

ATTACHMENT TYPE MICRO AIR GRINDER

ROTUS Series

ROTUS SERIES ◀◀



ROTUS Standard Set
Code No. 1163 Model ROTUS-IR



- Interchangeability with a variety of attachments ideal for any applications.
- To achieve high torque, ROTUS air motor is assembled with micron precision between the vanes and the internal surface of the cylinder using NAKANISHI's proprietary techniques.
- Lightweight and compact design.
- Assembled with ON/OFF, speed control and FWD./REV. by the Ring Switch.

A Special Rotary Vane Air Motor is Incorporated

The air motor utilizes a special vane design which keeps constant speed even under load providing stable grinding and polishing operation.

Excellent quietness with Silencer

By attaching the silencer to the end of the exhaust air tubing, the motor is operated extremely quiet.

Twist Free Hose

To prevent twisting of the hose, 360° Twist- Free Joint connects the motor and the hose. (IM-301)

30,000 min⁻¹

Ring Type Attachment		
Code No.	1147	Model IR-310
ROTUS Air Motor		
Code No.	1004	Model IM-301

14 Types of Attachments Available

14 different types of attachments making an almost infinite number of applications possible.



* ROTUS Attachment is exchangeable for Emax EVOLUTION. System Chart Emax EVOLUTION Series / ROTUS Series (P.11-12)

Set-Up Drawing



■ Use Air Line Kit AL-H1207F or air supply 3 pieces set. (Air Filter, Air Regulator, Lubricator)

ROTUS Series System Chart

Code No.

Model

Attachment

1147

IR-310

Ring Type

1005

IH-300

Lever Type

2811

IG-400

Straight Type

1016

HG-200

6 mm Torque Type

1017

BMH-300

Long Type

1012

MFC-300S

90° Mini Angle Type

1013

MFC-300M

90° Mini Angle Type (Very Small Head)

1006

IC-300

90° Angle Type

1014

KC-300

50° Angle Type

LUSTER

1302

LS-100

Pistol-Type Polisher (Reciprocating motion)

MINI-LUSTER

1307

ML-8

Pencil-Type Reciprocating Polishing Finisher (Reciprocating motion)

SWING-LUSTER

1380

SLS-16

Pencil-Type Reciprocating Polishing Finisher (Right to left motion)

Hammer Action Type

8060

HA-500

Engraving and Ornament Processing Work Hammer

FINE BELT SANDER

1146

KBS-101

Small-sized Handy Belt Sander

Speed Reducer·Extension Joint

Extension Joint

1015

CN-01

1/4 Speed Reducer

1009

RG-01

1/15 Speed Reducer

1010

RG-02

May be connected between the motor and the attachment when required increased torque.

Motor

Air Motor with Hose 360° Twist-Free Joint Mechanism

1004

IM-301

3,000~30,000 min⁻¹

Air Line Kit

4507

AL-H1207F

Foot Controller

1064

AFC-45

*This air line kit is designed for use with the AFC-45 foot controller, Code No.1064.

Electricaly Driven

EmaxEVO ESPERT

Air Driven

ROTUS IMPULSE PRESTO II

General Parts

GENERAL PARTS

CAUTION

Exclusive Tools

EXCLUSIVE TOOLS

INDEX

Protective Equip.

Details of Maximum Allowable speed on intermittent use or continuous use P.41~44

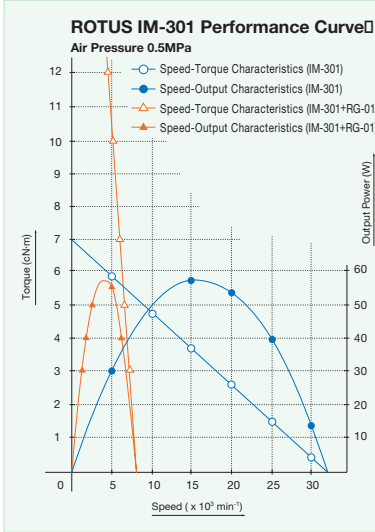
ROTUS SERIES

PRECISION HIGH TORQUE AIR MOTOR · STANDARD SET

ROTUS Air Motor · Standard Set

3,000~30,000 min⁻¹

- To achieve high torque, ROTUS air motor is assembled with micron precision between the vanes and the internal surface of the cylinder using NAKANISHI's proprietary techniques.
- This high performance air motor with minimal power loss from load fluctuation has excellent performance in its grinding stability. Moreover, the motor with minimal air consumption runs quietly and the energy-saving mechanism makes it possible to operate with a 0.75KW (1hp) air compressor.
- Lightweight and compact design. 130 g (w/o hose)
- 14 types of attachments for all types of applications.
- ON/OFF, FWD./REV. Rotation Direction and Motor Speed can be controlled only by the Ring Switch.
 - Foot controller is available (P.44) : used as an ON/OFF switch as well as a variable speed control.
- Air cooling system generates no heat for continuous operation.
- By attaching the silencer to the end of the exhaust air tubing, the motor is operated extremely quiet.
- Twist-Free Joint mechanism is installed in IM-301 to solve the problem of hose twisting.



ROTUS Air Motor (with Twist-Free Joint Mechanism)

2,000~30,000 min⁻¹

Code No.	1004	Model	IM-301
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- Speed : Max. 30,000 min⁻¹ (0.4 MPa)
- Proper Air Pressure : 0.3~0.45 MPa
- Air Consumption : 75 NL/min
- Output Power : 46 W
- Max. Torque : 6.6 cN·m (0.4 MPa)
- Weight : 130 g (w/o hose)

Standard Accessories

- Hose (K-206) : 2 m
- Silencer (K-209)
- Pin Spanner (K-233) : 1 pc.



<Air Motor with 360° Twist-Free Joint Mechanism>

- Adopted Twist-Free Joint mechanism between the motor and the hose has solved the problem of hose twisting.



ROTUS Standard Set



30,000 min⁻¹ (Speed)

The ROTUS System is a hand-held grinder with an energy saving air motor. Since it is an air driven system, there is virtually no heat generation resulting in excellent durability. Select from a variety of attachments depending on the application.

The Ring type IR-310 is a standard attachment for ROTUS standard set ROTUS-IR.

Code No.	1163	Model	ROTUS-IR
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- Standard Equipment
- Air Grinder (IR-310+IM-301) : 1 pc.
 - Collet ø3.0mm (CHH-3.0), ø2.35 mm (CHH-2.35) : 1 pc. each
 - Air Line Kit (AL-H1207F) : 1 pc.
 - Foot Controller (AFC-45) : 1 pc.
 - Accessories : Piping Hose 2m (K-275) : 1 pc., Lubricating Oil (K-211) : 1 pc., Spanner (7x5.1) : 1 pc., Pin Spanner (K-233) : 2 pcs., L Shaped Spanner (9) : 1 pc.

