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**Willis**

*High Speed Precision Lathes*

# Willis

## High Speed Precision Lathes

### STANDARD EQUIPMENT AND ACCESSORIES:

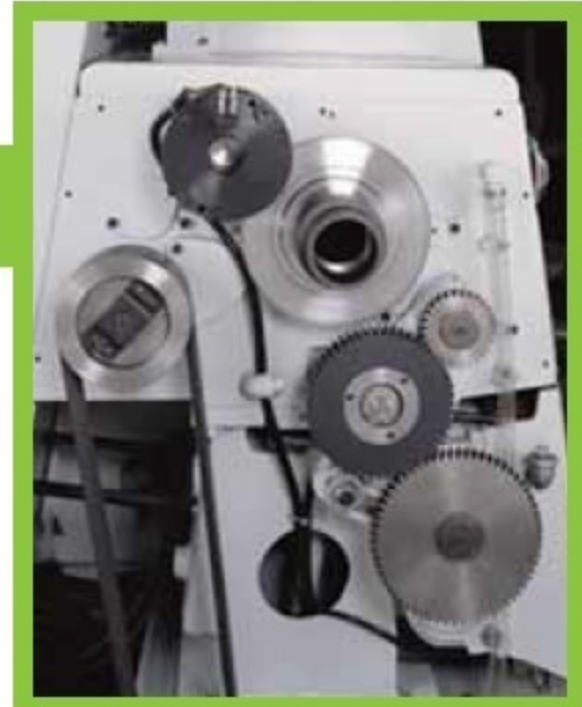
- Low voltage controls
- Coolant system
- Motor and electrics controls system
- One backplate for 3-jaw chuck
- 4-way toolpost
- Threads indicator
- Feed rod overload clutch
- Centers & center sleeve
- Leveling blocks
- Service tools & toolbox
- Touch paints
- Instruction & parts manual

### OPTIONAL EQUIPMENT AND ACCESSORIES:

- VS model for full series
- 3-jaws scroll chuck
- 4-jaws independent chuck
- backplate for chuck
- Face plate
- Steady rest
- Follow rest
- Rotating center
- Full length splash guard
- Halogen lamp
- Chuck safety guard
- Chip safety guard
- CE Electrical system
- Protect cover on leadscrew
- Turret type micrometer bed stop
- 5C collet attachment
- 5C collets
- Taper turning attachment
- Quick change toolpost
- Additional toolholder for Q.C.T.
- Hydraulic copying attachment
- Magnetic brake system
- Any others by consults

### MAGNETIC BRAKE SYSTEM :

- Available on all models as optional equipment
- Available to supply along with or without Foot Brake
- Qualify for standard CE-Regulation



### PLEASE GIVE THE FOLLOWING INFORMATION ON PLACING ORDERS:

- Metric or inch system on leadscrew and dials graduation
- Left-handed or right-handed on apron
- Electrical power source specification
- Gap bed or straight bed
- Painted colors with RAL number
- Optional equipment and accessories

## 13" SWING SERIES



**1340VS pictured**

- D1-4 Camlock spindle nose
- 8-step spindle speed from 105-2000rpm
- Optional 2-speed motor driven for 16-step speed from 53-2000rpm
- Optional variable-speed drive from 40-2500rpm in 2 variable ranges
- 3HP (2.25Kw) spindle motor
- Swing over bed 330mm
- Distance between center 750mm/1000mm
- Headstock gears with precision hardened and ground
- Optional universal gearbox provides comprehensive range of metric, imperial, M.P. and D.P threading
- Induction hardened & precision ground bed

## 14" SWING SERIES



**1440 pictured**

- D1-5 Camlock spindle nose
- 8-step spindle speed from 70-2000rpm
- Optional 2-speed motor driven for 16-step speed from 35-2000rpm
- Optional variable-speed drive from 35-2500rpm in 2 variable ranges
- 5HP (3.75Kw) spindle motor
- Swing over bed 360mm
- Distance between center 750mm/1000mm
- Headstock gears with precision hardened and ground
- Universal gearbox provides comprehensive range of metric, imperial, M.P. and D.P threading
- Induction hardened & precision ground bed

