

*Reliable, Trustable,  
Responsible.*

**Reliable**

Reliable quality products

**Trustable**

We put our reputation in first position

**Responsible**

What we promise what we do.

*We believe, we can, we just do it.*



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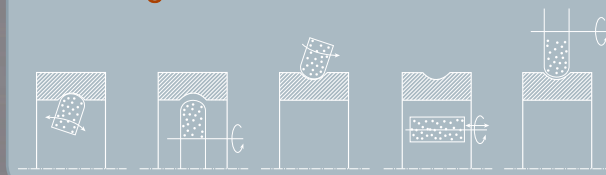
Goodwill focus on grinding technology,  
One-stop solution for  
your grinding requirement.

**BEARINGS GRINDER MACHINES**





Machining Processes



## Deep Groove Ball Bearing Grinding Line

- Automation line is adopted with world lead technique, such as AE self-adaption control system, quick approach / prevent impact ect, all the control system and machine toolings are international famous brand, have the specialty of high precision, high efficiency and long lifetime.
- Automation line have process parameters online optimization function, including self-adaption control based on surplus, size error feedback and then self-adjustment, auto alarming and self-management about G/W' s improper size, auto stop after the wrong piece size and geometric tolerance oversize, auto alarm for the equipments failure.
- Automation line is adopted high efficient and stable loading, transiting and making up system, which can reduce cost and promote quality.

## Deep groove ball bearing grinding line series and processing range

- GW30Q small deep groove ball bearing grinding line, suit for inner ring ID $\phi$ 10-30mm, outer ring OD $\phi$ 26-62mm deep groove ball bearing ring grinding super finishing.
- GW50Q middle and small deep groove ball bearing grinding line, suit for inner ring ID $\phi$ 17-50mm, outer ring OD $\phi$ 40-100mm deep groove ball bearing ring grinding super finishing.
- GW100Q middle deep groove ball bearing grinding line, suit for inner ring ID $\phi$ 40-100mm, outer ring OD $\phi$ 100-200mm deep groove ball bearing ring grinding super finishing.
- GW160Q large and middle deep groove ball bearing grinding line, suit for inner ring ID $\phi$ 80-160mm, outer ring OD  $\phi$ 120-250mm deep groove ball bearing ring grinding super finishing.
- GW250Q large deep groove ball bearing grinding line, suit for inner ring ID $\phi$ 120-250mm, outer ring OD  $\phi$ 200-350mm deep groove ball bearing ring grinding super finishing.
- GW400Q large deep groove ball bearing grinding line, suit for inner ring ID $\phi$ 200-400mm, outer ring OD  $\phi$ 250-500mm deep groove ball bearing ring grinding super finishing.



## Deep Grove Ball Bearing Grinding Line

	Auto inner ring race grinder of ball-bearing	Auto inner ring inner bore grinder of ballbearing	Auto inner ring race super finishing of bearing	Auto outer ring race grinder of ball-bearing	Auto outer ring race super finishing of bearing
	 <ul style="list-style-type: none"> <li>Imported PLC and touch screen, grinding feeding is adopted with AC servo control</li> <li>Imported linear guideway and ball screw assembly</li> <li>Imported self-adaption control system, anti-collision control system and wheel auto dynamic balancing system(optional)</li> <li>Wheel spindle is adopted with precision bearing, air-sealed unit and imported invert-er timing</li> <li>Work spindle driving is adopted with import-ed motor and precision bearing unit</li> </ul>	 <ul style="list-style-type: none"> <li>Imported PLC and touch screen, grinding feeding is adopted with AC servo control Imported linear guideway and ball screw assembly</li> <li>Imported self-adaption control system, anti-collision control system and in process gaug-ing auto feedback control system (optional)</li> <li>Wheel motor is adopted with hi-speed and hi-power electric spindle, spindle driving speed is regulated by intermediate frequency inverter</li> <li>Work spindle driving is adopted with com-mon frequency conversion motor to regulate speed and imported precision bearing unit Oscillation mechanism is adopted with com-mon frequency conversion motor to regu-late speed and "roller rolling" guideway</li> </ul>	 <ul style="list-style-type: none"> <li>Bore centering end face pressing</li> <li>Work rotating speed and oil stone oscilla-tion timing is to adopt imported inverter timing</li> <li>Oil stone pressure adjustable, oil stone auto compensation and exchange auto warning</li> <li>Swift oil stone oscillation mechanism, high processing efficiency</li> <li>Interior work transferring for rational struc-ture</li> </ul>	 <ul style="list-style-type: none"> <li>Imported PLC and touch screen, grinding feeding is adopted with AC servo control Imported linear guideway and ball screw assembly</li> <li>Imported self-adaption control system, anti-collision control system (optional)</li> <li>Wheel motor is adopted with hi-speed and hi-power electric spindle, spindle driving is adopted with intermediate frequency in-verter to adjust speed</li> <li>Work spindle driving is adopted with fre-quency conversion timing motor and im-ported precision bearing unit</li> </ul>	 <ul style="list-style-type: none"> <li>OD positioning end face pressing</li> <li>Work rotating speed and oil stone oscil-lation timing is adopted with electronic inverter timing</li> <li>Oil stone pressure adjustable, oil stone auto compensation, auto exchange warning</li> <li>Swift oil stone oscillation mechanism with adjustable frequency, high processing efficiency</li> <li>Interior work transferring for rational struc-ture Double stations for rough and fine super-finishing process</li> </ul>



