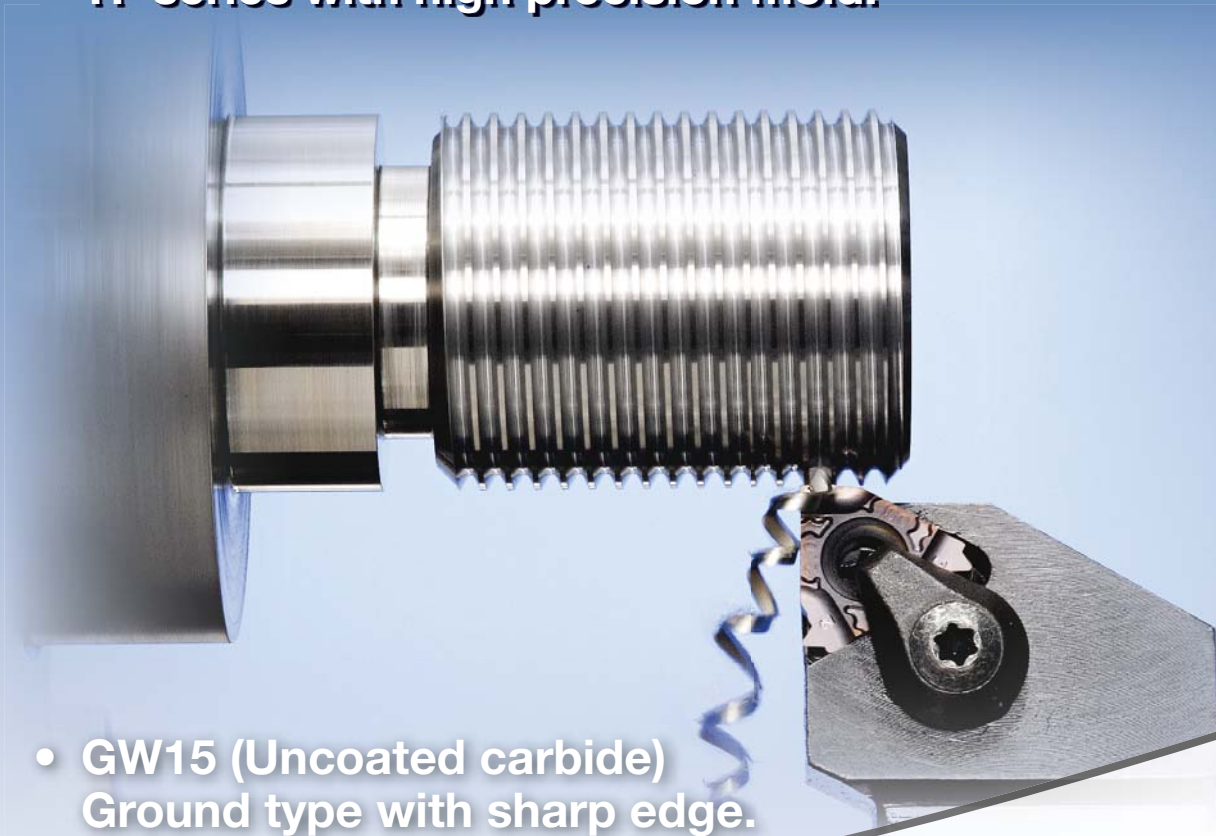




PR1115 THREADING

High quality, long tool life and cost efficiency

- **PR1115 (PVD coated carbide)**
TF series with high precision mold.



- **GW15 (Uncoated carbide)**
Ground type with sharp edge.

Hohe Qualität, Standzeit und Kosteneffizienz

- PR1115 (PVD Hartmetall)
Höchstpräzise Pressung bei der TF Serie.
- GW15 (unbesch. Hartmetall).
Geschliffene Sorte mit scharfer Kante.

Outil de haute qualité, de longue tenue et d'excellent rapport coût/efficacité

- PR1115 (carbure revêtu PVD) série TF frittée de haute précision.
- GW15 (Carbure non revêtu) profil rectifié a arête vive.

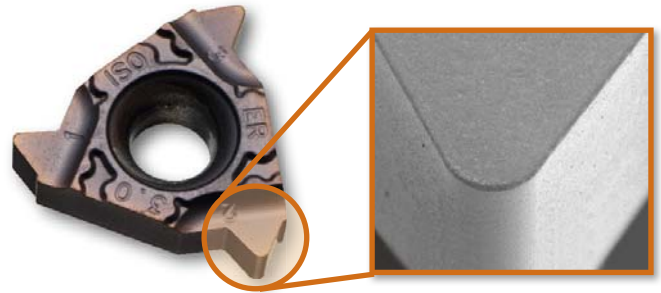
Alta qualità, lunga durata dell'inserto e ottimizzazione dei costi

- PR1115 (Metallo duro rivestito PVD)
La serie TF è prodotta da uno stampo altamente preciso.
- GW15 (Metallo duro non rivestito) Il tipo rettificato ha un tagliente affilato.

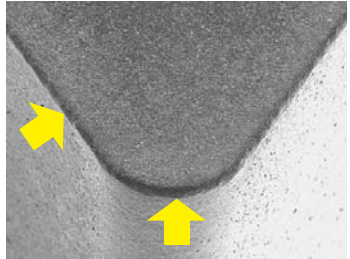
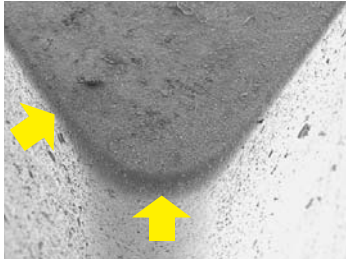
TF Features
TF Eigenschaften
TF proprietà
TF proprietà

High quality cutting edge by utilizing the high precision mold technology.
 Qualitativ hochwertige Schneide durch die Nutzung hochpräziser Pressverfahren.

La technologie utilisant un moule de haute précision garantit une arête vive de très haute qualité.
 Tagliente di alta qualità ottenuto dall'uso di una precisa tecnologia di stampaggio.