# High Speed

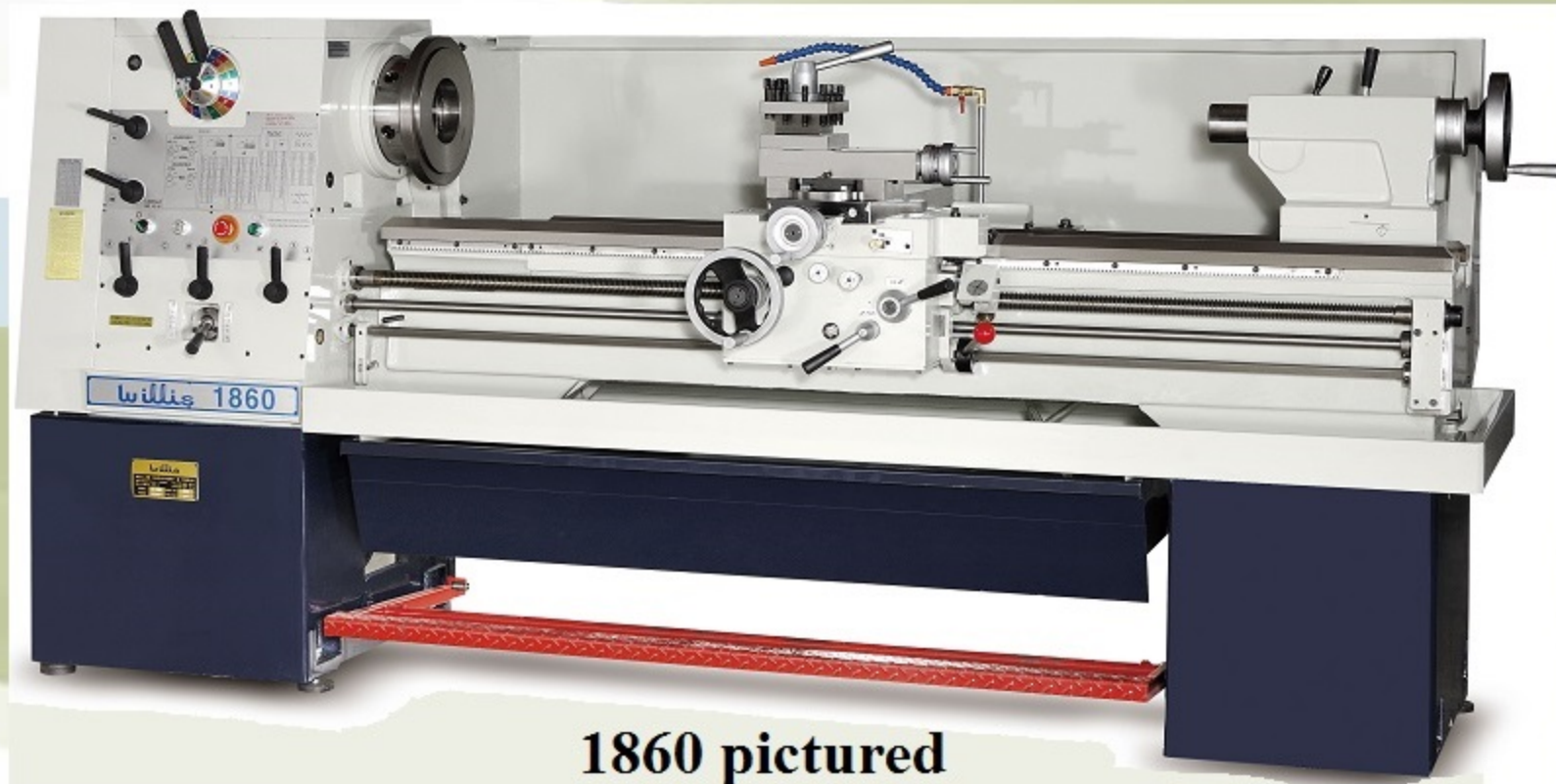
## 15" SWING SERIES



1550 pictured

- D1-6 Camlock spindle nose
- 16-step spindle speed from 25-2000rpm
- Optional variable-speed drive from 18-2500rpm in 2 variable ranges
- 7.5HP (5.5Kw) spindle motor
- Swing over bed 390mm
- Distance between center 760mm/1000mm/1250mm
- Headstock gears with precision hardened and ground
- Universal gearbox provides comprehensive range of metric, imperial, M.P. and D.P threading
- Induction hardened & precision ground bed
- Mechanical multi-plate clutch is available as optional

