

TURBINES

ABT · Xpeed · HTS · PLANET



2026

TURBINES



eka Klingseisen

Werkzeuge & Maschinen

TURBINES SERIES

HIGH-SPEED ROTATION & HIGH PRECISION

ABT Series

Standard air bearing turbine spindles

• Max. speed: 160,000 min⁻¹

Xpeed Series

Ultimate air bearing turbine spindle

• Max. speed: 120,000 min⁻¹

HTS Series

Air turbine spindle for small-diameter end milling

• Max. speed: 150,000 min⁻¹

PLANET Series

Air turbine spindles for high-speed jig grinding

• Max. speed: 65,000 min⁻¹



NAKANISHI
ABT-1000
MADE IN JAPAN
ABD10001

NAKANISHI
HTS1500ZZ
MADE IN JAPAN
A244007
150,000min⁻¹

NAKANISHI
PLANET 600
M2040
MADE IN JAPAN
OBD80002
65,000min⁻¹

E4000

E3000

E2000

1-Speed3

Air-Speed

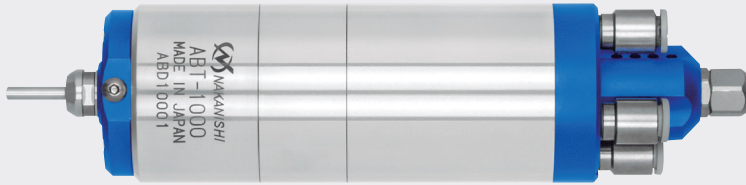
HES

TURBINES

ACCESSORIES

Index

ABT SERIES Standard air bearing turbine spindles



ABT-1000 p. 7-5
Max. speed 100,000 min⁻¹



ABT-1600 p. 7-5
Max. speed 160,000 min⁻¹

Xpeed SERIES Ultimate air bearing turbine spindle



Xpeed1200 p. 7-7
Max. speed 120,000 min⁻¹

HTS SERIES

Air turbine spindle for small-diameter end milling



HTS1500ZZ-M2040

Max. speed 150,000 min⁻¹

Straight shank

HTS1500ZZ-M2040 p. 7-9

E4000

E3000

E2000

1Speed3

Air-Speed

HES

TURBINES

ACCESSORIES

PLANET SERIES

Air turbine spindles for high-speed jig grinding



PLANET600

Max. speed 65,000 min⁻¹

Straight shank

PL600-M2040 p. 7-11

PL600-H3440 p. 7-11

Standard model of air bearing turbine spindles for high-precision machining with small-diameter tools

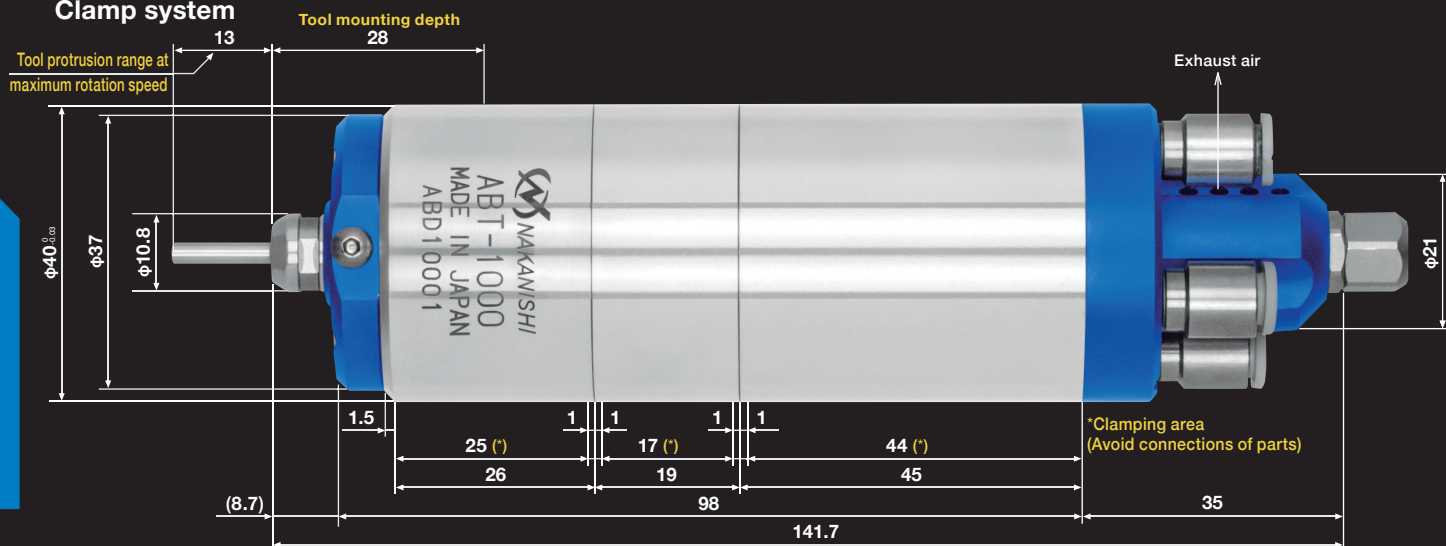
- Precision-machined shafts and bearings reduce core shake and vibration, resulting in high rotational accuracy
- The air-driven mechanism that floats and rotates the shaft achieves a longer product life than ball bearings

ABT SERIES

Standard air bearing turbine spindles

ABT-1000

Clamp system

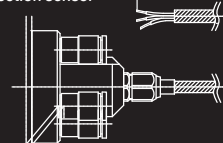


⚠ Caution

- Air bearing spindles require clean dry air for proper operation.
- Never rotate the spindle, change cutting tools or collet without supplying clean, dry air to the bearing surfaces.
- Always supply clean, dry air to the bearing surfaces even when the spindle is not being rotated.
- Do not start work process until after stable rotation has been established and verified.

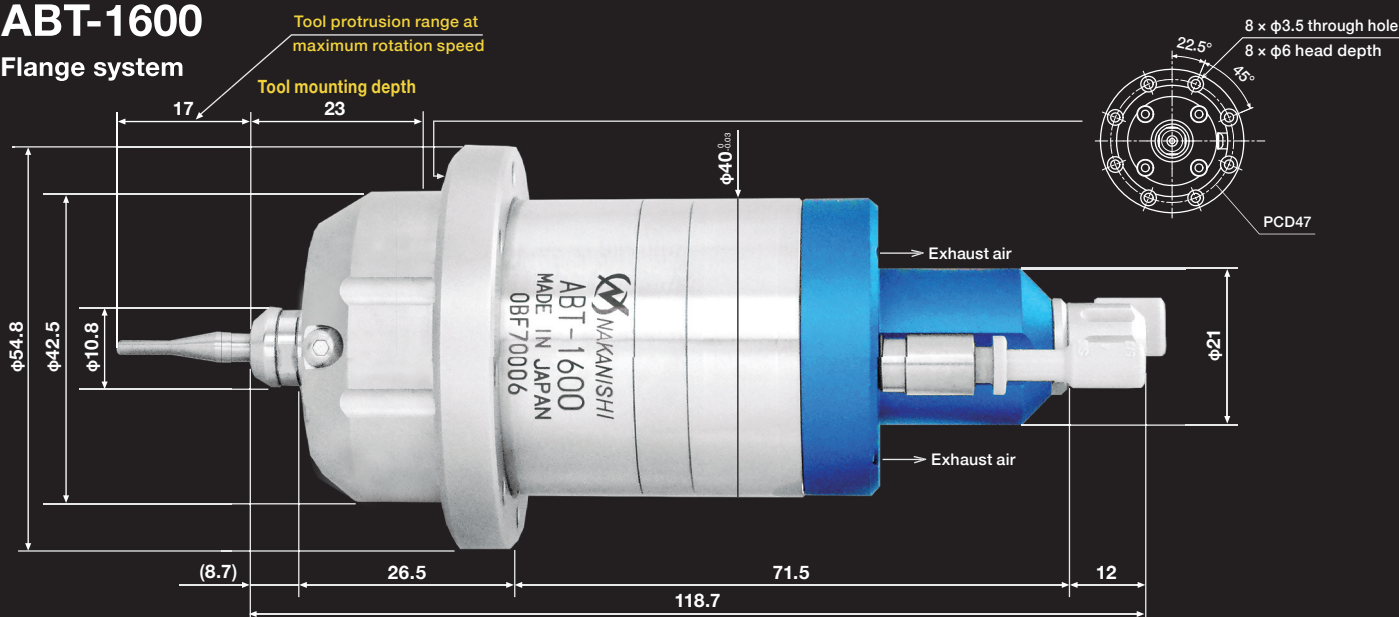
When using the Rotation speed detection sensor

Wiring cable length: 5 m



ABT-1600

Flange system

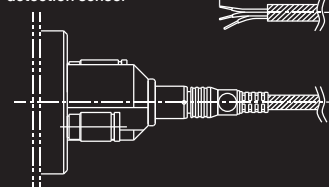


⚠ Caution

- Air bearing spindles require clean dry air for proper operation.
- Never rotate the spindle, change cutting tools or collet without supplying clean, dry air to the bearing surfaces.
- Always supply clean, dry air to the bearing surfaces even when the spindle is not being rotated.
- Do not start work process until after stable rotation has been established and verified.

When using the Rotation speed detection sensor

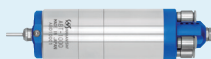
Wiring cable length: 5 m



Spindle Guide



CHA AA



ABT-1000



ABT-1600



AL-A0611



AL-A1205

Specifications

CAD drawings

CAD drawings (DXF/STEP) are available on our website

Order by Code No.

