MITSUBISHI MATERIALS

XB Series

EXCHANGEABLE HEAD TYPE TURNING TOOLS







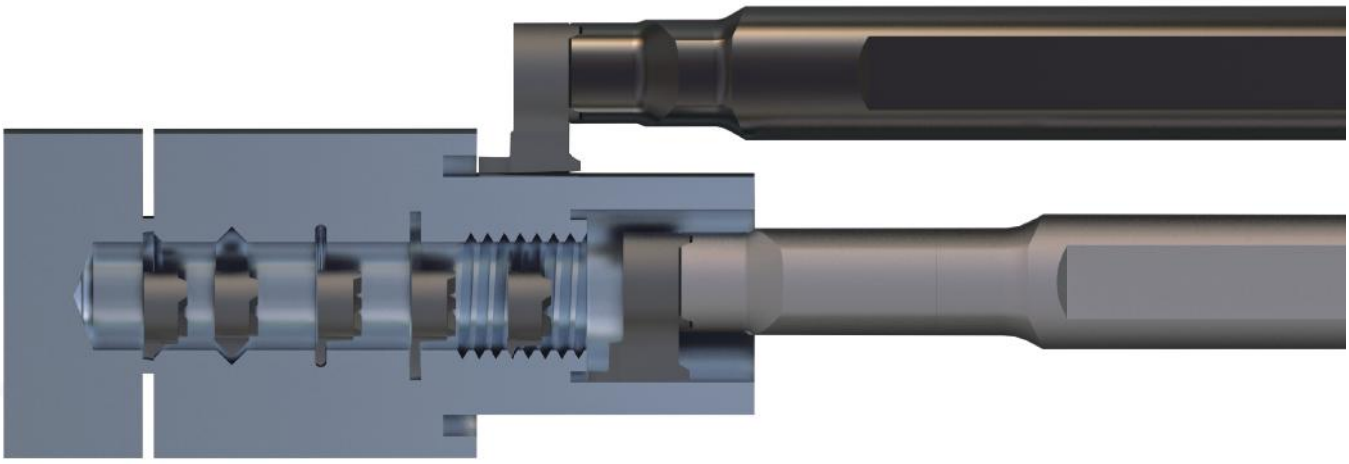
TOOL NEWS **B278A**

Exchangeable Head Type Turning Tools

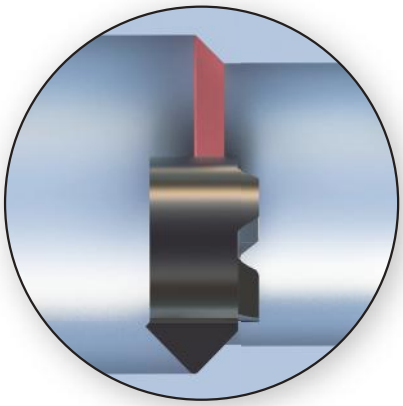
XB Series NEW

Versatile Range of Applications with One Holder

With high-quality cutting edges and excellent sharpness, a full range of tools for a variety of applications is available.
Experience the efficiency and stability provided by this new multi-functional, exchangeable head type turning tool.

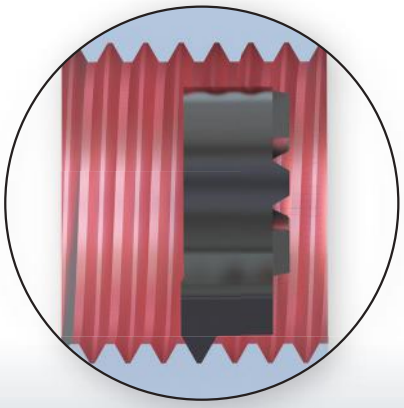


Chamfering



XBSC

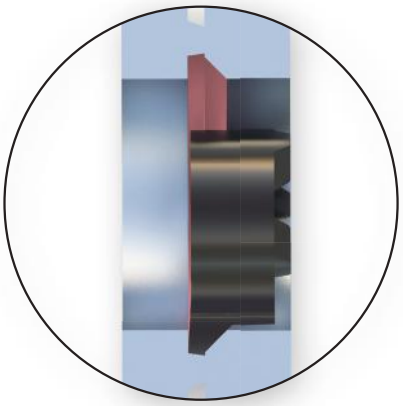
Threading



XBST

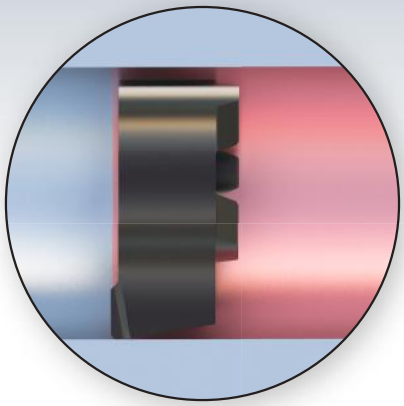
Pre-Chamfering

(Internal Machining before Cutting-Off)



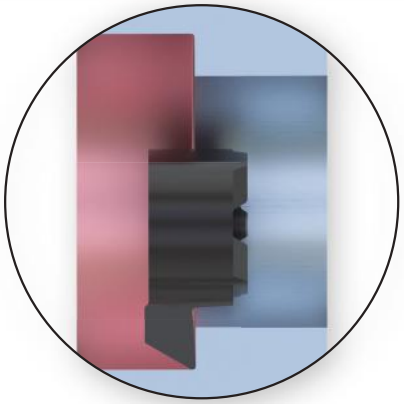
XBSX

Boring



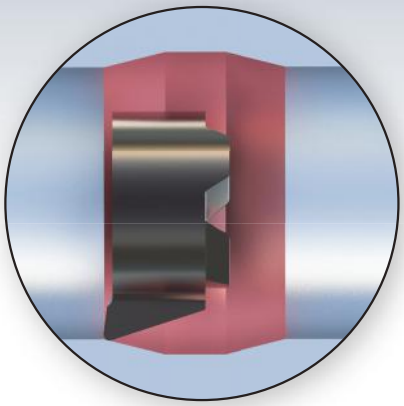
XBBA

Back Boring



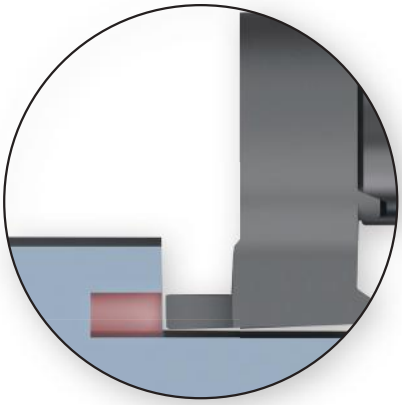
XBBB

Copying (Profiling)



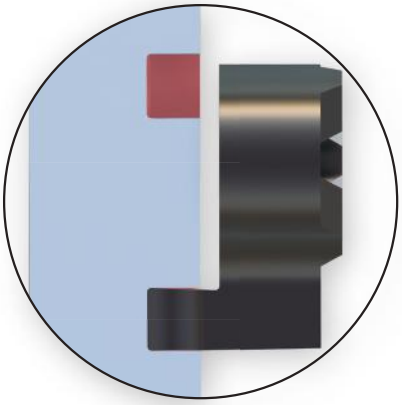
XBPA/B/C/D

External Side Face Grooving



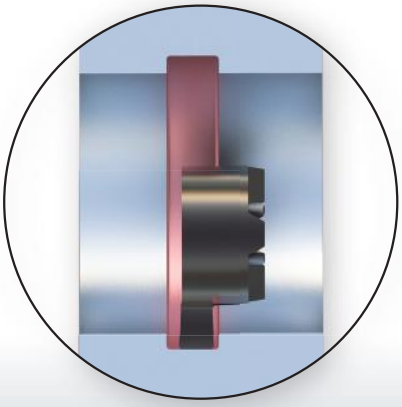
XBSE

Internal Side Face Grooving



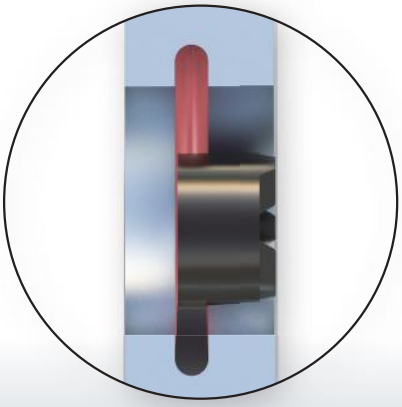
XBSF

Grooving (Flat Type)



XBSG

Grooving (Round Type)



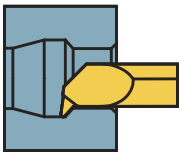
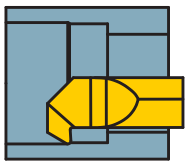
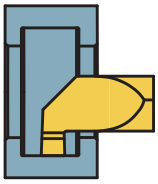
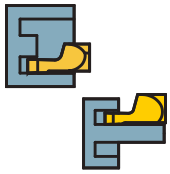
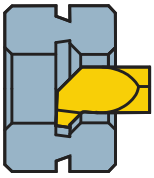
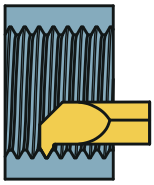
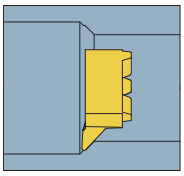
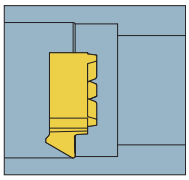
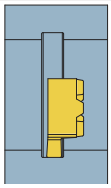
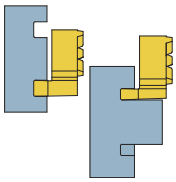
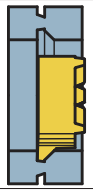
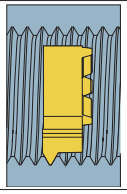
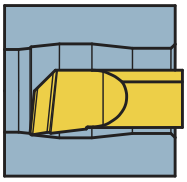
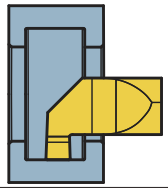
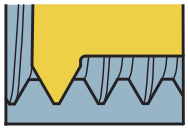
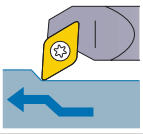
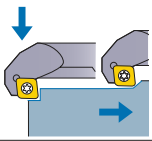
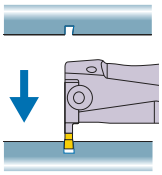
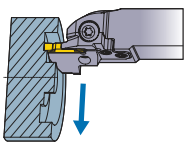
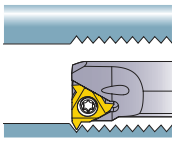
XBSR

CLASSIFICATION

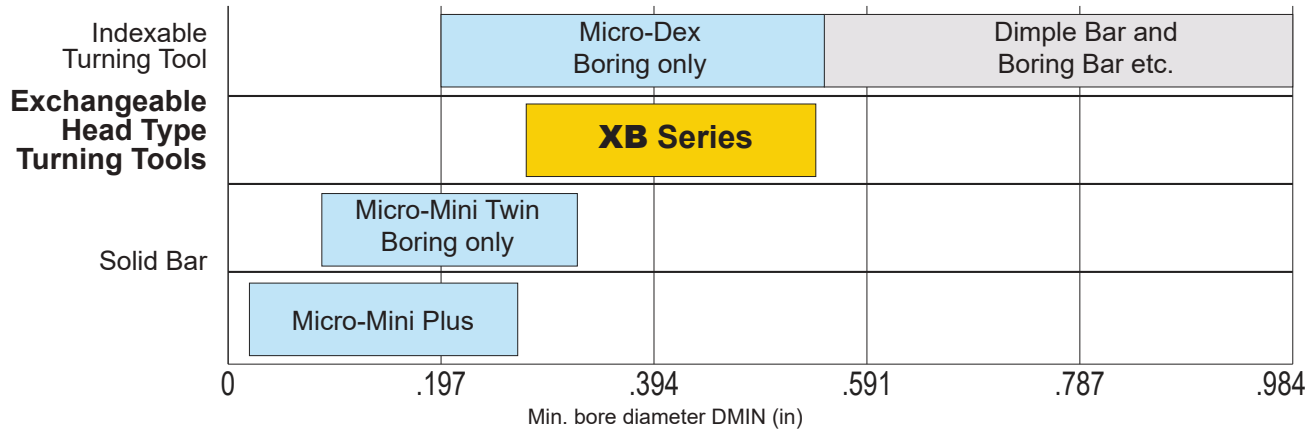
The XB Series Broadens Machining Application Coverage

Versatile Range of Tools for All Applications

(in)

Tools	DMIN	Boring Copying	Back Boring	Grooving	Face Grooving	Pre-Chamfering	Threading
Micro-Mini Plus	≥.020						
	DC	.020 – .268	.118 – .276	.079 – .268	.197 – .787	.157 – .236	.028 – .276
XB Series	≥.276						
	DC	.276 – .543	.307 – .543	.307 – .787	E=.472, .630 F=.551, .709	.315 – .551	.276 – .551
Micro-Mini Twin	≥.087		–		–	–	
	DC	.087 – .323	–	.118 – .276	–	–	.118 – .276
Boring Bar	≤1.969					–	
	DC	Copying ≥.551	≥.787	≥.984	≥1.378	–	≥.512

Boring and Copying (Profiling)

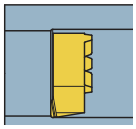
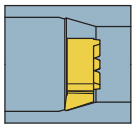
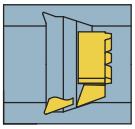
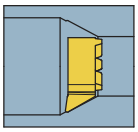
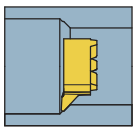
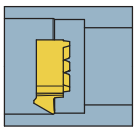
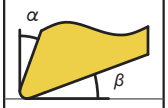


Large Expansion of Available Tools

Boring and Copying (Profiling)

The optimal tool can be selected according to the machining application.

