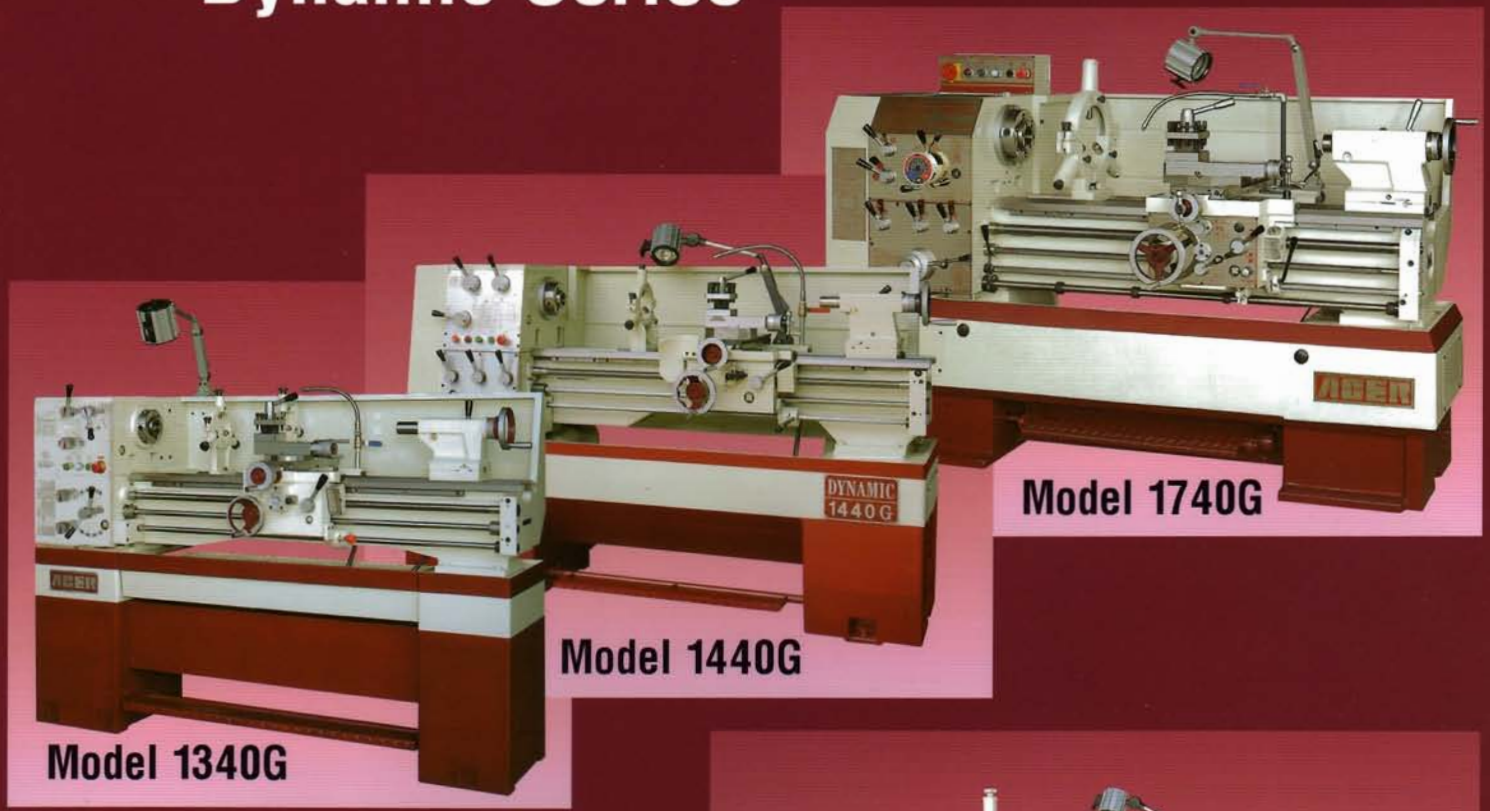
ACER

Technology • Creativity • Reliability
An Unswerving Commitment to Excellence

High Speed Precision Engine Lathe

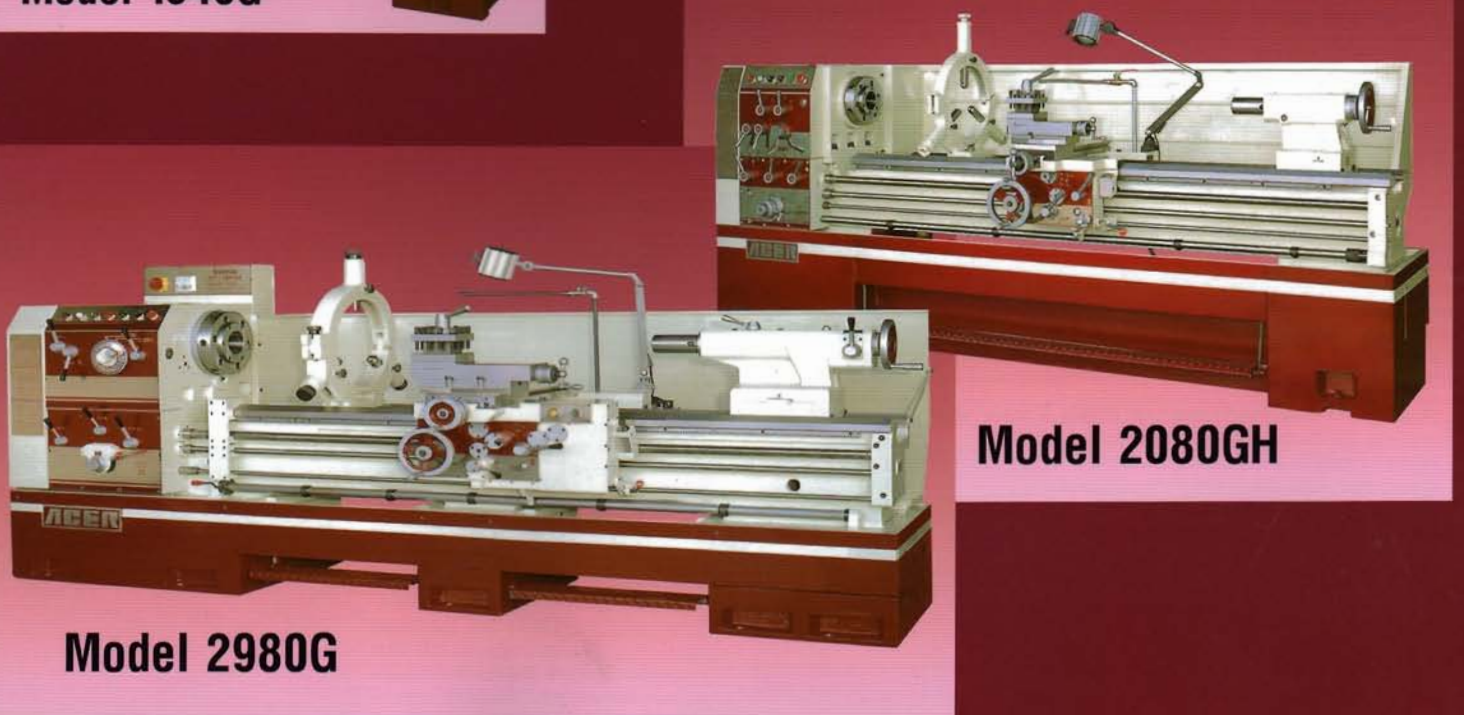
Dynamic Series



Model 1740G

Model 1440G

Model 1340G



Model 2080GH

Model 2980G

Model & Machine Features

Headstock's rigidity and durability are derived from high tensile cast iron (FC-25). It's built to last! Gears are made from chromium molybdenum steel (SCM 21). They are treated by cementation, and precisely ground to provide smooth and quiet running. Combination of forced lubrication and oil bathed system in headstock prolongs life expectancy of the gears and the spindle.

HEADSTOCK

Simple laid-out cabinet is easy to maintain and easy to fix. A standard 24 volts control voltage is nonharmful to human being if he is shocked.

