

# HOW TO READ THE STANDARD OF SMALL TOOLS

## ● How this section page is organised

- ① Organised according to the cutting mode of small tools.  
(Refer to the inside title on the next page.)
- ② Shown as Turning → External Grooving → External Cutting Off → Threading → Boring.

**TYPE OF TOOL HOLDER**  
indicates the first four letters of the order number, as well as cutting applications.

**APPLICATION**

**PRODUCT SECTION**

**FIGURE SHOWING THE TOOLING APPLICATION**  
uses illustrations and arrows to depict the available machining applications such as external turning, copying, facing, chamfering, threading, and grooving together with cutting edge lead angles.

**GEOMETRY**

**CHIP BREAKER BY CUTTING APPLICATION**

**SMALL TOOLS**

**EXTERNAL FRONT TURNING**

**SCAC-SM**

Order Number	Stock	Insert Number	H	R	LF	LX	HXKW	HF	WF2	Class Steel	Wrench
SCACRL0808K06-SM		0602	8	8	125	11	1.6	8	0	TS254	TKY08R
SCACRL1010K06-SM		0602	10	10	125	—	—	10	0	TS254	TKY08R
SCACRL1010K09-SM		0973	10	10	125	16	3.5	10	0	TS43	TKY15R
SCACRL1212M09-SM		0973	12	12	150	14	1.5	12	0	TS43	TKY15R
SCACRL1616M09-SM		0973	16	16	150	—	—	16	0	TS43	TKY15R

● Clamp Torque (N·m) : TS254=1.0, TS43=3.5

**SDJC-SM**

Order Number	Stock	Insert Number	H	R	LF	LX	HXKW	HF	WF2	Class Steel	Wrench
SDJCLR0808K07-SM		0702	8	8	125	15	2	8	0	TS254	TKY08R
SDJCLR1010K07-SM		DCMT	10	10	125	—	—	10	0	TS254	TKY08R
SDJCLR1010K11-SM		DCET	10	10	125	24	4	10	0	TS43	TKY15R
SDJCLR1212M11-SM		DCGT	12	12	150	22	2	12	0	TS43	TKY15R
SDJCLR1616M11-SM		DCGW	16	16	150	—	—	16	0	TS43	TKY15R

● Clamp Torque (N·m) : TS254=1.0, TS43=3.5

**SCLC-SM**

Order Number	Stock	Insert Number	H	R	LF	LX	HXKW	HF	WF2	Class Steel	Wrench
SCLCLR0808K06-SM		0602	8	8	125	11	2.1	8	0	TS254	TKY08R
SCLCLR1010K06-SM		0602	10	10	125	—	—	10	0	TS254	TKY08R
SCLCLR1010K09-SM		0973	10	10	125	20	4	10	0	TS43	TKY15R
SCLCLR1212M09-SM		0973	12	12	150	18	2	12	0	TS43	TKY15R
SCLCLR1616M09-SM		0973	16	16	150	—	—	16	0	TS43	TKY15R

● Clamp Torque (N·m) : TS254=1.0, TS43=3.5

**SDNC-SM**

Order Number	Stock	Insert Number	H	R	LF	LX	HXKW	HF	WF2	Class Steel	Wrench
SDNCLR0808K07-SM		0702	8	8	125	—	—	8	3	TS254	TKY08R
SDNCLR1010K07-SM		DCMT	10	10	125	—	—	10	3	TS254	TKY08R
SDNCLR1010K11-SM		DCET	10	10	125	24	2	10	0	TS43	TKY15R
SDNCLR1212M11-SM		DCGT	12	12	150	—	—	12	5	TS43	TKY15R
SDNCLR1616M11-SM		DCGW	16	16	150	—	—	16	5	TS43	TKY15R

● Clamp Torque (N·m) : TS254=1.0, TS43=3.5

**RECOMMENDED CUTTING CONDITIONS**

Work Material	Hardness	Grade	Cutting Speed (m/min)	Feed (mm/rev)
P Carbon Steel - Alloy Steel	H91H~H91D	MS915/VP15T	100 (50~150)	0.08 (0.01~0.15)
		MS915	110 (50~160)	0.08 (0.01~0.15)
Free Cutting Steel	—	NX252	150 (50~250)	0.08 (0.01~0.15)
		VP15T/MP905/MP915	80 (50~120)	0.06 (0.02~0.1)
M Non-Ferrous Metal	<200H	—	150 (70~300)	0.09 (0.04~0.15)
N Titanium Alloy	—	MT100MT905	60 (40~80)	0.08 (0.04~0.12)
Heat Resistant Alloy	—	MP915	50 (30~75)	0.08 (0.04~0.12)

**LEGEND FOR STOCK STATUS MARK**  
is shown on the left hand page of each double-page spread.

**REFERENCE PAGE FOR APPLICABLE INSERTS**  
indicates reference pages giving details of inserts that are applicable to the product.

**PAGE REFERENCE**  
· SPARE PARTS  
· TECHNICAL DATA  
indicates reference pages, including the above, on the right hand page of each double-page spread.

**PRODUCT STANDARDS**  
indicates order numbers, stock status (per right/left hand), applicable inserts, dimensions, and spare parts.

**RECOMMENDED CUTTING CONDITIONS**  
for each work material classification, indicates recommended cutting conditions according to the ISO categories for cutting grades, P, M and N.

Note1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.  
Note2) Dimensions shown for insert corner RE 0.2.

● Inventory maintained in Japan.

SCAC-SM type inserts > A145~A147  
SCLC-SM type inserts > A148~A149  
SDN & PCD inserts > B045~B052, B072

SDJC-SM type inserts > A150~A154  
SDNC-SM type inserts > A150~A154

SDN & PCD inserts > B054~B056, B076  
SPARE PARTS > B001  
TECHNICAL DATA > B001

● To Order : Please specify

① order number and hand of tool (right/left).

# TURNING TOOLS

## SMALL TOOLS

OUTLINE OF SMALL TOOLS ..... D002  
 CLASSIFICATION..... D004

### STANDARD OF SMALL TOOLS

**EXTERNAL FRONT TURNING**  
 SCAC-SM ..... D008  
 SCLC-SM..... D008  
 SDJC-SM..... D009  
 SDNC-SM ..... D009  
 SVLP-SM ..... D010  
 SVJB-SM ..... D010  
 SVJC-SM ..... D011  
 SVVB-SM..... D011  
 SVPP-SM..... D011

**EXTERNAL BACK TURNING**  
 BTAH ..... D012  
 CTBH ..... D013  
 BTVH ..... D014

**EXTERNAL GROOVING**  
 GTAH ..... D016  
 GTBH ..... D016  
 GTCH ..... D016

**EXTERNAL CUTTING OFF**  
 CTAH ..... D018  
 CTAH-S..... D018  
 CTBH ..... D020  
 CTCH ..... D021  
 CTDH ..... D022  
 CTEH ..... D023

**EXTERNAL THREADING**  
 TTAH ..... D024

**EXTERNAL FRONT TURNING, COPYING, FACING**  
 SH ..... D026

**CAM TYPE TOOL POSTS**  
 CSVH ..... D027

**BORING**  
 SBAH ..... D030

\*Arranged by Alphabetical order

D012 BTAH	D013 CTBH	D030 SBAT INSERTS
D012 BTAT INSERTS	D020 CTBH	D008 SCAC-SM
D013 BTBT INSERTS	D020 CTBT INSERTS	D008 SCLC-SM
D014 BTVH	D021 CTCH	D009 SDJC-SM
D014 BTVT INSERTS	D021 CTCT INSERTS	D009 SDNC-SM
D027 CSVH	D022 CTDH	D026 SH
D028 CSVTBXL INSERTS	D022 CTDH INSERTS	D010 SVJB-SM
D028 CSVTB INSERTS	D023 CTEH	D011 SVJC-SM
D028 CSVTC INSERTS	D023 CTET INSERTS	D010 SVLP-SM
D027 CSVTF INSERTS	D016 GTAH	D011 SVPP-SM
D027 CSVTFXL INSERTS	D016 GTAT INSERTS	D011 SVVB-SM
D029 CSVTG INSERTS	D016 GTBH	D024 TTAH
D029 CSVTT INSERTS	D016 GTBT INSERTS	D024 TTAT INSERTS
D018 CTAH	D016 GTCH	
D018 CTAH-S	D016 GTCT INSERTS	
D019 CTAT INSERTS	D030 SBAH	

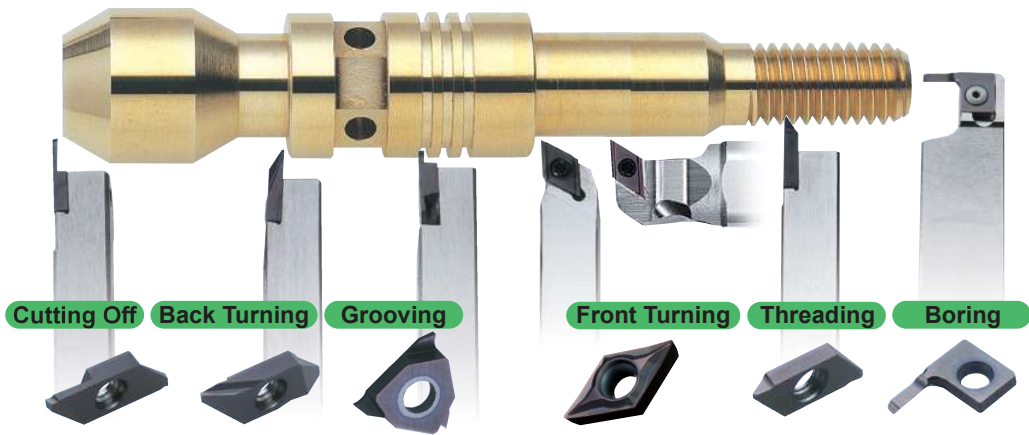


# OUTLINE OF SMALL TOOLS

TOOLS FOR GANG TYPE AUTOMATIC LATHES (FOR EXTERNAL TURNING AND BORING)

D

SMALL TOOLS



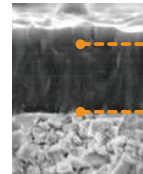
PVD Coated Cemented Carbide Grade for Carbon Steel

## MS6015 NEW

Skilled at pure iron, carbon steel and free cutting steel turning and achieving implemented stable finished surfaces and excellent dimensional accuracy.

	MS6015	Conventional
Coating	TiCN multilayer	TiAlN
Hardness (HV)	3,000	2,800
Wear Coefficient (Carbon Steel)	Low	High
Base Material Hardness (HRA)	92.0	92.0
T.R.S (GPa)	2.0	2.0

Ti-C-N Multilayer Coating



Superior wear and welding resistance and demonstrating the best possible results for carbon steel.

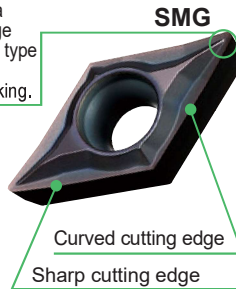
Minute multilayers remarkably improve welding.

### ● Moulded breaker insert

Nose radii designed with minus tolerance

- Suitable for small parts applications that often require minus tolerance dimensions.
- The order number is shown with the letter "M" that indicates minus tolerance. ex) DCGT11T301M-FS
- The radius value is printed on the side of the insert label for easy recognition.

A combination of a curved cutting edge and the protrusion type breaker promotes efficient chip breaking.



SMG

FS

FS-P

### ● Tolerance Corner R



E class  
RE  $_{-0.02}^0$  mm



LS

LS-P

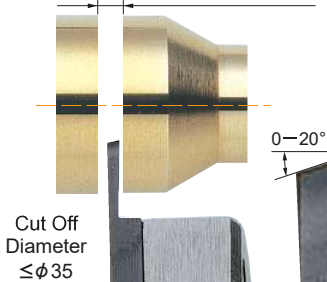
The letter "M" insert  
RE  $_{-0.05}^0$  mm

(Conventional G-class insert)  
RE  $\pm 0.10$  mm



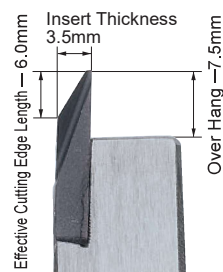
### ● Cutting Off

Cutting Edge Width  
0.7-3.0mm



Cut Off Diameter  
 $\leq \phi 35$

### ● Back Turning



Inserts for Moulded Back Turning

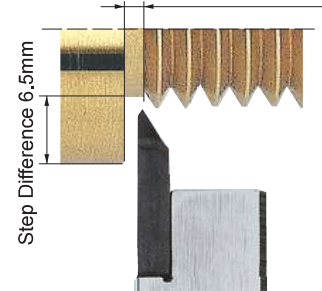
## SMB Breaker

NEW

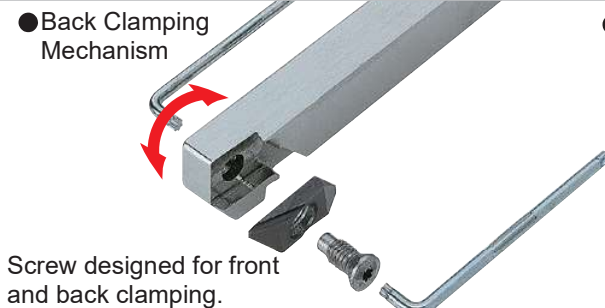


### ● Threading

Can machine to the end face



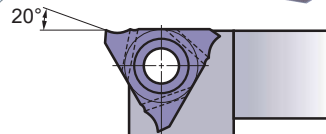
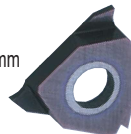
### ● Back Clamping Mechanism



Screw designed for front and back clamping.