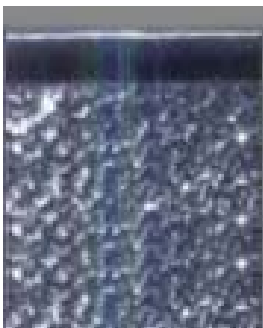


Comparison of cutting edge sharpness
Vergleich Schneidkantenschärfe
Comparatif des angles d'affûtage des arêtes vives
Confronto dell'affilatura del tagliente

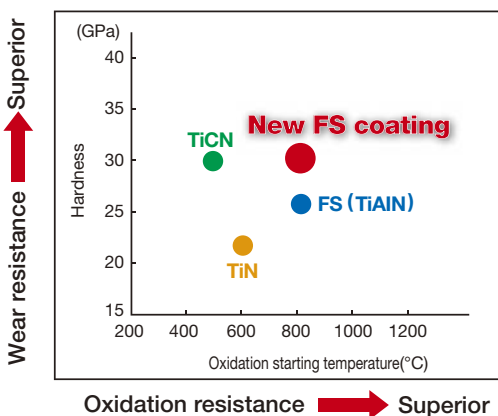
<p>Consistently micro honed cutting edge ensures sharpness and high quality thread shape.</p> <p>Die gleichmäßig mikro honed Schneidkante sorgt für Schärfe und hochqualitative Gewindeformen.</p> <p>Le micro honing des arêtes vives assure un excellent affûtage et un filetage de haute qualité.</p> <p>Il tagliente micro onato assicura costantemente l'alta qualità del filetto ed un taglio morbido.</p>  <p style="text-align: center;">16ER150ISO-TF</p>	<p>Unstable honing. Unbeständiges Honing. Honing instabile. Onatura instabile.</p>  <p style="text-align: center;">Competitor Concurrent Wettbewerb Concorrente</p>
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New PVD Coated Carbide PR1115
Neues PVD-beschichtetes Hartmetall PR1115
Nouveau PR1115 en carbure revêtu PVD
Nuovo metallo duro PVD – PR1115

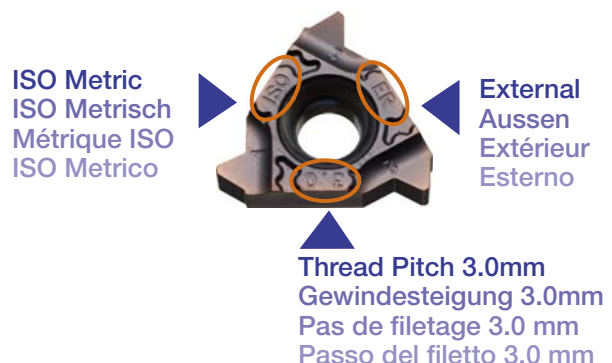
Coating layer of PR1115 | Beschichtungsebene der PR1115 | Couche de revêtement du PR1115 | Strato del rivestimento PR1115

	<p>Sectional structure Querschnittsansicht Structure en coupe Struttura sezionata</p>	<ul style="list-style-type: none"> • New TiAlN coating for high speed machining and excellent wear resistance. • Micro grain carbide substrate. 	<ul style="list-style-type: none"> • Neue TiAlN-Beschichtung, für die Bearbeitung mit hohen Drehzahlen. Ausgezeichnete Verschleißresistenz. • Feinstkorn Hartmetall Substrat. 	<ul style="list-style-type: none"> • Nouveau revêtement TiAlN assurant un usinage à grande vitesse et une excellente résistance à l'usure. • Substrat carbure micro grain. 	<ul style="list-style-type: none"> • Nuovo rivestimento TiAlN per lavorazioni ad alta velocità ed eccellente resistenza all'usura. • Substrato di metallo duro in micrograna.
<p>Features Eigenschaften Proprietà Proprietà</p>	<ul style="list-style-type: none"> • High hardness (30GPa) • High adhesiveness • Precised and refined structure • Superior oxidation resistance (800°C) 	<ul style="list-style-type: none"> • Hohe Härte (30GPa) • Hohe Haftfähigkeit • Präzise und feine Oberfläche • Hervorragende Oxidationsbeständigkeit (800°C) 	<ul style="list-style-type: none"> • Très haute dureté (30GPa) • Force d'adhésion élevée • Structure fine et précise • Résistance supérieure à l'oxydation (800°C) 	<ul style="list-style-type: none"> • Alta durezza (30GPa) • Alta adesione • Struttura precisa e ben rifinita • Resistenza superiore all'ossidazione (800°C) 	

Relationship between hardness and oxidation resistance
Verhältnis zwischen Härte und Oxidationsbeständigkeit
Relation entre dureté et résistance à l'oxydation.
Relazione tra durezza e resistenza all'ossidazione



Clear markings provide user friendly insert identification
Eindeutige Markierung für einfache Schneidplattenerkennung
Un marquage clair permet une identification facile par l'utilisateur
La marcatura chiara garantisce un facile riconoscimento dell'inserto



■ Available for every threading standard
 Erhältlich für jeden Gewindestandard
 Disponible pour toutes normes de filetage
 Disponibile per ogni filetto standard

Metric | Metrisch | Métrique | Metrico (ISO)

Whitworth (W)

Unifide | UN Gewinde | Unifié | Unificato

50° type (Partial Profile)
 50° type (Teilprofil)
 Type 50° (Profil partiel)
 Tipo 50° (Profilo parziale)

Parallel Pipe | Rohrgewinde
 Pas du gaz pour filetage cylindrique
 Per Tubazioni Cilindrica <G(PF)>

60° type (Partial Profile)
 60° type (Teilprofil)
 Type 60° (Profil partiel)
 Tipo 60° (Profilo parziale)

Tapered Pipe Thread | Teilprofil
 Pas du gaz pour filetage conique
 Per Tubazioni Conica
 <BSPT(PT)(R)(Rc)>



■ Case Studies

15CrMo5	
<ul style="list-style-type: none"> ·Machine Part ·Vc = 65m/min ·with coolant 	
16ER150ISO-TF (PR1115)	1800 pcs/edge
Competitor A	600 pcs/edge
<p>New TF threading series greatly extended tool life compared to Competitor A.</p> <p style="text-align: right;">(Evaluation by the user)</p>	

C25	
<ul style="list-style-type: none"> ·Nut ·Vc= 262m/min ·with coolant 	
16IR150ISO-TF (PR1115)	500 pcs/edge
Competitor B	300 pcs/edge
<p>New TF threading series extended tool life to 1.7 times compared to Competitor B.</p> <p style="text-align: right;">(Evaluation by the user)</p>	

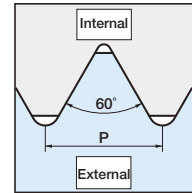
15CrMo5	
<ul style="list-style-type: none"> ·Vc = 150m/min ·9 pass ·with coolant ·M42xP1.5 	
16ER150ISO-TF (PR1115)	300 pcs/edge
Competitor C	300 pcs/edge(Instable)
<p>For Comp. C, the number of workpieces machined per insert varied greatly. In contrast, TF series showed stability and its cutting edge was in good condition after machining the equal amount of workpieces. (still capable of machining)</p> <p style="text-align: right;">(Evaluation by the user)</p>	

C35	
<ul style="list-style-type: none"> ·Vc = 180m/min ·5 pass ·L = 25mm ·with coolant 	
16ER150ISO-TF (PR1115)	270 pcs/edge
Competitor D	180 pcs/edge
<p>The nose wear of Comp.D was 0.1mm after processing 180 pcs/edge. In the case of TF series, it was 0.03mm even after processing 270pcs./edge. (1/3 wear compared with Comp. D)</p> <p style="text-align: right;">(Evaluation by the user)</p>	

Threading Insert

Metric(M)

External



60° Full Profile (mm)

Description	Previous Description	A	T	ød
16E [°]	TNN32E [°]	9.525	3.68	4.0
22E [°]	TNN43E [°]	12.7	4.9	4.9

