



MORI SEIKI

High Speed Precision Lathe **MS/MR/MH Type**



GILBERT LODGE
AND COMPANY LIMITED
AUCKLAND CHRISTCHURCH
WELLINGTON DUNEDIN

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World Famous for Reliability --- High Speed Precision Lathes From Mori Seiki

Headstock

12-step spindle speeds. The velocity ratio in the most frequently used speed range is minimized to provide optimum cutting speed constantly.

Inside the rugged, box-type headstock, Meebground gears are used for improved accuracy. The forced lubrication system is powered by a trochoid pump.

Spindle

Three high-precision bearings are used to support the spindle. Spindle design allows heat to escape at the rear of the spindle to minimize thermal expansion. The large supporting area provides for precision and heavy-duty cutting.



Feed box

Inch/metric system can be switched easily at the touch of a lever. The safety device protects the transmission gears from an overload during feeding and cutting.

Base

MS and MR employ a box-type one-piece construction base. The hydraulically actuated disc brake allows for sudden stops during high-speed operation, improving work efficiency, and safety. (MH-3000 employs a brake motor.)

Bed

Double side wall construction and specially shaped ribs are used to prevent bed torsion. The slide way is hardened with high frequency waves (Shore hardness H_v70) and finished by grinding.

Mori Seiki's high-speed precision lathes were developed through long and varied experience in advanced technology. Powerful and rugged construction for precision and heavy-duty cutting operation, and superb controllability with greater safety are just a few reasons for Mori Seiki's superior dependability. These high-precision lathes, as well as our NC lathe series, have attained an international reputation for excellence in a variety of applications.

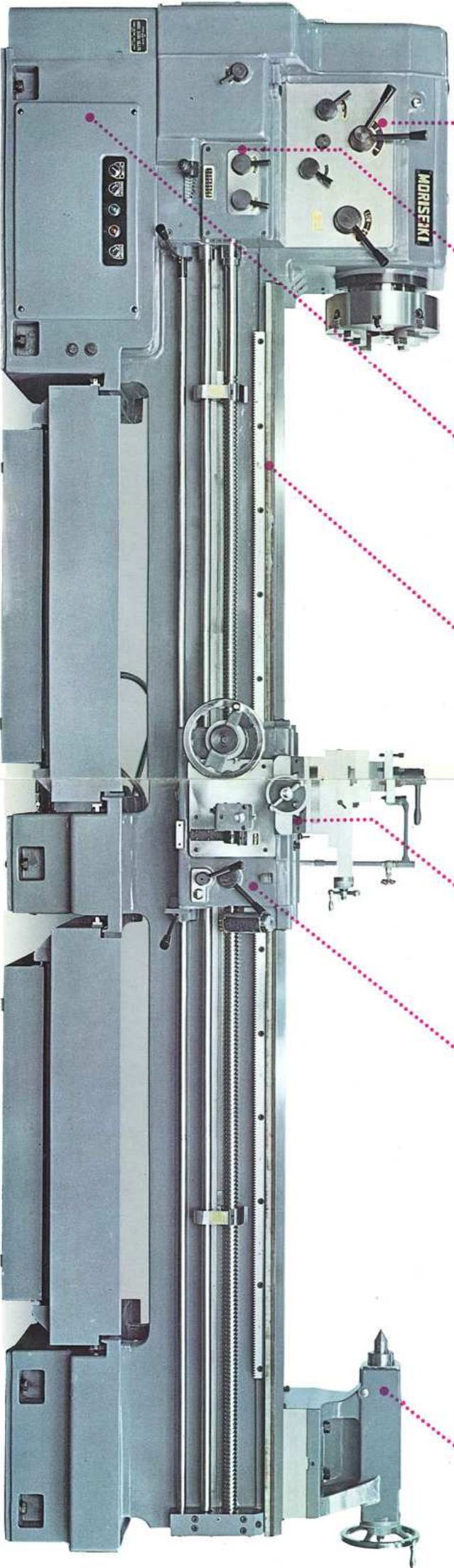
Apron

The apron has a built-in automatic lubrication system which feeds oil to all parts in the apron, the slide way and the cross slide. Automatic feed, either longitudinal feed or crossfeed, can be performed by a simple lever operation. The sizing device, which stops automatic feed during sizing work, also serves as a safety device.