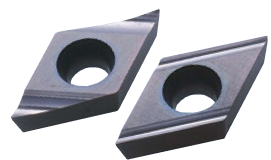
### ● Grooving

- 3-cornered
- Groove width 0.3-3.0mm
- Traversing possible



### ● Front Turning

- ISO E class accuracy inserts
- A wide variety of small corner R inserts
- Rake angle 30°



## Tools for a very wide range of small parts machining

External Turning	Tools for front turning, back turning, grooving, threading, and cutting off
Internal Turning	Tools for boring, internal grooving and internal threading
Drilling	Drills
End Milling	End Mills

## Tools for CNC automatic and small lathes

Types of Tool Posts	Gang type, turret type, cam type (radial pattern type)
Tool Sizes	Square shank: 8–16 mm Round shank : less than $\phi 25.4$

## Indexable inserts developed under the concept of "high quality, high efficiency and long tool life."

High Quality	E class tolerance, sharp cutting edge, high accuracy small corner R, smooth surface finish
Long Tool Life	PVD coating MS6015/VP15TF/MP9005/MP9015
High Efficiency	Regrinding not necessary due to the employment of indexable inserts. A wide variety of top cutting edge geometries

## TOOLS FOR CAM TYPE AUTOMATIC LATHES

- The most suitable for the use with cam type automatic lathes (radial pattern tool posts)
- The most suitable for machining of small parts with work diameter 5mm or smaller
- Single holder for front turning, back turning, grooving, threading and cutting off operations



D  
SMALL TOOLS

## INTERNAL TURNING TOOLS

### Solid type **MICRO-MINI TWIN Boring Bars**

Boring  
Grooving  
Threading



Minimum cutting diameter  $\phi 2.2$ –

Round Shank

Square Shank

### **MICRO-DEX Boring Bars**

Minimum cutting diameter  $\phi 5.0$ –



Minimum cutting diameter  $\phi 10.0$ –

### **DIMPLE BAR**

## DRILLING TOOLS

Violet Coated Precision Drills

**VAPDS/VAPDM** (General)  
**VAPDSSUS/VAPDMSUS** (For stainless steel)  
**VAPDSCB** (For counter boring)

Micro Solid Carbide Drills

**MSE** Drills  
**MSE/MSP** (Centre Drills)

Solid Carbide Drill

**MVS/MVE**

Solid Carbide Flat Bottom Drills

**MFE** **NEW**

Solid Carbide Drills for Centreing and Chamfering

**DLE** **NEW**

Solid Gun Drill

Micro Solid Carbide Gun Drill with through coolant holes  
**MGS**



## END MILLING TOOLS

Solid Carbide End Mill

**MSSTAR** End Mill Series

Vibration Control End Mills for Machining Difficult-to-Cut Materials

**SMART MIRACLE** End Mill Series



# CLASSIFICATION OF EXTERNAL TURNING TOOLS

## GANG TYPE TOOL POSTS

### ● FRONT TURNING

Name of Tool Holder	Shank Size (mm) (H x W x L)	Geometry
<b>SCAC-SM</b> ↻ D008	8 x 8 x 125 10 x 10 x 125 12 x 12 x 150 16 x 16 x 150	90° KAPR
<b>SCLC-SM</b> ↻ D008	8 x 8 x 125 10 x 10 x 125 12 x 12 x 150 16 x 16 x 150	95° KAPR
<b>SDJC-SM</b> ↻ D009	8 x 8 x 125 10 x 10 x 125 12 x 12 x 150 16 x 16 x 150	93° KAPR
<b>SDNC-SM</b> ↻ D009	8 x 8 x 125 10 x 10 x 125 12 x 12 x 150 16 x 16 x 150	62.5° KAPR
<b>SVLP-SM</b> ↻ D010	10 x 10 x 125 12 x 12 x 150 16 x 16 x 150	95° KAPR
<b>SVJB-SM</b> ↻ D010	10 x 10 x 125 12 x 12 x 150 16 x 16 x 150	93° KAPR
<b>SVJC-SM</b> NEW ↻ D011	10 x 10 x 120 12 x 12 x 120 16 x 16 x 120	93° KAPR
<b>SVPP-SM</b> ↻ D011	10 x 10 x 125 12 x 12 x 150 16 x 16 x 150	117.5° KAPR
<b>SVVB-SM</b> ↻ D011	10 x 10 x 125 12 x 12 x 150 16 x 16 x 150	72.5° KAPR

### ● BACK TURNING

Name of Tool Holder	Shank Size (mm) (H x W x L)	Geometry
<b>BTAH</b> (Insert Size 2.8, 3.5, 5.0mm) ↻ D012	8 x 10 x 120 10 x 10 x 120 12 x 12 x 120 16 x 16 x 120	
<b>CTBH</b> (Insert Size 4.5, 6.0mm) ↻ D013	10 x 10 x 120 12 x 12 x 120 16 x 16 x 120	
<b>BTVH</b> (Insert Size 7.5mm) ↻ D014	10 x 10 x 120 12 x 12 x 120 16 x 16 x 120	53° KAPR

### ● THREADING

Name of Tool Holder	Shank Size (mm) (H x W x L)	Geometry
<b>TTAH</b> ↻ D024	8 x 10 x 120 10 x 10 x 120 12 x 12 x 120 16 x 16 x 120	

### ● GROOVING

Name of Tool Holder	Shank Size (mm) (H x W x L)	Geometry
<b>GTAH</b> (Groove Width 0.3—3.0mm) ↻ D016	8 x 8 x 80 8 x 8 x 120 10 x 10 x 80 10 x 10 x 120 12 x 12 x 80 12 x 12 x 120 16 x 16 x 120	U Type ↑ E Type VT Type
<b>GTBH</b> (Groove Width 1.45—3.0mm) ↻ D016	10 x 10 x 80 10 x 10 x 120 12 x 12 x 120 16 x 16 x 120	U Type ↑ E Type VT Type
<b>GTCH</b> (Groove Width 2.5—3.0mm) ↻ D016	10 x 10 x 80 10 x 10 x 120	U Type ↑ E Type VT Type

### ● CUTTING OFF

Name of Tool Holder	Shank Size (mm) (H x W x L)	Geometry
<b>CTAH</b> (Max. Cut Off Diameter 12mm) ↻ D018	8 x 10 x 120 10 x 10 x 120 12 x 12 x 120 16 x 16 x 120	
<b>CTAH-S</b> (Max. Cut Off Diameter 12mm) ↻ D018	10 x 10 x 80	
<b>CTBH</b> (Max. Cut Off Diameter 16mm) ↻ D020	10 x 10 x 120 12 x 12 x 120 16 x 16 x 120	
<b>CTCH</b> (Max. Cut Off Diameter 20mm) ↻ D021	10 x 10 x 120 12 x 12 x 120	
<b>CTDH</b> (Max. Cut Off Diameter 23—35mm) ↻ D022	16 x 16 x 120 16 x 16 x 125	
<b>CTEH</b> (Max. Cut Off Diameter 23—35mm) ↻ D023	16 x 16 x 120 16 x 16 x 125	

D

SMALL TOOLS

## OPPOSITE TOOL POSTS

### ● DIMPLE SLEEVE HOLDER

Name of Tool Holder	Shank Size (mm) (Shank Dia. x L)	Geometry
<b>SH</b> (Front Turning, Copying, Facing)	$\phi 15.875 \times 100$ $\phi 19.05 \times 125$ $\phi 20 \times 125$ $\phi 22 \times 125$ $\phi 25.4 \times 150$	 <b>93° KAPR</b>
<b>D026</b>		

## TURRET TYPE TOOL POSTS

### ● FRONT TURNING

Name of Tool Holder	Shank Size (mm) (H x W x L)	Geometry
<b>DTGN</b>	$16 \times 16 \times 100$ $20 \times 20 \times 125$ $25 \times 25 \times 150$	 <b>91° KAPR</b>
<b>C016</b>		
<b>MTJN</b>	$20 \times 20 \times 125$ $25 \times 25 \times 150$	 <b>93° KAPR</b>
<b>C017</b>		
<b>PTGN</b>	$10 \times 10 \times 70$ $12 \times 12 \times 80$ $16 \times 16 \times 100$ $20 \times 20 \times 125$ $25 \times 25 \times 150$	 <b>91° KAPR</b>
<b>C016</b>		
<b>SCLC</b>	$8 \times 8 \times 60$ $10 \times 10 \times 70$ $12 \times 12 \times 80$ $16 \times 16 \times 100$	 <b>95° KAPR</b>
<b>C022</b>		
<b>SDJC</b>	$10 \times 10 \times 70$ $12 \times 12 \times 80$ $16 \times 16 \times 100$	 <b>93° KAPR</b>
<b>C023</b>		
<b>SDNC</b>	$8 \times 8 \times 60$ $10 \times 10 \times 70$ $12 \times 12 \times 80$ $16 \times 16 \times 100$	 <b>62.5° KAPR</b>
<b>C023</b>		
<b>SSSC</b>	$12 \times 12 \times 80$ $16 \times 16 \times 100$	 <b>45° KAPR</b>
<b>C026</b>		
<b>STGC</b>	$10 \times 10 \times 70$ $12 \times 12 \times 80$ $16 \times 16 \times 100$	 <b>91° KAPR</b>
<b>C027</b>		
<b>SVJC</b>	$10 \times 10 \times 70$ $16 \times 16 \times 100$	 <b>93° KAPR</b>
<b>C028</b>		
<b>SVVC</b>	$16 \times 16 \times 100$	 <b>72.5° KAPR</b>
<b>C028</b>		

### ● THREADING

Name of Tool Holder	Shank Size (mm) (H x W x L)	Geometry
<b>MMT</b>	$12 \times 12 \times 100$ $16 \times 16 \times 100$ $20 \times 20 \times 125$ $25 \times 25 \times 150$ $32 \times 32 \times 170$	
<b>G019</b>		
<b>SMGH</b>	$10 \times 10 \times 70$ $12 \times 12 \times 80$ $16 \times 16 \times 100$	
<b>G026</b>		

### ● GROOVING

Name of Tool Holder	Shank Size (mm) (H x W x L)	Geometry
<b>SMGH</b>	$10 \times 10 \times 70$ $12 \times 12 \times 80$ $16 \times 16 \times 100$	
<b>F118</b>		

## CAM TYPE TOOL POSTS

Name of Tool Holder	Shank Size (mm) (H x W x L)	Geometry
<b>CSVH</b> (Front Turning)	$7 \times 7 \times 140$ $8 \times 8 \times 140$ $9.5 \times 9.5 \times 140$ $10 \times 10 \times 140$ $12 \times 12 \times 140$	
<b>D027</b>		
<b>CSVH</b> (Front Turning Copying)	$7 \times 7 \times 140$ $8 \times 8 \times 140$ $9.5 \times 9.5 \times 140$ $10 \times 10 \times 140$ $12 \times 12 \times 140$	
<b>D027</b>		
<b>CSVH</b> (Back Turning)	$7 \times 7 \times 140$ $8 \times 8 \times 140$ $9.5 \times 9.5 \times 140$ $10 \times 10 \times 140$ $12 \times 12 \times 140$	
<b>D027</b>		
<b>CSVH</b> (Back Turning Copying)	$7 \times 7 \times 140$ $8 \times 8 \times 140$ $9.5 \times 9.5 \times 140$ $10 \times 10 \times 140$ $12 \times 12 \times 140$	
<b>D027</b>		
<b>CSVH</b> (Cutting Off)	$7 \times 7 \times 140$ $8 \times 8 \times 140$ $9.5 \times 9.5 \times 140$ $10 \times 10 \times 140$ $12 \times 12 \times 140$	
<b>D027</b>		
<b>CSVH</b> (Grooving)	$7 \times 7 \times 140$ $8 \times 8 \times 140$ $9.5 \times 9.5 \times 140$ $10 \times 10 \times 140$ $12 \times 12 \times 140$	
<b>D027</b>		
<b>CSVH</b> (Threading)	$7 \times 7 \times 140$ $8 \times 8 \times 140$ $9.5 \times 9.5 \times 140$ $10 \times 10 \times 140$ $12 \times 12 \times 140$	
<b>D027</b>		

D

SMALL TOOLS

# CLASSIFICATION OF INTERNAL TURNING TOOLS (FOR GENERAL USE)

D  
SMALL TOOLS

Product Name	Holder
For Gang Type Tool Posts ↻ D030	<b>SBAH</b>  Min. Cutting Diameter : 3mm
<b>MICRO-MINI TWIN Boring Bars</b> (Solid Carbide) ↻ E019	<b>CB CR</b>  Min. Cutting Diameter : 2.2mm
<b>MICRO-MINI Boring Bars</b> (Solid Carbide) ↻ E022	<b>COFR-BLS</b>  Min. Cutting Diameter : 3.2mm
<b>MICRO-DEX Boring Bars</b> (Carbide Shank) ↻ E016	<b>SCLC</b>  Min. Cutting Diameter : 5mm
<b>MICRO-DEX Boring Bars</b> (Carbide Shank) ↻ E017	<b>STUC</b>  Min. Cutting Diameter : 8mm
<b>MICRO-DEX Boring Bars</b> (Carbide Shank) ↻ E016	<b>SWUB</b>  Min. Cutting Diameter : 6mm
<b>F type Bars</b> (Steel Shank) ↻ E027	<b>FSWL1</b>  Min. Cutting Diameter : 5.8mm
<b>F type Bars</b> (Carbide Shank) ↻ E027	<b>FSWL2</b>  Min. Cutting Diameter : 5.8mm
<b>DIMPLE BAR</b> (Steel Shank) (Carbide Shank) ↻ E006	<b>FSCLC/P FSCLC/P-E</b>  Min. Cutting Diameter : 10mm

Product Name	Holder
<b>DIMPLE BAR</b> (Steel Shank) (Carbide Shank) ↻ E008	<b>FSDUC FSDUC-E</b>  Min. Cutting Diameter : 14mm
<b>DIMPLE BAR</b> (Steel Shank) (Carbide Shank) ↻ E009	<b>FSDQC FSDQC-E</b>  Min. Cutting Diameter : 13mm
<b>DIMPLE BAR</b> (Steel Shank) (Carbide Shank) ↻ E007	<b>FSTUP FSTUP-E</b>  Min. Cutting Diameter : 10mm
<b>DIMPLE BAR</b> (Steel Shank) ↻ E011	<b>FSVUB/C</b>  Min. Cutting Diameter : 16mm
<b>DIMPLE BAR</b> (Steel Shank) ↻ E011	<b>FSVPB/C</b>  Min. Cutting Diameter : 16mm
<b>DIMPLE BAR</b> (Steel Shank) ↻ E012	<b>FSVJB/C</b>  Min. Cutting Diameter : 16mm
<b>DIMPLE BAR</b> (Steel Shank) (Carbide Shank) ↻ E010	<b>FSWUB/P FSWUB/P-E</b>  Min. Cutting Diameter : 10mm

