TurnLine

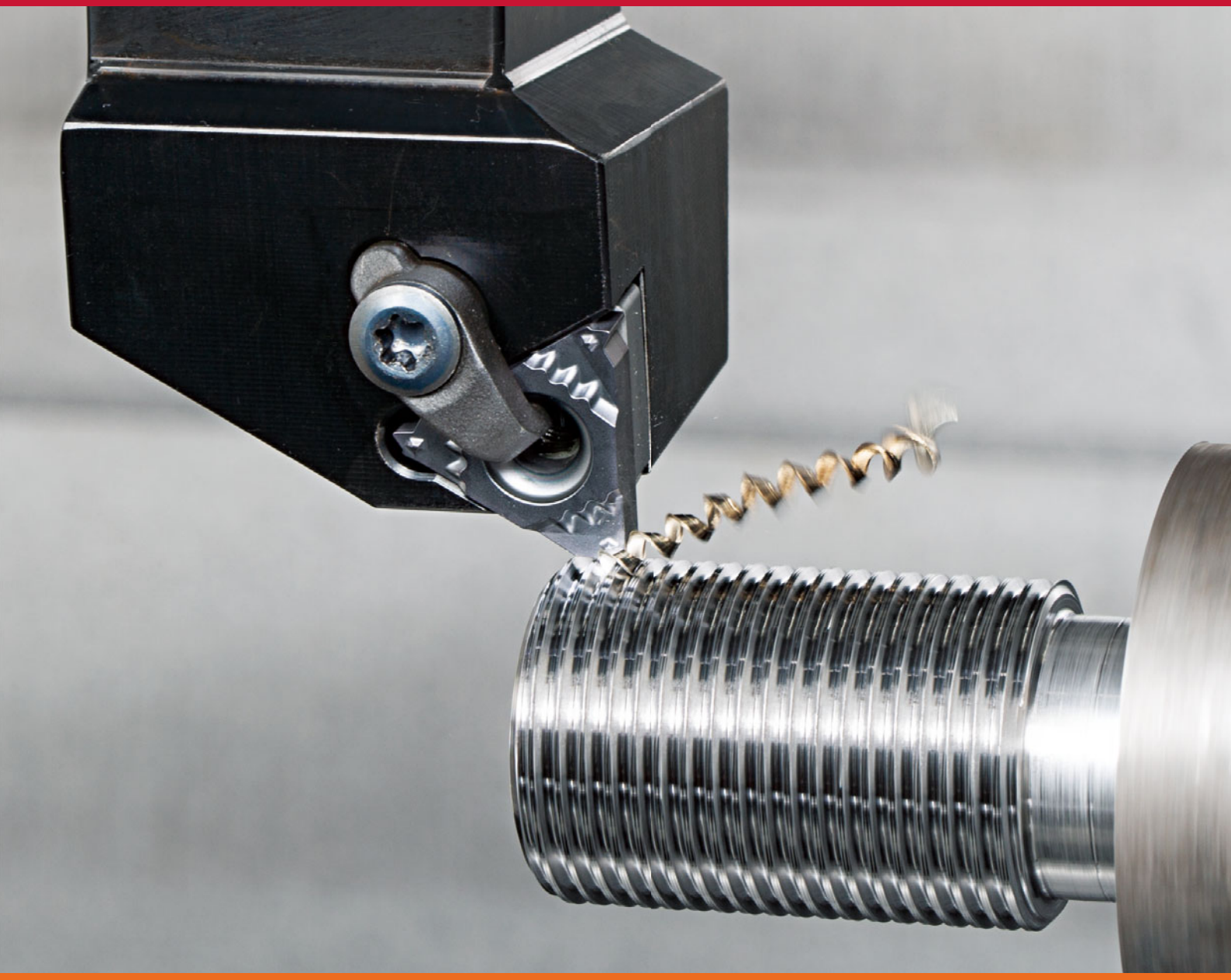
TUNGTHREAD

www.tungaloy.com

Tungaloy Report No. 375-G

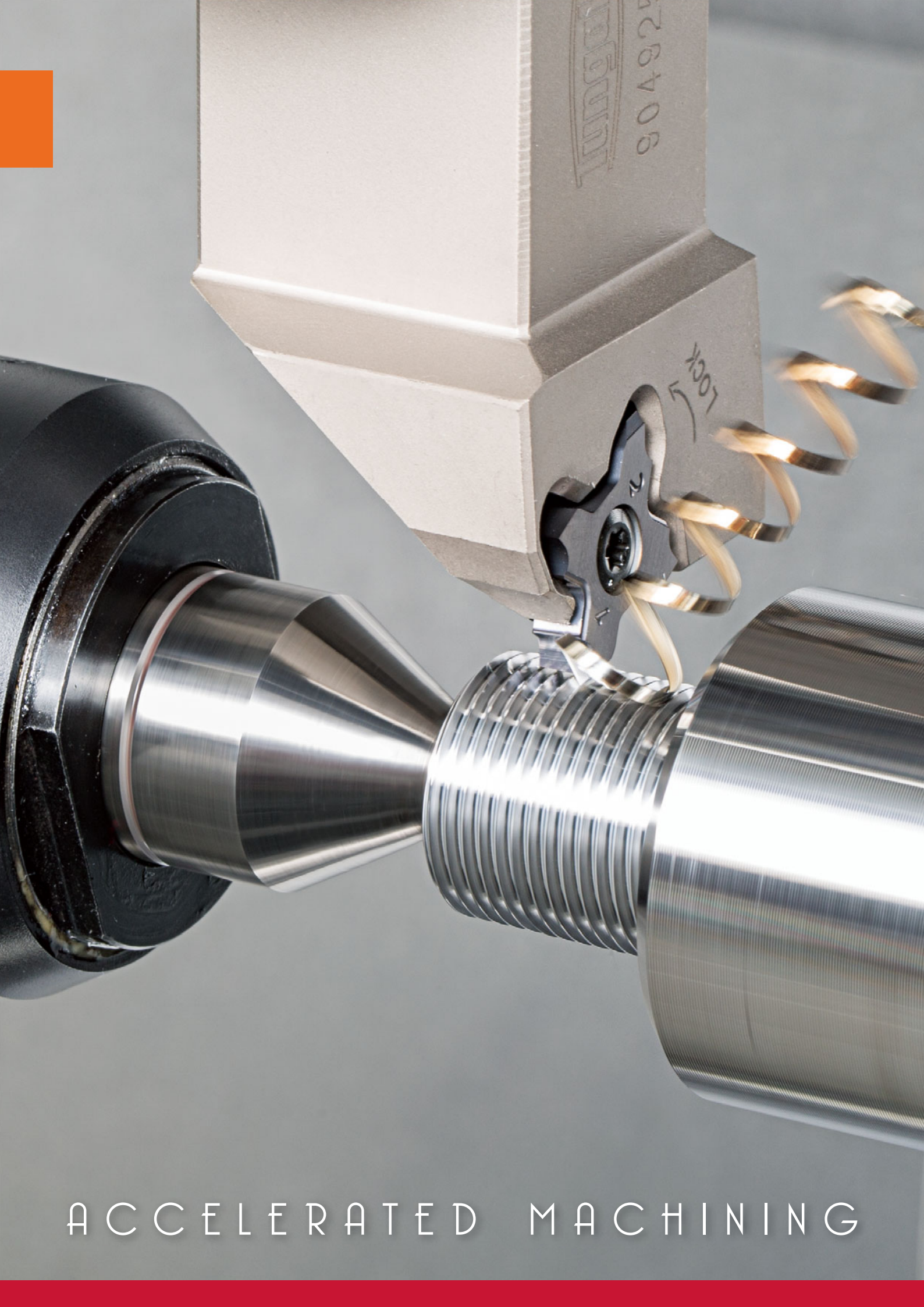
Member IMC Group Tungaloy

Now in **AH8000 grade** or **TCT18FR/R-ISO for burr-less threading** for Thread Turning Tool Series



INDUSTRY 4.0

FEED the SPEED!


ACCELERATED MACHINING

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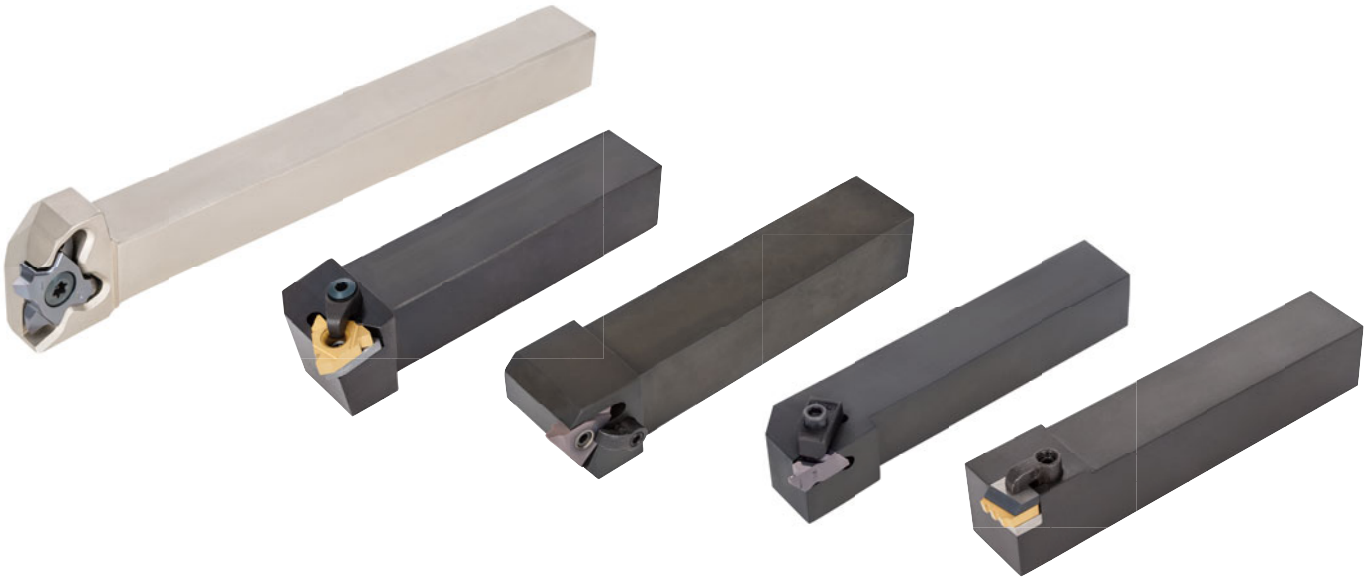


Effective threading tools for CNC lathes, Swiss-type lathes, and multitasking machines

TUNGTHREAD
TUNGALOY

Lay-down inserts

Offers various types of threading inserts

p.5

Double clamping method ensures secure insert positioning for threading standard API threads.

TETRAMINICUT

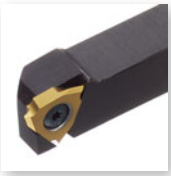
p.50

First-choice threading tool for use in Swiss-type machines, featuring 4 fully edged threading insert. Also suited for threading small diameter parts in standard CNC lathes without interference with the lathe center.

DUOJUSTCUT

p.56

Offers various tools for all threading operations in Swiss-type lathes.



J-SERIES

p.62

Complementary tool series for threading operations in Swiss-type machines.
The insert features 3 cutting edges. Also suited for the use in cam-driven automatic lathes.

TINYMINITURN

p.64

Internal threading tool for diameters as small as ø4 mm. Internal coolant supply with optimized coolant hole position.

TUNGT-CLAMP

p.71

Features highly secure insert clamping mechanism with insert securely locked in position by a clamp. Grooving insert or threading insert fits the same holder.

Tangential inserts

p.75

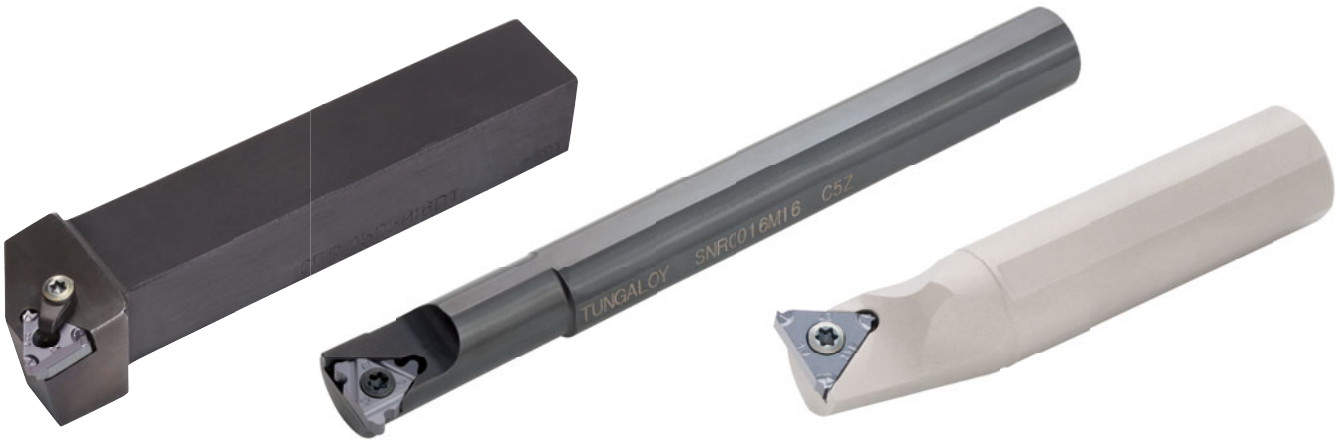
Ensures a wider thread pitch application range with less tool investment for ACME and STUB ACME threads. The full profile insert helps attain close thread dimension and eliminates burrs.

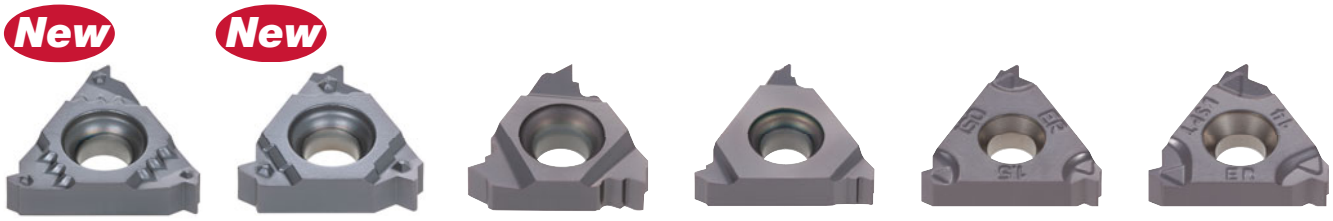
Chaser

p.82

Multiple pointed inserts for efficient threading of API Round and Buttress threads.

Laydown inserts





Expansion **AH8015 grade** for Universal threading

TUNGTHREAD
TUNGALOY

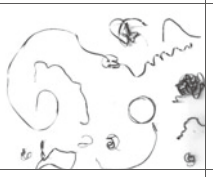
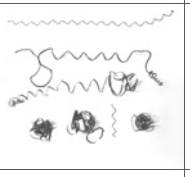
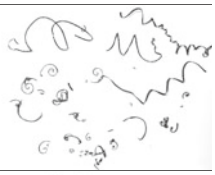
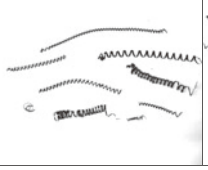
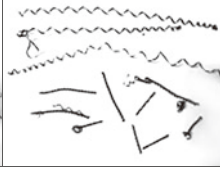
Wide lineup of economical M-class inserts for

B style chipbreaker - first choice for general threading

16ER***-**B**
16IR***-**B**
22ER***-**B**
22IR***-**B**

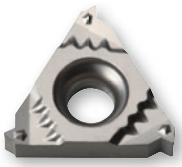
AH725

PVD-coated grade

	without chipbreaker	with chipbreaker	
	16ER15ISO	16ER15ISO-B	16ER15ISO-M
Radial infeed			
Flank infeed			

Material : S45C
Screw Size : M24 X 1.5 (external threading)
Cutting speed : *Vc* = 180 m/min

M style chipbreaker - for better surface finish and fracture resistance



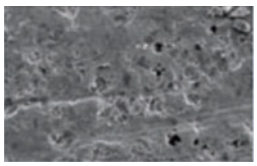
16ER***-**M**
16IR***-**M**

NS9530

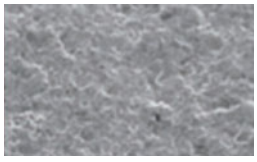
Provides excellent surface finish quality with advantage in cost per insert

Coating surface smoothness is significantly improved to reduce build-up edge for better surface finish quality and wear resistance

Conventional



NS9530



AH725

PVD-coated grade

Superior fracture resistance with optimized cutting edge preparation

AH8000 New

PVD-coated grade

PREMIUMTEC
TUNGALOY

Special surface technology

Nano-multi-layered AlTiN coating with high Al content

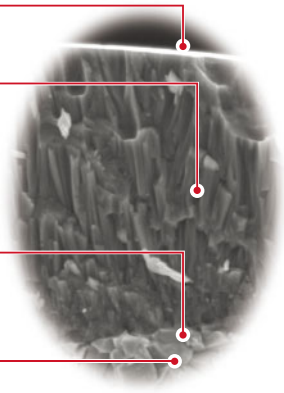
- Increases hardness by 20%
- Prevents micro cracks from developing

→ Long tool life & stable machining

Improved adhesion strength

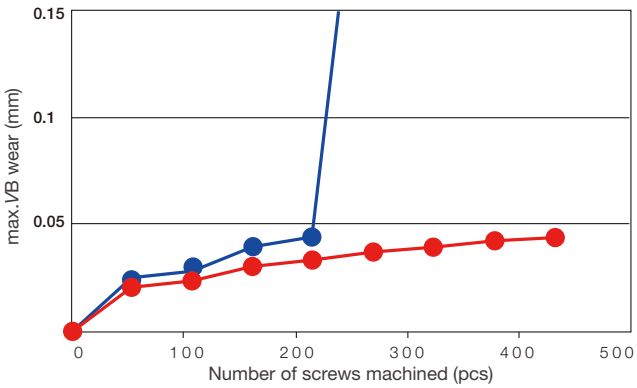
→ Prevents notch wear that tends to occur in machining heat-resistant alloys

Newly developed substrates



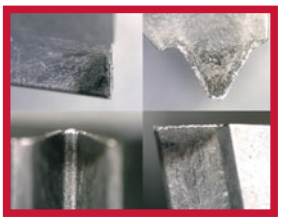
New AH8015 / Threading

M



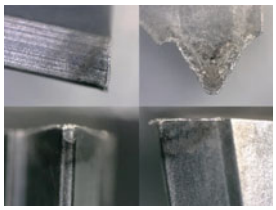
Insert	: 16ER15ISO
Workpiece material	: SUS304
Cutting speed	: *Vc* = 100 m/min
pitch	: 1.5mm
Machining	: External threading
Infeed method	: Radial infeed
Coolantt	: Wet

After 432 thread



AH8015

After 216 thread

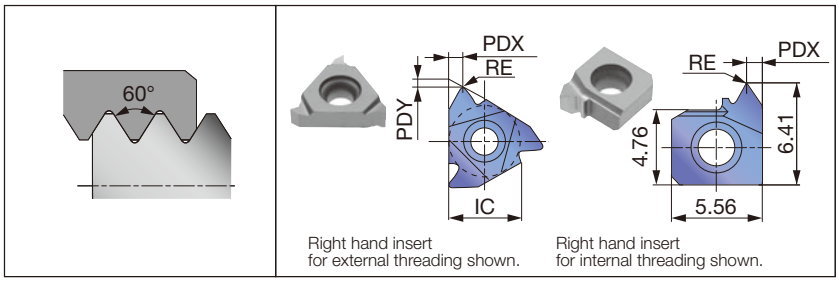


Conventional

ISO	Workpiece materials	Hardness	Cutting speed *Vc* (m/min)				
			AH725	AH8015	T313V	NS9530	TH10
P	Carbon steel	< 200 HB	80 - 180	80 - 180	100 - 200	150 - 200	-
		> 200 HB	60 -160	60 -160	100 - 150	100 - 170	-
M	Stainless steel	-	50 - 130	50 - 130	70 - 130	-	-
K	Cast iron	-	-	-	70 - 150	-	70 - 90
N	Aluminium	-	-	-	-	-	100 - 500
S	Heat-resistance alloys	-	-		-	-	10 - 40
H	High hardened steel	50 - 60 HRC	-	-	-	-	10 - 30

INSERT

60° thread angle



Applicable toolholders

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
11		SNR/L**11...
16	CER/L**16... B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22...	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...
27	CER/L**27...	CNR/L**27...

Partial-profile inserts

Insert size	Pitch	TPI	Hand of cut	External insert								Internal insert							
				Designation	Grades			IC	PDX	PDY	RE	Designation	Grades			IC	PDX	PDY	RE
					Coating		Uncoated						Coating		Uncoated				
					AH725	T313V	TH10						AH725	T313V	TH10				
6	0.5~1.5	48~16	R									6IRA60	●		●	-	0.9	-	0.04
11	0.5~1.5	48~16	R									11IRA60	●	●	●	6.35	0.9	0.7	0.04
11	0.5~1.5	48~16	L									11ILA60	●	●	●	6.35	0.9	0.7	0.04
16	0.5~1.5	48~16	R	16ERA60	●	●	●	9.525	0.9	0.7	0.06	16IRA60	●	●	●	9.525	0.9	0.7	0.04
16	0.5~1.5	48~16	L	16ELA60	●	●	●	9.525	0.9	0.7	0.06	16ILA60	●	●	●	9.525	0.9	0.7	0.04
16	0.5~3	48~8	R	16ERAG60	●	●		9.525	1.6	1.2	0.06	16IRAG60	●	●		9.525	1.6	1.2	0.04
16	1.75~3	14~8	R	16ERG60	●	●	●	9.525	1.6	1.2	0.22	16IRG60	●	●	●	9.525	1.6	1.2	0.12
16	1.75~3	14~8	L	16ELG60	●	●		9.525	1.6	1.2	0.22	16ILG60	●	●	●	9.525	1.6	1.2	0.12
22	3.5~5	7~5	R	22ERN60	●	●	●	12.7	2.5	1.7	0.44	22IRN60	●	●	●	12.7	2.5	1.7	0.25
22	3.5~5	7~5	L	22ELN60	●	●		12.7	2.5	1.7	0.44	22ILN60	●	●		12.7	2.5	1.7	0.25
27	4~6	6~4	R	27ERZ60	●	●		15.875	3.2	2.2	0.5	27IRZ60	●	●		15.875	3.2	2.2	0.28

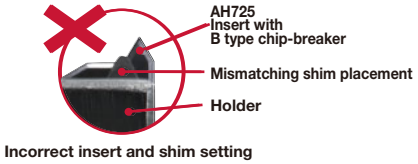
Partial-profile inserts with chipbreaker

Insert size	Pitch	TPI	Hand of cut	External insert								Internal insert							
				Designation	Grades			IC	PDX	PDY	RE	Designation	Grades			IC	PDX	PDY	RE
					Coating		Cermet						Coating		Cermet				
					AH725		NS9530						AH725		NS9530				
11	0.5~1.5	48~16	R									11IRA60-B	●			6.35	0.9	0.7	0.04
11	0.5~1.5	48~16	R									11IRA60-M			●	6.35	0.9	0.7	0.04
16	0.5~1.5	48~16	R	16ERA60-B	●*			9.525	0.9	0.8	0.05	16IRA60-B	●*			9.525	0.9	0.8	0.05
16	0.5~1.5	48~16	R	16ERA60-M			●	9.525	0.9	0.7	0.06	16IRA60-M			●	9.525	0.9	0.7	0.04
16	0.5~3	48~8	R	16ERAG60-B	●*			9.525	1.7	1.2	0.06	16IRAG60-B	●*			9.525	1.7	1.2	0.05
16	0.5~3	48~8	R	16ERAG60-M	●		●	9.525	1.6	1.2	0.06	16IRAG60-M	●		●	9.525	1.6	1.2	0.04
16	1.75~3	14~8	R	16ERG60-B	●*			9.525	1.7	1.2	0.17	16IRG60-B	●*			9.525	1.7	1.2	0.1
16	1.75~3	14~8	R	16ERG60-M			●	9.525	1.6	1.2	0.22	16IRG60-M			●	9.525	1.6	1.2	0.14
22	3.5~5	7~5	R	22ERN60-B	●*			12.7	2.5	1.7	0.32	22IRN60-B	●*			12.7	2.5	1.7	0.19

Note: ●* There are two different types of shims for AH725 inserts dependent on the chipbreaker used. Always choose the correct shim from the table on Page 21 before use. If a mismatched shim is used for an AH725 insert, proper insert support is not provided, resulting in unsuccessful tool performance and short tool life.

may require an alternative shim.

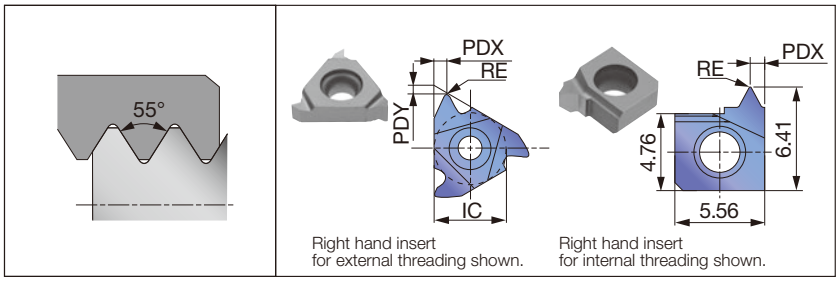
AH725 may require an alternative shim. Please check your insert specification on Page 21.



Incorrect insert and shim setting

● : Line-up / Packing Quantity = 5 pcs.

55° thread angle



Applicable toolholders

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
11		SNR/L**11...
16	CER/L**16... B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22...	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...

Partial-profile inserts

Insert size	Pitch	TPI	Hand of cut	External insert								Internal insert							
				Designation	Grades			IC	PDX	PDY	RE	Designation	Grades			IC	PDX	PDY	RE
					Coating		Un-coated						Coating		Un-coated				
					AH725	T313V	TH10						AH725	T313V	TH10				
6	0.5~1.5	48~16	R									6IRA55	●		●	-	0.9	-	0.07
11	0.5~1.5	48~16	R									11IRA55	●	●	●	6.35	0.9	0.7	0.07
16	0.5~1.5	48~16	R	16ERA55	●	●	●	9.525	0.9	0.7	0.07	16IRA55	●	●	●	9.525	0.9	0.7	0.07
16	0.5~3	48~8	R	16ERAG55	●			9.525	1.7	1.2	0.07	16IRAG55	●			9.525	1.7	1.2	0.07
16	1.75~3	14~8	R	16ERG55	●	●	●	9.525	1.6	1.2	0.25	16IRG55	●	●	●	9.525	1.7	1.2	0.25
22	3.5~5	7~5	R	22ERN55	●	●	●	12.7	2.5	1.7	0.5	22IRN55	●	●	●	12.7	2.5	1.7	0.5

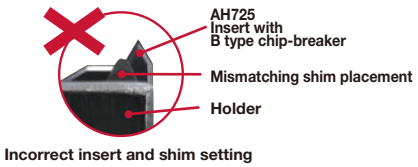
Partial-profile inserts with chipbreaker

Insert size	Pitch	TPI	Hand of cut	External insert							Internal insert						
				Designation	Grades	IC	PDX	PDY	RE	Designation	Grades	IC	PDX	PDY	RE	
					Coating						Coating						
					AH725						AH725						
16	0.5~3	48~16	R	16ERAG55-B	●*	9.525	1.7	1.2	0.07	16IRAG55-B	●*	9.525	1.7	1.2	0.05		
16	1.75~3	14~8	R	16ERG55-B	●*	9.525	1.7	1.2	0.23	16IRG55-B	●*	9.525	1.7	1.2	0.2		

Note: ●* There are two different types of shims for AH725 inserts dependent on the chipbreaker used. Always choose the correct shim from the table on Page 21 before use. If a mismatched shim is used for an AH725 insert, proper insert support is not provided, resulting in unsuccessful tool performance and short tool life.

may require an alternative shim.

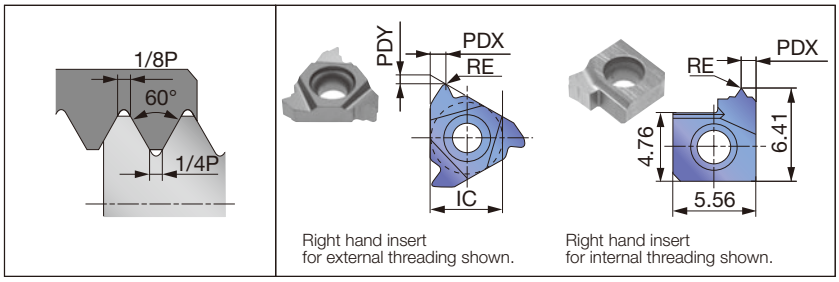
AH725 may require an alternative shim. Please check your insert specification on Page 21.



Incorrect insert and shim setting

● : Line-up / Packing Quantity = 5 pcs.

ISO metric



Applicable toolholders

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
11		SNR/L**11...
16	CER/L**16... B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22...	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...
27	CER/L**27...	CNR/L**27...

Full-profile inserts

Insert size	Pitch	TPI	Hand of cut	External insert									Internal insert							
				Designation	Grades				IC	PDX	PDY	RE	Designation	Grades				IC	PDX	PDY	RE
					Coating			Un-coated						Coating			Un-coated				
					AH725	New AH8015	T313V	TH10						AH725	AH8015	T313V	TH10				
6	0.75		R										6IR075ISO	●			●	-	0.5	-	0.05
6	1		R										6IR10ISO	●			●	-	0.9	-	0.07
6	1.25		R										6IR125ISO	●			●	-	0.9	-	0.09
6	1.5		R										6IR15ISO	●			●	-	0.9	-	0.11
6	1.75		R										6IR175ISO	●			●	-	0.9	-	0.12
6	2		R										6IR20ISO	●			●	-	0.9	-	0.14
11	0.5		R										11IR05ISO	●			●	6.35	0.5	1.2	0.04
11	0.75		R										11IR075ISO	●				6.35	0.5	1.2	0.05
11	1		R										11IR10ISO	●		●	●	6.35	0.9	0.7	0.07
11	1		L										11IL10ISO	●				6.35	0.9	0.7	0.07
11	1.25		R										11IR125ISO	●				6.35	0.9	0.7	0.09
11	1.25		L										11IL125ISO	●				6.35	0.9	0.7	0.09
11	1.5		R										11IR15ISO	●		●	●	6.35	0.9	0.7	0.11
11	1.5		L										11IL15ISO	●				6.35	0.9	0.7	0.11
11	1.75		R										11IR175ISO	●		●		6.35	0.9	0.7	0.12
11	1.75		L										11IL175ISO	●				6.35	0.9	0.7	0.12
11	2		R										11IR20ISO	●		●		6.35	0.9	0.7	0.14
11	2		L										11IL20ISO	●				6.35	0.9	0.7	0.14
16	0.5		R	16ER05ISO	●			●	9.525	0.5	1.2	0.06	16IR05ISO	●				9.525	0.5	1.2	0.04
16	0.75		R	16ER075ISO	●		●	●	9.525	0.5	1.2	0.09	16IR075ISO	●				9.525	0.5	1.2	0.05
16	1		R	16ER10ISO	●		●	●	9.525	0.9	0.7	0.13	16IR10ISO	●		●	●	9.525	0.9	0.7	0.07
16	1		L	16EL10ISO					9.525	0.9	0.7	0.13	16IL10ISO	●				9.525	0.9	0.7	0.07
16	1.25		R	16ER125ISO	●		●		9.525	0.9	0.7	0.16	16IR125ISO	●				9.525	0.9	0.7	0.09
16	1.25		L	16EL125ISO					9.525	0.9	0.7	0.16	16IL125ISO	●				9.525	0.9	0.7	0.09
16	1.5		R	16ER15ISO	●		●	●	9.525	0.9	0.7	0.19	16IR15ISO	●		●	●	9.525	0.9	0.7	0.11
16	1.5		L	16EL15ISO					9.525	0.9	0.7	0.19	16IL15ISO	●				9.525	0.9	0.7	0.11
16	1.75		R	16ER175ISO	●		●		9.525	1.6	1.2	0.22	16IR175ISO	●		●		9.525	1.6	1.2	0.12
16	2		R	16ER20ISO	●	●	●	●	9.525	1.6	1.2	0.25	16IR20ISO	●		●	●	9.525	1.6	1.2	0.14

● : New item
● : Line-up / Packing Quantity = 5 pcs.