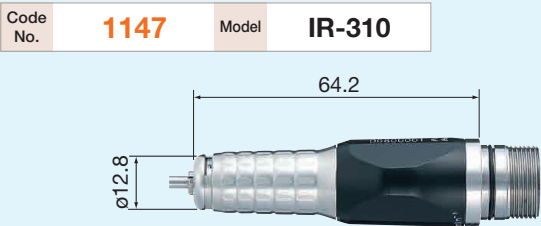
Specifications (IM-301 + IR-310)

Weight	Max. Torque	Speed	Proper Air Pressure	Air Consumption	Output Power	Collet
222g(*)	6.6 cN·m (0.4 MPa)	30,000 min ⁻¹	0.3~0.45 MPa	75 NL/min	46 W (Motor)	ø0.3~ø3.175 mm CHH Group (P.55)

* Weight (w/o Hose)

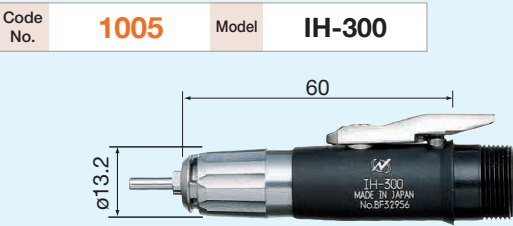
◆ Order by Code No.

Ring Type Attachment



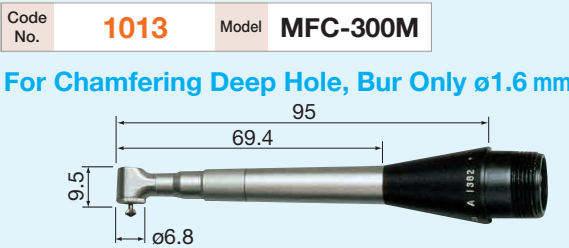
- 40,000 min⁻¹ Max.**
- High precision and high reliability is realized by micron precision.
 - Slim, lightweight design allows for fine finishing of delicate parts.
 - One-touch ring type bur replacement.
- ◆ Weight : 92 g
- Standard Size Collet
- ø3.0 mm (CHH-3.0) ø2.35 mm (CHH-2.35)
- Optional Collets : CHH group are shown in page (P.55)
- Standard Accessories
- Spanner (7x5.1) : 1 pc. • Pin Spanner (K-233) : 1 pc.
 - L Shaped Spanner (9) : 1 pc.

Lever Type Attachment



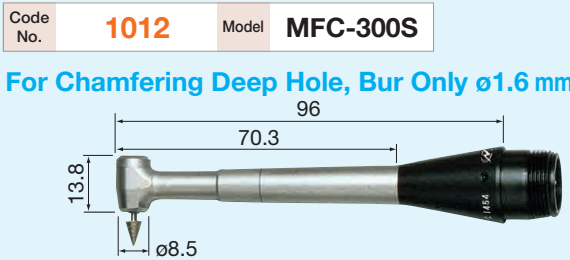
- 40,000 min⁻¹ Max.**
- High precision and high reliability is realized by micron precision.
 - Slim, lightweight design allows for fine finishing of delicate parts.
 - Lever Type one touch bur release.
- ◆ Weight : 62 g
- Standard Size Collet
- ø3.0 mm (CHH-3.0) ø2.35 mm (CHH-2.35)
- Optional Collets : CHH group are shown in page (P.55)
- Standard Accessories
- Spanner (7x5.1) : 1 pc.
 - Pin Spanner (K-233) : 1 pc.

90° Mini Angle Type Attachment



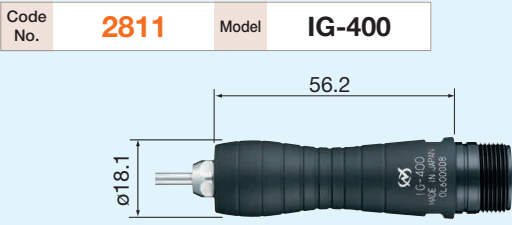
- 15,000 min⁻¹ Max.**
 Please use it with Speed Reducer.
- The world's smallest angle type attachment.
 - Suitable for chamfering and deburring the inside of the slit pipe.
- ◆ Minimum Inner Diameter : ø13 mm
 ◆ Holding tool width : 7.2 mm ◆ Weight : 47 g
 ◆ Speed Reduction Ratio : 10/11
- Standard Size Collet
- ø1.6 mm (K-253) P.56
- Standard Accessories
- Chuck Wrench (K-232) : 1 pc. • Pin Spanner (K-233) : 1 pc.

90° Mini Angle Type Attachment



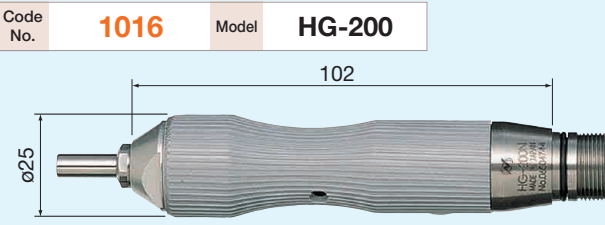
- 15,000 min⁻¹ Max.**
 Please use it with Speed Reducer.
- Suitable for chamfering and deburring the inside of the slit pipe.
 - Minimum Inner Diameter : ø20 mm
- ◆ Holding tool width : 11.9 mm
 ◆ Weight : 50 g
 ◆ Speed Reduction Ratio : 10/11
- Standard Size Collet
- ø1.6 mm (K-252) P.56
- Standard Accessories
- Chuck Wrench (K-232) : 1 pc. • Pin Spanner (K-233) : 1 pc.

Straight Type Attachment



- 40,000 min⁻¹ Max.**
- Lightweight ergonomically designed with minimal vibration for extended use.
 - NK Micron Collet permits strong retention and high precision performance.
- ◆ Weight : 55 g
- Standard Size Collet
- ø3.0 mm (NKM6-3.0)
- Optional Collets : NKM6 group are shown in page (P.56)
- Standard Accessories
- Collet Nut (CHN-6) • Bar Wrench (PCR-30) : 1 pc.
 - Spanner (9 x 9), (15 x 17) : 1 pc. each

6 mm Torque Type Attachment



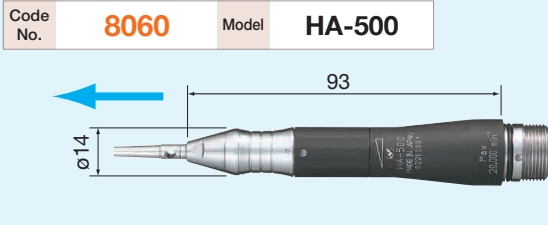
- 30,000 min⁻¹ Max.**
 Please use it with Speed Reducer.
- Permits the use of ø6.0 mm shank burs.
 - The resistance produced by cutting and grinding is absorbed by a special rubber grip to eliminate slipping.
 - Collet is tightened by a spanner.
- ◆ Weight : 210 g
- Standard Size Collet
- ø6.0 mm (CHG-6.0)
- Optional Collets : CHG group are shown in page (P.55)
- Standard Accessories
- Spanner (10 x 10) : 1 pc. • Bar Wrench (K-212) : 1 pc.
 - Pin Spanner (K-233) : 1 pc.

