

Small Lathe Tools

SumiSmall

D1 to D46

Boring Bars  E1 ~ Grooving / Cut-off / Threading Tools  F1 ~

D

For Small
Lathes

D

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External Holders

Indexable Head Type Quick Change Tool Holders 	APM series	D8
SEC-PB Tool Holders	SPB series	D24
SEC-Mini Tool Holders Zero Offset Holders	PCLC-X type / SCLC-X type / SCAC-X type	D26
	PDJC-X type / SDJC-X type	D27
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	SVJC-X type / PTXN-X type	D29
SEC-Mini Tool Holders PC series / SC series	PCLC type / SCLC type	D30
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E Boring Bars

Multi-functional Small Lathe Tools	E16
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F Grooving / Cut-off / Threading Tools

SEC-Grooving Tools (External)	F4
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SEC-Small Diameter Cut-off Tool Holders	F88
SEC-Threading Tools (External)	F112, F120
SEC-Threading Tools (Internal)	F112, F125

Stock Markings and Symbols

- mark: Standard stocked item
- mark: To be replaced with the new item featured on the same page
- ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability)

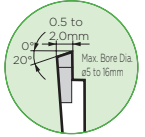
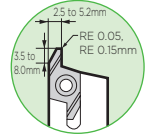
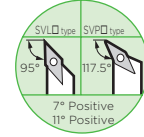
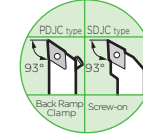
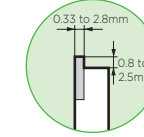
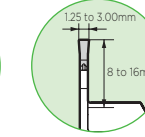
- * mark: Semi-standard stock (please confirm stock availability)
- mark: Stock or planned stock (please confirm stock availability)
- Blank: Made-to-order item
- mark: Not available

Small Lathe Tools Selection Guide

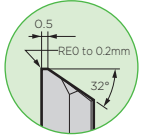
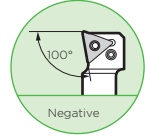
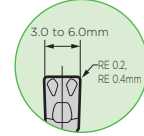
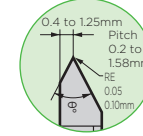
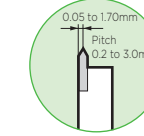
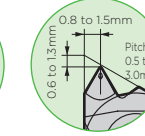
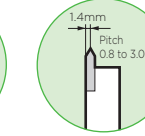
For Small Lathes

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External Turning (1)

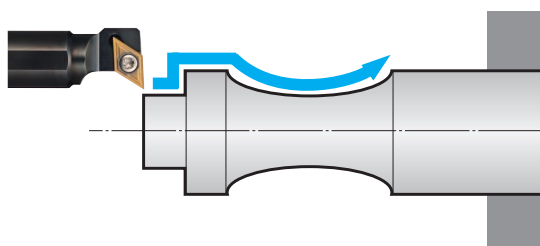
Application / Model / Page	Cut-off	Back Turning	Profiling	General External Turning	Grooving	Grooving / Cut-off
SCT series	SBT series PBT series	SV series	PD/SD series	GWC series TGA type Insert	GND series	
Indexable Head  F88 ~	Indexable Head  D44	Indexable Head  D36 ~	Indexable Head  D32, D33	Indexable Head  F4	Indexable Head  F12 ~	
						
	Indexable Head  D17 ~	Indexable Head  D15 ~	Indexable Head  D14 ~	Indexable Head  D18 ~	Indexable Head  D20 ~	

External Turning (2)

Application / Model / Page	Turning	Turning	Grooving	Threading	Grooving	Threading	Threading
SFT series	PTXN-X type	Grooving Traverse Cutting	STH series	GWC series TTE type Insert	SSTE series	THE series	
Indexable Head  D46	Indexable Head  D29	Indexable Head  F56	Indexable Head  F120	Indexable Head  F4	Indexable Head  F112 ~	Indexable Head  F124	
							
				Indexable Head  D18 ~			

External Turning (3)

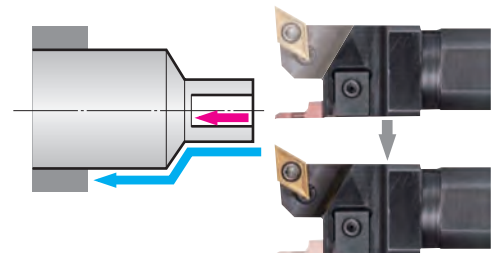
External turning made possible with holder sleeves.



Application / Model / Page	Round Shank Holder
	RS series
	Indexable Head  D38 to D41

Multi-functional Tool

A single holder capable of performing two operations.



Application / Model / Page	Twin Head Holder	
	I.D. + O.D. CKBE type	I.D. + I.D. CKBB type
	Indexable Head  E16	Indexable Head  E17

Small Lathe Tools Selection Guide

Internal Boring (1) Machining of very small diameters $\phi 1\text{mm}$ and above

Application / Model / Page	Very Small Dia. Boring	Very Small Dia. Boring	Solid Carbide Bar	Small Hole Boring Bars
	Square Shank C KB series	Round Shank S-C KB type / S-C KB-S type	Square Shank L type Gang type Toolpost CKBS type	SEXC series <i>Expansion</i>
	E64	E66	E65	E70 -
Cutting Edge Shape	General KBMX type	Back Turning KBMZ type	Grooving KBMG type	Face Grooving KBMFR type

Internal Boring (2) Machining of small diameters $\phi 5\text{mm}$ and above

Internal Grooving and Threading

Application / Model / Page	Boring	Internal Grooving	Internal Grooving / Internal Threading	Internal Grooving	Internal Threading	Internal Threading
	SW type / ST type / SC type / SD type / SV type / SS type	SGIT series	SSH series <i>Expansion</i>	GNDIS series <i>Expansion</i>	STHI series	SSTI series
	E18 to E61	F59	F60 -	F48 -	F126	F112 -
Cutting Edge Shape	Stop Boring E40 -	Internal Face Grooving F66 -	Internal Threading F62 -	Internal Grooving F48 -	Internal Threading STHI series	Internal Threading SSTI series

Small Hole Boring Bars (CBN)

Small Hole Boring Bars (PCD/Binderless PCD)

Drilling

Application / Model / Page	Small Hole Boring Bars (CBN)	Small Hole Boring Bars (PCD/Binderless PCD)	General-purpose	For Aluminum Alloy
	SUMIBORON BSME series	SUMIDIA DABB series	MULTIDRILL NeXEO MDE series	MULTIDRILL MDA series
	E73	E80	J8 -	J90 -
Cutting Edge Shape	E76	E81	J8 -	J90 -

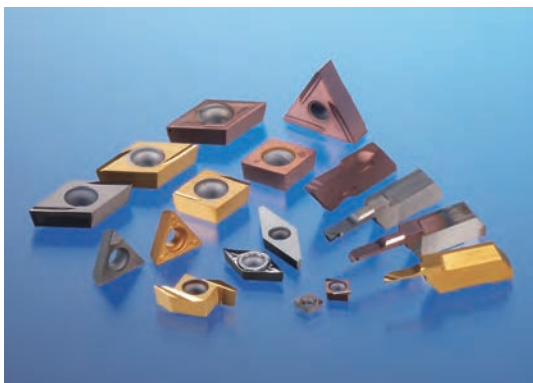


General Features

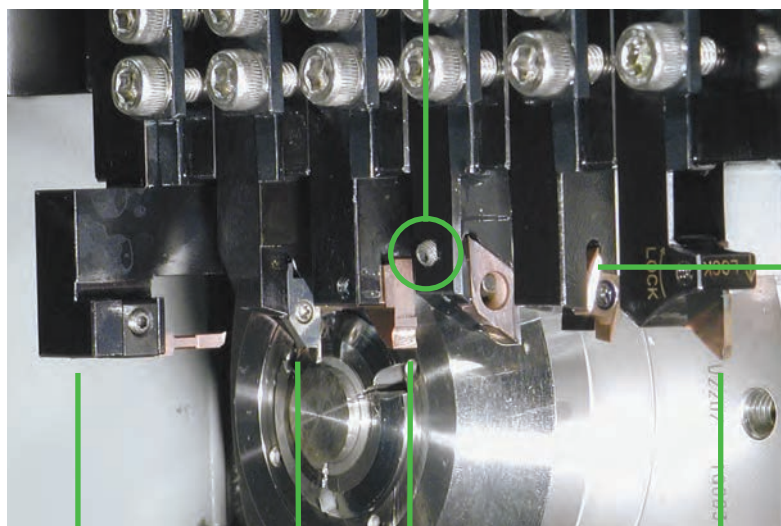
In 1984, Sumitomo Electric Hardmetal first released the SEC-MINI Tool Holder series for small product machining in small NC autolathes. Through these years of experience, new tool designs including our side lever lock tool holder were developed to meet various machining requirements such as back turning, profiling and cut-off; we continually strive to enhance the series.

SumiSmall

Full Lineup of Grades from Carbide to PCD



IC D6 -



Special Tools for Small Lathes to Cover Various types of Machining

● MINI Boring Bar CKB series

Min. bore diameter $\phi 1$ to $\phi 5$ mm



IC E64 -

● Very Small Diameter Part Turning Tool SPB series

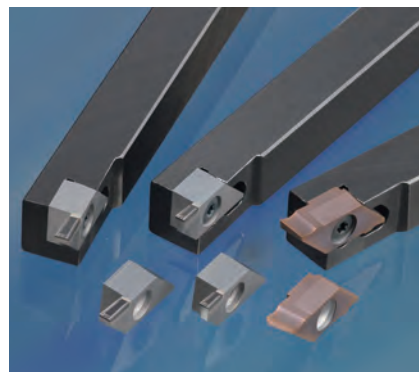
Best suited for very small parts with diameter of less than $\phi 10$ mm



IC D24 -

● Wide-Cut Holders SGW series

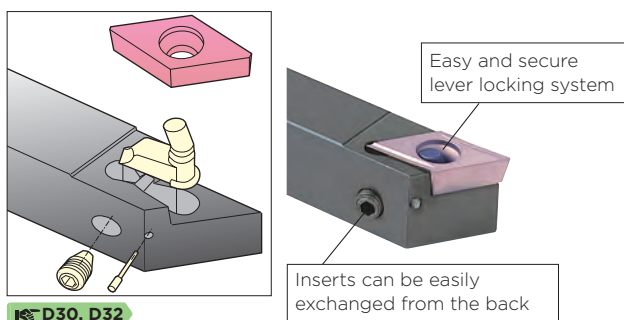
Ideal for high-efficiency machining of long parts, eliminating chip control issues



IC D42

■ A Wide Selection of Easy-to-Use Holders

● PC/PD type Back Clamp Tool Holders



Icons D30, D32

● Back-Turning Tool Holder SBT series / PBT series Expansion

Sharp cutting edge produces good surface finish
Maximum machining step 8.0mm, width of cut 2.5mm



Icons D44

Indexable Heads Icons D17 -

● Cut-off Tool SCT type

Inserts can be changed easily even from the back, simply by loosening the screw
Maximum cut-off diameters: $\phi 5\text{mm}$, $\phi 12\text{mm}$, $\phi 16\text{mm}$



Icons F88 -

● Indexable Head Type Quick Change Holder APM series New

Mounting/removing the head alone reduces machine downtime when replacing inserts. A polygon taper shape is used for the fitting part, achieving indexing repeatability within $5\mu\text{m}$

Icons D8 -



● Zero Offset Holders *Products with part number suffix "-X" Expansion

Tool compensation not required for small gang-type lathes

Icons D26 -



Indexable Heads Icons D14 -

● Twin Head Holder

Multi-functional Autolathe Tool

One holder performing 2 different operat

Icons E16 -



● Round Shank Holder RS series

External turning made possible with holder sleeves

Icons D38 -



● SEC-Grooving Tool SSH type Expansion

Internal coolant supply enables superb chip control, while the tough carbide body allows stable machining, supporting internal grooving of $\phi 8\text{mm}$ up
Introducing series for internal face grooving and threading

Icons F60 -



● SEC-Grooving Tools GND series Expansion

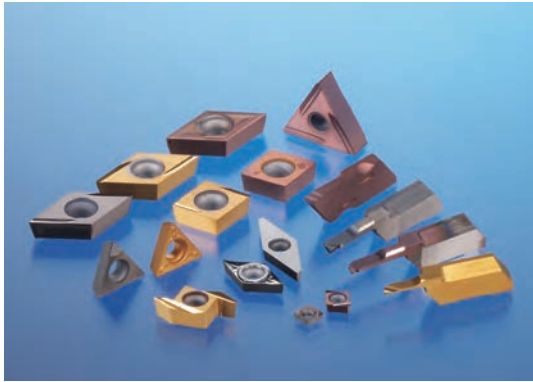
Lineup includes shanks for small lathes with internal coolant supply
Suitable for grooving widths 1.25mm and up
Grade for non-ferrous metal machining DL1500 now part of the series

Icons F12 -



Indexable Heads Icons D20 -

Insert Grade Selection Guide



In 1984, Sumitomo Electric Hardmetal first released the SEC-MINI Tool Holder series for small product machining in small NC autolathes.

A full range of insert grades including AC530U and AC1030U as well as Cermet T1500A, Cemented Carbide BL130, SUMIBORON BN2000, and SUMIDIA DA1000 are available to meet a variety of machining requirements. In addition to the high-precision grade ACZ150, AC1030U has been added to support an even wider range of precision application requirements, from automotive to electrical component machining.

■ Insert Grade Selection Guide

Insert Grades	Application Range			Applicable Work Material					
	High-precision	Finishing to Light Cutting	Medium Cutting	P General Steel	M Stainless Steel	K Cast Iron	N Non-Ferrous Metal	S Heat-Resistant Alloy	H Hardened Steel
Coated Carbide (PVD)	ACZ150			◎	◎		○		
	AC5015S			○	◎	○		◎	
	AC5025S			○	◎	○		◎	
	AC530U			◎	◎	○	○	○	
	AC1030U			◎	◎	○	○	○	
Uncoated Cermet Coated Cermet	T1000A			◎	○	◎	○		
	T1500A/T1500Z			◎	○	○	○		
Cemented Carbide	BL130			○	○	○	○		
	H1			○	○	○	◎		
	EH510			○	○	○	○	◎	
CBN (SUMIBORON)	BN1000/BN2000								◎
	BN7125					◎		○	
PCD (SUMIDIA)	DA1000						◎		

◎ 1st Recommendation ○ 2nd Recommendation

■ Recommended Cutting Conditions

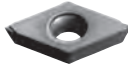
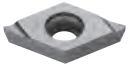
(Red text: 1st recommendation, Blue text: 2nd recommendation)

Work Material	P Free-Cutting Steel		P Carbon Steel		M Stainless Steel		S Heat-Resistant Alloy		H Hardened Steel		N Aluminum Alloy		N Brass	
Tool Grade	vc(m/min)	f(mm/rev)	vc(m/min)	f(mm/rev)	vc(m/min)	f(mm/rev)	vc(m/min)	f(mm/rev)	vc(m/min)	f(mm/rev)	vc(m/min)	f(mm/rev)	vc(m/min)	f(mm/rev)
ACZ150	50 to 200	0.02 to 0.10	50 to 150	0.01 to 0.08	50 to 150	0.01 to 0.05					70 to 300	0.05 to 0.20	70 to 300	0.05 to 0.20
AC5015S	50 to 200	0.02 to 0.15	50 to 200	0.02 to 0.10	50 to 200	0.02 to 0.10	30 to 100	0.02 to 0.10					70 to 300	0.05 to 0.20
AC5025S	50 to 200	0.02 to 0.15	50 to 200	0.02 to 0.10	50 to 200	0.02 to 0.10	30 to 100	0.02 to 0.10					70 to 300	0.05 to 0.20
AC530U	50 to 200	0.02 to 0.15	50 to 200	0.02 to 0.10	50 to 200	0.02 to 0.10							70 to 300	0.05 to 0.20
AC1030U	50 to 200	0.02 to 0.15	50 to 150	0.02 to 0.10	50 to 150	0.02 to 0.10							70 to 300	0.05 to 0.20
T1000A	50 to 200	0.02 to 0.15	50 to 200	0.02 to 0.10	50 to 150	0.02 to 0.10					70 to 300	0.05 to 0.20	70 to 300	0.05 to 0.20
T1500A	50 to 200	0.02 to 0.15	50 to 200	0.02 to 0.10	50 to 150	0.02 to 0.10					70 to 300	0.05 to 0.20	70 to 300	0.05 to 0.20
T1500Z	50 to 200	0.02 to 0.15	50 to 200	0.02 to 0.10	50 to 150	0.02 to 0.10					70 to 300	0.05 to 0.20	70 to 300	0.05 to 0.20
BN1000									120 to 300	0.03 to 0.15				
BN2000									50 to 200	0.03 to 0.20				
BN7125							50 to 200	0.05 to 0.25						
DA1000											70 to 300	0.02 to 0.10	70 to 300	0.02 to 0.10

Chipbreaker Selection

■ Insert series

● Insert Precision Selection Guide

Insert Class	E Class	G Class	M Class
			
Height Tolerance	±0.025mm	±0.13mm	±0.13mm
Features	Peripheral faces are ground Thickness tolerances are tighter than G class inserts	Peripheral faces are ground	Peripheral faces have a sintered finish
Applications	High-precision to finishing	Finishing to Light Cutting	Roughing to Light Cutting
Cat. No.	CCET09T302R-FX DCET0702018L-FY	CCGT09T304R-FX DCGT11T302MN-SI(*)	CCMT09T304N-LU DCMT070208N-SU

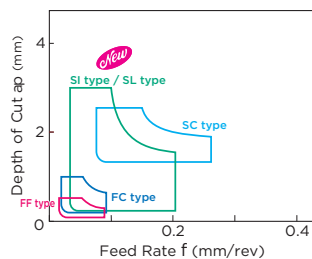
(*) Catalogue numbers with a feed direction symbol prefixed with "M" means that the product has a corner radius with negative tolerance.

● Chipbreaker Selection

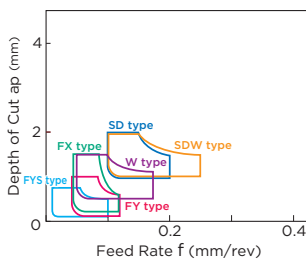
	Representative example	Features
Molded type	FC type  SI type  AG type 	3D chipbreaker with good chip evacuation and sharp cutting edge.
Parallel type	FX type 	Best suited for general-purpose external finishing with larger depths of cut.
Wide type	FYS type  FY type 	Suppresses burrs in necking operation. Suppresses chattering during facing and external turning operations.

