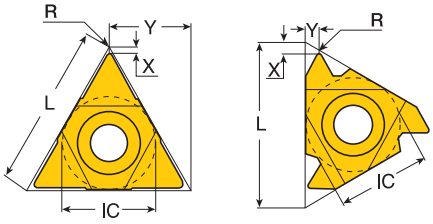
60 - Partial Profile 60°
ISO - ISO Metric
UN - American UN
NPT - NPT

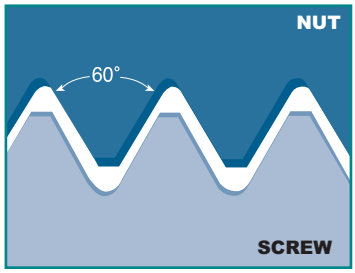
7 Grade

For more grade information see page 43

TAEGUline

Partial Profile 60°



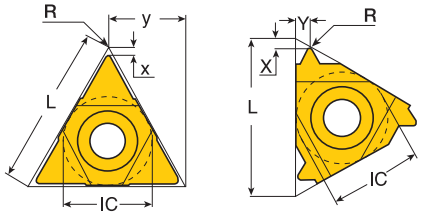


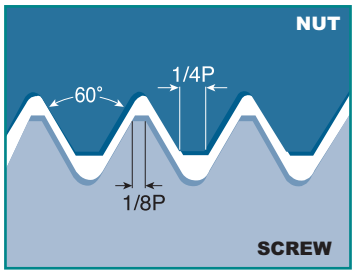
Thread Form	IC	Pitch Range		Designation		Dimension			
		mm	TPI	Right Hand	Left Hand	L	R	X	Y
External Regular Type  M - Type 	1/4"	0.5-1.5	48 - 16	11 ER A 60	11 EL A 60	.433	.002	.031	.035
	3/8"	0.5-1.5	48 - 16	16 ER A 60	16 EL A 60	.630	.002	.031	.035
		0.5-1.5	48 - 16	16 ERM A 60		.630	.002	.031	.035
		1.75-3.0	14 - 8	16 ER G 60	16 EL G 60	.630	.007	.047	.067
		1.75-3.0	14 - 8	16 ERM G 60		.630	.007	.047	.067
		0.5-3.0	48 - 8	16 ER AG 60	16 EL AG 60	.630	.002	.047	.067
		0.5-3.0	48 - 8	16 ERM AG 60		.630	.002	.047	.067
Internal Regular Type  M - Type 	5/32"	0.5-1.25	48 - 20	06 IR A 60	06 IL A 60	.236	.002	.020	.024
		0.5-1.25	48 - 20	06 IRM A 60		.236	.002	.020	.024
	3/16"	0.5-1.5	48 - 16	08 IR A 60	08 IL A 60	.315	.002	.024	.028
		0.5-1.5	48 -16	08 IRM A 60		.315	.002	.024	.028
	1/4"	0.5-1.5	48 - 16	11 IR A 60	11 IL A 60	.433	.002	.031	.035
		0.5-1.5	48 - 16	11 IRM A 60		.433	.002	.031	.035

• ERM/IRM with pressed chipbreaker

THREADING INSERTS

ISO METRIC Full Profile
DIN13 12-1986 Class: 6G





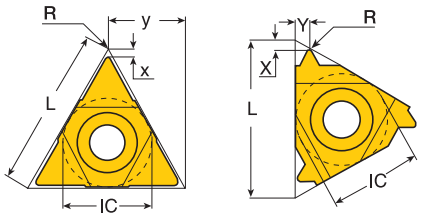
Thread Form	IC	Pitch	Designation		Dimension			
		mm	Right Hand	Left Hand	L	R	X	Y
External Regular Type  M - Type 	1/4"	0.35	11 ER 0.35 ISO	11 EL 0.35 ISO	.433	.002	.031	.016
		0.40	11 ER 0.40 ISO	11 EL 0.40 ISO	.433	.002	.028	.016
		0.45	11 ER 0.45 ISO	11 EL 0.45 ISO	.433	.002	.028	.016
		0.50	11 ER 0.50 ISO	11 EL 0.50 ISO	.433	.002	.024	.024
		0.60	11 ER 0.60 ISO	11 EL 0.60 ISO	.433	.003	.024	.024
		0.70	11 ER 0.70 ISO	11 EL 0.70 ISO	.433	.003	.024	.024
		0.75	11 ER 0.75 ISO	11 EL 0.75 ISO	.433	.003	.024	.024
		0.80	11 ER 0.80 ISO	11 EL 0.80 ISO	.433	.004	.024	.024
		1.00	11 ER 1.00 ISO	11 EL 1.00 ISO	.433	.005	.028	.028
		1.25	11 ER 1.25 ISO	11 EL 1.25 ISO	.433	.006	.031	.035
		1.50	11 ER 1.50 ISO	11 EL 1.50 ISO	.433	.007	.031	.039
		1.75	11 ER 1.75 ISO	11 EL 1.75 ISO	.433	.008	.031	.043
	3/8"	0.35	16 ER 0.35 ISO	16 EL 0.35 ISO	.630	.002	.031	.016
		0.40	16 ER 0.40 ISO	16 EL 0.40 ISO	.630	.002	.028	.016
		0.45	16 ER 0.45 ISO	16 EL 0.45 ISO	.630	.002	.028	.016
		0.50	16 ER 0.50 ISO	16 EL 0.50 ISO	.630	.002	.024	.024
		0.60	16 ER 0.60 ISO	16 EL 0.60 ISO	.630	.003	.024	.024
		0.70	16 ER 0.70 ISO	16 EL 0.70 ISO	.630	.003	.024	.024
		0.75	16 ER 0.75 ISO	16 EL 0.75 ISO	.630	.003	.024	.024
		0.80	16 ER 0.80 ISO	16 EL 0.80 ISO	.630	.004	.024	.024
		1.00	16 ER 1.00 ISO	16 EL 1.00 ISO	.630	.004	.028	.028
		1.00	16 ERM 1.00 ISO		.630	.005	.028	.028
		1.25	16 ER 1.25 ISO	16 EL 1.25 ISO	.630	.004	.031	.035
		1.25	16 ERM 1.25 ISO		.630	.006	.031	.035
		1.50	16 ER 1.50 ISO	16 EL 1.50 ISO	.630	.006	.031	.039
		1.50	16 ERM 1.50 ISO		.630	.007	.031	.039
		1.75	16 ER 1.75 ISO	16 EL 1.75 ISO	.630	.007	.035	.047
		1.75	16 ERM 1.75 ISO		.630	.008	.035	.047
		2.00	16 ER 2.00 ISO	16 EL 2.00 ISO	.630	.008	.039	.051
		2.00	16 ERM 2.00 ISO		.630	.010	.039	.051
		2.50	16 ER 2.50 ISO	16 EL 2.50 ISO	.630	.012	.043	.059
		2.50	16 ERM 2.50 ISO		.630	.012	.043	.059
		3.00	16 ER 3.00 ISO	16 EL 3.00 ISO	.630	.015	.047	.063
		3.00	16 ERM 3.00 ISO		.630	.015	.047	.063

