



PARTING, GROOVING & GROOVE-TURN SYSTEM



Parting, Grooving & Groove-Turn System

C002

GrooveLine - Parting, Grooving & Groove-Turn System



TETRA^{FORCE}CUT

C041

4-cornered inserts with good clamping rigidity for highly precise grooving and parting



W = 0.5 - 3.18 mm



TETRA^MCUT

C049

Unique insert geometry for highly precise grooving

W = 0.33 - 3.0 mm



DUO^{JUST}CUT

C009

Innovative clamping system for stable parting operations

W = 1.0 - 2.0 mm



EASY^{MULTI}CUT

C111

Multi-functional tool series for parting, grooving, and turning



W = 4.0 - 6.0 mm



TUNG^{HEAVY}GROOVE

C123

Highly rigid clamping system for wide grooving and profiling in one pass



W = 10 - 25 mm



TUNG^CCUT

C053

Multi-functional tool series for various grooving operations



W = 1.4 - 8.0 mm



MY-T SERIES

C086

Variety tool series for a wide range of grooving and parting operations



W = 2.0 - 8.0 mm

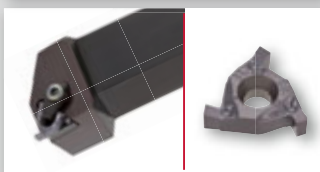


TUNG-CLAMP

C021

G-class inserts with precisely designed chipbreaker for grooving

W = 1.0 - 3.0 mm



GTGNTYPE

C038

3-cornered inserts for grooving

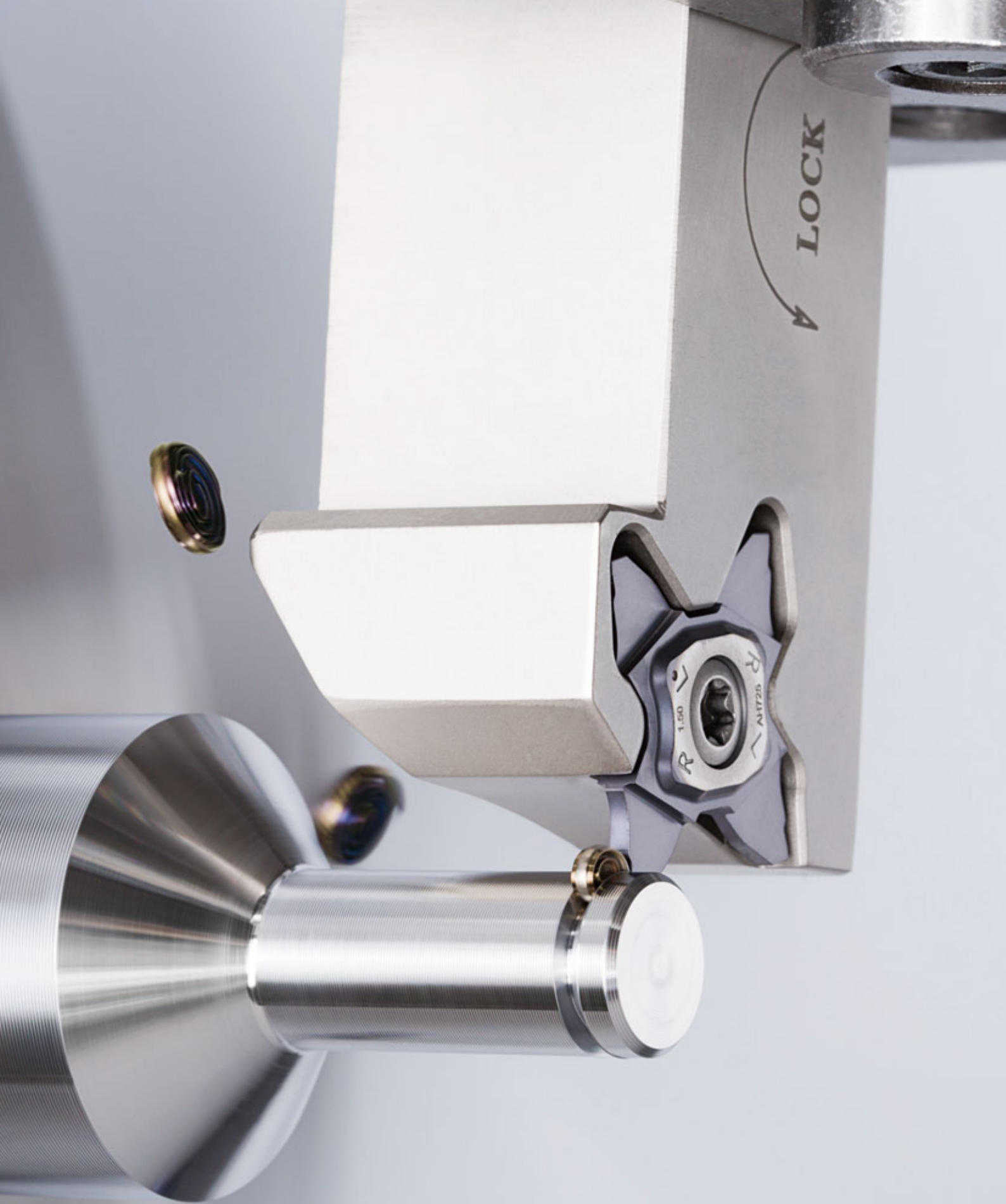


W = 1.0 - 2.25 mm

Other Grooving & Parting Tool

C014





TetraForce-Cut

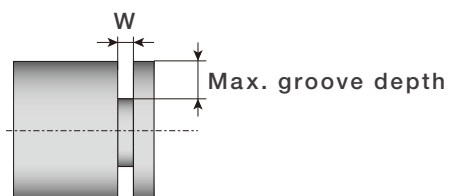
Tungaloy C003

External Grooving - Quick Guide

Max. groove depth: 6.4 mm

Series	W (mm)	Max. groove depth (mm)						See page
		1	2	3	4	5	6	
TetraMini-Cut	0.33	0.8						C049
	0.43 - 0.5	1.2						
	0.75 - 1.75	2						
	2 - 3	2.5						
JTGR/L	0.33	0.7						C018
	0.43 - 0.5	1.1						
	0.65 - 0.95	1.9						
	1 - 1.8	2.1						
	2 - 3	2.6						
GBR/L32	0.33	0.8						C033
	0.5	1.2						
	0.75 - 1.5	2						
	2 - 2.5	2.5						
GBR/L43	1.25 - 1.45	2						C033
	1.5 - 2.3	3.5						
	2.5 - 4.5	5						
GX-R/LE	1	1.5						C030
	1.5	2.3						
	2	3						
	2.5	3.8						
	3	4.5						
	3.5	5.3						
	4 - 4.5	6						
TetraForce-Cut	0.5 - 0.75	2.5						C041
	0.8	1.6						
	1 - 1.25	3.5						
	1.4	2						
	1.47	2.5						
	1.5	5.7						
	1.57 - 1.96	3						
	2	6.4						
	2.22 - 2.3	3.5						
	2.39 - 2.5	5.7						
	2.7 - 2.87	6.2						
	3 - 3.18	6.4						

 First choice
 Available

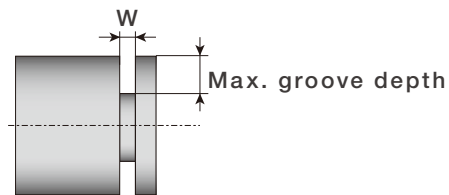


External Grooving - Quick Guide

Max. groove depth: 50 mm

Series	W (mm)	Max. groove depth (mm)					See page
		10	20	30	40	50	
MY-T FLEX	3	10					C104
	4	12					
	5	14					
CTD	3 - 4	14					C106
	5	20					
MY-T CGD	2	16					C102
	3 - 8	21.6					
MY-T G series	2	16					C086
	3	22					
	4 - 5	25					
TungCut	1.4	16					C053
	2	17					
	3 - 4	25					
	5 - 6	25	32				
	8	35					
EasyMulti-Cut	4	25	30				C111
	5	25	32				
	6	25	35				
TungHeavy Groove	10	36					C123
	15	40					
	20	40					
	25	50					

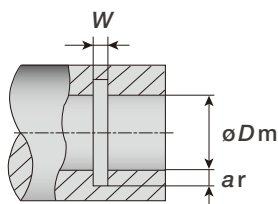
First choice
 Available



Internal Grooving - Quick Guide

Series	W (mm)	ar (mm)	øDm (mm)					See page
			10	20	30	40	50	
SNG	1 - 2	1.5	8		25			C025
	1.5 - 3.5	2		14	25			
	1.5 - 3.5	3		20	25			
EasyMulti-Cut	4	6		20	25			C111
		9			25			
		11			32			
	5	11				40		
	6	11				40		
TungCut	2	6			25			C053
		8			25			
	3	6			25			
		5.1			25			
		8			32			
		10				40		
	4	6			25			
		8			32			
		4			31			
		10				40		
	5	5			31			
		10				40		
	6	4			31			
		10				40		
	8	5				37		
		5.8				42		
MY-T G series	3	3.5			25			C086
		5			32			
	4	5			32			
		6				40		
	5	5			32			
GBR/L32	0.33	0.8			32			C034
	0.5	1.2			32			
	0.75 - 2.5	2			32			

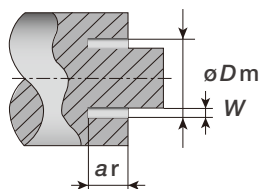
 First choice
 Available



Face Grooving - Quick Guide

Series	W (mm)	ar (mm)	øD (mm)								See page
			50	100	150	200	250	300	400	500	
FGC	3	10	30	120							C128
	4	10	30	120							
		20	30	120							
	5	12	30	120							
		22	30	120							
	6	14	40	120							
	8	16	60	120							
TungCut		10	30	50							C053
	3	12	46	200							
		15	50	100							
	4	10	30	36							
		12	30	40							
		16	58	250							
		20	36	200							
	5	20	60	∞							
		25	60	200							
	6	20	60	250							
		25	60	400							
MY-T G series	3	10	30	500							C086
		14	30	500							
	4	14	35	500							
		22	35	500							
	5	14	35	500							
		22	35	500							
EasyMulti-Cut	4	50	30	75							C111
		65	75	500							
	5	50	35	75							
		65	75	500							
	6	50	45	75							
		65	75	500							
GX-F	1	1.5	55	∞							C032
	1.5	2.3	55	∞							
	2	3	55	∞							
	2.5	3.8	55	∞							
	3	4.5	55	∞							
	3.5	5.3	55	∞							
	4 - 4.5	6	55	∞							

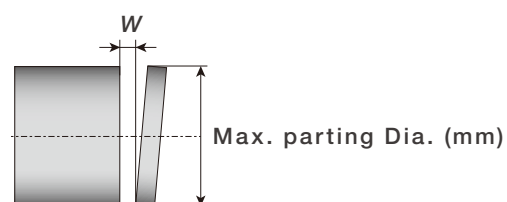
First choice
 Available



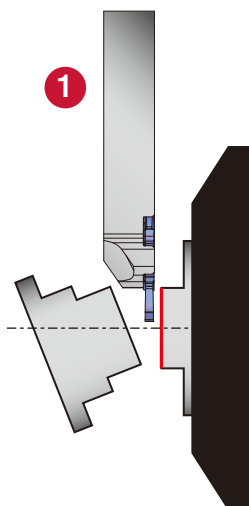
Parting off - Quick Guide

Series	W (mm)	Max. parting Dia. (mm)						See page	
		10	20	40	60	80	100		200
TetraForce-Cut	0.5 - 0.75	5							C041
	0.8	3.2							
	1 - 1.25	5							
	1.4	4							
	1.47	5							
	1.5	11.4							
	1.57 - 1.96	6							
	2	12.8							
	2.2 - 2.3	7							
	2.39 - 2.5	11.4							
	2.7 - 2.87	12.4							
	3 - 3.18	12.8							
DuoJust-Cut	1	6							C009
	1.5	16							
	2	16							
MY-T	2	50							C086
	3	100							
	4	100							
	5	120							
TungCut	1.4	29							C053
	2	12.8	50						
	3	12.8	100						
	4	50	120						
	5	50	120						
	6	50	120						
	8	80							
EasyMulti-Cut	4	50	100						C111
	5	50	120						
	6	50	120						

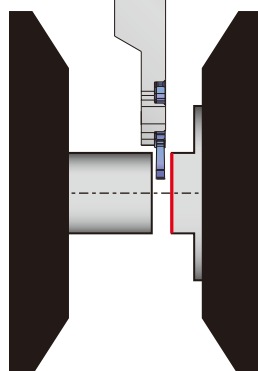
 First choice
 Available



Great cutting performance in **various parting-off operations**



2



1 JSXXR/L

W = 1 - 2 mm
Max. parting Dia.:
16 mm
Shank size:
10 - 20 mm

Page C010

2 JSXXR/L - S

W = 1 - 2 mm
Max. parting Dia.:
16 mm
Shank size:
10 - 12 mm

Page C010

3 types of inserts are available for different parting-off diameters can be mounted **in the same pocket of all the toolholders**.

- Optimized overhang length for **stable machining**

Regular-type toolholder



Page C010

Toolholder for sub-spindle

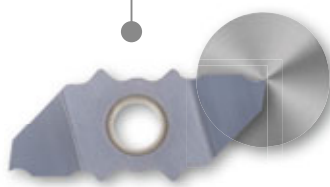


Page C010



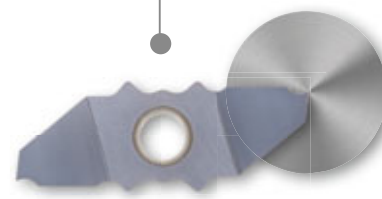
JXPG06

Max. parting-off dia.
ø6 mm
Page C011



JXPG12

Max. parting-off dia.
ø12 mm
Page C011



JXPG16

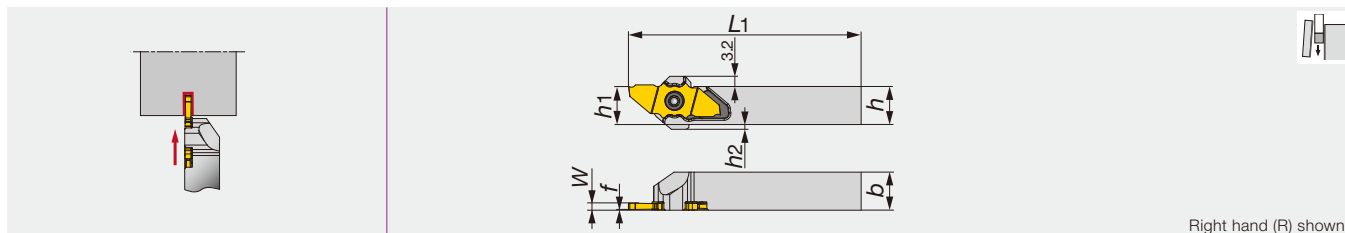
Max. parting-off dia.
ø16 mm
Page C011



DUOJ CUT^{UST}

JSXXR/L

Parting off tool for swiss lathes



Right hand (R) shown.

Designation	W	h	b	f	L1*	h1	h2	Insert
JSXXR/L1010X09	1 - 2	10	10	0.2	≤120	10	3	JXPG06...,12...,16...
JSXXR/L1212F09	1 - 2	12	12	0.2	≤85	12	1.5	JXPG06...,12...,16...
JSXXR/L1212X09	1 - 2	12	12	0.2	≤120	12	1.5	JXPG06...,12...,16...
JSXXR/L1616X09	1 - 2	16	16	0.2	≤120	16	-	JXPG06...,12...,16...
JSXXR/L2020H09	1 - 2	20	20	0.2	≤100	20	-	JXPG06...,12...,16...

* "L1" is calculated with JXPG16*** insert. When JXPG12*** insert is used, "L1" is shorter 2 mm.

When JXPG06*** insert is used, "L1" is shorter 4 mm.

Note: The right hand insert (JXPG**R***) is used for the right hand toolholders (JSXXR***), and the left hand insert (JXPG**L***) is used for the left hand toolholders (JSXXL***).

SPARE PARTS

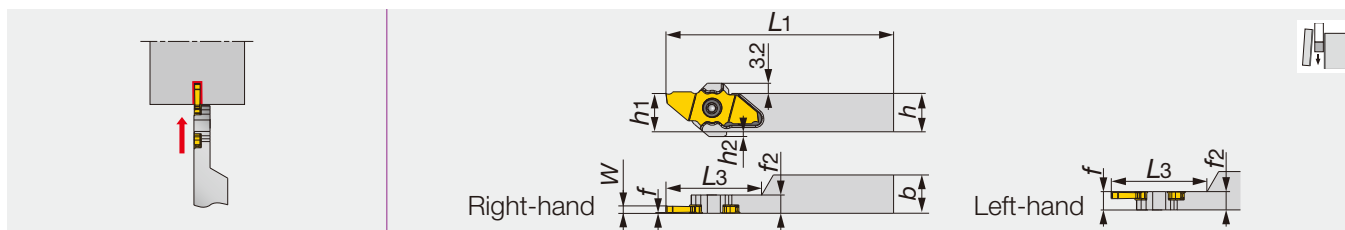


Designation	Clamping screw	Wrench
JSXXR...	CSTC-4L100DL	T-1008/5
JSXXL...	CSTC-4L100DR	T-1008/5

DUOJ CUT^{UST}

JSXXR/L-S

Parting off tool for sub spindle in swiss lathes



Designation	W	h	b	f	L1*	L3*	h1	h2	f2	Insert
JSXXR/L1010X09-S	1 - 2	10	10	0.2/5.5	≤120	≤26	10	3	5.7	JXPG06...,12...,16...
JSXXR/L1212F09-S	1 - 2	12	12	0.2/5.5	≤85	≤26	12	1.5	5.7	JXPG06...,12...,16...
JSXXR/L1212X09-S	1 - 2	12	12	0.2/5.5	≤120	≤30	12	1.5	5.7	JXPG06...,12...,16...

* "L1" and "L3" are calculated with JXPG16*** insert. When JXPG12*** insert is used, "L1" and "L3" are 2 mm shorter.

When JXPG06*** insert is used, "L1" and "L3" are 4 mm shorter.

Note: The right-hand insert (JXPG**R***) is used for the right-hand toolholder (JSXXR***), and the left-hand insert (JXPG**L***) is used for the left-hand toolholder (JSXXL***).

SPARE PARTS



Designation	Clamping screw	Wrench
JSXXR*****09-S	CSTC-4L055DL	T-1008/5
JSXXL*****09-S	CSTC-4L055DR	T-1008/5

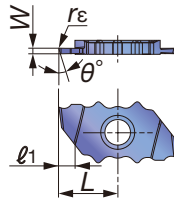


Reference pages

Inserts → C011, Standard cutting conditions → C012

INSERT

JXPG06R/L-F (sharp edge)



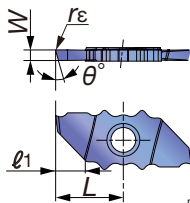
Right hand (R) shown.

Designation	$W_{\pm 0.025}$	r_{ϵ}	SH725		D_{max}	L	θ°	ℓ_1
			R	L				
JXPG06R/L10F	1	0.05	●	●	6	10.5	0	2.65
JXPG06R/L15F	1.5	0.05	●	●	6	10.5	0	2.65
JXPG06R/L10F-15	1	0.05	●	●	6	10.5	15	2.65
JXPG06R/L15F-15	1.5	0.05	●	●	6	10.5	15	2.65

● : Line up

D_{max} : Max. parting off dia

JXPG12R/L-F (sharp edge)



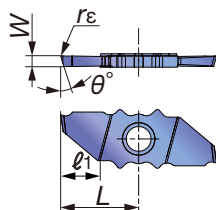
Right hand (R) shown.

Designation	$W_{\pm 0.025}$	r_{ϵ}	SH725		D_{max}	L	θ°	ℓ_1
			R	L				
JXPG12R/L15F	1.5	0.05	●	●	12	12.5	0	5.23
JXPG12R/L20F	2	0.05	●	●	12	12.5	0	5.23
JXPG12R/L15F-15	1.5	0.05	●	●	12	12.5	15	5.23
JXPG12R/L20F-15	2	0.05	●	●	12	12.5	15	5.23

● : Line up

D_{max} : Max. parting off dia

JXPG16R/L-F (sharp edge)



Right hand (R) shown.

Designation	$W_{\pm 0.025}$	r_{ϵ}	SH725		D_{max}	L	θ°	ℓ_1
			R	L				
JXPG16R/L15F	1.5	0.05	●	●	16	14.5	0	6.96
JXPG16R/L20F	2	0.05	●	●	16	14.5	0	6.96
JXPG16R/L15F-15	1.5	0.05	●	●	16	14.5	15	6.96
JXPG16R/L20F-15	2	0.05	●	●	16	14.5	15	6.96

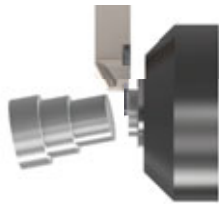
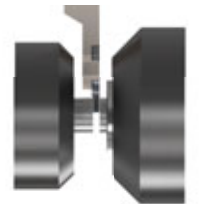
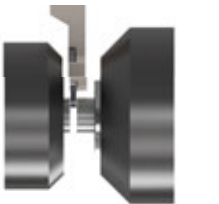
● : Line up

D_{max} : Max. parting off dia

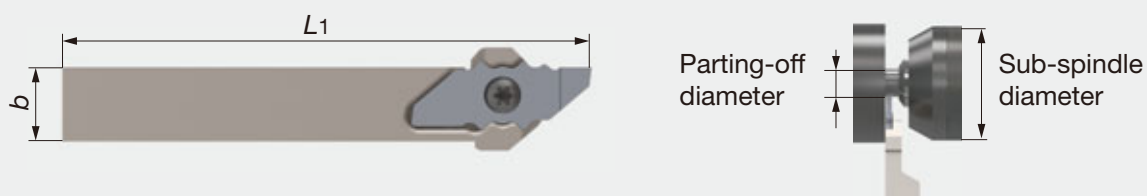
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed V _c (m/min)	Feed f (mm/rev)
P	Low carbon steels C15, C20, etc.	SH725	50 - 200	0.01 - 0.05
	Carbon steels, Alloy steels C55, 42CrMoS4, etc.	SH725	50 - 200	0.01 - 0.05
	Free cutting steels X50CrSi8 2, etc.	SH725	50 - 200	0.01 - 0.05
M	Stainless steels X5CrNi18-9, X5CrNiMo17-12-2, etc.	SH725	50 - 200	0.01 - 0.05
N	Aluminium alloys A5056, A6061, etc.	SH725	150 - 200	0.01 - 0.05
	Copper alloy C2600, C280C, etc.	SH725	100 - 200	0.01 - 0.05
S	Titanium alloys Ti-6Al-4V, etc.	SH725	30 - 80	0.01 - 0.05
	Superalloys Inconel718, etc.	SH725	30 - 80	0.01 - 0.05

HOW TO SELECT TOOLS

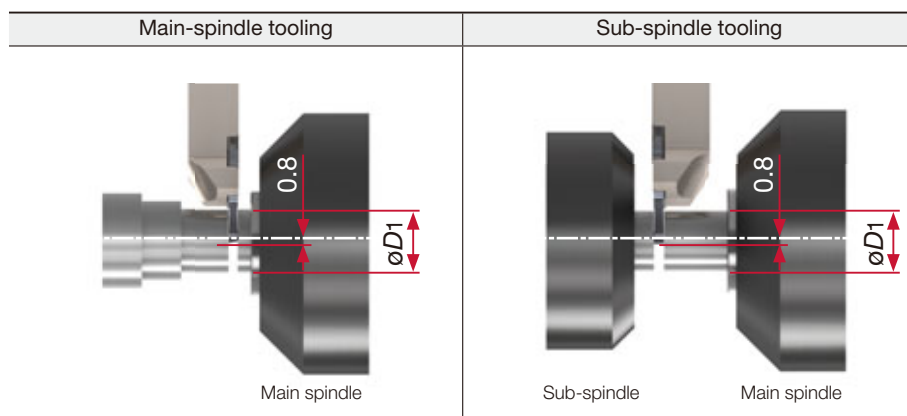
Application	Large-diameter machining of workpiece with rigidity		Small-diameter machining of workpiece with short overhang	
	Main-spindle tooling	Sub-spindle tooling	Sub-spindle tooling	
			Workpiece with long overhang at the side of sub-spindle for the process after parting-off	Short workpiece with low rigidity
	 Main spindle Position of parting-off is at the side of the main spindle	 Sub-spindle Main spindle Position of parting-off is at the side of the sub-spindle	 Sub-spindle Main spindle Position of parting-off is at the side of the main spindle	 Sub-spindle Main spindle Position of parting-off is at the side of the sub-spindle
Toolholder	R-hand (JSXXR type)	L-hand (JSXXL type)	R-hand (JSXXR-S type)	L-hand (JSXXL-S type)
Insert	Right-hand insert with lead angle to remove center core (JXPG**R***-15 type)	Left-hand insert (JXPG**L*** type)	Right-hand insert (JXPG**R*** type)	Left-hand insert (JXPG**L*** type)

HOW TO SELECT TOOLHOLDERS FOR SUB-SPINDLE

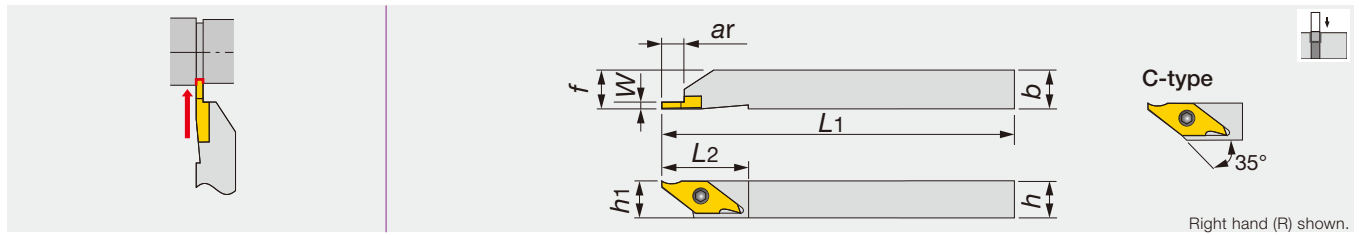


Sub-spindle dia.	Max parting-off dia.	Shank size b	Tool length L1	Insert	Toolholder
ø40	~ ø6	10	116	JXPG06...	JSXXR/L1010X09-S
ø40	~ ø6	12	81	JXPG06...	JSXXR/L1212F09-S
ø40	~ ø12	10	118	JXPG12...	JSXXR/L1010X09-S
ø40	~ ø12	12	83	JXPG12...	JSXXR/L1212F09-S
ø40	~ ø16	10	120	JXPG16...	JSXXR/L1010X09-S
ø40	~ ø16	12	85	JXPG16...	JSXXR/L1212F09-S
ø50	~ ø6	12	116	JXPG06...	JSXXR/L1212X09-S
ø50	~ ø12	12	118	JXPG12...	JSXXR/L1212X09-S
ø50	~ ø16	12	85	JXPG16...	JSXXR/L1212F09-S
ø50	~ ø16	12	120	JXPG16...	JSXXR/L1212X09-S

MAX. PARTING-OFF DIA. & DEPTH



The cutting edge reaches 0.8 mm beyond the center line in parting-off.
 $\varnothing D1$ = Max. parting-off dia.



Designation	W	ar	h	b	L1	L2	h1	f	Insert
JSVGR/L1010K-C	0.33 - 2	0.7 - 5.5	10	10	125	23	10	10	JVGR/L...
JSVGR/L1212K-C	0.33 - 2	0.7 - 5.5	12	12	125	23	12	12	JVGR/L...
JSVGR/L1616K	0.33 - 2	0.7 - 5.5	16	16	125	23	16	16	JVGR/L...

• Recommend clamping torque: 2.3 N·m.

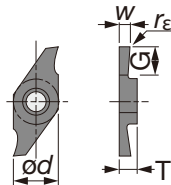
Designation	Applicable insert
JSVGR/L1010K-C	JVGR/L...
JSVGR/L1212K-C	JVGR/L...
JSVGR/L1616K	JVGR/L...

SPARE PARTS

Designation	Clamping screw	Wrench
JSVGR/L...	CSTB-3S	T-9F(Optional T-9L)

APPLICABLE INSERT

JVG-type (sharp edge)



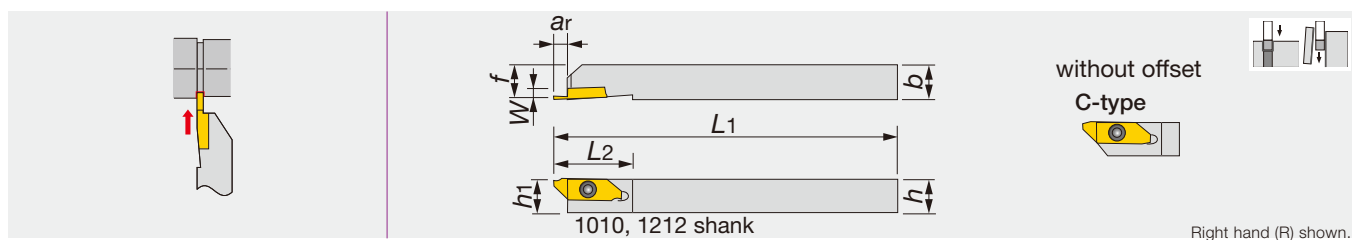
Right hand (R) shown.

Designation	$W^{+0.05}_0$	r_{ϵ}	Coated				Cermet		Uncoated		ϕd	T	G
			J740		SH725		NS9530		TH10				
			R	L	R	L	R	L	R	L			
JVGR/L033F	0.33	0	●		●	●			●		7.94	3.18	0.7
JVGR/L050F	0.5	0	●		●	●			●		7.94	3.18	1.1
JVGR/L075F	0.75	0	●		●	●			●		7.94	3.18	1.9
JVGR/L095F	0.95	0	●		●	●			●		7.94	3.18	1.9
JVGR/L100F	1	0	●		●	●	●	●	●	●	7.94	3.18	5.5
JVGR/L125F	1.25	0	●		●	●			●		7.94	3.18	5
JVGR/L150F	1.5	0	●		●	●	●	●	●	●	7.94	3.18	5.5
JVGR/L200F	2	0	●		●	●	●		●		7.94	3.18	5.5

● : Line up

Reference pages

Standard cutting conditions → C020



Designation	W	ar	h	b	L1	L2	h1	f	Insert
JSXGR/L1010K8-C	0.7 - 2	4.5 - 6	10	10	125	29	10	9.9	JXG...
JSXGR/L1212K8-C	0.7 - 2	4.5 - 6	12	12	125	29	12	11.9	JXG...
JSXGR/L1616K8	0.7 - 2	4.5 - 6	16	16	125	29	16	15.9	JXG...
JSXGR/L2020K8	0.7 - 2	4.5 - 6	20	20	125	29	20	19.9	JXG...
JSXGR/L2525K8	0.7 - 2	4.5 - 6	25	25	125	29	25	24.9	JXG...

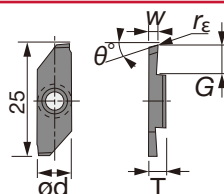
• Can be wrenched from back side with double socket torx screw. • JSXGR/L-type toolholders are used for JXG-type grooving inserts, JXF-type front-turning inserts and JXR-type reverse-turning inserts.

SPARE PARTS

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

APPLICABLE INSERT

JXG-type (with hand and sharp edge)



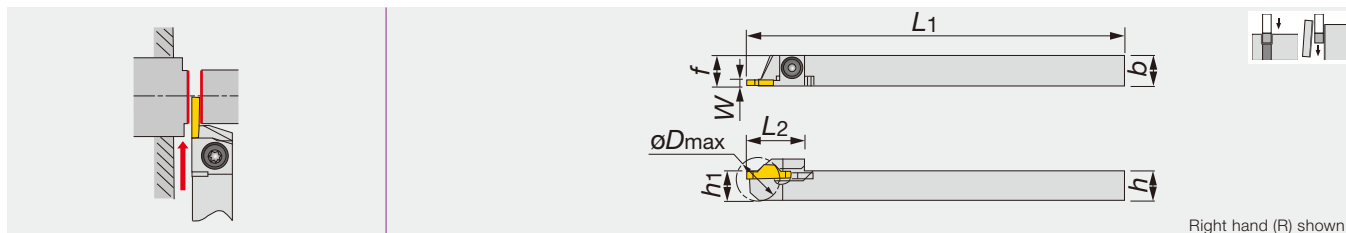
Right hand (R) shown.

Designation	W±0.025	rε	Coated		Uncoated		ød	T	θ°	G
			J740		TH10					
			R	L	R	L				
JXGR/L8070FA	0.7	0	●	●	●	●	8	3.97	15	4.5
JXGR/L8070FA-005	0.7	0.05	●				8	3.97	15	4.5
JXGR/L8100FA	1	0	●	●	●	●	8	3.97	15	6
JXGR/L8100FA-005	1	0.05	●				8	3.97	15	6
JXGR/L8100FA45	1	0	●		●		8	3.97	15	4.5
JXGR/L8100FA45-005	1	0.05	●				8	3.97	15	4.5
JXGR/L8150FA	1.5	0	●	●	●	●	8	3.97	15	6
JXGR/L8150FA-005	1.5	0.05	●				8	3.97	15	6
JXGR/L8150FA50	1.5	0	●		●		8	3.97	15	5
JXGR/L8150FA50-005	1.5	0.05	●				8	3.97	15	5
JXGR/L8180FA	1.8	0	●		●		8	3.97	15	6
JXGR/L8180FA-005	1.8	0.05	●				8	3.97	15	6
JXGR/L8200FA	2	0	●	●	●	●	8	3.97	15	6
JXGR/L8200FA-005	2	0.05	●				8	3.97	15	6
JXGR/L8200FN	2	0	●	●	●	●	8	3.97	0	6
JXGR/L8200FN-005	2	0.05	●				8	3.97	0	6

● : Line up

Reference pages

Standard cutting conditions → C020



Right hand (R) shown.

Designation	W	øD _{max}	h	b	L ₁	L ₂	h ₁	f	Insert
JCCWSR/L1010K2	2	20	10	10	125	19	10	10	JCC*200...
JCCWSR/L1212K2	2	20	12	12	125	19	12	12	JCC*200...
JCCWSR/L1616K2	2	20	16	16	125	19	16	16	JCC*200...
JCCWSR/L2020K2	2	20	20	20	125	19	20	20	JCC*200...
JCCWSR/L2525K2	2	20	25	25	125	19	25	25	JCC*200...

øD_{max}: Max. parting off dia.

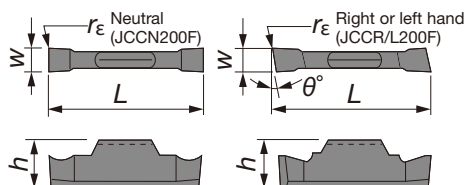
SPARE PARTS

Designation	Clamping screw	Wrench
JCCWSR/L...	CSTB-4S	T-15F



APPLICABLE INSERT

JCC-type (sharp edge)



Right hand (R) shown.

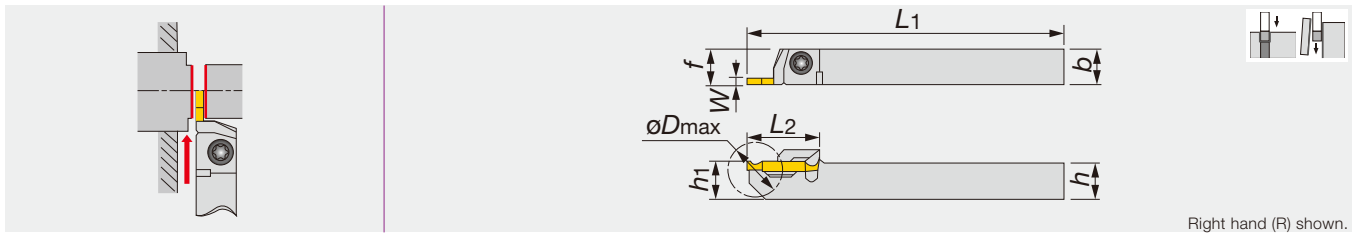
Designation	W±0.025	rε	Coated		Uncoated		h	L	θ°
			J740		TH10				
			R	L	R	L			
JCCN200F	2	0	●		●		4.8	15	0
JCCN200F-005	2	0.05	●				4.8	15	0
JCCR/L200F	2	0	●	●	●	●	4.8	15	15
JCCR/L200F-005	2	0.05	●	●			4.8	15	15

● : Line up



Reference pages

Standard cutting conditions → C020



Designation	W	øD _{max}	h	b	L ₁	L ₂	h ₁	f	Insert
JCGWSR/L1010K2	2	20	10	10	125	20	10	10	JCGN200F...
JCGWSR/L1212K2	2	20	12	12	125	20	12	12	JCGN200F...
JCGWSR/L1616K2	2	20	16	16	125	20	16	16	JCGN200F...

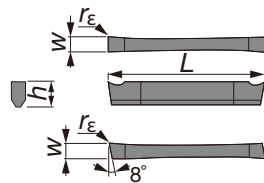
øD_{max}: Max. parting off dia.

SPARE PARTS

Designation	Clamping screw	Wrench
JCGWSR/L...	CSTB-4S	T-15F

APPLICABLE INSERT

JCG-type (sharp edge)



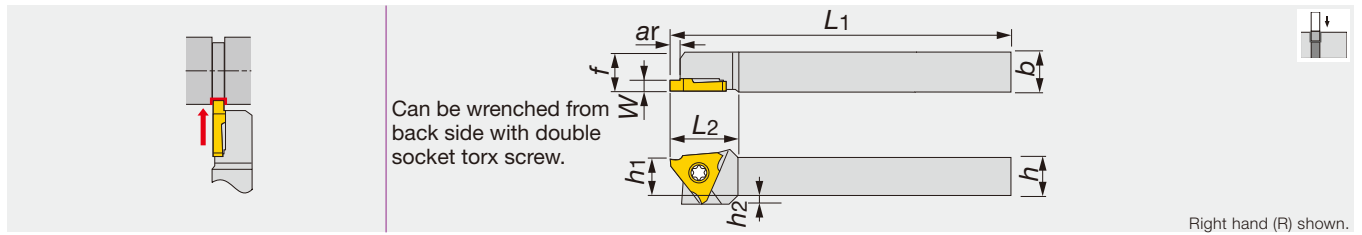
Designation	W±0.025	rε	Coated J740		Uncoated TH10		h	L
			R	L	R	L		
JCGN200F	2	0.05	●		●		3	20
JCGN200FR/L	2	0.05	●	●	●	●	3	20

● : Line up

J-SERIES

JSTGR/L

External grooving toolholders for swiss lathes



Designation	W	ar	h	b	L1	L2	h1	f	h2	Insert
JSTGR/L1010X3	0.33 - 3	0.7 - 2.6	10	10	120	18.5	10	10	2	JTGR/L3...
JSTGR/L1212F3	0.33 - 3	0.7 - 2.6	12	12	85	18.5	12	12	-	JTGR/L3...
JSTGR/L1212X3	0.33 - 3	0.7 - 2.6	12	12	120	18.5	12	12	-	JTGR/L3...
JSTGR/L1616X3	0.33 - 3	0.7 - 2.6	16	16	120	18.5	16	16	-	JTGR/L3...
JSTGL1616K3	0.33 - 3	0.7 - 2.6	16	16	125	18.5	16	16	-	JTGR/L3...

• Recommend clamping torque: 1.2 N-m.

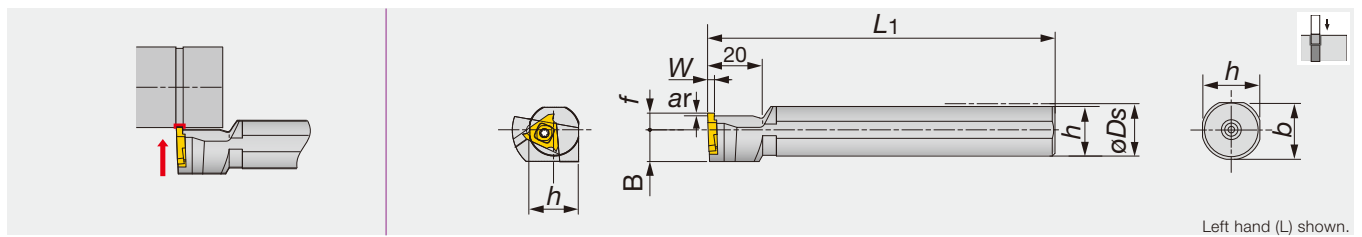
SPARE PARTS

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

J-SERIES

JS-TGL3

External grooving toolholders for swiss lathe, perpendicularly mounted inserts



Designation	W	ar	øDs	f	L1	h	b	B	Insert
JS19K-TGL3	0.33 - 3	0.7 - 2.6	19.05	6	125	18	18	11.5	JTGR3...
JS20K-TGL3	0.33 - 3	0.7 - 2.6	20	6	125	19	19	11.5	JTGR3...
JS22K-TGL3	0.33 - 3	0.7 - 2.6	22	6	125	21	21	11.5	JTGR3...
JS25K-TGL3	0.33 - 3	0.7 - 2.6	25.4	10	125	24	24	12.7	JTGR3...

• Left hand toolholders (TGL3) are used with right hand inserts (JTGR3). • Recommend clamping torque: 3.0 Nm-ft.

SPARE PARTS

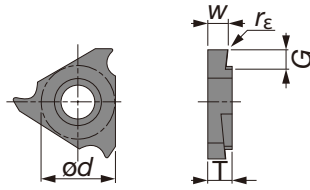
Designation	Clamping screw	Wrench
JS***-TGL3	CSTB-4S	T-15F

Reference pages

Inserts → **C019 - C020**, Standard cutting conditions → **C020**

APPLICABLE INSERT

JTGR-type (sharp edge)



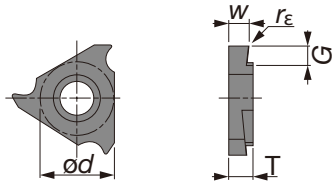
Right hand (R) shown.

Designation	$W_0^{+0.05}$	$r\epsilon$	Coated				Cermet		Uncoated		ϕd	T	G
			SH725		J740		NS9530		TH10				
			R	L	R	L	R	L	R	L			
JTGR/L3033F	0.33	0.03	●		●	●			●	●	9.525	3.18	0.7
JTGR/L3033F-005	0.33	0.05	●								9.525	3.18	0.7
JTGR/L3043F	0.43	0.03			●						9.525	3.18	1.1
JTGR/L3050F	0.5	0.03	●	●	●	●	●		●	●	9.525	3.18	1.1
JTGR/L3050F-005	0.5	0.05	●	●							9.525	3.18	1.1
JTGR/L3065F	0.65	0.03	●		●						9.525	3.18	1.9
JTGR/L3065F-010	0.65	0.1	●								9.525	3.18	1.9
JTGR/L3075F	0.75	0.03	●	●	●	●	●	●	●	●	9.525	3.18	1.9
JTGR/L3075F-010	0.75	0.1	●	●							9.525	3.18	1.9
JTGR/L3080F	0.8	0.03	●		●						9.525	3.18	1.9
JTGR/L3080F-010	0.8	0.1	●								9.525	3.18	1.9
JTGR/L3085F	0.85	0.03	●		●						9.525	3.18	1.9
JTGR/L3095F	0.95	0.03	●	●	●	●	●		●	●	9.525	3.18	1.9
JTGR/L3095F-010	0.95	0.1	●	●							9.525	3.18	1.9
JTGR/L3100F	1	0.05	●	●	●	●	●		●	●	9.525	3.18	2.1
JTGR/L3100F-010	1	0.1	●	●							9.525	3.18	2.1
JTGR/L3110F	1.1	0.05	●		●						9.525	3.18	2.1
JTGR/L3120F	1.2	0.05	●		●						9.525	3.18	2.1
JTGR/L3120F-010	1.2	0.1	●								9.525	3.18	2.1
JTGR/L3125F	1.25	0.05	●	●	●	●	●		●	●	9.525	3.18	2.1
JTGR/L3125F-010	1.25	0.1	●	●							9.525	3.18	2.1
JTGR/L3130F	1.3	0.05	●		●						9.525	3.18	2.1
JTGR/L3140F	1.4	0.05	●		●						9.525	3.18	2.1
JTGR/L3140F-010	1.4	0.1	●								9.525	3.18	2.1
JTGR/L3145F	1.45	0.05	●		●	●	●		●	●	9.525	3.18	2.1
JTGR/L3145F-010	1.45	0.1	●								9.525	3.18	2.1
JTGR/L3150F	1.5	0.05	●	●	●	●	●		●	●	9.525	3.18	2.1
JTGR/L3150F-010	1.5	0.1	●	●							9.525	3.18	2.1
JTGR/L3175F	1.75	0.05	●		●	●	●	●	●	●	9.525	3.18	2.1
JTGR/L3175F-010	1.75	0.1	●								9.525	3.18	2.1
JTGR/L3180F	1.8	0.05	●		●						9.525	3.18	2.1
JTGR/L3200F	2	0.05	●	●	●	●	●		●	●	9.525	3.18	2.6
JTGR/L3200F-010	2	0.1	●	●							9.525	3.18	2.6
JTGR/L3225F	2.25	0.05	●		●						9.525	3.18	2.6
JTGR/L3250F	2.5	0.05	●	●	●	●	●		●	●	9.525	3.18	2.6
JTGR/L3250F-010	2.5	0.1	●	●							9.525	3.18	2.6
JTGR/L3275F	2.75	0.05			●						9.525	3.18	2.6
JTGR/L3300F	3	0.05	●		●						9.525	3.18	2.6
JTGR/L3300F-010	3	0.1	●								9.525	3.18	2.6

● : Line up

APPLICABLE INSERT

JTG-type (with honed edge)



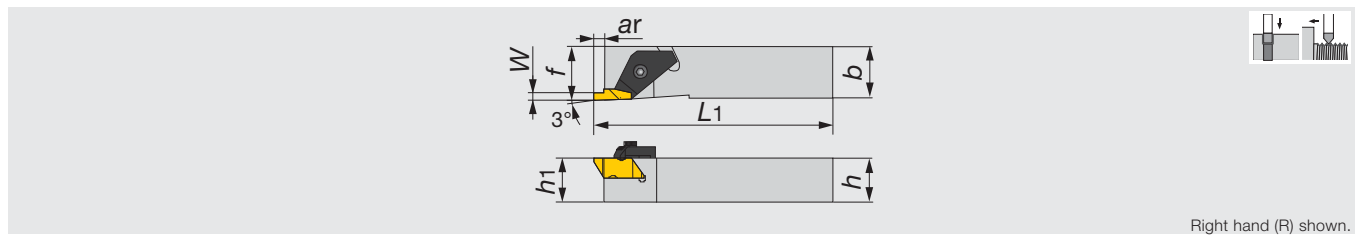
Right hand (R) shown.

Designation	$W_{+0.05}^0$	r_{ϵ}	J9530		ϕd	T	G
			R	L			
JTGR/L3100	1	0.05	●		9.525	3.18	2.1
JTGR/L3125	1.25	0.05	●		9.525	3.18	2.1
JTGR/L3150	1.5	0.05	●		9.525	3.18	2.1
JTGR/L3200	2	0.05	●		9.525	3.18	2.6

● : Line up

STANDARD CUTTING CONDITIONS FOR J SERIES GROOVING TOOLS

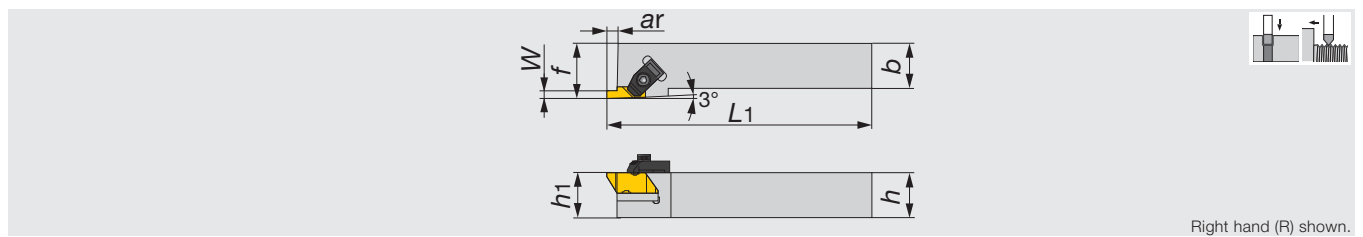
ISO	Workpiece material	Grade	Cutting speed V_c (m/min)	Feed f (mm/rev)
P	General steels, Free-cutting steels, etc.	J740	10 - 100	0.01 - 0.1
		SH725	50 - 150	0.01 - 0.1
		NS9530	50 - 150	0.01 - 0.1
		J9530	50 - 150	0.01 - 0.1
M	Stainless steels, etc.	J740	10 - 100	0.01 - 0.1
		SH725	50 - 150	0.01 - 0.1
N	Aluminium alloys, copper alloys, etc.	TH10	10 - 200	0.01 - 0.1
S	Difficult-to-cut materials, titanium alloys, etc.	TH10	10 - 30	0.01 - 0.1



Designation	W	ar	h1	h	b	L1	f	Insert
FLASR/L-1616M3	1 - 3	5.31	16	16	16	125	16	FL*-3**R/L...

Note: The right hand toolholders use right hand inserts, and the left hand toolholders use left hand inserts.

SPARE PARTS			
Designation	Clamp	Clamping screw	Wrench
FLASR-1616M3	TF-184	S-412	5/32HEX
FLASL-1616M3	TF-185	S-412	5/32HEX



Designation	W	ar	h1	h	b	L1	f	Insert
FLSR/L-2020M3	1 - 3	4.5	20	20	20	125	32	FL*-3**R/L...
FLSR/L-2525M3	1 - 3	4.5	25	25	25	150	32	FL*-3**R/L...

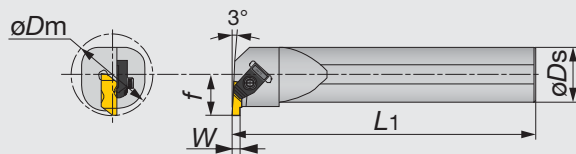
Note: The right hand toolholders use right hand inserts, and the left hand toolholders use left hand inserts.

SPARE PARTS			
Designation	Clamp	Clamping screw	Wrench
FLSR-****M3	TF-72	S-412	5/32HEX
FLSL-****M3	TF-73	S-412	5/32HEX

TUNGST-CLAMP

A_M-FLER/L

Internal toolholders for grooving & threading



Right hand (R) shown.