ELECTRIC CABINET

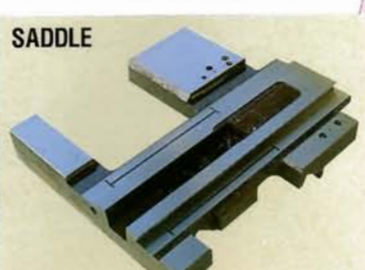
- Ampere meter for indicating power consumption
- Magnetic multiple-disc clutches in the headstock are used for efficient starting and reversing the spindle.
- Manual jog button
- 12 speeds range from 25 to 1,200 RPM.
- Oil flood indicator
- One of the outside gear on the gear box is designed with a safety ring to protect from damage.
- Optional 2nd starting lever
- Drip-proof 15 HP spindle motor
- Magnetic disc brake with foot pedal allows for rapid control of the spindle rotation.
- Hardened & ground bedways at Rockwell C 55 degree
- Electro-trochoid pump forces lubrication oil to all running parts outside of the headstock.

A uniquely designed gear box offers a comprehensive range of inch and metric threads without changing gears (metric threads: 0.5~14mm pitch; inch thread: 2~56 TPI). Wide range of feed rate selection and threading are accomplished by turning three levers and one rotary dial. Smooth running gears are made from low carbon steel (SCM 4), and they are angle shaped and oil spread to reduce noise. One outside gear is designed with safety ring to protect gear box from damage.

GEAR BOX

Saddle is coated with TURCITE-B and precision ground to provide wear resistance. With forced lubrication system, the cross traverse accuracy of the machine is maintained.

SADDLE



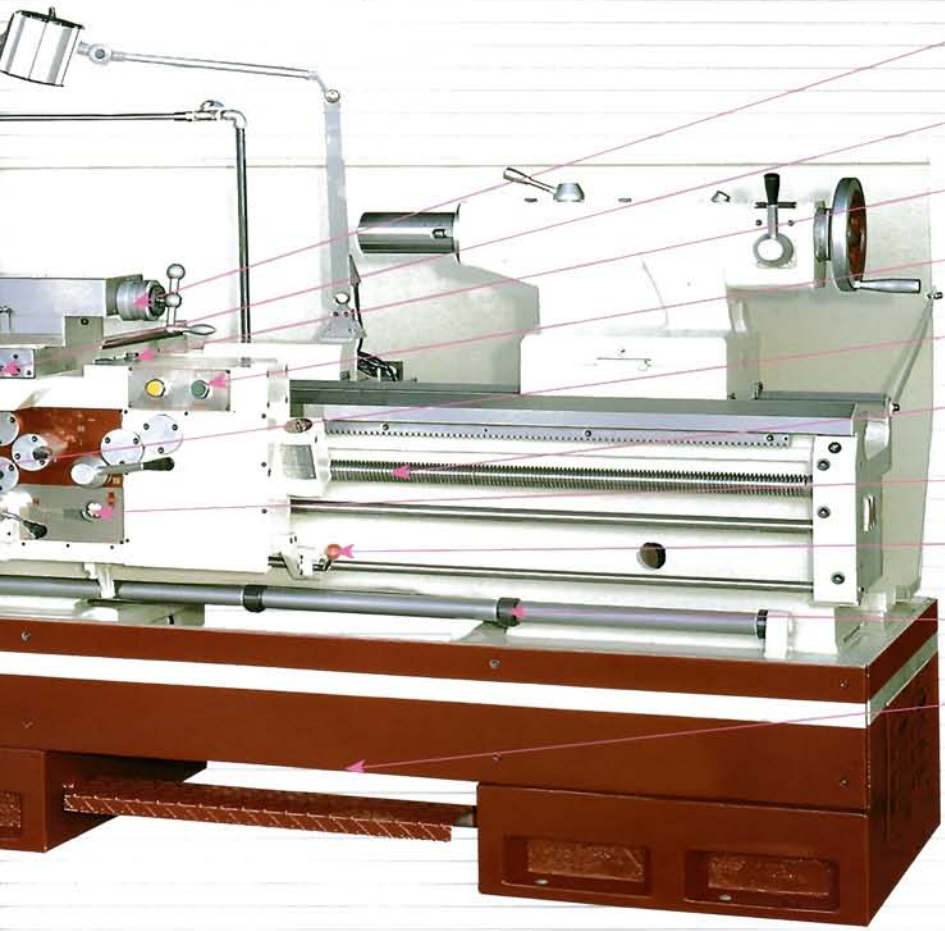
2460G / 2480G / 24120G / 24160G
2960G / 2980G / 29120G / 29160G

Three point support on the spindle is the key to heavy cutting. 4-1/8"bored spindle is made from medium carbon steel (S45C), and induction hardened & ground to its final accuracy. It is supported by three Timken bearings (two taper roller and one cylindrical roller bearings) to assure its accuracy and rigidity during heavy turning.

SPINDLE

A 3-1/32"diametered quill, graduated in inch and metric scale, is made from low carbon steel, and it is hardened and ground to its accuracy. Hardness of the quill is HRC 60 degree. Rigid construction of the tailstock is able to facilitate heavy drilling and withstand heavy cutting. Tailstock's quill with key-way lock to prevent from rotation when heavy drilling. A dual feed rate system in tailstock provides a finer control for drilling.

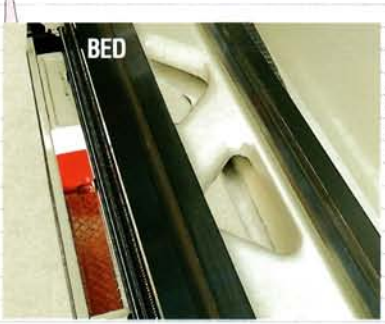
TAILSTOCK



- Handwheel with direct inch/metric reading micro-collar
- Precision ground cross slideways
- Saddle-lock device for heavy cutting
- Rapid four directional travel
- Safety clutched longitudinal hand wheel
- 4 TPI and Oil bathed longitudinal lead screw
- Oil level indicator
- Forward/stop/reverse lever with safety device
- Multi-position length stop
- Removable chip pan
- Machine bed with FC-30 casting iron

Machine weigh at 7,150 / 7,810 / 8,690 / 9,570 lbs
7,650 / 8,310 / 9,190 / 10,070 lbs

BED



Triangular ribbed bed with annealing process on the casting allows no deformation occurs on the bed ways.

APRON

Automatic feeding and threading in apron are fully interlocked to prevent simultaneous engagement of both functions. The apron is equipped with a cone-clutch device to avoid gear damage. A & S selection lever allows for open-loop or closed-loop lubrication system. Magnetic clutcher enable four-direction rapid travel.

Model & Machine Features

Rigidity and durability of the headstock are derived from extra thick casting (FC-25) and prolong annealing process. One piece double-bearing seat is the main reason for this series to withstand heavy cutting. All gears are made from chromium molybdenum alloy (SCM21). They are treated by cementation and are precisely ground to provide smooth and quiet running. Forced lubrication and oil bathed gears and spindle bearings help reduce heat generation, thus prolonging the life of the spindle.

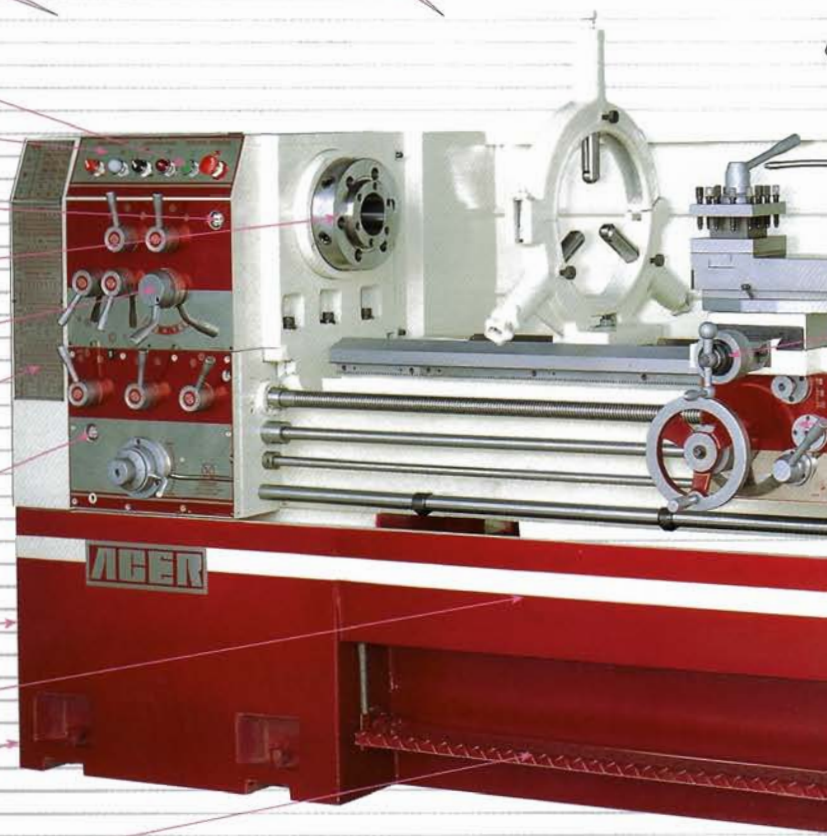
HEADSTOCK

A very simple laid-out cabinet is easy to trouble shoot. With a standard 24 volt control circuit, a electric shock becomes nonharmful to the operator.