Tail stock

The tail stock can be moved by loosening the clamp (the roller will work).



Choose the one which suits your needs from our wide range of products.

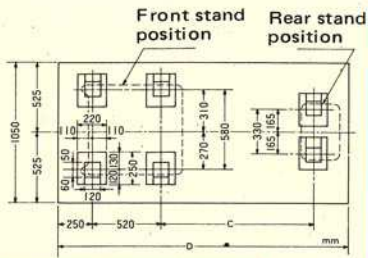
Mori Seiki's wide selection of high speed precision lathes — 3 types/
18 models — can meet your particular requirements. Standard and
optional accessories are also available.

Comparison Table

Model		Swing Over Bed	Swing Over Cross Slide	Swing Over Gap	Between Centers	Bed Width	Lead Screw	Main Motor	
MS-	650	435	250		650	352	31.75φ	3.7 kw (5 HP) 4P	
	850				850				
	850G			650	1250				6mm
	1250								
	1250G			650					
MR-	1000	520	300		1000	420	38φ	7.5 kw (10 HP) 4P	
	1000G			750					
	1500				1500				
	1500G			750	2000				6mm
	2000								
	2000G			750					
MH-	1000	610	400		1000	420	38φ	7.5 kw (10 HP) 4P	
	1000G			850					
	1500				1500				
	1500G			850	2000				6mm
	2000								
	2000G			850					
	3000				3050				460

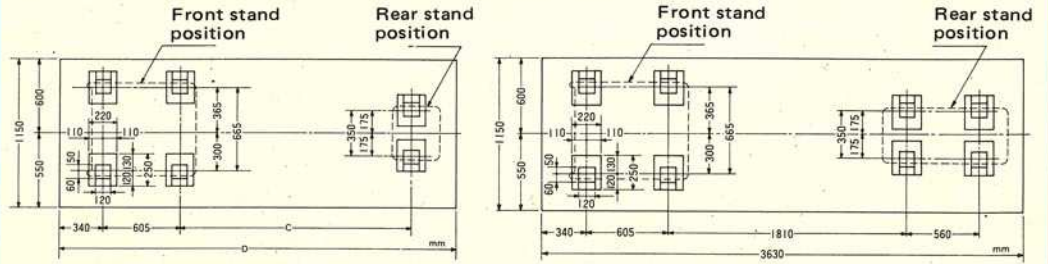
Installation Drawing

MS



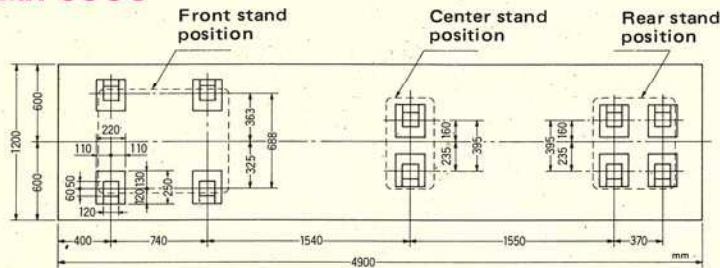
	C	D
MS-650	945	2000
MS-850	1145	2200
MS-1250	1545	2600
MS-1250G		

MR MH 1000 1500 2000



	C	D
1000	1310	2600
1000G		
1500	1810	3100
1500G		

MH-3000



The leading manufacturer of NC lathes.