Designation	W	ϕD_m	ϕD_s	L1	f	Insert
A25M-FLER/L3	1 - 3	34.9	25	300	17.7	FL*-3**L/R...
A32M-FLER/L3	1 - 3	44.45	32	350	22.1	FL*-3**L/R...
A40M-FLER3	1 - 3	50.8	40	350	24.5	FL*-3**L...

Note: The right hand toolholders use left hand inserts, and the left hand toolholders use right hand inserts.

SPARE PARTS

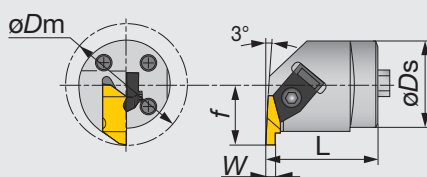


Designation	Clamp	Clamping screw	Wrench
A**M-FLER3	TF-73	S-412	5/32HEX
A**M-FLEL3	TF-72	S-412	5/32HEX

TUNGST-CLAMP

HS-FLER/L

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



Right hand (R) shown.

Designation	W	ϕD_m	ϕD_s	L	f	Insert
HS40-FLER3W	1 - 3	56.1	40	40.1	28	FL*-3**L...
HS50-FLER3W	1 - 3	70.1	50	41.9	35	FL*-3**L...

Note: The right hand toolholders use right hand inserts, and the left hand toolholders use left hand inserts.

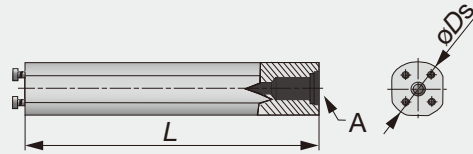
SPARE PARTS



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

Reference pages

Inserts → C023, Standard cutting conditions → C024



Designation	ØDs	L	A
S-570-40M-40	40	273	1/2-14NPT
S-570-50M-50	50	366	1/2-14NPT

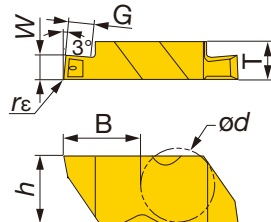
SPARE PARTS



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

INSERT

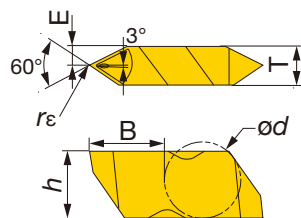
FLG-CB (For grooving)



Designation	W±0.025	rε	AH110		G	Ød	T	h	B
			R	L					
FLG-3M100R/L-CB	1	0.13 - 0.25	●	●	1.4	9.525	4.95	8.74	10.29
FLG-3M150R/L-CB	1.5	0.13 - 0.25	●	●	2.55	9.525	4.95	8.74	10.29
FLG-3M200R/L-CB	2	0.13 - 0.25	●	●	2.55	9.525	4.95	8.74	10.29
FLG-3M250R/L-CB	2.5	0.13 - 0.25	●	●	4.07	9.525	4.95	8.74	10.29
FLG-3M300R/L-CB	3	0.13 - 0.25	●	●	4.07	9.525	4.95	8.74	10.29

● : Line up

FLT-CB (For threading)



Designation	rε	AH725		Pitch		Ød	E	T	h	B
		R	L	Internal	External					
FLT-3R/L-HCB	0.13 - 0.2	●	●	2.11 - 5.08	1.27 - 4.23	9.525	2.49	4.95	8.74	10.16
FLT-3R/LC-HCB	0.31 - 0.38	●	●	4.23 - 5.08	2.31 - 4.23	9.525	2.49	4.95	8.74	10.16
FLT-3R/L-CB	0.13 - 0.2	●	●	2.11 - 3.175	1.27 - 3.175	9.525	2.49	4.95	8.74	10.16

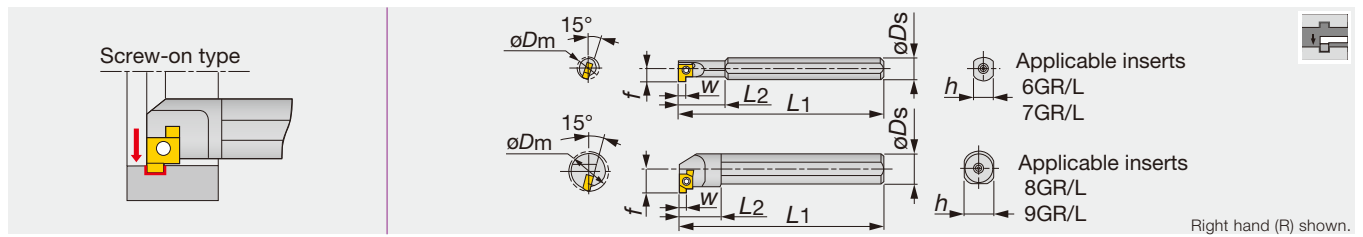
● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Application	Cutting speed Vc (m/min)	Feed f (mm/rev)
P	High carbon steel C45, etc.	AH110	Grooving	100 - 200	0.12 - 0.35
		AH725	Threading	80 - 180	-
	Alloy steel 34CrMo4, etc.	AH110	Grooving	50 - 80	0.12 - 0.3
		AH725	Threading	60 - 160	-
M	Stainless steel X5CrNi18-9, etc.	AH110	Grooving	50 - 150	0.1 - 0.2
		AH725	Threading	50 - 130	-
K	Gray cast iron 250, etc.	AH110	Grooving	50 - 180	0.1 - 0.25
		AH725	Threading	-	-
	Ductile cast iron 40-15S, etc.	AH110	Grooving	50 - 120	0.1 - 0.25
		AH725	Threading	-	-

SNGR/L

Toolholders for internal grooving



Designation	Material	W	ϕD_m	ϕD_s	f	L_1	L_2	h	Max. groove depth	Insert
SNGR/L08H06	STEEL	1 - 2	8	8	4.7	100	18	7	1.5	6GR/L...
SNGR/L08H07	STEEL	1 - 2	10	8	5.8	100	23	7	1.5	7GR/L...
SNGR/L10K07	STEEL	1 - 2	12	10	6.8	125	29	9	1.5	7GR/L...
SNGR/L10K08	STEEL	1.5 - 3.5	14	10	7.6	125	15	9	2	8GR/L...
SNGR/L12M08	STEEL	1.5 - 3.5	16	12	8.6	150	18	11	2	8GR/L...
SNGR/L16Q09	STEEL	1.5 - 3.5	20	16	11.6	180	20	15	3	9GR/L...
SNGR/L20R09	STEEL	1.5 - 3.5	24	20	13.6	200	25	18	3	9GR/L...
SNGR/L08K06SC	CARBIDE	1.5 - 3.5	8	8	4.7	125	28	7	1.5	6GR/L...
SNGR/L08K07SC	CARBIDE	1.5 - 3.5	10	8	5.8	125	35	7	1.5	7GR/L...
SNGR/L10M07SC	CARBIDE	1.5 - 3.5	12	10	6.8	150	45	9	1.5	7GR/L...
SNGR/L10M08SC	CARBIDE	1.5 - 3.5	14	10	7.6	150	45	9	2	8GR/L...
SNGR/L12Q08SC	CARBIDE	1.5 - 3.5	16	12	8.6	180	-	11	2	8GR/L...
SNGR/L16R09SC	CARBIDE	1.5 - 3.5	20	16	11.6	200	-	15	3	9GR/L...

SPARE PARTS

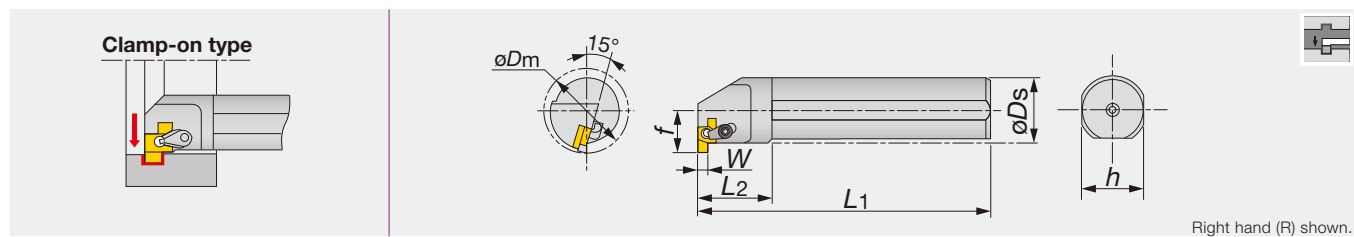
Designation	Clamping screw	Wrench
SNGR/L***06	CSTB-2L040	T-6F
SNGR/L***07	CSTB-2.2S	T-7F
SNGR/L***08	CSTB-2.2	T-7F
SNGR/L***09	CSTB-2.5L080	T-8F
SNGR/L***06SC	CSTB-2L040	T-6F
SNGR/L***07SC	CSTB-2.2S	T-7F
SNGR/L***08SC	CSTB-2.2	T-7F
SNGR/L***09SC	CSTB-2.5L080	T-8F

Reference pages

Inserts, Standard cutting conditions → C027

**CNGR/L**

Toolholders for internal grooving



Designation	W	ϕD_m	ar	ϕD_s	f	L_1	L_2	h	Insert
CNGR/L25S15	2 - 5	32	5	25	18.1	250	30	23	15GR/L...
CNGR/L32T15	2 - 5	40	5	32	22.1	300	35	30	15GR/L...
CNGR/L40U15	2 - 5	48	5	40	26.1	350	45	38	15GR/L...

SPARE PARTS

Designation	Clamp set	Screw	Shim	Wrench
CNGR...	CSP22	DTS5-3.5	SGSR151	T-20F
CNGL...	CSP22	DTS5-3.5	SGSL151	T-20F

Optional parts for CNG type toolholders

When using as a screw-on type, use the following parts.

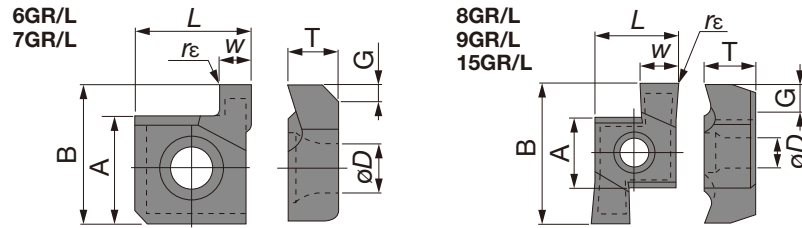


Designation	Clamping screw	Wrench
CNGR/L...	CSTB-3.5L	T-15F



INSERT

**GR/L



Right hand (R) shown.

Designation	W±0.025	rε	Cermet		Uncoated				A	B	T	øD	L	G
			NS9530		TH10		UX30							
			R	L	R	L	R	L						
6GR/L100	1	0.2	●		●		●	●	4.76	6.44	2.34	2.3	5.56	1.5
6GR/L150	1.5	0.2	●		●	●	●	●	4.76	6.44	2.34	2.3	5.56	1.5
6GR/L200	2	0.2	●		●	●	●	●	4.76	6.44	2.34	2.3	5.56	1.5
7GR/L100	1	0.2	●		●		●		5.56	7.36	3.08	2.58	5.56	1.5
7GR/L150	1.5	0.2	●		●		●		5.56	7.36	3.08	2.58	5.56	1.5
7GR/L200	2	0.2	●		●	●	●	●	5.56	7.36	3.08	2.58	5.56	1.5
8GR/L150	1.5	0.2	●		●		●		5.56	10.16	3.87	2.58	6.15	2
8GR/L200	2	0.2	●		●	●	●		5.56	10.16	3.87	2.58	6.15	2
8GR/L250	2.5	0.2	●		●	●	●	●	5.56	10.16	3.87	2.58	6.15	2
8GR/L300	3	0.2	●		●	●	●	●	5.56	10.16	3.87	2.58	6.15	2
8GR/L350	3.5	0.2			●		●		5.56	10.16	3.87	2.58	6.15	2
9GR/L150	1.5	0.2	●	●	●		●	●	6.35	12.95	4.66	2.86	7.74	2
9GR/L200	2	0.2	●	●	●	●	●	●	6.35	12.95	4.66	2.86	7.74	3
9GR/L250	2.5	0.2	●	●	●		●	●	6.35	12.95	4.66	2.86	7.74	3
9GR/L300	3	0.2	●	●	●	●	●	●	6.35	12.95	4.66	2.86	7.74	3
9GR/L350	3.5	0.2	●	●	●		●	●	6.35	12.95	4.66	2.86	7.74	3
15GR/L200	2	0.2	●		●		●		9.2	20.8	5.1	4.8	10.8	3
15GR/L250	2.5	0.2	●		●		●		9.2	20.8	5.1	4.8	10.8	3
15GR/L300	3	0.2	●		●		●	●	9.2	20.8	5.1	4.8	10.8	3
15GR/L350	3.5	0.2	●		●		●		9.2	20.8	5.1	4.8	10.8	3
15GR/L400	4	0.2	●		●		●		9.2	20.8	5.1	4.8	10.8	4
15GR/L450	4.5	0.2			●	●	●		9.2	20.8	5.1	4.8	10.8	4
15GR/L500	5	0.2			●		●		9.2	20.8	5.1	4.8	10.8	5

Note:

When using a right or left hand insert, the right hand insert is used with right hand toolholder and the left hand insert is used with left hand toolholder.

● : Line up

STANDARD CUTTING CONDITIONS

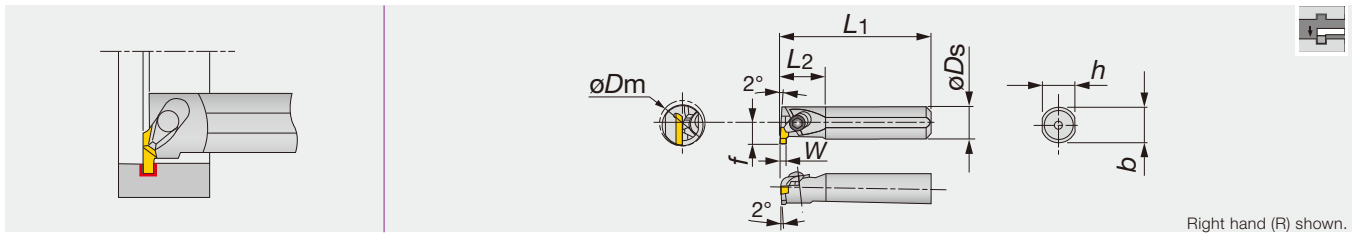
ISO	Workpiece material	Cutting speed Vc (m/min)	Feed f (mm/rev)
P	Medium carbon steels	40 - 150	0.05 - 0.15
K	Cast irons, Light alloys	60 - 200	0.05 - 0.15

Notes:

- Cutting conditions shown above are a guideline only.
- When grooving close to the minimum bore diameter or with long reach conditions, reduce the conditions shown above by approximately 50%.
- To help chip evacuation, use water-soluble cutting fluid. The fluid should be applied sufficiently to the cutting point.
- When using without cutting fluid, reduce both the cutting speeds and feeds shown on the above by 50% at least.

CGXR/L

Toolholders for internal grooving



Designation	Material	W	øDm	øDs	f	L1	L2	h	b	Max. groove depth	Insert
CGXR/L0016	STEEL	1 - 3	20	16	11.3	150	24	15	15.5	3	GIR/L52...
CGXR/L0020	STEEL	1 - 3	24	20	13.3	180	30	18	19	3	GIR/L52...
CGXR/L0025	STEEL	1 - 5	32	25	18	200	38	23	24	5.3	GIR/L63...
CGXR/L0032	STEEL	1 - 5	40	32	23	250	48	30	31	5.3	GIR/L63...
CGXR/L0040	STEEL	1 - 5	48	40	27	300	60	37	38.5	5.3	GIR/L63...
CGXR/L16SC	CARBIDE	1 - 3	20	16	11.3	200	24	15	-	3	GIR/L52...

• When using a right or left hand insert, the right hand insert (GIR) is used for the right hand toolholders (CGXR) , and the left hand insert (GIL) is used for the left hand toolholders (CGXL).

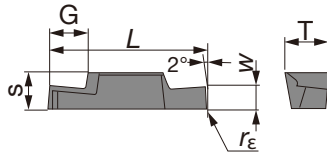
SPARE PARTS

Designation	Clamp set	Wrench 1	Wrench 2
CGXR/L0016/20	CSW-0	-	P-2.5T
CGXR/L0025/32/40	CSW-2	P-4	-
CGXR/L16SC	CSW-0	-	P-2.5T



INSERT

GIR/L



Right hand (R) shown.

Designation	W±0.05	rε	Cermet NS9530		Uncoated TH10		S	T	L	G
			R	L	R	L				
GIR/L5210-02	1	0.2	●	●	●	●	3.5	4.4	15	1.5
GIR/L5215-02	1.5	0.2	●	●	●	●	3.5	4.4	15	2.3
GIR/L5220-02	2	0.2	●	●	●	●	3.5	4.4	15	3
GIR/L5225-02	2.5	0.2	●		●	●	3.5	4.4	15	3
GIR/L5230-02	3	0.2	●		●	●	3.5	4.4	15	3
GIR/L6310-02	1	0.2	●		●	●	5.5	6.4	24	1.5
GIR/L6315-02	1.5	0.2	●	●	●	●	5.5	6.4	24	2.3
GIR/L6320-02	2	0.2	●	●	●	●	5.5	6.4	24	3
GIR/L6325-02	2.5	0.2	●	●	●	●	5.5	6.4	24	3.8
GIR/L6330-02	3	0.2	●	●	●	●	5.5	6.4	24	4.5
GIR/L6335-02	3.5	0.2	●	●	●	●	5.5	6.4	24	5.3
GIR/L6340-02	4.0	0.2	●	●	●	●	5.5	6.4	24	5.3
GIR/L6345-02	4.5	0.2	●		●	●	5.5	6.4	24	5.3
GIR/L6350-02	5	0.2	●		●	●	5.5	6.4	24	5.3

Note:

When using a right or left hand insert, the right hand insert is used with right hand toolholder and the left hand insert is used with left hand toolholder.

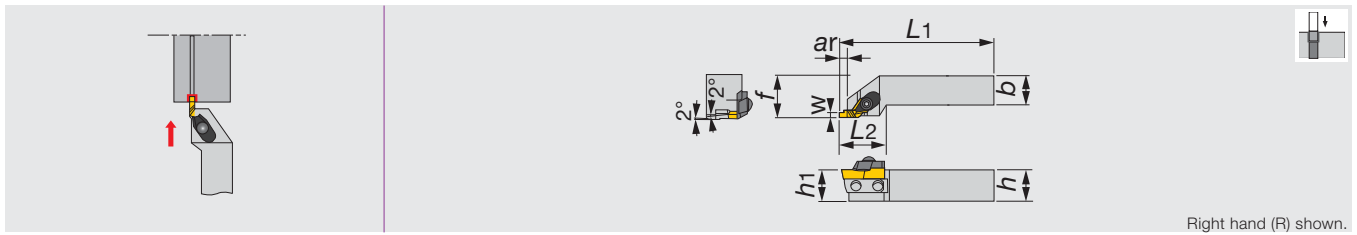
● : Line up

STANDARD CUTTING CONDITIONS (EXTERNAL & INTERNAL GROOVING)

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)	Feed f (mm/rev)		
				W < 2 mm	W = 2 ~ 4 mm	W > 4 mm
P	Carbon steels	NS9530	80 - 150	0.05 - 0.1	0.08 - 0.15	0.08 - 0.2
K	Cast irons, Light alloys	TH10	60 - 150	0.05 - 0.1	0.08 - 0.15	0.08 - 0.2

GX-R/LE

External toolholders for grooving, with double-ended inserts



Right hand (R) shown.

Designation	W	ar	h	b	L1	L2	h1	f	Insert
GX-2020R/LE	1 - 4.5	1.5 - 6	20	20	125	35	20	25	XGR/L63...
GX-2525R/LE	1 - 4.5	1.5 - 6	25	25	150	35	25	32	XGR/L63...

- When using a right or left hand insert, the right hand insert (XGR) is used for the right hand toolholders (GX-****RE), and the left hand insert (XGL) is used for the left hand toolholders (GX-****LE).

SPARE PARTS

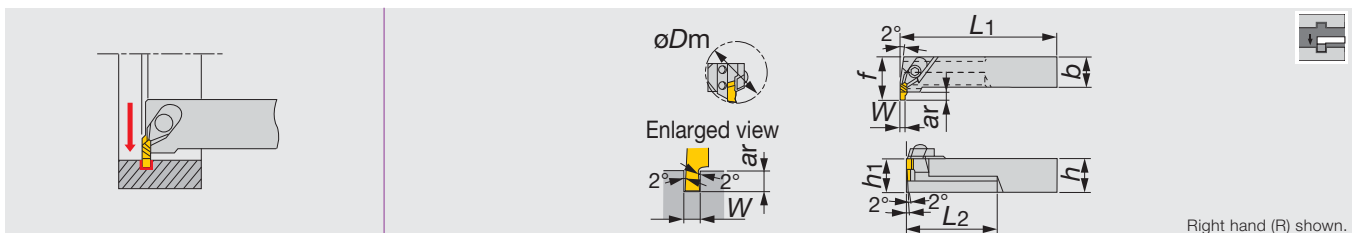
Designation	Clamp set	Clamp screw	Shim	Shim screw	Wrench
GX-2020RE	CP81A	RT-1	SL-6R	BHM4-8	P-4
GX-2020LE	CP81A	RT-1	SL-6L	BHM4-8	P-4
GX-2525RE	CP81A	RT-1	SL-1R	BHM4-8	P-4
GX-2525LE	CP81A	RT-1	SL-1L	BHM4-8	P-4

Note:

Max.groove width and max. groove depth shown in the above table are the values when the insert having the largest cutting edge width is used.

GX-R/LI

Toolholders for internal grooving



Right hand (R) shown.

Designation	W	øDm	ar	h	b	L1	L2	h1	f	Insert
GX-2525R/LI	1 - 4.5	55	1.5 - 6	25	25	200	70	25	35	XGL/R63...

- When using a right or left hand insert, the right hand insert (XGR) is used for the left hand toolholders (GX-****LI), and the left hand insert (XGL) is used for the right hand toolholders (GX-****RI).

SPARE PARTS

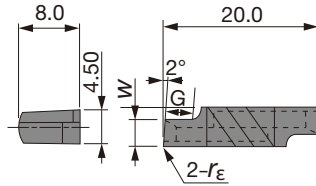
Designation	Clamp set	Clamp screw	Shim	Shim screw	Wrench
GX-2525RI	CP81B	RT-1	SL-2R	BHM3-8	P-4
GX-2525LI	CP81B	RT-1	SL-2L	BHM3-8	P-4

Reference pages

Inserts, Standard cutting conditions → C031

INSERT

XGR/L



Right hand (R) shown.

Designation	W±0.05	rε	Cermet		Uncoated				G
			NS9530		TH10		UX30		
			R	L	R	L	R	L	
XGR/L6310-02	1	0.2	●	●	●	●	●	●	1.5
XGR/L6315-02	1.5	0.2	●	●	●	●	●	●	2.3
XGR/L6320-02	2	0.2	●	●	●	●	●	●	3
XGR/L6325-02	2.5	0.2	●	●	●	●	●	●	3.8
XGR/L6330-02	3	0.2	●	●	●	●	●	●	4.5
XGR/L6335-02	3.5	0.2	●	●	●	●	●	●	5.3
XGR/L6340-02	4	0.2	●	●	●	●	●	●	6
XGR/L6345-02	4.5	0.2	●	●	●	●	●	●	6

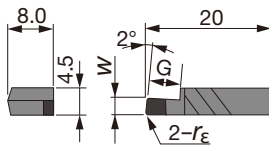
Note;

For internal machining, use right-hand toolholder (GX-****R) with left-hand insert (XGL****), and use left-hand toolholder (GX-****L) with right-hand insert (XGR****).

For external machining, use right-hand toolholder (GX-****RE) with right-hand insert (XGR****), and use left-hand toolholder (GX-****LE) with left-hand insert (XGL****).

● : Line up

XGR/L-QBN



Right hand (R) shown.

Designation	W±0.05	rε	T-CBN		G
			BX360		
			R	L	
XGR/L6315S-QBN	1.5	0.2	●		2.3
XGR/L6320S-QBN	2	0.2	●		3
XGR/L6325S-QBN	2.5	0.2	●		3.8
XGR/L6330S-QBN	3	0.2	●		4.5
XGR/L6335S-QBN	3.5	0.2	●		5.3
XGR/L6340S-QBN	4	0.2	●		6
XGR/L6345S-QBN	4.5	0.2	●		6

● : Line up

Note;

For internal machining, use right-hand toolholder (GX-****R) with left-hand insert (XGL****), and use left-hand toolholder (GX-****L) with right-hand insert (XGR****).

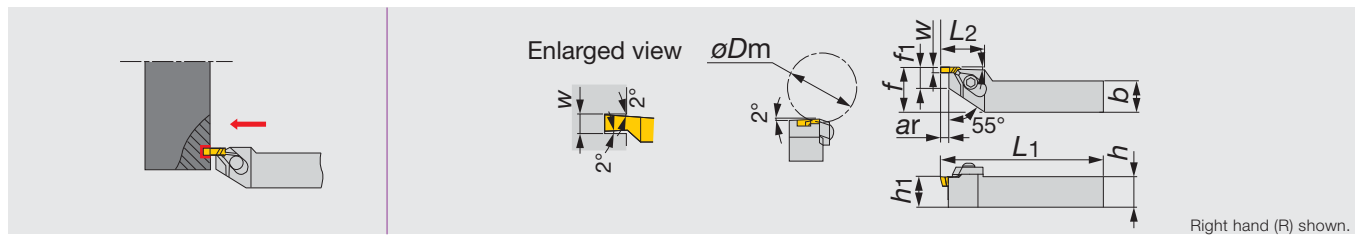
For external machining, use right-hand toolholder (GX-****RE) with right-hand insert (XGR****), and use left-hand toolholder (GX-****LE) with left-hand insert (XGL****).

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed v_c (m/min)	Feed f (mm/rev)		
				$W < 2$ mm	$W = 2 \sim 4$ mm	$W > 4$ mm
P	Carbon steels	NS9530	80 - 200	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
		TX10S	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
		UX30	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
K	Cast irons , Light alloys	TH10	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
H	Hardened steels	BX360	50 - 180	0.05 - 0.15	0.05 - 0.15	0.05 - 0.15

GX-R/LF

Toolholders for face grooving



Designation	W	ϕD_m	ar	h	b	L1	L2	h1	f	f1	Insert
GX-2525R/LF	1 - 4.5	55	1.5 - 6	25	25	150	35	25	32	15	XNL/R63...

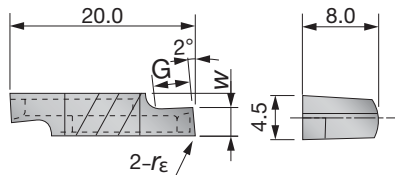
• When using a right or left hand insert, the right hand insert (XNR) is used for the left hand toolholders (GX-...LF), and the left hand insert (XNL) is used for the right hand toolholders (GX-...RF).

SPARE PARTS

Designation	Clamp set	Clamping screw	Shim	Shim screw	Wrench
GX-2525RF	CP81A	RT-1	SL-3R	BHM4-8	P-4
GX-2525LF	CP81A	RT-1	SL-3L	BHM4-8	P-4

INSERT

XNR/L



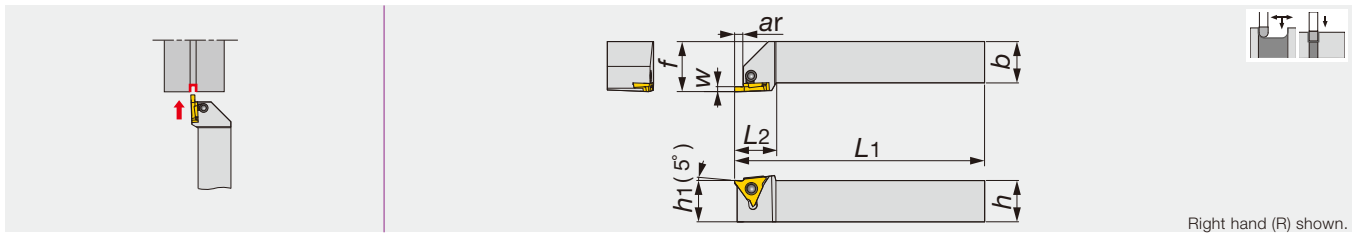
Left hand (L) shown.

Designation	W $\pm$ 0.05	rE	Cermet NS9530		Uncoated TH10		G
			R	L	R	L	
XNR/L6310-02	1	0.2	●	●	●	●	1.5
XNR/L6315-02	1.5	0.2	●	●	●	●	2.3
XNR/L6320-02	2	0.2	●	●	●	●	3
XNR/L6325-02	2.5	0.2	●	●	●	●	3.8
XNR/L6330-02	3	0.2	●	●	●	●	4.5
XNR/L6335-02	3.5	0.2	●	●	●	●	5.3
XNR/L6340-02	4	0.2	●	●	●	●	6
XNR/L6345-02	4.5	0.2	●	●	●	●	6

● : Line up

TGTSR/L

External toolholders for grooving, with triple corner insert



Right hand (R) shown.

Designation	W	ar	h	b	L1	L2	h1	f
TGTSR/L2020K16	0.33 - 2.5	2.5	20	20	125	25	20	25
TGTSR/L2525M16	0.33 - 2.5	2.5	25	25	150	25	25	30
TGTSR/L2020K22-1	1 - 1.45	2	20	20	125	25	20	25
TGTSR/L2020K22-2	1.5 - 2.3	3.5	20	20	125	25	20	25
TGTSR/L2020K22-3	2.5 - 4.5	5	20	20	125	25	20	25
TGTSR/L2525M22-1	1 - 1.45	2	25	25	150	25	25	30
TGTSR/L2525M22-2	1.5 - 2.3	3.5	25	25	150	25	25	30
TGTSR/L2525M22-3	2.5 - 4.5	5	25	25	150	25	25	30

- See below applicable insert table.
- The right hand insert (GBR) is used for the right hand toolholders (TGTSR), and the left hand insert (GBL) is used for the left hand toolholders (TGTSR).

Designation	Applicable insert
TGTSR/L2020K16	GBR/L32...
TGTSR/L2525M16	GBR/L32...
TGTSR/L2020K22-1	GBR/L43125 ~ 145 GBR/L43050R
TGTSR/L2020K22-2	GBR/L43150 ~ 230 GBR/L43075R ~ 100R
TGTSR/L2020K22-3	GBR/L43250 ~ 450 GBR/L43125R ~ 200R
TGTSR/L2525M22-1	GBR/L43125 ~ 145 GBR/L43050R
TGTSR/L2525M22-2	GBR/L43150 ~ 230 GBR/L43075R ~ 100R
TGTSR/L2525M22-3	GBR/L43250 ~ 450 GBR/L43125R ~ 200R

SPARE PARTS



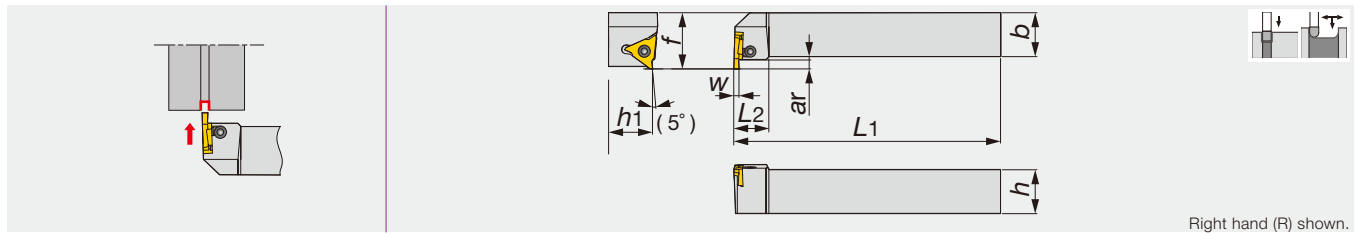
Designation	Clamp	Clamping screw	Wrench
TGTSR/L*16	CP900	MCS520-2.5	P-2.5
TGTSR/L*22...	CP910	MCS520-2.5	P-2.5

Reference pages

Inserts → C035 - C036, Standard cutting conditions → C036

TGTR/L

Perpendicular toolholders for external grooving, with triple corner inserts



Designation	W	ar	h	b	L1	L2	h1	f
TGTR/L2020K16	0.33 - 2.5	2.5	20	20	125	20	20	27
TGTR/L2525M16	0.33 - 2.5	2.5	25	25	150	20	25	32
TGTR/L2020K22-1	1 - 1.45	2	20	20	125	20	20	27
TGTR/L2020K22-2	1.5 - 2.3	3.5	20	20	125	20	20	27
TGTR/L2020K22-3	2.5 - 4.5	5	20	20	125	20	20	27
TGTR/L2525M22-1	1 - 2.3	2	25	25	150	20	25	32
TGTR/L2525M22-2	1.5 - 2.3	3.5	25	25	150	20	25	32
TGTR/L2525M22-3	2.5 - 4.5	5	25	25	150	20	25	32

- See below applicable insert table.
- The left hand insert (GBL) is used for the right hand toolholders (TGTR), and the right hand insert (GBR) is used for the left hand toolholders (TGTL).

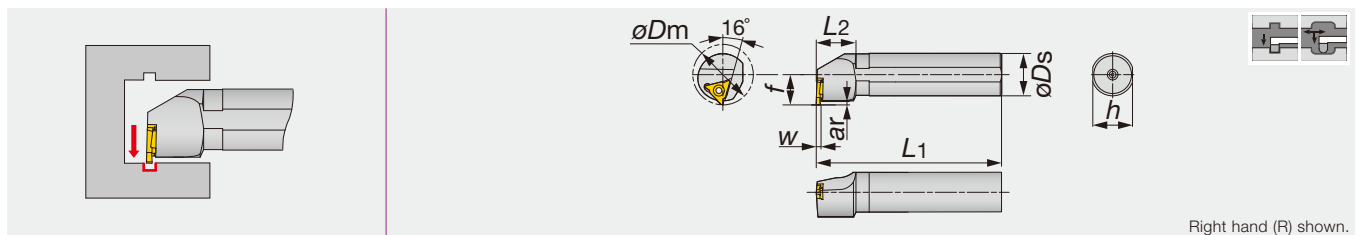
Designation	Applicable insert
TGTR/L2020K16	GBL/R32...
TGTR/L2525M16	GBL/R32...
TGTR/L2020K22-1	GBL/R43125 ~ 145 GBL/R43050R
TGTR/L2020K22-2	GBL/R43150 ~ 230 GBL/R43075R ~ 100R
TGTR/L2020K22-3	GBL/R43250 ~ 450 GBL/R43125R ~ 200R
TGTR/L2525M22-1	GBL/R43125 ~ 145 GBL/R43050R
TGTR/L2525M22-2	GBL/R43150 ~ 230 GBL/R43075R ~ 100R
TGTR/L2525M22-3	GBL/R43250 ~ 450 GBL/R43125R ~ 200R

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
TGTR/L*****16	CP900	MCS520-2.5	P-2.5
TGTR/L*****22...	CP910	MCS520-2.5	P-2.5

S-SGTR/L

Toolholders for internal grooving



Designation	W	øDm	ar	øDs	f	L1	L2	h	Insert
S25R-SGTR/L16	0.33 - 2.5	35	2	25	17.5	200	30	23	GBL/R32...
S32S-SGTR/L22	1.25 - 4.5	40	2.5	32	23	250	30	30	GBL/R43...

- When using a right or left hand insert, the right hand insert (GBR) is used for the left hand toolholders (SGTL), and the left hand insert (GBL) is used for the right hand toolholders (SGTR).

SPARE PARTS

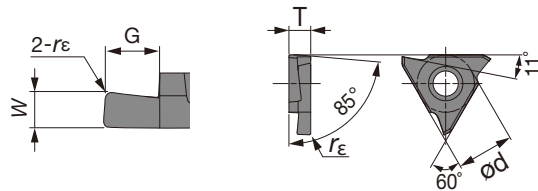
Designation	Clamping screw	Wrench
S25R-SGTR/L16	CSTB-4S	T-15F
S32S-SGTR/L22	CSTB-5S	T-20F

Reference pages

Inserts → C035 - C036, Standard cutting conditions → C036

APPLICABLE INSERT

GBR/L32

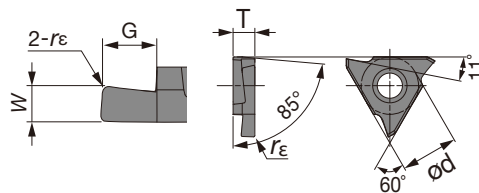


Right hand (R) shown.

Designation	$W \pm 0.025$	$r\epsilon$	Coated AH710		Cermet NS9530		Uncoated KS05F		G	ϕd	T
			R	L	R	L	R	L			
GBR/L32033	0.33	0.03	●	●	●		●		0.8	9.525	3.18
GBR/L32050	0.5	0.05	●	●	●		●		1.2	9.525	3.18
GBR/L32075	0.75	0.05	●	●	●	●	●		2	9.525	3.18
GBR/L32095	0.95	0.05	●	●	●	●	●		2	9.525	3.18
GBR/L32100	1	0.05	●	●	●	●	●		2	9.525	3.18
GBR/L32125	1.25	0.2	●	●	●	●	●		2	9.525	3.18
GBR/L32145	1.45	0.2	●	●	●		●		2	9.525	3.18
GBR/L32150	1.5	0.2	●	●	●		●		2	9.525	3.18
GBR/L32200	2	0.2	●	●	●		●		2.5	9.525	3.18
GBR/L32250	2.5	0.2	●	●	●		●		2.5	9.525	3.18

● : Line up

GBR/L43



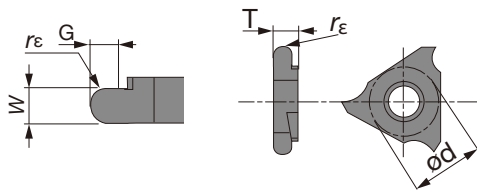
Right hand (R) shown.

Designation	$W \pm 0.025$	$r\epsilon$	Coated AH710		Cermet NS9530		Uncoated KS05F		G	ϕd	T
			R	L	R	L	R	L			
GBR/L43125	1.25	0.2	●	●	●		●		2	12.7	4.76
GBR/L43145	1.45	0.2	●	●	●		●		2	12.7	4.76
GBR/L43150	1.5	0.2	●	●	●	●	●		3.5	12.7	4.76
GBR/L43175	1.75	0.2	●	●	●	●	●		3.5	12.7	4.76
GBR/L43185	1.85	0.2	●	●	●	●	●		3.5	12.7	4.76
GBR/L43200	2	0.2	●	●	●	●	●		3.5	12.7	4.76
GBR/L43230	2.3	0.2	●	●	●	●	●		3.5	12.7	4.76
GBR/L43250	2.5	0.3	●	●	●		●		5	12.7	4.76
GBR/L43265	2.65	0.3	●	●	●		●		5	12.7	4.76
GBR/L43280	2.8	0.3	●	●	●		●		5	12.7	4.76
GBR/L43300	3	0.3	●	●	●		●		5	12.7	4.76
GBR/L43330	3.3	0.3	●	●	●		●		5	12.7	4.76
GBR/L43350	3.5	0.3	●	●	●		●		5	12.7	4.76
GBR/L43400	4	0.4	●	●	●		●		5	12.7	4.76
GBR/L43430	4.3	0.4	●	●	●		●		5	12.7	4.76
GBR/L43450	4.5	0.4	●	●	●		●		5	12.7	4.76

● : Line up

APPLICABLE INSERT

GBR/L43-R (Radius)



Right hand (R) shown.

Designation	$W \pm 0.025$	r_ϵ	Coated AH710		Cermet NS9530		Uncoated KS05F		G	ϕd	T
			R	L	R	L	R	L			
GBR/L43050R	1	0.5	●	●	●		●	●	2	12.7	4.76
GBR/L43075R	1.5	0.75	●	●	●		●	●	3.5	12.7	4.76
GBR/L43100R	2	1	●	●	●		●	●	3.5	12.7	4.76
GBR/L43125R	2.5	1.25	●	●	●		●	●	5	12.7	4.76
GBR/L43150R	3	1.5	●	●	●		●	●	5	12.7	4.76
GBR/L43200R	4	2	●	●	●		●	●	5	12.7	4.76

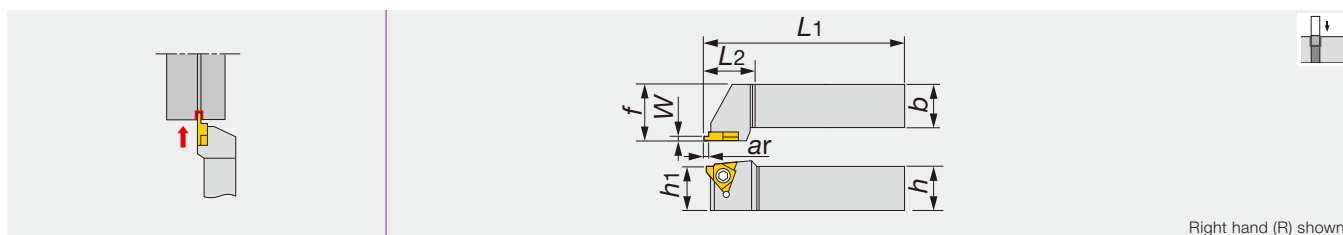
● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Grade	Cutting speed V_c (m/min)	Feed f (mm/rev)
P	Carbon steels, Alloy steels C45, 18CrMo4, etc.	150 - 240HB	NS9530	100 - 200	0.02 - 0.25
		150 - 240HB	AH710	60 - 150	0.05 - 0.25
M	Stainless steels X5CrNi18-9, etc.	$\leq 240HB$	AH710	60 - 150	0.05 - 0.15
K	Cast irons 250, etc.	Tensile strength $\leq 350 \text{ N/mm}^2$	AH710	60 - 150	0.05 - 0.15
N	Non-ferrous metals Aluminium, etc.	-	KS05F	200 - 300	0.05 - 0.15

SGTR/L

External toolholders for grooving, with triple corner inserts



Right hand (R) shown.

Designation	W	ar	h	b	L1	L2	h1	f	Insert
SGTR1616-3	1.15 - 2.7	1.5 - 3	16	16	100	20	16	20	GLR/L3...
SGTR/L2020-3	1.15 - 2.7	1.5 - 3	20	20	125	20	20	25	GLR/L3...
SGTR/L2525-3	1.15 - 2.7	1.5 - 3	25	25	150	20	25	32	GLR/L3...
SGTR/L2020-4	1.15 - 4.2	1.5 - 4	20	20	125	30	20	25	GLR/L4..., GOR/L4...
SGTR/L2525-4	1.15 - 4.2	1.5 - 4	25	25	150	30	25	32	GLR/L4..., GOR/L4...

SPARE PARTS

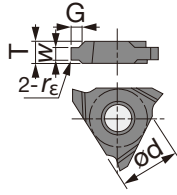
Designation	Clamping screw	Wrench
SGTR/L***-3	CSTB-4	T-15F
SGTR/L***-4	CSTB-5	T-20F

Reference pages

Inserts, Standard cutting conditions → C037

APPLICABLE INSERT

GOR/L (O-ring)

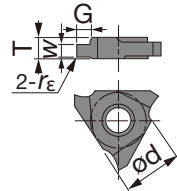


Right hand (R) shown.

Designation	$W_{\pm 0.1 \atop -0.05}$	r_{ϵ}	Cermet NS9530		Uncoated UX30		G	ϕd	T
			R	L	R	L			
GOR/L4190	2.5	0.4	●		●		1.5	12.7	4.76
GOR/L4240	3.2	0.4	●		●		2	12.7	4.76
GOR/L4310	4.1	0.7	●		●		2.5	12.7	4.76

● : Line up

GLR/L (Lock-ring)



Right hand (R) shown.

Designation	$W_{\pm 0.1 \atop -0.05}$	r_{ϵ}	Cermet NS9530		Uncoated UX30		G	ϕd	T
			R	L	R	L			
GLR/L3115	1.15	0.1	●	●	●	●	1.5	9.525	3.18
GLR/L3135	1.35	0.1	●	●	●		1.5	9.525	3.18
GLR/L3165	1.65	0.1	●	●	●		2	9.525	3.18
GLR/L3175	1.75	0.1	●	●	●	●	2	9.525	3.18
GLR/L3195	1.95	0.1	●	●	●	●	2.5	9.525	3.18
GLR/L3220	2.2	0.1	●		●	●	3	9.525	3.18
GLR/L3270	2.7	0.1	●		●	●	3	9.525	3.18
GLR/L4115	1.15	0.1	●		●		1.5	12.7	4.76
GLR/L4135	1.35	0.1	●		●		1.5	12.7	4.76
GLR/L4165	1.65	0.1	●		●		2	12.7	4.76
GLR/L4175	1.75	0.1	●		●		2	12.7	4.76
GLR/L4190	1.9	0.1	●				2.5	12.7	4.76
GLR/L4195	1.95	0.1	●		●		2.5	12.7	4.76
GLR/L4220	2.2	0.1	●		●	●	3.5	12.7	4.76
GLR/L4270	2.7	0.1	●		●		3.5	12.7	4.76
GLR/L4320	3.2	0.1	●		●	●	4	12.7	4.76
GLR/L4420	4.2	0.1	●		●	●	4	12.7	4.76

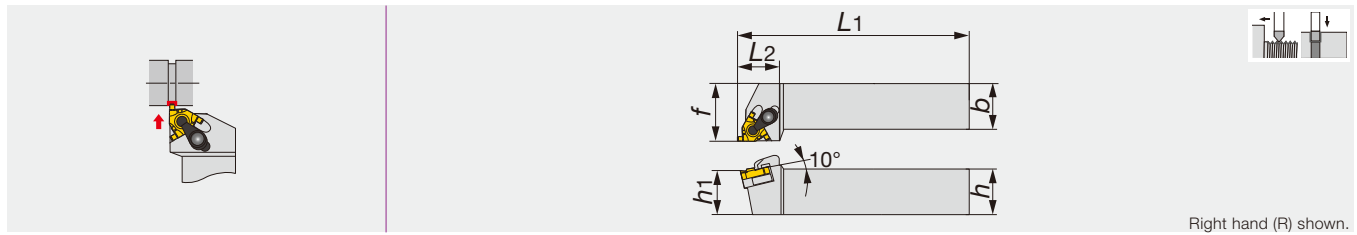
● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed V_c (m/min)	Feed f (mm/rev)		
				$W < 2$ mm	$W = 2 \sim 4$ mm	$W > 4$ mm
P	Carbon steels	NS9530	80 - 200	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25
		UX30	60 - 150	0.05 - 0.1	0.08 - 0.2	0.08 - 0.25

CER/L

External grooving toolholders, alternative clamping of screw-on or clamp-on(DT type only)



Right hand (R) shown.

Designation	h	b	L1	L2	h1	f	Insert
CER/L1212H16DT	12	12	100	24	12	16	GTGN16...
CER/L1616H16DT	16	16	100	24	16	20	GTGN16...
CER/L2020K16DT	20	20	125	24	20	25	GTGN16...
CER/L2525M16DT	25	25	150	28	25	32	GTGN16...
CER3232P16T	32	32	170	32	32	40	GTGN16...

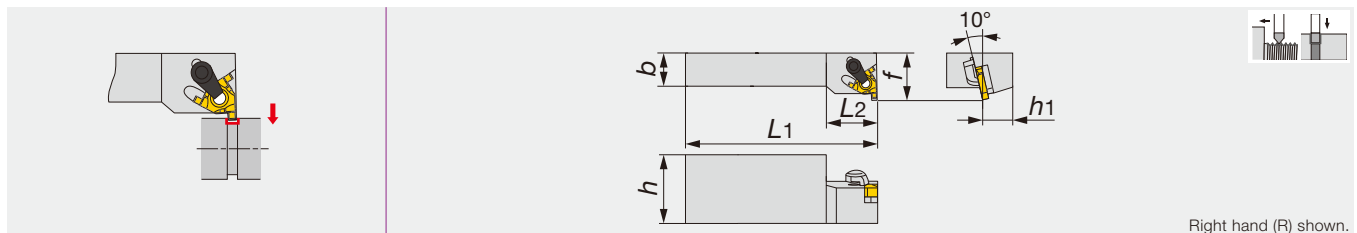
- A clamp set for CER/L type consists of a clamp and a clamping screw. • A shim set for CER/L type consists of a shim and a shim screw.
- Standard shims for CER/L type can be used for both left hand and right hand toolholders. Use either of the sides depending on the hand.
- When using the GTGN insert, the exclusive shim must be used. Exclusive shim should be ordered separately.

SPARE PARTS

Designation	Clamp set	Clamping screw	Shim screw	Shim (Optional parts)	Wrench	Wrench 1
CER*****16DT	CSP16	CSTB-3.5ST	DTS5-3.5	(G16ER/IL-DT)	P-3.5	T-15F
CEL*****16DT	CSP16	CSTB-3.5ST	DTS5-3.5	(G16EL/IR-DT)	P-3.5	T-15F
CER3232P16T	CSP16	-	-	(G16ER/IR-S)	-	T-15F

B-S/CER/L

External threading toolholders for swiss lathes



Right hand (R) shown.

Designation	h	b	L1	L2	h1	f	Insert
B-CER/L16M16	32	16	150	24	16	22	GTGN16...

- When using the GTGN insert, the exclusive shim must be used. Exclusive shim should be ordered separately.