# CLASSIFICATION OF INTERNAL TURNING TOOLS (GROOVING/THREADING END MILLING/DRILLING)



## FOR GROOVING AND THREADING

Product Name	Holder
<b>MICRO-MINI TWIN Boring Bars</b> (Solid Type) ➔ F120	<b>CG TYPE(Grooving)</b>  Min. Cutting Diameter : 3mm
<b>MICRO-MINI TWIN Boring Bars</b> (Solid Type) ➔ G033	<b>CT TYPE(Threading)</b>  Min. Cutting Diameter : 3mm
<b>F type Bars</b> (Steel Shank) (Carbide Shank) (Grooving) (Threading) ➔ F124	<b>FSL51 FSL52</b>  Min. Cutting Diameter : 10mm

## END MILLS

Solid Carbide End Mill series	➔ J024
HSS End Mill series	➔ J044

## DRILLS

Product Name	Series Title
<b>NEW</b> Leading Drills ➔ P012	<b>DLE series</b> 
<b>NEW</b> Flat Bottom Drills ➔ P015	<b>MFE series</b> 
DLE series	➔ P012
MFE series	➔ P015
MVX/TAF Drill (Indexable type)	➔ P230
Solid Carbide Drill series	➔ P004
Solid Gun Drill series	➔ P130
HSS Drill series	➔ P008

D  
SMALL TOOLS



# EXTERNAL FRONT TURNING

## SCAC-SM

Finish	Finish	Light	Light
SMG/FS (06,09)	R/L-F (06)	R/L-SS (06,09)	LS (06,09)
Medium R/L-SN (06,09)	Medium R/L-SR (06,09)	For nonferrous metals AZ (06,09)	Light LS-P (06,09)

Order Number	Stock		Insert Number	Dimensions (mm)								Clamp Screw *	Wrench
	R	L		H	B	LF	LH	HBKW	HF	WF2			
SCACR/L0808K06-SM	●	●		0602	8	8	125	11	1.6	8	0	TS254	TKY08R
SCACR/L1010K06-SM	●	●		0602	10	10	125	—	—	10	0	TS254	TKY08R
SCACR/L1010K09-SM	●	●		09T3	10	10	125	16	3.5	10	0	TS43	TKY15R
SCACR/L1212M09-SM	●	●		09T3	12	12	150	14	1.5	12	0	TS43	TKY15R
SCACR/L1616M09-SM	●	●		09T3	16	16	150	—	—	16	0	TS43	TKY15R

\* Clamp Torque (N · m) : TS254=1.0, TS43=3.5

## SCLC-SM

Finish	Finish	Light	Light
SMG/FS (06,09)	R/L-F (06)	R/L-SS (06,09)	LS (06,09)
Medium R/L-SN (06,09)	Medium R/L-SR (06,09)	For nonferrous metals AZ (06,09)	Light LS-P (06,09)

Order Number	Stock		Insert Number	Dimensions (mm)								Clamp Screw *	Wrench
	R	L		H	B	LF	LH	HBKW	HF	WF2			
SCLCR/L0808K06-SM	●	●		0602	8	8	125	11	2.1	8	0	TS254	TKY08R
SCLCR/L1010K06-SM	●	●		0602	10	10	125	—	—	10	0	TS254	TKY08R
SCLCR/L1010K09-SM	●	●		09T3	10	10	125	20	4	10	0	TS43	TKY15R
SCLCR/L1212M09-SM	●	●		09T3	12	12	150	18	2	12	0	TS43	TKY15R
SCLCR/L1616M09-SM	●	●		09T3	16	16	150	—	—	16	0	TS43	TKY15R

\* Clamp Torque (N · m) : TS254=1.0, TS43=3.5

Note1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.  
 Note2) Dimensions shown for insert corner RE 0.2.

● : Inventory maintained in Japan.

SCAC-SM type inserts > A140—A147  
 SCLC-SM type inserts > A140—A147  
 CBN & PCD inserts > B049—B052, B072

SDJC-SM				Without off set							Finish		Light	
				Right hand tool holder shown.							SMG/FS	R/L-F	R/L-SS	LS
											 (07, 11)	 (07, 11)	 (07, 11)	 (07, 11)
											Medium	Medium	For nonferrous metals	Light
											 (07, 11)	 (07, 11)	 (07, 11)	 (07, 11)
											Medium	Medium	For nonferrous metals	Light
Order Number	Stock		Insert Number	Dimensions (mm)							*			
	R	L		H	B	LF	LH	HBKW	HF	WF2	Clamp Screw	Wrench		
SDJCR/L0808K07-SM	●	●	DCMT	0702	8	8	125	15	2	8	0	TS254	TKY08R	
SDJCR/L1010K07-SM	●	●		DCMW	0702	10	10	125	—	—	10	0	TS254	TKY08R
SDJCR/L1010K11-SM	●	●	DCET	11T3	10	10	125	24	4	10	0	TS43	TKY15R	
SDJCR/L1212M11-SM	●	●	DCGT	11T3	12	12	150	22	2	12	0	TS43	TKY15R	
SDJCR/L1616M11-SM	●	●	DCGW	11T3	16	16	150	—	—	16	0	TS43	TKY15R	

\* Clamp Torque (N · m) : TS254=1.0, TS43=3.5

SDNC-SM				Neutral edge with handed holder							Finish		Light	
				Without off set							SMG/FS	R/L-F	R/L-SS	LS
											 (07, 11)	 (07, 11)	 (07, 11)	 (07, 11)
											Medium	Medium	For nonferrous metals	Light
											 (07, 11)	 (07, 11)	 (07, 11)	 (07, 11)
											Medium	Medium	For nonferrous metals	Light
Order Number	Stock		Insert Number	Dimensions (mm)							*			
	R	L		H	B	LF	LH	HBKW	HF	WF2	Clamp Screw	Wrench		
SDNCR/L0808K07-SM	●	●	DCMT	0702	8	8	125	—	—	8	3	TS254	TKY08R	
SDNCR/L1010K07-SM	●	●		DCMW	0702	10	10	125	—	—	10	3	TS254	TKY08R
SDNCR/L1010K11-SM	●	●	DCET	11T3	10	10	125	24	2	10	5	TS43	TKY15R	
SDNCR/L1212M11-SM	●	●	DCGT	11T3	12	12	150	—	—	12	5	TS43	TKY15R	
SDNCR/L1616M11-SM	●	●	DCGW	11T3	16	16	150	—	—	16	5	TS43	TKY15R	

\* Clamp Torque (N · m) : TS254=1.0, TS43=3.5

## RECOMMENDED CUTTING CONDITIONS

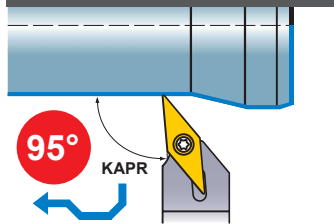
Work Material	Hardness	Grade	Cutting Speed (m/min)	Feed (mm/rev)
P Carbon Steel · Alloy Steel	180HB—280HB	MS6015/VP15TF	100 (50—150)	0.08 (0.01—0.15)
		MS6015	110 (30—180)	0.08 (0.01—0.15)
	Free Cutting Steel	—	NX2525	150 (50—250)
M Stainless Steel	≤200HB	VP15TF/MP9005/MP9015	80 (50—120)	0.06 (0.02—0.1)
N Non-Ferrous Metal	—	HTi10/MT9005	150 (70—230)	0.09 (0.03—0.15)
S Titanium Alloy	—	MT9005	60 (40—80)	0.08 (0.04—0.12)
		MP9015	50 (20—75)	0.08 (0.04—0.12)

SDJC-SM type inserts > A149—A154  
SDNC-SM type inserts > A149—A154

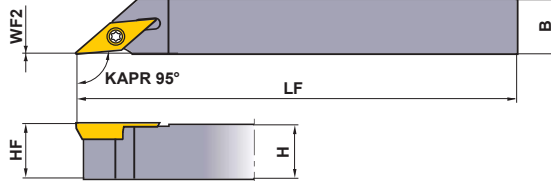
CBN & PCD inserts > B054—B056, B073  
SPARE PARTS > Q001  
TECHNICAL DATA > R001

# EXTERNAL FRONT TURNING

## SVLP-SM



Without off set



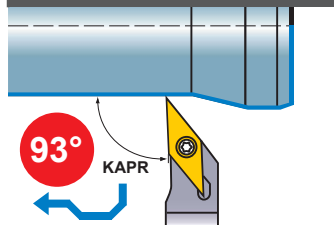
Right hand tool holder shown.



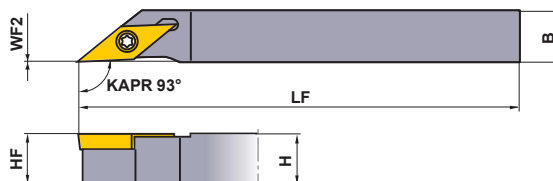
Order Number	Stock		Insert Number	Dimensions (mm)					* Clamp Screw	Wrench	
	R	L		H	B	LF	HF	WF2			
SVLPR/L1010K08-SM	●	●	VPET VPGT	0802	10	10	125	10	0	TS202	TKY06R
SVLPR/L1212M08-SM	●	●		0802	12	12	150	12	0	TS202	TKY06R
SVLPR/L1010K11-SM	●	●		1103	10	10	125	10	0	TS255	TKY08R
SVLPR/L1212M11-SM	●	●		1103	12	12	150	12	0	TS255	TKY08R
SVLPR/L1616M11-SM	●	●		1103	16	16	150	16	0	TS255	TKY08R

\* Clamp Torque (N · m) : TS202=0.6, TS255=1.0

## SVJB-SM



Without off set



Right hand tool holder shown.



Order Number	Stock		Insert Number	Dimensions (mm)					* Clamp Screw	Wrench	
	R	L		H	B	LF	HF	WF2			
SVJBR/L1010K11-SM	●	●	VBMT VBET VBGT VBGW	1103	10	10	125	10	0	TS255	TKY08R
SVJBR/L1212M11-SM	●	●		1103	12	12	150	12	0	TS255	TKY08R
SVJBR/L1616M11-SM	●	●		1103	16	16	150	16	0	TS255	TKY08R

\* Clamp Torque (N · m) : TS255=1.0

## RECOMMENDED CUTTING CONDITIONS

Work Material	Hardness	Grade	Cutting Speed (m/min)	Feed (mm/rev)
P Carbon Steel · Alloy Steel	180HB—280HB	MS6015/VP15TF	100 (50—150)	0.08 (0.01—0.15)
		MS6015	110 (30—180)	0.08 (0.01—0.15)
	Free Cutting Steel	—	NX2525	150 (50—250)
M Stainless Steel	≤200HB	VP15TF/MP9005/MP9015	80 (50—120)	0.06 (0.02—0.1)
N Non-Ferrous Metal	—	HTi10/MT9005	150 (70—230)	0.09 (0.03—0.15)
S Titanium Alloy	—	MT9005	60 (40—80)	0.08 (0.04—0.12)
		Heat Resistant Alloy	—	MP9015

Note1) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.

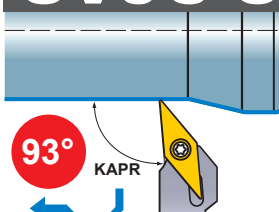
Note2) Dimensions shown for insert corner RE 0.2.

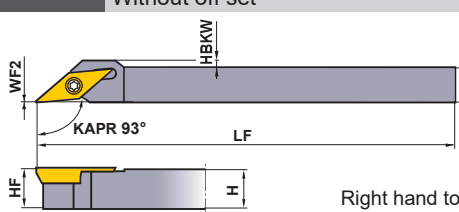
● : Inventory maintained in Japan.

SVLP-SM type inserts > A174  
 SVJB-SM type inserts > A167—A169  
 CBN & PCD inserts > B061, B077








## SVJC-SM NEW



Without off set





Right hand tool holder shown.

Finish	Finish	Light	Light
FP  (11)	FM  (11)	LS  (11,13)	LS-P  (11,13)
Light	Light	Light	
LP  (11)	LM  (11)	LS  (11)	

Order Number	Stock		Insert Number	Dimensions (mm)						*  		
	R	L		H	B	LF	HBKW	HF	WF2	Clamp Screw	Wrench	
SVJCR/L1010JX11-SM	●	●	VCMW VCMT VCGT	1103	10	10	120	—	10	0	TS255	TKY08R
SVJCR/L1212JX11-SM	●	●		1103	12	12	120	—	12	0	TS255	TKY08R
SVJCR/L1616JX11-SM	●	●		1103	16	16	120	—	16	0	TS255	TKY08R
SVJCR/L1010JX13-SM	●	●		1303	10	10	120	2	10	0	TS32	TKY08R
SVJCR/L1212JX13-SM	●	●		1303	12	12	120	—	12	0	TS32	TKY08R
SVJCR/L1616JX13-SM	●	●		1303	16	16	120	—	16	0	TS32	TKY08R

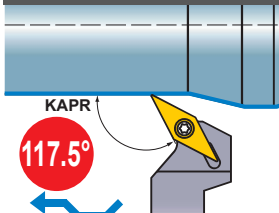
\* Clamp Torque (N · m) : TS255=1.0, TS32=1.0

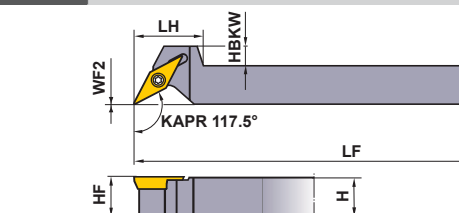
● = NEW

D



SMALL TOOLS



## SVPP-SM





Right hand tool holder shown.

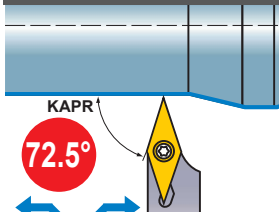
Finish
R/L-SRF  (11)
Finish SMG  (11)

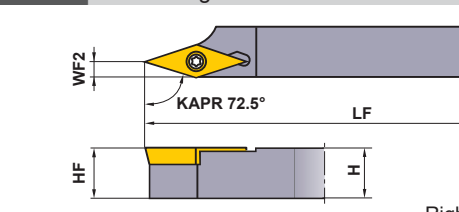
Order Number	Stock		Insert Number	Dimensions (mm)						*  			
	R	L		H	B	LF	LH	HBKW	HF	WF2	Clamp Screw	Wrench	
SVPPR/L1010K11-SM	●	●	VPET VPGT	1103	10	10	125	20	8	10	0	TS255	TKY08R
SVPPR/L1212M11-SM	●	●		1103	12	12	150	20	6	12	0	TS255	TKY08R
SVPPR/L1616M11-SM	●	●		1103	16	16	150	17	—	16	0	TS255	TKY08R

\* Clamp Torque (N · m) : TS255=1.0




## SVVB-SM



Neutral edge with handed holder





Right hand tool holder shown.

