

AIR MOTOR SPINDLE

# BANTAM Series

## Air System



Suitable for drilling and milling with a small diameter tool when the maximum speed of the conventional vertical milling or machining center is not fast enough.

### BANTAM 150

12,000~15,000 min<sup>-1</sup>  
Output 132W



### BANTAM 250

20,000~26,000 min<sup>-1</sup>  
Output 105W



1

E-max

ROTUS

ESPERT

VIVA-MATE 3

PNEU-SONIC

IMPULSE

PRESTO MIRACLE

SHEENUS

SONIC CUTTER

2

ASTRO-E 500Z

ASTRO-E 800Z

ASTRO-E 2550

ASTRO-E 250

ASTRO-E 6040

3

ASTRO SYSTEM

φ22.8

φ25

φ30

ASTRO SERIES

φ19.05

φ20

φ23

φ25

HIGH OUTPUT

4

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5

ASTRO-X

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# AIR MOTOR SPINDLE "BANTAM SERIES"

## BANTAM Series Features

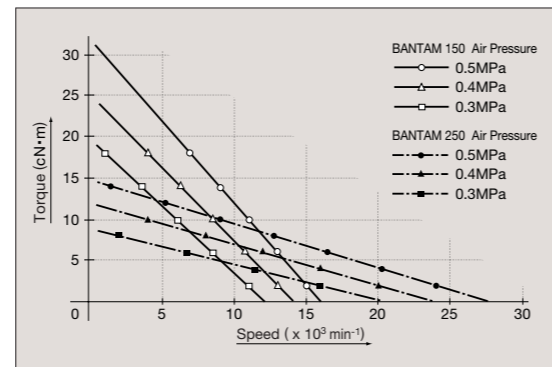
- Air motor spindle type offers less vibration, and is suitable for precision processing works of small-diameter drill & small-diameter end mill, grinding of inside & outside cylindrical surfaces, etc.
- Air driven system generates minimum heat ensuring smooth and continuous operation.
- Chuck run-out accuracy within 8 microns combined with four ultra-precision angular bearings results in strong rigidity.
- High torque enables the use of grinding instrument for grinding of bore, outside cylindrical surface, end surface, etc.



## BANTAM Series Specifications

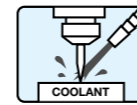
- Speed ..... BANTAM 150 / BANTAM 250  
15,000 / 26,000 min<sup>-1</sup> (0.5MPa)  
14,000 / 24,000 min<sup>-1</sup> (0.4MPa)  
12,000 / 20,000 min<sup>-1</sup> (0.3MPa)
- Max. Output Power ..... 132W / 105W
- Air type ..... Side Air Supply Type
- Shank ..... Straight
- Proper Air Pressure ..... 0.3~0.5MPa
- Hose Diameter Air Inlet (K-257) ..... ø7 mm (O.D.)

### ● BANTAM Series Torque-Speed Characteristics



## BANTAM Series Connection Drawing

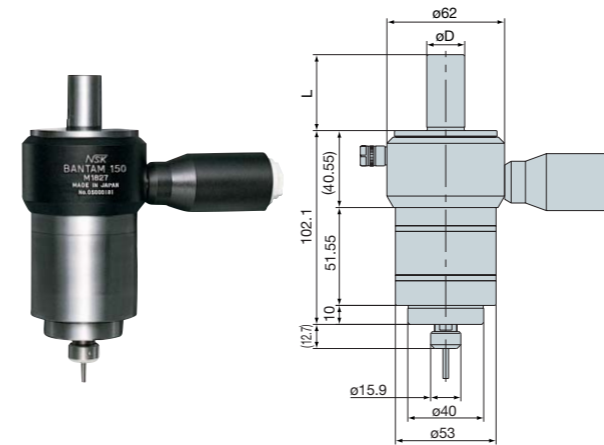
Clean, lubricated, and regulated air is required for BANTAM Series spindles. Please refer to the diagram to the right for proper connections. AL-0304 incorporates a filter, regulator and lubricator to provide the appropriate air.



BANTAM Series can be used in conjunction with water or oil based coolants.

## BANTAM 150

15,000 min<sup>-1</sup>



- Speed 12,000~15,000 min<sup>-1</sup>
- Max. Output 132W

Speed	12,000 min <sup>-1</sup>	14,000 min <sup>-1</sup>	15,000 min <sup>-1</sup>
Proper Air Pressure	0.3MPa	0.4MPa	0.5MPa
Air Consumption	120NL/min	148NL/min	172NL/min

### Air Motor Spindle

CAT. No.	Model	Shank øD x L
1243	B150-M1827	Straight Shank ø18 x 27 mm
1244	B150-M2040	Straight Shank ø20 x 40 mm

#### Standard Equipment · Accessories

- Collet Chuck ø3.0 mm (CH5-3.0) : 1 pc. ● Chuck Nut (K-218) : 1 pc.
- Inlet Air Hose (K-257) : ø7 mm x 2 m ● Silencer (K-262)
- Spanner (10 x 10) : 1 pc. ● Pin Spanner (K-222) : 1 pc. ● Filter Joint (FJ-03)

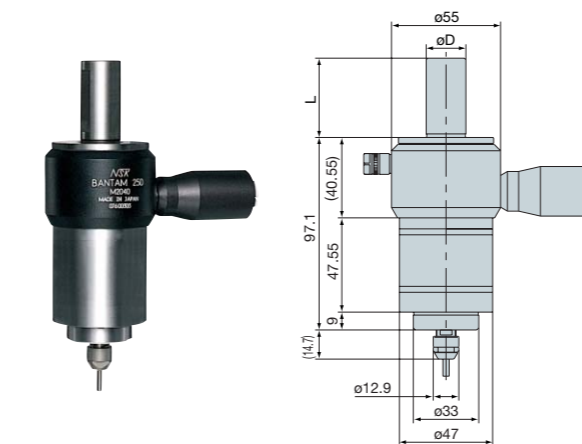
< Optional >

- Collet Chuck (CH5-□□) ..... ø0.3 mm~ø6.0 mm in 0.1 mm increments and ø2.35, ø3.175, ø6.35 mm
- Chuck Nut (K-218) ..... For Collet Chuck (CH5)

\*Use AL-0304 for BANTAM Series.