■ Application Range of Chipbreakers for Finishing to Light Cutting

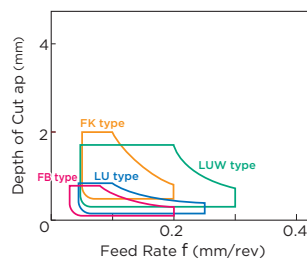
● G Class Chipbreaker



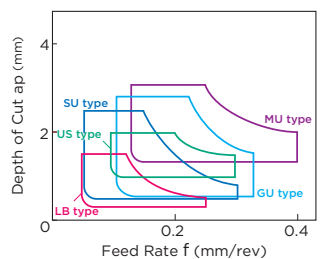
● G Class Ground type



● M Class Finishing to Light Cutting



● M Class Light Cutting



■ Chipbreakers for Finishing to Light Cutting

Positive type G Class

FF type P M K N S H  Realises outstanding chip control in fine cutting conditions. Sharp Edge specifications Relief Angle 5° 7° CCGT09T300 type	FC type P M K N S H  Peripheral ground 3D chipbreaker with good chip control and cutting edge sharpness. Sharp Edge specifications Relief Angle 7° 11° CCGT09T300 type	SI type P M K N S H  Sharp-edged chipbreaker for a wide range of applications from finishing to light cutting. Sharp Edge specifications Relief Angle 7° 11° CCGT09T300 type	SL type P M K N S H  Sharp-edged chipbreaker with high machining quality for a wide range of applications from finishing to light cutting. Sharp Edge specifications Relief Angle 7° 11° CCGT09T300 type	SC type P M K N S H  Two-stepped chipbreaker for light cutting. Sharp Edge specifications Relief Angle 7° TCGT110300 type
AG type P M K N S H  Al chipbreaker for mirror finishing without chip adhesion. Sharp Edge specifications Relief Angle 7° CCGT09T300 type				

Positive type G Class (Ground type)

FX type P M K N S H  Parallel chipbreaker with sharp edge. Sharp Edge Relief Angle 5° 7° 11° TPGT110300 type	FYS type P M K N S H  Fine cutting chipbreaker with sharp edge. Sharp Edge Relief Angle 5° 7° CCGT04X100 type	FY type P M K N S H  Wide chipbreaker with sharp edge. Sharp Edge Relief Angle 5° 7° 11° TPGT110300 type	SD type P M K N S H  Stepped parallel ground type. Sharp Edge specifications Relief Angle 7° 11° TPGT110300 type	AY type P M K N S H  High-quality ground Al chipbreaker for excellent surface finish. Sharp Edge Relief Angle 5° 7° 11° CCGT09T300 type
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Positive type M Class

FB type P M K N S H  Finishing chipbreaker for mild steel turning with excellent chip control and surface finish. Relief Angle 5° 7° 11° CCMT09T300 type	LU type P M K N S H  Chip control significantly improved in fine cutting. Relief Angle 5° 7° 11° CCMT09T300 type	LB type P M K N S H  Light-cutting chipbreaker with sharp edge and good chip control. Relief Angle 5° 7° 11° CCMT09T300 type	SU type P M K N S H  General-purpose chipbreaker with excellent cutting edge sharpness. Relief Angle 7° 11° TPMT160400 type	GU type P M K N S H  General-purpose chipbreaker. 1st Recommendation. Relief Angle 5° 7° 11° CCMT09T300 type
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Applicable Work Materials: **P** Steel **M** Stainless Steel **K** Cast Iron **N** Non-Ferrous Metal **S** Exotic Alloy **H** Hardened Steel



New

For Small
Lathes

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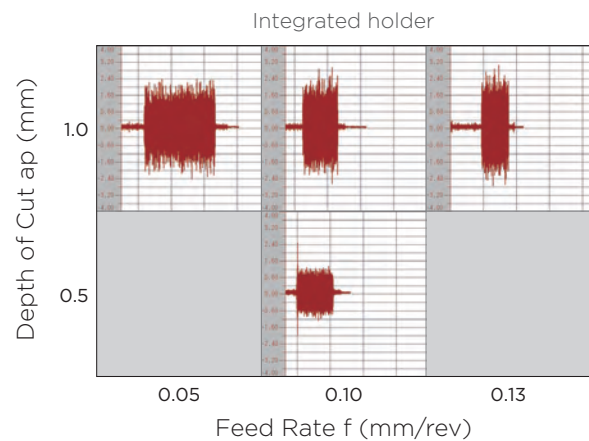
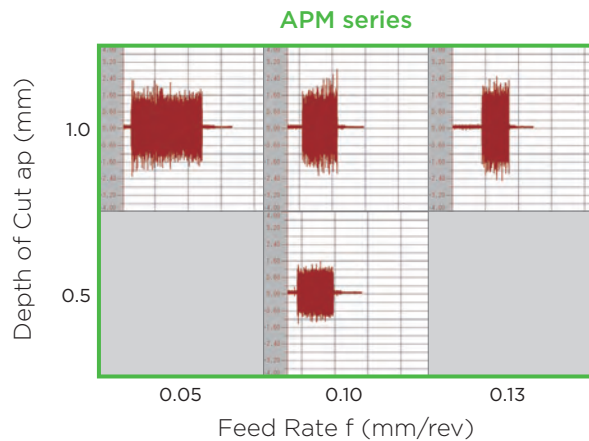
■ Features

- Tool changeover time reduced
Mounting / removing the head alone improves workability and safety when changing the insert, reducing machine downtime at changeovers thus increasing productivity
- Excellent head change repeatability
High-accuracy polygon taper shape achieves change repeatability within 5 μ m
- Lineup of 10, 12 and 16mm shank sizes support a wide range of CNC autolathes, etc.
- Supports front turning, back turning, grooving, and cut-off
- Internal coolant supply design, supports coolant supply without hose

■ Cutting Performance

● Low vibration

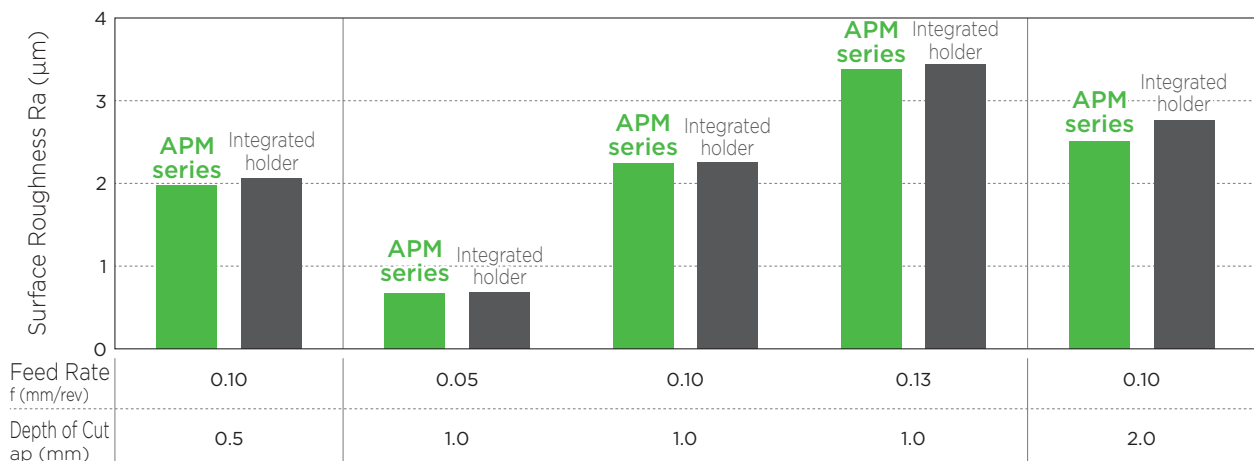
The APM series realises low vibration performance equivalent to that of integrated holders



Work Material: SUS420J2 Tool Shank: APM-R1212X84J Head: APM12-SDJCR11T3J Insert: DCGT11T302MN-SI (AC1030U)
Cutting Conditions: $v_c = 80\text{m/min}$ $f = 0.05, 0.10, 0.13\text{mm/rev}$ $a_p = 0.5, 1.0\text{mm}$ Wet

● Machined surface roughness

The APM series realises machined surface roughness equivalent to that of integrated holders

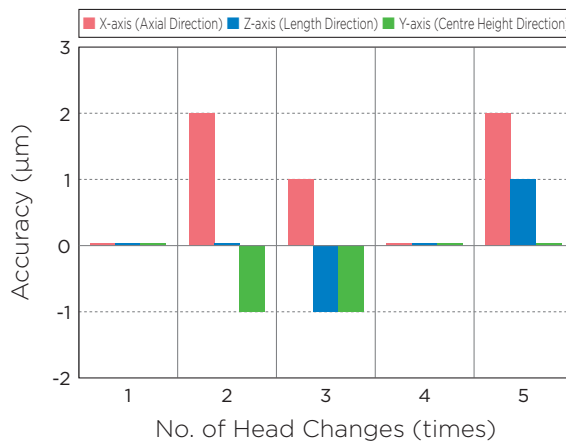
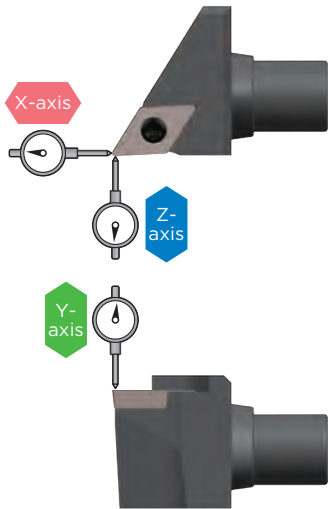


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Cutting Conditions: $v_c = 80\text{m/min}$ $f = 0.05, 0.10, 0.13\text{mm/rev}$ $a_p = 0.5, 1.0, 2.0\text{mm}$ Wet

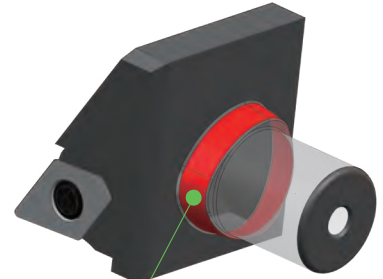
APM series

Head Change Repeatability

Polygon taper shape achieves change repeatability within 5µm



*Measured using the same shank, the same head, and the same insert corner

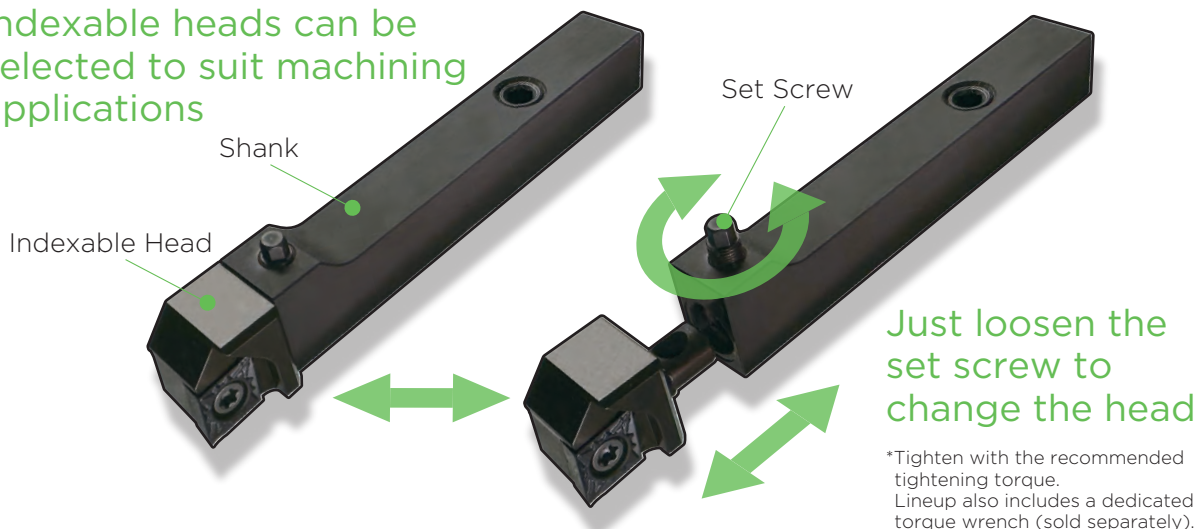


Polygon Taper Shape



Head Change Structure

Indexable heads can be selected to suit machining applications



APM series Combination Examples

Indexable Head

For ISO Turning Inserts

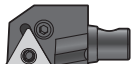
Positive

SCLC type
SDJC type
SVJB type
SVJC type
SVJP type



Negative

PTGN type



For Dedicated Inserts

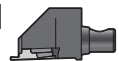
Back Turning

SBT type



Grooving / Threading

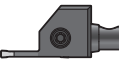
GWC type



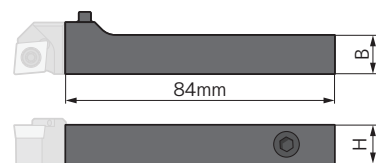
Grooving / Cut-off

GNDM type

GNDL type



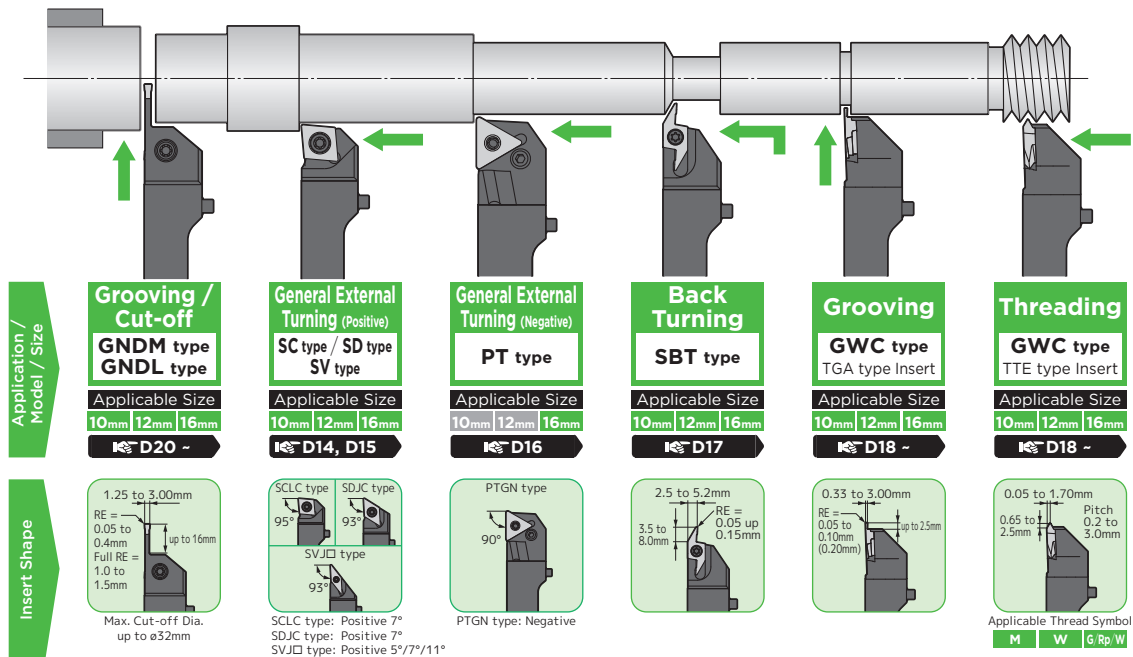
Shank



APM-R1010X84J Height H: 10mm Width B: 10mm
APM-R1212X84J Height H: 12mm Width B: 12mm
APM-R1616X84J Height H: 16mm Width B: 16mm

APM series

Head Lineup



Tooling Selection

Application	External Turning				
	General Turning / Facing	General Turning / Profiling	General Turning	Back Turning	
Insert Shape	80° Diamond type (Positive)	55° Diamond type (Positive)	35° Diamond type (Positive)	Triangular type (Negative)	Dedicated Insert (BT type)
Clamp Mechanism					
Screw-on	SCLC type D14	SDJC type D14	SVJB type / SVJC type SVJP type D15	—	SBT type D17
Lever Lock	—	—	—	PTGN type D16	—

Application	External Grooving / Threading / Cut-off		
	Grooving	Threading	Grooving / Cut-off
Insert Shape	Dedicated Insert (TGA type)	Dedicated Insert (TTE type)	Dedicated Insert (GCM type / GCG type)
Clamp Mechanism			
Screw-on	GWC type D18 ~	GWC type D18 ~	—
Clamp-on	—	—	GNDM type GNDL type D20 ~

APM series

Quick Change Holder APM series Precautions for Use

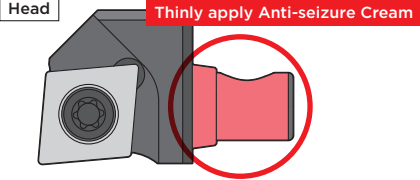
■ Anti-seizure Cream (APM-P)

When removing the head, it may be difficult to take out even when the set screw has been loosened.
As a countermeasure, use dedicated Anti-seizure Cream APM-P to enable smooth removal.

Application Method

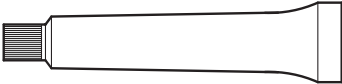
Head

Thinly apply Anti-seizure Cream



After cleaning the polygon taper and shaft on the indexable head, apply a thin layer of dedicated Anti-seizure Cream APM-P with a rag or similar.
*Anti-seizure Cream (APM-P) has been applied before packaging.

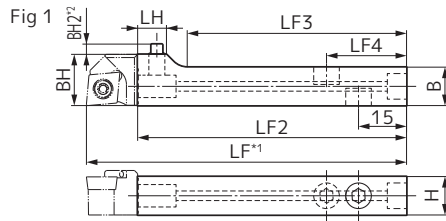
Anti-seizure Cream

Cat. No.	Stock	
APM-P	●	

Anti-seizure Cream is sold separately.



Sumi Small



Shank

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Width B	Overall Length LF2	Width BH	Protrusion Width BH2	Head LH	Length LF3	Length LF4	Applicable Size	Fig	Set Screw		Plug	Torque Wrench
															
APM-R1010X84J	●	10	10	84	13.5	3	9	69.0	25	10	1	BTT0507H	3.0	APM-M8P	TRDRS3530 (*)
APM-R1212X84J	●	12	12	84	16.0	3	9	68.5	25	12	1	BTT0510H			
APM-R1616X84J	●	16	16	84	20.0	4	10	68.0	27	16	1	BTT0611H			

Select shanks and heads with matching applicable size. *1 See head tables for specific LF dimensions (set dimensions).

*2 When using separately sold set screws (torx type: BTT0000T), BH2 = 0mm.