ABT-1000



■ Detection of rotation speed

Built-in magnetic sensor
(output signal: 1 pulse/rev)

■ Air piping

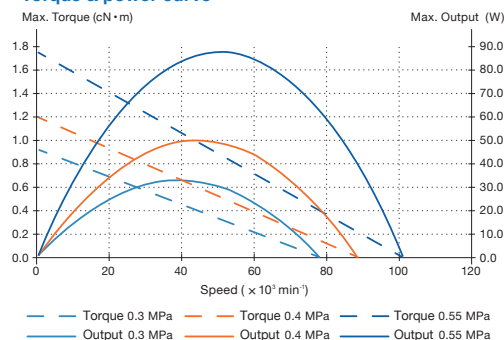
Intake hose (Turbine): $\phi 6$ mm \times 2 parts
Intake hose (Air bearing): $\phi 6$ mm

O.D.	Speed	Spindle accuracy	Max. power	Collet	Net weight
$\phi 40$ mm	100,000 min ⁻¹	Within 1 μ m	88 w	CHA Group AA ($\phi 3.0$, $\phi 3.175$, $\phi 4.0$ mm)	820 g
Air bearing required air pressure		Air turbine operating air pressure		Bearing load capacity	
0.55 MPa (Air consumption: 50 NL/min)		0.55 MPa (Air consumption: 135 NL/min)		Radial: 20 N or more / Thrust: 35 N or more	
Standard equipment and accessories	Collet: $\phi 3.0$ mm (CHA-3.0AA) / Collet nut (CHN-3A) / Rotation speed detection sensor cable: 1 pc. / Wrench (10 \times 10): 1 pc. / Bar wrench (K-277): 1 pc. / Hexagon wrench (2 mm): 1 pc. / Protective cover: 1 pc. / Cap: 1 pc. / Test bur ($\phi 3 \times 40$ L): 1 pc.				
Options	Collet (CHA Group high precision type AA): $\phi 3.0$, $\phi 3.175$, $\phi 4.0$ mm p. 8-5				

*Intake hose is sold separately.

Code No. **1856** Model **ABT-1000**

Torque & power curve



ABT-1600



Do not exceed 17 mm of Tool the protrusion depth range at Depth for mounted grindstones and cutting tools when using at the Maximum Rotation Speed (160,000 min⁻¹) (rpm). If a total length of a grindstones and cutting tools are longer than 40 mm, cut off a grindstones and cutting tools before use. If the overhang must exceed 17 mm, reduce the Air turbine speed.

■ Detection of rotation speed

Built-in magnetic sensor
(output signal: 2 pulse/rev)

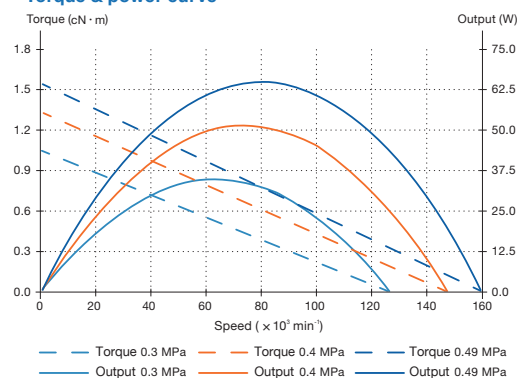
■ Air piping

Intake hose (Turbine): $\phi 6$ mm
Intake hose (Air bearing): $\phi 4$ mm

O.D.	Speed	Spindle accuracy	Max. power	Collet	Net weight
$\phi 40$ mm	160,000 min ⁻¹	Within 1 μ m	63 w	CHA Group AA ($\phi 3.0$, $\phi 3.175$, $\phi 4.0$ mm)	570 g
Air bearing required air pressure		Air turbine operating air pressure		Bearing load capacity	
0.5 MPa (Air consumption: 35 NL/min)		0.5 MPa (Air consumption: 150 NL/min)		Radial: 10 N or more / Thrust: 20 N or more	
Standard equipment and accessories	Collet: $\phi 4.0$ mm (CHA-4.0AA) / Collet nut (CHN-3A) / Rotation speed detection sensor cable: 1 pc. / Wrench (10 \times 10): 1 pc. / Bar wrench (K-277): 1 pc. / Hexagon wrench (2 mm): 1 pc. / Intake hose ($\phi 6 \times 1.5$ m): 1 pc. / Intake hose ($\phi 4 \times 1.5$ m): 1 pc. / Air plug ($\phi 4$), ($\phi 6$): 1 pc. each / Protective cover: 1 pc. / Cap: 1 pc. / Stepped test bur ($\phi 2 \times \phi 4 \times 34$ L): 1 pc.				
Options	Collet (CHA Group high precision type AA): $\phi 3.0$, $\phi 3.175$, $\phi 4.0$ mm p. 8-5				

Code No. **1857** Model **ABT-1600**

Torque & power curve



E4000

E3000

E2000

1Speed3

Air-Speed

HES

TURBINES

ACCESSORIES

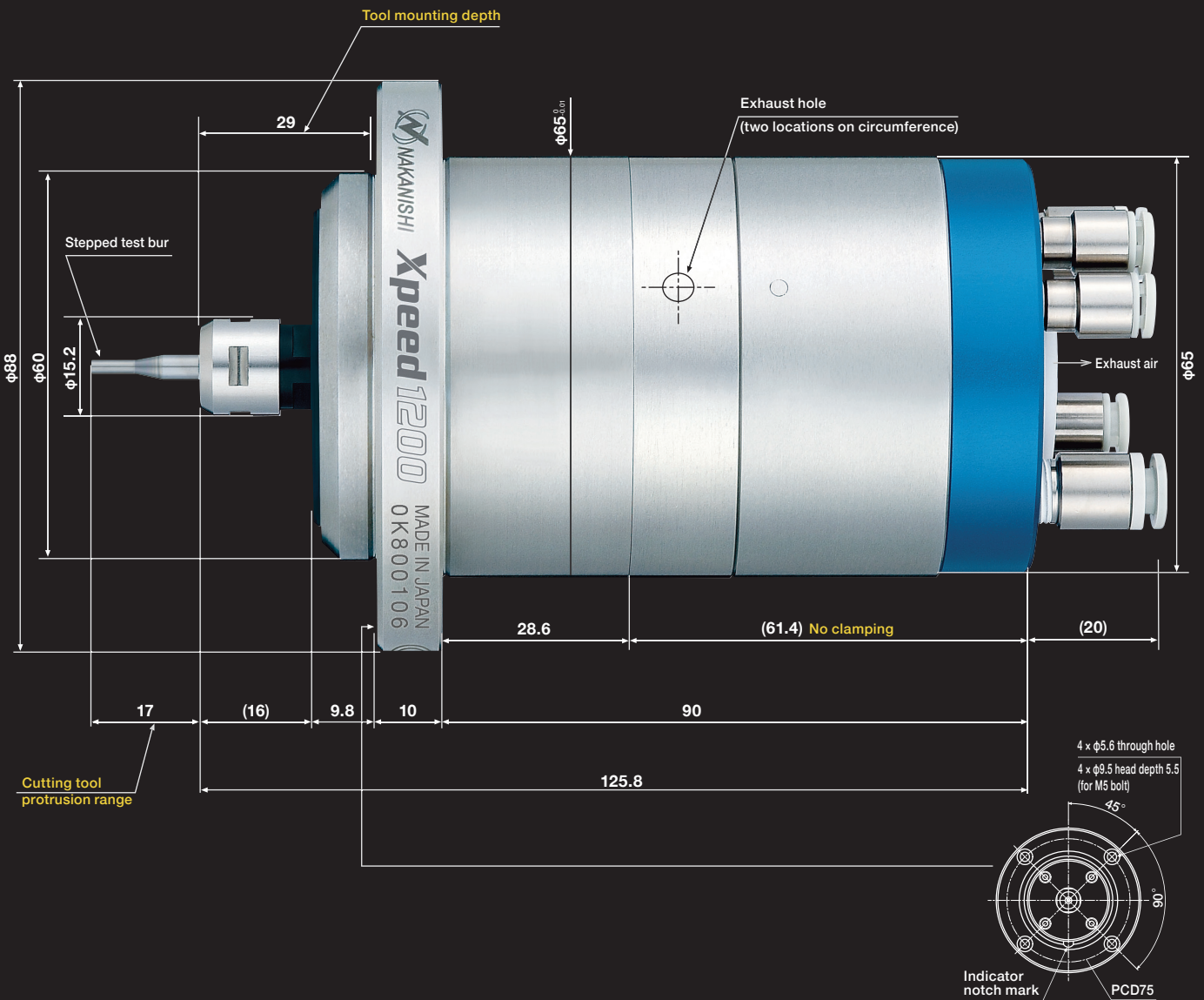
The ultimate model of air bearing turbine spindle for ultra-precision machining with micro small-diameter tools

- Precision-machined shafts and bearings reduce core shake and vibration, resulting in high rotational accuracy
- The air-driven mechanism that floats and rotates the shaft achieves a longer product life than ball bearings

Xpeed SERIES

Ultimate air bearing turbine spindle

Xpeed1200



⚠ Caution

- Air bearing spindles require clean dry air for proper operation.
- Never rotate the spindle, change cutting tools or collet without supplying clean, dry air to the bearing surfaces.
- Always supply clean, dry air to the bearing surfaces even when the spindle is not being rotated.
- Do not start work process until after stable rotation has been established and verified.