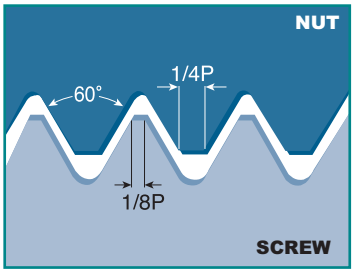
• ERM with pressed chipbreaker

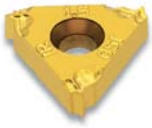
TAEGUline

THREADING INSERTS

ISO METRIC Full Profile
DIN13 12-1986 Class: 6H



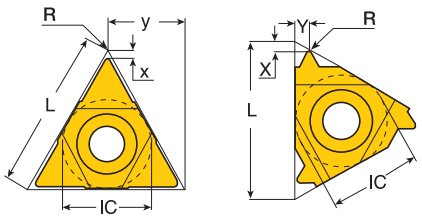


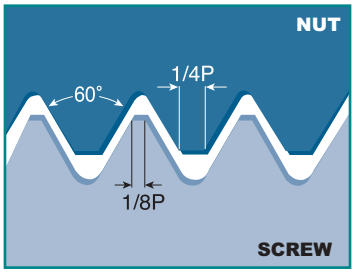
Thread Form	IC	Pitch	Designation		Dimension			
		mm	Right Hand	Left Hand	L	R	X	Y
Internal Regular Type  M - Type 	5/32"	0.50	06 IR 0.50 ISO	06 IL 0.50 ISO	.236	.001	.020	.020
		0.75	06 IR 0.75 ISO	06 IL 0.75 ISO	.236	.002	.020	.020
		1.00	06 IR 1.00 ISO	06 IL 1.00 ISO	.236	.002	.020	.024
		1.25	06 IR 1.25 ISO	06 IL 1.25 ISO	.236	.003	.024	.024
	3/16"	0.50	08 IR 0.50 ISO	08 IL 0.50 ISO	.315	.002	.024	.020
		0.75	08 IR 0.75 ISO	08 IL 0.75 ISO	.315	.002	.024	.020
		1.00	08 IR 1.00 ISO	08 IL 1.00 ISO	.315	.002	.024	.024
		1.25	08 IR 1.25 ISO	08 IL 1.25 ISO	.315	.003	.024	.028
		1.50	08 IR 1.50 ISO	08 IL 1.50 ISO	.315	.003	.024	.028
		1.75	08 IR 1.75 ISO	08 IL 1.75 ISO	.315	.004	.024	.031
		2.00	08 UIRL 2.00 ISO		.315	.005	.039	.157
	1/4"	0.35	11 IR 0.35 ISO	11 IL 0.35 ISO	.433	.001	.031	.012
		0.40	11 IR 0.40 ISO	11 IR 0.40 ISO	.433	.001	.031	.016
		0.45	11 IR 0.45 ISO	11 IR 0.45 ISO	.433	.001	.031	.016
		0.50	11 IR 0.50 ISO	11 IR 0.50 ISO	.433	.001	.024	.024
		0.60	11 IR 0.60 ISO	11 IR 0.60 ISO	.433	.001	.024	.024
		0.70	11 IR 0.70 ISO	11 IR 0.70 ISO	.433	.002	.024	.024
		0.75	11 IR 0.75 ISO	11 IR 0.75 ISO	.433	.002	.024	.024
		0.80	11 IR 0.80 ISO	11 IR 0.80 ISO	.433	.002	.024	.024
		1.00	11 IR 1.00 ISO	11 IR 1.00 ISO	.433	.002	.024	.028
		1.25	11 IR 1.25 ISO	11 IR 1.25 ISO	.433	.003	.031	.035
		1.50	11 IR 1.50 ISO	11 IR 1.50 ISO	.433	.003	.031	.039
		1.50	11 IRM 1.50 ISO		.433	.003	.031	.039
		1.75	11 IR 1.75 ISO	11 IR 1.75 ISO	.433	.004	.035	.043
		2.00	11 IR 2.00 ISO	11 IR 2.00 ISO	.433	.005	.031	.035

• IRM with pressed chipbreaker

THREADING INSERTS

AMERICAN UN Full Profile
(UN, UNC, UNF, UNEF, ANSI B1, 3M-1986 Class: 2A)





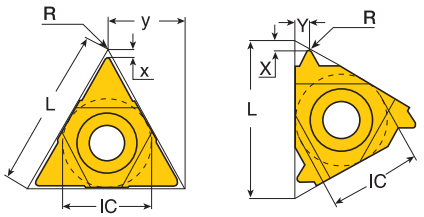
Thread Form	IC	Pitch	Designation		Dimension			
		TPI	Right Hand	Left Hand	L	R	X	Y
External Regular Type  M - Type 	1/4"	56	11 ER 56 UN	11 EL 56 UN	.433	.002	.028	.016
		48	11 ER 48 UN	11 EL 48 UN	.433	.002	.024	.024
		44	11 ER 44 UN	11 EL 44 UN	.433	.002	.024	.024
		40	11 ER 40 UN	11 EL 40 UN	.433	.002	.024	.024
		36	11 ER 36 UN	11 EL 36 UN	.433	.003	.024	.024
		32	11 ER 32 UN	11 EL 32 UN	.433	.004	.024	.024
		28	11 ER 28 UN	11 EL 28 UN	.433	.004	.024	.028
		24	11 ER 24 UN	11 EL 24 UN	.433	.005	.028	.031
		20	11 ER 20 UN	11 EL 20 UN	.433	.006	.031	.035
		18	11 ER 18 UN	11 EL 18 UN	.433	.007	.031	.039
		16	11 ER 16 UN	11 EL 16 UN	.433	.007	.035	.043
	3/8"	56	16 ER 56 UN	16 EL 56 UN	.630	.002	.028	.016
		48	16 ER 48 UN	16 EL 48 UN	.630	.002	.024	.024
		40	16 ER 40 UN	16 EL 40 UN	.630	.002	.024	.024
		36	16 ER 36 UN	16 EL 36 UN	.630	.003	.024	.024
		32	16 ER 32 UN	16 EL 32 UN	.630	.004	.024	.024
		28	16 ER 28 UN	16 EL 28 UN	.630	.004	.024	.028
		24	16 ER 24 UN	16 EL 24 UN	.630	.005	.028	.031
		24	16 ERM 24 UN		.630	.004	.028	.031
		20	16 ER 20 UN	16 EL 20 UN	.630	.006	.031	.035
		20	16 ERM 20 UN		.630	.006	.031	.035
		18	16 ER 18 UN	16 EL 18 UN	.630	.007	.031	.039
		18	16 ERM 18 UN		.630	.006	.031	.039
		16	16 ER 16 UN	16 EL 16 UN	.630	.007	.035	.043
		16	16 ERM 16 UN		.630	.007	.035	.043
		14	16 ER 14 UN	16 EL 14 UN	.630	.009	.039	.047
		14	16 ERM 14 UN		.630	.009	.039	.047
		13	16 ER 13 UN	16 EL 13 UN	.630	.009	.039	.051
		13	16 ERM 13 UN		.630	.009	.039	.051
		12	16 ER 12 UN	16 EL 12 UN	.630	.010	.043	.055
		12	16 ERM 12 UN		.630	.010	.043	.055
		11.5	16 ER 11.5 UN	16 EL 11.5 UN	.630	.011	.043	.059
		11	16 ER 11 UN	16 EL 11 UN	.630	.011	.043	.059
		10	16 ER 10 UN	16 EL 10 UN	.630	.013	.043	.059
		9	16 ER 9 UN	16 EL 9 UN	.630	.014	.047	.067
		8	16 ER 8 UN	16 EL 8 UN	.630	.016	.047	.063
		8	16 ERM 8 UN		.630	.016	.047	.063

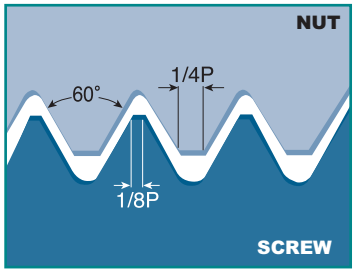
• ERM with pressed chipbreaker

TAEGUline

THREADING INSERTS

AMERICAN UN Full Profile
(UN, UNC, UNF, UNEF, ANSI B1, 3M-1986 Class: 2B)

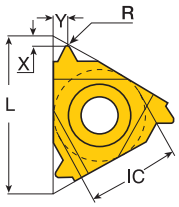


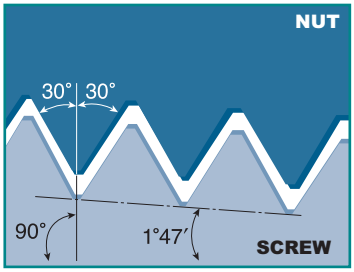


Thread Form	IC	Pitch	Designation		Dimension			
		TPI	Right Hand	Left Hand	L	R	X	Y
Internal 	5/32"	32	06 IR 32 UN	06 IL 32 UN	.236	.002	.020	.020
		28	06 IR 28 UN	06 IL 28 UN	.236	.002	.020	.020
		24	06 IR 24 UN	06 IL 24 UN	.236	.002	.020	.024
		20	06 IR 20 UN	06 IL 20 UN	.236	.002	.024	.024
		18	06 IR 18 UN	06 IL 18 UN	.236	.003	.024	.024
	3/16"	32	08 IR 32 UN	08 IL 32 UN	.315	.002	.024	.020
		28	08 IR 28 UN	08 IL 28 UN	.315	.002	.024	.024
		24	08 IR 24 UN	08 IL 24 UN	.315	.002	.024	.024
		20	08 IR 20 UN	08 IL 20 UN	.315	.002	.024	.028
		18	08 IR 18 UN	08 IL 18 UN	.315	.003	.024	.028
		16	08 IR 16 UN	08 IL 16 UN	.315	.004	.024	.028
		14	08 IR 14 UN	08 IL 14 UN	.315	.004	.024	.031
		13	08 U IRL 13 UN		.315	.004	.039	.157
		12	08 U IRL 12 UN		.315	.005	.035	.157
		11	08 U IRL 11 UN		.315	.006	.035	.157
	1/4"	72	11 IR 72 UN	11 IL 72 UN	.433	.001	.031	.012
		64	11 IR 64 UN	11 IL 64 UN	.433	.001	.031	.016
		56	11 IR 56 UN	11 IL 56 UN	.433	.001	.028	.016
		48	11 IR 48 UN	11 IL 48 UN	.433	.001	.024	.024
		40	11 IR 40 UN	11 IL 40 UN	.433	.001	.024	.024
		36	11 IR 36 UN	11 IL 36 UN	.433	.002	.024	.024
		32	11 IR 32 UN	11 IL 32 UN	.433	.002	.024	.024
		28	11 IR 28 UN	11 IL 28 UN	.433	.002	.024	.028
		24	11 IR 24 UN	11 IL 24 UN	.433	.002	.028	.031
		20	11 IR 20 UN	11 IL 20 UN	.433	.002	.031	.035
		18	11 IR 18 UN	11 IL 18 UN	.433	.003	.031	.039
		16	11 IR 16 UN	11 IL 16 UN	.433	.004	.035	.043
		14	11 IR 14 UN	11 IL 14 UN	.433	.004	.035	.043