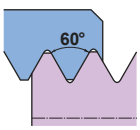
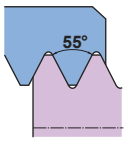
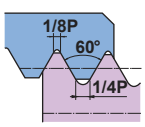
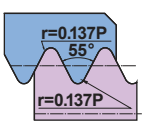
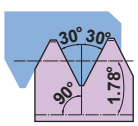
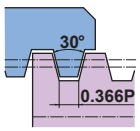
(in)

Holder Size	DMIN	Head Type	XBBA	XBPA	XBPB	XBPC	XBPD	XBBB
		Image of Machining						
		Max. Workpiece Inclination Angle	0°	16°	18°	28°	45°	90°
		 CDX	Boring	α=8°/β=18°	α=20°/β=20° Internal Recessing	α=5°/β=30°	α=3°/β=47°	Back Boring
H07	.276	.047		✓			✓	
H08	.307	.020–.051	✓	✓	✓	✓	✓	✓
H09	.354	.020–.067	✓	✓	✓		✓	✓
	.394	.091						✓
H11	.386	.039		✓				
	.433	.020–.091	✓	✓	✓	✓	✓	✓
H14	.539	.157				✓	✓	
	.543	.138–.157		✓	✓			✓

Threading

New heads for machining four additional types of thread.

(in)

Holder Size	DMIN	Head Type		XBST-60R	XBST-55R	XBST-ISOR	XBST-WR	XBST-NPTR	XBST-TRR
		Type		Partial Profile 60°	Partial Profile 55°	ISO Metric	Whitworth for BSW, BSP	American NPT	ISO Trapezoidal 30°
				General	General	Wiper	Wiper	Wiper	Wiper
		Pitch/mm (mm)	Thread/in						
H07	.276	0.50–1.50	24–18	✓	✓	✓			
H08	.315	0.50–1.81	27–14	✓		✓		✓	
H09	.354	0.50–3.00	18–14	✓	✓	✓			✓
	.394	4.00	–						✓
H11	.433	0.50–4.00	19–14	✓	✓	✓	✓		✓
H14	.551	0.50–5.00	19–14	✓		✓	✓		✓

Grooving

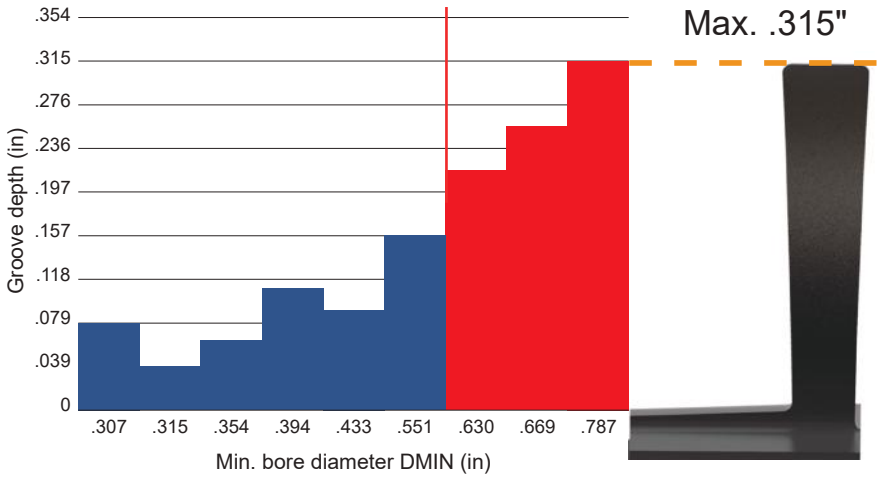
Expansion of the range of inserts for different groove widths and depths.

Added Groove Widths

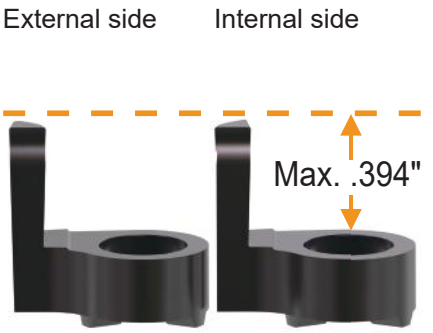
Flat Type (CW): .031 in, Round Type (CW): .062 in

Added Groove Depths

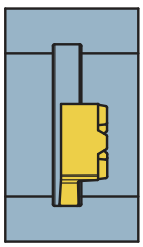
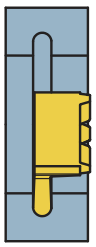
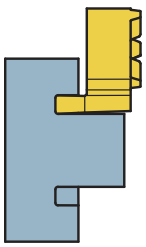
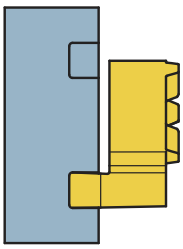
Grooving



Face Grooving



(in)

Holder Size	DMIN	Head Type		XBSG	XBSR	XBSE	XBSF
		Type		Flat Type	Round Type	External Side Face Grooving	Internal Side Face Grooving
		CW	CDX				
H07	.307	.039–.079	.079	✓			
H08	.315	.031–.079	.039	✓	✓		
H09	.354	.031–.079	.063–.071	✓	✓		
	.394	.039–.118	.110	✓			
H11	.433	.031–.118	.091	✓	✓		
H14	.472	.039–.118	.059–.236			✓	
	.551	.039–.118	.059–.236	✓	✓		✓
	.630	.059–.118	.217	✓			
	.669	.059–.118	.256	✓			
H18	.630	.118	.394			✓	
	.709	.118	.394				✓
	.787	.059–.079	.315	✓			

Flexible Holder + Dedicated Sleeve

Flexible holders with freely adjustable neck lengths have been added.

Flexible Holder



Dedicated Sleeve



The dedicated sleeve is designed to allow variable overhang.



Holder Type	Tool Material	Coolant Thru	H07	H08	H09	H11	H14	H18
Standard Holder	Steel	without	✓	✓	✓	✓	✓	
		with	✓	✓	✓	✓	✓	✓
	Carbide	with	✓	✓	✓	✓	✓	✓
Flexible Holder	Carbide	without		✓				
		with				✓		

Variety of Types Offering Abundant Options

Both types of holders, carbide and steel are supplied as standard with internal coolant.
External coolant type is also standard for the steel holders, and can be combined with the internal coolant type SLV sleeve holder.

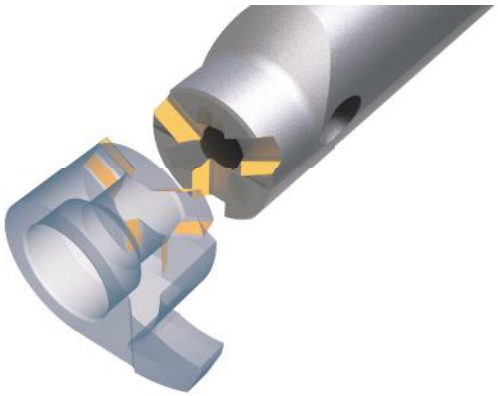


Flexible Holder

Features

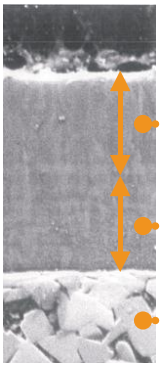
Six-Sided Restraint

Highly rigid design that firmly clamps the insert with six-side restraints located in 3 keyways. Stable machining process that suppresses chatter and vibration is achieved by operation with single screw from the front.



Dedicated Carbide Base Material: MPB115

By applying a multilayer PVD coating with excellent heat and wear resistance to a dedicated carbide base material, both wear resistance and edge stability have been achieved.



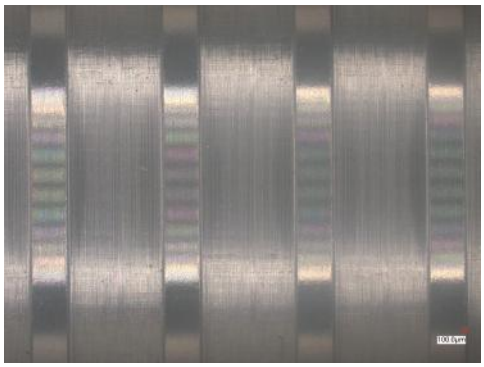
Al-Rich Technology (AlTi)N-Based
Improved wear and heat resistance.

Alternating Multilayers of (TiAl)N with Different
Ti and Al ratios achieve high wear resistance.

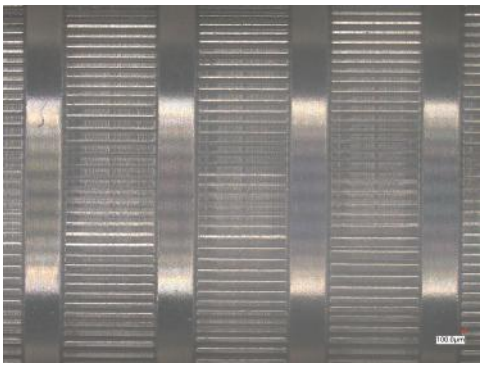
Dedicated Carbide Base Material.

304 Stainless: Comparison of Grooving Surfaces

The XB series is excellent at suppressing chatter and vibration.



XB Series



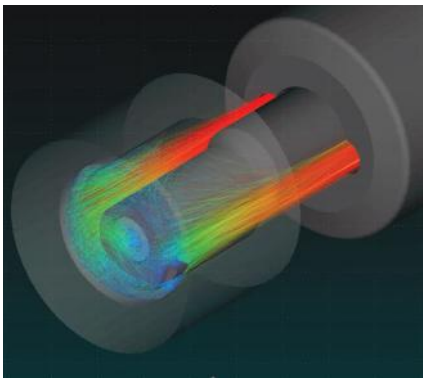
Conventional
Chatter and vibration occurred.

<Cutting Conditions>
Material : AISI 304 Stainless
Head : XBSG08H08200R005R
Cutting Speed : vc= 210 SFM
Feed per Rev. : fr= .0004 IPR
Groove Shape : Width=.079 in
ap=.030 in
Cutting Mode : Internal Coolant Through
1 MPa

Combination with SLV Sleeve Holder

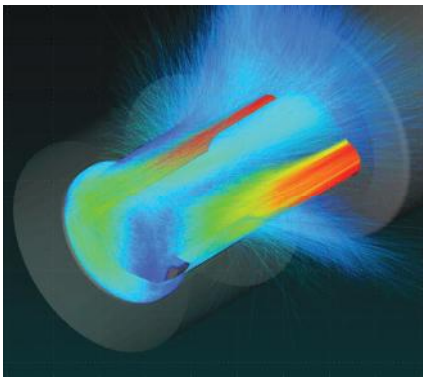
The internal coolant type SLV sleeve has a tapered pipe thread at the rear end of the sleeve, allowing direct connection of high-pressure coolant.
Supplying copious coolant through the tool provides efficient cooling and improves chip removal. This significantly reduces problems during internal machining.

1.



Delivers large amounts of coolant.

2.

