#### 10-90 Series - Turbine

#### 100,000 RPM 0.06 hp (0.044 kW)

- Requires no air line lubrication High precision ball bearings for long life expectancy
- Two-stage turbine motor with roll throttle
- Achieves a superb finish with its high speed and precision spindle
- Light weight and durable aluminum housing
- Low vibration and quiet operation minimizes operator fatigue



Cat. No.	Collet Size	Free Speed (rpm)	Abrasive Capacity	Type Housing	Weight	Length	Air Inlet Size
10R9000-03	3 mm	100,000	3/16" Carbide Burr, 3/16" Diamond Pin	Aluminum	0.5 lb   0.23 kg	5.4 in   137 mm	1/8 in
10R9000-08	1/8 in	100,000	3/16" Diamond Pin	Aluminum	0.5 lb   0.23 kg	5.4 in   137 mm	1/8 in

CAUTION: Use dry air at 90 psi maximum: Do not lubricate turbine grinders. Lubrication will be detrimental to the operation and life of turbine tools. Do not attach a quick-disconnect fitting directly to the tool.

Standard Equipment: Applicable collet, collet wrenches, 7 ft./2.1 m air supply hose, replaceable cartridge hose filter.

#### 10-95 Series - Turbine

#### 80,000 RPM 0.1 hp (0.074 kW)

- Requires no air line lubrication High precision ball bearings for long life expectancy
- Maximizes productivity with two-stage turbine motor
- Achieves a superb finish with its high speed and precision spindle
- Light weight and durable aluminum housing
- Low vibration and quiet operation minimizes operator fatigue



Cat. No.	Collet Size	Throttle Type	Free Speed (rpm)	Abrasive Capacity	Type Housing	Weight	Length	Air Inlet Size
10L9500-	6 1/8 in	Lever	80,000	1/4" Carbide Burr, 3/16" Diamond Pin	Aluminum	1.9 lb   0.86 kg	5.8 in   147 mm	1/4 in
10N9500-	3 <b>6*</b> 1/8 in	None	80,000	1/4" Carbide Burr, 3/16" Diamond Pin	Aluminum	1.9 lb   0.86 kg	5.8 in   147 mm	1/4 in

<sup>\*</sup> Tool will start with applied air, intended for fixtured applications;

CAUTION: Use dry air at 90 psi maximum: Do not lubricate turbine grinders. Lubrication will be detrimental to the operation and life of turbine tools

Do not attach a quick-disconnect fitting directly to the tool

Standard Equipment: Applicable collet, collet wrenches, 8 ft./2.4 m air supply hose, built-in air filter, speed regulator

# **12R91 Series - Governed - Turbine**

65,000 RPM 0.1 hp (0.074 kW)

- Requires no air line lubrication High precision ball bearings for long life expectancy
- Two-stage turbine motor with roll throttle
- Achieves a superb finish with its high speed and precision spindle
- Light weight and durable composite housing
- Low vibration and quiet operation minimizes operator fatigue



Cat. No.	Collet Size	Free Speed (rpm)	Overhose	Abrasive Capacity	Type Housing	Weight	Length	Air Inlet Size
12R9180-03	3 mm	65,000	None	1/8" Carbide Burr, 1/8" Diamond Pin	Composite	0.4 lb   0.18 kg	5.8 in   147 mm	1/8 in
12R9180-08	1/8 in	65,000	None	1/8" Carbide Burr, 1/8" Diamond Pin	Composite	0.4 lb   0.18 kg	5.8 in   147 mm	1/8 in
12R9180-43	3 mm	65,000	4 ft   1.2 m	1/8" Carbide Burr, 1/8" Diamond Pin	Composite	0.4 lb   0.18 kg	5.8 in   147 mm	1/8 in
12R9180-48	1/8 in	65,000	4 ft   1.2 m	1/8" Carbide Burr, 1/8" Diamond Pin	Composite	0.4 lb   0.18 kg	5.8 in   147 mm	1/8 in

CAUTION: Use dry air at 90 psi maximum: Do not lubricate turbine grinders. Lubrication will be detrimental to the operation and life of turbine tools.

Do not attach a quick-disconnect fitting directly to the tool.