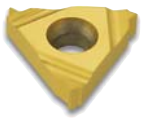
THREADING INSERTS

NPT (NATIONAL PIPE THREADS)
Full Profile ANSI/ASME B1.20.1-1983

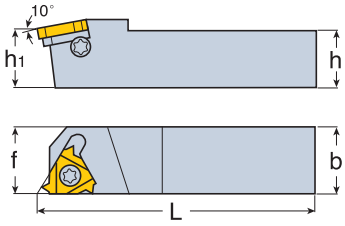


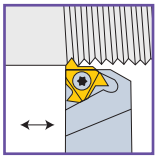


Application: Steam, gas and water pipes

Thread Form	IC	Pitch	Designation		Dimension			
		TPI	Right Hand	Left Hand	L	R	X	Y
External Regular Type  M - Type 	3/8"	27	16 ER 27 NPT	16 EL 27 NPT	.630	.002	.028	.031
		18	16 ER 18 NPT	16 EL 18 NPT	.630	.002	.031	.039
		18	16 ERM 18 NPT		.630	.002	.031	.039
		14	16 ER 14 NPT	16 EL 14 NPT	.630	.003	.035	.047
		14	16 ERM 14 NPT		.630	.002	.035	.047
		11.5	16 ER 11.5 NPT	16 EL 11.5 NPT	.630	.004	.043	.059
		11.5	16 ERM 11.5 NPT		.630	.004	.043	.059
		8	16 ER 8 NPT	16 EL 8 NPT	.630	.005	.051	.071
		8	16 ERM 8 NPT		.630	.006	.047	.071
Internal Regular Type  M - Type 	5/32"	27	06 IR 27 NPT	06 IL 27 NPT	.236	.002	.024	.024
	3/16"	27	08 IR 27 NPT	08 IL 27 NPT	.315	.002	.024	.024
		18	08 IR 18 NPT	08 IL 18 NPT	.315	.002	.024	.024
	1/4"	27	11 IR 27 NPT	11 IL 27 NPT	.433	.002	.028	.031
		18	11 IR 18 NPT	11 IL 18 NPT	.433	.002	.031	.039
		14	11 IR 14 NPT	11 IL 14 NPT	.433	.002	.031	.039

• ERM with pressed chipbreaker



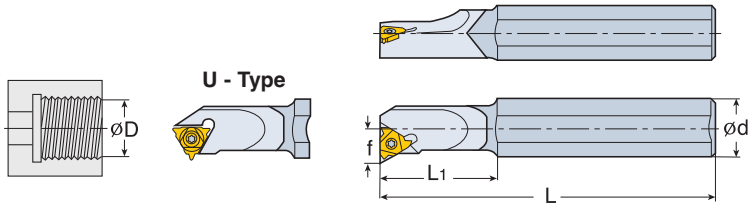


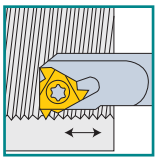
Right-hand shown

SER/L

Designation	Dimension (inch)				Insert
	h=h1	b	L	f	
SER/L 0310 H11(1)	.310	.310	4.00	.43	11 ER/L...
SER/L 0375 H11(1)	.375	.375	4.00	.43	
SER/L 0375 D16	.375	.375	2.50	.63	16 ER/L...
SER/L 0500 F16	.500	.500	3.25	.63	
SER/L 0625 H16	.625	.625	4.00	.63	

- (1) Toolholders without anvil
- All toolholders are made with 1.5° helix angle
- For spare parts see page 40
- Right-hand inserts (ER) for right-hand tools (SER)





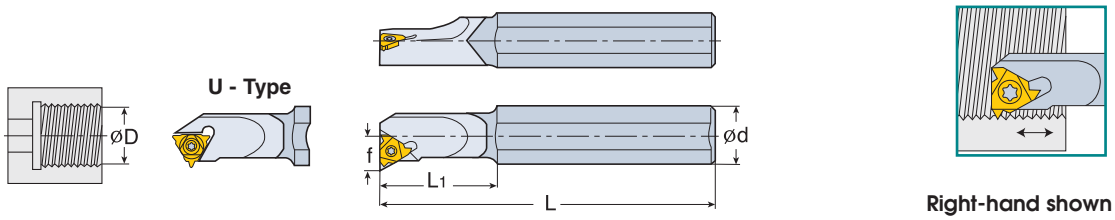
Right-hand shown

SIR/L

Designation	Dimension (inch)					Insert
	d	L	L_1	Dmin	f	
SIR 0205 H06(1)	.500	4.0	.500	.250	.17	06 IR...
SIL 0205 H06(1)	.500	4.0	.500	.250	.17	06 IL...
SIR 0265 K08(1)	.625	5.0	.710	.315	.21	08 IR...
SIL 0265 K08(1)	.625	5.0	.710	.315	.21	08 IL...
SIR 0310 K08U(1)	.625	5.0	.825	.355	.25	08 UIRL...
SIL 0310 K08U(1)	.625	5.0	.825	.355	.25	08 UIRL...
SIR/L 0375 H11(1)	.375	4.0	-	.470	.29	
SIR/L 0375 K11(1)	.625	5.0	1.000	.470	.26	11 IR/L...
SIR/L 0500 L11(1)	.625	5.5	1.250	.630	.32	

- (1) Toolholders without anvil
- Right-hand inserts (IR) for right-hand tools (SIR)
- All toolholders are made with 1.5° helix angle
- For spare parts see page 40

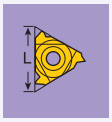
TAEGUline

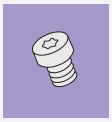


SIR/L

Designation	Dimension (inch)					Insert
	d	L	L_1	Dmin	f	
SIR/L 0205 H06C	.236	4.0	1.0	.250	.170	06 IR...
SIR/L 0265 K08C	.315	5.0	1.2	.315	.210	08 IR...
SIR/L 0310 K08UC	.315	5.0	1.4	.355	.250	08 UIRL...
SIR/L 0375 M11C	.380	6.0	-	.500	.290	11 IR/L...
SIR/L 0500 P11C	.500	7.0	-	.600	.330	

- All carbide shank toolholders are without anvil
- Right-hand inserts (IR) for right-hand tools (SIR)
- For spare parts see page 40
- All toolholders are made with 1.5° helix angle






External Toolholder

Insert Size	Insert Screw	Anvil Screw	Torx Key	Anvil EX. Right	Anvil EX. Left
11	S11	-	T-8/5	-	-
16	S16	A16	T-10/5	AE16	AI16

Internal Toolholder

Insert Size	Insert Screw	Anvil Screw	Torx Key	Anvil IN. Right	Anvil IN. Left
06	SR-14-552	-	T-6/5	-	-
08	SR-14-558	-	T-6/5	-	-
11	S11	-	T-8/5	-	-

- Torx Key: use only flag type

Threading Technical Information

Number of Cutting Passes for Regular Type Inserts

Pitch	mm	0.5	1.0	1.5	2.0	2.5	3.0	4.0	6.0
	TPI	48	24	16	12	10	8	6	4
Number of Passes		4-6	5-9	5-12	6-14	7-15	8-17	10-20	11-22

- For mini-tools (06IR or 08IR) add 1 - 3 passes. Increase for hard materials.

Maximum depth of first cut for CNC control
External Threading - M-Type Inserts

Full Profile	Pitch	TPI	Insert Designation	No. of passes Min.	No. of passes Max.	Max. Depth for First Pass (D_1) mm: Low Carbon Steel Eq.	Low Carbon Steel Dim.	High Carbon Steel Eq.	High Carbon Steel Dim.	Alloy Steel Eq.	Alloy Steel Dim.	Stainless Steel Eq.	Stainless Steel Dim.	Nonferrous Aluminum Eq.	Nonferrous Aluminum Dim.
ISO	1.00		16 ERM 1.00 ISO	5	9	.013	.020	.012	.018	.011	.016	.009	.013	.019	.028
Metric	1.25		16 ERM 1.25 ISO	6	11	.017	.025	.015	.022	.013	.020	.011	.016	.023	.035
	1.50		16 ERM 1.50 ISO	6	12	.018	.027	.016	.024	.015	.022	.012	.018	.025	.038
	1.75		16 ERM 1.75 ISO	8	13	.019	.028	.017	.026	.015	.023	.012	.019	.026	.040
	2.00		16 ERM 2.00 ISO	8	14	.020	.030	.018	.027	.016	.024	.013	.019	.028	.041
	2.50		16 ERM 2.50 ISO	10	15	.021	.031	.019	.028	.017	.025	.013	.020	.029	.044
	3.00		16 ERM 3.00 ISO	12	17	.022	.033	.020	.030	.018	.026	.014	.022	.031	.046
American		24	16 ERM 24 UN	5	9	.013	.020	.012	.018	.011	.016	.009	.013	.019	.028
UN		20	16 ERM 20 UN	6	10	.017	.025	.015	.022	.013	.020	.011	.016	.023	.035
		18	16 ERM 18 UN	6	11	.018	.027	.016	.024	.015	.022	.012	.018	.025	.038
		16	16 ERM 16 UN	7	12	.019	.028	.017	.025	.015	.022	.012	.018	.026	.039
		14	16 ERM 14 UN	7	13	.018	.027	.016	.024	.015	.022	.011	.016	.025	.038
		12	16 ERM 12 UN	8	14	.022	.033	.018	.027	.016	.024	.013	.019	.028	.041
		8	16 ERM 8 UN	12	17	.019	.028	.020	.030	.018	.026	.014	.022	.031	.046
NPT		18	16 ERM 18 NPT	10	20	.009	.014	.009	.013	.007	.011	.006	.009	.013	.020
		14	16 ERM 14 NPT	13	26	.009	.014	.009	.013	.007	.011	.005	.009	.013	.020
		11.5	16 ERM 11.5 NPT	15	24	.011	.016	.009	.014	.009	.013	.007	.010	.015	.022
		8	16 ERM 8 NPT	17	30	.012	.018	.011	.016	.010	.015	.008	.012	.017	.025
Partial	0.50-1.50	48-16	16 ERM A 60		(1)	.009	.013	.008	.012	.007	.010	.006	.008	.012	.018
Profile 60°	1.75-3.00	14-8	16 ERM G 60			.020	.030	.018	.027	.016	.024	.013	.019	.028	.041
	0.50-3.00	48-8	16 ERM AG 60			.009	.014	.009	.013	.007	.011	.006	.009	.013	.020
	3.50-5.00	7-5	22 ERM N 60			.016	.024	.015	.022	.013	.020	.011	.016	.022	.034

(1) As per the number of passes for the relevant pitch.
For CT3000, TT6010 and K10, reduce depth of first cut by 30%.

