



Axially-Compliant Finishing Tool

VersaFinish™

Product Description

ATI's Axially Compliant Finishing Tool, also known as VersaFinish™, is a robust, low-speed, high-torque air tool with an axially floating spindle, suitable for a multitude of robotic and non-robotic material finishing operations on aluminum, plastic, steel, etc.

The rotating spindle is equipped with a 3/8" chuck for holding customer-supplied tools. These may include, but are not limited to, abrasive brushes, wire brushes, sanding disks, polishing points, and chamfering tools. While spinning at low speeds the customer's tool is pushed against the workpiece using an adjustable air supply to control the contact force. This constant pneumatic force allows the spindle to respond axially to changes in part profile. The force control system provides very high stiffness in the path direction and a low stiffness in the contact force direction.

Optional sensing devices are available to detect the position of the spindle and monitor its speed for process development. The floating head design reacts quickly to any variances in part position or robot path. As a result, robot programming time can be reduced by up to 75%.

Features

Reliable vane motor: Robust vane-type air motor with gear reduction designed with rugged components provides long service with exceptional power.

High-torque performance: Vane motors increase their torque in response to loads introduced in finishing.

Floating axial compliance: Remotely-adjusted air pressure controls and maintains the constant axial force on the floating spindle. The axially-compliant motion of the spindle allows the customer's tool to compensate for deviations in the part profile along the robot path, compensate for tool wear, and provide constant contact force with the workpiece.

Mounting options: The VersaFinish is provided with a mounting pattern on the side of its housing. Adapter plates may easily be customized for robotic, bench, or fixture mounting.

Simple Tool Holder: The VersaFinish is supplied with a simple key-actuated 3/8" chuck for holding common media. The spindle is threaded to allow replacement of the chuck with customer-supplied or custom-manufactured media holders.



ACT-390 with Nylon Brush (not included)

Easy teaching: The axial motion of the spindle allows fast and simple programming of the robot. This movement also compensates for changes in part tolerances, part misalignment, tool wear, and robot path variation.

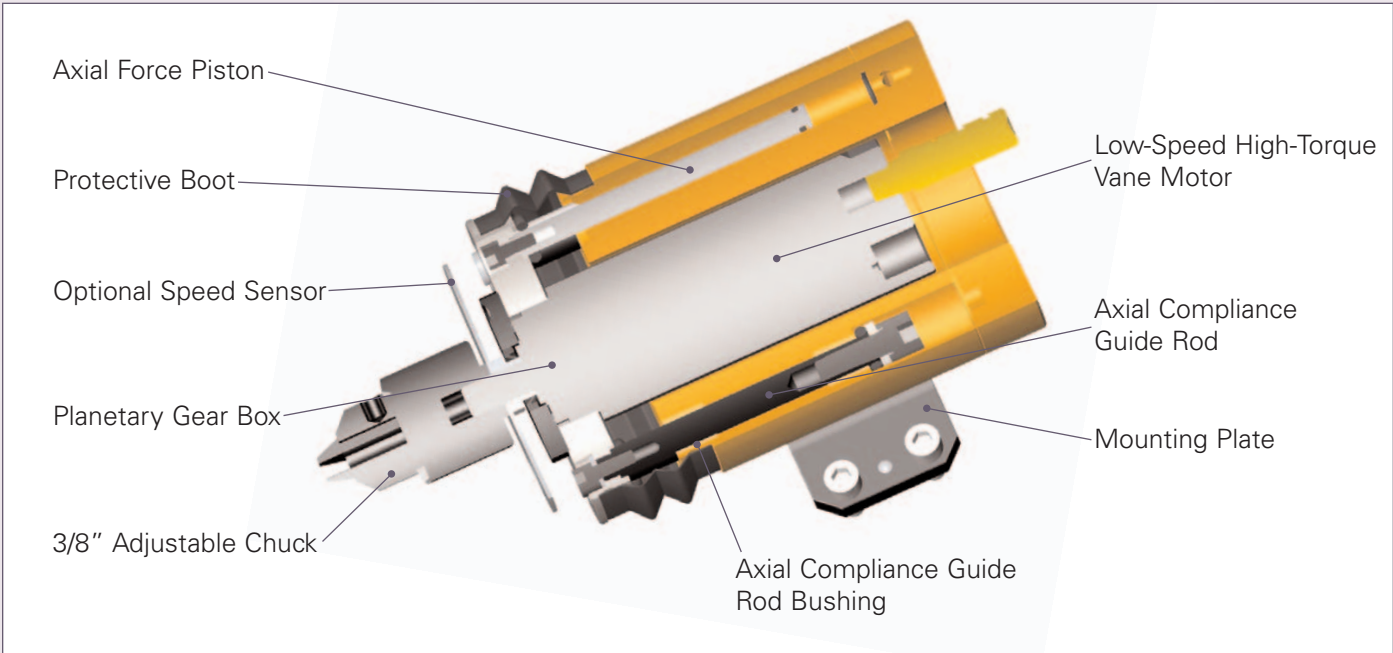
Optional Sensors: To assist in process development or monitoring, the VersaFinish may be ordered with optional sensors to detect the spindle speed and forward or retracted positions. All units are supplied with a Forward (-F) sensor to detect when the media is in contact with the work piece. Two other options are available:

-R = Retract Sensor (spindle pushed fully back)

-T = Tachometer Sensor (rotational speed of the spindle)

Specification	ACT-390
Weight total (w/o adapter)	3.3 kg (7.25 lbs)
Compensation (axial)	15 mm max., ±7.5 mm recommended (.59 in max. axial, ±0.30 in recommended)
Compliance force	14-74 N, @ supply pressure of 0.34-4.1 bar (3.2-16.7 lbs, @ supply pressure of 5-60 psi)
Motor	Air motor, vane type
Idle Speed/Working Speed	5600 RPM / 2600 RPM
Power	390 W (0.52 hp) at 2600 RPM
Torque (max. power)	1.4 Nm (1 lb-ft)
(starting/stall)	2.7 Nm (2 lb-ft)
Spindle air pressure	6.2 bar (90 psi) maximum
Air consumption (approx. max.)	9 l/s (19 CFM)
Chuck size	10mm (3/8") standard (specials upon request)
Required lubricated air	
Oil Type	ISO VG32 Class 1 Turbine Oil, or equivalent
Delivery rate	1 drop per minute by oil fog system

Contact ATI for more information on our entire line of Robotic Deburring Tools or visit our web site at www.ati-ia.com



ATI INDUSTRIAL AUTOMATION www.ati-ia.com VersaFinish ACT-390 9230-50-1037-02