SWING-LUSTER Attachment



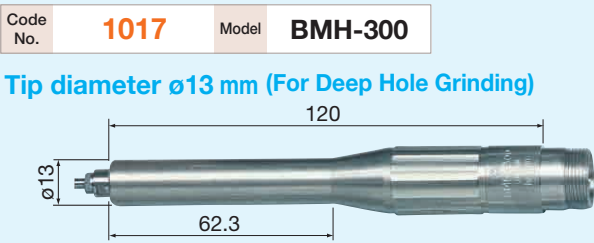
- 30,000 min⁻¹ Max.**
- High speed grinding and polishing operations can be performed while maintaining the fine and delicate feeling of hand polishing.
 - Lightweight pencil type design makes it easy to work in tight areas.
 - Easily adjustable stroke length allows efficient work on minute areas or large sections.
- ◆ Weight : 127 g ◆ Stroke Range (variable) : 0~1.6 mm
 ◆ Reciprocating Stroke (variable) : 0~7,650 times/min.
 ◆ Max. tool shank diameter ø5.0 mm, Screw clamp type.
- Standard Accessories
- Spanner (16 x 18), (20 x 24) : 1 pc. each
 - Allen Wrench (1.5 mm) : 1 pc. • Standard Accessories : 1 set
- Standard Accessories
- | Code No. | Description | Package |
|----------|--|------------|
| 60737 | Ceramic Fiber Grindstone 1 x 6 x 50 #1200 | 1 pc. each |
| 62814 | Electroplated Diamond File 1.2 x 4 x 50 #100 | |
| 62510 | Ceramic Fiber Grindstone Holder | |

Hammer Attachment



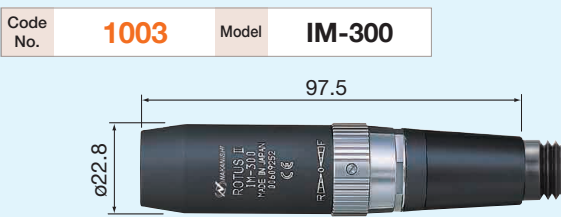
- 16,000 min⁻¹ Max.**
 Please use it with Speed Reducer.
- A wide variety of patterns can be produced by varying the spring pressure and hammer speed.
 - Light weight, pencil type grip makes the handpiece very comfortable to hold and easy to use.
 - Adjustable spring pressure. ◆ Weight : 95 g
 - Self lubricating hammer mechanism ensure excellent durability.
 - Stroke Range : 0.4 mm ◆ Stroke Times : 25~4,000 times/min.
 - Stroke Spring Pressure : 4.4~7.1 N (Ring Adjustment Type)
- Standard Accessories
- Spanner (7 x 5.5) : 1 pc. • Bar Wrench (K-212) : 1 pc.
 - Oil and Oil offer machine • Hammer Bit (For replacement) : 2 pcs.
- Hammer Bit to be machined to required shapes (SUS-420, heat treated, approx, HRC50)
- | Code No. | Package |
|----------|-------------|
| 65301 | 3 pcs./pack |

Long Type Attachment



- 35,000 min⁻¹ Max.**
- This unique slim body makes it ideal for cutting and grinding the bottom surface of deep ribs or holes.
 - Collet is tightened by a spanner.
- ◆ Weight : 156 g
- Standard Size Collet
- ø3.0 mm (CHM-3.0)
- Optional Collets : CHM group are shown in page (P.56)
- Standard Accessories
- Spanner (7 x 5.1), (6 x 4.5) : 1 pc. each
 - Pin Spanner (K-233) : 1 pc.

ROTUS Air Motor (with Chip Air Mechanism)



- ◆ Speed : 3,000~30,000 min⁻¹ ◆ Proper Air Pressure : 0.3~0.45 MPa
 ◆ Air Consumption : 75 NL/min ◆ Output Power : 46 W
 ◆ Max. Torque : 6.6 cN·m (0.4MPa) ◆ Weight : 130 g (w/o hose)
- Standard Accessories
- Hose (K-207) : 2 m • Silencer (K-209) • Pin Spanner (K-233) : 1 pc.

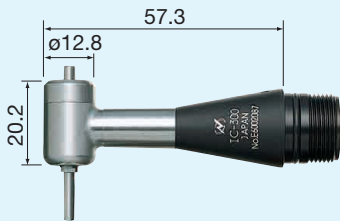
<Air Motor with Chip Air Mechanism>

- Air motor IM-300 with Chip Air Mechanism blows away the cutting dust with clean air coming through the top end of the attachment. The hand-held cutting work remains cool by the chip air allowing comfort through out the working process.



90° Angle Attachment

Code No.	1006	Model	IC-300
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- 30,000 min⁻¹ Max.
Please use it with Speed Reducer.
- Suitable for polishing a flat surface at speed with a grinding disk pad.
 - Capable of applications for rough cutting to mirror finishing.
 - Speed Reduction Ratio : 3/4

◆ Weight : 45 g

Standard Size Collet

Optional Collets : CHC group are shown in page (P.55)

Standard Accessories

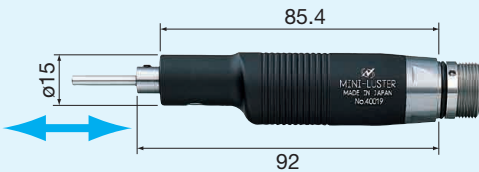
- Chuck Wrench (K-231) : 1 pc.
- Pin Spanner (K-233) : 1 pc.
- Standard Accessories : 1 set

Code No.	Description	Package
64101	Rubber Pad (Small) O.D. ø10 mm	1 pc./pack
64102	Rubber Pad (Med) O.D. ø20 mm	
64103	Rubber Pad (Large) O.D. ø30 mm	
64133	Sand Paper Disk for small pad ø11 #180	5 pcs./pack
64137	Sand Paper Disk for small pad ø11 #600	
64153	Sand Paper Disk for med. pad ø21 #180	
64157	Sand Paper Disk for med. pad ø21 #600	
64173	Sand Paper Disk for large pad ø31 #180	
64177	Sand Paper Disk for large pad ø31 #600	

MINI-LUSTER Attachment (Pencil-Type Reciprocating Polishing Finisher)

Code No.	1307	Model	ML-8	Stroke (0.8 mm)
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Reciprocating motion



- 25,000 min⁻¹ Max.
- Due to pencil type grip, it is most suitable for polishing narrow grooves, details, etc.
 - Stroke Range (Fixed) : 0.8 mm
 - Reciprocating Stroke (Variable) : 0~6,380 times/min.