Cutting Data

Maximum depth of first cut for CNC control
Internal Threading - M-Type Inserts

Full Profile	Pitch (mm)	TPI	Insert Designation	No. of passes Min.	No. of passes Max.	Max. Depth for First Pass (D_1) inch: Low Carbon Steel Eq.	Low Carbon Steel Dim.	High Carbon Steel Eq.	High Carbon Steel Dim.	Alloy Steel Eq.	Alloy Steel Dim.	Stainless Steel Eq.	Stainless Steel Dim.	Nonferrous Aluminum Eq.	Nonferrous Aluminum Dim.
ISO	1.50		11 IRM 1.50 ISO	10	20	.008	.012	.007	.011	.006	.009	.005	.007	.011	.019
Metric	1.00		16 IRM 1.00 ISO	9	16	.006	.008	.005	.007	.004	.006	.004	.005	.008	.011
	1.25		16 IRM 1.25 ISO	9	16	.007	.011	.007	.010	.006	.009	.005	.007	.011	.015
	1.50		16 IRM 1.50 ISO	10	20	.008	.012	.007	.011	.006	.009	.005	.008	.011	.019
	1.75		16 IRM 1.75 ISO	11	18	.008	.013	.007	.011	.007	.010	.006	.008	.011	.018
	2.00		16 IRM 2.00 ISO	12	21	.009	.013	.008	.012	.007	.010	.006	.008	.012	.018
	2.50		16 IRM 2.50 ISO	14	21	.009	.013	.008	.012	.007	.011	.006	.009	.013	.019
	3.00		16 IRM 3.00 ISO	16	22	.009	.014	.009	.013	.007	.011	.006	.009	.013	.020
American		20	16 IRM 20 UN	7	13	.008	.012	.007	.011	.006	.009	.005	.008	.011	.017
UN		18	16 IRM 18 UN	8	15	.008	.012	.007	.011	.006	.009	.005	.008	.011	.017
		16	16 IRM 16 UN	11	19	.008	.012	.007	.011	.006	.009	.005	.008	.011	.017
		14	16 IRM 14 UN	11	20	.008	.012	.007	.011	.007	.010	.005	.007	.011	.017
		12	16 IRM 12 UN	12	21	.009	.013	.008	.012	.007	.011	.006	.009	.013	.019
		8	16 IRM 8 UN	14	20	.009	.014	.009	.013	.007	.011	.006	.009	.013	.020
NPT		14	16 IRM 14 NPT	21	35	.005	.008	.005	.007	.004	.006	.003	.005	.007	.011
		11.5	16 IRM 11.5 NPT	21	33	.007	.010	.006	.009	.006	.008	.004	.006	.009	.014
		8	16 IRM 8 NPT	20	34	.009	.013	.008	.012	.007	.010	.006	.008	.012	.018
Partial	0.50 - 1.25	48-16	06 IRM A 60			.009	.013	.008	.012	.007	.010	.006	.008	.012	.018
Profile 60°	0.50 - 1.50	48-16	08 IRM A 60		(1)	.005	.008	.005	.007	.004	.006	.003	.005	.007	.011
	0.50 - 1.50	48-16	11 IRM A 60			.005	.008	.005	.007	.004	.006	.003	.005	.007	.011
	0.50 - 1.50	48-16	16 IRM A 60			.005	.008	.005	.007	.004	.006	.003	.005	.007	.011
	1.75 - 3.00	14-8	16 IRM G 60			.009	.013	.008	.012	.007	.010	.006	.008	.012	.018
	0.50 - 3.00	48-8	16 IRM AG 60			.006	.008	.005	.007	.004	.007	.004	.006	.008	.011
	3.50 - 5.00	7-5	22 IRM N 60			.009	.013	.008	.012	.007	.011	.006	.009	.013	.019

(1) As per the number of passes for the relevant pitch.
For CT3000, TT6010 and K10, reduce depth of first cut by 30%.

Cutting Data

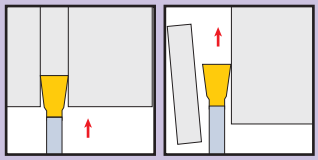
Cutting Speed Range by Workpiece Material and Carbide Grades

		Brinell HB	Coated			Uncoated		
			TT7010	TT9030	TT8010	P30	Cermet CT3000	UF10/K10
MATERIAL		Hardness	Cutting Speed (SFM)					
Carbon Steel	0.2 %C	150	525	590	341	341	614	
	0.45%C	190	490	525	322	322	577	
	0.83%C	250	426	459	279	279	499	
Alloy Steel		<200	426	426	279	279	499	
		200 - 250	393	393	256	256	459	
		275 - 325	312	328	203	203	364	
		325 - 375	262	262	171	171	308	
		375 - 425	197	197	128	128	230	
Stainless Steel	Mart.	175 - 225	490	525	322	322	577	344
		275 - 325	344	360	171	171	308	180
		135 - 175	262	328	223	223	404	230
	Aust.	375 - 425	230	262	151	151	269	164
Cast Steel	Carbon	<150	490	558	322	322	577	
		150 - 200	360	360	236	236	423	
	Alloyed	200 - 250	328	328	213	213	384	
		250-300	262	164	171	171	308	
Malleable Iron	Short chip	110 - 145		262				180
	Long chip	200 - 250		328				164
Cast Iron	Low tensile	180		426				328
	High tensile	250		328				230
Nodular Iron	Ferritic	160		426				246
	Pearlitic	250		328				230
Chilled Cast Iron		400		66				
Bronze Alloy		120 - 200		393				279
Lead Alloy		80 - 150		490				377
Brass & Red		60 - 110		393				279
Phosphor Bronze		85 - 110		328				197
Aluminum Alloys		150 - 200		820				558
Aluminum Alloys, Cast				984				787

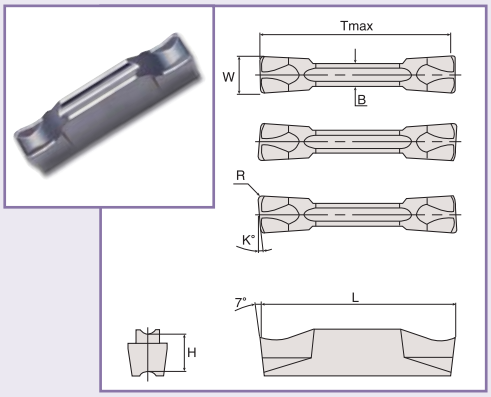
ISO CLASS	GRADE NAME	GRADE DESCRIPTION
P20~P30	P30	Carbide grade for carbon and cast steels. Works well at medium to low cutting speeds
K10~K30	K10 or UF10	Carbide grade for nonferrous metals, aluminum and cast iron
K10~K20 P10~P25	TT6010	PVD TiN coated micrograin for free cutting untreated alloy steels (below 30 HRc), for stainless steels and cast iron
P15~P35	TT7010	PVD TiN coated grade for treated and hard alloy steels (25 HRc & up) at medium to low cutting speeds
P30~P50 K25~K40	TT8010	PVD TiN coated grade for low cutting speed. Works well with wide range of stainless steels
P20~P40 K20~K30	TT9030	PVD TiAlN coated sub-micrograin grade for a variey of materials. First choice grade. Works well in stainless steels and exotic materials at medium to high cutting speeds.