A main disconnecting switch automatically shuts off power to the cabinet if the cabinet door is open.

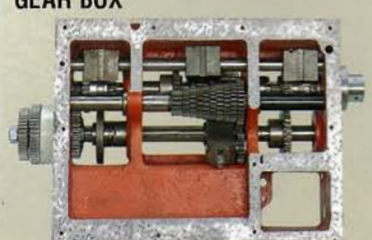
ELECTRIC CABINET

- Jog feed button
- Control panel
- Oil flood indicator
- D1-8 spindle nose with 20 mm wide gears
- 18 speeds from 20 to 1500 RPM
- Gear train is designed with a safety pin to protect from damage.
- Oil level indicator
- Drip proof 10 HP spindle motor
- One piece casting base
- Mechanical foot brake is easy to adjust and maintain
- Standard foot brake



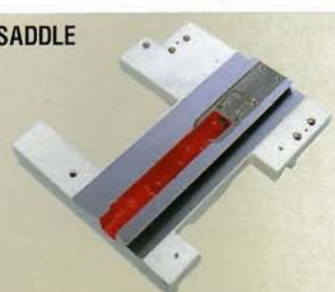
This uniquely designed gear box offers a wide range of inch and metric threads without changing gears (metric threads: 0.5 ~7mm pitch; inch thread: 4~56 TPI). The resulted threads from cutting are absolute value, and they are easy to fit in with a cap. Smooth running gears are made from low carbon steel (SCM 4), and they are hardened and ground to increase their life expectancy. This gear box is also bathed with oil when the machine is running.

GEAR BOX



The top of the saddle is hardened and ground to 2/10,000" per 12", and the bottom is coated with TURCITE-B to reduce machine wear. All lubrication lines are pre-machined on the saddle, and uniquely designed to evenly distribute lubrication oil.

SADDLE



2040GH / 2060GH / 2080GH

Three-point Timken bearing support and double lock-nut design on the spindle are the keys to withstand heavy cutting. The 3 1/8" spindle is made and forged from medium carbon steel (S45C). With a concentric machining of spindle housing, the spindle is able to withstand 1,540 lbs without center support. (Note: under conditions of three-jaw chuck on spindle and dead center on the tailstock.)

SPINDLE

A 2 7/10" diametered quill, graduated in inch and metric scale is made from low carbon steel, and it is hardened and ground to its accuracy. Hardness of the quill is HRC 60 degree. With two-locking plate design, the tailstock is able to withstand heavy cutting and facilitate heavy drill.

TAILSTOCK

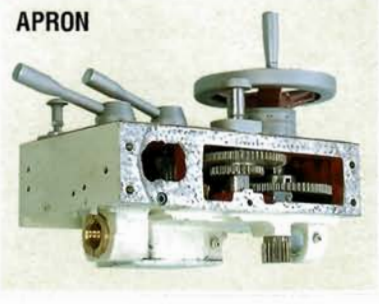
- Halogen light
- With a 1 : 1 ratio for cross and longitudinal feed rate
- Saddle locking screw for heavy cutting
- Protective overload cone shape device
- Oil level indicator
- One-shot lube for apron and saddle
- Machine bed with FC-30 casting iron
- Multi-position length stop
- Automotive painting process
- Machine weigh at impressive 4,210 / 5,120 / 6,030 lbs

Deep boxy type ribs are the essential for rigidity during heavy cutting. All beds are stress relieved and hardened and ground to ACER standard.

BED

Automatic feeding and threading in apron are fully interlocked to prevent simultaneous engagement of both functions. The apron is equipped with a cone-clutch device to avoid gear damage when heavy turning. All turning shafts in the apron are support by bearings, and the gears are oil bathed.

APRON



ACER Model & Machine Features

Headstock's rigidity and durability are derived from high tensile cast iron (FC25). It's built to last! Gears are made from chromium molybdenum steel (SCM21). They are treated by cementation, and precisely ground to provide smooth and quiet running. Combination of forced lubrication and oil bathed system in headstock prolongs life expectancy of the gears and the spindle.

HEADSTOCK

Simple laid-out electric cabinet is easy to maintain and easy to fix. A standard 24 volts control voltage is nonharmful to human-being if he is shocked.

ELECTRIC CABINET

Electro-trochoid pump forces lubrication oil to all running parts inside the headstock.

Oil bathed cross lead screw (optional)

Oil flood indicator.

Hand chip guard

Output shaft of the gear box is designed with a safety pin to protect from damage.

Power disconnecting limit switch

Oil level indicator.

Drip-proof 7.5 HP spindle motor.

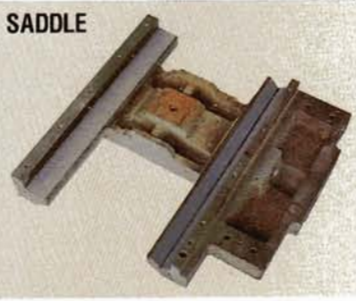
Mechanical drum type brake is easy to adjust and maintain.

A uniquely designed gear box offers a comprehensive range of inch and metric threads without changing gears (metric threads: 0.5 ~ 7mm pitch; inch threads: 4 ~ 56 TPI). Wide range of feed rate selection and threading are accomplished by turning three levers and one rotary dial. Smooth running gears are made from low carbon steel (SCM4), and they are angle shaped and oil lubed to reduce noise. Output shaft is designed with safety pin to protect gear box from damage.

GEAR BOX

Saddle is coated with TURCITE-B to provide wear resistance. With forced lubrication system, the cross traverse accuracy of the machine is maintained.

SADDLE



1740G / 1760G / 1780G
2040G / 2060G / 2080G

Three point support on the spindle is the key to heavy cutting. 2-1/4" bored spindle is made from medium carbon steel (S45C), and induction hardened & ground to its final accuracy. It is supported by three FAG bearings (two taper roller bearings and one plain roller bearing) to assure its accuracy and rigidity during heavy turning. (Three taper roller bearing support on the spindle is optional).

SPINDLE

A 2-1/4" diametered quill, graduated in inch and metric scale, is made from low carbon steel (SCM4), and it is hardened and ground to its accuracy. Hardness of the quill is HRC 60 degree. Rigid construction of the tailstock is able to facilitate heavy drilling and withstand heavy cutting. The stroke of the quill is 6"--longest in its class! Tailstock's quill with key-way lock to prevent from rotation when heavy drilling.

TAILSTOCK

- Hardened & ground bedways at Rockwell C 55 degree
- Hardened & ground cross slideways
- Saddle lock device for heavy cutting
- Triangular bed web for rigidity
- Oil bathed longitudinal lead screw
- Forward/stop/reverse lever with safety device
- Oil level indicator
- Multi-position length stop
- Machine bed with FC-30 casting iron
- Machine weigh at 3,500 / 3,950 / 4,400 lbs 4,250 / 4,750 lbs

BED

Triangular ribbed bed with annealing process on the casting allows no deformation occurs on the slideways.

APRON

Automatic feeding and threading in apron are fully interlocked to prevent simultaneous engagement of both functions. The apron is equipped with an overload protection device to avoid gear damage.

Model & Machine Features -- 1440G

Oil level indicator

HEADSTOCK
All gears are made with chromium molydenum steel, and hardened & ground to its accuracy. A forced lubrication system lubricates all running gears and bearings within the headstock.