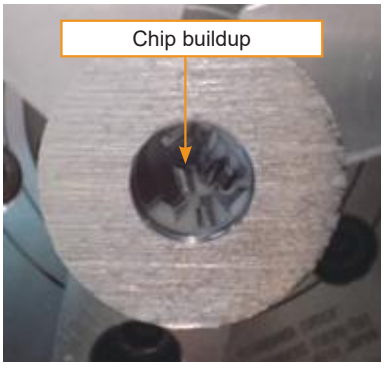


Easily penetrates to the bottom of the hole and prevents chip accumulation.

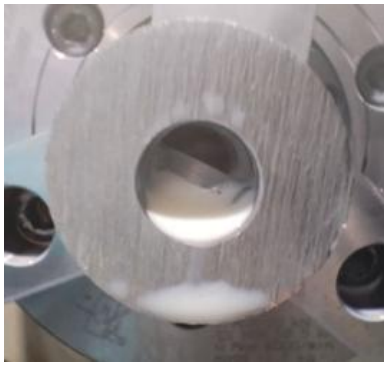


Comparison of Chip Evacuation Machining Blind Holes in 1045 Alloy Steel

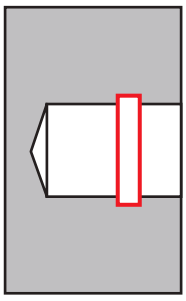
The combination with SLV sleeves offers excellent chip evacuation performance by suppressing chip buildup.



Steel shank with coolant thru



Steel shank without coolant thru + SLV sleeve

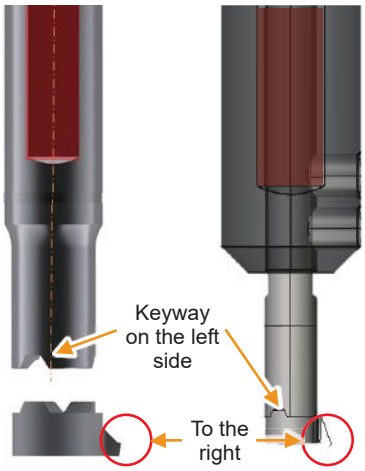
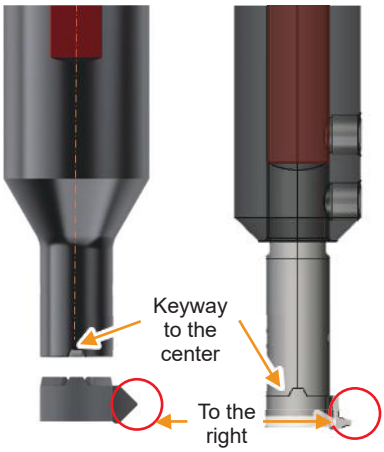
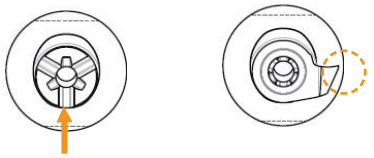
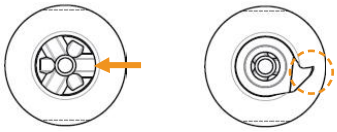
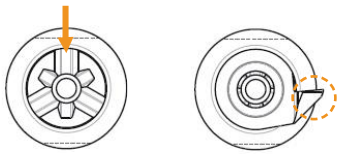


<Cutting Conditions>

Material	: AISI 1045, Pre-drilled Hole .39 in
Cutting Speed	: vc= 260 SFM
Feed per Rev.	: f= .0008 IPR
Depth of Cut	: ap=.039 in
Groove Width	: .079 in
Groove Bottom Diameter	: .472 in
Coolant Pressure	: 0.5 MPa

Precautions When Installing Inserts

Set the cutting edge so that the tip faces to the right, using the flat surface of the holder as a reference.
The location of the keyway varies depending on the holder size.

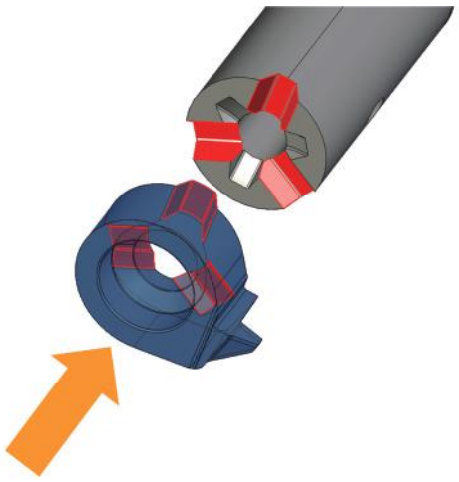
XBSH07 / XBSH09 / XBSH14 / XBSH18	XBSH08	XBSH11
	Standard Holder / Flexible Holder 	Standard Holder / Flexible Holder 
View from head mount	View from head mount	View from head mount
Keyway at the bottom / Cutting edge to the right 	Keyway on the right side / Cutting edge to the right 	Keyway at the top / Cutting edge to the right 
Holder Side / Head Installed Condition	Holder Side / Head Installed Condition	Holder Side / Head Installed Condition

Prevention of Incorrect Mounting

The key on the head seat has its orientation modified to prevent incorrect mounting on heads of similar neck diameter.

(in)

Head Type	Mounting Diameter	Front View
H07	ϕ.189	
H08	ϕ.236	
H09	ϕ.244	
H11	ϕ.315	
H14	ϕ.354	
H18	ϕ.453	

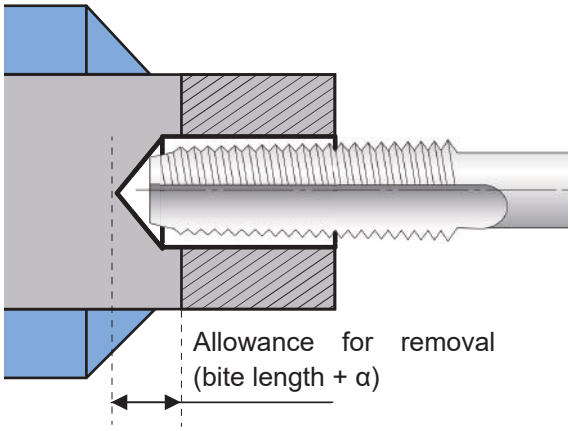


Propose a Solution

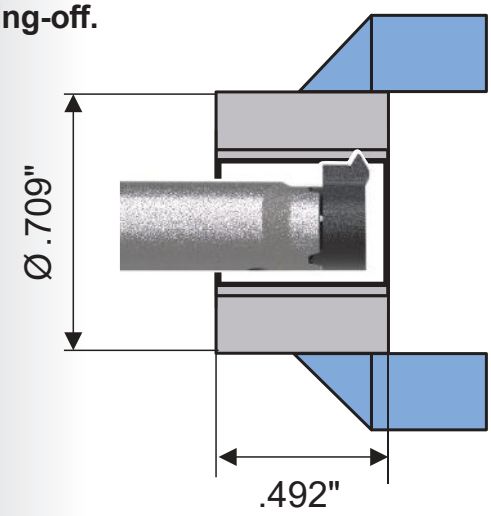
Threading: Replace Tapping with an Indexable Turning Tool

Compared to tapping, which requires a clearance (engagement length + α), the XB series can save workpiece material and reduce cycle times. Therefore, it is recommended to switch from tapping to using an indexable turning tool.

Conventional Tapping
Four steps processing is required to remove the chips.



With the XB series, threading can be started immediately after cutting-off.



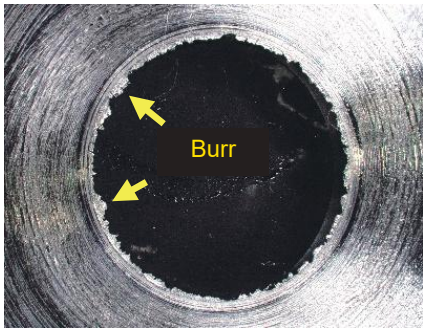
Tool life comparison using a thread gauge

Number of components 100 pieces. : Number of components 176 pieces.

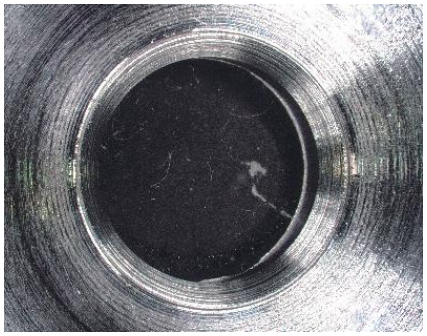
<Cutting Conditions>	<Cutting Conditions>
Tool : Carbide Tap	Tool : XB Series
Cutting Speed : vc= 130 SFM	Cutting Speed : vc= 195 SFM
Feed per Rev. : f= .049 IPR	Feed per Rev. : f= .049 IPR
4 step	6 pass
Four steps processing is required to remove the chips.	

Realize burr-free machining by utilizing internal cutting-off.

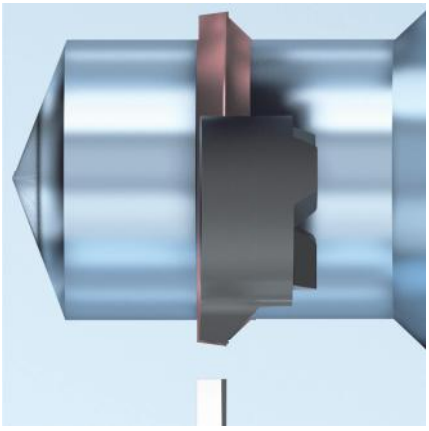
Chamfering before cutting-off reduces the need for a deburring process.



Cutting-off without chamfer
With burrs



Cutting-off after chamfering



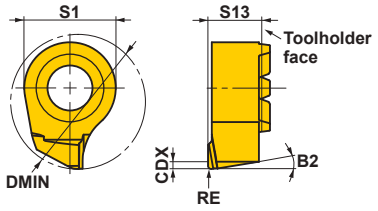
XBSX

XB SERIES HEAD

Boring NEW

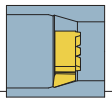
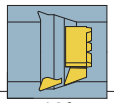
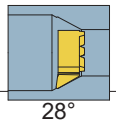
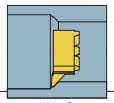
(mm)

Order Number	Hand	Stock Coated MPB115		DMIN	RE	B2	S1	S13	CDX	Holder Type	Geometry
XBBA08H08CR020R	R	●		7.8	0.2	10°	6.0	3.5	0.5	H08	
XBBA09H09CR020R	R	●		9.0	0.2	10°	6.2	3.6	0.5	H09	
XBBA11H11CR020R	R	●		11.0	0.2	10°	8.0	4.2	0.5	H11	

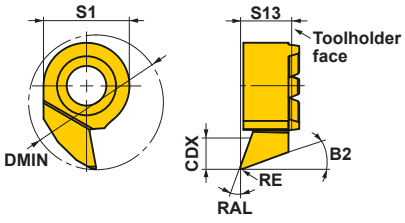


Copying (Profiling) NEW

(mm)

Head Type	XBPA	XBPB	XBPC	XBPD
Image of Machining				
Max. Workpiece Inclination Angle	16°	18°	28°	45°

Order Number	Hand	Stock Coated MPB115		DMIN	RE	B2	RAL	S1	S13	CDX	Holder Type	Geometry
XBPA07H07R010R	R	●		7.0	0.1	18°	8°	4.8	3.7	1.2	H07	
XBPA07H07R020R	R	●		7.0	0.2	18°	8°	4.8	3.7	1.2	H07	
XBPA08H08R020R	R	●		7.8	0.2	18°	8°	6.0	3.5	1.2	H08	
XBPA09H09R020R	R	●		9.0	0.2	18°	8°	6.2	3.6	1.5	H09	
XBPA10H11R020R	R	●		9.8	0.2	18°	8°	8.0	4.2	1.0	H11	
XBPA11H11R020R	R	●		11.0	0.2	18°	8°	8.0	4.2	2.3	H11	
XBPA14H14R020R	R	●		13.8	0.2	18°	8°	9.0	5.3	4.0	H14	
XBPB08H08R020R	R	●		7.8	0.2	20°	20°	6.0	3.5	1.2	H08	
XBPB09H09R020R	R	●		9.0	0.2	20°	20°	6.2	3.6	1.5	H09	
XBPB11H11R020R	R	●		11.0	0.2	20°	20°	8.0	4.2	2.3	H11	
XBPB14H14R020R	R	●		13.8	0.2	20°	20°	9.0	5.3	4.0	H14	
XBPC08H08R020R	R	●		7.8	0.2	30°	5°	6.0	3.5	1.0	H08	
XBPC11H11R020R	R	●		11.0	0.2	30°	5°	8.0	4.2	2.3	H11	
XBPC14H14R020R	R	●		13.7	0.2	30°	5°	9.0	5.3	4.0	H14	
XBPD07H07R020R	R	●		7.0	0.2	47°	3°	4.8	3.7	1.2	H07	
XBPD08H08R010R	R	●		7.8	0.1	47°	3°	6.0	3.5	1.2	H08	
XBPD08H08R020R	R	●		7.8	0.2	47°	3°	6.0	3.5	1.2	H08	
XBPD09H09R020R	R	●		9.0	0.2	47°	3°	6.2	3.5	1.5	H09	
XBPD11H11R020R	R	●		11.0	0.2	47°	3°	8.0	4.2	2.3	H11	
XBPD14H14R020R	R	●		13.7	0.2	47°	3°	9.0	5.3	4.0	H14	
XBPD14H14R040R	R	●		13.7	0.4	47°	3°	9.0	5.3	4.0	H14	



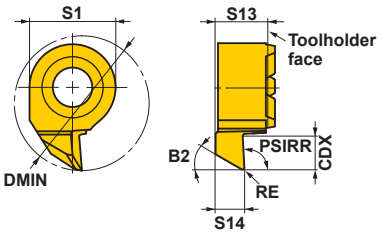
● : USA Stock

5 heads in one case.