TDC/TSC with C-Type Chipbreakers

Single and Double Ended Inserts for Grooving and Parting



TDC-Type (double ended)

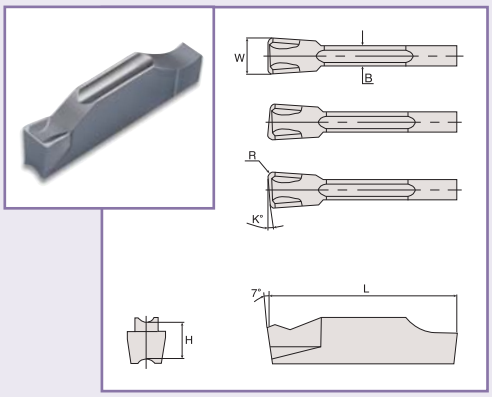


Neutral

Left-hand

Right-hand

TSC-Type (single ended)



Neutral

Left-hand

Right-hand

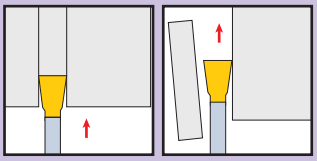
Designation	Insert Seat Size	W±.002 (inch) W±0.05 (mm)	R (inch) (mm)	L (inch) (mm)	K (degrees)	H (inch) (mm)	Tmax TDC	Tmax TSC	Grades K10	TT7220	TT8020	TT9030	CT3000	PV3030
TDC/TSC 2	2	.079 2.0	.008 0.20	.79 20	0°	.185 4.7	.748 19		○	○	○	○	○	○
TDC/TSC 2 - 6L	2	.079 2.0	.008 0.20	.79 20	6°	.185 4.7	.748 19		○	○	○			
TDC/TSC 2 - 6R	2	.079 2.0	.008 0.20	.79 20	6°	.185 4.7	.748 19		○	○	○	○		
TDC/TSC 2 - 8L	2	.079 2.0	.008 0.20	.79 20	8°	.185 4.7	.748 19			○	○			
TDC/TSC 2 - 8R	2	.079 2.0	.008 0.20	.79 20	8°	.185 4.7	.748 19			○	○			
TDC/TSC 2 - 15L	2	.079 2.0	.008 0.20	.79 20	15°	.185 4.7	.748 19			○	○			
TDC/TSC 2 - 15R	2	.079 2.0	.008 0.20	.79 20	15°	.185 4.7	.748 19			○	○			
TDC/TSC 2 - 15LS	2	.079 2.0	.0008 0.02	.77 19.6	15°	.185 4.7	.748 19			○	○			
TDC/TSC 2 - 15RS	2	.079 2.0	.0008 0.02	.77 19.6	15°	.185 4.7	.748 19			○	○			

Ordering example: 100 pcs. TDC 2 TT7220

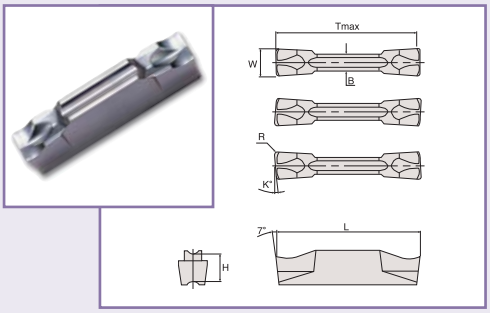
○ : Stock

TDJ/TSJ with J-Type Chipbreakers

Single and Double Ended Inserts for Grooving and Parting



TDJ-Type (double ended)

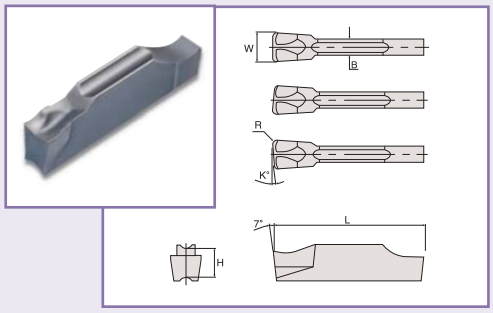


Neutral

Left-hand

Right-hand

TSJ-Type (single ended)



Neutral

Left-hand

Right-hand

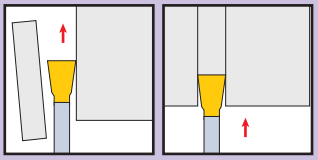
Designation	Insert Seat Size	W ±.002 (inch) W ±0.05 (mm)	R (inch) (mm)	L (inch) (mm)	K (degrees)	H (inch) (mm)	Tmax		Grades				
							TDJ	TSJ	K10	TT7220	TT8020	TT9030	
TDJ 1.4	1	.055 1.4	.006 0.16	.63 16	0°	.157 4.0	.591 15				○	○	
TDJ/TSJ 2	2	.079 2.0	.008 0.20	.79 20	0°	.185 4.7	.748 19		○	○	○	○	○
TDJ/TSJ 2-6L	2	.079 2.0	.008 0.20	.79 20	6°	.185 4.7	.748 19			○	○	○	
TDJ/TSJ 2-6R	2	.079 2.0	.008 0.20	.79 20	6°	.185 4.7	.748 19		○	○	○	○	
TDJ/TSJ 2-15L	2	.079 2.0	.008 0.20	.79 20	15°	.185 4.7	.748 19			○	○	○	
TDJ/TSJ 2-15R	2	.079 2.0	.008 0.20	.79 20	15°	.185 4.7	.748 19			○	○	○	
TDJ/TSJ 2-15LS	2	.079 2.0	.0008 0.02	.77 19.6	15°	.185 4.7	.748 19			○	○	○	
TDJ/TSJ 2-15RS	2	.079 2.0	.0008 0.02	.77 19.6	15°	.185 4.7	.748 19			○	○	○	

Ordering example: 100 pcs. TDJ 2 TT7220

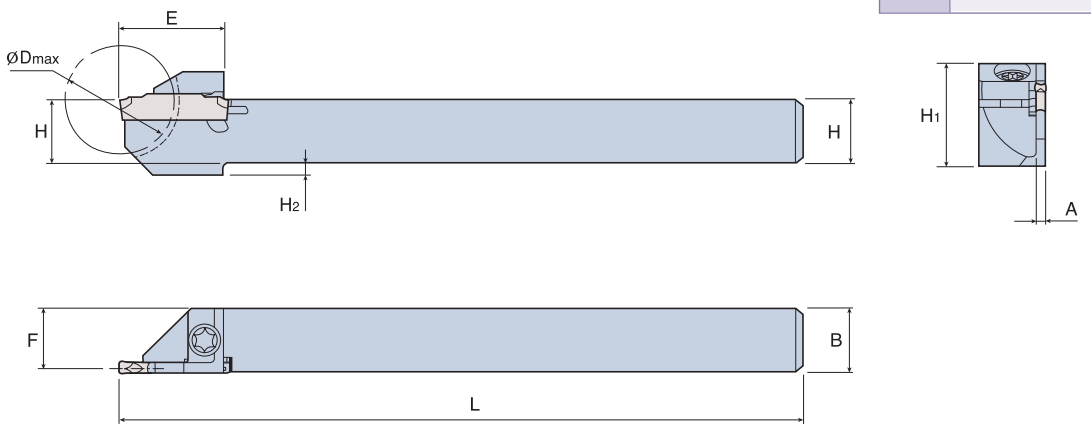
○ : Stock

TTER/L-SH

External Grooving
Holders for Swiss Automatics



Use Insert	TDC/TSC: page T276 TDJ/TSJ : page T279



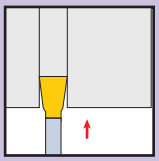
Right hand shown

Designation	Insert Seat Size	H (inch)	B (inch)	L (inch)	F (inch)	E (inch)	A (inch)	H1 (inch)	H2 (inch)	Dmax (inch)	Screw	Wrench	Torque (in-lbs)
TTER/L 9.5-20-1.4SH	1	0.375	0.375	5.00	0.35	0.71	0.045	0.54	-	0.79	SR34-535	T15	17.7
TTER/L 12.7-24-1.4SH	1	0.500	0.500	5.00	0.48	0.77	0.045	0.62	-	0.94			
TTER/L 9.5-20-2SH	2	0.375	0.375	5.00	0.34	0.75	0.069	0.69	-	0.79			
TTER/L 12.7-24-2SH	2	0.500	0.500	5.00	0.47	0.75	0.069	0.75	-	0.94			

Designation	Insert Seat Size	H (mm)	B (mm)	L (mm)	F (mm)	E (mm)	A (mm)	H1 (mm)	H2 (mm)	Dmax (mm)	Screw	Wrench	Torque (in-lbs)
TTER/L 10-20-1.4SH	1	10	10	4.92	0.37	0.71	0.039	0.54	-	0.79	SR34-535	T15	17.7
TTER/L 12-24-1.4SH	1	12	12	4.92	0.45	0.77	0.039	0.62	-	0.94			
TTER/L 14-24-1.4SH	1	14	14	4.92	0.53	0.77	0.039	0.70	-	0.94			
TTER/L 16-32-1.4SH	1	16	16	4.92	0.61	0.94	0.039	0.78	-	1.26			
TTER/L 10-20-2SH	2	10	10	4.92	0.36	0.75	0.061	0.69	0.08	0.79			
TTER/L 12-24-2SH	2	12	12	4.92	0.44	0.75	0.061	0.75	0.08	0.94			
TTER/L 14-24-2SH	2	14	14	4.92	0.52	0.75	0.061	0.75	-	0.94			
TTER/L 16-32-2SH	2	16	16	4.92	0.60	0.94	0.061	0.83	-	1.26			

TTG (Screw-Clamp)

Triple Corner Insert for Shallow Grooving



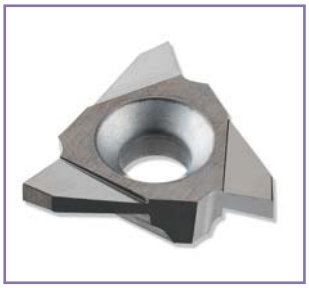
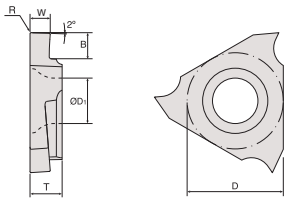