◆ Weight : 130 g

◆ Max. tool shank diameter ø3.2 mm, Screw clamp type

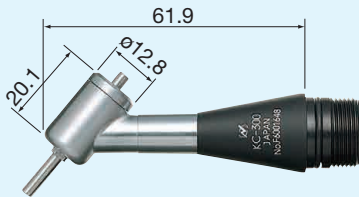
Standard Accessories

- Allen Wrench (1.5 mm) : 1 pc.
- Standard Accessories : 1 set

Code No.	Description	Package
62751	Spring Holder	1 pc./pack
62510	Ceramic Fiber Grindstone Holder	
62814	Electroplated Diamond File 1.2 x 4 x 50 #100	
60737	Ceramic Fiber Grindstone 1 x 6 x 50 #1200	

50° Angle Attachment

Code No.	1014	Model	KC-300
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- 30,000 min⁻¹ Max.
Please use it with Speed Reducer.
- Perfect for finishing bottom surfaces and other tight, hard to reach areas.
 - Suitable for polishing a flat surface at speed with a grinding disk pad.
 - Speed Reduction Ratio : 3/4
- Use the motor in reverse rotation for clockwise rotation.

◆ Weight : 45 g

Standard Size Collet

Optional Collets : CHC group are shown in page (P.55)

Standard Accessories

- Chuck Wrench (K-231) : 1 pc.
- Pin Spanner (K-233) : 1 pc.
- Standard Accessories : 1 set

Code No.	Description	Package
64101	Rubber Pad (Small) O.D. ø10 mm	1 pc./pack
64102	Rubber Pad (Med) O.D. ø20 mm	
64103	Rubber Pad (Large) O.D. ø30 mm	
64133	Sand Paper Disk for small pad ø11 #180	5 pcs./pack
64137	Sand Paper Disk for small pad ø11 #600	
64153	Sand Paper Disk for med. pad ø21 #180	
64157	Sand Paper Disk for med. pad ø21 #600	
64173	Sand Paper Disk for large pad ø31 #180	
64177	Sand Paper Disk for large pad ø31 #600	

LUSTER Attachment (Pistol-Type Polisher)

Code No.	1302	Model	LS-100
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Reciprocating motion



- 25,000 min⁻¹ Max.
- High performance grinding & polishing with high power and reciprocating stroke.
 - Well-balanced, rubber-grip absorbs vibration.
 - Stroke Range : 0~6 mm (variable)
 - Reciprocating Stroke (variable) : 0~6,300 times/min.

◆ Weight : 680 g

◆ Max. tool shank diameter ø6.4 mm, Screw clamp type

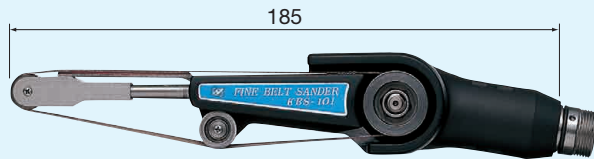
Standard Accessories

- Allen Wrench (2 mm), (3 mm) : 1 pc. each
- Lubricating Oil • Lubrication Nozzle for LUSTER
- Standard Accessories : 1 set

Code No.	Description	Package
62502	Stone Holder	1 pc./pack
62505	Stone Holder	
62751	Spring Holder	
62525	Rectangular Pad	
62526	Rod for Rectangular Pad	10 pcs./pack
62527	Angle Rod	
62552	Sand Paper Tip #120	
62555	Sand Paper Tip #320	
62557	Sand Paper Tip #600	
62559	Sand Paper Tip #1000	

FINE BELT SANDER Attachment

Code No.	1146	Model	KBS-101
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- 30,000 min⁻¹ Max.
- Very high belt speed, ideal for applications from deburring to finishing.
 - The angle of the belt section is fully adjustable.

◆ Belt Speed : 0~705 m/min.

◆ Weight : 350 g

◆ Belt Sizes : 4, 6, 8 mm Widthx300mm long

Standard Accessories

- Allen Wrench (3 mm) : 1 pc.
- Standard Accessories : 1 set

Code No.	Description	Package
64902	Abrasive Belt Width 4mm #120	2 pcs. each
64904	Abrasive Belt Width 4mm #240	
64906	Abrasive Belt Width 4mm #400	
64912	Abrasive Belt Width 6mm #120	
64914	Abrasive Belt Width 6mm #240	
64916	Abrasive Belt Width 6mm #400	
64922	Abrasive Belt Width 8mm #120	
64924	Abrasive Belt Width 8mm #240	
64926	Abrasive Belt Width 8mm #400	

1/4 Speed Reducer

Code No.	1009	Model	RG-01
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- 30,000 min⁻¹ Max.
- Mounted between an attachment and a motor.
 - The speed is reduced to 1/4 but the torque is multiplied by 4 times.
 - Suitable for high torque grinding process or drilling.
- ◆ Weight : 68 g

Standard Accessories

- Pin Spanner (K-233) : 1 pc.

1/15 Speed Reducer

Code No.	1010	Model	RG-02
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- 30,000 min⁻¹ Max.
- Mounted between an attachment and a motor.
 - The speed is reduced to 1/15 but the torque is multiplied by 15 times.
 - Suitable for high torque grinding process or drilling.
- ◆ Weight : 93 g

Standard Accessories

- Pin Spanner (K-233) : 1 pc.

Air Line Kit

Code No.	4507	Model	AL-H1207F
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This air line kit is designed for use with the AFC-45 foot controller, Code No.1064.

- Ensures a smooth operation and long life by supplying stable, conditioned air to the air motor.
- Three functions : air filter, regulator, mist lubricator can also be used to adjust motor speed.

◆ Weight : 2.2 kg ◆ Filter Mesh : 5 µm

Standard Accessories

- Air Pressure Gauge • Air Regulator • Air Filter • Lubricator
- Air Control Valve (CV-05) • Piping Hose (K-275) • Lubricating Oil (K-211)

Foot Controller

Code No.	1064	Model	AFC-45
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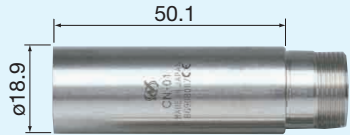


This foot controller is necessary for use with the AL-H1207F air line kit.