Finish	Medium
R/L-F  (11)	R/L-SN  (11)
Medium R/L-SR  (11)	

Order Number	Stock		Insert Number	Dimensions (mm)					*  		
	R	L		H	B	LF	HF	WF2	Clamp Screw	Wrench	
SVVBR/L1010K11-SM	●	●	VBET VBGT VBMT VBGW	1103	10	10	125	10	3	TS255	TKY08R
SVVBR/L1212M11-SM	●	●		1103	12	12	150	12	3	TS255	TKY08R
SVVBR/L1616M11-SM	●	●		1103	16	16	150	16	3	TS255	TKY08R

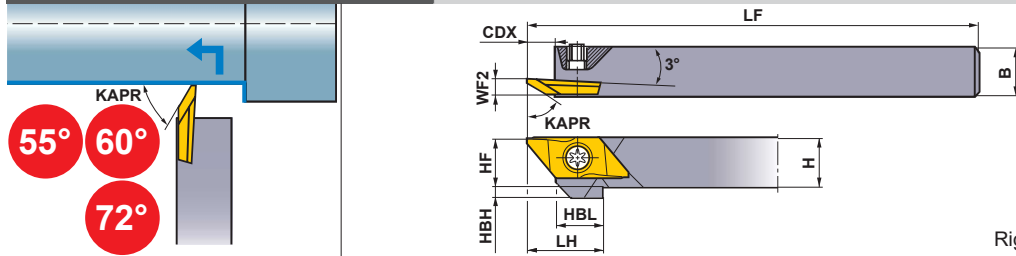
\* Clamp Torque (N · m) : TS255=1.0

SVJC-SM type inserts > A170—A172  
 SVPP-SM type inserts > A174  
 SVVB-SM type inserts > A167—A169

CBN & PCD inserts > B061, B077  
 SPARE PARTS > Q001  
 TECHNICAL DATA > R001

# EXTERNAL BACK TURNING

## BTAH



Right hand tool holder shown.

Order Number	Stock		Insert Number	Dimensions (mm)										* Clamp Screw	Wrench	
	R	L		H	B	LF	LH	HF	WF2	HBH	HBL	CDX				
BTAHR/L0810-50	●	●	BTAT	5528	R/L-B	8	10	120	15	8	3.5	4	9.5	5.5	NS402W	NKY15S
BTAHR/L1010-50	●	●		6035	R/L-B	10	10	120	15	10	3.5	2	9.5	5.5	NS402W	NKY15S
BTAHR/L1212-50	●	●		605000RX		12	12	120	15	12	3.5	—	9.5	5.5	NS403W	NKY15S
BTAHR/L1616-50	●	●		7235	R-SMB	16	16	120	15	16	3.5	—	9.5	5.5	NS403W	NKY15S

Note 1) Please use right hand insert for right hand holder and left hand insert for left hand holder.

Note 2) Set the maximum depth of cut at under 60% of the effective cutting edge length (LE).

\* Clamp Torque (N · m) : NS402W=1.0, NS403W=1.0

## INSERTS

Order Number	Hand	Coated		Dimensions (mm)							LE* (mm)	Geometry
		VP15TF	NEW MS6015	PSIRRL*	RER/L	CF	L	W1	CW	S		
NEW BTAT7235V5R-SMB	R	●		72°	0.05	0.3	20	8	1.4	2.5	3.5	With Breaker
NEW BTAT723501MR-SMB	R	●		72°	0.08	0.3	20	8	1.4	2.5	3.5	
NEW BTAT723502MR-SMB	R	●		72°	0.18	0.3	20	8	1.4	2.5	3.5	
BTAT552800R-B	R	●	●	55°	0	0	20	8	0.5	2.5	2.8	
BTAT552800L-B	L	●		55°	0	0	20	8	0.5	2.5	2.8	
BTAT552801R-B	R	●	●	55°	0.1	0	20	8	0.5	2.5	2.8	
BTAT552801L-B	L	●		55°	0.1	0	20	8	0.5	2.5	2.8	
BTAT603500R-B	R	●	●	60°	0	0	20	8	0.5	2.5	3.5	
BTAT603500L-B	L	●		60°	0	0	20	8	0.5	2.5	3.5	
NEW BTAT603501MR-B	R	●	●	60°	0.08	0	20	8	0.5	2.5	3.5	
BTAT603501R-B	R	●	●	60°	0.1	0	20	8	0.5	2.5	3.5	
BTAT603501L-B	L	●		60°	0.1	0	20	8	0.5	2.5	3.5	
BTAT605000RX	R	●		60°	0	0	20	8	1.25	2.5	5.0	

Note 1) REL, PSIRR dimensions for Right Hand Tool and RER, PSIRRL dimensions for Left Hand Tool.

● = NEW

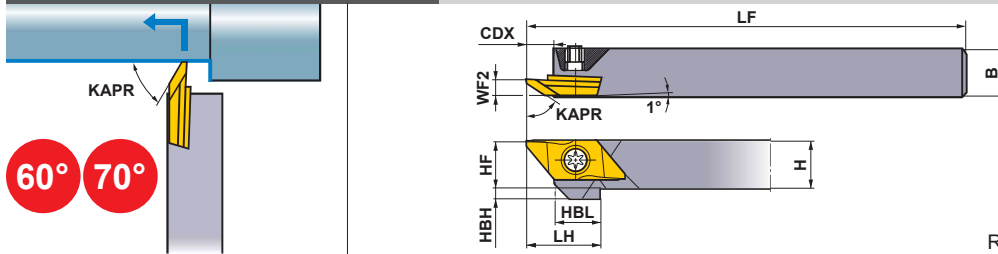
\* Numeric value set insert on holder.

## RECOMMENDED CUTTING CONDITIONS



Work Material	Hardness	Grade	Cutting Speed (m/min)	Feed (mm/rev)
P Carbon Steel · Alloy Steel	180HB—280HB	MS6015/VP15TF	100 (50—150)	0.08 (0.01—0.15)
	Free Cutting Steel	MS6015	110 (30—180)	0.08 (0.01—0.15)
M Stainless Steel	≤200HB	VP15TF	80 (50—120)	0.06 (0.02—0.1)
N Non-Ferrous Metal	—	MS6015	150 (70—230)	0.09 (0.03—0.15)

● : Inventory maintained in Japan. (5 inserts in one case)

# CTBH



Right hand tool holder shown.

Order Number	Stock		Insert Number	Dimensions (mm)								*  				
	R	L		H	B	LF	LH	HF	WF2	HBH	HBL	CDX	Clamp Screw	Wrench		
CTBHR/L1010-160	●	●	BTBT	60450	R/L-B	10	10	120	19.5	10	3.4	2	12	7.5	NS402W	NKY15S
CTBHR/L1212-160	●	●		606000	R/L	12	12	120	19.5	12	3.4	—	12	7.5	NS403W	NKY15S
CTBHR/L1616-160	●	●		7055	R-SMB	16	16	120	19.5	16	3.4	—	12	7.5	NS403W	NKY15S

Note 1) Please use right hand insert for right hand holder and left hand insert for left hand holder.

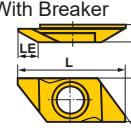
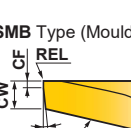
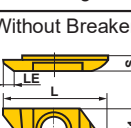
Note 2) Set the maximum depth of cut at under 60% of the effective cutting edge length (LE).

\* Clamp Torque (N · m) : NS402W=1.0, NS403W=1.0

D

SMALL TOOLS

## INSERTS

Order Number	Hand	Coated		Dimensions (mm)								LE* (mm)	Geometry
		VP15TF	NEW MS6015	PSIRR/L*	RER/L	CF	L	W1	CW	S	CDX		
NEW BTBT7055V5R-SMB	R	●		70°	0.05	0.3	25	9.4	1.35	3.5	6.5	5.5	With Breaker 
NEW BTBT705501MR-SMB	R	●		70°	0.08	0.3	25	9.4	1.35	3.5	6.5	5.5	
NEW BTBT705502MR-SMB	R	●		70°	0.18	0.3	25	9.4	1.35	3.5	6.5	5.5	SMB Type (Moulded) B Type (Grinding) 
BTBT604500R-B	R	●	●	60°	0	0.2	25	9.4	0.7	3.5	5.5	4.5	
BTBT604500L-B	L	●		60°	0	0.2	25	9.4	0.7	3.5	5.5	4.5	Without Breaker 
NEW BTBT604501MR-B	R		●	60°	0.08	0.3	25	9.4	0.7	3.5	5.5	4.5	
BTBT604501R-B	R	●	●	60°	0.1	0.3	25	9.4	0.7	3.5	5.5	4.5	Right hand insert shown.
BTBT604501L-B	L	●		60°	0.1	0.3	25	9.4	0.7	3.5	5.5	4.5	
BTBT606000R	R	●		60°	0	0.2	25	9.4	0.7	3.5	7	6.0	Right hand insert shown.
BTBT606000L	L	●		60°	0	0.2	25	9.4	0.7	3.5	7	6.0	

Note 1) REL, PSIRR dimensions for Right Hand Tool and RER, PSIRL dimensions for Left Hand Tool.

● = NEW

\* Numeric value set insert on holder.

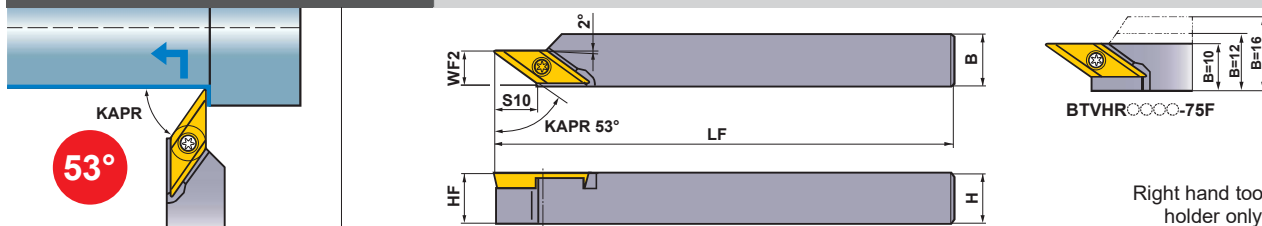
● : Inventory maintained in Japan. (5 inserts in one case)

SPARE PARTS > Q001  
TECHNICAL DATA > R001

D013

# EXTERNAL BACK TURNING

## BTVH



Right hand tool holder only.

D

SMALL TOOLS

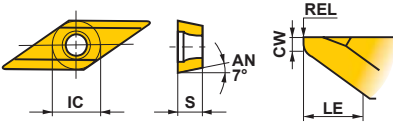
Order Number	Stock	Insert Number	Dimensions (mm)						*	
	R		H	B	LF	HF	WF2	S10	Clamp Screw	Wrench
BTVHR1010-75	●	BTVT 5375 $\circ$ R-B	10	10	120	10	7.5	8.5	NS251	NKY15S
BTVHR1212-75	●		12	12	120	12	7.5	8.5	NS251	NKY15S
BTVHR1616-75	●		16	16	120	16	7.5	8.5	NS251	NKY15S
BTVHR1010-75F	●		10	10	120	10	10.0	8.5	NS251	NKY15S
BTVHR1212-75F	●		12	12	120	12	10.0	8.5	NS251	NKY15S
BTVHR1616-75F	●		16	16	120	16	10.0	8.5	NS251	NKY15S

Note 1) Set the maximum depth of cut at under 30% of the effective cutting edge length (LE).

Note 2) For high load machining, F type is recommended.

\* Clamp Torque (N · m) : NS251=1.0

## INSERTS

Order Number	Hand	Coated	Dimensions (mm)				LE* (mm)	Geometry
		VP15TF	IC	S	REL	CW		
BTVT5375V5R-B	R	●	6.35	3.18	0.05	0.5	7.5	With Breaker 
BTVT537501R-B	R	●	6.35	3.18	0.1	0.5	7.5	

\* Numeric value set insert on holder.

## RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Grade	Cutting Speed (m/min)	Feed (mm/rev)
P	Carbon Steel · Alloy Steel	180HB—280HB	VP15TF	100 (50—150)	0.08 (0.01—0.15)
	Free Cutting Steel	—	VP15TF	110 (30—180)	0.08 (0.01—0.15)
M	Stainless Steel	≤200HB	VP15TF	80 (50—120)	0.06 (0.02—0.1)
N	Non-Ferrous Metal	—	VP15TF	150 (70—230)	0.09 (0.03—0.15)

● : Inventory maintained in Japan. (5 inserts in one case)

SPARE PARTS > Q001  
TECHNICAL DATA > R001

# Memo

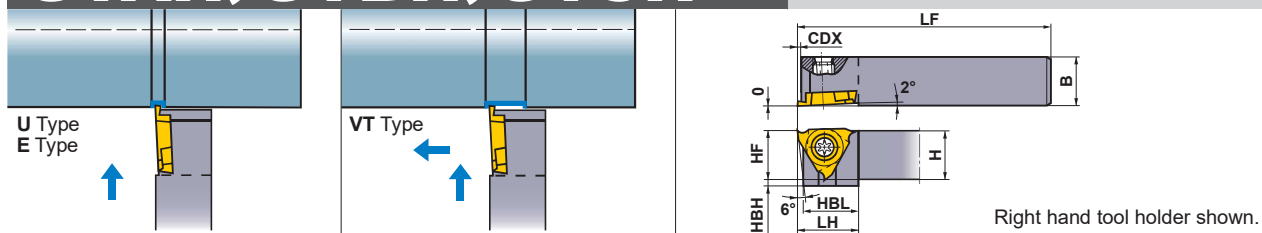
---

A series of horizontal dotted lines for writing, spanning the width of the page.