Fig. 1



Right hand shown

Designation	W±.0001 (inch)	B (inch)	R (inch)	D (inch)	T (inch)	θ °	ØD1 (inch)	Pitch	Grade		Remark
									CT3000	TT9030	
TTG 32 R/L 03007R05-C	0.012	0.028	0.002					-	○	○	
TTG 32 R/L 05012R05-C	0.020	0.047	0.002					-	○	○	
TTG 32 R/L 07520R10-C	0.030	0.079	0.004					-	○	○	
TTG 32 R/L 10020R10-C	0.039	0.079	0.004					-	○	○	
TTG 32 R/L 12520R10-C	0.049	0.079	0.004	0.375	0.125	-	0.177	-	○	○	Fig 1
TTG 32 R/L 15020R10-C	0.059	0.079	0.004					-	○	○	
TTG 32 R/L 17520R10-C	0.069	0.079	0.004					-	○	○	
TTG 32 R/L 20025R10-C	0.079	0.098	0.004					-	○	○	
TTG 32 R/L 25025R10-C	0.098	0.098	0.004					-	○	○	

TGTER/L (Screw-Clamp)

External Shallow Grooving Holders

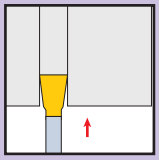
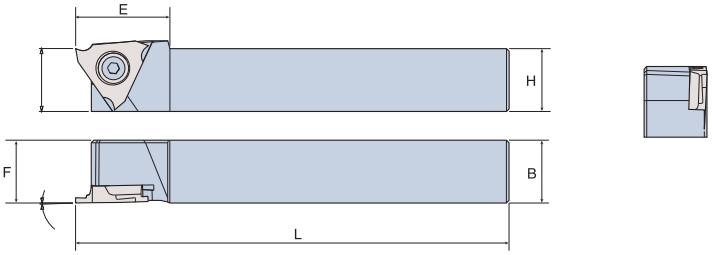


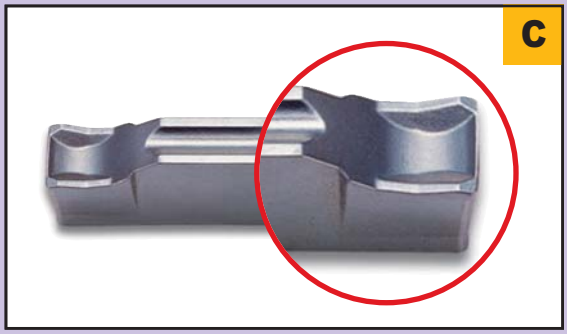
Fig. 1



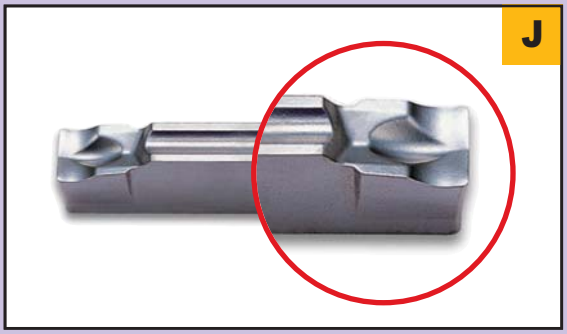
Metric Shanks — **Right hand shown**

Designation	H	B	L	E	F	H_1	A	Insert (Width; mm)	Screw	Wrench	Fig
TGTER/L 1010 K16-SH	10	10	125	18	10	2	-	TTG 32R/L	TS 40E113I/HG	T15	Fig1.
TGTER/L 1212 M16-SH	12	12	150		12	-	-				
TGTER/L 1616 M16-SH	16	16	150		16	-	-				

Selection of Chipbreakers

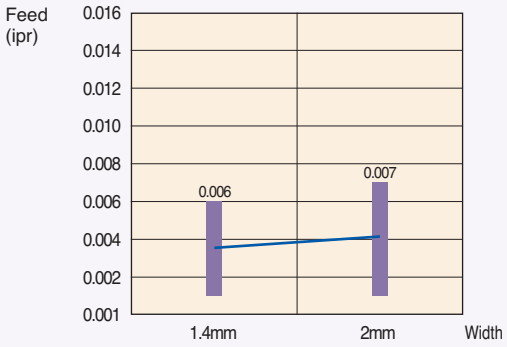


- For hard materials and tough applications.
- For general applications on steel, alloy steel and stainless steel.
- Medium-to-high feeds.

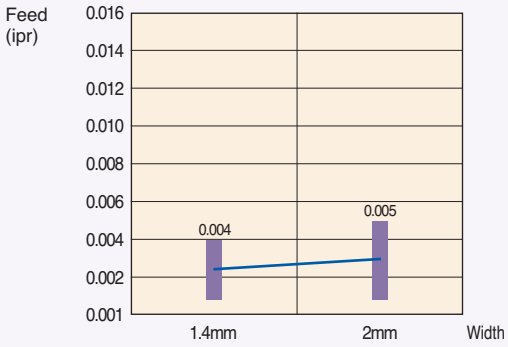


- For soft materials, parting of tubes, small diameters and thin-walled parts.
- Low forces and smaller burrs.
- Improved straightness.
- Low-to-medium feeds.

Recommended feed range as a function of insert width
Material; SAE4140 (HB240)
Recommendations are for neutral inserts - for R/L inserts reduce feeds by 20 - 40%



"C"



"J"

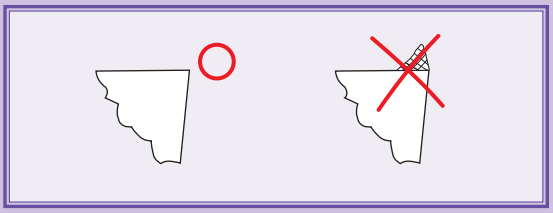
Workpiece Materials					
	Alloy Steel	Austenitic Stainless	High - Temp Alloys	Nonferrous Materials	Cast Iron
High ↑ Feed ↓ Low	C	C	C	C Brass	C
	J	J	J Titanium	J Aluminum	

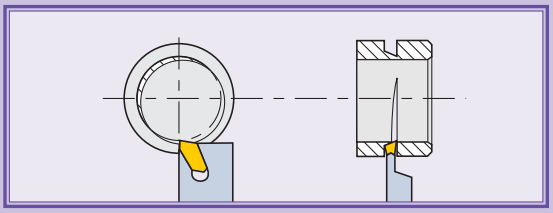
7. To Prevent or Reduce Built-up Edge

- Use appropriate carbide grade and geometry.
- Increase speed.
- Reduce feed.
- Increase coolant flow/concentration.

8. Parting on Eccentric Tubes

- Inserts with 4 degree lead angle are usually recommended for tubes. However, the combination of an eccentric bore and machine resiliency may increase feed-snap on breakthrough and damage the cutting edge. Changing to a 8 degree lead angle insert will moderate the breakthrough.



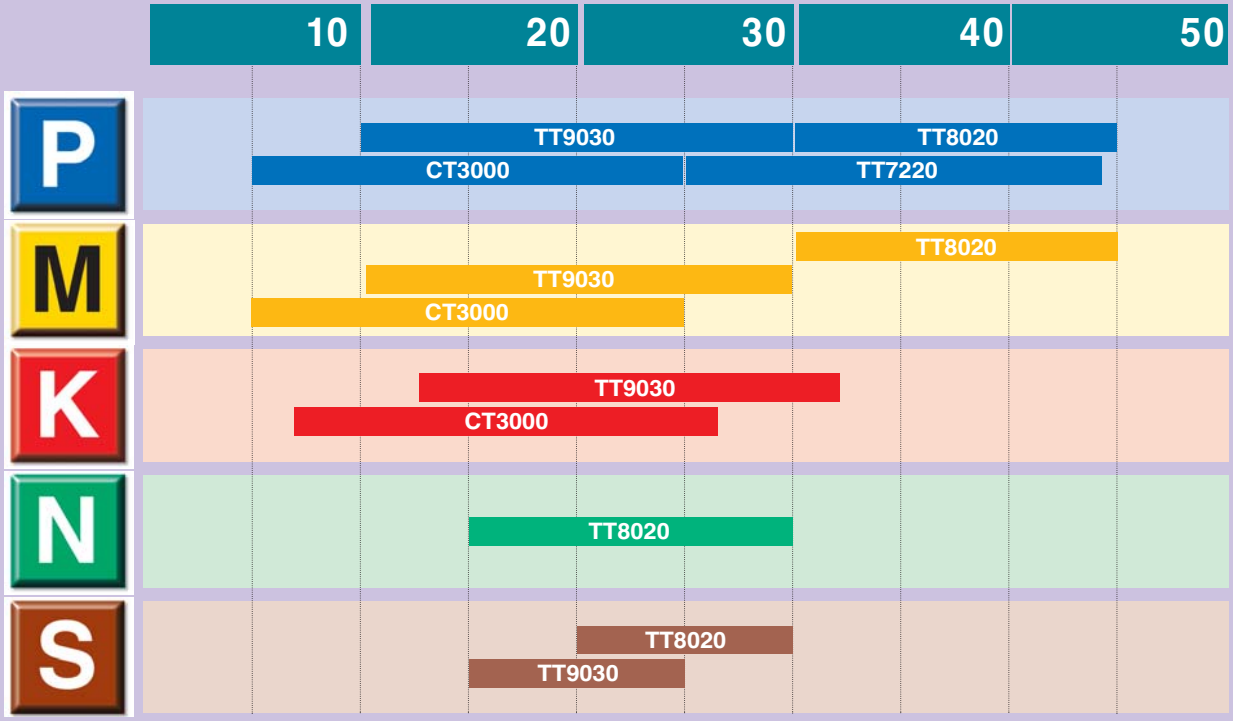


- Recommendations given are normal machining conditions. If excessive wear occurs, select an insert in a harder grade. If chopping or breakage occurs, select an insert in atougher grade.
- The high end of the cutting speed recommendations given here are for insert widths of .118 ich and over at low-to-medium feeds. For smaller insert widths or machining at high feeds, choose a lower cutting speed.
- Optimal grade selection depends also on workpiece material, diameter and rigidity of the system.