- Designed to depress from any direction.
- Fine adjustment of speed control is possible.

Extension Joint

Code No.	1015	Model	CN-01
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- 35,000 min⁻¹ Max.
- Speed Ratio 1 : 1
 - This is a joint to be connected between a motor and an attachment to extend the total length of the attachment.
- ◆ Weight : 83 g

Standard Accessories

- Pin Spanner (K-233) : 1 pc.

Precautions for using Nakanishi Tools

For safe use of the tools

- Please read operation manuals before using any tools.
- Please keep all operation manuals on hand for reference whenever necessary.

Caution Incorrect use of the tools, or ignoring ‘CAUTIONS for safety’ described in the operating manuals, could cause fatal or serious bodily injury.

CAUTIONS

Always use safety glasses, mask, face guard for your safety.

Fasten the collet firmly.
Make sure the tool is fully installed in the collet to avoid tool slippage.

Do not touch the tools when in operation.
Make sure the work area is neat and there is sufficient light.

Do not use the tool where flammable liquids or gases exist.

Start at low speed and increase gradually to insure safe work.
This is particularly important for the use of new tools, large cutting tools and elastic tools such as rubber grindstone, sander and brush tools.

Do not leave operating tools.
Confirm that the tool has stopped completely after switching off.

Keep the tools and products in a cool, dry place.

Select proper tools and products for your application.
Select tools carefully considering the performance of the tools, work procedure and type/shape of the material.

Check the tools carefully before use.
Confirm that the tools are free of chips, cracks, splits, scratches, irregular bondings, and out of round shanks, etc.

Stop grinding or polishing immediately whenever unusual sounds, vibrations, or wear are found.
Restart the work only after the problem is found and corrected.

Only use attachments, parts, consumable articles and accessories produced by NAKANISHI.

Do not wear loose clothing and/or accessories that may be caught in machinery.
Long hair should be secured prior to machine operation.

Check all tools carefully before use.
Clean the inside of the collet and tool shank, chips or fine metals inside the collet could cause tool slippage and result in damage to machinery or bodily injury.

Do not apply high pressure to or pry with the tools.
This can break and/or bend the tools. Use the tools within their design limitation. Excessive pressure will decrease the efficiency of your work and cause excessive wear of the tools.

The tools should be used by taking care of the overhang and below maximum allowable speed.
The catalogue shows the maximum allowable speed at 13 mm overhang (distance between the face of the collet and the top of the tool shank).

Overhang	Maximum allowable speed (min ⁻¹)
Less than 13 mm	Shown in the catalogue (A)
Less than 20 mm	(A) x 0.5
Less than 25 mm	(A) x 0.3
Less than 50 mm	(A) x 0.1

Symbols used in NAKANISHI Tools Catalogue

	<p>Shank Diameter</p> <p>Shows shank diameter of the tools. Nakanishi produces tools with several shank diameters.</p> <p>* Nakanishi micro grinders utilize a collet system, which insures maximum precision. Therefore, please use the collet that best corresponds to the tool shank diameter.</p>
	<p>Standard Package</p> <p>One package is the minimum shipping unit. This number shows the number of pieces in the standard package (bag, box and etc.). Please order the number of packages needed for the desired quantity.</p>
	<p>Maximum allowable speed</p> <p>Do not exceed the maximum allowable tool speed. For your safety, use the tools below the indicated allowable speed. Start at low speed and increase gradually to insure safety. The preceding is particularly important for the use of new tools and machines.</p> <p>* Maximum allowable speed assumes an overhang of less than 13mm. Decrease speed if the overhang is more than 13mm.</p> <p>Refer to “Precautions for using Nakanishi Tools” on the next page.</p> <p>* Check the tools and machinery for mechanical defects prior to each use.</p>
	<p>Grit</p> <p>This shows grain size of various grinding tools.</p> <p>Rough Cutting..... 46, 54, 60, 70, 80, 90</p> <p>Medium Cutting..... 100, 120, 150, 180</p> <p>Pre Finishing..... 220, 240, 280, 320, 400</p> <p>Finishing..... 500, 600, 700, 800, 1000</p> <p>Fine Finishing and Mirror Polishing..... 1200, 1500, 1800, 2000, 3000, 4000, 6000, 8000</p>

Code No. **62801~**

NAKANISHI's EXCLUSIVE TOOLS

Electroplated Diamond File

Flat taper		Thickness 1.4	0.5 mm # 200 62801	0.4 mm # 400 62802	0.35 mm # 600 62803
Flat taper		Thickness 1.4	0.5 mm # 200 62805	0.4 mm # 400 62806	0.35 mm # 600 62807
Flat		1.5	# 150 62811	# 200 62812	# 400 62813
Flat (Single side electroplating)		1.2	# 100 62814		
Flat		1.4	# 150 62815	# 200 62816	# 400 62817
Flat (Single side electroplating)		1	# 150 62821	# 200 62822	# 400 62823
Flat (Single side electroplating)		1.5	# 150 62825	# 200 62826	# 400 62827

End Code number on each page

Code number (Order number)

Standard package quantity

Shank diameter of the tool

Maximum allowable speed

Total length of the tool (mm)

Note : Specifications may be changed without notice. Colors of the tools in this catalogue may not be the same as actual colors due to printing limitations.

P. 63

P. 64

Exclusive Tools of Electromotive Polisher

"LUSTER", "MINI-LUSTER", "SWING-LUSTER"

LUSTER

Best for finishing large open work areas.

SHANK 03.0

1 pc./pack Electroplated Diamond File

Flat taper

0.3

3

Thickness 1.4

15

70

03

200 62301

400 62302

600 62303

Flat taper

0.3

6

Thickness 1.4

15

72

03

200 62305

400 62306

600 62307

Flat

1.7

4.2

45

90

03

150 62311

Half-round

2

15

45

90

03

150 62313

Round

03

45

90

03

150 62315

Angular

2.5

12.5

45

90

03

150 62317

1 pc./pack Diamond File Flat Type

*Use with stone holder No.62502.

