

# MICRO AIR GRINDER

## MICRO AIR GRINDER

**GEM ECO GEMMOTOR**

▶ ECO GEMMOTOR | MODEL-101E

### Operates from 0.3Mpa!

### It helps factories save energy and reduce CO<sub>2</sub>!

**48,000**  
(min<sup>-1</sup>)

Max. Revolution

**REAR**

Air Exhaustion

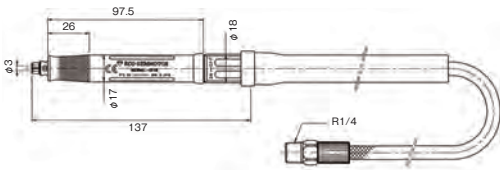
**100**  
g

Weight

**3.0**  
mm

Chucking Width

- Eco-friendly grinder that helps factories save energy and reduce CO<sub>2</sub>.
- Delivers strong torque even at low pressure (usable from 0.3 MPa; strong torque at 0.4 MPa)
- High spindle rigidity and excellent runout accuracy
- Ultra-lightweight (100 g), low noise, low vibration, and ergonomic for comfortable long-hour use.
- Supports Ø2.35 and Ø3.175 tools with interchangeable collets.



For example, in a large factory:

- 245 operating days per year
- 16 hours of operation per day
- Air grinder usage rate: 40%

Annual energy and environmental benefits

Electricity savings .940 kWh per unit  
CO<sub>2</sub> emissions reduction 415 kg per unit※1



Equivalent to the electricity used by  
a typical household for 2.4 months※2



※1 Based on an emission factor of 0.441 kg-CO<sub>2</sub>/kWh. ※2 Based on a four-person household using 400 kWh per month.

Model Number	Max. Revolution (min <sup>-1</sup> )	Supply Air Pressure (MPa)	Air Consumption (L/minANR)	Chucking Width (mm)	Air Inlet (from air source)	Air Exhaustion	Throttle	weight(g)
MODEL-101E	48,000	0.4 ± 0.1	100	φ3 (std)	R1/4	REAR	ON ↔ OFF valve	100

●Set includes: Main unit × 1, Collet Ø3 × 1 (optional Ø2.35 and Ø3.175 available), Air hose Ø5.8 (ID) × Ø8.5 (OD) × 1.5 m × 1, Exhaust hose 0.5 m × 1, Box wrench (6 mm) × 1, Grip wrench (8 mm) × 1, Rubber sleeve × 1, Instruction manual × 1, Tool box × 1

**GEM NEWMOTOR**

▶ GEM NEWMOTOR | MODEL-101

### High speed, high rigidity, high precision micro grinder.

### It works comfortably with large heads and long tools!

**60,000**  
(min<sup>-1</sup>)

Max. Revolution

**REAR**

Air Exhaustion

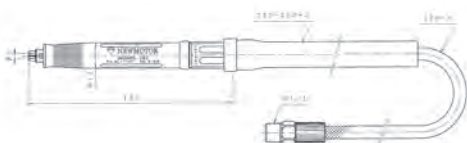
**100**  
g

Weight

**3.0**  
mm

Chucking Width

- High spindle rigidity and excellent runout accuracy
- 60,000 min<sup>-1</sup> with a high-torque vane motor
- Ultra-lightweight (100 g), low noise, low vibration, ergonomic for long, comfortable use
- Supports Ø2.35 and Ø3.175 tools with interchangeable collets



Model Number	Max. Revolution (min <sup>-1</sup> )	Supply Air Pressure (MPa)	Air Consumption (L/minANR)	Chucking Width (mm)	Air Inlet (from air source)	Air Exhaustion	Throttle	weight(g)
MODEL-101	60,000	0.5 <sup>+0.2</sup> <sub>-0.1</sub>	160	φ3 (std)	R1/4	REAR	ON ↔ OFF valve	100

●Set includes: Main unit × 1, Collet Ø3 × 1 (optional Ø2.35 and Ø3.175 available), Air hose Ø5.8 (ID) × Ø8.5 (OD) × 1.5 m × 1, Exhaust hose 0.5 m × 1, Box wrench (6 mm) × 1, Grip wrench (8 mm) × 1, Rubber sleeve × 1, Instruction manual × 1, Tool box × 1

※Specifications are subject to change without notice.

## MICRO AIR GRINDER STRAIGHT TYPE



► GEM NEWMOTOR | MODEL-100

### Front Exhaust Type

Provides stable machining with effective tool cooling and chip removal.