Standard Equipment: Applicable collet, collet wrenches, collet guard, 5 ft./1.5m air supply hose

# 12-03 Series - Gearless Right Angle

80,000 RPM 0.1 hp (0.074 kW)

- Industrial bearing provides long life expectancy
- Designed for precision deburring and metal removal
- Compact and light weight composite housing
- Roll throttle equipped
- Includes over-hose



Cat. No.	Collet Size	Free Speed (rpm)	Overhose	Abrasive Capacity	Type Housing	Weight	Length	Air Inlet Size
12R0380-13	3 mm	80,000	1 ft   0.3 m	1/4" Carbide Burr, 1/4" Diamond Pin	Composite	0.3 lb   0.14 kg	5.5 in   140 mm	1/8 in
12R0380-18	1/8 in	80,000	1 ft   0.3 m	1/4" Carbide Burr, 1/4" Diamond Pin	Composite	0.3 lb   0.14 kg	5.5 in   140 mm	1/8 in
12R0380-43	3 mm	80,000	4 ft   1.2 m	1/4" Carbide Burr, 1/4" Diamond Pin	Composite	0.3 lb   0.14 kg	5.5 in   140 mm	1/8 in

Use dry air at 90 psi maximum: Do not lubricate turbine grinders. Lubrication will be detrimental to the operation and life of turbine tools. Do not attach a quick-disconnect fitting directly to the tool. Standard Equipment: Applicable collet, collet wrenches, collet guard, 5 ft/1.5 m air supply hose, 1 ft./0.3 m overhose

# 10-04 Series - Inline

60,000 RPM 0.1 hp (0.074 kW)





■ Compact and light aluminum weight housing

Roll throttle equipped



	Collet Guard									
Without	With	Wrenchless Chuck	Collet	Free Speed			Tuno			Air Inlet
Cat. No.	Cat. No.	Cat. No.	Size	(rpm)	Overhose	Abrasive Capacity	Type Housing	Weight	Length	Size
10R0400-13	10R0401-13	_	3 mm	60,000	1 ft   0.3 m	1/4" Carbide Burr, 1/4" Diamond Pin	Aluminum	0.2 lb   0.09 kg	5.8 in   147 mm	1/8 in
10R0400-18	10R0401-18	_	1/8 in	60,000	1 ft   0.3 m	1/4" Carbide Burr, 1/4" Diamond Pin	Aluminum	0.2 lb   0.09 kg	5.8 in   147 mm	1/8 in
_	10R0401-16	_	3/32 in	60,000	1 ft   0.3 m	1/4" Carbide Burr, 1/4" Diamond Pin	Aluminum	0.2 lb   0.09 kg	5.8 in   147 mm	1/8 in
_	10R0401-43	_	3 mm	60,000	4 ft   1.2 m	1/4" Carbide Burr, 1/4" Diamond Pin	Aluminum	0.2 lb   0.09 kg	5.8 in   147 mm	1/8 in
_	_	10R0412-18	1/8 in	60,000	1 ft   0.3 m	1/4" Carbide Burr, 1/4" Diamond Pin	Aluminum	0.2 lb   0.09 kg	6.2 in   157 mm	1/8 in
_	10R0414-43	_	3 mm	60,000	4 ft   1.2 m	1/4" Carbide Burr, 1/4" Diamond Pin	Aluminum	0.2 lb   0.09 kg	5.8 in   147 mm	1/8 in

Use dry air at 90 psi maximum: Do not lubricate turbine grinders. Lubrication will be detrimental to the operation and life of turbine tools. Do not attach a quick-disconnect fitting directly to the tool. Standard Equipment: Applicable collet, collet wrenches, collet guard, 5 ft/1.5 m air supply hose, 1 ft./0.3 m overhose



# Carbide Burrs | Diamond Pins | Mounted Wheels

#### 12-04 Series - Inline

#### 60,000 RPM 0.1 hp (0.074 kW)

- Industrial bearing provides long life expectancy
- Designed for precision deburring and metal removal
- Compact and light weight composite housing
- Roll throttle equipped