90

60

20

8

10

t

150 62351

200 62352

400 62353

90

60

20

8

6

t

150 62361

200 62362

400 62363

SHANK 03.0,03.5

3 pcs./pack Precision Finishing Files (Flat, Round, Angular, Triangular, Half-Round)

1.3(1.5)

5.1(6)

(Flat)

03(3,5)

57301

57311

57321

03(3,5)

(Round)

57302

57312

57322

2.5(2.7)

(Angular)

57303

57313

57323

3.3(4.1)

(Triangular)

03(3,5)

57304

57314

57324

2

15(6)

(Half-round)

03(3,5)

57305

57315

57325

5 files-pack set

• Standard (total length 140mm) set (No.57301~No.57305 : 1pc. each) ----- 57309

• Fine (total length 140mm) set (No.57311~No.57315 : 1pc. each) ----- 57319

• Standard (total length 180mm) set (No.57321~No.57325 : 1pc. each) ----- 57329

SHANK 03.0

3 pcs./pack Rasps for plastics and wood working (Flat, Round, Angular, Triangular, Half-Round)

2.2

5.7

(Flat)

03

57401

3.8

(Round)

57402

3.3

(Angular)

57403

3.8

(Triangular)

57404

2.3

5.7

(Half-round)

57405

5 files-pack set

• Rasps set for plastics and wood working (No.57401~No.57405 : 1pc. each) ----- 57410

1 pc./pack Stone Holder

Maximum clamping thickness 4.5 x Width 11 mm

25

30

03.2

62502

Maximum clamping thickness 11 x Width 13.5 mm

31

11

36

03

62505

2 pcs./pack Ceramic Fiber Grindstone (Total Length 50 mm)

• Alumina fiber abrasive with the strength and the flexibility for rough or fine finishing.

Flat

W

0.8

50

62502

Flat

W

1.0

50

62505

Round

03

50

62507

Grit

Color

W = 4 mm

W = 6 mm

180 Ivory 60701 60711

300 Brown 60702 60712

400 Orange 60703 60713

600 Black 60704 60714

800 Blue 60705 60715

1,000 White 60706 60716

1,200 Pink 60707 60717

Grit

Color

W = 4 mm

W = 6 mm

W = 10 mm

180 Ivory 60721 60731 62961

300 Brown 60722 60732 62962

400 Orange 60723 60733 62963

600 Black 60724 60734 62964

800 Blue 60725 60735 62965

1,000 White 60726 60736 62966

1,200 Pink 60727 60737 62967

Grit

Color

03 mm

180 Ivory 63101

300 Red 63102

400 Orange 63103

600 Black 63104

800 Blue 63105

1,000 White 63106

1,200 Pink 63107

1 pc./pack Ceramic Fiber Grindstone Holder • Grindstone Holder

Maximum clamping thickness 1 x Width 4 mm

010

4

1.3

22.2

38

03

62506

Maximum clamping thickness 1 x Width 10 mm

013.4

10.2

1.3

28

38

03

62508

Maximum clamping thickness 1 x Width 6 mm

011.5

6

1.3

23.4

38

03

62507

Maximum clamping thickness 1 x Width 6 mm

011.5

6

1.3

23.4

14

03

62510

Grindstone Holder

012

7.2

3.2

24

38

03

62509

1 pc./pack Flat Holder

• Tip for use with abrasive sheets.

(Stainless Steel SUS 304)

7

75

25

30

03.2

62512

(Stainless Steel SUS 304)

7

50

25

30

03.2

62982

1 pc./pack Angular Pad Holder

• Holder for use with abrasive tips for polishing flat surfaces.

(Total Length 120 mm · Total Height 60 mm)

18(W) x 8(D) x 6(H) mm

62521

① 62525

② 62526

③ 62527

④ 62751

Abrasive Tip (For Flat Holder and Angular Pad Holder)

100 pcs./pack Sand Paper Tip

8

18

Grit

120 62552

320 62555

600 62557

Adhesive Back

Grit

1,000 62559

1,500 62560

3 pcs./pack Wood Tip Holder

50

50

31

15

03

W

10 mm 62621

15 mm 62622

20 mm 62623

1 pc./pack Spring Holder

65

03

62751

*Mountable shaft diameter range 01~03.3 mm

NAKANISHI's EXCLUSIVE TOOLS

SHANK 3.0

1 pc./pack Electroplated Diamond File

Flat taper		Thickness 1.4	t	Grit	
			0.5 mm	# 200	62801
			0.4 mm	# 400	62802
Flat taper		Thickness 1.4	0.5 mm	# 200	62805
			0.4 mm	# 400	62806
			0.35 mm	# 600	62807
Flat		1.5		# 150	62811
				# 200	62812
				# 400	62813
Flat (Single side electroplating)		1.25		# 100	62814
Flat		1.2*		# 150	62815
				# 200	62816
				# 400	62817
Flat (Single side electroplating)		1		# 150	62821
				# 200	62822
				# 400	62823
Flat (Single side electroplating)		1.8		# 150	62825
				# 200	62826
				# 400	62827

*62815 is thickness 1.4mm.

Angular		2	Grit	
			# 150	62831
			# 200	62832
Round		1	# 100	62840
			# 150	62841
			# 200	62842
Round		2	# 150	62845
			# 200	62846
			# 400	62847
Round		3	# 150	62851
			# 200	62852
			# 400	62853
Round taper		1	# 150	62855
			# 200	62856
			# 400	62857
Half-round		1.5	# 150	62865
			# 200	62866
			# 400	62867
Half-round		2	# 150	62871
			# 200	62872
			# 400	62873
Triangular		2.6	# 150	62881
			# 200	62882
			# 400	62883

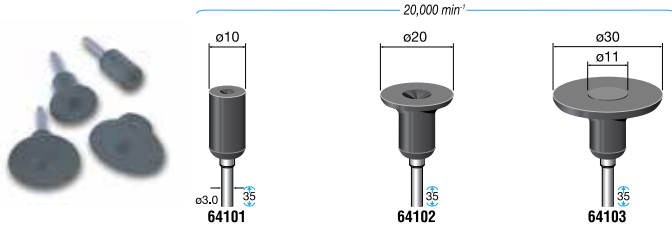
Exclusive Tools of "60° & 90° ANGLE"



Special tools for Nakanishi Micro-grinder "Angle Attachment". Highly efficient for grinding, polishing, finishing, etc.

SHANK 3.0

5 pcs./pack Special Rubber Pad For Abrasive and Felt Disks



100 pcs./pack Sand Paper Disk

Cloth Type

- For Metals ... Both for dry and wet finishing (Adhesive is resistant to water and oil)

For Metals	Grit	11	21	31
	# 60	64111	64121	64141
	# 80	64112	64122	64142
	# 120	64113	64123	64143
	# 180	64114	64124	64144
	# 240	64115	64125	64145
	# 320	64116	64126	64146
	# 400	64117	64127	64147
	# 600	64118	64128	64148
	# 800	64119	64129	64149
	# 1,000	64120	64130	64150

Adhesive Back

Paper Type

- For Metals ... Both for dry and wet finishing (Adhesive is resistant to water and oil)

For Metals (Black)	Grit	11	21	31
	# 80	64131	64151	64171
	# 120	64132	64152	64172
	# 180	64133	64153	64173
	# 240	64134	64154	64174
	# 320	64135	64155	64175
	# 400	64136	64156	64176
	# 600	64137	64157	64177
	# 800	64138	64158	64178
	# 1,000	64139	64159	64179
	# 1,500	64140	64160	64180

Adhesive Back

Paper Type

- Dry type ... For Metal, Woodwork, Paint, Putty polishing, Dry use

For Dry type (White)	Grit	11	21	31
	# 80	64201	64211	64221
	# 120	64202	64212	64222
	# 180	64203	64213	64223
	# 240	64204	64214	64224
	# 320	64205	64215	64225
	# 400	64206	64216	64226
	# 600	64207	64217	64227

Adhesive Back

NAKANISHI's EXCLUSIVE TOOLS

100 pcs./pack Zirconium Disk

- Best for finishing aluminum, stainless steel, copper alloy, brass, etc.