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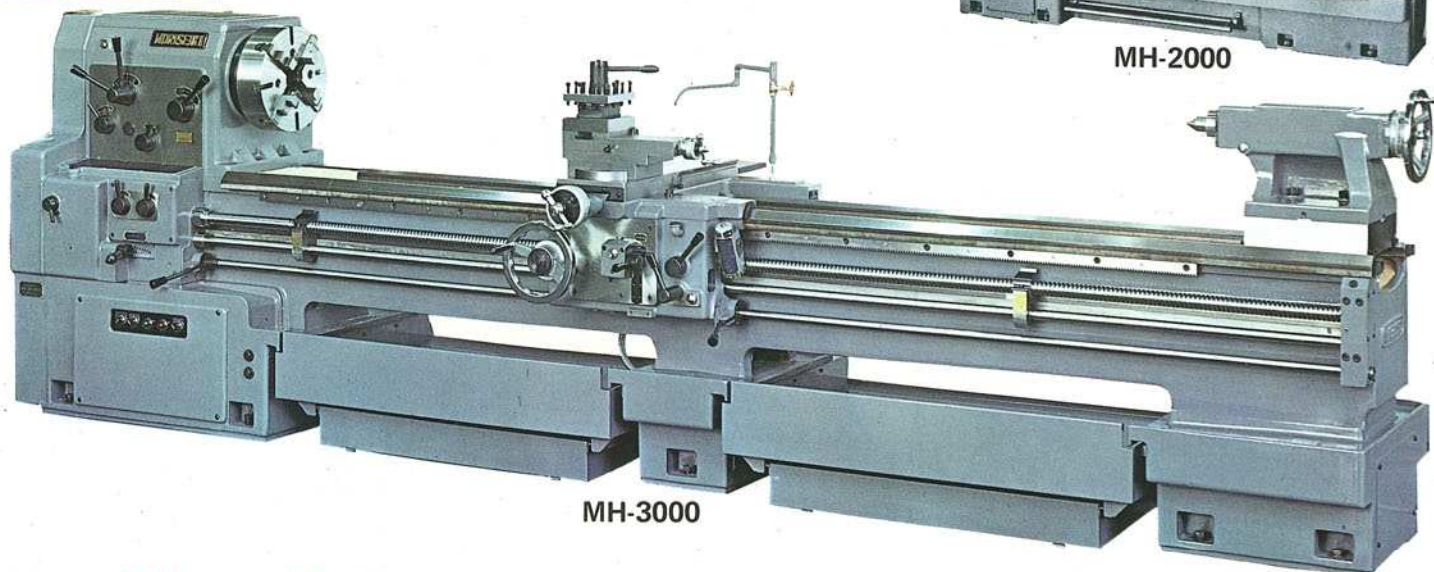
Overseas Offices: Chicago, Los Angeles, New York, Houston, Boston, Detroit, Dallas, Toronto, Düsseldorf, Birmingham, Stockholm, Oslo, Johannesburg, Sydney, Melbourne.

MH type

On lathes with cutoff devices, the apron handle is located in a different position.
MH-2000, MH-2000G and MH-3000 are equipped with a lead screw and feed rod support.



MH-2000



MH-3000

MH type specifications

Unit: Inch (mm)