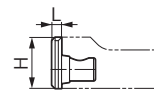
*Torque wrench is sold separately from the shank.

Fig 1 (Standard hex type)

Fig 2 (Torx type)



Fig 1



Parts (Set Screw)

Dimensions (mm)

Cat. No.	Stock	Screw Standard	Overall Length	Applicable Shank	N·m	Fig
BTT 0507H	●	SW3.5	10.0	APM-R1010X84J	3.0	1
BTT 0510H	●	SW3.5	12.5	APM-R1212X84J	3.0	1
BTT 0611H	●	SW4.5	14.5	APM-R1616X84J	4.0	1
BTT 0507T	●	T10	7.0	APM-R1010X84J	3.0	2
BTT 0510T	●	T10	9.5	APM-R1212X84J	3.0	2
BTT 0611T	●	T20	10.5	APM-R1616X84J	4.0	2

Suffix H: Hex (included with shank; use the torque wrench below or a commercially available wrench)

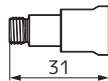
T: Torx (sold separately; use a commercially available wrench)

Set Screw Torque Wrench

Cat. No.	Stock	Screw Standard	Torque Value (N·m)	Applicable Shank
TRDRS3530	●	SW3.5	3.0	APM-R1010X84J APM-R1212X84J
TRDRS4540	●	SW4.5	4.0	APM-R1616X84J

Torque wrench is sold separately. Dedicated for set screw part number suffix H (hex type).

Fig 1



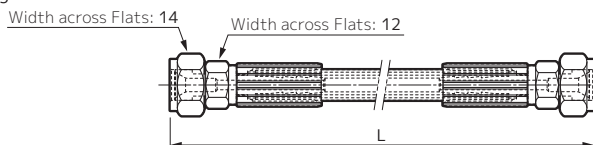
Piping Parts (Adapter)

Dimensions (mm)

Cat. No.	Stock	Screw Standard	Screw Standard	External Diameter	Applicable Shank	Fig
J-M8-G1/8-U	●	M8	G1/8	ø15	APM-R1010X84J APM-R1212X84J	1
J-G1/8-G1/8-U	●	G1/8	G1/8	ø18	APM-R1616X84J	1

Adapter is sold separately.

Fig 1



Piping Parts (Hose)

Dimensions (mm)

Cat. No.	Stock	L	Screw Standard	Screw Standard	Fig
J-HOSE-G1/8-G1/8-200	●	200	G1/8	G1/8	1
J-HOSE-G1/8-G1/8-300	●	300	G1/8	G1/8	1

Hoses are sold separately.

Parts (Stopper Plug)

Dimensions (mm)

Cat. No.	Stock	L	H	Applicable Shank	Fig
APM10-PLUG	●	2.2	13.4	APM-R1010X84J	1
APM12-PLUG	●	3.0	15.9	APM-R1212X84J	1
APM16-PLUG	●	4.0	19.9	APM-R1616X84J	1

Use the stopper plug to protect the shank joint part when the head is not mounted. (Sold separately)

Fig 1



Piping Parts (Plug)

Cat. No.	Stock	Screw Standard	Applicable Shank	Fig
APM-M8P	●	M8	APM-R1010X84J APM-R1212X84J	1
APM-G1/8P	●	G1/8	APM-R1616X84J	1

The shank is shipped with two plugs mounted.

Fig 1

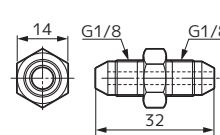


Fig 2

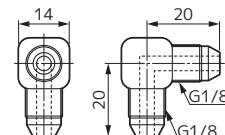


Fig 3

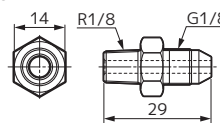
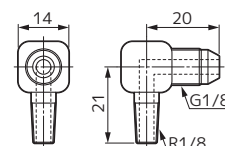


Fig 4



Piping Parts (Connector)

Dimensions (mm)

Cat. No.	Stock	Screw Standard	Screw Standard	Fig
J-G1/8-G1/8-00	●	G1/8	G1/8	1
J-G1/8-G1/8-90	●	G1/8	G1/8	2
J-G1/8-R1/8-00	●	G1/8	R1/8	3
J-G1/8-R1/8-90	●	G1/8	R1/8	4

Connectors are sold separately.

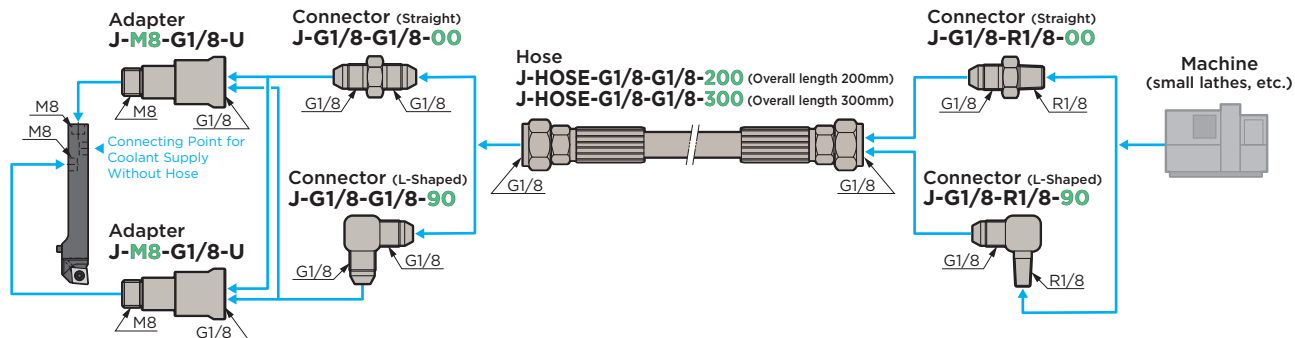


APM series

■ Piping Method for Hoses, Connectors, and Adapters

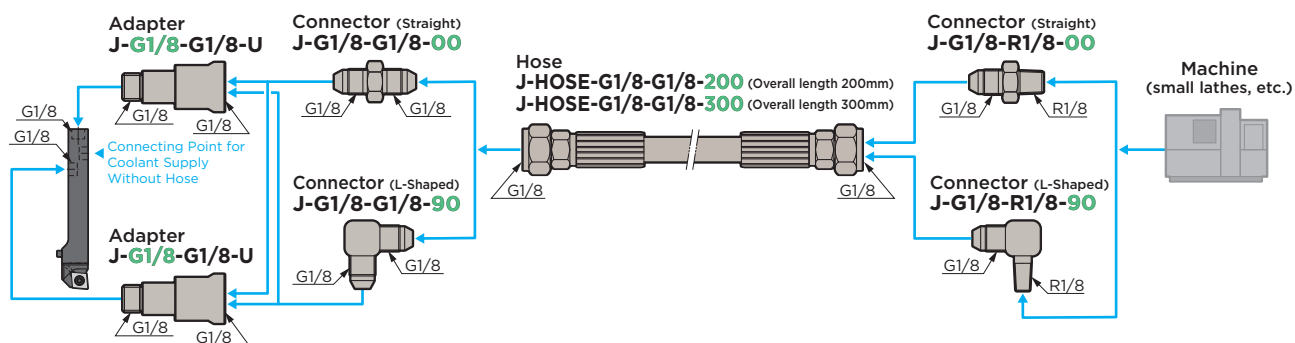
APM series Shank

APM-R1010X84J (10mm square) / **APM-R1212X84J** (12mm square)



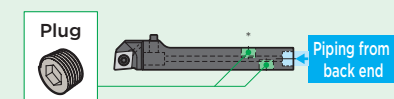
APM series Shank

APM-R1616X84J (16mm square)



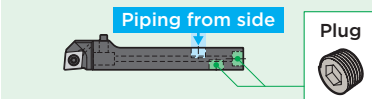
- Use an adapter suited to the machine specifications.
- Apply sealant such as commercial sealing tape to the piping connection parts.
- See figures below for plug mounting when piping. (For Plug Cat. No. 10/12mm square: **APM-M8P**, 16mm square: **APM-G1/8P**)

Piping from back end (as default)

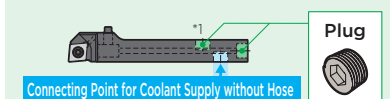


*The plug may protrude a few millimetres when mounted on the side.

Piping from side



Coolant Supply without Hose



*1 The plug may protrude a few millimetres when mounted on the side.

*2 The plug is mounted as default, so remove it for use with coolant supply without hose.

Coolant Supply without Hose

Coolant can be supplied directly from the toolpost without a hose

Connecting Points for Hoses

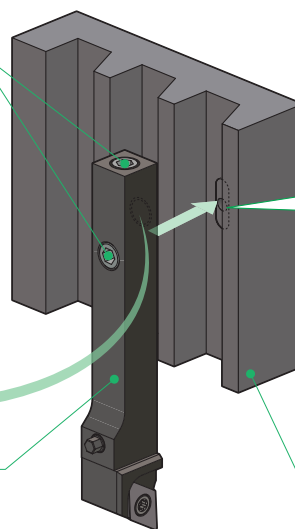
For coolant supply without hose, mount plugs on the side and back end
APM-M8P (for 10/12mm square)
APM-G1/8P (for 16mm square)

Connecting Point for Coolant Supply without Hose

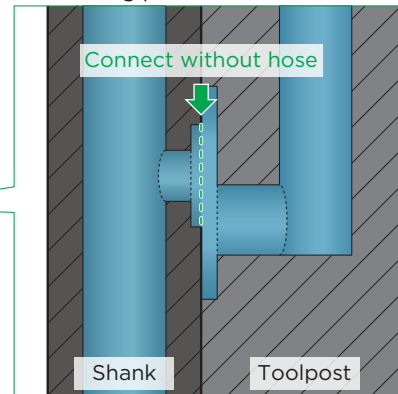
For coolant supply without hose, remove the plug.



All APM series shanks use coolant supply without hose



Connecting point cross-section

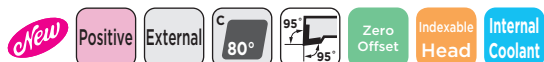


Tool overhang may need to be adjusted depending on the machine specifications.
 If additional tool modification is required to suit your machine, please contact our sales office.

Compatible Toolpost for Coolant Supply without Hose

Note: When using external coolant supply, attach a plug at the back end as well.

APM series

External Turning, Internal Coolant Supply
Screw-on

Sumi Small

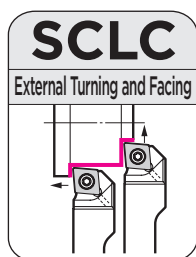


Fig 1

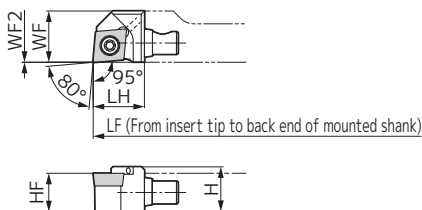


Figure shows right-handed (R) tool.

Head

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Head LH	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Overall Length LF	Applicable Insert				Flat Insert Screw			Wrench
								Cat. No.	Ref. Page	Applicable Size	Fig		N·m		
APM10-SCLC R0602J	●	11.9	16	13.5	10	0	100	CC□T0602	B68 ~	10	1	BFTX02506N	1.5	TRX08 (*)	
APM12-SCLC R0602J	●	13.9	16	16.0	12	0	100			12	1				
APM16-SCLC R0602J	●	17.9	16	20.0	16	0	100			16	1				
APM10-SCLC R09T3J	●	11.9	16	13.5	10	0	100	CC□T09T3	B71 ~	10	1	BFTX0409N	3.4	TRX15 (*)	
APM12-SCLC R09T3J	●	13.9	16	16.0	12	0	100			12	1				
APM16-SCLC R09T3J	●	17.9	16	20.0	16	0	100			16	1				

Refer to shank selection on page D12 for applicable shanks.

*Wrenches are sold separately from heads.

External Turning, Internal Coolant Supply
Screw-on

Sumi Small

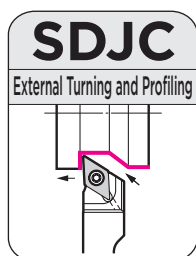


Fig 1

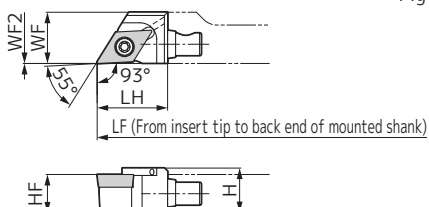


Fig 2

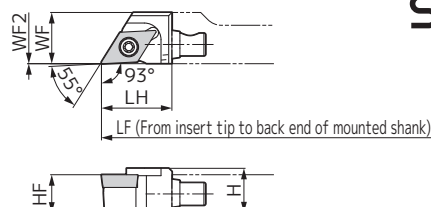


Figure shows right-handed (R) tool.

Head

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Head LH	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Overall Length LF	Applicable Insert				Flat Insert Screw			Wrench
								Cat. No.	Ref. Page	Applicable Size	Fig		N·m		
APM10-SDJC R0702J	●	11.9	16	13.5	10	0	100	DC□T0702	B78 ~	10	1	BFTX02506N	1.5	TRX08 (*)	
APM12-SDJC R0702J	●	13.9	16	16.0	12	0	100			12	1				
APM16-SDJC R0702J	●	17.9	16	20.0	16	0	100			16	1				
APM10-SDJC R11T3J	●	11.9	20	13.5	10	0	104	DC□T11T3	B82 ~	10	1	BFTX0409N	3.4	TRX15 (*)	
APM12-SDJC R11T3J	●	13.9	22	16.0	12	0	106			12	2				
APM16-SDJC R11T3J	●	17.9	22	20.0	16	0	106			16	2				

Refer to shank selection on page D12 for applicable shanks.

*Wrenches are sold separately from heads.



APM series

New

Positive

External

V 35°

93°

Zero Offset

Indexable Head

Internal Coolant

External Turning, Internal Coolant Supply
Screw-on

SumiSmall

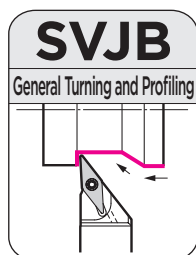


Fig 1

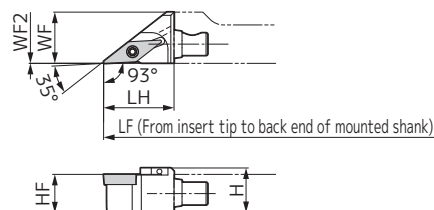


Figure shows right-handed (R) tool.

Head

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Head LH	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Overall Length LF	Applicable Insert		Applicable Size	Fig	Flat Insert Screw		Wrench
								Cat. No.	Ref. Page					 (For Torx hole)
APM10-SVJB R1103J	●	11.9	22	13.5	10	0	106	VB□T1103	B116 ~	10	1	BFTX02508NV	1.5	TRX08 (*)
APM12-SVJB R1103J	●	13.9	22	16.0	12	0	106			12	1			
APM16-SVJB R1103J	●	17.9	22	20.0	16	0	106			16	1			

Refer to shank selection on page D12 for applicable shank. * Wrenches are sold separately from heads.

New

Positive

External

V 35°

93°

Zero Offset

Indexable Head

Internal Coolant

External Turning, Internal Coolant Supply
Screw-on

SumiSmall

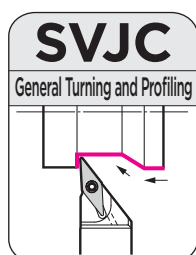


Fig 1

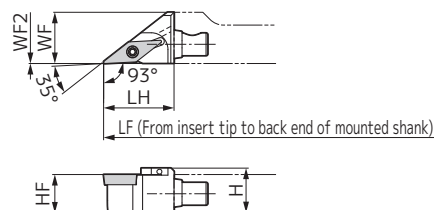


Figure shows right-handed (R) tool.

Head

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Head LH	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Overall Length LF	Applicable Insert		Applicable Size	Fig	Flat Insert Screw		Wrench
								Cat. No.	Ref. Page					
APM10-SVJC R1103J	●	11.9	22	13.5	10	0	106	VC□T1103	B119~	10	1	BFTX02508NV	1.5	TRX08 (*)
APM12-SVJC R1103J	●	13.9	22	16.0	12	0	106			12	1			
APM16-SVJC R1103J	●	17.9	22	20.0	16	0	106			16	1			

Refer to shank selection on page D12 for applicable shank. * Wrenches are sold separately from heads.

New

Positive

External

V 35°

93°

Zero Offset

Indexable Head

Internal Coolant

External Turning, Internal Coolant Supply
Screw-on

SumiSmall

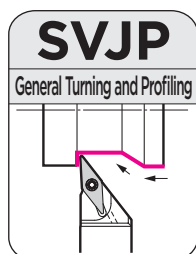


Fig 1

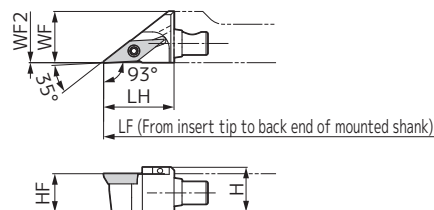


Figure shows right-handed (R) tool.

Head

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Head LH	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Overall Length LF	Applicable Insert		Applicable Size	Fig	Flat Insert Screw		Wrench
								Cat. No.	Ref. Page					 (For Torx hole)
APM10-SVJP R1103J	●	11.9	22	13.5	10	0	106	VP□T1103	B123	10	1	BFTX02508NV	1.5	TRX08 (*)
APM12-SVJP R1103J	●	13.9	22	16.0	12	0	106			12	1			
APM16-SVJP R1103J	●	17.9	22	20.0	16	0	106			16	1			

Refer to shank selection on page D12 for applicable shanks.

* Wrenches are sold separately from heads.



Recommended Tightening Torque (N·m) ● mark: Standard stocked item (new product/expanded item)

APM series

New

Negative

External

60°

90°

Zero Offset

Indexable Head

Internal Coolant

External Turning, Internal Coolant Supply
Lever Lock



For Small Lathes

D

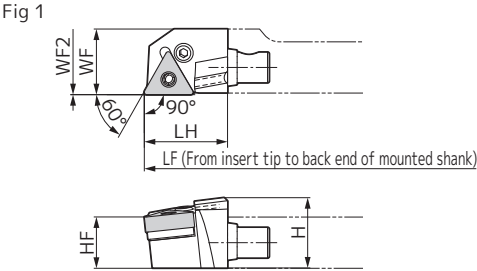
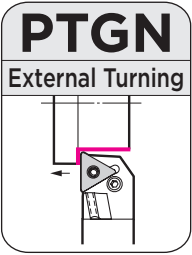


Figure shows right-handed (R) tool.

