

We Iron Flower Machinery Inc. was founded in 1981. In growing time, our company has manufactured a great deal of lathes with more than half the output being exported. Production techniques are similar in principle to those employed in the volume production of comprehensive kind of lathes. Owing to effort & grow continually, we have built an unsurpassed reputation in machine tool field.

Our staff are strongly creative and totally dedicated to offering the A1 products to our honourable customers.

We are committed to continuous improvement in everything we do and we believe the only true measuring of our success is customer satisfaction quality is not enough, we constantly strive to improve in every aspect of our business.

It is our sincere desire to work with each and every one of you as our products developer & end-user. Especially, we deep believe whom us keep strive pace with our customer and being a good partner in the turning processing techniques.

The Iron flower offers you the most complete line of turning lathes production equipment.

1. PC based CNC lathes ( flat bed )
2. High speed precision lathes
3. Heavy duty precision lathes
4. High speed precision lathes(W) inverter

## COMPREHENSIVE LATHES AT A GLANCE

*A family of products built to quality & performance they are well designed & engineered products from which you can select the most suitable m/c for your particular application*



# FLAT BED CNC LATHES

US PAT. NO.:5,862,705

This entirely new design places the emphasis firmly on multi-performance, safety, low noise, advance productivity and easier operation

AC-1800 Series



AC-2600/3000/3300 Series



AC-2100/2500 Series



AC-5100 Series



## SPECIFICATIONS:

ITEM	MODEL	AC-1840	AC-1860	AC-1880	AC-2140	AC-2160	AC-2180	AC-2540	AC-2560	AC-2580
Working Capacity										
Swing over bed			460mm			540mm			630mm	
Center height			230mm			270mm			315mm	
Swing over cross slide			230mm			310mm			400mm	
Dist. between centers		1000mm	1500mm	2000mm	1000mm	1500mm	2000mm	1000mm	1500mm	2000mm
Width of bed			350mm			350mm			350mm	
Headstock										
Spindle speeds			H:3100~681rpm M:680~153rpm L:152~33rpm			H:2250~491rpm M:490~126rpm L:125~27rpm	1500~331rpm 330~93rpm 92~20rpm	H:2250~491rpm M:490~126rpm L:125~27rpm	1500~331rpm 330~93rpm 92~20rpm	800~176rpm 175~53rpm 52~10rpm
Spindle nose			D1-6			D1-8	A2-11	D1-8	A2-11	A2-11
Spindle bore			56mm			85mm	105mm(opt.)	85mm	105mm(opt.)	153mm(opt.)
Saddle										
Longitudinal travel(Z-axis)		810mm	1310mm	1810mm	810mm	1310mm	1810mm	810mm	1310mm	1810mm
Cross slide travel(X-axis)			280mm			350mm			350mm	
Tailstock										
Spindle travel			170mm			170mm			170mm	
Taper in spindle			MT#5			MT#5			MT#5	
Motor										
Spindle motor		AC 7.5HP or 10 HP (opt.)				AC 10HP or 15 HP (opt.)		AC 10HP or 15 HP (opt.)		
Ball screw(Dia. x pitch)		X:25 x 5mm		Z:40 x 10mm		X:25 x 5mm	Z:40 x 10mm	X:25 x 5mm Z:40 x 10mm		
Z-axis drive motor			6.3NM			6.3NM			6.3NM	
X-axis drive motor			6.3NM			6.3NM			6.3NM	
Coolant pump motor			1/6HP			1/6HP			1/6HP	
X.Z Feeds										
Z-axis rapid travel			7m/min			7m/min			7m/min	
X-axis rapid travel			5m/min			5m/min			5m/min	
Machine Weight										
N.W. (Approx.)		2900kgs	3200kgs	3500kgs	3100kgs	3400kgs	3700kgs	3200kgs	3500kgs	3800kgs

Note: We have the right to modify the specifications or designs. If there are subjected to change,

without prior notice.