Insert size	Pitch	TPI	Hand of cut	External insert								Internal insert							
				Designation	Grades			IC	PDX	PDY	RE	Designation	Grades			IC	PDX	PDY	RE
					Coating		Uncoated						Coating		Uncoated				
					AH725	T313V	TH10						AH725	T313V	TH10				
16	2		L	16EL20ISO	●			9.525	1.6	1.2	0.25	16IL20ISO	●			9.525	1.6	1.2	0.14
16	2.5		R	16ER25ISO	●	●	●	9.525	1.6	1.2	0.31	16IR25ISO	●	●	●	9.525	1.6	1.2	0.18
16	3		R	16ER30ISO	●	●	●	9.525	1.6	1.2	0.38	16IR30ISO	●	●	●	9.525	1.6	1.2	0.21
16	3		L	16EL30ISO				9.525	1.6	1.2	0.38	16IL30ISO	●			9.525	1.6	1.2	0.21
22	3.5		R	22ER35ISO	●	●		12.7	2.5	1.7	0.44	22IR35ISO	●	●		12.7	2.5	1.7	0.25
22	4		R	22ER40ISO	●	●		12.7	2.5	1.7	0.5	22IR40ISO	●	●		12.7	2.5	1.7	0.28
22	4.5		R	22ER45ISO	●			12.7	2.5	1.7	0.56	22IR45ISO	●			12.7	2.5	1.7	0.32
22	5		R	22ER50ISO	●	●		12.7	2.5	1.7	0.63	22IR50ISO	●	●		12.7	2.5	1.7	0.35
27	6		R	27ER60ISO	●	●		15.875	3.2	2.2	0.75	27IR60ISO	●	●		15.875	3.2	2.2	0.42

Full-profile inserts with chipbreaker

Insert size	Pitch	TPI	Hand of cut	External insert								Internal insert							
				Designation	Grades			IC	PDX	PDY	RE	Designation	Grades			IC	PDX	PDY	RE
					Coating		Cermet						Coating		Cermet				
					AH725	New AH8015	NS9530						AH725	New AH8015	NS9530				
11	0.5		R									11IR05ISO-B	●			6.35	0.5	1.2	0.04
11	0.5		R									11IR05ISO-M			●	6.35	0.5	1.2	0.04
11	0.75		R									11IR075ISO-B	●			6.35	0.5	1.2	0.05
11	0.75		R									11IR075ISO-M			●	6.35	0.5	1.2	0.05
11	1		R									11IR10ISO-B	●			6.35	0.9	0.7	0.08
11	1		R									11IR10ISO-M			●	6.35	0.9	0.7	0.08
11	1.25		R									11IR125ISO-B	●			6.35	0.9	0.7	0.1
11	1.25		R									11IR125ISO-M			●	6.35	0.9	0.7	0.1
11	1.5		R									11IR15ISO-B	●			6.35	0.9	0.7	0.12
11	1.5		R									11IR15ISO-M			●	6.35	0.9	0.7	0.12
11	1.75		R									11IR175ISO-B	●			6.35	0.9	0.7	0.12
11	1.75		R									11IR175ISO-M			●	6.35	0.9	0.7	0.12
11	2		R									11IR20ISO-B	●			6.35	0.9	0.7	0.14
11	2		R									11IR20ISO-M			●	6.35	0.9	0.7	0.14
16	0.5		R	16ER05ISO-M			●	9.525	0.5	1.2	0.06								
16	0.75		R	16ER075ISO-B	●*			9.525	0.6	0.6	0.08								
16	0.75		R	16ER075ISO-M			●	9.525	0.5	1.2	0.09								
16	1		R	16ER10ISO-B	●*			9.525	0.7	0.7	0.11	16IR10ISO-B	●*			9.525	0.7	0.6	0.05
16	1		R	16ER10ISO-M	●		●	9.525	0.9	0.7	0.13	16IR10ISO-M		●	●	9.525	0.9	0.7	0.08
16	1.25		R	16ER125ISO-B	●*			9.525	0.9	0.8	0.14	16IR125ISO-B	●*			9.525	0.9	0.8	0.07
16	1.25		R	16ER125ISO-M		●	●	9.525	0.9	0.7	0.16	16IR125ISO-M			●	9.525	0.9	0.7	0.1
16	1.5		R	16ER15ISO-B	●*			9.525	1	0.8	0.19	16IR15ISO-B	●*			9.525	1	0.8	0.08
16	1.5		R	16ER15ISO-M	●	●	●	9.525	0.9	0.7	0.19	16IR15ISO-M	●	●	●	9.525	0.9	0.7	0.12
16	1.75		R	16ER175ISO-B	●*			9.525	1.2	0.9	0.2	16IR175ISO-B	●*			9.525	1.2	0.9	0.10
16	1.75		R	16ER175ISO-M			●	9.525	1.6	1.2	0.22	16IR175ISO-M			●	9.525	1.6	1.2	0.14
16	2		R	16ER20ISO-B	●*			9.525	1.3	1	0.24	16IR20ISO-B	●*			9.525	1.3	1	0.11
16	2		R	16ER20ISO-M	●		●	9.525	1.6	1.2	0.25	16IR20ISO-M			●	9.525	1.6	1.2	0.14
16	2.5		R	16ER25ISO-B	●*			9.525	1.5	1.1	0.3	16IR25ISO-B	●*			9.525	1.5	1.1	0.14
16	2.5		R	16ER25ISO-M			●	9.525	1.6	1.2	0.31	16IR25ISO-M			●	9.525	1.6	1.2	0.18
16	3		R	16ER30ISO-B	●*			9.525	1.6	1.2	0.38	16IR30ISO-B	●*			9.525	1.5	1.1	0.18
16	3		R	16ER30ISO-M			●	9.525	1.6	1.2	0.38	16IR30ISO-M			●	9.525	1.6	1.2	0.21
22	3.5		R	22ER35ISO-B	●*			12.7	2.3	1.6	0.48								
22	4		R	22ER40ISO-B	●*			12.7	2.3	1.6	0.52								

Note: ●* There are two different types of shims for AH725 inserts dependent on the chipbreaker used. Always choose the correct shim from the table on Page 21 before use. If a mismatched shim is used for an AH725 insert, proper insert support is not provided, resulting in unsuccessful tool performance and short tool life.

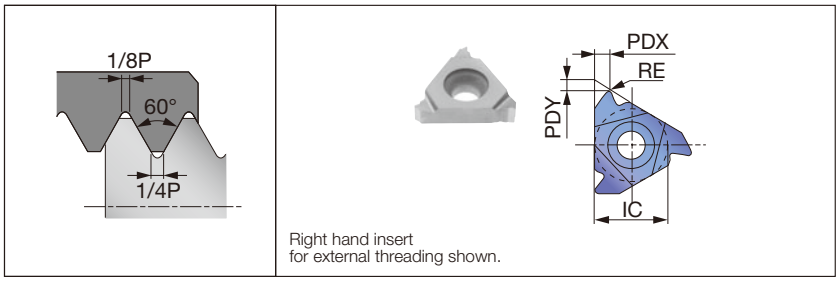
may require an alternative shim.

AH725 may require an alternative shim. Please check your insert specification on Page 21.

● : New item

● : Line-up / Packing Quantity = 5 pcs.

Unified



Right hand insert
for external threading shown.

Applicable toolholders

Insert size	External	Internal
11		SNR/L**11...
16	CER/L**16... B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22...	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...

Full-profile inserts

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert							Internal insert						
				Designation	Grades / Coating AH725	Grades / Coating T313V	IC	PDX	PDY	RE	Designation	Grades / Coating AH725	Grades / Coating T313V	IC	PDX	PDY	RE
11	(0.794)	32	R								11IR32UN	●		6.35	0.5	1.2	0.06
11	(0.907)	28	R								11IR28UN	●		6.35	0.5	1.2	0.06
11	(1.058)	24	R								11IR24UN	●		6.35	0.9	0.7	0.07
11	(1.27)	20	R								11IR20UN	●		6.35	0.9	0.7	0.09
11	(1.411)	18	R								11IR18UN	●		6.35	0.9	0.7	0.1
11	(1.588)	16	R								11IR16UN	●		6.35	0.9	0.7	0.11
11	(1.814)	14	R								11IR14UN	●		6.35	0.9	0.7	0.13
16	(0.794)	32	R	16ER32UN	●		9.525	0.5	1.2	0.1	16IR32UN	●		9.525	0.5	1.2	0.06
16	(0.907)	28	R	16ER28UN	●		9.525	0.5	1.2	0.11	16IR28UN	●		9.525	0.5	1.2	0.06
16	(1.058)	24	R	16ER24UN	●		9.525	0.9	0.7	0.13	16IR24UN	●		9.525	0.9	0.7	0.07
16	(1.27)	20	R	16ER20UN	●		9.525	0.9	0.7	0.16	16IR20UN	●		9.525	0.9	0.7	0.09
16	(1.411)	18	R	16ER18UN	●		9.525	0.9	0.7	0.18	16IR18UN	●		9.525	0.9	0.7	0.1
16	(1.588)	16	R	16ER16UN	●	●	9.525	0.9	0.7	0.2	16IR16UN	●	●	9.525	0.9	0.7	0.11
16	(1.814)	14	R	16ER14UN	●	●	9.525	1.6	1.2	0.23	16IR14UN	●	●	9.525	1.6	1.2	0.13
16	(1.954)	13	R	16ER13UN	●		9.525	1.6	1.2	0.24	16IR13UN	●		9.525	1.6	1.2	0.14
16	(2.117)	12	R	16ER12UN	●	●	9.525	1.6	1.2	0.27	16IR12UN	●	●	9.525	1.6	1.2	0.15
16	(2.309)	11	R	16ER11UN	●		9.525	1.6	1.2	0.29	16IR11UN	●		9.525	1.6	1.2	0.16
16	(2.54)	10	R	16ER10UN	●		9.525	1.6	1.2	0.32	16IR10UN	●		9.525	1.6	1.2	0.18
16	(2.822)	9	R	16ER9UN	●		9.525	1.6	1.2	0.35	16IR9UN	●		9.525	1.6	1.2	0.2
16	(3.175)	8	R	16ER8UN	●	●	9.525	1.6	1.2	0.4	16IR8UN	●	●	9.525	1.6	1.2	0.22
22	(3.629)	7	R	22ER7UN	●		12.7	2.5	1.7	0.45	22IR7UN	●		12.7	2.5	1.7	0.25
22	(4.233)	6	R	22ER6UN	●		12.7	2.5	1.7	0.53	22IR6UN	●		12.7	2.5	1.7	0.3
22	(5.08)	5	R	22ER5UN	●		12.7	2.5	1.7	0.64	22IR5UN	●		12.7	2.5	1.7	0.36

● : Line-up / Packing Quantity = 5 pcs.

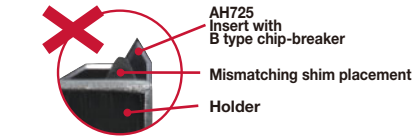
Full-profile inserts with chipbreaker

Insert size	Pitch	TPI	Hand of cut	External insert							Internal insert						
				Designation	Grades		IC	PDX	PDY	RE	Designation	Grades		IC	PDX	PDY	RE
					Coating AH725	Cermet NS9530						Coating AH725	Cermet NS9530				
16	(1.058)	24	R	**16ER24UN-B**	●*		9.525	0.8	0.7	0.11							
16	(1.058)	24	R	**16ER24UN-M**		●	9.525	0.9	0.7	0.13							
16	(1.27)	20	R	**16ER20UN-B**	●*		9.525	0.9	0.8	0.14	**16IR20UN-B**	●*		9.525	0.9	0.8	0.06
16	(1.27)	20	R	**16ER20UN-M**		●	9.525	0.9	0.7	0.16	**16IR20UN-M**		●	9.525	0.9	0.7	0.09
16	(1.411)	18	R	**16ER18UN-B**	●*		9.525	1	0.8	0.15	**16IR18UN-B**	●*		9.525	1	0.8	0.08
16	(1.411)	18	R	**16ER18UN-M**		●	9.525	0.9	0.7	0.18	**16IR18UN-M**		●	9.525	0.9	0.7	0.1
16	(1.588)	16	R	**16ER16UN-B**	●*		9.525	1.1	0.9	0.19	**16IR16UN-B**	●*		9.525	1.1	0.9	0.09
16	(1.588)	16	R	**16ER16UN-M**		●	9.525	0.9	0.7	0.2	**16IR16UN-M**		●	9.525	0.9	0.7	0.11
16	(1.814)	14	R	**16ER14UN-B**	●*		9.525	1.2	1	0.22	**16IR14UN-B**	●*		9.525	1.2	0.9	0.11
16	(1.814)	14	R	**16ER14UN-M**		●	9.525	1.6	1.2	0.23	**16IR14UN-M**		●	9.525	1.6	1.2	0.13
16	(1.954)	13	R	**16ER13UN-B**	●*		9.525	1.3	1	0.24							
16	(2.117)	12	R	**16ER12UN-B**	●*		9.525	1.4	1.1	0.25	**16IR12UN-B**	●*		9.525	1.4	1.1	0.12
16	(2.117)	12	R	**16ER12UN-M**		●	9.525	1.6	1.2	0.27	**16IR12UN-M**		●	9.525	1.6	1.2	0.15
16	(3.175)	8	R	**16ER8UN-B**	●*		9.525	1.6	1.2	0.41	**16IR8UN-B**	●*		9.525	1.5	1.1	0.19
16	(3.175)	8	R	**16ER8UN-M**		●	9.525	1.6	1.2	0.4	**16IR8UN-M**		●	9.525	1.6	1.2	0.22

Note: ●* There are two different types of shims for AH725 inserts dependent on the chipbreaker used. Always choose the correct shim from the table on Page 21 before use. If a mismatched shim is used for an AH725 insert, proper insert support is not provided, resulting in unsuccessful tool performance and short tool life.

may require an alternative shim.

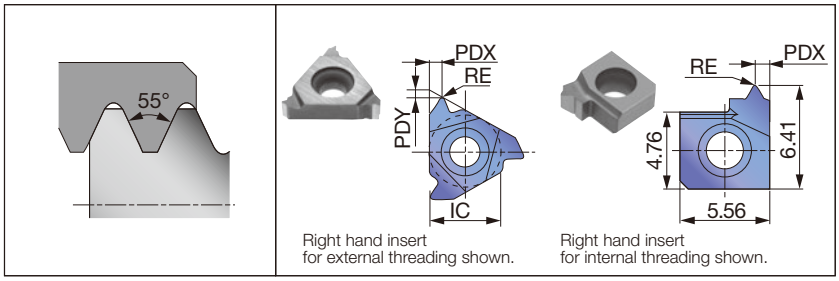
AH725 may require an alternative shim. Please check your insert specification on Page 21.



Incorrect insert and shim setting

● : Line-up / Packing Quantity = 5 pcs.

Whitworth



Applicable toolholders

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
11		SNR/L**11...
16	CER/L**16... B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22...	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...

Full-profile inserts

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert: Designation	Grades: Coating AH725	Coating T313V	Uncoated TH10	IC	PDX	PDY	RE	Internal insert: Designation	Grades: Coating AH725	Coating T313V	Uncoated TH10	IC	PDX	PDY	RE
6	(1.337)	19	R									6IR19W	●		●	-	0.9	-	0.17
11	(1.337)	19	R									11IR19W	●	●	●	6.35	0.9	0.7	0.17
11	(1.814)	14	R									11IR14W	●	●	●	6.35	0.9	0.7	0.23
16	(0.907)	28	R	16ER28W	●	●		9.525	0.9	0.7	0.11	16IR28W	●			9.525	0.9	0.7	0.11
16	(0.97)	26	R	16ER26W	●			9.525	0.9	0.7	0.12	16IR26W	●			9.525	0.9	0.7	0.12
16	(1.27)	20	R	16ER20W	●			9.525	0.9	0.7	0.16	16IR20W	●			9.525	0.9	0.7	0.16
16	(1.337)	19	R	16ER19W	●	●		9.525	0.9	0.7	0.17	16IR19W	●			9.525	0.9	0.7	0.17
16	(1.411)	18	R	16ER18W	●			9.525	0.9	0.7	0.18	16IR18W	●			9.525	0.9	0.7	0.18
16	(1.588)	16	R	16ER16W	●	●		9.525	0.9	0.7	0.2	16IR16W	●	●		9.525	0.9	0.7	0.2
16	(1.814)	14	R	16ER14W	●	●	●	9.525	1.6	1.2	0.23	16IR14W	●	●	●	9.525	1.6	1.2	0.23
16	(1.814)	14	L	16EL14W	●			9.525	1.6	1.2	0.23								
16	(2.117)	12	R	16ER12W	●	●		9.525	1.6	1.2	0.27	16IR12W	●	●		9.525	1.6	1.2	0.27
16	(2.309)	11	R	16ER11W	●	●	●	9.525	1.6	1.2	0.29	16IR11W	●	●	●	9.525	1.6	1.2	0.29
16	(2.54)	10	R	16ER10W	●	●		9.525	1.6	1.2	0.32	16IR10W	●	●		9.525	1.6	1.2	0.32
16	(2.822)	9	R	16ER9W	●			9.525	1.6	1.2	0.35	16IR9W	●			9.525	1.6	1.2	0.35
16	(3.175)	8	R	16ER8W	●	●		9.525	1.6	1.2	0.4	16IR8W	●	●		9.525	1.6	1.2	0.4
22	(3.629)	7	R	22ER7W	●			12.7	2.5	1.7	0.45	22IR7W	●			12.7	2.5	1.7	0.45
22	(4.233)	6	R	22ER6W	●			12.7	2.5	1.7	0.53	22IR6W	●			12.7	2.5	1.7	0.53
22	(5.08)	5	R	22ER5W	●			12.7	2.5	1.7	0.64	22IR5W	●			12.7	2.5	1.7	0.64

Full-profile inserts with chipbreaker

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert: Designation	Grades: Coating AH725	Coating AH8015	Cermet NS9530	IC	PDX	PDY	RE	Internal insert: Designation	Grades: Coating AH725 (New)	Coating AH8015	Cermet NS9530	IC	PDX	PDY	RE
16	(1.337)	19	R	16ER19W-B	●*			9.525	1	0.8	0.16								
16	(1.337)	19	R	16ER19W-M			●	9.525	0.9	0.7	0.17	16IR19W-M			●	9.525	0.9	0.7	0.17
16	(1.588)	16	R	16ER16W-B	●*			9.525	1.1	0.9	0.2	16IR16W-B	●*			9.525	1.1	0.9	0.18
16	(1.814)	14	R	16ER14W-B	●*			9.525	1.2	1	0.24	16IR14W-B	●*			9.525	1.2	1	0.21
16	(1.814)	14	R	16ER14W-M			●	9.525	1.6	1.2	0.23	16IR14W-M		●	●	9.525	1.6	1.2	0.23
16	(2.309)	11	R	16ER11W-B	●*			9.525	1.5	1.1	0.27	16IR11W-B	●*			9.525	1.5	1.1	0.27
16	(2.309)	11	R	16ER11W-M			●	9.525	1.6	1.2	0.29	16IR11W-M			●	9.525	1.6	1.2	0.29

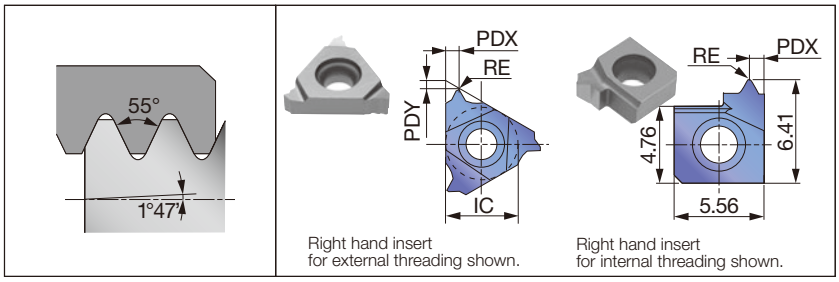
Note: ●* There are two different types of shims for AH725 inserts dependent on the chipbreaker used. Always choose the correct shim from the table on Page 21 before use. If a mismatched shim is used for an AH725 insert, proper insert support is not provided, resulting in unsuccessful tool performance and short tool life.

may require an alternative shim.

AH725 may require an alternative shim. Please check your insert specification on Page 21.

● : New item ● : Line-up / Packing Quantity = 5 pcs.

Taper pipe (BSPT)



Applicable toolholders

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
11		SNR/L**11...
16	CER/L**16... B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...

Full-profile inserts

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert: Designation	Grades: Coating AH725	Coating T313V	Un-coated TH10	IC	PDX	PDY	RE	Internal insert: Designation	Grades: Coating AH725	Coating T313V	Un-coated TH10	IC	PDX	PDY	RE
6	(1.337)	19	R									6IR19PT	●		●	-	0.9	-	0.14
11	(1.337)	19	R									11IR19PT	●	●	●	6.35	0.9	0.7	0.14
11	(1.814)	14	R									11IR14PT	●	●	●	6.35	0.9	0.7	0.16
16	(0.907)	28	R	16ER28PT	●	●		9.525	0.9	0.7	0.09								
16	(1.337)	19	R	16ER19PT	●	●		9.525	0.9	0.7	0.14	16IR19PT	●			9.525	0.9	0.7	0.14
16	(1.814)	14	R	16ER14PT	●	●		9.525	1.6	1.2	0.16	16IR14PT	●	●	●	9.525	1.6	1.2	0.16
16	(2.309)	11	R	16ER11PT	●	●		9.525	1.6	1.2	0.26	16IR11PT	●	●	●	9.525	1.6	1.2	0.26

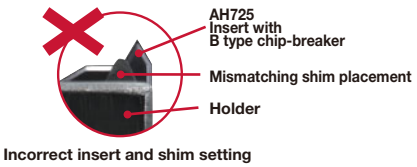
Full-profile inserts with chipbreaker

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert: Designation	Grades: Coating AH725	Cermet NS9530	IC	PDX	PDY	RE	Internal insert: Designation	Grades: Coating AH725	Cermet NS9530	IC	PDX	PDY	RE
16	(1.337)	19	R	16ER19PT-M		●	9.525	0.9	0.7	0.18	16IR19PT-M		●	9.525	0.9	0.7	0.18
16	(1.814)	14	R	16ER14PT-B	●*		9.525	1.2	1	0.21	16IR14PT-B	●*		9.525	1	1.2	0.21
16	(1.814)	14	R	16ER14PT-M		●	9.525	1.6	1.2	0.25	16IR14PT-M		●	9.525	1.6	1.2	0.25
16	(2.309)	11	R	16ER11PT-B	●*		9.525	1.5	1.1	0.28	16IR11PT-B	●*		9.525	1.5	1.1	0.28
16	(2.309)	11	R	16ER11PT-M		●	9.525	1.6	1.2	0.32	16IR11PT-M		●	9.525	1.6	1.2	0.32

Note: ●* There are two different types of shims for AH725 inserts dependent on the chipbreaker used. Always choose the correct shim from the table on Page 21 before use. If a mismatched shim is used for an AH725 insert, proper insert support is not provided, resulting in unsuccessful tool performance and short tool life.

may require an alternative shim.

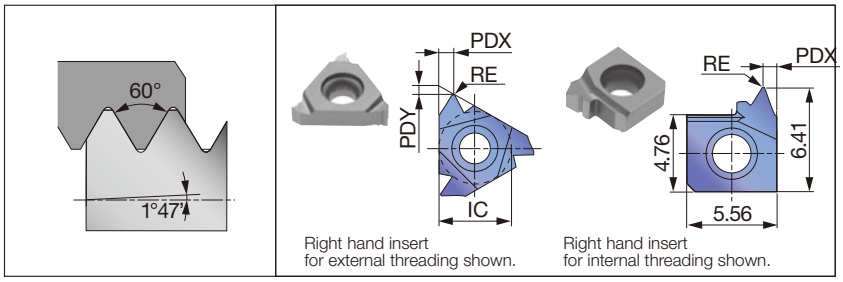
AH725 may require an alternative shim. Please check your insert specification on Page 21.



Incorrect insert and shim setting

● : Line-up / Packing Quantity = 5 pcs.

NPT



Applicable toolholders

Insert size	External	Internal
6		SNR/L000*K06SC... SNR/L000*H06...
16	CER/L**16... B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...

Full-profile inserts

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert: Designation	Grades: Coating AH725	Coating T313V	Uncoated TH10	IC	PDX	PDY	RE	Internal insert: Designation	Grades: Coating AH725	Coating T313V	Uncoated TH10	IC	PDX	PDY	RE
6	(1.411)	18	R									6IR18NPT	●		●	-	0.9	-	0.03
16	(0.941)	27	R	16ER27NPT	●			9.525	0.5	1.2	0.02	16IR27NPT	●			9.525	0.5	1.2	0.02
16	(1.411)	18	R	16ER18NPT	●	●		9.525	0.9	0.7	0.03	16IR18NPT	●			9.525	0.9	0.7	0.03
16	(1.814)	14	R	16ER14NPT	●			9.525	1.6	1.2	0.04	16IR14NPT	●		●	9.525	1.6	1.2	0.04
16	(2.209)	11.5	R	16ER115NPT	●			9.525	1.6	1.2	0.05	16IR115NPT	●		●	9.525	1.6	1.2	0.05
16	(3.175)	8	R	16ER8NPT	●			9.525	1.6	1.2	0.07	16IR8NPT	●		●	9.525	1.6	1.2	0.07

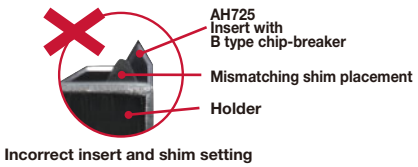
Full-profile inserts with chipbreaker

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert: Designation	Grades: Coating AH725	Cermet NS9530	IC	PDX	PDY	RE	Internal insert: Designation	Grades: Coating AH725	Cermet NS9530	IC	PDX	PDY	RE
16	(1.411)	18	R	16ER18NPT-B	●*		9.525	1	0.8	0.05							
16	(1.411)	18	R	16ER18NPT-M		●	9.525	0.9	0.7	0.07	16IR18NPT-M		●	9.525	0.9	0.7	0.07
16	(1.814)	14	R	16ER14NPT-B	●*		9.525	1.2	0.9	0.05	16IR14NPT-B	●*		9.525	1.2	0.9	0.05
16	(1.814)	14	R	16ER14NPT-M		●	9.525	1.6	1.2	0.08	16IR14NPT-M		●	9.525	1.6	1.2	0.08
16	(2.209)	11.5	R	16ER115NPT-B	●*		9.525	1.5	1.1	0.09	16IR115NPT-B	●*		9.525	1.5	1.1	0.09
16	(2.209)	11.5	R	16ER115NPT-M		●	9.525	1.6	1.2	0.09	16IR115NPT-M		●	9.525	1.6	1.2	0.09
16	(3.175)	8	R	16ER8NPT-B	●*		9.525	1.8	1.3	0.12	16IR8NPT-B	●*		9.525	1.8	1.3	0.12

Note: ●* There are two different types of shims for AH725 inserts dependent on the chipbreaker used. Always choose the correct shim from the table on Page 21 before use. If a mismatched shim is used for an AH725 insert, proper insert support is not provided, resulting in unsuccessful tool performance and short tool life.

may require an alternative shim.

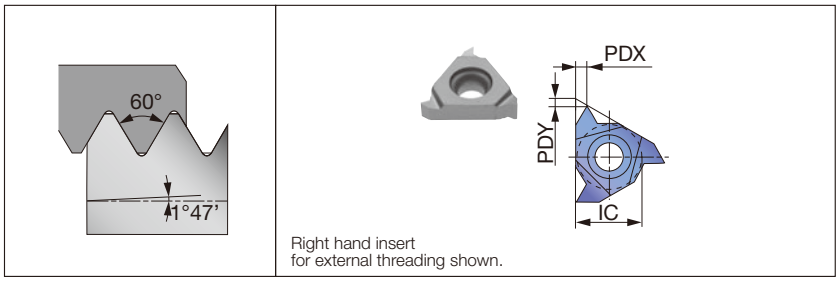
AH725 may require an alternative shim. Please check your insert specification on Page 21.



Incorrect insert and shim setting

● : Line-up / Packing Quantity = 5 pcs.

NPTF



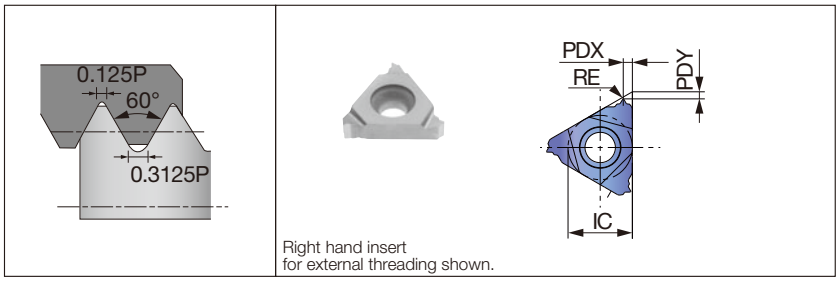
Applicable toolholders

Insert size	External	Internal
16	CER/L**16...	TSNR/L**16
	B-SER/L**16	SNR/L**16...
	B-CER/L**16	TCNR/L**16...
	BC-SER/L**16	CNR/L**16...

Full-profile inserts

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert						Internal insert					
				Designation	Grades / Coating / AH725	IC	PDX	PDY	RE	Designation	Grades / Coating / AH725	IC	PDX	PDY	RE
16	(0.941)	27	R	**16ER27NPTF**	●	9.525	0.5	1.2	-						
16	(1.411)	18	R	**16ER18NPTF**	●	9.525	0.9	0.7	-						
16	(1.814)	14	R	**16ER14NPTF**	●	9.525	1.6	1.2	-	**16IR14NPTF**	●	9.525	1.6	1.2	-
16	(2.209)	11.5	R	**16ER115NPTF**	●	9.525	1.6	1.2	-	**16IR115NPTF**	●	9.525	1.6	1.2	-
16	(3.175)	8	R	**16ER8NPTF**	●	9.525	1.6	1.2	-	**16IR8NPTF**	●	9.525	1.6	1.2	-

MJ



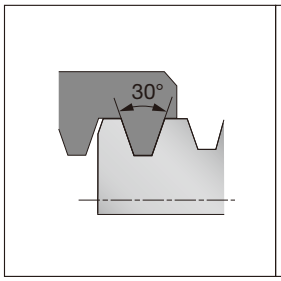
Applicable toolholders

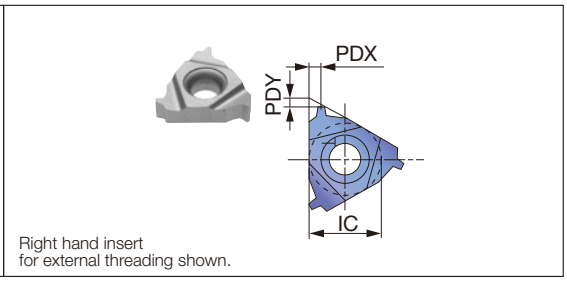
Insert size	External	Internal
11		SNR**11...

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert					
				Designation	Grades / Coating / AH8015	IC	PDX	PDY	RE
11	1		R	**11IR10MJ**	●	6.35	0.9	0.7	0.05

● : Line-up / Packing Quantity = 5 pcs.

30° Trapezoidal (DIN103)





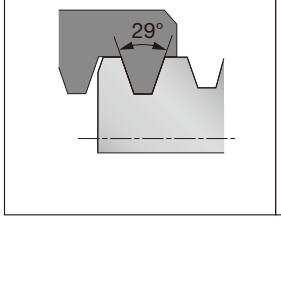
Right hand insert
for external threading shown.

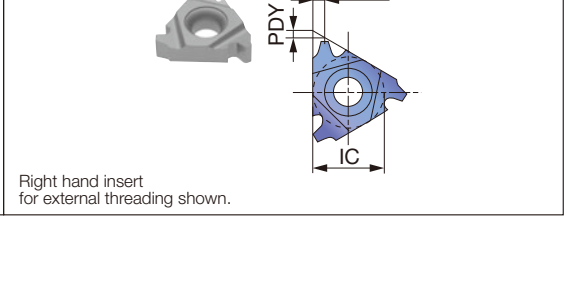
Applicable toolholders

Insert size	External	Internal
16	CER/L**16... B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22...	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...
27	CER/L**27...	CNR/L**27...

Insert size	Pitch	TPI	Hand of cut	External insert						Internal insert					
				Designation	Grades / Coating		IC	PDX	PDY	Designation	Grades / Coating		IC	PDX	PDY
					AH725	T313V					AH725	T313V			
16	1.5		R	**16ER15TR**	●		9.525	0.9	0.7	**16IR15TR**	●		9.525	0.9	0.7
16	2		R	**16ER20TR**	●	●	9.525	1.6	1.3	**16IR20TR**	●	●	9.525	1.6	1.3
16	3		R	**16ER30TR**	●	●	9.525	1.6	1.3	**16IR30TR**	●	●	9.525	1.6	1.3
22	4		R	**22ER40TR**	●	●	12.7	2.5	2	**22IR40TR**	●	●	12.7	2.5	2
22	5		R	**22ER50TR**	●	●	12.7	2.5	2	**22IR50TR**	●	●	12.7	2.5	2
27	6		R	**27ER60TR**	●	●	15.875	3.2	2.5						

29° Trapezoidal (ACME)





Right hand insert
for external threading shown.

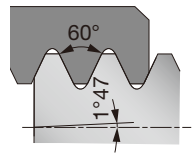
Applicable toolholders

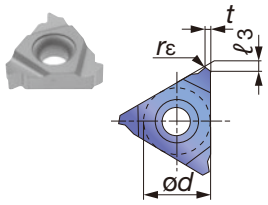
Insert size	External	Internal
16	CER/L**16... B-SER/L**16 B-CER/L**16 BC-SER/L**16	TSNR/L**16 SNR/L**16... TCNR/L**16... CNR/L**16...
22	CER/L**22...	TSNR/L**22 SNR/L**22... TCNR/L**22... CNR/L**22...

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert						Internal insert					
				Designation	Grades / Coating		IC	PDX	PDY	Designation	Grades / Coating		IC	PDX	PDY
					AH725	T313V					AH725	T313V			
16	(2.117)	12	R	**16ER12ACME**	●		9.525	1.6	1.3	**16IR12ACME**	●		9.525	1.6	1.3
16	(2.540)	10	R	**16ER10ACME**	●		9.525	1.6	1.3	**16IR10ACME**	●		9.525	1.6	1.3
16	(3.175)	8	R	**16ER8ACME**	●	●	9.525	1.6	1.3	**16IR8ACME**	●	●	9.525	1.6	1.3
22	(4.233)	6	R	**22ER6ACME**	●	●	12.7	2.5	2	**22IR6ACME**	●	●	12.7	2.5	2
22	(5.080)	5	R	**22ER5ACME**	●	●	12.7	2.5	2	**22IR5ACME**	●	●	12.7	2.5	2

● : Line-up / Packing Quantity = 5 pcs.

API Round





Right hand insert
for internal threading shown.

Applicable toolholders

Insert size	External	Internal
16	CER/L**16...	TSNR/L**16
	B-SER/L**16	SNR/L**16...
	B-CER/L**16	TCNR/L**16...
	BC-SER/L**16	CNR/L**16...

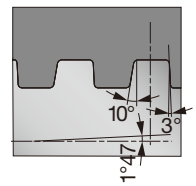
Full-profile inserts

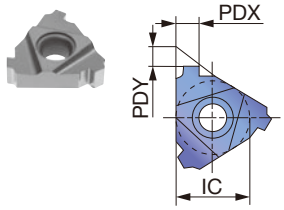
Insert size	Pitch (Reference)	TPI	Hand of cut	External insert: Designation	Grades: Coating: AH725	Grades: Coating: T313V	IC	PDX	PDY	RE	Internal insert: Designation	Grades: Coating: AH725	Grades: Coating: T313V	IC	PDX	PDY	RE
16	(2.54)	10	R	**16ER10RAPI**	●		9.525	1.6	1.2	0.36	**16IR10RAPI**	●	●	9.525	1.6	1.2	0.36
16	(3.175)	8	R	**16ER8RAPI**	●		9.525	1.6	1.2	0.43	**16IR8RAPI**	●	●	9.525	1.6	1.2	0.43
22	(3.175)	8	R								**22IR8RAPI-2T**	●		12.7	4.5	3	0.43

Full-profile inserts with chipbreaker

Insert size	Pitch (Reference)	Number of threads	Hand of cut	External insert: Designation	Grades: Coating: AH725	IC	PDX	PDY	RE	Internal insert: Designation	Grades: Coating: AH725	IC	PDX	PDY	RE
16	(2.54)	10	R	**16ER10RD-CB**	●	9.525	1.2	1.5	0.36	**16IR10RD-CB**	●	9.525	1.2	1.5	0.36
16	(3.175)	8	R	**16ER8RD-CB**	●	9.525	1.3	1.5	0.43	**16IR8RD-CB**	●	9.525	1.3	1.5	0.43

API Buttress





Right hand insert
for external threading shown.