	Classification of usage
P Carbon Steel-Alloy Steel	●
M Stainless Steel	●
K Gray Cast Iron	●
N Non-ferrous Metal	●

Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
			mm	TPI/ inch	r _ε	S		θ	PR1115		GW15	
							R		L	R	L	
	16E [°] 100ISO-TF	M	1.0	-	0.12	0.80	60°	●				KTN [°] ---16 KTNS [°] ---16
	125ISO-TF		1.25		0.15	0.90		●				
	150ISO-TF		1.5		0.19	1.00		●				
	175ISO-TF		1.75		0.22	1.60		●				
	200ISO-TF		2.0		0.25	1.50		●				
	250ISO-TF		2.5		0.33	1.60		●				
	300ISO-TF		3.0		0.41	1.60		●				
	16E [°] 050ISO	M	0.5	-	0.06	0.40	60°	●	●	●		KTN [°] ---16 KTNS [°] ---16
	075ISO		0.75		0.09	0.53		●	●	●		
	100ISO		1.0		0.12	0.80			●	●		
	125ISO		1.25		0.15	0.90			●	●		
	150ISO		1.5		0.19	1.00			●	●		
	200ISO		2.0		0.25	1.50			●	●		
	250ISO		2.5		0.32	1.60				●		
	22E [°] 350ISO	M	3.5	-	0.48	2.10	60°	●				KTN [°] ---22
	400ISO		4.0		0.55	2.80		●				
	450ISO		4.5		0.62	2.80		●				
	500ISO		5.0		0.70	2.80		●				
								●				

60°type

External

60° Partial Profile (mm)

Description	Previous Description	A	T	ød
16E [°]	TNN32E [°]	9.525	3.68	4.0
22E [°]	TNN43E [°]	12.70	4.9	4.9

	Classification of usage
P Carbon Steel-Alloy Steel	●
M Stainless Steel	●
K Gray Cast Iron	●
N Non-ferrous Metal	●

Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
			mm	TPI/ inch	r _ε	S		θ	PR1115		GW15	
							R		L	R	L	
	16E [°] A60-TF	M	0.5-1.5	-	0.06	1.00	60°	●				KTN [°] ---16 KTNS [°] ---16
	G60-TF	M	1.75~3	-	0.22	1.60		●				
	AG60-TF	M	0.5~3	-	0.06	1.60		●				
	16E [°] A60	M	0.5-1.5	-	0.06	1.00	60°			●		KTN [°] ---16 KTNS [°] ---16
	G60	M	1.75~3	-	0.22	1.70				●		
	AG60	M	0.5~3	-	0.06	1.70				●		
	22E [°] N60	M	3.5~5	-	0.48	2.5		60°	●		●	

PR1115/GW15(Threading) are sold in 5 piece boxes.

●:Std. Item

●Metric(M)

Internal

60° Full Profile (mm)

Description	Previous Description	A	T	ød	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide	Classification of usage
111[°]	TNN221[°]	6.35	3.18	3.0	P	Carbon Steel-Alloy Steel	●						●:1st Choice ○:2nd Choice
161[°]	TNN321[°]	9.525	3.68	4.0	M	Stainless Steel	●						
221[°]	TNN431[°]	12.70	4.9	4.85	K	Gray Cast Iron				●			
					N	Non-ferrous Metal					●		

Insert		Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide	Applicable Toolholder
Right-hand Shown				mm	TPI/inch	rε	S	θ	PR1115		GW15	
									R	L	R	
Full Profile		111[°] 100ISO-TF	M	1.0		0.07	0.8	60°	●			SIN [°] ...-11E SIN [°] ...-11
		125ISO-TF		1.25		0.08	1.1		●			
		150ISO-TF		1.5		0.11	1.1		●			
		175ISO-TF		1.75		0.12	1.1		●			
		111[°] 050ISO	M	0.5		0.03	0.55	60°	●		●	
		075ISO		0.75		0.05	0.68		●		●	
		100ISO		1.0		0.07	0.8			●	●	
		125ISO		1.25		0.08	1.1			●	●	
		150ISO		1.5		0.11	1.1			●	●	
		161[°] 100ISO-TF	M	1.0		0.07	0.8	60°	●			SIN [°] ...-16 CIN [°] ...-16
		125ISO-TF		1.25		0.08	1.1		●			
		150ISO-TF		1.5		0.11	1.1		●			
		175ISO-TF		1.75	-	0.12	1.1		●			
		200ISO-TF		2.0		0.14	1.5		●			
		250ISO-TF		2.5		0.17	1.5		●			
		300ISO-TF		3.0		0.19	1.6		●			
		161[°] 100ISO	M	1.0		0.07	0.8	60°		●	●	
		125ISO		1.25		0.08	1.1			●	●	
		150ISO		1.5		0.11	1.1			●	●	
		200ISO		2.0		0.14	1.5			●	●	
250ISO		2.5			0.16	1.5				●		
300ISO		3.0			0.19	1.6				●		
	221[°] 350ISO	M	3.5		0.23	2.1	60°	●			SIN [°] ...-22 CIN [°] ...-22	
	400ISO		4.0		0.26	2.8		●				
	450ISO		4.5		0.30	2.8		●				
	500ISO		5.0		0.34	2.8		●				

●60°type(Metric)

Internal

60° Partial Profile (mm)

Description	Previous Description	A	T	ød	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide	Classification of usage
061[°]	TNN061[°]	3.97	1.91	2.3	P	Carbon Steel-Alloy Steel	●						●:1st Choice ○:2nd Choice
081[°]	TNN081[°]	4.76	2.38	2.3	M	Stainless Steel	●						
111[°]	TNN221[°]	6.35	3.18	3.0	K	Gray Cast Iron				●			
161[°]	TNN321[°]	9.525	3.68	4.0	N	Non-ferrous Metal					●		
221[°]	TNN431[°]	12.70	4.9	4.85									

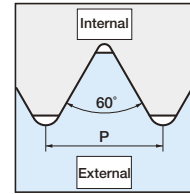
Insert		Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide	Applicable Toolholder
Right-hand Shown				mm	TPI/inch	rε	S	θ	PR1115		GW15	
									R	L	R	
Partial Profile		061[°] 60005	M	0.75-1.25	-	0.05	0.60	60°	●			SIN [°] ...-06E
		081[°] 60007	M	1.0-1.75	-	0.07	0.80	60°	●			SIN [°] ...-08E
		111[°] A60	M	0.5-1.5	-	0.02	1.00	60°	●		●	SIN [°] ...-11E SIN [°] ...-11
		161[°] A60	M	0.5-1.5	-	0.02	1.00	60°	●		●	SIN [°] ...-16 CIN [°] ...-16
		G60	M	1.75~3	-	0.11	1.70		●		●	
		AG60	M	0.5~3	-	0.02	1.70		●		●	
		221[°] N60	M	3.5~5	-	0.22	2.5	60°	●		●	SIN [°] ...-22 CIN [°] ...-22

PR1115/GW15(Threading) are sold in 5 piece boxes.

