

MW1420 -Universal

MW1420 (stepless spindle,load weight 100kgs)

M1420 (spindle speed 60,85,230,120,170,460 rpm/min, load weight 50kgs)

M14 series cylindrical surface grinder is suitable for grinding outer/inner surface of cylinder and taper.

The longitudinal movement of the worktable is driven by hydraulic or by handwheel,the worktable can rotate to a certain degree so as to be suitable for grinding taper.

The wheelhead cross feed is driven by hydraulic,which realizes automatic periodical feed and rapid feed.it can also do rough and fine feed through handwheel.

M14 series universal cylindrical grinder has internal grinding apparatus,internal grinding spindle is supported by precise rollbearing.

The workhead spindle,wheelhead spindle,internal grinding spindle,coolant pump,hydrodynamic and hydrostatic oil pump are driven by separate motors

The spindle of M1450 series is supported by hydrostatic and hydrostatic lubrication,its movement on low speed is smooth.

The spindle of M1450 series is supported by hydrostatic and hydrodynamic bearing of high rigidity,it makes the spindle have high rotary accuracy and perfect rigidity.

The wheelhead of the universal type(M1450) adopts inverter motor to realize stepless speed changing.the wheelhead spindle of the universal type (M1450) adopts sliding bearing structure.the clearance of the front bearing can be adjusted to make it suitable for the grinding use center or chuck the workhead of the universal type can be rotate to any position within its counterclock direction 90 degree so it can be suitable for grinding inner or outer surface of taper.

Each moving parts of the machine has electric,hydraulic and mechanic interlock structure the machine is well designed with pleasing appearance,all control lever are centralized in panel make operating easy.

The wheel dresser can be assembled on the worktable surface or on the tailstock.

There have many different distance between the centers for choice.

Standard accessories:

- (1) complete set of electrical equipment
- (2) coolant equipment
- (3) wheel periphery dresser
- (4) wheel flange
- (5) wheel balancing arbor
- (6) leveling wedge
- (7) open type steady rest
- (8) carbide tipped center

Optional accessories:

- (1) wheel balancing stand
- (2) magnetic separator
- (3) center grinding attachment
- (4) close type steady rest
- (5) end wheel dresser
- (6) radius wheel dresser

Model Description	unit	Specifications			
		M1420x500	M1420x750	MW1420x500	MW1420x750
General capacity					
Distance between centers	mm	500	750	500	750
Centre height	mm	118	118	135	135
Dia.Ground(O.D)	mm	8~200	8~200	5~200	5~200
Dia.Ground(I.D)	mm	13~100	13~100	25~100	25~100
Max.length ground(O.D)	mm	500	750	500	750
Max.length ground(I.D)	mm	125	125	125	125
Max weight of work piece	kg	50	50	100	100
Workhead					
Swiveling angle		+90	+90	+90	+90
Center taper	MT	3	3	4	4
Spindle speed	r/min	60,85,230,120,170,460	60,85,230,120,170,460	25~380	25~380
Wheelhead					
Wheel spindle speed	r/min	1820	1820	1670	1670
Wheelhead rapid travel	mm	20	20	50	50
Max travel	mm	150	150	205	205
Swiveling angle	°	-180~ ±30°	-180~ ±30°	+10°	+10°
Hand feed per.rev	mm	1	1	rough:2.0 fine:0.5	rough:2.0 fine:0.5
Hand feed per.gra	mm	0.00125	0.00125	rough:0.01 fine:0.0025	rough:0.01 fine:0.0025
Max dimension of wheel(ODxWxD)	mm	400x40x203	400x40x203	400x50x203	400x50x203
Internal grinding					
Spindle speed	r/min	14000	14000	10000/15000	10000/15000
Dimension of wheel	mm	max:50x25x13 min:17x20x6	max:50x25x13 min:17x20x6	max:30x25x10 min:17x20x6	max:30x25x10 min:17x20x6
Table					
Hand feed per rev.	mm	6	6	6	6
Max swivelling angle of table	°	clockwise:5° widdershins:9°	clockwise:7° widdershins:9°	clockwise:3° widdershins:9°	clockwise:3° widdershins:8°
Longitudinal traverse speed of table	m/min	0.1~4	0.1~4	0.1~4	0.1~4
Tailstock					
Center taper	MT	3	3	4	4
Quill travel	mm	25	25	30	30
Motor					
Wheelhead motor power	Kw	3	3	4	4
Internal grinding	Kw	The same motor with wheelhead motor		1.1	1.1
Power of workhead motor	Kw	0.25	0.37	0.55	0.55
Machine					
Gross weigh	Kg	2400	2900	4100	4300
Packing dimension	mm	1920x1450x2050	2130x1450x2050	2350x2030x2050	2750x2030x2050