Applicable toolholders

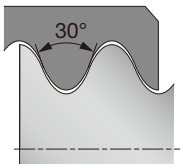
Insert size	External	Internal
22	CER/L**22...	TSNR/L**22
		SNR/L**22...
		TCNR/L**22...
		CNR/L**22...

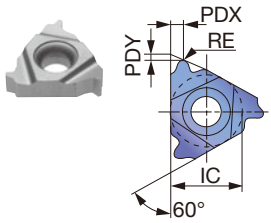
Full-profile inserts

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert: Designation	Grades: Coating: AH725	IC	PDX	PDY	Internal insert: Designation	Grades: Coating: AH725	IC	PDX	PDY
22	(5.08)	5	R	**22ER5BAPI**	●	12.7	3.72	2.2	**22IR5BAPI**	●	12.7	3.45	2.2

● : Line-up / Packing Quantity = 5 pcs.

Round (DIN405)





Right hand insert
for external threading shown.

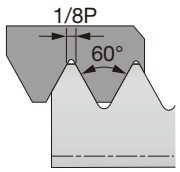
Applicable toolholders

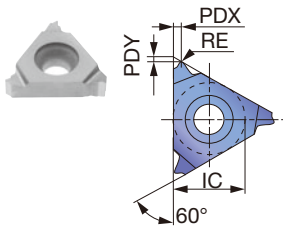
Insert size	External	Internal
16	CER/L**16...	TSNR/L**16
	B-SER/L**16	SNR/L**16...
	B-CER/L**16	TCNR/L**16...
	BC-SER/L**16	CNR/L**16...

Full-profile inserts

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert						Internal insert					
				Designation	Grades / Coating / AH725	IC	PDX	PDY	RE	Designation	Grades / Coating / AH725	IC	PDX	PDY	RE
16		8	R	**16ER8RD-B**	●	9.525	1.3	1.4	-						
16		6	R	**16ER6RD-B**	●	9.525	1.7	1.5	-	**16IR6RD-B**	●	9.525	1.5	1.4	-

UNJ (Aerospace)





Right hand (R) shown.

Applicable toolholders

Insert size	External
16	CER/L**16...
	B-SER/L**16
	B-CER/L**16
	BC-SER/L**16

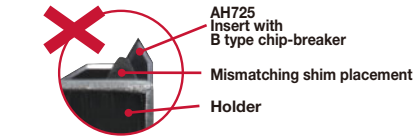
Full-profile inserts

Insert size	Pitch (Reference)	TPI	Hand of cut	External insert					
				Designation	Grades / Coating / AH725	IC	PDX	PDY	RE
16		32	R	**16ER32UNJ**	●	9.525	0.5	1.2	0.13
16		28	R	**16ER28UNJ**	●	9.525	0.5	1.2	0.15
16		24	R	**16ER24UNJ**	●	9.525	0.9	0.7	0.18
16		20	R	**16ER20UNJ**	●	9.525	0.9	0.7	0.21
16		18	R	**16ER18UNJ**	●	9.525	0.9	0.7	0.24
16		16	R	**16ER16UNJ**	●	9.525	0.9	0.7	0.26
16		14	R	**16ER14UNJ**	●	9.525	1.6	1.2	0.3
16		12	R	**16ER12UNJ**	●	9.525	1.6	1.2	0.35
16		10	R	**16ER10UNJ**	●	9.525	1.6	1.2	0.42
16		8	R	**16ER8UNJ**	●	9.525	1.6	1.2	0.53

● : Line-up / Packing Quantity = 5 pcs.

IMPORTANT NOTICE - Replacement of shim sheet

Note: ●* There are two different types of shims for AH725 inserts dependent on the chipbreaker used. Always choose the correct shim from the table below before use. If a mismatched shim is used for an AH725 insert, proper insert support is not provided, resulting in unsuccessful tool performance and short tool life.



Incorrect insert and shim setting

List of interchangeable Shims (Size 16 · Insert).

Holder type	Lead Angle	External designation		Internal designation	
		① Conventional	❶ Standard (New)	② Conventional	❷ Standard (New)
Dual clamping methods of screw-on and clamp-on	4°	GXE16-4DT	AE16-4DT	GXN16-4DT	AN16-4DT
	3°	GXE16-3DT	AE16-3DT	GXN16-3DT	AN16-3DT
	2°	GXE16-2DT	AE16-2DT	GXN16-2DT	AN16-2DT
	1° (Standard)	GX16-1DT	A16-1DT	GX16-1DT	A16-1DT
	0°	GXE16-0DT	AE16-0DT	GXN16-0DT	AN16-0DT
	-1°	GXE16-99DT	AE16-99DT	GXN16-99DT	AN16-99DT
	-2°	GXE16-98DT	AE16-98DT	GXN16-98DT	AN16-98DT
Clamp-on	4°	GXE16-4	AE16-4	GXN16-4	AN16-4
	3°	GXE16-3	AE16-3	GXN16-3	AN16-3
	2°	GXE16-2	AE16-2	GXN16-2	AN16-2
	1° (Standard)	GXE16-1	A16-1	GXN16-1	A16-1
	0°	GXE16-0	AE16-0	GXN16-0	AN16-0
	-1°	GXE16-99	AE16-99	GXN16-99	AN16-99
	-2°	GXE16-98	AE16-98	GXN16-98	AN16-98

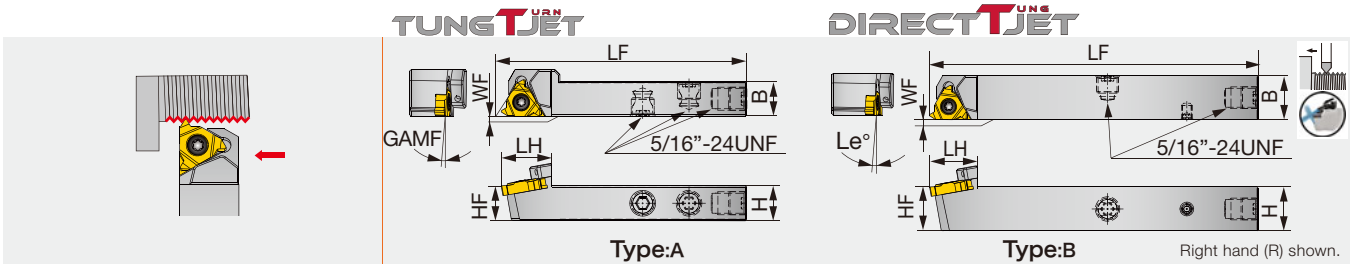
Target items for the replacement of shims (Size 16 · Insert).

Thread type	External			Internal		
	Designation	Grades	Replacement	Designation	Grades	Replacement
ISO			① Conventional ↓ ❶ Standard (New)	16IR15ISO-B	AH725	② Conventional ↓ ❷ Standard (New)
				16IR175ISO-B	AH725	
				16IR20ISO-B	AH725	
55°	16ERAG55-B	AH725		16IRAG55-B	AH725	
				16IRG55-B	AH725	
60°	16ERA60-B	AH725		16IRAG60-B	AH725	
				16IRA60-B	AH725	
				16IRG60-B	AH725	
UN				16IR18UN-B	AH725	
				16IR16UN-B	AH725	
				16IR14UN-B	AH725	
W				16IR16W-B	AH725	
				16IR14W-B	AH725	
PT				16IR14PT-B	AH725	
NPT	16ER8NPT-B	AH725		16IR14NPT-B	AH725	
				16IR115NPT-B	AH725	

TUNGTHREAD
TUNGALOY

TOOLHOLDERS
TUNGTHREAD
JSE2R16-CHP

External threading.High-pressure coolant capability, including DirectTungJet system.



Designation	H	B	LF	LH	HF	WF	GAMF	Type	Insert
JSE2R1212F16-CHP	12	12	85	19	12	0	1°	A	16ER...
JSE2R1212X16-CHP	12	12	120	19	12	0	1°	B	16ER...
JSE2R1616X16-CHP	16	16	120	19	16	0	1°	B	16ER...

* External coolant tube connection type

SPARE PARTS

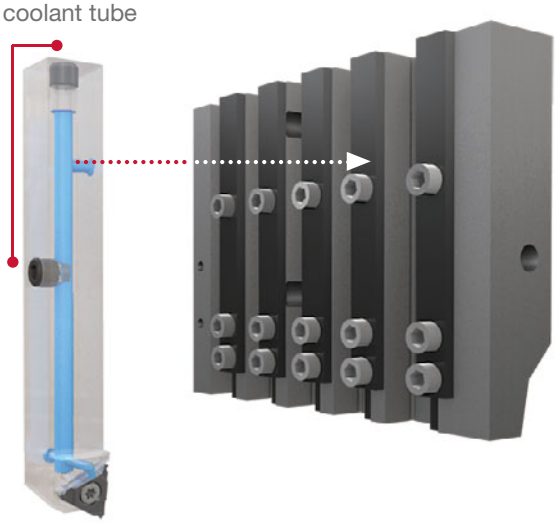
Designation	Clamping screw	Wrench
JSE2R**16-CHP	CSTB-3.5	T-15F

DIRECTTJET system

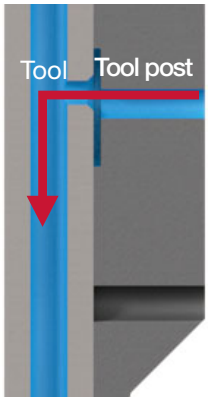
Tube-free design streamlines tool setup
Through-coolant supply enables high productivity

Coolant is supplied from the tool post directly to the tools

Optional connection with external coolant tube



Detailed view of the coolant flow after connection

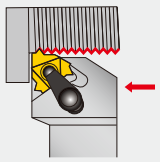


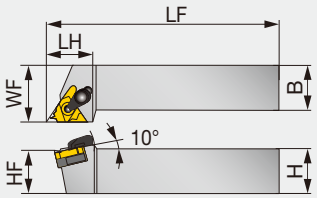
No need for coolant tube setup.
Eliminates chip entanglement on tubes and streamlines tool replacement.

TUNGTHREAD

CER/L

Clamp-on toolholders for external threading (screw-on type available as option for -DT type holders)





Right hand (R) shown.

Designation	H	B	LF	LH	HF	WF	Insert
CER/L1212H16DT	12	12	100	24	12	16	16ER/L...
CER/L1616H16DT	16	16	100	24	16	20	16ER/L...
CER/L2020K16DT	20	20	125	24	20	25	16ER/L...
CER/L2525M16DT	25	25	150	28	25	32	16ER/L...
CER/L2525M22DT	25	25	150	31.3	25	32	22ER/L...
CER3232P16T	32	32	170	32	32	40	16ER...
CER3232P22T	32	32	170	32	32	40	22ER...
CER2525M27T	25	25	150	34	25	32	27ER...
CER3232P27T	32	32	170	34	32	40	27ER...

Note: A clamp set for CER/L type consists of a clamp and a clamping screw. A shim set for CER/L type consists of a shim and a shim screw. Standard shims for CER/L type can be used for both left hand and right hand toolholders. Use either of the sides depending on the hand.

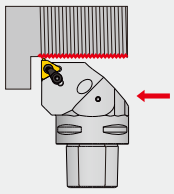
SPARE PARTS

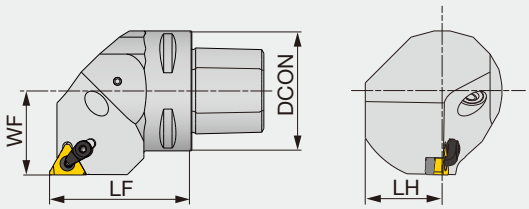
Designation	Clamp set	Clamping screw	Screw	Shim	Shim set	Wrench	Wrench 1	Wrench 2
CER/L**16DT	CSP16	CSTB-3.5ST	DTS5-3.5	A16-1DT	-	P-3.5	T-15F	-
CER/L2525M22DT	CSP22	CSTB-4ST	DTS6-4	GX22-1DT	-	P-4	T-15F	T-20F
CER3232P16T	CSP16	-	-	-	A16-1	-	T-15F	-
CER3232P22T	CSP22	-	-	-	NXE22-1	-	T-20F	-
CER**27T	CSP27	-	-	-	NXE27-1	P-4	-	-

TUNGCAP

C-CER/L

TungThread external threading toolholders, alternative clamping of screw-on or clamp-on





Right hand (R) shown.

Designation	DCON	LF	LH	WF	RE	Insert
C4CER/L27050-16ERN(2)	40	50	25	27	0.8	16ER/L...
C5CER/L35060-16ER(1)	50	60	32	35	0.8	16ER/L...
C5CER/L35060-16ERN(2)	50	60	32	35	0.8	16ER/L...
C6CER/L45065-16ER(1)	63	65	41	45	0.8	16ER/L...
C6CER/L45065-16ERN(2)	63	65	41	45	0.8	16ER/L...

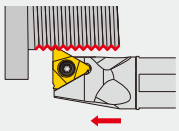
(1) Applicable for 3 MPa pressure coolant. (2) Applicable for 7 MPa pressure coolant.

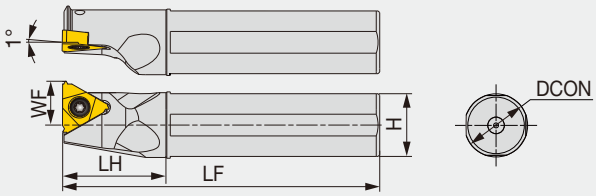
SPARE PARTS

Designation	Clamp set	Clamping screw	Coolant parts	Screw	Shim	Wrench	Wrench 1
C5CE*35060-16ER	CSP16	CSTB-3.5ST	EZ104	DTS5-3.5	A16-1DT	P-3.5	T-15F
C5CE*35060-16ERN	CSP16	CSTB-3.5ST	SATZ-M10X1-M5	DTS5-3.5	A16-1DT	P-3.5	T-15F
C6CE*45065-16ER	CSP16	CSTB-3.5ST	EZ104	DTS5-3.5	A16-1DT	P-3.5	T-15F
C6CE*45065-16ERN	CSP16	CSTB-3.5ST	SATZ-M10X1-M5	DTS5-3.5	A16-1DT	P-3.5	T-15F

TUNGTHREAD
JS-SEL16

External threading toolholders for Swiss-type lathe





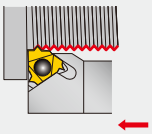
Designation	DCON	H	LF	LH	WF	Insert
JS16F-SEL16	16	15	85	25	11	16ER...
JS19G-SEL16	19.05	18	90	30	12.5	16ER...
JS19X-SEL16	19.05	18	120	30	12.5	16ER...
JS20G-SEL16	20	19	90	30	13	16ER...
JS20X-SEL16	20	19	120	30	13	16ER...
JS25HSEL16	25	24	100	30	15.5	16ER...
JS254X-SEL16	25.4	24	120	30	15.7	16ER...

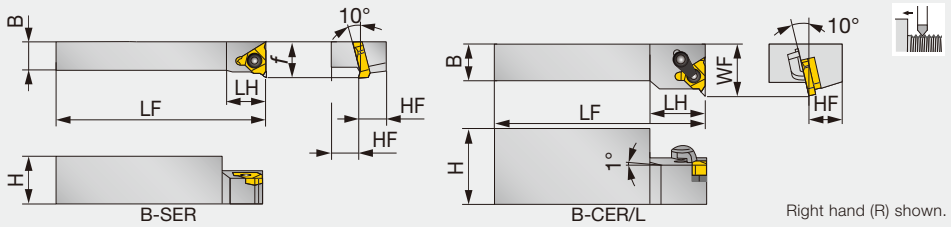
SPARE PARTS


Designation	Clamping screw	Wrench 1
JS***-SEL16	CSTB-3.5	T-15F

TUNGTHREAD
B-S/CER/L

External threading toolholders for Swiss-type lathe





Designation	H	B	LF	LH	HF	WF	Insert
B-SER10H16	20	10	100	15	10	16	16ER...
B-SER12K16	24	12	125	18	12	18	16ER...
B-CER/L16M16	32	16	150	24	16	22	16ER/L...

SPARE PARTS

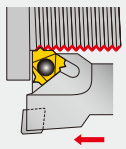


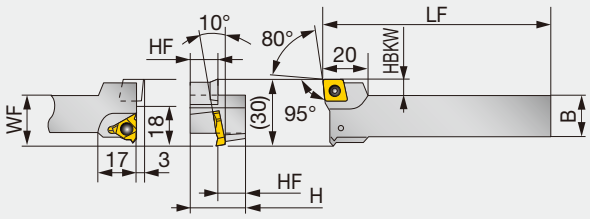

Designation	Clamp set	Shim set	Clamping screw	Wrench
B-SER**16	-	-	CSTB-3.5	T-15F
B-CER/L16M16	CSP16	A16-1	-	T-15F

TUNGTHREAD

BC-SER/L

Multi functional external threading toolholders for small lathe





Right hand (R) shown.

Designation	H	B	LF	HF	WF	HBKW	Insert
BC-SER12K16	24	16	125	12	23	7	16ER..., CC*T09T3...

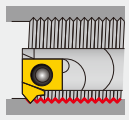
SPARE PARTS

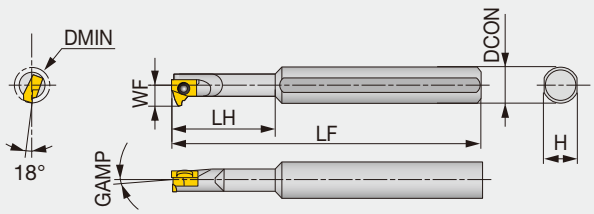
Designation	Clamping screw	Wrench
BC-SER12K16	CSTB-3.5	T-15F

TUNGTHREAD

SNR/L-2/3

Small-diameter internal threading toolholder, screw-on





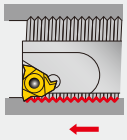
Designation	Material	DMIN	DCON	WF	LF	LH	H	GAMP	Insert
SNR0006H06-2	STEEL	8	8	4.7	100	18	7	2°	6IR...
SNR0006H06-3	STEEL	8	8	4.7	100	18	7	3°	6IR...
SNR0008H06-2	STEEL	10	8	5.7	100	18	7	2°	6IR...
SNR0008H06-3	STEEL	10	8	5.7	100	18	7	3°	6IR...
SNR0006K06SC-2	CARBIDE	8	8	4.7	125	30	7	2°	6IR...
SNR0006K06SC-3	CARBIDE	8	8	4.7	125	30	7	3°	6IR...
SNR0008K06SC-2	CARBIDE	10	8	5.7	125	18	7	2°	6IR...
SNR0008K06SC-3	CARBIDE	10	8	5.7	125	18	7	3°	6IR...

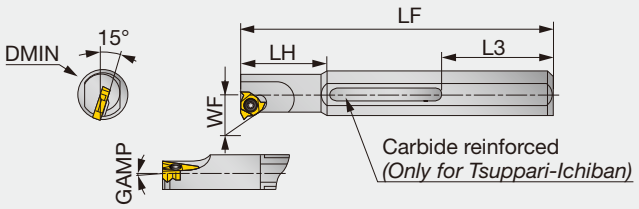
SPARE PARTS

Designation	Clamping screw	Wrench
SNR0006H06...	CSTB-2L040	T-6F
SNR0008H06...	CSTB-2L	T-6F
SNR0006K06SC...	CSTB-2L040	T-6F
SNR0008K06SC...	CSTB-2L	T-6F

TUNGTHREAD
SNR/L

Internal threading bars, Screw-on clamp





Right hand,
Tsuppari-Ichiban shank shown.

Designation	Material	DMIN	DCON	WF	LF	LH	L3	H	B	GAMP	Insert
TSNR0016Q16	Tuppari	19	16	10.6	180	40	59	15	-	1°	16IR...
TSNR0020R22	Tuppari	24	20	13.9	200	50	49	18	-	1°	22IR...
SNR/L0010K11	STEEL	12	16	6.6	125	25	-	15	15.5	1°	11IR/L...
SNR0010K11-2	STEEL	12	16	6.6	125	25	-	15	15.5	2°	11IR...
SNR0010K11-3	STEEL	12	16	6.6	125	25	-	15	15.5	3°	11IR...
SNR/L0013L11	STEEL	15	16	8.2	140	32.5	-	15	15.5	1°	11IR/L...
SNR0013L11-2	STEEL	15	16	8.2	140	32.5	-	15	15.5	2°	11IR...
SNR0013L11-3	STEEL	15	16	8.2	140	32.5	-	15	15.5	3°	11IR...
SNR/L0016M16	STEEL	19	16	10.6	150	40	-	15	15.5	1°	16IR/L...
SNR0016M16-2	STEEL	19	16	10.6	150	40	-	15	15.5	2°	16IR...
SNR0016M16-3	STEEL	19	16	10.6	150	40	-	15	15.5	3°	16IR...
SNR/L0020Q22	STEEL	24	20	13.9	180	50	-	18	19	1°	22IR/L...
SNR0020Q22-2	STEEL	24	20	13.9	180	50	-	18	19	2°	22IR...
SNR0020Q22-3	STEEL	24	20	13.9	180	50	-	18	19	3°	22IR...
SNR0010M11SC	CARBIDE	13	10	7.4	150	24	-	9	-	1°	11IR...
SNR0010M11SC-2	CARBIDE	13	10	7.4	150	24	-	9	-	2°	11IR...
SNR0010M11SC-3	CARBIDE	13	10	7.4	150	24	-	9	-	3°	11IR...
SNR0012P11SC	CARBIDE	15	12	8.5	170	28	-	11	-	1°	11IR...
SNR0012P11SC-2	CARBIDE	15	12	8.5	170	28	-	11	-	2°	11IR...
SNR0012P11SC-3	CARBIDE	15	12	8.5	170	28	-	11	-	3°	11IR...
SNR/L0016R16SC	CARBIDE	20	16	11.9	200	35	-	15	-	1°	16IR/L...
SNR0016R16SC-2	CARBIDE	20	16	11.9	200	35	-	15	-	2°	16IR...

Note: When using a right or left hand insert, the right hand insert (**IR...type) is used for the right hand toolholders (SNR...type) and left hand insert (**IL...type) is used for the left hand toolholders (SNL...type).

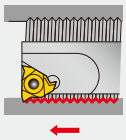
SPARE PARTS

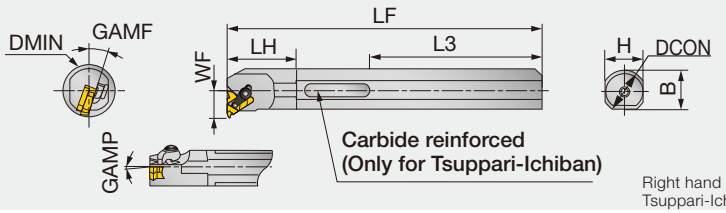

Designation	Clamping screw	Wrench
TSNR0016Q16	CSTB-3.5	T-15F
TSNR0020R22	CSTB-4	T-15F
SNR/L00**11...	CSTB-2.5	T-8F
SNR/L0016M16...	CSTB-3.5	T-15F
SNR/L0020Q22...	CSTB-4	T-15F
SNR00**11SC...	CSTB-2.5	T-8F
SNR/L0016R16SC...	CSTB-3.5	T-15F

TUNGTHREAD

CNR/L

Internal threading bars, alternative clamping of screw-on or clamp-on(DT type only)





Right hand (R),
Tsuppari-Ichiban shank type shown.

Designation	Material	DMIN	DOCN	WF	LF	LH	L3	H	B	GAMF	GAMP	Insert
TCNR0020R16DT	TSUPPARI	24	20	14	200	30	49	18	-	15°	1°	16IR...
TCNR0025S16DT	TSUPPARI	29	25	16.5	250	38	64	23	-	15°	1°	16IR...
TCNR0025S22DT	TSUPPARI	30	25	18.2	250	38	64	23	-	15°	1°	22IR...
CNR/L0020P16	STEEL	24	20	14	170	30	-	18	19	15°	1°	16IR/L...
CNR/L0025R16	STEEL	29	25	16.5	200	38	-	23	24	15°	1°	16IR/L...
CNR/L0032S16	STEEL	37	32	20.1	250	48	-	30	31	15°	1°	16IR/L...
CNR/L0025R22	STEEL	30	25	18.2	200	38	-	23	24	15°	1°	22IR/L...
CNR/L0032S22	STEEL	38	32	21.9	250	48	-	30	31	15°	1°	22IR/L...
CNR0040T27	STEEL	46	40	26.9	300	60	-	37	38.5	10°	1°	27IR...

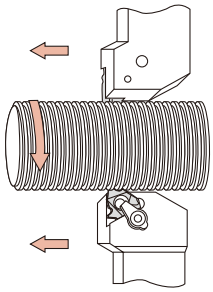
Note: A clamp set for CNR/L type toolholders consists of a clamp and a clamping screw. A shim set for CNR/L type toolholders consists of a shim and a shim fixing screw. Standard shims for CNR/L type toolholders are commonly used for right and left hand toolholders. The right hand insert (IR) is used for the right hand toolholder (CNR...) and left hand insert (IL) is used for left hand toolholder (CNL...).

SPARE PARTS

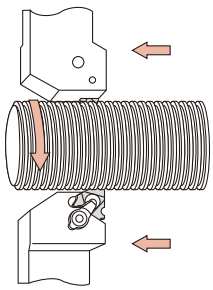
Designation	Clamp set	Clamping screw	Screw	Shim	Shim set R	Shim set L	Wrench	Wrench 1	Wrench 2
TCNR002**16DT	CSP16	CSTB-3.5ST	DTS5-3.5	A16-1DT	-	-	P-3.5	T-15F	-
TCNR0025S22DT	CSP22	CSTB-4ST	DTS6-4	GX22-1DT	-	-	P-4	T-15F	T-20F
CNR/L**16	CSP16	-	-	-	A16-1	A16-1	-	T-15F	-
CNR/L**22	CSP22	-	-	-	NXN22-1	NXE22-1	-	T-20F	-
CNR0040T27	CSP27	-	-	-	NXN27-1	NXE27-1	P-4	-	-

External threading

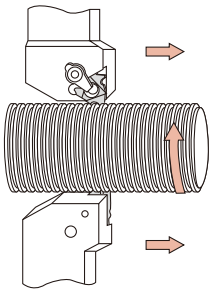
Right hand thread



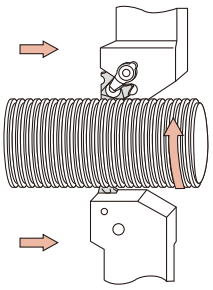
Work rotation	Regular
Feed direction	Push
Hand of toolholder	Right
Hand of insert	Right
Standard shim	①



Work rotation	Regular
Feed direction	Pull
Hand of toolholder	Left
Hand of insert	Left
Standard shim	④

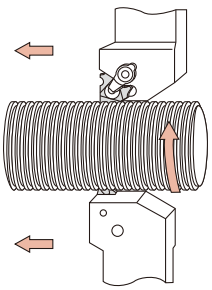


Work rotation	Reverse
Feed direction	Push
Hand of toolholder	Right
Hand of insert	Right
Standard shim	①

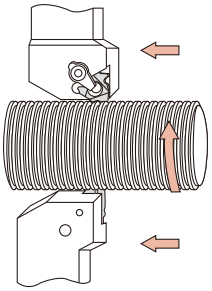


Work rotation	Reverse
Feed direction	Pull
Hand of toolholder	Left
Hand of insert	Left
Standard shim	④

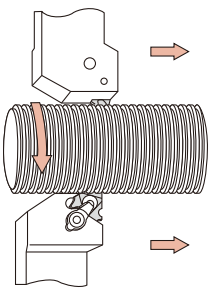
Left hand thread



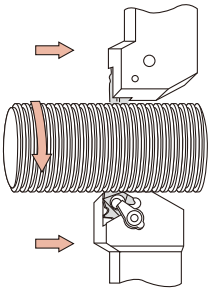
Work rotation	Reverse
Feed direction	Push
Hand of toolholder	Left
Hand of insert	Left
Standard shim	②



Work rotation	Reverse
Feed direction	Pull
Hand of toolholder	Right
Hand of insert	Right
Standard shim	③



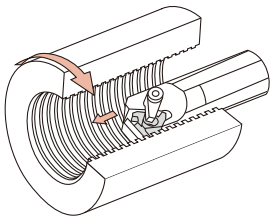
Work rotation	Regular
Feed direction	Push
Hand of toolholder	Left
Hand of insert	Left
Standard shim	②



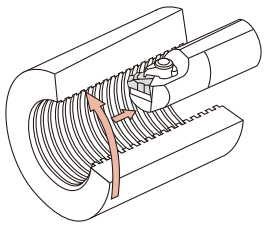
Work rotation	Regular
Feed direction	Pull
Hand of toolholder	Right
Hand of insert	Right
Standard shim	③

Internal threading

Right hand thread

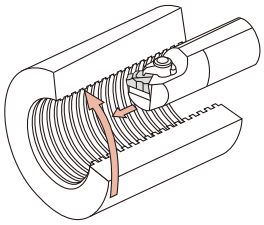


Work rotation	Regular
Feed direction	Push
Hand of toolholder	Right
Hand of insert	Right
Standard shim	②

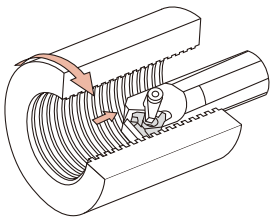


Work rotation	Reverse
Feed direction	Pull
Hand of toolholder	Left
Hand of insert	Left
Standard shim	③

Left hand thread



Work rotation	Reverse
Feed direction	Push
Hand of toolholder	Left
Hand of insert	Left
Standard shim	①



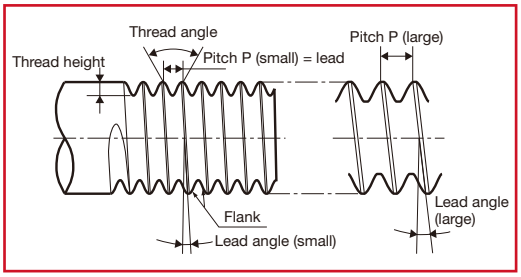
Work rotation	Regular
Feed direction	Pull
Hand of toolholder	Right
Hand of insert	Right
Standard shim	④

Standard shim

No.	New	No.	New
①	A16-1DT	②	A16-1DT
	A16-1		A16-1
	GX22-1DT		GX22-1DT
	NXE22-1		NXN22-1
	NXE27-1		NXN27-1
③	AE16-99DT	④	AN16-99DT
	AE16-99		AN16-99
	GXE22-99DT		GXN22-99DT
	NXE22-99		NXN22-99
	NXE27-99		NXN27-99

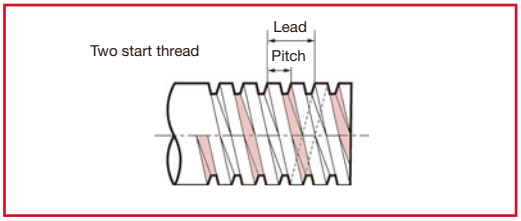
Relationship between lead, lead angle and pitch

1. Lead is the axial distance a screw advances in one rotation. In single start screw, the lead is equal to the pitch.
2. The inclination angle of a threaded groove is called lead angle. In screws of the same diameter, the lead angle increases as the pitch increases.
3. The side face of a completed thread groove is called the flank. The distance between the crest and the root is called thread height.



Single and multi start thread

1. The single start thread has a single groove. Two start thread or three start thread has two grooves or three grooves respectively.
2. The pitch of multi start thread is the distance of adjoining groove.
3. When viewing the section of the multi start thread, the pitch is same as that of the single start thread. The lead of the two or three start thread is twice or three times the pitch. The multi start thread is mainly used for trapezoidal threads.



Tolerance class of threads

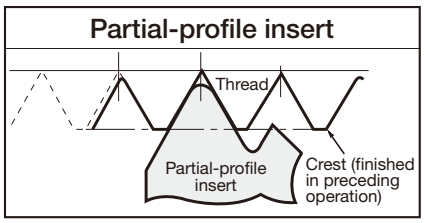
Tolerance classes of screw threads are expressed as follows:
Metric coarse external thread: 6h, 6g
Metric coarse internal thread: 5H, 6H
These classes are ranked with tolerances of thread diameter, pitch, thread angle, etc. For fastening applications, 6H- and 6g-class (former JIS second class) threads, manufactured by cutting or rolling, are generally used. 5H- and 4h-class threads (former JIS first class) are generally finished by grinding.
For example, M8-6g means metric coarse external thread of 6g tolerance class.

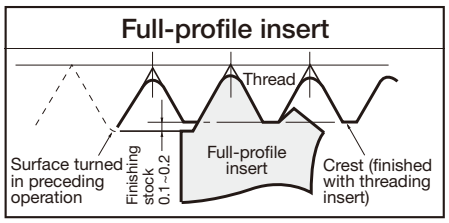
TAC threading insert

Difference between full-profile and partial-profile insert

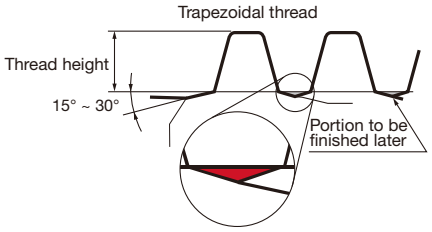
Full-profile insert

In the full-profile insert, the major diameter of the thread is finished by the profiled finishing edge as shown in the figure below. Therefore, about 0.1 mm of finishing stock must be left on the outer surface of the workpiece before threading. In trapezoidal threads, since slants of 15° to 30° are left on the crest of the thread as shown in the figure below, these portions must be finished by another tool later.
Full-profile insert removes burrs on the crest.





When machining trapezoidal threads:



Partial-profile insert

Partial-profile inserts cannot be used for finishing of the crest, but can be applied to a wide range of pitches.

For example

Designation	Pitch (mm)	TPI	Insert radius RE (mm)
16ERA60	0.5 ~ 1.5	48 ~ 16	0.06
16ERG60	1.75 ~ 3	14 ~ 8	0.22

Corner radii of inserts are fitted to the thread of the smallest pitch.

Difference between external and internal use inserts

In full-profile inserts for metric and unified threads, the corner radius and thread height differ from those for the external and internal use insert respectively. Therefore, the right hand insert for external use and the left hand insert for internal use are not the same tool.
Since the rake angles of toolholders are -10° for external toolholders and -15° for internal toolholders, the external / internal toolholders can not be used for machining internal / external thread.
In Whitworth thread, though the external thread and internal thread have the same thread form, the external and internal toolholders are incompatible because of the different rake angle.