Back Boring NEW

(mm)

Order Number	Hand	Stock		DMIN	RE	B2	PSIRR	S14	S1	S13	CDX	Holder Type	Geometry
		Coated											
		MPB115											
XBBB08H08R020R	R	●		7.8	0.2	30°	93°	2.3	6.0	3.3	1.3	H08	
XBBB09H09R020R	R	●		9.0	0.2	30°	93°	2.4	6.2	3.6	1.7	H09	
XBBB10H09R020R	R	●		10.0	0.2	30°	93°	2.4	6.2	3.6	2.3	H09	
XBBB11H11R020R	R	●		11.0	0.2	30°	93°	2.7	8.0	4.3	2.3	H11	
XBBB14H14R020R	R	●		13.8	0.2	30°	93°	3.0	9.0	5.4	3.5	H14	

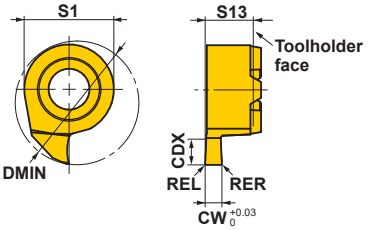


XB SERIES HEAD

Grooving (Flat Type) NEW

(mm)

Order Number	Hand	Stock		DMIN	CW	CDX	RER, REL	S1	S13	Holder Type	Geometry
		Coated									
		MPB115									
XBSG08H07100R005R	R	●		7.8	1.0	2.0	0.05	4.8	3.7	H07	
XBSG08H07125R005R	R	●		7.8	1.3	2.0	0.05	4.8	3.7	H07	
XBSG08H07150R005R	R	●		7.8	1.5	2.0	0.05	4.8	3.7	H07	
XBSG08H07200R005R	R	●		7.8	2.0	2.0	0.05	4.8	3.7	H07	
XBSG08H08079R	R	●		8.0	0.79	1.0	—	6.0	3.3	H08	
XBSG08H08079R020R	R	●		8.0	0.79	1.0	0.2	6.0	3.3	H08	
XBSG08H08100R005R	R	●		8.0	1.0	1.0	0.05	5.9	3.3	H08	
XBSG08H08125R005R	R	●		8.0	1.3	1.0	0.05	6.0	3.3	H08	
XBSG08H08150R005R	R	●		8.0	1.5	1.0	0.05	5.9	3.3	H08	
XBSG08H08200R005R	R	●		8.0	2.0	1.0	0.05	5.9	3.3	H08	
XBSG09H09100R005R	R	●		9.0	1.0	1.8	0.05	6.2	3.6	H09	
XBSG09H09125R005R	R	●		9.0	1.3	1.8	0.05	6.2	3.6	H09	
XBSG09H09150R005R	R	●		9.0	1.5	1.8	0.05	6.2	3.6	H09	
XBSG09H09200R005R	R	●		9.0	2.0	1.8	0.05	6.2	3.6	H09	
XBSG10H09100R005R	R	●		10.0	1.0	2.8	0.05	6.2	3.6	H09	
XBSG10H09125R005R	R	●		10.0	1.3	2.8	0.05	6.2	3.6	H09	
XBSG10H09150R005R	R	●		10.0	1.5	2.8	0.05	6.2	3.6	H09	
XBSG10H09200R005R	R	●		10.0	2.0	2.8	0.05	6.2	3.6	H09	
XBSG10H09250R010R	R	●		10.0	2.5	2.8	0.1	6.2	3.6	H09	
XBSG10H09300R010R	R	●		10.0	3.0	2.8	0.1	6.2	3.6	H09	
XBSG11H11079R020R	R	●		11.0	0.79	2.3	0.2	8.0	4.2	H11	
XBSG11H11100R005R	R	●		11.0	1.0	2.3	0.05	8.0	4.2	H11	
XBSG11H11125R005R	R	●		11.0	1.3	2.3	0.05	8.0	4.2	H11	
XBSG11H11150R010R	R	●		11.0	1.5	2.3	0.1	8.0	4.2	H11	
XBSG11H11200R010R	R	●		11.0	2.0	2.3	0.1	8.0	4.2	H11	
XBSG11H11250R020R	R	●		11.0	2.5	2.3	0.2	8.0	4.2	H11	
XBSG11H11300R020R	R	●		11.0	3.0	2.3	0.2	8.0	4.2	H11	
XBSG14H14100R005R	R	●		14.0	1.0	4.0	0.05	9.0	5.3	H14	
XBSG14H14125R005R	R	●		14.0	1.3	4.0	0.05	9.0	5.3	H14	
XBSG14H14150R010R	R	●		14.0	1.5	4.0	0.1	9.0	5.3	H14	
XBSG14H14200R010R	R	●		14.0	2.0	4.0	0.1	9.0	5.3	H14	
XBSG14H14250R020R	R	●		14.0	2.5	4.0	0.2	9.0	5.3	H14	
XBSG14H14300R020R	R	●		14.0	3.0	4.0	0.2	9.0	5.3	H14	
XBSG16H14150R020R	R	●		16.0	1.5	5.5	0.2	9.0	5.0	H14	
XBSG16H14200R020R	R	●		16.0	2.0	5.5	0.2	9.0	5.2	H14	
XBSG16H14250R020R	R	●		16.0	2.5	5.5	0.2	9.0	5.2	H14	
XBSG16H14300R020R	R	●		16.0	3.0	5.5	0.2	9.0	5.2	H14	
XBSG17H14150R020R	R	●		17.0	1.5	6.5	0.2	9.0	5.0	H14	
XBSG17H14200R020R	R	●		17.0	2.0	6.5	0.2	9.0	5.2	H14	
XBSG17H14250R020R	R	●		17.0	2.5	6.5	0.2	9.0	5.2	H14	
XBSG17H14300R020R	R	●		17.0	3.0	6.5	0.2	9.0	5.2	H14	
XBSG20H18150R020R	R	●		20.0	1.5	8.0	0.2	11.0	5.6	H18	
XBSG20H18200R020R	R	●		20.0	2.0	8.0	0.2	11.0	5.6	H18	



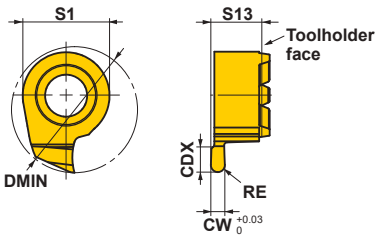
● : USA Stock

5 heads in one case.

Grooving (Round Type) NEW

(mm)

Order Number	Hand	Stock		DMIN	CW	CDX	RE	S1	S13	Holder Type	Geometry
		Coated									
		MPB115									
XBSR08H08080R040R	R	●		8.0	0.8	1.0	0.4	5.9	3.3	H08	
XBSR08H08100R050R	R	●		8.0	1.0	1.0	0.5	5.9	3.3	H08	
XBSR08H08200R100R	R	●		8.0	2.0	1.0	1.0	5.9	3.3	H08	
XBSR09H09080R040R	R	●		9.0	0.8	1.6	0.4	6.2	3.6	H09	
XBSR09H09100R050R	R	●		9.0	1.0	1.6	0.5	6.2	3.6	H09	
XBSR09H09200R100R	R	●		9.0	2.0	1.6	1.0	6.2	3.6	H09	
XBSR11H11080R040R	R	●		11.0	0.8	2.3	0.4	8.0	4.2	H11	
XBSR11H11100R050R	R	●		11.0	1.0	2.3	0.5	8.0	4.2	H11	
XBSR11H11200R100R	R	●		11.0	2.0	2.3	1.0	8.0	4.2	H11	
XBSR14H14100R050R	R	●		14.0	1.0	4.0	0.5	9.0	5.3	H14	
XBSR14H14157R080R	R	●		14.0	1.57	4.0	0.79	9.0	5.3	H14	
XBSR14H14200R100R	R	●		14.0	2.0	4.0	1.0	9.0	5.3	H14	
XBSR14H14300R150R	R	●		14.0	3.0	4.0	1.5	9.0	5.3	H14	

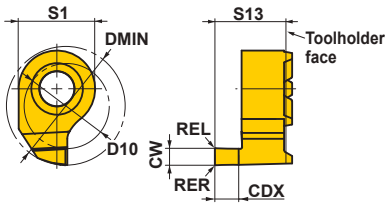


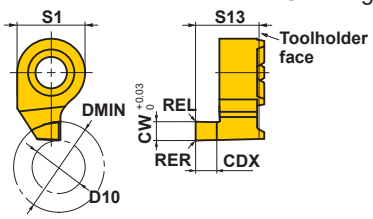
XB SERIES HEAD

External and Internal Side Face Grooving NEW

(mm)

Order Number	Hand	Stock		DMIN	D10*	CW	CDX	RER, REL	S1	S13	Holder Type	Geometry
		Coated										
		MPB115										
XBSF14H14100R010R	R	●		14.0	12.0	1.0	1.5	0.1	9.0	8.3	H14	Internal Side Face Grooving
XBSF14H14150R010R	R	●		14.0	11.0	1.5	2.5	0.1	9.0	8.3	H14	
XBSF14H14200R010R	R	●		14.0	10.0	2.0	3.0	0.1	9.0	8.3	H14	
XBSF14H14250AR010R	R	●		14.0	9.0	2.5	3.0	0.1	9.0	8.3	H14	
XBSF14H14250BR010R	R	●		14.0	9.0	2.5	5.0	0.1	9.0	10.3	H14	
XBSF14H14300AR010R	R	●		14.0	8.0	3.0	3.0	0.1	9.0	8.3	H14	
XBSF14H14300BR010R	R	●		14.0	8.0	3.0	6.0	0.1	9.0	11.3	H14	
XBSF18H18300R020R	R	●		18.0	12.0	3.0	10.0	0.2	11.0	15.8	H18	
XBSE12H14100R010R	R	●		12.0	10.0	1.0	1.5	0.1	9.0	8.3	H14	External Side Face Grooving
XBSE12H14150R010R	R	●		12.0	9.0	1.5	2.5	0.1	9.0	8.3	H14	
XBSE12H14200R010R	R	●		12.0	8.0	2.0	3.0	0.1	9.0	8.3	H14	
XBSE12H14250AR010R	R	●		12.0	7.0	2.5	3.0	0.1	9.0	8.3	H14	
XBSE12H14250BR010R	R	●		12.0	7.0	2.5	5.0	0.1	9.0	10.3	H14	
XBSE12H14300AR010R	R	●		12.0	6.0	3.0	3.0	0.1	9.0	8.3	H14	
XBSE12H14300BR010R	R	●		12.0	6.0	3.0	6.0	0.1	9.0	11.3	H14	
XBSE16H18300R020R	R	●		16.0	10.0	3.0	10.0	0.2	11.0	15.8	H18	



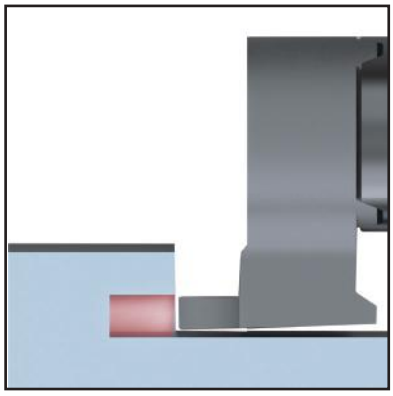


* D10 dimension indicates the diameter remaining at the center when machining with DMIN.