Grit	11	21	31
# 60	64251	64261	64271
# 80	64252	64262	64272
# 120	64253	64263	64273
# 150	64254	64264	64274

Adhesive Back

20 pcs./pack Fiber Disk

- Soft finishing can be done on flat & curved surfaces, due to superior flexibility.



Grit	Color	11	21	31
# 120	Brown	64281	64291	64301
# 240	Violet	64282	64292	64302
# 320	Red Brown	64283	64293	64303
# 600	Dark Blue	64284	64294	64304
# 800	Gray	64285	64295	64305
# 1,000	Orange	64286	64296	64306

*Thickness 3 mm

Adhesive Back

20 pcs./pack Felt Disk

- Ideal for finishing using abrasives and diamond compounds.



Description	11	21	31
Soft Type Felt Disk (1mm thickness)	64331	64332	64333
Soft Type Felt Disk (2mm thickness)	64335	64336	64337

Adhesive Back

20 pcs./pack Felt Disk Chromium Oxide (Blue Rouge) Embedded Type.

- Useful for speedy finishing because of Chromium Oxid (Blue Rouge) Embedded.



Description	11	21	31
Felt Disk Chromium Oxide (Blue Rouge) Embedded Type. (2mm thickness)	64341	64342	64343

Adhesive Back

20 pcs./pack Rubber Points Disk

- Best for coarse finishing, pre-finishing with great polishing power.



Grit	Color	20	30
# 60	Brown	64391	64401
# 80	Red	64392	64402
# 120	Dark Green	64393	64403
# 180	Olive	64394	64404
# 220	Green	64395	64405
# 320	Brown	64396	64406

*Thickness 3 mm

Adhesive Back

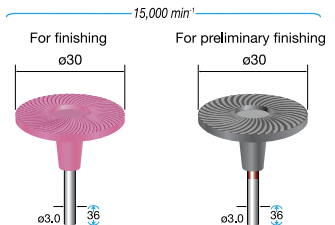
SHANK 3.0

5 pcs./pack Mounted Rubber Disks (Rubber Pad Integration)

- Moderately hard abrasive grain have great polishing ability.



For finishing			
Grit	Color	WA	GC
# 80	Pink	64411	—
# 80	Purple	—	64421
# 120	Blue	64412	64422
# 180	Yellow	64413	—
# 180	Green	—	64423
# 220	Green	64414	64424
# 320	Purple	64415	64425
# 500	Orange	64416	—
# 500	Brown	—	64426



For preliminary finishing (Fast grinding)		
Grit	Color	WA
# 80	Black (Red Line)	64431
# 120	Black (Blue Line)	64432

1 pc./pack Diamond Disk (Fully Electroplated Type)

- Superior in sharpness and durability.



Grit	11	21	31
# 100	64451	64461	64471
# 140	64452	64462	64472
# 200	64453	64463	64473
# 280	64454	64464	64474
# 400	64455	64465	64475
# 600	64456	64466	64476
# 800	64457	64467	64477
# 1,000	64458	64468	64478

Adhesive Back

1 pc./pack Diamond Disk (Dot Electroplated Type, Wet Type)

- Electroplated nickel-alloy pellet is strongly adhered to resin base.



Grit	Color	11	21	31
# 60	Green	64501	64511	64521
# 120	Black	64502	64512	64522
# 200	Red	64503	64513	64523
# 400	Yellow	64504	64514	64524
# 800	Gray	64505	64515	64525

Adhesive Back

NAKANISHI's EXCLUSIVE TOOLS

3 pcs./pack Resin Bond Diamond Disk Star Pattern

Star Pattern

Grit	ø11	ø21	ø31
# 80	64531	64541	64551
# 120	64532	64542	64552
# 180	64533	64543	64553
# 240	64534	64544	64554
# 400	64535	64545	64555
# 600	64536	64546	64556
# 800	64537	64547	64557
# 1,000	64538	64548	64558
# 2,000	64539	64549	64559

Adhesive Back

*Patterns maybe changed without notice

3 pcs./pack Lapping Film Disk Diamond Abrasive

Diamond Film (Diamond)

Grit	Color	ø11	ø21	ø31
# 400	Ivory	64601	64606	64611
# 800	Ivory	64602	64607	64612
# 1,500	Ivory	64603	64608	64613
# 3,000	Ivory	64604	64609	64614

Adhesive Back

50 pcs./pack Lapping Film Disk WA Abrasive

Aramid Film (WA)

Grit	Color	ø11	ø21	ø31
# 320	Pink	64621	64626	64631
# 600	Green	64622	64627	64632
# 1,000	Orange	64623	64628	64633
# 1,500	Olive	64624	64629	64634
# 3,000	Violet	64625	64630	64635

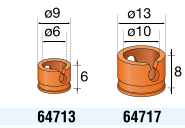
Adhesive Back

SHANK ø3.0 Lap Ring



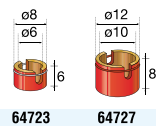
• Plastic and brass lapping rings for use with abrasive and diamond compounds.

10 pcs./pack Replacement Plastic Ring



64713 64717

5 pcs./pack Replacement Brass Ring

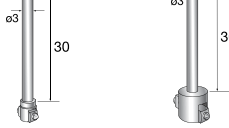


64723 64727

*Do not use the same ring for different abrasive compound grits.

1 pc./pack Replacement Holder

For internal diameter ø6 mm For internal diameter ø10 mm



64731 64732

Exclusive Tools of "90° MINI ANGLE TYPE ATTACHMENT"



Steel cutters for radius grinding of deep cross holes for "Mini-Angle attachment". Ideal for radius grinding of holes or removing burrs from cross jigs, precision parts and inside surfaces of pipes.