**50,000**  
(min<sup>-1</sup>)

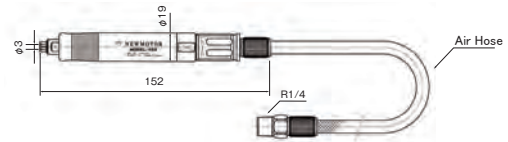
**FRONT**

**110**  
g

**3.0**  
mm

Max. Revolution Air Exhaustion Weight Chucking Width

- Front exhaust for effective tool cooling and chip removal
- Supports Ø2.35 and Ø3.175 tools with interchangeable collets



Model Number	Max. Revolution (min <sup>-1</sup> )	Supply Air Pressure (MPa)	Air Consumption (L/minANR)	Chucking Width (mm)	Air Inlet (from air source)	Air Exhaustion	Throttle	Weight(g)
MODEL-100	50,000	0.5 <sup>+0.2</sup> <sub>-0.1</sub>	150	φ3 (std)	R1/4	FRONT	ON↔OFF valve	110

●Set includes: Main unit × 1, Collet Ø3 × 1 (optional Ø2.35 and Ø3.175 available), Air hose Ø5.8 (ID) × Ø8.5 (OD) × 1.5 m × 1, Box wrench (6 mm) × 1, Double-ended wrench (8mm) × 1, Instruction manual × 1, Tool box × 1



► MACH-MOTOR | U-M

### Standard Micro Air Grinder

Easy to use with low vibration and simple tool changes.

**60,000**  
(min<sup>-1</sup>)

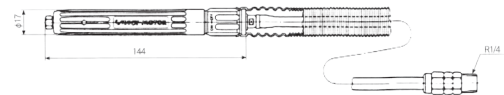
**REAR**

**140**  
g

**3.0**  
mm

Max. Revolution Air Exhaustion Weight Chucking Width

- 60,000 min<sup>-1</sup> using a high-torque vane motor
- Low vibration zinc die-cast body
- Spindle-integrated collet for excellent runout accuracy
- Easy tool changes with shaft-lock pin



Model Number	Max. Revolution (min <sup>-1</sup> )	Supply Air Pressure (MPa)	Air Consumption (L/minANR)	Chucking Width (mm)	Air Inlet (from air source)	Air Exhaustion	Throttle	Weight(g)
U-M	60,000	0.5 <sup>+0.2</sup> <sub>-0.1</sub>	180	φ3 (std)	R1/4	REAR	ON↔OFF valve	140

●Set includes: Main unit × 1, Air hose Ø5.8 (ID) × Ø8.5 (OD) × 1.5 m × 1, Exhaust hose 0.5 m × 1, Pin tool (φ3mm) × 1, Single-ended wrench (8mm) × 1, Instruction manual × 1, Tool box × 1

## MICRO AIR GRINDER ANGLE TYPE



► GEM NEWMOTOR | ANGLE TYPE MODEL-109-111-112

Slim angle-head design for easy use in tight spaces.

High-precision gears reduce noise and vibration.



► MODEL-109

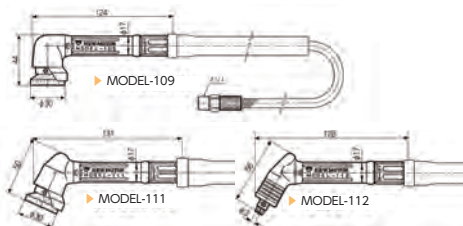


► MODEL-111



► MODEL-112

The compact angle head improves handling and maneuverability.



Model Number	Head angle	Max. Revolution (min <sup>-1</sup> )	Supply Air Pressure (MPa)	Air Consumption (L/minANR)	Chucking cap. (mm)	Air Inlet (from air source)	Air Exhaustion	Throttle	Weight(g)
MODEL-109	90°	25,000	0.5 <sup>+0.2</sup> <sub>-0.1</sub>	160	M7×0.75※	R1/4	REAR	ON↔OFF valve	140
MODEL-111	120°	25,000		160	M7×0.75※	R1/4	REAR	ON↔OFF valve	140
MODEL-112	120°	45,000		160	φ3(std)	R1/4	REAR	ON↔OFF valve	120

# MICRO AIR GRINDER

## MICRO AIR GRINDER STRAIGHT TYPE



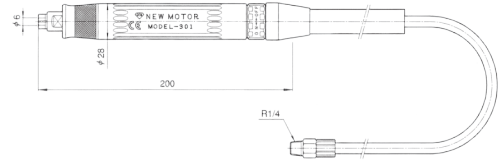
▶ GEM NEWMOTOR | MODEL-301

### Ø6 Shank Pencil Grinder

High torque and high precision in a compact body.

