

TOOLS & SOLUTIONS

Impulse Series

Katalogauszug



PRECISION PENCIL TYPE MICRO AIR GRINDER

IMPULSE Series



- ① 60,000 min⁻¹ NSP-601
- ② 40,000 min⁻¹ NA45-400 (60°)
- ③ 23,000 min⁻¹ NA45-230 (60°)
- ④ 23,000 min⁻¹ NA90-230 (90°)

- Best for high precision grinding, because IMPULSE has smooth rotational without the burs runout or vibration, even when motor speed is remarkable high.
- Incorporates a special vane air motor. Motor speed remains stable even under varying loads.
- Silencer on the exhaust air hose keeps the grinder very quiet.
- Use of high precision components in the IMPULSE provides excellent endurance to maintain micron specification.

Electrically Driven

EmaxEVO
ESPERT

Air Driven

ROTUS
IMPULSE
PRESTO II

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IMPULSE SERIES ◀◀



Mounting & Dismounting Cutting Tool

Insert the spanner provided into the hole on the spindle and open or close the chuck with the Chuck Wrench to exchange the cutting tool.

Exchangeable Collet

Standard Size : $\varnothing 3.0$ mm (CHS-3.0)
Optional Collets : CHS group $\varnothing 0.8$ mm~ $\varnothing 3.175$ mm

Twist Free Hose

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



Straight IMPULSE

| | | | |
|----------|-------------|-------|----------------|
| Code No. | 1034 | Model | NSP-601 |
|----------|-------------|-------|----------------|

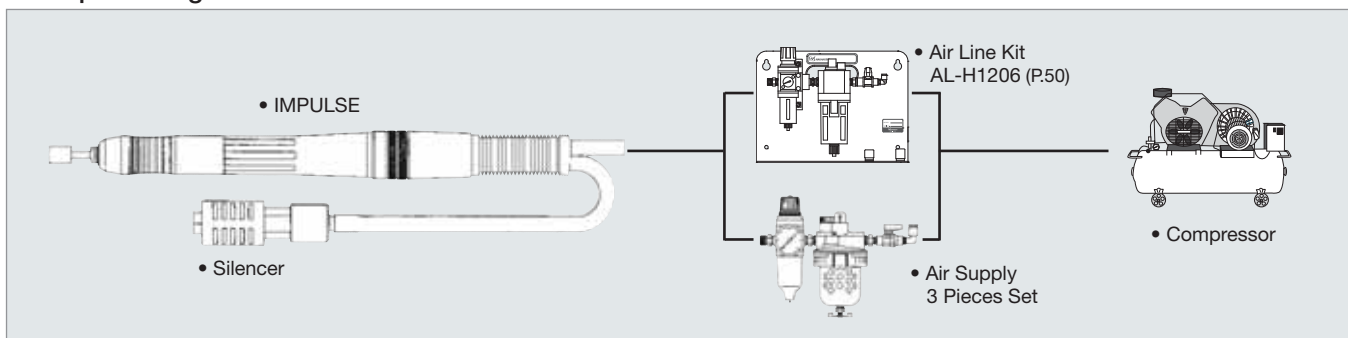
ON / OFF Ring

Easy to switch ON/OFF and to adjust motor speed, turning right & left.

Connecting Part To Air Line Kit

Built in air filter in air inlet coupling (the connection to air line kit).

Set-Up Drawing



■ Use Air Line Kit AL-H1206 or air supply 3 pieces set. (Air Filter, Air Regulator, Lubricator)

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PRECISION AIR GRINDER

Straight/60° IMPULSE



Straight IMPULSE

60,000 min⁻¹

| | |
|----------|----------------|
| Code No. | 1034 |
| Model | NSP-601 |

Standard Size Collet

ø3.0 mm (CHS-3.0)

Optional Collets :
CHS group are shown in page (P.56)



- Straight type is designed for high speed precision grinding.
- The front part of the NSP-601 model is made of stainless steel ; the back portion of aluminum alloy.
- The safety design of clamping the chuck up to 29 mm maintains stable rotation of the cutting tool.
- The air motor is assembled with a special vane design which keeps constant speed under load providing stable grinding and polishing operation.

60° IMPULSE

40,000 min⁻¹

| | |
|----------|-----------------|
| Code No. | 1035 |
| Model | NA45-400 |

Standard Size Collet

ø3.0 mm (CHS-3.0)

Optional Collets :
CHS group are shown in page (P.56)



- Angled model housings are all aluminum alloy.
- Ideal for removing sharp edges at corners and surfaces difficult to reach with straight type.