Head

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Head LH	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Overall Length LF	Applicable Insert		Applicable Size	Fig	Lever Pin	Bolt	Shim	Shim Retainer	Wrench	
								Cat. No.	Ref. Page								 (For hexagonal hole)
APM16-PTGN R1604J	●	22	26	20.5	16	0.5	110	TN□□1604	B48 ~	16	1	LCL3APM	LCS3APM	3.5	LST317APM	LSP3APM	LH025 (・)

Refer to shank selection on page D12 for applicable shanks.
* Wrenches are sold separately from heads.

APM series

New

External

Back
TurningIndexable
HeadInternal
CoolantBack Turning, Internal Coolant Supply
Screw-on

SumiSmall

For Small
Lathes

D

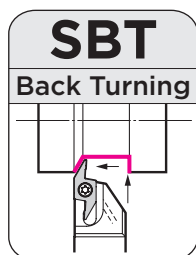


Fig 1

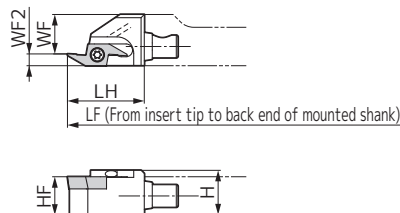


Figure shows right-handed (R) tool.

Head

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Head LH	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Overall Length LF	Applicable Insert		Fig	Flat Insert Screw		Wrench
								Cat. No.	Applicable Size				
APM10-SBT R-35J	●	11.9	22	11.0	10	2.5	106	BTR3500	10	1		2.0	TRX10 (*)
APM12-SBT R-35J	●	13.9	22	13.5	12	2.5	106		12	1			
APM16-SBT R-35J	●	17.9	22	17.5	16	2.5	106		16	1			
APM10-SBT R-55J	●	11.9	22	9.8	10	3.7	106	BTR5500	10	1		2.0	TRX10 (*)
APM12-SBT R-55J	●	13.9	24	12.3	12	3.7	108		12	1			
APM16-SBT R-55J	●	17.9	24	16.3	16	3.7	108		16	1			
APM12-SBT R-80J	●	13.9	30	10.8	12	5.2	114	BTR8000	12	1		2.0	TRX10 (*)
APM16-SBT R-80J	●	17.9	30	14.8	16	5.2	114		16	1			

Refer to shank selection on page D12 for applicable shanks.

* Wrenches are sold separately from heads.

Expansion

Insert (Coated Carbide / DLC / Cermet)

Dimensions (mm)

Cat. No.	AC5015S	AC5025S	AC1030U	AC530U	ACZ150	DL1500	T1500A	Overall Length L	Maximum Depth of Cut CDX	Width of Cut CW	Corner Radius RE	Applicable Head	Fig	Fig 1
BT R3505	●	●	●	●	●	●	●	15	3.5	2.5	0.05	APM00-SBTR-35J	1	
BT R3508	●	●	●	●	●	●	●	15	3.5	2.5	0.08		1	
BT R3515	●	●	●	●	●	●	●	15	3.5	2.5	0.15		1	
BT R5505	●	●	●	●	●	●	●	19	5.5	3.7	0.05	APM00-SBTR-55J	1	
BT R5508	●	●	●	●	●	●	●	19	5.5	3.7	0.08		1	
BT R5515	●	●	●	●	●	●	●	19	5.5	3.7	0.15		1	
BT R8005	●	●	●	●	●	—	—	24	8.0	5.2	0.05	APM00-SBTR-80J	1	
BT R8008	●	●	●	●	●	—	—	24	8.0	5.2	0.08		1	
BT R8015	●	●	●	●	●	—	—	24	8.0	5.2	0.15		1	

Recommended Cutting Conditions

Work Material	P Free-Cutting Steel		P Carbon Steel		M Stainless Steel		S Exotic Alloy		N Non-Ferrous Metal	
Process	Plunging	Traverse Cut	Plunging	Traverse Cut	Plunging	Traverse Cut	Plunging	Traverse Cut	Plunging	Traverse Cut
Insert Grades	AC1030U/ACZ150 T1500A		AC1030U/AC530U/ACZ150 T1500A		AC1030U/AC5015S/AC5025S AC530U/ACZ150		AC5015S/AC5025S		DL1500	
Cutting Speed vc (m/min)	50 to 150		50 to 150		50 to 150		20 to 80		150 to 300	
Feed Rate f (mm/rev)	0.02 to 0.10	0.02 to 0.15	0.02 to 0.05	0.02 to 0.10	0.02 to 0.04	0.02 to 0.06	0.01 to 0.03	0.01 to 0.04	0.02 to 0.05	0.02 to 0.10

The inserts on this page can also be used with SEC-MINI Tool Holder SBT type / PBT type.



Recommended Tightening Torque (N·m) ● mark: Standard stocked item (new product/expanded item)

APM series

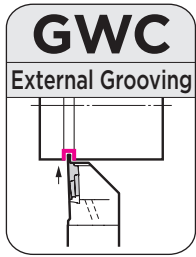
External Shallow Grooving
Screw-on

Fig 1

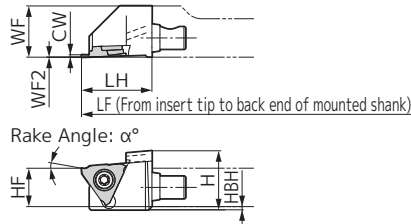
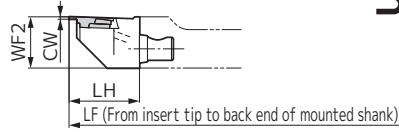


Fig 2



SumiSmall

Head

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Head LH	Cutting Edge Distance WF	Cutting Edge Height HF	Step HBH	Offset WF2	Overall Length LF	Width of Cut CW	Maximum Groove Depth	Applicable Size	Applicable Insert		Flat Insert Screw		Wrench
												Cat. No.	Fig			
APM10-GWC R-R3J	●	18.3	20	13.5	10	3	0	104	0.33 to 3.00	0.8 to 2.5	10	TGAR3...	1	BFTX0409N	3.4	TRX15 (*)
APM12-GWC R-R3J	●	18.4	22	16.0	12	1	0	106	0.33 to 3.00	0.8 to 2.5	12		1			
APM16-GWC R-R3J	●	21.4	22	20.0	16	—	0	106	0.33 to 3.00	0.8 to 2.5	16		1			
APM10-GWC R13.5-L3J	●	18.3	20	—	10	3	13.5	104	0.33 to 3.00	0.8 to 2.5	10	TGAL3...	2	BFTX0409N	3.4	TRX15 (*)
APM12-GWC R16-L3J	●	18.4	22	—	12	1	16.0	106	0.33 to 3.00	0.8 to 2.5	12		2			
APM16-GWC R20-L3J	●	21.4	22	—	16	—	20.0	106	0.33 to 3.00	0.8 to 2.5	16		2			

Refer to shank selection on page D12 for applicable shanks. Refer to page D19 for applicable inserts.

Right-handed (part number suffix: -R3J) heads are used with right-handed (R) inserts.

* Wrenches are sold separately from heads.

Selecting GWC series Heads

Integrated holder	Right-handed (R)	Left-handed (L)
APM series	Right-handed (R) No Offset	Right-handed (R) With Offset
APM series Shank	APM-R00X84J (Common)	
GWC series Head	APM00-GWC R-R3J	APM00-GWC R-000-L3J Offset Dimensions
Applicable Insert	TGA R3000	TGA L3000
GWC series Head Mounted Appearance		

Rake Angle When Mounted on Head (α°)

Coated Carbide	Carbide	DLC	Coated Cermet	Cermet
AC5015S AC5025S AC530U	H1	DL1500	T2500Z	T1500A
10°	20°	10°	10°	5°



APM series

Fig. 1 (Grooving)

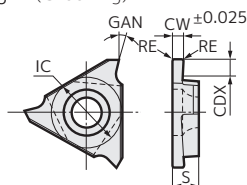
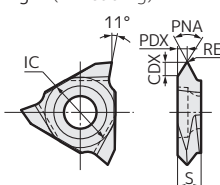


Fig. 2 (Threading)



Rake Angle by Grade (Grooving)

Grade	Cutting Edge Shape	GAN
Coated Carbide AC5015S	Honing	15°
Coated Carbide AC5025S	Honing	15°
Coated Carbide AC530U	Honing	15°
Carbide H1	Sharp Edged	25°
DLC DL1500	Sharp Edged	25°
Coated Cermet T2500Z	Honing	15°
Cermet T1500A	Sharp Edged	10°

* For the rake angle when mounted on the head, refer to page D18.

Figure shows right-handed (R) tool.

Expansion

Insert (Grooving) (Coated Carbide / Cemented Carbide / DLC / Cermet)

Dimensions (mm)

Cat. No.*	AC5015S		AC5025S		AC530U		H1		DL1500		T2500Z		T1500A		Width of Cut	Maximum Groove Depth	Corner Radius	Inscribed Circle	Thickness	Applicable Head	Fig
	R	L	R	L	R	L	R	L	R	L	R	L	R	L	CW	CDX	RE	IC	S		
TGA R/L3033(E)					●	●	●	●			●	●	●	●	0.33	0.8	0.05	9.525	3.18	APMOO-GWCR-R3J	1
TGA R/L3043(E)					●	●	●	●			●	●	●	●	0.43	0.8	0.05	9.525	3.18		1
TGA R/L3050(E)					●	●	●	●	●	●	●	●	●	●	0.50	1.2	0.05	9.525	3.18		1
TGA R/L3053(E)					●	●	●	●			●	●	●	●	0.53	1.2	0.05	9.525	3.18		1
TGA R/L3065(E)					●	●	●	●			●	●	●	●	0.65	1.2	0.05	9.525	3.18		1
TGA R/L3075(E)					●	●	●	●	●	●	●	●	●	●	0.75	2.0	0.1*	9.525	3.18		1
TGA R/L3080(E)					●	●	●	●			●	●	●	●	0.80	2.0	0.1*	9.525	3.18		1
TGA R/L3095(E)					●	●	●	●			●	●	●	●	0.95	2.0	0.1*	9.525	3.18		1
TGA R/L3100(E)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	1.00	2.0	0.1*	9.525	3.18		1
TGA R/L3110(E)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	1.10	2.0	0.1*	9.525	3.18		1
TGA R/L3120(E)					●	●	●	●			●	●	●	●	1.20	2.0	0.1*	9.525	3.18	APMOO-GWCR...-L3J	1
TGA R/L3125(E)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	1.25	2.0	0.1*	9.525	3.18		1
TGA R/L3130(E)					●	●	●	●			●	●	●	●	1.30	2.0	0.1*	9.525	3.18		1
TGA R/L3135(E)					●	●	●	●			●	●	●	●	1.35	2.0	0.1*	9.525	3.18		1
TGA R/L3140(E)					●	●	●	●			●	●	●	●	1.40	2.0	0.1*	9.525	3.18	APMOO-GWCR...-L3J	1
TGA R/L3145(E)					●	●	●	●	●	●	●	●	●	●	1.45	2.0	0.1*	9.525	3.18		1
TGA R/L3150(E)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	1.50	2.0	0.1*	9.525	3.18		1
TGA R/L3160(E)					●	●	●	●			●	●	●	●	1.60	2.0	0.1*	9.525	3.18		1
TGA R/L3165(E)					●	●	●	●			●	●	●	●	1.65	2.0	0.1*	9.525	3.18		1
TGA R/L3175(E)					●	●	●	●			●	●	●	●	1.75	2.0	0.1*	9.525	3.18		1
TGA R/L3185(E)					●	●	●	●			●	●	●	●	1.85	2.0	0.1*	9.525	3.18		1
TGA R/L3200(E)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	2.00	2.5	0.1*	9.525	3.18		1
TGA R/L3220(E)					●	●	●	●			●	●	●	●	2.20	2.5	0.1*	9.525	3.18		1
TGA R/L3230(E)					●	●	●	●	●	●	●	●	●	●	2.30	2.5	0.1*	9.525	3.18		1
TGA R/L3250(E)					●	●	●	●			●	●	●	●	2.50	2.5	0.1*	9.525	3.18		1
TGA R/L3265(E)					●	●	●	●			●	●	●	●	2.65	2.5	0.1*	9.525	3.18		1
TGA R/L3270(E)					●	●	●	●			●	●	●	●	2.70	2.5	0.1*	9.525	3.18		1
TGA R/L3280(E)					●	●	●	●			●	●	●	●	2.80	2.5	0.1*	9.525	3.18		1
TGA R/L3300(E)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	3.00	2.5	0.1*	9.525	3.18		1

* Add E as the part number suffix for T1500A. Right-handed (R) inserts are used with right-handed (part number suffix: -R3J) heads.

* : T1500A is RE = 0.2

Recommended Cutting Conditions

Work Material	P General Steel			M Stainless Steel		S Exotic Alloy	N Non-Ferrous Metal		
Insert Grades	AC530U		T2500Z	T1500A		AC5015S AC5025S	H1	DL1500	
Cutting Speed vc (m/min)	50 to 200		100 to 180	100 to 180		50 to 200	20 to 80	up to 300	
Feed Rate f (mm/rev)	0.02 to 0.10		0.05 to 0.10	0.05 to 0.08		0.02 to 0.10	0.01 to 0.03	0.05	

Insert (Threading, 60°/55° General-purpose Threads) (Coated Carbide / DLC / Cermet) Dimensions (mm)

Cat. No.	AC5015S		AC5025S		AC1030U		DL1500		T1500A		Pitch		Corner Radius	X Direction	Depth of Cut	Included Angle	Inscribed Circle	Thickness	Applicable Head	Fig
	R	L	R	L	R	L	R	L	R	L	mm	Threads/Inch	RE	PDX	CDX	PNA	IC	S		
TTE R/L36002075	●	●	●	●	●	●	●	●	●	●	0.20 to 0.75	80 to 32	0.05	0.55	0.65	60	9.525	3.18	APMOO-GWCR-R3J	2
TTE R/L36005125	●	●	●	●	●	●	●	●	●	●	0.50 to 1.25	56 to 20	0.05	1.00	1.30	60	9.525	3.18		2
TTE R/L3601015	●	●	●	●	●	●	●	●	●	●	1.00 to 1.50	24 to 16	0.10	1.30	1.80	60	9.525	3.18		2
TTE R/L3601530	●	●	●	●	●	●	●	●	●	●	1.50 to 3.00	16 to 8	0.20	1.70	2.40	60	9.525	3.18	APMOO-GWCR...-L3J	2
TTE R/L3554816	●	●	●	●	●	●	●	●	●	●	—	48 to 16	0.05	1.00	1.50	55	9.525	3.18		2
TTE R/L3552008	●	●	●	●	●	●	●	●	●	●	—	20 to 8	0.10	1.50	2.40	55	9.525	3.18		2

Right-handed (R) inserts are used with right-handed (part number suffix: -R3J) heads.

The inserts on this page can also be used with SEC-Grooving Tool GWC type.

● mark: Standard stocked item (new product/expanded item)

APM series



* For traverse cutting (groove expansion), use a multi-functional or profiling insert.

External Multi-purpose type (Grooving, Traversing and Profiling)
Clamp-on

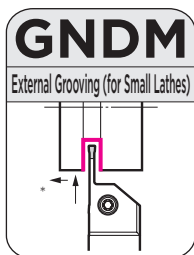


Fig 1

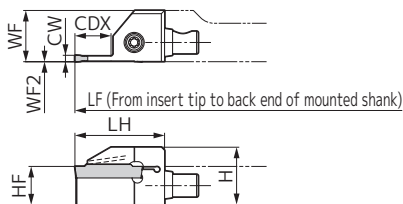
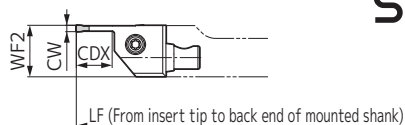


Fig 2



Sumi Small

Head

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Head LH	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Overall Length LF	Width of Cut CW	Maximum Groove Depth CDX	Max. Cut-off Dia.	Applicable Size	Fig	Flat Insert Screw Wrench		
APM16-GNDR-213J	●	21.9	28.5	20	16	0	112	2.00	13.0	26	16	1	BX0515	4.0	LH040 (*)
APM16-GNDR-313J	●	21.9	28.5	20	16	0	112	3.00	13.0	26	16	1			
APM16-GNDR20-213J	●	21.9	28.5	—	16	20	112	2.00	13.0	26	16	2			
APM16-GNDR20-313J	●	21.9	28.5	—	16	20	112	3.00	13.0	26	16	2			

Refer to shank selection on page D12 for applicable shanks. Select heads and inserts with matching width of cut CW.

Refer to page D21 for applicable inserts. Refer to page D22 for head feed direction selection. * Wrenches are sold separately from heads.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to page D22.