MINI ANGLE TYPE Attachment (Very Small Head)

MINI ANGLE TYPE Attachment

SHANK ø1.6 Steel Cutters For Deep Cross Hole Finishing

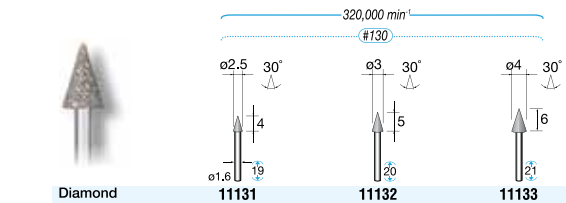
1 pc./pack Diamond Coated Burs For Deep Cross Hole Finishing



15,000 min⁻¹ ø2.1 ø1.5 ø1.6 110° 64801

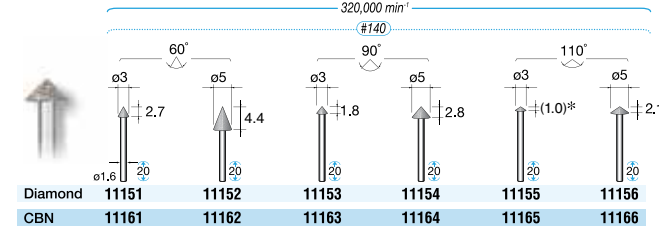
SHANK ø1.6 Diamond and CBN Coated Burs For Deep Cross Hole Finishing

1 pc./pack Diamond and CBN Coated Burs For Deep Cross Hole Finishing



Diamond 11131 11132 11133

5 pcs./pack Diamond and CBN Coated Burs For Deep Cross Hole Finishing



Diamond 11151 11152 11153 11154 11155 11156 CBN 11161 11162 11163 11164 11165 11166

*11165 is Cut Length 1.4mm.

NAKANISHI's EXCLUSIVE TOOLS

Exclusive Tools of "IMPULSE"



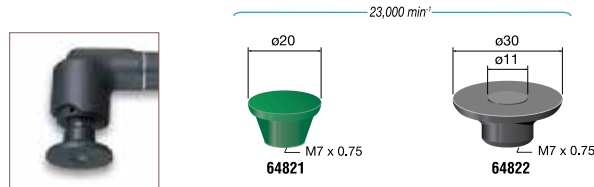
Special tools for Nakanishi Micro-grinder "IMPULSE". Excellent for grinding or polishing flat surfaces, edges with Nakanishi's high-power air grinder.



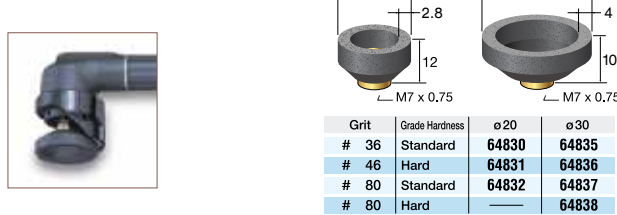
90° ANGLE IMPULSE · NA90-230

60° ANGLE IMPULSE · NA45-230

5 pcs./pack Special Rubber Pad for Disk Abrasives



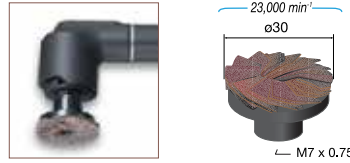
12 pcs./pack Cup Wheel



Grit	Grade Hardness	ø20	ø30
# 36	Standard	64830	64835
# 46	Hard	64831	64836
# 80	Standard	64832	64837
# 80	Hard	—	64838

5 pcs./pack Polishing Sander

• Abrasive Disk for high speed rotation is made from overlapping abrasive cloths.

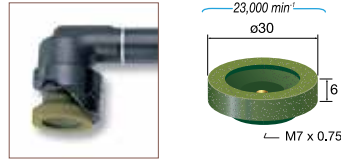


Grit	
# 80	64842
# 120	64844
# 180	64846
# 240	64847
# 400	64849

• Convenient Assorted set for trial polishing All grain size (5 types x each 1 pc.) Total 5 pcs.-pack 64850

10 pcs./pack Rubber Cup Wheel

• Rubber Cup Wheel with high elasticity for grinding & polishing.



Grit	Color	ø20	ø30
# 60	Brown	64851	64852
# 80	Red	64853	64854
# 120	Blue	64855	64856
# 180	Olive	64857	64858
# 220	Green	64859	64860
# 320	Brown	64861	64862

• Convenient Assorted set for trial polishing All grain size (6 types x each 2 pcs.) Total 12 pcs.-pack 64859

Exclusive Tools of "FINE BELT SANDER"



FINE BELT SANDER Attachment

30 pcs./pack Abrasive Belts

• High Quality Abrasive Belts are superior in grinding & durability.



For Grinding or Polishing of Metals (Length 300 mm)

Grit	W = 4 mm	W = 6 mm	W = 8 mm
# 80	64901	64911	64921
# 120	64902	64912	64922
# 180	64903	64913	64923
# 240	64904	64914	64924
# 320	64905	64915	64925
# 400	64906	64916	64926
# 600	—	—	64927
# 800	—	—	64928

• Assorted set for preliminary finishing (● Mark) Grain size (4 types x each 10 pcs.), W = 8 mm Total 40 pcs.-pack 64931

• Assorted set for finishing (● Mark) Grain size (4 types x each 10 pcs.), W = 8 mm Total 40 pcs.-pack 64932



For Woodwork (Length 300 mm)

Grit	8 mm Width
# 80	64941
# 120	64942
# 240	64943

• Assorted set for woodwork All grain size (3 types x each 10 pcs.) Total 30 pcs.-pack 64955

Code No. 64971~65030

NAKANISHI's EXCLUSIVE TOOLS

3 pcs./pack Diamond Belt

- For grinding and polishing of Carbide, Hardened steel, Steel, Special steels, Ceramic, FRP, etc.



Hard Type (Length 300 mm)

Grit	8 mm Width
# 80	65011
# 120	65012
# 240	65014
# 320	65015
# 600	65017

- Assorted set
All grain size (5 types x each 1 pc.)
Total 5 pcs.-pack 65019



Soft Type (Length 300 mm)

Grit	8 mm Width	Grit	8 mm Width
# 120	65021	# 600	65025
# 180	65022	# 800	65026
# 240	65023	#1,000	65027
# 320	65024		
# 400	65028		

- Assorted set
All grain size (8 types x each 1 pc.)
Total 8 pcs.-pack 65030

30 pcs./pack Zirconium Belt

- Best for polishing aluminum, stainless steel, brass



(Length 300 mm)

Grit	8 mm Width
# 80	64971
# 100	64972
# 120	64973

- Assorted set
All grain size (3 types x each 10 pcs.)
Total 30 pcs.-pack 64975

Electrically Driven

EmaEVO
ESPERT

Air Driven

ROTUS
IMPULSE
PRESTO II

General Parts

GENERAL
PARTS

CAUTION

Exclusive Tools

EXCLUSIVE
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