Collet	Guard								
Without Cat. No.	With Cat. No.	Collet Size	Free Speed (rpm)	Overhose	Abrasive Capacity	Type Housing	Weight	Length	Air Inlet Size
12R0400-13	12R0410-13	3 mm	60,000	1 ft   0.3 m	1/4" Carbide Burr, 1/4" Diamond Pin	Composite	0.3 lb   0.14 kg	5.8 in   147 mm	1/8 in
12R0400-18	_	1/8 in	60,000	1 ft   0.3 m	1/4" Carbide Burr, 1/4" Diamond Pin	Composite	0.3 lb   0.14 kg	5.8 in   147 mm	1/8 in
12R0400-43	_	3 mm	60,000	4 ft   1.2 m	1/4" Carbide Burr, 1/4" Diamond Pin	Composite	0.3 lb   0.14 kg	5.8 in   147 mm	1/8 in
_	12R0410-16	3/32 in	60,000	1 ft   0.3 m	1/4" Carbide Burr, 1/4" Diamond Pin	Composite	0.3 lb   0.14 kg	5.8 in   147 mm	1/8 in
12R0410-18	-	1/8 in	60,000	1 ft   0.3 m	1/4" Carbide Burr, 1/4" Diamond Pin	Composite	0.3 lb   0.14 kg	5.8 in   147 mm	1/8 in
12R0410-43	_	3 mm	60,000	4 ft   1.2 m	1/4" Carbide Burr, 1/4" Diamond Pin	Composite	0.3 lb   0.14 kg	5.8 in   147 mm	1/8 in

Use dry air at 90 psi maximum: Do not lubricate turbine grinders. Lubrication will be detrimental to the operation and life of turbine tools. Do not attach a quick-disconnect fitting directly to the tool. Standard Equipment: Applicable collet, collet wrenches, collet guard, 5 ft/1.5 m air supply hose, 1 ft./0.3 m overhose

### MP Series - MP4200 & MP4201

70,000 RPM 0.06 hp (0.044 kW)

- Ideal for precision deburring, blending, and smoothing applications
- Lightweight, ergonomically designed and vibration free
- Rear exhaust directs air away from work
- Standard with 5 ft air hose and 1 ft overhose
- Ideal for tight spots
- Slim comfortable design with ergonomic grip for operator comfort
- Double bearings for increased durability on MP4200 inline
- Includes both 1/8 in and 3 mm collets



Model		Free Speed	Abrasive Capacity		Len	Length		ight	Hose	(I.D.)	CFM	Inlet	Collet
Number	l iib	RPM	Carbide Bur	Diamond Pin	in	mm	lbs.	kg	in	mm	OI IVI	(NPT)	Size
Inline													
MP4200	0.1	70,000	1/4 in	1/4 in	5.35	136	0.43	0.2	3/16	4.76	8	1/8 in	1/8 in, 30 mm
Angle													
MP4201	0.1	70,000	1/4 in	1/4 in	5.9	150	0.43	0.2	3/16	4.76	8	1/8 in	1/8 in, 30 mm

**General:** Air Inlet 1/4" NPT. Use 1/4" (6.4 mm) I.D. hose. All tools performance rated @ 90psi (620 kPa) air pressure.

Optional:

MP4200 - 70617600 1/8" collet kit (5 pcs.), 70620200PT - 3mm collet kit (5 pcs.) MP4201 - 70618800 1/8" collet kit (5 pcs.), 70620400PT - 3mm collet kit (5 pcs.)

### 220G Series - Push-Pull Start

60,000 RPM 0.1 hp (0.74 kW)

- Industrial bearing provides long life expectancy
- Designed for precision deburring and metal removal
- Compact and light weight housing
- Available in a kit with a complete set of accessories

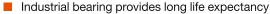


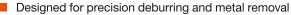
Coll	et Guard								
With	Without	Collet	Throttle	Free Speed					Air Inlet
Cat. No.	Cat. No.	Size	Туре	(rpm)	Abrasive Capacity	Type Housing	Weight	Length	Size
220GL-600-C2	_	1/8 in	Lever	60,000	1/4" Carbide Burr	Aluminum	0.4 lb   0.18 kg	4.6 in   117 mm	1/8 in
_	220G-600-C2-K#	-	None	60,000	1/4" Carbide Burr	Aluminum	0.5 lb   0.23 kg	4.6 in   117 mm	1/8 in
220G-600-C2*	_	1/8 in	None	60,000	1/4" Carbide Burr	Aluminum	0.3 lb   0.14 kg	4.6 in   117 mm	1/8 in