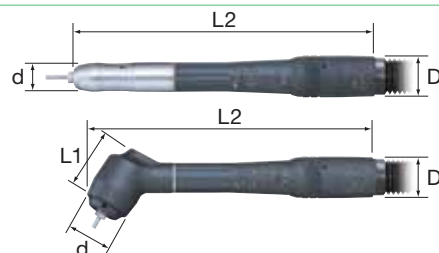


Specifications

Air Consumption : 165 NL/min
 Proper Air Pressure : 0.4~0.6 MPa
 Inlet Air Hose Length : 1.5 m
 Eraser Hose Length : 1.2 m

Standard Accessories

• Collet ø3.0 mm (CHS-3.0) : 1 pc.
 • Hose (K-213) : 1.5 m • Silencer (K-208) : 1 pc.
 • Spanner (8 x 5) : 1 pc. • Bar Wrench (K-212) : 1 pc.



| Code No. | d | D | L1 | L2 | Weight | Speed | Collet |
|-------------|-------|-------|------|-----|--------|--------------------------|------------------|
| 1034 | ø17 | ø23.9 | — | 168 | 165 g | 60,000 min ⁻¹ | ø0.8~ø3.175 mm |
| 1035 | ø28.6 | ø23.9 | 39.6 | 161 | 210 g | 40,000 min ⁻¹ | CHS Group (P.56) |

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PRECISION AIR GRINDER

Super Cut IMPULSE

Exclusive Tools P.69 ~72



90° Super Cut IMPULSE

23,000 min⁻¹

| | |
|----------|-----------------|
| Code No. | 1036 |
| Model | NA90-230 |

Standard Size Collet

ø3.0 mm (CHS-3.0)

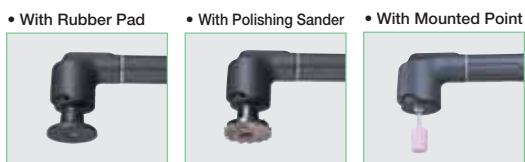
 Optional Collets :
 CHS group are shown in page (P.56)


Standard Accessories

| Code No. | Description | Package |
|----------|---------------------------|-------------|
| 42423 | Mounted Points | 1 pc. |
| 64822 | Rubber Pad | 1 pc./pack |
| 64836 | Cup Wheel | |
| 64837 | Cup Wheel | |
| 64172 | Sand Paper Disk ø31 #120 | 2 pcs./pack |
| 64175 | Sand Paper Disk ø31 #320 | |
| 64177 | Sand Paper Disk ø31 #600 | |
| 64179 | Sand Paper Disk ø31 #1000 | |

 ▶ Mounted Points → NAKANISHI "POLISHING TOOLS" Catalog
 ▶ Disks → P.69-71

Exclusive Tools P.69 ~72



Please refer to next page.

60° Super Cut IMPULSE

23,000 min⁻¹

| | |
|----------|-----------------|
| Code No. | 1037 |
| Model | NA45-230 |

Standard Size Collet

ø3.0 mm (CHS-3.0)

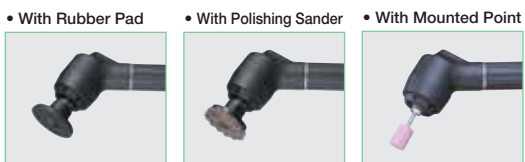
 Optional Collets :
 CHS group are shown in page (P.56)


Standard Accessories

| Code No. | Description | Package |
|----------|---------------------------|-------------|
| 42423 | Mounted Points | 1 pc. |
| 64822 | Rubber Pad | 1 pc./pack |
| 64836 | Cup Wheel | |
| 64837 | Cup Wheel | |
| 64172 | Sand Paper Disk ø31 #120 | 2 pcs./pack |
| 64175 | Sand Paper Disk ø31 #320 | |
| 64177 | Sand Paper Disk ø31 #600 | |
| 64179 | Sand Paper Disk ø31 #1000 | |

 ▶ Mounted Points → NAKANISHI "POLISHING TOOLS" Catalog
 ▶ Disks → P.69-71

Exclusive Tools P.69 ~72



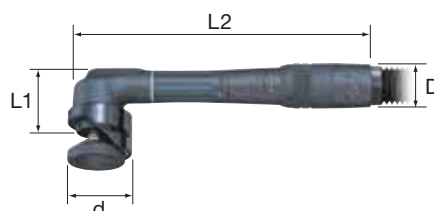
Please refer to next page.