For example

Designation	Applicable inserts	Insert radius RE (mm)	Thread hight (mm)	Rake angle of holders
16ER20ISO	External	0.25	1.52	-10°
16IL20ISO	Internal	0.14	1.3	-15°

Compensation for the lead angle and tool relief angle

When the pitch is large or the screw diameter is small, the lead angle becomes large and the effective relief angle on the advance flank side β_2 becomes small. In particular, this will cause shorter life of the insert in the case of trapezoidal screw with small flank angle. It is ideal without any interference for the thread cutting insert to have an equal relief angle on both right and left. Replace the shim so that the rake face of insert faces the thread groove direction ($\beta = \beta_3$).

Calculating the lead angle

The lead angle is calculated as follows:

$$\beta = \tan^{-1}(\ell / \pi d) = \tan^{-1}(nP/\pi d)$$

β : Lead angle
ℓ : Lead
n : No. of threads
P : Pitch
d : Pitch diameter

Calculating the relief angle

The relief angle β_1 is calculated as follows:

$$\beta_1 = \tan^{-1}(\tan\theta \cdot \tan\alpha)$$

The α of a standard toolholder is 10° for external threading and 15° for internal threading.

Included angle 2θ	θ	β_1	
		External threading tool	Internal threading tool
60°	30°	5.8°	8.8°
55°	27.5°	5.2°	7.9°
30°	15°	2.7°	4.1°
29°	14.5°	2.6°	4°

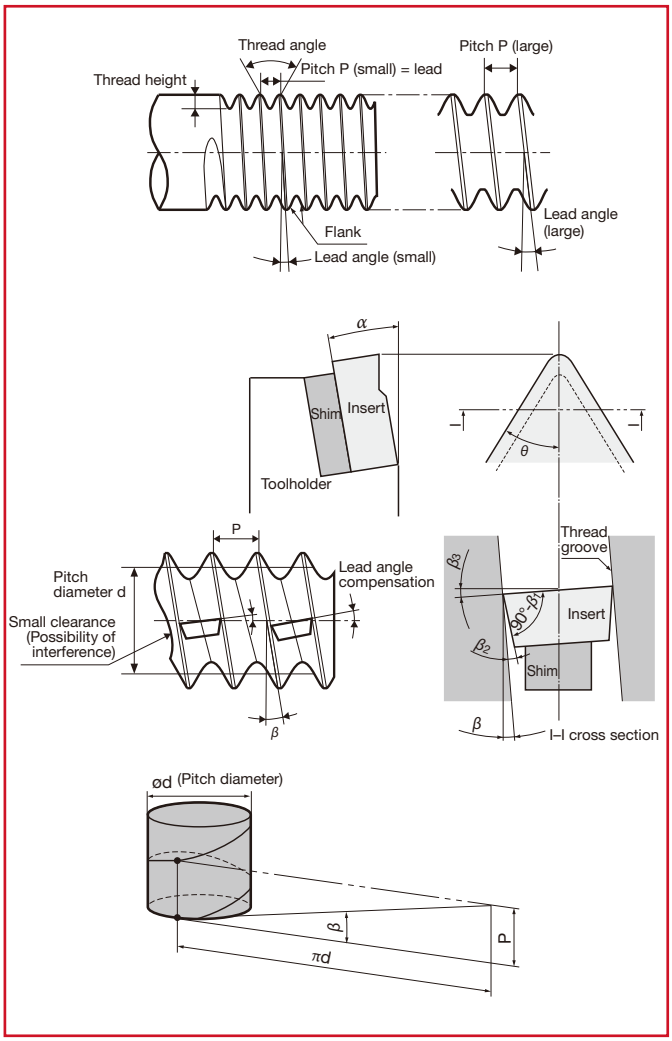
Accordingly, the effective relief angle is calculated as follows:

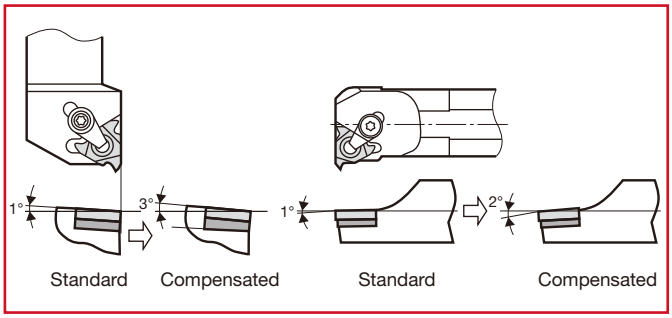
$$\beta_2 = \beta_1 + \beta_3 - \beta$$

β : Lead angle
β_2 : Effective relief angle
β_3 : Lead angle compensation value

In other words, $\beta_1 = \beta_2$ when the thread lead angle is equal to the compensation value. Namely, the relief angle of the tool itself is equal to the effective relief angle. If the wrong compensation value is used, $\beta_1 > \beta_2$. The effective relief angle becomes smaller and cause the interference between the flank side of insert and the thread groove. Therefore, carry out compensation of the lead angle so that the following range is obtained:

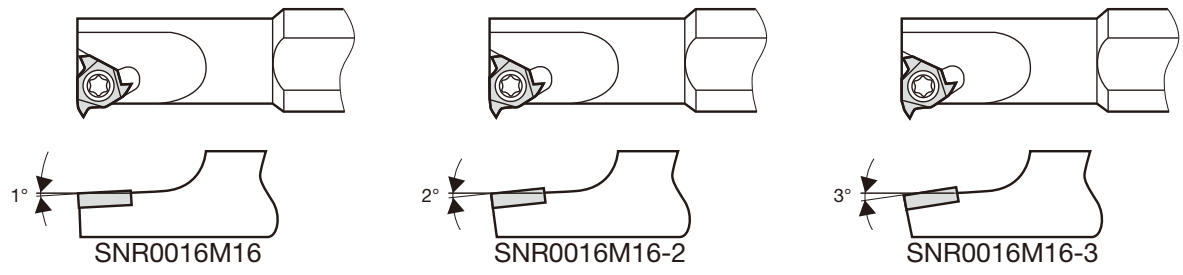
±1° when the thread angle is 60° and 55°
±30° when the thread angle is 30° and 29°





Compensation of lead angle for shim less internal toolholders

When using internal threading toolholders without shim, the above-mentioned method can not be applied for lead angle compensation. Therefore, special toolholders for large lead angles are available as shown below. The final figure of the designation (-2 or -3) indicates 2° or 3° lead angle to be used respectively. The toolholders without these figures are for 1° lead angle.



Type of shim and the compensation value of lead angle

The designation of the shim and compensated lead angles are shown in the table.

Compensated lead angles	-2°	-1°	0°	1°	2°	3°	4°
Shim	□□□-98	□□□-99	□□□-0	□□□-1	□□□-2	□□□-3	□□□-4

Note: The last numeral of the shim designation is the compensated lead angle.

■ Toolholders and applicable shims

Screw-on / clamp-on dual toolholders

Toolholder designation	Shim	
	R	L
CER/L□□□□□16DT	AE16-□DT	AN16-□DT
CER/L□□□□□22DT	GXE22-□DT	GXN22-□DT
TCNR/L□□□□□16DT	AN16-□DT	AE16-□DT
TCNR/L□□□□□22DT	GXN22-□DT	GXE22-□DT

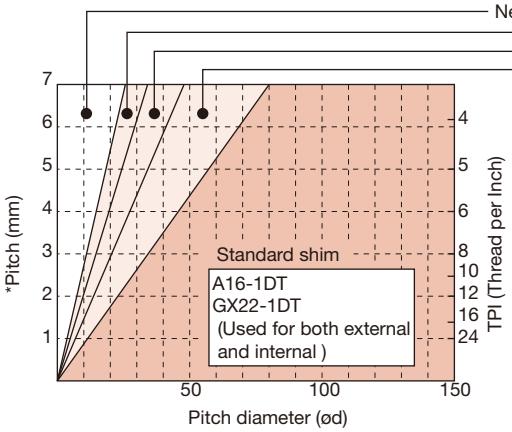
Note: Standard shim is AE16-1DT or GX22-1DT. Other types are optional.

Clamp-on type toolholders

Toolholder designation	Shim	
	R	L
CER/L□□□□□16-T	AE16-□	AN16-□
CER/L□□□□□22-T	NXE22-□	NXN22-□
CER/L□□□□□27-T	NXE27-□	NXN27-□
CNR/L□□□□□16	AN16-□	AE16-□
CNR/L□□□□□22	NXN22-□	NXE22-□
CNR/L□□□□□27	NXN27-□	NXE27-□
B-CER/L□□□16	AE16-□	AN16-□

Note: Standard shim is □□□□□-1. Other types are optional.

Shim selection guide for screw-on / clamp-on dual ST-type tools

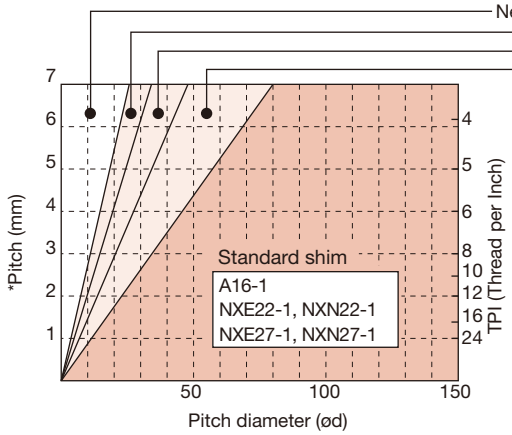


* For the multi start thread lead (multiplied by the pitch and No. of threads)

● List of exchangeable shims

	Designation	D30	Designation	D30	Designation	D30	Designation	D30
β3 = 4°	AE16-4DT	●	AN16-4DT	●	GXE22-4DT	●	GXN22-4DT	●
β3 = 3°	AE16-3DT	●	AN16-3DT	●	GXE22-3DT	●	GXN22-3DT	●
β3 = 2°	AE16-2DT	●	AN16-2DT	●	GXE22-2DT	●	GXN22-2DT	●
β3 = 1° Standard shim	A16-1DT	●	A16-1DT	●	GX22-1DT	●	GX22-1DT	●
β3 = 0°	AE16-0DT	●	AN16-0DT	●	GXE22-0DT	●	GXN22-0DT	●
β3 = -1°	AE16-99DT	●	AN16-99DT	●	GXE22-99DT	●	GXN22-99DT	●
β3 = -2°	AE16-98DT	●	AN16-98DT	●	GXE22-98DT	●	GXN22-98DT	●
Applicable toolholders	CER--16DT TCNL--16DT		CEL--16DT TCNR--16DT		CER--22DT TCNL--22DT		CEL--22DT TCNR--22DT	

Shim selection guide for clamp-on type ST-tools



* For the multi start thread lead (multiplied by the pitch and No. of threads)

● List of exchangeable shims

	Designation	D30	Designation	D30	Designation	D30	Designation	D30	Designation	D30	Designation	D30
β3 = 4°	AE16-4	●	AN16-4	●	NXE22-4	●	NXN22-4	●	NXE27-4		NXN27-4	
β3 = 3°	AE16-3	●	AN16-3	●	NXE22-3	●	NXN22-3	●	NXE27-3		NXN27-3	
β3 = 2°	AE16-2	●	AN16-2	●	NXE22-2	●	NXN22-2	●	NXE27-2		NXN27-2	
β3 = 1° Standard shim	A16-1	●	A16-1	●	NXE22-1	●	NXN22-1	●	NXE27-1	●	NXN27-1	●
β3 = 0°	AE16-0	●	AN16-0	●	NXE22-0	●	NXN22-0	●	NXE27-0		NXN27-0	
β3 = -1°	AE16-99	●	AN16-99	●	NXE22-99	●	NXN22-99	●	NXE27-99		NXN27-99	
β3 = -2°	AE16-98	●	AN16-98	●	NXE22-98	●	NXN22-98	●	NXE27-98		NXN27-98	
Applicable toolholders	CER--16T CNL--16 B-CER--16		CEL--16T CNR--16 B-CEL--16		CER--22T CNL--22		CEL--22T CNR--22		CER--27T CNL--27		CEL--27T CNR--27	

● : Line up

Selection of internal threading toolholders

Relation between internal toolholders and machinable threads

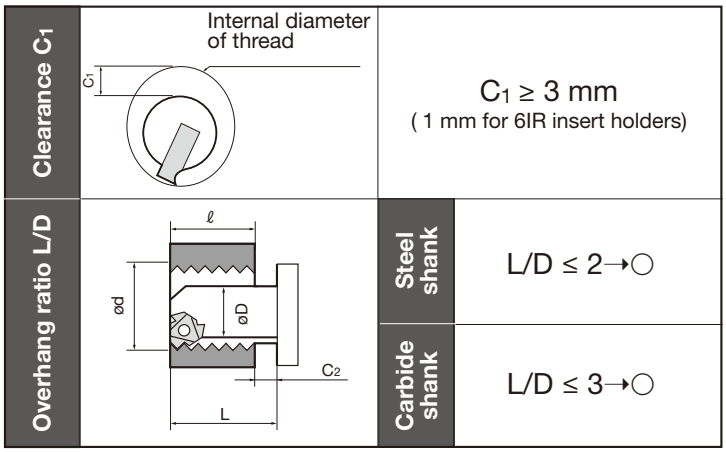
In the tables starting on the next page, the relationships between toolholders, inserts, threads to be machined, and shims to be replaced are shown. In these tables, the criteria are set as follows.

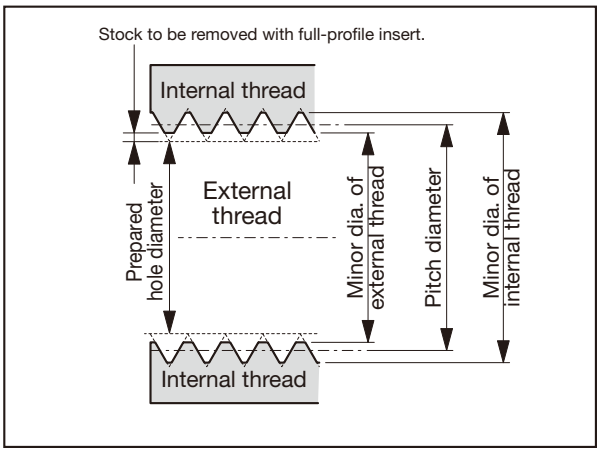
- **The minimum machining diameter.**
- **The L/D ratio of the toolholder.**
- **The lead angle of the thread.**
- **Cutting conditions**

Especially when machining near the minimum machining diameter, the compensation for the lead angle should be done carefully.
Moreover, in threading, because chips generally can not be broken into small pieces, the shank size should be selected in consideration of adequate clearance (C_1).

Symbols

- ◯ Recommended
- • Usable
- 2 Needs replacing of the shim. "2" indicates "Change to the shim for 2° lead angle".
- Unusable





How to use the tables

①First, find the nominal thread diameter. Example: M35 X 1.5
②The table indicates that the lead angle is 0°48′.
③The Cat. No. of the insert to be used corresponds with IR15ISO.
④By following the row to the right, • and ◯ marks are found. The ◯ mark indicates the optimum toolholder type. The toolholders of • mark are usable, but less rigid because the shank diameter against the threading diameter is smaller than those of ◯ marked toolholder. In this example, CNR0025R16 and TCNR0020R16DT are the optimum toolholders. The insert Cat.No. is 16IR15ISO.
⑤In the case of M33 X 3 thread, the lead angle is 1°46′. By following the row to the right. 2 mark is found. This indicates that the shim should be replaced to 2° type. For calculation of the lead angle, refer to page 35.

Metric fine screw thread (ISO)

(For full size of this table, see page 34.)

Nominal size	Pitch	Effective diameter	Lead angle	Shank material	Steel shank															Carbide shank									"Tsuppari-Ichiban"				
				Insert size	6IR				11IR				16IR				22IR				6IR				11IR				16IR				22IR	
				Holder Cat. No.	SNR0006H06-2	SNR0006H06-3	SNR0008H06-2	SNR0008H06-3	SNR0010K11	SNR0010K11-2	SNR0013L11	SNR0013L11-2	SNR0016M16	SNR0016M16-2	CNR0020P16	CNR0025R16	CNR0032S16	SNR0020Q22	SNR0020Q22-2	CNR0025R22	CNR0032S22	SNR0006K06SC-2	SNR0006K06SC-3	SNR0008K06SC-2	SNR0008K06SC-3	SNR0010M11SC	SNR0010M11SC-2	SNR0012P11SC	SNR0012P11SC-2	SNR0016R16SC	SNR0016R16SC-2	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT	(TCNR0032T16DT)	TSNR0020R22	TCNR0025S22DT
				Insert Cat. No.																														
M33×1.5	1.5	32.03	0°51′	IR15ISO					•		•		•		◯									•		•		•		•	◯			
M33×2	2	31.7	1°09′	IR20ISO	•		•		•		•		•		•	◯				•		•		•		•		•		•	◯			
M33×3	3	31.05	1°46′	IR30ISO											2															•	2			
M35×1.5	1.5	34.03	0°48′	IR15ISO					•		•		•		•	◯								•		•		•		•	◯			
M36×1.5	1.5	35.03	0°47′	IR15ISO					•		•		•		•	◯								•		•		•		•	◯			
M36×2	2	34.7	1°03′	IR20ISO											•	◯				•		•		•		•		•		•	◯			
M36×3	3	34.05	1°36′																											•	2			
M38×1.5	1.5	37																						•		•		•		•	•	◯		
																								•		•		•		•	•			

Selection of Internal Toolholders—Relationship between thread sizes, toolholders, and inserts—Part 1

Metric coarse screw thread (ISO)

Nominal size	Pitch	Pitch diameter	Lead angle	Shank material	Steel shank															Carbide shank								"Tsuppari-Ichiban"	
				Insert size	6IR				11IR				16IR		22IR				27IR			6IR				11IR		16IR		22IR	
				Holder Cat. No. / Insert Cat. No.	SNR0006H06-2	SNR0006H06-3	SNR0008H06-2	SNR0008H06-3	SNR0010K11-2	SNR0010K11-3	SNR0013L11-2	SNR0013L11-3	SNR0016M16-2	SNR0016M16-3	SNR0020Q22-2	SNR0020Q22-3	CNR0025R22	CNR0032S22	(CNR0040T22)	CNR0040T27	(CNR0050U27)	SNR0006K06SC-2	SNR0006K06SC-3	SNR0008K06SC-2	SNR0008K06SC-3	SNR0010M11SC-2	SNR0010M11SC-3	SNR0016R16SC-2	(SNR0016R16SC-3)	TCNR00025S22DT	(TCNR00032T22DT)
M10	1.5	9.03	3°02′	IR15ISO																									
M11	1.5	10.03	2°44′	IR15ISO		○															○								
M12	1.75	10.86	2°56′	IR175ISO		○															○								
M14	2	12.7	2°52′	IR20ISO		•		○													•		○						
M16	2	14.7	2°29′	IR20ISO	•		○													•		○							
M18	2.5	16.38	2°47′	IR25ISO																									
M20	2.5	18.38	2°29′	IR25ISO																									
M22	2.5	20.38	2°14′	IR25ISO																									
M24	3	22.05	2°29′	IR30ISO																									
M27	3	25.05	2°11′	IR30ISO									○														○		
M30	3.5	27.73	2°18′	IR35ISO																									
M33	3.5	30.73	2°05′	IR35ISO											○														
M36	4	33.4	2°11′	IR40ISO											○														
M39	4	36.4	2°00′	IR40ISO											•		[2]												[2]	
M42	4.5	39.08	2°06′	IR45ISO											•		[2]												[2]	
M45	4.5	42.08	1°57′	IR45ISO											•		[2]												[2]	
M48	5	44.75	2°02′	IR50ISO											•		[2]	[2]											[2]	[2]
M52	5	48.75	1°52′	IR50ISO											•		[2]	[2]											[2]	[2]
M56	5.5	52.43	1°55′	IR55ISO																									
M60	5.5	56.43	1°47′	IR55ISO															[2]										
M64	6	60.1	1°49′	IR60ISO															[2]										
M68	6	64.1	1°42′	IR60ISO															[2]	[2]									

[2] : Change the shim to NXN22-2

[2] : Change the shim to NXN27-2

[2] : Change the shim to GXN22-2DT

Metric fine screw thread (ISO)

Nominal size	Pitch	Pitch diameter	Lead angle	Shank material	Steel shank										Carbide shank									
				Insert size	6IR				11IR						6IR				11IR					
				Holder Cat. No. / Insert Cat. No.	SNR0006H06-2	SNR0006H06-3	SNR0008H06-2	SNR0008H06-3	SNR0010K11	SNR0010K11-2	SNR0010K11-3	SNR0013L11	SNR0013L11-2	SNR0013L11-3	SNR0006K06SC-2	SNR0006K06SC-3	SNR0008K06SC-2	SNR0008K06SC-3	SNR0010M11SC	SNR0010M11SC-2	SNR0010M11SC-3	SNR0012P11SC	SNR0012P11SC-2	SNR0012P11SC-3
M9×0.75	0.75	8.51	1°36′	IR075ISO																				
M9×1	1	8.32	2°11′	IR10ISO																				
M10×0.75	0.75	9.51	1°26′	IR075ISO																				
M10×1	1	9.35	1°57′	IR10ISO	○										○									
M10×1.25	1.25	9.19	2°29′	IR125ISO																				
M11×0.75	0.75	10.51	1°18′	IR075ISO																				
M11×1	1	10.35	1°46′	IR10ISO	○										○									
M12×1	1	11.35	1°36′	IR10ISO	•		○								•		○							
M12×1.25	1.25	11.19	2°02′	IR125ISO	○										○									
M12×1.5	1.5	11.03	2°29′	IR15ISO	○										○									
M14×1	1	13.35	1°22′	IR10ISO																				
M14×1.25	1.25	13.19	1°44′	IR125ISO	•		○								•		○							
M14×1.5	1.5	13.03	2°06′	IR15ISO	•		○								•		○							
M15×1	1	14.35	1°16′	IR10ISO																				
M15×1.5	1.5	14.03	1°57′	IR15ISO	•		○								•		○							
M16×1	1	15.35	1°11′	IR10ISO					○															
M16×1.5	1.5	15.03	1°49′	IR15ISO	•		○								•		○							
M17×1	1	16.35	1°07′	IR10ISO					○										○					
M17×1.5	1.5	16.03	1°42′	IR15ISO	•		•			○					•		○							
M18×1	1	17.35	1°03′	IR10ISO					○										○					
M18×1.5	1.5	17.03	1°36′	IR15ISO	•		•			○					•		•			○				
M18×2	2	16.7	2°11′	IR20ISO	•		•			○					•		•			○				
M20×1	1	19.35	0°57′	IR10ISO					•			○							•				○	
M20×1.5	1.5	19.03	1°26′	IR15ISO					•			○							•				○	
M20×2	2	18.7	1°57′	IR20ISO	•		•			○					•		•			•			○	

Note : The above tables show correspondence of internal toolholders at the time of setting clearance between thread and toolholder to 3 mm (1 mm in case of SN type) and the finishing stock to 0.1 mm.

Metric fine screw thread (ISO)

Nominal size	Pitch	Pitch diameter	Lead angle	Shank material	Steel shank												Carbide shank												"Tsuppari-Ichiban"	
				Insert size	6IR				11IR					16IR				6IR				11IR					16IR				16IR	
				Holder Cat. No. / Insert Cat. No.	SNR0006H06-2	SNR0006H06-3	SNR0008H06-2	SNR0008H06-3	SNR0010K11	SNR0010K11-2	SNR0013L11	SNR0013L11-2	SNR0013L11-3	SNR0016M16	SNR0016M16-2	SNR0016M16-3	CNR0020P16	SNR0006K06SC-2	SNR0006K06SC-3	SNR0008K06SC-2	SNR0008K06SC-3	SNR0010M11SC	SNR0010M11SC-2	SNR0010M11SC-3	SNR0012P11SC	SNR0012P11SC-2	SNR0012P11SC-3	SNR0016R16SC	SNR0016R16SC-2	(SNR0016R16SC-3)	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT
M22×1	1	21.35	0°51′	IR10ISO					•		○											•			○							
M22×1.5	1.5	21.03	1°18′	IR15ISO	•		•		•		○							•		•		•			○							
M22×2	2	20.7	1°46′	IR20ISO	•		•			•		○						•		•			•			○						
M24×1	1	23.35	0°47′	IR10ISO							○			•								•			○					•		
M24×1.5	1.5	23.03	1°11′	IR15ISO	•		•				○			•				•		•		•			○					•		
M24×2	2	22.07	1°39′	IR20ISO	•		•			•		○						•		•			•			○						
M25×1	1	24.35	0°45′	IR10ISO					•		○			•											○				•		•		
M25×1.5	1.5	24.03	1°08	IR15ISO	•		•		•		○			•				•		•					○				•		•		
M25×2	2	23.7	1°32′	IR20ISO	•		•			•		○			•			•		•			•			○						
M26×1.5	1.5	25.03	1°06′	IR15ISO	•		•		•		•			○				•		•		•			•				•		○		
M27×1	1	26.35	0°42′	IR10ISO					•		•			○								•			•				•		○		
M27×1.5	1.5	26.03	1°03′	IR15ISO	•		•		•		•			○				•		•		•			•				•		○		
M27×2	2	25.7	1°25′	IR20ISO	•		•		•		•			○				•		•		•			•				•		○		
M28×1	1	27.35	0°40′	IR10ISO					•		•			○								•			•				•		○		
M28×1.5	1.5	27.03	1°01′	IR15ISO	•		•		•		•			○				•		•		•			•				•		○		
M28×2	2	26.7	1°22′	IR20ISO	•		•		•		•			○				•		•		•			•				•		○		
M30×1	1	29.35	0°37′	IR10ISO					•		•			○								•			•				•		○		
M30×1.5	1.5	29.03	0°57′	IR15ISO					•		•			○								•			•				•		○		
M30×2	2	28.7	1°16′	IR20ISO	•		•		•		•			○				•		•		•			•				•		○		
M30×3	3	28.05	1°57′	IR30ISO											○													○				
M32×1.5	1.5	31.03	0°53′	IR15ISO					•		•			○			○					•			•				•		•	○	
M32×2	2	30.07	1°11′	IR20ISO	•		•		•		•			○			○	•		•		•			•				•		•	○	

Metric fine screw thread (ISO)

Nominal size	Pitch	Pitch diameter	Lead angle	Shank material	Steel shank															Carbide shank									"Tsuppari-Ichiban"					
				Insert size	6IR				11IR				16IR				22IR			6IR				11IR				16IR		16IR				22IR	
				Holder Cat. No. / Insert Cat. No.	SNR0006H06-2	SNR0006H06-3	SNR0008H06-2	SNR0008H06-3	SNR0010K11	SNR0010K11-2	SNR0013L11	SNR0013L11-2	SNR0016M16	SNR0016M16-2	CNR0020P16	CNR0025R16	CNR0032S16	SNR0020Q22	SNR0020Q22-2	CNR0025R22	CNR0032S22	SNR0006K06SC-2	SNR0006K06SC-3	SNR0008K06SC-2	SNR0008K06SC-3	SNR0010M11SC	SNR0010M11SC-2	SNR0012P11SC	SNR0012P11SC-2	SNR0016R16SC	SNR0016R16SC-2	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT	(TCNR0032T16DT)	TSNR0020R22	TCNR0025S22DT
M33×1.5	1.5	32.03	0°51′	IR15ISO					•		•		•		○										•		•		•		•	○			
M33×2	2	31.7	1°09′	IR20ISO	•		•		•		•		•		•	○					•		•		•		•		•		•	○			
M33×3	3	31.05	1°46′	IR30ISO											2																•	2			
M35×1.5	1.5	34.03	0°48′	IR15ISO					•		•		•		•	○									•		•		•		•	○			
M36×1.5	1.5	35.03	0°47′	IR15ISO					•		•		•		•	○									•		•		•		•	○			
M36×2	2	34.7	1°03′	IR20ISO	•		•		•		•		•		•	○					•		•		•		•		•		•	○			
M36×3	3	34.05	1°36′	IR30ISO											2																•	2			
M38×1.5	1.5	37.03	0°44′	IR15ISO					•		•		•		•	○									•		•		•		•	○	○		
M39×1.5	1.5	38.03	0°43′	IR15ISO					•		•		•		•	○									•		•		•		•	○	○		
M39×2	2	38.7	0°58′	IR20ISO					•		•		•		•	○									•		•		•		•	○	○		
M39×3	3	37.05	1°29′	IR30ISO									•		•	○											•		•		•	○	○		
M40×1.5	1.5	39.03	0°42′	IR15ISO					•		•		•		•	○									•		•		•		•	○	○		
M40×2	2	37.8	0°57′	IR20ISO					•		•		•		•	○									•		•		•		•	○	○		
M40×3	3	38.05	1°26′	IR30ISO									•		•	○													•		•	○	○		
M42×1.5	1.5	41.03	0°40′	IR15ISO					•		•		•		•	○									•		•		•		•	○	○		
M42×2	2	40.7	0°54′	IR20ISO					•		•		•		•	○									•		•		•		•	○	○		
M42×3	3	40.05	1°22′	IR30ISO									•		•	○													•		•	○	○		
M42×4	4	39.4	1°51′	IR40ISO														2																•	2
M45×1.5	1.5	44.03	0°37′	IR15ISO					•		•		•		•	•	○								•		•		•		•	○	○		
M45×2	2	43.7	0°50′	IR20ISO					•		•		•		•	•	○								•		•		•		•	○	○		
M45×3	3	43.05	1°16′	IR30ISO									•		•	•	○					•		•		•		•		•		•	○	○		
M45×4	4	42.4	1°43′	IR40ISO														2																•	2
M48×1.5	1.5	47.03	0°35′	IR15ISO					•		•		•		•	•	○								•		•		•		•	○	○		
M48×2	2	46.7	0°47′	IR20ISO					•		•		•		•	•	○								•		•		•		•	○	○		
M48×3	3	46.05	1°11′	IR30ISO									•		•	•	○												•		•	○	○		
M48×4	4	45.4	1°36′	IR40ISO															2															•	2

2 : Change the shim to AN16-2

2 : Change the shim to NXN22-2

2 : Change the shim to AN16-2DT

2 : Change the shim to GXN22-2DT

Note : The above tables show correspondence of internal toolholders at the time of setting clearance between thread and toolholder to 3 mm (1 mm in case of SN type) and the finishing stock to 0.1 mm.

Metric fine screw thread (ISO)

Nominal size	Pitch	Pitch diameter	Lead angle	Shank material	Steel shank																		Carbide shank								"Tsuppari-Ichiban"					
				Insert size	6IR				11IR				16IR						22IR					6IR				11IR				16IR		16IR			22IR	
				Holder Cat. No.	SNR0006H06-2	SNR0006H06-3	SNR0008H06-2	SNR0008H06-3	SNR0010K11	SNR0010K11-2	SNR0013L11	SNR0013L11-2	SNR0016M16	SNR0016M16-2	CNR0020P16	CNR0025R16	CNR0032S16	(CNR0040T16)	(CNR0050U16)	SNR0020Q22	SNR0020Q22-2	CNR0025R22	CNR0032S22	(CNR0040T22)	SNR0006K06SC-2	SNR0006K06SC-3	SNR0008K06SC-2	SNR0008K06SC-3	SNR0010M11SC	SNR0010M11SC-2	SNR0012P11SC	SNR0012P11SC-2	SNR0016R16SC	SNR0016R16SC-2	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT	(TCNR0032T16DT)	TSNR0020R22	TCNR0025S22DT	(TCNR0032T22DT)
				Insert Cat. No.																																		
M50×1.5	1.5	49.03	0°33′	IR15ISO					•		•		•		•	•	○	•										•		•		•		•	•	○	○			
M50×2	2	48.7	0°45′	IR20ISO					•		•		•		•	•	○											•		•		•		•	•	○	○			
M50×3	3	48.05	1°08′	IR30ISO									•		•	•	○															•		•	•	○	○			
M52×1.5	1.5	51.03	0°32′	IR15ISO					•		•		•		•	•	•	○										•		•		•		•	•	○	○			
M52×2	2	50.7	0°43′	IR20ISO					•		•		•		•	•	•	○										•		•		•		•	•	○	○			
M52×3	3	50.05	1°06′	IR30ISO									•		•	•	○	•														•		•	•	○	○			
M52×4	4	49.4	1°29′	IR40ISO																•	•	•	•															•	•	○
M55×1.5	1.5	54.03	0°30′	IR15ISO					•		•		•		•	•	○	•										•		•		•		•	•	○	○			
M55×2	2	53.7	0°41′	IR20ISO					•		•		•		•	•	•	○										•		•		•		•	•	○	○			
M55×3	3	53.05	1°02′	IR30ISO									•		•	•	•	○														•		•	•	○	○			
M55×4	4	52.4	1°24′	IR40ISO																•	•	•	•	○														•	•	○
M56×1.5	1.5	55.03	0°30′	IR15ISO					•		•		•		•	•	•	○										•		•		•		•	•	○	○			
M56×2	2	54.7	0°40′	IR20ISO					•		•		•		•	•	•	○										•		•		•		•	•	○	○			
M56×3	3	54.05	1°01′	IR30ISO									•		•	•	•	○														•		•	•	○	○			
M56×4	4	53.4	1°22′	IR40ISO																•	•	•	•	○														•	•	○
M58×1.5	1.5	57.03	0°29′	IR15ISO					•		•		•		•	•	•	○										•		•		•		•	•	○	○			
M58×2	2	56.7	0°39′	IR20ISO					•		•		•		•	•	•	○										•		•		•		•	•	○	○			
M58×3	3	56.05	0°59′	IR30ISO									•		•	•	•	○														•		•	•	○	○			
M58×4	4	55.4	1°19′	IR40ISO																•	•	•	•	○														•	•	○
M60×1.5	1.5	59.03	0°28′	IR15ISO					•		•		•		•	•	•	○										•		•		•		•	•	○	○			
M60×2	2	58.7	0°37′	IR20ISO					•		•		•		•	•	•	○										•		•		•		•	•	○	○			
M60×3	3	58.05	0°57′	IR30ISO									•		•	•	•	○														•		•	•	○	○			
M60×4	4	57.4	1°16′	IR40ISO																•	•	•	•	○														•	•	○

Unified coarse screw thread (UNC)

Nominal size	TPI	Pitch diameter	Lead angle	Shank material	Steel shank																				Carbide shank									"Tsuppari-Ichiban"	
				Insert size	11IR						16IR			22IR						27IR			11IR						16IR			22IR	
				Holder Cat. No.	SNR0010K11	SNR0010K11-2	SNR0010K11-3	SNR0013L11	SNR0013L11-2	SNR0013L11-3	SNR0016M16	SNR0016M16-2	SNR0016M16-3	SNR0020Q22	SNR0020Q22-2	SNR0020Q22-3	CNR0025R22	CNR0032S22	(CNR0040T22)	CNR0040T27	(CNR0050U27)	(CNR0063V27)	SNR0010M11SC	SNR0010M11SC-2	SNR0010M11SC-3	SNR0012P11SC	SNR0012P11SC-2	SNR0012P11SC-3	SNR0016R16SC	SNR0016R16SC-2	(SNR0016R16SC-3)	TCNR0025S22DT	(TCNR0032T22DT)
				Insert Cat. No.																															
7/16-14UNC	14	9.93	3°20′	(IR14UN)																															
1/2-13UNC	13	11.43	3°07′	(IR13UN)																															
9/16-12UNC	12	12.91	2°59′	IR12UN																															
5/8-11UNC	11	14.38	2°56′	(IR11UN)																															
3/4-10UNC	10	17.4	2°40′	(IR10UN)																															
7/8-9UNC	9	20.39	2°31′	IR9UN																															
1-8UNC	8	23.34	2°29′	IR8UN								○																							
1 1/8-7UNC	7	26.22	2°31′	(IR7UN)																															
1 1/4-7UNC	7	29.39	2°15′	(IR7UN)											○																					
1 3/8-6UNC	6	32.17	2°24′	(IR6UN)											○																					
1 1/2-6UNC	6	35.35	2°11′	(IR6UN)											○		2																		2	
1 3/4-5UNC	5	41.15	2°15′	(IR5UN)											○		2																		2	
2-4 1/2UNC	4.5	47.14	2°11′	(IR45UN)																															
2 1/4-4 1/2UNC	4.5	53.49	1°55′	(IR45UN)																2															
2 1/2-4UNC	4	59.38	1°57′	(IR4UN)																2															
2 3/4-4UNC	4	65.73	1°46′	(IR4UN)																2	2														
3-4UNC	4	72.08	1°36′	(IR4UN)																2	2														
3 1/4-4UNC	4	78.43	1°29′	(IR4UN)																•	•	○													
3 1/2-4UNC	4	84.78	1°22′	(IR4UN)																•	•	○													
3 3/4-4UNC	4	91.13	1°16′	(IR4UN)																•	•	○													
4-4UNC	4	97.48	1°11′	(IR4UN)																•	•	○													

2 : Change the shim to NXN22-2

2 : Change the shim to NXN27-2

2 : Change the shim to GXN22-2DT

Note : The above tables show correspondence of internal toolholders at the time of setting clearance between thread and toolholder to 3 mm (1 mm in case of SN type) and the finishing stock to 0.1 mm.