Spindle
Guide

CHK AA



Xpeed1200



AL-A0611

Specifications

Order by Code No.

CAD drawings

CAD drawings (DXF/STEP) are available on our website

Xpeed1200



Code No.

1854

Model

Xpeed1200

E4000

E3000

E2000

iSpeed3

Air-Speed

HES

TURBINES

ACCESSORIES

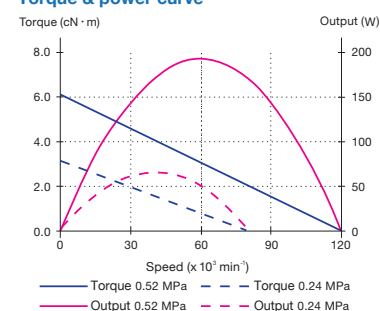
Detection of rotation speed

Fiber sensor mounting holes available
Reflective mark on rotary axis
(output signal: 1 pulse/rev)

Air piping

Intake hose (Turbine): $\phi 6$ mm \times 2 parts
Intake hose (Air bearing): $\phi 6$ mm \times 2 parts
Intake hose (Brake): $\phi 6$ mm \times 2 parts

Torque & power curve



O.D.	Speed	Spindle accuracy	Max. power	Collet	Net weight
$\phi 65$ mm	120,000 min ⁻¹	Within 1 μ m	192 w	CHK Group AA ($\phi 3.0$ – $\phi 6.35$ mm)	2,300 g
Air bearing required air pressure		Air bearing required air pressure		Bearing load capacity	
0.6 MPa (Air consumption: 60 NL/min)		0.5 MPa (Air consumption: 315 NL/min)		Radial: 25 N or more / Thrust: 70 N or more	
Standard equipment and accessories	Collet: $\phi 4.0$ mm (CHK-4.0AA) / Collet nut (K-265A) / Wrench (12 \times 14): 1 pc. / Torque wrench (14 mm): 1 pc.				
	Intake hose $\phi 6 \times 1.5$ m, (clear: 1 pc., light blue: 1 pc.) / Fitting for piping plug ($\phi 6$): 6 pcs.				
	Protective cover: 1 pc. / Protective cap: 1 pc. / Stepped test bur ($\phi 2 \times \phi 4 \times 34$ L): 1 pc.				
Options	Collet (CHK Group high precision type AA): $\phi 3.0$, $\phi 3.175$, $\phi 4.0$, $\phi 6.0$, $\phi 6.35$ mm p. 8-5				

Spindle
Guide

CHA



HTS1500ZZ-M2040



AL-M1202



AL-M1201BL



AL-M1203BS2

Specifications

CAD drawings

CAD drawings (DXF/STEP) are available on our website

Order by Code No.

HTS1500ZZ-M2040



Code No.

7919

Model

HTS1500ZZ-M2040

Air piping

Intake hose: $\phi 6$ mm

Max. power	Speed	Spindle accuracy	Air consumption	Net weight	Corresponding tool		
54 w	150,000 min ⁻¹	Within 1 μ m	175 NL/min	860 g	Square end mill $\phi 1.0$ mm or less	Ball end mill R0.5 mm or less	Grindstone $\phi 4.0$ mm or less
Standard equipment and accessories	Collet: $\phi 4.0$ mm (CHA-4.0) / Collet nut (CHN-AA) / Wrench (8 × 5) · (9 × 11): 1 pc. each Hose $\phi 6.0 \times 4$ m (K-247) with Filter joint (FJ-01)						
Options	Collet (CHA Group): $\phi 0.5$ – $\phi 4.0$ mm p. 8-5						

E4000

E3000

E2000

iSpeed3

Air-Speed

HES

TURBINES

ACCESSORIES

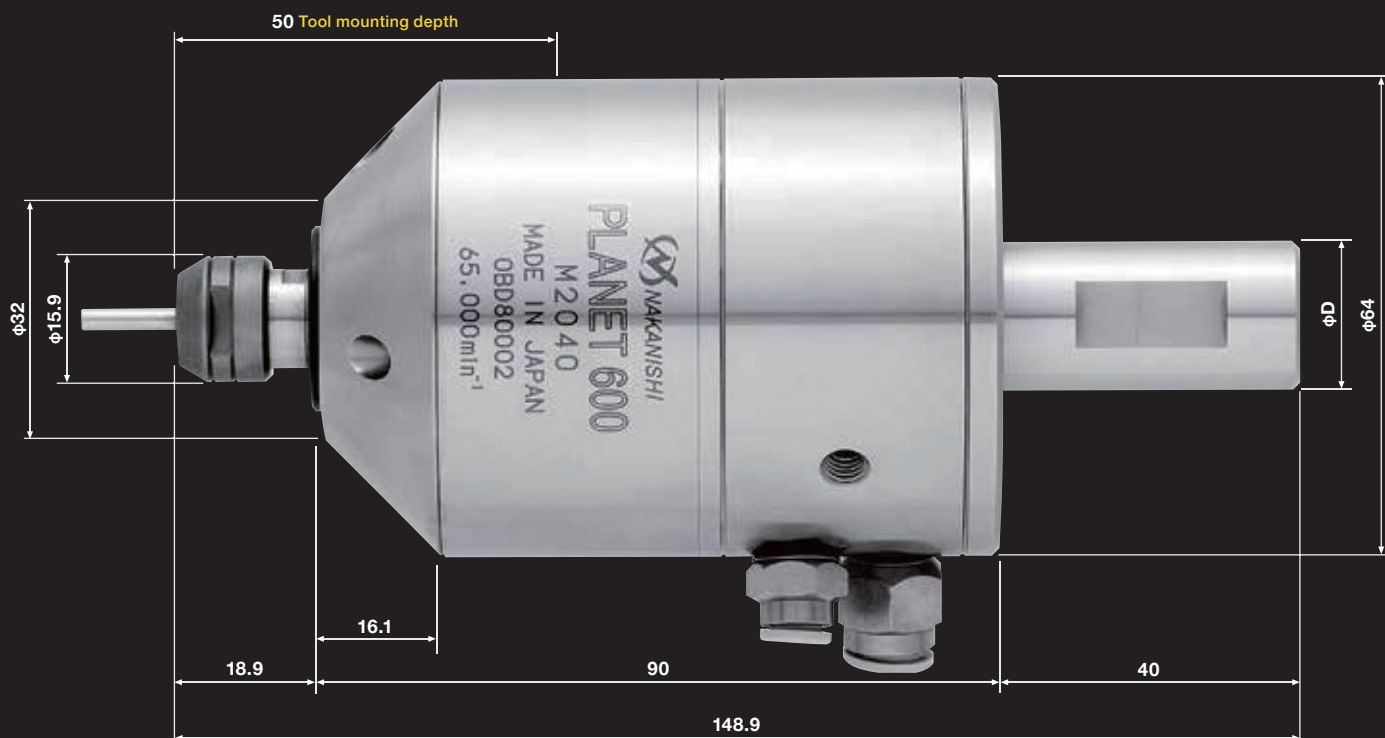
PLANET can be used as the main axis of a jig grinding machine or an inner surface grinding machine

- By combining a boring head and PLANET, a milling machine can be converted into a jig grinding machine
- A desktop lathe can be converted into an inner surface grinding machine with the PLANET

PLANET SERIES

Air turbine spindles for high-speed jig grinding

PLANET600



ABT SERIES

Xspeed SERIES

Features



- By combining a boring head and PLANET, a milling machine can be converted into a jig grinding machine.
- A desktop lathe can be converted into an inner surface grinding machine with the PLANET.
- PLANET can be used as the main axis of an internal surface grinding device.

Since the PLANET can be used simply by attaching to your existing standard machine tool, there is no need to purchase a new expensive, high-spec machine. In addition, since it can be used only when required, it contributes to the effective utilization of equipment and the avoidance of unwanted idle time.

With a rotation speed of 65,000 min⁻¹ and a spindle accuracy within 1 μ m, PLANET achieves high-precision machining such as jig grinding and mold machining.

HTS SERIES

PLANET SERIES

Spindle
Guide

CHK



PL600



AL-M1202



AL-M1201BL



AL-M1203BS2

Specifications

CAD drawings

CAD drawings (DXF/STEP) are available on our website

Order by Code No.

