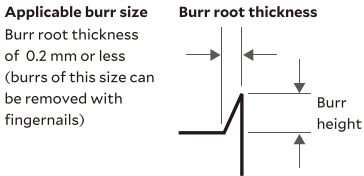


XEBEC Stone™ Flexible Shaft

Patented

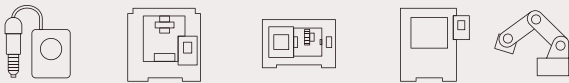
Ideal for deburring and polishing front and back of cross holes, grooves and areas that are deep inside the workpiece. The spring steel flexible shaft absorbs vibrations which makes soft contact with the surface possible.



Video (YouTube)

Applicable equipment

This tool can be mounted on equipment which can control the rotational speed.



Rotary tool
(electric)

Machining
center

Lathe (with milling
function)

Special
machine

Robot

Ball type

Equivalent grit (Color)	Product code	Head size (mm)	Shaft diameter (mm)	Shank diameter (mm)	Overall length L (mm)	Standard rotational speed (min ⁻¹)	Maximum rotational speed (min ⁻¹)	Fig
#800 (Blue)	CH-PB-3B	φ 3	φ 1.5	φ 3	70	5000 - 8000	15000	18
	CH-PB-4B	φ 4	φ 1.5	φ 3	70	5000 - 8000	13000	18
	CH-PB-5B	φ 5	φ 1.5	φ 3	70	5000 - 8000	12000	18
	CH-PB-6B	φ 6	φ 1.5	φ 3	70	5000 - 8000	10000	18
#400 (Orange)	CH-PO-3B	φ 3	φ 1.5	φ 3	70	5000 - 8000	15000	18
	CH-PO-4B	φ 4	φ 1.5	φ 3	70	5000 - 8000	13000	18
	CH-PO-5B	φ 5	φ 1.5	φ 3	70	5000 - 8000	12000	18
	CH-PO-6B	φ 6	φ 1.5	φ 3	70	5000 - 8000	10000	18
#220 (Gray)	CH-PM-3B	φ 3	φ 1.5	φ 3	70	5000 - 8000	15000	18
	CH-PM-4B	φ 4	φ 1.5	φ 3	70	5000 - 8000	13000	18
	CH-PM-5B	φ 5	φ 1.5	φ 3	70	5000 - 8000	12000	18
	CH-PM-6B	φ 6	φ 1.5	φ 3	70	5000 - 8000	10000	18
	CH-PM-10B	φ 10	φ 1.5	φ 3	70	4000 - 5000	6000	18
	CH-PM-3B-L	φ 3	φ 1.5	φ 3	150	—	1000	18
	CH-PM-4B-L	φ 4	φ 2.3	φ 2.3	150	—	3000	19
	CH-PM-5B-L	φ 5	φ 2.3	φ 2.3	150	—	3000	19
	CH-PM-6B-L	φ 6	φ 2.3	φ 2.3	150	—	3000	19
	CH-PM-10B-L	φ 10	φ 2.3	φ 2.3	150	—	2000	19

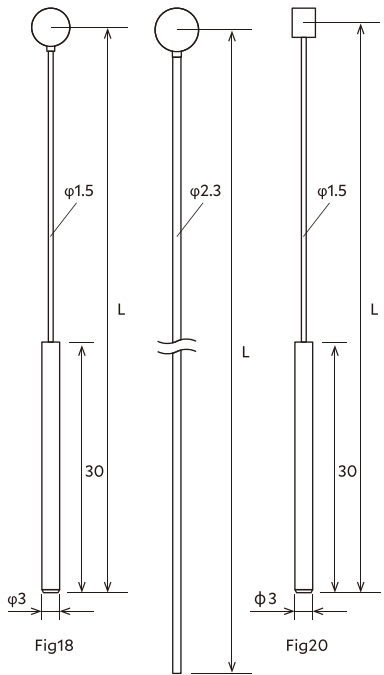


Fig19
(CH-PM-4B-L
CH-PM-5B-L
CH-PM-6B-L
CH-PM-10B-L)

Cylinder type

Equivalent grit (Color)	Product code	Head size (mm)	Shaft diameter (mm)	Shank diameter (mm)	Overall length L (mm)	Standard rotational speed (min ⁻¹)	Maximum rotational speed (min ⁻¹)	Fig
#800 (Blue)	CH-PB-3R	φ3×3	φ 1.5	φ 3	70	5000 - 8000	15000	20
	CH-PB-4R	φ4×4	φ 1.5	φ 3	70	5000 - 8000	13000	20
	CH-PB-5R	φ5×5	φ 1.5	φ 3	70	5000 - 8000	12000	20
#400 (Orange)	CH-PO-3R	φ3×3	φ 1.5	φ 3	70	5000 - 8000	15000	20
	CH-PO-4R	φ4×4	φ 1.5	φ 3	70	5000 - 8000	13000	20
	CH-PO-5R	φ5×5	φ 1.5	φ 3	70	5000 - 8000	12000	20
#220 (Gray)	CH-PM-3R	φ3×3	φ 1.5	φ 3	70	5000 - 8000	15000	20
	CH-PM-4R	φ4×4	φ 1.5	φ 3	70	5000 - 8000	13000	20
	CH-PM-5R	φ5×5	φ 1.5	φ 3	70	5000 - 8000	12000	20
	CH-PM-5R-C01	φ5×10	φ 1.5	φ 3	70	5000 - 8000	12000	20

Precautions for Use

- The tool will be damaged when:
- processed beyond the maximum rotation speed
 - used with a pneumatic tool

Disc type

Ceramic Stone

Equivalent grit (Color)	Product code	Head diameter x thickness (mm)	Maximum rotational speed (min ⁻¹)	Fig
#220(Gray)	CH-PM-14D	φ14×2	5000	21

Trial set

The set includes a disc type
Stone and a shaft.