Oil level indicator

SPINDLE
1-9/16" bored spindle is made from medium carbon steel, and is induction hardened & ground to its final accuracy. It also has a two-point support with both bearings being taper roller.

Safety overload device

Hand chip guard

Half nut engagement handle

Oil level indicator

Model 1440G

GEAR BOX
Universal gear box offers a wide range of cutting capacity. All ranges can be reached by moving three levers and turning one rotary dial.

Triangular bed wed

24 volts safety control circuit

Weigh in at 2,310 lbs

Forward/stop/reverse lever

APRON
Automatic feeding and threading in apron are fully interlocked to prevent simultaneous engagement of both functions.

Hardened & ground bed ways at Rockwell C 55 degree

Precision ground cross slideways

Oil lubricated leadscrew

TAILSTOCK
Keyed 1-1/2" diametered quill is hardened to Rockwell C 55 degree & ground to its inspection accuracy.

10" wide bed way with FC-30 casting iron

Two-tone automotive paint

Model & Machine Features -- 1340G / 1440E

HEADSTOCK
All gears are made with chromium molydenum steel, and are hardened & ground to its accuracy. A forced lubrication system lubricates all running gears and bearings within the headstock.

SPINDLE
1-1/2" bored spindle is made from medium carbon steel, and is induction hardened & ground to its final accuracy. It also has a two-point support with both bearings being taper roller.

Half nut engagement handle

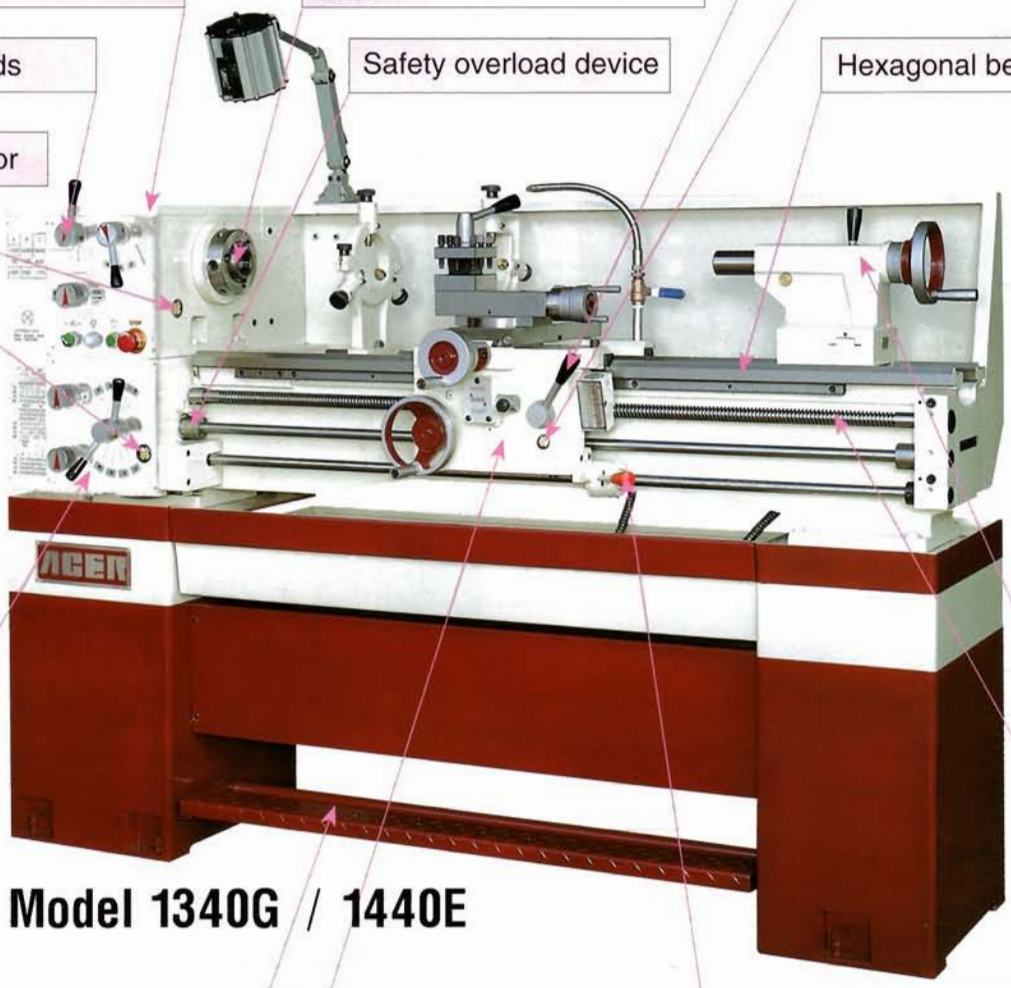
Oil level indicator

Nine-step speeds

Safety overload device

Hexagonal bed web

Oil level indicator



Model 1340G / 1440E

GEAR BOX
Unique two lever universal gear box offers a wide range of cutting capacity. All ranges can be reached by moving two levers and two dials.

Forward/stop/reverse lever

Oil lubricated leadscrew

APRON
Automatic feeding and threading in apron are fully interlocked to prevent simultaneous engagement of both functions.

TAILSTOCK
Keyed 1-7/16" diametered quill is hardened to Rockwell C 55 degree & ground to its inspection accuracy.

Standard foot brake

Chip-pan (Removable type)

7-1/2" wide bed way with FC-30 casting iron

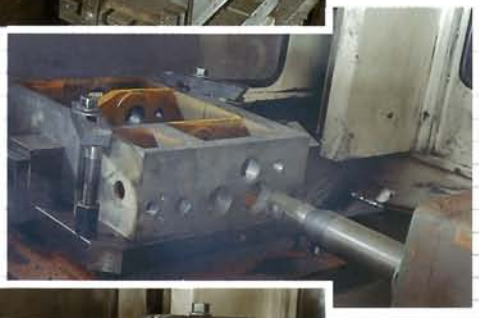
24 volts safety control circuit

Precision ground saddle ways

Two-tone automotive paint

Weigh in at 1,320 / 1,380 lbs

Machining Process & Assembly



The machining accuracy of the headstock, gear box and apron are important to a lathe. Their squareness, flatness and parallelism are the key to a time-saving assembly line. All ACER headstock, gear box, and apron are machined exclusively on CNC horizontal machining center, and four face machining center. So all hole patterns and connecting surfaces are machined at once.

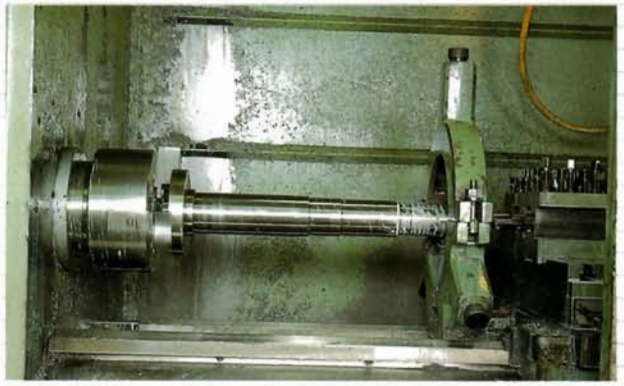
Bed and casting stands' accuracy is maintained by Marufuku planer type contour milling center. All casting stands and beds are machined twice. Once is on the floor side. It's used as the reference surface. The top side is then levelled and machined to a parallelism accuracy of **0.0008/20".**

ACER uses CNC machining center to machine on the saddle of the lathe. With the machine's table length over 8 feet, the 18 inches long saddle is machined to a flatness accuracy under **0.0008/20".**

Induction heat treat on bed slideways is a must for today's lathe. With FC- 30 casting iron, the bed slideways are regularily hardened to Rockwell C 55 degree.

Machining Process & Assembly

Precision grinding with double column form grinding machine alllows the parallelism of the hardened bed slideways to reach within **0.0006/40"**. This is the key to all moving accuracy. Without it, the machine is no good!



A forced and pressurized metal cylinder is machined down to a pre- spindle shape object. Using CNC lathe to finalize its shape helps the next machining process-- grinding. All spindles of ACER lathe are ground within **0.00012"** on taper bore and **0.0002**" on the cam surface. These tolerences are the best in their class!