PL600-M2040 / PL600-H3440

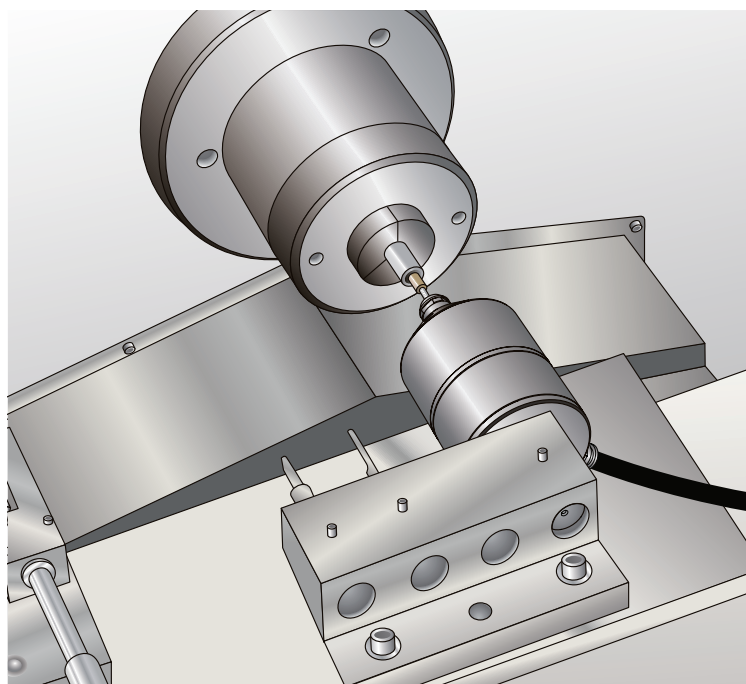
Code No. **7355** Model **PL600-M2040**Code No. **7356** Model **PL600-H3440**

Air piping

Intake hose: $\phi 6$ mmExhaust hose: $\phi 8$ mm

O.D.	Speed	Spindle accuracy	Collet	Net weight
$\phi 64$ mm	65,000 min ⁻¹	Within 1 μ m	CHK Group ($\phi 0.5$ – $\phi 6.35$ mm)	PL600-M2040: 1,740 g PL600-H3440: 1,735 g
Shank O.D. (ϕD)		Air turbine operating air pressure		
PL600-M2040: $\phi 20$ mm PL600-H3440: $\phi 19.05$ mm		0.4 MPa (Air consumption: 175 NL/min)		
Standard equipment and accessories	Collet nut (K-265): 1 pc. / Wrench (12 x 14): 2 pcs. / Hose $\phi 6 \times 2$ m (K-254) with Filter joint (FJ-01)			
	Silencer: 1 pc. / Anti-rotation bar: 1 set *Collet is sold separately.			
Options	Collet (CHK Group): $\phi 0.5$ – $\phi 6.35$ mm p. 8-5			

In case mounted on a lathe



ACCESSORIES

Air line kit	p. 8-3-4
Collet	p. 8-5-7
Collet nut	p. 8-8
Grip ring / Spacer / Bush	p. 8-9-10
Collet holder / Preset adapter	p. 8-11
COMBOX-NET.EIP, etc.	p. 8-12-14



E4000

E3000

E2000

I-Speed3

Air-Speed

HES

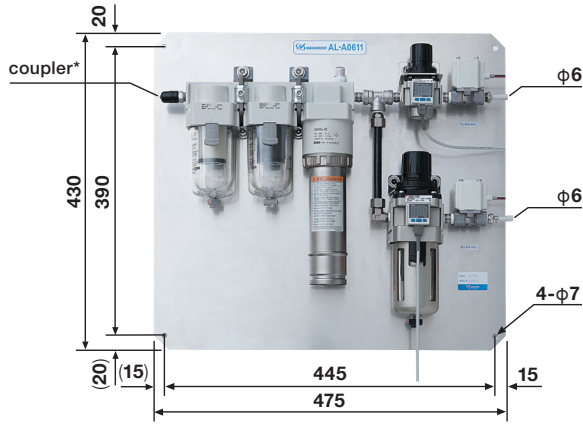
TURBINES

ACCESSORIES

Air line kit

AL-A0611

Filtration: 0.01 µm



Code No.

1548

Model

AL-A0611

■ Air piping

Inlet: Coupler (Model: KK13P-02M made by SMC Corporation)

Outlet: φ6.0 mm × 2 parts

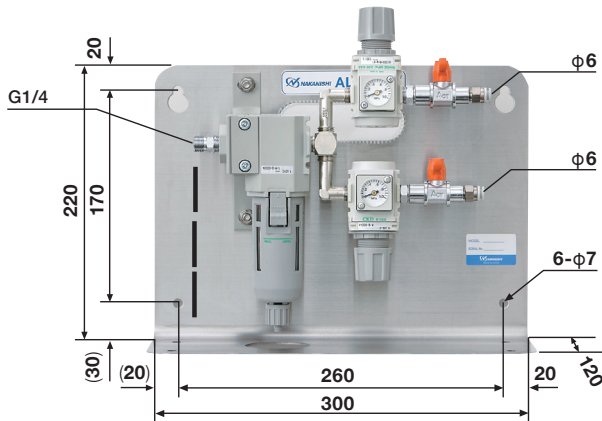
■ Net weight: 8.2 kg

Standard accessories	Spacer: 4 pcs.
Standard equipment	Mist separator / Micro-mist separator Membrane air dryer / Air regulator Regulator with Micro-mist separator Digital pressure switch: 2 pcs. / Solenoid valve: 2 pcs.
Compatible model	E3000 (NRAF-5080) · ABT series Xspeed series

*If you do not use our air line kit, please prepare a micro mist separator with 0.01 µm filtration.

AL-A1205

Filtration: 0.3 µm



Code No.

4505

Model

AL-A1205

■ Air piping

Inlet: G1/4 male thread for connection hose

Outlet: φ6.0 mm × 2 parts

■ Net weight: 2.4 kg

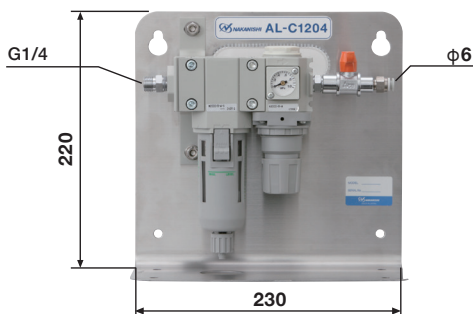
Standard accessories	Hose pipe (K-275): 2 m Mounting screw (M6 × 20): 4 pcs. Washer: 4 pcs. / Rubber pad: 4 pcs.
Standard equipment	Oil mist filter / Air regulator: 2 pcs. ON-OFF valve: 2 pcs.
Compatible model	E3000 (NRAF-5080) · ABT series

*Recommendation of nominal filtration rating: 0.3 µm,

Pressure range: 0.1-1.0 MPa Recommendation of air filter: M2000-WS (CKD)

AL-C1204

Filtration: 0.3 µm



Code No.

4504

Model

AL-C1204

■ Air piping

Inlet: G1/4 male thread for connection hose

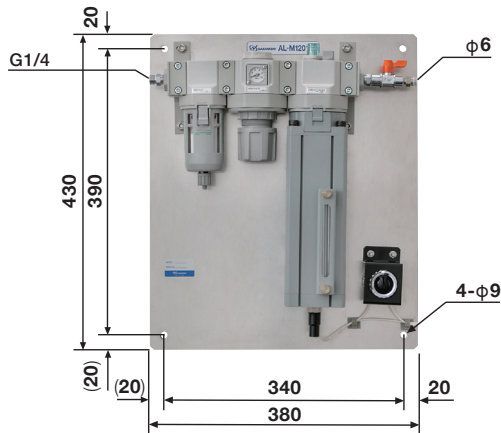
Outlet: φ6.0 mm

■ Net weight: 1.9 kg

Standard accessories	Hose pipe (K-275): 2 m / Rubber pad: 4 pcs. Mounting screw (M6 × 20): 4 pcs. Washer: 4 pcs. / Hose band: 1 pc.
Standard equipment	Air filter / Air regulator / Air pressure gauge ON-OFF valve
Compatible model	E4000 series · E3000 series · E2000 series iSpeed3 series · HES series

AL-M1201BL

Filtration: 0.3 μm



Code No.

4501

Model

AL-M1201BL

■ Air piping

Inlet: G1/4 male thread for connection hose

Outlet: φ6.0 mm

■ Net weight: 5.2 kg

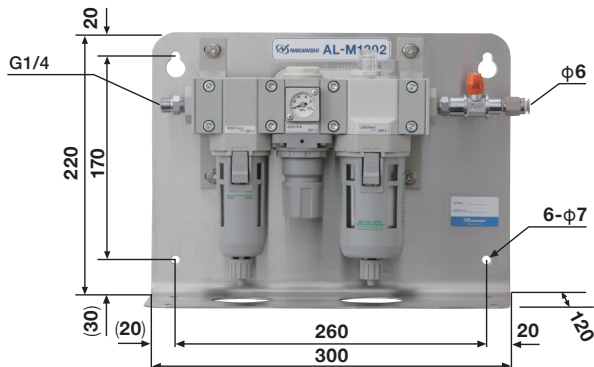
Standard accessories	Hose pipe (K-275): 2 m / Connection joint: 1 pc. φ6 mm Air hose: 1 pc. / Spacer: 4 pcs. Lubricating oil (K-202) 1 L: 1 pc. Bolt (M8 × 20 L): 4 pcs.
Standard equipment	Air filter / Air regulator / Lubricator ON-OFF valve / Alarm buzzer
Compatible model	E3000 (RG-3004M) · HTS series PLANET series

*Recommendation of nominal filtration rating: 0.3 μm,

Pressure range: 0.1-1.0 MPa Recommendation of air filter: M2000-WS (CKD)

AL-M1202

Filtration: 0.3 μm



Code No.