- FAGOR Control is standard, but ANILAM, FANUC & SIEMENS available on request.
- Spindle auto speed shifting(3 steps) and CNC controlling.
- All casting are made of high tensile meehanite cast iron which are annealed treatment to eliminate internal residual stress.
- Wide bed and box constructed, bed ways are high frequency heat treated, precision ground etc., to provide stability at high speed running or deep cut.
- Spindle & gear are made of CR-MO alloy steel which are carburizing & precisely ground, forced lubricating & oil bathed combined in headstock which can be prolonged servicing life.
- Three point support on the spindle with two taper roller bearings and one roller bearing to assure the accuracy & rigidity.
- AC main drive spindle motor.
- High precision ball screw.
- Imperial & metric threading.
- Easy manual turning of radial, chamfering, taper, facing and grooving.
- Tool radius & geometry compensation.

- Internal digital readout.
- Constant surface speed for model with infinite variable speed.
- Integrated PLC.
- 8 bit bus, 32K RAM.
- Serial port(RS-232 interface).
- Teach-in mode.
- Semiautomatic, automatic(Cycle) and part program modes.
- Automatic acceleration/deceleration.
- Rapid travels.
- Self diagnostic routines.
- Automatic home searching.
- Program input RS-232 or floppy disk(option).
- 1.44MB floppy disk drive(option).
- External DNC communication software.

## SPECIFICATIONS:

ITEM	MODEL	AC-2660	AC-2680	AC-26120	AC-26160	AC-26200	AC-3060	AC-3080	AC-30120	AC-30160	AC-30200	AC-3360	AC-3380	AC-33120	AC-33160	AC-33200
Working Capacity																
Swing over bed				670mm				770mm						840mm		
Center height				335mm				385mm						420mm		
Swing over cross slide				400mm				500mm						570mm		
Dist. between centers		1600mm	2100mm	3100mm	4100mm	5100mm	1600mm	2100mm	3100mm	4100mm	5100mm	1600mm	2100mm	3100mm	4100mm	5100mm
Width of bed				450mm				450mm						450mm		
Headstock																
Spindle speeds		H:2250~491rpm M:490~126rpm L:125~27rpm		1500~331rpm 330~93rpm 92~20rpm		800~176rpm 175~53rpm 52~10rpm		H:1500~331rpm M:330~93rpm L:92~20rpm		800~176rpm 175~53rpm 52~10rpm		H:1500~331rpm M:330~93rpm L:92~20rpm		800~176rpm 175~53rpm 52~10rpm	450~108rpm 107~31rpm 30~6rpm	350~87rpm 86~26rpm 25~5rpm
Spindle nose		D1-8		A2-11		A2-11		A2-11		A2-11		A2-11		A2-11	A2-15	A2-20
Spindle bore		85mm		105mm(opt.)		153mm(opt.)		105mm		153mm(opt.)		105mm		153mm(opt.)	230mm(opt.)	305mm(opt.)
Saddle																
Longitudinal travel(Z-axis)		1500mm	2000mm	3000mm	4000mm	5000mm	1500mm	2000mm	3000mm	4000mm	5000mm	1500mm	2000mm	3000mm	4000mm	5000mm
Cross slide travel(X-axis)				450mm				450mm						450mm		
Tailstock																
Spindle travel				220mm				220mm						220mm		
Taper in spindle				MT#5				MT#5						MT#5		
Motor																
Spindle motor				AC 15HP or 20 HP(opt.)				AC 15HP or 20 HP(opt.)				AC 15HP or 20HP(opt.)				
Ball screw(Dia. x pitch)				X:28 x 5mm Z:50 x 10mm				X:28 x 5mm Z:50 x 10mm				X:28 x 5mm Z:50 x 10mm				
Z-axis drive motor				11.6NM				11.6NM				11.6NM				
X-axis drive motor				6.3NM				6.3NM				6.3NM				
Coolant pump motor				1/4HP				1/4HP				1/4HP				
X.Z Feeds																
Z-axis rapid travel				7m/min				7m/min				7m/min				
X-axis rapid travel				5m/min				5m/min				5m/min				
Machine Weight																
N.W. (Approx.)		4100kgs	4600kgs	5600kgs	6600kgs	7600kgs	4300kgs	4800kgs	5800kgs	6800kgs	7800kgs	4500kgs	5000kgs	6000kgs	7000kgs	8000kgs