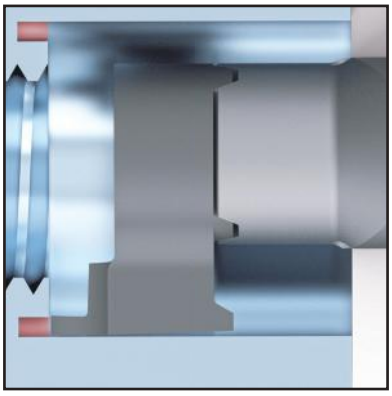
External and Internal Side Face Grooving

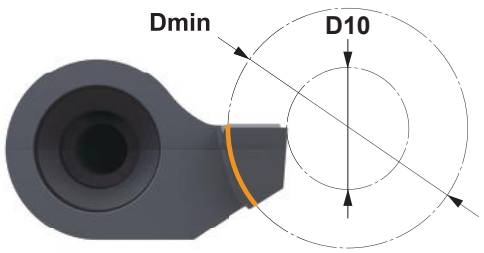
It is designed to avoid interference; therefore correct installation is important.

External side face

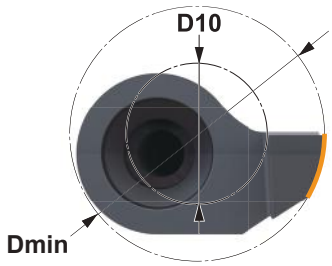


Internal side face





Relief angle is inside



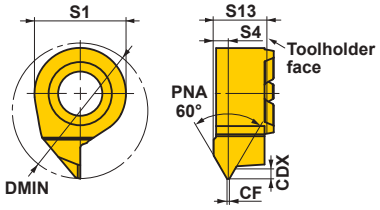
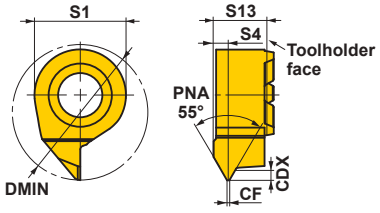
Relief angle is outside

● : USA Stock

5 heads in one case. (XBSE16H and XBSF18H come in cases of two.)

Internal Threading NEW

(mm)

Order Number	Hand	Stock		DMIN	TP (mm)	TPI (thread/in)	CF	S1	S13	S4	CDX	Holder Type	Geometry
		Coated											
		MPB115											
XBST07H0705060R	R	●		7.0	0.5–0.75	48–36	0.05	4.8	3.4	0.50	0.44	H07	Partial Profile 60° Partial Form
XBST07H0710060R	R	●		7.0	1.0–1.25	24	0.11	4.8	3.4	0.70	0.70	H07	
XBST07H0715060R	R	●		7.0	1.5–1.75	16	0.17	4.8	3.4	0.90	0.97	H07	
XBST08H0805060R	R	●		8.0	0.5–0.75	48–36	0.05	5.9	3.4	0.45	0.43	H08	
XBST08H0810060R	R	●		8.0	1.0–1.25	24	0.11	5.9	3.4	0.80	0.70	H08	
XBST08H0815060R	R	●		8.0	1.5–1.75	16	0.17	5.9	3.4	1.30	0.98	H08	
XBST09H0905060R	R	●		9.0	0.5–0.75	48–36	0.06	6.2	3.6	0.35	0.44	H09	
XBST09H0910060R	R	●		9.0	1.0–1.25	24	0.11	6.2	3.6	0.55	0.54	H09	
XBST09H0915060R	R	●		9.0	1.5–1.75	16	0.17	6.2	3.6	0.75	0.81	H09	
XBST09H0917560R	R	●		9.0	1.75–2.0	14–13	0.19	6.2	3.6	0.95	0.95	H09	
XBST09H0920060R	R	●		9.0	2.0–2.5	12–11	0.24	6.2	3.6	1.05	1.08	H09	
XBST09H0925060R	R	●		9.0	2.5–3.0	10–9	0.30	6.2	3.6	1.45	1.35	H09	
XBST09H0930060R	R	●		9.0	3.0–3.5	8	0.36	6.2	3.4	1.45	1.62	H09	
XBST11H1105060R	R	●		11.0	0.5–0.75	48–36	0.05	8.0	4.2	0.45	0.43	H11	
XBST11H1110060R	R	●		11.0	1.0–1.25	24	0.17	8.0	4.2	0.60	0.70	H11	
XBST11H1115060R	R	●		11.0	1.5–1.75	16	0.24	8.0	4.2	1.00	0.98	H11	
XBST11H1120060R	R	●		11.0	2.0–2.5	12–11	0.25	8.0	4.2	1.30	1.41	H11	
XBST11H1125060R	R	●		11.0	2.5–3.0	10–9	0.30	8.0	4.2	1.40	1.68	H11	
XBST14H1410060R	R	●		14.0	1.0–1.25	24	0.11	9.0	5.4	0.80	0.55	H14	
XBST14H1415060R	R	●		14.0	1.5–1.75	16	0.17	9.0	5.4	1.10	0.81	H14	
XBST14H1420060R	R	●		14.0	2.0–2.5	12–11	0.24	9.0	5.4	1.50	1.08	H14	
XBST14H1425060R	R	●		14.0	2.5–3.0	10–9	0.30	9.0	5.4	1.85	1.35	H14	
XBST07H0701855R	R	●		7.0	–	18–14	0.25	4.8	3.3	0.90	1.25	H07	Partial Profile 55° Partial Form
XBST07H0702455R	R	●		7.0	–	24–18	0.18	4.8	3.3	0.75	1.00	H07	
XBST07H0703255R	R	●		7.0	–	32–24	0.13	4.8	3.3	0.60	0.75	H07	
XBST09H0901455R	R	●		9.0	–	14–11	0.30	6.2	3.5	1.10	1.60	H09	
XBST09H0901855R	R	●		9.0	–	18–14	0.24	6.2	3.5	0.90	1.25	H09	
XBST09H0902455R	R	●		9.0	–	24–18	0.18	6.2	3.5	0.75	1.00	H09	
XBST11H1102455R	R	●		11.0	–	24–18	0.18	8.0	4.2	0.75	1.00	H11	

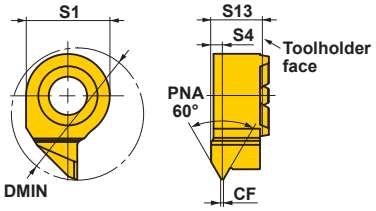
* DMIN : Minimum pilot hole diameter

XB SERIES HEAD

Internal Threading NEW

(mm)

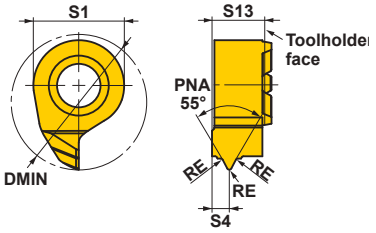
Order Number	Hand	Stock Coated MPB115	Stock Coated	DMIN	TP (mm)	TPI (thread/in)	CF	S1	S13	S4	Holder Type	Geometry
XBST07H07075ISOR	R	●		7.0	0.75	—	0.08	4.8	3.3	0.60	H07	ISO Metric Full form
XBST07H07100ISOR	R	●		7.0	1.00	—	0.11	4.8	3.3	0.60	H07	
XBST07H07125ISOR	R	●		7.0	1.25	—	0.14	4.8	3.3	0.60	H07	
XBST08H08075ISOR	R	●		8.0	0.75	—	0.08	6.0	3.6	0.82	H08	
XBST08H08100ISOR	R	●		8.0	1.00	—	0.11	6.0	3.6	0.82	H08	
XBST08H08125ISOR	R	●		8.0	1.25	—	0.14	6.0	3.6	0.82	H08	
XBST09H09050ISOR	R	●		9.0	0.50	—	0.05	6.2	3.7	0.40	H09	
XBST09H09075ISOR	R	●		9.0	0.75	—	0.08	6.2	3.7	0.65	H09	
XBST09H09100ISOR	R	●		9.0	1.00	—	0.11	6.2	3.7	0.65	H09	
XBST09H09125ISOR	R	●		9.0	1.25	—	0.14	6.2	3.6	0.80	H09	
XBST09H09150ISOR	R	●		9.0	1.50	—	0.17	6.2	3.6	0.80	H09	
XBST09H09175ISOR	R	●		9.0	1.75	—	0.19	6.2	3.6	1.00	H09	
XBST09H09200ISOR	R	●		9.0	2.00	—	0.24	6.2	3.6	0.95	H09	
XBST09H09250ISOR	R	●		9.0	2.50	—	0.30	6.2	3.6	1.05	H09	
XBST09H09300ISOR	R	●		9.0	3.00	—	0.36	6.2	3.6	1.35	H09	
XBST11H11100ISOR	R	●		11.0	1.00	—	0.11	8.0	4.3	0.70	H11	
XBST11H11150ISOR	R	●		11.0	1.50	—	0.17	8.0	4.3	1.00	H11	
XBST11H11200ISOR	R	●		11.0	2.00	—	0.24	8.0	4.3	1.40	H11	
XBST11H11250ISOR	R	●		11.0	2.50	—	0.30	8.0	4.3	1.35	H11	
XBST11H11300ISOR	R	●		11.0	3.00	—	0.36	8.0	4.3	1.40	H11	
XBST14H14050ISOR	R	●		14.0	0.50	—	0.05	9.0	5.4	0.60	H14	
XBST14H14100ISOR	R	●		14.0	1.00	—	0.11	9.0	5.4	0.70	H14	
XBST14H14150ISOR	R	●		14.0	1.50	—	0.17	9.0	5.4	1.10	H14	
XBST14H14200ISOR	R	●		14.0	2.00	—	0.24	9.0	5.4	1.20	H14	
XBST14H14250ISOR	R	●		14.0	2.50	—	0.30	9.0	5.4	1.00	H14	



* DMIN : Minimum pilot hole diameter

(mm)

Order Number	Hand	Stock Coated MPB115	Stock Coated	DMIN	TP (mm)	TPI (thread/in)	RE	S1	S13	S4	Holder Type	Geometry
XBST11H11014WR	R	●		11.0	—	14	0.24	8.0	4.3	1.30	H11	Whitworth for BSW, BSP Full form
XBST11H11019WR	R	●		11.0	—	19	0.18	8.0	4.3	1.60	H11	
XBST14H14014WR	R	●		14.0	—	14	0.24	9.0	5.4	1.80	H14	
XBST14H14019WR	R	●		14.0	—	19	0.18	9.0	5.4	1.55	H14	



* DMIN : Minimum pilot hole diameter

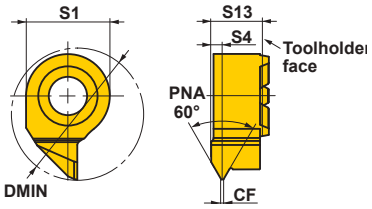
● : USA Stock

5 heads in one case.