Specifications

 Air Consumption : 165 NL/min
 Proper Air Pressure : 0.4~0.6 MPa
 Inlet Air Hose Length : 1.5 m
 Eraser Hose Length : 1.2 m

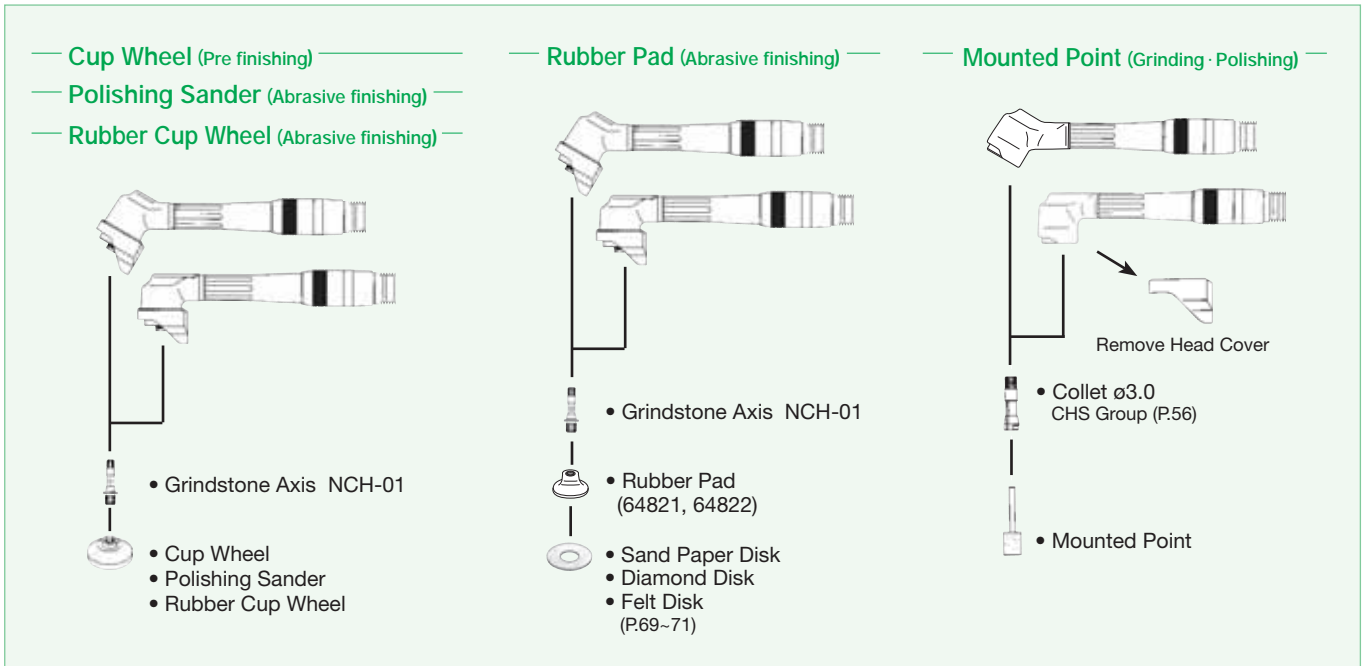
Standard Accessories

 • Grindstone Axis (NCH-01) : 1 pc.
 • Silencer (K-208) : 1 pc. • Spanner (8x5) : 1 pc.
 • Bar Wrench (K-212) : 2 pcs. • Hose (K-213) : 1.5 m
 • Allen Wrench (1.5 mm) : 1 pc.


| Code No. | d | D | L1 | L2 | Weight | Speed | Collet |
|-------------|-------|-------|------|-----|--------|--------------------------|------------------|
| 1036 | ø33.5 | ø23.9 | 34 | 156 | 190 g | 23,000 min ⁻¹ | ø0.8~ø3.175 mm |
| 1037 | ø33.5 | ø23.9 | 39.6 | 163 | 190 g | 23,000 min ⁻¹ | CHS Group (P.56) |

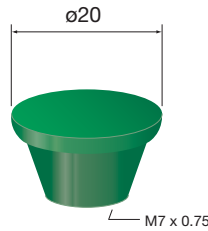
◆ Order by Code No.

The Exchangeable Attachment Chart

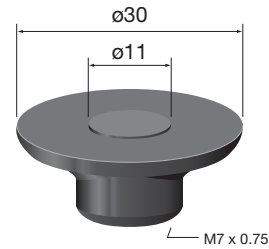


Rubber Pad

- Disks are pasted on the Rubber Pad. (P.69~71)



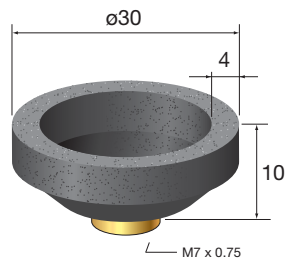
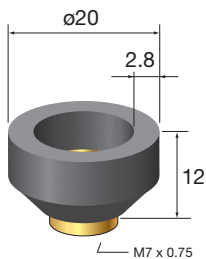
5 pcs./pack Code No. **64821**
23,000 min⁻¹ Max.