## 18" - 22" SWING



1860 pictured

- D1-8 Camlock spindle nose
- 16-step spindle speed from 20-1600rpm
- Optional variable-speed drive from 16-2000rpm in 2 variable ranges
- 10HP (7.5Kw) spindle motor
- Swing over bed 460mm/510mm/560mm
- Distance between center 1000mm/1500mm/2000mm/3000mm
- Headstock gears with precision hardened and ground
- Mechanical multi-plate clutch
- Universal gearbox provides comprehensive range of metric, imperial, M.P. and D.P threading
- Induction hardened & precision ground bed

# Precision Lathes

## MACHINE SPECIFICATIONS

SERIES		13" SWING		14" SWING		15" SWING		
MODELS		1330	1340	1430	1440	1530	1540	1550
<b>CAPACITY</b>								
Centre height		165 (6.5)		178 (7)		190 (7.5)		
Swing over bed		330 (13)		360 (14.25)		390 (15.25)		
Swing over cross slide		190 (7.5)		215 (8.625)		240 (9.5)		
Swing in gap		510 (20)		560 (22)		610 (24)		
Distance between centres		750 (30)	1000 (40)	750 (30)	1000 (40)	760 (30)	1000(40)	1250(50)
Gap width in front of faceplate		150 (6)		150 (6)		150 (6)		
Cross slide travel		145 (5.7)		195 (7.6)		230 (9)		
Top slide travel		95 (3.75)		100 (4)		120 (4.75)		
Width of bed		185 (7.3)		250 (10)		270 (11)		
Length of bed		1380 (54.25)	1650 (65)	1560 (61.25)	1820 (71.5)	1710 (66.5)	1950 (76.5)	2200 (86.5)
<b>MAIN SPINDLE</b>								
Spindle nose (camlock)		D-1-4		D-1-5		D-1-6		
Spindle bore		35(1.375)		42(1.625)		54(2.125)		
Spindle speed	Numbers	8	16-optional	8	16-optional	16		
	Ranges(RPM)	105-2000	53-2000	70-2000	35-2000	25-2000		
Varispeed	Gear steps	2		2		2		
	Ranges(RPM)	40-2500		35-2500		18-2500		
Spindle nose bush		MT#4		MT#5		MT#6		
Spindle centre		MT#3		MT#3		MT#4		
<b>TAILSTOCK</b>								
Tailstock spindle travel		100 (4)		120 (4.75)		155 (6.125)		
Tailstock barrel diameter		40 (1.56)		50 (2)		58.5 (2.312)		
Tailstock centre		MT#3		MT#3		MT#4		
<b>THREADING</b>								
No.of whitworth threads		32 (in) 24 (mm) 36-optional		36		45		
Range of whitworth threads (T.P.I.)		4-56 (in) 4-28 (mm) 4-72-optional		4-72		2-72		
No. of metric threads		14(in) 18(mm) 31-optional		27		39		
Range of metric threads		0.5-6.0mm(in) 0.45-7mm(mm) 0.2-7.0mm-optional		0.4-7mm		0.2-14mm		
No. of Diametral pitch threads		21-optional		21		21		
Range of D.P. threads		8-44DP-optional		8-44DP		8-44DP		
No. of Module pitch threads		18-optional		18		18		
Range of Module pitch threads		0.3-3.5mm-optional		0.3-3.5mm		0.3-3.5mm		
<b>FEED RANGE</b>								
Longitudinal feeds		0.038-0.254 (0.0015-0.01) 0.02-0.520 (0.00008-0.0205)-optional		0.03-0.40(0.0012-0.016)		0.040-1.00 (0.0015-0.04)		
Cross feeds		0.012-0.090 (0.0005-0.0035) 0.006-0.170 (0.00023-0.0067)-optional		0.01-0.13(0.0004-0.0053)		0.02-0.50 (0.0008-0.02)		
<b>DRIVING MOTOR</b>								
Main motor	Standard	2.25KW (3HP)		3.75KW(5HP)		5.5KW(7.5HP)		
	Optional	2.25/1.12KW(3/1.5HP)		3.75/2.25KW(5/3HP)		—		
	Varispeed	1.5KW (2HP)		3.75KW(5HP)		5.5KW(7.5HP)		
<b>PACKING SIZE</b>								
Length		1625 (64)	1930(76)	1830 (72)	2135(84)-CE	1970 (77)	2210 (87)	2515 (99)
Width		760 (30)		915 (36)		1016 (40)		
Height		1473 (58) 1623(64)-CE		1525 (60) 1675 (66) -CE		1600 (63) 1752 (69) -CE		
Net weight (Approx. kgs)		620	670	850	900	1000	1150	1300
Gross weight (Approx. kgs)		750	820	1000	1100	1200	1350	1500