Internal Threading NEW

(mm)

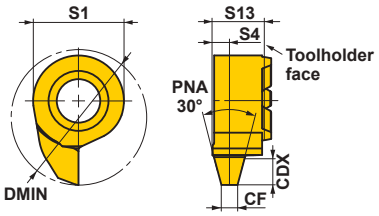
Order Number	Hand	Stock Coated MPB115		DMIN	TP (mm)	TPI (thread/in)	CF	S1	S13	S4	Holder Type	Geometry
XBST08H08014NPTR	R	●		8.0	—	14	0.06	6.0	3.2	1.20	H08	American NPT Full form
XBST08H08018NPTR	R	●		8.0	—	18	0.04	6.0	3.5	0.90	H08	
XBST08H08027NPTR	R	●		8.0	—	27	0.03	6.0	3.5	0.70	H08	



* DMIN : Minimum pilot hole diameter

(mm)

Order Number	Hand	Stock Coated MPB115		DMIN	TP (mm)	TPI (thread/in)	CF	S1	S13	S4	CDX	Holder Type	Geometry
XBST09H09150TRR	R	●		9.0	1.5	—	0.46	6.2	3.6	0.55	0.90	H09	ISO Trapezoidal 30° Partial form
XBST09H09200TRR	R	●		9.0	2.0	—	0.59	6.2	3.6	0.70	1.25	H09	
XBST09H09300TRR	R	●		9.0	3.0	—	0.95	6.2	3.4	1.10	1.75	H09	
XBST10H09400TRR	R	●		10.0	4.0	—	1.32	6.2	3.6	1.30	2.25	H09	
XBST11H11150TRR	R	●		11.0	1.5	—	0.46	8.0	4.3	0.60	0.90	H11	
XBST11H11200TRR	R	●		11.0	2.0	—	0.59	8.0	4.3	0.80	1.25	H11	
XBST11H11300TRR	R	●		11.0	3.0	—	0.95	8.0	4.3	1.10	1.75	H11	
XBST11H11400TRR	R	●		11.0	4.0	—	1.32	8.0	4.0	1.40	2.25	H11	
XBST14H14200TRR	R	●		14.0	2.0	—	0.59	9.0	5.3	1.00	1.25	H14	
XBST14H14300TRR	R	●		14.0	3.0	—	0.95	9.0	5.3	1.30	1.75	H14	
XBST14H14400TRR	R	●		14.0	4.0	—	1.32	9.0	5.3	1.30	2.25	H14	
XBST14H14500TRR	R	●		14.0	5.0	—	1.68	9.0	5.3	1.75	2.75	H14	



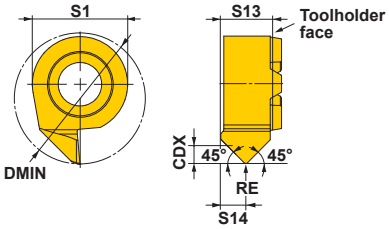
* DMIN : Minimum pilot hole diameter

XB SERIES HEAD

Chamfering NEW

(mm)

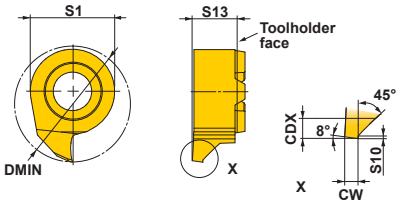
Order Number	Hand	Stock Coated MPB115		DMIN	RE	S14	S1	S13	CDX	Holder Type	Geometry
XBSC07H074545R020R	R	●		7.0	0.2	1.2	4.8	3.5	0.8	H07	
XBSC08H084545R020R	R	●		8.0	0.2	1.7	5.9	3.4	1.4	H08	
XBSC09H094545R020R	R	●		9.0	0.2	1.8	6.2	3.6	1.3	H09	
XBSC11H114545R020R	R	●		11.0	0.2	2.1	8.0	4.3	1.5	H11	
XBSC14H144545R020R	R	●		14.0	0.2	2.6	9.0	5.4	1.5	H14	



Pre-Chamfering (Internal Machining before Cutting-Off) NEW

(mm)

Order Number	Hand	Stock Coated MPB115		DMIN	CW	S10	S1	S13	CDX	Holder Type	Geometry
XBSX08H080845R	R	●		8.0	1.0	0.2	5.9	3.3	1.0	H08	
XBSX09H090845R	R	●		9.0	1.0	0.2	6.2	3.6	1.5	H09	
XBSX11H110845R	R	●		11.0	1.0	0.2	8.0	4.2	1.5	H11	
XBSX14H140845R	R	●		14.0	1.0	0.2	9.0	5.3	1.5	H14	



● : USA Stock

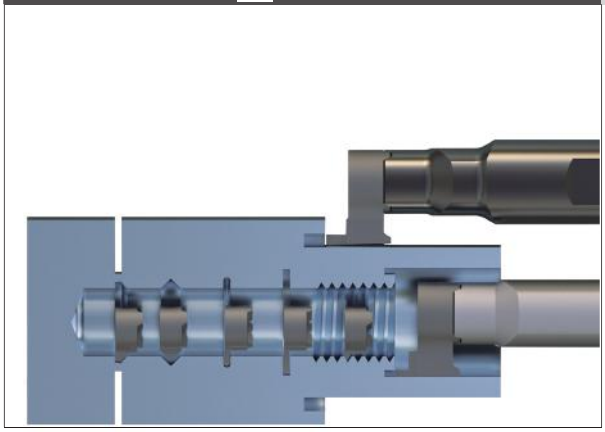
5 heads in one case

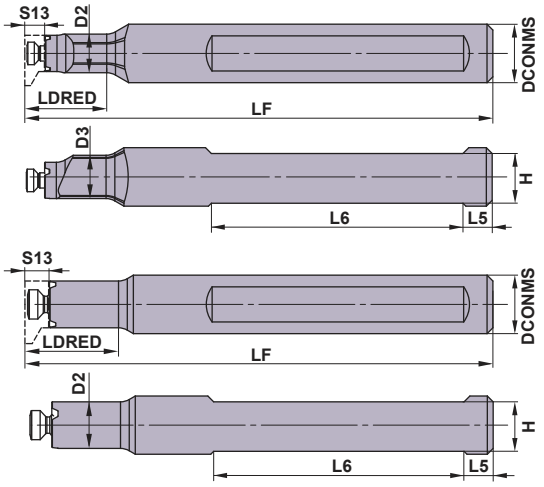
XBSERIES

Versatile Range of Applications with One Holder
Machining Threads Instead of Tapping

XBSH_S NEW

Steel shank without coolant thru



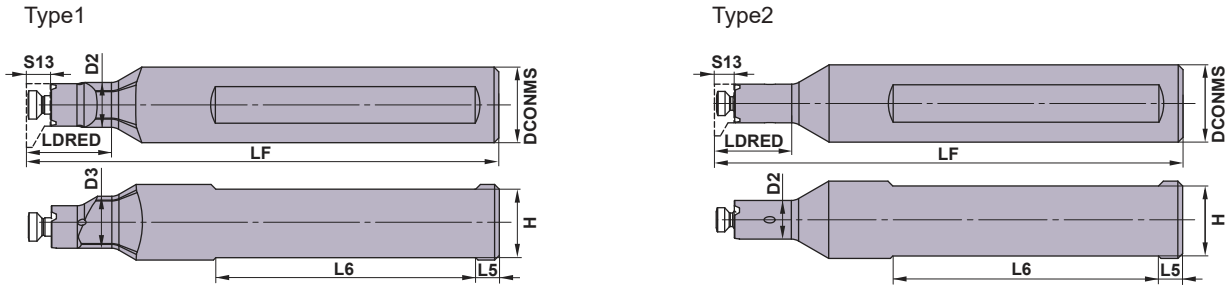


(mm)

Order Number	Stock	DCONMS	D2	D3	LF*	LDRED	H	L5	L6	Suitable Head	Type
XBSH070700080S	●	7	4.8	6.0	80	12	5.5	5	43	XB-H07	1
XBSH080700080S	●	7	6.0	—	80	12	6.0	5	43	XB-H08	2
XBSH091000080S	●	10	6.6	7.4	80	14	8.5	5	43	XB-H09	1
XBSH111000080S	●	10	8.0	—	80	16	8.5	5	43	XB-H11	2
XBSH141200080S	●	12	9.5	110	80	18	10.5	5	43	XB-H14	1

XBSH_S-C NEW

Steel shank with coolant thru



(mm)

Order Number	Stock	DCOMNS	D2	D3	LF*	LDRED	H	L5	L6	Suitable Head	Type
XBSH071600080S-C	●	16	4.8	6.0	80	12	14.5	5	43	XB-H07	1
XBSH081600080S-C	●	16	6.0	—	80	12	15.0	5	43	XB-H08	2
XBSH091600095S-C	●	16	6.6	7.4	95	14	14.5	5	55	XB-H09	1
XBSH111600097S-C	●	16	8.0	—	97	16	14.5	5	55	XB-H11	2
XBSH141600100S-C	●	16	9.5	11.0	100	18	14.5	5	55	XB-H14	1
XBSH182000095S-C	●	20	11.5	14.2	95	25	18.5	5	55	XB-H18	1

* The LF dimension varies depending on the head to be mounted.
Please check the S13 dimension of the head.

(mm)

Tool Holder	S13 Dimension of Head
XBSH07	3.7
XBSH08	3.3
XBSH09	3.3

(mm)

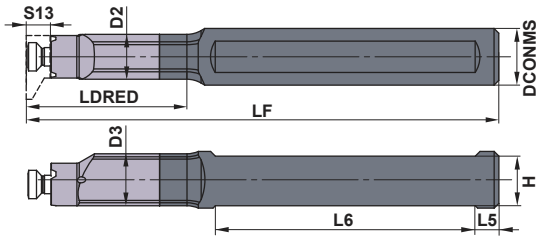
Tool Holder	S13 Dimension of Head
XBSH11	4.2
XBSH14	5.2
XBSH18	5.6

XBSERIES

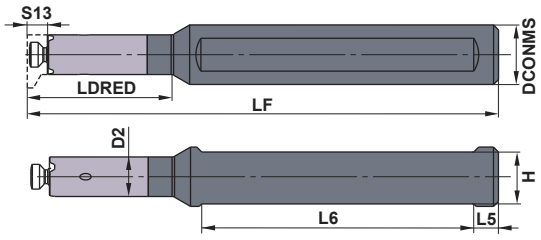
XBSH_C-C NEW

Carbide shank with coolant thru

Type1



Type2



(mm)

Order Number	Stock	DCONMS	D2	D3	LF*	LDRED	H	L5	L6	Suitable Head	Type
XBSH071200080C-C	●	12	4.8	6.0	80	21	10.5	5	43	XB-H07	1
XBSH081200080C-C	●	12	6.0	—	80	21	11.0	5	43	XB-H08	2
XBSH091200090C-C	●	12	6.6	7.4	90	22	10.5	5	50	XB-H09	1
XBSH091200098C-C	●	12	6.6	7.4	98	30	10.5	5	50	XB-H09	1
XBSH111200095C-C	●	12	8.0	—	95	29	10.5	5	55	XB-H11	2
XBSH111200110C-C	●	12	8.0	—	110	42	10.5	5	55	XB-H11	2
XBSH141200100C-C	●	12	9.5	11.0	100	34	10.5	5	55	XB-H14	1
XBSH141200110C-C	●	12	9.5	11.0	110	45	10.5	5	50	XB-H14	1
XBSH181600100C-C	●	16	11.5	14.3	100	42	14.5	5	45	XB-H18	1
XBSH181600130C-C	●	16	11.5	14.3	130	60	14.5	5	55	XB-H18	1

* The LF dimension varies depending on the head to be mounted.
Please check the S13 dimension of the head.

(mm)

Tool Holder	S13 Dimension of Head
XBSH07	3.7
XBSH08	3.3
XBSH09	3.3
XBSH11	4.2
XBSH14	5.2
XBSH18	5.6

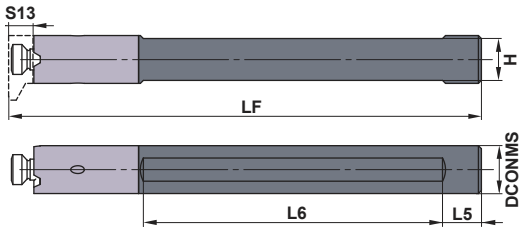
Spare Parts

Tool Holder Type	Clamp Screw	Torque (lbf-in)	Wrench
XBSH07	TPS20-X	7.1	TIP7F-X
XBSH08	TPS26-X	10.6	TIP8F-X
XBSH09	TPS26-X	10.6	TIP8F-X
XBSH11	TPS35-X	31.0	TIP10F-X
XBSH14	TPS40-X	39.8	TIP15F-X
XBSH18	TPS50-X	62.0	TIP20F-X

● : **USA Stock**

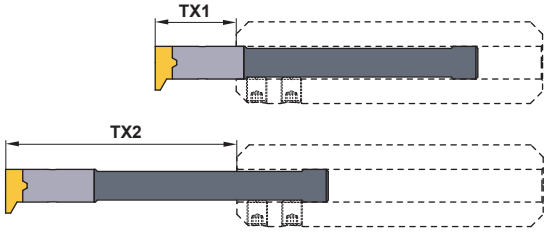
XBSH_FC/FC-C NEW

Carbide shank, Flexible holder



Protrusion adjustment

Please use the flexible holder in combination with the dedicated sleeve.



Protrusion adjustment: TX1 = minimum, TX2 = maximum.