項目 Item / 型號 Model	單位 Unit	參數 Specifications				
		M1420	MW1420	M1432B	M1450	M1463
一般能力 General capacity						
頂尖距 Distance between centers	mm	520, 750	500, 750	1000, 1500, 2000, 3000	1500, 2000, 3000, 4000	2000, 3000, 4000, 5000
中心高 Center height	mm	118	135	180	270	370
可磨外圓直徑範圍 Dia. Ground(O.D)	mm	8~200	5~200	8~320	25~500	30~630
可磨內孔直徑範圍 Dia. Ground(I.D)	mm	13~80	25~100	30~100	30~200	30~250
可磨外圓最大長度 Max. length ground(O.D)	mm	520, 750	500, 750	1000, 1500, 2000, 3000	1500, 2000, 3000, 4000	2000, 3000, 4000, 5000
可磨內孔最大長度 Max. length ground(I.D)	mm	125	125	125	320	320
可磨工件最大重量 Max. weight of work piece	kg	50	100	150	1000	3000
頭架 Workhead						
離座回轉角度 Swiveling angle	°	+90°	+90°	+90°	+90°	+90°
中心銼度 Center taper(MT)	莫氏(MT)	3	4	4	6	6
主軸轉速 Spindle speed	r/min	60, 85, 230, 120, 170, 460	50HZ:25~380 Stepless	50HZ:25~220 Stepless	50HZ:20~224 Stepless	50HZ:14~140 stepless
砂輪架 Wheelhead						
砂輪主軸轉速 Wheel spindle speed	r/min	1820	1670	1670	1330/665	1100/550
快速進給量 Wheelhead rapid travel	mm	20	50	50	100	100
最大移動量 Max. travel	mm	150	205	246	370	450
回轉角度 Swiveling angle	°	-180 ~ +30°	+10°	± 30°	-30°	± 30°
手錶一轉砂輪架移動量 Hand feed per. rev	mm	1	粗 rough: 2 精 fine: 0.5	粗 rough: 2 精 fine: 0.5	粗 rough: 4 精 fine: 0.5	粗 rough: 4 精 fine: 0.5
手錶一轉砂輪架移動量 Hand feed per. gra	mm	0.00125	粗 rough: 0.01 精 fine: 0.0025	粗 rough: 0.01 精 fine: 0.0025	粗 rough: 0.02 精 fine: 0.0025	粗 rough: 0.02 精 fine: 0.0025
砂輪尺寸(外徑×寬度×孔徑) Wheel size (O.DxWxD)	mm	400 × 40 × 203	400 × 50 × 203	400 × 50 × 203	500 × 75 × 305	600 × 75 × 305
砂輪線速度 Peripheral velocity	m/s	35	35	35	35/17.5	35/17.5
內圓磨具 Internal grinding device						
主軸轉速 Spindle speed	r/min	14000	10000/15000	10000/15000	10000	10000
砂輪尺寸 Dimension of wheel	mm	最大 max: 50 × 25 × 13 最小 min: 17 × 20 × 6	最大 max: 50 × 25 × 13 最小 min: 17 × 20 × 6	最大 max: 50 × 25 × 13 最小 min: 17 × 20 × 6	最大 max: 75 × 32 × 32 最小 min: 30 × 25 × 10	最大 max: 75 × 32 × 32 最小 min: 30 × 25 × 10
工作臺 Table						
手錶一轉工作臺移動量 Hand feed per. rev	mm	6	6	6	5	5
工作臺最大回轉角度 Max. swiveling angle of table	順時針 Clockwise	°	5° (520), 3° (750)	3°	3° (1000, 1500), 2° (2000, 3000)	3° (1500), 2° (2000, 3000), 1° (4000)
	逆時針 Anticlockwise	°	9°	9° (500), 8° (750)	7° (1000), 6° (1500), 5° (2000), 3° (3000)	6° (1500), 5° (2000), 3° (3000), 2° (4000)
工作臺的線速度範圍 Longitudinal speed range of table	m/min	0.1~4	0.1~4	0.1~4	0.1~3	0.1~2.5
尾架 Tailstock						
中心銼度 Center taper(MT)	莫氏(MT)	3	4	4	6	公制80 #
尾架套筒手動移動量 Quill travel	mm	25	30	30	70	70
電動機 Motor						
砂輪架電機功率 Wheelhead motor power	kW	3	4	5.5	5/7.5	7/11
內圓磨具電機功率 Internal grinding	kW	(與砂輪架電機用同一電機) (The same motor with wheelhead motor)	1.1	1.1	1.5	1.5
頭架電機功率 Workhead motor power	kW	0.25/0.37	1.1	1.5	4	1.5
機床 Machine						
毛重 Gross weight	t ₀	2.4 (520), 2.9 (750)	4.1 (500), 4.3 (750)	5.3 (1000), 6.1 (1500), 7.9 (2000), 9.9 (3000)	11.2 (1500), 13 (2000), 17.4 (3000)	22 (2000), 28 (3000), 34 (4000), 39 (5000)
包裝體積 (長 × 寬 × 高) Packing dimension	cm	192 × 145 × 205(520)	235 × 203 × 205(500)	322 × 200 × 205(1000)	510 × 228 × 210(1500)	695 × 242 × 226(2000)
		213 × 145 × 205(750)	275 × 203 × 205(750)	422 × 200 × 205(1500)	585 × 228 × 210(2000)	890 × 242 × 226(3000)
				540 × 200 × 205(2000)	785 × 228 × 210(3000)	1100 × 242 × 226(4000)
				739 × 200 × 205(3000)	1000 × 228 × 210(4000)	分體包裝床身長1250(5000)