SPARE PARTS

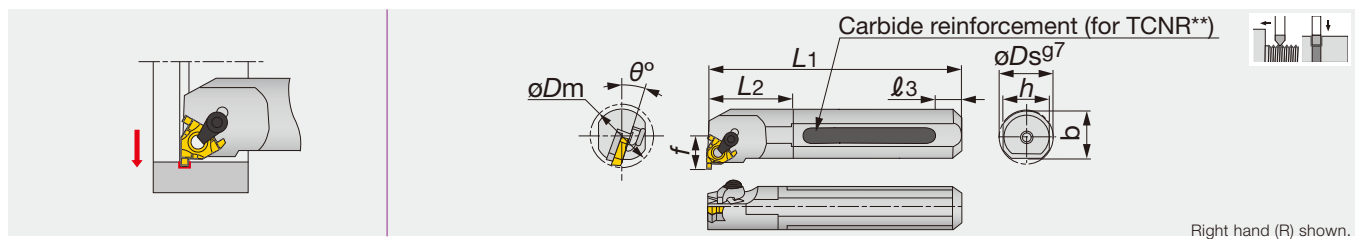
Designation	Clamp set	Clamping screw	Wrench	Shim (Optional parts)
B-CER16M16	CSP16	-	T-15F	(G16ER/IL-S)
B-CEL16M16	CSP16	-	T-15F	(G16EL/IR-S)

Reference pages

Inserts → C039, Standard cutting conditions → C040

CNR/L

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



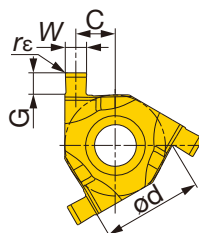
Designation	Material	ϕD_m	ϕD_s	f	L_1	L_2	ℓ_3	h	b	θ°	Insert
TCNR0020R16DT	TSUPPARI	24	20	14	200	30	49	18	-	15	GTGN-16...
TCNR0025S16DT	TSUPPARI	29	25	16.5	250	38	64	23	-	15	GTGN-16...
CNR/L0020P16	STEEL	24	20	14	170	30	-	18	19	15	GTGN-16...
CNR/L0025R16	STEEL	29	25	16.5	200	38	-	23	24	15	GTGN-16...
CNR/L0032S16	STEEL	37	32	20.1	250	48	-	30	31	15	GTGN-16...

- Shim is used for both right and left hand toolholders.
- 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.
- When using the GTGN insert, the exclusive shim must be used. Exclusive shim should be ordered separately.

Designation	Clamp set	Clamping screw	Shim screw	Shim (Optional parts)	Wrench	Wrench 1
TCNR002**16DT	CSP16	CSTB-3.5ST	DTS5-3.5	(G16EL/IR-DT)	P-3.5	T-15F
CNR00***16	CSP16	-	-	(G16EL/IR-S)	-	T-15F
CNL00***16	CSP16	-	-	(G16ER/IL-S)	-	T-15F

INSERT

GTGN16



Right hand (R) shown.

Designation	$W \pm 0.03$	r_ϵ	SH730	Insert size	ϕd	G	C	Shim	
								Dual method clamp type; Screw-on/ Clamp-on	Clamp-on type
GTGN-16ER/IL100	1	0.1	●	16	9.525	1.25	4.22	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL120	1.2	0.1	●	16	9.525	1.3	4.12	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL140	1.4	0.1	●	16	9.525	1.5	4.02	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL170	1.7	0.1	●	16	9.525	1.7	3.87	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL195	1.95	0.1	●	16	9.525	1.7	3.75	G16ER/IL-DT	G16ER/IL-S
GTGN-16ER/IL225	2.25	0.1	●	16	9.525	1.8	3.6	G16ER/IL-DT	G16ER/IL-S
GTGN-16EL/IR100	1	0.1	●	16	9.525	1.25	4.22	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR120	1.2	0.1	●	16	9.525	1.3	4.12	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR140	1.4	0.1	●	16	9.525	1.5	4.02	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR170	1.7	0.1	●	16	9.525	1.7	3.87	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR195	1.95	0.1	●	16	9.525	1.7	3.75	G16EL/IR-DT	G16EL/IR-S
GTGN-16EL/IR225	2.25	0.1	●	16	9.525	1.8	3.6	G16EL/IR-DT	G16EL/IR-S

Note:
GTGN insert is applicable for both external and internal grooving, but the hand of tool is opposite in external and internal machining.
Shim for GTGN is exclusive to each type of toolholders

Package quantity = 10 pcs

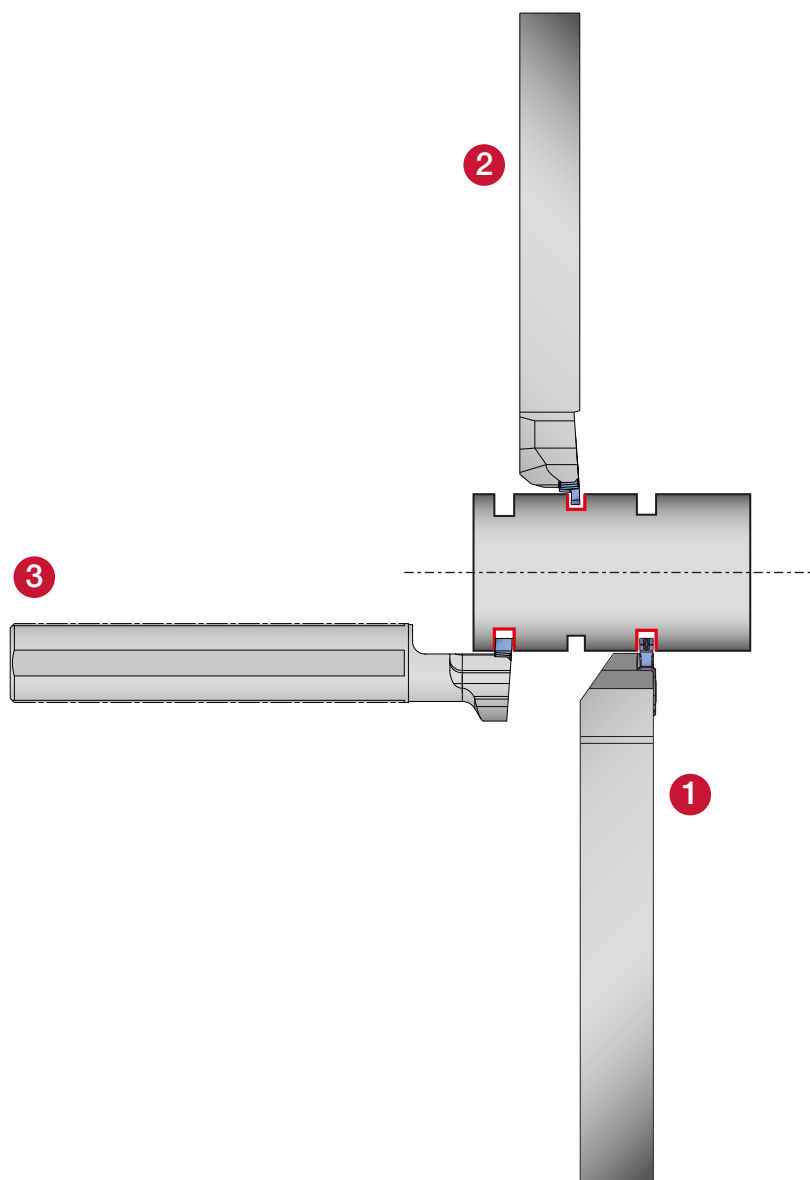
Reference pages

Standard cutting conditions → C040

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed V _c (m/min)	Feed f (mm/rev)
P	Steels 42CrMo4, etc.	SH730	50 - 150	0.05 - 0.1
M	Stainless steels X5CrNiMo17-12-2, etc.	SH730	30 - 150	0.05 - 0.1
S	Heat-resistant alloys, Titanium alloys etc. Ti-6Al-4V, etc.	SH730	30 - 100	0.05 - 0.1

Multi-purpose grooving line with economical insert containing **4 cutting edges**



1 STCR/L -27

W = 0.5 - 3.18 mm
ar = 1.6 - 6.4 mm
Shank size:
10 - 25 mm

Page C042

2 STCR/L -18

W = 0.33 - 3 mm
ar = 0.8 - 2.5 mm
Shank size:
10 - 25 mm

Page C049

3 JS-STCL18

W = 0.33 - 3 mm
ar = 0.8 - 2.5 mm
Shank size:
ø14 - ø25.4 mm

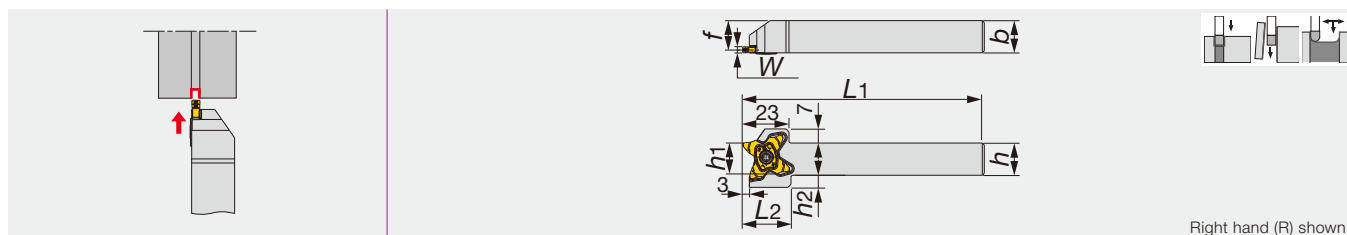
Page C050

STCR/L -27-CHP

W = 0.5 - 3.18 mm
ar = 1.6 - 6.4 mm
Shank size:
25 mm

Page C042

Precision external grooving tools with uniquely shaped insert with 4 cutting edges



Right hand (R) shown.

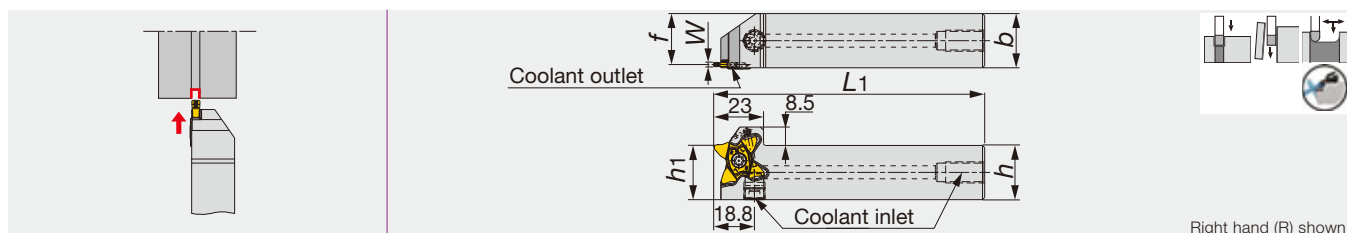
Designation	W	h1	b	h	L1	f	h2	L2	Insert
STCR/L1010-27	0.5 - 3.18	10	10	10	120	8.5	9.5	24	TC*27...
STCR/L1212-27	0.5 - 3.18	12	12	12	120	10.5	8	24	TC*27...
STCR/L1616-27	0.5 - 3.18	16	16	16	120	14.5	6	24	TC*27...
STCR/L2020-27	0.5 - 3.18	20	20	20	120	18.5	2	24	TC*27...
STCR/L2525-27	0.5 - 3.18	25	25	25	135	23.5	-	-	TC*27...

SPARE PARTS

Designation	Screw	Wrench
STCR****-27	SR16-212-01397L	T-2010/5
STCL****-27	SR16-212-01397	T-2010/5

STCR/L-CHP

Precision external grooving tools with uniquely shaped insert, with channels for high pressure coolant.



Right hand (R) shown.

Designation	W	h1	b	h	L1	f	Insert
STCR/L2525-27-CHP	0.5 - 3.18	25	25	25	125	23.5	TC*27...

SPARE PARTS

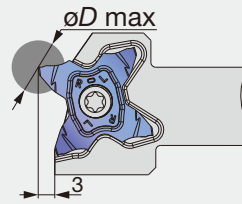
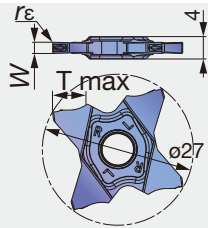
Designation	Screw	Wrench
STCR****-27-CHP	SR16-212-01397L	T-2010/5
STCL****-27-CHP	SR16-212-01397	T-2010/5

Reference pages

Inserts → C043 - C047, Standard cutting conditions → C048

INSERT - FOR GROOVING AND PARTING OFF

TCS27



Designation	W ± 0.02	rε	AH725	Relation of groove depth (T) and Max. diameter (øD max)													
				T max	øD max	T≤1	T≤2	T≤3	T≤3.5	T≤4	T≤4.5	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4
TCS27-050-000	0.5	0	●	1	2	∞	-	-	-	-	-	-	-	-	-	-	-
TCS27-050-004	0.5	0.04	●	2.5	5	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-075-010	0.75	0.1	●	2.5	5	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-080-000	0.8	0	●	1.6	3.2	∞	-	-	-	-	-	-	-	-	-	-	-
TCS27-100-006	1	0.06	●	3.5	7	∞	∞	∞	600	-	-	-	-	-	-	-	-
TCS27-100-010	1	0.1	●	3.5	7	∞	∞	∞	600	-	-	-	-	-	-	-	-
TCS27-104-000	1.04	0	●	2	4	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-120-000	1.2	0	●	2	4	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-125-010	1.25	0.1	●	3.5	7	∞	∞	∞	600	-	-	-	-	-	-	-	-
TCS27-125-020	1.25	0.2	●	3.5	7	∞	∞	∞	600	-	-	-	-	-	-	-	-
TCS27-140-000	1.4	0	●	2	4	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-147-000	1.47	0	●	2.5	5	∞	∞	-	-	-	-	-	-	-	-	-	-
TCS27-150-010	1.5	0.1	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-
TCS27-150-020	1.5	0.2	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-
TCS27-157-015	1.57	0.15	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-170-010	1.7	0.1	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-175-010	1.75	0.1	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-175-020	1.75	0.2	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-178-018	1.78	0.18	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-185-020	1.85	0.2	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-196-015	1.96	0.15	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-
TCS27-200-010	2	0.1	●	6.4	12.8	∞	∞	∞	600	280	180	130	105	85	60	50	30
TCS27-200-020	2	0.2	●	6.4	12.8	∞	∞	∞	600	280	180	130	105	85	60	50	30
TCS27-222-015	2.22	0.15	●	3.5	7	∞	∞	∞	600	-	-	-	-	-	-	-	-
TCS27-230-020	2.3	0.2	●	3.5	7.	∞	∞	∞	600	-	-	-	-	-	-	-	-
TCS27-239-015	2.39	0.15	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-
TCS27-247-020	2.47	0.2	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-
TCS27-250-010	2.5	0.1	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-
TCS27-250-030	2.5	0.3	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-
TCS27-270-010	2.7	0.1	●	6.2	12.4	∞	∞	∞	600	280	180	135	105	95	85	78	-
TCS27-287-020	2.87	0.2	●	6.2	12.4	∞	∞	∞	600	280	180	135	105	95	85	78	-
TCS27-300-000	3	0	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	55
TCS27-300-020	3	0.2	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	55
TCS27-300-030	3	0.3	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	55
TCS27-300-040	3	0.4	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	55
TCS27-315-015	3.15	0.15	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	68
TCS27-318-020	3.18	0.2	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	68

Package Quantity = 5 pcs.

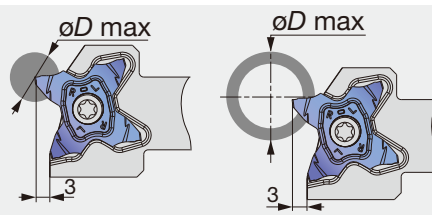
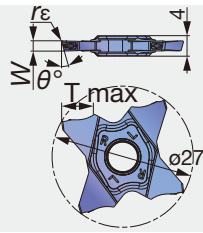
● : Line up

Grooving Tool

TETRAFCUT

INSERT - FOR PARTING OFF

TCS27-R/L



Right hand (R) shown.

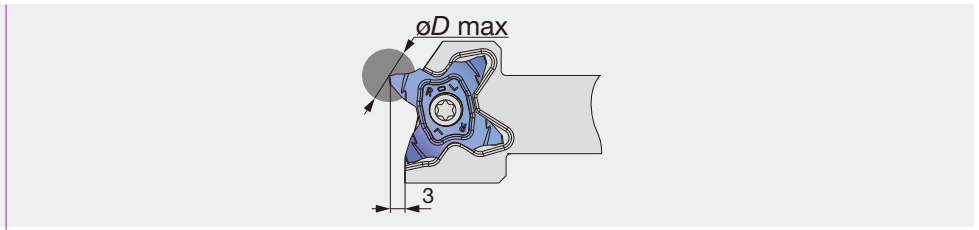
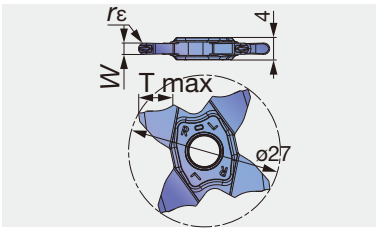
Designation	$W \pm 0.02$	r_ϵ	AH725		T max	θ°	Max. parting off dia. $\phi D \max$	
			R	L			Solid bar	Tube
TCS27-100-15R/L	1	0.06	●	●	3.5	15	7	600
TCS27-150-6R/L	1.5	0.06	●	●	5.7	6	11.4	35
TCS27-150-15R/L	1.5	0.06	●	●	5.7	15	11.4	35
TCS27-200-6R/L	2	0.1	●	●	6.4	6	12.8	30
TCS27-200-15R/L	2	0.1	●	●	6.4	15	12.8	30

Package Quantity = 5 pcs.

● : Line up

INSERT - FOR GROOVING AND PROFILING

TCS27-Full R



Designation	W ± 0.02	rε	AH725	T max	Relation of groove depth (T) and Max. diameter (øD max)												
					T≤1	T≤2	T≤3	T≤3.5	T≤4	T≤4.5	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4	
TCS27-157-079	1.57	0.79	●	3	∞	∞	∞	-	-	-	-	-	-	-	-	-	
TCS27-200-100	2	1	●	3	∞	∞	∞	-	-	-	-	-	-	-	-	-	
TCS27-239-120	2.39	1.2	●	5.7	∞	∞	∞	600	280	180	130	50	35	-	-	-	
TCS27-300-150	3	1.5	●	6.4	∞	∞	∞	600	280	180	135	105	95	85	78	55	

Package Quantity = 5 pcs.

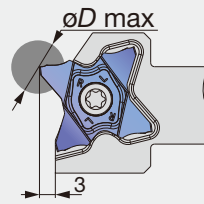
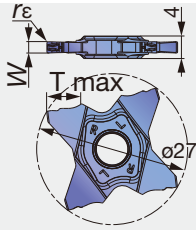
● : Line up

Grooving Tool

TETRAFCUT

INSERT - FOR GROOVING AND PARTING OFF

TCM27



Grooving Tool

TETRAFCUT

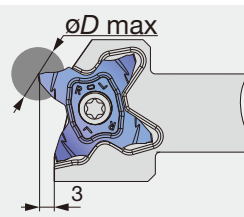
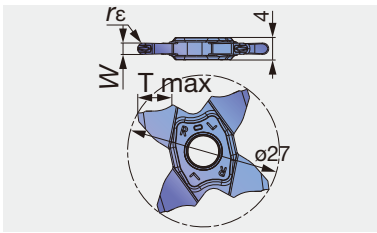
Designation	W ± 0.02	rε	AH725	T max	øD max	Relation of groove depth (T) and Max. diameter (øD max)												
						T≤1	T≤2	T≤3	T≤3.5	T≤4	T≤4.5	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4	
TCM27-150-010	1.5	0.1	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-	
TCM27-150-020	1.5	0.2	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-	
TCM27-157-015	1.57	0.15	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-	
TCM27-170-010	1.7	0.1	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-	
TCM27-175-010	1.75	0.1	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-	
TCM27-175-020	1.75	0.2	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-	
TCM27-178-018	1.78	0.18	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-	
TCM27-185-020	1.85	0.2	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-	
TCM27-196-015	1.96	0.15	●	3	6	∞	∞	∞	-	-	-	-	-	-	-	-	-	
TCM27-200-010	2	0.1	●	6.4	12.8	∞	∞	∞	600	280	180	130	105	85	60	50	30	
TCM27-200-020	2	0.2	●	6.4	12.8	∞	∞	∞	600	280	180	130	105	85	60	50	30	
TCM27-222-015	2.22	0.15	●	3.5	7	∞	∞	∞	600	-	-	-	-	-	-	-	-	
TCM27-230-020	2.3	0.2	●	3.5	7	∞	∞	∞	600	-	-	-	-	-	-	-	-	
TCM27-239-015	2.39	0.15	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-	
TCM27-247-020	2.47	0.2	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-	
TCM27-250-010	2.5	0.1	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-	
TCM27-250-030	2.5	0.3	●	5.7	11.4	∞	∞	∞	600	280	180	130	50	35	-	-	-	
TCM27-270-010	2.7	0.1	●	6.2	12.4	∞	∞	∞	600	280	180	135	105	95	85	78	-	
TCM27-287-020	2.87	0.2	●	6.2	12.4	∞	∞	∞	600	280	180	135	105	95	85	78	-	
TCM27-300-000	3	0	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	55	
TCM27-300-020	3	0.2	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	55	
TCM27-300-030	3	0.3	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	55	
TCM27-300-040	3	0.4	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	55	
TCM27-315-015	3.15	0.15	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	68	
TCM27-318-020	3.18	0.2	●	6.4	12.8	∞	∞	∞	600	280	180	135	105	95	85	78	68	

Package Quantity = 5 pcs.

● : Line up

INSERT - FOR GROOVING AND PROFILING

TCM27-Full R



Designation	W ± 0.02	rε	AH725	T max	Relation of groove depth (T) and Max. diameter (øD max)												
					T≤1	T≤2	T≤3	T≤3.5	T≤4	T≤4.5	T≤5	T≤5.5	T≤5.7	T≤6	T≤6.2	T≤6.4	
TCM27-157-079	1.57	0.79	●	3	∞	∞	∞	-	-	-	-	-	-	-	-	-	
TCM27-200-100	2	1	●	3.5	∞	∞	∞	600	-	-	-	-	-	-	-	-	
TCM27-239-120	2.39	1.2	●	5.7	∞	∞	∞	600	280	180	130	50	35	-	-	-	
TCM27-300-150	3	1.5	●	6.4	∞	∞	∞	600	280	180	135	105	95	85	78	55	

Package Quantity = 5 pcs.

● : Line up

Grooving Tool

TETRAFCUT

CHIPBREAKER

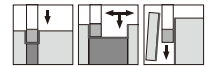
TCS27



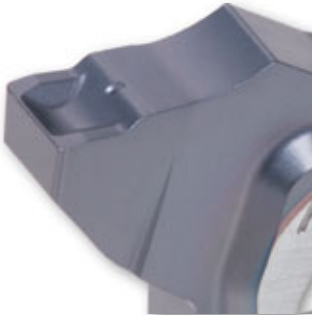
W = 0.5 mm – 3.18 mm

For general machining

Lower cutting force and superior sharpness



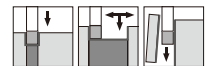
TCM27



W = 1.5 mm – 3.18 mm

For high feed machining

Well-designed edge with high strength

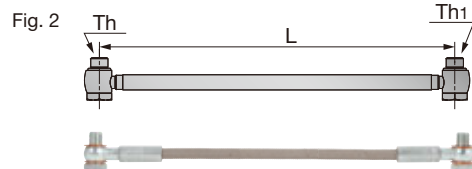
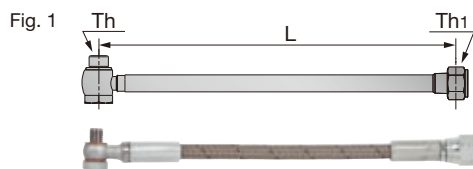


STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed Vc (m/min)	Feed: <i>f</i> (mm/rev)					Depth of cut for profiling (with full radius insert)
				Grooving, parting-off		Parting-off (with hand)	Profiling (with full radius insert)		
				TCS	TCM	TCS	TCS	TCM	
	Carbon steel C45, etc.	AH725	100 - 200	0.05 - 0.15	0.05 - 0.25	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
	Alloy steel 34CrMo4, etc.	AH725	50 -180	0.05 - 0.15	0.05 - 0.25	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
	Stainless steel X5CrNi18-9, etc.	AH725	100 - 150	0.05 - 0.15	0.05 - 0.2	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
	Grey cast iron 250, etc.	AH725	50 - 180	0.05 - 0.15	0.05 - 0.25	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
	Ductile cast iron 400-15, etc.	AH725	50 - 120	0.05 - 0.15	0.05 - 0.2	0.04 - 0.12	0.05 - 0.1	0.05 - 0.15	0.5
	Titanium alloys Ti-6Al-4V, etc.	AH725	30 - 60	0.05 - 0.15	0.05 - 0.15	0.04 - 0.12	0.05 - 0.1	0.05 - 0.1	0.5

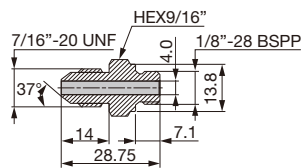
PARTS FOR COOLANT HOSE

Connecting hose



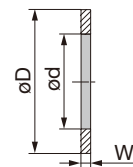
Designation	Length L	Threading size		Max. pressure (MPa)	Fig.
		Th	Th1		
CHP-HOSE-G1/8-7/16-200BS	200	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-G1/8-7/16-250BS	250	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-G1/8-G1/8-200BB	200	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2
CHP-HOSE-G1/8-G1/8-250BB	250	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2

Connector

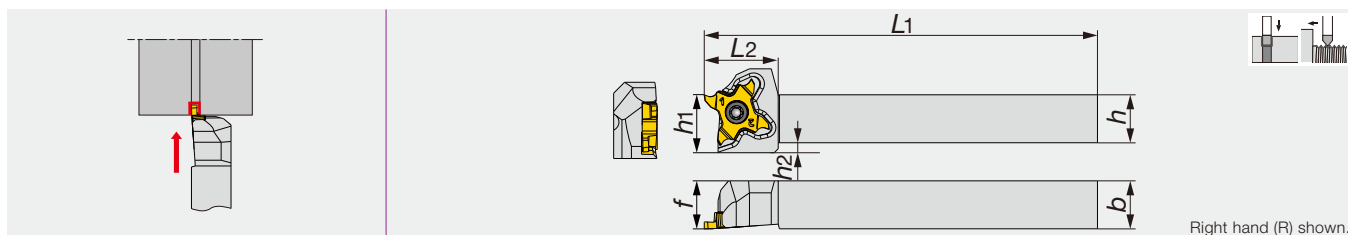


Designation
CHP-NIPPLE-G1/8-7/16UNF

Seal washer



Designation	øD	ød	W
CHP-COPPER-SEAL1/8	15	10	1



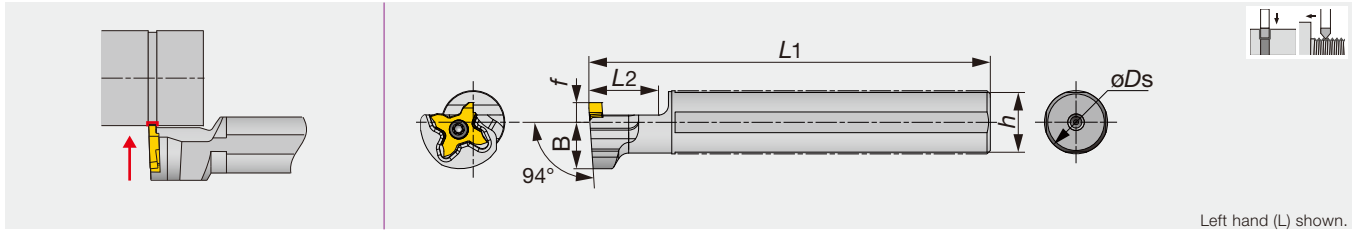
Designation	h	b	$L1$	$L2$	$h1$	f	$h2$	Insert
STCR/L1010X18	10	10	120	18.5	10	10	4.5	TC*18...
STCR/L1212F18	12	12	85	18.5	12	12	2.5	TC*18...
STCR/L1212X18	12	12	120	18.5	12	12	2.5	TC*18...
STCR/L1616X18	16	16	120	18.5	16	16	-	TC*18...
STCR/L2020H18	20	20	100	18.5	20	20	-	TC*18...
STCR/L2020X18	20	20	120	23	20	25	-	TC*18...
STCR/L2525Z18	25	25	135	23	25	30	-	TC*18...

• The right hand insert (TC*18R***) is used for the right hand toolholders (STCR***), and the left hand insert (TC*18L***) is used for the left hand toolholders (STCL***).

SPARE PARTS

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

Precision grooving tools with uniquely shaped insert for swiss lathes



Designation	øDs	L1	L2	h	B	f	Insert
JS14H-STCL18	14	100	20	13	14	6	TC*18...
JS159F-STCL18	15.875	85	20	15	14	6	TC*18...
JS16F-STCL18	16	85	20	15	14	6	TC*18...
JS19G-STCL18	19.05	90	20	18	14	6	TC*18...
JS19X-STCL18	19.05	120	20	18	14	6	TC*18...
JS20G-STCL18	20	90	20	19	14	6	TC*18...
JS20X-STCL18	20	120	20	19	14	6	TC*18...
JS22X-STCL18	22	120	20	21	12.25	10	TC*18...
JS25H-STCL18	25	100	20	24	12.25	10	TC*18...
JS254X-STCL18	25.4	120	20	24	12.25	10	TC*18...

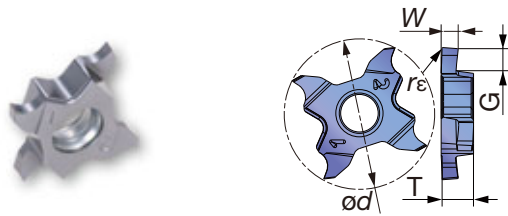
• The right hand insert (TC*18R**) is used for the left hand toolholders (STCL***).

SPARE PARTS

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

INSERT

TCP18R/L-F (sharp edge)



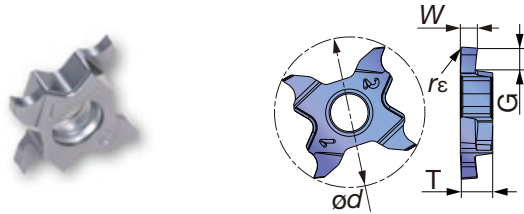
Designation	W±0.02	rε	SH725				ød
			R	L	G	T	
TCP18R/L033F-005	0.33	0.05	●	●	0.8	4	18
TCP18R/L043F-005	0.43	0.05	●	●	1.2	4	18
TCP18R/L050F-005	0.5	0.05	●	●	1.2	4	18
TCP18R/L075F-005	0.75	0.05	●	●	2	4	18
TCP18R/L095F-005	0.95	0.05	●	●	2	4	18
TCP18R/L100F-010	1	0.1	●	●	2	4	18
TCP18R/L120F-010	1.2	0.1	●	●	2	4	18
TCP18R/L125F-010	1.25	0.1	●	●	2	4	18
TCP18R/L145F-010	1.45	0.1	●	●	2	4	18
TCP18R/L150F-010	1.5	0.1	●	●	2	4	18
TCP18R/L175F-010	1.75	0.1	●	●	2	4	18
TCP18R/L200F-010	2	0.1	●	●	2.5	4	18
TCP18R/L250F-010	2.5	0.1	●	●	2.5	4	18
TCP18R/L300F-010	3	0.1	●	●	2.5	4	18

● : Line up

Reference pages

Inserts → C050 - C052, Standard cutting conditions → C051 - C052

TCP18R/L(honed edge)



Designation	W±0.02	rε	AH725		G	T	ød
			R	L			
TCP18R/L033-005	0.33	0.05	●	●	0.8	4	18
TCP18R/L043-005	0.43	0.05	●	●	1.2	4	18
TCP18R/L050-005	0.5	0.05	●	●	1.2	4	18
TCP18R/L075-005	0.75	0.05	●	●	2	4	18
TCP18R/L095-005	0.95	0.05	●	●	2	4	18
TCP18R/L100-010	1	0.1	●	●	2	4	18
TCP18R/L120-010	1.2	0.1	●	●	2	4	18
TCP18R/L125-010	1.25	0.1	●	●	2	4	18
TCP18R/L145-010	1.45	0.1	●	●	2	4	18
TCP18R/L150-010	1.5	0.1	●	●	2	4	18
TCP18R/L175-010	1.75	0.1	●	●	2	4	18
TCP18R/L200-010	2	0.1	●	●	2.5	4	18
TCP18R/L250-010	2.5	0.1	●	●	2.5	4	18
TCP18R/L300-010	3	0.1	●	●	2.5	4	18

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Priority	Grade	Cutting speed Vc (m/min)	Feed f (mm/rev)
P	Low carbon steels C15, C20 etc.	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
	Carbon steels, Alloy steels C55, 42CrMoS4 etc.	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
M	Prehardened steels NAK80, PX5 etc.	First choice	SH725	80 - 180	0.03 - 0.1
		Toughness	AH725	80 - 180	0.03 - 0.1
	Stainless steels X5CrNi18-9, X5CrNiMo17-12-2 etc.	First choice	SH725	50 - 120	0.03 - 0.1
		Toughness	AH725	50 - 120	0.03 - 0.1
K	Grey cast irons 250, 300 etc.	First choice	AH725	50 - 180	0.03 - 0.1
		Sharpness	SH725	50 - 180	0.03 - 0.1
	Ductile cast irons 400-15, 600-3 etc.	First choice	AH725	50 - 180	0.03 - 0.1
		Sharpness	SH725	50 - 180	0.03 - 0.1
S	Titanium alloys Ti-6Al-4V, etc.	First choice	SH725	20 - 80	0.03 - 0.1
		Toughness	AH725	20 - 80	0.03 - 0.1
	Superalloys Inconel718, etc.	First choice	SH725	20 - 80	0.03 - 0.1
		Toughness	AH725	20 - 80	0.03 - 0.1

CHIPBREAKER

TCP18



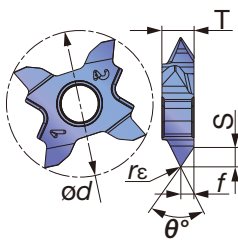
W = 0.33 mm – 3 mm

Suitable for small parts on swiss lathe
Low cutting force with large rake angle



INSERT

TCT18R/L (For Threading)



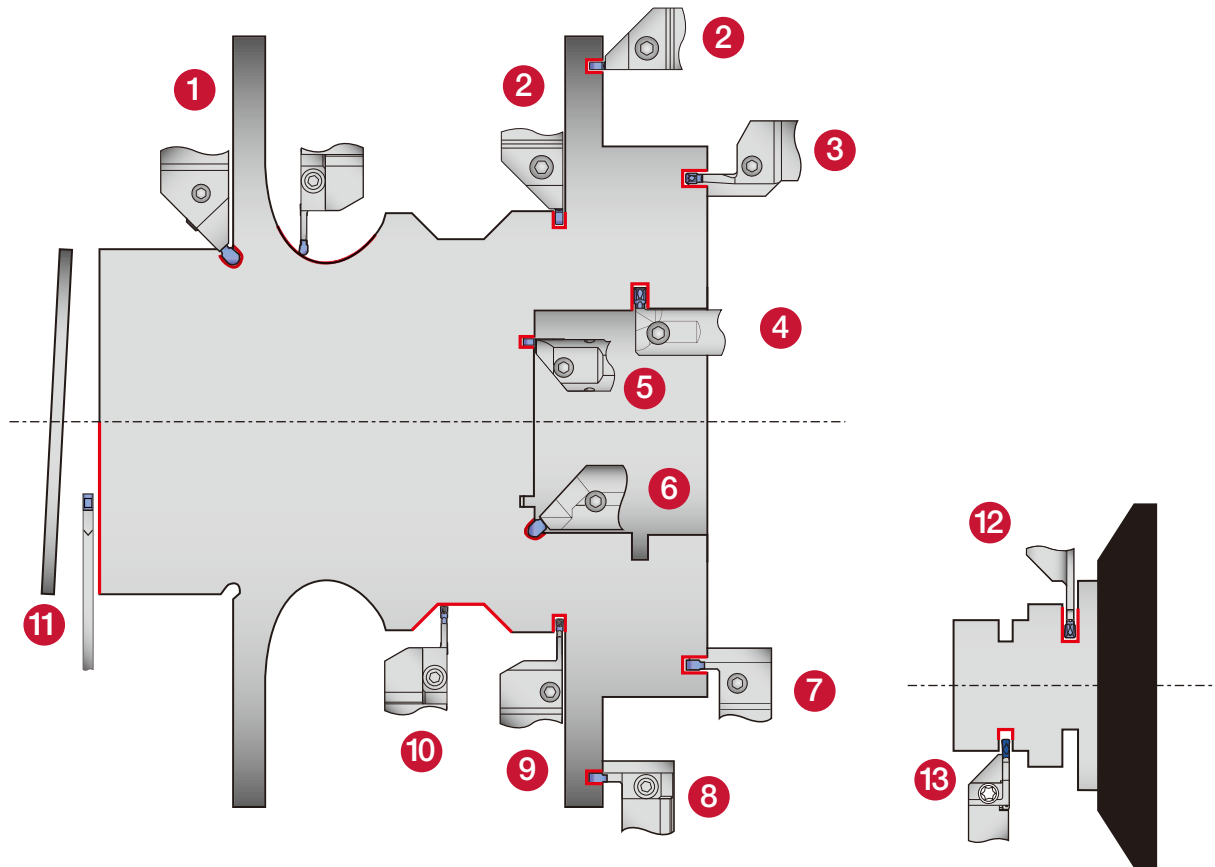
Designation	r_ϵ	AH725		pitch min	pitch max	f	S	θ°	T	ϕd
		R	L							
TCT18R/L-60N-010	0.1	●	●	0.8	3	1.6	2.67	60	4	18
TCT18R/L-60N-020	0.2	●	●	1.5	3	1.6	2.57	60	4	18

● : Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Grade	Cutting speed V_c (m/min)	Pitch (mm)	TPI
P	Low carbon steels C15, C20 etc.	AH725	60 - 150	0.8 - 3	32 - 8
	Carbon steels, Alloy steels C55, 42CrMoS4 etc.	AH725	60 - 150	0.8 - 3	32 - 8
	Prehardened steels NAK80, PX5 etc.	AH725	60 - 150	0.8 - 3	32 - 8
M	Stainless steels X5CrNi18-9, X5CrNiMo17-12-2, etc.	AH725	50 - 80	0.8 - 3	32 - 8
K	Grey cast irons 250, 300 etc.	AH725	50 - 100	0.8 - 3	32 - 8
	Ductile cast irons 400-15, 600-3 etc.	AH725	50 - 100	0.8 - 3	32 - 8
S	Titanium alloys Ti-6Al-4V, etc.	AH725	30 - 100	0.8 - 3	32 - 8
	Superalloys Inconel718, etc.	AH725	30 - 100	0.8 - 3	32 - 8

Multi-functional tool reduces tool cost and shortens set-up time



1 CGEUR/L

Monoblock type
W = 3 - 6 mm
ar = 2.8 - 3.4 mm
Shank size:
16 - 25 mm

Page C063

2 CTEFR/L

Monoblock type
W = 2 - 6 mm
ar = 4.8 mm
Shank size:
20 - 25 mm

Page C057

3 CTFR/L

Monoblock type
W = 3 - 6 mm
ar = 10 - 25 mm
Shank size:
25 mm

Page C066

4 CTIR/L

Monoblock type
W = 2 - 8 mm
ar = 4 - 10 mm
Shank size:
ø16 - ø40 mm

Page C064

5 CTIFR/L

Monoblock type
W = 3 - 6 mm
ar = 5.5 mm
Shank size:
ø25 - ø32 mm

Page C071

6 CGIUR/L

Monoblock type
W = 3 - 6 mm
ar = 2.8 mm
Shank size:
ø20 - ø25 mm

Page C065

7 CTFVR/L

Monoblock type
W = 3 - 6 mm
ar = 10 - 20 mm
Shank size:
25 mm

Page C067

8 CAFR/L

Adaptor type
W = 3 - 6 mm
ar = 12 - 25 mm
Shank size:
20 - 32 mm

Page C068

9 CTER/L

Monoblock type
W = 2 - 8 mm
ar = 8 - 36 mm
Shank size:
16 - 32 mm

Page C054

10 CAER/L

Adaptor type
W = 3 - 6 mm
ar = 16 - 20 mm
Shank size:
20 - 32 mm

Page C058

11 CGP

Blade type
W = 1.4 - 8 mm
Max. parting Dia.:
ø120 mm
Shank size:
ø20 - ø25 mm

Page C061

12 CGER/L

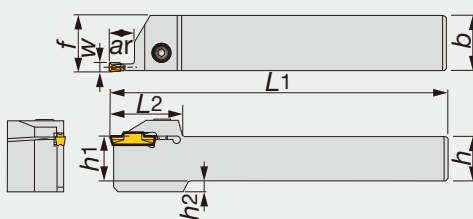
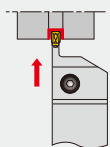
Monoblock type
W = 1.4 - 4 mm
ar = 10 - 16 mm
Shank size:
12 - 20 mm

Page C057

13 JCTER/L

Monoblock type
W = 1.4 - 3 mm
ar = 10 - 16 mm
Shank size:
10 - 20 mm

Page C056



Insert:
DGM, SGM, DGS,
SGS, DGG, DTX,
DTE, DTR, DTA, SGN

Right hand (R) shown.

Designation	W	Seat size	ar	h	b	L1	L2	h1	f ⁽¹⁾	h2
CTER/L1616-2T08	2	2	8	16	16	110	33	16	16.1	4
CTER/L2020-2T08	2	2	8	20	20	125	33	20	20.1	-
CTER/L2525-2T08	2	2	8	25	25	150	33	25	25.1	-
CTER/L1616-2T12	2	2	12	16	16	110	32	16	16.1	4
CTER/L2020-2T12	2	2	12	20	20	125	32	20	20.1	-
CTER/L2525-2T12	2	2	12	25	25	150	32	25	25.1	-
CTER/L1616-2T17	2	2	17	16	16	110	37	16	16.1	4
CTER/L2020-2T17	2	2	17	20	20	125	37	20	20.1	-
CTER/L2525-2T17	2	2	17	25	25	150	37	25	25.1	-
CTER/L1616-3T09	3	3	9	16	16	110	32	16	16.3	4
CTER/L2020-3T09	3	3	9	20	20	125	32	20	20.3	-
CTER/L2525-3T09	3	3	9	25	25	150	32	25	25.3	-
CTER/L2020-3T12	3	3	12	20	20	125	32	20	20.3	-
CTER/L2525-3T12	3	3	12	25	25	150	32	25	25.3	-
CTER/L1616-3T20	3	3	20	16	16	110	38.5	16	16.3	4
CTER/L2020-3T20	3	3	20	20	20	125	38.5	20	20.3	-
CTER/L2525-3T20	3	3	20	25	25	150	38.5	25	25.3	-
CTER/L2525-3T25	3	3	25	25	25	150	44.5	25	25.3	-
CTER/L1616-4T10	4	4	10	16	16	110	32	16	16.5	4
CTER/L2020-4T10	4	4	10	20	20	125	32	20	20.5	-
CTER/L2525-4T10	4	4	10	25	25	150	32	25	25.5	-
CTER/L2020-4T15	4	4	15	20	20	125	33	20	20.5	-
CTER/L2525-4T15	4	4	15	25	25	150	33	25	25.5	-
CTER/L1616-4T25	4	4	25	16	16	110	45	16	16.5	4
CTER/L2020-4T25	4	4	25	20	20	125	45	20	20.5	-
CTER/L2525-4T25	4	4	25	25	25	150	45	25	25.5	-
CTER/L3232-4T25	4	4	25	32	32	170	45	32	32.5	-
CTER/L2020-5T12	5	5	12	20	20	125	37	20	20.6	-
CTER/L2525-5T12	5	5	12	25	25	150	37	25	25.6	-
CTER/L2525-5T20	5	5	20	25	25	150	37	25	25.6	-
CTER/L2525-5T32	5	5	32	25	25	150	56	25	25.6	-
CTER/L3232-5T32	5	5	32	32	32	170	56	32	32.6	-
CTER/L2020-6T12	6	6	12	20	20	125	37	20	20.6	-
CTER/L2525-6T12	6	6	12	25	25	150	37	25	25.6	7
CTER/L2525-6T20	6	6	20	25	25	150	41	25	25.6	-
CTER/L2525-6T32	6	6	32	25	25	150	56	25	25.6	7
CTER/L3232-6T32	6	6	32	32	32	170	56	32	32.6	-
CTER/L2525-8T16	8	8	16	25	25	150	47	25	26.1	7
CTER/L2525-8T25	8	8	25	25	25	150	47	25	26.1	7
CTER/L3232-8T25	8	8	25	32	32	170	47	32	33.1	-
CTER/L2525-8T36	8	8	36	25	25	150	60	25	26.1	7
CTER/L3232-8T36	8	8	36	32	32	170	60	32	33.1	-

• When depth is deeper than (insert length - 1.5 mm), 1 corner type is recommended.

(1) "f" value is calculated with groove width "W" shown in the table. .

Reference pages

Inserts → **C073 - C085**, Standard cutting conditions → **C085**

SPARE PARTS



Designation	Clamping screw	Wrench
CTER/L1616-2T08	CM5X0.8X16-A	P-4
CTER/L2020-2T08	CM5X0.8X20-A	P-4
CTELR/L2525-2T08	CM5X0.8X25-A	P-4
CTER/L1616-2T12	CM5X0.8X16-A	P-4
CTER/L2020-2T12	CM5X0.8X20-A	P-4
CTER/L2525-2T12	CM5X0.8X25-A	P-4
CTER/L1616-2T17	CM5X0.8X16-A	P-4
CTER/L2020-2T17	CM5X0.8X20-A	P-4
CTER/L2525-2T17	CM5X0.8X25-A	P-4
CTER/L1616-3T09	CM5X0.8X16-A	P-4
CTER/L2020-3T09	CM5X0.8X20-A	P-4
CTER/L2525-3T09	CM5X0.8X25-A	P-4
CTER/L2020-3T12	CM5X0.8X20-A	P-4
CTER/L2525-3T12	CM5X0.8X25-A	P-4
CTER/L1616-3T20	CM5X0.8X16-A	P-4
CTER/L2020-3T20	CM5X0.8X20-A	P-4
CTER/L2525-3T20.25	CM5X0.8X25-A	P-4
CTER/L1616-4T10	CM6X1X16-A	P-5
CTER/L2020-4T10	CM6X1X20-A	P-5
CTER/L2525-4T10	CM6X1X25-A	P-5
CTER/L2020-4T15	CM6X1X20-A	P-5
CTER/L2525-4T15	CM6X1X25-A	P-5
CTER/L1616-4T25	CM6X1X16-A	P-5
CTER/L2020-4T25	CM6X1X20-A	P-5
CTER/L2525-4T25	CM6X1X25-A	P-5
CTER/L3232-4T25	CM6X1X25-A	P-5
CTER/L2020-5T12	CM6X1X20-A	P-5
CTER/L2525-5T20	CM6X1X25-A	P-5
CTER/L2525, 3232-5T32	CM6X1X25-A	P-5
CTER/L2020-6T12	CM8X1.25X20-A	P-6
CTER/L2525-6T12	CM8X1.25X25-A	P-6
CTER/L2525-6T20	CM8X1.25X25-A	P-6
CTER/L2525, 3232-6T32	CM8X1.25X25-A	P-6
CTER/L2525-8T16	CM8X1.25X25-A	P-6
CTER/L2525, 3232-8T25	CM8X1.25X25-A	P-6
CTER/L2525, 3232-8T36	CM8X1.25X25-A	P-6



Grooving Tool

TUNGALLOY

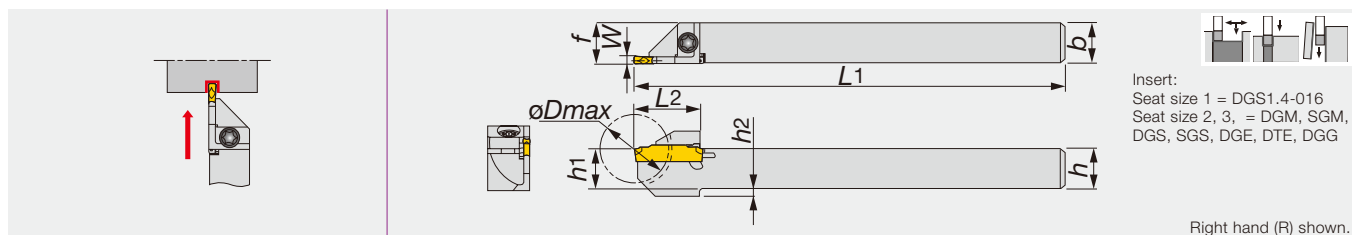


External



Parting-off

Others

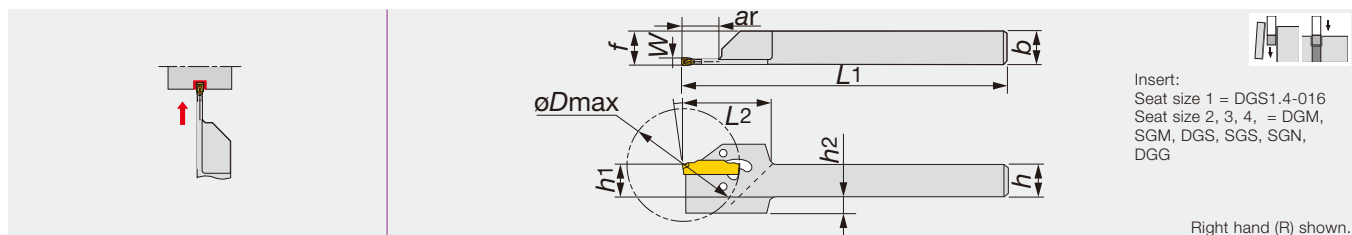


Designation	W	Seat size	øD _{max}	h	b	L ₁	L ₂	h ₁	f ⁽¹⁾	h ₂
JCTER/L1010X1.4T10	1.4	1	20	10	10	120	18	10	10.2	-
JCTER/L1010-1.4T10	1.4	1	20	10	10	125	18	10	10.2	-
JCTER/L1212F1.4T12	1.4	1	24	12	12	85	19.5	12	12.2	-
JCTER/L1212X1.4T12	1.4	1	24	12	12	120	19.5	12	12.2	-
JCTER/L1212-1.4T12	1.4	1	24	12	12	125	19.5	12	12.2	-
JCTER/L1414-1.4T12	1.4	1	24	14	14	125	19.5	14	14.2	-
JCTER/L1616X1.4T16	1.4	1	32	16	16	120	24	16	16.2	-
JCTER/L1616-1.4T16	1.4	1	32	16	16	125	24	16	16.2	-
JCTER/L1010X2T10	2	2	20	10	10	120	19	10	10.1	2
JCTER/L1010-2T10	2	2	20	10	10	125	19	10	10.1	2
JCTER/L1212F2T12	2	2	24	12	12	85	19	12	12.1	2
JCTER/L1212X2T12	2	2	24	12	12	120	19	12	12.1	2
JCTER/L1212-2T12	2	2	24	12	12	125	19	12	12.1	2
JCTER/L1414-2T12	2	2	24	14	14	125	19	14	14.1	-
JCTER/L1616X2T16	2	2	32	16	16	120	24	16	16.1	-
JCTER/L1616-2T16	2	2	32	16	16	125	24	16	16.1	-
JCTER/L1212F3T12	3	3	24	12	12	85	19	12	12.3	2
JCTER/L1212X3T12	3	3	24	12	12	120	19	12	12.3	2
JCTER/L1212-3T12	3	3	24	12	12	125	19	12	12.3	2
JCTER/L1616X3T16	3	3	32	16	16	120	24	16	16.3	-
JCTER/L1616-3T16	3	3	32	16	16	125	24	16	16.3	-
JCTER/L2020H3T16	3	3	32	20	20	100	24	20	20.3	-
JCTER/L2020-3T16	3	3	32	20	20	125	24	20	20.3	-

(1) "f" value is calculated with groove width "W" shown in the table. • øD_{max}: Max. parting off dia.

