

XEBEC Optional Tools

Reduce the burden of adjusting for brush wear and achieve more consistent deburring and polishing results.



Holder with brush



XEBEC Floating Holder™

A built-in spring helps to maintain stable load, reducing the frequency of wear offsets and brush protrusion length adjustments.

Floating holder in use



VIDEO



Sleeve with brush



XEBEC Self-Adjusting Sleeve™

A built-in gear mechanism automatically adjusts brush protrusion length, reducing human error and providing consistent machining performance.

Self-adjusting sleeve in use



VIDEO



Brush in setter tool



XEBEC Brush Length Adjustment Tool™

A tool for quick in-machine brush length adjustment.

XEBEC Floating Holder™

Straight Shank Type
BT Shank Type

Patented

Straight Shank Type used with
XEBEC Brush Surface ($\phi 6 \sim 100$)

BT Shank Type used with
XEBEC Brush Surface ($\phi 6 \sim 25$)

A built-in spring helps to maintain stable load, reducing the frequency of wear offsets and brush protrusion length adjustments.



VIDEO

Applicable equipment [Straight Shank Type]

This holder can be used on equipment shown below.



Machining
center



Lathe
(with live tools)



Dedicated
machine



Robot

Applicable equipment [BT Shank Type]

This holder can be used with machine tools that are
compatible with BT30/40 shanks.

Straight Shank Type

Product code	Matching brush dia. (mm)	Sleeve shank diameter (mm)	Maximum rotational speed (min ⁻¹)	Attachments	Fig.
FH-ST12-SL10	$\phi 6$	$\phi 6$ (use with bush 1●)	10000	1. $\phi 6$ bush	11
	$\phi 15$	$\phi 6$ (use with bush 1●)	6000	2. $\phi 8$ bush	
	$\phi 25$	$\phi 8$ (use with bush 2●)	5000	3. Low-pressure spring	
	$\phi 40$	$\phi 10$	3000	4. Standard spring◆ 5. High-pressure spring	
FH-ST20-60	$\phi 60$	$\phi 12$	2000	$\phi 12$ bush	12
FH-ST20-100	$\phi 100$	$\phi 16$	1200	$\phi 16$ bush	12

- ◆ Installed when shipped.
- Attachments included when shipped.
- Optional $\phi 3$ bush is available.
- Refer to p. 24 for the spring load.



Fig. 11

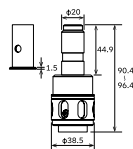


Fig. 12

BT Shank Type

Product code	Matching brush dia. (mm)	Sleeve shank diameter (mm)	Maximum rotational speed (min ⁻¹)	Length under gauge line (mm)	Fig.
FH-BT30	$\phi 6$	$\phi 6$ (with $\phi 6$ bush○)	10000	75	13
	$\phi 15$	$\phi 6$ (with $\phi 6$ bush○)	6000		
	$\phi 25$	$\phi 8$	5000		
FH-BT40	$\phi 6$	$\phi 6$ (with $\phi 6$ bush○)	10000	60	14
	$\phi 15$	$\phi 6$ (with $\phi 6$ bush○)	6000		
	$\phi 25$	$\phi 8$	5000		

- $\phi 6$ bush sold separately.
- Refer to p. 24 for the spring load.

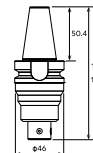


Fig. 13

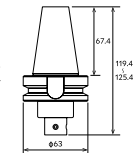


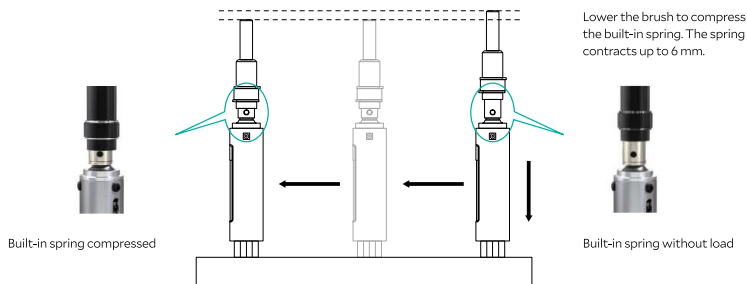
Fig. 14

Precautions for use

- Lower the tool vertically onto the workpiece.
- The tool cannot be used on surfaces that are discontinuous or have protrusions.
- The tool may not function correctly on a horizontal machining center when spring load is low.

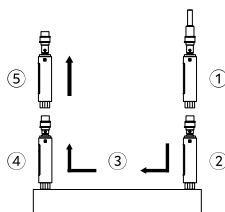
Mechanism

This tool has a built-in spring. The spring is compressed when the brush contacts the workpiece surface.



How to use

Product in use



The diagram to the left shows how to use the tool effectively.

1. Approach the workpiece surface from above without rotating the brush.
2. Set the depth of cut and compress the spring.
3. Rotate the brush and start feeding with the spring compressed.
4. Stop rotation and feed when finished machining.
5. Remove the brush upward from the workpiece surface.

Unacceptable workpiece shapes



Avoid cavities and protrusions to ensure proper operation of the floating mechanism.