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- All casting are made of high tensile meehanite cast iron which are annealed treatment to eliminate internal residual stress.
- Wide bed and box constructed, bed ways are high frequency heat treated, precision ground etc., to provide stability at high speed running or deep cut.
- Spindle & gear are made of CR-MO alloy steel which are carburizing & precisely ground, forced lubricating & oil bathed combined in headstock which can be prolonged servicing life.
- Three point support on the spindle with two taper roller bearings and one roller bearing to assure the accuracy & rigidity.
- AC main drive spindle motor.
- High precision ball screw.
- Imperial & metric threading.
- Easy manual turning of radial, chamfering, taper, facing and grooving.
- Tool radius & geometry compensation.

- Internal digital readout.
- Constant surface speed for model with infinite variable speed.
- Integrated PLC.
- 8 bit bus, 32K RAM.
- Serial port(RS-232 interface).
- Teach-in mode.
- Semiautomatic, automatic(Cycle) and part program modes.
- Automatic acceleration/deceleration.
- Rapid travels.
- Self diagnostic routines.
- Automatic home searching.
- Program input RS-232 or floppy disk(option).
- 1.44MB floppy disk drive(option).
- External DNC communication software.

## SPECIFICATIONS:

ITEM	MODEL	AC-5160	AC-5180	AC-51120	AC-51160	AC-51200	AC-51240
Working Capacity							
Swing over bed				1300mm			
Center height				650mm			
Swing over cross slide				900mm			
Dist. between centers		1700mm	2200mm	3200mm	4200mm	5200mm	6200mm
Width of bed				770mm			
Headstock							
Spindle speeds			H:750~151 rpm M:150~31 rpm L:30~6 rpm	H:560~111 rpm M:110~21 rpm L:20~4 rpm	H:270~54 rpm M:53~11 rpm L:10~2 rpm	H:215~43 rpm M:42~9 rpm L:8~1.5 rpm	H:155~31 rpm M:30~7 rpm L:6~1.2 rpm
Spindle nose			A2-11	A2-15	A2-20	A2-28	A2-28
Spindle bore			155mm	230mm(opt.)	305mm(opt.)	410mm(opt.)	510mm(opt.)
Saddle							
Longitudinal travel(Z-axis)		1700mm	2200mm	3200mm	4200mm	5200mm	6200mm
Cross slide travel(X-axis)				680mm			
Ball screw(Dia. x pitch)				X:ø40X8mm, Z:ø80x10mm			
Tailstock							
Spindle Dia.				165mm			
Spindle travel				300mm			
Taper in spindle				MT#6			
				Build In Type Quill			
Motor							
Spindle motor				22 / 33 kw or 28 / 42 kw (opt.)			
Z-axis drive motor				39.7NM			
X-axis drive motor				17.3NM			
Coolant pump motor				6 Bar			
X,Z Feeds							
Z-axis rapid travel				7m/min			
X-axis rapid travel				5m/min			
Machine Weight							
N.W. (Approx.)		12000kgs	12800kgs	14400kgs	16000kgs	17600kgs	19200kgs

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### STANDARD ACCESSORIES:

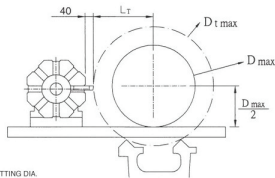
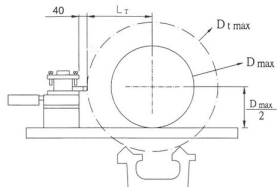
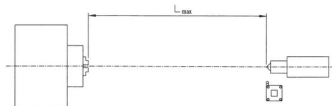
- Fagor 8055/A TC Control
- Lubricate equipment
- Center sleeve / Center
- Leveling bolts / Pads
- Electrical handwheel(MPG)
- Automatic speed change
- Work light
- Chip conveyor

### OPTIONAL ACCESSORIES:

- Manual toolpost(4T)
- Electric servo toolpost(H4)
- Hydraulic turret(V8)
- Powerful turreted(V8 / V12)
- Steady rest
- Follow rest
- Rotating center MT#6
- Siemens / Fanuc control