Unified fine screw thread (UNF)

Nominal size	TPI	Pitch diameter	Lead angle	Shank material	Steel shank										Carbide shank										"Tsuppari-Ichiban"		
				Insert size	6IR				11IR		16IR				6IR				11IR				16IR		16IR		
				Holder Cat. No. / Insert Cat. No.	SNR0006H06-2	SNR0006H06-3	SNR0008H06-2	SNR0008H06-3	SNR0010K11-2	SNR0013L11-2	SNR0016M16	SNR0016M16-2	CNR0020P16	CNR0025R16	SNR0006K06SC-2	SNR0006K06SC-3	SNR0008K06SC-2	SNR0008K06SC-3	SNR0010M11SC	SNR0010M11SC-2	SNR0012P11SC	SNR0012P11SC-2	SNR0016R16SC	SNR0016R16SC-2	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT
3/8-24UNF	24	8.84	2°11′	(IR24UN)																							
				IRA60																							
7/16-20UNF	20	10.29	2°15′	(IR20UN)																							
				IRA60	○										○												
1/2-20UNF	20	11.87	1°57′	(IR20UN)																							
				IRA60	•		○								•		○										
9/16-18UNF	18	13.37	1°55′	(IR18UN)																							
				IRA60	•		○								•		○										
5/8-18UNF	18	14.96	1°43′	(IR18UN)																							
				IRA60	•		○								•		○										
3/4-16UNF	16	18.02	1°36′	IR16UN					○											○							
7/8-14UNF	14	21.05	1°34′	IR14UN					•	○										•		○					
1-12UNF	12	24.03	1°36′	IR12UN								○												○			
1 1/8-12UNF	12	27.2	1°25′	IR12UN							○												○		○		
1 1/4-12UNF	12	30.38	1°16′	IR12UN							•		○										○		•	○	
1 3/8-12UNF	12	33.55	1°09′	IR12UN							•		•	○									○		•	•	○
1 1/2-12UNF	12	36.73	1°03′	IR12UN							•		•	○									○		•	•	○

Unified extra fine screw thread (UNEF)

Nominal size	TPI	Pitch diameter	Lead angle	Shank material	Steel shank											Carbide shank								"Tsuppari-Ichiban"		
				Insert size	6IR		11IR				16IR					6IR		11IR				16IR		16IR		
				Holder Cat. No. / Insert Cat. No.	SNR0006H06-2	SNR0008H06-2	SNR0010K11	SNR0010K11-2	SNR0013L11	SNR0013L11-2	SNR0016M16	SNR0016M16-2	CNR0020P16	CNR0025R16	CNR0032S16	SNR0006H06SC-2	SNR0008H06SC-2	SNR0010K11	SNR0010K11-2	SNR0012L11	SNR0012L11-2	SNR0016M16	SNR0016M16-2	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT
3/8	32	9.01	1°61′	IR32UN																							
7/16	28	10.52	1°57′	IR28UN	○											○											
1/2	28	12.11	1°37′	IR28UN																							
9/16	24	13.6	1°42′	IR24UN																							
5/8	24	15.19	1°27′	IR24UN																							
11/16	24	16.77	1°15′	IR24UN			○											○									
3/4	20	18.22	1°27′	IR20UN			○											○									
13/16	20	19.81	1°17′	IR20UN			•		○									•		○							
7/8	20	21.4	1°08′	IR20UN			•		○									•		○							
15/16	20	22.99	1°01′	IR20UN			•		•		○							•		○				○			
1	20	24.57	0°94′	IR20UN			•		•		○							•		•		○		○			
1 1/16	18	26.07	0°99′	IR18UN			•		•		○							•		•		○		○			
1 1/8	18	27.66	0°93′	IR18UN			•		•		○							•		•		○		○			
1 3/16	18	29.25	0°88′	IR18UN			•		•		•		○					•		•		○		•	○		
1 1/4	18	30.83	0°84′	IR18UN			•		•		•		○					•		•		○		•	○		
1 5/16	18	32.42	0°79′	IR18UN			•		•		•		○					•		•		○		•	○		
1 3/8	18	34.01	0°76′	IR18UN			•		•		•		•	○				•		•		○		•	•	○	
1 7/16	18	35.6	0°72′	IR18UN			•		•		•		•	○				•		•		○		•	•	○	
1 1/2	18	37.18	0°69′	IR18UN			•		•		•		•	○				•		•		○		•	•	○	
1 9/16	18	38.77	0°66′	IR18UN			•		•		•		•	○				•		•		○		•	•	○	
1 5/8	18	40.36	0°64′	IR18UN			•		•		•		•	•	○			•		•		○		•	•	○	
1 11/16	18	41.95	0°61′	IR18UN			•		•		•		•	•	○			•		•		○		•	•	○	

Note : The above tables show correspondence of internal toolholders at the time of setting clearance between thread and toolholder to 3 mm (1 mm in case of SN type) and the finishing stock to 0.1 mm.

Whitworth British Standard (BSW)

Nominal size	TPI	Pitch diameter	Lead angle	Shank material	Steel shank										Carbide shank		"Tsuppari-Ichiban"				
				Insert size	16IR						22IR				16IR		16IR			22IR	
				Holder Cat. No. / Insert Cat. No.	SNR0016M16	SNR0016M16-2	SNR0016M16-3	CNR0020P16	CNR0025R16	CNR0032S16	SNR0020Q22	SNR0020Q22-2	SNR0020Q22-3	CNR0025R22	CNR0032S22	SNR0016M16	SNR0016M16-2	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT	TSNR0020R22	TCNR0025S22DT
7/16	14	9.95	3°32′	IR14W																	
1/2	12	11.34	3°40′	IR12W																	
9/16	12	12.93	2°98′	IR12W																	
5/8	11	14.4	2°92′	IR11W																	
11/16	11	15.98	2°63′	IR11W																	
3/4	10	17.42	2°66′	IR10W																	
7/8	9	20.42	2°52′	IR9W																	
1	8	23.37	2°48′	IR8W																	
1 1/8	7	26.25	2°52′	IR7W																	
1 1/4	7	29.43	2°25′	IR7W								○									
1 1/2	6	35.39	2°18′	IR6W								○									
1 3/4	5	41.2	2°25′	IR5W								•		[2]							[2]

[2] : Change the shim to NXN22-2

[2] : Change the shim to GXN22-2DT

Whitworth British Standard Fine (BSF)

Nominal size	TPI	Pitch diameter	Lead angle	Shank material	Steel shank														Carbide shank				"Tsuppari-Ichiban"				
				Insert size	6IR		11IR		16IR					22IR					6IR		16IR		16IR			22IR	
				Holder Cat. No. / Insert Cat. No.	SNR0006H06-2	SNR0008H06-2	SNR0010K11	SNR0010K11-2	SNR0016M16	SNR0016M16-2	SNR0016M16-3	CNR0020P16	CNR0025R16	SNR0020Q22	SNR0020Q22-2	SNR0020Q22-3	CNR0025R22	CNR0032S22	SNR0006H06SC-2	SNR0008H06SC-2	SNR0016M16	SNR0016M16-2	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT	TSNR0020R22	TCNR0025S22DT
7/16	18	10.21	2°52′	IR18W																							
1/2	16	11.68	2°48′	IR16W	○														○								
9/16	16	13.27	2°18′	IR16W	•	○													•	○							
5/8	14	14.71	2°25′	IR14W																							
11/16	14	16.3	2°03′	IR14W				○																			
3/4	12	17.69	2°18′	IR12W																							
7/8	11	20.75	2°03′	IR11W																							
1	10	23.77	1°95′	IR10W						○																	
1 1/8	9	26.77	1°92′	IR9W						○											○						
1 1/4	9	29.94	1°72′	IR9W						•		[2]									○		[2]				
1 3/8	8	32.89	1°76′	IR8W						•		[2]									○		[2]				
1 1/2	8	36.07	1°61′	IR8W						•		•	[2]								○		•	[2]			
1 5/8	8	39.24	1°48′	IR8W					•			•	○									○		•	•	○		
1 3/4	7	42.13	1°57′	IR7W											○		[2]										[2]
2	7	48.48	1°37′	IR7W										•			•	○								•	○
2 1/4	6	54.44	1°42′	IR6W										•			•	○								•	○
2 1/2	6	60.79	1°27′	IR6W										•			•	○								•	○
2 3/4	6	67.14	1°15′	IR6W										•			•	○								•	○
3	5	72.95	1°27′	IR5W										•			•	○								•	○
3 1/4	5	79.3	1°17′	IR5W										•			•	○								•	○

[2] : Change the shim to AN16-2

[2] : Change the shim to NXN22-2

[2] : Change the shim to AN16-2DT

[2] : Change the shim to GXN22-2DT

Note : The above tables show correspondence of internal toolholders at the time of setting clearance between thread and toolholder to 3 mm (1 mm in case of SN type) and the finishing stock to 0.1 mm.

30° trapezoidal thread (TR)

1/2

Nominal size	Pitch	Pitch diameter	Lead angle	Shank material	Steel shank														Carbide shank			"Tsuppari-Ichiban"						
				Insert size	16IR						22IR						27IR		16IR			16IR				22IR		
				Holder Cat. No. / Insert Cat. No.	SNR0016M16	SNR0016M16-2	SNR0016M16-3	CNR0020P16	CNR0025R16	CNR0032S16	CNR0040T16	CNR0050U16	SNR0020Q22	SNR0020Q22-2	SNR0020Q22-3	CNR0025R22	CNR0032S22	CNR0040T27	(CNR0050U27)	SNR0016R16SC	SNR0016R16SC-2	(SNR0016R16SC-3)	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT	(TCNR0032T16DT)	TSNR0020R22	TCNR0025S22DT	(TCNR0032T22DT)
TR22×3	3	20.5	2°40′	IR30TR																								
TR24×5	5	21.5	4°14′	IR50TR																								
TR24×3	3	22.5	2°26′	IR30TR																								
TR26×5	5	23.5	3°52′	IR50TR																								
TR26×3	3	24.5	2°14′	IR30TR		○																						
TR28×5	5	25.5	3°34′	IR50TR																								
TR28×3	3	26.5	2°04′	IR30TR		•														○								
TR30×6	6	27	4°03′	IR60TR																								
TR30×3	3	28.5	1°55′	IR30TR		•														○								
TR32×6	6	29	3°46′	IR60TR																								
TR32×3	3	30.5	1°48′	IR30TR		•		[2]												•			[2]					
TR34×6	6	31	3°32′	IR60TR																								
TR34×3	3	32.5	1°41′	IR30TR		•		[2]												•			[2]					
TR36×6	6	33	3°19′	IR60TR																								
TR36×3	3	34.5	1°35′	IR30TR		•		2	[2]											•			[2]	[2]				
TR38×3	3	36.5	1°30′	IR30TR		•		2	[2]											•			[2]	[2]				
TR40×3	3	38.5	1°25′	IR30TR	•			•	○										○				•	○				
TR42×3	3	40.5	1°21′	IR30TR	•			•	○										○				•	○				
TR44×3	3	42.5	1°17′	IR30TR	•			•	•	○									○				•	•	○			
TR46×3	3	44.5	1°14′	IR30TR	•			•	•	○									○				•	•	○			
TR48×3	3	46.5	1°11′	IR30TR	•			•	•	○									○				•	•	○			
TR50×3	3	48.5	1°08′	IR30TR	•			•	•	○									○				•	•	○			
TR52×3	3	50.5	1°05′	IR30TR	•			•	•	•	○								○				•	•	○			
TR55×3	3	53.5	1°01′	IR30TR	•			•	•	•	○								○				•	•	○			
TR60×3	3	58.5	0°56′	IR30TR	•			•	•	•	○								○				•	•	○			

[2] : Change the shim to AN16-2 ◄

[2] : Change the shim to AN16-2DT ◄

30° trapezoidal thread (TR)

2/2

Nominal size	Pitch	Pitch diameter	Lead angle	Shank material	Steel shank																Carbide shank			"Tsuppari-Ichiban"						
				Insert size	16IR						22IR							27IR			16IR			16IR				22IR		
				Holder Cat. No. / Insert Cat. No.	SNR0016M16	SNR0016M16-2	SNR0016M16-3	CNR0020P16	CNR0025R16	CNR0032S16	SNR0020Q22	SNR0020Q22-2	SNR0020Q22-3	CNR0025R22	CNR0032S22	(CNR0040T22)	(CNR0050U22)	(CNR0063V22)	CNR0040T27	(CNR0050U27)	(CNR0063V27)	SNR0016R16SC	SNR0016R16SC-2	(SNR0016R16SC-3)	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT	(TCNR0032T16DT)	TSNR0020R22	TCNR0025S22DT	(TCNR0032T22DT)
TR65×4	4	63	1°09′	IR40TR							•			•	•	•	○										•	•	○
TR70×4	4	68	1°04′	IR40TR							•			•	•	•	○										•	•	○
TR75×4	4	73	1°00′	IR40TR							•			•	•	•	○										•	•	○
TR80×4	4	78	0°56′	IR40TR							•			•	•	•	•	○									•	•	○
TR85×4	4	83	0°53′	IR40TR							•			•	•	•	•	○									•	•	○
TR90×4	4	88	0°50′	IR40TR							•			•	•	•	•	○									•	•	○
TR95×4	4	93	0°47′	IR40TR							•			•	•	•	•	○									•	•	○
TR100×4	4	98	0°45′	IR40TR							•			•	•	•	•	○									•	•	○
TR105×4	4	103	0°42′	IR40TR							•			•	•	•	•	○									•	•	○
TR110×4	4	108	0°41′	IR40TR							•			•	•	•	•	○									•	•	○
TR115×6	6	112	0°59′	IR60TR															•	•	○								
TR120×6	6	117	0°56′	IR60TR															•	•	○								
TR125×6	6	122	0°54′	IR60TR															•	•	○								
TR130×6	6	127	0°52′	IR60TR															•	•	○								
TR135×6	6	132	0°50′	IR60TR															•	•	○								
TR140×6	6	137	0°48′	IR60TR															•	•	○								
TR145×6	6	142	0°46′	IR60TR															•	•	○								
TR150×6	6	147	0°45′	IR60TR															•	•	○								
TR155×6	6	152	0°43′	IR60TR															•	•	○								
TR160×6	6	157	0°42′	IR60TR															•	•	○								
TR165×6	6	162	0°41′	IR60TR															•	•	○								
TR170×6	6	167	0°39′	IR60TR															•	•	○								

Note : The above tables show correspondence of internal toolholders at the time of setting clearance between thread and toolholder to 3 mm (1 mm in case of SN type) and the finishing stock to 0.1 mm.

Parallel pipe thread (G) This table is also applied to PF, Rp, and PS type threads.

Nominal size	TPI	Pitch	Pitch diameter	Lead angle	Shank material	Steel shank												Carbide shank								"Tsuppari-Ichiban"			
					Insert size	6IR		11IR				16IR						6IR				11IR				16IR		16IR			
					Holder Cat. No. / Insert Cat. No.	SNR0006H06-2	SNR0008H06-2	SNR0010K11	SNR0010K11-2	SNR0013L11	SNR0013L11-2	SNR0016M16	SNR0016M16-2	CNR0020P16	CNR0025R16	CNR0032S16	(CNR0040T16)	(CNR0050U16)	SNR0006K06SC-2	SNR0006K06SC-3	SNR0008K06SC-2	SNR0008K06SC-3	SNR0010M11SC	SNR0010M11SC-2	SNR0012P11SC	SNR0012P11SC-2	SNR0016R16SC	SNR0016R16SC-2	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT	(TCNR0032T16DT)
G1/4	19	1.34	12.30	1°59′	IR19W	•	○												•		○										
G3/8	19	1.34	15.81	1°33′	IR19W	•	•		○										•		○										
G1/2	14	1.81	19.79	1°40′	IR14W				•		○												•		○						
G5/8	14	1.81	21.75	1°31′	IR14W				•		○												•		○						
G3/4	14	1.81	25.28	1°18′	IR14W			•		•		○											•		•		○		○			
G7/8	14	1.81	29.04	1°08′	IR14W			•		•		•		○									•		•		○		•	○		
G1	11	2.31	31.77	1°20′	IR11W							•		○													○		•	○		
G1-1/8	11	2.31	36.42	1°09′	IR11W							•		•	○												○		•	•	○	
G1-1/4	11	2.31	40.43	1°02′	IR11W							•		•	○												○		•	•	○	
G1-1/2	11	2.31	46.32	0°55′	IR11W							•		•	•	○											○		•	•	•	○
G1-3/4	11	2.31	52.27	0°48′	IR11W							•		•	•	•	○										○		•	•	•	○
G2	11	2.31	58.14	0°43′	IR11W							•		•	•	•	○										○		•	•	•	○
G2-1/4	11	2.31	64.23	0°39′	IR11W							•		•	•	•	•	○									○		•	•	•	○
G2-1/2	11	2.31	73.71	0°34′	IR11W							•		•	•	•	•	○									○		•	•	•	○
G2-3/4	11	2.31	80.06	0°32′	IR11W							•		•	•	•	•	○									○		•	•	•	○
G3	11	2.31	86.41	0°29′	IR11W									0	0	0	0	0												0	0	0
G3-1/2	11	2.31	98.85	0°26′	IR11W									0	0	0	0	0												0	0	0
G4	11	2.31	111.55	0°23′	IR11W									0	0	0	0	0												0	0	0
G4-1/2	11	2.31	124.25	0°20′	IR11W									0	0	0	0	0												0	0	0
G5	11	2.31	136.95	0°18′	IR11W									0	0	0	0	0												0	0	0
G6	11	2.31	162.35	0°16′	IR11W									0	0	0	0	0												0	0	0

0 : Change the shim to AN16-0 ←

0 : Change the shim to AN16-0DT ←

Taper pipe thread (PT) This table is also applied to Rc type pipe thread.

Nominal size	TPI	Pitch	Pitch diameter	Lead angle	Shank material	Steel shank												Carbide shank								"Tsuppari-Ichiban"			
					Insert size	6IR				11IR				16IR						6IR				11IR				16IR		16IR			
					Holder Cat. No. / Insert Cat. No.	SNR0006H06-2	SNR0006H06-3	SNR0008H06-2	SNR0008H06-3	SNR0010K11	SNR0010K11-2	SNR0013L11	SNR0013L11-2	SNR0016M16	SNR0016M16-2	CNR0020P16	CNR0025R16	CNR0032S16	(CNR0040T16)	(CNR0050U16)	SNR0006K06SC-2	SNR0006K06SC-3	SNR0008K06SC-2	SNR0008K06SC-3	SNR0010M11SC	SNR0010M11SC-2	SNR0012P11SC	SNR0012P11SC-2	SNR0016R16SC	SNR0016R16SC-2	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT	(TCNR0032T16DT)
PT1/4	19	1.34	12.30	1°59′	IR19PT	○													○												
PT3/8	19	1.34	15.81	1°33′	IR19PT	•		○											•		○										
PT1/2	14	1.81	19.79	1°40′	IR14PT					○														•		○					
PT3/4	14	1.81	25.28	1°19′	IR14PT									○									•		•		○		○			
PT1	11	2.31	31.77	1°20′	IR11PT									•		○											○		•	○		
PT1 1/4	11	2.31	40.43	1°02′	IR11PT									•		•	○										○		•	•	○	
PT1 1/2	11	2.31	46.32	0°55′	IR11PT									•		•	•	○									○		•	•	•	○
PT2	11	2.31	58.14	0°43′	IR11PT									•		•	•	•	○								○		•	•	•	○
PT2 1/2	11	2.31	73.71	0°34′	IR11PT									•		•	•	•	•	○							○		•	•	•	○
PT3	11	2.31	86.41	0°29′	IR11PT											0	0	0	0	0										0	0	0
PT3 1/2	11	2.31	98.85	0°26′	IR11PT											0	0	0	0	0										0	0	0
PT4	11	2.31	111.55	0°23′	IR11PT											0	0	0	0	0										0	0	0
PT5	11	2.31	136.95	0°18′	IR11PT											0	0	0	0	0										0	0	0
PT6	11	2.31	162.35	0°16′	IR11PT											0	0	0	0	0										0	0	0
PT7	11	2.31	187.75	0°13′	IR11PT											0	0	0	0	0										0	0	0
PT8	11	2.31	213.15	0°12′	IR11PT											0	0	0	0	0										0	0	0
PT9	11	2.31	238.55	0°11′	IR11PT											0	0	0	0	0										0	0	0
PT10	11	2.31	263.95	0°10′	IR11PT											0	0	0	0	0										0	0	0
PT12	11	2.31	314.75	0°08′	IR11PT											0	0	0	0	0										0	0	0

0 : Change the shim to AN16-0 ←

0 : Change the shim to AN16-0DT ←

Note : The above tables show correspondence of internal toolholders at the time of setting clearance between thread and toolholder to 3 mm (1 mm in case of SN type) and the finishing stock to 0.1 mm.

National taper pipe thread (NPT)

Nominal size	TPI	Pitch	Lead angle	Shank material	Steel shank											Carbide shank							"Tsuppari-Ichiban"			
				Insert size	6IR				16IR							6IR				16IR			16IR			
				Holder Cat. No. / Insert Cat. No.	SNR0006H06-2	SNR0006H06-3	SNR0008H06-2	SNR0008H06-3	SNR0016M16	SNR0016M16-2	SNR0016M16-3	CNR0020P16	CNR0025R16	CNR0032S16	(CNR0040T16)	(CNR0050U16)	SNR0006K06SC-2	SNR0006K06SC-3	SNR0008K06SC-2	SNR0008K06SC-3	SNR0016R16SC	SNR0016R16SC-2	(SNR0016R16SC-3)	TSNR0016Q16	TCNR0020R16DT	TCNR0025S16DT	(TCNR0032T16DT)
3/8NPT	18	1.41	1°37′	IR18NPT	•		○										•		○								
1/2NPT	14	1.81	1°40′	IR14NPT																							
3/4NPT	14	1.81	1°19′	IR14NPT					○												○			○			
1NPT	11.5	2.21	1°17′	IR115NPT					○			○									○			•	○		
1 1/4NPT	11.5	2.21	1°00′	IR115NPT					○			•	•	○							○			•	•	•	○
1 1/2NPT	11.5	2.21	0°52′	IR115NPT					○			•	•	○							○			•	•	•	○
2NPT	11.5	2.21	0°41′	IR115NPT					○			•	•	•	•	○					○			•	•	•	○
2 1/2NPT	8	3.175	0°50′	IR8NPT					○			•	•	•	•	○					○			•	•	•	○
3NPT	8	3.175	0°40′	IR8NPT					○			•	•	•	•	○					○			•	•	•	○
3 1/2NPT	8	3.175	0°35′	IR8NPT					○			•	•	•	•	○					○			•	•	•	○
4NPT	8	3.175	0°31′	IR8NPT					○			•	•	•	•	○					○			•	•	•	○
5NPT	8	3.175	0°25′	IR8NPT								0	0	0	0	[0]									0	0	[0]
6NPT	8	3.175	0°21′	IR8NPT								0	0	0	0	[0]									0	0	[0]
8NPT	8	3.175	0°16′	IR8NPT								0	0	0	0	[0]									0	0	[0]
10NPT	8	3.175	0°13′	IR8NPT								0	0	0	0	[0]									0	0	[0]
12NPT	8	3.175	0°11′	IR8NPT								0	0	0	0	[0]									0	0	[0]
14NPT	8	3.175	0°10′	IR8NPT								0	0	0	0	[0]									0	0	[0]
16NPT	8	3.175	0°09′	IR8NPT								0	0	0	0	[0]									0	0	[0]
18NPT	8	3.175	0°08′	IR8NPT								0	0	0	0	[0]									0	0	[0]
20NPT	8	3.175	0°07′	IR8NPT								0	0	0	0	[0]									0	0	[0]
24NPT	8	3.175	0°06′	IR8NPT								0	0	0	0	[0]									0	0	[0]

[0] : Change the shim to AN16-0 ←

[0] : Change the shim to AN16-0DT ←

29° trapezoidal thread (ACME)

Nominal size	TPI	Pitch	Pitch diameter	Lead angle	Shank material	Steel shank												Carbide shank			"Tsuppari-Ichiban"			
					Insert size	16IR						22IR					27IR		16IR			16IR		22IR	
					Holder Cat. No. / Insert Cat. No.	SNR0016M16	SNR0016M16-2	SNR0016M16-3	CNR0020P16	CNR0025R16	CNR0032S16	SNR0020Q22	SNR0020Q22-2	SNR0020Q22-3	CNR0025R22	CNR0032S22	CNR0040T27	(CNR0050U27)	SNR0016R16SC	SNR0016R16SC-2	SNR0016R16SC-3	TSNR0016Q16	TCNR0020R16DT	TCNR0025S22DT	(TCNR0032T22DT)
3/8	12	2.12	8.465	4°33′	IR12ACME																			
7/16	12	2.12	10.053	3°50′	IR12ACME																			
1/2	10	2.54	11.43	4°03′	IR10ACME																			
5/8	8	3.18	14.274	4°03′	IR8ACME																			
3/4	6	4.23	16.934	4°33′	IR6ACME																			
7/8	6	4.23	20.109	3°50′	IR6ACME																			
1	5	5.08	22.86	4°03′	IR5ACME																			
1-1/8	5	5.08	26.035	3°33′	IR5ACME																			
1-1/4	5	5.08	29.21	3°10′	IR5ACME																			
1-3/8	4	6.35	31.75	3°39′	IR4ACME																			
1-1/2	4	6.35	34.925	3°19′	IR4ACME																			
1-3/4	4	6.35	41.275	2°48′	IR4ACME																			
2	4	6.35	47.625	2°26′	IR4ACME																			

Because this thread standard is characterized with large pitch and small diameter, (that is a large lead angle) the standard inserts and toolholders can not be used for machining this thread type. The application is limited to outside of the standard.

Note : The above tables show correspondence of internal toolholders at the time of setting clearance between thread and toolholder to 3 mm (1 mm in case of SN type) and the finishing stock to 0.1 mm.

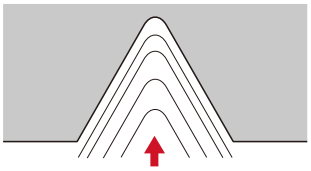
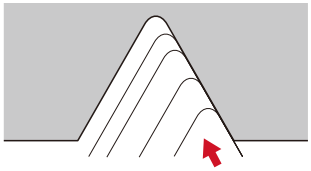
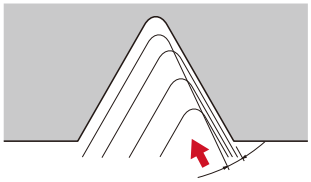
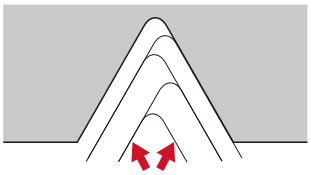
Threading guidelines

Determine the infeed per pass and number of threads while referring to the table and description below.

Pitch (mm)	0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	3.5	4	4.5	5 ~
TPI	48	32	24	20	16	14	12	10	8	7	6	5.5	5 ~
No. of passes	4 ~ 6	4 ~ 7	4 ~ 8	5 ~ 9	6 ~ 10	7 ~ 12	7 ~ 12	8 ~ 14	10 ~ 16	11 ~ 18	11 ~ 18	11 ~ 19	12 ~ 24

Note:
- When using the full-profile insert, set the total infeed amount by taking the finish stock of 0.1mm into account.
- Set the first infeed to 150 ~ 200% of nose R and do not allow it to exceed 0.5 mm.
- The infeed amount during the final pass must be a minimum of 0.05 mm. No zero cuts should be made. (Extra small infeed or zero cutting of work hardened surfaces will reduce tool life.)
- The partial-profile insert or inside diameter insert has small nose R. Reduce the infeed per pass and increase the no. of passes.
- Regarding standard infeed per passes and no. of passes, please refer to our catalog.

Infeed methods for threading tools

Infeed method	Features
 Straight infeed (radial infeed)	• Most simple and typical method Suitable for relatively small pitch threads of easily machinable material. • Chip contact length on right and left is longer, causing chattering, with increased load on the nose end. • When the half included angle is not symmetrical to the right and left, infeeding in the direction of 1/2 of the included angle will ensure equal machining with right and left cutting edges.
 Single edge infeed (flank infeed)	• Suitable for large pitch threads or easy to tear materials. Effectively prevents chattering. • Chips are discharged in one direction only. Satisfactory chip control. • Edge on the right (with zero infeed) tends to be worn heavily.
 Modified single-edge infeed (flank infeed)	• Suitable for large pitch threads or easy to tear materials. Effectively prevents chattering. • Chips are discharged in one direction only. Satisfactory chip control. • Edge on the right tends to be worn heavily.
 Alternating flank infeed	• Suitable for large pitch threads or easy to tear material. Effectively prevents chattering. • Chips are discharged alternately in right and left directions, resulting in possible entanglement. • Right and left edges are used alternately, ensuring uniform wear and extending tool life.