5 pcs./pack Code No. **64822**
23,000 min⁻¹ Max.

Cup Wheel

- For pre finishing.

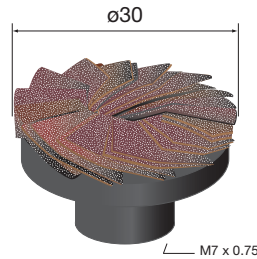


12 pcs./pack 23,000 min⁻¹ Max.

| Grit | Grade Hardness | Code No. ($\phi 20$) | Code No. ($\phi 30$) |
|------|----------------|------------------------|------------------------|
| # 36 | Standard | 64830 | 64835 |
| # 46 | Hard | 64831 | 64836 |
| # 80 | Standard | 64832 | 64837 |
| # 80 | Hard | — | 64838 |

Polishing Sander

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



5 pcs./pack 23,000 min⁻¹ Max.

| Grit | Code No. |
|-------|----------|
| # 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

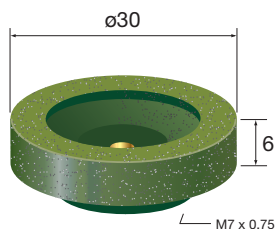
Code No. **64850** 5 pcs./pack

Rubber Cup Wheel

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



NA90-230



10 pcs./pack 23,000 min⁻¹ Max.

| Grit | Color | Code No. |
|-------|-------|--------------|
| # 60 | Brown | 64851 |
| # 80 | Red | 64852 |
| # 120 | Blue | 64853 |
| # 180 | Olive | 64854 |
| # 220 | Green | 64855 |
| # 320 | Brown | 64856 |

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

Code No. **64859** 12 pcs./pack

Air Line Kit (Automatic Lubricating Device)

Code No. **4506**

Model **AL-H1206**

Standard Accessories

- Air Pressure Gauge • Air Regulator
- Air Filter • Lubricator
- Air ON-OFF Valve
- Piping Hose (K-275) : 2 m
- Lubricating Oil (K-211) : 1 pc.



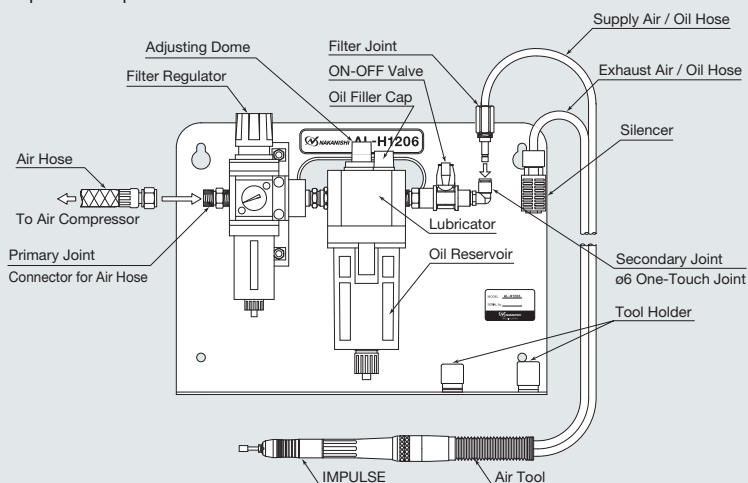
300(W) x 120(D) x 220(H) mm

- Supplies the smooth air flow and automatic lubrication for long life and the stable power.
- By adjustment of auto lubrication & air flow, this will extend the lifetime of air grinder.
- Best for grinding and polishing processes, AL-H1206 air line kit has a compact body with a carrying handle and holder to put the IMPULSE in.







◆ Weight : 2.2 kg ◆ Filter Mesh : 5 μm

Piping Connection Diagram

- Use Air Line Kit AL-H1206 or air supply 3 pieces set. (Air Filter, Air Regulator, Lubricator)
- Coupler is not provided.