External Deep Grooving and Cut-off
Clamp-on

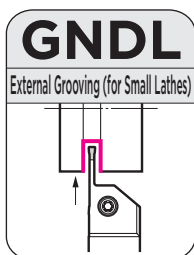


Fig 1

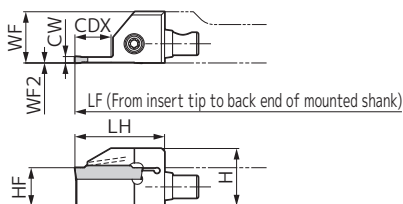
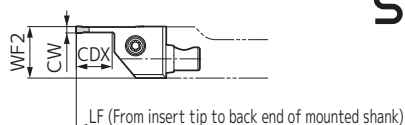


Fig 2



Sumi Small

Head

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Head LH	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Overall Length LF	Width of Cut CW	Maximum Groove Depth CDX	Max. Cut-off Dia.	Applicable Size	Fig	Flat Insert Screw Wrench		
APM10-GNDR-1.2509J	●	13.9	22	13.5	10	0	106	1.25	9.0	18	10	1	BFTX0412N	3.0	LT15-10 (*)
APM10-GNDR-1.509J	●	13.9	22	13.5	10	0	106	1.50	9.0	18	10	1			
APM10-GNDR-209J	●	13.9	22	13.5	10	0	106	2.00	9.0	18	10	1			
APM10-GNDR-309J	●	13.9	22	13.5	10	0	106	3.00	9.0	18	10	1			
APM10-GNDR13.5-1.2509J	●	13.9	22	—	10	13.5	106	1.25	9.0	18	10	2	BFTX0412N	3.0	LT15-10 (*)
APM10-GNDR13.5-1.509J	●	13.9	22	—	10	13.5	106	1.50	9.0	18	10	2			
APM10-GNDR13.5-209J	●	13.9	22	—	10	13.5	106	2.00	9.0	18	10	2			
APM10-GNDR13.5-309J	●	13.9	22	—	10	13.5	106	3.00	9.0	18	10	2			
APM12-GNDR-1.2512J	●	17.9	28	16	12	0	112	1.25	12.0	24	12	1	BFTX0412N	3.0	LT15-10 (*)
APM12-GNDR-1.512J	●	17.9	28	16	12	0	112	1.50	12.0	24	12	1			
APM12-GNDR-213J	●	17.9	28	16	12	0	112	2.00	13.0	26	12	1			
APM12-GNDR-313J	●	17.9	28	16	12	0	112	3.00	13.0	26	12	1			
APM12-GNDR16-1.2512J	●	17.9	28	—	12	16	112	1.25	12.0	24	12	2	BFTX0412N	3.0	LT15-10 (*)
APM12-GNDR16-1.512J	●	17.9	28	—	12	16	112	1.50	12.0	24	12	2			
APM12-GNDR16-213J	●	17.9	28	—	12	16	112	2.00	13.0	26	12	2			
APM12-GNDR16-313J	●	17.9	28	—	12	16	112	3.00	13.0	26	12	2			
APM16-GNDR-1.2512.5J	●	21.9	28.5	20	16	0	117	1.25	12.5	25	16	1	BX0515	4.0	LH040 (*)
APM16-GNDR-1.512.5J	●	21.9	28.5	20	16	0	117	1.50	12.5	25	16	1			
APM16-GNDR-216J	●	21.9	33	20	16	0	117	2.00	16.0	32	16	1			
APM16-GNDR-316J	●	21.9	33	20	16	0	117	3.00	16.0	32	16	1			
APM16-GNDR20-1.2512.5J	●	21.9	28.5	—	16	20	117	1.25	12.5	25	16	2			
APM16-GNDR20-1.512.5J	●	21.9	28.5	—	16	20	117	1.50	12.5	25	16	2			
APM16-GNDR20-216J	●	21.9	33	—	16	20	117	2.00	16.0	32	16	2			
APM16-GNDR20-316J	●	21.9	33	—	16	20	117	3.00	16.0	32	16	2			

Refer to shank selection on page D12 for applicable shanks. Select heads and inserts with matching width of cut CW.

Refer to page D21 for applicable inserts. Refer to page D22 for head feed direction selection. * Wrenches are sold separately from heads.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to page D22.



APM series

Expansion

Inserts for GNDM-J type / GNDL-J type

(Coated Carbide / Cermet / Cemented Carbide / DLC)

Fig 1

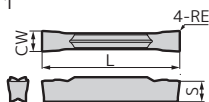


Fig 2 (Figure shows right-handed (R) tools.)

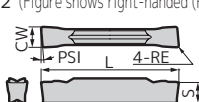


Fig 3

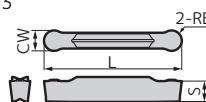
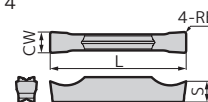


Fig 4



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										CW	Tolerance					
GCM N3002-MG	●	●	●	●	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-MG	●	●	▲	●	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1
GCM N2002-ML	—	—	—	—	●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
GCM N3002-ML	●	●	▲	●	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-ML	●	●	—	●	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1

Grooving / Cut-off

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										CW	Tolerance					
GCM N2002-GG	—	●	▲	—	●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
GCM N3002-GG	—	●	▲	—	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-GG	—	●	▲	—	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1
GCM N2002-GL	—	●	▲	—	●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
N2004-GL	—	●	—	—	●	●	●	●	—	2.0	±0.03	0.4	21.1	3.6	5	1
GCM N3002-GL	—	●	▲	—	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-GL	—	●	—	—	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1
GCM N125005-GF	—	—	—	—	—	—	—	—	—	1.25	±0.03	0.05	17.4	3.2	1	1
GCM N150005-GF	—	—	—	—	—	—	—	—	—	1.5	±0.03	0.05	17.8	3.7	1	1
GCM N2002-GF	—	—	—	—	●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
N2004-GF	—	—	—	—	●	●	●	●	—	2.0	±0.03	0.4	21.1	3.6	5	1
GCM N3002-GF	—	●	▲	—	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-GF	—	●	—	—	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1

Cut-off (Handed Edge)

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	Lead Angle	Width of Cut		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
									CW	Tolerance					
GCM R2002-CG-05	●	▲	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	2
GCM L2002-CG-05	●	▲	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	2
GCM R3002-CG-05	●	▲	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8	5	2
GCM L3002-CG-05	●	▲	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8	5	2
GCM R20003-CF-10	—	—	●	●	—	—	—	10°	2.0	±0.08	0.03	22.4	3.6	5	2
GCM L20003-CF-10	—	—	●	●	—	—	—	10°	2.0	±0.08	0.03	22.4	3.6	5	2
GCM R30003-CF-10	—	—	●	●	—	—	—	10°	3.0	±0.08	0.03	22.4	3.8	5	2
GCM L30003-CF-10	—	—	●	●	—	—	—	10°	3.0	±0.08	0.03	22.4	3.8	5	2
GCM R20003-CF-15	—	—	●	●	—	—	—	15°	2.0	±0.08	0.03	22.4	3.6	5	2
GCM L20003-CF-15	—	—	●	●	—	—	—	15°	2.0	±0.08	0.03	22.4	3.6	5	2
GCM R30003-CF-15	—	—	●	●	—	—	—	15°	3.0	±0.08	0.03	22.4	3.8	5	2
GCM L30003-CF-15	—	—	●	●	—	—	—	15°	3.0	±0.08	0.03	22.4	3.8	5	2

GCM R: Right-handed, GCM L: Left-handed

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										CW	Tolerance					
GCM N3015-RG	●	●	▲	●	●	●	●	●	—	3.0	±0.03	1.5	21.1	3.8	5	3

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	Width of Cut		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
									CW	Tolerance					
GCM N2010-RN	—	—	—	—	●	●	●	●	2.0	±0.03	1.0	21.7	3.6	5	3
N3015-RN	●	●	▲	●	●	●	●	●	3.0	±0.03	1.5	22.6	3.8	5	3

Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H10	DL1500						Width of Cut		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
								CW	Tolerance					
GCG N2002-GA	●	●	—	—	—	—	—	2.0	±0.025	0.2	21.1	3.6	5	4
N3002-GA	●	●	—	—	—	—	—	3.0	±0.025	0.2	21.1	3.8	5	4

Part Number Suffix Code (Chipbreakers)

Type	Code	Application	Type	Code	Application
Grooving / Traverse Cutting	MG	Multi-functional / General-purpose	Cut-off (Handed Edge)	CG	Cut-off / General-purpose
	ML	Multi-functional / Low-feed		CF	Cut-off / Low cutting force
Grooving / Cut-off	GG	Grooving / General-purpose	External Profiling / External Radius Grooving	RG	Profiling / General-purpose
	GL	Grooving / Low-feed	Profiling / Radius Grooving / Necking	RN	Facing / Necking / General-purpose
	GF	Grooving / Low cutting force	For Non-Ferrous Metals	GA	Non-Ferrous Metals / General-purpose

Chipbreaker Selection **D23** Recommended Cutting Conditions **D22**

Select heads and inserts with matching width of cut (CW).

The inserts on this page can also be used with SEC-Grooving Tool / Cut-off Tool GND type.

● mark: Standard stocked item (new product/expanded item) ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability)

APM series

GND series Head Lineup

MG: Multi-functional / General-purpose type **ML**: Multi-functional / Low-feed type **GG**: Grooving / General-purpose type **GL**: Grooving / Low-feed type **GF**: Grooving / Low cutting force type
CG: Cut-off / General-purpose type **CF**: Cut-off / Low cutting force type **RG**: Profiling / General-purpose type **RN**: Facing / Necking / General-purpose type **GA**: Non-Ferrous Metal / General-purpose type

Type	Shank Size (mm)	Width of Cut (mm)								Model	Max. Groove Depth (mm)	Ref. Page	Applicable Chipbreakers																		
		Height H	Width B	1.25	1.5	2	3	4	5				6	7	8	5	10	15	20	25	30	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA
For Small Lathes	10	10	1.25	1.5																											
					2																										
						3																									
	12	12	1.25	1.5																											
					2																										
						3																									
	16	16	1.25	1.5																											
					2																										
						2																									
							3																								
								3																							

In Stock

©: Best O: Suitable

■ In Stock

◎: Best ○: Suitable

GND series Head Recommended Cutting Conditions (Feed Rate / Depth of Cut)

Width of Cut (mm)	Recommended Cutting Conditions		Corner Radius (mm)	Applicable Insert
	Grooving / Cut-off (Necking)	Traverse Cutting		
1.25	Chipbreaker Feed Rate f (mm/rev)	—	0.05	MG ML GG GL GF CG CF RG RN GA
1.5	Chipbreaker Feed Rate f (mm/rev)	—	0.05	MG ML GG GL GF CG CF RG RN GA
2.0	Chipbreaker Feed Rate f (mm/rev)	Depth of Cut Depth of Cut ap (mm)	0.03 0.2 0.4 1.0	MG ML GG GL GF CG CF RG RN GA
3.0	Chipbreaker Feed Rate f (mm/rev)	Depth of Cut Depth of Cut ap (mm)	0.03 0.2 0.4 1.5	MG ML GG GL GF CG CF RG RN GA

In cut-off applications, reduce the feed rate to around 30% to 50% near the centre of the workpiece.

GND series Head Recommended Cutting Conditions (Cutting Speed by Work Material)

Work Material	P Carbon Steel / Alloy Steel					M Stainless Steel			K Cast Iron				S Exotic Alloy		N Non-Ferrous Metal
Tool Grades	AC8025P	AC8035P AC830P	AC5015S AC520U	AC5025S AC530U AC1030U	T2500A	AC8035P AC830P	AC5015S AC520U	AC5025S AC530U AC1030U	AC8025P	AC425K	AC5015S AC520U	AC5025S AC530U AC1030U	AC5015S AC520U	AC5025S AC530U AC1030U	H10 DL1500
Cutting Speed vc (m/min)	80 to 250	80 to 200	80 to 200	50 to 200	50 to 200	70 to 150	70 to 150	50 to 150	80 to 200	80 to 200	60 to 200	50 to 200	20 to 80	20 to 60	150 to 300

Selecting GND series Heads

Integrated Holder	Right-handed (R)	Left-handed (L)
APM series	Right-handed (R) No Offset	Right-handed (R) With Offset
APM series Shank	APM- R 00X84J (Common)	
GND series Head	APM00-GND□ R-0000J	APM00-GND□ R- 000 -0000J Offset Dimensions
Applicable Insert	Common	
GND series Head Mounted Appearance	 No Offset	 Yes Offset

APM series

Chipbreaker Selection Guide for Inserts with GND series Heads

	Grooving / Traverse Cutting	Grooving	Cut-off
1st Recommendation	MG type General-purpose Improved Chip Control Chipping Prevention	GG type General-purpose Improved Chip Control Chipping Prevention	GG type General-purpose Improved Chip Control Chipping Prevention
2nd Recommendation	ML type Low-Feed Chip Control Emphasised Width of Cut: Up to 4.0mm Width of Cut: 5.0mm and greater Improved Chip Control Reduced Chattering Chipping Prevention	GL type General-purpose Chip Control Emphasised Improved Chip Control Reduced Chattering Chipping Prevention	CG type General-purpose Feed Direction Lead Angle 5° Improved Chip Control Reduced Chattering Chipping Prevention
	GF type Low Cutting Force Improved Chip Control Reduced Chattering Chipping Prevention	CF type Low Cutting Force Feed Direction Lead Angle 10°/15° Improved Chip Control Reduced Chattering Chipping Prevention	GF type Low Cutting Force Improved Chip Control Reduced Chattering Chipping Prevention
	External Profiling / External Radius Grooving	Facing / Internal Profiling / Radius Grooving / Necking	For Non-Ferrous Metals
Recommendation	RG type General-purpose 1st Recommendation 	RN type General-purpose 2nd Recommendation 2mm Width Supported 	GA type General-purpose For Non-Ferrous Metals

Grade Selection Guide for Inserts with GND series Heads

Application	P Steel	M Stainless Steel	K Cast Iron	S Exotic Alloy	N Non-Ferrous Metal
Continuous / High-speed	AC8025P CVD Surface Finish Emphasised T2500A Cermet	AC8035P (AC830P) CVD AC5015S PVD	AC425K CVD AC8025P CVD AC5015S PVD	AC5015S PVD AC5025S (AC520U) PVD	DL1500 PVD H10 Uncoated Carbide
Interrupted / Unstable	AC8035P (AC830P) CVD AC5025S (AC520U) PVD 1st Recommendation AC530U/AC1030U PVD	AC5015S PVD 1st Recommendation AC5025S (AC520U) PVD AC530U/AC1030U PVD	AC5015S PVD AC5025S (AC520U) PVD AC530U/AC1030U PVD	AC5015S PVD AC5025S (AC520U) PVD AC530U/AC1030U PVD	DL1500 PVD H10 Uncoated Carbide



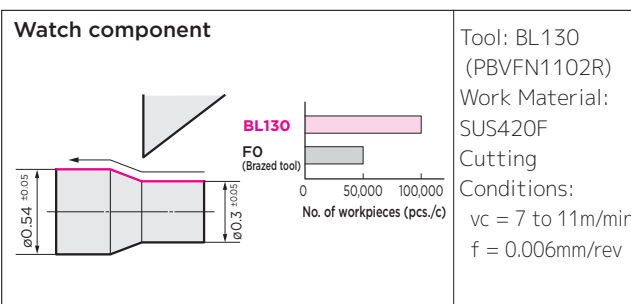
■ Features

- High rigidity type tools for gang-type NC lathes
- Inserts for various applications can be used on a single holder
- Can also be used on turret-type toolposts
- BL130 has wear resistance similar to coated grades and sharpness similar to uncoated grades
- Ultra-fine grained cemented carbide grade F1, typically used for brazed tools, is now available for indexable inserts

■ Grade Application

Insert Grade	Applicable Work Material		Stainless Steel	
	General Steel/SK Material	Austenitic	Martensitic Ferritic	Brass/ Aluminum Alloy
BL130	○	○	◎	○
F1	○	◎	○	○

■ Application Examples



Very Small Diameter Part Turning
Screw-on

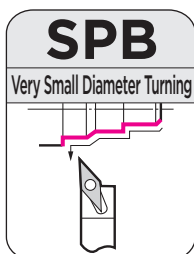


Fig 1

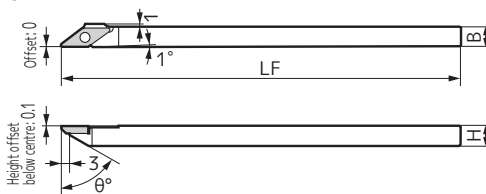


Fig 3

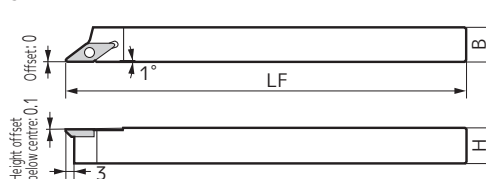


Fig 2

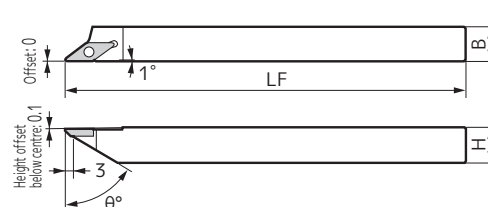


Figure shows right-handed (R) tool.

Holder

Toolpost	Cat. No.	Stock		Height H	Width B	Overall Length LF	Relief Angle θ°	Fig	Parts		
		R	L						Flat Insert Screw	Wrench	Dimensions (mm)
Turret type	SPB R/L0707-70	●	●	7	7	140	70	1	BFTX02505N	1.1	LT08-06
	SPB R/L0808-60	●	●	8	8	140	60	2	BFTX02506N	1.5	
	SPB R/L0808-70	●	●	8	8	140	70	2	BFTX02505N	1.1	
	SPB R/L0909-70	●	●	9.5	9.5	140	70	2	BFTX02505N	1.1	
	SPB R/L1010-60	●	●	10	10	140	60	2	BFTX02506N	1.5	
	SPB R/L1212-60	●	●	12	12	140	60	2	BFTX02506N	1.5	
Gang type	SPB R/L0808	●	—	8	8	140	—	3	BFTX02506N	1.5	LT08-06
	SPB R/L1010	●	—	10	10	140	—	3	BFTX02506N	1.5	
	SPB R/L1212	●	—	12	12	140	—	3	BFTX02506N	1.5	

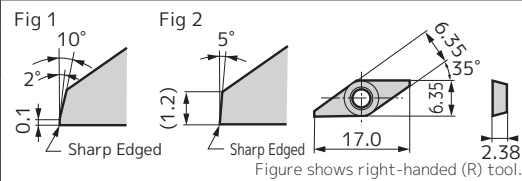
Inserts

() Cemented Carbide

Front Turning Insert

Dimensions (mm)

Cat. No.	Stock				Effective Length	Wiper Edge	Fig
	BL130	F1					
	R	L	R	L			
PBVFW 1102 R/L	●				1.0	Yes	1
PBVFN 1102 R/L	●				1.0	No	2

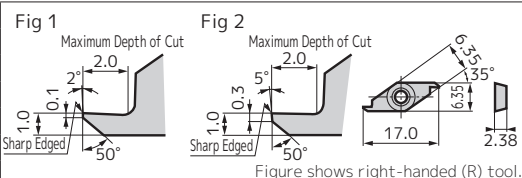


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Dimensions (mm)

Back Turning Insert

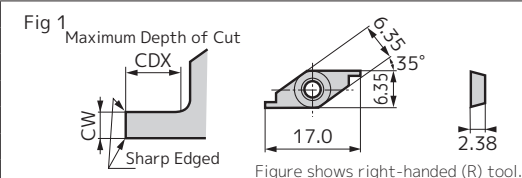
Cat. No.	Stock				Effective Length	Wiper Edge	Fig
	BL130	F1					
	R	L	R	L			
PBVBW 1102 R/L	●				1.0	Yes (2°)	1
PBVBN 1102 R/L	●				1.0	No (5°)	2



Grooving Insert

Dimensions (mm)