## BANTAM 250

26,000 min<sup>-1</sup>



- Speed 20,000~26,000 min<sup>-1</sup>
- Max. Output 105W

Speed	20,000 min <sup>-1</sup>	24,000 min <sup>-1</sup>	26,000 min <sup>-1</sup>
Proper Air Pressure	0.3MPa	0.4MPa	0.5MPa
Air Consumption	114NL/min	134NL/min	154NL/min

### Air Motor Spindle

CAT. No.	Model	Shank øD x L
1222	B250-M1827	Straight Shank ø18 x 27 mm
1223	B250-M2040	Straight Shank ø20 x 40 mm

#### Standard Equipment · Accessories

- Collet Chuck ø3.0 mm (CHA-3.0) : 1 pc. ● Chuck Nut (K-263) : 1 pc.
- Inlet Air Hose (K-257) : ø7 mm x 2 m ● Silencer (K-261)
- Spanner (10 x 10), (8 x 5) : 1 pc. each ● Filter Joint (FJ-03)

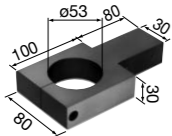
< Optional >

- Collet Chuck (CHA-□□) ..... ø0.5 mm~ø4.0 mm in 0.1 mm increments and ø2.35, ø3.175 mm
- Chuck Nut (K-263) ..... For Collet Chuck (CHA)

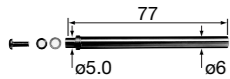
\*Use AL-0304 for BANTAM Series.

## BANTAM Series Parts


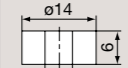
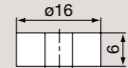
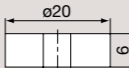
### ■ Holder for Lathe

Product	CAT. No.	Model	Description
	1237	HB-53	BANTAM Lathe Holder For BANTAM 150

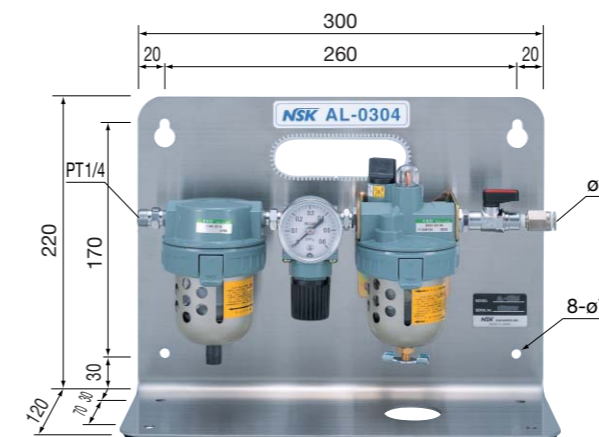
### ■ Grindstone Axis

Product	CAT. No.	Model	Size of inside diameter d (Unit : mm)	Fit to
	3679	PV-70	Grindstone PBG-14, 16, 20 PDG-14, 16, 20 } are usable	BANTAM 150

### ■ Unmounted Vitrified Grindstone for Internal Grinding

Product	Product dimensions		
			
(Diamond) Grit #170	CAT. No. 65621	65622	65623
	Model PDG-14	PDG-16	PDG-20
(CBN) Grit #170	CAT. No. 65625	65626	65627
	Model PBG-14	PBG-16	PBG-20
Package	1 pc.		

## CAT. No. 1542 AIR LINE KIT AL-0304



- The AL-0304 is a system supplying oil to the motor side automatically by regulating the air pressure. However, in some cases the filter of AL-0304 may not provide sufficient filter effects, and it is recommended to install either an air dryer or a large air filter between the compressor and AL-0304. The lubricator used by NSK is a micro-mist type lubricator specially designed to supply 3% of the visually controlled drip volume (approx. 30 drops/min) to the secondary side (air motor, etc.) in an atomized state.

### Air Line Kit (For ø6 mm, ø8 mm Hose · Filter Mesh 0.3 μm)


CAT. No.	Model	Standard Equipment - Accessories
1542	AL-0304	<ul style="list-style-type: none"> <li>• Air Filter</li> <li>• Air Regulator</li> <li>• Air Pressure Gauge</li> <li>• Lubricator</li> <li>• Air ON-OFF Valve</li> <li>• Hose for Piping (K-260) : 2 m</li> <li>• Lubricating Oil (K-211) : 1 pc.</li> <li>• Reducer</li> </ul>

\* Reducer (ø8 - ø6 mm Adaptor) is provided.

## LUBRICATING OIL

- Use ISO VG15 Liquid Paraffin (Shell Ongina oil #15) for lubricator.

### Lubricating Oil (70 cc)

CAT. No.	Model	Product
1057	K-211	

### Lubricating Oil (1L)

CAT. No.	Model	Product
1058	K-202	