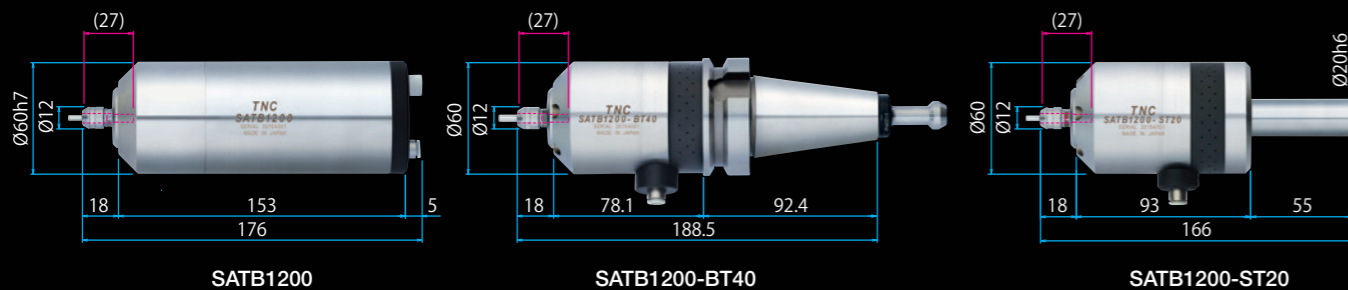


Air Turbine Spindle Unit

SATB1200

Feature

- This Unit enables ultra high speed end-milling on existing NC milling machine. (SATB1200-BT40, SATB1200-ST20)
- This Unit enables small diameter internal grinding on existing internal grinding machine (SATB1200).
- We have total of 3 types: 2 types for milling machine and straight type for internal grinding machine.
- This Spindle Unit can run ultra high speed without lubrication.
- By implementing twin-turbine for rotation drive, this Spindle Unit can perform ultra high speed and powerful grinding/milling.
- Collet Chuck CHA by NAKANISHI Inc. is used for tool holding. Maximum tool holding diameter is $\phi 4$ mm.
- By grind-finishing the shaft and the housing precisely, this unit enables lower vibration and improved rotation accuracy.
- On grinding with small diameter grinding stone, high-accuracy surface roughness is enabled.



Model	Nominal Speed (min ⁻¹)	Collet Chuck Standard	Holding Tool Diameter (ϕ mm)	Maximum Grinding Stone Diameter* (ϕ mm)	Air Pressure (MPa)	Air Consumption (NI/min)	Output (W)	Weight (Kg)
SATB1200	120,000	CHA	~ $\phi 4$	~ $\phi 5$	0.3 ~ 0.5	150	37	2.4
SATB1200-BT40								2.8
SATB1200-ST20								2.8

*:Maximum Grinding Stone Diameter requires the following conditions. The weight balance and the runout are in good condition, and L/D is less than 3. If Tool Length needs to be longer, it is necessary to make the tool diameter smaller and the peripheral speed lower.

Standard Equipment	<ul style="list-style-type: none"> • Chuck Nut • Chuck Nut Spanner(2 kinds) • Air Hose(2m)
Optional	<ul style="list-style-type: none"> ■ Collet Chuck : NAKANISHI Inc. CHA($\phi 0.5 \sim \phi 4.0$) ■ Chuck Nut : NAKANISHI Inc. CHN-A ■ Air Line Kit : NAKANISHI Inc. AL-C1204

* Specifications may be changed without notice.

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17.03.00

Straight
BT40/ST20
 $\phi 60$ mm
120,000
min⁻¹

Twin
Turbine

Air Turbine Spindle Unit

SATB Series

Line up

Speed	For Internal Grinding	For Milling
120,000 min ⁻¹	SATB 1200	SATB1200-BT40/ST20
60,000 min ⁻¹	SATB 600	SATB 600-BT40/ST20
30,000 min ⁻¹	By Special Order of Holder	SATB 300-BT40/ST32
15,000 min ⁻¹	By Special Order of Holder	SATB 150-BT40/ST32

Ultra High Speed End-Milling on NC Milling Machine
 Small Diameter Internal Grinding on Internal Grinding Machine



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TNC
Techno Nakanishi Co., Ltd.