Fine ground gears are the key to reduce machine noise. All gears in ACER lathe are ground exclusively on Reishauser CNC gear grinder. Teeth to teeth accuracy is guaranteed within **0.2 micron** of each others.

All spindles are fitted with gears and FAG taper roller bearings, and are lubricated by flood type lubrication system within the headstock. The accuracy of the spindle is maintained by the skillful technician to be within **0.00012"** on the runout, and then they are dynamically balanced to prolong the spindle's life.

Quality controlled gears, parts and spindle are carefully installed to ensure a smooth running headstock. To make sure all headstocks are quiet and operational, they are pre-test for noise level and functions before installation. Thus the noise of ACER lathe is reduced to a minimum.

Machining Process & Assembly

This uniquely designed gear box allows a wide range of cutting capacity. All ACER gear boxes are test individually before installation. This process allows a **100%** proof of no-error assembly line.

Pre-test headstock and gear box are installed onto each scraped machine base. All inspections of the spindle are now able to carry out. At this point, this lathe is half way to the finished.

All ACER aprons are assembled with exact procedure. A step by step instructions allow skillful technician to test and adjust the apron before installation. And this enable ACER assembly standard to be maintained.

Fitted and scraped saddle is assembled onto each machine bed. And with apron and cross compound are installed, the skillful technician is now ready to test run the machine.

The matching surfaces between casting stand and machine bed are hand scraped to maximize contact surface area. With more than usual contacting surfaces, this ACER lathe is made to be a rigid and sturdy machine.

The final step on the machine is automotive painting. All paint are sprayed and adjusted to ensure machine's life-long appearance.

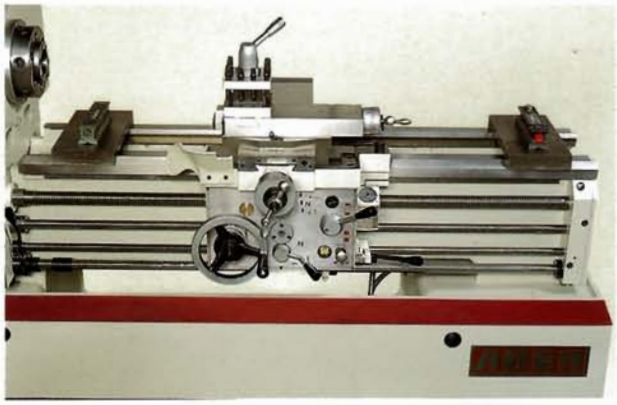
Standard & Inspection

Standard

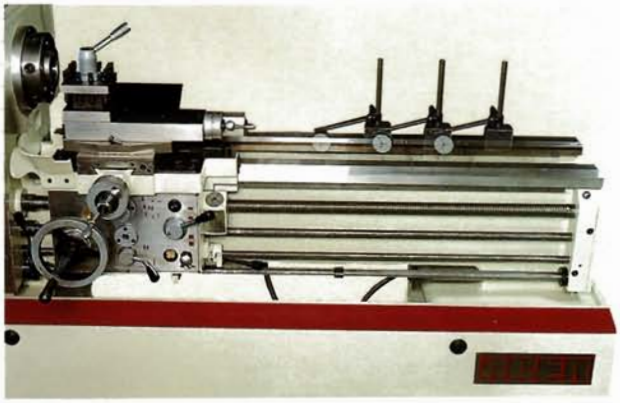
Manufactured to exact tolerances:		Swing under 20"	Swing over 20"
1. Spindle center runout		0.0002"	0.0004"
2. Cam action of spindle		0.0002"	0.0004"
3. Spindle taper runout	(front at o" position)	0.0002"	0.0004"
	(rear at 12" position)	0.0004"	0.0008"
4. Headstock alignment	vertical	0.0006/12"	0.0008/12"
	horizontal	0.0006/12"	0.0008/12"
5. Saddle way alignment		0.0006/40"	0.0006/40"
6. Cross slide alignment		0.0006/12"	0.0006/12"

Inspection

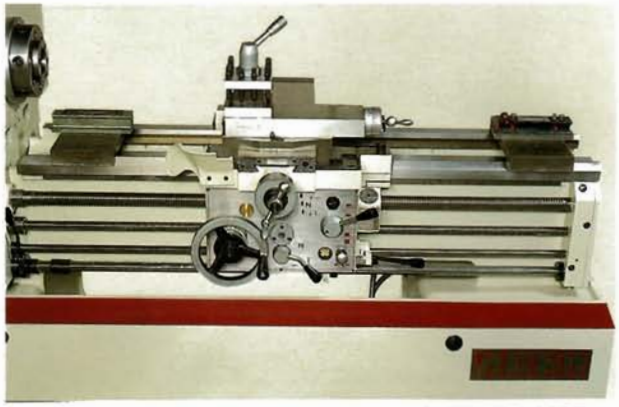
A: Swing under or equal to 20"
B: Swing over 20"



Bed level cross traverse direction **A:0.0004/40"** **B:0.0008/40"**



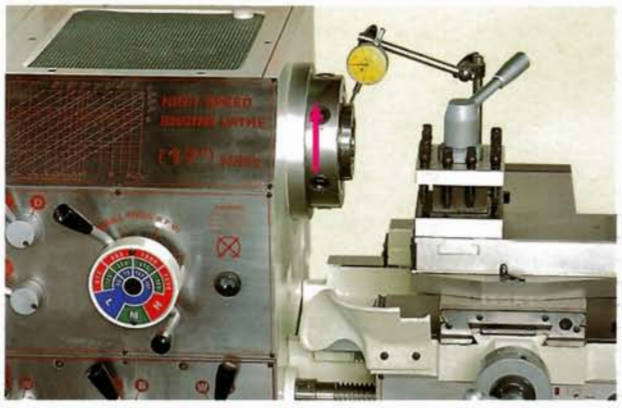
Saddle way alignment **A:0.0006/40"** **B:0.0006/40"**



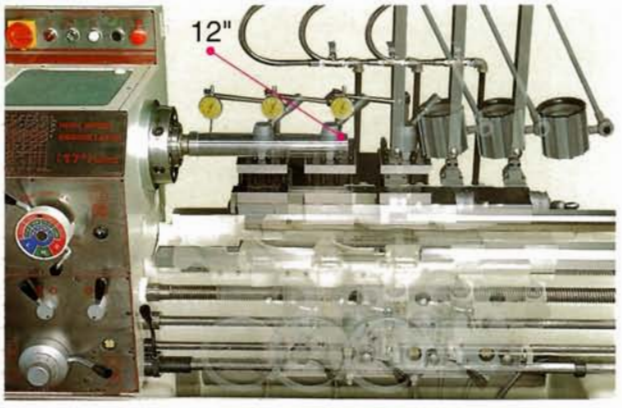
Bed level longitudinal direction **A:0.0008/40"** **B:0.0012/40"**

Spindle center runout **A:0.0002"** **B:0.0004"**

Standard & Inspection

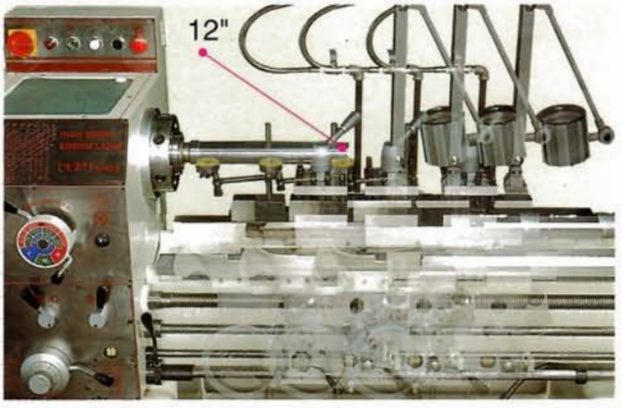


Spindle nose runout **A:0.00012"**
B:0.00024"

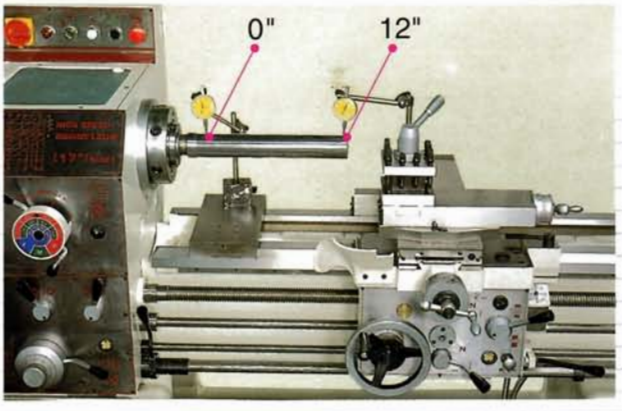


Headstock alignment – vertical
(high only at 12" position) **A:0.0006/12"**
B:0.0008/12"