Recommended Conditions

T-Clamp Ultra Plus

Material		Hardness Brinell HB	Grade TT8020	Grade TT7220	Grade TT9030
			← Tougher	Harder →	
			Cutting Speed (sfm)		
Carbon Steel	0.2%C	150	360-560		
	0.45%C	190	330-490		
	0.83%C	250	280-460		
Alloy Steel		200	280-460		
		200-250	230-460		
		275-325	200-360		
		325-375	165-330		
		375-425	130-200		
Cast Steel Carbon Alloy		150	260-430		
		150-200	230-390		
		250-300	200-330		
Martensitic Stainless Steel Austenitic		175-225	330-490		
		275-325	230-380		
		375-425	200-330		
		135-175	200-430		



TT8020

Toughest PVD grade for severely interrupted cuts and stainless steel and exotic alloy machining.

TT7220

A PVD coated grade for machining in carbon steel and alloy steel.

TT9030/TT9020

A tough PVD coated grade with excellent wear resistance.
Very good performance in alloy steels, stainless steels and exotic alloys.

CT3000

A tough new reinforced cermet grade with excellent wear resistance.
Recommended for grooving, parting & turning alloy steels and stainless steels with good surface quality and long tool life.

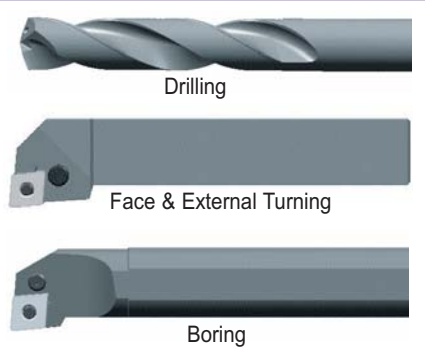
Features

T-Cap Multi-function system

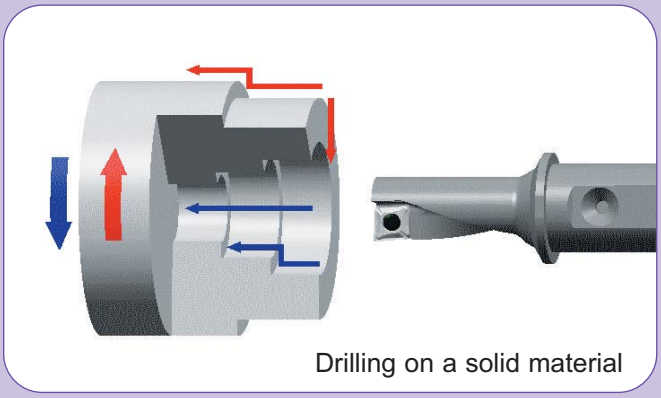
- Turning, boring and drilling with one tool
- Short set-up and cycle time
- Minimized tool positions and reduced tooling cost

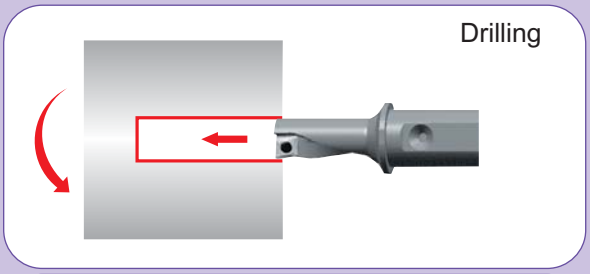
Application

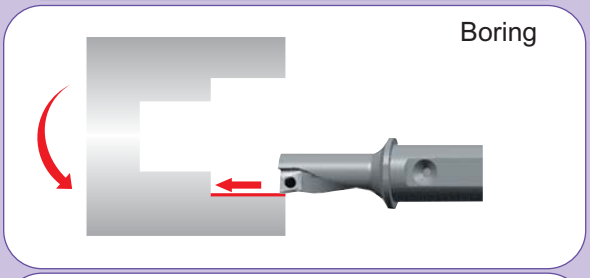
- Conventional

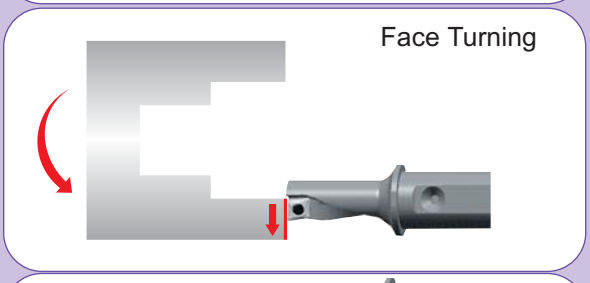


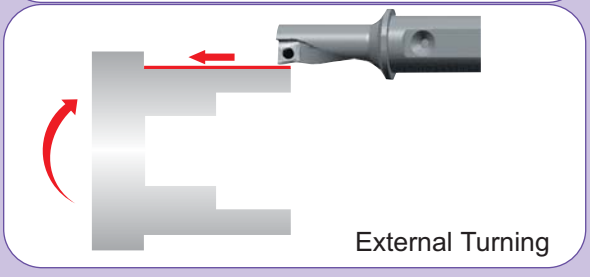
■ T-Cap











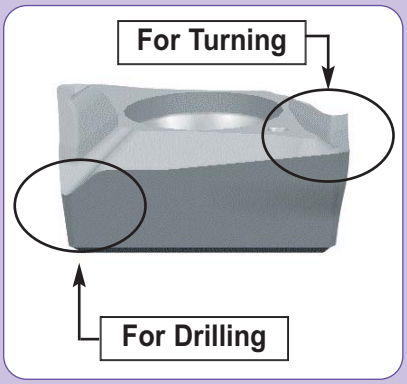
TAEGUline

Features

Multi-function System

Body

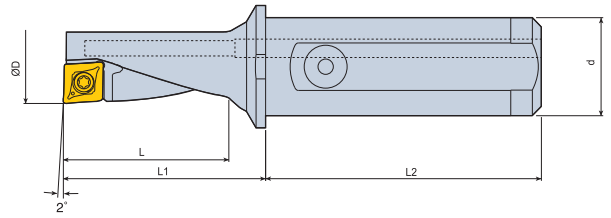
- Internal coolant supply
- Cylindrical shank with one flat clamping surface
- Two face contact for strong clamping
- Helical flute for smooth chip flow
- Large chip gullet for good chip evacuation
- Secure clamping feature



Inserts

- Two different unique geometries for drilling and turning
- High helix cutting edge to minimize cutting forces
- Excellent chip control at low feed and small d.o.c.
- Optimum chip formation in drilling operations

Holders



Metric Shanks

Designation	Stock		Dimension (mm)					Insert	Spare Parts	
	R	L	ØD	Ød	L	L1	L2		Screw	Wrench
TCAP 08R/L-2.25D	●	●	8mm	10mm	18	22	38	XCMT 0401□□	TS 18034I/HG-P	T 6-P
TCAP 10R/L-2.25D	●	●	10mm	12mm	22.5	27.5	42	XCMT 0502□□	TS 20038I/HG-P	T 6-P
TCAP 12R/L-2.25D	●	●	12mm	16mm	27	33	45	XCMT 0602□□	TS 22052I/HG-P	T 7-P
TCAP 14R/L-2.25D	●	●	14mm	16mm	31.5	38.5	45	XCMT 0703□□	TS 25064I/HG-P	T 8-P
TCAP 16R/L-2.25D	●	●	16mm	20mm	36	44	50	XCMT 0803□□	TS 30100I/HG-P	TD 9-P