Product code
CHPM14D-SET

Φ2.3 to Φ3 Collet Adapter

Adapts the φ2.3 shaft to fit on a rotary
tool that can hold φ3 shanks.

Product code
RMP3024X

Shaft

Product code	Shaft diameter (mm)	Overall length (mm)	Mounting screw	Maximum rotational speed (min ⁻¹)	Fig
CH-D-SH	φ2.3	78	M2×6	5000	22

Precautions for Use

Use the disc type by normal rotation (clockwise). If it is used by reverse
rotation, the screw will be loosened, and the Stone can be fallen off.

The tool will be damaged when:

- processed beyond the maximum rotation speed
- used with a pneumatic tool

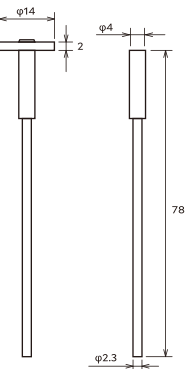
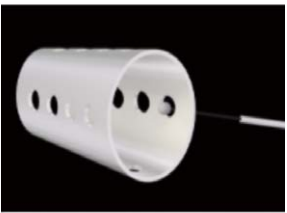


Fig21

Fig22

Applications

Deburring of a pipe part
for aircraft (cross hole)



Material : SUS
Previous process : Drilling
Tool : CH-PM-6B

Before

Deburring with a rubber
grinding stone on a rotary tool.
Finish quality varied depending
on the workers' skill. It took 40
min to remove burrs from 16
cross holes.

After

Remove burrs by contouring by
inserting the Stone in the cross
holes and pulling it out. Finish
quality is uniformed, and
deburring time is shortened.

Deburring of a hole
in a groove



Material : SCM
Previous process : Drilling
Tool : CH-PM-145D

Before

Deburring with a disk-shaped
grinding stone with a shaft. It
was difficult to approach the
spot with the shaft too short
and the tool had a short life.

After

Easy to approach the groove
with the disc type Stone with a
long shaft. Compared with the
grinding stone that was used
before, the ceramic fiber Stone
lasts longer and does not need
to be replaced as frequently.
Improved cost efficiency
as only the stone need to be
replaced.

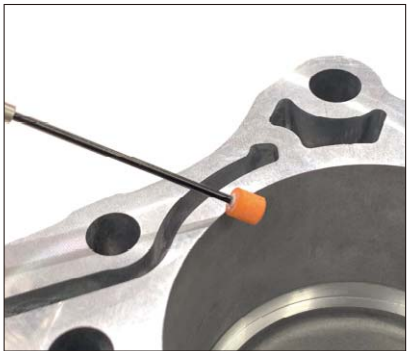
How to use

All surfaces of the ceramic stone is abrasive and all of them can be used for deburring and polishing.

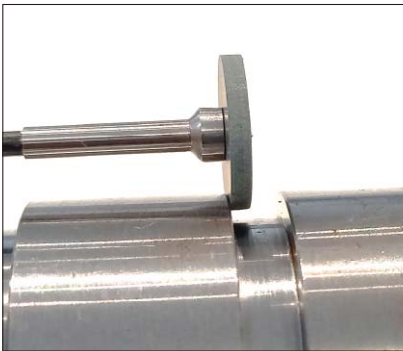
Ball type



Cylinder type

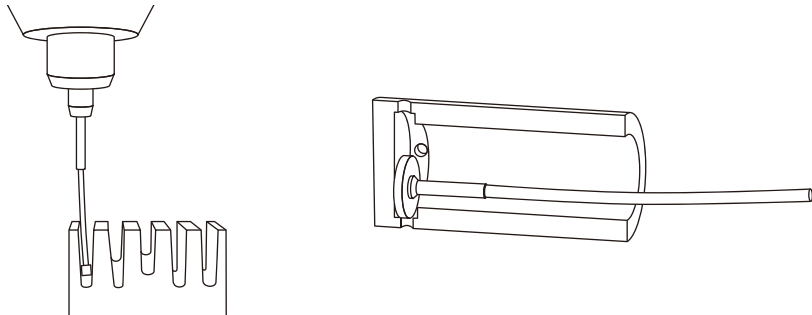


Disc type



Features

The spring steel flexible shaft absorbs vibrations which makes soft contact with the surface possible while
preventing the Ceramic Stone to bounce around, thereby reducing the risk of scratching the workpiece.
These benefits make this an optimal tool for polishing and deburring areas that are deep inside the workpiece.



Instruction manual