●:Std. Item

Threading Insert

Unifide(UN)



External

60° Full Profile (mm)

Description	Previous Description	A	T	ød
16E%	TNN32E%	9.525	3.68	4.0
22E%	TNN43E%	12.70	4.9	4.9

	Classification of usage
P Carbon Steel-Alloy Steel	●
M Stainless Steel	●
K Gray Cast Iron	●
N Non-ferrous Metal	●

Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
			mm	TPI/inch	rε	S	θ	PR1115		GW15		
								R	L	R	L	
	16E% 24UN-TF	UN	-	24	0.12	0.80	60°	●				KTN% ---16 KTNS% ---16
	20UN-TF			20	0.15	1.00		●				
	18UN-TF			18	0.18	1.00		●				
	16UN-TF			16	0.20	1.10		●				
	14UN-TF			14	0.23	1.50		●				
	13UN-TF			13	0.25	1.50		●				
	12UN-TF			12	0.27	1.50		●				
	10UN-TF			10	0.34	1.50		●				
	08UN-TF			8	0.43	1.75		●				
	22E% 08UN	UN	-	8	0.43	2.1	60°	●				KTN% ---22

60° type(Unifide)

External

60° Partial Profile (mm)

Description	Previous Description	A	T	ød
16E%	TNN32E%	9.525	3.68	4.0
22E%	TNN43E%	12.70	4.9	4.9

	Classification of usage
P Carbon Steel-Alloy Steel	●
M Stainless Steel	●
K Gray Cast Iron	●
N Non-ferrous Metal	●

Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
			mm	TPI/inch	rε	S	θ	PR1115		GW15		
								R	L	R	L	
	16E% A60-TF	UN	-	48-16	0.06	1.00	60°	●				KTN% ---16 KTNS% ---16
	G60-TF			14-8	0.22	1.60		●				
	AG60-TF			48-8	0.06	1.60		●				
	16E% A60	UN	-	48-16	0.06	1.00	60°			●		KTN% ---16 KTNS% ---16
	G60			14-8	0.22	1.70				●		
	AG60			48-8	0.06	1.70				●		
	22E% N60	UN	-	7-5	0.48	2.5	60°	●		●		KTN% ---22

PR1115/GW15(Threading) are sold in 5 piece boxes.

●:Std. Item


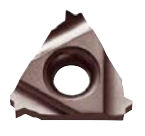
●Unifide(UN)

Internal

60° Full Profile (mm)

Description	Previous Description	A	T	ød
16I [℥]	TNN32I [℥]	9.525	3.68	4.0
22I [℥]	TNN43I [℥]	12.70	4.9	4.85

				Classification of usage
P	Carbon Steel-Alloy Steel	●		●:1st Choice ○:2nd Choice
M	Stainless Steel	●		
K	Gray Cast Iron			
N	Non-ferrous Metal			

Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
			mm	TPI/ inch	rε	S	θ	PR1115		GW15		
								R	L	R	L	
	16I [℥] 24UN-TF	UN	-	24	0.06	0.8	60°	●				SIN [℥] ...-16 CIN [℥] ...-16
	20UN-TF			20	0.08	1.0		●				
	18UN-TF			18	0.09	1.0		●				
	16UN-TF			16	0.10	1.1		●				
	14UN-TF			14	0.12	1.5		●				
	13UN-TF			13	0.13	1.5		●				
	12UN-TF			12	0.14	1.5		●				
	10UN-TF			10	0.17	1.5		●				
	08UN-TF			8	0.21	1.8		●				
	22I [℥] 08UN	UN	-	8.0	0.20	1.8	60°	●				SIN [℥] ...-22 CIN [℥] ...-22

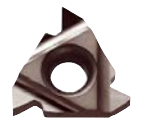
●60°type(Unifide)

Internal

60° Partial Profile

Description	Previous Description	A	T	ød
06I [℥]	TNN06I [℥]	3.97	1.91	2.3
08I [℥]	TNN08I [℥]	4.76	2.38	2.3
11I [℥]	TNN22I [℥]	6.35	3.18	3.0
16I [℥]	TNN32I [℥]	9.525	3.68	4.0
22I [℥]	TNN43I [℥]	12.70	4.9	4.85

				Classification of usage
P	Carbon Steel-Alloy Steel	●		●:1st Choice ○:2nd Choice
M	Stainless Steel	●		
K	Gray Cast Iron		●	
N	Non-ferrous Metal		●	

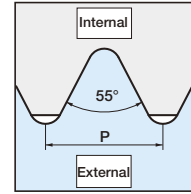
Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
			mm	TPI/ inch	rε	S	θ	PR1115		GW15		
								R	L	R	L	
	06I [℥] 60005	UN	-	28-20	0.05	0.60	60°	●				SIN [℥] ...-06E
	08I [℥] 60007	UN	-	20-16	0.07	0.80	60°	●				SIN [℥] ...-08E
	11I [℥] A60	UN	-	48-16	0.02	1.00	60°	●		●		SIN [℥] ...-11E SIN [℥] ...-11
	16I [℥] A60	UN	-	48-16	0.02	1.00	60°	●		●		SIN [℥] ...-16 CIN [℥] ...-16
	G60							●		●		
	AG60							●		●		
	22I [℥] N60	UN	-	7-5	0.22	2.5	60°	●		●		SIN [℥] ...-22 CIN [℥] ...-22

PR1115/GW15(Threading) are sold in 5 piece boxes.

●:Std. Item

Threading Insert

Parallel Pipe <G(PF)> Whitworth(W)



External

Full Profile 55° (mm)					P	Material	Classification of usage			
Description	Previous Description	A	T	ød						
16E ^{3/4}	TNN32E ^{3/4}	9.525	3.68	4.0		Carbon Steel-Alloy Steel	●			
						Stainless Steel	●			
						Gray Cast Iron	○			
						Non-ferrous Metal	○			
Insert Right-hand Shown		Description	Applicable Thread	Pitch	Dimension(mm)	Angle(°)	PVD coated carbide	Carbide	Applicable Toolholder	
				mm	TPI/inch	rε	S	θ		
Full Profile			G (PF)	16E ^{3/4} 19W-TF	19	0.16	1.0	55°	●	KTN ^{3/4} ---16 KTNS ^{3/4} ---16
				14W-TF	14	0.23	1.5		●	
				11W-TF	11	0.30	1.5		●	
				16E ^{3/4} 16W-TF	16	0.19	1.1		●	
			W	14W-TF	14	0.23	1.5	55°	●	KTN ^{3/4} ---16 KTNS ^{3/4} ---16
				11W-TF	11	0.30	1.5		●	