IMPULSE Series Spare Parts

| Product | Description | Code No. | Model | Fit to |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------|-------------|---------------|---------------------------------|
|  | Grindstone Axis (for Cup Wheel & Rubber Pad) | 1045 | NCH-01 | IMPULSE |
|  | Head Cover | 1043 | CNA | IMPULSE |
|  | Hose 1.5 m | 1038 | K-213 | IMPULSE |
|  | Silencer Small (w/Metal Fittings) | 1061 | K-208 | IMPULSE |
|  | Spanner 8 x 5 | 2012 | — | IMPULSE |
|  | Bar Wrench (72 mm) | 2013 | K-212 | IMPULSE |
|  | Allen Wrench (1.5 mm) | — | — | IMPULSE Available in the market |
|  | Lubricating Oil (70cc) | 1057 | K-211 | For Air Line Kit AL-H1206 |
|  | Lubricating Oil (1L) | 1058 | K-202 | |
|  | Filter Joint (for ø6 Quick Disconnecting Joint) | 2039 | FJ-02 | (For K-213 Hose) |

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PRESTO II AIR TURBINE GRINDER ◀◀

ULTRA-HIGH SPEED AIR TURBINE GRINDER

PRESTO II

320,000 min⁻¹ ø1.6 mm Bur Only

- Ultra high speed 320,000 min⁻¹ non-lube air turbine.
- It is most suitable for precision processing works such as small precision parts, ceramic, correction of printed circuit board, etc. due to its non-lube handpiece.
- Flexible tubing ensures excellent workability reducing fatigue to the operator's hand for long continuous use.



PRESTO II Standard Set

| | |
|----------|----------|
| Code No. | 1125 |
| Model | PR2-304S |

- Standard Equipment
- Presto Handpiece (PR-304) : 1 pc.
 - Air Line Kit (PR2-06) : 1 pc.
 - Foot Controller (AFC-40) : 1 pc.
 - Handpiece Holder (Z014) : 1 pc.



Specifications

| | |
|---------------------|-----------------------------|
| Rotating Speed | : 320,000 min ⁻¹ |
| Proper Air Pressure | : 0.25 MPa |
| Air Consumption | : 40 NL/min |
| Inside Diameter | : ø1.6 mm Bur Only |
| Filter Mesh | : 5 µm |

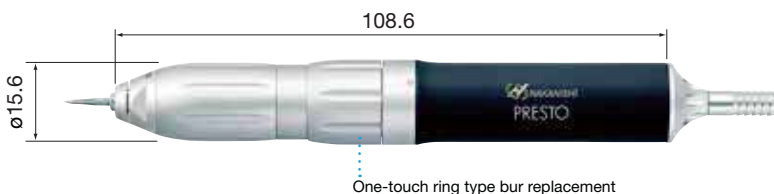
PRESTO Handpiece

320,000 min⁻¹

| | |
|----------|--------|
| Code No. | 1122 |
| Model | PR-304 |

◆ Weight : 71 g (w/o Hose)

- Standard Accessories
- 2 m Hose



- Ultra-high speed no lube air turbine handpiece ideal for delicate processing application.
- Built-in dust protect mechanism developed by NAKANISHI ensures long durability.
- Chip air blows away the cutting powder and cools the cutting tool.
- Flexible tubing ensures excellent workability reducing fatigue to the operator's hand for long continuous use.

PRESTO II Spare Parts

| Product | Description / Specifications | Code No. | Model |
|---------|------------------------------------------------------------|----------|--------|
| | PRESTO II Air Line Kit (w/o Lubricator / Filter Mesh 5 µm) | 1126 | PR2-06 |
| | PRESTO II Cartridge | 1120 | PR-03 |
| | Foot Controller | 1124 | AFC-40 |
| | Piping Hose (ø6.0) 2 m Long | 2041 | K-237 |
| | Air Turbine Hose (ø5.1) 2 m Long | 2042 | K-238 |
| | Pin Spanner | 2002 | T-751 |

ø1.6 mm tools for PRESTO II
Please see the NAKANISHI "POLISHING TOOLS" Catalog



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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.



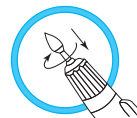
Caution

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.



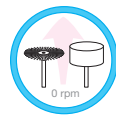
Do not touch the tools when in operation. Make sure the work area is neat and there is sufficient light.



Do not use damaged or broken electric cords and air hoses.



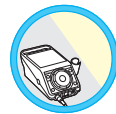
Do not use the tool where flammable liquids or gases exist.



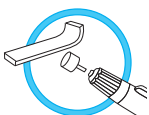
Start at low speed and increase gradually to insure safe work. This is particularly important for the use of new tools, large cutting tools and elastic tools such as rubber grindstone, sander and brush tools.



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



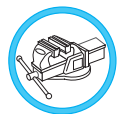
Keep the tools and products in a cool, dry place.



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.



Fix the work material firmly in a vise and/or other clamping fixture.



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



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



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



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).