	MH-1000	MH-1500	MH-2000	MH-1000G	MH-1500G	MH-2000G	MH-3000
Swing							
Swing Over Bed	24" (610mm)						
Swing Over Bed from Face Plate up to 7" (180mm)	26-3/8" (670mm)						
Swing Over Cross Slide	16" (400mm)						
Swing Over Gap	33-3/8" (850mm)						
Distance							
Width of Gap (from Face Plate)	9-7/8" (250mm)						
Distance from Bed to Spindle Center	43-11/16" (1110mm)						
Distance from Floor to Spindle Center	120"						
Between Centers	40" (1000mm)	60" (1500mm)	80" (2000mm)	40" (1000mm)	60" (1500mm)	80" (2000mm)	43-11/16" (1110mm)
Spindle							
Spindle Nose	ASA A1-8 or D1-8						
Hole Thru Spindle	3" (77mm)						
Spindle Sleeve Taper	M.T. No. 7						
Spindle Center Taper	M.T. No. 5						
Number of Spindle Speeds	12						
Spindle Speed Range (RPM)	27, 50, 65, 90, 123, 145, 220, 278, 355, 495, 683, 1205						
Feeds							
Number of Feed Changes (both longitudinal and cross feeds)	32						
Range of Longitudinal Feeds	0.0028 ~ 0.0392" (0.072 ~ 1.00mm)/rev.						
Range of Cross Feeds	0.0029 ~ 0.0424" (0.075 ~ 1.08mm)/rev.						
Threads							
Lead Screw	1-1/2" (38mm) dia. x Acme thread 4 T.P.I. or 6mm pitch						
Inch Threads	80 ~ 4 T.P.I.						
Metric Threads	0.5 ~ 7mm pitch						
D.P. Threads	112 ~ 8						
Module Threads	0.5 ~ 3.5						
Tool Post							
Cross Slide Travel	13-1/2" (345mm)						
Compound Rest Travel	6-5/8" (170mm)						
Max. Cutting Tool Size (X x Y)	1" x 1-3/16" (25 x 30mm)						
Tail Stock							
Tail Stock Spindle Stroke	6" (150mm)						
Spindle Center Taper	M.T. No. 5						
Bed							
Bed Width	16-1/2" (420mm)						
Bed Length	86-13/16" (2205mm)	106-1/2" (2705mm)	127" (3225mm)	86-13/16" (2205mm)	106-1/2" (2705mm)	127" (3225mm)	18-1/16" (460mm)
Motor							
Main Motor	10 HP (7.5 kw) 4P or 15 HP (11 kw) 4P (Optional)						
Motor for Coolant System	75W (1/10 HP) 2P						
Floor Space	100x43" (2500x1090mm)	120x43" (3030x1090mm)	140x43" (3550x1090mm)	100x43" (2530x1090mm)	120x43" (3030x1090mm)	140x43" (3550x1090mm)	179"x47" (4553x1194mm)
Net Weight	5890 lbs (2670 kg)	6401 lbs (2900 kg)	7430 lbs (3370 kg)	5890 lbs (2670 kg)	6600 lbs (3000 kg)	7430 lbs (3370 kg)	7700 lbs (3500 kg)

Standard Accessories

- 4 jaw independent chuck (14") & handle
- Driving plate 300φ
- Center sleeve (M.T. No.7)
- Center (high speed steel) M.T. No. 5
- Center (carbide tip) M.T. No. 5

- Coolant pump
- Installation blocks
- Grease pump
- Single-ended wrench
- Screwdriver
- Hex. handles
- Box handles

Optional Accessories

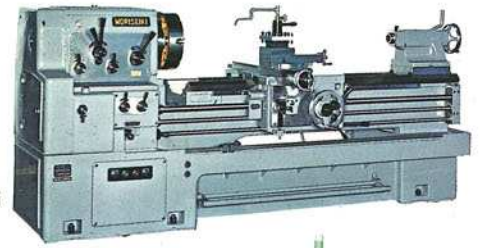
- 3 jaw chuck (12")
- Bed stopper
- Steady rest (30 ~ 155φmm)
- Steady rest (160 ~ 275φmm)
- Follow rest
- Inverse tool post
- Steady rest with rolls (150 ~ 280φmm)

- Face plate 550φ
- D.P./Module change gears
- Taper cutting attachment; 400 type
- Max. taper angle 20°
- Max. taper length 400mm
- Drill attachment
- Worm gear (22.13)