55° type <G(PF),W>

External

Partial Profile 55° (mm)					P	Material	Classification of usage						
Description	Previous Description	A	T	ød									
16E ^{3/4}	TNN32E ^{3/4}	9.525	3.68	4.0		Carbon Steel-Alloy Steel	●						
22E ^{3/4}	TNN43E ^{3/4}	12.70	4.9	4.9		Stainless Steel	●						
						Gray Cast Iron	○						
						Non-ferrous Metal	○						
Insert Right-hand Shown		Description	Applicable Thread	Pitch	Dimension(mm)	Angle(°)	PVD coated carbide	Carbide	Applicable Toolholder				
				mm	TPI/inch	rε	S	θ					
Partial Profile			G (PF)	16E ^{3/4} A55-TF	28,19	0.06	1.00	55°	●	KTN ^{3/4} ---16 KTNS ^{3/4} ---16			
				G55-TF	14,11	0.22	1.60		●				
				AG55-TF	28~11	0.06	1.60		●				
			G (PF)	16E ^{3/4} A55	28,19	0.06	1.00	55°		●			
				G55	14,11	0.22	1.70			●			
				AG55	28~11	0.06	1.70			●			
			G (PF)	22E ^{3/4} N55	-	-	0.47	2.5	55°	●	KTN ^{3/4} ---22		
						W	16E ^{3/4} A55-TF	48~16	0.06	1.00	55°	●	KTN ^{3/4} ---16 KTNS ^{3/4} ---16
							G55-TF	14~8	0.22	1.60		●	
	AG55-TF	48~8	0.06				1.60	●					
			W	16E ^{3/4} A55	48~16	0.06	1.00	55°		●			
				G55	14~8	0.22	1.70			●			
				AG55	48~8	0.06	1.70			●			
			W	22E ^{3/4} N55	-	7~5	0.47	2.5	55°	●	KTN ^{3/4} ---22		

PR1115/GW15(Threading) are sold in 5 piece boxes.

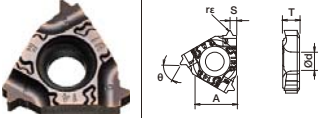
●:Std. Item

●Parallel Pipe <G(PF)> Whitworth(W)

Internal

Full Profile 55° (mm)

Description	Previous Description	A	T	ød
16I ^{5/8}	TNN32I ^{5/8}	9.525	3.68	4.0

Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
			mm	TPI/ inch	rε	S		PR1115		GW15		
							R	L	R	L		
	16I ^{5/8} 19W-TF	G (PF)	-	19	0.16	1.0	55°	●				SIN ^{5/8} ...-16 CIN ^{5/8} ...-16
	14W-TF			14	0.23	1.5		●				
	11W-TF			11	0.30	1.5		●				
	16I ^{5/8} 16W-TF	W	-	16	0.19	1.1	55°	●				SIN ^{5/8} ...-16 CIN ^{5/8} ...-16
	14W-TF			14	0.23	1.5		●				
	11W-TF			11	0.30	1.5		●				

P	Carbon Steel-Alloy Steel	●		Classification of usage ●:1st Choice ○:2nd Choice
M	Stainless Steel	●		
K	Gray Cast Iron			
N	Non-ferrous Metal			

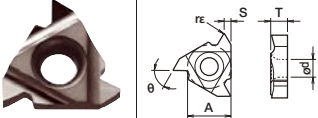
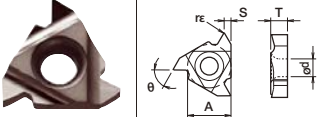
-No wiper effect is expected when threading the internal whitworth screw using 16IR^{5/8}W-TF insert.

●55°type <G(PF),W>

Internal

Partial Profile 55° (mm)

Description	Previous Description	A	T	ød
06I ^{5/8}	TNN06I ^{5/8}	3.97	1.91	2.3
08I ^{5/8}	TNN08I ^{5/8}	4.76	2.38	2.3
11I ^{5/8}	TNN22I ^{5/8}	6.35	3.18	3.0
16I ^{5/8}	TNN32I ^{5/8}	9.525	3.68	4.0
22I ^{5/8}	TNN43I ^{5/8}	12.70	4.9	4.85

Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder		
			mm	TPI/ inch	rε	S		PR1115		GW15				
							R	L	R	L				
	06I ^{5/8} 5501	G (PF)	-	28	0.10	0.60	55°	●				SIN ^{5/8} ...-06E		
	08I ^{5/8} 5501	G (PF)		28,19	0.10	0.80		55°	●				SIN ^{5/8} ...-08E	
	11I ^{5/8} A55	G (PF)		28,19	0.06	1.10		55°	●		●		SIN ^{5/8} ...-11E SIN ^{5/8} ...-11	
	16I ^{5/8} A55	G (PF)	-	28,19	0.06	1.00	55°				●		SIN ^{5/8} ...-16 CIN ^{5/8} ...-16	
		G55		G (PF)	14,11	0.22		1.70	●		●			
		AG55		G (PF)	28~11	0.06		1.70	●		●			
	22I ^{5/8} N55	G (PF)	-	-	0.47	2.5	55°	●		●		SIN ^{5/8} ...-22 CIN ^{5/8} ...-22		
		06I ^{5/8} 5501	W	-	24	0.10	0.60	55°	●				SIN ^{5/8} ...-06E	
		08I ^{5/8} 5501	W		24,20	0.10	0.80		55°	●				SIN ^{5/8} ...-08E
		11I ^{5/8} A55	W		48~16	0.06	1.10		55°	●		●		SIN ^{5/8} ...-11E SIN ^{5/8} ...-11
16I ^{5/8} A55		W	48~16		0.06	1.00	55°		●		●			SIN ^{5/8} ...-16 CIN ^{5/8} ...-16
		G55	W		14~8	0.22			1.70	●		●		
		AG55	W		48~8	0.06			1.70	●		●		
22I ^{5/8} N55		W	-		7~5	0.47	2.5		55°	●		●		SIN ^{5/8} ...-22 CIN ^{5/8} ...-22

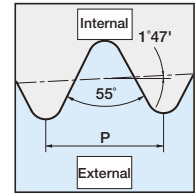
P	Carbon Steel-Alloy Steel	●		Classification of usage ●:1st Choice ○:2nd Choice
M	Stainless Steel	●		
K	Gray Cast Iron		●	
N	Non-ferrous Metal		●	

PR1115/GW15(Threading) are sold in 5 piece boxes.

●:Std. Item

Threading Insert

Tapered Pipe Thread<R(PT)(BSPT)>



External

Full Profile 55°

(mm)

Description	Previous Description	A	T	ød
16E%	TNN32E%	9.525	3.68	4.0

P	Carbon Steel-Alloy Steel	●		Classification of usage ●:1st Choice ○:2nd Choice
M	Stainless Steel	●		
K	Gray Cast Iron		●	
N	Non-ferrous Metal		●	

Insert Right-hand Shown		Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
				mm	TPI/ inch	rε	S	θ	PR1115		GW15		
									R	L	R	L	
Full Profile		16E% 28BSPT-TF	PT (R)	-	28	0.10	0.8	55°	●				KTN% ---16 KTNS% ---16
		19BSPT-TF			19	0.16	1.0		●				
		14BSPT-TF			14	0.22	1.6		●				
		11BSPT-TF			11	0.29	1.6		●				
		16E% 28BSPT	PT (R)	-	28	0.10	0.8			●			
		19BSPT			19	0.16	1.0			●			
		14BSPT			14	0.22	1.6			●			
		11BSPT			11	0.29	1.6			●			