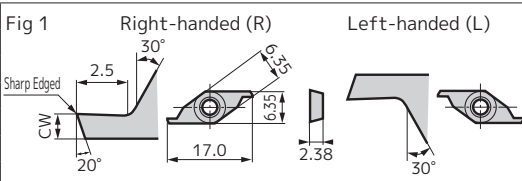
Cat. No.	Stock				Machining Groove Depth CDX	Width of Cut CW	Fig
	BL130	F1					
	R	L	R	L			
PBVG 1102 R/L-030	●				0.5	0.3	1
PBVG 1102 R/L-050	●				1.0	0.5	1
PBVG 1102 R/L-100	●				2.0	1.0	1



Cut-off Insert

Dimensions (mm)

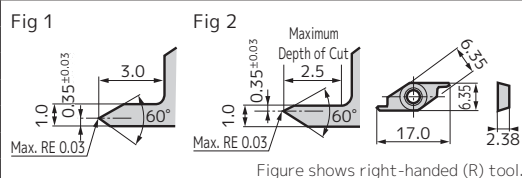
Cat. No.	Stock				Max. Cut-off Dia.	Width of Cut CW	Fig
	BL130	F1					
	R	L	R	L			
PBVC 1102 R/L-50	●	●			5.0	1.0	1



Threading Insert

Dimensions (mm)

Cat. No.	Stock				Process Pitch	Fig
	BL130	F1				
	R	L	R	L		
PBVTF 1102 R/L	●				0.2 to 0.5	1
PBVTB 1102 R/L	●				0.2 to 0.5	2



Recommended Cutting Conditions

Work Material	P Free-Cutting Steel	P Carbon Steel	M Stainless Steel	N Non-Ferrous Metal
Cutting Speed v_c (m/min)	5 to 80	5 to 80	5 to 50	5 to 100
Feed Rate f (mm/rev)	0.003 to 0.05			
Coolant	Wet (oil-based)			

Zero Offset Holders

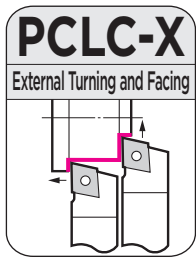
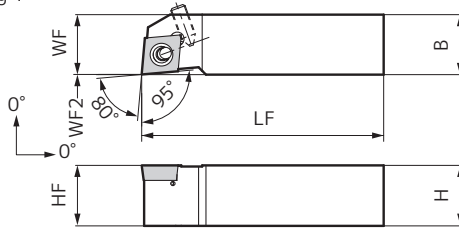


Fig 1



For PCLC R/L1212-K09X

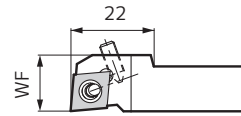


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Applicable Insert		Fig	Lever Pin	Set Screw	Pin	Wrench
	R	L							Cat. No.	Ref. Page					
PCLC R/L1010-K06X	●		10	10	125	10	10	0	CC□T0602	B68 ~	1	LCL06	BTT0407	LP07	TH020
PCLC R/L1212-K09X	●		12	12	125	15	12	0			1				
PCLC R/L1616-K09X	●		16	16	125	16	16	0	CC□T09T3	B71 ~	1	LCL09	BTT0411	LP06	TH020

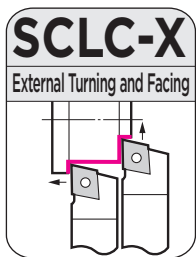


Fig 1

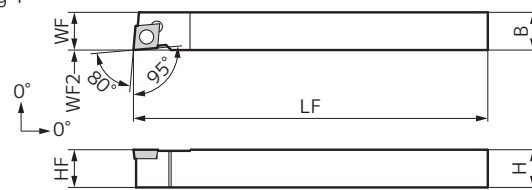


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Applicable Insert		Fig	Flat Insert Screw		Wrench
	R	L							Cat. No.	Ref. Page			N·m	
SCLC R/L1010-H06X	●	●	10	10	100	10	10	0	CC□T0602	B68 ~	1	BFTX02506N	1.5	TRX08
SCLC R/L1215-K09X	●	●	12	15	125	15	12	0			1			
SCLC R/L1215-F09X*	●	●	12	15	85	15	12	0	CC□T09T3	B71 ~	1	BFTX0409N	3.4	TRX15

*85mm Shank

Indexable Heads D14

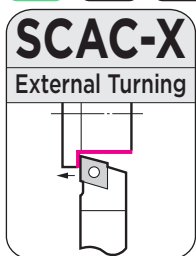


Fig 1

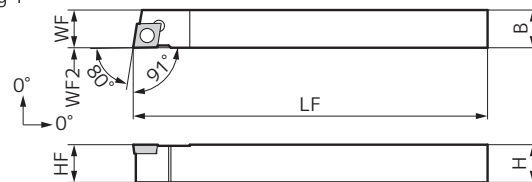


Figure shows right-handed (R) tool.

Holder

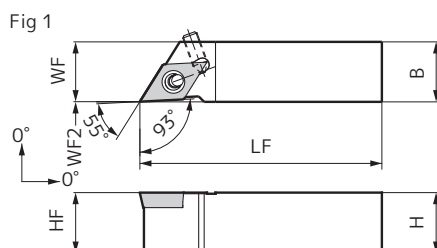
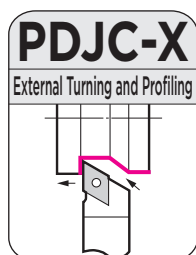
Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Applicable Insert		Fig	Flat Insert Screw		Wrench
	R	L							Cat. No.	Ref. Page			N·m	
SCAC R/L1010-H06X	●	●	10	10	100	10	10	0	CC□T0602	B68 ~	1	BFTX02506N	1.5	TRX08
SCAC R/L1215-F09X*	●	●	12	15	85	15	12	0			1			
SCAC R/L1215-K09X	●	●	12	15	125	15	12	0	CC□T09T3	B71 ~	1	BFTX0409N	3.4	TRX15

*85mm Shank

Zero Offset Holders



For PDJC R/L1212-K11X

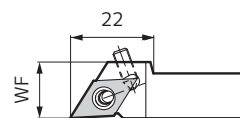


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Applicable Insert		Fig	Lever Pin	Set Screw	Pin	Wrench
	R	L							Cat. No.	Ref. Page					
PDJC R/L1010-K07X	●		10	10	125	10	10	0	DC□T0702	B78 ~	1	LCL06	BTT0407	LP04	TH020
PDJC R/L1212-K11X	●		12	12	125	15	12	0	DC□T11T3	B82 ~	1	LCL09	BTT0411	LP07	TH020
PDJC R/L1616-K11X	●		16	16	125	16	16	0	DC□T11T3	B82 ~	1	LCL09	BTT0411	LP07	TH020

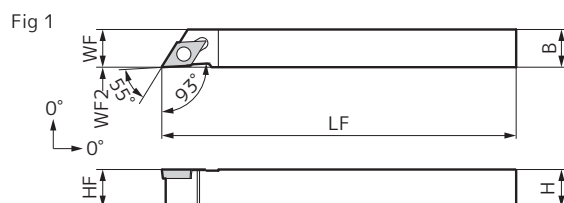
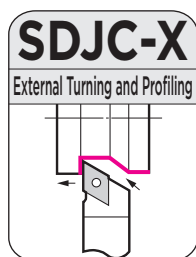


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Applicable Insert		Fig	Flat Insert Screw		Wrench
	R	L							Cat. No.	Ref. Page			N·m	
SDJC R/L1010-H07X	●	●	10	10	100	10	10	0	DC□T0702	B78 ~	1	BFTX02506N	1.5	TRX08
SDJC R/L1215-F11X*	●	●	12	15	85	15	12	0	DC□T11T3	B82 ~	1	BFTX0409N	3.4	TRX15
SDJC R/L1215-K11X	●	●	12	15	125	15	12	0	DC□T11T3	B82 ~	1	BFTX0409N	3.4	TRX15

*85mm Shank

Indexable Heads D14

Zero Offset Holders

Zero
Offset

SDAC-X

External Turning and Profiling

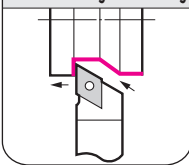


Fig 1

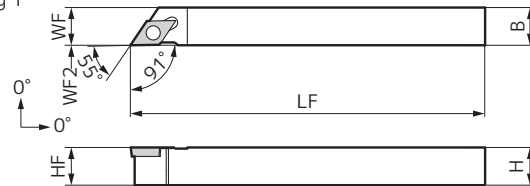


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Applicable Insert		Fig	Flat Insert Screw		Wrench
	R	L							Cat. No.	Ref. Page				
SDAC R/L1010-H07X	●	●	10	10	100	10	10	0	DC□T0702	B78 ~	1		1.5	TRX08
SDAC R/L1215-F11X*	●	●	12	15	85	15	12	0	DC□T11T3	B82 ~	1		3.4	TRX15
SDAC R/L1215-K11X	●	●	12	15	125	15	12	0			1			

*85mm Shank

Zero
Offset

SDPC-X

Necking

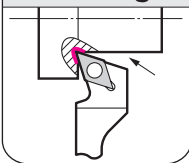


Fig 1

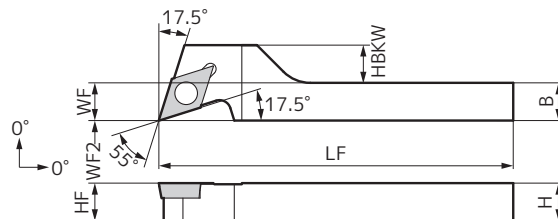


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Step HBKW	Offset WF2	Applicable Insert		Fig	Flat Insert Screw		Wrench
	R	L								Cat. No.	Ref. Page				
SDPC R/L1010-H11X	●	●	10	10	100	10	10	10	0	DC□T11T3	B82 ~	1		3.4	TRX15



Zero Offset Holders

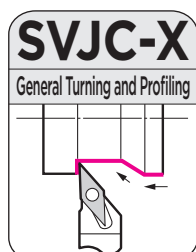


Fig 1

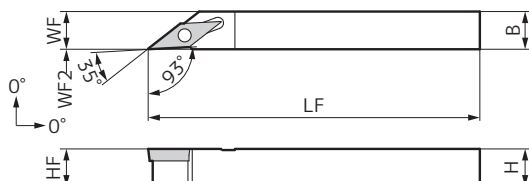


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Offset WF2	Applicable Insert		Fig	Flat Insert Screw Wrench		
	R	L							Cat. No.	Ref. Page				
SVJC R/L1010-H11X	●	●	10	10	100	10	10	0	VC□T1103	B119 ~	1			
SVJC R/L1212-F11X*	●	●	12	12	85	12	12	0			1			
SVJC R/L1212-K11X	●	●	12	12	125	12	12	0			1			

*85mm Shank

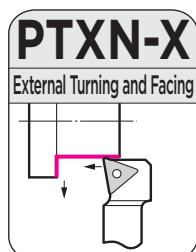
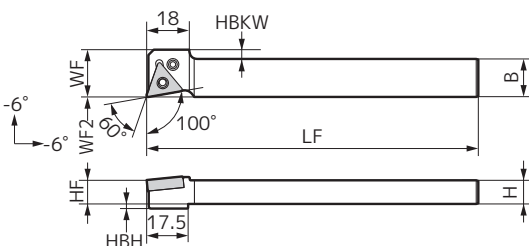
Indexable Heads  D15

Fig 1



Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Step HBH	Step HBKW	Offset WF2	Applicable Insert		Fig	Lever Pin	Bolt	Wrench
										Cat. No.	Ref. Page				
PTXN R1016-X16X	●	10	16	120	20	10	2	4	0	TN□□1604	B48 ~	1			
PTXN R1216-X16X	●	12	16	120	20	12	0	4	0			1			
PTXN R1616-X16X	●	16	16	120	20	16	0	4	0			1			
PTXN R2020-X16X	●	20	20	120	20	20	0	0	0			1			

Back
ClampGeneral External Turning
Lever LockFor Small
Lathes

D

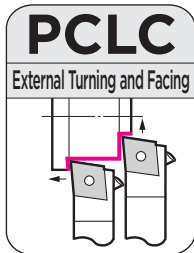
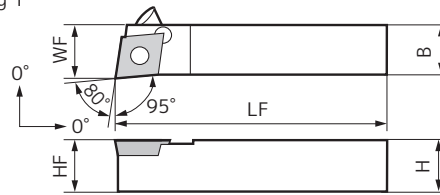


Fig 1



For PCLC R/L0810-K06

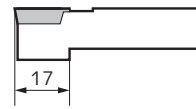


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Lever Pin	Set Screw	Pin	Wrench (For Hexagonal hole)
	R	L						Cat. No.	Ref. Page					
PCLC R/L0810-K06	●	●	8	10	125	10.5	8	CC□□0602	B68 ~	1	LCL06	BTT0407	LP07	TH020
PCLC R/L1010-K06	●	●	10	10	125	10.5	10			1				
PCLC R/L1212-M09	●	●	12	12	150	12.5	12			1		BTT0407		
PCLC R/L1616-M09	●	●	16	16	150	16.5	16	CC□□09T3	B71 ~	1	LCL09	BTT0411	LP06	TH020
PCLC R/L2020-M09	●	●	20	20	150	20.5	20			1				

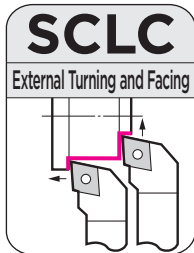
General External Turning
Screw-on

Fig 1

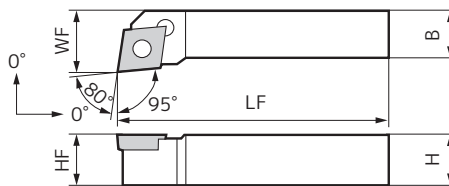


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Previous Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw		Wrench (For Torx hole)
		R	L						Cat. No.	Ref. Page			N·m	
SCLC R/L0808H06	SCLC R/L0808-06	●	●	8	8	100	10	8	CC□□0602	B68 ~	1	BFTX02506N	1.5	TRX08
SCLC R/L1010H06	SCLC R/L1010-06	●	●	10	10	100	12	10			1			
SCLC R/L1212H09	SCLC R/L1212-09	●	●	12	12	100	16	12			1			
SCLC R/L1616H09	SCLC R/L1616-09	●	●	16	16	100	20	16	CC□□09T3	B71 ~	1	BFTX0409N	3.4	TRX15
SCLC R/L2020K09	SCLC R/L2020-09	●	●	20	20	125	25	20			1			

When using handed chipbreaker inserts for facing, the holder and insert are opposite handed.

Indexable Heads D14

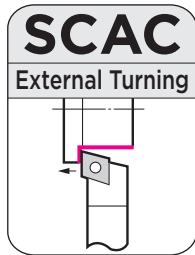
General External Turning
Screw-on

Fig 1

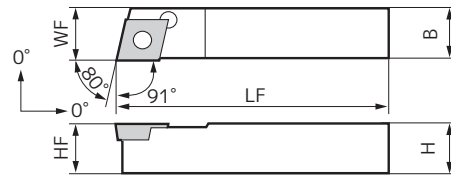


Figure shows right-handed (R) tool.

Holder

Parts

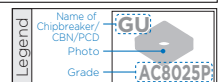
Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw			Wrench
	R	L						Cat. No.	Ref. Page					
SCAC R/L0808-06	●		8	8	100	8.5	8	CC□□0602	B68 ~	1	BFTX02506N	1.5	TRX08	
SCAC R/L1010-06	●	●	10	10	100	10.5	10			1				
SCAC R/L1212-09	●	●	12	12	100	12.5	12			1				
SCAC R/L1616-09	●	●	16	16	100	16.5	16	CC□□09T3	B71 ~	1	BFTX0409N	3.4	TRX15	
SCAC R/L2020-09	●	●	20	20	125	20.5	20			1				

Applicable Inserts ◀ PCLC type/SCLC type/SCAC type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (Page A10 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-Ferrous)		H (Hardened Steel)			Hard Brittle Materials
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—	—
General Machining	T1500Z	AC8025P	AC8020P	AC6030M	AC6030M	AC6135M	BN7125/BNC500	AC4015K	AC4015K	AC5015S	DA1000	H1	BNC2125	BN2000	DA1090	
High-precision	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	BN7125/BNC500	—	—	AC5015S	DA1000	—	BNC2115	BN1000	NPD10	
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~			A18 ~	A22 ~		A20 ~			M2 ~

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

PD series/SD series

Back
ClampGeneral External Turning and Profiling
Lever LockFor Small
Lathes

D

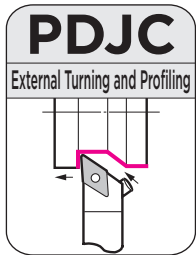
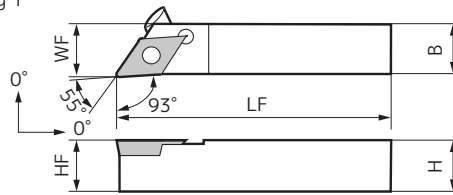


Fig 1



For PDJC R/L0810-K07

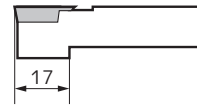


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Lever Pin	Set Screw	Pin	Wrench (For Hexagonal hole)
	R	L						Cat. No.	Ref. Page					
PDJC R/L0810-K07	●	●	8	10	125	10.5	8	DC□□0702	B78 ~	1	LCL06	BTT0407	LP04	TH020
PDJC R/L1010-K07	●	●	10	10	125	10.5	10			1				
PDJC R/L1212-M11	●	●	12	12	150	12.5	12	DC□□11T3	B82 ~	1	LCL09	BTT0407	LP07	TH020
PDJC R/L1616-M11	●	●	16	16	150	16.5	16			1		BTT0411		
PDJC R/L2020-M11	●	●	20	20	150	20.5	20			1				

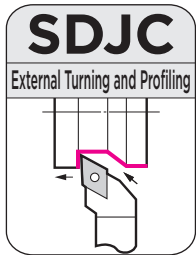
General External Turning and Profiling
Screw-on

Fig 1

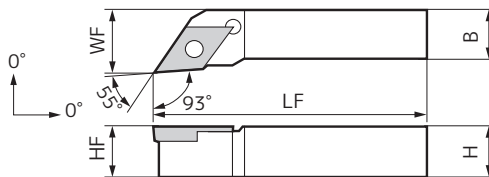


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Previous Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw		Wrench (For Torx hole)
		R	L						Cat. No.	Ref. Page			N·m	
SDJC R/L0808H07	SDJC R/L0808-07	●		8	8	100	10	8	DC□□0702	B78 ~	1	BFTX02506N	1.5	TRX08
SDJC R/L1010H07	SDJC R/L1010-07	●	●	10	10	100	12	10			1			
SDJC R/L1212H11	SDJC R/L1212-11	●	●	12	12	100	16	12	DC□□11T3	B82 ~	1	BFTX0409N	3.4	TRX15
SDJC R/L1616H11	SDJC R/L1616-11	●	●	16	16	100	20	16			1			
SDJC R/L2020K11	SDJC R/L2020-11	●	●	20	20	125	24	20			1			