SPARE PARTS

Designation	Clamping screw	Wrench
JCTER/L...	CSHB-4-A	T-15F

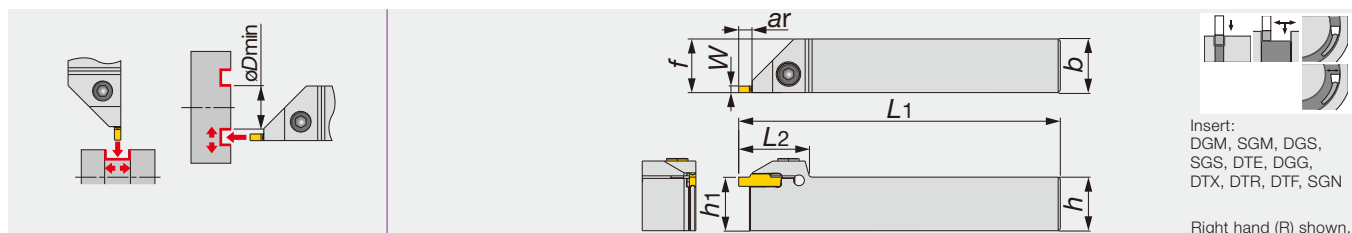


Designation	W	Seat size	øDmax ⁽¹⁾	ar	h	b	L1	L2	h1	f ⁽²⁾	h2
CGER/L2020-1.4T14	1.4	1	29/29	9.7	20	20	125	31	20	20.2	-
CGER/L1212-2T17	2	2	35/35	11.8	12	12	150	31	12	12.1	6
CGER/L1616-2T17	2	2	35/35	11.8	16	16	150	31	16	16.1	2
CGER/L2020-2T17	2	2	35/35	9.8	20	20	125	31	20	20.1	-
CGER/L1212-3T19	3	3	38/40	12	12	12	150	31	12	12.3	6
CGER/L1616-3T19	3	3	38/45	14.9	16	16	150	31	16	16.3	2
CGER/L2020-3T19	3	3	38/45	13.2	20	20	125	31	20	20.3	-
CGER/L2020-4T19	4	4	38/55	20.3	20	20	125	33	20	20.4	-

• Wrench, CRW**, should be ordered separately. Insert is clamped by the elastic deformation of upper jaw. (1) DG*/SG* Maximum diameter of parting off Dmax, can be increased by using SG* insert for some toolholders. (2) *f* value is calculated with groove width "W" shown in the table. • øDmax: Max. parting off dia.

SPARE PARTS

Designation	Wrench
CGER/L2020-1.4T14	CRW23
CGER/L****-2T17 - 4T19	CRW33



Designation	W	Seat size	ar	h1	b	h	L1	f	L2
CTEFR/L2020-4T04	4	2, 3, 4	4.8	20	20	20	125	20.5	33
CTEFR/L2525-4T04	4	2, 3, 4	4.8	25	25	25	150	25.5	33
CTEFR/L2020-6T04	6	5, 6	4.8	20	20	20	125	20.6	37
CTEFR/L2525-6T04	6	5, 6	4.8	25	25	25	150	25.6	37

(1) *f* value is calculated with groove width "W" shown in the table.

SPARE PARTS

Designation	Clamping screw	Wrench
CTEFR/L2020-4T04	CM6X1X20-A	P-5
CTEFR/L2525-4T04	CM6X1X25-A	P-5
CTEFR/L2020-6T04	CM6X1X20-A	P-5
CTEFR/L2525-6T04	CM6X1X25-A	P-5

Insert	Groove width W	Min. dia. for face grooving øDmin
DGM / DGS / SGN	2	295
DGM / DGS / SGN	3	92
DGM / DGS / SGN	4	37
DGM / DGS	5	60
DGM / DGS	6	57
DTE / DGG	3	62
DTE / DGG	4	42
DTE / DGG	5	64
DTE / DGG	6	61

Insert	Groove width W	Min. dia. for face grooving øDmin
DTR	3	44
DTR	4	32
DTR	5	48
DTR	6	48
DTX	3	19
DTX	4	20
DTX	5	20
DTX	6	23
DTF	3	19
DTF	4	20

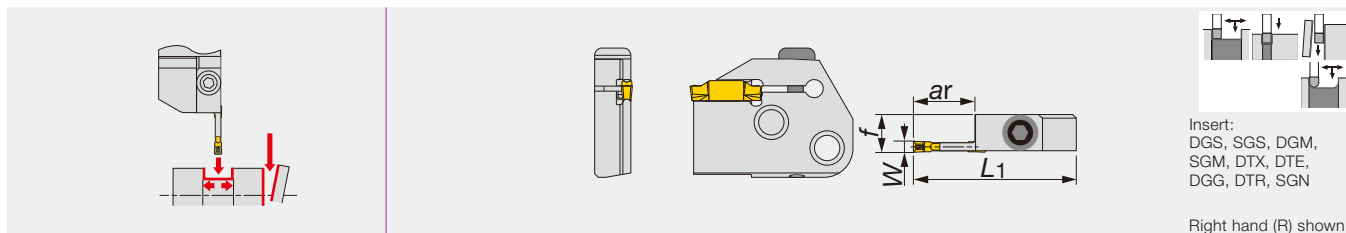
Reference pages

Inserts → C073 - C085, Standard cutting conditions → C085

TUNG CUT

CAER/L

Blades for external grooving & parting & turning



Designation	W	Seat size	ar	L1	f	Shank
CAER/L-3T16	3	3	16	45	10.4	CHFVL/R...,CHSR/L...
CAER/L-4T16	4	4	16	45	10.5	CHFVL/R...,CHSR/L...
CAER/L-5T20	5	5	20	49	10.5	CHFVL/R...,CHSR/L...
CAER/L-6T20	6	6	20	49	10.5	CHFVL/R...,CHSR/L...

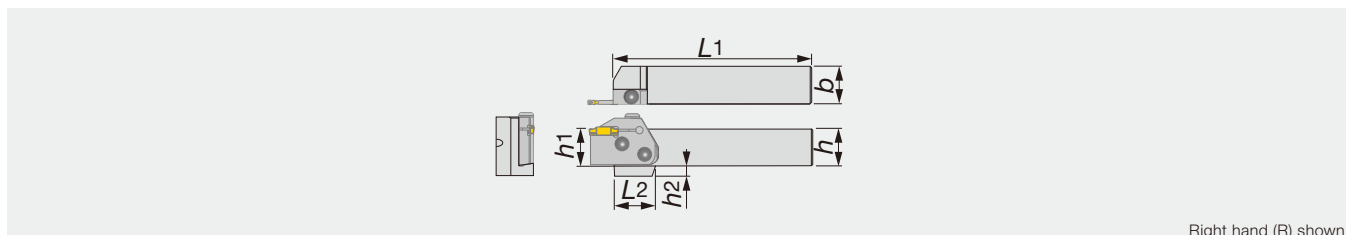
SPARE PARTS

Designation	Clamping screw	Wrench
CAER/L...	BHM6-20-A	P-4

TUNG CUT

CHSR/L

Shank of toolholders for CAER/L & CAFR/L blades



Designation	h	b	L1	L2	h1	h2	Blade*
CHSR/L2020	20	20	133	35	20	12	CAER/L...,CAFL/R...
CHSR/L2525	25	25	133	28	25	7	CAER/L...,CAFL/R...
CHSR/L3232	32	32	153	28	32	-	CAER/L...,CAFL/R...

* Blade sold separately.

SPARE PARTS

Designation	Clamping screw	Wrench
CHSR/L...	CSHB-6-A	P-4

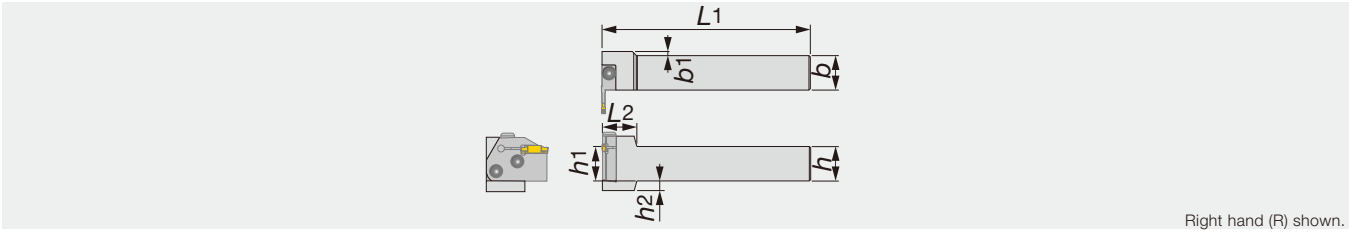
Combination of blade and toolholder

Toolholders	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
CHSR...	●			●
CHSL...		●	●	

● : Corresponding

Reference pages

Inserts → C073 - C085, Standard cutting conditions → C085



Designation	<i>h</i>	<i>b</i>	<i>L</i> 1	<i>L</i> 2	<i>h</i> 1	<i>h</i> 2	<i>b</i> 1	Blade
CHFVR/L2020	20	20	150	25	20	12	8	CAEL/R...,CAFR/L...
CHFVR/L2525	25	25	150	25	25	7	3	CAEL/R...,CAFR/L...
CHFVR/L3232	32	32	170	25	32	-	-	CAEL/R...,CAFR/L...

SPARE PARTS

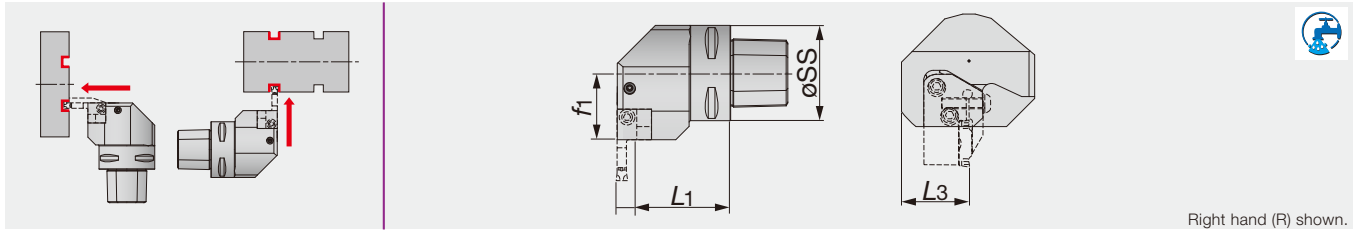
Designation	 Clamping screw	 Wrench
CHFVR/L...	CSHB-6-A	P-4

Combination of blade and toolholder

Toolholders	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
CHFVR...		●	●	
CHFVL...	●			●

● : Corresponding

TungCut shank of perpendicular toolholders for CAER/L & CAFR/L blades



Right hand (R) shown.

Designation	øSS	L1	L3	f1
C4CHFVR/L27050N	40	42.5	36	27
C5CHFVR/L35060N	50	49.5	36	35
C6CHFVR/L45065	63	54.5	41	45
C6CHFVR/L45065N	63	54.5	41	45

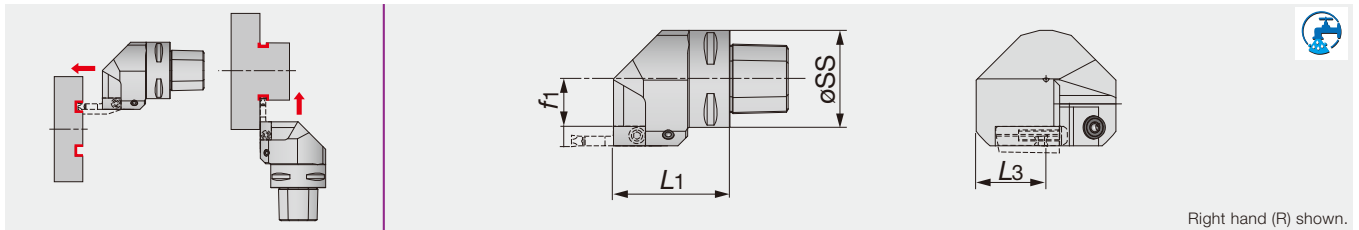
• The last character of designation is "N": Capable for 7 Mpa coolant pressure.

SPARE PARTS

Designation	Coolant parts	Coolant parts 1	Plug	Clamping screw	Wrench
C4CHFVR/L27050N	SATZ-M8X1-M3	-	SSHM4-4	CSHB-6-A	P-4
C5CHFVR/L35060N	SATZ-M10X1-M5	-	SSHM4-4	CSHB-6-A	P-4
C6CHFVR/L45065	CNZ125	PNZ5	-	CSHB-6-A	P-4
C6CHFVR/L45065N	SATZ-M10X1-M5	-	SSHM4-4	CSHB-6-A	P-4

C-CHSR/L

TungCut shank of toolholders for CAER/L & CAFR/L blades



Right hand (R) shown.

Designation	øSS	L1	L3	f1
C4CHSR/L27050N	40	50	36	16.5
C5CHSR/L35060	50	60	36	24.5
C5CHSR/L35060N	50	60	36	24.5
C6CHSR/L45065N	63	65	41	34.5

• The last character of designation is "N": Capable for 7 Mpa coolant pressure.

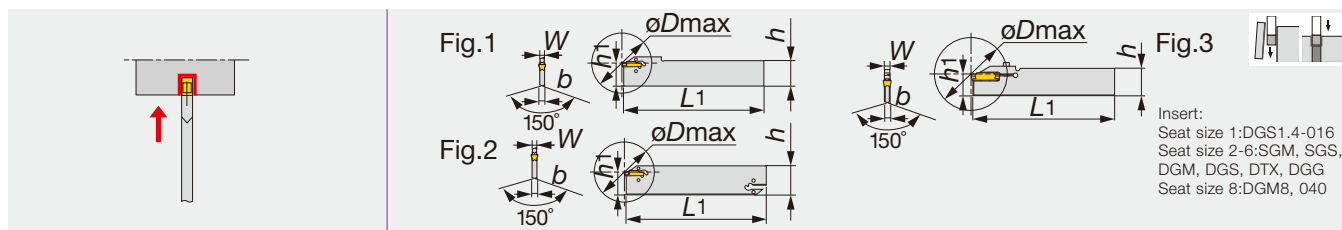
SPARE PARTS

Designation	Coolant parts	Coolant parts 1	Plug	Clamping screw	Wrench
C4CHSR/L27050N	SATZ-M8X1-M3	-	SSHM4-4	CSHB-6-A	P-4
C5CHSR/L35060	CNZ125	PNZ5	-	CSHB-6-A	P-4
C5CHSR/L35060N	SATZ-M10X1-M5	-	SSHM4-4	CSHB-6-A	P-4
C6CHSR/L45065N	SATE-M10X1-M5	-	SSHM4-4	CSHB-6-A	P-4

Combination of blade and toolholder

Toolholders	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
C*CHFVR...	●	●	●	
C*CHFVL...				●
C*CHSR...	●			●
C*CHSL...		●	●	

● : Corresponding



Designation	W	Seat size	ϕD_{max}	h1	b	h	L1	Fig
CGP26-1.4S	1.4	1	26	21.4	1	26	150	1
CGP32-1.4D	1.4	1	26	24.8	1	32	150	2
CGP26-2S	2	2	40	21.4	1.8	26	150	1
CGP32-2D	2	2	50	24.8	1.8	32	150	2
CGP26-3S	3	3	50	21.4	2.4	26	150	1
CGP32-3D	3	3	100	24.8	2.4	32	150	2
CGP26-4S	4	4	80	21.4	3.2	26	150	1
CGP32-4D	4	4	100	24.9	3.2	32	150	2
CGP45-4D	4	4	120	38.1	3.2	45	150	2
CGP32-5D	5	5	120	24.9	4	32	150	2
CGP32-6D	6	6	120	24.9	5.2	32	150	2
CGP32-8S-CL	8	8	80	24.9	6.2	32	150	3

- When depth is deeper than (insert length - 1.5 mm), 1 corner type is recommended.
- Wrench (CRW**) should be ordered separately.
- Max groove depth is 28.5 mm.
- ϕD_{max} : Max. parting off dia.

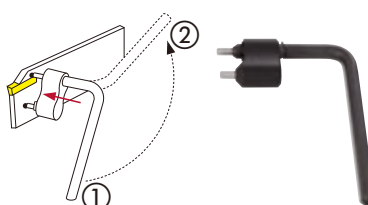
SPARE PARTS

Designation	Clamping screw	Wrench
CGP**-1.4*	-	CRW23
CGP**-2/3/4/5/6	-	CRW33
CGP32-8S-CL	CM4X0.7X20-M0-A	P-3

Caution

Newly developed wrench

Insert is clamped by the elastic deformation of upper jaw.
Low clamping stress increases the stability and tool life.

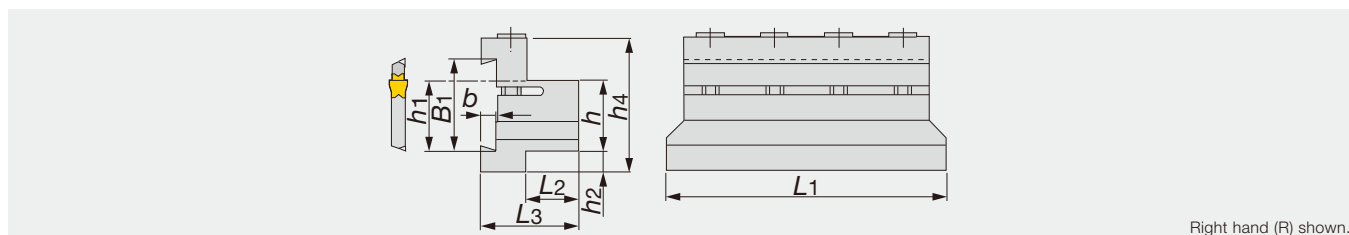


- ①→②: unclamp
②→①: clamp

TUNG CUT

CTBF

Tool block for CGP blades(fixed clamp)



Right hand (R) shown.

Designation	h	B1	L2	L1	b	h1	h2	h4	L3	Blade*
CTBF25-45	25	45	22	110	5.5	38.1	25	66	40	CGP45...
CTBF32-45	32	45	28	120	5.5	38.1	18	66	45	CGP45...

* Blade sold separately.

SPARE PARTS

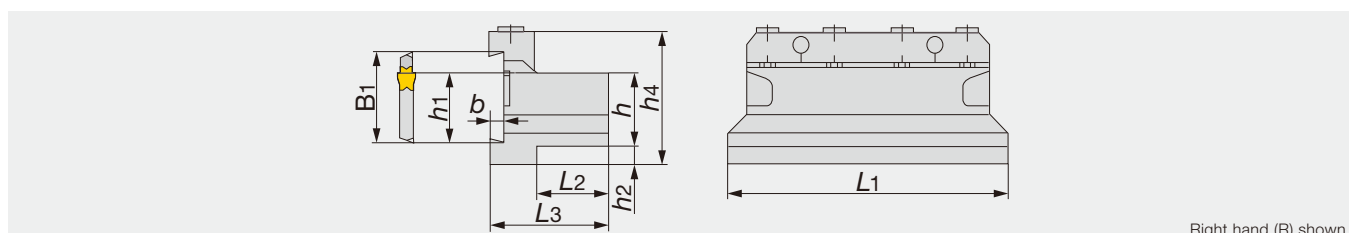
Designation	Clamping screw	Wrench
CTBF...	CM6X1.0X40-A	P-5



TUNG CUT

CTBU

Tool block for CGP and EGP blades



Right hand (R) shown.

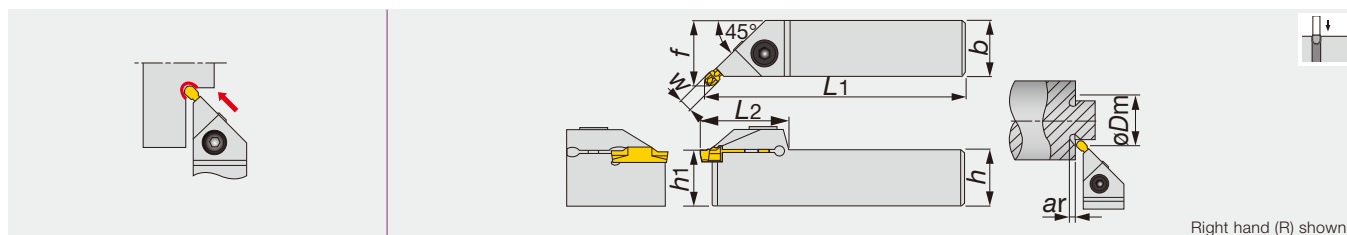
Designation	h1	b	B1	L1	h	h2	h4	L2	L3	Blade*
CTBU20-26	21.4	4	26	86	20	9	43	21	38	CGP26...
CTBU25-26	21.4	4	26	110	25	5	45	23	42	CGP26...
CTBU20-32	24.8	5.3	32	100	20	13	50	19	38	CGP32...
CTBU25-32	24.8	5.3	32	110	25	8	50	23	42	CGP32...
CTBU32-32	24.8	5.3	32	110	32	5	54	29	48	CGP32...

* Blade sold separately.

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
CTBU20-26	CT-86	CM6X30-S	P-5
CTBU25-26	CT-105	CM6X30-S	P-5
CTBU20-32	CT-100	CM6X30-S	P-5
CTBU25-32	CT-110	CM6X30-S	P-5
CTBU32-32	CT-110	CM6X30-S	P-5



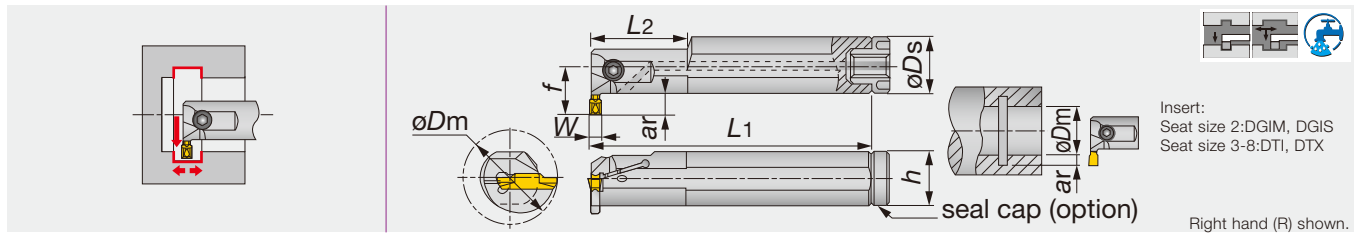


Designation	W	øD _m	Seat size	a _r	h	b	L ₁	L ₂	h ₁	f ⁽¹⁾	Insert
CGEUR/L1616-3T02	3	32	3	2.8	16	16	110	30	16	19.3	DTIU...
CGEUR/L2020-3T02	3	32	3	2.8	20	20	125	30	20	23.3	DTIU...
CGEUR/L2525-3T02	3	32	3	2.8	25	25	150	30	25	28.3	DTIU...
CGEUR/L1616-4T02	4	32	4	2.8	16	16	110	31	16	19.5	DTIU...
CGEUR/L2020-4T02	4	32	4	2.8	20	20	125	31	20	23.5	DTIU...
CGEUR/L2525-4T02	4	32	4	2.8	25	25	150	31	25	28.5	DTIU...
CGEUR/L2525-6T03	6	34	5, 6	3.4	25	25	150	35	25	28.9	DTIU...

(1) "f" value is calculated with groove width "W" shown in the table.

SPARE PARTS

Designation	Clamping screw	Wrench
CGEUR/L****-3T02	CM5X0.8X16-A	P-4
CGEUR/L1616-4T02	CM6X1X16-A	P-5
CGEUR/L2020-4T02	CM6X1X20-A	P-5
CGEUR/L2525-4T02/6T03	CM6X1X25-A	P-5



Designation	W	øD _m	Seat size	ar	øD _s	f	L ₁	L ₂	h	Insert
CTIR/L16-2T08-D250	2	25	2	8	16	16.5	125	-	14	DGIM..., DGIS...
CTIR/L20-2T06-D250	2	25	2	6	20	15.8	160	40	18	DGIM..., DGIS...
CTIR/L20-3T06-D250	3	25	3	6	20	15.8	160	40	18	DTI..., DTX...
CTIR/L25-3T05-D250	3	25	3	5.1	25	17.5	200	40	23	DTI..., DTX...
CTIR/L25-3T08-D320	3	32	3	8	25	21.5	200	40	23	DTI..., DTX...
CTIR/L32-3T10-D400	3	40	3	10	32	27	250	60	30	DTI..., DTX...
CTIR/L20-4T06-D250	4	25	4	6	20	15.8	160	40	18	DTI..., DTX...
CTIR/L25-4T08-D320	4	32	4	8	25	21.5	200	40	23	DTI..., DTX...
CTIR/L32-4T04-D310	4	31	4	4	32	20.8	250	60	30	DTI..., DTX...
CTIR/L32-4T10-D400	4	40	4	10	32	27	250	60	30	DTI..., DTX...
CTIR/L25-5T05-D310	5	31	5	5	25	17.3	200	60	23	DTI..., DTX...
CTIR/L32-5T10-D400	5	40	5	10	32	27	250	60	30	DTI..., DTX...
CTIR/L32-6T04-D310	6	31	6	4	32	20.8	250	60	30	DTI..., DTX...
CTIR/L32-6T10-D400	6	40	6	10	32	27	250	60	30	DTI..., DTX...
CTIR/L32-8T05-D370	8	37	8	5	32	21.3	250	60	30	DTI..., DTX...
CTIR/L40-8T05-D420	8	42	8	5.8	40	25.8	300	65	38	DTI..., DTX...

(1) "L₁" value is calculated with groove width "W" shown in the table.

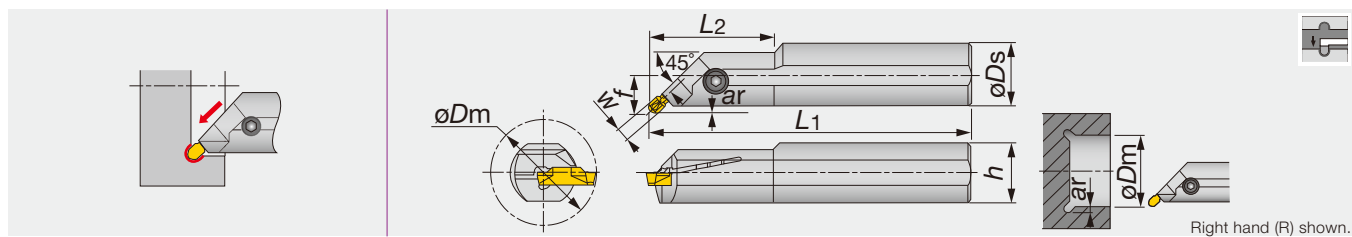
SPARE PARTS



Designation	Clamping screw	Wrench	Seal cap	Thread type for connection
CTIR/L16-2T08-D250	CM5X0.8X10-A	P-4	CA-16	M6
CTIR/L20-2T06-D250	CM5X0.8X12-A	P-4	CA-20	M6
CTIR/L20-3T06-D250	CM5X0.8X12-A	P-4	CA-20	M6
CTIR/L25-3T05-D250	CM5X0.8X16-A	P-4	CA-25	R1/8"
CTIR/L25-3T08-D320	CM5X0.8X16-A	P-4	CA-25	R1/8"
CTIR/L32-3T10-D400	CM5X0.8X16-A	P-4	CA-32	R1/8"
CTIR/L20-4T06-D250	CM5X0.8X12-A	P-4	CA-20	M6
CTIR/L25-4T08-D320	CM5X0.8X16-A	P-4	CA-25	R1/8"
CTIR/L32-4T04-D310	CM5X0.8X16-A	P-4	CA-32	R1/8"
CTIR/L32-4T10-D400	CM5X0.8X16-A	P-4	CA-32	R1/8"
CTIR/L25-5T05-D310	CM6X1X16-A	P-5	CA-25	R1/8"
CTIR/L32-5T10-D400	CM6X1X20-A	P-5	CA-32	R1/8"
CTIR/L32-6T04-D310	CM6X1X20-A	P-5	CA-32	R1/8"
CTIR/L32-6T10-D400	CM6X1X20-A	P-5	CA-32	R1/8"
CTIR/L32-8T05-D370	CM6X1X25-A	P-5	CA-32	R1/8"
CTIR/L40-8T05-D420	CM6X1X25-A	P-5	CA-40	R1/8"

Reference pages

Inserts → C073 - C085, Standard cutting conditions → C085

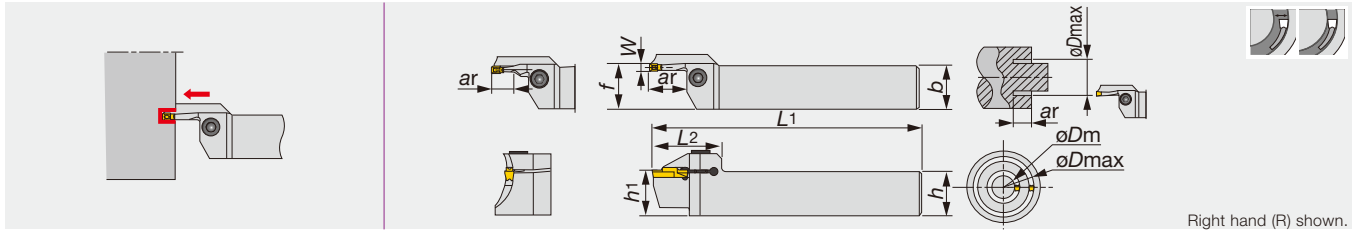


Designation	W	øD _m	Seat size	ar	øD _s	f ⁽¹⁾	L ₁	L ₂	h	Insert
CGIUR/L20-3T02-D380	3	38	3	2.8	20	12.8	160	-	19	DTIU...
CGIUR/L25-3T02-D380	3	38	3	2.8	25	14.8	200	40	23	DTIU...
CGIUR/L20-4T02-D380	4	38	4	2.8	20	12.9	160	-	19	DTIU...
CGIUR/L25-4T02-D460	4	46	4	2.8	25	14.9	200	40	23	DTIU...
CGIUR/L25-6T02-D460	6	46	5, 6	2.8	25	15.2	200	-	23	DTIU...

(1) "f" value is calculated with groove width "W" shown in the table.

SPARE PARTS

Designation	Clamping screw	Wrench
CGIUR/L20-3T02-D380	CM5X0.8X12-A	P-4
CGIUR/L25-3T02-D380	CM5X0.8X16-A	P-4
CGIUR/L*-4T02-D...	CM5X0.8X16-A	P-4
CGIUR/L25-6T02-D460	CM6X1X25-A	P-5



Designation	W	øD _m	øD _{max}	Seat size	ar	h	b	L ₁	L ₂	h ₁	f ⁽¹⁾
CTFR/L2525-3T10-024035	3	24	35	3	10	25	25	150	38	25	25.5
CTFR/L2525-3T10-029040	3	29	40	3	10	25	25	150	38	25	25.5
CTFR/L2525-3T10-034050	3	34	50	3	10	25	25	150	38	25	25.5
CTFR/L2525-3T15-044070	3	44	70	3	15	25	25	150	38	25	25.5
CTFR/L2525-3T15-064100	3	64	100	3	15	25	25	150	38	25	25.5
CTFR/L2525-4T10-022036	4	22	36	4	10	25	25	150	39	25	25.6
CTFR/L2525-4T20-028042	4	28	42	4	20	25	25	150	39	25	25.6
CTFR/L2525-4T20-034050	4	34	50	4	20	25	25	150	39	25	25.6
CTFR/L2525-4T20-042070	4	42	70	4	20	25	25	150	39	25	25.6
CTFR/L2525-4T20-062120	4	62	120	4	20	25	25	150	39	25	25.6
CTFR/L2525-4T20-112200	4	112	200	4	20	25	25	150	39	25	25.6
CTFR/L2525-5T25-050080	5	50	80	5	25	25	25	150	49	25	25.6
CTFR/L2525-5T25-070110	5	70	110	5	25	25	25	150	49	25	25.6
CTFR/L2525-5T25-100150	5	100	150	5	25	25	25	150	49	25	25.6
CTFR/L2525-5T25-140200	5	140	200	5	25	25	25	150	49	25	25.6
CTFR/L2525-6T25-048070	6	48	70	6	25	25	25	150	49	25	25.6
CTFR/L2525-6T25-058100	6	58	100	6	25	25	25	150	49	25	25.6
CTFR/L2525-6T25-088180	6	88	180	6	25	25	25	150	49	25	25.6
CTFR/L2525-6T25-168400	6	168	400	6	25	25	25	150	49	25	25.6

- When depth is deeper than (insert length - 1.5 mm), 1 corner type is recommended.
- (1) "f" value is calculated with groove width "W" shown in the table.
- When DTF insert is installed, Max "ar" should be 15 mm.

SPARE PARTS

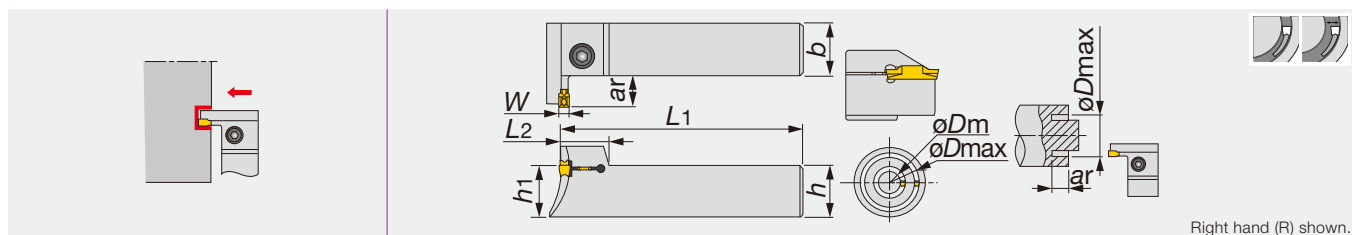
Designation	Clamping screw	Wrench
CTFR/L2525-3T - 4T...	CM6X1X25-A	P-5
CTFR/L2525-5T - 6T...	CM8X1.25X25-A	P-6

INSERT

Designation	Insert seat size	Insert
CTFR/L2525-3T10-024035	3	DTF, DTX
CTFR/L2525-3T10-029040	3	DTF, DTX
CTFR/L2525-3T10-034050	3	DTF, DTX
CTFR/L2525-3T15-044070	3	DTF, DTX, DTE, DTR
CTFR/L2525-3T15-064100	3	DTF, DTX, DTE, DGG, DGM, DGS, DTR
CTFR/L2525-4T10-022036	4	DTF, DTX
CTFR/L2525-4T20-028042	4	DTF, DTX
CTFR/L2525-4T20-034050	4	DTF, DTX
CTFR/L2525-4T20-042070	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR
CTFR/L2525-4T20-062120	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR
CTFR/L2525-4T20-112200	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR
CTFR/L2525-5T25-...	5	DTX, DTE, DGG, DGM, DGS, DTR
CTFR/L2525-6T25-...	6	DTX, DTE, DGG, DGM, DGS, DTR

Reference pages

Inserts → **C073 - C085**, Standard cutting conditions → **C085**



Right hand (R) shown.

Designation	W	øDm	øDmax	Seat size	ar	h	b	L1	L2	h1
CTFVR/L2525-3T10-024035	3	24	35	3	10	25	25	150	18	25
CTFVR/L2525-3T10-029040	3	29	40	3	10	25	25	150	18	25
CTFVR/L2525-3T10-034050	3	34	50	3	10	25	25	150	18	25
CTFVR/L2525-3T15-044060	3	44	60	3	15	25	25	150	18	25
CTFVR/L2525-3T15-054085	3	54	85	3	15	25	25	150	18	25
CTFVR/L2525-4T12-022040	4	22	40	4	12	25	25	150	18.5	25
CTFVR/L2525-4T15-032050	4	32	50	4	15	25	25	150	18.5	25
CTFVR/L2525-4T15-042060	4	42	60	4	15	25	25	150	18.5	25
CTFVR/L2525-4T15-052085	4	52	85	4	15	25	25	150	18.5	25
CTFVR/L2525-5T20-050080	5	50	80	5	20	25	25	150	22	25
CTFVR/L2525-5T20-070110	5	70	110	5	20	25	25	150	22	25
CTFVR/L2525-5T20-100150	5	100	150	5	20	25	25	150	22	25
CTFVR/L2525-5T20-140200	5	140	200	5	20	25	25	150	22	25
CTFVR/L2525-6T20-048085	6	48	85	6	20	25	25	150	22	25
CTFVR/L2525-6T20-073150	6	73	150	6	20	25	25	150	22	25
CTFVR/L2525-6T20-138250	6	138	250	6	20	25	25	150	22	25

• When depth is deeper than (insert length - 1.5 mm), 1 corner type is recommended.

SPARE PARTS

Designation	Clamping screw	Wrench
CTFVR/L2525-3T...	CM5X0.8X25-A	P-4
CTFVR/L2525-4T...	CM6X1X25-A	P-5
CTFVR/L2525-5T..., 6T...	CM8X1.25X25-A	P-6

INSERT

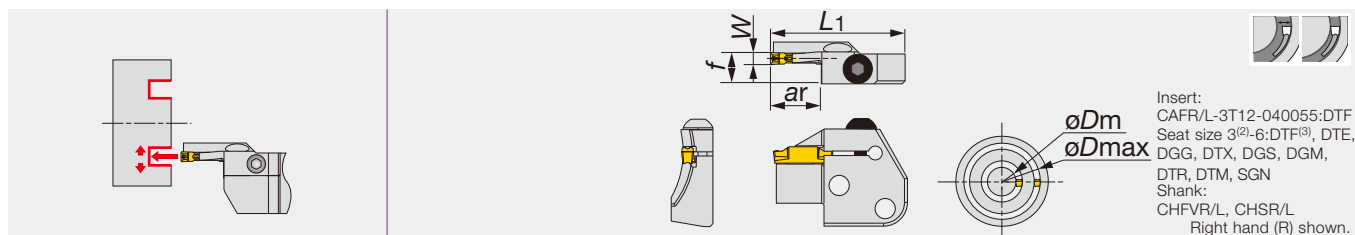
Designation	Insert seat size	Insert
CTFVR/L2525-3T10-024035	3	DTF, DTX
CTFVR/L2525-3T10-029040	3	DTF, DTX
CTFVR/L2525-3T10-034050	3	DTF, DTX, DTR
CTFVR/L2525-3T15-044060	3	DTF, DTX, DTE, DTR
CTFVR/L2525-3T15-054085	3	DTF, DTX, DTE, DGG, DGM, DGS, DTR
CTFVR/L2525-4T12-022040	4	DTF, DTX
CTFVR/L2525-4T15-032050	4	DTF, DTX
CTFVR/L2525-4T15-042060	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR
CTFVR/L2525-4T15-052085	4	DTF, DTX, DTE, DGG, DGM, DGS, DTR
CTFVR/L2525-5T20-...	5	DTX, DTE, DGG, DGM, DGS, DTR
CTFVR/L2525-6T20-...	6	DTX, DTE, DGG, DGM, DGS, DTR

(1) Min. diameter øDm of DTE, DGS and DGM insert

Insert	øDm	Note
DTE3 / DGS3 / DGM3	ø92	When diameter is smaller than øDm, DTF or DTX type insert is recommended.
DTE4 / DGS4 / DGM4	ø42	

Reference pages

Inserts → C073 - C085, Standard cutting conditions → C085



Designation	W	øDm	øDmax	Seat size	ar	L1	f ⁽¹⁾
CAFR/L-3T12-040055	3	40	55	3	12	45	10.4
CAFR/L-3T12-055075	3	55	75	3	12	45	10.4
CAFR/L-3T12-075100	3	75	100	3	12	45	10.4
CAFR/L-3T12-100140	3	100	140	3	12	45	10.4
CAFR/L-3T12-140200	3	140	200	3	12	45	10.4
CAFR/L-4T16-050070	4	50	70	4	16	45	10.5
CAFR/L-4T16-070100	4	70	100	4	16	45	10.5
CAFR/L-4T16-100150	4	100	150	4	16	45	10.5
CAFR/L-4T16-150250	4	150	250	4	16	45	10.5
CAFR/L-5T20-055080	5	55	80	5	20	49	10.5
CAFR/L-5T20-080120	5	80	120	5	20	49	10.5
CAFR/L-5T20-120180	5	120	180	5	20	49	10.5
CAFR/L-5T20-180300	5	180	300	5	20	49	10.5
CAFR/L-5T20-300000	5	300	∞	5	20	49	10.5
CAFR/L-6T25-060090	6	60	90	6	25	55	10.5
CAFR/L-6T25-090150	6	90	150	6	25	55	10.5
CAFR/L-6T25-150250	6	150	250	6	25	55	10.5
CAFR/L-6T25-250400	6	250	400	6	25	55	10.5

• When depth is deeper than (insert length - 1.5 mm), 1 corner type is recommended.

(1) "f" value is calculated with groove width "W" shown in the table.

(2) Not applicable for CAFR/L-3T12-040055

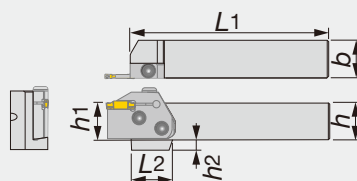
(3) Seat sizes of DTF are Only 3 and 4

SPARE PARTS

Designation	Clamping screw	Wrench
CAFR/L...	BHM6-20-A	P-4

Min. diameter øDm of DTE, DGS and DGM insert

Insert	øDm	Note
DTE 3 / DGS 3 / DGM 3	ø92	When diameter is smaller than øDm, DTF or DTX type insert is recommended.
DTE 4 / DGS 4 / DGM 4	ø42	
DTE 5 / DGS 5 / DGM 5	ø64	
DTE 6 / DGS 6 / DGM 6	ø61	



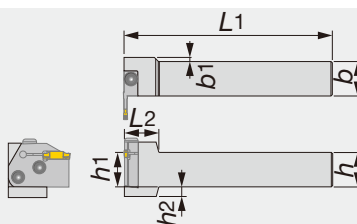
Right hand (R) shown.

Designation	<i>h</i>	<i>b</i>	<i>L</i> ₁	<i>L</i> ₂	<i>h</i> ₁	<i>h</i> ₂	Blade
CHSR/L2020	20	20	133	35	20	12	CAER/L...,CAFL/R...
CHSR/L2525	25	25	133	28	25	7	CAER/L...,CAFL/R...
CHSR/L3232	32	32	153	28	32	-	CAER/L...,CAFL/R...

SPARE PARTS



Designation	Clamping screw	Wrench
CHSR/L...	CSHB-6-A	P-4



Right hand (R) shown.

Designation	<i>h</i>	<i>b</i>	<i>L</i> ₁	<i>L</i> ₂	<i>h</i> ₁	<i>h</i> ₂	<i>b</i> ₁	Blade
CHFVR/L2020	20	20	150	25	20	12	8	CAEL/R...,CAFR/L...
CHFVR/L2525	25	25	150	25	25	7	3	CAEL/R...,CAFR/L...
CHFVR/L3232	32	32	170	25	32	-	-	CAEL/R...,CAFR/L...

SPARE PARTS



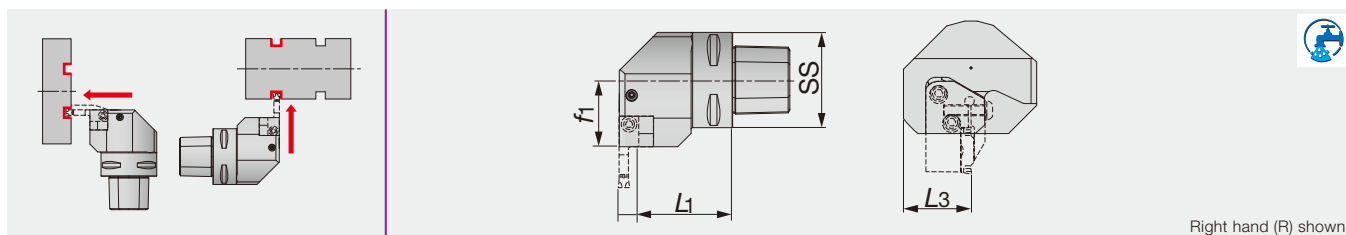
Designation	Clamping screw	Wrench
CHFVR/L...	CSHB-6-A	P-4

Combination of blade and toolholder

Toolholders	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
CHSR...	●			●
CHSL...		●	●	
CHFVR...		●	●	
CHFVL...	●			●

● : Correspondence

TungCap shank of perpendicular toolholders for CAER/L & CAFR/L blades



Right hand (R) shown.

Designation	SS	L1	L3	f1	Blade
C4CHFVR/L27050N	40	42.5	36	27	CAEL/R..., CAFR/L...
C5CHFVR/L35060N	50	49.5	36	35	CAEL/R..., CAFR/L...
C6CHFVR/L45065	63	54.5	41	45	CAEL/R..., CAFR/L...
C6CHFVR/L45065N	63	54.5	41	45	CAEL/R..., CAFR/L...

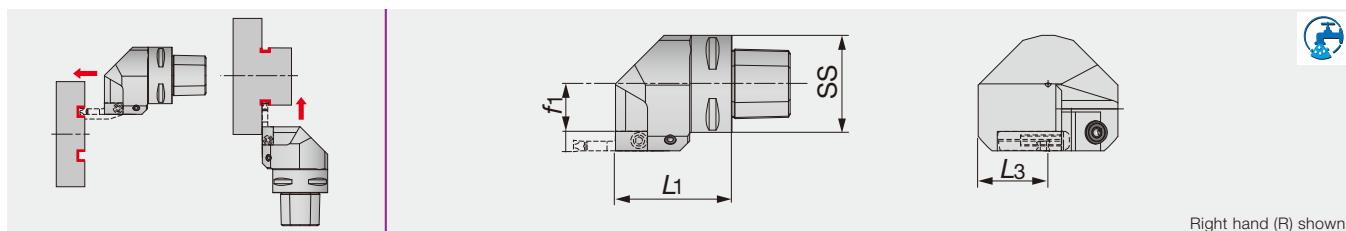
• The last character of designation is "N": Capable for 7Mpa, coolant pressure.

SPARE PARTS

Designation	Coolant parts	Coolant parts 1	Clamping screw	Wrench
C4CHFVR/L27050N	SATZ-M8X1-M3	-	CSHB-6-A	P-4
C5CHFVR/L35060N	SATZ-M10X1-M5	-	CSHB-6-A	P-4
C6CHFVR/L45065	CNZ125	PNZ5	CSHB-6-A	P-4
C6CHFVR/L45065N	SATZ-M10X1-M5	-	CSHB-6-A	P-4

C-CHSR/L

TungCap shank of toolholders for CAER/L & CAFR/L blades



Right hand (R) shown.

Designation	SS	L1	L3	f1	Blade
C4CHSR/L27050N	40	50	36	16.5	CAER/L..., CAFL/R...
C5CHSR/L35060	50	60	36	24.5	CAER/L..., CAFL/R...
C5CHSR/L35060N	50	60	36	24.5	CAER/L..., CAFL/R...
C6CHSR/L45065N	63	65	41	34.5	CAER/L..., CAFL/R...

• The last character of designation is "N": Capable for 7Mpa, coolant pressure.

SPARE PARTS

Designation	Coolant parts	Coolant parts 1	Clamping screw	Wrench
C4CHSR/L27050N	SATZ-M8X1-M3	-	CSHB-6-A	P-4
C5CHSR/L35060	CNZ125	PNZ5	CSHB-6-A	P-4
C5CHSR/L35060N	SATZ-M10X1-M5	-	CSHB-6-A	P-4
C6CHSR/L45065N	SATZ-M10X1-M5	-	CSHB-6-A	P-4

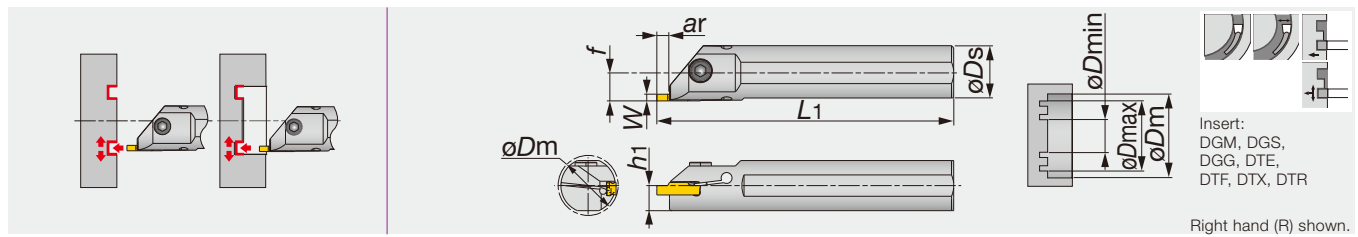
Combination of blade and toolholder

Toolholders	Blade			
	CAER...	CAEL...	CAFR...	CAFL...
C*CHFVR...	●			●
C*CHFVL...		●	●	
C*CHSR...		●	●	
C*CHSL...	●			●

● : Correspondence

CTIFR/L

Toolholders for face / internal face grooving & turning



Designation	W	Seat size	ar	øDs	h1	L1 ⁽¹⁾	f
CTIFR/L25-4T05-D270	4	3, 4	5.5	25	11.5	200	13.3
CTIFR/L32-4T05-D340	4	3, 4	5.5	32	15	250	16.8
CTIFR/L25-5T05-D270	6	5, 6	5.5	25	11.5	200	13.3
CTIFR/L32-5T05-D340	6	5, 6	5.5	32	15	250	16.8

(1) *f* value is calculated with groove width "W" shown in the table.**

SPARE PARTS

Designation	Clamping screw	Wrench
CTIFR/L25-4T05-D270	CM6X1X16-A	P-5
CTIFR/L32-4T05-D340	CM6X1X20-A	P-5
CTIFR/L25-5T05-D270	CM6X1X16-A	P-5
CTIFR/L32-5T05-D340	CM6X1X20-A	P-5

Insert seat size	Min. bore dia. øDm		Insert seat size	øDmin				øDmax
	øDs = 25 mm	øDs = 32 mm		DGM, DGS, DGG	DTE	DTF / DTX	DTR	
3	26.3	33.3	3	92	62	19	44	∞
4	26.8	33.8	4	37	42	20	32	∞
5	26.3	33.3	5	60	64	20	48	∞
6	26.8	33.8	6	57	61	23	48	∞

Grooving Tool

TUNGALOID

Face Grooving

Others

Reference pages

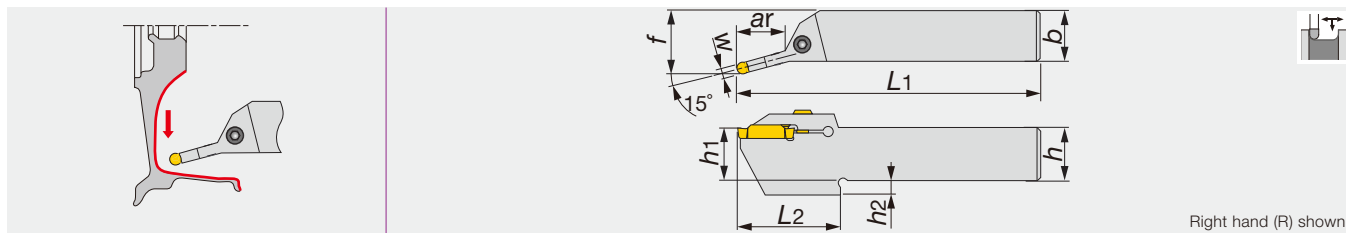
Inserts → C073 - C085, Standard cutting conditions → C085

Tungaloy C071

TUNG CUT

CTER/L-15A

Toolholders for machining aluminum wheel, square shank



Right hand (R) shown.