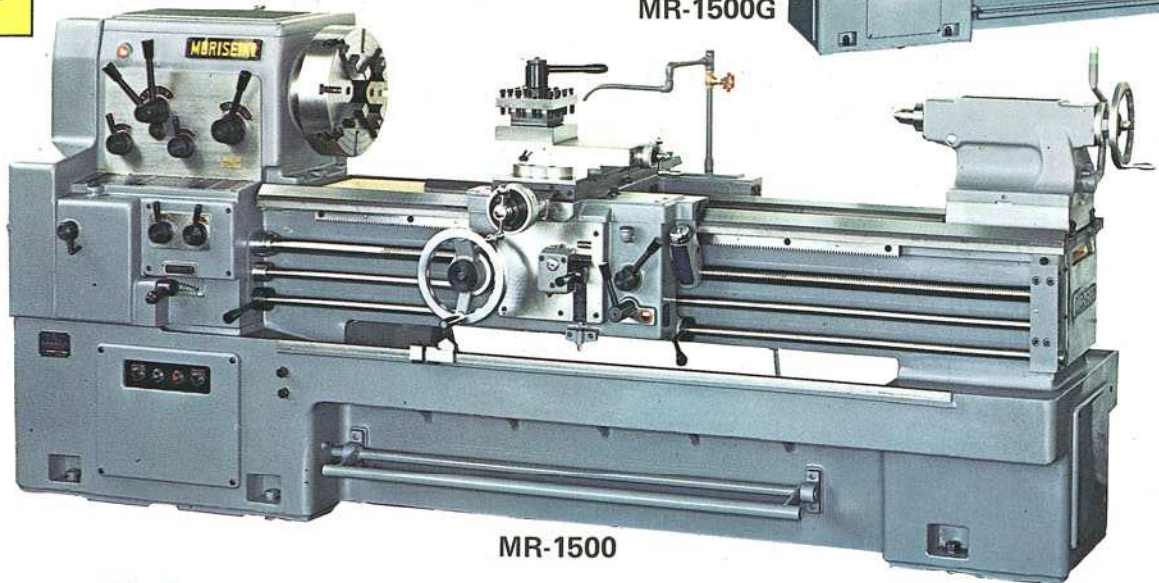
The MH-3000 carriage comes equipped with a rapid feed unit.

MR type

On lathes with cutoff devices, the apron handle is located in a different position.
MR-2000 and MR-2000G are equipped with a lead screw and feed rod support.



MR-1500G



MR-1500

MR type specifications

Unit: Inch (mm)

	MR-1000	MR-1500	MR-2000	MR-1000G	MR-1500G	MR-2000G
Swing Swing Over Bed Swing Over Bed from Face Plate up to 7" (180mm) Swing Over Cross Slide Swing Over Gap			20-1/2" (520mm) 23" (585mm) 11-3/4" (300mm)		29-1/2" (750mm)	
Distance Width of Gap (from Face Plate) Distance from Bed to Spindle Center Distance from Floor to Spindle Center Between Centers			9-7/8" (250mm) 42-5/16" (1075mm) 80"	40" (1000mm)	60" (1500mm) 9-7/8" (250mm)	80" (2000mm)
Spindle Spindle Nose Hole Thru Spindle Spindle Sleeve Taper Spindle Center Taper Number of Spindle Speeds Spindle Speed Range (RPM)			ASA A1-6 or D1-6 2-3/64" (52mm) M.T. No. 6 M.T. No. 4 12 28, 52, 67, 93, 126, 165, 225, 312, 400, 558, 765, 1350			
Feeds Number of Feed Changes (both longitudinal and cross feeds) Range of Longitudinal Feeds Range of Cross Feeds			40 0.0014 ~ 0.0196" (0.036 ~ 0.50mm)/rev. & 0.0028 ~ 0.0392" (0.072 ~ 1.00mm)/rev. 0.0015 ~ 0.0212" (0.037 ~ 0.54mm)/rev. & 0.0029 ~ 0.0424" (0.075 ~ 1.08mm)/rev.			
Threads Lead Screw Inch Threads Metric Threads D.P. Threads Module Threads			1.5" (31.75mm) dia. x Acme thread 4 T.P.I. or 6 mm pitch 80 ~ 4 T.P.I. 0.25 ~ 7 mm pitch 112 ~ 8 0.5 ~ 3.5			
Tool Post Cross Slide Travel Compound Rest Travel Max. Cutting Tool Size (X x Y)			11-7/8" (300mm) 6-5/8" (170mm) 1" x 1-3/16" (25 x 30mm)			
Tail Stock Tail Stock Spindle Stroke Spindle Center Taper			6" (150mm) M.T. No. 5			
Bed Bed Width Bed Length	86-13/16" (2205mm)	106-1/2" (2705mm)	16-1/2" (420mm) 127" (3225mm)	86-13/16" (2205mm)	106-1/2" (2705mm)	127" (3225mm)
Motor Main Motor Motor for Coolant System			7.5 kw (10 HP) 4P or 11 kw (15 HP) 4P (optional) 75 W (1/10 HP) 2P			
Floor Space	100x41" (2530x1020mm)	120x41" (3030x1020mm)	140x41" (3550x1020mm)	100x41" (2530x1020mm)	120x41" (3030x1020mm)	140x41" (3550x1020mm)
Net Weight	5673 lbs (2570 kg)	6401 lbs (2900 kg)	7218 lbs (3270 kg)	5673 lbs (2570 kg)	6401 lbs (2900 kg)	7218 lbs (3270 kg)