Indexable Heads D14

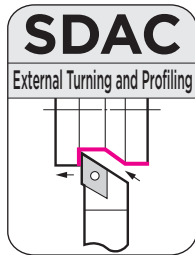
General External Turning and Profiling
Screw-on

Fig 1

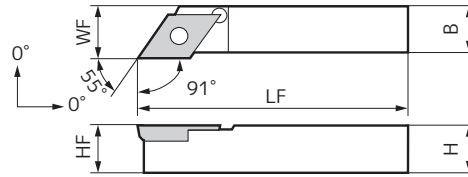


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page				
SDAC R/L0808-07	●	●	8	8	100	8.5	8	DC□□0702	B78 ~	1	BFTX02506N	1.5	TRX08
SDAC R/L1010-07	●	●	10	10	100	10.5	10			1			
SDAC R/L1212-11	●	●	12	12	100	12.5	12	DC□□11T3	B82 ~	1	BFTX0409N	3.4	TRX15
SDAC R/L1616-11	●	●	16	16	100	16.5	16			1			
SDAC R/L2020-11	●	●	20	20	125	20.5	20			1			

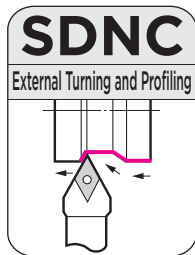
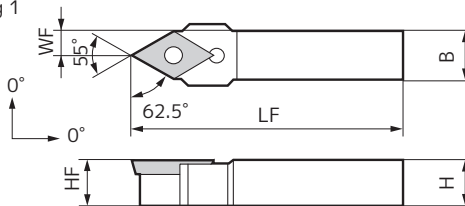
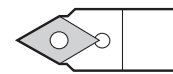
General External Turning and Profiling
Screw-on

Fig 1

For SDNC N1616
SDNC N2020

Holder

Parts

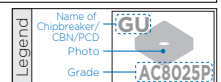
Dimensions (mm)

Cat. No.	Stock	Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw		Wrench
							Cat. No.	Ref. Page				
SDNC N0808-07	●	8	8	100	4	8	DC□□0702	B78 ~	1	BFTX02506N	1.5	TRX08
SDNC N1010-07	●	10	10	100	5	10			1			
SDNC N1212-11	●	12	12	100	6	12	DC□□11T3	B82 ~	1	BFTX0409N	3.4	TRX15
SDNC N1616-11	●	16	16	100	8	16			1			
SDNC N2020-11	●	20	20	125	10	20			1			

Applicable Inserts ◀ PDJC type/SDJC type/SDAC type/SDNC type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (Page A10 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)			S (Exotic Alloy)	N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Materials
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	High-speed Finishing	Finishing to Medium Cutting	Medium to Roughing	Finishing to Medium Cutting	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	—
General Machining															
	T1500Z	AC8025P	AC8020P	AC6030M	AC6030M	AC6135M	BN7125/BNC500	AC4015K	AC4015K	AC5015S	DA1000	H1	BNC2125	BN2000	DA1090
High-precision								—	—			—			
	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	BN7125/BNC500	—	—	AC5015S	DA1000	—	BNC2115	BN1000	NPD10
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~			A18 ~	A22 ~		A20 ~		M2 ~

BNC500 is for ductile cast iron.

Recommended Tightening Torque (N·m)

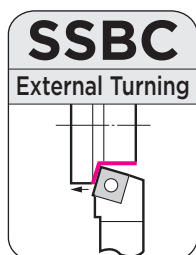
General External Turning
Screw-on

Fig 1

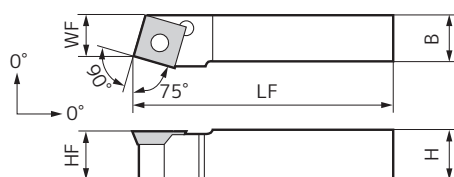


Figure shows right-handed (R) tool.

Holder

Parts

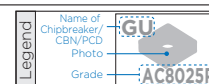
Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page				
SSBC R/L1010-07	●	●	10	10	100	9	10	SC□□0702	B88	1	BFTX0307N	2.0	TRX10
SSBC R/L1212-09	●	●	12	12	100	11	12	SC□□09T3	B89	1	BFTX0409N	3.4	TRX15
SSBC R/L1616-09	●	●	16	16	100	15	16			1			
SSBC R/L2020-09	●	●	20	20	125	19	20			1			

Applicable Inserts ◀ SSBC type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (Page A10 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range Process	P (Steel)			M (Stainless Steel)			K (Cast Iron)		N (Non-Ferrous)
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	Finishing to Medium Cutting	Medium to Roughing	—
General Machining	FB 	GU 	MU 	LB 	GU 	MU 	MU 	No Chipbreaker 	SUMIDIA
	T1500Z	AC8025P	AC8020P	AC6030M	AC6030M	AC6030M	AC4015K	AC4015K	DA1000
High-precision	FX 	SC 	SC 	FX 	SC 	SC 	—	—	SUMIDIA
	T1500A	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	—	—	DA1000
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~		A22 ~

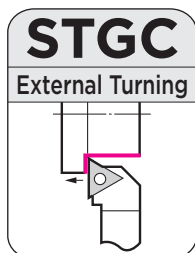
General External Turning
Screw-on

Fig 1

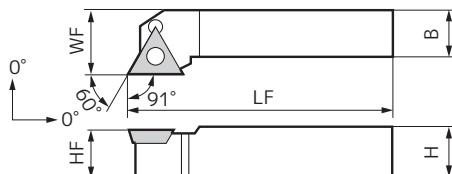


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw		Wrench	
	R	L						Cat. No.	Ref. Page					
STGC R/L0808-09	●		8	8	100	10	8	TC□□0902	B100	1		BFTX02205N	0.5	 (For Torx hole)
STGC R/L1010-09	●	●	10	10	100	12	10			1				
STGC R/L1212-11	●	●	12	12	100	16	12	TC□□1102	B101	1		BFTX02506N	1.5	 (For Torx hole)
STGC R/L1616-11	●	●	16	16	100	20	16			1				
STGC R/L2020-11	●	●	20	20	125	25	20			1				

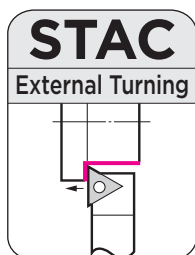
General External Turning
Screw-on

Fig 1

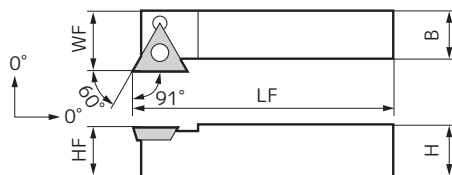


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

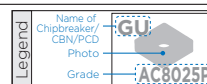
Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw		Wrench	
	R	L						Cat. No.	Ref. Page					
STAC R/L0808-09		●	8	8	100	8.5	8	TC□□0902	B100	1		BFTX02205N	0.5	 (For Torx hole)
STAC R/L1010-09	●		10	10	100	10.5	10			1				
STAC R/L1212-11	●	●	12	12	100	12.5	12	TC□□1102	B101	1		BFTX02506N	1.5	 (For Torx hole)
STAC R/L1616-11	●	●	16	16	100	16.5	16			1				
STAC R/L2020-11	●	●	20	20	125	20.5	20			1				

Applicable Inserts ◀ STGC type/STAC type

1st Recommended Insert

● Refer as well to the Insert Selection Guide (Page A10 -).

● Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range	P (Steel)			M (Stainless Steel)			K (Cast Iron)		N (Non-Ferrous)
	Finishing	Medium Cutting	Roughing	Finishing	Medium Cutting	Roughing	Finishing to Medium Cutting	Medium to Roughing	—
General Machining	LU	SU	SU	LB	SU	SU	MU	No Chipbreaker	SUMIDIA
	T1500Z	AC8025P	AC8020P	AC6030M	AC6030M	AC6135M	AC4015K	AC4015K	DA1000
High-precision	FF	SI	SC	FF	SI	SC	—	—	SUMIDIA
	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	AC1030U	—	—	DA1000
Recommended Cutting Conditions	A10 ~			A14 ~			A16 ~		A22 ~

SV series (7° Pos.)

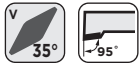
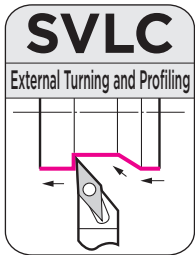
General External Turning and Profiling
Screw-on

Fig 1

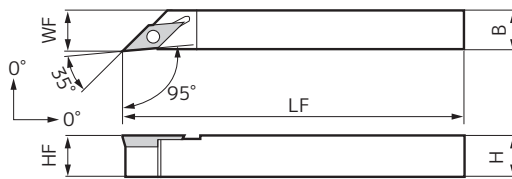


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page				
SVLC R/L1010-H11	●	●	10	10	100	10.5	10	VC□□1103	B119 ~	1	BFTX02508NV	1.5	TRX08
SVLC R/L1212-H11	●	●	12	12	100	12.5	12			1			
SVLC R/L1616-H11	●	●	16	16	100	16.5	16			1			
SVLC R/L2020-K11*	●	●	20	20	125	20.5	20			1			

* Old Cat. No. SVLC R/L 2020-H11

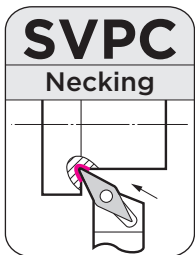
General External Turning and Profiling
Screw-on

Fig 1

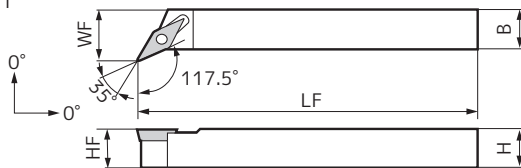


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

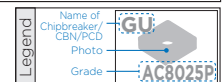
Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page				
SVPC R/L1010-H11	●	●	10	10	100	14.5	10	VC□□1103	B119 ~	1	BFTX02508NV	1.5	TRX08
SVPC R/L1212-H11	●	●	12	12	100	16.5	12			1			
SVPC R/L1616-H11	●	●	16	16	100	20.5	16			1			
SVPC R/L2020-K11*	●	●	20	20	125	24.5	20			1			

* Old Cat. No. SVPC R/L 2020-H11

Applicable Inserts ◀ SVLC type/SVPC type

1st Recommended Insert

- Refer as well to the Insert Selection Guide (Page A10 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range	P (Steel)		M (Stainless Steel)		S (Exotic Alloy)		N (Non-Ferrous)		H (Hardened Steel)		Hard Brittle Materials
	Finishing	Medium Cutting	Finishing	Medium Cutting	Finishing to Medium Cutting	Medium to Roughing	High-precision/Finishing	Finishing to Medium Cutting	Coated	Uncoated	
General Machining	FB T1500Z	GU AC8025P	LB AC6030M	GU AC6030M	SU AC5015S	SU AC5025S	SUMIDIA DA1000	AG H1	SUMIBORON BNC2125	SUMIBORON BN2000	SUMIDIA DA90
High-precision	FF AC1030U	SI AC1030U	FF AC1030U	SI AC1030U	FF AC1030U	SI AC5015S	SUMIDIA DA1000	—	SUMIBORON BNC2115	SUMIBORON BN1000	SUMIDIA BINDERLESS NPD10
Recommended Cutting Conditions	A10 -		A14 -		A18 -		A22 -		A20 -		M2 -

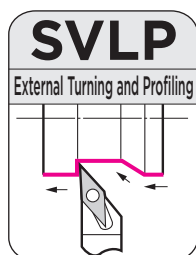
General External Turning and Profiling
Screw-on

Fig 1

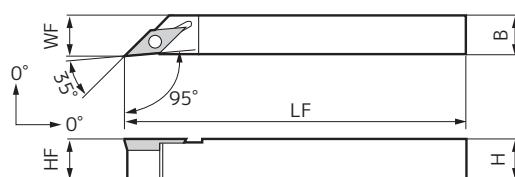


Figure shows right-handed (R) tool.

Holder**Parts**

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			N·m 	
SVLP R/L1010-H11	●	●	10	10	100	10.5	10	VP□T1103	B123	1		1.5	 (For Torx hole)
SVLP R/L1212-H11	●	●	12	12	100	12.5	12			1			
SVLP R/L1616-H11	●	●	16	16	100	16.5	16			1			

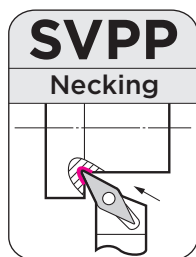
General External Turning and Profiling
Screw-on

Fig 1

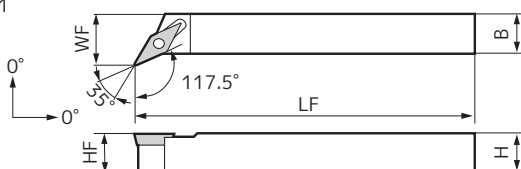


Figure shows right-handed (R) tool.

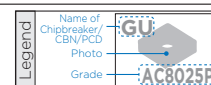
Holder**Parts**

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Insert		Fig	Flat Insert Screw		Wrench
	R	L						Cat. No.	Ref. Page			N·m 	
SVPP R/L1010-H11	●	●	10	10	100	14.5	10	VP□T1103	B123	1		1.5	 (For Torx hole)
SVPP R/L1212-H11	●	●	12	12	100	16.5	12			1			
SVPP R/L1616-H11	●	●	16	16	100	20.5	16			1			

Applicable Inserts ◀ SVLP type/SVPP type**1st Recommended Insert**

- Refer as well to the Insert Selection Guide (Page A10 -).
- Depending on the insert size, some combinations cannot be made to order or manufactured.



Application Range	P (Steel)	M (Stainless Steel)
Process	Finishing	Finishing
High-precision	FX 	FX
Recommended Cutting Conditions	AC1030U 	AC1030U

SEC-Round Shank Tool Holders

RS-SCL type

For Small Lathes

D



■ Features of Round Shank Holders

- Shank diameters from $\varnothing 14$ to $\varnothing 25$ mm are in stock. Holders can be fitted on various manufacturers' sleeve toolposts.
- Bars can be mounted from the rear of the sleeve toolpost to increase the tooling range.



General Turning
Screw-on

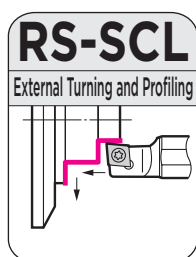
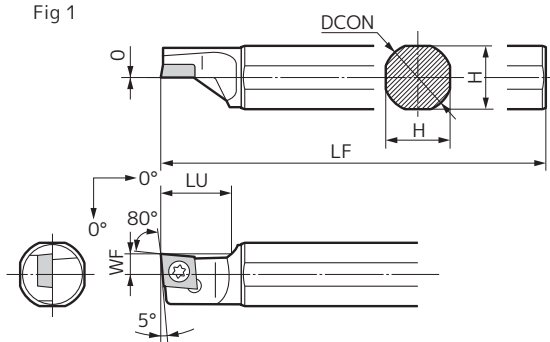


Fig 1



Holder

Parts

Dimensions (mm)

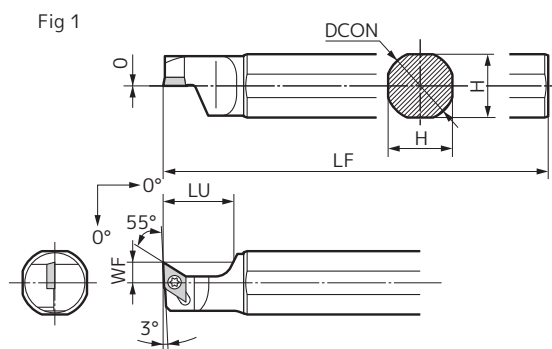
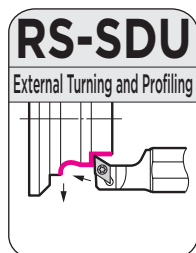
Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Usable Length LU	Applicable Insert		Fig	Flat Insert Screw	Wrench
							Cat. No.	Ref. Page			 (For Torx hole)
RS15H-SCL L06	●	15.875	15	100	6.0	20	CC□□0602	B68 ~	1	BFTX02507NT	RT08
RS19X-SCL L06	●	19.05	18	120	6.0	20			1		
RS20X-SCL L06X	●	20	19	95	6.0	20			1		
RS20X-SCL L06	●	20	19	120	6.0	20			1		
RS22X-SCL L06	●	22	21	120	6.0	20			1		
RS25X-SCL L06	●	25	24	120	6.0	20			1		
RS25M-SCL L06	●	25.4	24	150	6.0	20	CC□□09T3	B71 ~	1	BFTX0408NT	LT25NT
RS15H-SCL L09	●	15.875	15	100	6.0	20			1		
RS19X-SCL L09	●	19.05	18	120	6.0	20			1		
RS20X-SCL L09S	●	20	19	95	6.0	20			1		
RS20X-SCL L09	●	20	19	120	6.0	20			1		
RS22X-SCL L09	●	22	21	120	6.0	20			1		
RS25X-SCL L09	●	25	24	120	6.0	20			1		
RS25M-SCL L09	●	25.4	24	150	6.0	20			1		

Right-handed (R) or neutral (N) inserts can be used.

RS-SDU type/RS-SDX type



General Turning
Screw-on



Holder

Parts

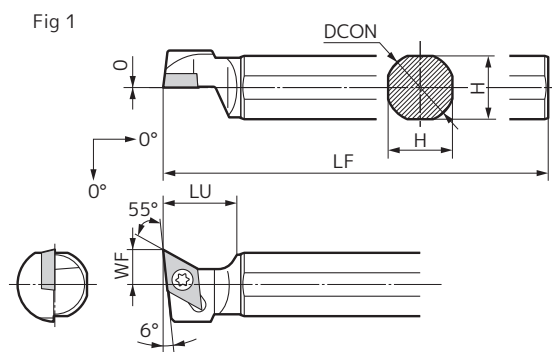
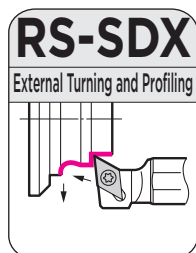
Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Usable Length LU	Applicable Insert		Fig	Flat Insert Screw	Wrench
							Cat. No.	Ref. Page			
RS14F-SDU L07	●	14	13	80	6.0	20	DC□□0702	B78 ~	1	BFTX02507NT	RT08
RS15H-SDU L07	●	15.875	15	100	6.0	20			1		
RS16F-SDU L07	●	16	15	80	6.0	20			1		
RS16X-SDU L07	●	16	15	120	6.0	20			1		
RS19X-SDU L07	●	19.05	18	120	6.0	20			1		
RS20X-SDU L07S	●	20	19	95	6.0	20			1		
RS20X-SDU L07	●	20	19	120	6.0	20	DC□□11T3	B82 ~	1	BFTX0410NT	LT25NT
RS22X-SDU L07	●	22	21	120	6.0	20			1		
RS19X-SDU L11	●	19.05	18	120	10.0	20			1		
RS20X-SDU L11S	●	20	19	95	10.0	20			1		
RS20X-SDU L11	●	20	19	120	10.0	20			1		
RS22X-SDU L11	●	22	21	120	10.0	20			1		
RS25X-SDU L11	●	25	24	120	10.0	20			1		
RS25M-SDU L11	●	25.4	24	150	10.0	20			1		

Right-handed (R) or neutral (N) inserts can be used.