(mm)

Order Number	Stock	DCOMNS	LF*	H	L5	L6	TX1	TX2	Coolant Thru	Suitable Head
XBSH080600065FC	●	6	65	5	9.5	38	18	42	without	XB-H08
XBSH080600103FC	●	6	103	5	9.5	52	40	80	without	XB-H08
XBSH110800079FC-C	●	8	79	7	6.5	50	20	55	with	XB-H11
XBSH110800129FC-C	●	8	129	7	7.5	69	50	105	with	XB-H11

* The LF dimension varies depending on the head to be mounted.
Please check the S13 dimension of the head.

(mm)

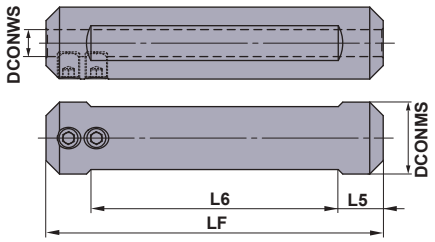
Tool Holder	S13 Dimension of Head
XBSH08	3.3
XBSH11	4.2

Spare Parts

Tool Holder Type	Clamp Screw	Torque (lbf-in)	Wrench
XBSH08	TPS26-X	10.6	TIP8F-X
XBSH11	TPS35-X	31.0	TIP10F-X

XBSHSL NEW

Dedicated sleeve for flexible holder



(mm)

Order Number	Stock	DCONMS	DCONWS	LF	L5	L6
XBSHSL1600075S6N	●	16	6	75	10	55
XBSHSL1600075S8N	●	16	8	75	10	55
XBSHSL2000075S6N	●	20	6	75	10	55
XBSHSL2000075S8N	●	20	8	75	10	55

Spare Parts

Tool Holder Type	Clamp Screw	Torque (lbf-in)	Wrench
XBSHSL○○○○○○○S6N	P-HSS05	10.6	HKY25R
XBSHSL○○○○○○○S8N	P-HSS06	10.6	HKY25R

XBSERIES

Recommended Cutting Conditions

Cutting Speed

	Material	Cutting Speed **vc** (SFM)
P	Pure Iron, Free Cutting Steel, Soft Magnetic Iron	525 (330 — 850)
P	Carbon Steel, Alloy Steel	360 (195 — 560)
M	Stainless Steel	260 (130 — 490)
K	Cast Iron, Ductile Cast Iron	330 (165 — 655)
N	Non-Ferrous Metal	655 (395 — 1245)
S	Titanium Alloys, Heat Resistant Alloys	130 (65 — 230)
H	Hardened Steel	195 (100 — 295)

Depth of Cut / Feed per Revolution

Machining	**f** (IPR)	**ap** (in)
Boring, Copying	.0012 (.0012—.0039)	.008—.020
Grooving, Pre-Chamfering	.0008 (.0004—.0012)	—
End face grooving, Chamfering	.0016 (.0008—.0024)	—

XB Series Standard Depth of Cut for Threading

Material :

P	Pure Iron, Free Cutting Steel, Soft Magnetic Iron, Low Carbon Steel
N	Non-Ferrous Metal

ISO Metric (Head: XBST-60R, XBST-ISOR)

Pitch (mm)	Total Cutting Depth	Number of Passes (mm)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0.5	0.30	0.08	0.07	0.06	0.05	0.04																			
0.75	0.40	0.10	0.08	0.07	0.06	0.05	0.04																		
1.0	0.54	0.12	0.10	0.09	0.07	0.06	0.05	0.05																	
1.25	0.68	0.14	0.12	0.10	0.09	0.06	0.06	0.06	0.05																
1.5	0.81	0.15	0.12	0.11	0.09	0.07	0.06	0.06	0.05	0.05	0.05														
1.75	0.95	0.16	0.13	0.12	0.09	0.07	0.07	0.06	0.06	0.05	0.05	0.05	0.04												
2.0	1.08	0.17	0.14	0.13	0.10	0.08	0.08	0.06	0.06	0.06	0.06	0.05	0.05	0.04											
2.5	1.35	0.20	0.16	0.15	0.11	0.10	0.09	0.07	0.07	0.07	0.06	0.06	0.06	0.05	0.05	0.05									
3.0	1.62	0.23	0.19	0.17	0.13	0.12	0.10	0.08	0.09	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.05								
3.5	1.89	0.27	0.22	0.20	0.16	0.13	0.11	0.11	0.09	0.09	0.08	0.08	0.08	0.07	0.07	0.07	0.06								

Whitworth 55° (Head: XBST-55R, XBST-WR)

Pitch (thread /in)	Total Cutting Depth	Number of Passes (in)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
32	.020	.005	.004	.004	.003	.002	.002																		
28	.023	.005	.004	.004	.003	.003	.002	.002																	
24	.027	.006	.005	.005	.004	.003	.002	.002																	
22	.029	.006	.005	.005	.003	.003	.003	.002	.002																
20	.032	.006	.006	.005	.004	.003	.003	.003	.002																
19	.034	.007	.006	.005	.004	.004	.003	.003	.002																
18	.035	.006	.006	.005	.004	.003	.003	.002	.002	.002	.002														
16	.040	.007	.006	.006	.004	.004	.003	.003	.003	.002	.002														
14	.046	.007	.006	.006	.005	.004	.003	.003	.003	.002	.002	.002	.002												
12	.054	.009	.007	.007	.005	.004	.004	.003	.003	.003	.003	.002	.002	.002											
11	.058	.009	.007	.007	.006	.004	.004	.004	.003	.003	.003	.003	.003	.002											

American NPT (Head: XBST-NPTR)

Pitch (thread /in)	Total Cutting Depth	Number of Passes (in)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
27	.031	.007	.005	.005	.004	.003	.003	.002	.002																
18	.047	.009	.008	.007	.005	.004	.004	.004	.003	.003															
14	.058	.009	.008	.006	.006	.005	.004	.004	.004	.003	.003	.003	.003												

ISO Trapezoidal 30° (Head: XBST-TRR)

Pitch (mm)	Total Cutting Depth	Number of Passes (mm)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1.5	0.90	0.16	0.14	0.12	0.10	0.08	0.07	0.06	0.06	0.06	0.05														
2.0	1.25	0.20	0.16	0.15	0.12	0.09	0.09	0.07	0.07	0.07	0.06	0.06	0.06	0.05											
3.0	1.75	0.25	0.20	0.19	0.14	0.12	0.11	0.10	0.09	0.08	0.08	0.07	0.07	0.07	0.06	0.06	0.06								
4.0	2.25	0.30	0.25	0.22	0.18	0.14	0.13	0.12	0.10	0.10	0.10	0.09	0.08	0.08	0.08	0.07	0.07	0.07	0.07						
5.0	2.75	0.35	0.28	0.26	0.20	0.17	0.15	0.14	0.12	0.11	0.11	0.11	0.10	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.07				

XB SERIES

XB Series Standard Depth of Cut for Threading

Material :

P	Carbon Steel, Alloy Steel
K	Cast Iron

ISO Metric (Head: XBST-60R, XBST-ISOR)

Pitch (mm)	Total Cutting Depth	Number of Passes (mm)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0.5	0.30	0.08	0.07	0.06	0.05	0.04																			
0.75	0.40	0.10	0.08	0.07	0.06	0.05	0.04																		
1.0	0.54	0.12	0.10	0.09	0.07	0.06	0.05	0.05																	
1.25	0.68	0.14	0.12	0.10	0.09	0.06	0.06	0.06	0.05																
1.5	0.81	0.15	0.12	0.11	0.09	0.07	0.06	0.06	0.05	0.05	0.05														
1.75	0.95	0.16	0.13	0.12	0.09	0.07	0.07	0.06	0.06	0.05	0.05	0.05	0.04												
2.0	1.08	0.17	0.14	0.13	0.10	0.08	0.08	0.06	0.06	0.06	0.06	0.05	0.05	0.04											
2.5	1.35	0.19	0.16	0.14	0.11	0.10	0.08	0.07	0.07	0.07	0.06	0.05	0.06	0.05	0.05	0.05	0.04								
3.0	1.62	0.22	0.19	0.16	0.13	0.11	0.10	0.08	0.08	0.08	0.06	0.07	0.06	0.06	0.06	0.06	0.05	0.05							
3.5	1.89	0.26	0.21	0.20	0.15	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.07	0.07	0.07	0.06	0.06	0.06							

Whitworth 55° (Head: XBST-55R, XBST-WR)

Pitch (thread /in)	Total Cutting Depth	Number of Passes (in)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
32	.020	.005	.004	.004	.003	.002	.002																		
28	.023	.005	.004	.004	.003	.003	.002	.002																	
24	.027	.006	.005	.005	.004	.003	.002	.002																	
22	.029	.006	.005	.005	.003	.003	.003	.002	.002																
20	.032	.006	.006	.005	.004	.003	.003	.003	.002																
19	.034	.007	.006	.005	.004	.004	.003	.003	.002																
18	.035	.006	.006	.005	.004	.003	.003	.002	.002	.002	.002														
16	.040	.007	.006	.006	.004	.004	.003	.003	.003	.002	.002														
14	.046	.007	.006	.006	.005	.004	.003	.003	.003	.002	.002	.002	.002												
12	.054	.009	.007	.007	.005	.004	.004	.003	.003	.003	.003	.002	.002	.002											
11	.058	.009	.007	.007	.006	.004	.004	.004	.003	.003	.003	.003	.003	.002											

American NPT (Head: XBST-NPTR)

Pitch (thread /in)	Total Cutting Depth	Number of Passes (in)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
27	.031	.007	.005	.005	.004	.003	.003	.002	.002																
18	.047	.009	.008	.007	.005	.004	.004	.004	.003	.003															
14	.058	.009	.008	.006	.006	.005	.004	.004	.004	.003	.003	.003	.003												

ISO Trapezoidal 30° (Head: XBST-TRR)

Pitch (mm)	Total Cutting Depth	Number of Passes (mm)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1.5	0.90	0.16	0.14	0.12	0.10	0.08	0.07	0.06	0.06	0.06	0.05														
2.0	1.25	0.20	0.16	0.15	0.12	0.09	0.09	0.07	0.07	0.07	0.06	0.06	0.06	0.05											
3.0	1.75	0.24	0.20	0.18	0.14	0.12	0.10	0.09	0.09	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.05							
4.0	2.25	0.29	0.24	0.22	0.17	0.14	0.13	0.11	0.10	0.10	0.09	0.09	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.06					
5.0	2.75	0.34	0.27	0.26	0.20	0.16	0.15	0.13	0.12	0.11	0.10	0.10	0.10	0.09	0.09	0.08	0.08	0.08	0.08	0.07	0.07	0.07			

Material :

M	Stainless Steel
S	Titanium Alloys, Heat Resistant Alloys
H	Hardened Steel

ISO Metric (Head: XBST-60R, XBST-ISOR)

Pitch (mm)	Total Cutting Depth	Number of Passes (mm)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0.5	0.30	0.06	0.05	0.05	0.04	0.03	0.02	0.03	0.02																
0.75	0.40	0.08	0.07	0.06	0.05	0.04	0.04	0.03	0.03																
1.0	0.54	0.11	0.09	0.09	0.06	0.06	0.05	0.04	0.04																
1.25	0.68	0.12	0.11	0.09	0.07	0.06	0.06	0.05	0.04	0.04	0.04														
1.5	0.81	0.13	0.11	0.11	0.07	0.07	0.06	0.05	0.05	0.04	0.04	0.04	0.04												
1.75	0.95	0.14	0.12	0.11	0.09	0.07	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.04										
2.0	1.08	0.16	0.13	0.12	0.09	0.08	0.07	0.06	0.05	0.06	0.05	0.05	0.04	0.04	0.04	0.04									
2.5	1.35	0.18	0.15	0.13	0.11	0.08	0.08	0.07	0.07	0.06	0.05	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04						
3.0	1.62	0.20	0.17	0.16	0.11	0.10	0.09	0.08	0.07	0.07	0.06	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04				
3.5	1.89	0.24	0.19	0.18	0.14	0.12	0.10	0.09	0.09	0.08	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05				

Whitworth 55° (Head: XBST-55R, XBST-WR)