Infeed per Pass and Number of Passes

ISO metric full-profile inserts (for external)

Pitch		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	3.5	4	4.5	5	5.5	6
Height of thread		0.32	0.47	0.63	0.79	0.95	1.11	1.27	1.58	1.9	2.21	2.53	2.85	3.16	3.48	3.8
Total depth of cut		0.42	0.57	0.73	0.89	1.05	1.21	1.37	1.68	2	2.31	2.63	2.95	3.26	3.58	3.9
Number of passes	1	0.15	0.18	0.25	0.25	0.3	0.3	0.3	0.3	0.35	0.35	0.4	0.4	0.45	0.5	0.5
	2	0.12	0.12	0.2	0.2	0.25	0.25	0.25	0.25	0.3	0.3	0.35	0.35	0.35	0.35	0.4
	3	0.1	0.12	0.13	0.15	0.2	0.2	0.2	0.25	0.25	0.3	0.3	0.3	0.3	0.3	0.3
	4	0.05	0.1	0.1	0.14	0.15	0.16	0.2	0.23	0.2	0.25	0.25	0.25	0.25	0.25	0.25
	5		0.05	0.05	0.1	0.1	0.15	0.15	0.2	0.2	0.21	0.2	0.2	0.25	0.23	0.25
	6				0.05	0.05	0.1	0.12	0.15	0.15	0.2	0.2	0.2	0.2	0.2	0.2
	7						0.05	0.1	0.15	0.15	0.15	0.15	0.2	0.2	0.2	0.2
	8							0.05	0.1	0.15	0.15	0.15	0.15	0.18	0.15	0.15
	9								0.05	0.1	0.15	0.15	0.15	0.15	0.15	0.15
	10									0.1	0.1	0.13	0.15	0.15	0.15	0.15
	11									0.05	0.1	0.1	0.15	0.13	0.15	0.15
	12										0.05	0.1	0.1	0.1	0.15	0.15
	13											0.1	0.1	0.1	0.15	0.15
	14											0.05	0.1	0.1	0.1	0.15
	15												0.1	0.1	0.1	0.1
	16												0.05	0.1	0.1	0.1
	17													0.1	0.1	0.1
	18													0.05	0.1	0.1
	19														0.1	0.1
	20														0.05	0.1
	21															0.1
	22															0.05
	23															
	24															

ISO metric full-profile inserts (for internal)

Pitch		0.5	0.75	1	1.25	1.5	1.75	2	2.5	3	3.5	4	4.5	5	5.5	6
Height of thread		0.29	0.43	0.58	0.72	0.87	1.01	1.16	1.45	1.74	2.03	2.32	2.61	2.9	3.19	3.48
Total depth of cut		0.39	0.53	0.68	0.82	0.97	1.11	1.26	1.55	1.84	2.13	2.42	2.71	3	3.29	3.58
Number of passes	1	0.08	0.1	0.14	0.15	0.2	0.2	0.2	0.25	0.25	0.3	0.3	0.35	0.35	0.4	0.4
	2	0.07	0.09	0.13	0.13	0.16	0.18	0.18	0.22	0.22	0.25	0.25	0.25	0.25	0.25	0.25
	3	0.07	0.08	0.11	0.12	0.14	0.16	0.17	0.2	0.2	0.22	0.22	0.22	0.22	0.22	0.22
	4	0.06	0.08	0.1	0.11	0.12	0.14	0.16	0.18	0.18	0.2	0.2	0.2	0.2	0.2	0.2
	5	0.06	0.07	0.08	0.1	0.12	0.12	0.14	0.16	0.16	0.18	0.18	0.18	0.2	0.2	0.19
	6	0.05	0.06	0.07	0.09	0.1	0.1	0.12	0.15	0.15	0.16	0.18	0.18	0.18	0.18	0.18
	7		0.05	0.05	0.07	0.08	0.09	0.1	0.1	0.14	0.14	0.16	0.16	0.16	0.16	0.17
	8				0.05	0.05	0.07	0.08	0.1	0.13	0.13	0.14	0.14	0.14	0.14	0.16
	9						0.05	0.06	0.08	0.12	0.12	0.14	0.14	0.14	0.14	0.15
	10							0.05	0.06	0.1	0.11	0.12	0.12	0.13	0.13	0.14
	11								0.05	0.08	0.1	0.12	0.12	0.13	0.13	0.14
	12									0.06	0.1	0.1	0.12	0.12	0.13	0.13
	13									0.05	0.07	0.1	0.11	0.12	0.12	0.13
	14										0.05	0.09	0.1	0.12	0.12	0.13
	15											0.07	0.1	0.11	0.12	0.12
	16											0.05	0.09	0.1	0.12	0.12
	17												0.08	0.1	0.1	0.12
	18												0.05	0.1	0.1	0.1
	19													0.08	0.1	0.1
	20													0.05	0.1	0.1
	21														0.08	0.1
	22														0.05	0.1
	23															0.08
	24															0.05

Unified full-profile inserts

		For external							For internal						
TPI		24	20	18	16	14	12	8	24	20	18	16	14	12	8
Height of thread		0.67	0.8	0.89	1.01	1.15	1.34	2.01	0.61	0.74	0.82	0.92	1.05	1.23	1.84
Total depth of cut		0.77	0.9	0.99	1.11	1.25	1.44	2.11	0.71	0.84	0.92	1.02	1.15	1.33	1.94
Number of passes	1	0.25	0.25	0.28	0.3	0.3	0.3	0.35	0.2	0.2	0.2	0.2	0.25	0.25	0.3
	2	0.22	0.2	0.23	0.25	0.25	0.25	0.3	0.16	0.16	0.18	0.18	0.2	0.2	0.25
	3	0.15	0.16	0.18	0.18	0.23	0.21	0.25	0.12	0.13	0.15	0.16	0.18	0.18	0.22
	4	0.1	0.14	0.15	0.15	0.18	0.18	0.22	0.1	0.12	0.14	0.14	0.16	0.16	0.2
	5	0.05	0.1	0.1	0.1	0.14	0.15	0.2	0.08	0.1	0.1	0.11	0.13	0.13	0.18
	6		0.05	0.05	0.08	0.1	0.12	0.2	0.05	0.08	0.1	0.1	0.1	0.1	0.16
	7				0.05	0.05	0.1	0.16		0.05	0.05	0.08	0.08	0.1	0.14
	8						0.08	0.16				0.05	0.05	0.08	0.12
	9						0.05	0.12						0.08	0.12
	10							0.1						0.05	0.1
	11							0.05							0.1
	12														0.05
	13														
	14														

Whitworth full-profile inserts

		For external									For internal								
TPI		20	19	18	16	14	12	11	10	8	20	19	18	16	14	12	11	10	8
Height of thread		0.83	0.88	0.92	1.04	1.19	1.39	1.51	1.66	2.08	0.83	0.88	0.92	1.04	1.19	1.39	1.51	1.66	2.08
Total depth of cut		0.93	0.98	1.02	1.14	1.29	1.49	1.61	1.76	2.18	0.93	0.98	1.02	1.14	1.29	1.49	1.61	1.76	2.18
Number of passes	1	0.25	0.28	0.3	0.3	0.3	0.3	0.3	0.35	0.35	0.2	0.2	0.22	0.22	0.25	0.25	0.25	0.3	0.35
	2	0.2	0.22	0.24	0.25	0.25	0.25	0.25	0.3	0.3	0.18	0.18	0.18	0.18	0.21	0.21	0.21	0.25	0.3
	3	0.18	0.18	0.18	0.18	0.23	0.2	0.2	0.23	0.25	0.16	0.16	0.17	0.17	0.2	0.2	0.2	0.22	0.25
	4	0.15	0.15	0.15	0.14	0.2	0.18	0.18	0.2	0.23	0.14	0.16	0.16	0.16	0.18	0.18	0.18	0.2	0.22
	5	0.1	0.1	0.1	0.12	0.16	0.15	0.15	0.15	0.22	0.12	0.13	0.14	0.14	0.16	0.16	0.16	0.16	0.2
	6	0.05	0.05	0.05	0.1	0.1	0.14	0.14	0.14	0.2	0.08	0.1	0.1	0.12	0.14	0.14	0.14	0.14	0.18
	7				0.05	0.05	0.12	0.12	0.12	0.18	0.05	0.05	0.05	0.1	0.1	0.1	0.12	0.12	0.16
	8						0.1	0.12	0.12	0.16				0.05	0.05	0.1	0.1	0.12	0.14
	9						0.05	0.1	0.1	0.14						0.1	0.1	0.1	0.12
	10							0.05	0.05	0.1						0.05	0.1	0.1	0.11
	11									0.05							0.05	0.05	0.1
	12																		0.05
	13																		
	14																		
	15																		

30° Trapezoidal (TR) inserts

		For external					For internal				
Pitch		2	3	4	5	6	2	3	4	5	6
Height of thread		1.25	1.75	2.25	2.75	3.5	1.25	1.75	2.25	2.75	3.5
Total depth of cut		1.35	1.85	2.35	2.85	3.6	1.35	1.85	2.35	2.85	3.6
Number of passes	1	0.25	0.25	0.3	0.3	0.3	0.2	0.22	0.25	0.25	0.25
	2	0.2	0.22	0.25	0.25	0.25	0.18	0.2	0.22	0.22	0.22
	3	0.2	0.2	0.22	0.2	0.23	0.18	0.18	0.2	0.2	0.21
	4	0.18	0.18	0.2	0.2	0.2	0.16	0.16	0.2	0.18	0.2
	5	0.15	0.17	0.18	0.18	0.18	0.15	0.16	0.17	0.18	0.18
	6	0.12	0.16	0.16	0.16	0.18	0.13	0.16	0.16	0.16	0.18
	7	0.1	0.14	0.15	0.16	0.16	0.1	0.14	0.16	0.16	0.16
	8	0.1	0.14	0.14	0.15	0.16	0.1	0.14	0.14	0.15	0.16
	9	0.05	0.12	0.14	0.14	0.16	0.1	0.12	0.14	0.14	0.16
	10		0.12	0.12	0.14	0.16	0.05	0.12	0.12	0.14	0.16
	11		0.1	0.12	0.14	0.16		0.1	0.12	0.14	0.16
	12		0.05	0.12	0.12	0.15		0.1	0.12	0.12	0.15
	13			0.1	0.12	0.15		0.05	0.1	0.12	0.15
	14			0.1	0.12	0.15			0.1	0.12	0.15
	15			0.05	0.12	0.14			0.1	0.12	0.14
	16				0.1	0.14			0.05	0.1	0.14
	17				0.1	0.12				0.1	0.12
	18				0.1	0.12				0.1	0.12
	19				0.05	0.12				0.1	0.12
	20					0.12				0.05	0.12
	21					0.1					0.1
	22					0.1					0.1
	23					0.05					0.1
	24										0.05
	25										
	26										

29° Trapezoidal (TR) inserts

		For external			For internal		
TPI		8	6	5	8	6	5
Height of thread		1.88	2.41	2.92	1.88	2.41	2.92
Total depth of cut		1.98	2.51	3.02	1.98	2.51	3.02
Number of passes	1	0.25	0.25	0.25	0.22	0.22	0.22
	2	0.22	0.22	0.22	0.2	0.2	0.2
	3	0.2	0.2	0.2	0.18	0.18	0.18
	4	0.18	0.18	0.18	0.16	0.18	0.18
	5	0.16	0.17	0.18	0.16	0.16	0.16
	6	0.16	0.16	0.16	0.16	0.15	0.16
	7	0.16	0.16	0.16	0.15	0.15	0.15
	8	0.14	0.14	0.14	0.14	0.14	0.14
	9	0.14	0.14	0.14	0.14	0.14	0.14
	10	0.12	0.14	0.14	0.12	0.14	0.14
	11	0.1	0.14	0.14	0.1	0.14	0.14
	12	0.1	0.12	0.14	0.1	0.12	0.14
	13	0.05	0.12	0.12	0.1	0.12	0.12
	14		0.12	0.12	0.05	0.12	0.12
	15		0.1	0.12		0.1	0.12
	16		0.1	0.12		0.1	0.12
	17		0.05	0.12		0.1	0.12
	18			0.12		0.05	0.12
	19			0.1			0.1
	20			0.1			0.1
	21			0.05			0.1
	22						0.05
	23						
	24						
	25						
	26						

PT full-profile inserts

		For external				For internal		
TPI		28	19	14	11	19	14	11
Height of thread		0.6	0.86	1.16	1.48	0.86	1.16	1.48
Total depth of cut		0.7	0.96	1.26	1.58	0.96	1.26	1.58
Number of passes	1	0.25	0.28	0.3	0.3	0.22	0.25	0.25
	2	0.2	0.2	0.25	0.25	0.2	0.22	0.22
	3	0.1	0.18	0.2	0.22	0.18	0.18	0.18
	4	0.1	0.15	0.15	0.18	0.16	0.14	0.18
	5	0.05	0.1	0.11	0.15	0.1	0.12	0.15
	6		0.05	0.1	0.12	0.05	0.1	0.13
	7			0.1	0.11	0.05	0.1	0.12
	8			0.05	0.1		0.1	0.1
	9				0.1		0.05	0.1
	10				0.05			0.1
	11							0.05
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							

NPT full-profile inserts

		For external				For internal		
TPI		18	14	11.5	8	14	11.5	8
Height of thread		1.14	1.47	1.79	2.58	1.47	1.79	2.58
Total depth of cut		1.24	1.57	1.89	2.68	1.57	1.89	2.68
Number of passes	1	0.2	0.25	0.25	0.3	0.22	0.22	0.25
	2	0.18	0.22	0.22	0.25	0.2	0.2	0.2
	3	0.17	0.2	0.2	0.2	0.18	0.18	0.2
	4	0.16	0.18	0.18	0.2	0.18	0.18	0.2
	5	0.14	0.17	0.18	0.2	0.16	0.16	0.2
	6	0.12	0.16	0.17	0.2	0.14	0.16	0.2
	7	0.12	0.12	0.16	0.18	0.12	0.16	0.18
	8	0.1	0.12	0.14	0.18	0.12	0.14	0.18
	9	0.05	0.1	0.12	0.16	0.1	0.12	0.16
	10		0.05	0.12	0.16	0.1	0.12	0.16
	11			0.1	0.14	0.05	0.1	0.14
	12			0.05	0.14		0.1	0.14
	13				0.12		0.05	0.12
	14				0.1			0.1
	15				0.1			0.1
	16				0.05			0.1
	17							0.05
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							

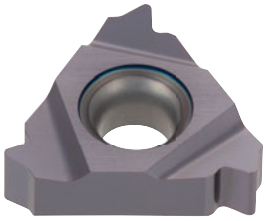
TUNGTHREAD
TUNGALOY

Oil & Gas
INDUSTRY

Wide selections for API and ANSI/ASME threads

Oil & Gas INDUSTRY

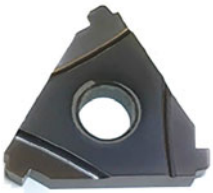
For API Buttress and API Round (3 edged, single-sided inserts)



16*R*API, 22*R5BAPI
Laydown style, without chipbreaker - See page 19

16*R*RD-CB
Laydown style, without chipbreaker - See page 19

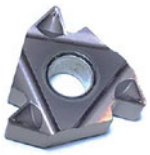
Laydown style, large insert for enhanced stability



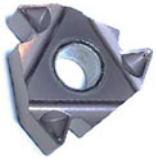
L535B**-FC**
Laydown style, without chipbreaker - See page 46

6-edged, double-sided insert ideal for threading API drill pipes

One insert can be used for both internal and external threading with reduced tool cost and inventory.



Right-hand, OD threading (See pages 47 and 48)

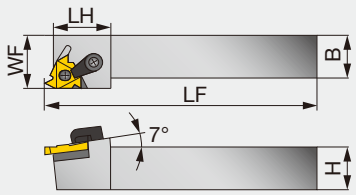


Right-hand, ID threading(See page 48)

Oil & Gas INDUSTRY

MTVNR/L-5

"TungThread"External threading toolholders for laydown inserts



Right hand (R) shown.

Designation	B	H	LF	LH	WF	Insert
MTVNR-2525M5	25	25	152	39	31.8	L535B**EXT-FC
MTVNR-3232M5	32	32	178	39	38.1	L535B**EXT-FC

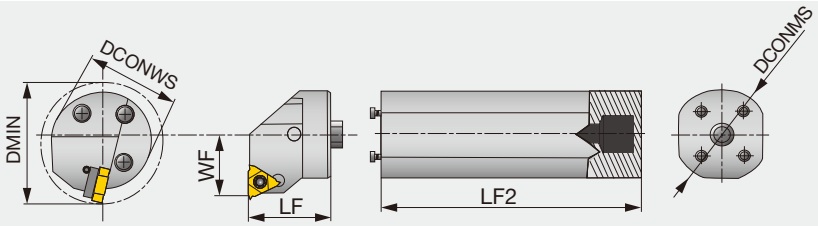
SPARE PARTS

Designation	Shim	Lock pin	Clamp	Clamping screw	Wrench
MTVNR...	LS53NOFORMEXT	NL-58	TC-250	STC-11	1/8HEX

Oil & Gas INDUSTRY

HS-LNFR-53

Exchangeable internal threading heads for laydown inserts



Right hand (R) shown.

Designation	DMIN	DCONWS	WF	LF	Insert
HS40-LNFR-53	50	40	28.7	41.3	L535B**INT-FC
HS50-LNFR-53	63	50	32.7	41.3	L535B**INT-FC

SPARE PARTS

Designation	Lock pin	Clamp	Clamping screw	Wrench
HS**-LNFR-53	NL-56	TC-250	STC-11	1/8HEX

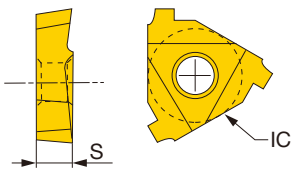
Shank

Designation	DCONMS	LF2
S-570-40M-40	40	273
S-570-50M-50	50	366

SPARE PARTS

Designation	Clamping screw	Wrench
S-570-40M-40	SS100	5/32HEX
S-570-50M-50	SS94	1/4EX

Full-profile inserts (Single-sided)



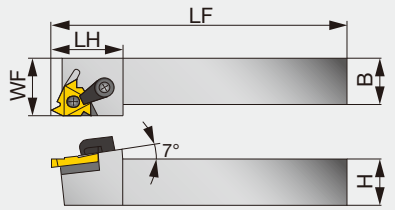
Connection	TPI	Taper mm/mm	Taper TPF	External insert Designation	External insert Grades Coating AH725	External insert IC	External insert S	Internal insert Designation	Internal insert Grades Coating AH725	Internal insert IC	Internal insert S
API Buttress	5	1/16	0.75	**L535B75EXT-FC**	●	15.875	4.8	**L535B75INT-FC**	●	15.875	4.8
	5	1/12	1	**L535B1EXT-FC**	●	15.875	4.8	**L535B1INT-FC**	●	15.875	4.8

● : Line-up

Oil & Gas INDUSTRY

MTVNR-54

External threading toolholder for laydown double-side inserts



Right hand (R) shown.

Designation	H	B	LF	LH	WF	Insert
MTVNR-3232M54	32	32	178	39	38.1	LDS54**FT-CB#...

SPARE PARTS

Designation	Shim	Lock pin	Clamp	Clamping screw	Wrench
MTVNR-3232M54	LS53NOFORMEXT	NL-58	TC-250	STC-11	1/8HEX

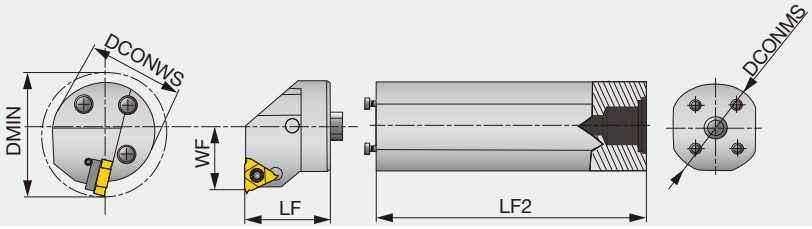
External tool, Right hand

Internal tool, Right hand

Oil & Gas INDUSTRY

HS-LNFR/L-54API

Exchangeable internal threading heads for laydown double-side inserts



Right hand (R) shown.

Designation	DMIN	DCONWS	WF	LF	Insert
HS40-LNFR-54API	50	40	27	32	LDS54**FT-CB#...
HS50-LNFR-54API	63	50	35	40	LDS54**FT-CB#...

SPARE PARTS

Designation	Lock pin	Clamp	Clamping screw	Wrench
HS40-LNFR-54API	H410-1	TC-250	STC-11	1/8HEX
HS50-LNFR-54API	NL-56	TC-250	STC-11	1/8HEX

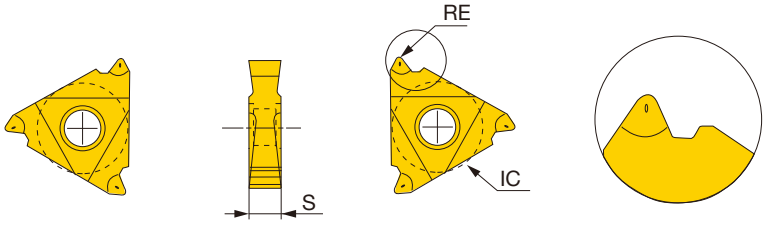
Shank

Designation	DCONMS	LF2
S-570-40M-40	40	273
S-570-50M-50	50	366

SPARE PARTS

Designation	Clamping screw	Wrench
S-570-40M-40	SS100	5/32HEX
S-570-50M-50	SS94	1/4EX

Full-profile inserts (Double-sided)

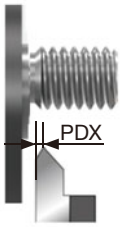


Connection	TPI	Thread form	Taper		Designation	Grade / Coating / AH725	IC	S	RE
			mm/mm	TPF					
API Rotary shoulder connection	4	V-0.038R	1/6	2	**LDS54428FT-CB #1**	●	15.875	6.4	0.97
	4	V-0.038R	1/4	3	**LDS54438FT-CB #2**	●	15.875	6.4	0.97
	4	V-0.050	1/6	2	**LDS54425FT-CB #3**	●	15.875	6.4	0.64
	4	V-0.050	1/4	3	**LDS54435FT-CB #4**	●	15.875	6.4	0.64
	5	V-0.040	1/4	3	**LDS54530FT-CB #5**	●	15.875	6.4	0.51

● : Line-up

Wide selections for various threading needs

DUOJUSTCUT



Ideal for threading high thread pitches

Thread pitch (mm)	PDX (mm)
0.2 ~ 0.4	0.25
0.4 ~ 1	0.6
1 ~ 1.5	1.25

See page 56

TETRAMINICUT

First-choice tools

Thread pitch (mm)	PDX (mm)
0.4 ~ 1	0.6
1 ~ 2	1
0.8 ~ 3	1.6

See page 50

J-SERIES

Complementary tool

See page 62

TUNGTHREAD

For threading different types of threads with one tool

See page 22

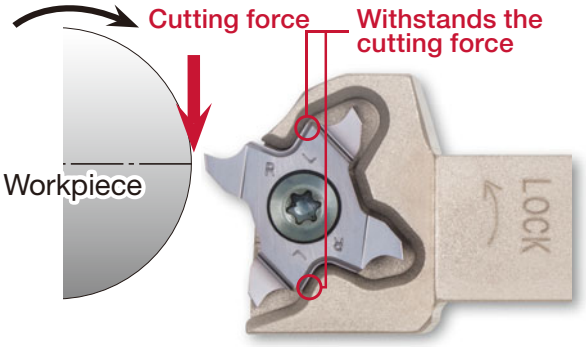
TETRAMINICUT

Expand full **profile (ISO metric)** with highly rigid clamping insert clamping

TETRAMINI CUT

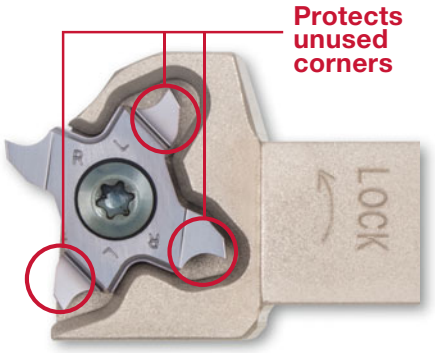
Unique 3-point clamping system

The unique pocket design provides accurate indexing repeatability of the cutting edge height.

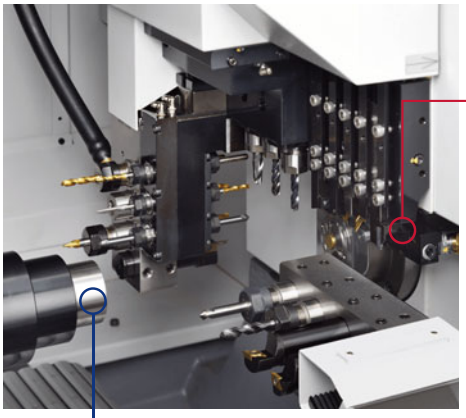


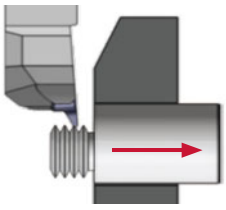
The insert pocket protects all unused cutting edges

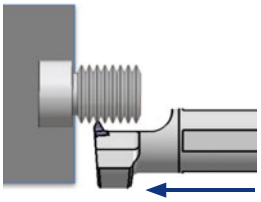
Strong and stable clamping design protects unused insert corners from damage during operation.



For external threading in Swiss machines





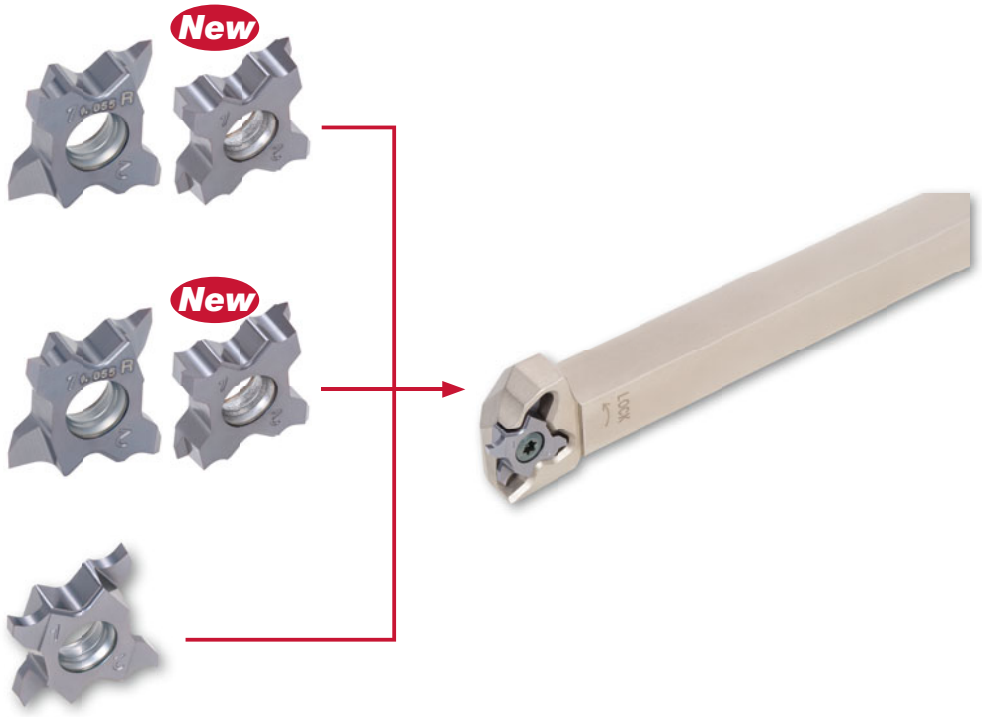


Threading and grooving insert fit the same tool holder

Threading insert
(First choice)
Max thread pitch: 3 mm
New • ISO metric pitch :
1.0, 1.25, 1.5 mm

Threading insert
(sharp edge)
Max thread pitch: 2 mm
New • ISO metric pitch :
0.5, 0.7, 0.75, 0.8 mm

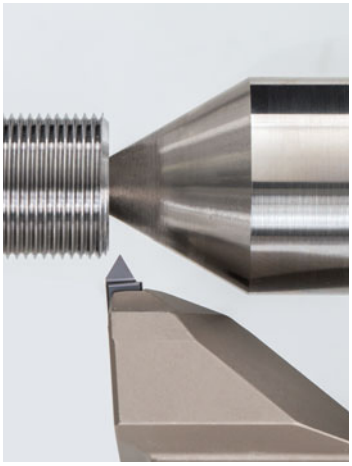
Grooving insert
Max grooving width: 3 mm



No tool interference with the lathe center when machining small parts

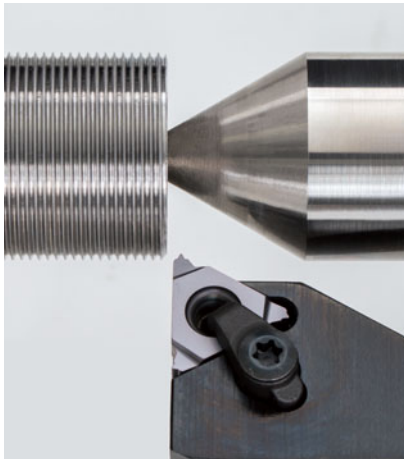
TETRAMCUT

M16x1



Insert：TCT18R-60N-020

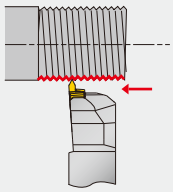
M24x1

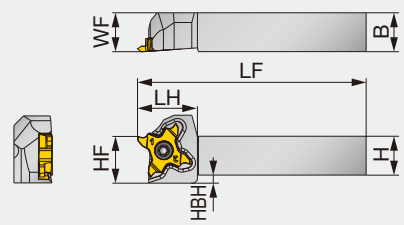


Insert：16ER10ISO

TETRAMINICUT
STCR/L-18

External threading tool holder for 4 cornered inserts





Right hand (R) shown.

Designation	H	B	LF	LH	HF	WF	HBH	Insert
STCR/L1010X18	10	10	120	18.5	10	10	4.5	TC*18...
STCR/L1212F18	12	12	85	18.5	12	12	2.5	TC*18...
STCR/L1212X18	12	12	120	18.5	12	12	2.5	TC*18...
STCR/L1616X18	16	16	120	18.5	16	16	-	TC*18...
STCR/L2020H18	20	20	100	18.5	20	20	-	TC*18...
STCR/L2020X18	20	20	120	23	20	25	-	TC*18...
STCR/L2525Z18	25	25	135	23	25	30	-	TC*18...

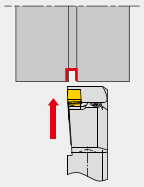
- This holder accommodates either a threading or grooving insert
- The right hand insert (TCT18R...) is used for the right hand toolholders (STCR...), and the left hand insert (TCL18...) is used for the left hand toolholders (STCL...).

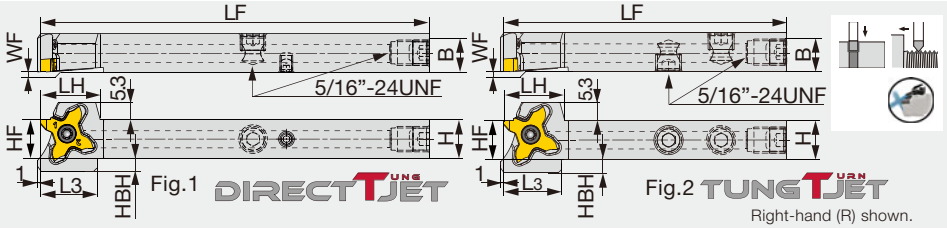
SPARE PARTS


Designation	Clamping screw	Wrench
STCR...	CSTC-4L100DL	T-1008/5
STCL...	CSTC-4L100DR	T-1008/5

TETRAMINICUT
TetraMini-Cut STCR/L-18

External grooving and threading toolholder, high pressure coolant compatible





Right-hand (R) shown.

Designation	H	B	LF	LH	*L3*	HF	WF	HBH	Fig.	Insert	Torque*
STCR/L1212F18-CHP	12	12	85	18.5	17.5	12	0/12	4	2	TC*18...	1.2
STCR/L1212X18-CHP	12	12	120	18.5	17.5	12	0/12	4	1	TC*18...	1.2
STCR/L1616X18-CHP	16	16	120	18.5	-	16	0/16	0	1	TC*18...	1.2

- This holder accommodates either a threading or grooving insert
- The right hand insert (TCT18R...) is used for the right hand toolholders (STCR...), and the left hand insert (TCL18...) is used for the left hand toolholders (STCL...).

SPARE PARTS

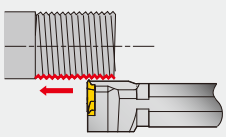

Designation	Clamping screw	Wrench
STCL**18-CHP	CSTC-4L100DR	T-1008/5
STCR**18-CHP	CSTC-4L100DL	T-1008/5

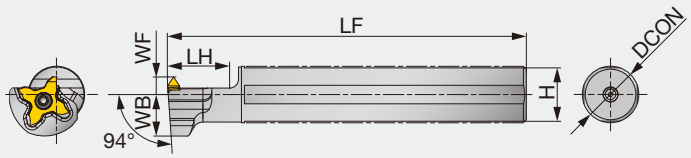
Groove width range : 0.33 - 3.0 mm
Threading pitch range : 0.8 - 3.0 mm

TETRAMINI CUT

JS-STCL18

Internal threading tool holder for 4 cornered inserts





Left hand (L) shown.

Designation	DCON	LF	LH	H	WB	WF	Insert
JS14H-STCL18	14	100	20	13	14	6	TC*18R...
JS159F-STCL18	15.875	85	20	15	14	6	TC*18R...
JS16F-STCL18	16	85	20	15	14	6	TC*18R...
JS19G-STCL18	19.05	90	20	18	14	6	TC*18R...
JS19X-STCL18	19.05	120	20	18	14	6	TC*18R...
JS20G-STCL18	20	90	20	19	14	6	TC*18R...
JS20X-STCL18	20	120	20	19	14	6	TC*18R...
JS22X-STCL18	22	120	20	21	12.25	10	TC*18R...
JS25H-STCL18	25	100	20	24	12.25	10	TC*18R...
JS254X-STCL18	25.4	120	20	24	12.25	10	TC*18R...

- The right hand insert (TCT18R...) is used for the left hand toolholders (STCL...)

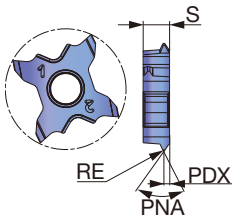
SPARE PARTS

Designation	Clamping screw	Wrench
JS**STCL18	CSTC-4L100DL	T-1008/5

New

ISO metric

TCT18FR/R-ISO (Full profile inserts)

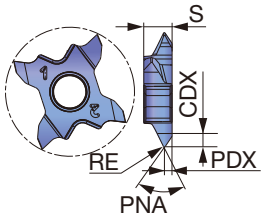


Designation	Edge preparation	Grade SH725 R	Grade SH725 L	Grade AH725 R	Grade AH725 L	Dimensions (mm) pitch	PDX	RE	PNA	S
TCT18FR-05ISO	Sharp	★				0.5	0.35	0.06	60°	4
TCT18FR-07ISO	Sharp	★				0.7	0.45	0.09	60°	4
TCT18FR-075ISO	Sharp	★				0.75	0.50	0.09	60°	4
TCT18FR-08ISO	Sharp	★				0.8	0.50	0.10	60°	4
TCT18R-10ISO	Lightly honed			★		1.0	0.60	0.13	60°	4
TCT18R-125ISO	Lightly honed			★		1.25	0.70	0.17	60°	4
TCT18R-15ISO	Lightly honed			★		1.5	0.80	0.20	60°	4

Package quantity = 5pcs.
★ : To be released in summer 2019

60° thread angle

TCT18FR/R/L (Threading)



Designation	Edge preparation	Grade SH725 R	Grade AH725 R	Grade AH725 L	Dimensions (mm) pitch min	pitch max	PDX	CDX	RE	PNA	S
TCT18FR-60A-005	Sharp	●			0.4	1	0.6	0.99	0.05	60°	4
TCT18FR-60A-010	Sharp	●			1	2	1	1.63	0.1	60°	4
TCT18R/L-60N-010	Lightly honed		●	●	0.8	3	1.6	2.67	0.1	60°	4
TCT18R/L-60N-020	Lightly honed		●	●	1.5	3	1.6	2.57	0.2	60°	4

Package quantity = 5pcs.
● : Line up

STANDARD CUTTING CONDITIONS

TCT18R/L ／ TCT18FR (sharp edge)

ISO	Workpiece materials	Priority	Grades	Cutting speed *Vc* (m/min)	Pitch (mm)	TPI
P	Low carbon steel (S15C / C15, S20C / C20, etc.)	First choice	SH725	60 - 150	0.4 - 2.0	64 - 18
		Toughness	AH725	60 - 150	0.8 - 3.0	32 - 8
	Carbon steels, Alloy steel (S55C / C55, SCM440 / 42CrMoS4, etc.)	First choice	SH725	60 - 150	0.4 - 2.0	64 - 18
		Toughness	AH725	60 - 150	0.8 - 3.0	32 - 8
	Prehardened steel (NAK80, PX5, etc.)	First choice	SH725	60 - 150	0.4 - 2.0	64 - 18
		Toughness	AH725	60 - 150	0.8 - 3.0	32 - 8
M	Stainless steel (SUS304 / X5CrNi18-9, X5CrNiMo17-12-2, etc)	First choice	SH725	50 - 80	0.4 - 2.0	64 - 18
		Toughness	AH725	50 - 80	0.8 - 3.0	32 - 8
K	Grey cast iron (FC250 / GG25 / 250, FC300 / GG30 / 300, etc.)	First choice	AH725	50 - 100	0.8 - 3.0	32 - 8
		Sharpness	SH725	50 - 100	0.4 - 2.0	64 - 18
	Ductile cast iron (FCD400 / 400-15, FCD600 / 600-3, etc.)	First choice	AH725	50 - 100	0.8 - 3.0	32 - 8
		Sharpness	SH725	50 - 100	0.4 - 2.0	64 - 18
S	Titanium alloys (Ti-6Al-4V, etc.)	First choice	SH725	30 - 100	0.4 - 2.0	64 - 18
		Toughness	AH725	30 - 100	0.8 - 3.0	32 - 8
	Superalloys (Inconel718, etc.)	First choice	SH725	30 - 100	0.4 - 2.0	64 - 18
		Toughness	AH725	30 - 100	0.8 - 3.0	32 - 8

DUOJUST CUT

Double cornered insert with high rigidity clamping for various threading operations in Swiss machines

DUOJUST CUT

Unique clamping method enhances insert rigidity during machining

DuoJustCut's tool holder is designed to protect unused cutting edge from damage during machining. Even if the first cutting edge is fractured, the other cutting edge can be used thanks to its unique insert clamping method.