FH-ST12-SL10 spring specifications

Spring type	Outer diameter (mm)	Spring constant (N/mm)	Overall length (mm)	Load by stroke (N)	
				0 mm	6 mm
Standard spring (installed)	φ10	0.30	40	4.5	6.3
Low-pressure spring (attachment)	φ10	0.30	30	1.5	3.3
High-pressure spring (attachment)	φ10	0.55	38	7.7	11.0
Maximum load spring (sold separately)	φ10	3.03	30	15.2	33.4

FH-ST20-60/100 and FH-BT30/40 load adjustment

Load adjustment	Load by stroke (N)		Load adjustment screw position
	0 mm	6 mm	
Standard float	2	6	When load adjustment screw is flush with shaft end.
Higher float	6	10	When load adjustment screw is fully inside shaft.



MANUAL

XEBEC Self-Adjusting Sleeve™ Patented

Used with
XEBEC Brush Surface ($\phi 6 - 40$)

A built-in gear mechanism automatically adjusts brush protrusion length, reducing human error and providing consistent machining performance.



VIDEO

Applicable equipment

This tool is used on equipment capable of precise angular control of the sleeve.



Machining center



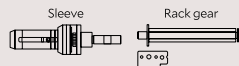
Dedicated machine



Robot

Tool composition

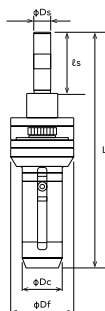
Consists of a sleeve and rack gear. Brushes are sold separately.



Sleeves

Product code	Matching brush	Sleeve outer dia. Dc (mm)	Maximum outer dia. Df (mm)	Shank diameter Ds (mm)	Overall length L (mm)	Shank length ℓ_s (mm)	Main body mass (g)	Maximum rotational speed (min ⁻¹)	Fig.
XP-AUT06M	A13-CB06M	$\phi 14.2$	$\phi 37$	$\phi 10$	124.1	35.0	220	10000	15
	A11-CB06M								
	A21-CB06M								
	A32-CB06M								
XP-AUT15M	A13-CB15M	$\phi 23.4$	$\phi 37$	$\phi 10$	136.3	35.0	270	6000	15
	A11-CB15M								
	A32-CB15M								
	A11-CB25M								
XP-AUT25M	A21-CB25M	$\phi 34.6$	$\phi 60$	$\phi 16$	189.0	41.5	795	5000	15
	A32-CB25M								
	A11-CB40M								
XP-AUT40M	A21-CB40M	$\phi 50.0$	$\phi 60$	$\phi 16$	189.0	41.5	910	3000	15
	A32-CB40M								

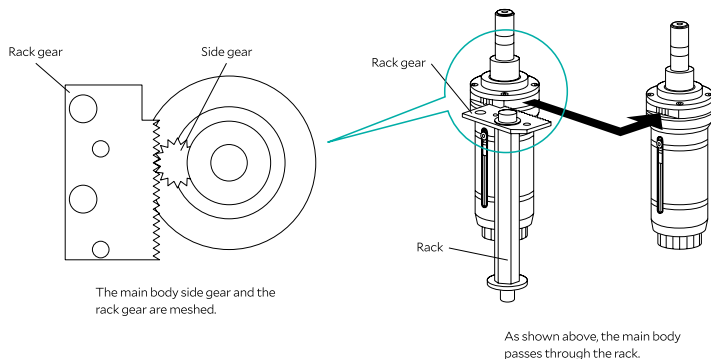
Fig. 15



How to use

Mount the rack gear inside the machine.

The brush protrusion length is adjusted by rotating the side gear built inside the sleeve with the rack gear.



Brush protrusion length

The brush protrusion length can be adjusted in increments of 0.05 mm.

It is possible to make an adjustment of up to 1 mm in a single pass. This allows adjustments to be made at a predetermined interval corresponding to tool wear.



MANUAL

XEBEC Short BT Holder™

Compact tool holder whose length under the gauge line is 23.5 mm (including bush flange thickness 1.5 mm). Optimal when space is limited.

■ Only for use with XEBEC tools

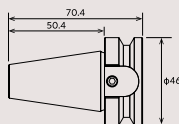


Used with
XEBEC Brush Surface
XEBEC Self-Adjusting Sleeve
XEBEC Floating Holder

Applicable equipment

This tool can be used with machine tools that are compatible with BT30 shanks.

Tool outline



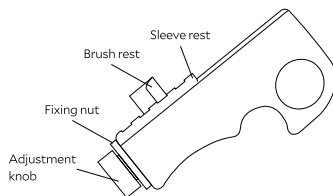
XEBEC Brush Length Adjustment Tool™

A tool for quick in-machine brush length adjustment.

Product code	Matching brush diameter (mm)	Built-in hexagonal wrench size (mm)
XP-EZ-001	$\phi 15$ / $\phi 25$ / $\phi 40$ / $\phi 60$ / $\phi 100$	1.5, 2.0

How to use

- Move the brush rest using the adjustment knob to set the amount of brush protrusion.
- Tighten the fixing nut.
- Hold the unit in one hand and align the sleeve rest with the sleeve end.
- Loosen the adjustment screw on the sleeve to allow the bristles to drop to the brush rest.
- Tighten the adjustment screw to secure the brush in place.



Used with
XEBEC Brush Surface ($\phi 15 - 100$)

MEMO