Designation	W	Seat size	ar	h	b	L1	f	L2	h1	h2	Insert
CTER/L2525-6T25-15A	6	6	25	25	25	150	32.2	50.5	25	7	DTA...
CTER/L2525-8T30-15A	8	8	30	25	25	150	32.9	55	25	7	DTA...

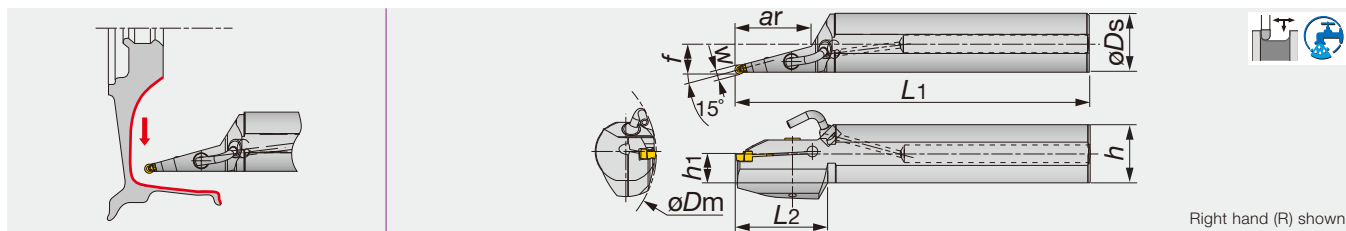
SPARE PARTS

Designation	Clamping screw	Wrench
CTER/L2525-***-15A	CM6X1X25-A	P-5

TUNG CUT

CGIUR/L-15A

Boring bars for machining aluminum wheel



Right hand (R) shown.

Designation	W	øDm	Seat size	ar	øDs	f	L1	L2	h	h1	Insert
CGIUR/L40-6T50-D160-15A	6	160	6	50	40	19.7	320	60	38.5	19	DTA...
CGIUR/L40-8T83-D160-15A	8	160	8	83	40	20.5	320	85	38.5	19	DTA...
CGIUR/L50-6T85-D200-15A	6	200	6	85	50	25.2	350	85	48.5	23.5	DTA...
CGIUR/L50-8T85-D200-15A	8	200	8	85	50	25.9	350	85	48.5	23.5	DTA...

SPARE PARTS

Designation	Clamping screw	Wrench
CGIUR/L*-15A	CM6X1X25-A	P-5

Nozzle parts

Coolant pipe	Coolant nozzle
PNZ5	CNZ125

Reference pages

Inserts → C073 - C085, Standard cutting conditions → C085

External grooving and parting

DGM type (2 corners)
SGM type (1 corner)

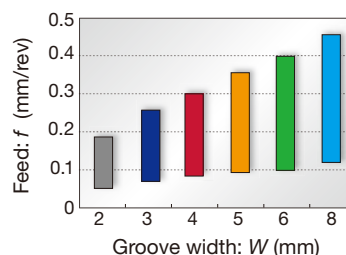


Page C077

1st choice for external grooving and parting off

Smooth chip evacuation
Well-designed edge with high strength
Handed insert available
 $W = 2 - 8 \text{ mm}$

■ Standard feed



DGS type (2 corners)
SGS type (1 corner)

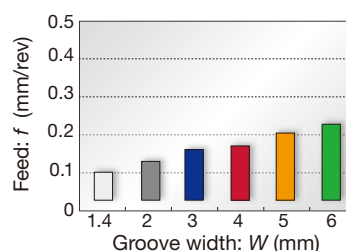


Page C078, C079

Lower cutting force and superior sharpness

Unique-designed edge and chipbreaker
Handed insert available
 $W = 1.4 - 6 \text{ mm}$

■ Standard feed



External and face grooving, and turning

DTE type (2 corners)

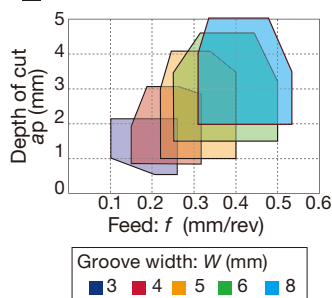


Page C080, C081

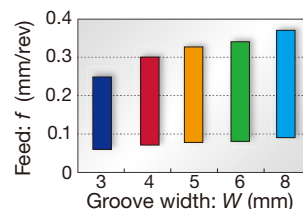
For general purpose

Unique chipbreaker makes chips shorter
Molded and ground insert available
 $W = 3 - 8 \text{ mm}$

■ Standard feed and DoC



■ Standard feed



External and face grooving

DGG type (2 corners)

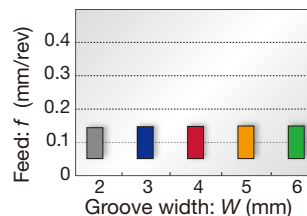


Page C081

For non-ferrous materials and titanium

Chipbreaker with low cutting force
Sharp cutting edge that prevents vibration and delivers fine surface finish
 $W = 2 - 6 \text{ mm}$

■ Standard feed



External, internal and face grooving, and turning

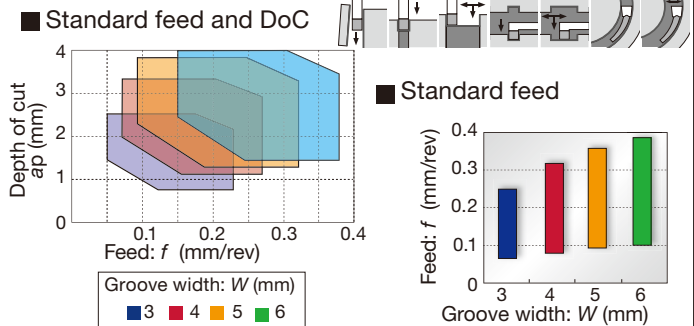
DTX type (2 corners)



Page C081

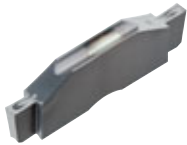
Multi-functional type

Well balanced sharpness and strength
Multi functional insert
 $W = 3 - 6 \text{ mm}$



External grooving

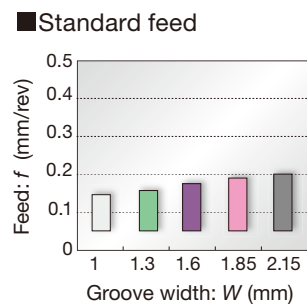
DGE type (2 corners)



Page C080

For high accurate and shallow groove

Excellent chip control
 $W = 1 - 2.15 \text{ mm}$



Profiling and undercutting

DTR type (2 corners)

Molded



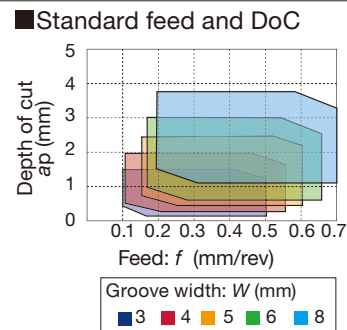
Ground



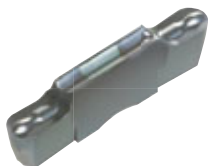
Page C083, C084

Full radius type

Excellent chip control
Molded and ground insert available
 $W = 3 - 8 \text{ mm}$



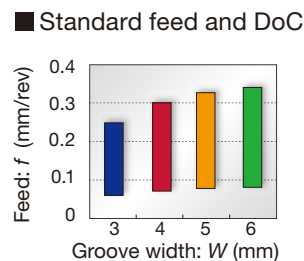
DTIU type (2 corners)



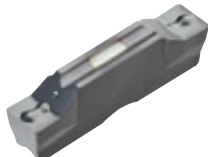
Page C084

Full radius type

Excellent chip control
For undercutting
 $W = 3 - 6 \text{ mm}$



Internal grooving and turning

DTI type (2 corners)  Page C082	1st choice for internal grooving Unique chipbreaker makes chips shorter Molded and ground insert available $W = 3 - 8 \text{ mm}$ ■ Standard feed and DoC ■ Standard feed
---	---

Small diameter internal grooving

DGIM type (2 corners)  Page C083	2 mm insert width only (For general purpose) Unique chipbreaker for excellent chip control Excellent fracture resistance due to optimum land on the cutting edge For general applications on steels & stainless steels $W = 2 \text{ mm}$ ■ Standard feed
---	--

DGIS type (2 corners)  Page C083	2 mm insert width only (Lower cutting force) Low cutting force due to a unique land geometry Applicable for low carbon steels & stainless steels $W = 2 \text{ mm}$ ■ Standard feed
--	--

Face grooving and turning

DTF type (2 corners)  Page C082	1st choice for face grooving Unique chipbreaker makes chips shorter Handed insert $W = 3 - 4 \text{ mm}$ ■ Standard feed and DoC ■ Standard feed
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Aluminium wheel machining

**DTA type
(2 corners)**



Page C084

Full radius type

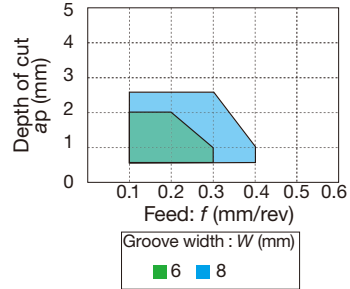
Excellent chip control

For aluminium wheel
profiling

Ground insert

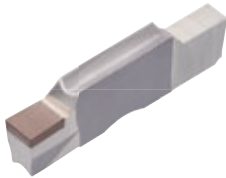
$W = 6 - 8 \text{ mm}$

■ Standard feed and DoC



External grooving of hardened steels

**SGN-CBN type
(1 corner)**



Page C085

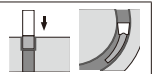
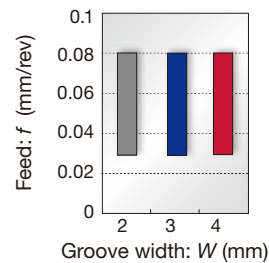
For hardened steel cutting

Optimum cutting edge
shape for grooving of hard-
ened steels

High tolerance width for
finishing ($W = \pm 0.025 \text{ mm}$)

$W = 2 - 4 \text{ mm}$

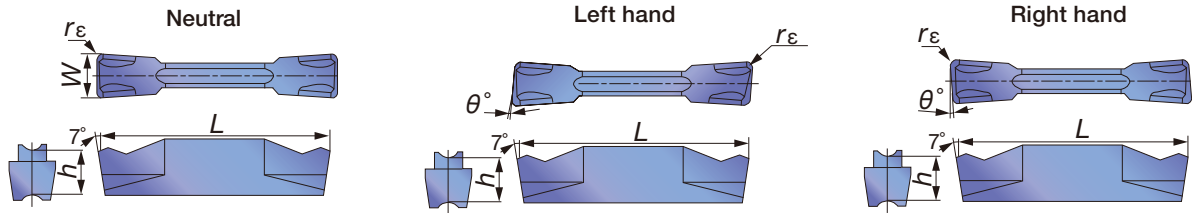
■ Standard feed



INSERT

DGM

External grooving and parting off, 2 corner

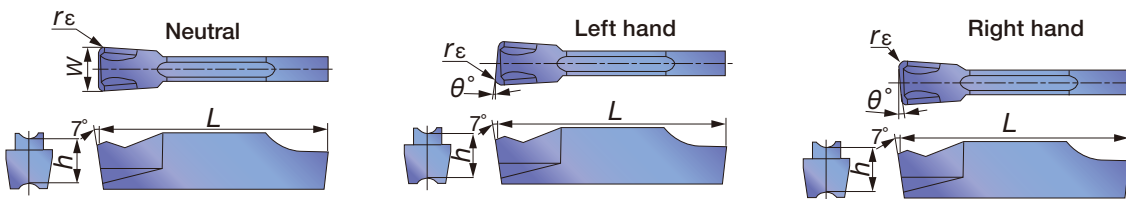


Designation	Insert seat size	W±0.05	r _ε	Coated										Cermet		L	h	θ°
				T9125		AH7025		AH725		AH905		GH130		NS9530				
				R	L	R	L	R	L	R	L	R	L	R	L			
DGM2-020	2	2	0.2	●		●		●				●		●		20	5	0
DGM2-020-6R/L	2	2	0.2					●	●			●	●			19.8	5	6
DGM2-020-8R/L	2	2	0.2					●	●			●	●			19.8	5	8
DGM2-020-15R/L	2	2	0.2					●	●			●	●			19.8	5	15
DGM2-002-15R/L	2	2	0.02					●	●			●	●			19.35	5	15
DGM3-020	3	3	0.2	●		●		●		●		●		●		20	5	0
DGM3-020-6R/L	3	3	0.2					●	●			●	●			19.9	5	6
DGM3-002-6R/L	3	3	0.02					●	●			●	●			19.45	5	6
DGM3-020-15R/L	3	3	0.2					●	●			●	●			19.9	5	15
DGM4-030	4	4	0.3	●		●		●		●		●		●		20	5	0
DGM4-030-4R/L	4	4	0.3					●	●			●	●			19.8	5	4
DGM4-030-15R/L	4	4	0.3					●	●			●	●			19.8	5	15
DGM5-030	5	5	0.3	●		●		●		●		●		●		25	5.5	0
DGM5-030-4R	5	5	0.3					●				●				24.9	5.5	4
DGM6-030	6	6	0.3	●		●		●		●		●		●		25	5.5	0
DGM8-040	8	8	0.4	●				●				●				30	6.7	0

● : Line up

SGM

External deep grooving and parting off, 1 corner

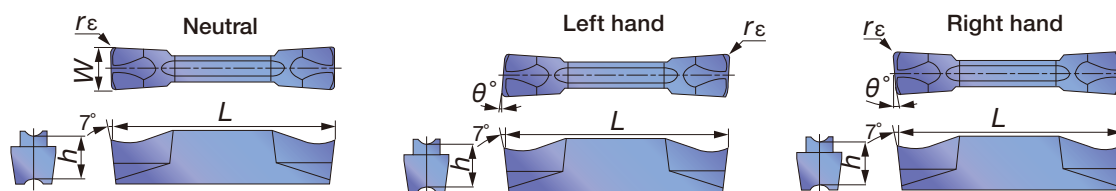


Designation	Insert seat size	W±0.05	rε	Coated				L	h	θ°
				AH725		GH130				
				R	L	R	L			
SGM2-020	2	2	0.2	●		●		20	5	0
SGM2-020-6R/L	2	2	0.2	●	●	●	●	19.8	5	6
SGM3-020	3	3	0.2	●		●		20	5	0
SGM3-020-6R/L	3	3	0.2	●	●	●	●	19.6	5	6
SGM3-020-15R/L	3	3	0.2	●	●	●	●	19.6	5	15
SGM4-030	4	4	0.3	●		●		20	5	0
SGM4-030-4R/L	4	4	0.3	●	●	●	●	19.65	5	4
SGM5-030	5	5	0.3	●		●		25	5.5	0
SGM6-030	6	6	0.3	●		●		25	5.5	0

● : Line up

DGS

External grooving and parting off, 2 corner



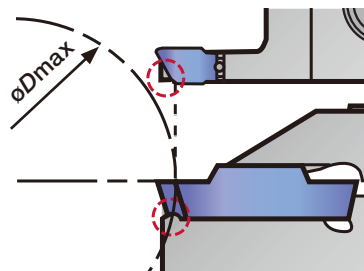
Designation	Insert seat size	W±0.05	rε	Coated								Cermet		L	h	θ°
				T9125		AH7025		AH725		GH130		NS9530				
				R	L	R	L	R	L	R	L	R	L			
DGS1.4-016	1	1.4	0.16					●		●				16	4.3	0
DGS2-020	2	2	0.2	●		●		●		●		●		20	5	0
DGS2-020-6R/L	2	2	0.2					●	●	●	●			19.95	5	6
DGS2-002-6R/L	2	2	0.02					●	●	●	●			19.8	5	6
DGS2-020-15R/L	2	2	0.2					●	●	●	●			19.95	5	15
DGS2-002-15R/L	2	2	0.02					●	●	●	●			19.8	5	15
DGS3-020	3	3	0.2	●		●		●		●		●		20	5	0
DGS3-020-6R/L	3	3	0.2					●	●	●	●			19.9	5	6
DGS3-002-6R/L	3	3	0.02					●	●	●	●			19.6	5	6
DGS3-020-15R/L	3	3	0.2					●	●	●	●			19.9	5	15
DGS3-002-15R/L	3	3	0.02					●	●	●	●			19.45	5	15
DGS4-030	4	4	0.3	●		●		●		●		●		20	5	0
DGS4-030-4R/L	4	4	0.3					●	●	●	●			19.8	5	4
DGS5-030	5	5	0.3	●				●		●		●		25	5.5	0
DGS6-030	6	6	0.3	●				●		●				25	5.5	0

● : Line up

Caution

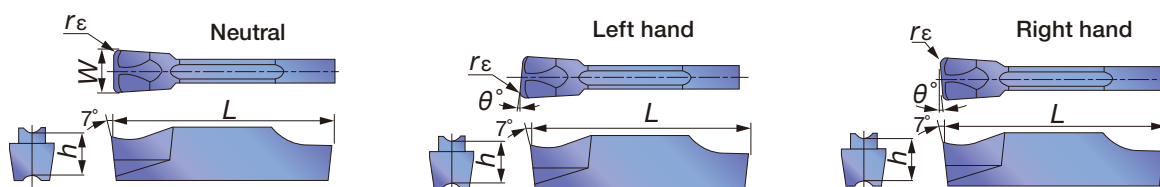
Designation	$\phi D_{\max}$ (mm)	Designation	$\phi D_{\max}$ (mm)
DGM2-002-15R/L	28	DGS2-002-15R/L	28
DGM3-002-15R/L	29	DGS3-002-15R/L	29
DGM4-030-15R/L	30	SGS3-020-15R/L	103
SGM3-020-15R/L	103	SGS3-002-15R/L	34

The tool will interfere with the workpiece when grooving larger diameter than $\phi D_{\max}$.



SGS

External deep grooving and parting off, 1 corner

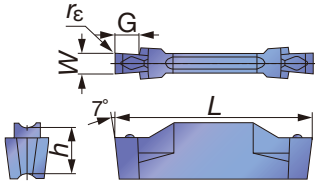


Designation	Insert seat size	W±0.05	rε	Coated				L	h	θ°
				AH725		GH130				
				R	L	R	L			
SGS2-020	2	2	0.2	●		●		20	5	0
SGS2-020-6R/L	2	2	0.2	●	●	●	●	19.8	5	6
SGS2-020-15R/L	2	2	0.2	●	●	●	●	19.8	5	15
SGS3-020	3	3	0.2		●		●	20	5	0
SGS3-020-6R/L	3	3	0.2	●	●	●	●	19.64	5	6
SGS3-002-6R/L	3	3	0.02	●	●	●	●	19.8	5	6
SGS3-020-15R/L	3	3	0.2	●	●	●	●	19.64	5	15
SGS3-002-15R/L	3	3	0.02	●	●	●	●	19.8	5	15
SGS4-030	4	4	0.3		●		●	20	5	0
SGS5-030	5	5	0.3		●		●	25	5.5	0
SGS6-030	6	6	0.3		●		●	25	5.5	0

● : Line up

DGE

External grooving (for high-precision machining)



Designation	Insert seat size	W±0.02	rε	Coated		Cermet	G	L	h
				AH725	GH130	NS9530			
DGE100-000	2	1	0	●	●	●	2.5	20	5
DGE130-000	2	1.3	0	●	●	●	2.5	20	5
DGE160-010	2	1.6	0.1	●	●	●	2.5	20	5
DGE185-010	2	1.85	0.1	●	●	●	3.5	20	5
DGE215-015	2	2.15	0.15	●	●	●	3.5	20	5

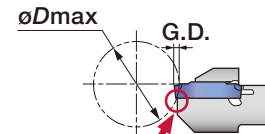
● : Line up

Caution

øDmax is limited as shown in the picture to the right according to the groove depth, G.D. Please refer to the following table.

G.D = Groove depth

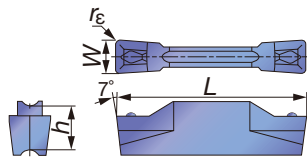
Designation	Max. groove depth (mm)	øDmax (mm)				
		G.D. = 1	G.D. = 1.5	G.D. = 2	G.D. = 2.5	G.D. = 3
DGE100-000	2	∞	18.6	11.5	-	-
DGE130-000						
DGE160-010						
DGE185-010	3	∞	18.6	11.5	8.8	7
DGE215-015						



Relevant area (Interference)

DTE

External, grooving and turning (for high-precision machining)

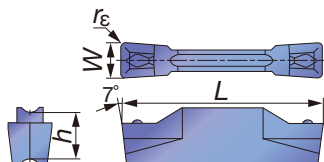


Designation	Insert seat size	W±0.02	rε	Coated				Cermet	L	h
				T9125	AH7025	AH725	GH130	NS9530		
DTE265-015	3	2.65	0.15	●	●	●	●	●	20	5
DTE300-020	3	3	0.2	●	●	●	●	●	20	5
DTE300-040	3	3	0.4	●		●	●	●	20	5
DTE315-015	3	3.15	0.15	●		●	●	●	20	5
DTE400-040	4	4	0.4	●		●	●	●	20	5
DTE400-080	4	4	0.8	●	●	●	●	●	20	5
DTE415-015	4	4.15	0.15	●		●	●	●	20	5
DTE478-055	5	4.78	0.55	●		●	●	●	25	5.5
DTE500-040	5	5	0.4	●		●	●	●	25	5.5
DTE500-080	5	5	0.8	●	●	●	●	●	25	5.5
DTE515-015	5	5.15	0.15	●		●	●		25	5.5
DTE600-080	6	6	0.8	●	●	●	●		25	5.5
DTE600-120	6	6	1.2	●		●	●		25	5.5
DTE800-080	8	8	0.8	●		●	●		30	6.7
DTE800-120	8	8	1.2	●		●	●		30	6.7

● : Line up

DTE

External, grooving and turning

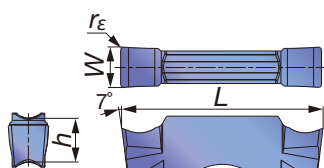


Designation	Insert seat size	$W \pm 0.05$	r_ϵ	Coated				Cermet	L	h
				T9125	AH7025	AH725	GH130	NS9530		
DTE3-040	3	3	0.4	●	●	●	●	●	20	5
DTE4-040	4	4	0.4	●	●	●	●	●	20	5

● : Line up

DGG

External and face grooving (for high-precision machining)

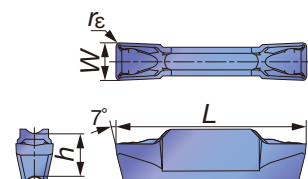


Designation	Insert seat size	$W \pm 0.02$	r_ϵ	Cermet	Uncoated	L	h
				NS9530	KS05F		
DGG200-020	2	2	0.2	●	●	20	5
DGG300-020	3	3	0.2	●	●	20	5
DGG400-040	4	4	0.4	●	●	20	5
DGG500-040	5	5	0.4	●	●	25	5.5
DGG600-040	6	6	0.4	●	●	25	5.5

● : Line up

DTX

External, internal, face grooving and turning

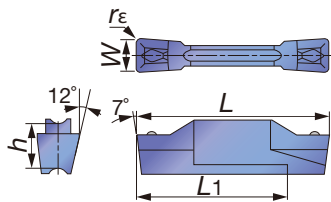


Designation	Insert seat size	$W \pm 0.05$	r_ϵ	Coated				Cermet	L	h
				T9125	AH7025	AH725	GH130	NS9530		
DTX3-030	3	3	0.3	●	●	●	●	●	20	5
DTX4-040	4	4	0.4	●	●	●	●	●	20	5
DTX5-040	5	5	0.4	●	●	●	●	●	25	5.5
DTX6-080	6	6	0.8			●	●		25	5.5

● : Line up

DTF

Face grooving and turning

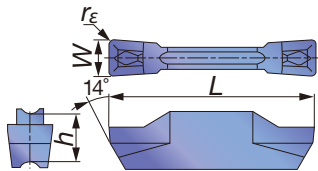


Designation	Insert seat size	W±0.05	rε	Coated						Cermet				
				T9125		AH725		GH130		NS9530				
				R	L	R	L	R	L	R	L	L	h	L1
DTF3-040-R/L	3	3	0.4	●	●	●	●	●	●	●	●	20	5	16
DTF4-040-R/L	4	4	0.4	●	●	●	●	●	●	●	●	20	5	16

● : Line up

DTI

Internal grooving and turning (for high-precision machining)

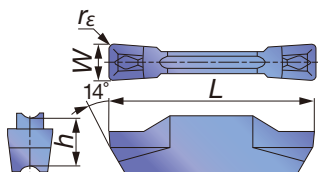


Designation	Insert seat size	$W \pm 0.02$	r_ϵ	Coated			Cermet	L	h
				T9125	AH725	GH130	NS9530		
DTI300-040	3	3	0.4	●	●	●	●	20	5
DTI400-040	4	4	0.4	●	●	●	●	20	5
DTI400-080	4	4	0.8	●	●	●	●	20	5
DTI500-040	5	5	0.4	●	●	●	●	25	5.5
DTI500-080	5	5	0.8	●	●	●	●	25	5.5
DTI600-080	6	6	0.8	●	●	●		25	5.5
DTI600-120	6	6	1.2	●	●	●		25	5.5
DTI800-080	8	8	0.8	●	●	●		30	6.7
DTI800-120	8	8	1.2	●	●	●		30	6.7

● : Line up

DTI

Internal grooving and turning

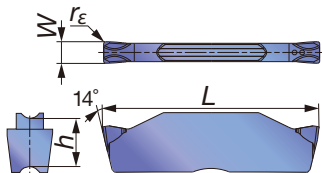


Designation	Insert seat size	$W \pm 0.05$	r_ϵ	Coated				Cermet	L	h
				T9125	AH7025	AH725	GH130	NS9530		
DTI3-040	3	3	0.4	●		●	●	●	20	5
DTI4-040	4	4	0.4	●		●	●	●	20	5

● : Line up

DGIM

Small diameter internal grooving

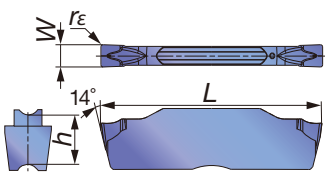


Designation	Insert seat size	$W \pm 0.05$	r_ϵ	Coated			Cermet	L	h
				T9125	AH725	GH130	NS9530		
DGIM2-020	2	2	0.2	●	●	●	●	20	5

● : Line up

DGIS

Small diameter internal grooving

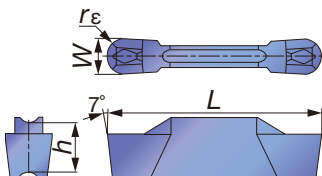


Designation	Insert seat size	$W \pm 0.05$	r_ϵ	Coated			Cermet	L	h
				T9125	AH725	GH130	NS9530		
DGIS2-020	2	2	0.2	●	●	●	●	20	5

● : Line up

DTR

Profiling and undercutting (for high-precision machining)

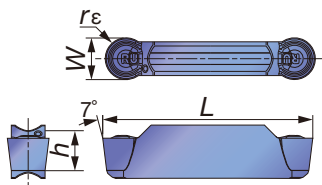


Designation	Insert seat size	$W \pm 0.02$	r_ϵ	Coated			Cermet	L	h
				T9125	AH725	GH130	NS9530		
DTR300-150	3	3	1.5	●	●	●	●	20	5
DTR400-200	4	4	2	●	●	●	●	20	5
DTR478-239	5	4.78	2.39	●	●	●	●	25	5.5
DTR500-250	5	5	2.5	●	●	●	●	25	5.5
DTR600-300	6	6	3	●	●	●		25	5.5

● : Line up

DTR

Profiling and undercutting

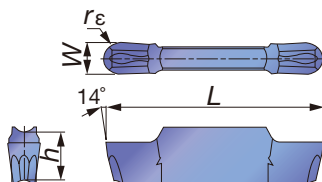


Designation	Insert seat size	$W \pm 0.05$	r_ϵ	Coated					Cermet	L	h
				T9125	AH7025	AH725	AH905	GH130	NS9530		
DTR3-150	3	3	1.5	●	●	●	●	●	●	20	5
DTR4-200	4	4	2	●	●	●	●	●	●	20	5
DTR5-250	5	5	2.5	●	●	●	●	●	●	25	5.5
DTR6-300	6	6	3	●	●	●		●		25	5.5
DTR8-400	8	8	4	●		●		●		30	6.7

● : Line up

DTIU

Profiling and undercutting (for high-precision machining)

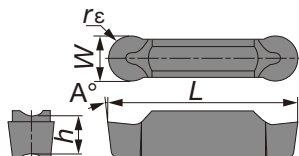


Designation	Insert seat size	$W \pm 0.02$	r_ϵ	Coated		L	h
				AH725	GH130		
DTIU300-150	3	3	1.5	●	●	20	5
DTIU400-200	4	4	2	●	●	20	5
DTIU500-250	5	5	2.5	●	●	25	5.5
DTIU600-300	6	6	3	●	●	25	5.5

● : Line up

DTA

Aluminium wheel machining (for high-precision machining)

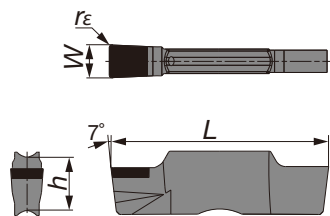


Designation	Insert seat size	$W \pm 0.02$	r_ϵ	Uncoated	L	h	A°
				TH10			
DTA600-300	6	6	3	●	25	5.5	7
DTA800-400	8	8	4	●	30	6.7	10

● : Line up

SGN

External grooving of hardened steels



Designation	Insert seat size	W±0.025	rε	CBN	L	h
				BX360		
SGN200-020	2	2	0.2	●	20	5
SGN300-020	3	3	0.2	●	20	5
SGN400-020	4	4	0.2	●	20	5

● : Line up

Grooving Tool

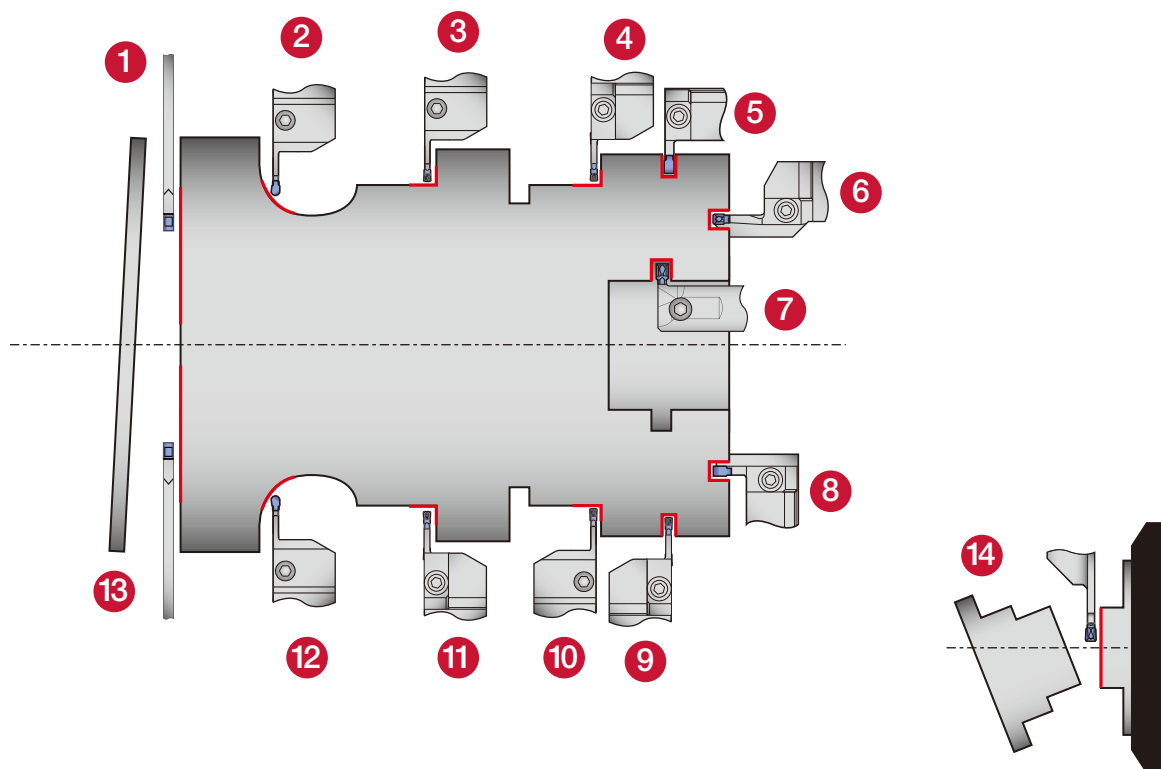
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting speed Vc (m/min)
P	Steels C45, 34CrMo4, etc.	< 300 HB	First choice	AH7025, AH725	50 - 180
		< 300 HB	Priority for wear resistance	T9125	80 - 200
		< 300 HB	Priority for impact resistance	GH130	50 - 120
		< 300 HB	Priority for surface finish	NS9530	80 - 220
M	Stainless steels X10CrNiS18-9, etc.	< 200 HB	First choice	AH7025, AH725	50 - 120
		< 200 HB	Priority for impact resistance	GH130	50 - 120
K	Grey cast irons GG25, 250, etc.	-	First choice	GH130	50 - 180
	Ductile cast irons GGG45, 450-10S, etc.	-	First choice	GH130	50 - 120
N	Aluminium alloys Si < 12%	-	First choice	TH10	100 - 500
S	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	AH905	20 - 80
		< HRC 40	Priority for impact resistance	AH7025, AH725	20 - 80
H	Hardened steels 34CrMo4, etc.	> HRC 50	First choice	BX360	80 - 150

TUNGALLOY

**MY-T SERIES** - Quick Guide

Wide variety of tools dramatically reduce set up time



External



Internal



Face Grooving



Parting-off



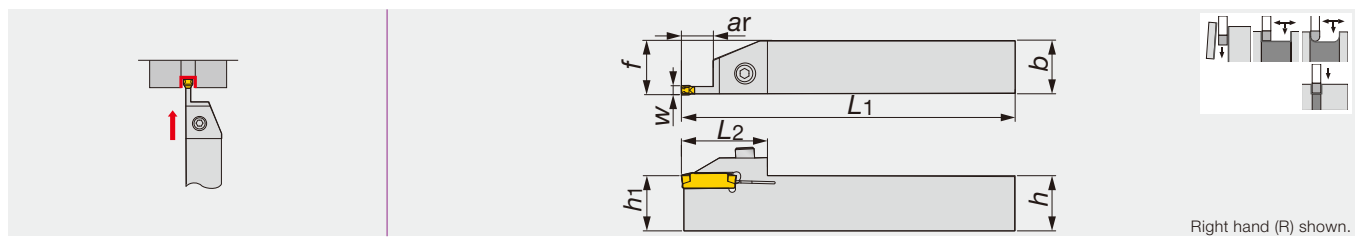
Others

- | | | | | |
|---|---|---|--|---|
| 1 CCH
1 corner
$W = 3 - 5 \text{ mm}$
Max. parting Dia.:
120 mm
Shank size:
20 - 32 mm
Page C094 | 2 CGSSR/L-D
1 corner
Monoblock type
$W = 3 - 5 \text{ mm}$
$ar = 22 - 25 \text{ mm}$
Shank size:
16 - 25 mm
Page C093 | 3 CGSSR/L
1 corner
Monoblock type
$W = 2 - 5 \text{ mm}$
$ar = 12 - 16 \text{ mm}$
Shank size:
16 - 25 mm
Page C093 | 4 CGWSR/L-G
1 corner
Adaptor type
$W = 2 - 5 \text{ mm}$
$ar = 12 \text{ mm}$
Shank size:
20 - 25 mm
Page C092 | 5 CGWTR/L-G
1 corner
Adaptor type
$W = 2 - 5 \text{ mm}$
$ar = 12 \text{ mm}$
Shank size:
20 - 25 mm
Page C092 |
| 6 CGWSR/L
*S/D*L/R
1 corner
Adaptor type
$W = 3 - 5 \text{ mm}$
$ar = 10 - 22 \text{ mm}$
Shank size:
20 - 25 mm
Page C095 | 7 CGTR/L
1 corner
Monoblock type
$W = 3 - 5 \text{ mm}$
$ar = 3.5 - 6 \text{ mm}$
Shank size:
$\varnothing 25 - \varnothing 40 \text{ mm}$
Page C097 | 8 CGWTR/L
*S/D*L/R
1 corner
Adaptor type
$W = 3 - 5 \text{ mm}$
$ar = 10 - 22 \text{ mm}$
Shank size:
20 - 25 mm
Page C096 | 9 CGWSR/L-WG
2 corner
Adaptor type
$W = 3 - 5 \text{ mm}$
$ar = 12 - 13 \text{ mm}$
Shank size:
20 - 25 mm
Page C088 | 10 CGWSR/L-W
2 corner
Monoblock type
$W = 3 - 5 \text{ mm}$
$ar = 12 - 13 \text{ mm}$
Shank size:
16 - 25 mm
Page C087 |
| 11 CGWSR/L
-WG-L
2 corner
Adaptor type
$W = 2 - 5 \text{ mm}$
$ar = 15 - 21.5 \text{ mm}$
Shank size:
20 - 25 mm
Page C088 | 12 CGWSR/L
-W-L
2 corner
Monoblock type
$W = 3 - 5 \text{ mm}$
$ar = 15 - 21.5 \text{ mm}$
Shank size:
16 - 25 mm
Page C087 | 13 CCH-W
2 corner
$W = 2 - 5 \text{ mm}$
Max. parting Dia.:
42 mm
Shank size:
20 - 32 mm
Page C089 | 14 JCGSSR/L
1 corner
For swiss type machine
$W = 2 \text{ mm}$
Max. parting Dia.:
32 mm
Shank size:
10 - 16 mm
Page C094 | |

MY-T SERIES

CGWSR/L-W

External toolholders for grooving & parting & turning



Designation	W	ar	h	b	L1	L2	h1	f	Insert
CGWSR/L1616-W30	3	12	16	16	125	34	16	16.4	WG*30, WGE30R/L
CGWSR/L2020-W30	3	12	20	20	150	34	20	20.4	WG*30, WGE30R/L
CGWSR/L2525-W30	3	12	25	25	150	34	25	25.4	WG*30, WGE30R/L
CGWSR/L2020-W40	4	13	20	20	150	39	20	20.4	WG*40, WGE40R/L
CGWSR/L2525-W40	4	13	25	25	150	39	25	25.4	WG*40, WGE40R/L
CGWSR/L2020-W50	5	13	20	20	150	39	20	20.4	WG*50, WGE50R/L
CGWSR/L2525-W50	5	13	25	25	150	39	25	25.4	WG*50, WGE50R/L

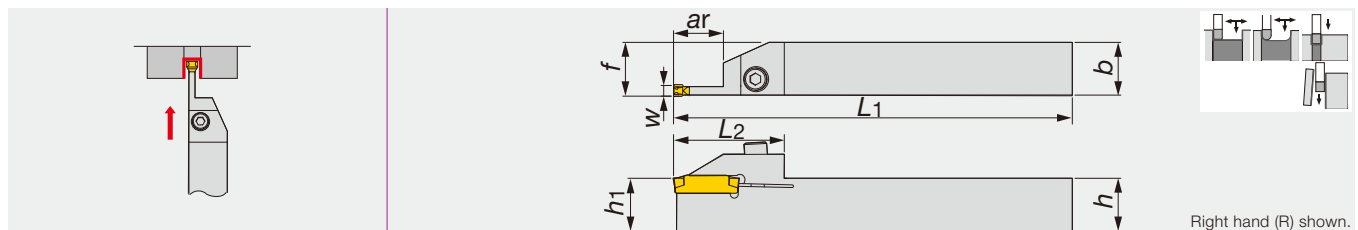
SPARE PARTS

Designation	Clamping screw	Wrench
CGWSR/L***-W...	CHHM5-18	P-4

MY-T SERIES

CGWSR/L-W-L

External toolholders for deep grooving & parting & turning



Designation	W	ar	h	b	L1	L2	h1	f	Insert
CGWSR/L1616-W20-L	2	15	16	16	125	37	16	16.2	WGE20, WGE20R/L
CGWSR/L2020-W20-L	2	15	20	20	150	37	20	20.2	WGE20, WGE20R/L
CGWSR/L2525-W20-L	2	15	25	25	150	37	25	25.2	WGE20, WGE20R/L
CGWSR/L1616-W30-L	3	16.5, 17.5	16	16	125	37	16	16.4	WG*30, WGE30R/L
CGWSR/L2020-W30-L	3	16.5, 17.5	20	20	150	37	20	20.4	WG*30, WGE30R/L
CGWSR/L2525-W30-L	3	16.5, 17.5	25	25	150	37	25	25.4	WG*30, WGE30R/L
CGWSR/L2020-W40-L	4	21, 21.5	20	20	150	42	20	20.4	WG*40, WGE40R/L
CGWSR/L2525-W40-L	4	21, 21.5	25	25	150	42	25	25.4	WG*40, WGE40R/L
CGWSR/L2020-W50-L	5	21	20	20	150	42	20	20.4	WG*50, WGE50R/L
CGWSR/L2525-W50-L	5	21	25	25	150	42	25	25.4	WG*50, WGE50R/L

SPARE PARTS

Designation	Clamping screw	Wrench
CGWSR/L***-W**-L	CHHM5-18	P-4

Reference pages

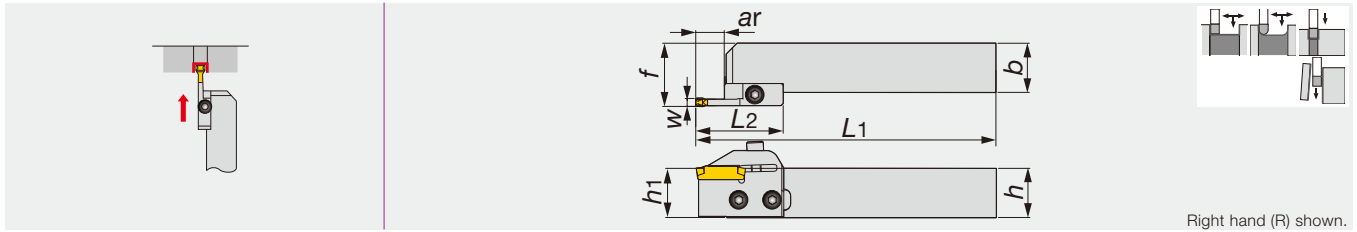
Inserts → C090 - C091, Standard cutting conditions → C091



MY-T SERIES

CGWSR/L-WG

External toolholders for grooving & parting & turning



Designation	W	ar	h	b	L1	L2	h1	f	Insert	Shank	Blade
CGWSR/L2020-W30GR/L	3	12	20	20	150.5	43.5	20	26.9	WG*30, WGE30R/L	CGWSR/L2020	W30GR/L
CGWSR/L2525-W30GR/L	3	12	25	25	150.5	43.5	25	31.9	WG*30, WGE30R/L	CGWSR/L2525	W30GR/L
CGWSR/L2020-W40GR/L	4	13	20	20	151.5	44.5	20	26.9	WG*40, WGE40R/L	CGWSR/L2020	W40GR/L
CGWSR/L2525-W40GR/L	4	13	25	25	151.5	44.5	25	31.9	WG*40, WGE40R/L	CGWSR/L2525	W40GR/L
CGWSR/L2020-W50GR/L	5	13	20	20	151.5	44.5	20	26.9	WG*50, WGE50R/L	CGWSR/L2020	W50GR/L
CGWSR/L2525-W50GR/L	5	13	25	25	151.5	44.5	25	31.9	WG*50, WGE50R/L	CGWSR/L2525	W50GR/L

- When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

SPARE PARTS

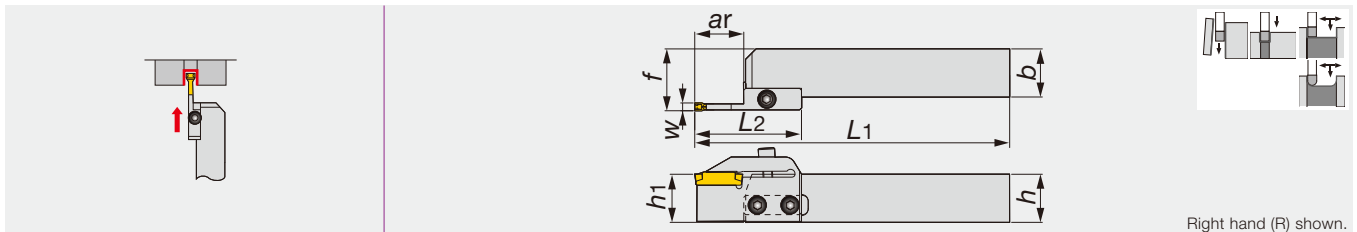
Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-W**GR/L	CHHM5-18	CSHB-6	P-4



MY-T SERIES

CGWSR/L-WG-L

External toolholders for deep grooving & parting & turning



Designation	W	ar	h	b	L1	L2	h1	f	Insert	Shank	Blade
CGWSR/L2020-W20GR/L-L	2	15	20	20	153.5	46.5	20	26.7	WGE20, WGE20R/L	CGWSR/L2020	W20GR/L-L
CGWSR/L2525-W20GR/L-L	2	15	25	25	153.5	46.5	25	31.7	WGE20, WGE20R/L	CGWSR/L2525	W20GR/L-L
CGWSR/L2020-W30GR/L-L	3	16.5 - 17.5	20	20	157.5	50.5	20	26.9	WG*30, WGE30R/L	CGWSR/L2020	W30GR/L-L
CGWSR/L2525-W30GR/L-L	3	16.5 - 17.5	25	25	157.5	50.5	25	31.9	WG*30, WGE30R/L	CGWSR/L2525	W30GR/L-L
CGWSR/L2020-W40GR/L-L	4	21 - 21.5	20	20	162.5	55.5	20	26.9	WG*40, WGE40R/L	CGWSR/L2020	W40GR/L-L
CGWSR/L2525-W40GR/L-L	4	21 - 21.5	25	25	162.5	55.5	25	31.9	WG*40, WGE40R/L	CGWSR/L2525	W40GR/L-L
CGWSR/L2020-W50GR/L-L	5	21	20	20	162.5	55.5	20	26.9	WG*50, WGE50R/L	CGWSR/L2020	W50GR/L-L
CGWSR/L2525-W50GR/L-L	5	21	25	25	162.5	55.5	25	31.9	WG*50, WGE50R/L	CGWSR/L2525	W50GR/L-L

- When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

SPARE PARTS

Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-W**GR/L-L	CHHM5-18	CSHB-6	P-4

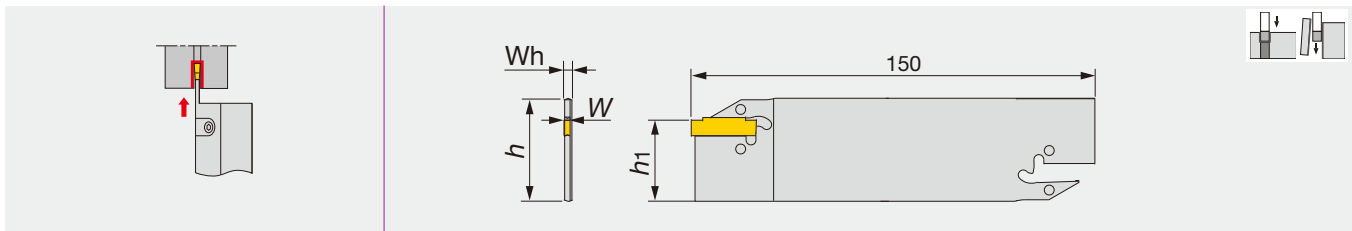


Reference pages

Inserts → C090 - C091, Standard cutting conditions → C091

CCH-W

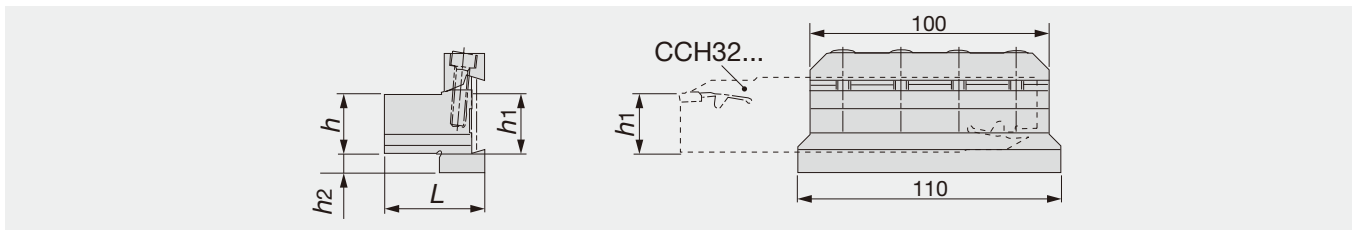
Blades for external grooving & parting off (2 corner)



Designation	W	Applicable insert	Max. parting off dia.	Wh	h1	h
CCH32-W20	2	WGE20, WGE20R/L	33	1.6	24.6	(32)
CCH32-W30	3	WG*30, WGE30R/L	33	2.2	24.6	(32)
CCH32-W40	4	WG*40, WGE40R/L	42	3.2	24.5	(32)
CCH32-W50	5	WG*50, WGE50R/L	42	4.2	24.3	(32)

CCBS-32

Tool block for CCH blades



Designation	h	h1	h2	L	Blade
CCBS20-32	20	20	13	38	CCH32...
CCBS25-32	25	25	8	42	CCH32...
CCBS32-32	32	32	5	42	CCH32...