55°type<R(PT)>

External

Partial Profile 55°

(mm)

Description	Previous Description	A	T	ød
16E%	TNN32E%	9.525	3.68	4.0
22E%	TNN43E%	12.70	4.9	4.9

P	Carbon Steel-Alloy Steel	●		Classification of usage ●:1st Choice ○:2nd Choice
M	Stainless Steel	●		
K	Gray Cast Iron		●	
N	Non-ferrous Metal		●	

Insert Right-hand Shown		Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
				mm	TPI/ inch	rε	S	θ	PR1115		GW15		
									R	L	R	L	
Partial Profile		16E% A55-TF	R (PT)	-	28,19	0.06	1.00	55°	●				KTN% ---16 KTNS% ---16
		G55-TF	R (PT)		14,11	0.22	1.60		●				
		AG55-TF	R (PT)		28~11	0.06	1.60		●				
		16E% A55	R (PT)	-	28,19	0.06	1.00	55°			●		
		G55	R (PT)		14,11	0.22	1.70				●		
		AG55	R (PT)		28~11	0.06	1.70				●		
		22E% N55	R (PT)		-	-	0.47		2.5	55°	●		

PR1115/GW15(Threading) are sold in 5 piece boxes.

●:Std. Item

●Tapered Pipe Thread<Rc(PT)(BSPT)>

Internal

Full Profile 55° (mm)

Description	Previous Description	A	T	ød
11I ^{R/L}	TNN22I ^{R/L}	6.35	3.18	3.0
16I ^{R/L}	TNN32I ^{R/L}	9.525	3.68	4.0

				Classification of usage
P	Carbon Steel-Alloy Steel	●		●:1st Choice ○:2nd Choice
M	Stainless Steel	●		
K	Gray Cast Iron		●	
N	Non-ferrous Metal		●	

Full Profile	Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
				mm	TPI/ inch	rε	S		PR1115		GW15		
									R	L	R	L	
Full Profile		11I ^{R/L} 28BSPT-TF	Rc (PT)	-	28	0.10	0.6	55°	●				SIN ^{R/L} ...-11E SIN ^{R/L} ...-11
		19BSPT-TF			19	0.16	0.78		●				
		14BSPT-TF			14	0.22	0.97		●				
		11I ^{R/L} 28BSPT	Rc (PT)	-	28	0.10	0.6	55°			●		
		19BSPT			19	0.16	0.78				●		
		14BSPT			14	0.22	0.97				●		
	16I ^{R/L} 14BSPT-TF	Rc (PT)	-	14	0.22	0.97	55°	●				SIN ^{R/L} ...-16 CIN ^{R/L} ...-16	
	11BSPT-TF			11	0.29	1.5		●					
	16I ^{R/L} 14BSPT	Rc (PT)	-	14	0.22	0.97	55°			●			
	11BSPT			11	0.29	1.5				●			

●55°type(Rc)

Internal

Partial Profile 55° (mm)

Description	Previous Description	A	T	ød
06I ^{R/L}	TNN06I ^{R/L}	3.97	1.91	2.3
08I ^{R/L}	TNN08I ^{R/L}	4.76	2.38	2.3
11I ^{R/L}	TNN22I ^{R/L}	6.35	3.18	3.0
16I ^{R/L}	TNN32I ^{R/L}	9.525	3.68	4.0
22I ^{R/L}	TNN43I ^{R/L}	12.70	4.9	4.85

				Classification of usage
P	Carbon Steel-Alloy Steel	●		●:1st Choice ○:2nd Choice
M	Stainless Steel	●		
K	Gray Cast Iron		●	
N	Non-ferrous Metal		●	

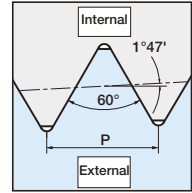
Partial Profile	Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder					
				mm	TPI/ inch	rε	S		PR1115		GW15							
									R	L	R	L						
Partial Profile		06I ^{R/L} 5501	Rc(PT)	-	28	0.10	0.60	55°	●				SIN ^{R/L} ...-06E					
		08I ^{R/L} 5501	Rc(PT)		28,19	0.10	0.80		55°	●				SIN ^{R/L} ...-08E				
		11I ^{R/L} A55	Rc(PT)		28,19	0.06	1.10		55°	●		●		SIN ^{R/L} ...-11E SIN ^{R/L} ...-11				
		16I ^{R/L} A55	Rc(PT)		-	28,19	0.06	1.00	55°	●		●			SIN ^{R/L} ...-16 CIN ^{R/L} ...-16			
			G55							Rc(PT)	14,11	0.22	1.70	●			●	
			AG55							Rc(PT)	28~11	0.06	1.70	●			●	
		22I ^{R/L} N55	Rc(PT)		-	-	0.47	2.5	55°	●		●		SIN ^{R/L} ...-22 CIN ^{R/L} ...-22				

PR1115/GW15(Threading) are sold in 5 piece boxes.

●:Std. Item

Threading Insert

American National Tapered Pipe Thread (NPT)



External

Partial Profile 60° (mm)					P	Carbon Steel-Alloy Steel	●		Classification of usage				
Description	Previous Description	A	T	ød	M	Stainless Steel	●		●:1st Choice ○:2nd Choice				
16E ^{R/L}	TNN32E ^{R/L}	9.525	3.68	4.0	K	Gray Cast Iron		●					
					N	Non-ferrous Metal		●					
Insert Right-hand Shown		Description	Applicable Thread	Pitch	Dimension(mm)	Angle(°)	PVD coated carbide	Carbide		Applicable Toolholder			
				mm	TPI/inch	rε	S	θ	PR1115		GW15		
									R	L	R	L	
Full Profile		16E ^{R/L} 18NPT	NPT	-	18	0.04	0.9	60°	●		●		KTN ^{R/L} ...-16 KTNS ^{R/L} ...-16
		14NPT			14	0.05	1.5		●		●		
		11.5NPT			11.5	0.06	1.5		●		●		

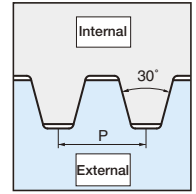
Internal

Partial Profile 60° (mm)					P	Carbon Steel-Alloy Steel	●		Classification of usage				
Description	Previous Description	A	T	ød	M	Stainless Steel	●		●:1st Choice ○:2nd Choice				
16I ^{R/L}	TNN32I ^{R/L}	9.525	3.68	4.0	K	Gray Cast Iron		●					
					N	Non-ferrous Metal		●					
Insert Right-hand Shown		Description	Applicable Thread	Pitch	Dimension(mm)	Angle(°)	PVD coated carbide	Carbide		Applicable Toolholder			
				mm	TPI/inch	rε	S	θ	PR1115		GW15		
									R	L	R	L	
Full Profile		16I ^{R/L} 18NPT	NPT	-	18	0.04	0.9	60°	●		●		SIN ^{R/L} ...-16 CIN ^{R/L} ...-16
		14NPT			14	0.05	1.5		●		●		
		11.5NPT			11.5	0.06	1.5		●		●		

PR1115/GW15(Threading) are sold in 5 piece boxes.