Inch Shanks

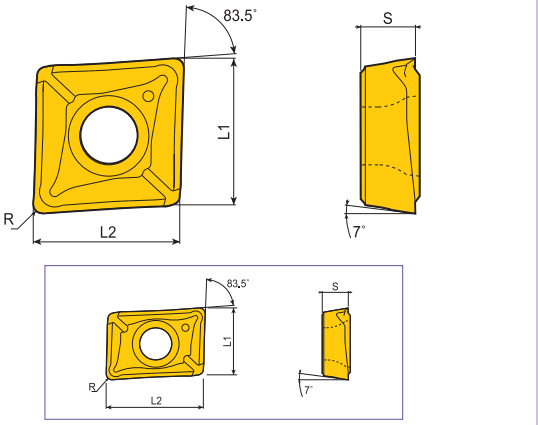
Designation	Stock		Dimension (inch)					Insert	Spare Parts	
	R	L	ØD	Ød	L	L1	L2		Screw	Wrench
TCAP 08R/L-2.25D-IN	●	●	.315	.375	.708	.866	1.50	XCMT 0401□□	TS 18034I/HG-P	T 6-P
TCAP 08R/L-3.0DN12.7*			.315	.375	.944	1.150	2.00	XCMT 0401□□	TS 18034I/HG-P	T 6-P
TCAP 10R/L-2.25D-IN	●	●	.394	.500	.886	1.083	1.65	XCMT 0502□□	TS 20038I/HG-P	T 6-P
TCAP 10R/L-3.0DN12.7*			.394	.500	1.181	1.335	2.01	XCMT 0502□□	TS 20038I/HG-P	T 6-P
TCAP 12R/L-2.25D-IN	●	●	.472	.625	1.063	1.300	1.77	XCMT 0602□□	TS 22052I/HG-P	T 7-P
TCAP 12R/L-3.0DN15.88*			.472	.625	1.417	1.583	2.16	XCMT 0602□□	TS 22052I/HG-P	T 7-P
TCAP 14R/L-2.25D-IN	●	●	.551	.625	1.240	1.516	1.77	XCMT 0703□□	TS 25064I/HG-P	T 8-P
TCAP 14R/L-3.0DN15.88*			.551	.625	1.654	1.874	2.06	XCMT 0703□□	TS 25064I/HG-P	T 8-P
TCAP 16R/L-2.25D-IN	●	●	.630	.750	1.417	1.732	1.97	XCMT 0803□□	TS 30100I/HG-P	TD 9-P
TCAP 12R/L-3.0DN15.88*			.630	.750	1.890	2.134	2.20	XCMT 0803□□	TS 30100I/HG-P	TD 9-P

*Heavy metal shank.

T-CAP INSERTS

Inserts-General Purpose

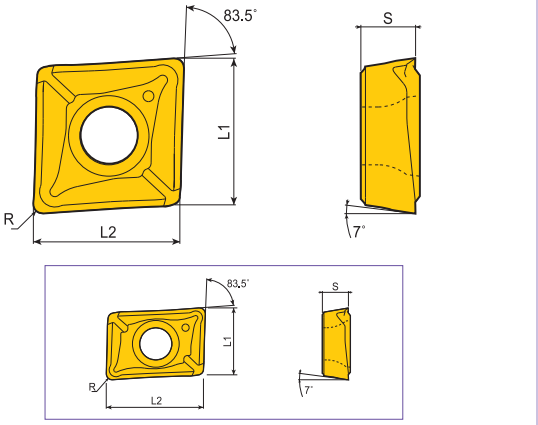
Right Hand Shown (XCMT 0401)



Designation	Stock		Dimension (inch)			
	TT 9030	TT 8020	L1	L2	S	R
XCMT 040104R TC	●	●	.173	.252	.067	.016
XCMT 040104L TC	●	●	.173	.252	.067	.016
XCMT 050204 TC	●	●	.220	.220	.083	.016
XCMT 060204 TC	●	●	.252	.252	.094	.016
XCMT 070304 TC	●	●	.295	.295	.125	.016
XCMT 080304 TC	●	●	.331	.331	.125	.016

TT9030 - General purpose applications TT8020 - Stainless steel applications.

Inserts-Aluminum/Non-Ferrous

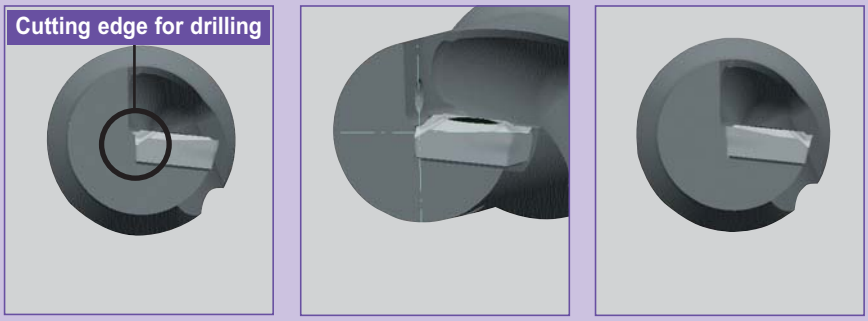


Designation	Stock		Dimension (inch)		
	K10	L1	L2	S	R
XCGT 040104R TA	●	.173	.252	.067	.016
XCGT 040104L TC	●	.173	.252	.067	.016
XCGT 050204 TC	●	.220	.220	.083	.016
XCGT 060204 TC	●	.252	.252	.094	.016
XCGT 070304 TC	●	.295	.295	.125	.016
XCGT 080304 TC	●	.331	.331	.125	.016

Set-Up

Insert positioning

•Cutting edge for drilling should be positioned in the center of tool body.



Correct | Correct | Wrong

Coolant pressure

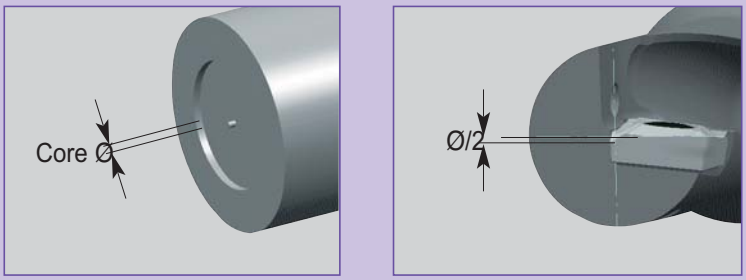
• Must be above 30 psi in 2.25xD drills, regardless of drilling diameter. (Optimal pressure is above 70 psi)

Optimization of chip shape

• Material with low carbon content (Low Carbon Steel/Low Carbon Alloy Steel)
High speed machining is recommended to make the chips thinner as many problems are caused by thick chips.

• Material with medium to high carbon content (Carbon Steel/Alloy Steel)
If too tight (thick chip)? Increase speed if the speed is slow or reduce feed.
If too loose (long chip)? Reduce speed if the speed is high or increase feed.

Set-Up



Please check formation of core and its size after drilling .125" to .250" depth and diameter.
Core should be within .006"-.018".

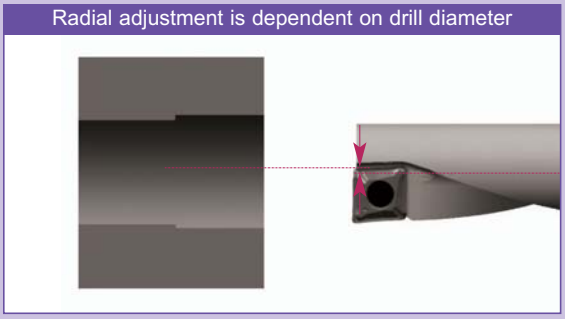
If the TCAP is being held in a fixed turret location, reverse the tool by 180º and test again to see if core size is within acceptable tolerances.

If a core does not appear,
•It can cause breakage of insert and vibration when drilling or turning.

If the size of core is over the recommendation,
•It will cause overload and vibration.

Radial Adjustment (Off-center drilling)

Radial adjustment is dependent on drill diameter



(inch)

Holder	Drill Dia.	Dmin	Dmax
TCAP 08 -	0.315	0.309	0.329
TCAP 10 -	0.394	0.387	0.417
TCAP 12 -	0.472	0.465	0.496
TCAP 14 -	0.551	0.543	0.575
TCAP 16 -	0.630	0.620	0.650

Recommended Cutting Conditions

Cutting speed (Vc)

Workpiece Materials	Hardness (BHN)	Cutting speed: Vc (sfm)	
		In Drilling	In Turning & Boring
Low Carbon Steel (-0.25% C)	- 150	425 - 790	490 - 895
Carbon Steel (0.25%< C)	150 - 250	295 - 525	330 - 590
Low Alloy Steel	- 180	395 - 690	460 - 755
Medium Alloy Steel	200 - 250	230 - 460	260 - 525
High Alloy Steel	250 - 350	165 - 330	200 - 395
Martensitic Stainless Steel	200	360 - 590	425 - 655
Austenitic Stainless Steel	200	295 - 525	330 - 590
Gray Cast Iron	180 - 220	360 - 590	395 - 655
Ductile Cast Iron	200 - 240	295 - 525	330 - 590
Aluminum Alloy	60 - 130	330 - 1640	490 - 1970
Copper Alloy	90 - 100	330 - 1310	330 - 1640

Feed (f)

Designation	Application	Cutting Conditions	
		ap (inch)	f (ipr)
XCMT 040104	External Turning	.023" (.008" - .070")	.002" (.001" - .006")
	Drilling	-	.002" (.001" - .004")
XCMT 050204	External Turning	.031" (.008" - .087")	.003" (.001" - .007")
	Drilling	-	.002" (.001" - .005")
XCMT 060204	External Turning	.039" (.012" - .098")	.003" (.001" - .008")
	Drilling	-	.003" (.001" - .005")
XCMT 070304	External Turning	.047" (.016" - .110")	.005" (.002" - .009")
	Drilling	-	.003" (.001" - .006")
XCMT 080304	External Turning	.059" (.016" - .126")	.005" (.002" - .010")
	Drilling	-	.003" (.001" - .006")