# EXTERNAL GROOVING

## GTAH, GTBH, GTCH



D

SMALL TOOLS

	Order Number	Stock		Insert Number	Dimensions (mm)							Cutting Width (mm)	Clamp Screw *2	Wrench	
		R	L		H	B	HF	LF	CDX *1	LH	HBH				HBL
Standard Shank	GTahr/L0808-20S	●	●	GTAT	8	8	8	80	2	15	5	12.9	0.3-3.0	NS404W	NKY15S
	GTahr/L1010-20S	●	●		GTBT *1	10	10	10	80	2	15	3	12.9	0.3-3.0	NS404W
	GTahr/L1212-20S	●	●	GTCT *1	12	12	12	80	2	15	1	12.9	0.3-3.0	NS404W	NKY15S
	GTbhr/L1010-30S	●	●	GTBT. GTCT	10	10	10	80	3	15	3	13.4	1.45-3.0	NS404W	NKY15S
	GTchr/L1010-30S	●	●	GTCT	10	10	10	80	3	15	3	13.4	2.5-3.0	NS404W	NKY15S
Long Shank	GTahr/L0808-20	●	●	GTAT	8	8	8	120	2	15	5	12.9	0.3-3.0	NS404W	NKY15S
	GTahr/L1010-20	●	●		GTBT *1	10	10	10	120	2	15	3	12.9	0.3-3.0	NS404W
	GTahr/L1212-20	●	●	GTCT *1	12	12	12	120	2	15	1	12.9	0.3-3.0	NS404W	NKY15S
	GTahr/L1616-20	●	●		16	16	16	120	2	15	-	12.9	0.3-3.0	NS404W	NKY15S
	GTbhr/L1010-30	●	●	GTBT. GTCT	10	10	10	120	3	15	3	13.4	1.45-3.0	NS404W	NKY15S
	GTbhr/L1212-30	●	●		GTCT	12	12	12	120	3	15	1	13.4	1.45-3.0	NS404W
	GTbhr/L1616-30	●	●		16	16	16	120	3	15	-	13.4	1.45-3.0	NS404W	NKY15S
	GTchr/L1010-30	●	●	GTCT	10	10	10	120	3	15	3	13.4	2.5-3.0	NS404W	NKY15S

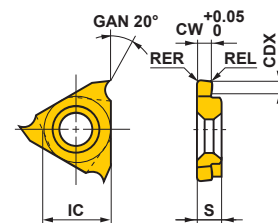
Note 1) Please use right hand insert for right hand holder and left hand insert for left hand holder.

\*1 It is not possible to machine depths over CDX dimensions(Max. Groove Depth).

\*2 Clamp Torque (N · m) : NS404W=1.0

### INSERTS

Order Number	Hand	Coated	Dimensions (mm)					Geometry
		VP15TF	CW	CDX *1	RER/L	IC	S	
GTAT 03006V3R-U	R	●	0.3	0.6	0.03	9.525	3.18	U Type Breaker (General purpose Grooving)
GTAT 03006V3L-U	L	●	0.3	0.6	0.03	9.525	3.18	
GTAT 05012V5R-U	R	●	0.5	1.2	0.05	9.525	3.18	
GTAT 05012V5L-U	L	●	0.5	1.2	0.05	9.525	3.18	
GTAT 07520V5R-U	R	●	0.75	2.0	0.05	9.525	3.18	
GTAT 07520V5L-U	L	●	0.75	2.0	0.05	9.525	3.18	
GTAT 09520V5R-U	R	●	0.95	2.0	0.05	9.525	3.18	
GTAT 09520V5L-U	L	●	0.95	2.0	0.05	9.525	3.18	
GTAT 10020V5R-U	R	●	1.0	2.0	0.05	9.525	3.18	
GTAT 10020V5L-U	L	●	1.0	2.0	0.05	9.525	3.18	
GTAT 10320V5R-U	R	●	1.03	2.0	0.05	9.525	3.18	
GTAT 12520V5R-U	R	●	1.25	2.0	0.05	9.525	3.18	
GTAT 12520V5L-U	L	●	1.25	2.0	0.05	9.525	3.18	
GTBT14530V5R-U	R	●	1.45	3.0	0.05	9.525	3.18	
GTBT14530V5L-U	L	●	1.45	3.0	0.05	9.525	3.18	
GTBT15030V5R-U	R	●	1.5	3.0	0.05	9.525	3.18	
GTBT15030V5L-U	L	●	1.5	3.0	0.05	9.525	3.18	
GTBT17530V5R-U	R	●	1.75	3.0	0.05	9.525	3.18	
GTBT17530V5L-U	L	●	1.75	3.0	0.05	9.525	3.18	
GTBT20030V5R-U	R	●	2.0	3.0	0.05	9.525	3.18	
GTBT20030V5L-U	L	●	2.0	3.0	0.05	9.525	3.18	
GTCT25030V5R-U	R	●	2.5	3.0	0.05	9.525	3.18	
GTCT25030V5L-U	L	●	2.5	3.0	0.05	9.525	3.18	



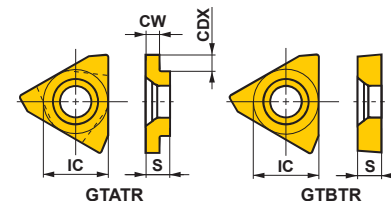
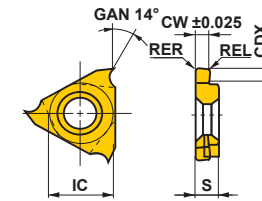
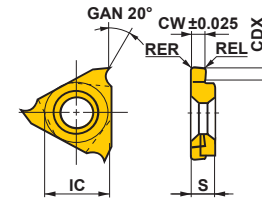
Right hand insert shown.

\*1 It is not possible to machine depths over CDX dimensions(Max. Groove Depth).

● : Inventory maintained in Japan. (5 inserts in one case)

# INSERTS

Order Number	Hand	Coated		Carbide	Dimensions (mm)					Geometry	
		VP15TF	VP15KZ	TF15	CW	CDX	RER/L	IC	S		
GTAT 03306V3R-E	R	●			0.33	0.6	0.03	9.525	3.18	E Type Breaker (Ring processing Grooving)	
GTAT 03306V3L-E	L	●			0.33	0.6	0.03	9.525	3.18		
GTAT 04312V3R-E	R	●			0.43	1.2	0.03	9.525	3.18		
GTAT 04312V3L-E	L	●			0.43	1.2	0.03	9.525	3.18		
GTAT 05312V5R-E	R	●			0.53	1.2	0.05	9.525	3.18		
GTAT 05312V5L-E	L	●			0.53	1.2	0.05	9.525	3.18		
GTAT 07520V5R-E	R	●			0.75	2.0	0.05	9.525	3.18		
GTAT 07520V5L-E	L	●			0.75	2.0	0.05	9.525	3.18		
GTAT 09520V5R-E	R	●			0.95	2.0	0.05	9.525	3.18		
GTAT 09520V5L-E	L	●			0.95	2.0	0.05	9.525	3.18		
GTAT 10020V5R-E	R	●			1.0	2.0	0.05	9.525	3.18		
GTAT 10020V5L-E	L	●			1.0	2.0	0.05	9.525	3.18		
GTAT 1002001R-E	R	●			1.0	2.0	0.1	9.525	3.18		
GTAT 1002001L-E	L	●			1.0	2.0	0.1	9.525	3.18		
GTAT 12020V5R-E	R	●			1.2	2.0	0.05	9.525	3.18		
GTAT 12020V5L-E	L	●			1.2	2.0	0.05	9.525	3.18		
GTAT 1202001R-E	R	●			1.2	2.0	0.1	9.525	3.18		
GTAT 1202001L-E	L	●			1.2	2.0	0.1	9.525	3.18		
GTAT 14020V5R-E	R	●			1.4	2.0	0.05	9.525	3.18		
GTAT 14020V5L-E	L	●			1.4	2.0	0.05	9.525	3.18		
GTBT15030V5R-E	R	●			1.5	3.0	0.05	9.525	3.18		
GTBT15030V5L-E	L	●			1.5	3.0	0.05	9.525	3.18		
GTBT1503001R-E	R	●			1.5	3.0	0.1	9.525	3.18		
GTBT1503001L-E	L	●			1.5	3.0	0.1	9.525	3.18		
GTBT18030V5R-E	R	●			1.8	3.0	0.05	9.525	3.18		
GTBT18030V5L-E	L	●			1.8	3.0	0.05	9.525	3.18		
GTBT20030V5R-E	R	●			2.0	3.0	0.05	9.525	3.18		
GTBT20030V5L-E	L	●			2.0	3.0	0.05	9.525	3.18		
GTBT2003001R-E	R	●			2.0	3.0	0.1	9.525	3.18		
GTBT2003001L-E	L	●			2.0	3.0	0.1	9.525	3.18		
GTBT22530V5R-E	R	●			2.25	3.0	0.05	9.525	3.18		
GTBT22530V5L-E	L	●			2.25	3.0	0.05	9.525	3.18		
GTCT25030V5R-E	R	●			2.5	3.0	0.05	9.525	3.18		
GTCT25030V5L-E	L	●			2.5	3.0	0.05	9.525	3.18		
GTCT27530V5R-E	R	●			2.75	3.0	0.05	9.525	3.18		
GTCT27530V5L-E	L	●			2.75	3.0	0.05	9.525	3.18		
GTCT30030V5R-E	R	●			3.0	3.0	0.05	9.525	3.18		
GTCT30030V5L-E	L	●			3.0	3.0	0.05	9.525	3.18		
Right hand insert shown.											
GTAT 0330600R-VT	R		●		0.33	0.6	0	9.525	3.18	VT Type Breaker (Grooving, Side Turning)	
GTAT 0431200R-VT	R		●		0.43	1.2	0	9.525	3.18		
GTAT 0532000R-VT	R		●		0.53	2.0	0	9.525	3.18		
GTAT 0652000R-VT	R		●		0.65	2.0	0	9.525	3.18		
GTAT 0752000R-VT	R		●		0.75	2.0	0	9.525	3.18		
GTAT 0802000R-VT	R		●		0.8	2.0	0	9.525	3.18		
GTAT 0852000R-VT	R		●		0.85	2.0	0	9.525	3.18		
GTAT 0952000R-VT	R		●		0.95	2.0	0	9.525	3.18		
GTAT 1002000R-VT	R		●		1.0	2.0	0	9.525	3.18		
GTAT 1102000R-VT	R		●		1.1	2.0	0	9.525	3.18		
GTAT 1202000R-VT	R		●		1.2	2.0	0	9.525	3.18		
GTAT 1302000R-VT	R		●		1.3	2.0	0	9.525	3.18		
GTAT 1402000R-VT	R		●		1.4	2.0	0	9.525	3.18		
GTBT1503000R-VT	R		●		1.5	3.0	0	9.525	3.18		
GTBT2003000R-VT	R		●		2.0	3.0	0	9.525	3.18		
Right hand insert shown.											
GTATR	R			*●	1.76	3.0	—	9.525	3.18		Blank
GTATL	L			*●	1.76	3.0	—	9.525	3.18		
GTBTR	R			*●	—	0	—	9.525	3.18		
GTBTL	L			*●	—	0	—	9.525	3.18		
Right hand insert shown.											



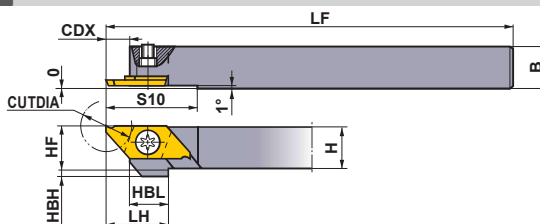
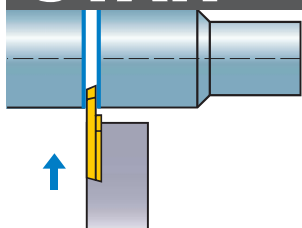
\* 10 inserts in one case.

CUTTING CONDITIONS > D018  
 SPARE PARTS > Q001  
 TECHNICAL DATA > R001

D  
SMALL TOOLS

# EXTERNAL CUTTING OFF

## CTAH



Right hand tool holder shown.

Order Number	Stock		Insert Number	Dimensions (mm)									CUTDIA (mm)	*2						
	R	L		H	B	HF	LF	LH	CDX	HBH	HBL	S10		Clamp Screw	Wrench					
CTAHR/L0810-120	●	●	CTAT	○	8	10	8	120	15	5.5	4	9.5	22	12 (8)*1	NS402W	NKY15S				
CTAHR/L1010-120	●	●		○	10	10	10	120	15	5.5	2	9.5	22				NS402W	NKY15S		
CTAHR/L1212-120	●	●		○	12	12	12	120	15	5.5	—	9.5	22						NS403W	NKY15S
CTAHR/L1616-120	●	●		○	16	16	16	120	15	5.5	—	9.5	22							

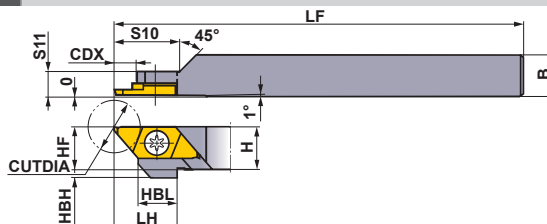
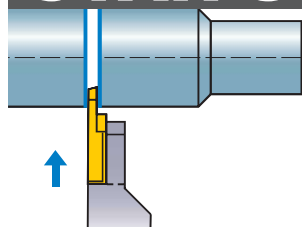
\*1 When the width of cutting off (CW) is 0.7mm.

\*2 Clamp Torque (N • m) : NS402W=1.0, NS403W=1.0

D

SMALL TOOLS

## CTAH-S



Right hand tool holder only.

Order Number	Stock		Insert Number	Dimensions (mm)											CUTDIA (mm)	*2	
	R	L		H	B	HF	LF	LH	CDX	HBH	HBL	S10	S11	Clamp Screw		Wrench	
CTAHR1010-120S	●		CTAT	○	10	10	10	80	15	16	2	9.5	16	5.5	12 (8)*1	NS401	NKY25R

\*1 When the width of cutting off (CW) is 0.7mm.