Decrease the speed as shown in the table below, if you are using a longer overhang than 13 mm.

| 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 |

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Symbols used in NAKANISHI Tools Catalogue

| | |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Shank Diameter Shows shank diameter of the tools. Nakanishi produces tools with several shank diameters. * 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 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 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. * Maximum allowable speed assumes an overhang of less than 13mm. Decrease speed if the overhang is more than 13mm. Refer to "Precautions for using Nakanishi Tools" on the next page. * Check the tools and machinery for mechanical defects prior to each use.</p> |
|  | <p>Grit This shows grain size of various grinding tools. Rough Cutting..... 46, 54, 60, 70, 80, 90 Medium Cutting..... 100, 120, 150, 180 Pre Finishing..... 220, 240, 280, 320, 400 Finishing..... 500, 600, 700, 800, 1000 Fine Finishing and Mirror Polishing..... 1200, 1500, 1800, 2000, 3000, 4000, 6000, 8000</p> |

Code No. **62801~**

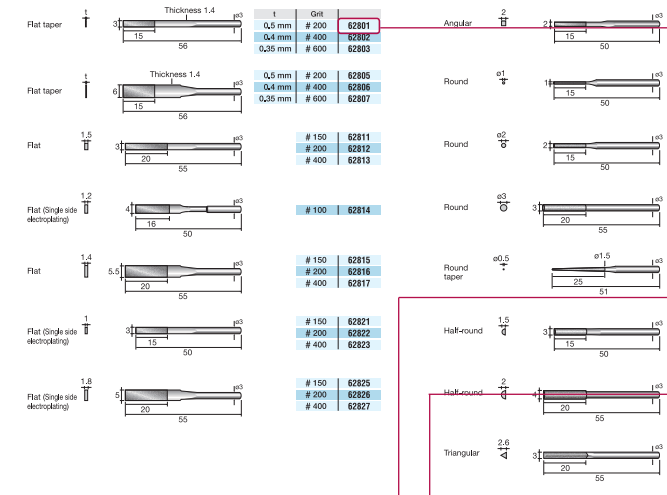
NAKANISHI's EXCLUSIVE TOOLS

SHANK 3.0
1 pcs./pack Electroplated Diamond File

| Thickness 1.4 | Grit | Order No. |
|---------------|-------|-----------|
| 0.6 mm | # 200 | 62801 |
| 0.4 mm | # 400 | 62802 |
| 0.36 mm | # 600 | 62803 |
| 0.5 mm | # 300 | 62805 |
| 0.4 mm | # 400 | 62806 |
| 0.36 mm | # 600 | 62807 |

Exclusive Tools of "50° & 90° ANGLE"
Special tools for Nakanishi Micro-grinder "Angle Attachment". Highly efficient for grinding, polishing, finishing, etc.

Special Rubber Pad For Abrasive and



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.

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NAKANISHI'S EXCLUSIVE TOOLS



1 pc./pack Electroplated Diamond File

Flat taper

| t | Grit | |
|---------|-------|-------|
| 0.5 mm | # 200 | 62801 |
| 0.4 mm | # 400 | 62802 |
| 0.35 mm | # 600 | 62803 |

Flat taper

| | | |
|---------|-------|-------|
| 0.5 mm | # 200 | 62805 |
| 0.4 mm | # 400 | 62806 |
| 0.35 mm | # 600 | 62807 |

Flat

| | |
|-------|-------|
| # 150 | 62811 |
| # 200 | 62812 |
| # 400 | 62813 |

Flat (Single side electroplating)

| | |
|-------|-------|
| # 100 | 62814 |
|-------|-------|

Flat

| | |
|-------|-------|
| # 150 | 62815 |
| # 200 | 62816 |
| # 400 | 62817 |

*62815 is thickness 1.4mm.

Flat (Single side electroplating)

| | |
|-------|-------|
| # 150 | 62821 |
| # 200 | 62822 |
| # 400 | 62823 |

Flat (Single side electroplating)

| | |
|-------|-------|
| # 150 | 62825 |
| # 200 | 62826 |
| # 400 | 62827 |

Angular

| Grit | |
|-------|-------|
| # 150 | 62831 |
| # 200 | 62832 |
| # 400 | 62833 |

Round

| | |
|-------|-------|
| # 100 | 62840 |
| # 150 | 62841 |
| # 200 | 62842 |
| # 400 | 62843 |