4502

Model

AL-M1202

■ Air piping

Inlet: G1/4 male thread for connection hose

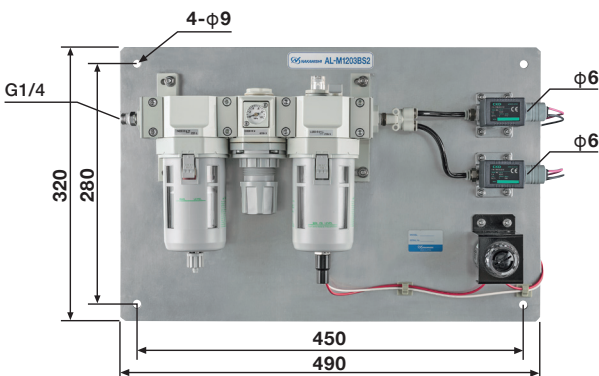
Outlet: φ6.0 mm

■ Net weight: 2.8 kg

Standard accessories	Hose pipe (K-275): 2 m / Hose band: 1 pc. Lubricating oil (K-211) 70 cc: 1 pc. Mounting screw (M6 × 20): 4 pcs. Washer: 4 pcs. / Rubber pad: 4 pcs.
Standard equipment	Air filter / Air regulator / Lubricator ON-OFF valve
Compatible model	Air-Speed series · HTS series · PLANET series

AL-M1203BS2

Filtration: 0.3 μm



Code No.

4503

Model

AL-M1203BS2

■ Air piping

Inlet: G1/4 male thread for connection hose

Outlet: φ6.0 mm × 2 parts

■ Net weight: 3.9 kg

Standard accessories	Hose pipe (K-275): 2 m Lubricating oil (K-202) 1 L: 1 pc. Bolt (M8 × 20 L): 4 pcs. / Spacer: 4 pcs.
Standard equipment	Air filter / Air regulator / Lubricator Solenoid valve: 2 pcs. / Alarm buzzer
Compatible model	Air-Speed series

E4000

E3000

E2000

1-Speed3

Air-Speed

HES

TURBINES

ACCESSORIES

Collet

CHA Group		Fit nuts: CHN-A, CHN-AA, CHN-CTA, CHN-3A			
		Code No.	Model	I.D. (mm)	Compatible model
<p>φ1.0 and over</p> <p>φ0.5-φ0.9</p>	91494	CHA-3.0AA	φ3.0AA*	CTS-2630 / 2620A (Type AA only) CTS-3030 EM20-S6000 · EM25-S6000 EMS-3060A · NR-3080S MSS-19 · MSS-20 · MSS-22 PMS-3020A QC3-A (NRR3060-QC / NR3060-AQC) ABT-1000 / 1600 Xpeed1600 (Type AA only) HES810 series HTS series iSpeed3 series	
	91496	CHA-3.175AA	φ3.175AA*		
91495	CHA-4.0AA	φ4.0AA*			
91492	CHA-2.35	φ2.35			
91430	CHA-3.0	φ3.0			
91493	CHA-3.175	φ3.175			
91440	CHA-4.0	φ4.0			
914 □□	CHA-□□	φ0.5, φ0.6, φ0.7, φ0.8, φ0.9 φ1.0, φ1.5, φ2.0, φ2.5, φ3.5 φ1.1, φ1.2, φ1.3, φ1.4, φ1.6, φ1.7, φ1.8, φ1.9 φ2.1, φ2.2, φ2.3, φ2.4, φ2.6, φ2.7, φ2.8, φ2.9 φ3.1, φ3.2, φ3.3, φ3.4, φ3.6, φ3.7, φ3.8, φ3.9			


*High precision type AA (Run-out accuracy within 2 μm)

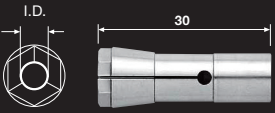
CHB Group		Fit nuts: K-265, K-265A			
		Code No.	Model	I.D. (mm)	Compatible model
	92820	CHB-2.0	φ2.0	NR33-6000ATC-ESD NR40-5100 ATC · NRR-3060	
	92830	CHB-3.0	φ3.0		
	92893	CHB-3.175	φ3.175		
	92835	CHB-3.5	φ3.5		
	92840	CHB-4.0	φ4.0		


CHK Group		Fit nuts: K-265, K-265A			
		Code No.	Model	I.D. (mm)	Compatible model
<p>φ1.0 and over</p> <p>φ0.5-φ0.9</p>	91597	CHK-3.0AA	φ3.0AA*	EM30-S6000 · EMA-3020K · EMR-3008K EMS-3060K · NR-2551 · NR-3060 NR-3060S · NR-403E · NR-453E NRAF-5080 · NRF-3060S · RAS-151E RAX-71E · RAX-271E MSS-25 · MSST-23 · PMA-3013K PMR-3005K · PMS-3020K NR-303 · NR-311 · NR-2351 · RAS-101 QC5-K (NRR4040-QC / NR4040-AQC) QC3-K (NRR3060-QC / NR3060-AQC) Xpeed1200 (Type AA only) HES510 series PLANET series	
	91598	CHK-3.175AA	φ3.175AA*		
	91599	CHK-4.0AA	φ4.0AA*		
	91600	CHK-6.0AA	φ6.0AA*		
	91601	CHK-6.35AA	φ6.35AA*		
	91592	CHK-2.35	φ2.35		
	91530	CHK-3.0	φ3.0		
	91593	CHK-3.175	φ3.175		
	91540	CHK-4.0	φ4.0		
	91594	CHK-4.76	φ4.76		
	91560	CHK-6.0	φ6.0		
	91596	CHK-6.35	φ6.35		
915 □□	CHK-□□	φ0.5, φ0.6, φ0.7, φ0.8, φ0.9 φ1.0, φ1.5, φ2.0, φ2.5, φ3.5, φ4.5, φ5.0, φ5.5 φ1.1, φ1.2, φ1.3, φ1.4, φ1.6, φ1.7, φ1.8, φ1.9 φ2.1, φ2.2, φ2.3, φ2.4, φ2.6, φ2.7, φ2.8, φ2.9 φ3.1, φ3.2, φ3.3, φ3.4, φ3.6, φ3.7, φ3.8, φ3.9 φ4.1, φ4.2, φ4.3, φ4.4, φ4.6, φ4.7, φ4.8, φ4.9 φ5.1, φ5.2, φ5.3, φ5.4, φ5.6, φ5.7, φ5.8, φ5.9			

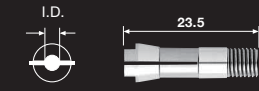
*High precision type AA (Run-out accuracy within 2 μm)

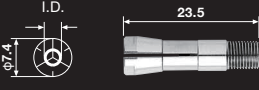
CHK-OH Group		Fit nut: K-265			
		Code No.	Model	I.D. (mm)	Compatible model
	93630	CHK-OH-3.0	φ3.0	CTM-4020 BMS-4020-MQL-CHK / 2M BMS-4040-MQL-CHK / 2M	
	93631	CHK-OH-3.175	φ3.175		
	93640	CHK-OH-4.0	φ4.0		
	93650	CHK-OH-5.0	φ5.0		
	93660	CHK-OH-6.0	φ6.0		
	93663	CHK-OH-6.35	φ6.35		

CHM Group				
	Code No.	Model	I.D. (mm)	Compatible model
	90910	CHM-1.0	φ1.0	AMH-301 · NR-601
	90916	CHM-1.6	φ1.6	
	90920	CHM-2.0	φ2.0	
	90992	CHM-2.35	φ2.35	
	90930	CHM-3.0	φ3.0	
	90993	CHM-3.175	φ3.175	

CHR Group				
	Code No.	Model	I.D. (mm)	Compatible model
	91920	CHR-2.0	φ2.0	NR50-5100 ATC
	91930	CHR-3.0	φ3.0	
	91993	CHR-3.175	φ3.175	
	91940	CHR-4.0	φ4.0	
	91960	CHR-6.0	φ6.0	
	91996	CHR-6.35	φ6.35	

CHR RS Group				
	Code No.	Model	I.D. (mm)	Compatible model
	93201	CHR-3.0RS	φ3.0	NR50-5100 ATC NR50-5100 ATC RS · NR50-6000ATC-RS
	93202	CHR-3.175RS	φ3.175	
	93203	CHR-4.0RS	φ4.0	
	93204	CHR-6.0RS	φ6.0	
	93205	CHR-6.35RS	φ6.35	

CHS Group				
	Code No.	Model	I.D. (mm)	Compatible model
	90516	CHS-1.6	φ1.6	RA-200 · RA-271E
	90592	CHS-2.35	φ2.35	
	90530	CHS-3.0	φ3.0	
	90593	CHS-3.175	φ3.175	
	905 □□	CHS-□□	φ0.8, φ0.9	
φ1.0, φ2.0, φ2.5 φ1.1, φ1.2, φ1.3, φ1.4, φ1.5, φ1.7, φ1.8, φ1.9 φ2.1, φ2.2, φ2.3, φ2.4, φ2.6, φ2.7, φ2.8, φ2.9				

CHSS Group				
	Code No.	Model	I.D. (mm)	Compatible model
	93010	CHSS-1.0	φ1.0	EMA-3020S · PMA-3013S QC3-SS (NRR3060-QC / NR3060-AQC)
	93015	CHSS-1.5	φ1.5	
	93020	CHSS-2.0	φ2.0	
	93025	CHSS-2.5	φ2.5	
	93092	CHSS-2.35	φ2.35	
	93030	CHSS-3.0	φ3.0	
93093	CHSS-3.175	φ3.175		