• The above specifications subject to change without prior notice.

# MACHINE SPECIFICATIONS

SERIES		18" - 22" SWING		
MODELS		1840/1860/1880/18120	2040/ 2060/2080/20120	2240/ 2260/ 2280/22120
<b>CAPACITY</b>				
Centre height		228 (9)	254 (10)	280 (11)
Swing over bed		460 (18)	510 (20)	560 (22)
Swing over cross slide		290 (11.5)	340 (13.5)	390 (15.5)
Swing in gap		710 (28)	760 (30)	810 (32)
Distance between centres		1840/2040/2240....1000 (40) 1860/2060/2260....1500 (60) 1880/2080/2280....2000 (80) 18120/20120/22120....3000 (120)		
Gap width in front of faceplate		220 (8.7)		
Cross slide travel		265 (10.5)		
Top slide travel		130 (5.1)		
Width of bed		345 (13)		
Length of bed		1840/2040/2240....2110 (83) 1860/2060/2260....2670 (105) 1880/2080/2280....3175 (125) 18120/20120/22120....4190 (165)		
<b>MAIN SPINDLE</b>				
Spindle nose (camlock)		D-1-8		
Spindle bore		80 (3.125)		
Spindle speed	Numbers	16		
	Ranges(RPM)	20-1600		
Varispeed	Gear steps	2		
	Ranges(RPM)	16-2000		
Spindle nose bush		MT#7		
Spindle centre		MT#5		
<b>TAILSTOCK</b>				
Tailstock spindle travel		180 (7)		
Tailstock barrel diameter		75 (3)		
Tailstock centre		MT#5		
<b>THREADING</b>				
No.of whitworth threads		45		
Range of whitworth threads (T.P.I.)		2-72		
No. of metric threads		39		
Range of metric threads		0.2-14mm		
No. of Diametral pitch threads		21		
Range of D.P. threads		8-44DP		
No. of Module pitch threads		18		
Range of Module pitch threads		0.3-3.5mm		
<b>FEED RANGE</b>				
Longitudinal feeds		0.04-1.0 (0.0015-0.04)		
Cross feeds		0.02-0.5 (0.0008-0.02)		
<b>DRIVING MOTOR</b>				
Main motor	Standard	7.5KW(10HP) 9.375KW (12.5HP)-120" Series		
	Optional	9.375KW (12.5HP)-40" 60" 80" Series		
	Varispeed	7.5KW (10HP) 9.375KW (12.5HP)		
<b>PACKING SIZE</b>				
Length		1840/2040/2240....2460 (97) 1860/2060/2260....2947 (116) 1880/2080/2280....3455 (136) 18120/20120/22120....4470 (176)		
Width		1100 (44)		
Height		1573 (69) 1900 (75)-CE	1778 (70) 1928 (76)-CE	1830 (72) 1980 (78)-CE
Net weight (Approx. kgs)		1800/2000/2300/3300	2000/2200/2500/3500	2200/2400/2700/3700
Gross weight (Approx. kgs)		2050/2300/2650/3800	2250/2500/2850/4000	2500/2700/3050/4200

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