

REMOTE VISUAL INSPECTION

Sweeney Digital Turning Tool from Enerpac Efficient Single-Operator Turbine Inspection



Simple, Controlled Engine Turbine Rotation

Turbine engines—including aeroengines, power generation turbines, and marine engines—all require remote visual inspection using borescopes to help ensure that they're working properly. In many cases, hundreds of blades need to be thoroughly inspected as quickly as possible to minimize downtime. Enerpac's Sweeney Digital Turning Tool enables you to control the turbine's blade rotation during borescope inspection using a convenient, palm-sized remote control or hands-free foot pedal. When used with an IPLEX series videoscope, a single inspector can thoroughly inspect an engine turbine efficiently.

Reduce labor costs

The Sweeney Digital Turning Tool enables a single operator to control the engine rotation while conducting the inspection.

Reduced risk of borescope or engine damage

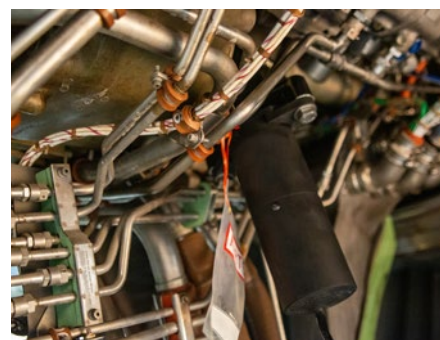
Since one person is controlling the inspection and engine rotation, the tool eliminates miscommunications if one person is inspecting and the other is controlling the rotation as well as the physical burden of using a wrench in a hard-to-reach location to manually rotate the blades.

The turning tool's torque overload sensor shuts down the tool if excessive torque occurs, helping prevent damage to the engine and borescope.

Features that Ease Your Inspection

The Sweeney Digital Turning Tool also has a number of features that make your inspections more efficient.

- › Blade tracking: helps keep you from inspecting the same blade twice or missing a blade.
- › Flag blades for additional screening: go back and check only the blades you want to.
- › Work comfortably: the palm-sized wireless remote enables you to hold or place it wherever it's comfortable.
- › Hands-free operation: the foot pedal enables you to stay focused on the inspection and operate key actions without using your hands.
- › Get to work quickly: the controller comes with a preinstalled engine library, enabling you to quickly set up the tool without changing software each time you change engines.



Attach the Sweeney Digital Turning Tool to the engine access port, and its drive motor enables you to turn the turbine blades.

Recommended Borescope/Videoscope Systems

IPLEX videoscopes are proven RVI solutions for aviation, power generation, and marine gas turbine borescope inspections and are used by customers all over the world. When paired with an Enerpac's Sweeney Digital Turning Tool, you can make your turbine inspections faster, safer, and more efficient.



IPLEX NX Videoscope

3D Visual Measurement Kit

- › Our highest image quality.
- › Advanced stereo measurement capabilities with 3D images.
- › Interchangeable scopes in a variety of diameters and lengths.
- › Available 6.2 mm working channel scope for foreign object debris removal.



IPLEX GX Videoscope

Balanced Versatility

- › Good balance of portability and high image quality with an 8-inch monitor.
- › Interchangeable scopes in a variety of diameters and lengths.
- › Optional stereo measurement
- › Easily swap the white light source for optional ultraviolet or infrared illumination.



IPLEX G Lite Videoscope

Handheld and Ultra Portable

- › Highly portable with an ergonomic, handheld design.
- › Optional stereo measurement
- › Easily swap the white light source for optional ultraviolet or infrared illumination.

Supported Engines

Manufacturer	Enerpac Model
CFM International	CFM56-2
CFM International	CFM56-3
CFM International	CFM56-5A/5B/5C
CFM International	CFM56-7B/7BE
General Electric	CF34-3A/3B
General Electric	CF34-10A/10E
General Electric	CF6-50
General Electric	CF6-6
General Electric	CF6-80A/80C2/80E1
General Electric	GE90
General Electric	GEnx
General Electric	LM1600
General Electric	LM2500 / LM2500+
General Electric	LM6000
IAE	V2500

Manufacture	Enerpac Model
Pratt & Whitney	JT8D
Pratt & Whitney	JT9D
Pratt & Whitney	PW1100G-JM
Pratt & Whitney	PW1200G
Pratt & Whitney	PW1500G
Pratt & Whitney	PW1700G
Pratt & Whitney	PW1900G
Pratt & Whitney	PW2000
Pratt & Whitney	PW4000/4084
Rolls-Royce	RB211-22B
Rolls-Royce	RB211-524
Rolls-Royce	RB211-535C/E
Rolls-Royce	Trent 700
Rolls-Royce	Trent 800
Mitsubishi Power	FT8

Specifications

Weight	
Total System Weight (all components)	13.2 kg (29.2 lb)
Controller	2.5 kg (5.5 lb) weight include AC cable
Drive Motor	4.4 kg (9.8 lb) weight includes connecting cable
Foot Pedal	0.6 kg (1.3 lb) weight includes connecting cable
Pendant (wireless remote)	0.8 kg (1.8 lb) weight includes connecting cable
Transport Case	4.9 kg (10.8 lb)

Operating Parameters	
Speed	Continuously variable
	20°/min. -360°/min.
Direction	Bidirectional adjustable backlash compensation
Torque	30 ft. lb. -150 ft. lb.
	User selectable
Acceleration /Deceleration	0.2 sec. -5 sec.
	Incrementally adjustable
Dwell Timer	0-60 sec.
	Can be held indefinitely by user
Blade Counter	Displays current blade number
Blade Flagging	Max. 999 flags per stage
	Can be flagged for re-inspection
Wireless remote (pendant)	Displays engine, stage and blade information
	9-button interface with wireless capability
Pendant Battery	2 qt. lithium-ion (model # LGMJ1PCB)

EVIDENT CORPORATION is an official Enerpac distributor.



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