E4000

E3000

E2000

1Speed3

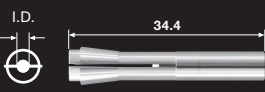
Air-Speed

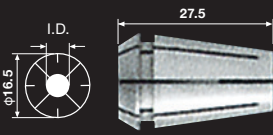
HES

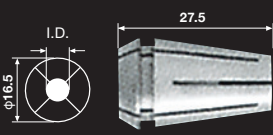
TURBINES

ACCESSORIES

Collet



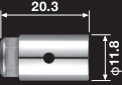



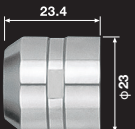
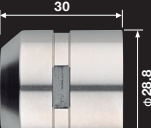
CH8 Group				
	Code No.	Model	I.D. (mm)	Compatible model
	91092	CH8-2.35	φ2.35	RA-100 · RA-151E
	91030	CH8-3.0	φ3.0	
	91093	CH8-3.175	φ3.175	
	910 □□	CH8-□□	φ0.8, φ0.9	
			φ1.0, φ1.5, φ2.0, φ2.5	
φ1.1, φ1.2, φ1.3, φ1.4, φ1.6, φ1.7, φ1.8, φ1.9				
φ2.1, φ2.2, φ2.3, φ2.4, φ2.6, φ2.7, φ2.8, φ2.9				

CH16 Group				Fit nut: CHN-16
 <p>*CH16-10.0 Length 24.5</p>	Code No.	Model	I.D. (mm)	Compatible model
	93130	CH16-3.0	φ3.0	BMS-4020 / 2M · BMS-4020RA BMS-4040 / 2M BMS-4040-RGD-03M / 2M BMS-4040RA-RGD-03M / 2M BMS-4040RA · NR-4040 QC5-16 (NRR4040-QC / NR4040-AQC)
	93193	CH16-3.175	φ3.175	
	93140	CH16-4.0	φ4.0	
	93160	CH16-6.0	φ6.0	
	93196	CH16-6.35	φ6.35	
	93180	CH16-8.0	φ8.0	
	93100	CH16-10.0	φ10.0	

CH16OH Group				Fit nut: CHN-16
 <p>*CH16OH-9.0, 10.0 Length 24.5</p>	Code No.	Model	I.D. (mm)	Compatible model
	93330	CH16OH-3.0	φ3.0	BMS-4020-MQL / 2M BMS-4040-MQL / 2M
	93331	CH16OH-3.175	φ3.175	
	93340	CH16OH-4.0	φ4.0	
	93350	CH16OH-5.0	φ5.0	
	93360	CH16OH-6.0	φ6.0	
	93363	CH16OH-6.35	φ6.35	
	93370	CH16OH-7.0	φ7.0	
	93380	CH16OH-8.0	φ8.0	
	93390	CH16OH-9.0	φ9.0	
	93400	CH16OH-10.0	φ10.0	

Collet nut

Order by Code No.

CHN-A				Fit collet: CHA Group
	Code No.	Model	Description	Compatible model
	2102	CHN-A	Collet nut for CHA collet	QC3-A (NRR3060-QC / NR3060-AQC) EM20-S6000 · EM25-S6000 EMS-3060A · NR-3080S MSS-19 · MSS-20 · MSS-22 PMS-3020A HES810 series iSpeed3 series
CHN-AA				Fit collet: CHA Group
	Code No.	Model	Description	Compatible model
	2159	CHN-AA	Collet nut for CHA collet	HTS series
CHN-CTA				Fit collet: CHA Group
	Code No.	Model	Description	Compatible model
	7798	CHN-CTA-3.0	Collet nut for CHA collet	CTS-2630 / 2620A / 3030
	7799	CHN-CTA-3.175		
	7800	CHN-CTA-4.0		
CHN-3A				Fit collet: CHA Group
	Code No.	Model	Description	Compatible model
	2160	CHN-3A	Collet nut for CHA collet	ABT series · Xpeed1600
K-265				Fit collets: CHK Group, CHK-OH Group
	Code No.	Model	Description	Compatible model
	2129	K-265	Collet nut for CHK collet	CTM-4020 BMS-4020-MQL-CHK / 2M BMS-4040-MQL-CHK / 2M QC5-K (NRR4040-QC / NR4040-AQC) QC3-K (NRR3060-QC / NR3060-AQC) EM30-S6000 · EMA-3020K · EMR-3008K EMS-3060K · NR-403E · NR-453E NR-2551 · NR-3060 · NR-3060S NRF-3060S · RAS-151E · RAX-71E RAX-271E MSS-25 · MSST-23 NR-303 · NR-311 · NR-2351 · RAS-101 PMA-3013K · PMR-3005K · PMS-3020K HES510 series PLANET series
K-265A				Fit collet: CHK Group
	Code No.	Model	Description	Compatible model
	2158	K-265A	Collet nut for CHK collet	NRAF-5080 Xpeed1200
CHN-16				Fit collets: CH16 Group, CH16OH Group
	Code No.	Model	Description	Compatible model
	2161	CHN-16	Collet nut for CH16 collet	BMS-4020 / 2M · BMS-4020-MQL / 2M BMS-4020RA · BMS-4040 / 2M BMS-4040-MQL / 2M · BMS-4040RA BMS-4040RA-RGD-03M / 2M BMS-4040-RGD-03M / 2M · NR-4040 QC5-16 (NRR4040-QC / NR4040-AQC)
CHN-20				Recommended : REGO-FIX ER20/ER20UP
	Code No.	Model	Description	Compatible model
	7914	CHN-20	Collet nut for BMS-5010 collet	BMS-5010 / RA

E4000

E3000

E2000

iSpeed3

Air-Speed

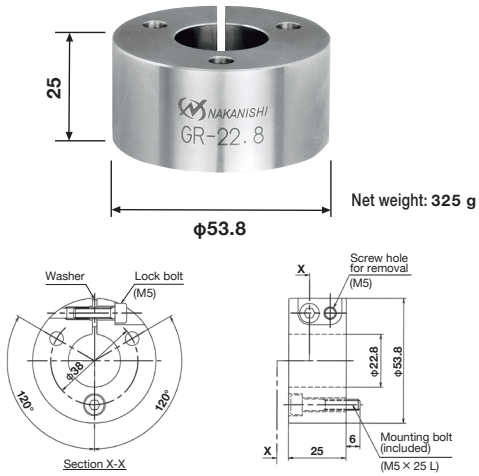
HES

TURBINES

ACCESSORIES

Grip ring

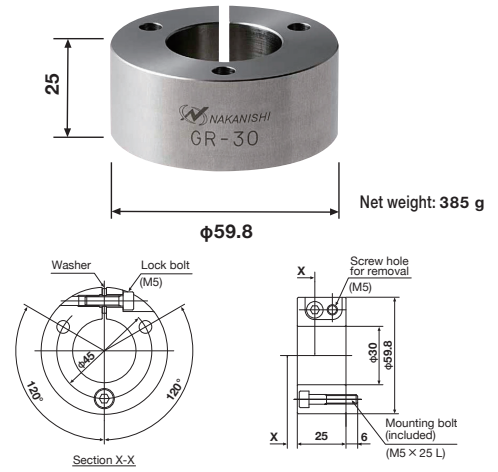
GR-22.8



Code No.	1888	Model	GR-22.8
Standard accessories	Mounting bolt (M5 × 25 L): 3 pcs.		
Compatible model	φ22.8 mm Spindle		

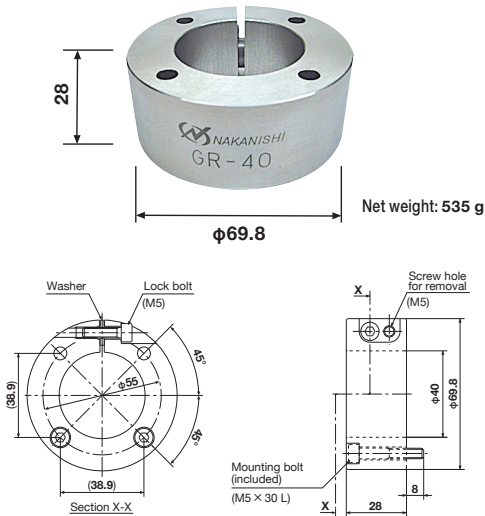
*GR-22.8 cannot be used with NR-311.

GR-30



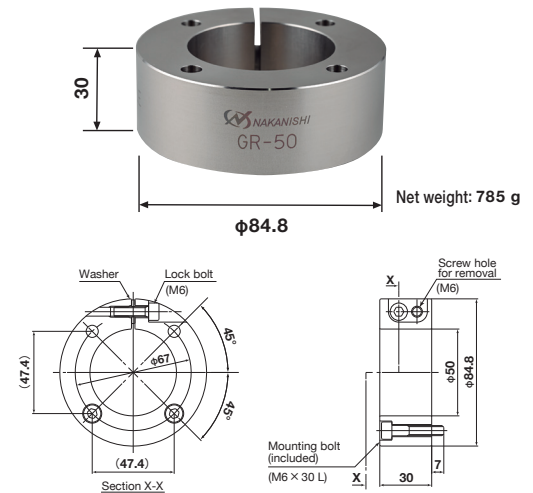
Code No.	1885	Model	GR-30
Standard accessories	Mounting bolt (M5 × 25 L): 3 pcs.		
Compatible model	φ30 mm Spindle		

GR-40



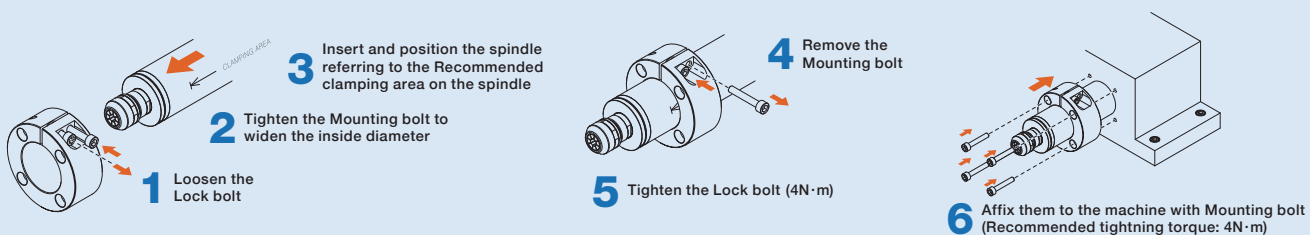
Code No.	1886	Model	GR-40
Standard accessories	Mounting bolt (M5 × 30 L): 4 pcs.		
Compatible model	φ40 mm Spindle		

GR-50



Code No.	1889	Model	GR-50
Standard accessories	Mounting bolt (M6 × 30 L): 4 pcs.		
Compatible model	φ50 mm Spindle		


How to mount to a machine tool



*The above figure shows GR-40 and GR-50, while GR-22.8 and GR-30 require three mounting bolts.