SPARE PARTS

Designation	Clamp	Screw	Wrench
CCBS*-32	CC-32	CM6X25	P-5

Grooving Tool

MY-T SERIES

External

Parting-off

Reference pages

Inserts → C090 - C091, Standard cutting conditions → C091

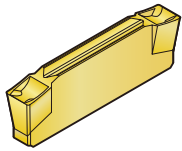


MY-T SERIES - Chipbreaker Guide

2 corner inserts

External grooving and parting off

WGE

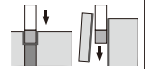
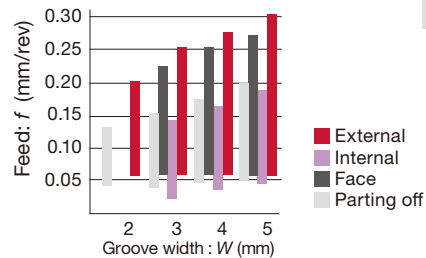


Page C091

1st choice for external grooving and parting

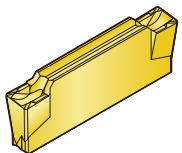
Excellent chip control for grooving

W = 2 - 5 mm



Parting off

WGE R/L

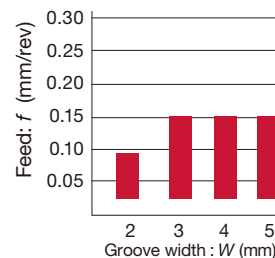


Page C091

Handed insert

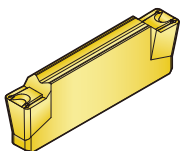
Minimize burr generation when workpiece is cut off

W = 2 - 5 mm



External grooving and traversing

WGT

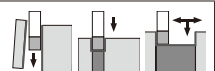
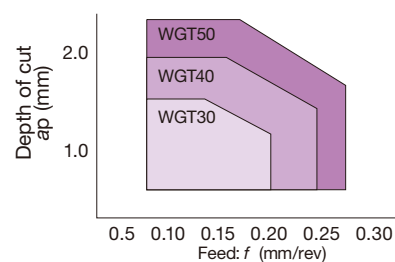


Page C091

1st choice for traversing

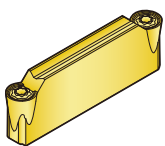
Low cutting force and good chip control for traversing

W = 3 - 5 mm



Profiling

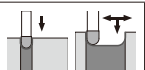
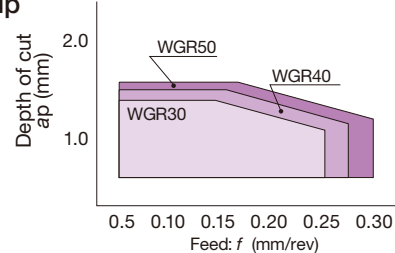
WGR

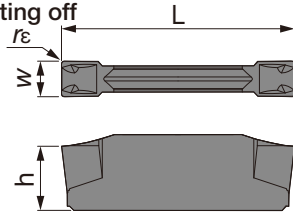


Page C091

Low cutting force and good chip control for profiling

W = 3 - 5 mm



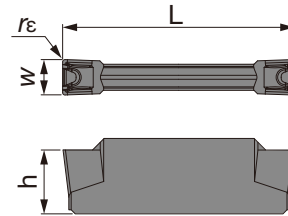
WGEFor general parting off
and grooving

Designation	$W_{0.1}^{+0.1}$	r_ϵ	Coated			L	h
			T9125	GH730	NS9530		
WGE20	2	0.2	●	●	●	20	4.7
WGE30	3	0.2	●	●	●	20	5.5
WGE40	4	0.2	●	●	●	25	5.7
WGE50	5	0.2	●	●	●	25	5.9

● : Line up

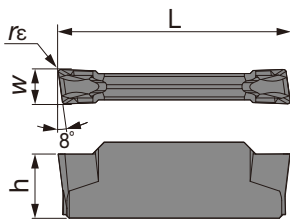
WGT

For traversing



Designation	$W_{0.1}^{+0.1}$	r_ϵ	Coated			L	h
			T9125	GH730	NS9530		
WGT30	3	0.4	●	●	●	20	5.5
WGT40	4	0.4	●	●	●	25	5.7
WGT50	5	0.4	●	●	●	25	5.9

● : Line up

WGER/LFor parting off
(with hand)

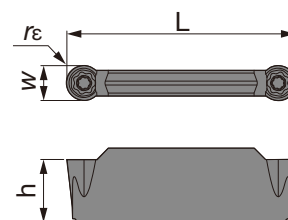
Right hand (R) shown.

Designation	$W_0^{+0.1}$	r_ϵ	Coated		L	h
			GH730			
			R	L		
WGE20R/L	2	0.2	●	●	20	4.7
WGE30R/L	3	0.2	●	●	20	5.5
WGE40R/L	4	0.2	●	●	25	5.7
WGE50R/L	5	0.2	●	●	25	5.9

● : Line up

WGR

For profiling



Designation	$W_{0.1}^{+0.1}$	r_ϵ	Coated			L	h
			T9125	GH730	NS9530		
WGR30	3	1.5	●	●	●	20	5.5
WGR40	4	2	●	●	●	25	5.7
WGR50	5	2.5	●	●	●	25	5.9

● : Line up

STANDARD CUTTING CONDITIONS

Workpiece material	Recommended grade	Cutting speed v_c (m/min)
Low carbon steels Alloy steels (~ HB150)	T9125	80 ~ 200
	NS9530	100 ~ 200
	GH730	50 ~ 180
Medium carbon steels Alloy steels (HB150 ~ 250)	T9125	80 ~ 180
	NS9530	80 ~ 180
	GH730	50 ~ 150
High carbon steels Alloy steels (HB250 ~)	T9125	80 ~ 150
	NS9530	80 ~ 150
	GH730	50 ~ 120
Stainless steels	T9125	80 ~ 150
	GH730	50 ~ 120
Grey and ductile cast irons	T9125	80 ~ 200
	GH730	50 ~ 180

Operation	Feed: f (mm/rev)			
	Groove width: W (mm)			
	2	3	4	5
Grooving (WGE□□)	0.06 ~ 0.20	0.06 ~ 0.25	0.07 ~ 0.27	0.07 ~ 0.30
Parting off (WGE□□R/L)	0.04 ~ 0.10	0.04 ~ 0.14	0.04 ~ 0.14	0.04 ~ 0.14
Traversing (WGT□□)	-	$ap = 0.5 \sim 1.5$ $f = 0.06 \sim 0.2$	$ap = 0.5 \sim 2.0$ $f = 0.06 \sim 0.25$	$ap = 0.5 \sim 2.5$ $f = 0.06 \sim 0.27$
Profiling (WGR□□)	-	$ap = 0.5 \sim 1.4$ $f = 0.05 \sim 0.25$	$ap = 0.5 \sim 1.5$ $f = 0.05 \sim 0.26$	$ap = 0.5 \sim 1.6$ $f = 0.05 \sim 0.3$

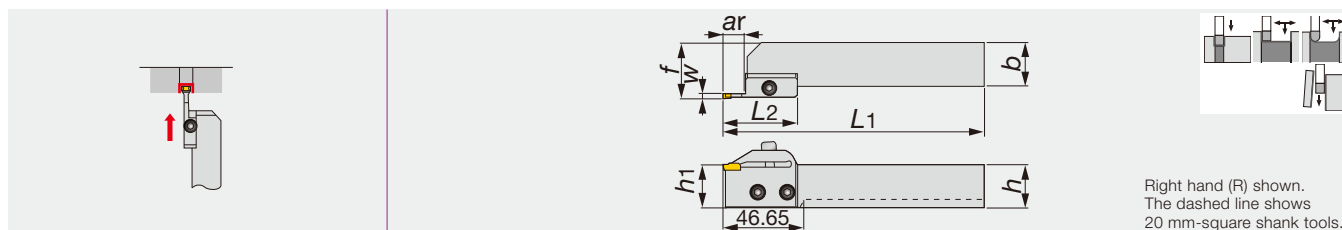
Note: For diameter compensation values in traversing, see page C104.



MY-T SERIES

CGWSR/L-G

External toolholders for grooving & parting & turning



Designation	W	ar	h	b	L1	L2	h1	f	Insert	Shank	Blade
CGWSR/L2020-20GR/L	2	12	20	20	150.2	43.15	20	26.8	GE20, GE20-AL	CGWSR/L2020	20GR/L
CGWSR/L2525-20GR/L	2	12	25	25	150.2	43.15	25	31.8	GE20, GE20-AL	CGWSR/L2525	20GR/L
CGWSR/L2020-30GR/L	3	12	20	20	150.2	43.15	20	27	G*30,GE30R/L,GE30-AL	CGWSR/L2020	30GR/L
CGWSR/L2525-30GR/L	3	12	25	25	150.2	43.15	25	32	G*30,GE30R/L,GE30-AL	CGWSR/L2525	30GR/L
CGWSR/L2020-40GR/L	4	12	20	20	150.2	43.15	20	27.1	G*40,GE40R/L,GE40-AL	CGWSR/L2020	40GR/L
CGWSR/L2525-40GR/L	4	12	25	25	150.2	43.15	25	32.1	G*40,GE40R/L,GE40-AL	CGWSR/L2525	40GR/L
CGWSR/L2020-50GR/L	5	12	20	20	150.2	43.15	20	27.2	G*50,GE50R	CGWSR/L2020	50GR

Note: For diameter compensation values in traversing, see page C104.

When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

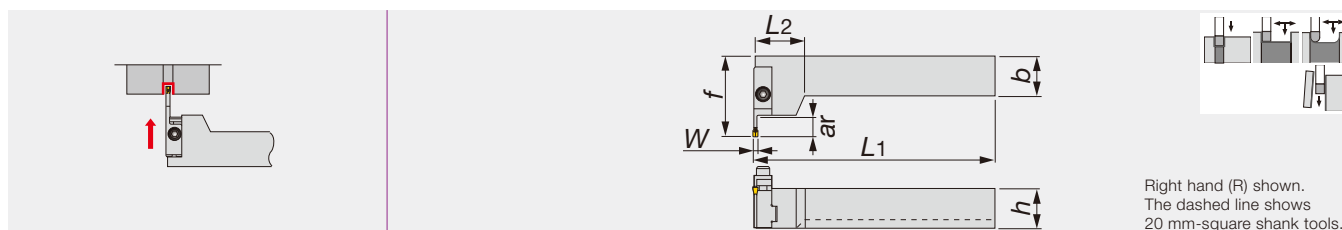
SPARE PARTS

Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-**GR/L	CHHM5-18	CSHB-6	P-4

MY-T SERIES

CGWTR/L-G

External toolholders for grooving & parting & turning



Designation	W	ar	h	b	L1	L2	f	Insert	Shank	Blade
CGWTR/L2020-30GL/R	3	12	20	20	150	12.9	49.9	G*30,GE30R/L,GE30-AL	CGWTR/L2020	30GL/R
CGWTR/L2525-30GL/R	3	12	25	25	150	12.9	49.9	G*30,GE30R/L,GE30-AL	CGWTR/L2525	30GL/R
CGWTR/L2020-40GL/R	4	12	20	20	150.1	12.9	49.9	G*40,GE40R/L,GE40-AL	CGWTR/L2020	40GL/R
CGWTR/L2525-40GL/R	4	12	25	25	150.1	12.9	49.9	G*40,GE40R/L,GE40-AL	CGWTR/L2525	40GL/R
CGWTR/L2020-50GL/R	5	12	20	20	150.2	12.9	49.9	G*50,GE50R/L,GE50-AL	CGWTR/L2020	50GL/R
CGWTR/L2525-50GL/R	5	12	25	25	150.2	12.9	49.9	G*50,GE50R/L,GE50-AL	CGWTR/L2525	50GL/R

Note: For diameter compensation values in traversing, see page C104.

When using a right or left hand blade set, the right hand blade set is used with left hand shank and the left hand blade set is used with right hand shank.

SPARE PARTS

Designation	Clamping screw	Blade screw	Wrench
CGWTR/L****-**GL/R	CHHM5-18	CSHB-6	P-4

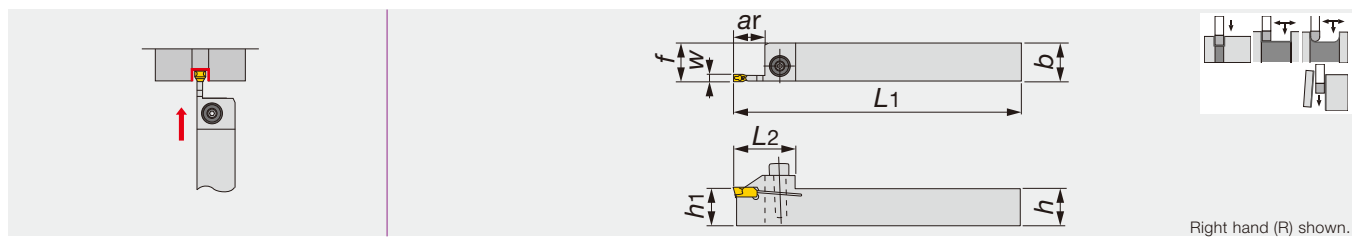
Reference pages

Inserts → **C098 - C100**, Standard cutting conditions → **C101**

MY-T SERIES

CGSSR/L

External toolholders for grooving & parting & turning



Designation	W	ar	h	b	L1	L2	h1	f	Insert
CGSSR/L1616-20	2	16	16	16	125	27	16	16.2	GE20, GE20-AL
CGSSR/L2020-20	2	16	20	20	150	27	20	20.2	GE20, GE20-AL
CGSSR/L2525-20	2	16	25	25	150	27	25	25.2	GE20, GE20-AL
CGSSR/L1616-30	3	12	16	16	125	27	16	16.5	G*30,GE30R/L,GE30-AL
CGSSR/L2020-30	3	12	20	20	150	27	20	20.5	G*30,GE30R/L,GE30-AL
CGSSR/L2525-30	3	12	25	25	150	27	25	25.5	G*30,GE30R/L,GE30-AL
CGSSR/L2020-40	4	12	20	20	150	27	20	20.6	G*40,GE40R/L,GE40-AL
CGSSR/L2525-40	4	12	25	25	150	27	25	25.6	G*40,GE40R/L,GE40-AL
CGSSR/L2020-50	5	12	20	20	150	27	20	20.7	G*50,GE50R/L,GE50-AL
CGSSR/L2525-50	5	12	25	25	150	27	25	25.7	G*50,GE50R/L,GE50-AL

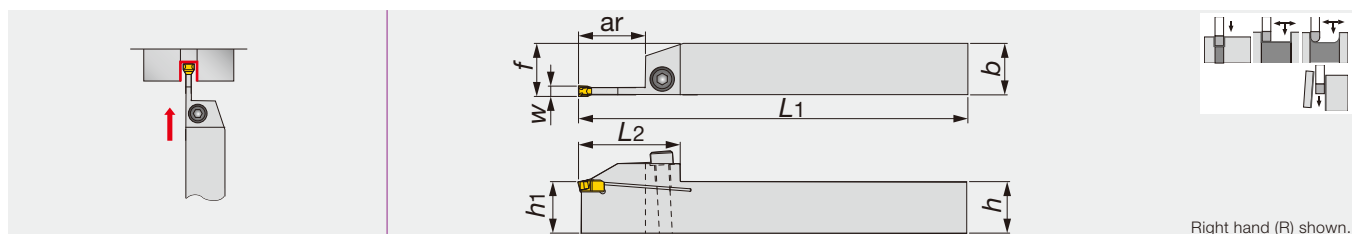
SPARE PARTS

Designation	Clamping screw	Wrench
CGSSR/L...	CHHM5-18	P-4

MY-T SERIES

CGSSR/L-D

External toolholders for deep grooving & parting & turning



Designation	W	ar	h	b	L1	L2	h1	f	Insert
CGSSR/L1616-30D	3	22	16	16	125	36.2	16	16.5	G*30,GE30R/L,GE30-AL
CGSSR/L2020-30D	3	22	20	20	150	36.2	20	20.5	G*30,GE30R/L,GE30-AL
CGSSR/L2525-30D	3	22	25	25	150	36.2	25	25.5	G*30,GE30R/L,GE30-AL
CGSSR/L2020-40D	4	25	20	20	150	39.5	20	20.6	G*40,GE40R/L,GE40-AL
CGSSR/L2525-40D	4	25	25	25	150	39.5	25	25.6	G*40,GE40R/L,GE40-AL
CGSSR/L2020-50D	5	25	20	20	150	39.5	20	20.7	G*50,GE50R/L
CGSSR/L2525-50D	5	25	25	25	150	39.5	25	25.7	G*50,GE50R/L

SPARE PARTS

Designation	Clamping screw	Wrench
CGSSR/L***-D	CHHM5-18	P-4

Reference pages

Inserts → C098 - C100, Standard cutting conditions → C101

Tungaloy C093

Grooving Tool

MY-T SERIES

External

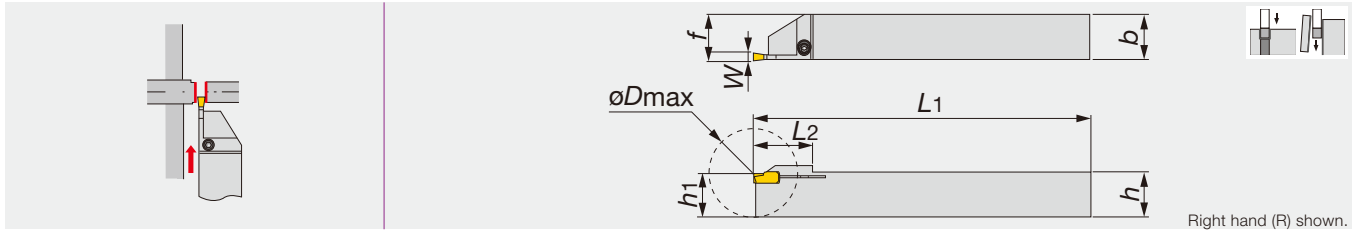
Parting-off

Others

MY-T SERIES

JCGSSR/L

External grooving toolholders for swiss lathe



Right hand (R) shown.

Designation	W	øDmax	h	b	L1	L2	h1	f	Insert
JCGSSR/L1010-20	2	20	10	10	125	15	10	10.2	GE20, GE20-AL
JCGSSR/L1212-20	2	25	12	12	125	19	12	12.2	GE20, GE20-AL
JCGSSR/L1616-20	2	32	16	16	125	22.5	16	16.2	GE20, GE20-AL

• øDmax: Max. parting off diameter

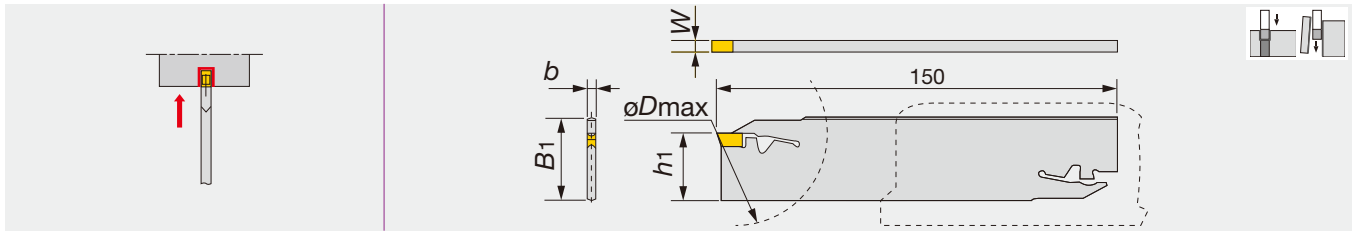
SPARE PARTS

Designation	Clamping screw	Wrench
JCGSSR/L...	CSTB-3	T-9F

MY-T SERIES

CCH

Blades for external grooving & parting off (for 1 corner insert)



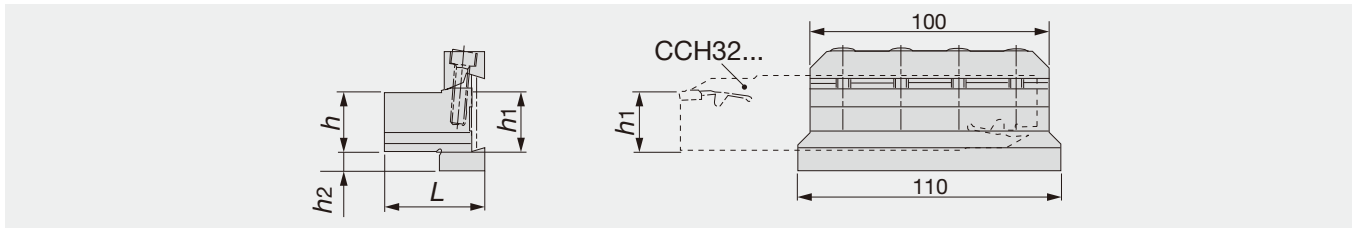
Designation	W	øDmax	b	h1	B1	Insert
CCH32-30	3	100	2.2	24.6	31.31	GE30, GE30R/L, GE30-AL
CCH32-40	4	100	3.2	24.5	31.04	GE40, GE40R/L, GE40-AL
CCH32-50	5	120	4.2	24.3	30.77	GE50, GE50R/L, GE50-AL

SPARE PARTS

Designation	Wrench
CCH...	CTL-2

CCBS-32

Tool block for CCH blades



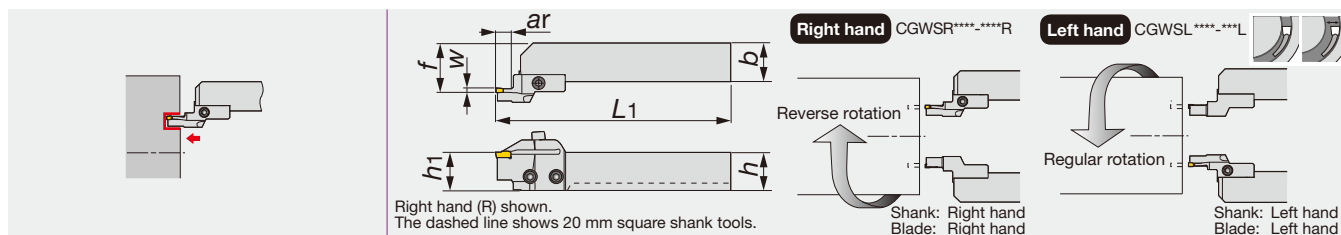
Designation	h	h1	h2	L	Blade
CCBS20-32	20	20	13	38	CCH32...
CCBS25-32	25	25	8	42	CCH32...
CCBS32-32	32	32	5	42	CCH32...

SPARE PARTS

Designation	Clamp	Screw	Wrench
CCBS*-32	CC-32	CM6X25	P-5

Reference pages

Inserts → C098 - C100, Standard cutting conditions → C101



Designation	W	øD _m	øD _{max}	ar	h	b	L ₁	h ₁	f	Insert	Shank
30S3040R/L	3	30	40	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...
30S4050R/L	3	40	50	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...
30S5065R/L	3	50	65	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...
30S6590R/L	3	65	90	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...
30S90150R/L	3	90	150	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...
30S150500R/L	3	150	500	10	20/25	20/25	152.5	20/25	27/32	G*30, GE30-AL	CGWSR/L...
40S3545R/L	4	35	45	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...
40S4555R/L	4	45	55	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...
40S5580R/L	4	55	80	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...
40S80140R/L	4	80	140	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...
40S140500R/L	4	140	500	14	20/25	20/25	152.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...
40D3545R/L	4	35	45	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...
40D4555R/L	4	45	55	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...
40D5580R/L	4	55	80	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...
40D80140R/L	4	80	140	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...
40D140500R/L	4	140	500	22	20/25	20/25	160.5	20/25	27/32	G*40, GE40-AL	CGWSR/L...
50S3545R/L	5	35	45	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...
50S4555R/L	5	45	55	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...
50S5575R/L	5	55	75	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...
50S75130R/L	5	75	130	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...
50S130500R/L	5	130	500	14	20/25	20/25	152.5	20/25	27/32	G*50	CGWSR/L...
50D3545R/L	5	35	45	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...
50D4555R/L	5	45	55	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...
50D5575R/L	5	55	75	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...
50D75130R/L	5	75	130	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...
50D130500R/L	5	130	500	22	20/25	20/25	160.5	20/25	27/32	G*50	CGWSR/L...

- There are 2 shank type of CGWSR/L and CGWTR/L.
- CGWSR/L Shank : The right hand blade set(...R) is used with right hand shank(CGWSR...) and the left hand blade set(...L) is used with left hand shank(CGWSL...).
- CGWTR/L Shank : The left hand blade set(...L) is used with right hand shank(CGWTR...) and the right hand blade set(...R) is used with left hand shank(CGWTL...).

SPARE PARTS

Designation	Clamping screw	Blade screw	Wrench
30S..., 40S...	CHHM5-18	CSHB-6	P-4
40D...	CM5X0.8X16	CSHB-6	P-4
50S...	CHHM5-18	CSHB-6	P-4
50D...	CM5X0.8X16	CSHB-6	P-4

Reference pages

Inserts → C098 - C100, Standard cutting conditions → C101



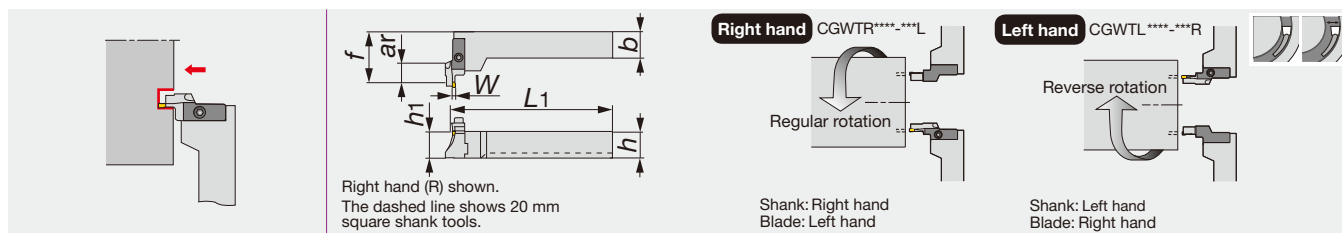
Grooving Tool

MY-T SERIES

MY-T SERIES

#S/D##R/L+CGWTR/L

Blades of "My-T" toolholders CGWSR/L-#S/D & CGWTR/L-#S/D for face grooving & turning



Designation	W	ϕD_m	ϕD_{max}	ar	h	b	L1	h1	f	Insert	Shank
30S3040R/L	3	30	40	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...
30S4050R/L	3	40	50	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...
30S5065R/L	3	50	65	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...
30S6590R/L	3	65	90	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...
30S90150R/L	3	90	150	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...
30S150500R/L	3	150	500	10	20/25	20/25	150	20/25	52.25	G*30, GE30-AL	CGWTL/R...
40S3545R/L	4	35	45	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...
40S4555R/L	4	45	55	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...
40S5580R/L	4	55	80	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...
40S80140R/L	4	80	140	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...
40S140500R/L	4	140	500	14	20/25	20/25	150	20/25	52.25	G*40, GE40-AL	CGWTL/R...
40D3545R/L	4	35	45	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...
40D4555R/L	4	45	55	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...
40D5580R/L	4	55	80	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...
40D80140R/L	4	80	140	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...
40D140500R/L	4	140	500	22	20/25	20/25	150	20/25	60.25	G*40, GE40-AL	CGWTL/R...
50S3545R/L	5	35	45	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...
50S4555R/L	5	45	55	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...
50S5575R/L	5	55	75	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...
50S75130R/L	5	75	130	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...
50S130500R/L	5	130	500	14	20/25	20/25	150	20/25	52.25	G*50	CGWTL/R...
50D3545R/L	5	35	45	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...
50D4555R/L	5	45	55	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...
50D5575R/L	5	55	75	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...
50D75130R/L	5	75	130	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...
50D130500R/L	5	130	500	22	20/25	20/25	150	20/25	60.25	G*50	CGWTL/R...

- There are 2 shank type of CGWSR/L and CGWTR/L.
- CGWSR/L Shank : The right hand blade set(...R) is used with right hand shank(CGWSR...) and the left hand blade set(...L) is used with left hand shank(CGWSL...).
- CGWTR/L Shank : The left hand blade set(...L) is used with right hand shank(CGWTR...) and the right hand blade set(...R) is used with left hand shank(CGWTL...).

SPARE PARTS

Designation	Clamping screw	Blade screw	Wrench
30S..., 40S...	CHHM5-18	CSHB-6	P-4
40D...	CM5X0.8X16	CSHB-6	P-4
50S...	CHHM5-18	CSHB-6	P-4
50D...	CM5X0.8X16	CSHB-6	P-4

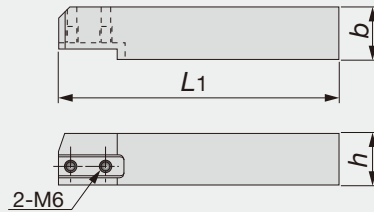
Reference pages

Inserts → C098 - C100, Standard cutting conditions → C101

MY-T SERIES

CGWSR/L

Shank of toolholders CGWSR/L-WG, -WG-L, -G, -CGD, -FL-G/TP & -#S/D



Right hand (R) shown.

Designation	h	b	L1
CGWSR/L2020	20	20	137
CGWSR/L2525	25	25	137

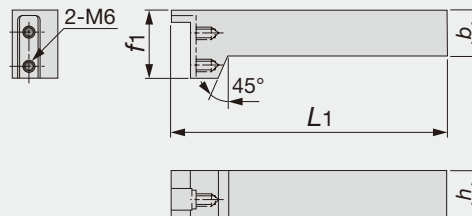
SPARE PARTS

Designation	Blade screw
CGWSR/L...	CSHB-6

MY-T SERIES

CGWTR/L

Shank of perpendicular toolholders CGWTR/L-G, -CGD, -FL & -#S/D



Right hand (R) shown.

Designation	h	b	L1	f1
CGWTR/L2020	20	20	150	37
CGWTR/L2525	25	25	150	37

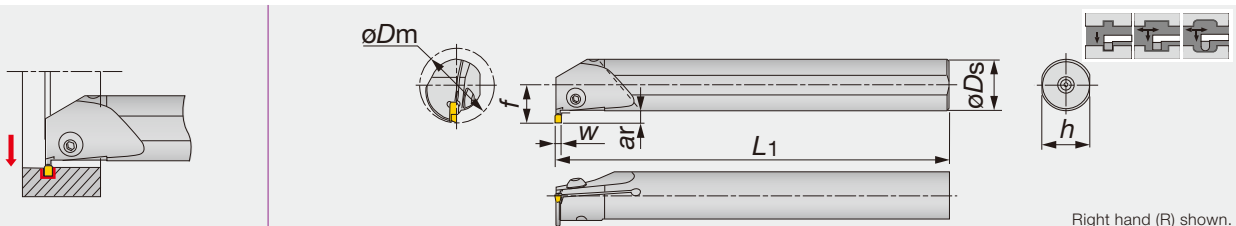
SPARE PARTS

Designation	Blade screw
CGWTR/L...	CSHB-6

MY-T SERIES

CGTR/L

Toolholders for internal grooving



Right hand (R) shown.

Designation	W	øDm	ar	øDs	f	L1	h	Insert
S20Q-CGTR/L30	3	25	3.5	20	14.5	180	18	G*30, GE30-AL
S25R-CGTR/L30	3	32	5	25	18.5	200	23	G*30, GE30-AL
S25R-CGTR/L40	4	32	5	25	18.5	200	23	G*40, GE40-AL
S32S-CGTR/L40	4	40	6	32	23	250	30	G*40, GE40-AL
S25R-CGTR/L50	5	32	5	25	18.5	200	23	G*50
S32S-CGTR/L50	5	40	6	32	23	250	30	G*50

SPARE PARTS

Designation	Clamping screw	Wrench
S***-CGTR/L...	BHM5-14	P-3

Reference pages

Inserts → C098 - C100, Standard cutting conditions → C101

Grooving Tool

MY-T SERIES

Internal

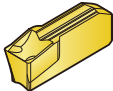
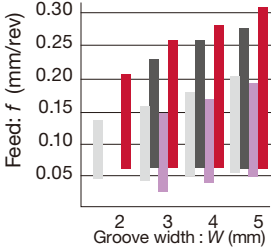
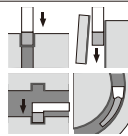
Others



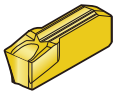
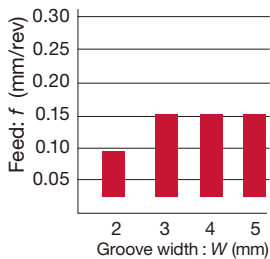
MY-T SERIES - Chipbreaker Guide

1 corner inserts

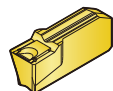
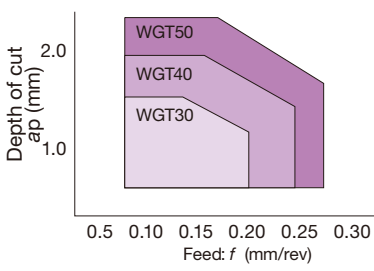
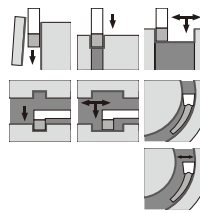
External grooving and parting off

GE  Page C100	1st choice for external grooving and parting Excellent chip control for grooving $W = 2 - 5 \text{ mm}$  
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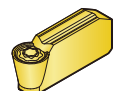
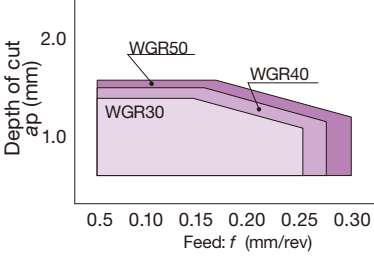
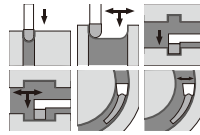
Parting off

GE R/L  Page C100	Handed insert Minimize burr generation when workpiece is cut off $W = 3 - 5 \text{ mm}$  
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Grooving and traversing

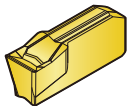
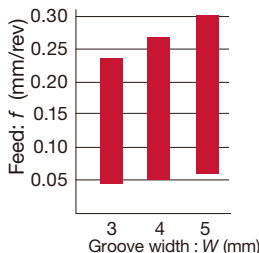
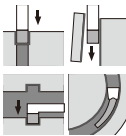
GT  Page C100	1st choice for traversing Low cutting force and good chip control for traversing $W = 3 - 5 \text{ mm}$  
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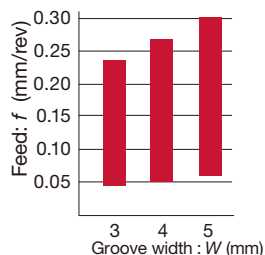
Profiling

GR  Page C100	Full radius type Low cutting force and good chip control for profiling $W = 3 - 5 \text{ mm}$  
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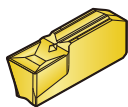
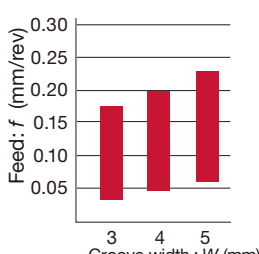
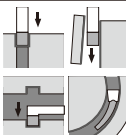
1 corner inserts

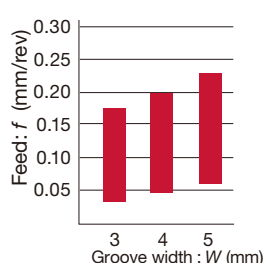
Face grooving

GF  Page C100	1st choice for face grooving Low cutting force and good chip control for face grooving $W = 3 - 5 \text{ mm}$	 
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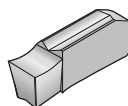
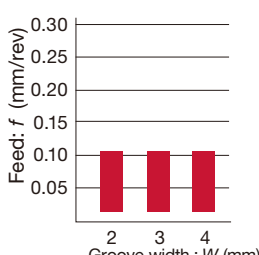
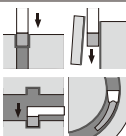


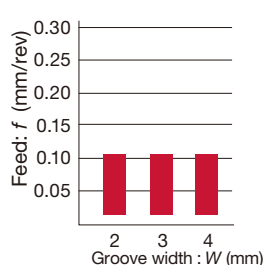
Internal grooving

GN  Page C100	1st choice for internal grooving Low cutting force and good chip control for internal grooving $W = 3 - 5 \text{ mm}$	 
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For non-ferrous materials

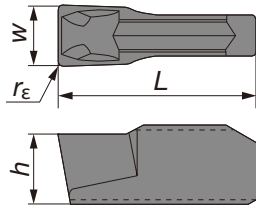
GE-AL  Page C100	Reduce cutting force and welding due to sharp chipbreaker $W = 2 - 4 \text{ mm}$	 
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INSERT

GE

For general grooving

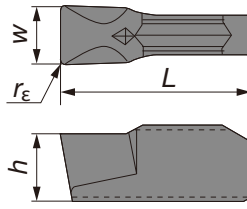


Designation	$W_{+0.1}^0$	r_ϵ	Coated			L	h
			T9125	GH730	NS9530		
GE20	2	0.2		●	●	10	3.5
GE30	3	0.2	●	●	●	10	3.5
GE40	4	0.2	●	●	●	10	4
GE50	5	0.2	●	●	●	12	4.5

● : Line up

GN

For internal grooving



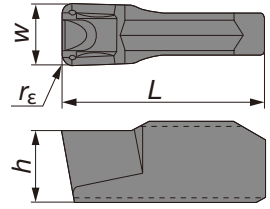
Designation	$W_0^{+0.1}$	r_ε	Coated	L	h
			GH730		
GN30	3	0.2	●	10	3.5
GN40	4	0.2	●	10	4
GN50	5	0.2	●	12	4.5

● : Line up

● : Line up

GT

For traversing

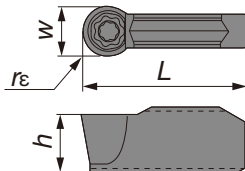


Designation	$W_{+0.1}^0$	r_ϵ	Coated			L	h
			T9125	GH730	NS9530		
GT30	3	0.4		●	●	10	3.5
GT40	4	0.4		●	●	10	4
GT50	5	0.4	●	●	●	12	4.5

● : Line up

GR

For profiling

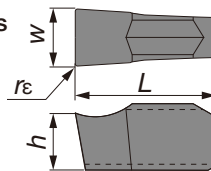


Designation	$W_{+0.1}^0$	r_ϵ	Coated			L	h
			T9125	GH730	NS9530		
GR30	3	1.5		●	●	10	3.5
GR40	4	2.0	●	●	●	10	4
GR50	5	2.5	●	●	●	12	4.5

● : Line up

GE-AL

For aluminium and non-ferrous metals



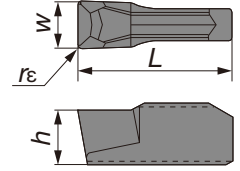
Designation	$W_{\pm 0.025}$	r_{ϵ}	Uncoated	L	h
			KS05F		
GE20-AL	2	0.2	●	10	3.5
GE30-AL	3	0.2	●	10	3.5
GE40-AL	4	0.2	●	10	4

● : Line up

● : Line up

GF

For face grooving (Improved chip control)

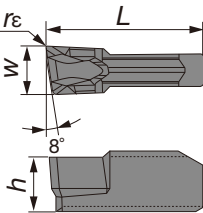


Designation	$W_{+0.1}^0$	r_ϵ	Coated		L	h
			GH730	NS9530		
GF30	3	0.2	●	●	10	3.5
GF40	4	0.2	●	●	10	4
GF50	5	0.2	●	●	12	4.5

● : Line up

GE-R/L

For parting off (handed insert)



Right hand (R) shown.

Designation	$W_0^{+0.1}$	r_{ϵ}	Coated	L	h
			GH730		
GE30R/L	3	0.2	●	10	3.5
GE40R/L	4	0.2	●	10	4
GE50R/L	5	0.2	●	12	4.5

● : Line up

● : Line up

STANDARD CUTTING CONDITIONS

Workpiece material	Recommended grade	Cutting speed v_c (m/min)
Low carbon steels Alloy steels (~ HB150)	T9125	80 - 200
	NS9530	100 - 200
	GH730	50 - 180
Medium carbon steels Alloy steels (HB150 ~ 250)	T9125	80 - 180
	NS9530	80 - 180
	GH730	50 - 150
High carbon steels Alloy steels (HB250 ~)	T9125	80 - 150
	NS9530	80 - 150
	GH730	50 - 120
Stainless steels	T9125	80 - 150
	GH730	50 - 120
Grey and ductile cast irons	T9125	80 - 200
	GH730	50 - 180
Aluminium alloys, Non-ferrous metals	KS05F	200 - 300

For External

Operation	Feed: f (mm/rev)			
	Groove width: W (mm)			
	2	3	4	5
Grooving (GE**)	0.06 - 0.2	0.06 - 0.25	0.07 - 0.27	0.07 - 0.3
Parting off (GE**R/L)	0.04 - 0.1	0.04 - 0.14	0.04 - 0.14	0.04 - 0.14
Traversing (GT**)	-	Depth of cut $ap = 0.5 - 1.5$ $f = 0.06 - 0.2$	Depth of cut $ap = 0.5 - 2$ $f = 0.06 - 0.25$	Depth of cut $ap = 0.5 - 2.5$ $f = 0.06 - 0.27$
Profiling (GR**)	-	Depth of cut $ap = 0.5 - 1.4$ $f = 0.05 - 0.25$	Depth of cut $ap = 0.5 - 1.5$ $f = 0.05 - 0.26$	Depth of cut $ap = 0.5 - 1.6$ $f = 0.05 - 0.3$
Grooving for Aluminium alloys (GE**-AL)	0.03 - 0.1	0.03 - 0.1	0.03 - 0.1	-

Note: For diameter compensation values in traversing, see page **C104**.

For Face

Operation	Feed: f (mm/rev)		
	Groove width: W (mm)		
	3	4	5
Face grooving (GE**)	0.06 - 0.22	0.06 - 0.24	0.07 - 0.26
Face grooving (GF**)	0.04 - 0.25	0.05 ~ 0.26	0.05 - 0.30
Face traversing (GT**)	Depth of cut $ap = 0.5 - 1.5$ $f = 0.06 - 0.2$	Depth of cut $ap = 0.5 - 2$ $f = 0.06 - 0.25$	Depth of cut $ap = 0.5 - 2.5$ $f = 0.06 - 0.27$
Face traversing (GR**)	Depth of cut $ap = 0.5 - 1.4$ $f = 0.05 - 0.25$	Depth of cut $ap = 0.5 - 1.5$ $f = 0.05 - 0.26$	Depth of cut $ap = 0.5 - 1.6$ $f = 0.05 - 0.3$
Face grooving for aluminium alloys (GE**-AL)	0.03 - 0.1	0.03 - 0.1	-

Notes:

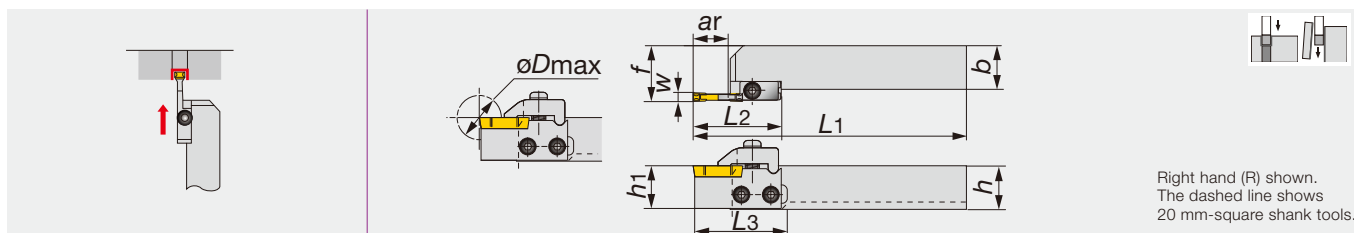
- For diameter compensation values in traversing, see page **C104**.
- For occurrence of vibrations in face traversing, set the feed to the lower side of the values show in the above table.

For Internal

Operation	Feed: f (mm/rev)		
	Groove width: W (mm)		
	3	4	5
Face grooving (GE**)	0.04 - 0.14	0.05 - 0.15	0.05 - 0.16
Face grooving (GN**)	0.04 - 0.16	0.05 - 0.18	0.05 - 0.2
Face traversing (GT**)	$ap = 0.5 - 1.5$ $f = 0.06 - 0.2$	$ap = 0.5 - 2$ $f = 0.06 - 0.25$	$ap = 0.5 - 2.5$ $f = 0.06 - 0.27$
Face traversing (GR**)	$ap = 0.5 - 1.4$ $f = 0.05 - 0.25$	$ap = 0.5 - 1.5$ $f = 0.05 - 0.26$	$ap = 0.5 - 1.6$ $f = 0.05 - 0.3$
Face grooving for aluminium alloys (GE**-AL)	0.03 ~ 0.1	0.03 ~ 0.1	-

Notes:

- For diameter compensation values in traversing, see page **C104**.
- For occurrence of vibrations in face traversing, set the feed to the lower side of the values show in the above table.



Right hand (R) shown.
The dashed line shows
20 mm-square shank tools.

Designation	W	ϕD_{max}	ar	h	b	L1	L2	L3	h1	f	Insert	Shank	Blade
CGWSR/L2020-CGDR/L2	2	35	16	20	20	152	45	48.5	20	26.45	CGD200	CGWSR/L2020	CGDR/L2
CGWSR/L2525-CGDR/L2	2	35	16	25	25	152	45	-	25	31.45	CGD200	CGWSR/L2525	CGDR/L2
CGWSR/L2020-CGDR/L3	3	46	21.6	20	20	157.6	50.6	54.1	20	26.45	CGD300	CGWSR/L2020	CGDR/L3
CGWSR/L2525-CGDR/L3	3	46	21.6	25	25	157.6	50.6	-	25	31.45	CGD300	CGWSR/L2525	CGDR/L3
CGWSR/L2020-CGDR/L4	4	46	21.6	20	20	157.6	50.6	54.1	20	26.65	CGD400	CGWSR/L2020	CGDR/L4
CGWSR/L2525-CGDR/L4	4	46	21.6	25	25	157.6	50.6	-	25	31.65	CGD400	CGWSR/L2525	CGDR/L4
CGWSR/L2020-CGDR/L5	5	46	21.6	20	20	157.6	50.6	54.1	20	26.95	CGD500	CGWSR/L2020	CGDR/L5
CGWSR/L2525-CGDR/L5	5	46	21.6	25	25	157.6	50.6	-	25	31.95	CGD500	CGWSR/L2525	CGDR/L5
CGWSR/L2020-CGDR/L6	6	46	21.6	20	20	157.6	50.6	54.1	20	27.1	CGD600	CGWSR/L2020	CGDR/L6
CGWSR/L2525-CGDR/L6	6	46	21.6	25	25	157.6	50.6	-	25	32.1	CGD600	CGWSR/L2525	CGDR/L6
CGWSR2525-8	7 / 8	50	21.6	25	25	150	-	-	25	26.35	CGD700, CGD800	-	-
CGWSR3232-8	7 / 8	50	21.6	32	32	170	-	-	32	33.35	CGD700, CGD800	-	-

When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

SPARE PARTS

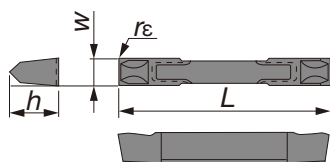
Designation	Blade	Clamp	Clamping screw	Blade screw	Spring pin	Spring	Wrench
CGWSR****-CGDR2	TCR2	CCR2	RT-1	CSHB-6	-	BP-9	P-4
CGWSL****-CGDL2	TCL2	CCL2	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-CGDR3	TCR3	CCR3	RT-1	CSHB-6	-	BP-9	P-4
CGWSL****-CGDL3	TCL3	CCL3	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-CGDR4	TCR4	CCR4	RT-1	CSHB-6	-	BP-9	P-4
CGWSL****-CGDL4	TCL4	CCL4	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-CGDR5	TCR5	CCR5	RT-1	CSHB-6	-	BP-9	P-4
CGWSL****-CGDL5	TCL5	CCL5	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-CGDR6	TCR6	CCR6	RT-1	CSHB-6	-	BP-9	P-4
CGWSL****-CGDL6	TCL6	CCL6	RT-1	CSHB-6	-	BP-9	P-4
CGWSR****-8	-	CCR/L-8	CHHM6-20	-	5X14AW	BP-9	P-5

Reference pages

Inserts, Standard cutting conditions → C103

INSERT

CGD



Designation	$W \pm 0.025$	r_ϵ	Coated	Cermet	Uncoated	L	h
			GH330	NS9530	UX30		
CGD200	2	0.2	●	●	●	20	3.25
CGD300	3	0.2	●	●	●	28.6	6.3
CGD400	4	0.2	●	●	●	28.6	6.3
CGD500	5	0.2	●	●	●	28.6	6.3
CGD600	6	0.2	●	●	●	28.6	8.5
CGD700	7	0.2	●		●	28.6	8.5
CGD800	8	0.2	●		●	28.6	8.5

● : Line up

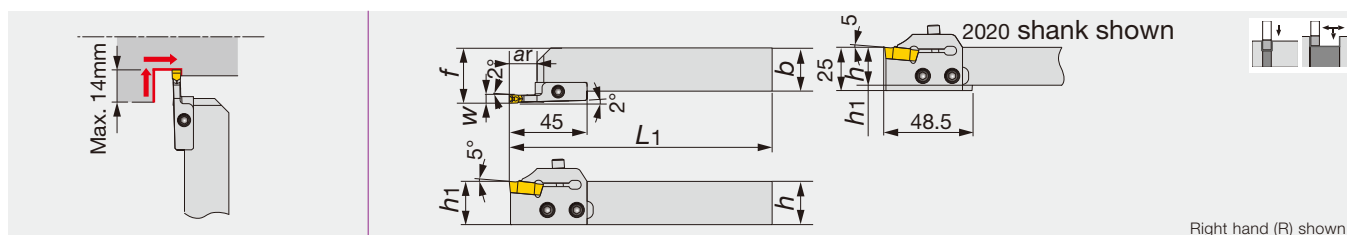
STANDARD CUTTING CONDITIONS

Operation	Cutting speed v_c (m/min)	Groove width: W (mm)						
		Feed: f (mm/rev)						
		2	3	4	5	6	7	8
Grooving: Low carbon steels	100 ~ 200	0.08 ~ 0.20	0.08 ~ 0.25	0.08 ~ 0.25	0.08 ~ 0.25	0.08 ~ 0.25	0.08 ~ 0.25	0.08 ~ 0.25
Grooving: Medium carbon steels				0.08 ~ 0.30	0.08 ~ 0.30	0.08 ~ 0.30	0.08 ~ 0.30	0.08 ~ 0.30
Parting off	100 ~ 150	0.08 ~ 0.15	0.08 ~ 0.15	0.08 ~ 0.15	0.08 ~ 0.15	0.08 ~ 0.15	0.08 ~ 0.15	0.08 ~ 0.15

MY-T SERIES

CGWSR/L-FLR/L#GP

External toolholders for grooving & turning



Designation	W	ar	h	b	L1	h1	f	Insert	Shank	Blade
CGWSR/L2020-FLR/L3GP	3	10	20	20	152	20	27	FLEX30R/L	CGWSR/L2020	FLR/L3GP
CGWSR/L2525-FLR/L3GP	3	10	25	25	152	25	32	FLEX30R/L	CGWSR/L2525	FLR/L3GP
CGWSR/L2020-FLR/L4GP	4	12	20	20	152	20	27	FLEX40R/L	CGWSR/L2020	FLR/L4GP
CGWSR/L2525-FLR/L4GP	4	12	25	25	152	25	32	FLEX40R/L	CGWSR/L2525	FLR/L4GP
CGWSR/L2020-FLR/L5GP	5	14	20	20	152	20	27	FLEX50R/L	CGWSR/L2020	FLR/L5GP
CGWSR/L2525-FLR/L5GP	5	14	25	25	152	25	32	FLEX50R/L	CGWSR/L2525	FLR/L5GP

- When ordering, shank and blade assembly Designation or shank and blade-set are required.
- When using a right or left hand blade-set, the right hand blade-set is used with right hand shank and the left hand blade-set is used with left hand shank.