Air Turbine Spindle Unit

SATB 150 / 300

Feature

- This Unit enables high speed end-milling on existing NC milling machine.
- This Spindle Unit can run ultra high speed rotation without lubrication. By implementing large air turbine, this spindle unit can perform powerful grinding/milling.
- Spindle Unit of $\phi 32$ straight shank type can be used on horizontal internal grinding machine with special holder. $\phi 32$ part can be modified with special order.
- REGO-FIX Collet Chuck is used for tool holding.
SATB150 : ER20 (Maximum holding diameter $\phi 13$ mm) SATB300 : ER16 (Maximum holding diameter $\phi 10$ mm)
- Please feel free to contact us if you have any request to change the shape of spindle unit in order to match with the tool you use.

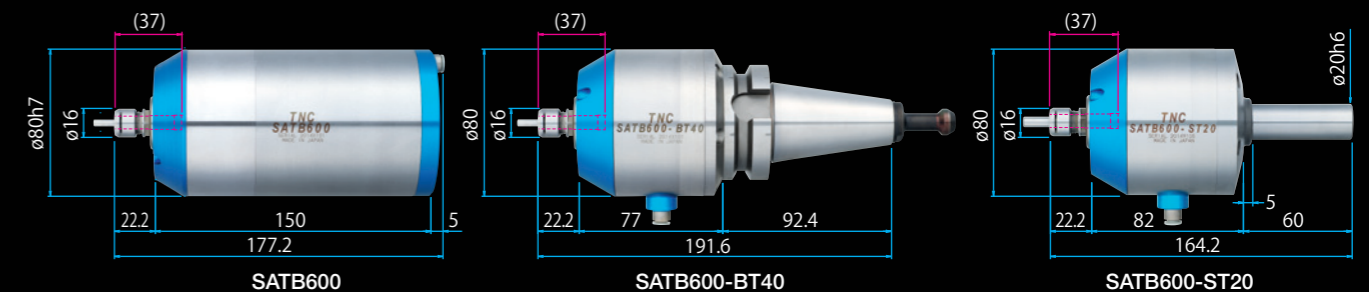
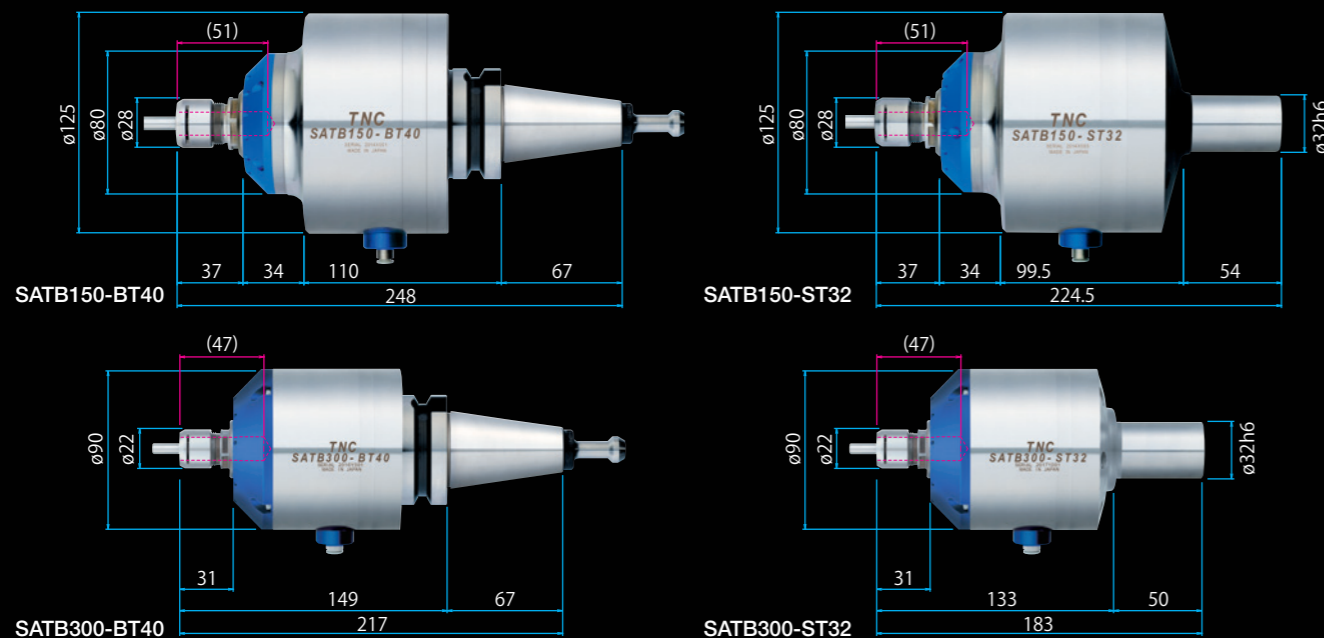