General Turning
Screw-on



Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Usable Length LU	Applicable Insert		Fig	Flat Insert Screw	Wrench
							Cat. No.	Ref. Page			
RS19X-SDX L11	●	19.05	18	120	10.0	20	DC□□11T3	B82 ~	1	BFTX0410NT	LT25NT
RS20X-SDX L11S	●	20	19	95	10.0	20			1		
RS20X-SDX L11	●	20	19	120	10.0	20			1		
RS25X-SDX L11	●	25	24	120	10.0	20			1		

Right-handed (R) or neutral (N) inserts can be used.

RS-SVX type/RS-SVVP type

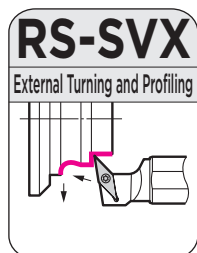
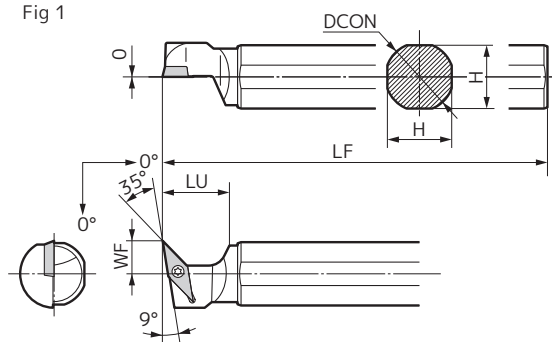
General Turning
Screw-on

Fig 1



Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Usable Length LU	Applicable Insert		Fig	Flat Insert Screw	Wrench
							Cat. No.	Ref. Page			
RS15H-SVX L11	●	15.875	15	100	10.0	20	VC□□1103	B119 ~	1	BFTX02507NT	RT08 (For Torx hole)
RS19X-SVX L11	●	19.05	18	120	10.0	20			1		
RS20X-SVX L11S	●	20	19	95	10.0	20			1		
RS20X-SVX L11	●	20	19	120	10.0	20			1		
RS22X-SVX L11	●	22	21	120	10.0	20			1		
RS25X-SVX L11	●	25.4	24	150	10.0	20			1		

Right-handed (R) or neutral (N) inserts can be used.

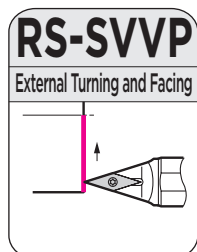
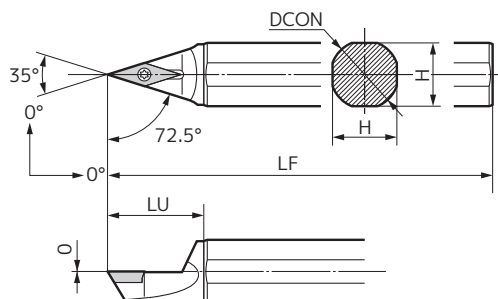
General Turning
Screw-on

Fig 1



Holder

Parts

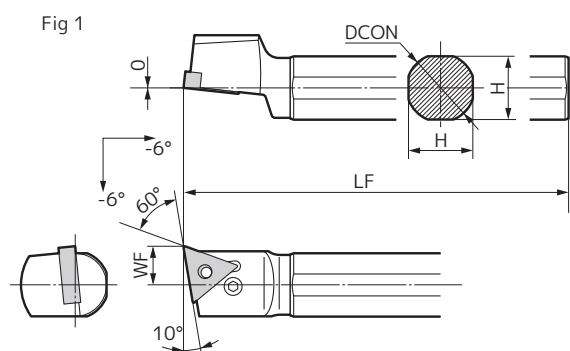
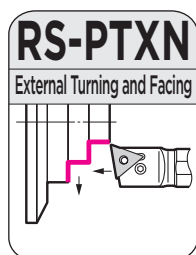
Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Usable Length LU	Applicable Insert		Fig	Flat Insert Screw	Wrench
						Cat. No.	Ref. Page			
RS19X-SVVP N11	●	19.05	18	120	27	VP□□1103	B123	1	BFTX02507NT	RT08
RS22X-SVVP N11	●	22	21	120	27			1		

RS-PTXN type



General Turning
Lever Lock



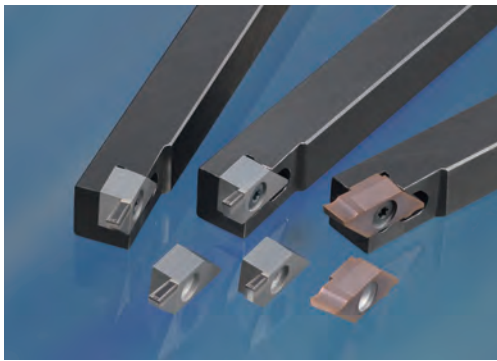
Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Cutting Edge Distance WF	Applicable Insert		Fig	Dimensions (mm)		
						Cat. No.	Ref. Page		Lever Pin	Bolt	Wrench
RS19X-PTXN L16	●	19.05	18	120	11.0	TN□□1604	B48 ~	1			 (For hexagonal hole)
RS20X-PTXN L16	●	20	19	120	11.0			1			
RS25M-PTXN L16	●	25.4	24	150	13.0			1			

Right-handed (R) or neutral (N) inserts can be used.



■ Features

- Enables high-efficiency roughing of long parts
- Coin-shaped chips are less likely to tangle with work material or machinery



■ Application Examples

■ SUMIDIA Multi-Function Tool with Chipbreaker SUMIDIA BREAK MASTER LD type

- Provides excellent chip control in traverse cutting and grooving of aluminum alloy.
- Solves chip control problems and dramatically improves work efficiency.
- Achieves long, stable tool life by employing high-toughness grade SUMIDIA DA1000.

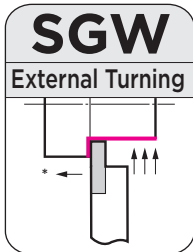
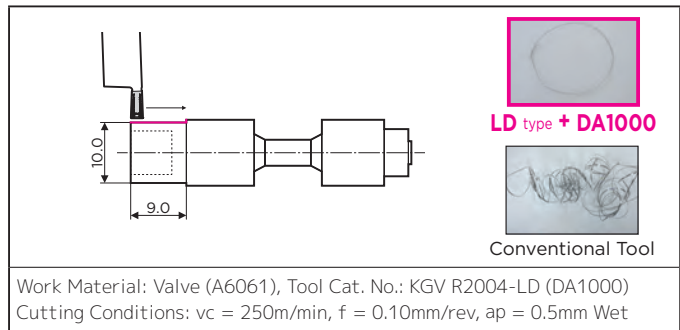
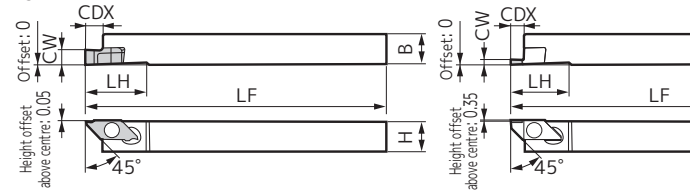


Fig 1



Dimensions with SUMIDIA insert mounted

External Multi-purpose type
(Grooving/Traverse Cutting)
Screw-on

*Use the SUMIDIA insert for traverse cutting.

Holder

Cat. No.	Stock	Height H	Width B	Overall Length LF	Maximum Groove Depth CDX	Head Length LH	Fig	Parts	
								Flat Insert Screw	Wrench
SGW R1212	●	12	12	120	7.0	24.5	1	BFTX0410T8R	1.1
SGW R1616	●	16	16	120	7.0	24.5	1		

The above dimensions for LF, CDX and LH are values with a carbide insert mounted. (Refer to the table below for dimensions with SUMIDIA insert mounted)

Insert (Carbide) (Coated Carbide)

Cat. No.	AC1030U	AC530U	Width of Cut CW	Overall Length L	Overall Length LF	Maximum Groove Depth CDX	Head Length LH	Effective Length	Fig
KGV R400	●	●	4.0	21.0	120	7.0	24.5	6.3	1
KGV R500	●	●	5.0	21.0	120	7.0	24.5	6.3	1
KGV R600	●	●	6.0	21.0	120	7.0	24.5	6.3	1

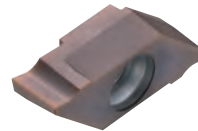
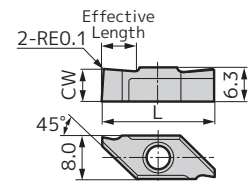


Fig 1

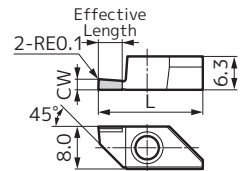


Insert (SUMIDIA) (SUMIDIA)

Cat. No.	DA1000	Width of Cut CW	Overall Length L	Overall Length LF	Maximum Groove Depth CDX	Head Length LH	Effective Length	Fig
KGV R2004-LD	●	2.0	19.7	118.7	5.0	23.2	4.0	1
KGV R2504-LD	●	2.5	19.7	118.7	5.0	23.2	4.0	1
KGV R2506-LD	●	2.5	21.2	120.2	6.5	24.7	5.5	1



Fig 1



The above dimensions for LF, CDX and LH are the holder dimensions with insert mounted.

Recommended Cutting Conditions

Work Material	P Steel	M Stainless Steel	N Non-Ferrous Metal	N Non-Ferrous Metal	
Insert Grades	AC1030U			DA1000	
Process	Grooving			Grooving	Traverse Cutting
Spindle Speed n (min ⁻¹)	4,000 to 6,000			4,500 to 8,000	4,500 to 8,000
Feed Rate f (mm/rev)	0.05 to 0.15			0.07 to 0.15	0.07 to 0.15
Coolant	Wet (oil-based)				

Be careful with spindle power during use. For small lathes, insufficient spindle power during machining may cause the machine to stop.
Be careful when machining carbon steel and stainless steel in particular.



Recommended Tightening Torque (N·m) Note: Regrinding the SUMIDIA BREAK MASTER LD type will adversely affect chip evacuation performance.

MEMO



SBT series/PBT series

For Small Lathes

D

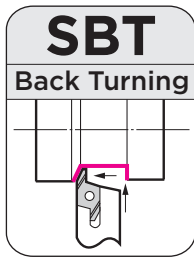


Fig 1

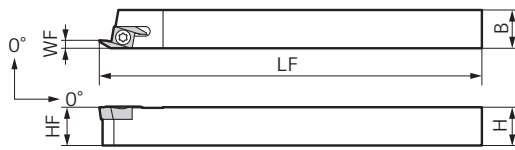
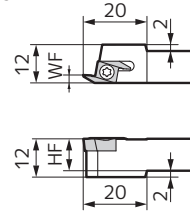


Fig 2

Back Turning
Screw-on

Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Applicable Inserts	Fig	Flat Insert Screw Wrench		
SBT35 R1010	●	10	10	120	2.5	10	BTR3500	2	BFTX0307N	2.0	TRX10
SBT35 R1212	●	12	12	120	2.5	12		1			
SBT35 R1616	●	16	16	120	2.5	16		1			
SBT35 R2020	●	20	20	125	2.5	20		1			

Refer to page D45 for applicable inserts.

Indexable Heads D17

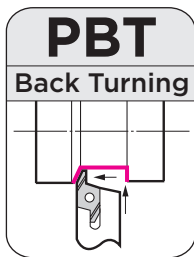
Back
Clamp

Fig 1

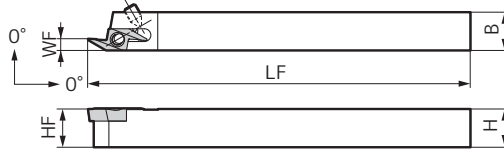
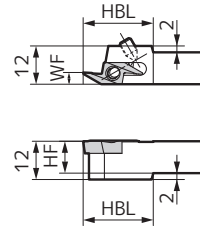


Fig 2

Back Turning
Lever Lock

Holder

Parts

Dimensions (mm)

Cat. No.	Stock	Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Offset HBL	Applicable Insert	Fig	Lever Pin Set Screw Pin Wrench			
PBT35 R1010	●	10	10	120	2.5	10	20	BTR3500	2	LCL09	BTT0407	LP07	TH020
PBT35 R1212	●	12	12	120	2.5	12	—		1				
PBT35 R1616	●	16	16	120	2.5	16	—		1				
PBT35 R2020	●	20	20	120	2.5	20	—		1				
PBT55 R1010	●	10	10	120	3.7	10	22	BTR5500	2	LCL09	BTT0407	LP07	TH020
PBT55 R1212	●	12	12	120	3.7	12	—		1				
PBT55 R1616	●	16	16	120	3.7	16	—		1				
PBT55 R2020	●	20	20	120	3.7	20	—		1				
PBT80 R1010	●	10	10	120	5.2	10	25	BTR8000	2	LCL09	BTT0407	LP07	TH020
PBT80 R1212	●	12	12	120	5.2	12	—		1				
PBT80 R1616	●	16	16	120	5.2	16	—		1				
PBT80 R2020	●	20	20	120	5.2	20	—		1				

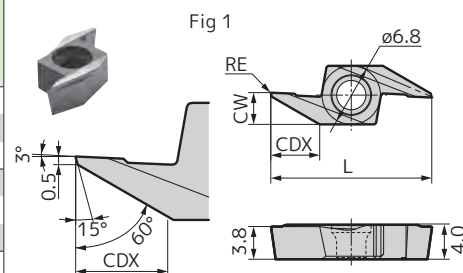
Refer to page D45 for applicable inserts.

SBT series/PBT series

Insert (Coated Carbide / DLC / Cermet)

Dimensions (mm)

Cat. No.	AC5015S	AC5025S	AC1030U	AC530U	ACZ150	DL1500	T1500A	Overall Length	Maximum Depth of Cut	Width of Cut	Corner Radius	Applicable Holder	Fig
								L	CDX	CW	RE		
BT R3505	●	●	●	●	●	●	●	15	3.5	2.5	0.05	SBT35R0000 PBT35R0000	1
BT R3508 <i>New</i>	●	●	●	●	●	●	●	15	3.5	2.5	0.08		1
BT R3515	●	●	●	●	●	●	●	15	3.5	2.5	0.15		1
BT R5505	●	●	●	●	●	●	●	19	5.5	3.7	0.05	PBT55R0000	1
BT R5508 <i>New</i>	●	●	●	●	●	●	●	19	5.5	3.7	0.08		1
BT R5515	●	●	●	●	●	●	●	19	5.5	3.7	0.15		1
BT R8005	●	●	●	●	●	—	—	24	8.0	5.2	0.05	PBT80R0000	1
BT R8008 <i>New</i>	●	●	●	●	●	—	—	24	8.0	5.2	0.08		1
BT R8015	●	●	●	●	●	—	—	24	8.0	5.2	0.15		1



Refer to page D44 for applicable holders.

Recommended Cutting Conditions

Work Material	P Free-Cutting Steel		P Carbon Steel		M Stainless Steel		S Exotic Alloy		N Non-Ferrous Metal	
Process	Plunging	Traverse Cut	Plunging	Traverse Cut	Plunging	Traverse Cut	Plunging	Traverse Cut	Plunging	Traverse Cut
Insert Grades	AC1030U/ACZ150 T1500A		AC1030U/AC530U/ACZ150 T1500A		AC1030U/AC5015S/AC5025S AC530U/ACZ150		AC5015S/AC5025S		DL1500	
Cutting Speed v_c (m/min)	50 to 150		50 to 150		50 to 150		20 to 80		150 to 300	
Feed Rate f (mm/rev)	0.02 to 0.10	0.02 to 0.15	0.02 to 0.05	0.02 to 0.10	0.02 to 0.04	0.02 to 0.06	0.01 to 0.03	0.01 to 0.04	0.02 to 0.05	0.02 to 0.10

The inserts on this page can also be used with Indexable Heads for APM series.

● mark: Standard stocked item (new product/expanded item)

For Small
Lathes

D

SFT series

General Turning
Screw-on

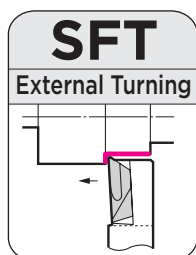
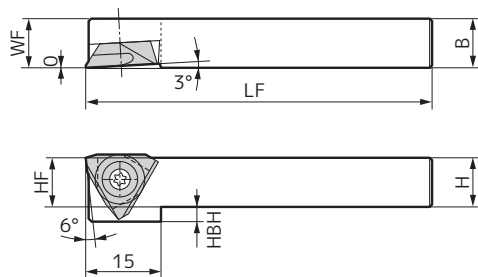


Fig 1



Holder

Parts Dimensions (mm)

Cat. No.	Stock	Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Offset HBH	Applicable Insert	Fig	Flat Insert Screw Wrench	
											
SFT R1010	●	10	10	120	10	10	3	TFR3300	1	BFTX0410NSW	RT08
SFT R1212	●	12	12	120	12	12	1		1		
SFT R1616	●	16	16	120	16	16	—		1		
SFT R2020	●	20	20	120	20	20	—		1		

Insert (Coated Carbide)

Dimensions (mm)

Cat. No.	ACZ150	Inscribed Circle IC	Width of Cut CW	Corner Radius RE	Applicable Holder	Fig	Fig 1		
									
TF R3300	●	9.525	4.76	—	SFT R0000	1			
TF R3305	●	9.525	4.76	0.05		1			
TF R3315	●	9.525	4.76	0.15		1			
TF R3320	●	9.525	4.76	0.20		1			

*1: Indicates angle when mounted on the holder
Maximum depth of cut 4.0mm