# INTERRUPTED DIAGRAM OF TOOL RACK



D<sub>t max</sub>=MAX CUTTING DIA.  
D<sub>max</sub>=MAX DIA. OF WORKPIECE  
L<sub>T</sub>=MAX CUTTING LENGTH

FOUR WAY TOOL POST	Model	L max
	AC-1840/AC-2140/AC-2540	800
	AC-1880/AC-2160/AC-2580	1300
	AC-1880/AC-2180/AC-2580	1800
	AC-2660/AC-3060/AC-3360	1400
	AC-2680/AC-3080/AC-3380	1900
	AC-26120/AC-30120/AC-33120	2900
	AC-26160/AC-30160/AC-33160	3900
	AC-26200/AC-30200/AC-30200	4900

EIGHT STATION TOOL POST	Model	L max
	AC-1840/AC-2140/AC-2540	710
	AC-1860/AC-2160/AC-2560	1210
	AC-1880/AC-2180/AC-2580	1710
	AC-2660/AC-3060/AC-3360	1250
	AC-2680/AC-3080/AC-3380	1750
	AC-26120/AC-30120/AC-33120	2750
	AC-26160/AC-30160/AC-33160	3750
	AC-26200/AC-30200/AC-33200	4750

FOUR WAY TOOL POST	Model	Dmax	D <sub>t max</sub>	L <sub>T</sub>
	AC-1800	ø230	ø460	230
	AC-2100	ø310	ø540	270
	AC-2500	ø400	ø660	300
	AC-2600	ø400	ø660	385
	AC-3000	ø500	ø770	385
	AC-3300	ø570	ø800	400

EIGHT STATION TOOL POST	Model	Dmax	D <sub>t max</sub>	L <sub>T</sub>
	AC-1800	ø230	ø460	230
	AC-2100	ø310	ø522	260
	AC-2500	ø400	ø522	260
	AC-2600	ø400	ø660	345
	AC-3000	ø500	ø690	345
	AC-3300	ø570	ø690	345

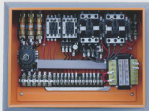
# FEATURES & PERFORMANCE

## HEADSTOCK



All geared headstock provides wide range of spindle speed and the gears are made of chrome-molybdenum alloy steel (SCM 21), Carburizing treated, finish ground for smooth and quiet running. Combined of forced lubrication and oil bathed in headstock which can be prolonged servicing life

## ELECTRIC CABINET



Safely designed of electrical cabinet is easy to maintain and install, A 24 volts protecting voltage is not harmed to operator whom is shocked.

## COMPOUND TOOL REST



The slide way for carriage & saddle are heat treated and precision ground and a hand oiler provides lubricating for longitudinal and cross motion

## TAILSTOCK

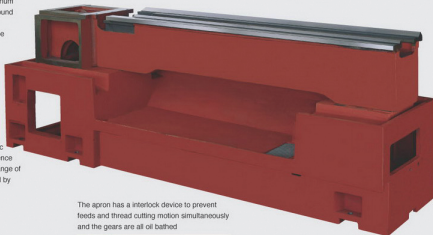


Rigid constructed tailstock is able to facilitate making precision turning and drilling. Tailstock quill is hardened and precision ground

## DOUBLE CHUCK SYSTEM

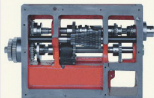


The system is suitable for spindle bore over 4"



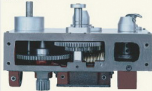
Controls of speed change, feed rate and inch/metric thread pitches are arranged for maximum convenience and no need gear changing. Especially, the wide range of feed rate selecting and threading are accomplished by turning three levers and one rotary dial

## GEAR BOX



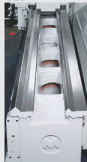
The apron has a interlock device to prevent feeds and thread cutting motion simultaneously and the gears are all oil bathed

## APRON



The bed and stand are made of one piece Meehanite cast iron which are annealed treatment to eliminate internal residual stress and more stable which can be resisted to vibration due to deep cutting

## BED



Wide bed and box constructed, bed ways are high frequency heat treated, precision ground which can be avoided vibration and tool chattering during made heavy duty processing