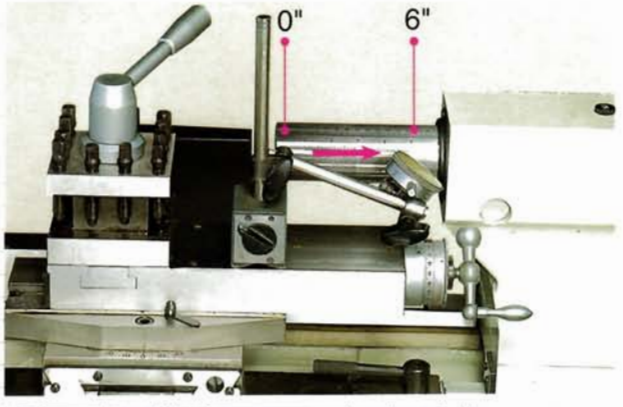
Cam action of spindle **A:0.0002"**
B:0.0004"



Headstock alignment – horizontal
(from 12" position, saddle moves inwards)
A:0.0006/12"
B:0.0008/12"

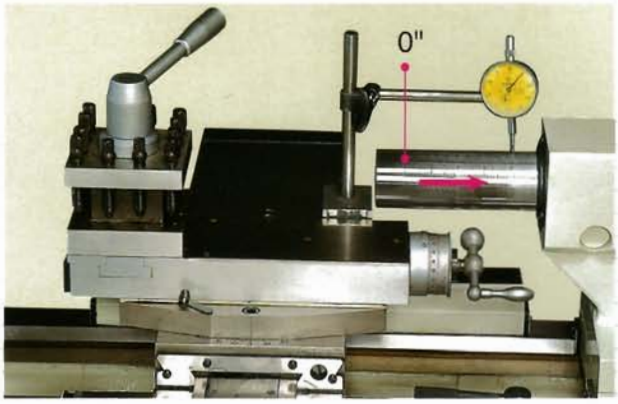


Spindle taper runout front 0" position **A:0.0002"**
B:0.0004"
rear 12" position **A:0.0004"**
B:0.0008"

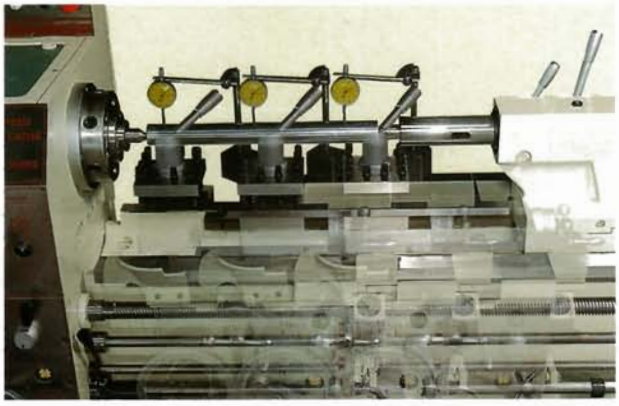


Tailstock quill alignment – horizontal
(from 6" position, quill moves inwards)
A:0.0004/6"
B:0.0008/6"

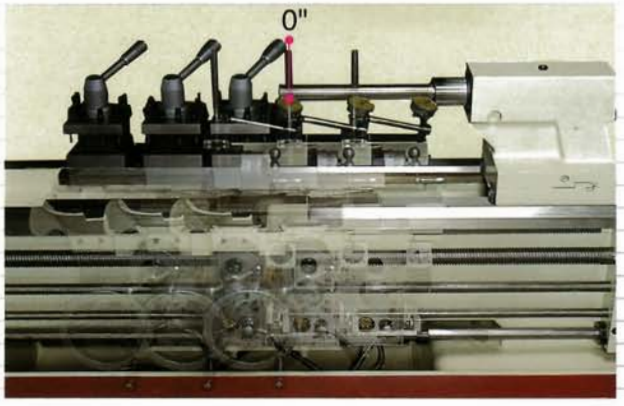
Standard & Inspection



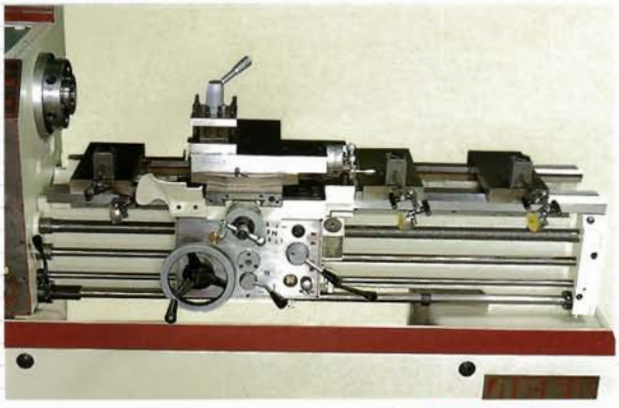
Tailstock quill alignment – vertical (high only at 0" position) **A:0.0006/6"** **B:0.0008/6"**



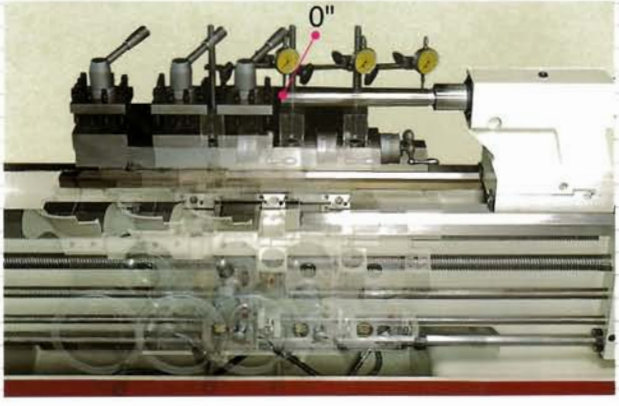
Vertical alignment of headstock and tailstock center (high only at tailstock) **A:0.0012/12"** **B:0.0016/12"**



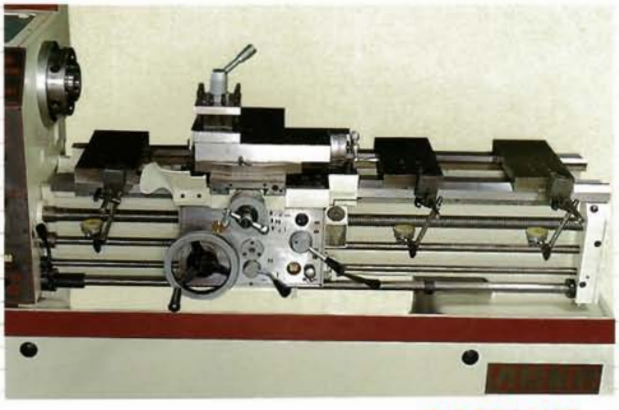
Tailstock spindle alignment – horizontal (from 0" position, saddle moves outwards) **A:0.0008/12"** **B:0.0012/12"**



Lead screw alignment – parallel (half nut disengaged) **A:0.004/40"** **B:0.0048/40"**

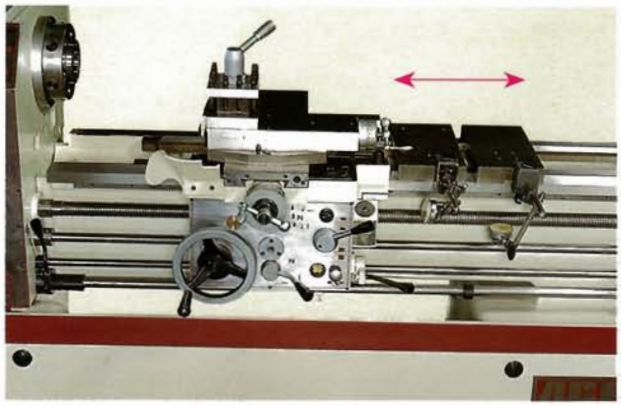


Tailstock spindle alignment – vertical (high only at 0" position) **A:0.0008/12"** **B:0.0016/12"**