\*2 Clamp Torque (N • m) : NS401=3.5

### RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Grade	Cutting Speed (m/min)	Feed (mm/rev)
P	Carbon Steel · Alloy Steel	180HB—280HB	MS6015/VP15TF	100 (50—150)	0.05 (0.02—0.09)
	Free Cutting Steel	—	MS6015	110 (30—180)	0.05 (0.01—0.09)
M	Stainless Steel	≤200HB	VP15TF	80 (50—120)	0.03 (0.02—0.05)
N	Non-Ferrous Metal	—	MS6015	150 (70—230)	0.07 (0.03—0.11)

● : Inventory maintained in Japan. (5 inserts in one case)

# INSERTS

Holder	Setting Geometry	Breaker	Geometry	Insert Geometry	Order Number	Hand	Coated		Dimensions (mm)								CUTDIA (mm)
							VP15TF	NEW MS6015	CW	CDX	RER/L	L	W1	S	LBB		
Right Hand (R)	16°	With Breaker		REL, CDX, LBB, CW ±0.05, RER	CTAT07080V5RR-B	R	●	●	0.7	4.5	0.05	20	8	2.5	1.5	8	
				REL, CDX, LBB, CW ±0.05, RER	CTAT10120V5RR-B	R	●	●	1.0	6.7	0.05	20	8	2.5	1.5	12	
				REL, CDX, LBB, CW ±0.05, RER	CTAT15120V5RR-B	R	●	●	1.5	6.7	0.05	20	8	2.5	1.5	12	
				REL, CDX, LBB, CW ±0.05, RER	CTAT20120V5RR-B	R	●	●	2.0	6.7	0.05	20	8	2.5	1.5	12	
	16°	With Breaker		REL, CDX, LBB, CW ±0.05, RER	CTAT15120V5RR-BX	R	●	●	1.5	6.7	0.05	20	8	2.5	1.5	12	
				REL, CDX, LBB, CW ±0.05, RER, Strong Edge Type	CTAT20120V5RR-BX	R	●	●	2.0	6.7	0.05	20	8	2.5	1.5	12	
	0°	With Breaker		REL, CDX, LBB, CW ±0.05, RER	CTAT10120V5RN-B	N	●	●	1.0	6.7	0.05	20	8	2.5	1.5	12	
				REL, CDX, LBB, CW ±0.05, RER	CTAT15120V5RN-B	N	●	●	1.5	6.7	0.05	20	8	2.5	1.5	12	
				REL, CDX, LBB, CW ±0.05, RER	CTAT20120V5RN-B	N	●	●	2.0	6.7	0.05	20	8	2.5	1.5	12	
				REL, CDX, LBB, CW ±0.05, RER, Strong Edge Type	CTAT15120V5RN-BX	N	●	●	1.5	6.7	0.05	20	8	2.5	1.5	12	
	0°	With Breaker		REL, CDX, LBB, CW ±0.05, RER, Strong Edge Type	CTAT20120V5RN-BX	N	●	●	2.0	6.7	0.05	20	8	2.5	1.5	12	
				REL, CDX, LBB, CW ±0.05, RER	CTAT10110V5RL-B	L	●	●	1.0	6.7	0.05	20	8	2.5	1.5	11	
16°	Without Breaker	REL, CDX, LBB, CW ±0.05, RER	CTAT15110V5RL-B	L	●	●	1.5	6.7	0.05	20	8	2.5	1.5	11			
		REL, CDX, LBB, CW ±0.05, RER	CTAT20110V5RL-B	L	●	●	2.0	6.7	0.05	20	8	2.5	1.5	11			
		REL, CDX, LBB, CW ±0.05, RER	CTAT1012000RR	R	●	●	1.0	6.7	0	20	8	2.5	3.5	12			
20°	Without Breaker	REL, CDX, LBB, CW ±0.05, RER	CTAT1512000RR	R	●	●	1.5	6.7	0	20	8	2.5	3.5	12			
		REL, CDX, LBB, CW ±0.05, RER	CTAT2012000RR	R	●	●	2.0	6.7	0	20	8	2.5	3.5	12			
		REL, CDX, LBB, CW ±0.05, RER	CTAT07080V5LL-B	L	●	●	0.7	4.5	0.05	20	8	2.5	1.5	8			
Left Hand (L)	16°	With Breaker	REL, CDX, LBB, CW ±0.05, RER	CTAT10120V5LL-B	L	●	●	1.0	6.7	0	20	8	2.5	1.5	12		
			REL, CDX, LBB, CW ±0.05, RER	CTAT15120V5LL-B	L	●	●	1.5	6.7	0	20	8	2.5	1.5	12		
			REL, CDX, LBB, CW ±0.05, RER	CTAT20120V5LL-B	L	●	●	2.0	6.7	0	20	8	2.5	1.5	12		
			REL, CDX, LBB, CW ±0.05, RER	CTAT10120V5LN-B	N	●	●	1.0	6.7	0.05	20	8	2.5	1.5	12		
	0°	With Breaker	REL, CDX, LBB, CW ±0.05, RER	CTAT15120V5LN-B	N	●	●	1.5	6.7	0.05	20	8	2.5	1.5	12		
			REL, CDX, LBB, CW ±0.05, RER	CTAT20120V5LN-B	N	●	●	2.0	6.7	0.05	20	8	2.5	1.5	12		
			REL, CDX, LBB, CW ±0.05, RER	CTAT10110V5LR-B	R	●	●	1.0	6.7	0.05	20	8	2.5	1.5	11		
	16°	Without Breaker	REL, CDX, LBB, CW ±0.05, RER	CTAT15110V5LR-B	R	●	●	1.5	6.7	0.05	20	8	2.5	1.5	11		
			REL, CDX, LBB, CW ±0.05, RER	CTAT20110V5LR-B	R	●	●	2.0	6.7	0.05	20	8	2.5	1.5	11		
			REL, CDX, LBB, CW ±0.05, RER	CTAT1012000LL	L	●	●	1.0	6.7	0	20	8	2.5	3.5	12		
	20°	Without Breaker	REL, CDX, LBB, CW ±0.05, RER	CTAT1512000LL	L	●	●	1.5	6.7	0	20	8	2.5	3.5	12		
			REL, CDX, LBB, CW ±0.05, RER	CTAT2012000LL	L	●	●	2.0	6.7	0	20	8	2.5	3.5	12		
REL, CDX, LBB, CW ±0.05, RER																	

Right hand insert shown.

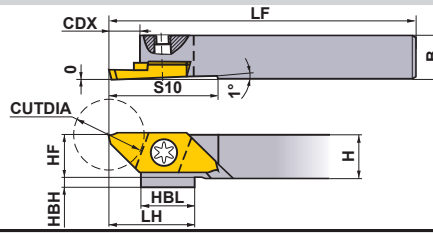
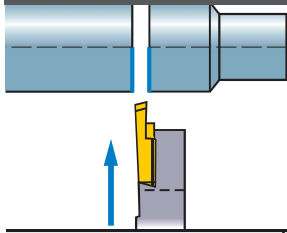
● = NEW



SMALL TOOLS

# EXTERNAL CUTTING OFF

## CTBH



Right hand tool holder shown.

Order Number	Stock		Insert Number	Dimensions (mm)										CUTDIA (mm)	*	
	R	L		H	B	HF	LF	LH	CDX	HBH	HBL	S10	Clamp Screw		Wrench	
CTBHR/L1010-160	●	●	CTBT	○	10	10	10	120	19.5	7.5	2	9.5	25	16	NS402W	NKY15S
CTBHR/L1212-160	●	●		○	12	12	12	120	19.5	7.5	—	9.5	25	16	NS403W	NKY15S
CTBHR/L1616-160	●	●		○	16	16	16	120	19.5	7.5	—	9.5	25	16	NS403W	NKY15S

\* Clamp Torque (N · m) : NS402W=1.0, NS403W=1.0

D

SMALL TOOLS

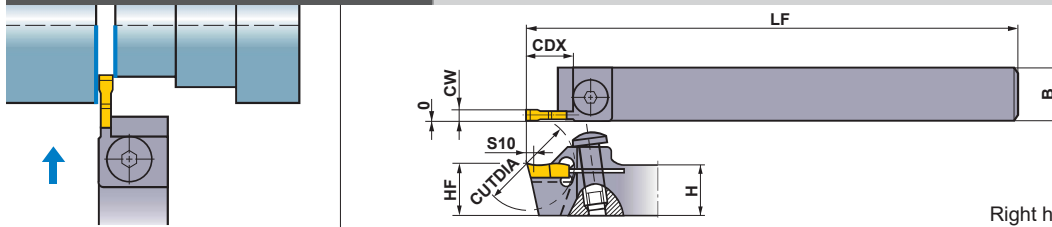
## INSERTS

Holder	Setting Geometry	Breaker	Geometry	Insert Geometry	Order Number	Hand	Coated		Dimensions (mm)						CUTDIA (mm)
							VP15TF	NEW MS6015	CW	CDX	RER/L	L	W1	S	
Right Hand (R)					CTBT15160V5RR-B	R	●	●	1.5	9.2	0.05	25	9.4	3.5	16
					CTBT20160V5RR-B	R	●	●	2.0	9.2	0.05	25	9.4	3.5	16
Left Hand (L)		With Breaker			CTBT20160V5RN-B	N	●	●	2.0	9.2	0.05	25	9.4	3.5	16
					CTBT20160V5LL-B	L	●		2.0	9.2	0.05	25	9.4	3.5	16
					CTBT20160V5LN-B	N	●	●	2.0	9.2	0.05	25	9.4	3.5	16
					CTBT20145V5LR-B	R	●	●	2.0	9.2	0.05	25	9.4	3.5	14.5

● = NEW

● : Inventory maintained in Japan. (5 inserts in one case)

# CTCH



Right hand tool holder shown.

Order Number	Stock		Insert Number	Dimensions (mm)						CUTDIA (mm)	* Clamp Screw	Wrench	
	R	L		H	B	HF	LF	CDX	S10				
CTCHR/L1010-200	●	●	CTCT	20000	10	10	10	120	11	0.5	20	NS501W	HKY25RS
CTCHR/L1212-200	●	●		20000	12	12	12	120	11	0.5	20	NS501W	HKY25RS

\* Clamp Torque (N · m) : NS501W=2.2

D

SMALL TOOLS

## INSERTS

Breaker	Order Number	Hand	Coated	Dimensions (mm)					CUTDIA (mm)	Geometry
			VP15TF	CW	PSIRR/L	RER/L	L	S		
With Breaker	CTCT22200V5N-B	N	* ●	2.2	0°	0.05	10	4.0	20	
	CTCT2220001N-B	N	* ●	2.2	0°	0.1	10	4.0	20	
	CTCT25200V5N-B	N	* ●	2.5	0°	0.05	10	4.0	20	
	CTCT2520001N-B	N	* ●	2.5	0°	0.1	10	4.0	20	
	CTCT22200V5R-B	R	* ●	2.2	17°	0.05	10	4.0	20	
	CTCT2220001R-B	R	* ●	2.2	17°	0.1	10	4.0	20	
	CTCT25200V5R-B	R	* ●	2.5	17°	0.05	10	4.0	20	
	CTCT2520001R-B	R	* ●	2.5	17°	0.1	10	4.0	20	
	CTCT22200V5L-B	L	* ●	2.2	17°	0.05	10	4.0	20	
	CTCT2220001L-B	L	* ●	2.2	17°	0.1	10	4.0	20	
	CTCT25200V5L-B	L	* ●	2.5	17°	0.05	10	4.0	20	
	CTCT2520001L-B	L	* ●	2.5	17°	0.1	10	4.0	20	

\* 10 inserts in one case.

## RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Grade	Cutting Speed (m/min)	Feed (mm/rev)
P	Carbon Steel · Alloy Steel	180HB—280HB	MS6015/VP15TF	100 (50—150)	0.05 (0.02—0.09)
	Free Cutting Steel	—	MS6015	110 (30—180)	0.05 (0.01—0.09)
M	Stainless Steel	≤200HB	VP15TF	80 (50—120)	0.03 (0.02—0.05)
N	Non-Ferrous Metal	—	MS6015	150 (70—230)	0.07 (0.03—0.11)

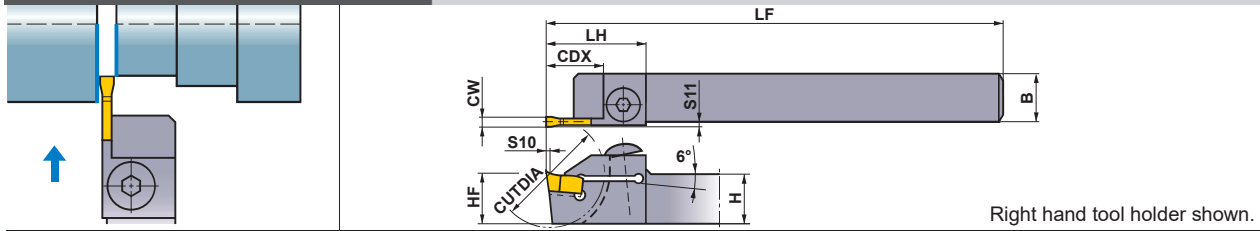
● : Inventory maintained in Japan. (10 inserts in one case)

SPARE PARTS > Q001  
TECHNICAL DATA > R001

D021

# EXTERNAL CUTTING OFF

## CTDH



Right hand tool holder shown.

Order Number	Stock		Insert Number	Dimensions (mm)								CUTDIA (mm)	* Clamp Screw	Wrench	
	R	L		H	B	HF	LF	LH	CDX	S10	S11				
CTDHR/L1616-230	●		CTDT	2535	16	16	16	125	24	12.2	0.5	0.5	23	HBH06020	HKY40R
CTDHR/L1616-280	●			2535	16	16	16	120	25	15	0.5	0.5	28	NS502W	HKY25R
CTDHR/L1616-350	●	●		2535	16	16	16	125	32	18.5	0.5	0.5	35	HBH06020	HKY40R

\* Clamp Torque (N · m) : HBH06020=7.0, NS502W=2.2

SMALL TOOLS

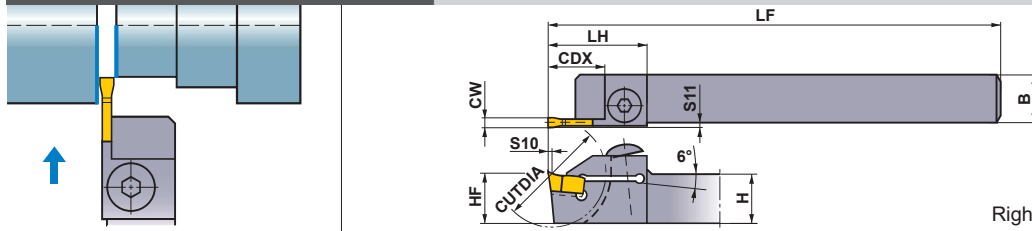
D

## INSERTS

Breaker	Order Number	Hand	Coated	Dimensions (mm)					CUTDIA (mm)	Geometry
			VP15TF	CW	PSIRR	RE	L	S		
With Breaker	CTDT2535002N-B	N	●	2.5	0°	0.2	12	6.39	23-35	
	CTDT25350V5R-B	R	●	2.5	8°	≤0.05	12	6.39	23-35	
	CTDT25350V5R-BS	R	●	2.5	17°	≤0.05	12	6.39	23-35	
	CTDT2535002R-B	R	●	2.5	8°	0.2	12	6.39	23-35	

● : Inventory maintained in Japan. (10 inserts in one case)

# CTEH



Right hand tool holder shown.