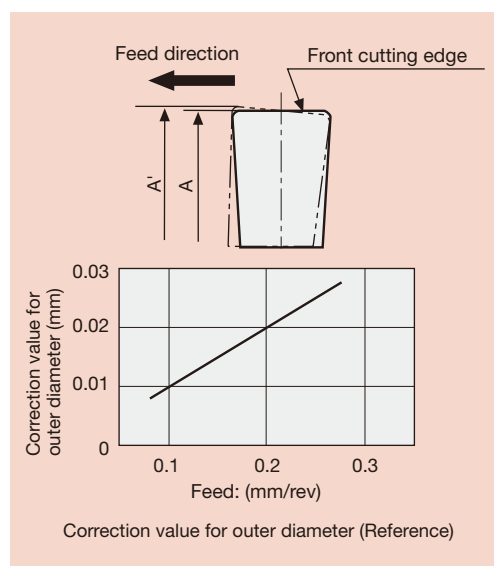
SPARE PARTS

Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-FLR/L*GP	CHHM5-18	CSHB-6	P-4

Cautionary Notes

When performing OD machining, the tool point must be set at a right angle to the axial direction of the work.

- When replacing an insert, the replacement should be made only after completely removing any chips or other foreign matter from the tool clamping area on the holder by using compressed air, etc.
- Never tighten the insert mounting screws when an insert has not been installed since doing so can deform the screws and prevent the future installation of an insert.
- Flex-Tool has mechanism in which the end cutting edge angle is formed by accepting a cutting force. In external grooving, there is a possibility that if the cutting conditions (feed and depth of cut) are set too high, the programmed diameter will not be achieved. To prevent this problem, it is necessary to perform a compensation in the program by an amount that is equal to the amount A'-A that is shown in the drawing on the right. The values of compensation corresponding to the feeds are also shown in the graph.



The length of blade for 5mm width is shortened 2mm compared from the old type blade. Please notice and read the instruction manual packaged in the box.

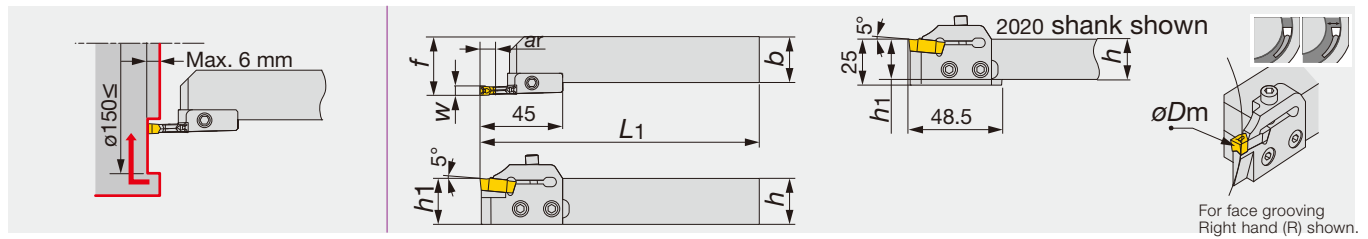
Reference pages

Inserts → C105

MY-T SERIES

CGWSR/L-FLR/L5TP

Toolholders for face grooving & turning



Designation	W	øDm	ar	h	b	L1	h1	f	Insert	Shank	Blade
CGWSR/L2020-FLR/L5TP	5	150	6	20	20	152	20	27	FLEX50R/L	CGWSR/L2020	FLR/L5TP
CGWSR/L2525-FLR/L5TP	5	150	6	25	25	152	25	32	FLEX50R/L	CGWSR/L2525	FLR/L5TP

- When ordering, shank and blade assembly Designation or shank and blade set are required.
- When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

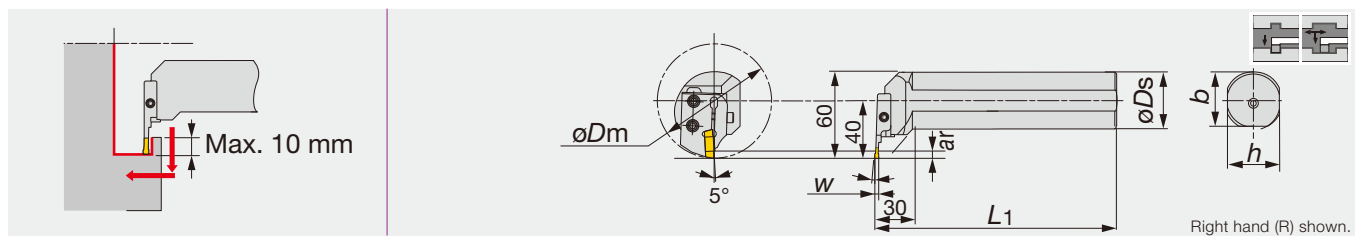
SPARE PARTS

Designation	Clamping screw	Blade screw	Wrench
CGWSR/L****-FLR/L5TP	CHHM5-18	CSHB-6	P-4

MY-T SERIES

CGWTR/L0040-FLL/R3NP

Toolholders for internal grooving & turning



Designation	W	øDm	ar	øDs	L1	h	b	Insert	Shank	Blade
CGWTR/L0040-FLL/R3NP	3	80	10	40	180	37.5	37	FLEX30L/R	CGWTR/L0040	FLL/R3NP

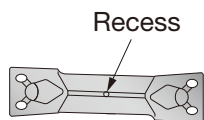
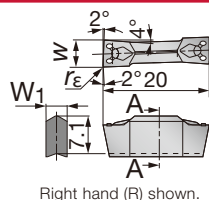
- When ordering, shank and blade assembly Designation or shank and blade set are required.
- When using a right or left hand blade set, the right hand blade set is used with left hand shank and the left hand blade set is used with right hand shank.

SPARE PARTS

Designation	Clamping screw	Blade screw	Wrench
CGWTR/L0040-FLL/R3NP	CHHM5-18	CSHB-6	P-4

APPLICABLE INSERT

FLEX(R/L)



Designation	W±0.05	rε	Coated	Cermet	Uncoated	W1
			T9125	NS9530	UX30	
FLEX30R/L	3	0.4		●		2.15
FLEX40R/L	4	0.4		●		3.1
FLEX50R/L	5	0.4	●	●	●	4

● : Line up

Grooving Tool

MY-T SERIES

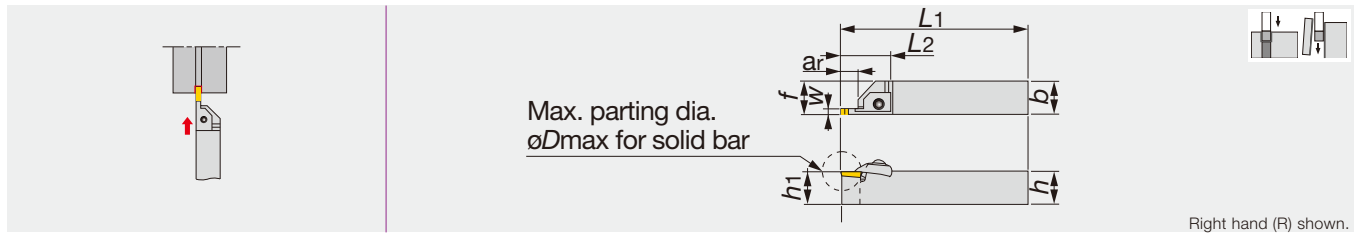
Internal

Face Grooving

Others

CTWR/L

External toolholders for grooving & parting, with double-ended inserts



Designation	W	øD _{max}	ar	h	b	L ₁	L ₂	h ₁	f	Insert
CTWR/L2020-3	3	32	14	20	20	150	41	20	20.25	CTD3
CTWR/L2525-3	3	32	14	25	25	150	41	25	25.25	CTD3
CTWR/L2020-4	4	32	14	20	20	150	41	20	20.25	CTD4
CTWR/L2525-4	4	32	14	25	25	150	41	25	25.25	CTD4
CTWR/L2525-5	5	42	20	25	25	150	46	25	25.25	CTD5

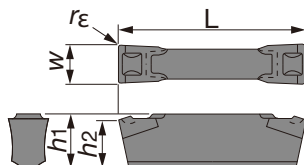
SPARE PARTS



Designation	Clamp	Pin	Clamping screw	Washer	Wrench
CTWR2020-3	CTC-3R	BP-360	CTS-M6	CDW6	P-4
CTWL2020-3	CTC-3L	BP-360	CTS-M6	CDW6	P-4
CTWR2525-3	CTC-3R	BP-360	CTS-M6	CDW6	P-4
CTWL2525-3	CTC-3L	BP-360	CTS-M6	CDW6	P-4
CTWR2020-4	CTC-4R	BP-360	CTS-M6	CDW6	P-4
CTWL2020-4	CTC-4L	BP-360	CTS-M6	CDW6	P-4
CTWR2525-4	CTC-4R	BP-360	CTS-M6	CDW6	P-4
CTWL2525-4	CTC-4L	BP-360	CTS-M6	CDW6	P-4
CTWR2525-5	CTC-5R	BP-360	CTS-M6	CDW6	P-4
CTWL2525-5	CTC-5L	BP-360	CTS-M6	CDW6	P-4

APPLICABLE INSERT

CTD



Designation	W±0.1	rε	AH725	L	h ₁	h ₂
CTD3	3	0.2	●	20	4.3	4
CTD4	4	0.2	●	20	5.3	5
CTD5	5	0.2	●	25	6.3	6

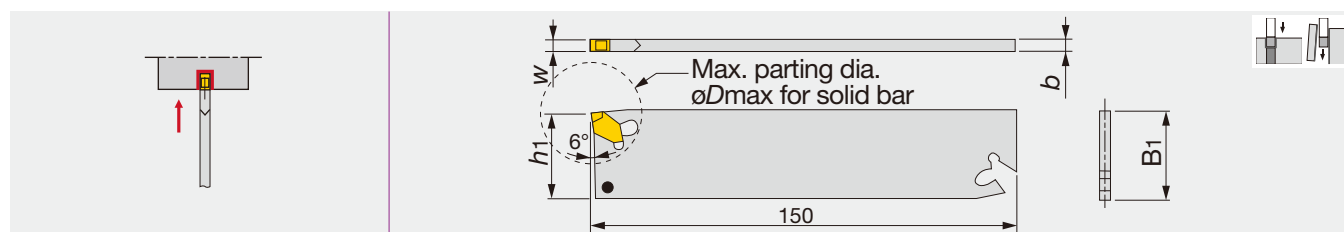
● : Line up

STANDARD CUTTING CONDITIONS

Operation (Workpiece material)		Cutting speed v _c (m/min)	Feed: f (mm/rev)		
			CTD3	CTD4	CTD5
Grooving	Low carbon steels	100 ~ 150	0.08 ~ 0.25	0.08 ~ 0.25	0.08 ~ 0.25
	Medium carbon steels		0.08 ~ 0.25	0.08 ~ 0.3	0.08 ~ 0.3
Parting off		100 ~ 150	0.08 ~ 0.15		

CTH

Blades for external grooving & parting



Designation	W	øD _{max}	b	h ₁	B ₁	Insert
CTH32-3	3	100	2.2	30.27	32.24	CT*3...
CTH32-4	4	100	3.2	30.13	31.97	CT*4...
CTH32-5	5	100	4.2	30	31.7	CT*5...
CTH32-6	6	100	5.2	29.87	31.44	CT*6...

SPARE PARTS

Designation	Wrench
CTH...	CTL-2

Grooving Tool

External

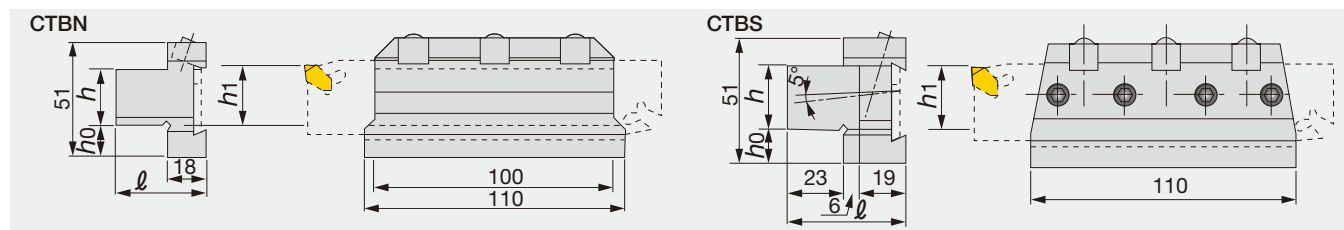
Parting-off

Reference pages

Inserts, Standard cutting conditions → C110

CTBN/S-32

Tool block for CTH blades



Designation	h	h_1	h_0	l	Blade
CTBN20-32	20	20.2	19.6	38	CTH32...
CTBN25-32	25	25.2	14.6	38	CTH32...
CTBN32-32	32	32.2	7.6	43	CTH32...
CTBS20-32	20	20.2	19.4	48	CTH32...
CTBS25-32	25	25.2	14.4	48	CTH32...
CTBS32-32	32	32.2	7.4	48	CTH32...

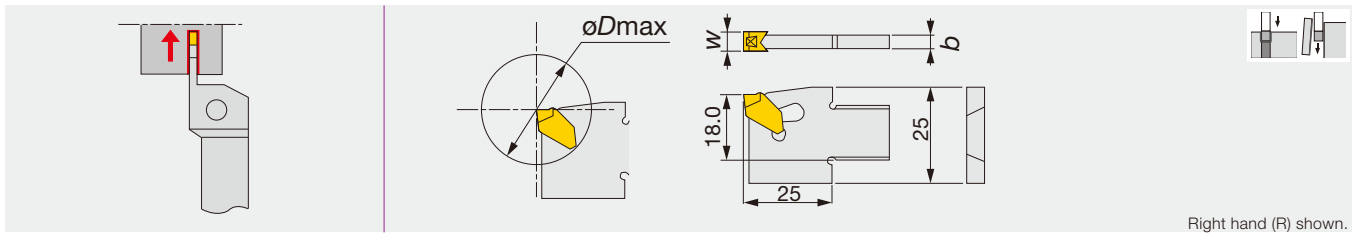
SPARE PARTS



Designation	Wedge clamping screw	Wedge	Wrench
CTBN**-32	NDS-8S	CTW-2	P-4
CTBS**-32	DS-8	CTW-2	P-4

CTSR/L

Blades for external grooving & parting



Designation	W	ϕD_{max}	b	Insert
CTSR/L25-3	3	50	2.2	CT*3...
CTSR/L25-4	4	50	3.2	CT*4...
CTSR25-5	5	50	4.2	CT*5...
CTSR25-6	6	50	5.2	CT*6...

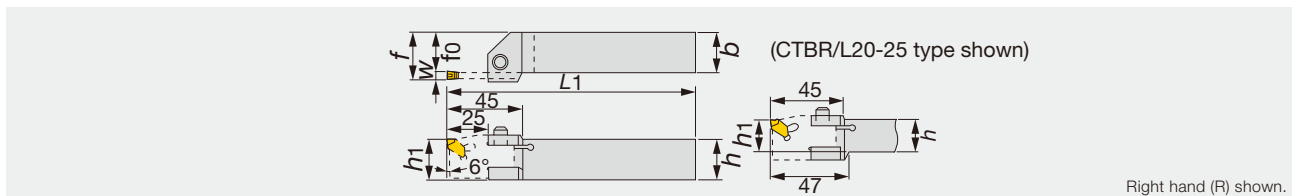
• Refer to the assembly drawing of "CTBR/L" regarding the dimensions.

SPARE PARTS

Designation	Wrench
CTSR/L...	CTL-2

TOOLHOLDER

CTBR/L



W	Designation	Blade	ar	h1	h	b	L1	f0	f
3,4	CTBR/L20-25	CTSR/L25-3/4	Max.25Max.cut off dia.ø50	20.2	20	25	150	19.6	22.6/23.6
3,4,5,6	CTBR/L25-25	CTSR/L25-3/4/5/6	Max.25Max.cut off dia.ø50	25.2	25	25	150	24.6	27.6/28.6/29.6/30.6

When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

SPARE PARTS

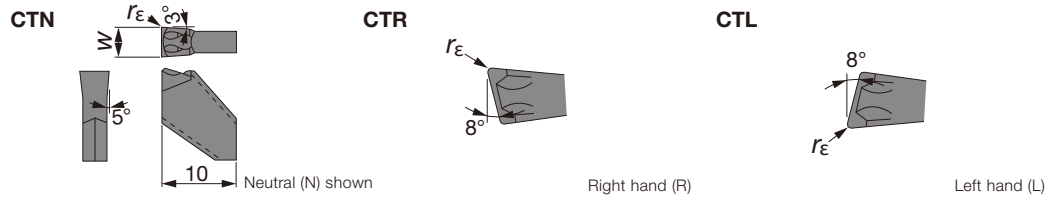
Designation	Clamping Screw	Wrench
CTBR/L...	M6x20	P-5

Reference pages

Inserts, Standard cutting conditions → C110

INSERT for CTH, CTS TYPE PARTING OFF TOOLHOLDER

CTN/CTR/CTL



Designation	$W \pm 0.2$	r_ϵ	Coated			Uncoated		
			T313W			TH10		
			N	R	L	N	R	L
CTN3	3	0.2	●					
CTR/L3	3	0.2		●	●			
CTN3K	3	0.2				●		
CTR/L3K	3	0.2					●	●
CTN4	4	0.2	●					
CTR/L4	4	0.2		●	●			
CTN4K	4	0.2				●		
CTR/L4K	4	0.2					●	●
CTN5	5	0.3	●					
CTR/L5	5	0.3		●				
CTN5K	5	0.3				●		
CTR/L5K	5	0.3					●	
CTN6	6	0.3	●					
CTN6K	6	0.3				●		

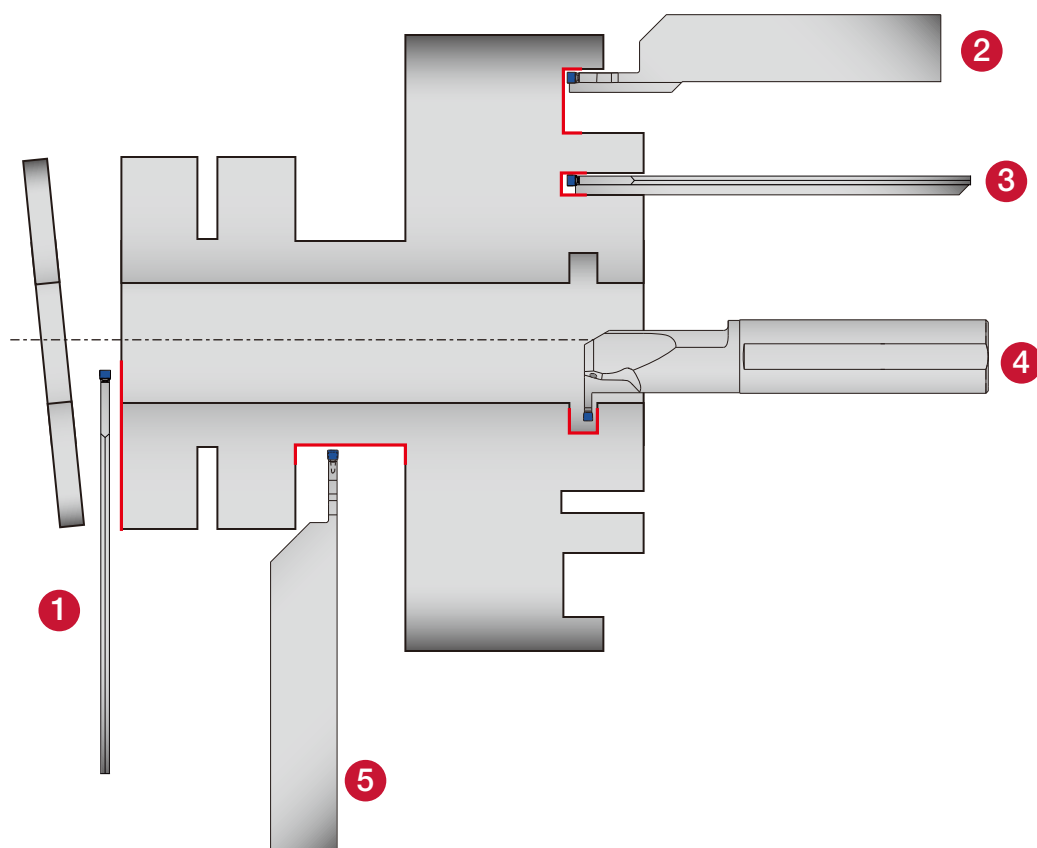
● : Line up

STANDARD CUTTING CONDITIONS FOR CTH, CTS

Operation / Workpiece material		Cutting speed v_c (m/min)	Feed: f (mm/rev)				
			CTN3	CTN4	CTN5	CTN6	CTR/L□
Grooving	Low carbon steels	100 ~ 150	0.08 ~ 0.25	0.08 ~ 0.25	0.08 ~ 0.25	0.08 ~ 0.3	-
	Medium carbon steels			0.08 ~ 0.3	0.08 ~ 0.3		-
	Cast irons, Light alloys	100 ~ 200	-	-	-	-	0.1 ~ 0.3
Parting off	Low carbon steels	100 ~ 150	0.08 ~ 0.2	0.08 ~ 0.2	0.08 ~ 0.2	0.08 ~ 0.2	0.08 ~ 0.15
	Medium carbon steels						-
	Cast irons, Light alloys	100 ~ 200	-	-	-	-	0.1 ~ 0.3

Note: When using CTS type (blade type) toolholders, reduce the values given in the table by 80 %.

The insert's secure & unique clamping guarantees reliable machining in grooving and turning



1 EGP

Blade type
W = 4 - 6 mm
Max. parting Dia.:
120 mm
Shank size:
20 - 32 mm

Page C113

EGP-CHP

Blade type
W = 4 - 6 mm
Max. parting Dia.:
120 mm
Shank size:
20 - 32 mm

Page C114

2 ETFR/L

W = 4 - 6 mm
ar = 15 - 32 mm
Shank size:
20 - 25 mm

Page C116

ETFR-CHP

W = 4 mm
ar = 15 - 32 mm
Shank size:
25 mm

Page C117

3 EFPR/L

Blade type
W = 4 - 6 mm
ar = Max. 65 mm
Shank size:
25 mm

Page C118

4 ETIR/L

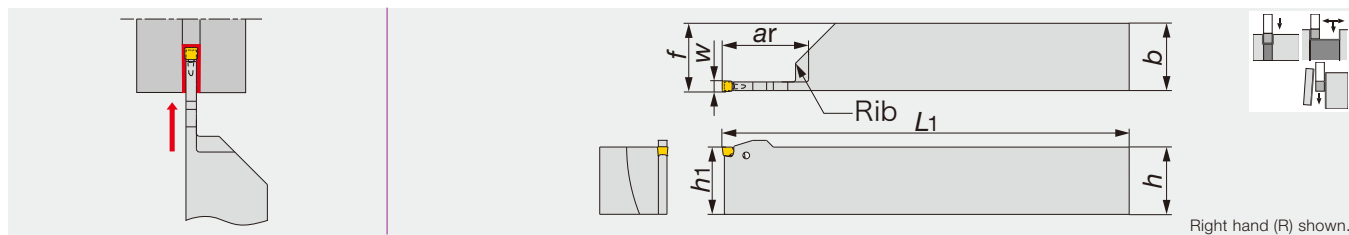
W = 4 - 6 mm
ar = 6 - 11 mm
Shank size:
ø16 - ø32 mm

Page C115

5 ETER/L

W = 4 - 6 mm
ar = 25 - 35 mm
Shank size:
20 - 32 mm

Page C112



Designation	W	ar	h1	b	h	L1	f	Insert	Rib
ETER/L2020-4T25	4	25	20	20	20	125	20.4	E**4...	Without
ETER/L2525-4T25	4	25	25	25	25	150	25.4	E**4...	Without
ETER/L3232-4T30	4	30	32	32	32	170	32.4	E**4...	Without
ETER/L2020-5T25	5	25	20	20	20	125	20.4	ETX5...	Without
ETER/L2525-5T32	5	32	25	25	25	150	25.4	ETX5...	Without
ETER/L3232-5T32	5	32	32	32	32	170	32.4	ETX5...	Without
ETER/L2525-6T35	6	35*	25	25	25	150	25.4	ETX6...	With
ETER/L3232-6T35	6	35**	32	32	32	170	32.4	ETX6...	With

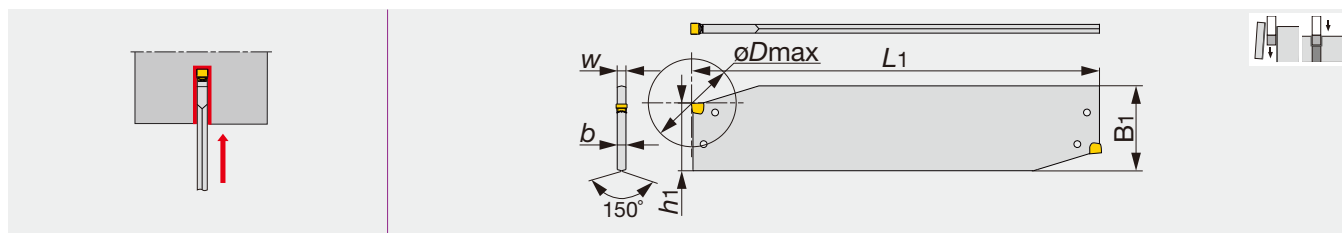
* Max. $\phi 170$
 ** Max. $\phi 340$

SPARE PARTS

Designation	Wrench (Optional parts)
ETER/L2020-4T25	(ECW-456EF)
ETER/L2525-4T25	(ECW-456EF)
ETER/L3232-4T30	(ECW-456EF)
ETER/L2020-5T25	(ECW-456EF)
ETER/L2525-5T32	(ECW-456EF)
ETER/L3232-5T32	(ECW-456EF)
ETER/L2525-6T35	(ECW-456EF)
ETER/L3232-6T35	(ECW-456EF)

Reference pages

Inserts → **C120 - C121**, Standard cutting conditions → **C121**

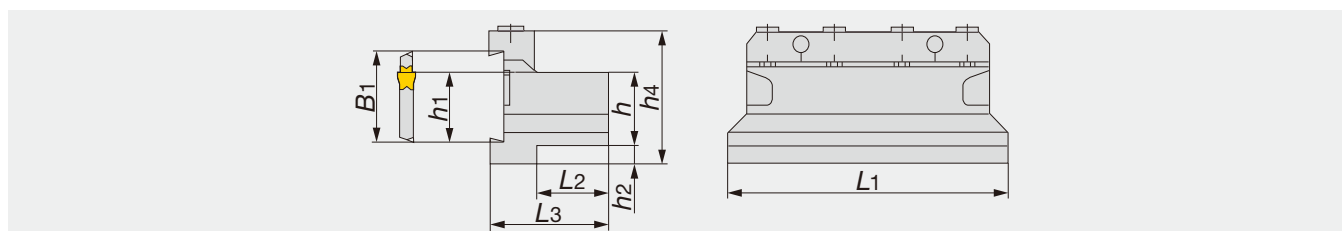


Designation	W	øDmax	h1	b	B1	L1	Insert
EGP26-4D	4	80	21.4	3.2	26	150	E**4...
EGP32-4D	4	100	24.9	3.2	32	150	E**4...
EGP32-5D	5	120	24.9	4.0	32	150	ETX5...
EGP32-6D	6	120	24.9	5.2	32	150	ETX6...

• øDmax: Max. parting off diameter

SPARE PARTS

Designation	Wrench (Optional parts)
EGP26-4D	(ECW-456EF)
EGP32-*D	(ECW-456EF)

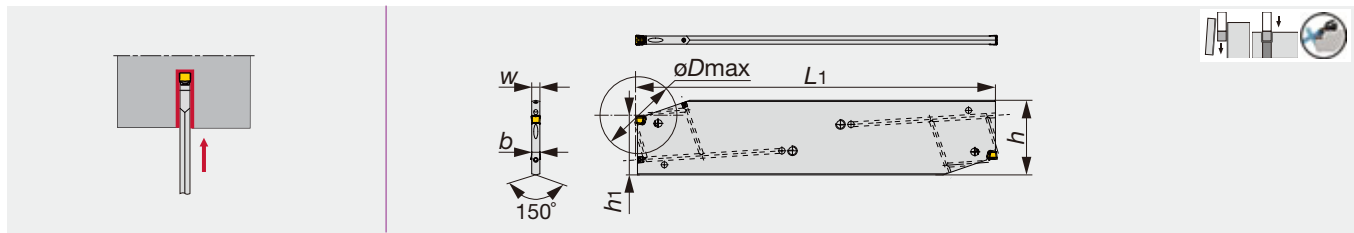


Designation	h1	B1	L1	h	h2	h4	L2	L3	Blade
CTBU20-26	21.4	26	86	20	9	43	21	38	EGP26...
CTBU25-26	21.4	26	110	25	5	45	23	42	EGP26...
CTBU20-32	24.8	32	100	20	13	50	19	38	EGP32...
CTBU25-32	24.8	32	110	25	8	50	23	42	EGP32...
CTBU32-32	24.8	32	110	32	5	54	29	48	EGP32...

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
CTBU20-26	CT-86	CM6X30-S	P-5
CTBU25-26	CT-105	CM6X30-S	P-5
CTBU20-32	CT-100	CM6X30-S	P-5
CTBU25, 32-32	CT-110	CM6X30-S	P-5

Blades for external deep grooving & parting, with channels for high pressure coolant.



Designation	W	øD _{max}	ar	h	b	L ₁	h ₁	Insert
EGP32-4D-CHP	4	100	50	32	3.4	150	24.9	E**4...
EGP32-5D-CHP	5	120	60	32	4.2	160	24.9	ETX5...
EGP32-6D-CHP	6	120	60	32	5.2	160	24.9	ETX6...

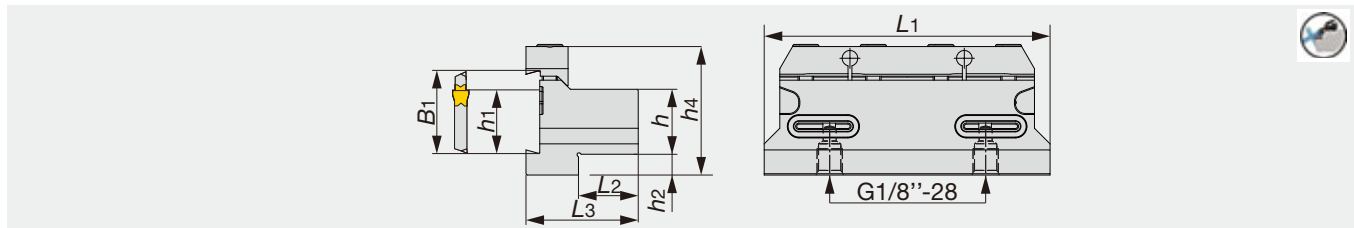
• øD_{max}: Max. parting off diameter

SPARE PARTS

Designation	Sealing screw	Wrench (Optional parts)
EGP32-*D-CHP	SGC340	(ECW-456EF)

CTBU-CHP

Tool blocks for external deep parting and grooving blades with channels for high pressure coolant



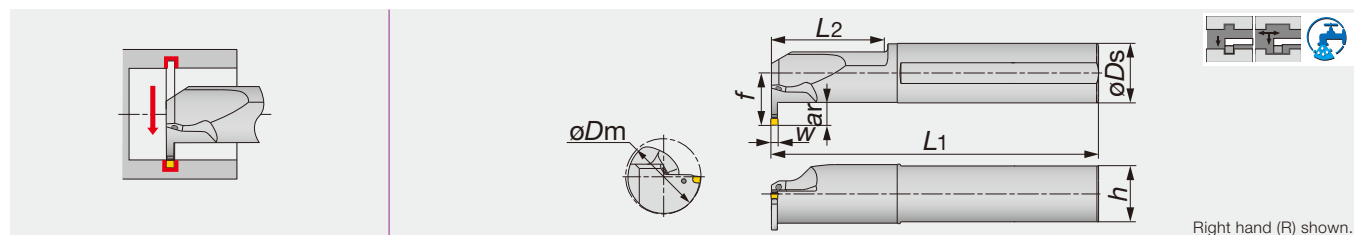
Designation	h	B1	L2	L1	h1	h2	h4	L3	Blade
CTBU25-32-CHP	25	32	23	110	24.8	8	49.4	43.2	EGP32-*D-CHP

SPARE PARTS

Designation	Sealing screw	Clamp	Wrench	O-ring
CTBU25-32-CHP	SRM6X16DIN912-12.9	CT-110	P-5	OR14X2.5NN

Reference pages

Inserts → C120 - C121, Standard cutting conditions → C121

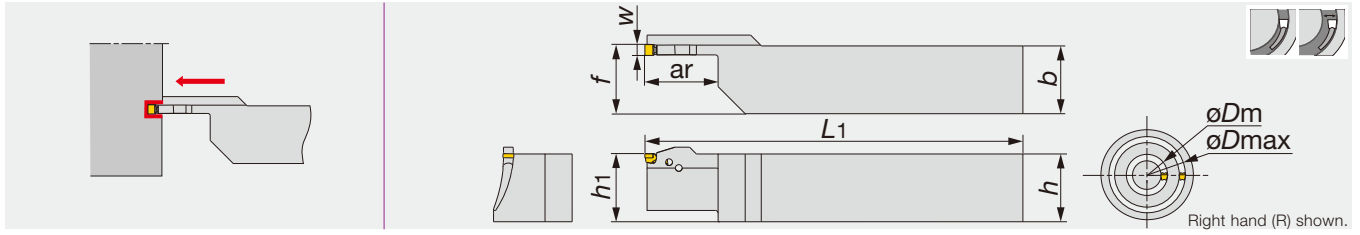


Designation	W	ϕD_m	ar	ϕD_s	h	L ₁	f	L ₂	Insert
ETIR/L16-4T06-D200	4	20	6	16	15	160	15	40	E**4...
ETIR/L20-4T06-D250	4	25	6	20	18	160	17	40	E**4...
ETIR/L25-4T09-D320	4	32	9	25	23	200	22.5	40	E**4...
ETIR/L32-4T11-D400	4	40	11	32	30	250	28	60	E**4...
ETIR/L32-5T11-D400	5	40	11	32	30	250	28	60	ETX5...
ETIR/L32-6T11-D400	6	40	11	32	30	250	28	60	ETX6...

• Wrench should be ordered separately.

SPARE PARTS

Designation	Seal cap (Optional parts: internal screw)	Wrench (Optional parts)
ETIR/L16-4T06-D200	CA-16(M6)	(ECW-456I)
ETIR/L20-4T06-D250	CA-20(M6)	(ECW-456I)
ETIR/L25-4T09-D320	CA-25(R1/8")	(ECW-456EF)
ETIR/L32...	CA-32(R1/8")	(ECW-456EF)



Designation	W	øD _m	øD _{max}	ar	h	b	L ₁	h ₁	f	Insert
ETFR/L2020-4T15-030035	4	30	35	15	20	20	125	20	20.5	E**4...
ETFR/L2525-4T15-030035	4	30	35	15	25	25	150	25	25.5	E**4...
ETFR/L2020-4T22-035045	4	35	45	22	20	20	125	20	20.5	E**4...
ETFR/L2525-4T22-035045	4	35	45	22	25	25	150	25	25.5	E**4...
ETFR/L2020-4T25-045055	4	45	55	25	20	20	125	20	20.5	E**4...
ETFR/L2525-4T25-045055	4	45	55	25	25	25	150	25	25.5	E**4...
ETFR/L2020-4T25-055075	4	55	75	25	20	20	125	20	20.5	E**4...
ETFR/L2525-4T25-055075	4	55	75	25	25	25	150	25	25.5	E**4...
ETFR/L2020-4T25-075120	4	75	120	25	20	20	125	20	20.5	E**4...
ETFR/L2525-4T25-075120	4	75	120	25	25	25	150	25	25.5	E**4...
ETFR/L2525-4T25-120200	4	120	200	25	25	25	150	25	25.5	E**4...
ETFR/L2525-4T25-200500	4	200	500	25	25	25	150	25	25.5	E**4...
ETFR/L2525-5T25-035045	5	35	45	25	25	25	150	25	25.5	ETX5...
ETFR/L2525-5T25-045055	5	45	55	25	25	25	150	25	25.5	ETX5...
ETFR/L2525-5T25-055075	5	55	75	25	25	25	150	25	25.5	ETX5...
ETFR/L2525-5T32-075120	5	75	120	32	25	25	150	25	25.5	ETX5...
ETFR/L2525-5T32-120200	5	120	200	32	25	25	150	25	25.5	ETX5...
ETFR/L2525-5T32-200500	5	200	500	32	25	25	150	25	25.5	ETX5...
ETFR/L2525-6T25-040055	6	40	55	25	25	25	150	25	25.5	ETX6...
ETFR/L2525-6T25-055075	6	55	75	25	25	25	150	25	25.5	ETX6...
ETFR/L2525-6T32-075120	6	75	120	32	25	25	150	25	25.5	ETX6...
ETFR/L2525-6T32-120200	6	120	200	32	25	25	150	25	25.5	ETX6...
ETFR/L2525-6T32-200500	6	200	500	32	25	25	150	25	25.5	ETX6...

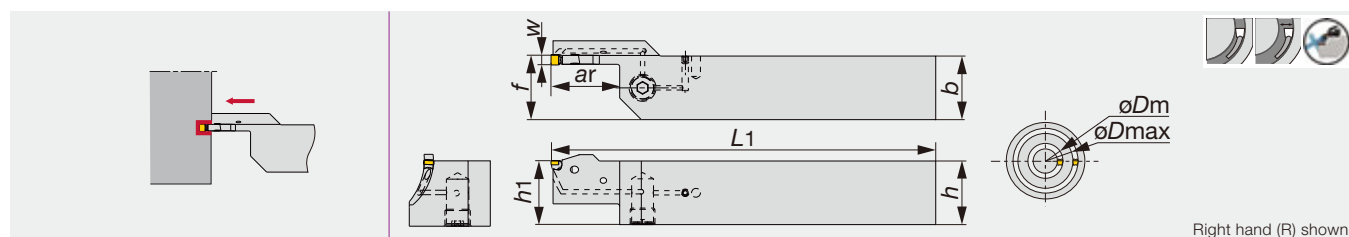
SPARE PARTS



Designation	Wrench (Optional parts)
ETFR/L...	(ECW-456EF)

Reference pages

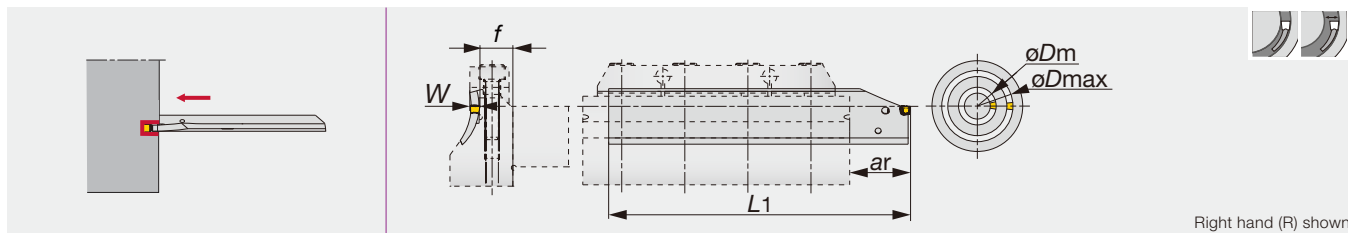
Inserts → C120 - C121, Standard cutting conditions → C121



Designation	W	øD _m	øD _{max}	ar	h	b	L ₁	h ₁	f	Insert
ETFR2525-4T15-030035-CHP	4	30	35	15	25	25	150	25	25.5	E**4...
ETFR2525-4T22-035045-CHP	4	35	45	22	25	25	150	25	25.5	E**4...
ETFR2525-4T25-045055-CHP	4	45	55	25	25	25	150	25	25.5	E**4...
ETFR2525-4T25-055075-CHP	4	55	75	25	25	25	150	25	25.5	E**4...
ETFR2525-4T25-075120-CHP	4	75	120	25	25	25	150	25	25.5	E**4...
ETFR2525-4T25-120200-CHP	4	120	200	25	25	25	150	25	25.5	E**4...
ETFR2525-4T25-200500-CHP	4	200	500	25	25	25	150	25	25.5	E**4...

SPARE PARTS

Designation	Wrench (Optional parts)
ETFR****-CHP	(ECW-456EF)



Right hand (R) shown

Designation	W	ϕD_m	ϕD_{max}	f	L1	min ar	max ar	Insert
EFPR/L-4-030035	4	30	35	13.6	125	18	50	E**4...
EFPR-4-035045	4	35	45	13.6	125	18	50	E**4...
EFPR-4-045055	4	45	55	13.6	125	18	50	E**4...
EFPR-4-055075	4	55	75	13.6	125	18	50	E**4...
EFPR-4-075120	4	75	120	13.6	140	18	65	E**4...
EFPR-4-120200	4	120	200	13.6	140	18	65	E**4...
EFPR-4-200500	4	200	500	13.6	140	18	65	E**4...
EFPR-5-035045	5	35	45	13.6	125	19	50	ETX5...
EFPR-5-045055	5	45	55	13.6	125	19	50	ETX5...
EFPR-5-055075	5	55	75	13.6	125	19	50	ETX5...
EFPR-5-075120	5	75	120	13.6	140	19	65	ETX5...
EFPR-5-120200	5	120	200	13.6	140	19	65	ETX5...
EFPR-5-200500	5	200	500	13.6	140	19	65	ETX5...
EFPR-6-045055	6	45	55	13.6	125	20	50	ETX6...
EFPR-6-055075	6	55	75	13.6	125	20	50	ETX6...
EFPR-6-075120	6	75	120	13.6	140	20	65	ETX6...
EFPR-6-120200	6	120	200	13.6	140	20	65	ETX6...
EFPR/L-6-200500	6	200	500	13.6	140	20	65	ETX6...

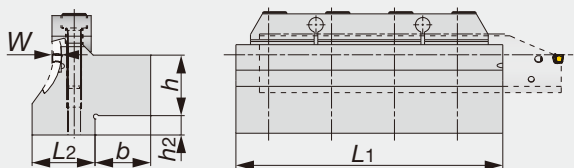
SPARE PARTS



Designation	Wrench (Optional parts)
EFPR/L...	(ECW-456I)

Reference pages

Inserts → C120 - C121, Standard cutting conditions → C121



Designation	W	øD _m	h	b	h ₂	L ₂	L ₁	Blade
CTBU25-030-4-CHP	4	30	25	23	8	26	110	EFPR/L-4-030035
CTBU25-035-4/5-CHP	4, 5	35	25	23	8	26	110	EFPR-4/5-035045
CTBU25-045-4/5-CHP	4, 5	45	25	23	8	26	110	EFPR-4/5-045055
CTBU25-055-4/5-CHP	4, 5	55	25	23	8	24	110	EFPR-4/5-055075
CTBU25-075-4/5-CHP	4, 5	75	25	23	8	22	110	EFPR-4/5-075120
CTBU25-120-4/5-CHP	4, 5	120	25	23	8	21	110	EFPR-4/5-120200
CTBU25-200-4/5-CHP	4, 5	200	25	23	8	18.5	110	EFPR-4/5-200500
CTBU25-045-6-CHP	6	45	25	23	8	28	110	EFPR-6-045055
CTBU25-055-6-CHP	6	55	25	23	8	26	110	EFPR-6-055075
CTBU25-075-6-CHP	6	75	25	23	8	24	110	EFPR-6-075120
CTBU25-120-6-CHP	6	120	25	23	8	23	110	EFPR-6-120200
CTBU25-200-6-CHP	6	200	25	23	8	20.5	110	EFPR/L-6-200500

SPARE PARTS

Designation	Clamp	Clamping screw	Wrench
CTBU25-***-*-CHP	CT-110	CM6X30-S	P-5

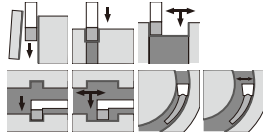
ETX type



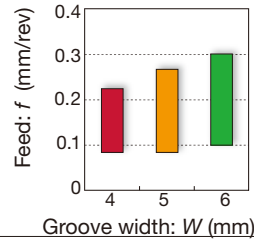
Page C121

Multi-functional insert
Well-balanced sharpness and strength

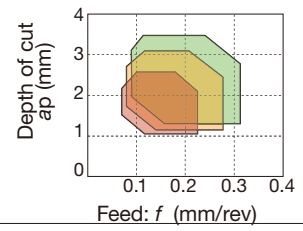
$W = 4 - 6 \text{ mm}$



■ Standard feed for grooving



■ Standard feed and depth of cut for turning



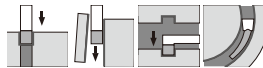
EGM type



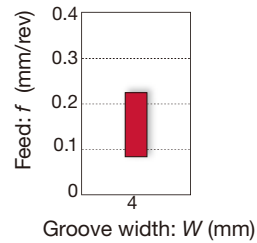
Page C121

First choice for parting off
Well-designed edge with high strength

$W = 4 \text{ mm}$

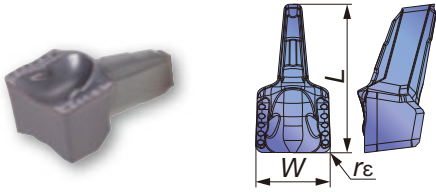


■ Standard feed for grooving



INSERT

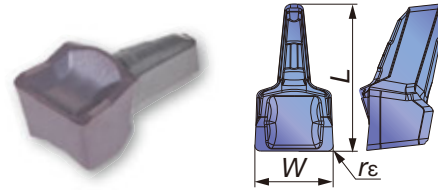
ETX



Designation	W±0.05	r _ε	AH725	L
ETX4-040	4	0.4	●	8
ETX5-040	5	0.4	●	10
ETX6-040	6	0.4	●	12

● : Line up

EGM



Designation	W±0.05	r _ε	AH725	L
EGM4-030	4	0.3	●	8

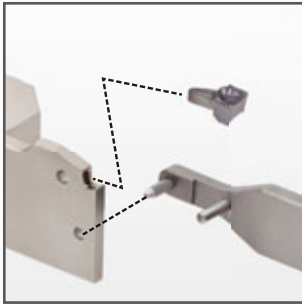
● : Line up

STANDARD CUTTING CONDITIONS

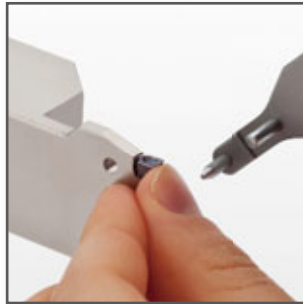
ISO	Workpiece material	Hardness	Grades	Chip-breaker	Cutting speed V _c (m/min)
P	Low carbon steel C15, C20, etc.	- 300 HB	AH725	ETX	80 - 180
		- 300 HB	AH725	EGM	80 - 180
	Carbon steel, Alloy steel C55, 42CrMoS4, etc.	- 300 HB	AH725	ETX	80 - 180
		- 300 HB	AH725	EGM	80 - 180
	Prehardened steel NAK80, PX5, etc.	- 300 HB	AH725	ETX	80 - 180
M	Stainless steel X5CrNi18-9, X5CrNiMo17-12-2, etc.	-	AH725	ETX	50 - 120
		-	AH725	EGM	50 - 120

PROCEDURE TO CLAMP AND UNCLAMP INSERT

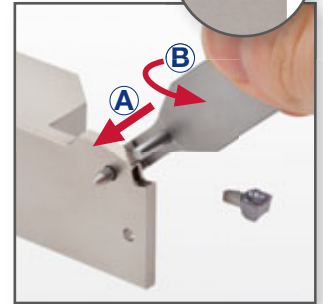
1 Put the insert in the pocket



2 Turn the wrench and push the insert into the pocket to clamp



3 Unclamp

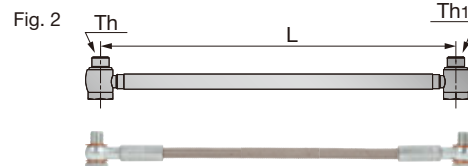
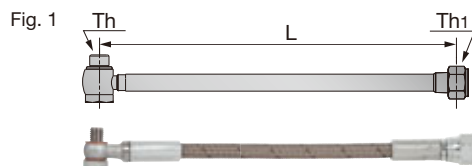


A Twist the wrench

B Push out the insert from the pocket to unclamp

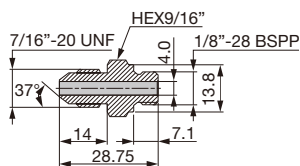
PARTS FOR COOLANT HOSE

Connecting hose

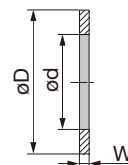


Designation	Length		Threading size		Max. pressure (MPa)	Fig.
	L	Th	Th1			
CHP-HOSE-G1/8-7/16-200BS	200	G1/8"-28 BSPP	7/16"-20 UNF		26	1
CHP-HOSE-G1/8-7/16-250BS	250	G1/8"-28 BSPP	7/16"-20 UNF		26	1
CHP-HOSE-5/16-7/16-200BS	200	5/16"-24UNF	7/16"-20 UNF		20	1
CHP-HOSE-5/16-G1/8-200BS	200	5/16"-24UNF	G1/8"-28 BSPP		20	1
CHP-HOSE-G1/8-G1/8-200BB	200	G1/8"-28 BSPP	G1/8"-28 BSPP		26	2
CHP-HOSE-G1/8-G1/8-250BB	250	G1/8"-28 BSPP	G1/8"-28 BSPP		26	2

Connector



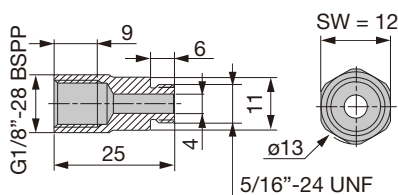
Seal washer



Designation
CHP-NIPPLE-G1/8-7/16UNF

Designation	øD	ød	W
CHP-COPPER-SEAL1/8	15	10	1
CHP-COPPER-SEAL5/16	11	8	1
CHP-COPPER-SEAL5/16-2.5	11	8	2.5

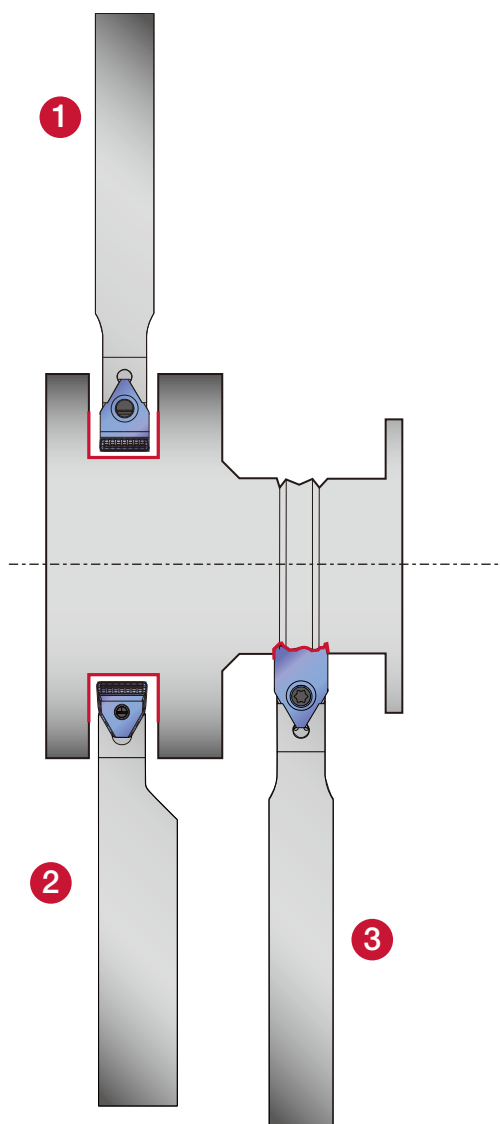
Connector for small lathe with seal washer



Designation
CHP-CONNECTOR/5/16-G1/8

Efficiently **reduces machining time** of wide width grooving and forming!