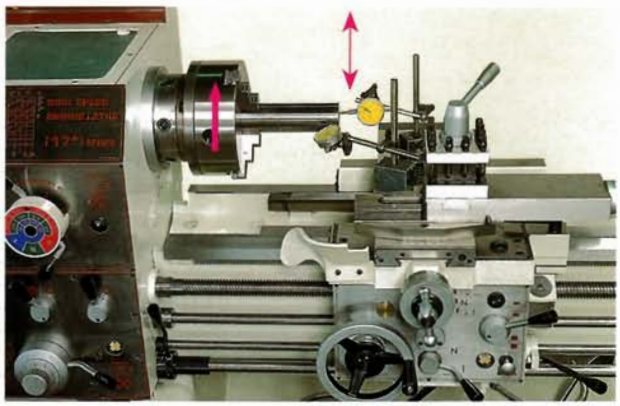


Lead screw alignment – vertical (half nut disengaged) **A:0.004/40"** **B:0.0048/40"**

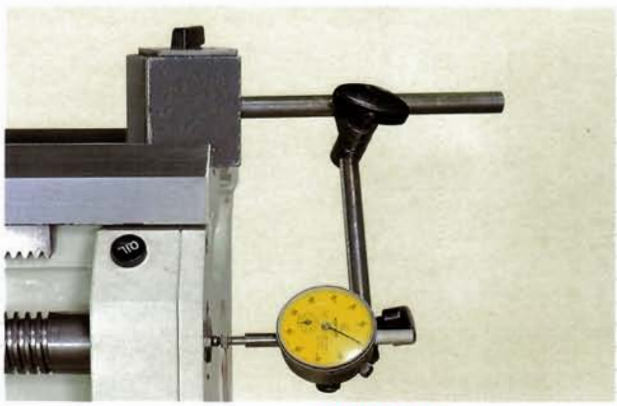
ACER Standard & Inspection



Half nut engaged & leadscrew center
parallel **A:0.006/40" B:0.006/40"** ⟩ to bed
vertical **A:0.006/40" B:0.006/40"** ⟩ slideways.

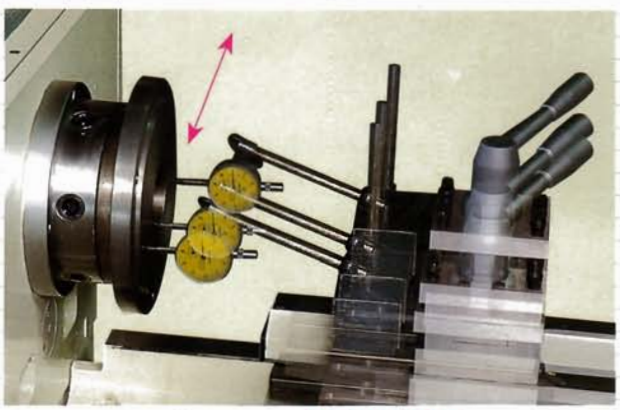


Actual cutting on steel bar, and measurement of its roundness and edge errors.



Lead screw cam action **A:0.0004"**
B:0.0004"

All gears on ACER lathe are tested on the teeth for their final form (within **0.2 micron**). If they are not to the standard, the gear will not be used.

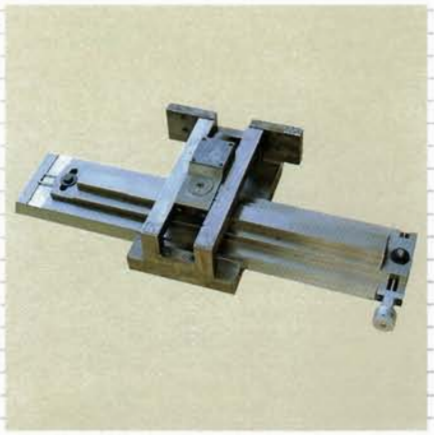


Cross slide alignment **A:0.0006/12"**
B:0.0006/12"

"Swing over bed"

22", 26" series also available upon request!

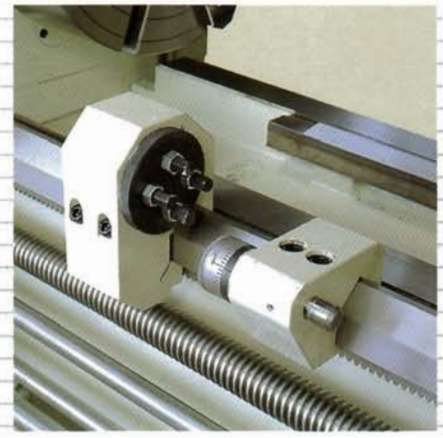
is the mark !



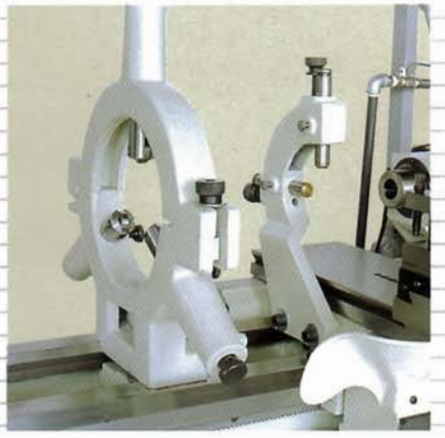
Telescopic Taper Turning Attachment

5C Collet Closer

Rear Tool Post



Micrometer Stop/Four Position Carriage Stop

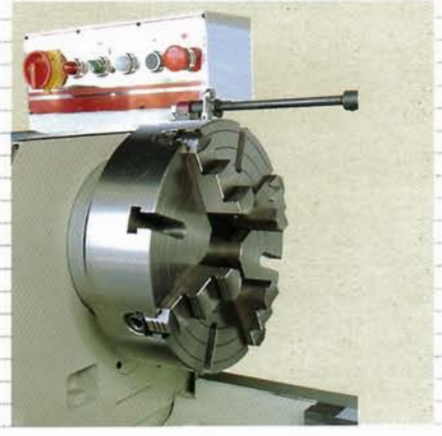


Bearing Type Steady Rest/Follow Rest

Face Plate/3 Jaw Adaptor Plate/Drive Plate

Quick Change Tool Post

Three Jaw Universal Chuck /Chuck Cover (Metal only)



Four Jaw Independent Chuck

Specifications

ITEM	MODEL	1340G	1440E	1440G	1740G
General Capacity	Center height	6-1/4'	6-3/4'	6-3/4'	8-1/2"
	Swing over bed	13"	14"	14"	17"
	Swing over gap (Gap type only)	19-1/4"	20-3/4"	21"	26"
	Swing over cross slide	7-5/8"	8-3/4"	9"	9-5/8"
	Distance between centers	40"		40"	40"
Main Spindle	Spindle nose	D1-4 or A1-5		D1-4 or A1-5	D1-6 or A1-6
	Spindle bore diameter	1-1/2"		1-9/16"	2-1/4"
	Type of spindle nose	MT.# 5		MT.# 5	MT.# 6
	Taper of center	MT.# 3		MT.# 3	MT.# 4
	Spindle speeds	80~2000 rpm(9 steps)		85~2000 rpm(8 steps)	50~1800 rpm(12 steps)
Carriage	Cross slide travel	6-7/8"		8-1/16"	8-5/8"
	Compound rest travel	3-3/4"		3-3/4"	7"
	Max. size cutting tool	3/4" x 3/4"		3/4" x 3/4"	1" x 1"
Tailstock	Spindle diameter	1-7/16"		1-1/2"	2-1/4"
	Spindle travel	4-3/8"		4-1/4"	6"
	Taper of center	MT.#3		MT.#3	MT.#4
Bed	Bed length	54"		58"	73"
	Bed width	7-1/2"		10"	11-7/8"
	Width of gap	7-5/8"		10"	8-3/4"
Threading & Feeding	System	Inch		Inch \ Metric	Inch \ Metric
	Pitch of leadscrew	24 Ø , 4 TPI		25 Ø , 4 TPI	35 Ø , 4 TPI
	Metric pitch threads	0.4~7mm/pitch (30 kinds)		0.25~6mm/pitch (22 kinds)	0.5 ~ 7.0mm/pitch (22 kinds)
	Inch pitch threads	3~56 TPI (32 kinds)		4~112 TPI (40 kinds)	4 ~ 56 TPI (36 kinds)
	Module pitch threads	-		0.25~3.0 M.P. (optional)	0.5 ~ 3.5 M.P. (12kinds)
	Diametral pitch threads	-		8~112 D.P. (optional)	8 ~ 56 D.P. (21 kinds)
	Range of longitudinal feeds	0.0016"~0.03"/rev.		0.002 ~ 0.04"/rev. \ 0.05 ~ 1.0mm/rev.	0.002 ~ 0.028"/rev. \ 0.05 ~ 0.70mm/rev.
	Range of cross feeds	0.0008"~0.015"/rev.		0.001 ~ 0.02"/rev. \ 0.025 ~ 0.5mm/rev.	0.001 ~ 0.014"/rev. \ 0.025 ~ 0.35mm/rev.
Power	Main drive motor	3 HP		3 HP	7-1/2 HP
	Rapid traverse motor	-		-	-
	Coolant pump motor	1/8 HP		1/8 HP	1/8 HP
Floor Dimension		67-3/4" x 28-3/8"		75" x 30"	85"x40"
Net Weight		1320 lbs	1380 lbs	2310 lbs	3500 lbs
Gross Weight		1540 lbs	1600 lbs	2550 lbs	3750 lbs
Packing Dimension		75" x 30" x 58"	75" x 30" x 58"	78" x 30" x 60"	88" x 41" x 67"