Round

| | |
|-------|-------|
| # 150 | 62845 |
| # 200 | 62846 |
| # 400 | 62847 |

Round

| | |
|-------|-------|
| # 150 | 62851 |
| # 200 | 62852 |
| # 400 | 62853 |

Round taper

| | |
|-------|-------|
| # 150 | 62855 |
| # 200 | 62856 |
| # 400 | 62857 |

Half-round

| | |
|-------|-------|
| # 150 | 62865 |
| # 200 | 62866 |
| # 400 | 62867 |

Half-round

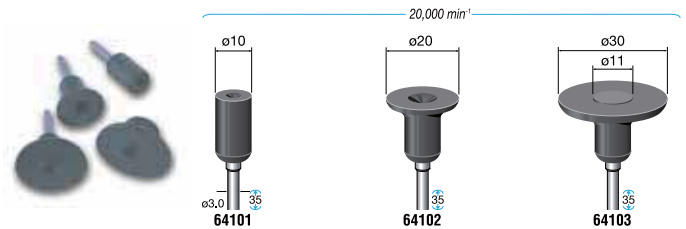
| | |
|-------|-------|
| # 150 | 62871 |
| # 200 | 62872 |
| # 400 | 62873 |

Triangular

| | |
|-------|-------|
| # 150 | 62881 |
| # 200 | 62882 |
| # 400 | 62883 |



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



Exclusive Tools of "60° & 90° ANGLE"

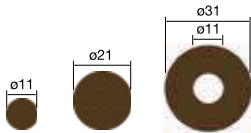


Special tools for Nakanishi Micro-grinder "Angle Attachment".
Highly efficient for grinding, polishing, finishing, etc.

100 pcs./pack Sand Paper Disk

Cloth Type

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

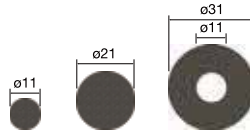


| | Grit | 11 | 21 | 31 |
|------------|---------|-------|-------|-------|
| For Metals | # 60 | 64111 | 64121 | 64141 |
| | # 80 | 64112 | 64122 | 64142 |
| | # 120 | 64113 | 64123 | 64143 |
| | # 180 | 64114 | 64124 | 64144 |
| | # 240 | 64115 | 64125 | 64145 |
| | # 320 | 64116 | 64126 | 64146 |
| | # 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)

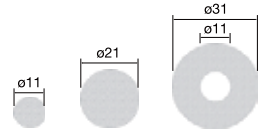


| | Grit | 11 | 21 | 31 |
|--------------------|---------|-------|-------|-------|
| For Metals (Black) | # 80 | 64131 | 64151 | 64171 |
| | # 120 | 64132 | 64152 | 64172 |
| | # 180 | 64133 | 64153 | 64173 |
| | # 240 | 64134 | 64154 | 64174 |
| | # 320 | 64135 | 64155 | 64175 |
| | # 400 | 64136 | 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



| | Grit | 11 | 21 | 31 |
|----------------------|-------|-------|-------|-------|
| For Dry type (White) | # 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

Electrically Driven
Air Driven
General Parts
General Parts
Exclusive Tools
EXCLUSIVE TOOLS
INDEX
Protective Equip.

NAKANISHI's EXCLUSIVE TOOLS

100 pcs./pack Zirconium Disk

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



| Grit | ø11 | ø21 | ø31 |
|-------|-------|-------|-------|
| # 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 | ø11 | ø21 | ø31 |
|---------|-----------|-------|-------|-------|
| # 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 | ø11 | ø21 | ø31 |
|-------------------------------------|-------|-------|-------|
| 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 Oxide (Blue Rouge) Embedded.



| Description | ø11 | ø21 | ø31 |
|----------------------------------------------------------------------|-------|-------|-------|
| 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 | ø20 | ø30 |
|-------|------------|-------|-------|
| # 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

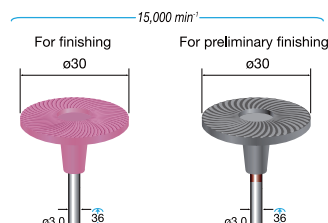
SHANK ø3.0

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 |

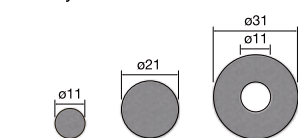


For preliminary finishing (Fast grinding)

| 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.

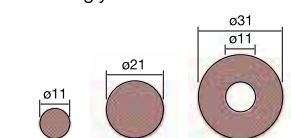


| Grit | ø11 | ø21 | ø31 |
|---------|-------|-------|-------|
| # 100 | 64451 | 64461 | 64471 |
| # 140 | 64452 | 64462 | 64472 |
| # 200 | 64453 | 64463 | 64473 |
| # 280 | 64454 | 64464 | 64474 |
| # 400 | 64455 | 64465 | 64475 |
| # 600 | 64456 | 64466 | 64476 |
| # 800 | 64457 | 64467 | 64477 |
| # 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 | ø11 | ø21 | ø31 |
|-------|--------|-------|-------|-------|
| # 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

Electrically Driven

EmaxEVO
ESPERT

Air Driven

ROTUS
IMPULSE
PRESTO II

General Parts

GENERAL PARTS

CAUTION

Exclusive Tools

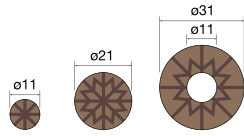
EXCLUSIVE TOOLS

INDEX

Protective Equip.