Insert is retained at 3 positions

Smart tool design eliminates difficult-to-reach areas on small parts

Allows threading all the way to the flange, making it ideal for threading small size screws.

	Insert shape		
	60A	60B	60N
Right handed			
Left handed			

DUOJUST CUT

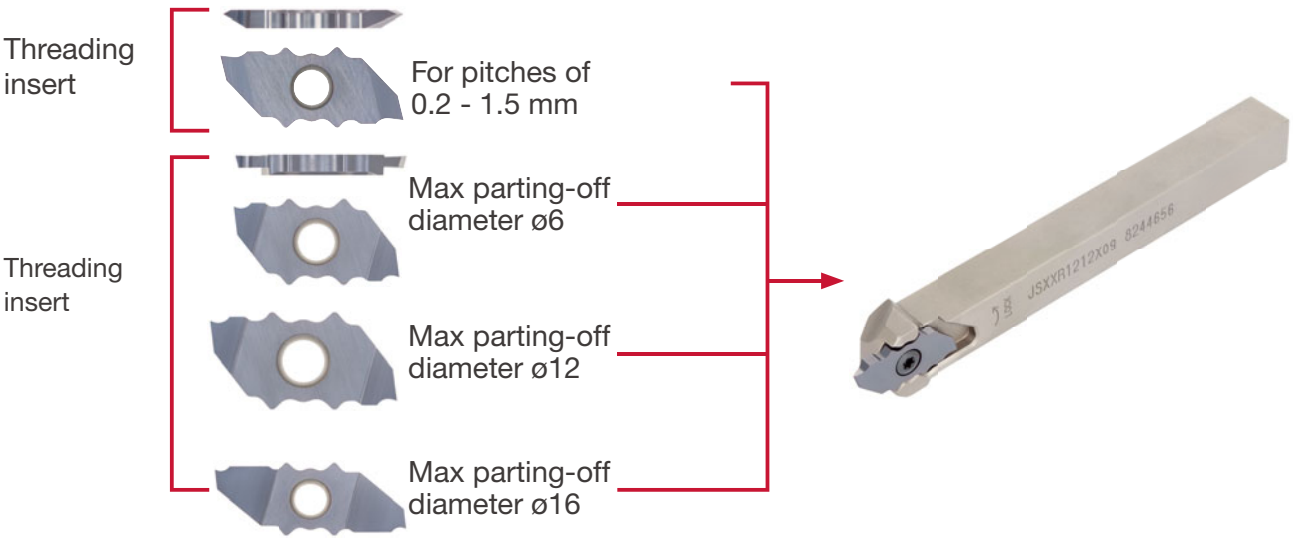
Insert description	Corner radius (mm)	PDX (mm)	Thread pitch (mm)
JXTG12FR-60A-000	0.05(Flat)	0.25	Applicable range
JXTG12FL-60A-000			
JXTG12FR-60B-000	0.05(Flat)	2.25	
JXTG12FL-60B-000			
JXTG12FR-60A-005	R0.05	0.6	Applicable range
JXTG12FL-60A-005			
JXTG12FR-60B-005	R0.05	1.9	
JXTG12FL-60B-005			
JXTG12FR-60N-010	R0.1	1.25	Applicable range
JXTG12FL-60N-010			

Thread pitch (mm): 0.2 | 0.25 | 0.35 | 0.4 | 0.5 | 0.6 | 0.8 | 1 | 1.25 | 1.5

Thread counts (TPI): 127 | 72 | 52 | 32 | 16

DUOJCUT

Parting and threading insert fit the same holder



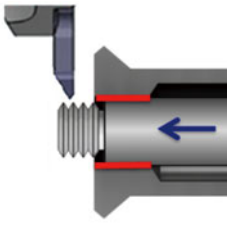
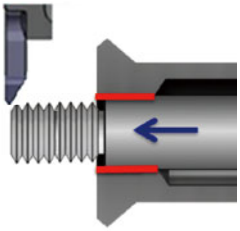
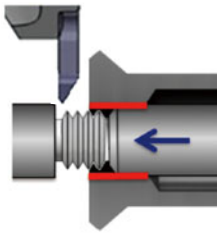
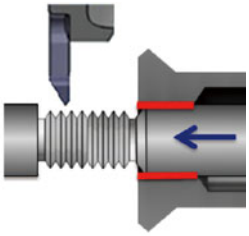
Mountable on the sleeve holder for machining on the second spindle

Cylindrical shanks are available in various diameters.

Cylindrical shank for external machining

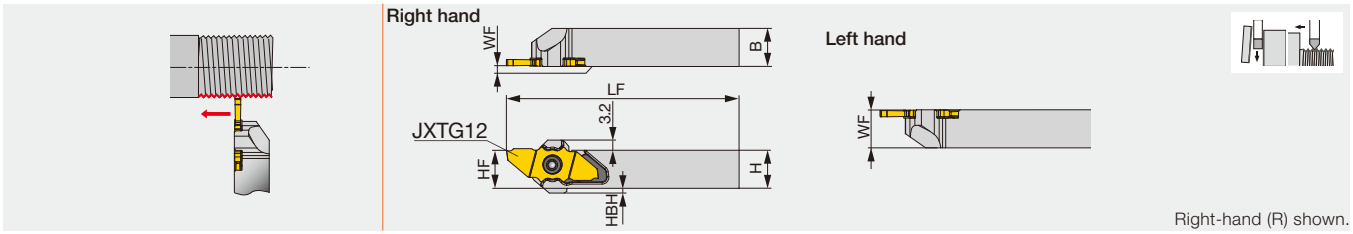
Guide to thread machining in Swiss machines

DUOJCUT offers a wide range of tools to choose for any operations in Swiss machines

	Guide bushing		For back turning	
	Short thread length	Long thread length	Short thread length	Long thread length
Application	 Insert type: A	 Insert type: A	 Insert type: B	 Insert type: B
Tool holder	R-hand holder (JSXXR type)	L-hand holder (JSXXL type)	R-hand holder (JSXXR type)	L-hand holder (JSXXL type)
Insert	**JXTG12FR-60A-*****	**JXTG12FL-60A-*****	**JXTG12FR-60B-*****	**JXTG12FL-60B-*****

DuoJust-Cut JSXXR/L

"J-series" Parting-off tool for swiss lathes



Designation	H	B	WF (R/L)	LF*	HF	HBH	Insert
JSXXR/L1010X09	10	10	0.2 / 9.8	118	10	3	JX...
JSXXR/L1212F09	12	12	0.2 / 9.8	83	12	1.5	JX...
JSXXR/L1212X09	12	12	0.2 / 9.8	118	12	1.5	JX...
JSXXR/L1616X09	16	16	0.2 / 9.8	118	16	0	JX...
JSXXR/L2020H09	20	20	0.2 / 9.8	98	20	0	JX...

- The threading or grooving insert fits this holder. LF may differ when using a parting-off insert.
Note: Use the right-hand insert (JX*G**R***) for a right-hand holder (JSXXR***); the left-hand insert (JX*G**L***) for a left-hand holder (JSXXL***).

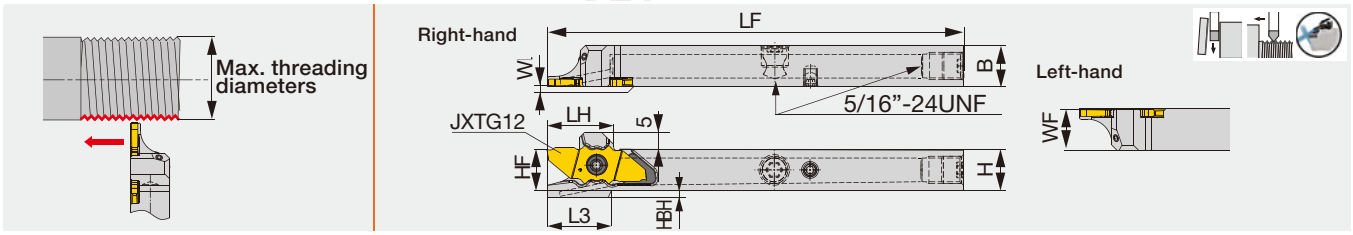
SPARE PARTS

Designation	Clamping screw	Wrench
JSXXR*****	CSTC-4L100DL	T-1008/5
JSXXL*****	CSTC-4L100DR	T-1008/5

JSXXR/L

Parting and threading toolholder, high pressure coolant compatible

DIRECTJET



Designation	H	B	WF (R/L)	LF*	HF	HBH	LH*	L3	Insert
JSXXR/L1212X09-CHP	12	12	0.2/11.8	118	12	2	≤ 19.4	18.8	JX**06...,12...,16...
JSXXR/L1616X09-CHP	16	16	0.2/15.8	118	16	2.5	≤ 19.4	18.7	JX**06...,12...,16...

- The threading or grooving insert fits this holder. LF may differ when using a parting-off insert.
Note: Use the right-hand insert (JX*G**R***) for a right-hand holder (JSXXR***); the left-hand insert (JX*G**L***) for a left-hand holder (JSXXL***).

SPARE PARTS

Designation	Clamping screw	Wrench
JSXXR...	CSTC-4L100DL	T-1008/5
JSXXL...	CSTC-4L100DR	T-1008/5

Parting-off widths : 1.0 mm and 1.5 mm (for a max parting diameter of ø6 mm)
: 1.5 mm and 2.0 mm (for max parting diameters of ø12 mm and ø16 mm)
Threading pitch range : 0.2 ~ 1.5 mm

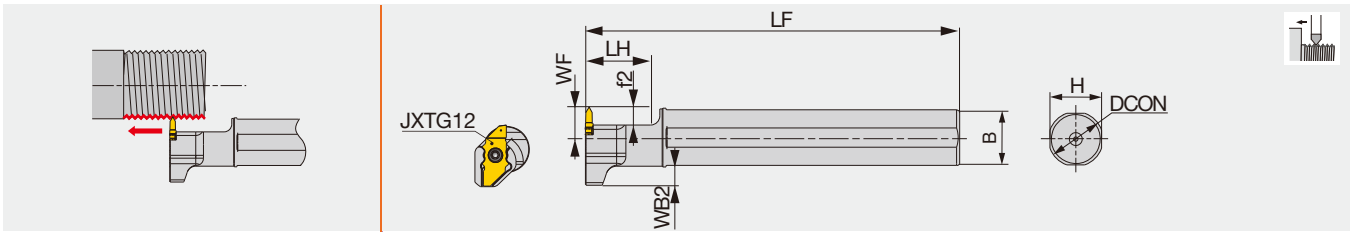
Range of threads machined

Designation	pitch	Max. threading diameters
JXTG12FR/L-60A-000	0.2 - 0.4	Metric thread : M26, Unified : 1"
JXTG12FR/L-60B-000	0.2 - 0.4	Metric thread : M26, Unified : 1"
JXTG12FR/L-60A-005	0.4 -1	Metric thread : M24, Unified : 15/16"
JXTG12FR/L-60B-005	0.4 -1	Metric thread : M24, Unified : 15/16"
JXTG12FR/L-60N-010	1 - 1.5	Metric thread : M22, Unified : 7/8"

DUOJUST-CUT

DuoJust-Cut JS-SXXL09

Toolholder for external threading (double-cornered insert)



Designation	DCON	H	B	WB2	LF	LH	WF**	f2**	Insert
JS19G-SXXL09	19.05	18	18	5.9	90	21	10	6	JX*G06,12*R
JS19X-SXXL09	19.05	18	18	5.9	120	21	10	6	JX*G06,12*R
JS20G-SXXL09	20	19	19	5.4	90	21	10	6	JX*G06,12*R
JS20X-SXXL09	20	19	19	5.4	120	21	10	6	JX*G06,12*R
JS22X-SXXL09	22	21	21	4.4	120	21	10	6	JX*G06,12*R
JS25H-SXXL09	25	24	24	2.9	100	21	10	6	JX*G06,12*R
JS254X-SXXL09	25.4	24	24	2.7	120	21	10	6	JX*G06,12*R

* Threading insert (JXTG12FR) or parting insert (JXPG06R/12R) fits this holder.
** With JXPG06 insert, f2 will be 2 mm shorter than specified.

SPARE PARTS

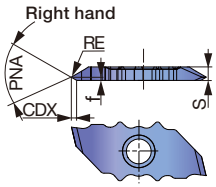
Designation	Clamping screw	Wrench
JS***-SXXL09	CSTC-4L055L	T-1008/5

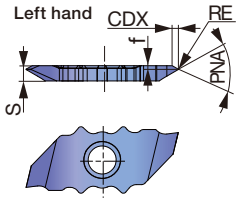
DUOJUST CUT

INSERTS

60° thread angle

JXTG12FR/L-60 (For Threading / Sharp edge)





Designation	Grade SH725 R	Grade SH725 L	Dimensions (mm) Pitch	PDX	CDX	RE	S	PNA
JXTG12FR/L-60A-000	●	●	0.2 - 0.4	0.25	0.4	0.05 max Flat	2.5	60°
JXTG12FR/L-60B-000	●	●	0.2 - 0.4	2.25	0.4	0.05 max Flat	2.5	60°
JXTG12FR/L-60A-005	●	●	0.4 - 1	0.6	0.99	0.05	2.5	60°
JXTG12FR/L-60B-005	●	●	0.4 - 1	1.9	0.99	0.05	2.5	60°
JXTG12FR/L-60N-010	●	●	1 - 1.5	1.25	2.07	0.1	2.5	60°

● : Line-up

	Insert orientation 60A	60B	60N
Right handed			
Left handed			

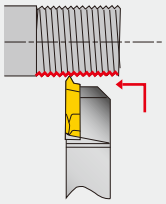
STANDARD CUTTING CONDITIONS

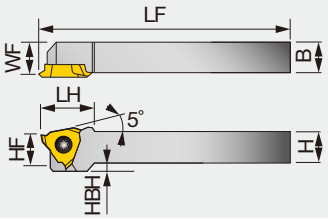
ISO	Workpiece materials	Grades	Cutting speed *Vc* (m/min)	Feed *f* (mm/rev)	
P	Low carbon steels (C15, C20, etc.)	SH725	50 - 200	0.2 - 1.5	127 - 16
P	Carbon steels, Alloy steels (C55, 42CrMoS4, etc.)	SH725	50 - 200	0.2 - 1.5	127 - 16
P	Free cutting steels (SUH22, SUH23, etc)	SH725	50 - 200	0.2 - 1.5	127 - 16
M	Stainless steels (X5CrNi18-9, X5CrNiMo17-12-2, etc)	SH725	50 - 200	0.2 - 1.5	127 - 16
N	Aluminium alloys (A5056, A6061, etc)	SH725	150 - 200	0.2 - 1.5	127 - 16
N	Copper alloy (C2600, C280C, etc)	SH725	100 - 200	0.2 - 1.5	127 - 16
S	Titanium alloys (Ti-6Al-4V, etc.)	SH725	30 - 80	0.2 - 1.5	127 - 16
S	Superalloys (Inconel718, etc.)	SH725	30 - 80	0.2 - 1.5	127 - 16

J-SERIES

JSTTR/L

External threading toolholders for Swiss-type lathes





Right hand (R) shown.

Designation	H	B	LF	LH	HF	WF	HBH	Insert
JSTTR/L1010X3	10	10	120	18.5	10	9.5	2	JTTR/L30...
JSTTR/L1212F3	12	12	85	18.5	12	11.5	-	JTTR/L30...
JSTTR/L1212X3	12	12	120	18.5	12	11.5	-	JTTR/L30...
JSTTR/L1616X3	16	16	120	16.5	16	15.5	-	JTTR/L30...

Recommended clamping torque: 1.2 N•m

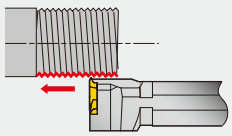
SPARE PARTS

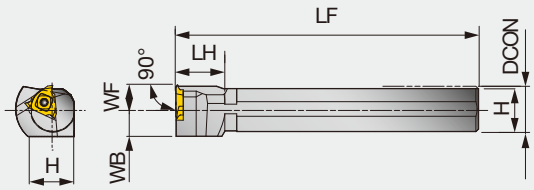
Designation	Clamping screw	Wrench
JSTTR/L...	CSTB-4SD	T-8F

J-SERIES

JS-TTL3

External threading toolholders for Swiss-type lathes





Left hand (L) shown.

Designation	DCON	WF	LF	LH	H	WB	Insert
JS19K-TTL3	19.05	10	125	20	18	11.5	JTTR30...
JS20K-TTL3	20	10	125	20	19	11.5	JTTR30...
JS22K-TTL3	22	10	125	20	21	11.5	JTTR30...
JS25K-TTL3	25.4	10	125	20	24	12.7	JTTR30...

Recommended clamping torque: 3.5 N•m

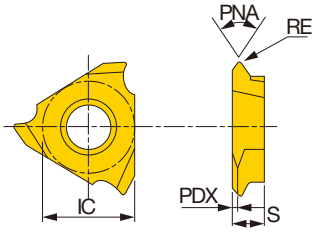
SPARE PARTS

Designation	Clamping screw	Wrench
JS**-TTL3	CSTB-4S	T-15F

J-SERIES

INSERTS

JTT (sharp edge)



Right hand (R) shown.

	RE	SH725		J740		NS9530		TH10		PNA	IC	S	PDX
		R	L	R	L	R	L	R	L				
JTTR/L3005F-55	0.05	●		●						55°	9.525	3.18	0.6
JTTR/L3005F	0.05	●	●	●		●		●		60°	9.525	3.18	0.9
JTTR/L3010F	0.1	●	●	●		●		●		60°	9.525	3.18	0.9

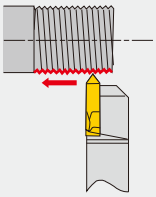
Notes: Left hand holder use right hand insert.
Machinable pitch range: 0.5 to 1 mm.

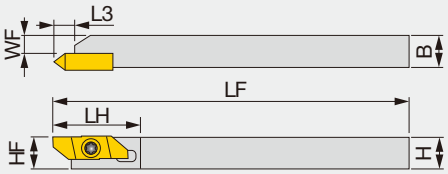
● : Line-up

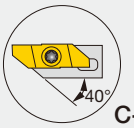
J-SERIES

JSXB R/L

External threading toolholders, screw-on, for Swiss-type lathes







C-type

Right hand (R) shown.

Designation	H	B	LF	LH	L3	HF	WF	Insert
JSXBR1010K8-C	10	10	125	29	6.4	10	5.7	JXT*R...
JSXBR1212K8-C	12	12	125	29	6.4	12	7.7	JXT*R...
JSXBR1616K8	16	16	125	29	6.4	16	11.7	JXT*R...
JSXBR2020K8	20	20	125	29	6.4	20	15.7	JXT*R...
JSXBR2525K8	25	25	125	29	6.4	25	20.7	JXT*R...

- Can be wrenched from back side with both end torx screw.
- This toolholder is compatible with JXB-type inserts and JXT-type inserts.

SPARE PARTS

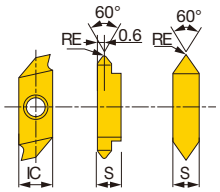


Designation	Clamping screw	Wrench	Wrench 1
JSXBR...	CSTB-4SD	T-8F	(T-8L)

*Optional

INSERTS

JXT (sharp edge)



1-Type JXT1R 2-Type JXT2R

Designation	RE	Coated J740	Uncoated TH10	PNA	IC	S
JXT1R6000F	0.03	●	●	60°	8	3.97
JXT2R6000F	0.03	●	●	60°	8	3.97

Machinable pitch range: 0.5 to 1 mm

● : Line-up

TUNGTHREAD
TUNGALOY

TINYMINITURN

Ensures high part quality and machining stability in ID threading of small parts

Suited for diameters as small as **ø4 mm**

TINY MINI TURN

Ideal sleeve with easy operation

1. Excellent repeatability of solid bars

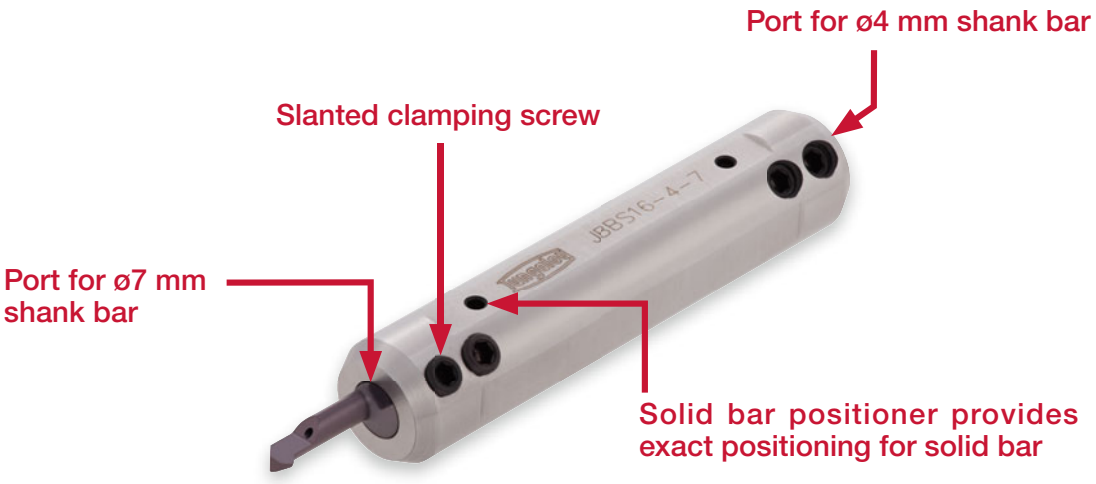
Exact positioning provides exceptional stability and reliability in tool changeovers

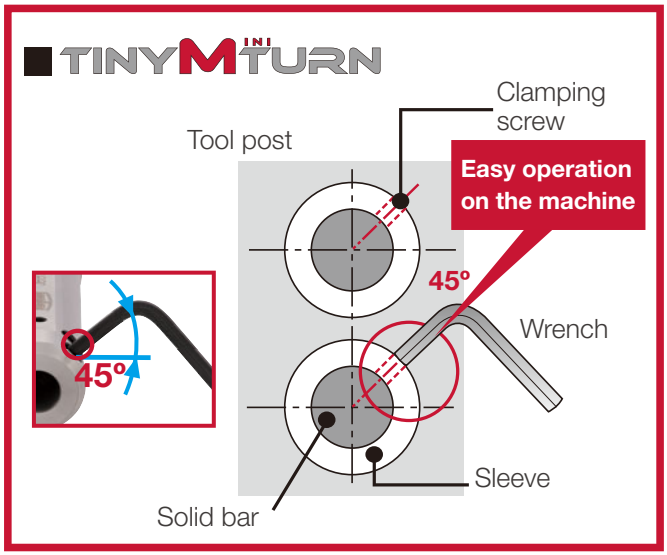
2. Double ports

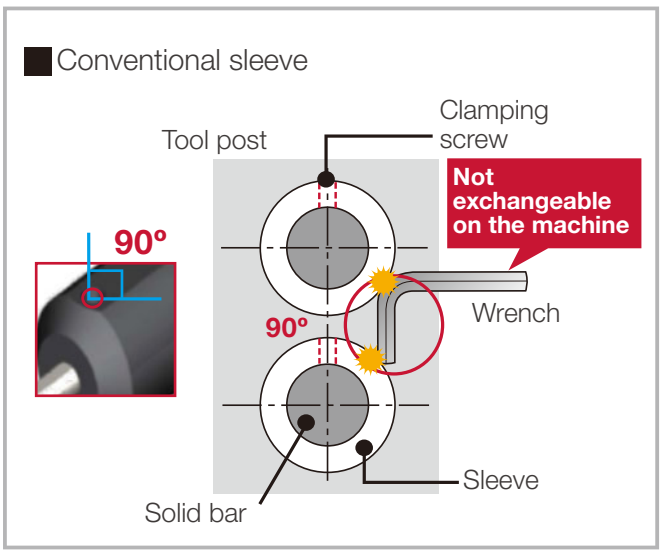
ø4 mm and ø7 mm shank can be set on ONE sleeve

3. Easy tool changeovers

Solid bar can be changed to suit any type of tool head on the machine due to the clamping screw tilted at 45º







Highly functional sleeve creates extremely stable machining!

Sleeve designed for through-coolant supply

1. Easy connection with coolant tube

Rc1/8 threads are provided at the end of the sleeve for coolant tube connection

2. Designed for optimal overhang lengths

Sleeve and flat lengths are designed to provide optimal overhang lengths

3. High accuracy and efficient tool change

Designed to ensure repetitive accuracy as well as faster and efficient tool change without removing the sleeve from the tool post

New

Collet chuck sleeve

1. Easy tool changeover

Simple and easy tool changeover is possible on the machine

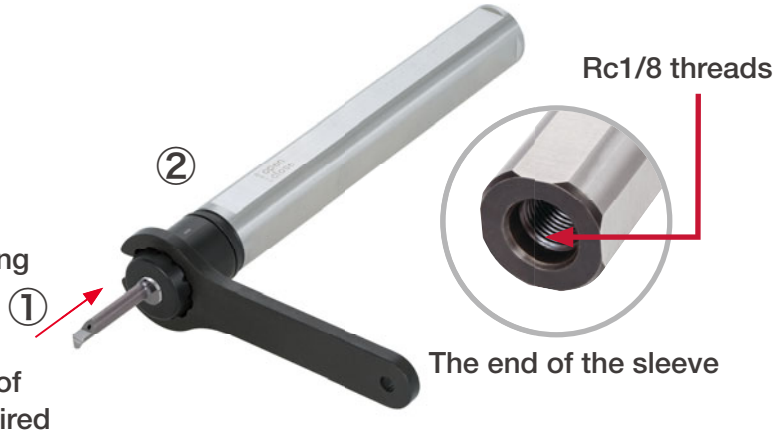
1. Place the tool in the sleeve
2. Tighten the cap with the special wrench

2. High indexing accuracy

Innovative collet chucking system ensures excellent repeatability for precision machining

3. Easy connection to coolant tube

Rc1/8 fitting threads is provided at the end of the sleeve. No additional connection is required for internal coolant supply.



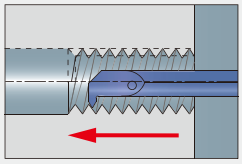
Sleeve selections

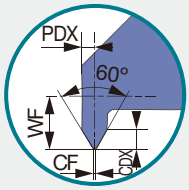
Sleeve type	 JBBS	 JBBS-C	New  JBBSA-C
Clamping system	Screw	Screw	Built-in collet
Through-coolant	No	Yes	Yes
Adaptable shank size	Both ø4 mm and ø7 mm can be assembled on the same sleeve	Separate sleeves for ø4 mm and ø7 mm	Separate sleeves for ø4 mm and ø7 mm
Available sleeve diameters	10 sizes, ø12.0 mm - ø25.4 mm	7 sizes, ø15.875 mm - ø25.4 mm	2 sizes, ø16 mm and ø20 mm
Tool changeover in the machine	Efficient	Efficient	Very Efficient

TINY MINI TURN

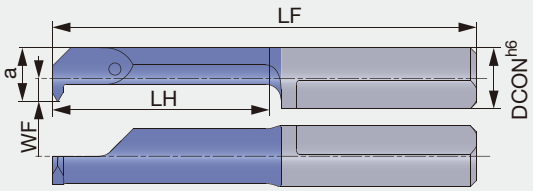
TinyMini-Turn JBIR

Solid boring bars for threading, metric thread





Detail of edge



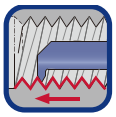
Right hand (R) shown.

Designation	Grade SH730	Pitch	DMIN	CF $^{0}_{-0.02}$	DCON	WF	a	LF	LH	CDX	PDX
JBIR04140050-D040	●	0.5	4	0.06	4	1.5	3.5	30	14	0.3	0.35
JBIR07140050-D050	●	0.5	5	0.06	7	0.9	4.4	30	14	0.3	0.35
JBIR07140075-D050	●	0.75	5	0.09	7	0.9	4.4	30	14	0.4	0.45
JBIR07140100-D048	●	1.0	4.8	0.12	7	0.9	4.4	30	14	0.6	0.55
JBIR07140100-D060	●	1.0	6	0.12	7	1.8	5.3	30	14	0.6	0.55
JBIR07140125-D060	●	1.25	6	0.15	7	1.8	5.3	30	14	0.7	0.65
JBIR07140150-D060	●	1.5	6	0.18	7	1.8	5.3	30	14	0.8	0.75
JBIR07140150-D070	●	1.5	7	0.18	7	2.8	6.3	30	14	0.8	0.75

● : Line-up

TINY MINI TURN

STANDARD CUTTING CONDITIONS



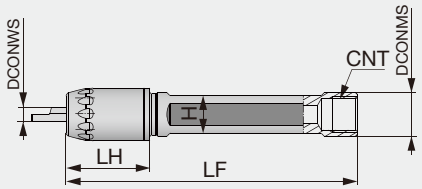
Threading (metric thread)

ISO	Workpiece materials	Grade	Cutting speed *Vc* (m/min)	Number of passes Pitch (mm) 0.5	0.75	1	1.25	1.5
P	Low carbon steels (C15, C20 etc.)	SH730	40 - 140	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
P	Carbon steels, Alloy steels (C55, 42CrMoS4 etc.)	SH730	40 - 140	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
P	Prehardened steels (NAK80, PX5 etc.)	SH730	40 - 140	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
M	Stainless steels (X5CrNi18-9, X5CrNiMo17-12-2 etc)	SH730	40 - 140	8	10	12	15	18
K	Grey cast irons (250, 300 etc.)	SH730	30 - 100	7	9	12	14	17
K	Ductile cast irons (400-15, 600-3 etc.)	SH730	30 - 100	7	9	12	14	17
N	Aluminium alloys, copper alloys Si < 12%	SH730	90 - 200	6	8	10	12	15

JBBSA-C

Collet chuck sleeve for solid carbide bars

New



Designation	DCONMS	DCONWS	LF	LH	H	CNT
JBBSA16-4-L100C	16	4	100	23	14	Rc1/8
JBBSA16-7-L100C	16	7	100	23	18	Rc1/8
JBBSA20-4-L120C	20	4	120	23	18	Rc1/8
JBBSA20-7-L120C	20	7	120	23	18	Rc1/8

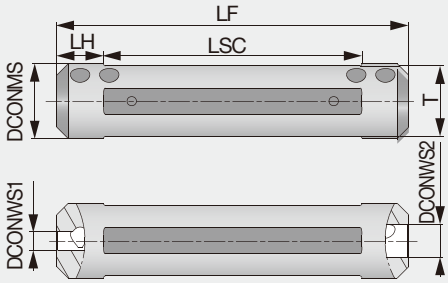
SPARE PARTS

Designation	Cap	Wrench
JBBSA**-4-L100C	CAP-A-4	WRENCH-A-4
JBBSA**-7-L100C	CAP-A-7	WRENCH-A-7

TINYMINI TURN

TinyMini-Turn JBBS

Sleeve with double ends, clamping two different sizes of carbide shanks with coolant supply



Designation	DCONMS	DCONWS1	DCONWS2	LF	LH	LSC	H
JBBS12-4-4	12	4	4	75	10	55	10.3
JBBS127-4-4	12.7	4	4	76.2	10	56.2	11.6
JBBS14-4-4	14	4	4	75	10	55	12
JBBS159-4-7	15.875	4	7	76.2	10	56.2	14
JBBS16-4-7	16	4	7	75	10	55	15
JBBS19-4-7	19.05	4	7	89	10	69	17.2
JBBS20-4-7	20	4	7	90	10	70	18
JBBS22-4-7	22	4	7	90	10	70	20
JBBS25-4-7	25	4	7	100	10	80	23
JBBS254-4-7	25.4	4	7	90	10	70	23.4

SPARE PARTS

Designation	Clamping screw	Wrench
JBBS12-4-4	SSHM5-4PF-S	P-2.5
JBBS14-4-4	SSHM5-4PF-S	P-2.5
JBBS127-4-4	SSHM5-6PF-S	P-2.5
JBBS...-4-7	SSHM5-6PF-S	P-2.5

TINYMINI TURN

TinyMini-Turn JBBS-C

Single end sleeve with external coolant insert

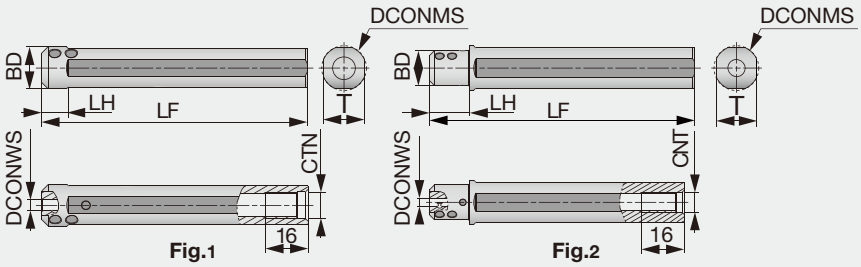


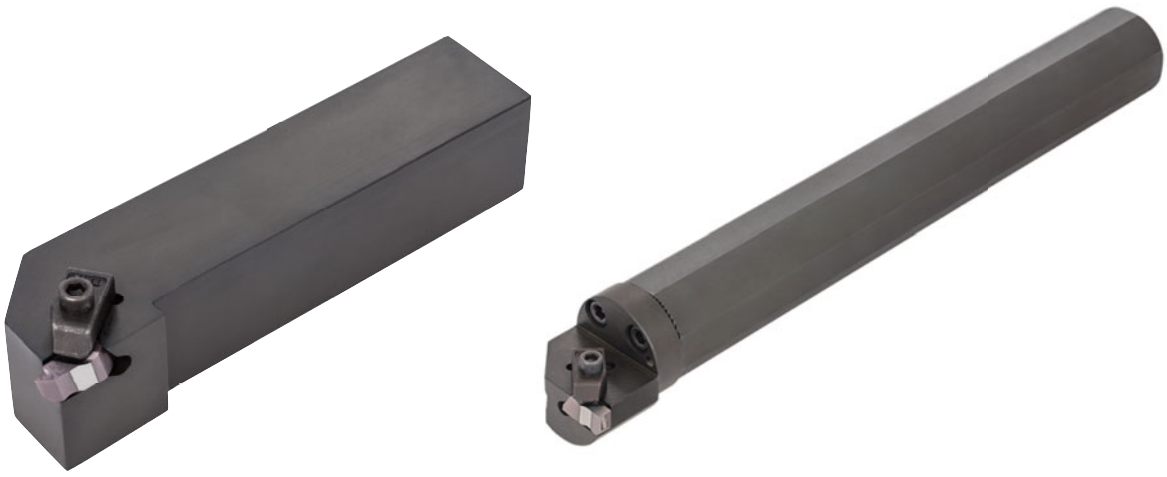
Fig.1 Fig.2

Designation	DCONMS	BD	DCONWS	LF	LH	H	CNT	Fig
JBBS159-4-L100C	15.875	15.875	4	100	10	14.58	R1/8	1
JBBS159-7-L100C	15.875	15.875	7	100	10	14.58	R1/8	1
JBBS16-4-L100C	16	16	4	100	10	15	R1/8	1
JBBS16-7-L100C	16	16	7	100	10	15	R1/8	1
JBBS19-4-L100C	19.05	17.5	4	100	20	17.2	R1/8	2
JBBS19-7-L100C	19.05	17.5	7	100	20	17.2	R1/8	2
JBBS20-4-L100C	20	17.5	4	100	20	18	R1/8	2
JBBS20-7-L100C	20	17.5	7	100	20	18	R1/8	2
JBBS22-4-L100C	22	17.5	4	100	20	20	R1/8	2
JBBS22-7-L100C	22	17.5	7	100	20	20	R1/8	2
JBBS25-4-L100C	25	18	4	100	23	23	R1/8	2
JBBS25-7-L100C	25	18	7	100	23	23	R1/8	2
JBBS254-4-L100C	25.4	18	4	100	23	23.4	R1/8	2
JBBS254-7-L100C	25.4	18	7	100	23	23.4	R1/8	2

SPARE PARTS


Designation	Clamping screw	Wrench
JBBS...-4-L100C	SSHM5-6PF-S	P-2.5
JBBS...-7-L100C	SSHM5-4PF-S	P-2.5

TUNGT-CLAMP



Multi-purpose tool with strong and secure clamping for heavy-duty grooving and threading

TUNGT-CLAMP

Strong and secure clamping

- Threading and grooving inserts fit the same tool holder
- Safe and secure insert retention enabled by a combination of the dove-tail method firmly pressed down with a clamp
- Head-changeable ID grooving/threading tool holder for easy tool change

Left-handed holder for ID grooving/threading

Right-handed holder for OD grooving/threading

3 types of inserts are mountable on the same turning holder, either for internal or external

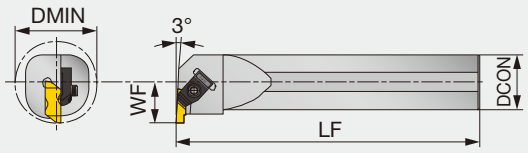
Right-handed, double-ended insert for threading

Right-handed, double-ended insert for grooving

Right-handed, single-ended insert for deep grooving

TUNGT-CLAMP
A_M-FLER/L

Internal toolholders for grooving & threading



Right hand (R) shown.