●:Std. Item

●Trapezoidal 30° type(Tr)



External

Partial Profile30° (mm)

Description	Previous Description	A	T	ød
16E%	TNN32E%	9.525	3.68	4.0
22E%	TNN43E%	12.70	4.9	4.9

P	Carbon Steel-Alloy Steel	●		Classification of usage ●:1st Choice ○:2nd Choice
M	Stainless Steel	●		
K	Gray Cast Iron			
N	Non-ferrous Metal			

Partial Profile	Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
				mm	TPI/ inch	rε	S	θ	PR1115		GW15		
									R	L	R	L	
	16E% 200TR	Tr	-	2.0	-	0.20	1.6	30°	●				KTN% ...-16 KTNS% ...-16
				3.0	-	0.20	1.6		●				
	22E% 400TR	Tr	-	4.0	-	0.20	2.5	30°	●				KTN% ...-22
				5.0	-	0.20	2.5		●				

Internal

Partial Profile30° (mm)

Description	Previous Description	A	T	ød
16I%	TNN32I%	9.525	3.68	4.0
22I%	TNN43E%	12.70	4.9	4.85

P	Carbon Steel-Alloy Steel	●		Classification of usage ●:1st Choice ○:2nd Choice
M	Stainless Steel	●		
K	Gray Cast Iron			
N	Non-ferrous Metal			

Partial Profile	Insert Right-hand Shown	Description	Applicable Thread	Pitch		Dimension(mm)		Angle(°)	PVD coated carbide		Carbide		Applicable Toolholder
				mm	TPI/ inch	rε	S	θ	PR1115		GW15		
									R	L	R	L	
	16I% 200TR	Tr	-	2.0	-	0.20	1.6	30°	●				SIN% ...-16 CIN% ...-16
				3.0	-	0.20	1.6		●				
	22I% 400TR	Tr	-	4.0	-	0.20	2.5	60°	●				SIN% ...-22 CIN% ...-22
				5.0	-	0.20	2.5		●				

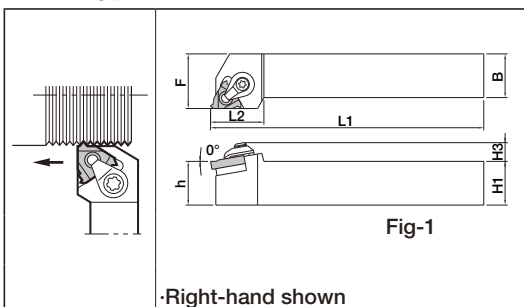
PR1115/GW15(Threading) are sold in 5 piece boxes.

●:Std. Item

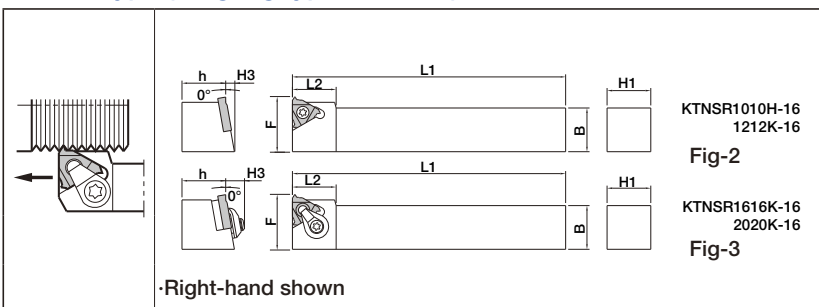
Applicable Toolholder

External Toolholder

KTN type



KTNS type (for gang type NC lathe)



External Threading Toolholder Dimension

Description	Standard		Dimension (mm)							Shape	Spare Parts					Applicable insert
	R	L	H1=h	H3	B	L1	L2	F	Clamp Set		Clamp Screw	Wrench	Shim	Shim Screw		
									5S 6S			FT LW				
KTN ^{1/2}	1616H-16	●	●	16	8.5	16	100	20	Fig-1	CPS-5S	-	FT-15	TN-32	SP3X8	16E ^{1/2}	
	2020H-16*	●		20		20	25	25								
	2020K-16	●	●	25		25	150	30								
	2525M-16	●	●	25	10	25	150	29	CPS-6S	LW-3	TN-43	SP3X8	22E ^{1/2}			
	2525M-22	●		25		170	34	32								
	3225P-22	●		32		20	27.4									
KTNS ^{1/2}	1010H-16	●		10	8.5	10	100	16	Fig-2	-	SB-3.5TR	-	-	-	16E ^{1/2}	
	1212K-16	●		12		12	18	18								
	1616K-16	●		16		16	125	22	Fig-3	CPS-5S	-	FT-15	TN-32	SP3X8		
	2020K-16	●		20		20	20	27.4								

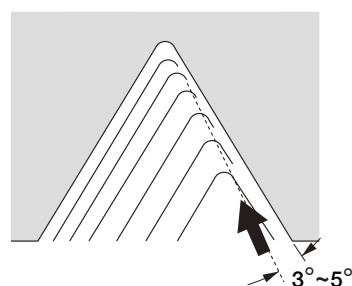
*indicates short shank type

●:Std. Item

Recommended cutting conditions

Workpiece material	Grade(m/min)(Vc:m/min)	
	PR1115	GW15
Carbon steel	100~150	-
Alloy steel	100~150	-
Stainless steel	60~80	-
Gray Cast Iron	-	100
Aluminium	-	150~400
Brass	-	150~300

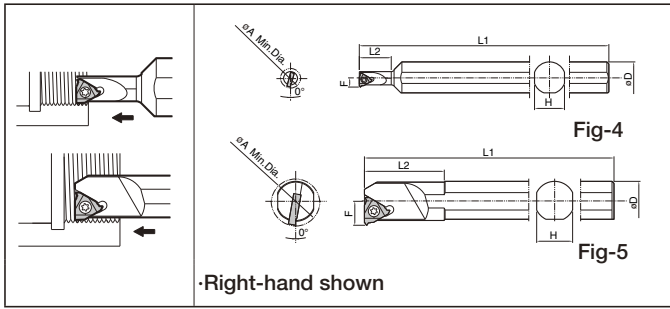
Recommended Infeed Methods



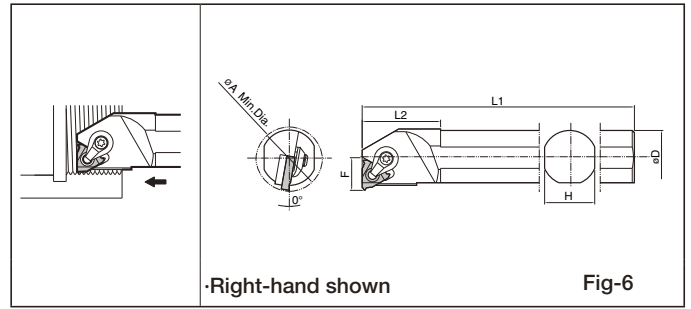
Flank Compound Infeed

●Internal Toolholder






■SIN type



■CIN type



●Internal Threading Toolholder Dimension

Description	Standard		Min. Dia.	Dimension (mm)					Shape	Spare Parts					Applicable insert
	R	L		øA	øD	H	L1	L2		F	Clamp Screw	Clamp Set	Wrench	Shim	
															