Use dry air at 90 psi maximum: Do not lubricate turbine grinders. Lubrication will be detrimental to the operation and life of turbine tools. Do not attach a quick-disconnect fitting directly to the tool. Standard Equipment: Applicable collet, collet wrenches, 8 ft./2.4 m air supply hose, built-in air filter, speed regulator

### 14/18 Series - Steel

50,000 RPM 0.1 hp (0.074 kW)





Compact and light weight housing

Available in a kit with a complete set of accessories



Cat. No.	Collet Size	Throttle Type	Free Speed (rpm)	Abrasive Capacity	Type Housing	Weight	Length	Air Inlet Size
14G-810	1/8 in	Roll	50,000	1/4" Carbide Burr, 1/2" Mounted Wheel	Steel	0.3 lb   0.14 kg	3.9 in   99 mm	1/8 in
18G-810D	1/4 in	Dial	40,000	1/4" Carbide Burr, 1/2" Mounted Wheel	Steel	0.9 lb   0.41 kg	5.9 in   150 mm	1/8 in
18G-810D-08	1/8 in	Dial	40,000	1/4" Carbide Burr, 1/2" Mounted Wheel	Steel	0.9 lb   0.41 kg	5.9 in   150 mm	1/8 in

Use dry air at 90 psi maximum: Do not lubricate turbine grinders. Lubrication will be detrimental to the operation and life of turbine tools. Do not attach a quick-disconnect fitting directly to the tool. Standard Equipment: Two collet wrenches, Nosepiece; Use dry air at 90 psi maximum: Do not lubricate turbine grinders. Lubrication will be detrimental to the operation and life of turbine tools. Do not attach a quick-disconnect fitting directly to the tool.

Standard Equipment: 1/4" collet - 7808, Nosepiece -1011790, 7/16" Spindle Wrench - 1011691, 11/16" Collet Nut Wrench - 1014472



<sup>\*</sup> Tool will start with applied air, intended for fixtured applications

<sup>#</sup> Kit includes grinder, hose, collet, collet wrench, cylindrical plain burr 413680, cylindrical radius end burr 413681, cone & taper burr 413682, and tree point burr 413683, carrying case.

# Carbide Burrs | Diamond Pins | Mounted Wheels

# 15Z Series - Air Marking Pen

20,000 RPM 0.06 hp (0.044 kW)

- Sliding sleeve throttle
- Ideal for marking a variety of materials, ranging from Aluminum to Titanium
- Carbide tipped stylus
- Weighs only 4 oz!

Cat. No.	Free Speed (rpm)	Abrasive Capacity	Type Housing	Weight	Length	Air Inlet Size	Diameter
15Z-710	20,000	1/8" Stylus	Aluminum	0.3 lb   0.14 kg	5.5 in   140 mm	1/4 in	0.6 in

Use dry air at 90 psi maximum: Do not lubricate turbine grinders. Lubrication will be detrimental to the operation and life of turbine tools. Do not attach a quick-disconnect fitting directly to the tool. Standard Equipment: Carbide tipped stylus

# 15Z Series - Air Marking Pen Kit

20,000 RPM 0.06 hp (0.044 kW)

- Includes 15Z-710 air marking pen
- 5' (1.5 m) air hose assembly
- 3/16" ID with 1/8" NPT fittings
- Includes two 1/2" wrenches
- Durable and convenient carrying case



Cat. No.	Free Speed (rpm)	Abrasive Capacity	Type Housing	Weight	Length	Air Inlet Size
15 <b>Z</b> -720	20,000	1/8" Stylus	Aluminum	0.4 lb   0.18 kg	5.50 in   140 mm	1/4 in

Use dry air at 90 psi maximum: Do not lubricate turbine grinders. Lubrication will be detrimental to the operation and life of turbine tools. Do not attach a quick-disconnect fitting directly to the tool. Standard Equipment: Carbide tipped stylus