● 主要參數 Main parameter

项目 Description	型号 Model	参数 Specifications						
	单位 Unit	MW1320	MW1420	M1432B	M1350	M1450	M1363	M1380
● 一般能力 General capacity								
顶尖距 Distance between centers	mm	500, 750	500, 750	1000, 1500	1500, 2000, 3000	1500, 2000, 3000	3000, 4000, 5000	3000, 4000, 5000
中心高 Center height	mm	135	135	180	270	270	335	500
可磨外圆直径范围 Dia. Ground(O.D)	mm	5~200	5~200	8~320	25~500	25~500	30~630	50~800
可磨内孔直径范围 Dia. Ground(I.D)	mm	—	25~100	30~100	—	30~200		
可磨外圆最大长度 Max. length ground(O.D)	mm	500, 750	500, 750	1000, 1500	1500, 2000, 3000	1500, 2000, 3000	3000, 4000, 5000	3000, 4000, 5000
可磨内孔最大长度 Max. length ground(I.D)	mm	—	100	125		320		
可磨工件最大重量 Max. weight of work piece	Kg	—	100	150	1000	1000	3000	5000
● 头架 Workhead								
体座回转角度 Swiveling angle	°	—	+90°	+90°		+90°		
中心锥度 Center taper(MT)	MT	4	4	4	6	6	公制(metric)80#	公制(metric)100#
主轴转速 Spindle speed	r/min	50HZ:25~380	50HZ:25~380	50HZ:25~220	50HZ:18~140	50HZ:20~224	50HZ:8~150	50HZ:6~80
● 砂轮架 Wheel head								
砂轮主轴转速 Wheel spindle speed	rpm	1335	1670	1670	870	1330/665	740	740
快速进给量 Wheelhead rapid travel	mm	50	50	50	100	100	100	100
最大移动量 Max. travel	mm	205	205	246	437.5	370	475	550
回转角度 Swiveling angle	°		±30°	±30°		-30°		
手轮一转砂轮架移动量	mm	粗 rough: 2 精 fine: 0.5		粗 rough: 4 精 fine: 0.5		粗 rough: 6 精 fine: 0.5		
手轮一格砂轮架移动量	mm	粗 rough: 0.01 精 fine: 0.0025		粗 rough: 0.02 精 fine: 0.0025		粗 rough: 0.02 精 fine: 0.0025		
砂轮最大尺寸(外径×宽度×孔径) wheel size	mm	500×50×203	400×50×203	400×50×203	750×75×305	500×75×305	900×75×305	900×75×305
砂轮线速度	mm	35	35	35	35	35/17.5	35	35
● 内圆磨具 Internal grinding device								
主轴转速 Spindle speed	r/min	—	10000	10000	—	7000	—	—
砂轮尺寸 wheel size	mm	—	最大 max: 35×25×10 最小 min: 17×20×6	最大 max: 50×25×13 最小 min: 17×20×6	—	最大 max: 175×32×32 最小 min: 30×25×10	—	—
● 工作台 Table								
手轮一转工作台移动量 Hand feed per. rev	mm	6	6	6	5		5	5
工作台最大回转角度 Max. swiveling angle	顺时针 clockwise	°	3°	3°	3° (1500), 2° (2000, 3000)		2° (3000), 1° (4000, 5000)	
	逆时针 anticlockwise	°	9° (750), 8° (500)		7° (1000), 6° (1500)		6° (1500), 5° (2000), 3° (3000)	
工作台纵向移动速度范围	m/min	0.1~4	0.1~4	0.1~4	0.1~3	0.1~3	0.1~4	0.1~4
● 尾架 Tailstock								
中心锥度 Center tape(MT)	MT	4	4	4	6	6	公制(metric)80#	公制(metric)100#
套筒手动移动量 Quill travel	mm	30	30	30	70	70	100	100
● 电动机 Motor								
砂轮架电机功率 Wheelhead motor power	Kw	5.5	4	5.5	15	5/7.5	18.5	18.5
内圆磨具电机功率 Internal grinding	Kw		1.1	1.1		1.5		
头架电机功率 Workhead motor power	Kw	0.75	0.75	1.5	2.2/3.6	4	5	10
● 机床 Machine								
毛重 Gross weight	t _s	4 (500), 4.2 (750)	4.1 (500), 4.3 (750)	5.3 (1000), 6.1 (1500)	11.2 (1500), 13 (2000), 17.4 (3000)		25(3000), 28 (4000), 30 (28/3000), 31 (4000), 35	
包装体积 (长×宽×高) Packing dimension	cm	260×206×205(500) 300×206×205(750)	260×206×205(500) 300×206×205(750)	338×200×205(1000) 438×200×205(1500)	540×270×210(1500) 610×270×210(2000) 810×270×210(3000)			

由于技术不断进步，更改恕不通知。Because of constant development of technique, the information will be changed without notice.