Order Number	Stock		Insert Number	Dimensions (mm)								CUTDIA (mm)	*		
	R	L		H	B	HF	LF	LH	CDX	S10	S11		Clamp Screw	Wrench	
CTEHR/L1616-230	●		CTET	3035	16	16	16	125	24	12.2	0.5	0.5	23	HBH06020	HKY40R
CTEHR/L1616-280	●			3035	16	16	16	120	25	15	0.5	0.5	28	NS502W	HKY25R
CTEHR/L1616-350	●	●		3035	16	16	16	125	32	18.5	0.5	0.5	35	HBH06020	HKY40R

\* Clamp Torque (N · m) : HBH06020=7.0, NS502W=2.2

D  
SMALL TOOLS

## INSERTS

Breaker	Order Number	Hand	Coated	Dimensions (mm)					CUTDIA (mm)	Geometry
			VP15TF	CW	PSIRR/L	RER/L	L	S		
With Breaker	CTET30350V5R-B	R	●	3	8°	≤0.05	12	6.39	23-35	
	CTET30350V5R-BS	R	●	3	17°	≤0.05	12	6.39	23-35	
	CTET3035002N-B	N	●	3	0°	0.2	12	6.39	23-35	
	CTET3035002R-B	R	●	3	8°	0.2	12	6.39	23-35	
	CTET3035002L-B	L	●	3	8°	0.2	12	6.39	23-35	

## RECOMMENDED CUTTING CONDITIONS

	Work Material	Hardness	Grade	Cutting Speed (m/min)	Feed (mm/rev)
P	Carbon Steel · Alloy Steel	180HB-280HB	VP15TF	100 (50-150)	0.05 (0.02-0.09)
	Free Cutting Steel	—	VP15TF	110 (30-180)	0.05 (0.01-0.09)
M	Stainless Steel	≤200HB	VP15TF	80 (50-120)	0.03 (0.02-0.05)
N	Non-Ferrous Metal	—	VP15TF	150 (70-230)	0.07 (0.03-0.11)

● : Inventory maintained in Japan. (10 inserts in one case)

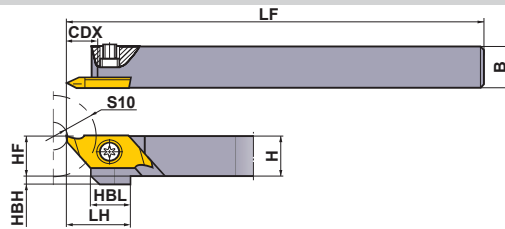
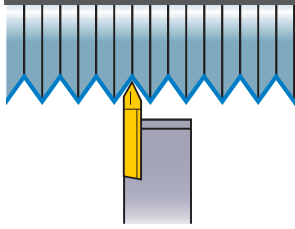
SPARE PARTS > Q001  
TECHNICAL DATA > R001

D023



# EXTERNAL THREADING

## TTAH



Right hand tool holder shown.

Order Number	Stock		Insert Number	Dimensions (mm)										Clamp Screw *	Wrench
	R	L		H	B	HF	LF	LH	HBH	HBL	CDX	S10			
TTAHR/L0810	●	●	TTAT	○	8	10	8	120	15	4	9.5	7	6.5	NS402W	NKY15S
TTAHR/L1010	●	●		○	10	10	10	120	15	2	9.5	7	6.5	NS402W	NKY15S
TTAHR/L1212	●	●		○	12	12	12	120	15	—	9.5	7	6.5	NS403W	NKY15S
TTAHR/L1616	●	●		○	16	16	16	120	15	—	9.5	7	6.5	NS403W	NKY15S

\* Clamp Torque (N · m) : NS402W=1.0, NS403W=1.0

### INSERTS

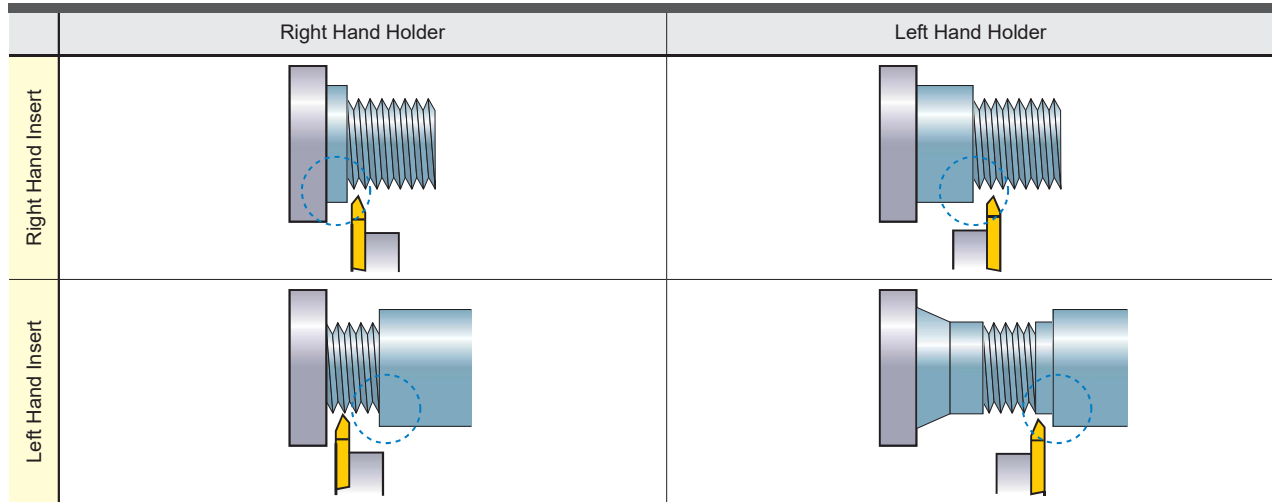
Holder	Setting Geometry	Breaker	Geometry	Insert Geometry	Order Number	Hand	Coated		Dimensions (mm)					Pitch of Screw mm (thread/inch)
							VP15TF	PXD	RE	L	W1	S		
Right Hand (R)		With Breaker	General Purpose Partial Profile (60°)		TTAT60075F5RR-B	R	●	0.4	0.05 Flat	20.0	8.0	2.5	0.2—0.75 (80—36)	
					TTAT60125V5RR-B	R	●	0.8	0.05	20.0	8.0	2.5	0.5—1.25 (40—16)	
					TTAT60075F5RL-B	L	●	0.4	0.05 Flat	20.0	8.0	2.5	0.2—0.75 (80—36)	
					TTAT60125V5RL-B	L	●	0.8	0.05	20.0	8.0	2.5	0.5—1.25 (40—16)	
					TTAT6015001RN-B	N	●	1.25	0.1	20.0	8.0	2.5	1.0—1.5 (24—18)	
					TTAT6015001LN-B	N	●	1.25	0.1	20.0	8.0	2.5	1.0—1.5 (24—18)	
Left Hand (L)		With Breaker	General Purpose Partial Profile (60°)		TTAT60075F5LR-B	R	●	0.4	0.05 Flat	20.0	8.0	2.5	0.2—0.75 (80—36)	
					TTAT60125V5LR-B	R	●	0.8	0.05	20.0	8.0	2.5	0.5—1.25 (40—16)	
					TTAT60075F5LL-B	L	●	0.4	0.05 Flat	20.0	8.0	2.5	0.2—0.75 (80—36)	
					TTAT60125V5LL-B	L	●	0.8	0.05	20.0	8.0	2.5	0.5—1.25 (40—16)	
					TTAT6015001RN-B	N	●	1.25	0.1	20.0	8.0	2.5	1.0—1.5 (24—18)	
					TTAT6015001LN-B	N	●	1.25	0.1	20.0	8.0	2.5	1.0—1.5 (24—18)	
Right Hand (R)		With Breaker	General Purpose Partial Profile (55°)		TTAT55158V5RR-B	R	●	0.8	0.05	20.0	8.0	2.5	(40—16)	
					TTAT55158V5RL-B	L	●	0.8	0.05	20.0	8.0	2.5	(40—16)	
					TTAT55158V5LR-B	R	●	0.8	0.05	20.0	8.0	2.5	(40—16)	
					TTAT55158V5LL-B	L	●	0.8	0.05	20.0	8.0	2.5	(40—16)	
Left Hand (L)		With Breaker	General Purpose Partial Profile (55°)		TTAT55158V5RR-B	R	●	0.8	0.05	20.0	8.0	2.5	(40—16)	
					TTAT55158V5RL-B	L	●	0.8	0.05	20.0	8.0	2.5	(40—16)	
					TTAT55158V5LR-B	R	●	0.8	0.05	20.0	8.0	2.5	(40—16)	
					TTAT55158V5LL-B	L	●	0.8	0.05	20.0	8.0	2.5	(40—16)	

### RECOMMENDED CUTTING CONDITIONS

Work Material	Hardness	Cutting Speed (m/min)	Work Material	Hardness	Cutting Speed (m/min)
<b>P</b> Carbon Steel · Alloy Steel	180HB—280HB	100 (50—150)	<b>M</b> Stainless Steel	≤200HB	80 (50—120)
Free Cutting Steel	—	110 (30—180)	<b>N</b> Non-Ferrous Metal	—	150 (70—230)

● : Inventory maintained in Japan. (5 inserts in one case)

# HOLDER APPLICATION



\*The above combinations enable to machine the side of

D  
SMALL TOOLS

## THREAD RANGE

Application range

Pitch (mm)	Pitch Diameter of Thread (mm)										Number of Passes
	≥ φ1.0	≥ φ1.2	≥ φ1.6	≥ φ2.0	≥ φ2.5	≥ φ3.0	≥ φ4.0	≥ φ5.0	≥ φ6.0	≥ φ7.0	
0.2											2-4
0.25											3-5
0.3											4-6
0.35											5-7
0.4											6-8
0.45											
0.5											
0.6											
0.7											
0.75											
0.8			Threading impossible								
1											
1.25											
1.5											

\*Metric Thread (60°)

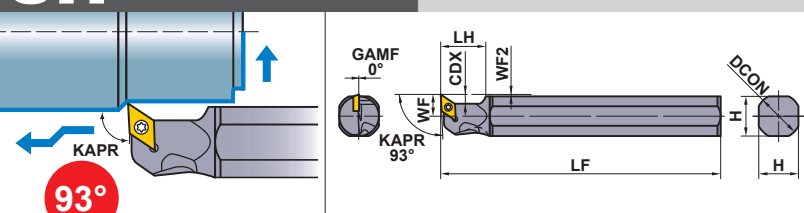
Pitch(thread/inch)	Pitch Diameter of Thread										Number of Passes
	≥ φ0.060	≥ φ0.073	≥ φ0.086	≥ φ0.099	≥ φ0.112	≥ φ0.164	≥ φ0.190	≥ φ0.250	≥ φ0.313		
mm	≥ φ1.524	≥ φ1.854	≥ φ2.184	≥ φ2.515	≥ φ2.845	≥ φ4.166	≥ φ4.826	≥ φ6.350	≥ φ7.938		
80											3-5
72											4-6
64											5-7
56											
48											
44											
40											
32											
28											
26											
24			Threading impossible								
20											
18											6-8
16											

\*American UN, Whitworth

# SMALL TOOLS

## EXTERNAL FRONT TURNING, COPYING, FACING (FOR OPPOSITE TOOL POSTS)

SH



Finish	Finish	Light	Light
SMG/FS (07, 11)	R-F (07, 11)	R-SS (07, 11)	LS (07, 11)
Medium R-SN (07, 11)	Medium R-SR (07, 11)	For nonferrous metals AZ (07, 11)	Light LS-P (07, 11)

**D**  
SMALL TOOLS

Order Number	Stock L	Insert Number	Dimensions (mm)									* Clamp Screw	Wrench
			DCON	LF	LH	H	WF	WF2	CDX				
SH16H-FSDUCL07	●	DCMT DCMW DCET DCGT DCGW	0702○○○	15.875	100	20	14	7.75	0.75	4.2	TS254	TKY08R	
SH19K-FSDUCL07	●			19.05	125	20	17	9.25	0.75	4.2	TS254	TKY08R	
SH20K-FSDUCL07	●			20	125	20	18	9.75	0.75	4.2	TS254	TKY08R	
SH22K-FSDUCL07	●			22	125	20	20	10.75	0.75	4.2	TS254	TKY08R	
SH25M-FSDUCL07	●			25.4	150	20	23	12.25	0.75	4.2	TS254	TKY08R	
SH16H-FSDUCL11	●	DCMT DCMW DCET DCGT DCGW	11T3○○○	15.875	100	20	15	7.75	0.75	6.4	TS43	TKY15R	
SH19K-FSDUCL11	●			19.05	125	20	17	9.25	0.75	6.4	TS43	TKY15R	
SH20K-FSDUCL11	●			20	125	20	18	9.75	0.75	6.4	TS43	TKY15R	
SH22K-FSDUCL11	●			22	125	20	20	10.75	0.75	6.4	TS43	TKY15R	
SH25M-FSDUCL11	●			25.4	150	20	23	12.25	0.75	6.4	TS43	TKY15R	

Note 1) When using insert with right and left hand chip breaker, please use right hand insert.  
 Note 2) The insert photos are only examples. The letters refer to the chip breaker and the dimension refers to the inscribed circle.  
 \* Clamp Torque (N · m) : TS254=1.0, TS43=3.5

### RECOMMENDED CUTTING CONDITIONS

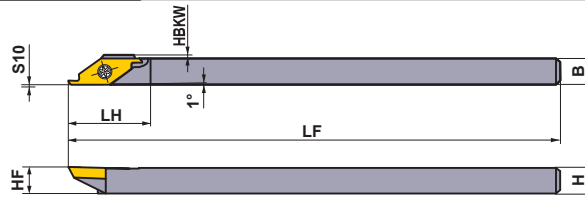
	Work Material	Hardness	Grade	Cutting Speed (m/min)	Feed (mm/rev)
P	Carbon Steel · Alloy Steel	180HB—280HB	MS6015/VP15TF	100 (50—150)	0.08 (0.01—0.15)
			MS6015	110 (30—180)	0.08 (0.01—0.15)
	Free Cutting Steel	—	NX2525	150 (50—250)	0.08 (0.01—0.15)
M	Stainless Steel	≤200HB	VP15TF/MP9005/MP9015	80 (50—120)	0.06 (0.02—0.1)
N	Non-Ferrous Metal	—	HTi10/MT9005	150 (70—230)	0.09 (0.03—0.15)
S	Titanium Alloy	—	MT9005	60 (40—80)	0.08 (0.04—0.12)
	Heat Resistant Alloy	—	MP9015	50 (20—75)	0.08 (0.04—0.12)

● : Inventory maintained in Japan.