NAKANISHI'S EXCLUSIVE TOOLS

3 pcs./pack Resin Bond Diamond Disk Star Pattern



*Patterns may be changed without notice

| 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

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



| Arandom 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

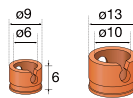
SHANK ø3.0

Lap Ring



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

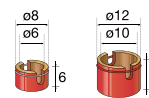
10 pcs./pack Replacement Plastic Ring



64713 64717

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

5 pcs./pack Replacement Brass Ring



64723 64727

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.



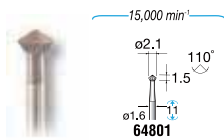
MINI ANGLE TYPE Attachment (Very Small Head)



MINI ANGLE TYPE Attachment

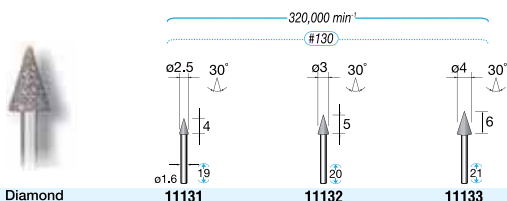
SHANK ø1.6

1 pc./pack Steel Cutters For Deep Cross Hole Finishing



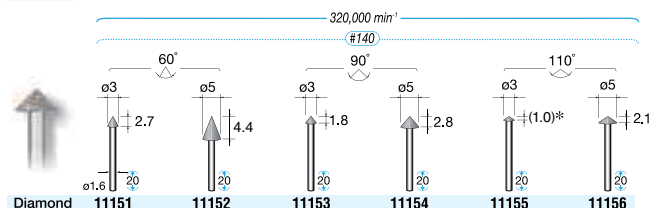
SHANK ø1.6

1 pc./pack Diamond 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.

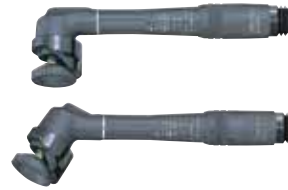
Electrically Driven
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 Air Driven
 ROTUS IMPULSE PRESTO II
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NAKANISHI's EXCLUSIVE TOOLS

Exclusive Tools of "IMPULSE"



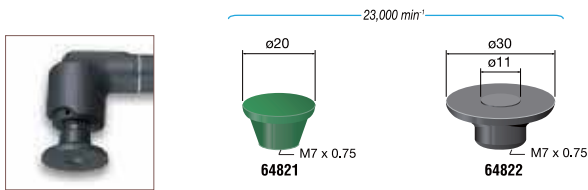
Special tools for Nakanishi Micro-grinder "IMPULSE".
Excellent for grinding or polishing flat surfaces, edges with Nakanishi's high-power air grinder.



90° ANGLE IMPULSE
· NA90-230

60° ANGLE IMPULSE
· NA45-230

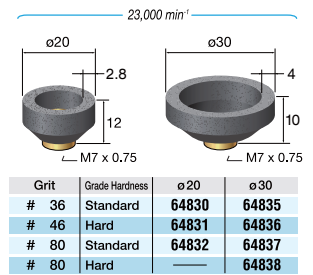
5 pcs./pack Special Rubber Pad for Disk Abrasives



64821

64822

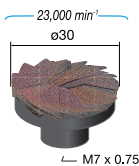
12 pcs./pack Cup Wheel



| 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.

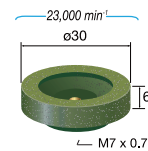


| Grit | |
|-------|-------|
| # 80 | 64842 |
| # 120 | 64844 |
| # 180 | 64846 |
| # 240 | 64847 |
| # 400 | 64849 |

• 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 | |
|-------|-------|-------|
| # 60 | Brown | 64851 |
| # 80 | Red | 64852 |
| # 120 | Blue | 64853 |
| # 180 | Olive | 64854 |
| # 220 | Green | 64855 |
| # 320 | Brown | 64856 |

• 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**

Electrically Driven

EMAXEVO
ESPERT

Air Driven

ROTUS
IMPULSE
PRESTO II

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Kontaktieren Sie

[unser Team:](#)



Brunnenstraße 2 · 78554 Aldingen

Tel. +49 (0)7424 98192-0 · Fax +49 (0)7424 84601 · info@klingseisen.de