Air Turbine Spindle Unit

SATB 600

Feature

- This Unit enables high speed end-milling on existing NC milling machine. (SATB600-BT40/ST20)
- This Unit enables small diameter internal grinding on existing internal grinding machine. (SATB600)
- This Spindle Unit can run ultra high speed rotation without lubrication. This can operate just with clean air supply.
- We have total of 3 types: 2 types for milling machine (BT40 Shank & Straight Shank) and straight type for internal grinding machine.
- REGO-FIX Collet Chuck is used for tool holding. ER11 (Maximum tool diameter $\phi 6$ mm)
- By grind-finishing the shaft and the housing precisely, this unit enables lower vibration and improved rotation accuracy.
- On grinding with small diameter grinding stone, high-accuracy surface roughness is enabled.



Model	Nominal Speed (min ⁻¹)	Collet Chuck Standard	Holding Tool Diameter (φ mm)	Maximum Grinding Stone Diameter* (φ mm)	Air Pressure (MPa)	Air Consumption (NI/min)	Output (W)	Weight (Kg)
SATB150-BT40	15,000	ER20	~φ 13	~φ 40	0.3 ~ 0.5	650	125	9.0
SATB150-ST32								9.5
SATB300-BT40	30,000	ER16	~φ 10	~φ 20	0.3 ~ 0.5	290	54	4.8
SATB300-ST32								4.2

*:Maximum Grinding Stone Diameter requires the following conditions. The weight balance and the runout are in good condition, and L/D is less than 3. If Tool Length needs to be longer, it is necessary to make the tool diameter smaller and the peripheral speed lower.

Standard Equipment	<ul style="list-style-type: none"> • Chuck Nut (Clumping Nut) • Chuck Nut (Clumping Nut) Spanner(2 kinds) • Air Hose(2m)
Optional	<ul style="list-style-type: none"> ■ Collet Chuck : REGO-FIX ER20(φ 1.0 ~ φ 13.0 : every φ 0.5 available), ER16(φ 1.0 ~ φ 10.0 : every φ 0.5 available) ■ Chuck Nut (Clumping Nut) : REGO-FIX ER20MS, ER16MS ■ Air Line Kit : NAKANISHI Inc. AL-C1204

Model	Nominal Speed (min ⁻¹)	Collet Chuck Standard	Holding Tool Diameter (φ mm)	Maximum Grinding Stone Diameter* (φ mm)	Air Pressure (MPa)	Air Consumption (NI/min)	Output (W)	Weight (Kg)
SATB600	60,000	ER11	~φ 6	~φ 10	0.3 ~ 0.5	220	40	4.9
SATB600-BT40								3.5
SATB600-ST20								2.7

*:Maximum Grinding Stone Diameter requires the following conditions. The weight balance and the runout are in good condition, and L/D is less than 3. If Tool Length needs to be longer, it is necessary to make the tool diameter smaller and the peripheral speed lower.

Standard Equipment	<ul style="list-style-type: none"> • Chuck Nut (Clumping Nut) • Chuck Nut (Clumping Nut) Spanner(2 kinds) • Air Hose(2m)
Optional	<ul style="list-style-type: none"> ■ Collet Chuck : REGO-FIX ER11UP(φ 1.0 ~ φ 6.0 : every φ 0.5 available) ■ Chuck Nut (Clumping Nut) : REGO-FIX ER11MS ■ Air Line Kit : NAKANISHI Inc. AL-C1204