

# ACER

ACER GROUP

## ACER Precision Flat Bed CNC Lathe Model: ATL 1840E

Optional C Axis Available Upon Request!!!



## Headstock

Rugged high grade alloy gears are hardened & ground by Reishauer to achieve smooth, quiet and vibration-free running.

The main spindle is supported by selected taper roller bearings and preloaded roller bearings. This design maintains high rigidity and concentricity of the spindle, thus ensuring high running accuracy over the complete speed.

Pressurized circular lubrication from a separate electric pump and oil reservoir provides a constant flow to all gears and bearings to maintain excellent thermal stability. Hot oil does not stay in the headstock, thus preventing thermal expansion and work piece intolerance.

Speed range selection is driven by an electric motor that responds to the control.

The 5000 turn Nemicon encoder equipped on the secondary spindle shaft provides the exact position of speed reading for the spindle's infinitely variable speed selection.

The four parallel V-belts assure drive in extremely stable, smooth running with minimum vibration.

The powerful frequency, efficient YASKAWA vector type inverter and main spindle motor meet international standards and are dynamically balanced with a pulley to optimize torque and horsepower.

## Bed and Carriage

A one-piece machine base casting on 1840E model is the solid & stable foundation for our lathe. Once it is attached to the precision ground bed with 12" wide bed ways, which are annealed to hardness HRC 52 to relieve stress and induction, the entire combination features outstanding structural rigidity and excellent vibration absorbing ability.

Dovetailed carriage and cross slides are both hardened and precision grounds. The saddle is laminated with Turcite-B and is scraped to maximize matching surfaces.

X and Z axis ball screws are supported by forced angular contact bearings to enable sensitive movement. One end is fixed and the other free end is supported by forced angular contact bearings or angular contact bearings.

Built-in electronic stops in the X & Z directions eliminate the chance of over-travel.

The front mount cutting turret and rear mount servo motor eliminate the need for a saddle cantilever on the ATL 1840E model. No more unbalancing and rocking of the saddle during heavy cutting!

With a center-drive Z axis ball screw design, a balance-load saddle is precisely positioned to cut the work piece. When heavy cut, the arch type supporting ribs will dissipate and absorb vibration. Thus the resulting workpiece will have a finer finish with a higher concentric accuracy.

Forced auto lubrication on X, Z axis ball screws, contacting surfaces and gibs ensures high resistance to wear and prolong lifespan of the contacting parts.





## CE Standard Electric Cabinet

The electric cabinet is completely sealed to prevent fluid or dust from entering.

Integrated electrical engineering with I/O plate and component set type display performance status and allow for easy troubleshooting.

Top mounting resistors dissipate heat build-up during constant back-and-forth motion of the spindle.

Powerful top-and-down mounted fans use hot & cold air principle to reduce heat build-up in the electric cabinet.

Each electric component is placed under CE guideline and is quick and easy to maintain.

A top mount warning light displays three colors to indicate the state of the machine. Red means error within the operation procedure; yellow displays when the job is finished; and green indicate that the machine is in the state of running. (Note: This applies only to Fagor controller; other controllers may have a different setting.)

## Tailstock

Rigid construction and increased throat depth on tailstock with MT#4 taper quill. When applied with a manual 4 way tool post, electric H4 or H8 turret, it allows for free cutting of long and heavy work pieces.

When performing manual drilling, the quill can be set to zero for easy drilling depth measurement.

Can be optionally equipped with a hydraulic quill to automatically travel forward and reverse.

## Movable Manual Control Panel

Providing convenient manual control for along the X and Z axes, the panel has two Manual Pulse Generators installed for minute axis increment.

Comprehensive, waterproof function keys and push buttons enhance operational convenience.

## Fully Enclosed Splash Guard

Full enclosure is a standard for model ATL 1840E. Doors on the rear and right splash guards allow easy assembly adjustment and maintenance along both the X and Z axes.

Note: CE standard fully enclosed splash guard is an option upon request!

## Optional Accessories



◆ 3 Jaw Scroll Chuck



◆ Chip Conveyor System



◆ Electric 4 Way Tool Post



◆ Hydraulic 3 Jaw Chuck at spindle end



◆ Hydraulic 3 Jaw Chuck front end



◆ Hydraulic 8 Tools Turret



◆ Hydraulic Tailstock



◆ Electric 8 Tools Turret



◆ Spindle Oil Chiller Unit

◆ Roller Type Steady Rest

◆ Follow Rest

◆ Four Jaw Independent Chuck

**Other CNC Controller Available!**  
Siemens, Fanuc, Mitsubishi, etc...



MODEL		ATL 1840E			
<b>Working Capacity</b>	Swing Over Bed		460 mm (18.11")		
	Swng Over Cross Slide		230 mm (9.06")		
	Max. Cutting Length	4 Way Tool Post / H4 Electric Turret ; Spindle W / 3 Jaw Chuck to Center		780 mm (30.71")	
		V8 Electric Turret ; Spindle W / 3 Jaw Chuck to Center		700 mm (27.56")	
		Center to Center		900 mm (35.43")	
	Max. Cutting Diameter	4 Way Tool Post / H4 Electric Turret		460 mm (18.11")	
		V8 Electric Turret		460 mm (18.11")	
	Max. Weight Loading Between Center to Center		570 kgs (1254 lbs)		
	Center Height		230 mm (9.06")		
Width of Bed		300 mm (11.81")			
<b>Headstock and Main Spindle</b>	Range of Spindle Speeds		601 - 3000 RPM 60 - 600 RPM		
	Spindle Nose; Internal Taper		A1 - 6 1 : 20		
	Spindle Bore		56 mm (2.20")		
<b>Cross-slide and Carriage</b>	Cross Slide Travel (X Axis)		280 mm (11.02")		
	Longitudinal Travel (Z Axis)		810 mm (31.89")		
	AC servo (X axis)		6.3 NM		
	AC servo (Z axis)		6.3 NM		
	Diameter of Ball Screw (X Axis)		25 mm (0.98") P5 C3		
	Diameter of Ball Screw (Z Axis)		40 mm (1.57") P10 C5		
	Rapid Travel Speed (X Axis)		5 m / min (196.85" / min)		
Rapid Travel Speed (Z Axis)		7 m / min (275.59" / min)			
<b>Turret</b>	Tool Station		Manual 4 way tool post	Electric H4 turret	
	Size of Cutting Tool		□ 25mm (0.98")	□ 25mm (0.98") □ 20mm (0.79")	
	Boring Bar Diameter		Φ 25 mm (0.98")		
<b>Tailstock</b>	Quill Diameter		58 mm (2.28")		
	Quill Travel		170 mm (6.69")		
	Quill Taper		MT # 4		
<b>Motor</b>	Main Spindle		Inverter AC 7.5 KW (10 HP)		
	Forced Lube Pump for Headstock		0.18 KW (1/4 HP)		
	Coolant Pump		0.12 KW (1/6 HP)		
<b>Tank Capacity (Approx.)</b>	Coolant Tank W/chip Tray (Opt.)		47 L / 12.42 gal		
<b>Measurements</b>	Weight (Net / Gross) Approx.		kg	2100 / 2500	
			lbs	4620 / 5500	
	Packing dimension	Length		229 cm (90.2")	
Width x Height		147 x 170 cm (57.9" x 67")			

\* Specifications and design subject to change without notice.

# ACER

*Technology . Creativity . Reliability*  
*An Unswerving Commitment to Excellence*

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