

# "The world's smallest angle spindle"

capable of chamfering / deburring the inside of  $\phi 18$  mm I.D. pipes

\*Among commercially available products according to Nakanishi survey, as of January 1, 2026.

Angle Spindle with Ultra-Compact Head

# RAM-3014

For use with  $\phi 1.6$  mm diameter tools

This product is an angle spindle featuring the world's smallest head. Electroplated diamond burs and Counterclockwise carbide chamfer cutter solve chamfering and deburring challenges for aluminum and stainless steel parts.



Shown in actual size



## Machining data Inner Cross Hole Chamfering for a $\phi 21$ mm I.D. Pipe

Machine tool	Machining center (Sodick Co., Ltd. / MC430L)
Workpiece	Aluminum (O.D.: $\phi 25$ mm, I.D.: $\phi 21$ mm, Side hole diameter: $\phi 2$ mm)
Tool	Counterclockwise carbide chamfer cutter (67102)
Rotational speed	Output: $13,630 \text{ min}^{-1}$ / Input: $15,000 \text{ min}^{-1}$
Feed rate	500 mm/min
Depth of cut	0.1 mm

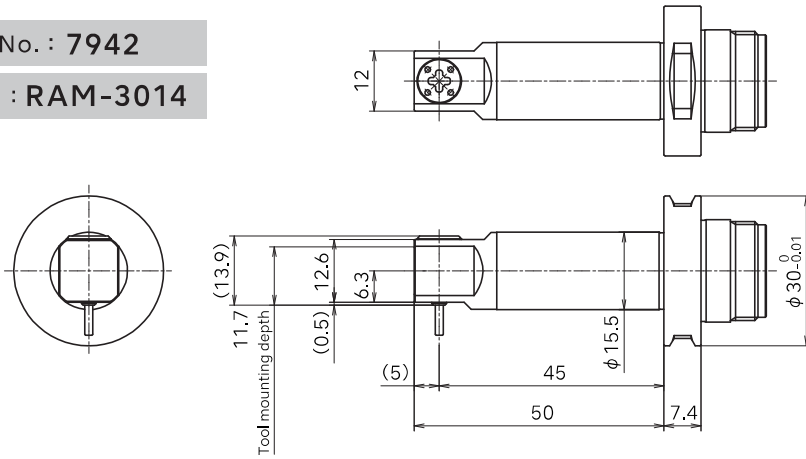
Check out  
the video  
for more details.



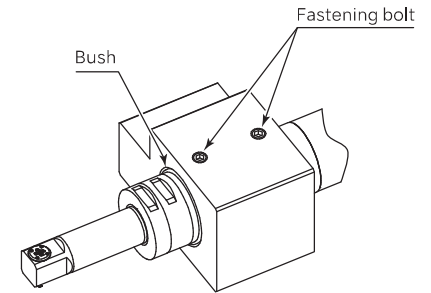
# Specifications

Code No. : 7942

Model : RAM-3014



## Bush installation image



O.D. φ30 mm	Max. speed at cutting tool 13,630 min <sup>-1</sup>	Max. allowable motor speed 15,000 min <sup>-1</sup> (Allowable rotational speed)	Reduction ratio 10/11	Net weight 116 g
Standard equipment and accessories Collet (K-252) / Wrench (22 × 27) : 1 pc. / Collet wrench (K-232)				

# Combination example

Collet	Spindle	Motor	Motor cord	Controller	Air line kit
<b>K-252</b> φ1.6 mm	<b>RAM-3014</b>	<b>EM-3060J / EM-3030T</b> + <b>Bush</b> RB-30×32 / RB-30×36	<b>EMCD-3000J</b> + <b>EMCD-3000</b>	<b>E3000i</b> <b>CONTROLLER</b>	<b>AL-C1204</b>
		<small>*The GR-30 cannot be used with RAM-3014.</small>		<small>*The E3000 controller may also be used, but the E3000i controller is recommended.</small>	<small>*Supply cooling air</small>

# Machining data

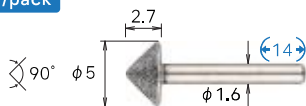
Workpiece	Tool	Processing form	Rotating speed at cutting tool [min <sup>-1</sup> ]	Feed rate [mm/min]	Depth of cut [mm]	Feed per blade [mm/tooth]	Chamfering	Edge chamfering
A5052 (Aluminum alloy)	Counterclockwise carbide chamfer cutter (67102)	Chamfering	13,630	1,050	Below 0.10	Below 0.026		
		Edge chamfering	13,630	840	Below 0.05	Below 0.020		
Chamfering		9,090	400	Below 0.10	Below 0.015			
Edge chamfering		9,090	300	Below 0.05	Below 0.011			

## φ1.6 mm Exclusive tools \*Please use with reverse rotation (counterclockwise).

### Electroplated diamond bur

Grit #140 Max. allowable speed: 160,000 min<sup>-1</sup>

5 pcs./pack

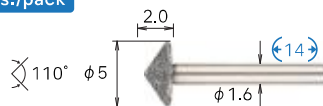


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### Electroplated diamond bur

Grit #140 Max. allowable speed: 180,000 min<sup>-1</sup>

5 pcs./pack

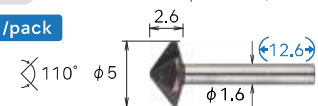


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### Counterclockwise carbide chamfer cutter

3 blades Max. allowable speed: 13,630 min<sup>-1</sup>

1 pc./pack



67102



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\*Specifications and design are subject to change without notice.



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