SH○○○ type inserts > A149—A154  
 CBN & PCD inserts > B054—B056, B073

# CAM TYPE TOOL POSTS

## CSVH



Right hand tool holder shown.

Order Number	Stock		Insert Number	Dimensions (mm)							*1 APMX (mm)	*2 Clamp Screw	Wrench	
	R	L		H	B	HF	LF	HBKW	LH	S10				
CSVHR/L0707	●	●	CSVT		7	7	7	140	0.5	20	0.1	3.0	NS251	NKY15S
CSVHR/L0808	●	●			8	8	8	140	0	20	0.1	3.0	NS251	NKY15S
CSVHR/L0909	●	●			9.5	9.5	9.5	140	0	20	0.1	3.0	NS251	NKY15S
CSVHR/L1010	●	●			10	10	10	140	0	20	0.1	3.0	NS251	NKY15S
CSVHR/L1212	●	●			12	12	12	140	0	20	0.1	3.0	NS251	NKY15S

Note 1) Please use right hand insert for right hand holder and left hand insert for left hand holder.

Note 2) Max. Cutting Depth (APMX) varies depending on the type of insert used.

\*1 APMX : Max. Cutting Depth

\*2 Clamp Torque (N · m) : NS251=1.0

D

SMALL TOOLS

## INSERTS

### CSVTF

#### Front turning

Order Number	Hand	Coated	Dimensions (mm)				APMX (mm) *	Geometry
		VP15KZ	IC	S	RER/L	CF		
CSVTF30AR	R	●	6.35	2.38	0	0.3	3.0	
CSVTF30AL	L	●	6.35	2.38	0	0.3	3.0	
CSVTF30BR	R	●	6.35	2.38	0	0.3	3.0	
CSVTF30CR	R	●	6.35	2.38	0	0.15	3.0	
CSVTF30DR	R	●	6.35	2.38	0	0.15	3.0	
CSVTF30AR-B	R	●	6.35	2.38	0	0.3	3.0	
CSVTF30AL-B	L	●	6.35	2.38	0	0.3	3.0	
CSVTF30BR-B	R	●	6.35	2.38	0	0.3	3.0	
CSVTF30CR-B	R	●	6.35	2.38	0	0.15	3.0	
CSVTF30DR-B	R	●	6.35	2.38	0	0.15	3.0	

\* APMX : Max. Cutting Depth

### CSVTFXL

#### Front turning, Copying

Order Number	Hand	Coated	Dimensions (mm)			APMX (mm) *	Geometry
		VP15KZ	IC	S	CFD		
CSVTFXL	L	●	6.35	2.38	0.7	3.0	

\* APMX : Max. Cutting Depth

● : Inventory maintained in Japan. (5 inserts in one case)

SPARE PARTS > Q001  
TECHNICAL DATA > R001

D027

# CAM TYPE TOOL POSTS

INSERTS

D

SMALL TOOLS

CSVTC		Cutting off							APMX* (mm)	Geometry
Order Number	Hand	Coated	Dimensions (mm)							
		VP15KZ	IC	S	RER/L	CDX	CW			
CSVTC0640R	R	●	6.35	2.38	0	2.0	0.6	1.5	<p>Without Breaker</p>	
CSVTC0750R	R	●	6.35	2.38	0	2.5	0.7	2.0		
CSVTC0750L	L	●	6.35	2.38	0	2.5	0.7	2.0		
CSVTC0850R	R	●	6.35	2.38	0	2.5	0.8	2.0		
CSVTC0850L	L	●	6.35	2.38	0	2.5	0.8	2.0		
CSVTC0950R	R	●	6.35	2.38	0	2.5	0.9	2.0		
CSVTC1060R	R	●	6.35	2.38	0	3.0	1.0	2.5		
CSVTC1060L	L	●	6.35	2.38	0	3.0	1.0	2.5		
CSVTC1360R	R	●	6.35	2.38	0	3.0	1.3	2.5		
CSVTC1360L	L	●	6.35	2.38	0	3.0	1.3	2.5		
CSVTC1560R	R	●	6.35	2.38	0	3.0	1.5	2.5		
CSVTC1560L	L	●	6.35	2.38	0	3.0	1.5	2.5		
CSVTC0640R-B	R	●	6.35	2.38	0	2.0	0.6	1.5		<p>With Breaker</p>
CSVTC0750R-B	R	●	6.35	2.38	0	2.5	0.7	2.0		
CSVTC0850R-B	R	●	6.35	2.38	0	2.5	0.8	2.0		
CSVTC0950R-B	R	●	6.35	2.38	0	2.5	0.9	2.0		
CSVTC1060R-B	R	●	6.35	2.38	0	3.0	1.0	2.5		
CSVTC1360R-B	R	●	6.35	2.38	0	3.0	1.3	2.5		
CSVTC1560R-B	R	●	6.35	2.38	0	3.0	1.5	2.5		

\* APMX : Max. Cutting Depth

CSVTB		Back turning								APMX* (mm)	Geometry
Order Number	Hand	Coated	Dimensions (mm)								
		VP15KZ	IC	S	RER/L	CDX	CW	CF	PSIRR/L		
CSVTB10AR	R	●	6.35	2.38	0	2.5	1	0.3	5°	2.0	<p>Without Breaker</p>
CSVTB10AL	L	●	6.35	2.38	0	2.5	1	0.3	5°	2.0	
CSVTB10BR	R	●	6.35	2.38	0	2.5	1	0.3	2°	2.0	
CSVTB10CR	R	●	6.35	2.38	0	2.5	1	0.15	2°	2.0	
CSVTB10DR	R	●	6.35	2.38	0	2.5	1	0.15	5°	2.0	
CSVTB12AR	R	●	6.35	2.38	0	2.5	1.2	0.3	5°	2.0	
CSVTB14AR	R	●	6.35	2.38	0	2.5	1.4	0.3	5°	2.0	
CSVTB10AR-B	R	●	6.35	2.38	0	2.5	1	0.3	5°	2.0	
CSVTB10BR-B	R	●	6.35	2.38	0	2.5	1	0.3	2°	2.0	
CSVTB10CR-B	R	●	6.35	2.38	0	2.5	1	0.15	2°	2.0	
CSVTB10DR-B	R	●	6.35	2.38	0	2.5	1	0.15	5°	2.0	
CSVTB12AR-B	R	●	6.35	2.38	0	2.5	1.2	0.3	5°	2.0	
CSVTB14AR-B	R	●	6.35	2.38	0	2.5	1.4	0.3	5°	2.0	

\* APMX : Max. Cutting Depth

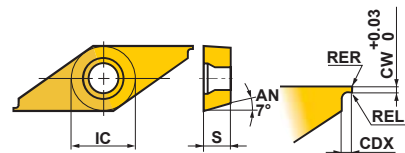
CSVTBXL		Back turning, Copying						APMX* (mm)	Geometry
Order Number	Hand	Coated	Dimensions (mm)						
		VP15KZ	IC	S	RER/L	CW	CF		
CSVTBXL	L	●	6.35	2.38	0	0.7	0.035	3.0	<p>Without Breaker</p>

\* APMX : Max. Cutting Depth

● : Inventory maintained in Japan. (5 inserts in one case)

# INSERTS

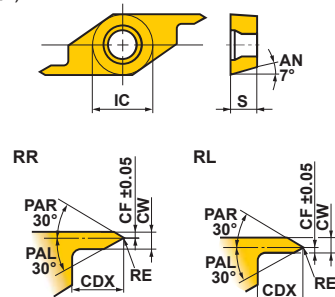
		Grooving								
Order Number	Hand	Coated	Dimensions (mm)					APMX* (mm)	Geometry	
		VP15KZ	IC	S	RER/L	CDX	CW			
CSV TG02505R	R	●	6.35	2.38	0	0.5	0.25	0.15	Without Breaker	
CSV TG03005R	R	●	6.35	2.38	0	0.5	0.3	0.15		
CSV TG03505R	R	●	6.35	2.38	0	0.5	0.35	0.15		
CSV TG04005R	R	●	6.35	2.38	0	0.5	0.4	0.15		
CSV TG04510R	R	●	6.35	2.38	0	1.0	0.45	0.45		
CSV TG05010R	R	●	6.35	2.38	0	1.0	0.5	0.45		
CSV TG05510R	R	●	6.35	2.38	0	1.0	0.55	0.45		
CSV TG06010R	R	●	6.35	2.38	0	1.0	0.6	0.45		
CSV TG06510R	R	●	6.35	2.38	0	1.0	0.65	0.45		
CSV TG07010R	R	●	6.35	2.38	0	1.0	0.7	0.45		
CSV TG07520R	R	●	6.35	2.38	0	2.0	0.75	1.4		
CSV TG07520L	L	●	6.35	2.38	0	2.0	0.75	1.4		
CSV TG08020R	R	●	6.35	2.38	0	2.0	0.8	1.4		
CSV TG08520R	R	●	6.35	2.38	0	2.0	0.85	1.4		
CSV TG09020R	R	●	6.35	2.38	0	2.0	0.9	1.4		
CSV TG09520R	R	●	6.35	2.38	0	2.0	0.95	1.4		
CSV TG09520L	L	●	6.35	2.38	0	2.0	0.95	1.4		
CSV TG10020R	R	●	6.35	2.38	0	2.0	1.0	1.4		
CSV TG11030R	R	●	6.35	2.38	0	3.0	1.1	2.6		
CSV TG12030R	R	●	6.35	2.38	0	3.0	1.2	2.6		
CSV TG12030L	L	●	6.35	2.38	0	3.0	1.2	2.6		
CSV TG13030R	R	●	6.35	2.38	0	3.0	1.3	2.6		
CSV TG14030R	R	●	6.35	2.38	0	3.0	1.4	2.6		
CSV TG15030R	R	●	6.35	2.38	0	3.0	1.5	2.6		



Right hand insert shown.

\* APMX : Max. Cutting Depth

		Threading									
Order Number	Hand	Coated	Pitch (mm)	Dimensions (mm)					Geometry		
		VP15KZ		IC	S	RE	CDX	CW		CF	
CSV TT60050RR	R	●	0.2-0.5	6.35	2.38	0.03	3.0	1.0	0.35	Without Breaker General Purpose Partial Profile (60°)	
CSV TT60050RL	L	●	0.2-0.5	6.35	2.38	0.03	3.0	1.0	0.35		



Right hand insert shown.

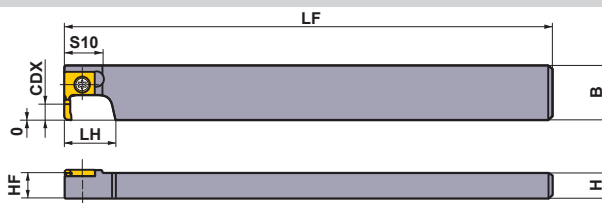
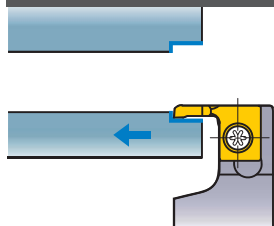
D

SMALL TOOLS

# BORING

## SBAH

Without off set



Right hand tool holder only.

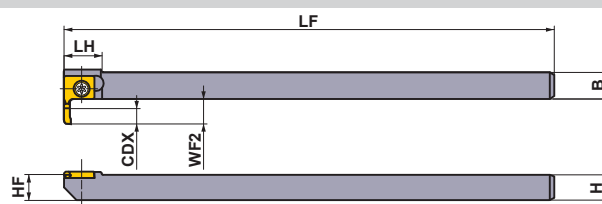
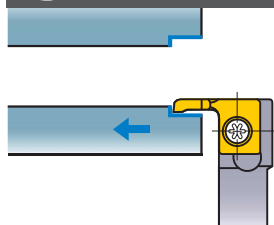
Order Number	Stock R	Insert Number		Dimensions (mm)						CDX (mm)	DMIN (mm)	*1	*2
				H	B	LF	HF	LH	S10				
<b>SBAHR1022</b>	●	SBAT	3080 $\odot$ L/L-B	10	21.5	120	10	17.5	15	8	3	NS402W	NKY15S
<b>SBAHR1222</b>	●			12	21.5	120	12	17.5	15	8	3	NS403W	NKY15S

\*1 DMIN : Min. Cutting Diameter

\*2 Clamp Torque (N · m) : NS402W=1.0, NS403W=1.0

## SBAH

With off set



Right hand tool holder only.

Order Number	Stock R	Insert Number		Dimensions (mm)						CDX (mm)	DMIN (mm)	*1	*2
				H	B	LF	HF	WF2	LH				
<b>SBAHR1010</b>	●	SBAT	3080 $\odot$ L/L-B	10	10	120	10	10	15	8	3	NS402W	NKY15S

\*1 DMIN : Min. Cutting Diameter

\*2 Clamp Torque (N · m) : NS402W=1.0

## INSERTS

Breaker	Order Number	Coated	Dimensions (mm)								DMIN (mm)	Geometry
		VP15KZ	PSIRL	RER	CDX	L	W1	S	CW	S10		
Without Breaker	<b>SBAT308000L</b>	●	5°	0	8.0	18.5	12.0	2.50	1.25	9.0	3	
	<b>SBAT3080V5L</b>	●	5°	0.05	8.0	18.5	12.0	2.50	1.25	9.0	3	
With Breaker	<b>SBAT308000L-B</b>	●	5°	0	8.0	18.5	12.0	2.50	1.25	9.0	3	
	<b>SBAT3080V5L-B</b>	●	5°	0.05	8.0	18.5	12.0	2.50	1.25	9.0	3	

\* DMIN : Min. Cutting Diameter

● : Inventory maintained in Japan. (5 inserts in one case)

SPARE PARTS > Q001  
TECHNICAL DATA > R001

# Memo

---

A series of horizontal dotted lines for writing, spanning the width of the page.