Pitch (thread /in)	Total Cutting Depth	Number of Passes (in)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
32	.020	.004	.003	.003	.002	.002	.002	.002	.002																
28	.023	.005	.004	.003	.003	.002	.002	.002	.002																
24	.027	.006	.005	.004	.004	.002	.002	.002	.002																
22	.029	.006	.004	.004	.003	.002	.002	.002	.002	.002	.002														
20	.032	.006	.005	.004	.004	.003	.002	.002	.002	.002	.002														
19	.034	.006	.005	.005	.004	.003	.003	.002	.002	.002	.002														
18	.035	.006	.005	.005	.003	.002	.002	.002	.002	.002	.002	.002	.002												
16	.040	.007	.006	.005	.004	.003	.003	.002	.002	.002	.002	.002	.002												
14	.046	.007	.006	.005	.004	.004	.003	.003	.002	.002	.002	.002	.002	.002	.002										
12	.054	.008	.007	.006	.005	.004	.003	.003	.003	.003	.002	.002	.002	.002	.002	.002									
11	.058	.009	.007	.006	.005	.004	.004	.004	.003	.003	.003	.002	.002	.002	.002	.002									

American NPT (Head: XBST-NPTR)

Pitch (thread /in)	Total Cutting Depth	Number of Passes (in)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
27	.031	.005	.005	.004	.003	.003	.003	.002	.002	.002	.002														
18	.047	.008	.007	.006	.005	.004	.004	.003	.003	.003	.002	.002													
14	.058	.009	.007	.007	.005	.004	.004	.004	.003	.003	.003	.003	.002	.002	.002										

ISO Trapezoidal 30° (Head: XBST-TRR)

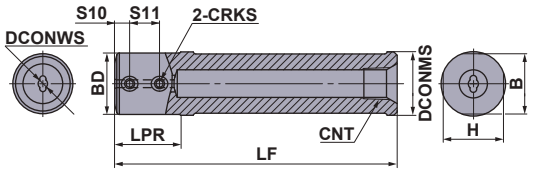
Pitch (mm)	Total Cutting Depth	Number of Passes (mm)																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1.5	0.90	0.15	0.12	0.11	0.09	0.07	0.07	0.05	0.06	0.05	0.05	0.04	0.04												
2.0	1.25	0.18	0.15	0.14	0.11	0.09	0.08	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.04									
3.0	1.75	0.22	0.18	0.17	0.13	0.10	0.10	0.08	0.08	0.08	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.04				
4.0	2.25	0.27	0.22	0.20	0.16	0.13	0.12	0.10	0.10	0.09	0.08	0.08	0.08	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.05		
5.0	2.75	0.31	0.26	0.24	0.18	0.16	0.13	0.12	0.12	0.10	0.10	0.09	0.09	0.09	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06

XBSERIES

SLV_A

With coolant tru

SLV Holder



(mm)

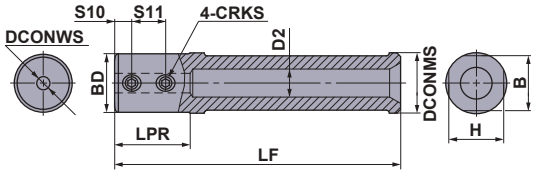
Order Number	Stock	DCONMS	DCONWS	BD	LF	LPR	H	B	S10	S11	CNT
SLV190080060A	●	19.05	6	18.5	80	20	17.8	17.8	5	10	RC1/8
SLV190080070A	●	19.05	7	18.5	80	20	17.8	17.8	5	10	RC1/8
SLV190080080A	●	19.05	8	18.5	80	20	17.8	17.8	5	10	RC1/8
SLV190110060A	●	19.05	6	18.5	110	20	17.8	17.8	5	10	RC1/8
SLV190110070A	●	19.05	7	18.5	110	20	17.8	17.8	5	10	RC1/8
SLV190110080A	●	19.05	8	18.5	110	20	17.8	17.8	5	10	RC1/8
SLV200080060A	●	20	6	19	80	20	18.8	18.8	5	10	RC1/8
SLV200080070A	●	20	7	19	80	20	18.8	18.8	5	10	RC1/8
SLV200080080A	●	20	8	19	80	20	18.8	18.8	5	10	RC1/8
SLV220115060A	●	22	6	20	115	20	20.8	20.8	5	10	RC1/8
SLV220115070A	●	22	7	20	115	20	20.8	20.8	5	10	RC1/8
SLV220115080A	●	22	8	20	115	20	20.8	20.8	5	10	RC1/8
SLV250067060A	●	25	6	20	67	20	23.9	23.9	5	10	RC1/8
SLV250067070A	●	25	7	20	67	20	23.9	23.9	5	10	RC1/8
SLV250067080A	●	25	8	20	67	20	23.9	23.9	5	10	RC1/8
SLV250110060A	●	25	6	20	110	20	23.9	23.9	5	10	RC1/8
SLV250110070A	●	25	7	20	110	20	23.9	23.9	5	10	RC1/8
SLV250110080A	●	25	8	20	110	20	23.9	23.9	5	10	RC1/8
SLV254080060A	●	25.4	6	20	80	20	24.4	24.4	5	10	RC1/8
SLV254080070A	●	25.4	7	20	80	20	24.4	24.4	5	10	RC1/8
SLV254080080A	●	25.4	8	20	80	20	24.4	24.4	5	10	RC1/8
SLV254110060A	●	25.4	6	20	110	20	24.4	24.4	5	10	RC1/8
SLV254110070A	●	25.4	7	20	110	20	24.4	24.4	5	10	RC1/8
SLV254110080A	●	25.4	8	20	110	20	24.4	24.4	5	10	RC1/8
SLV320110060A	●	32	6	20	110	22	31.1	31.1	5	10	RC1/8
SLV320110070A	●	32	7	20	110	22	31.1	31.1	5	10	RC1/8
SLV320110080A	●	32	8	20	110	22	31.1	31.1	5	10	RC1/8
SLV320110100A	●	32	10	25	110	22	31.1	31.1	5	10	RC1/4
SLV320110120A	●	32	12	25	110	22	31.1	31.1	5	10	RC3/8

* When combining a flexible holder and an SLV sleeve, external coolant is recommended.

● : USA Stock

SLV_N

Without coolant thru



(mm)

Order Number	Stock	DCONMS	DCONWS	BD	LF	LPR	H	B	S10	S11	D2
SLV160085060N	●	16	6	15.5	85	20	14.4	14.4	5	10	8.3
SLV160085070N	●	16	7	15.5	85	20	14.4	14.4	5	10	8.3
SLV160085080N	●	16	8	15.5	85	20	14.4	14.4	5	10	8.3
SLV190080060N	●	19.05	6	18.5	80	20	17.8	17.8	5	10	8.3
SLV190080070N	●	19.05	7	18.5	80	20	17.8	17.8	5	10	8.3
SLV190080080N	●	19.05	8	18.5	80	20	17.8	17.8	5	10	8.3
SLV190110060N	●	19.05	6	18.5	110	20	17.8	17.8	5	10	8.3
SLV190110070N	●	19.05	7	18.5	110	20	17.8	17.8	5	10	8.3
SLV190110080N	●	19.05	8	18.5	110	20	17.8	17.8	5	10	8.3
SLV200080060N	●	20	6	19	80	20	18.8	18.8	5	10	8.3
SLV200080070N	●	20	7	19	80	20	18.8	18.8	5	10	8.3
SLV200080080N	●	20	8	19	80	20	18.8	18.8	5	10	8.3
SLV220135060N	●	22	6	20	135	20	20.8	20.8	5	10	8.3
SLV220135070N	●	22	7	20	135	20	20.8	20.8	5	10	8.3
SLV220135080N	●	22	8	20	135	20	20.8	20.8	5	10	8.3
SLV220135100N	●	22	10	20	135	20	20.8	20.8	5	10	11.0
SLV220135120N	●	22	12	20	135	20	20.8	20.8	5	10	14.5
SLV250067060N	●	25	6	20	67	20	23.9	23.9	5	10	8.3
SLV250067070N	●	25	7	20	67	20	23.9	23.9	5	10	8.3
SLV250067080N	●	25	8	20	67	20	23.9	23.9	5	10	8.3
SLV250067100N	●	25	10	22	67	20	23.9	23.9	5	10	11.0
SLV250067120N	●	25	12	22	67	20	23.9	23.9	5	10	14.5
SLV250110060N	●	25	6	20	110	20	23.9	23.9	5	10	8.3
SLV250110070N	●	25	7	20	110	20	23.9	23.9	5	10	8.3
SLV250110080N	●	25	8	20	110	20	23.9	23.9	5	10	8.3
SLV250110100N	●	25	10	22	110	20	23.9	23.9	5	10	11.0
SLV250110120N	●	25	12	22	110	20	23.9	23.9	5	10	14.5
SLV254080060N	●	25.4	6	20	80	20	24.4	24.4	5	10	8.3
SLV254080070N	●	25.4	7	20	80	20	24.4	24.4	5	10	8.3
SLV254080080N	●	25.4	8	20	80	20	24.4	24.4	5	10	8.3
SLV254080100N	●	25.4	10	22	80	20	24.4	24.4	5	10	11.0
SLV254080120N	●	25.4	12	22	80	20	24.4	24.4	5	10	14.5
SLV254110060N	●	25.4	6	20	110	20	24.4	24.4	5	10	8.3
SLV254110070N	●	25.4	7	20	110	20	24.4	24.4	5	10	8.3
SLV254110080N	●	25.4	8	20	110	20	24.4	24.4	5	10	8.3
SLV254110100N	●	25.4	10	22	110	20	24.4	24.4	5	10	11.0
SLV254110120N	●	25.4	12	22	110	20	24.4	24.4	5	10	14.5

* When combining a flexible holder and an SLV sleeve, external coolant is recommended.

XB SERIES

Mounting Chart

Series		Boring Bar Type	Holder Type
XB	Multi-function	XBSH○○0700○○	SLV○○○○○○070A/N
XB	Multi-function	XBSH○○1000○○	SLV○○○○○○100A/N
XB	Multi-function	XBSH○○1200○○	SLV○○○○○○120A/N
XB	Multi-function	XBSH08○○○○○○○FC	XBSHSL○○○○○○○S6N
XB	Multi-function	XBSH11○○○○○○○FC-C	XBSHSL○○○○○○○S8N
MICRO-MINI TWIN	Boring	CB07RS	SLV○○○○○○070A/N
MICRO-MINI TWIN	Grooving	CG0712RS	SLV○○○○○○070A/N
MICRO-MINI TWIN	Grooving	CG0713RS	SLV○○○○○○070A/N
MICRO-MINI TWIN	Grooving	CG07RS	SLV○○○○○○070A/N
MICRO-DEX	Internal	C07KS○○○R○○	SLV○○○○○○070A/N
BORING BAR	Internal	C08-07S-○○○R/L	SLV○○○○○○070A/N
BORING BAR	Internal	C12-10S-○○○R/L	SLV○○○○○○100A/N
BORING BAR	Internal	C13-10SDQCR/L	SLV○○○○○○100A/N
BORING BAR	Internal	C14-10SDUCR/L	SLV○○○○○○100A/N
BORING BAR	Internal	C/S14-12S-○○○R/L	SLV○○○○○○120A/N
BORING BAR	Internal	C16-10SVPCR/L	SLV○○○○○○100A/N
BORING BAR	Internal	C/S16-12S-○○○R/L	SLV○○○○○○120A/N
BORING BAR	Internal	C/S20-12SVPBR/L	SLV○○○○○○120A/N

* The flexible holder is designed to be used in combination with a dedicated sleeve.
If the sleeve outer diameter does not match due to machine specifications, the following SLV sleeves can be used as substitutes:

For XBSH08○○○○○○○FC, use SLV○○○○○○060A/N
For XBSH11○○○○○○○FC-C, use SLV○○○○○○080A/N

When combining a flexible holder and an SLV sleeve, external coolant is recommended.

Spare Parts

Holder Type	Clamp Screw	Torque (lbf-in)	Wrench
SLV○○○○○○060A/N	HSS05004	35.4	HKY25R
SLV○○○○○○070A/N	HSS05004	35.4	HKY25R
SLV○○○○○○080A/N	HSS05004	35.4	HKY25R
SLV○○○○○○100A/N	HSS05004	35.4	HKY25R
SLV○○○○○○120A/N	HSS05004	35.4	HKY25R

Memo

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Fax: 905.814.0245

FOR YOUR SAFETY

- Don't handle inserts and chips without gloves.
- Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage.
- Please use safety covers and wear safety glasses.
- When using compounded cutting oils, please take fire precautions.
- When attaching inserts or spare parts, please use only the correct wrench or driver.
- When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

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Tools specifications subject to change without notice.

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