SIN 0612S-06E	●		6.4	12	11	100	10	3.8	Fig-4	SB-2040TR	-	FT-6	-	-	061 [°] ...
0816S-08E	●		7.8	16	15	125	16	4.0		SB-2050TR	-	FT-6	-	-	081 [°] ...
1216S-11E	●	●	12	16	14	150	25	6.3		SB-2TR	-	FT-8	-	-	111 [°] ...
1516S-11	●	●	15							30	7.5				
2016S-16	●	●	20	16	14	150	37	10.0	Fig-5	SB-3.5TR	-	FT-15	-	-	161 [°] ...
2420S-16	●	●	24	20	18	180	40	12.0		SB-4085TR	-	FT-15	-	-	221 [°] ...
2420S-22	●		24	20	18	180	40	13.5		-	CPS-5S	FT-15	TN-32	SP3X8	161 [°] ...
CIN 3025S-16	●	●	30	25	23	200	36	15.0	Fig-6	-	CPS-6S	LW-3	TN-43	SP3X8	221 [°] ...
3732S-16	●		37	32	30	250	45	18.5		-	CPS-5S	FT-15	TN-32	SP3X8	161 [°] ...
3025S-22	●		30	25	23	200	40	16.5		-	CPS-6S	LW-3	TN-43	SP3X8	221 [°] ...
3732S-22	●		37	32	30	250	45	20		-	CPS-6S	LW-3	TN-43	SP3X8	221 [°] ...

●:Std. Item

60°/55° Partial Profile

Thread Type	Pitch	Description	Corner-R (rε)	Total ap(mm)	No. of Passes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19						
	mm-TPI																													
Unified	Internal Thread	18 TPI/inch	081R 60007	0.07	0.85	17	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.03							
		16 TPI/inch	081R 60007	0.07	0.96	18	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03						
		48 TPI/inch	111R A60	0.02	0.32	5	0.08	0.07	0.07	0.06	0.04																			
		24 TPI/inch			0.67	7	0.14	0.13	0.12	0.10	0.08	0.06	0.04																	
		20 TPI/inch			0.8	8	0.14	0.13	0.12	0.12	0.11	0.08	0.06	0.04																
		18 TPI/inch			0.9	9	0.15	0.14	0.13	0.12	0.11	0.08	0.07	0.06	0.04															
		16 TPI/inch			1.01	10	0.15	0.14	0.13	0.12	0.12	0.10	0.08	0.07	0.06	0.04														
		48 TPI/inch			161R A60	0.02	0.32	5	0.08	0.07	0.07	0.06	0.04																	
		Tapered Pipe/Tapered Pipe	External Thread	28 TPI/inch	16ER A55-TF	0.06	0.67	7	0.16	0.14	0.10	0.09	0.08	0.06	0.04															
				19 TPI/inch	16ER A55-TF	0.06	1.02	8	0.20	0.18	0.16	0.14	0.12	0.10	0.07	0.05														
				14 TPI/inch	16ER G55-TF	0.06	1.40	11	0.24	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.06	0.05	0.04											
				11 TPI/inch	16ER G55-TF	0.06	1.79	13	0.25	0.22	0.21	0.20	0.18	0.16	0.14	0.12	0.10	0.08	0.06	0.05	0.04	0.03								
				28 TPI/inch	16ER A55	0.06	0.67	7	0.16	0.14	0.10	0.09	0.08	0.06	0.04															
				19 TPI/inch	16ER A55	0.06	1.02	8	0.20	0.18	0.16	0.14	0.12	0.10	0.07	0.05														
				14 TPI/inch	16ER G55	0.06	1.40	11	0.24	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.06	0.05	0.04											
				11 TPI/inch	16ER G55	0.06	1.79	13	0.25	0.22	0.21	0.20	0.18	0.16	0.14	0.12	0.10	0.08	0.06	0.05	0.04	0.03								
				Whitworth	External Thread	48 TPI/inch	16ER A55-TF	0.06	0.37	5	0.12	0.09	0.07	0.05	0.04															
						24 TPI/inch	16ER A55-TF	0.06	0.79	7	0.18	0.16	0.14	0.11	0.08	0.07	0.05													
						20 TPI/inch	16ER A55-TF	0.06	0.96	8	0.20	0.18	0.15	0.13	0.10	0.08	0.07	0.05												
						18 TPI/inch	16ER A55-TF	0.06	1.07	9	0.20	0.17	0.16	0.14	0.11	0.09	0.08	0.07	0.05											
						16 TPI/inch	16ER A55-TF	0.06	1.22	11	0.20	0.18	0.16	0.13	0.11	0.10	0.09	0.08	0.07	0.06	0.04									
						14 TPI/inch	16ER G55-TF	0.06	1.40	11	0.24	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.06	0.05	0.04									
						12 TPI/inch	16ER G55-TF	0.06	1.44	10	0.24	0.22	0.20	0.18	0.15	0.12	0.12	0.09	0.07	0.05										
						11 TPI/inch	16ER G55-TF	0.06	1.60	12	0.24	0.22	0.20	0.18	0.16	0.14	0.13	0.10	0.08	0.06	0.05	0.04	0.03							
						10 TPI/inch	16ER G55-TF	0.06	1.78	12	0.24	0.22	0.20	0.18	0.17	0.16	0.15	0.13	0.12	0.09	0.07	0.05								
9 TPI/inch	16ER G55-TF					0.06	2.01	14	0.24	0.22	0.20	0.19	0.18	0.16	0.15	0.14	0.12	0.11	0.10	0.08	0.07	0.05								
Whitworth	Internal Thread			28 TPI/inch	081R 5501	0.10	0.61	12	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.03	0.03										
				19 TPI/inch	081R 5501	0.10	0.95	18	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03			
				28 TPI/inch	111R A55	0.06	0.67	7	0.16	0.14	0.10	0.09	0.08	0.06	0.04															
				19 TPI/inch	111R A55	0.06	1.02	8	0.20	0.18	0.16	0.14	0.12	0.10	0.07	0.05														
				28 TPI/inch	161R A55	0.06	0.67	7	0.16	0.14	0.10	0.09	0.08	0.06	0.04															
				19 TPI/inch	161R A55	0.06	1.02	8	0.20	0.18	0.16	0.14	0.12	0.10	0.07	0.05														
				14 TPI/inch	161R G55	0.06	1.40	11	0.24	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.06	0.05	0.04											
		11 TPI/inch	161R G55	0.06	1.79	13	0.25	0.22	0.21	0.20	0.18	0.16	0.14	0.12	0.10	0.08	0.06	0.05	0.04	0.03										
		8 TPI/inch	16ER A55	0.06	0.37	5	0.12	0.09	0.07	0.05	0.04																			
		48 TPI/inch	16ER A55	0.06	0.37	5	0.12	0.09	0.07	0.05	0.04																			