Standard Accessories

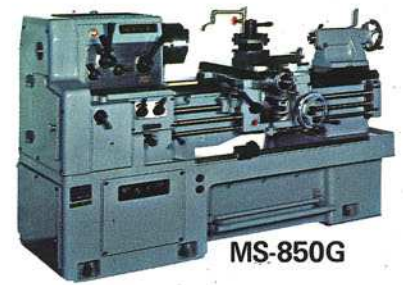
- 4 jaw independent chuck (14") & handle
- Driving plate 240φ
- Center sleeve (M.T. No. 6)
- Center (high speed steel) M.T. No. 4
- Center (carbide tip) M.T. No. 5
- Coolant pump
- Change gears 60 teeth
- Installation blocks
- Grease pump
- Single-ended wrench
- Screwdriver
- Hex. handles
- Box handles

Optional Accessories

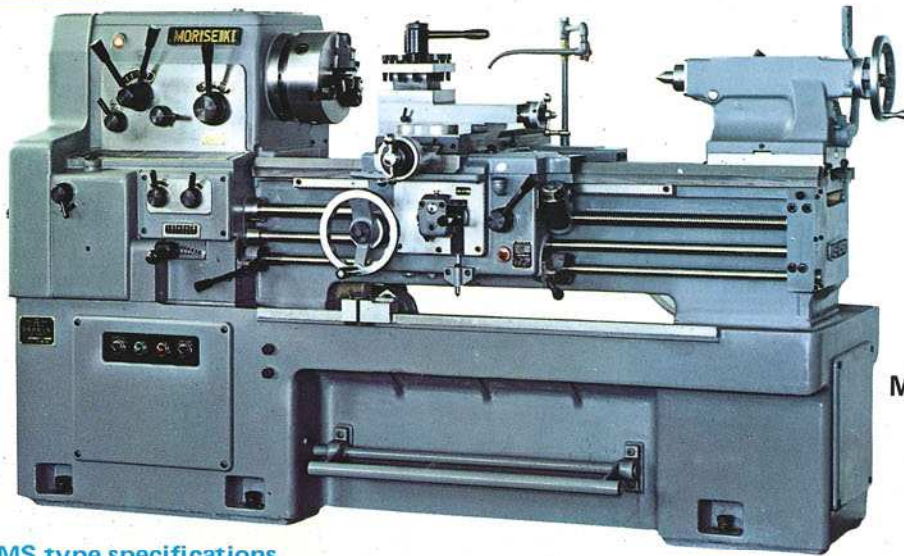
- 3 jaw chuck (9")
- 3 jaw chuck (10")
- Face plate 450φ
- Inverse tool post
- Taper cutting attachment; 400 type
Max. taper angle 20°
Max. taper length 400mm
- Bed stopper
- Steady rest (30 ~ 155φmm)
- Steady rest (150 ~ 280φmm)
- Follow rest
- D.P./Module change gears
- Worm gear (22.13)
- Drill attachment
- Steady rest with rolls (160 ~ 275φmm)

MS type

On lathes with cutoff devices, the apron handle is located in a different position.