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NJ E-mail Address: klim@acergroup.com

Specifications

ITEM	MODEL	1760G	1780G	2040G	2060G	2080G
General Capacity	Center height	8-3/4"		10-1/4"		
	Swing over bed	17"		20"		
	Swing over gap (Gap type only)	26"		27-1/2"		
	Swing over cross slide	9-5/8"		11-1/8"		
	Distance between centers	60"	80"	40"	60"	80"
Main Spindle	Spindle nose	D1-6 or A1-6		D1-6 or A1-6		
	Spindle bore diameter	2-1/4"		2-1/4"		
	Type of spindle nose	MT.# 6		MT.# 6		
	Taper of center	MT.# 4		MT.# 4		
	Spindle speeds	50~1800 rpm(12 steps)		50~1800 rpm(12 steps)		
Carriage	Cross slide travel	8-5/8"		10-1/8"		
	Compound rest travel	7"		7"		
	Max. size cutting tool	1" x 1"		1" x 1"		
Tailstock	Spindle diameter	2-1/4"		2-1/4"		
	Spindle travel	6"		6"		
	Taper of center	MT.#4		MT.#4		
Bed	Bed length	93"	113"	73"	93"	113"
	Bed width	12"		12"		
	Width of gap	8-3/4"		8-3/4"		
Threading & Feeding	System	Inch \ Metric		Inch \ Metric		
	Pitch of leadscrew	35Ø, 4 TPI		35Ø, 4 TPI		
	Metric pitch threads	0.5~7.0mm/pitch (22 kinds)		0.5~7.0 mm/pitch (22 kinds)		
	Inch pitch threads	4~56 TPI (36 kinds)		4~56 TPI (36 kinds)		
	Module pitch threads	0.5~3.5 M.P. (12 kinds)		0.5~3.5 M.P. (12 kinds)		
	Diametral pitch threads	8~56 D.P. (21 kinds)		8~56 D.P. (21 kinds)		
	Range of longitudinal feeds	0.002~0.028"/rev. \ 0.05~0.7mm/rev.		0.002~0.028"/rev. \ 0.05~0.7mm/rev.		
	Range of cross feeds	0.001~0.014"/rev. \ 0.025~0.35mm/rev.		0.001~0.014"/rev. \ 0.025~0.35mm/rev.		
Power	Main drive motor	7-1/2 HP		7-1/2 HP		
	Rapid traverse motor	-		-		
	Coolant pump motor	1/8 HP		1/8 HP		
Floor Dimension		105" x 40"	124" x 40"	85" x 40"	105" x 40"	124" x 40"
Net Weight		3950 lbs	4400 lbs	3800 lbs	4250 lbs	4700 lbs
Gross Weight		4250 lbs	4750 lbs	4050 lbs	4550 lbs	5050 lbs
Packing Dimension		107" x 41" x 67"	131" x 41" x 67"	88" x 41" x 67"	107" x 41" x 70"	131" x 41" x 70"

STANDARD ACCESSORIES

Gap bed Built in coolant One three-jaw adaptor plate Tool box w/tools
One four-jaw adaptor plate Operational manual Splash guard
Four way tool post Steady rest Halogen light One face plate
Touch-up paint

SPECIFICATIONS

ITEM	MODEL	2040GH	2060GH	2080GH	2460G / 2480G 24120G / 24160G	2960G / 2980G 29120G / 29160G
General Capacity	Center height	10-2/5"			11-7/8"	14-3/4"
	Swing over bed	20-1/10"			23-5/8"	29-1/8"
	Swing over gap (Gap type only)	27-1/8"			32-1/4"	37-25/32"
	Swing over cross slide	13"			15"	20-1/2"
	Distance between centers	40"	60"	80"	60" / 80" / 120" / 160"	
Main Spindle	Spindle nose	ASA 1-8 or D1-8			ASA 1-11 or D1-11	
	Spindle bore diameter	3-1/8"			4-1/11"	
	Type of spindle nose	84.7 x 1:16			108 x 1:12	
	Taper of center	MT.#5			MT 5	
	Spindle speeds	20~1500 rpm(18 steps)			25 ~ 1200 RPM (12 steps)	
Carriage	Cross slide travel	11-4/5"			13"	18-1/4"
	Compound rest travel	4-7/10"			9"	
	Max. size cutting tool	1" x 1"			1" x 1"	
Tailstock	Spindle diameter	2-7/10"			3-1/32"	
	Spindle travel	5-9/10"			7"	
	Taper of center	MT.#5			MT 5	
Bed	Bed length	76-2/5"	96"	117-3/4"	102" / 122" / 164" / 205"	
	Bed width	13-4/5"			16-1/2"	
	Width of gap	7-9/10"			14-3/16"	
Threading & Feeding	System	Inch \ Metric			Inch \ Metric	
	Pitch of leadscrew	35Ø, 4 TPI			1-1/2" Ø , 4 TPI	
	Metric pitch threads	0.5~7.0mm/pitch (24 kinds)			0.5 ~14mm x 31 kinds	
	Inch pitch threads	4~56 TPI (36 kinds)			2 ~ 56 TPI x 45 kinds	
	Module pitch threads	0.25~3.5 M.P. (16 kinds)			0.25~7 M.P. x 23 kinds	
	Diametral pitch threads	8~112 D.P. (36 kinds)			4 ~ 112 D.P. x 43kinds	
	Range of longitudinal feeds	0.002~0.035"/rev. \ 0.06~0.88mm/rev.			0.0012~0.0287"/rev. \ 0.03~0.73mm/rev.	
	Range of cross feeds	0.02~0.035"/rev. \ 0.06~0.88mm/rev.			0.0004~0.0118"/rev. \ 0.01~0.03mm/rev.	
Power	Main drive motor	10 HP			15 HP	
	Rapid traverse motor	-			1/2 HP (optional)	
	Coolant pump motor	1/8 HP			1/8 HP	
Floor Dimension		91" x 45"	110" x 45"	130" x 45"	110"x50" / 129"x50" / 169"x50" / 209"x50"	
Net Weight (29" series add 500 lbs)		4180 lbs	5120 lbs	6030 lbs	7150 lbs / 7180 lbs / 8690 lbs / 9570 lbs	
Gross Weight (29" series add 500 lbs)		4840 lbs	5780 lbs	6690 lbs	8250 lbs / 8690 lbs / 10010 lbs / 11000 lbs	
Packing Dimension (29" series add 6")		90.5" x 44.5" x 72"	114" x 44.5" x 72"	133" x 44.5" x 72"	119.5"x50"x74" / 138.5"x50"x74" / 181.3"x50"x74" / 220"x50"x74"	

Note: The manufacture reserves the right to modify the design, specifications, mechanisms, etc. to improve the performances of machine without notice.
All the specifications shown above are for reference only.

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