<b>30,000</b> (min <sup>-1</sup> )	<b>REAR</b>	<b>400</b> g	<b>6.0</b> mm	<b>3.0</b> mm
Max. Revolution	Air Exhaustion	Weight	Chucking Width	※ Option

- High power in a small, lightweight design
- Maintains micro grinder accuracy with increased output
- Supports Ø3 tools with interchangeable collets



Model Number	Max. Revolution (min <sup>-1</sup> )	Supply Air Pressure (MPa)	Air Consumption (L/minANR)	Chucking Width (mm)	Air Inlet (from air source)	Air Exhaustion	Throttle	Weight(g)
MODEL-301	30,000	0.5 <sup>+0.2</sup> <sub>-0.1</sub>	180	φ6 (std)	R1/4	REAR	ON↔OFF valve	400

●Set includes: Main unit × 1, Collet Ø6 × 1 (optional Ø3 available), Air hose Ø5.8 (ID) × Ø8.5 (OD) × 1.5 m × 1, Exhaust hose 0.5 m × 1, Box wrench (6 x10mm) × 1, Double-ended wrench (8x12mm) × 1, Instruction manual × 1, Tool box × 1

Pencil Type & Handy Air-Grinder



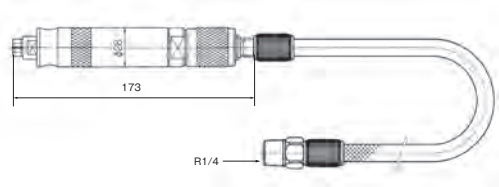
▶ PNEUMOTOR | TYPE-3

### Ø6 Shank Pencil Grinder

Machined Ø28 mm round body for easy mounting on robots and special machines.

<b>35,000</b> (min <sup>-1</sup> )	<b>FRONT</b>	<b>280</b> g	<b>6.0</b> mm	<b>3.0</b> mm
Max. Revolution	Air Exhaustion	Weight	Chucking Width	Chucking Width

- Ideal Ø28 mm cylindrical body for robotic or machine integration
- Easy speed adjustment with flow-control valve
- Front exhaust for tool cooling and chip removal



Model Number	Max. Revolution (min <sup>-1</sup> )	Supply Air Pressure (MPa)	Air Consumption (L/minANR)	Chucking Width (mm)	Air Inlet (from air source)	Air Exhaustion	Throttle	Weight
TYPE-3	35,000	0.5 <sup>+0.2</sup> <sub>-0.1</sub>	250	φ3 · φ6	R1/4	FRONT	Flow-control valve	280

●Set includes: Main unit × 1, Collet φ3 · φ6 × 1, Air hose Ø5.8 (ID) × Ø8.5 (OD) × 1.5 m × 1, Box wrench (6 x10mm) × 1, Double-ended wrench (8x12mm) × 1, Instruction manual × 1, Tool box × 1

## OPTION PARTS (FOR MICRO/SMALL GRINDER)

### ▶ CUP TOOL · PAPER DISK

NAME	FORM	PART NO.	GRID	pkg
MASTER CUP φ30 (CUP-SHAPED GRINDSTONE)		MC60	#60	12 pcs.
		MC100	#100	12 pcs.
PAPER DISK φ30 (WITH A HOLDER)		PD80	#80	100 pcs.
		PD120	#120	100 pcs.
		PD180	#180	100 pcs.
		PD320	#320	100 pcs.
PAPER DISK HOLDER		PH30	-	5 pcs.

### COLLET CHUCK

GRINDER MODEL	COLLET CHUCK SIZE & MODEL NO.			
	φ2.35	φ3.0	φ3.175	φ6.0
GEM NEWMOTOR MODEL-101	260122	260103*	260124	-
MODEL-101E	260122	260103*	260124	-
MODEL-100	260122	260103*	260124	-
MODEL-112	260122	260103*	260124	-
MODEL-301	-	260303	-	260304*
NEWMOTOR TYPE-3	-	260303*	-	260304*
pkg	1pcs.	1pcs.	1pcs.	1pcs.

- ※ Collets marked with \* are included with the grinder.
- ※ Please specify the code number when ordering.

# MRA AIR GRINDER



► MRA Pencil Grinder – Straight Type | MRA-PG5730

A versatile, easy-to-use Ø3 pencil grinder that feels “just right.”

<b>60,000</b> (min <sup>-1</sup> )	<b>REAR</b>	<b>135</b> g	<b>3.0</b> mm
Max. Revolution	Air Exhaustion	Weight	Chucking Width

- Max speed: 60,000 min<sup>-1</sup>
- High torque, low noise
- Lightweight, high-rigidity aluminum die-cast one-piece body
- Easy tool changes with shaft-lock pin



Model Number	Max. Revolution (min <sup>-1</sup> )	Supply Air Pressure (MPa)	Air Consumption (L/minANR)	Chucking Width (mm)	Air Inlet (from air source)	Air Exhaustion	Throttle	Weight(g)
MRA-PG5730	60,000	0.6±0.1	180	φ3.0	Rc 1/4	REAR	ON↔OFF valve	135

● Set includes: Main unit × 1, Air hose Ø5.8 (ID) × Ø8.5 (OD) × 1.5 m × 1, Exhaust hose 0.34 m × 1, Pin tool (φ2.7mm) × 1, Single-ended wrench (7mm) × 1, R1/4 Nipple × 1, Instruction manual × 1, Tool box × 1

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