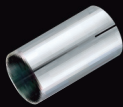
Spacer

Order by Code No.

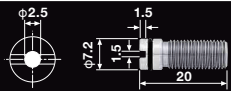
Spacer	Code No.	Model	Description / Description (I.D. × T)	Compatible model
	1882	SP-22 × 10 L	Spacer ($\phi 22 \times 10$ mm)	BM-322FL · BM-322FR

Bush

Bushings to allow smaller diameter spindles to be mounted in larger diameter holders

Bush	Code No.	Model	Description / Dimensions (I.D. × O.D. × L)	Compatible model
	1887	RB-19.05 × 25.4 × 36 L	$\phi 25.4$ Bush ($\phi 19.05 \times \phi 25.4 \times 36$ mm)	BM-319 · BM-319F · BMF-319 · BMJ-319 MSS-1902R / RA · MSS-1908R / RA MSS-1930R / RA
	1877	RB-20 × 22	$\phi 22$ Bush ($\phi 20 \times \phi 22 \times 40$ mm)	BM-320 · BMF-320 · BMJ-320 · EM20-S6000 MSS-2002R / RA · MSS-2008R / RA MSS-2030R / RA
	1876	RB-20 × 22.8	$\phi 22.8$ Bush ($\phi 20 \times \phi 22.8 \times 40$ mm)	BM-320 · BMF-320 · BMJ-320 · EM20-S6000 MSS-2002R / RA · MSS-2008R / RA MSS-2030R / RA
	1875	RB-20 × 23	$\phi 23$ Bush ($\phi 20 \times \phi 23 \times 40$ mm)	BM-320 · BMF-320 · BMJ-320 · EM20-S6000 MSS-2002R / RA · MSS-2008R / RA MSS-2030R / RA
	1878	RB-20 × 25	$\phi 25$ Bush ($\phi 20 \times \phi 25 \times 40$ mm)	BM-320 · BMF-320 · BMJ-320 · EM20-S6000 MSS-2002R / RA · MSS-2008R / RA MSS-2030R / RA
	1879	RB-20 × 25.4	$\phi 25.4$ Bush ($\phi 20 \times \phi 25.4 \times 40$ mm)	BM-320 · BMF-320 · BMJ-320 · EM20-S6000 MSS-2002R / RA · MSS-2008R / RA MSS-2030R / RA
	1883	RB-22 × 25 × 34 L	$\phi 25$ Bush ($\phi 22 \times \phi 25 \times 33.5$ mm)	BM-322 · BM-322FL · BM-322FR BM-322FS · BMF-322 · BMJ-322
	1884	RB-22 × 25.4 × 34 L	$\phi 25.4$ Bush ($\phi 22 \times \phi 25.4 \times 33.5$ mm)	BM-322 · BM-322FL · BM-322FR BM-322FS · BMF-322 · BMJ-322
	1872	RBS-22.8 × 25	$\phi 25$ Bush ($\phi 22.8 \times \phi 25 \times 25$ mm)	AMH-301 · NR-303 · NR-311 · NR-2351 RA-200 · RAS-101
	1871	RB-22.8 × 25	$\phi 25$ Bush ($\phi 22.8 \times \phi 25 \times 44$ mm)	RA-100
	1874	RBS-22.8 × 25.4	$\phi 25.4$ Bush ($\phi 22.8 \times \phi 25.4 \times 25$ mm)	AMH-301 · NR-303 · NR-311 · NR-2351 RA-200 · RAS-101
	1873	RB-22.8 × 25.4	$\phi 25.4$ Bush ($\phi 22.8 \times \phi 25.4 \times 44$ mm)	RA-100
	1880	RB-30 × 32	$\phi 32$ Bush ($\phi 30 \times \phi 32 \times 45$ mm)	NR-3060 · NR-3060S · NR-403E
	1881	RB-30 × 36	$\phi 36$ Bush ($\phi 30 \times \phi 36 \times 45$ mm)	NR-3060 · NR-3060S · NR-403E

Adjuster bolt

Adjuster bolt	Code No.	Model	Description	Compatible model
	7739	ADJUSTER BOLT	Adjuster bolt	BMS-4020-MQL-CHK / 2M BMS-4040-MQL-CHK / 2M

E4000

E3000

E2000

1Speed3

Air-Speed

HES

TURBINES

ACCESSORIES

Collet holder

Collet holder	Code No.	Model	Description	Compatible model
	9216	QC5-16	Collet holder for CH16 *with CHN-16	NR4040-AQC · NRR4040-QC
	9225	QC5-16-R		
	9215	QC5-K	Collet holder for CHK *with K-265	NR3060-AQC · NRR3060-QC
	9224	QC5-K-R		
	9210	QC3-K	Collet holder for CHK *with K-265	NR3060-AQC · NRR3060-QC
	9223	QC3-K-R		
	9209	QC3-A	Collet holder for CHA *with CHN-A	NR3060-AQC · NRR3060-QC
	9222	QC3-A-R		
	7794	QC3-SS	Collet holder for CHSS	

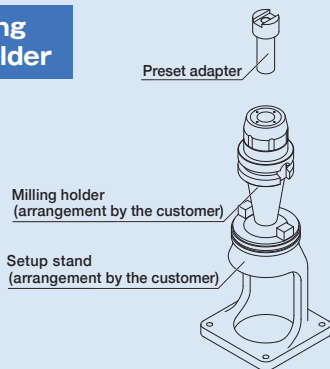
Preset adapter

Preset adapter	Code No.	Model	Description	Compatible collet holder
	9211	QC3-ADP	Preset adapter for QC3	QC3-A · QC3-K · QC3-SS
	9218	QC5-16 ADP	Preset adapter for QC5-16	QC5-16
	9217	QC5-K ADP	Preset adapter for QC5-K	QC5-K

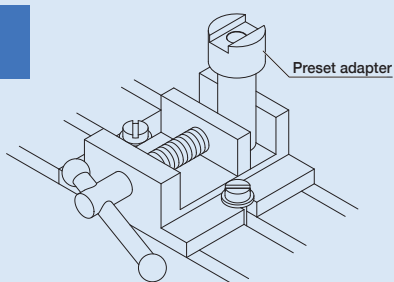
Set-up outside machines

1

In case using
a milling holder

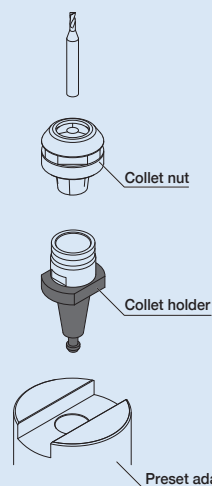


In case using
a vice

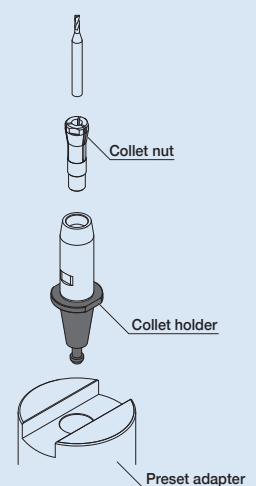


2

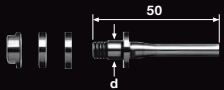
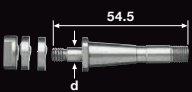
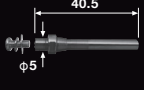

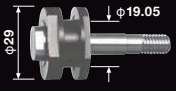
For QC3-K/A
QC5-16/K






For QC3-SS



Metal saw arbor · Grindstone arbor · Grindstone flange

Metal saw arbor	Code No.	Model	Description / Specifications	Compatible model
	2146	KCH-02 (5.0)	φ5.0 (I.D.)	Metal saw arbor : for φd (I.D.) × φ30 mm or less (O.D.) Run-out accuracy: within 0.02 mm
	1077	KCH-02 (6.0)	φ6.0 (I.D.)	
	2147	KCH-02 (8.0)	φ8.0 (I.D.)	
	2148	KCH-03 (5.0)	φ5.0 (I.D.)	Metal saw arbor : for φd (I.D.) × φ30 mm or less (O.D.) Run-out accuracy: within 0.02 mm
	2130	KCH-03 (6.0)	φ6.0 (I.D.)	
	2149	KCH-03 (8.0)	φ8.0 (I.D.)	
Grindstone arbor				
Code No.	Model	Description / Specifications	Compatible model	
	1029	AGM-01	Grindstone arbor Run-out accuracy: within 0.02 mm Grindstone I.D. φ5.0 mm	AMH-301 · NR-601
		2131	AGM-03	Grindstone arbor Run-out accuracy: within 0.02 mm Grindstone I.D. φ5.0 mm
Grindstone flange				
Code No.	Model	Description / Specifications	Compatible model	
	2138	EGF-19	Grindstone flange Available grindstone dimension φ19.05 (I.D.) × φ40 (O.D.) mm × 7 (width) mm	EM30-S6000 · EMR-3008K · EMS-3060K NR-403E · NR-453E · NR-2551 · NR-3060 · NR-3060S NRF-3060S · PMS-3020K
	2143	NGF2-19	Grindstone flange Available grindstone dimension φ19.05 (I.D.) × φ40 (O.D.) mm × 7 (width) mm	NR-311