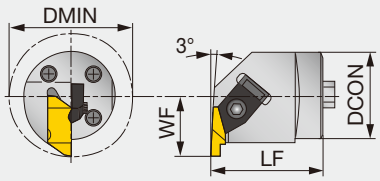
Designation	Pitch	DMIN	DCON	LF	WF	Insert
A25M-FLER/L3	2.11 - 5.08	34.9	25	300	17.7	FL*-3**L/R...
A32M-FLER/L3	2.11 - 5.08	44.5	32	350	22.1	FL*-3**L/R...
A40M-FLER3	2.11 - 5.08	50.8	40	350	24.5	FL*-3**L...

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
A**M-FLER3	TF-73	S-412	5/32HEX
A**M-FLEL3	TF-72	S-412	5/32HEX

TUNGT-CLAMP
HS-FLER/L

Exchangeable heads for internal grooving & threading, applicable on S-570 shanks



Right hand (R) shown.

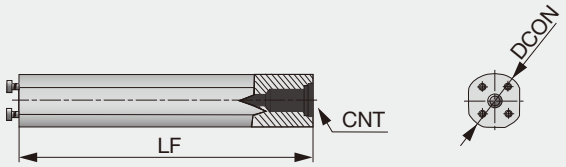
Designation	Pitch	DMIN	DCON	LF	WF	Insert
HS40-FLER3W	2.11 - 5.08	56.1	40	40.1	28	FL*-3**L...
HS50-FLER3W	2.11 - 5.08	70.1	50	41.9	35	FL*-3**L...

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
HS40-FLER3W	TF-73	S-412	5/32HEX
HS50-FLER3W	TF-73	S-412	5/32HEX

TUNGT-CLAMP
S-570

Steel shanks for exchangeable head



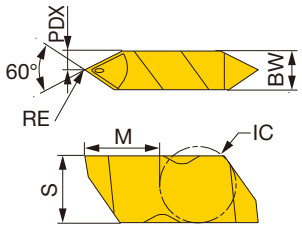
Designation	DCON	LF	CNT
S-570-40M-40	40	273	1/2-14NPT
S-570-50M-50	50	366	1/2-14NPT

SPARE PARTS


Designation	Clamping screw	Wrench
S-570-40M-40	SS100	5/32HEX
S-570-50M-50	SS94	1/4HEX

INSERTS

FLT-CB For threading



Designation	r_ε	AH725 R	AH725 L	Pitch Internal	Pitch External	IC	PDX	BW	S	M
FLT-3R/L-HCB	0.17	●	●	2.11 - 5.08	1.27 - 4.23	9.525	2.49	4.95	8.74	10.16
FLT-3R/LC-HCB	0.35	●	●	4.23 - 5.08	2.31 - 4.23	9.525	2.49	4.95	8.74	10.16
FLT-3R/L-CB	0.17	●	●	2.11 - 3.175	1.27 - 3.175	9.525	2.49	4.95	8.74	10.16

● : Line-up

TUNGT-CLAMP
STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Grade	Application	Cutting speed *Vc* (m/min)	Pitch (mm)	TPI (TPI)
P	Steel (S45C/C45 etc.)	AH725	Threading	80 - 180	Internal 2.11 - 5.08 External 1.27 - 4.23	Internal 5 - 12 Internal 6- 20
P	Carbon steels, Alloy steels (C55, 42CrMoS4 etc.)	AH725	Threading	60 - 160	Internal 2.11 - 5.08 External 1.27 - 4.23	Internal 5 - 12 External 6- 20
M	Stainless steels (X5CrNi18-9, X5CrNiMo17-12-2 etc)	AH725	Threading	50 - 130	Internal 2.11 - 5.08 External 1.27 - 4.23-	Internal 5 - 12 External 6- 20

Edge-on insert

Ensures stability in threading coarse and large-pitch threads

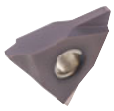
TUNGTHREAD

TUNGALOY

TUNGTHREAD

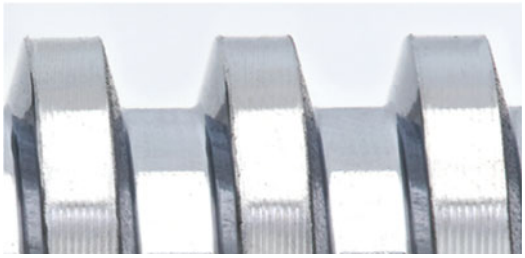
A range from 16 TPI through 3 TPI is covered by just 2 different types of inserts

While conventional 16ER, 22ER, and 27ER laydown style inserts can only cover a 16 TPI to 4 TPI range

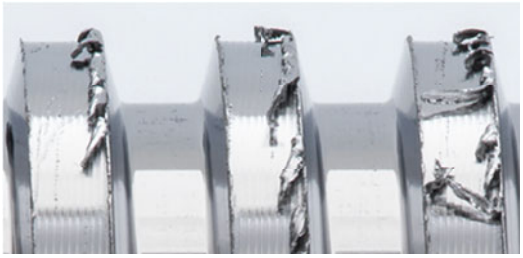
ACME STUB ACME	TPI								
	16	14	12	10	8	6	5	4	3
Existing 	16ER					22ER		27ER	
New series 	TNM*43						TNM*54		

Unique insert geometry ensures burr-free and close thread profiles

For ACME and STUB ACME thread inserts



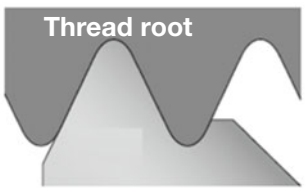
ACME threads with full profile insert



ACME threads without de-burring geometry

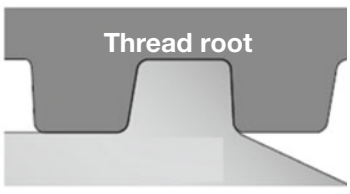
All threading inserts for API Round and API Buttress threads feature de-burring geometry to ensure thread profile accuracy

API Round threads
with de-burring geometry



Insert

API Buttress
Full profile insert

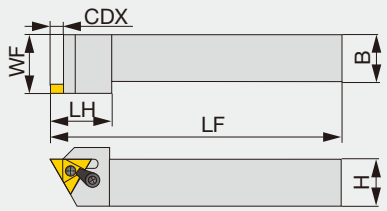


Insert

TUNGTHREAD

MTVOR/L

Multi-clamp holder for external threading (edge-on style)



Right hand (R) shown.

Designation	H	B	LF	LH	WF	CDX	Insert
MTVOR-2525M4	25	25	150	31	31.7	5.8	TNM*43...
MTVOR-3232M4	32	32	178	31	38.1	5.8	TNM*43...
MTVOR-2525M5	25	25	150	36	31.7	7.3	TNM*54...
MTVOR-3232M5	32	32	178	36	38.1	7.3	TNM*54...

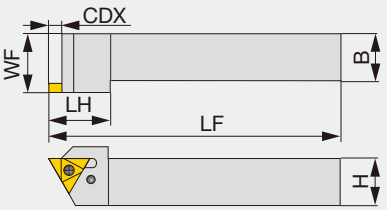
SPARE PARTS

Designation	Lock pin	Clamp	Clamping screw	Wrench
MTVOR-**M4	NL-44	TC-190	STC-5	3/32HEX
MTVOR-**M5	NL-56	TC-250	STC-11	1/8HEX

TUNGTHREAD

STVOR/L

External multi-clamp toolholders for on edge inserts



Right hand (R) shown.

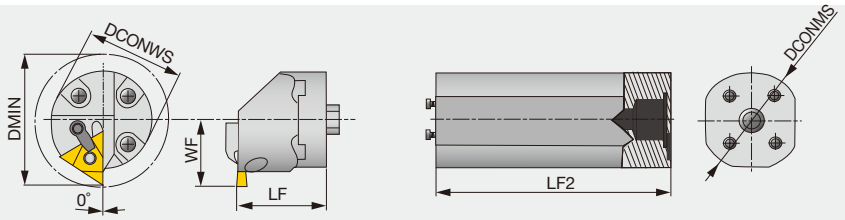
Designation	H	B	LF	LH	WF	CDX	Insert
STVOR-2525M4	25	25	150	31	31.7	5.8	TNMC43...
STVOR-3232M4	32	32	178	31	38.1	5.8	TNMC43...
STVOR-2525M5	25	25	150	36	31.7	7.3	TNMC54...
STVOR-3232M5	32	32	178	36	38.1	7.3	TNMC54...

SPARE PARTS

Designation	Lock pin	Clamp (Option)	Clamping screw (Option)	Wrench	
STVOR-**M4	SD2	TC-190	STC-9	T-20TORX	3/32HEX
STVOR-**M5	SD3	TC-250	STC-11	T-20TORX	1/8HEX

TUNGTHREAD
HS-MTHOR/L

Multi-clamp holder for Internal threading (edge-on style)



Right hand (R) shown.

Designation	DMIN	DCONWS	WF	LF	Insert
HS40-MTHOR-4	66.7	40	25.9	32	TNM*43...
HS50-MTHOR-4	73	50	35.9	40	TNM*43...
HS40-MTHOR-5	81.3	40	30.6	32	TNM*54...
HS50-MTHOR-5	82.6	50	35.9	40	TNM*54...

SPARE PARTS

Designation	Lock pin	Clamp	Clamping screw	Wrench
HS**-MTHOR-4	NL-44	TC-190	STC-5	3/32HEX
HS**-MTHOR-5	NL-56	TC-250	STC-11	1/8HEX

Shank

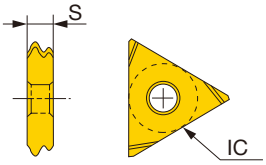
Designation	DCONMS	LF2
S-570-40M-40	40	273
S-570-50M-50	50	366

SPARE PARTS

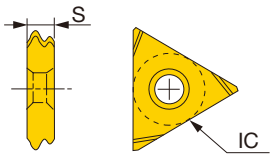
Designation	Clamping screw	Wrench
S-570-40M-40	SS100	5/32HEX
S-570-50M-50	SS94	1/4EX

TUNGTHREAD

Edge-on inserts



TNMA



TNMC

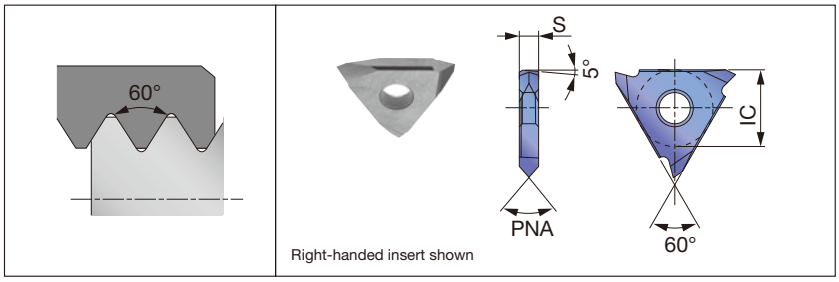
Connection	TPI	Taper		External insert				Internal insert			
		mm/mm	TPF	Designation	Grade Coated AH725	IC	S	Designation	Grade Coated AH725	IC	S
API Round	10	1/16	0.75	**TNMA 43 10RD EXT**	●	12.7	4.8	**TNMA 43 10RD INT**	●	12.7	4.8
	8	1/16	0.75	**TNMA 43 8RD EXT**	●	12.7	4.8	**TNMA 43 8RD INT**	●	12.7	4.8
API Buttress	5	1/12	1	**TNMA 54 5B1 EXT-FC**	●	15.875	6.4	**TNMA 54 5B1 INT-FC**	●	15.875	6.4
	5	1/16	0.75	**TNMA 54 5B75 EXT-FC**	●	15.875	6.4	**TNMA 54 5B75 INT-FC**	●	15.875	6.4
ACME (29° Trapezoid)	16	-	-	**TNMA43NT16PEXT-PT**	●	12.7	4.8	-	-	-	-
	14	-	-	**TNMA43NT14PEXT-PT**	●	12.7	4.8	-	-	-	-
	12	-	-	**TNMA43NT12PEXT-PT**	●	12.7	4.8	-	-	-	-
	10	-	-	**TNMA43NT10PEXT-PT**	●	12.7	4.8	-	-	-	-
	8	-	-	**TNMA43NT8PEXT-PT**	●	12.7	4.8	-	-	-	-
	6	-	-	**TNMA43NT6PEXT-PT**	●	12.7	4.8	-	-	-	-
	5	-	-	**TNMA54NT5PEXT-PT**	●	15.875	6.4	-	-	-	-
	4	-	-	**TNMA54NT4PEXT-PT**	●	15.875	6.4	-	-	-	-
	3	-	-	**TNMA54NT3PEXT-PT**	●	15.875	6.4	-	-	-	-
STUB ACME (29° Trapezoid)	16	-	-	**TNMA43NT16PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	14	-	-	**TNMA43NT14PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	12	-	-	**TNMA43NT12PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	10	-	-	**TNMA43NT10PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	8	-	-	**TNMA43NT8PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	6	-	-	**TNMA43NT6PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	5	-	-	**TNMA54NT5PSTUBE-PT**	●	15.875	6.4	-	-	-	-
	4	-	-	**TNMA54NT4PSTUBE-PT**	●	15.875	6.4	-	-	-	-
	3	-	-	**TNMA54NT3PSTUBE-PT**	●	15.875	6.4	-	-	-	-
API Round	10	1/16	0.75	**TNMC 43 10RD EXT**	●	12.7	4.8	**TNMC 43 10RD INT**	●	12.7	4.8
	8	1/16	0.75	**TNMC 43 8RD EXT**	●	12.7	4.8	**TNMC 43 8RD INT**	●	12.7	4.8
API Buttress	5	1/12	1	**TNMC 54 5B1 EXT-FC**	●	15.875	6.4	**TNMC 54 5B1 INT-FC**	●	15.875	6.4
	5	1/16	0.75	**TNMC 54 5B75 EXT-FC**	●	15.875	6.4	**TNMC 54 5B75 INT-FC**	●	15.875	6.4
ACME (29° Trapezoid)	16	-	-	**TNMC43NT16PEXT-PT**	●	12.7	4.8	-	-	-	-
	14	-	-	**TNMC43NT14PEXT-PT**	●	12.7	4.8	-	-	-	-
	12	-	-	**TNMC43NT12PEXT-PT**	●	12.7	4.8	-	-	-	-
	10	-	-	**TNMC43NT10PEXT-PT**	●	12.7	4.8	-	-	-	-
	8	-	-	**TNMC43NT8PEXT-PT**	●	12.7	4.8	-	-	-	-
	6	-	-	**TNMC43NT6PEXT-PT**	●	12.7	4.8	-	-	-	-
	5	-	-	**TNMC54NT5PEXT-PT**	●	15.875	6.4	-	-	-	-
	4	-	-	**TNMC54NT4PEXT-PT**	●	15.875	6.4	-	-	-	-
	3	-	-	**TNMC54NT3PEXT-PT**	●	15.875	6.4	-	-	-	-
STUB ACME (29° Trapezoid)	16	-	-	**TNMC43NT16PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	14	-	-	**TNMC43NT14PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	12	-	-	**TNMC43NT12PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	10	-	-	**TNMC43NT10PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	8	-	-	**TNMC43NT8PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	6	-	-	**TNMC43NT6PSTUBE-PT**	●	12.7	4.8	-	-	-	-
	5	-	-	**TNMC54NT5PSTUBE-PT**	●	15.875	6.4	-	-	-	-
	4	-	-	**TNMC54NT4PSTUBE-PT**	●	15.875	6.4	-	-	-	-
	3	-	-	**TNMC54NT3PSTUBE-PT**	●	15.875	6.4	-	-	-	-

• For ACME and STUB-ACME inserts can cut crest radius. Crest flat of ACME and STUB-ACME have to be cut by another tool.

● : Line-up

TT insert

60° metric threads

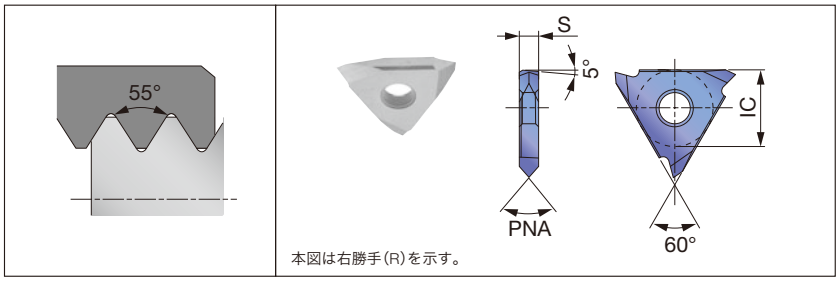


For external/internal threads

Pitch (mm)	TPI	L/R	Insert description	Grade		IC	S	PNA	Tool holder
				Cermet	Uncoated				
				NS9530	TH10				
≦ 3	≧ 8	R	**TTR42M-005**	●	●	12.7	3.2	60°	TT-****RE/LI
≦ 3	≧ 8	L	**TTL42M-005**	●	●	12.7	3.2	60°	TT-****LE/RI

TT insert

55° Whitworth, partial profile, for external / internal threads



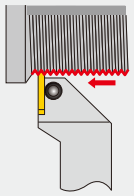
55° Whitworth, partial profile, for external/internal threads

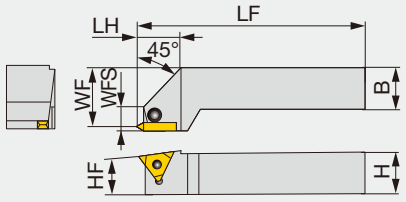
Pitch (mm)	TPI	L/R	Insert description	Grade		IC	S	PNA	Tool holder
				Cermet	Uncoated				
				NS9530	TH10				
≦ 3	≧ 8	R	**TTR42W-005**	●	●	12.7	3.2	55°	TT-****RE/LI
≦ 3	≧ 8	L	**TTL42W-005**	●	●	12.7	3.2	55°	TT-****LE/RI

● : Line up / Packing Quantity= 5 pcs

TUNGTHREAD
TT-R/LE

"TT type "External threading toolholders, pin lock





Right hand (R) shown.

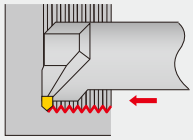
Designation	H	B	LF	LH	HF	WF	WFS	Insert
TT-2525R/LE	25	25	150	25	25	32	15	TTR/L42...

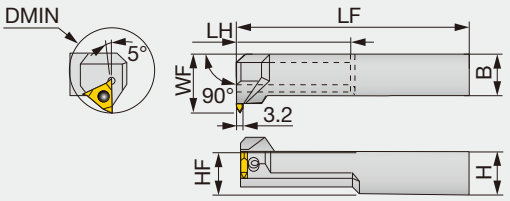
SPARE PARTS

Designation	Clamp	Right-left screw	Wrench
TT-2525R/LE	CP91	DS-6	P-3

TUNGTHREAD
TT-R/LI

"TT type "Internal threading toolholders, pin lock





Right hand (R) shown.

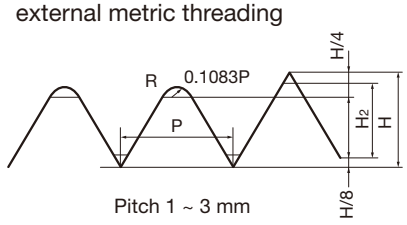
Designation	DMIN	H	B	LF	LH	HF	WF	Insert
TT-2525RI	50	25	25	200	70	25	35	TTL42...

Notes : The left hand insert is used for right hand toolholders.

SPARE PARTS

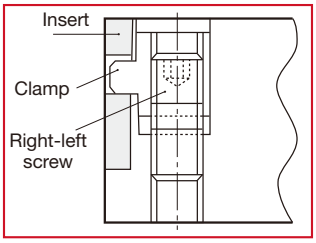
Designation	Clamp	Right-left screw	Wrench
TT-2525RI	CP91	DS-6	P-3

- Relationship between pitch, depth of cut and number of passes for external metric threading

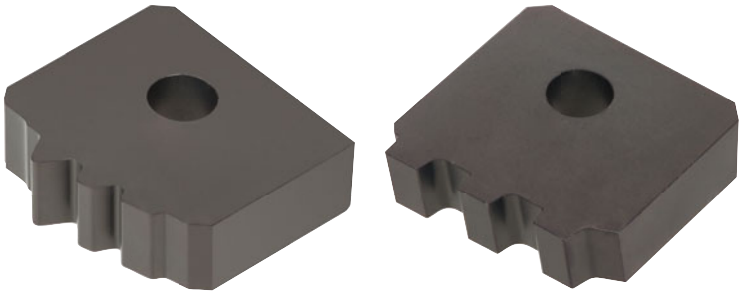


Note: Maximum machinable pitch is 3 mm.

	P	1	1.25	1.5	1.75	2	2.5	3
	H_2	0.6	0.76	0.92	1.09	1.25	1.57	1.9
	H	0.866	1.083	1.299	1.516	1.732	2.165	2.598
Number of passes	1	0.25	0.3	0.3	0.3	0.35	0.4	0.4
	2	0.15	0.2	0.25	0.25	0.25	0.3	0.35
	3	0.1	0.1	0.15	0.2	0.2	0.25	0.28
	4	0.05	0.06	0.1	0.1	0.16	0.2	0.2
	5	0.05	0.06	0.05	0.1	0.1	0.15	0.2
	6		0.06	0.05	0.07	0.07	0.1	0.13
	7			0.02	0.05	0.05	0.07	0.1
	8				0.02	0.02	0.05	0.1
	9					0.02	0.03	0.05
	10						0.02	0.05
	11							0.02
	12							0.02



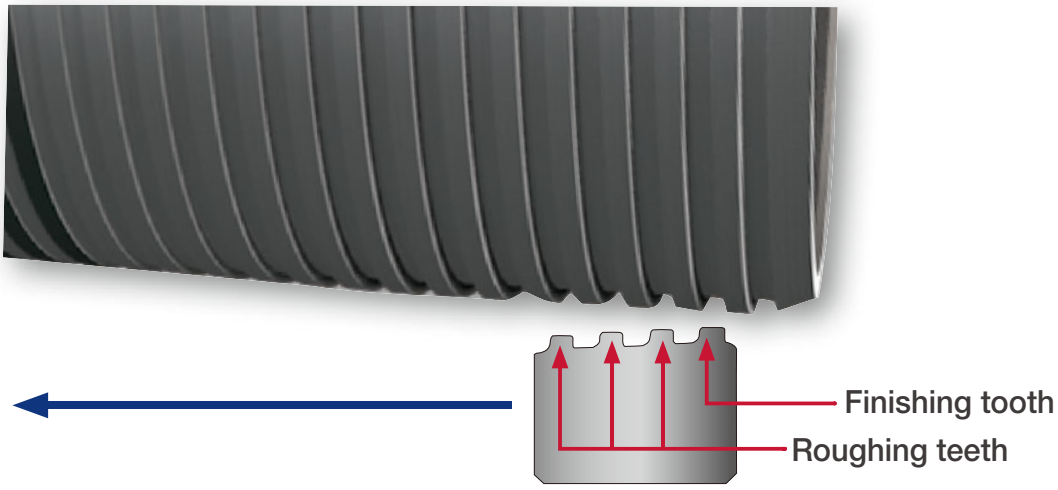
Chaser



Multi-tooth chaser inserts for efficient threading

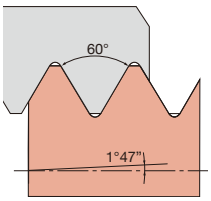
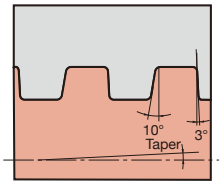
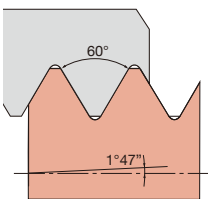
Chaser - highly efficient threading tool for reduced machining time

One chaser insert accomodates roughing, semi-finishing, and finishing teeth, enabling 4 different passes to be integrated into one single pass.



Available in major thread standards for the oil and gas industries

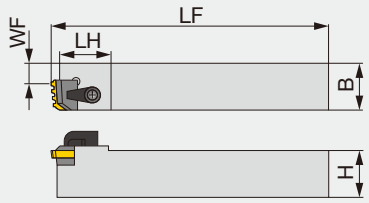
Chasers are designed for efficient external/internal threading of tubes, cases, and couplings for the oil and gas industries. Available for popular thread standards as below.

Thread standard	Thread profile	Standard threads per inch
API Round threads		- 8TPI (For tubing and casing) - 10TPI (For tubing)
API Buttress threads		- 5TPI,1/16taper (For tube diameters 13-3/8" or less) - 5TPI,1/12taper (For tube diameters 16" and above)
ANIS/ASME NPT threads		- 8TPI - 11.5TPI

Chaser

CLVOR

External toolholders for the chaser inserts



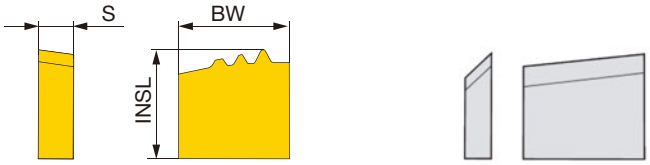
Right-hand (R) shown.

Designation	WF	LF	LH	H	B	Insert
CLVOR-25M6	16.1	178	32	25	25	CR-8R/10R/11.5NPT/8NPT-3E/4E
CLVOR-32M6	16.1	178	32	32	32	CR-8R/10R/11.5NPT/8NPT-3E/4E
CLVOR-40M8	29.8	179	32	40	40	CR-5B75-4E

SPARE PARTS

Designation	Shim	Shim screw	Clamp	Clamping screw	Wrench	
CLVOR-25M6	TF1207	SF80	TC-311	STC-4	T-25TORX	5/32HEX
CLVOR-32M6	TF1207	SF85	TC-311	STC-4	T-25TORX	5/32HEX
CLVOR-40M8	TF8132-E	SF60	TC-311	STC-4	T-20TORX	5/32HEX

Full profile insert (chaser)

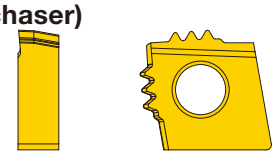


Connection	TPI	Taper		Designation	AH725	BW	INSL	S	Breakerpiece
		mm/mm	TPF						
API Round	8	1/16	0.75	**CR-8R-3E**	●	16	15	5.2	CR-8R / 10R-3E / 4E-CB
	10	1/16	0.75	**CR-10R-3E**	●	16	15.9	5.2	CR-8R / 10R-3E / 4E-CB
API Buttress	5	1/16	0.75	**CR-5B75-4E**	●	20.4	15.9	5.1	CR-5B75 / 5B1-4E-CB
NPT	11.5	1/16	0.75	**CR-11.5NPT-4E**	●	16	15.7	5.2	CR-8R / 10R-3E / 4E-CB
	8	1/16	0.75	**CR-8NPT-4E**	●	16	15.7	5.2	CR-8R / 10R-3E / 4E-CB

CNGA-3E

API Round & buttress chaser insert with 2 corners for turning

Full profile insert (chaser)



Connection	TPI	Taper		Designation	AH725
		mm/mm	TPF		
API Round	10	1/16	0.75	**CNGA-10R-3E**	●
	8	1/16	0.75	**CNGA-8R-3E**	●
API Buttress	5	1/16	0.75	**CNGA-5B75-3E**	●

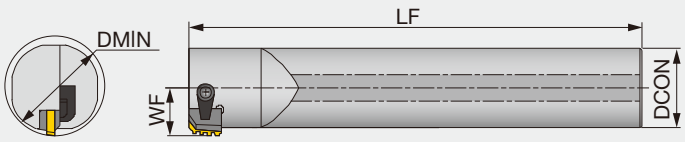
Note: Toolholder should be designed and ordered individualy.

Chaser

TUNGTHREAD

SI-CLHOR

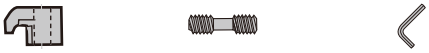
Internal toolholders for the chaser inserts



Right-hand (R) shown.

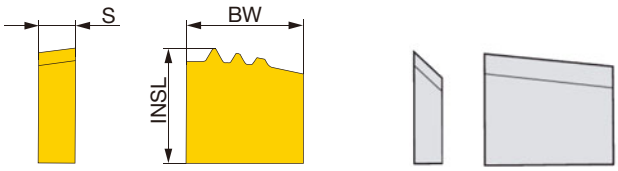
Designation	DMIN	DCON	WF	LF	Insert
SI-CLHOR-40M6	50.8	40	23.16	400	CR-**I

SPARE PARTS



Designation	Clamp	Clamping screw	Wrench
SI-CLHOR-40M6	TC-311	STC-8	5/32HEX

Full profile insert (chaser)



Connection	TPI	Taper		Designation	AH725	INSL	LE	S	Breakerpiece
		mm/mm	TPF						
API Round	8	1/16	0.75	**CR-8R-3I**	●	16	15	5.2	CR-8R / 10R-3I / 4I-CB
	10	1/16	0.75	**CR-10R-3I**	●	16	15.9	5.2	CR-8R / 10R-3I / 4I-CB
API Buttress	5	1/16	0.75	**CR-5B75-3I**	●	16	15.8	5.2	CR-8R / 10R-3I / 4I-CB
NPT	11.5	1/16	0.75	**CR-11.5NPT-4I**	●	16	15.7	5.2	CR-8R / 10R-3I / 4I-CB
	8	1/16	0.75	**CR-8NPT-4I**	●	16	15.7	5.2	CR-8R / 10R-3I / 4I-CB

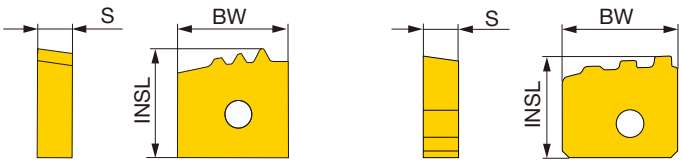
● : Line up

Chaser

TUNGTHREAD

CR-3E-#1_3

Chaser inserts for tool rotating machines



Connection	TPI	Taper		Designation	AH725	BW	INSL	S	Breakerpiece
		mm/mm	TPF						
API Round	8	1/16	0.75	**CR-8R-3E #1**	●	16	14.7	5.2	TD39318R-1-CBW/CAVITY
	8	1/16	0.75	**CR-8R-3E #2**	●	16	14.9	5.2	TD39328R-2-CBW/CAVITY
	8	1/16	0.75	**CR-8R-3E #3**	●	16	15	5.2	TD39338R-3-CBW/CAVITY
API Buttress	5	1/16	0.75	**CR-5B75-3E #1**	●	17	14.6	5.2	TD46015B75-1-CBW/CAVITY
	5	1/16	0.75	**CR-5B75-3E #2**	●	17	14.8	5.2	TD46025B75-2-CBW/CAVITY
	5	1/16	0.75	**CR-5B75-3E #3**	●	17	15	5.2	TD46035B75-3-CBW/CAVITY

● : Line up

MEMO

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