MS-850G



MS-850

MS type specifications

Unit: Inch (mm)

	MS-650	MS-850	MS-1250	MS-850G	MS-1250G
Swing			17.13" (435mm)		
Swing Over Bed					
Swing Over Bed from Face Plate up to 7" (180mm)			19.29" (490mm)		
Swing Over Cross Slide			9.84" (250mm)		
Swing Over Gap				25.59" (650mm)	
Distance					
Width of Gap (from Face Plate)			8.46" (215mm)		
Distance from Bed to Spindle Center			42.32" (1075mm)		
Distance from Floor to Spindle Center			49.21" (1250mm)		
Between Centers	25.59" (650mm)	33.46" (850mm)	49.21" (1250mm)	33.46" (850mm)	49.21" (1250mm)
Spindle					
Spindle Nose			ASA A1-6 or D1-6		
Hole Thru Spindle			2-3/64" (52mm)		
Spindle Sleeve Taper			M.T. No. 6		
Spindle Center Taper			M.T. No. 4		
Number of Spindle Speeds			12		
Spindle Speed Range (RPM)			32, 62, 82, 112, 160, 200, 285, 395, 510, 710, 1010, 1800		
Feeds					
Number of Feed Changes (both longitudinal and cross feeds)			40		
Range of Longitudinal Feeds	0.0010 ~ 0.0154" (0.045 ~ 0.627mm)/rev.			0.0020 ~ 0.0304" (0.090 ~ 1.254mm)/rev.	
Range of Cross Feeds	0.0010 ~ 0.0154" (0.045 ~ 0.627mm)/rev.			0.0020 ~ 0.0304" (0.090 ~ 1.254mm)/rev.	
Threads					
Lead Screw			1.25" (31.75mm) dia. x Acme thread 4 T.P.I. or 6mm pitch		
Inch Threads			80 ~ 4 T.P.I.		
Metric Threads			0.25 ~ 7mm pitch		
D.P. Threads			112 ~ 8		
Module Threads			0.5 ~ 3.5		
Tool Post					
Cross Slide Travel			10" (255mm)		
Compound Rest Travel			5.90" (150mm)		
Max. Cutting Tool Size (X x Y)			0.98" x 0.98" (25 x 25mm)		
Tail Stock					
Tail Stock Spindle Stroke			6" (150mm)		
Spindle Center Taper			M.T. No. 4		
Bed					
Bed Width			13.85" (352mm)		
Bed Length	66.14" (1680mm)	74.01" (1880mm)	89.76" (2280mm)	74.01" (1880mm)	89.76" (2280mm)
Motor					
Main Motor			5 HP (3.7 kw) 4P		
Motor for Coolant System			75W (1/10 HP) 2P or 7.5 HP (5.5 kw) 4P (Optional)		
Floor Space	78-3/8" x 41-1/4" (1990 x 1050mm)	86-1/4" x 41-1/4" (2190 x 1050mm)	102" x 41-1/4" (2590 x 1050mm)	86-1/4" x 41-1/4" (2190 x 1050mm)	102" x 41-1/4" (2590 x 1050mm)
Net Weight	3927 lbs (1785 kg)	4257 lbs (1935 kg)	4917 lbs (2235 kg)	4257 lbs (1935 kg)	4917 lbs (2235 kg)

Standard Accessories

- 4 jaw independent chuck (12") & handle
- Driving plate 240φ
- Center sleeve (M.T. No. 6)
- Center (high speed steel) M.T. No. 4
- Center (carbide tip) M.T. No. 4
- Coolant pump (MS-650, option)
- Change gears 72 teeth
- Installation blocks
- Grease pump
- Box handle
- Single-ended wrench
- Screwdriver
- Hex. handles

Optional Accessories

- 3 jaw chuck (9")
- Face plate 400φ
- 500φ (G type only)
- Inverse tool post
- Taper cutting attachment; 300 type
- Max. taper angle 20°
- Max. taper length 300mm
- Turret stopper
- Bed stopper
- Steady rest (30φ ~ 125φmm)
- Steady rest with rolls (90φ ~ 210φmm)
- Follow rest
- Copying attachment
- Chuck cover (9")
- D.P./Module change gears
- Coolant pump (MS-650)
- Worm gear (22T, 13T)
- Drill attachment