Grease · Oil

Grease	Code No.	Model	Description	Compatible model
	1547	—	Grease for Speed reducer (2.5 mL)	ARG-011E · ARG-021E EMR-3008K · EMA-3020K RAX-271E · RAX-71E PMR-3005K
	1550	—	Grease for Speed reducer (10 mL)	
	1549	—	Grease for Speed reducer (100 mL)	
Oil				
Code No.	Model	Description	Compatible model	
	1057	K-211	Lubricating oil (70 cc)	Air line kit (AL-M1201BL · AL-M1202 · AL-M1203BS2)
	1058	K-202	Lubricating oil (1 L)	

COMBOX



Code No.	8495	Model	COMBOX
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- By connecting the COMBOX to a CITIZEN “Cincom” CNC automatic lathe, iSpeed3 and E3000 motors can be easily operated by using the external M code signal.

Specifications	Input voltage: DC24 V (DC23-25 V) Dimensions: W142 × D240 × H31 mm / Net weight: 1.2 kg
Standard equipment and accessories	I/F Cable (High density D-SUB 15 connector): 1 pc. Cable D · E · F: 1 pc. each / Relay: 1 pc. Screw · Nut: 2 pcs. each / Connector cap: 4 pcs.
Compatible controllers	E3000 controller · iSpeed3 controller
External connecting device	CNC automatic lathe For details, please contact us or your local distributor.

E4000

E3000

E2000

iSpeed3

Air-Speed

HES

TURBINES

ACCESSORIES

Network Interface

COMBOX-NET.EIP

Easy IoT remote control and management of Nakanishi Spindle via EtherNet/IP.

Easy connection to a robot or special-purpose machine tool's PLC with a single LAN cable.

Code No.	7796	Model	COMBOX-NET.EIP
Code No.	7906	Model	COMBOX-NET D-sub Cable Set



EtherNet/IP™ is a trademark of ODVA, Inc.

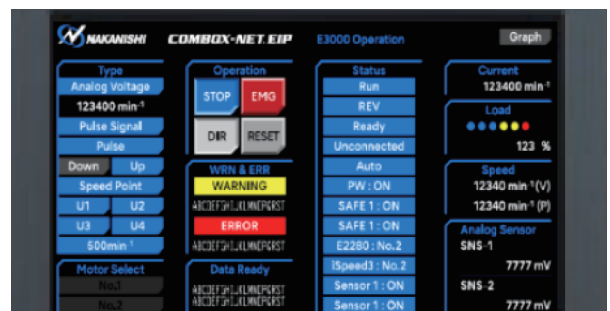
Feature 1 Remote management through IoT

• Easy remote error/warning display

Error or warning output from the controller can be easily displayed remotely. *Display contents vary depending on S/N

• Up to 4 sensors (digital × 2, analog × 2) can be connected

Various commercially available sensors can be added and used for condition monitoring.



PLC display example

Feature 2 Reduce design and production work hours

• Connectable to Ethernet/IP compatible devices via LAN cable

*Support for other protocols is pending

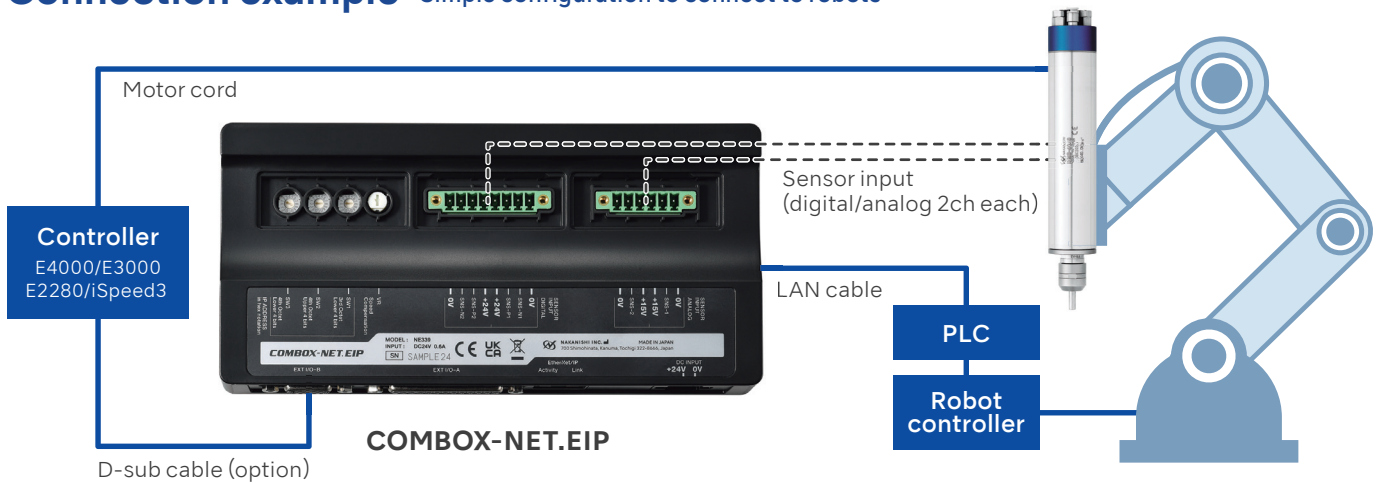
• Reduction of the number of lines in the ladder program in PLCs is possible

• I/O-related devices are no longer needed, reducing the amount of wiring required

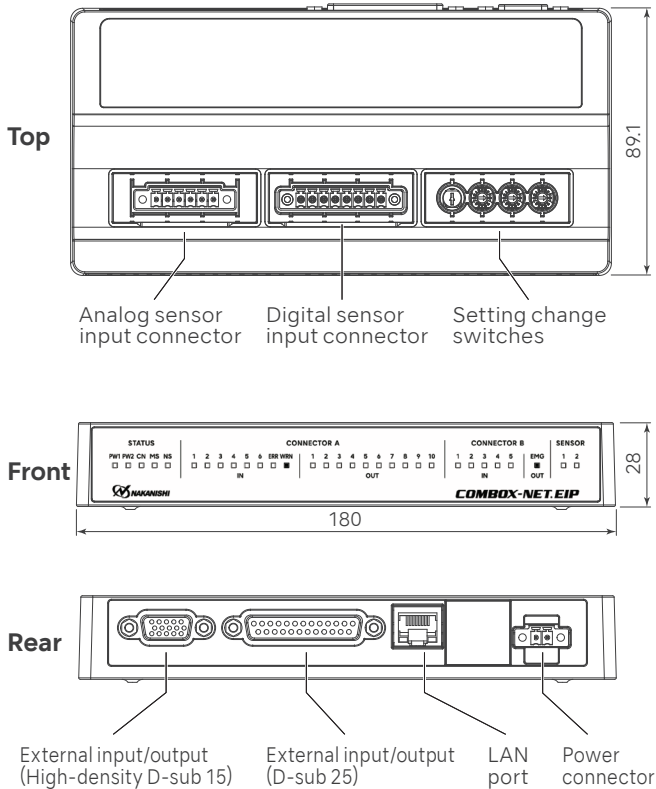
33% reduction in work hours
(compared to in-house measurements)



Connection example Simple configuration to connect to robots



Outside view



Specifications

Communication standard	EtherNet/IP
Baud rate	10 Mbps / 100 Mbps
Communication cycle (RPI)	4 ms or more
LAN cable specifications	Straight, category 5 or higher (STP cable recommended)
Rated input voltage	DC 24 V±10%
Dimensions	W180 × D89.1 × H28 mm
Net weight	282 g

Basic package

COMBOX-NET.EIP Main Body 1 pc.
 Bracket 1 pc.
 Mounting screw 4 pcs.
 Power connector 1 pc.
 Protect covers Attached on the main body

Code No. **7796** Model COMBOX-NET.EIP

*D-sub cables are sold separately.

Option

Code No. **7906** Model COMBOX-NET D-sub Cable Set

D-sub 15 cable (500 mm) and D-sub 25 cable (500 mm)

*Since D-sub cable has special size, we recommend the above product.

Compatible controllers

Connectable to all 4 models
 All inputs and outputs are handled via network communication.



E4000 controller
S/N: E*****



E3000 controller
S/N: G*****

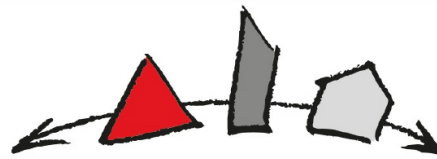


E2280 controller
S/N: B*****



iSpeed3 controller
S/N: C*****

*Controllers with the above S/Ns or later will display an error or warning code.
 Controllers with the S/Ns prior to the above will only indicate the presence or absence of an error or warning.



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*Specifications and design are subject to change without notice.