Effectively reduces the number of passes or machining time of complex profiles!



1 FPGN

Lever lock type
W = 10 - 25 mm
ar = 20 - 36 mm
Shank size:
12 - 25 mm

Page C125

2 FPGR

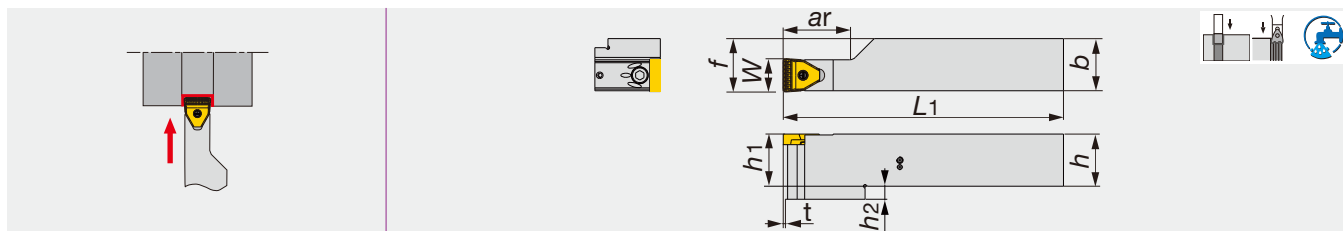
Lever lock type
W = 10 - 25 mm
ar = 20 - 50 mm
Shank size:
25 - 40 mm

Page C124

3 SPGN

Screw clamp type
W = 10 - 25 mm
ar = 20 - 36 mm
Shank size:
12 - 25 mm

Page C125



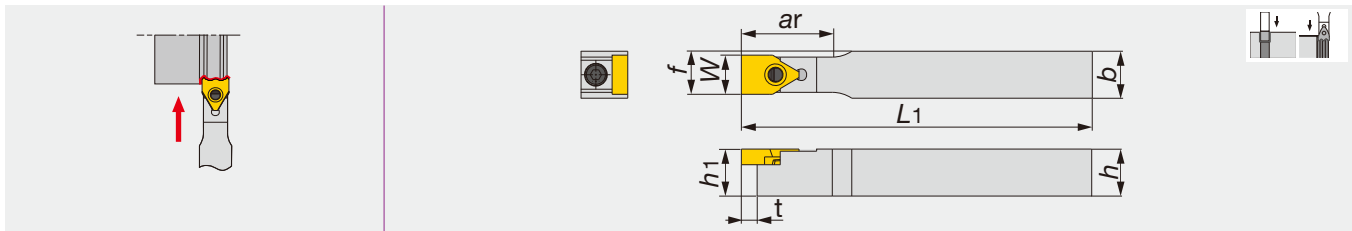
Designation	W	ar PSGB	ar PSGM	h1	b	h	L1 PSGB	L1 PSGM	f	h2	t PSGB	t PSGM	Insert ⁽¹⁾
FPGR2525M-10T20	10	25	20	25	25	25	155	150	25.5	-	5.5	0.5	PSG*10...
FPGR3232P-10T36	10	41	36	32	32	32	175	170	32.5	-	5.5	0.5	PSG*10...
FPGR2525M-15T20	15	25	20	25	25	25	155	150	25.5	-	5.5	0.5	PSG*15...
FPGR3232P-15T40	15	45	40	32	32	32	175	170	32.5	-	5.5	0.4	PSG*15...
FPGR3232P-20T40	20	45	40	32	32	32	175	170	32.5	8	5.5	0.4	PSG*20...
FPGR4040R-20T50	20	55	50	40	40	40	205	200	40.5	8	5.5	0.4	PSG*20...
FPGR3232P-25T40	25	45	40	32	32	32	175	170	32.5	8	5.5	0.4	PSG*25...
FPGR4040R-25T50	25	55	50	40	40	40	205	200	40.5	8	5.5	0.4	PSG*25...

(1) Can be used with both wide grooving and profile grooving inserts

SPARE PARTS



Designation	Lever	Clamping screw	Spring	Wrench
FPGR****-10T..., 15T...	FCL4	FCS3	BP-5	P-2.5
FPGR****-20T..., 25T...	FCL8	FCS6	BP-9	P-5



Designation	W	ar PSGB	ar PSGM	h1	b	h	L1 PSGB	L1 PSGM	f	t PSGB	t PSGM	Insert ⁽¹⁾
FPGN1212X-10T20	10	25	20	12	12	12	125	120	11	5.5	0.5	PSG*10...
FPGN1616X-10T20	10	25	20	16	16	16	125	120	13	5.5	0.5	PSG*10...
FPGN2020K-10T20	10	25	20	20	20	20	130	125	15	5.5	0.5	PSG*10...
FPGN1616X-15T25	15	30	25	16	16	16	125	120	15.5	5.5	0.4	PSG*15...
FPGN2020K-15T25	15	30	25	20	20	20	130	125	17.5	5.5	0.4	PSG*15...
FPGN2020K-20T32	20	37	32	20	20	20	130	125	20	5.5	0.4	PSG*20...
FPGN2525M-20T32	20	37	32	25	25	25	155	150	22.5	5.5	0.4	PSG*20...
FPGN2525M-25T36	25	41	36	25	25	25	155	150	25	5.5	0.4	PSG*25...

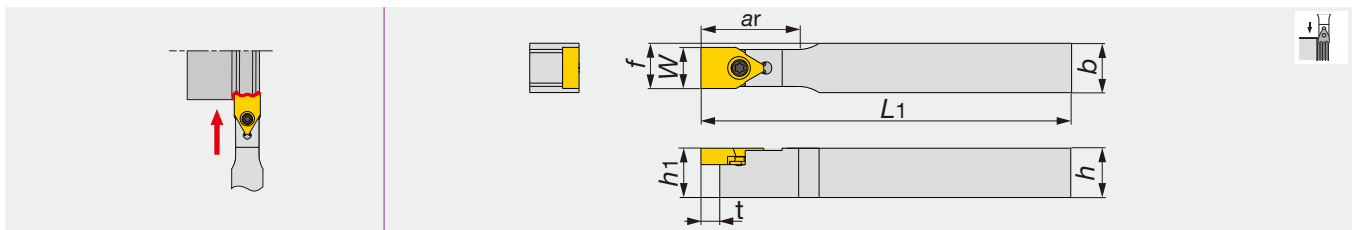
• We can make special shape with forming insert (PSGB type) responding to customer's request.(1) Can be used with both wide grooving and profile grooving inserts

SPARE PARTS

Designation	Lever	Clamping screw	Spring	Wrench
FPGN****-10T..., 15T...	FCL4	FCS3	BP-5	P-2.5
FPGN****-20T..., 25T...	FCL8	FCS6	BP-9	P-5

SPGN

Screw-on type, for external wide grooving and profiling



Designation	W	ar	h1	b	h	L1	f	t	Insert ⁽¹⁾
SPGN1212X-10T20	10	25	12	12	12	125	11	5.5	PSGB10
SPGN1616X-10T20	10	25	16	16	16	125	13	5.5	PSGB10
SPGN2020K-10T20	10	25	20	20	20	130	15	5.5	PSGB10
SPGN1616X-15T25	15	30	16	16	16	125	15.5	5.5	PSGB15
SPGN2020K-15T25	15	30	20	20	20	130	17.5	5.5	PSGB15
SPGN2020K-20T32	20	37	20	20	20	130	20	5.5	PSGB20
SPGN2525M-20T32	20	37	25	25	25	155	22.5	5.5	PSGB20
SPGN2525M-25T36	25	41	25	25	25	155	25	5.5	PSGB25

• We can make special shape with forming insert (PSGB type) responding to customer's request.(1) Can be used with profile grooving inserts, only

SPARE PARTS

Designation	Clamping screw	Wrench
SPGN****-10T20	CSTB-3L081	T-8F
SPGN****-15T25	CSTB-4	T-15F
SPGN****-20T..., 25T...	CSTB-5	T-20F

Reference pages

Inserts → C126 - C127, Standard cutting conditions → C127



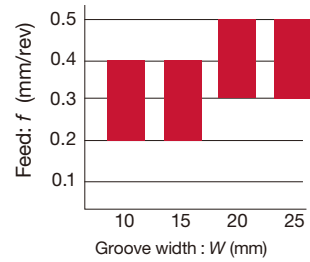
TUNGHEROOVE^{HEAVY} - Chipbreaker Guide

PSGM

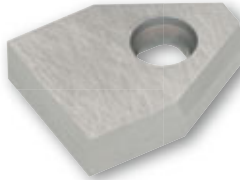


Page C127

For wide grooving
Excellent chip control
 $W = 10 - 25 \text{ mm}$



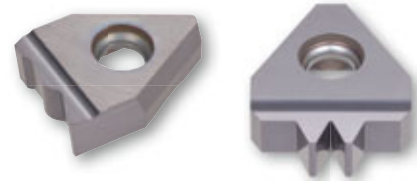
PSGB



Page C127

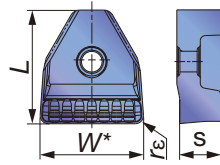
Blank for profiling shape
 $W = 10 - 25 \text{ mm}$

Specially tailored profile inserts



INSERT

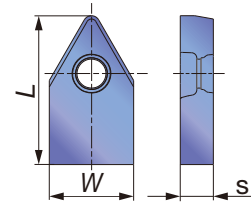
For wide grooving



Designation	W^*	r_ϵ	Coated AH725	L	s
PSGM10-08	10	0.8	●	11	4
PSGM15-15	15	1.5	●	15	5
PSGM20-20	20	2	●	22	6.5
PSGM25-20	25	2	●	22	6.5

*: Tolerance $W \pm 0.08$ ($W = 10$ mm), ± 0.1 ($W \geq 15$ mm) ● : Line up

Blanks for wide profile grooving*

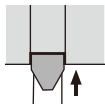


Designation	$W \pm 0.025$	Uncoated		L	s
		UX30	TH10		
PSGB10	10.2	●	●	18	4
PSGB15	15.2	●	●	20	5
PSGB20	20.2	●	●	27	6.5
PSGB25	25.2	●	●	27	6.5

● : Line up
*Stocked products are blanks (semi-finished) for formed inserts

Grooving Tool

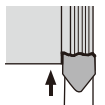
STANDARD CUTTING CONDITIONS



Wide grooving

ISO	Workpiece material	Hardness (HB)	Grade	Cutting speed V_c (m/min)
P	Alloy steel 42CrMo4, etc.	< 300	AH725	50 - 180
	Alloy steel 42CrMo4, etc.	< 300	UX30	50 - 120

PSGM type insert	Groove width: W (mm)			
	10	15	20	25
Feed: f (mm/rev)	0.2 - 0.4	0.2 - 0.4	0.3 - 0.5	0.3 - 0.5

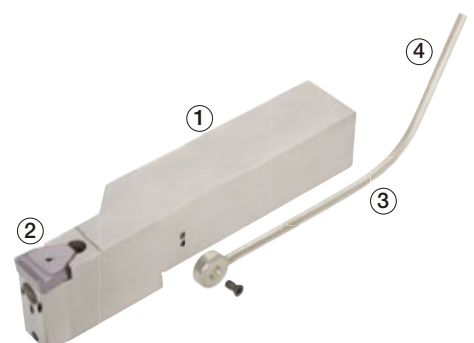


Forming

ISO	Workpiece material	Hardness (HB)	Grade	Cutting speed V_c (m/min)
P	Steel C45, etc.	< 200	UX30	50 - 150
	Alloy steel 42CrMo4, etc.	< 300	UX30	50 - 120
M	Stainless steel X10CrNiS18-9, etc.	< 200	UX30	50 - 120
K	Grey cast iron 250, etc.	-	TH10	50 - 150
	Ductile cast iron 450-10S, etc.	-	TH10	50 - 120
N	Aluminium alloy Si < 12%, etc.	-	TH10	100 - 500

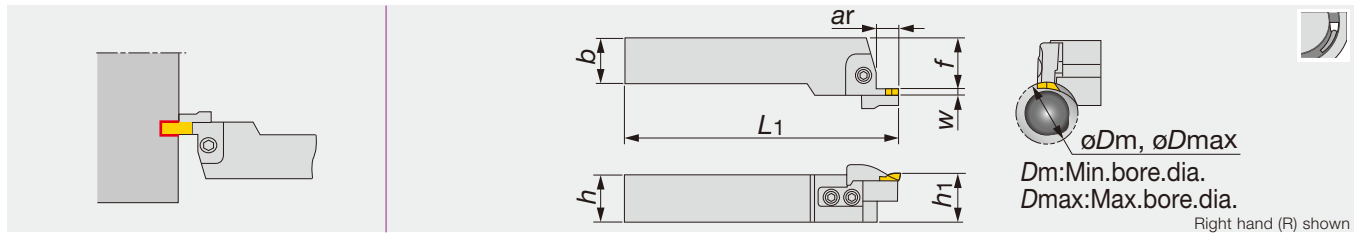
■ Spare parts for internal coolant supply attachment (Order separately)

No.	Parts name	Designation	Note
①	Body	FPGR...	-
②	Insert	PSGM...	-
③	Coolant supply attachment	SGCU-341	-
④	Connector	Commercial items can be used	G 1/8 thread NPT 1/8 thread



CFGSR/L-#S/D

Toolholders for face grooving



Designation	W	øDm	øDmax	ar	h	b	L1	h1	f	Insert
CFGSR/L2020-3SA	3	30	40	10	20	20	125	21	22	FGC3
CFGSR/L2020-3SB	3	40	50	10	20	20	125	21	22	FGC3
CFGSR/L2020-3SC	3	50	60	10	20	20	125	21	22	FGC3
CFGSR/L2020-3SD	3	60	80	10	20	20	125	20.5	22	FGC3
CFGSR/L2020-3SE	3	80	120	10	20	20	125	20.5	22	FGC3
CFGSR/L2525-3SA	3	30	40	10	25	25	150	26	29	FGC3
CFGSR/L2525-3SB	3	40	50	10	25	25	150	26	29	FGC3
CFGSR/L2525-3SC	3	50	60	10	25	25	150	26	29	FGC3
CFGSR/L2525-3SD	3	60	80	10	25	25	150	25.5	29	FGC3
CFGSR/L2525-3SE	3	80	120	10	25	25	150	25.5	29	FGC3
CFGSR/L2020-4SA	4	30	40	10	20	20	125	21	21	FGC4
CFGSR/L2020-4SB	4	40	50	10	20	20	125	21	21	FGC4
CFGSR/L2020-4SC	4	50	60	10	20	20	125	21	21	FGC4
CFGSR/L2020-4SD	4	60	80	10	20	20	125	20.5	21	FGC4
CFGSR/L2020-4SE	4	80	120	10	20	20	125	20.5	21	FGC4
CFGSR/L2525-4SA	4	30	40	10	25	25	150	26	28	FGC4
CFGSR/L2525-4SB	4	40	50	10	25	25	150	26	28	FGC4
CFGSR/L2525-4SC	4	50	60	10	25	25	150	26	28	FGC4
CFGSR/L2525-4SD	4	60	80	10	25	25	150	25.5	28	FGC4
CFGSR/L2525-4SE	4	80	120	10	25	25	150	25.5	28	FGC4
CFGSR/L2525-4DA	4	30	40	20	25	25	160	26	28	FGC4
CFGSR/L2525-4DB	4	40	50	20	25	25	160	26	28	FGC4
CFGSR/L2525-4DC	4	50	60	20	25	25	160	26	28	FGC4
CFGSR/L2525-4DD	4	60	80	20	25	25	160	25.5	28	FGC4
CFGSR/L2525-4DE	4	80	120	20	25	25	160	25.5	28	FGC4
CFGSR/L2020-5SA	5	30	40	12	20	20	127	21	20	FGC5
CFGSR/L2020-5SB	5	40	50	12	20	20	127	21	20	FGC5
CFGSR/L2020-5SC	5	50	60	12	20	20	127	21	20	FGC5
CFGSR/L2020-5SD	5	60	80	12	20	20	127	20.5	20	FGC5
CFGSR/L2020-5SE	5	80	120	12	20	20	127	20.5	20	FGC5
CFGSR/L2525-5SA	5	30	40	12	25	25	152	26	27	FGC5
CFGSR/L2525-5SB	5	40	50	12	25	25	152	26	27	FGC5
CFGSR/L2525-5SC	5	50	60	12	25	25	152	26	27	FGC5
CFGSR/L2525-5SD	5	60	80	12	25	25	152	25.5	27	FGC5
CFGSR/L2525-5SE	5	80	120	12	25	25	152	25.5	27	FGC5
CFGSR/L2525-5DA	5	30	40	22	25	25	162	26	27	FGC5
CFGSR/L2525-5DB	5	40	50	22	25	25	162	26	27	FGC5
CFGSR/L2525-5DC	5	50	60	22	25	25	162	26	27	FGC5
CFGSR/L2525-5DD	5	60	80	22	25	25	162	25.5	27	FGC5
CFGSR/L2525-5DE	5	80	120	22	25	25	162	25.5	27	FGC5
CFGSR/L2525-6SB	6	40	50	14	25	25	154	26	26	FGC6
CFGSR/L2525-6SC	6	50	60	14	25	25	154	26	26	FGC6
CFGSR/L2525-6SD	6	60	80	14	25	25	154	25.5	26	FGC6
CFGSR/L2525-6SE	6	80	120	14	25	25	154	25.5	26	FGC6
CFGSR/L3232-8SD	8	60	80	16	32	32	170	32.5	24.5	FGC8
CFGSR/L3232-8SE	8	80	120	16	32	32	170	32.5	24.5	FGC8

- Right hand toolholders are used in regular rotation. Left hand toolholders are used in reverse rotation.
- Each toolholder set includes all components.
- The right hand blade and clamp are used with the right hand shank, the left hand blade and clamp are used with the left hand shank.

Reference pages

Inserts → **C136**, Standard cutting conditions → **C137**

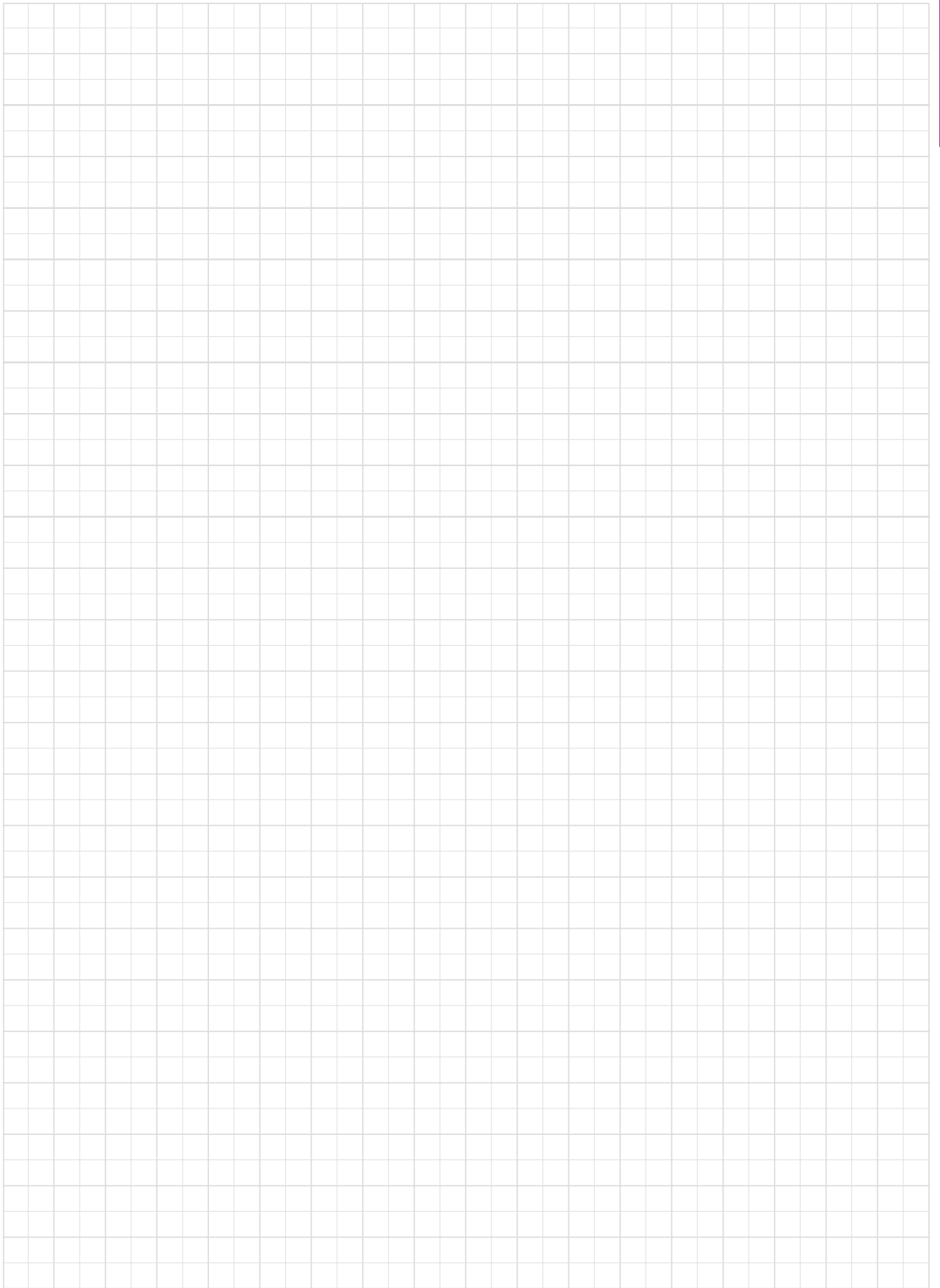
Designation	Shank	Blade	Clamp
CFGSR/L2020-3SA	CFGSR/L2020	FBR/L25-3SA	CFG-3SR/L
CFGSR/L2020-3SB	CFGSR/L2020	FBR/L25-3SB	CFG-3SR/L
CFGSR/L2020-3SC	CFGSR/L2020	FBR/L25-3SC	CFG-3SR/L
CFGSR/L2020-3SD	CFGSR/L2020	FBR/L25-3SD	CFG-3SR/L
CFGSR/L2020-3SE	CFGSR/L2020	FBR/L25-3SE	CFG-3SR/L
CFGSR/L2525-3SA	CFGSR/L2525	FBR/L25-3SA	CFG-3SR/L
CFGSR/L2525-3SB	CFGSR/L2525	FBR/L25-3SB	CFG-3SR/L
CFGSR/L2525-3SC	CFGSR/L2525	FBR/L25-3SC	CFG-3SR/L
CFGSR/L2525-3SD	CFGSR/L2525	FBR/L25-3SD	CFG-3SR/L
CFGSR/L2525-3SE	CFGSR/L2525	FBR/L25-3SE	CFG-3SR/L
CFGSR/L2020-4SA	CFGSR/L2020	FBR/L25-4SA	CFG-4SR/L
CFGSR/L2020-4SB	CFGSR/L2020	FBR/L25-4SB	CFG-4SR/L
CFGSR/L2020-4SC	CFGSR/L2020	FBR/L25-4SC	CFG-4SR/L
CFGSR/L2020-4SD	CFGSR/L2020	FBR/L25-4SD	CFG-4SR/L
CFGSR/L2020-4SE	CFGSR/L2020	FBR/L25-4SE	CFG-4SR/L
CFGSR/L2525-4SA	CFGSR/L2525	FBR/L25-4SA	CFG-4SR/L
CFGSR/L2525-4SB	CFGSR/L2525	FBR/L25-4SB	CFG-4SR/L
CFGSR/L2525-4SC	CFGSR/L2525	FBR/L25-4SC	CFG-4SR/L
CFGSR/L2525-4SD	CFGSR/L2525	FBR/L25-4SD	CFG-4SR/L
CFGSR/L2525-4SE	CFGSR/L2525	FBR/L25-4SE	CFG-4SR/L
CFGSR/L2525-4DA	CFGSR/L2525	FBR/L25-4DA	CFG-4DR/L
CFGSR/L2525-4DB	CFGSR/L2525	FBR/L25-4DB	CFG-4DR/L
CFGSR/L2525-4DC	CFGSR/L2525	FBR/L25-4DC	CFG-4DR/L
CFGSR/L2525-4DD	CFGSR/L2525	FBR/L25-4DD	CFG-4DR/L
CFGSR/L2525-4DE	CFGSR/L2525	FBR/L25-4DE	CFG-4DR/L
CFGSR/L2020-5SA	CFGSR/L2020	FBR/L25-5SA	CFG-5SR/L
CFGSR/L2020-5SB	CFGSR/L2020	FBR/L25-5SB	CFG-5SR/L
CFGSR/L2020-5SC	CFGSR/L2020	FBR/L25-5SC	CFG-5SR/L
CFGSR/L2020-5SD	CFGSR/L2020	FBR/L25-5SD	CFG-5SR/L
CFGSR/L2020-5SE	CFGSR/L2020	FBR/L25-5SE	CFG-5SR/L
CFGSR/L2525-5SA	CFGSR/L2525	FBR/L25-5SA	CFG-5SR/L
CFGSR/L2525-5SB	CFGSR/L2525	FBR/L25-5SB	CFG-5SR/L
CFGSR/L2525-5SC	CFGSR/L2525	FBR/L25-5SC	CFG-5SR/L
CFGSR/L2525-5SD	CFGSR/L2525	FBR/L25-5SD	CFG-5SR/L
CFGSR/L2525-5SE	CFGSR/L2525	FBR/L25-5SE	CFG-5SR/L
CFGSR/L2525-5DA	CFGSR/L2525	FBR/L25-5DA	CFG-5DR/L
CFGSR/L2525-5DB	CFGSR/L2525	FBR/L25-5DB	CFG-5DR/L
CFGSR/L2525-5DC	CFGSR/L2525	FBR/L25-5DC	CFG-5DR/L
CFGSR/L2525-5DD	CFGSR/L2525	FBR/L25-5DD	CFG-5DR/L
CFGSR/L2525-5DE	CFGSR/L2525	FBR/L25-5DE	CFG-5DR/L
CFGSR2525-6SB	CFGSR2525	FBR25-6SB	CFG-6SR
CFGSR/L2525-6SC	CFGSR/L2525	FBR/L25-6SC	CFG-6SR/L
CFGSR/L2525-6SD	CFGSR/L2525	FBR/L25-6SD	CFG-6SR/L
CFGSR/L2525-6SE	CFGSR/L2525	FBR/L25-6SE	CFG-6SR/L
CFGSR/L3232-8SD	CFGSR/L3232	FBR/L32-8SD	CFG-8SR/L
CFGSR/L3232-8SE	CFGSR/L3232	FBR/L32-8SE	CFG-8SR/L



SPARE PARTS

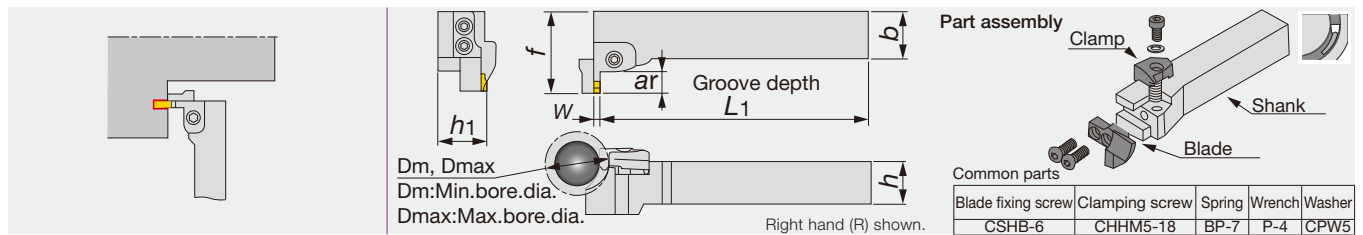


Designation	Clamp	Clamping screw	Blade screw	Spring	Washer	Wrench
CFGSR/L2020-3SA	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-3SB	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-3SC	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-3SD	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-3SE	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-3SA	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-3SB	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-3SC	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-3SD	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-3SE	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-4SA	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-4SB	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-4SC	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-4SD	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-4SE	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-4SA	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-4SB	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-4SC	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-4SD	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-4SE	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-4DA	CFG-4DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-4DB	CFG-4DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-4DC	CFG-4DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-4DD	CFG-4DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-4DE	CFG-4DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-5SA	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-5SB	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-5SC	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-5SD	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2020-5SE	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-5SA	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-5SB	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-5SC	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-5SD	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-5SE	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-5DA	CFG-5DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-5DB	CFG-5DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-5DC	CFG-5DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-5DD	CFG-5DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-5DE	CFG-5DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-6SB	CFG-6SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-6SC	CFG-6SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-6SD	CFG-6SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L2525-6SE	CFG-6SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L3232-8SD	CFG-8SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGSR/L3232-8SE	CFG-8SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4



CFGTR/L-#S/D

Perpendicular toolholders for face grooving



Designation	W	ϕD_m	ϕD_{max}	ar	h	b	L1	h1	f	Insert
CFGTR/L2020-3SA	3	30	40	10	20	20	122	21	44	FGC3
CFGTR/L2020-3SB	3	40	50	10	20	20	122	21	44	FGC3
CFGTR/L2020-3SC	3	50	60	10	20	20	122	21	44	FGC3
CFGTR/L2020-3SD	3	60	80	10	20	20	122	20.5	44	FGC3
CFGTR/L2020-3SE	3	80	120	10	20	20	122	20.5	44	FGC3
CFGTR/L2525-3SA	3	30	40	10	25	25	147	26	44	FGC3
CFGTR/L2525-3SB	3	40	50	10	25	25	147	26	44	FGC3
CFGTR/L2525-3SC	3	50	60	10	25	25	147	26	44	FGC3
CFGTR/L2525-3SD	3	60	80	10	25	25	147	25.5	44	FGC3
CFGTR/L2525-3SE	3	80	120	10	25	25	147	25.5	44	FGC3
CFGTR/L2020-4SA	4	30	40	10	20	20	121	21	44.	FGC4
CFGTR/L2020-4SB	4	40	50	10	20	20	121	21	44	FGC4
CFGTR/L2020-4SC	4	50	60	10	20	20	121	21	44	FGC4
CFGTR/L2020-4SD	4	60	80	10	20	20	121	20.5	44	FGC4
CFGTR/L2020-4SE	4	80	120	10	20	20	121	20.5	44.	FGC4
CFGTR/L2525-4SA	4	30	40	10	25	25	146	26	44	FGC4
CFGTR/L2525-4SB	4	40	50	10	25	25	146	26	44	FGC4
CFGTR/L2525-4SC	4	50	60	10	25	25	146	26	44	FGC4
CFGTR/L2525-4SD	4	60	80	10	25	25	146	25.5	44	FGC4
CFGTR/L2525-4SE	4	80	120	10	25	25	146	25.5	44	FGC4
CFGTR/L2525-4DA	4	30	40	20	25	25	146	26	54	FGC4
CFGTR/L2525-4DB	4	40	50	20	25	25	146	26	54	FGC4
CFGTR/L2525-4DC	4	50	60	20	25	25	146	26	54	FGC4
CFGTR/L2525-4DD	4	60	80	20	25	25	146	25.5	54	FGC4
CFGTR/L2525-4DE	4	80	120	20	25	25	146	25.5	54	FGC4
CFGTR/L2020-5SA	5	30	40	12	20	20	120	21	46	FGC5
CFGTR/L2020-5SB	5	40	50	12	20	20	120	21	46	FGC5
CFGTR/L2020-5SC	5	50	60	12	20	20	120	21	46	FGC5
CFGTR/L2020-5SD	5	60	80	12	20	20	120	20.5	46	FGC5
CFGTR/L2020-5SE	5	80	120	12	20	20	120	20.5	46	FGC5
CFGTR/L2525-5SA	5	30	40	12	25	25	145	26	46	FGC5
CFGTR/L2525-5SB	5	40	50	12	25	25	145	26	46	FGC5
CFGTR/L2525-5SC	5	50	60	12	25	25	145	26	46	FGC5
CFGTR/L2525-5SD	5	60	80	12	25	25	145	25.5	46	FGC5
CFGTR/L2525-5SE	5	80	120	12	25	25	145	25.5	46	FGC5
CFGTR/L2525-5DA	5	30	40	22	25	25	145	26	56	FGC5
CFGTR/L2525-5DB	5	40	50	22	25	25	145	26	56	FGC5
CFGTR/L2525-5DC	5	50	60	22	25	25	145	26	56	FGC5
CFGTR/L2525-5DD	5	60	80	22	25	25	145	25.5	56	FGC5
CFGTR/L2525-5DE	5	80	120	22	25	25	145	25.5	56	FGC5
CFGTR/L2525-6SB	6	40	50	14	25	25	144	26	48	FGC6
CFGTR/L2525-6SC	6	50	60	14	25	25	144	26	48	FGC6
CFGTR/L2525-6SD	6	60	80	14	25	25	144	25.5	48	FGC6
CFGTR/L2525-6SE	6	80	120	14	25	25	144	25.5	48	FGC6
CFGTR/L3232-8SD	8	60	80	16	32	32	162	32.5	50	FGC8
CFGTR/L3232-8SE	8	80	120	16	32	32	162	32.5	50	FGC8

- When using these face grooving toolholders, right hand ones use a right hand bladeset and left hand ones are left hand bladeset.
- Each toolholder set includes all components.
- The right hand blade and clamp are used with the right hand shank, the left hand blade and clamp are used with the left hand shank.

Reference pages

Inserts → **C136**, Standard cutting conditions → **C137**

Designation	Shank	Blade	Clamp
CFGTR/L2020-3SA	CFGTR/L2020	FBR/L25-3SA	CFG-3SR/L
CFGTR/L2020-3SB	CFGTR/L2020	FBR/L25-3SB	CFG-3SR/L
CFGTR/L2020-3SC	CFGTR/L2020	FBR/L25-3SC	CFG-3SR/L
CFGTR/L2020-3SD	CFGTR/L2020	FBR/L25-3SD	CFG-3SR/L
CFGTR/L2020-3SE	CFGTR/L2020	FBR/L25-3SE	CFG-3SR/L
CFGTR/L2525-3SA	CFGTR/L2525	FBR/L25-3SA	CFG-3SR/L
CFGTR/L2525-3SB	CFGTR/L2525	FBR/L25-3SB	CFG-3SR/L
CFGTR/L2525-3SC	CFGTR/L2525	FBR/L25-3SC	CFG-3SR/L
CFGTR/L2525-3SD	CFGTR/L2525	FBR/L25-3SD	CFG-3SR/L
CFGTR/L2525-3SE	CFGTR/L2525	FBR/L25-3SE	CFG-3SR/L
CFGTR/L2020-4SA	CFGTR/L2020	FBR/L25-4SA	CFG-4SR/L
CFGTR/L2020-4SB	CFGTR/L2020	FBR/L25-4SB	CFG-4SR/L
CFGTR/L2020-4SC	CFGTR/L2020	FBR/L25-4SC	CFG-4SR/L
CFGTR/L2020-4SD	CFGTR/L2020	FBR/L25-4SD	CFG-4SR/L
CFGTR/L2020-4SE	CFGTR/L2020	FBR/L25-4SE	CFG-4SR/L
CFGTR/L2525-4SA	CFGTR/L2525	FBR/L25-4SA	CFG-4SR/L
CFGTR/L2525-4SB	CFGTR/L2525	FBR/L25-4SB	CFG-4SR/L
CFGTR/L2525-4SC	CFGTR/L2525	FBR/L25-4SC	CFG-4SR/L
CFGTR/L2525-4SD	CFGTR/L2525	FBR/L25-4SD	CFG-4SR/L
CFGTR/L2525-4SE	CFGTR/L2525	FBR/L25-4SE	CFG-4SR/L
CFGTR/L2525-4DA	CFGTR/L2525	FBR/L25-4DA	CFG-4DR/L
CFGTR/L2525-4DB	CFGTR/L2525	FBR/L25-4DB	CFG-4DR/L
CFGTR/L2525-4DC	CFGTR/L2525	FBR/L25-4DC	CFG-4DR/L
CFGTR/L2525-4DD	CFGTR/L2525	FBR/L25-4DD	CFG-4DR/L
CFGTR/L2525-4DE	CFGTR/L2525	FBR/L25-4DE	CFG-4DR/L
CFGTR/L2020-5SA	CFGTR/L2020	FBR/L25-5SA	CFG-5SR/L
CFGTR/L2020-5SB	CFGTR/L2020	FBR/L25-5SB	CFG-5SR/L
CFGTR/L2020-5SC	CFGTR/L2020	FBR/L25-5SC	CFG-5SR/L
CFGTR/L2020-5SD	CFGTR/L2020	FBR/L25-5SD	CFG-5SR/L
CFGTR/L2020-5SE	CFGTR/L2020	FBR/L25-5SE	CFG-5SR/L
CFGTR/L2525-5SA	CFGTR/L2525	FBR/L25-5SA	CFG-5SR/L
CFGTR/L2525-5SB	CFGTR/L2525	FBR/L25-5SB	CFG-5SR/L
CFGTR/L2525-5SC	CFGTR/L2525	FBR/L25-5SC	CFG-5SR/L
CFGTR/L2525-5SD	CFGTR/L2525	FBR/L25-5SD	CFG-5SR/L
CFGTR/L2525-5SE	CFGTR/L2525	FBR/L25-5SE	CFG-5SR/L
CFGTR/L2525-5DA	CFGTR/L2525	FBR/L25-5DA	CFG-5DR/L
CFGTR/L2525-5DB	CFGTR/L2525	FBR/L25-5DB	CFG-5DR/L
CFGTR/L2525-5DC	CFGTR/L2525	FBR/L25-5DC	CFG-5DR/L
CFGTR/L2525-5DD	CFGTR/L2525	FBR/L25-5DD	CFG-5DR/L
CFGTR/L2525-5DE	CFGTR/L2525	FBR/L25-5DE	CFG-5DR/L
CFGTR/L2525-6SB	CFGTR/L2525	FBR/L25-6SB	CFG-6SR/L
CFGTR/L2525-6SC	CFGTR/L2525	FBR/L25-6SC	CFG-6SR
CFGTR/L2525-6SD	CFGTR/L2525	FBR/L25-6SD	CFG-6SR
CFGTR/L2525-6SE	CFGTR/L2525	FBR/L25-6SE	CFG-6SR/L
CFGTR/L3232-8SD	CFGTR/L3232	FBR/L32-8SD	CFG-8SR
CFGTR/L3232-8SE	CFGTR/L3232	FBR/L32-8SE	CFG-8SR/L



SPARE PARTS

						
Designation	Clamp	Clamping screw	Blade screw	Spring	Washer	Wrench
CFGTR/L2020-3SA	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-3SB	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-3SC	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-3SD	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-3SE	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-3SA	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-3SB	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-3SC	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-3SD	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-3SE	CFG-3SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-4SA	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-4SB	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-4SC	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-4SD	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-4SE	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-4SA	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-4SB	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-4SC	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-4SD	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-4SE	CFG-4SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-4DA	CFG-4DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-4DB	CFG-4DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-4DC	CFG-4DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-4DD	CFG-4DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-4DE	CFG-4DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-5SA	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-5SB	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-5SC	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-5SD	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2020-5SE	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-5SA	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-5SB	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-5SC	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-5SD	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-5SE	CFG-5SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-5DA	CFG-5DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-5DB	CFG-5DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-5DC	CFG-5DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-5DD	CFG-5DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-5DE	CFG-5DR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-6SB	CFG-6SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR2525-6SC	CFG-6SR	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR2525-6SD	CFG-6SR	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L2525-6SE	CFG-6SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR3232-8SD	CFG-8SR	CHHM5-18	CSHB-6	BP-7	CPW5	P-4
CFGTR/L3232-8SE	CFG-8SR/L	CHHM5-18	CSHB-6	BP-7	CPW5	P-4

FBR/L-#S/D

Blades of toolholder CFGSR/L-#S/D & CFGTR/L-#S/D for face grooving

Blade

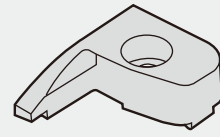
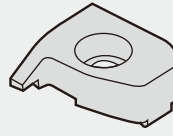
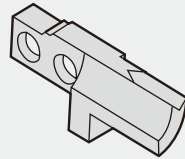
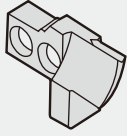
Shallow groove type (FBR/L□-□S□)

Deep groove type (FBR/L□□-□D□)

Clamp

Shallow groove type (CFG-□SR/L)

Deep groove type (CFG-□DR/L)



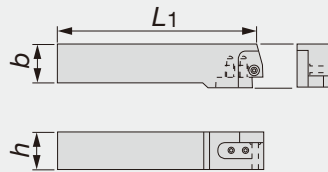
Right hand (R) shown.

Blade	Min. bore dia. ϕD_m	ar	W	Clamp
FBR/L25-3SA	30 - 40	10	3	CFG-3SR/L
FBR/L25-3SB	40 - 50	10	3	CFG-3SR/L
FBR/L25-3SC	50 - 60	10	3	CFG-3SR/L
FBR/L25-3SD	60 - 80	10	3	CFG-3SR/L
FBR/L25-3SE	80 - 120	10	3	CFG-3SR/L
FBR/L25-4SA	30 - 40	10	4	CFG-4SR/L
FBR/L25-4SB	40 - 50	10	4	CFG-4SR/L
FBR/L25-4SC	50 - 60	10	4	CFG-4SR/L
FBR/L25-4SD	60 - 80	10	4	CFG-4SR/L
FBR/L25-4SE	80 - 120	10	4	CFG-4SR/L
FBR/L25-4DA	30 - 40	20	4	CFG-4DR/L
FBR/L25-4DB	40 - 50	20	4	CFG-4DR/L
FBR/L25-4DC	50 - 60	20	4	CFG-4DR/L
FBR/L25-4DD	60 - 80	20	4	CFG-4DR/L
FBR/L25-4DE	80 - 120	20	4	CFG-4DR/L
FBR/L25-5SA	30 - 40	12	5	CFG-5SR/L
FBR/L25-5SB	40 - 50	12	5	CFG-5SR/L
FBR/L25-5SC	50 - 60	12	5	CFG-5SR/L
FBR/L25-5SD	60 - 80	12	5	CFG-5SR/L
FBR/L25-5SE	80 - 120	12	5	CFG-5SR/L

Blade	Min. bore dia. ϕD_m	ar	W	Clamp
FBR/L25-5DA	30 - 40	22	5	CFG-5DR/L
FBR/L25-5DB	40 - 50	22	5	CFG-5DR/L
FBR/L25-5DC	50 - 60	22	5	CFG-5DR/L
FBR/L25-5DD	60 - 80	22	5	CFG-5DR/L
FBR/L25-5DE	80 - 120	22	5	CFG-5DR/L
FBR/L25-6SB	40 - 50	14	6	CFG-6SR/L
FBR/L25-6SC	50 - 60	14	6	CFG-6SR/L
FBR/L25-6SD	60 - 80	14	6	CFG-6SR/L
FBR/L25-6SE	80 - 120	14	6	CFG-6SR/L
FBR25-6DB	40 - 50	24	6	CFG-6DR
FBR/L25-6DC	50 - 60	24	6	CFG-6DR/L
FBR/L25-6DD	60 - 80	24	6	CFG-6DR/L
FBR/L25-6DE	80 - 120	24	6	CFG-6DR/L
FBR32-8SD	60 - 80	16	8	CFG-8SR
FBR32-8SE	80 - 120	16	8	CFG-8SR
FBR32-8DD	60 - 80	26	8	CFG-8DR
FBR32-8DE	80 - 120	26	8	CFG-8DR

CFGSR/L

Shank of toolholder CFGSR/L-#S/D for face grooving



Right hand (R) shown.

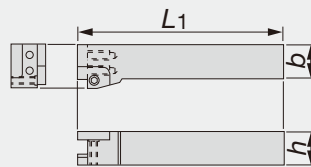
Designation	h	b	L1
CFGSR/L2020	20	20	114.3
CFGSR/L2525	25	25	139.3
CFGSR3232	32	32	153.3

SPARE PARTS

Designation	Clamping screw	Blade screw	Spring	Washer	Wrench
CFGSR/L...	CHHM5-18	CSHB-6	BP-7	CPW5	P-4

CFGTR/L

Shank of perpendicular toolholder CFGTR/L-#S/D for face grooving



Right hand (R) shown.

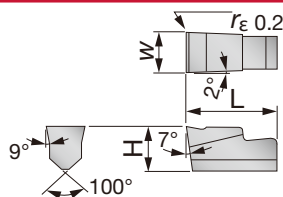
Designation	h	b	L1
CFGTR/L2020	20	20	125.8
CFGTR/L2525	25	25	150.8
CFGTR/L3232	32	32	170.8

SPARE PARTS

Designation	Clamping screw	Blade screw	Spring	Washer	Wrench
CFGTR/L...	CHHM5-18	CSHB-6	BP-7	CPW5	P-4

INSERT

FGC



Right hand (R) shown.

Designation	W±0.1	Coated	Cermet	Uncoated	L	H
		T313V	NS9530	UX30		
FGC3	3	●	●		10	4.29
FGC4	4	●	●		10	4.5
FGC5	5	●	●		12	5.5
FGC6	6			●	14	6.5
FGC8	8			●	16	8

● : Line up

Grade selection guide

Grades	Main applications	P group				K group			
		01	10	20	30	01	10	20	30
UX30	Low to medium speed cutting of steel, cast steel, cast iron and stainless steel								
NS9530	Medium to high speed cutting of steel and alloy steel, with satisfactory surface finish								
T313V	Low to high speed cutting of steel, cast steel, cast iron and stainless steel Standard cutting conditions								

STANDARD CUTTING CONDITIONS

Workpiece material: General carbon steel, C45 Cutting fluid: Water soluble cutting fluid	Groove width: W (mm)				
	3	4	5	6	8
Cutting speed v_c (m/min)	70 ~ 150	70 ~ 150	70 ~ 120	70 ~ 120	50 ~ 100
Feed f (mm/rev)	0.05 ~ 0.15	0.05 ~ 0.2	0.05 ~ 0.15	0.05 ~ 0.15	0.05 ~ 0.1

Notes:

- Above cutting conditions are applied to the shallow groove type (groove depth 10 ~ 16 mm).
- In the case of a deep groove type (groove depth 20 ~ 26 mm), apply 60 ~ 70% of above cutting conditions.
- The use of water soluble cutting fluid is recommended to discharge chips, protect the finished surface, and prevent chipping.

Notes on cutting diameter

- SA~SG types can widen the groove outward infinitely after grooving from the minimum to maximum diameter.
- SF and SG types can widen the groove inward to minimum zero after grooving from the minimum to maximum diameter. (See the figure)
- SA~SE types can not be used to widen the groove more inward from the minimum diameter.