## Deep groove ball bearing grinding line



Auto inner ring race grinder of ballbearing

model	work range		Processing accuracy			Efficiency (s)	Power (Kw)	Weight (t)
	ID (mm)	(mm) width	Dimension accuracy	Roundness (2-5 wave)( $\mu\text{m}$ )	Roughness ( $\mu\text{m}$ )			
3MZ131	$\phi 5-\phi 10$	5-10	P4/P5 Processing accuracy	0.8	0.32	5-10	4.5	1.25
3MZ133	$\phi 10-\phi 30$	8-20		0.8	0.32	8-20	13	3.5
3MZ135	$\phi 17-\phi 50$	10-32		1	0.32	10-30	13	3.5
3MZ1310	$\phi 40-\phi 100$	20-50		1.5	0.32	15-45	16	4.5
3MZ1316	$\phi 80-\phi 160$	20-70		2	0.32	20-50	20	5
3MZ1325	$\phi 120-\phi 250$	40-120		3	0.32	50-100	25	8
3MZ1340	$\phi 200-\phi 400$	50-180		4	0.32	60-120	35	11



Auto inner ring inner bore grinder of ballbearing

model	work range		Processing accuracy			Efficiency (s)	Power (Kw)	Weight (t)
	ID (mm)	(mm) width	Dimension accuracy	Roundness (2-5 wave)( $\mu\text{m}$ )	( $\mu\text{m}$ ) Roughness			
3MZ201	$\phi 5-\phi 10$	5-10	P4/P5 Processing accuracy	1	0.32	5-10	8	1.25
3MZ203	$\phi 10-\phi 30$	8-20		1	0.32	8-20	14	3
3MZ205	$\phi 17-\phi 50$	10-32		1.2	0.32	10-30	18	3
3MZ2010	$\phi 40-\phi 100$	20-50		1.5	0.32	15-45	30	4.5
3MZ2016	$\phi 80-\phi 160$	20-70		2	0.32	20-50	30	5
3MZ2025	$\phi 120-\phi 250$	40-120		3	0.32	50-100	40	8
3MZ2040	$\phi 200-\phi 400$	50-180		4	0.32	60-120	40	9



Auto outer ring race grinder of ballbearing

model	work range		Processing accuracy			Efficiency (s)	Power (Kw)	Weight (t)
	OD (mm)	(mm) width	Dimension accuracy	Roundness (2-5 wave)( $\mu\text{m}$ )	( $\mu\text{m}$ ) Roughness			
3MZ143	$\phi 18-\phi 30$	5-10	P4/P5 Processing accuracy	OR+0.3	0.32	8-10	8	1.25
3MZ146	$\phi 26-\phi 62$	8-20		OR+0.3	0.32	10-20	19	3
3MZ1410	$\phi 40-\phi 100$	10-32		OR+0.3	0.32	10-30	25	3
3MZ1420	$\phi 100-\phi 200$	20-50		OR+0.5	0.32	20-45	30	4.5
3MZ1425	$\phi 120-\phi 250$	20-70		OR+0.8	0.32	30-60	30	5
3MZ1435	$\phi 200-\phi 350$	40-120		OR+0.8	0.32	50-100	40	8
3MZ1450	$\phi 250-\phi 500$	50-180		OR+0.8	0.32	60-120	40	9



Auto inner ring race super finishing of bearing

model	specifications					Processing accuracy		Power (Kw)	Weight (t)
	work range		Oilstone oscillation angle	(1/min) Oilstone oscillation cpm	(r/min) Speed of work	Roundness (2-5 wave)(μm)	Roughness (μm)		
	ID (mm)	width							
3MZ311	φ5-φ10	5-10	±18°	~1000	~8000	Circular degree improve ≥20%	0.04 ~ 0.08	3.5	1.25
3MZ313	φ10-φ30	8-20		~1000	~8000			5	3
3MZ315	φ17-φ50	10-32		~700	~6000			6	3
3MZ3110	φ40-φ100	20-50		~700	~3000		9	4	
3MZ3116	φ80-φ160	20-70		~450	~3000		10	4.5	
3MZ3125	φ120-φ250	40-120		~400	~2000		10	5	
3MZ3140	φ200-φ400	50-180		~400	~1500		0.12	10	5



Auto outer ring race super finishing of bearing

model	specifications					Processing accuracy		Power (Kw)	Weight (t)
	work range		Oilstone oscillation angle	(1/min) Oilstone oscillation cpm	(r/min) Speed of work	Roundness (2-5 wave)(μm)	Roughness (μm)		
	OD (mm)	width							
3MZ323	φ10-φ30	5-10	±18°	~1000	~8000	Circular degree improve ≥20%	0.04 ~ 0.08	3.5	1.25
3MZ326	φ26-φ62	8-20		~1000	~8000			6	3
3MZ3210	φ40-φ100	10-32		~700	~6000			8	3
3MZ3220	φ80-φ200	20-50		~700	~3000			9	4
3MZ3225	φ120-φ250	20-70		~450	~3000		10	4.5	
3MZ3235	φ200-φ350	40-120		~400	~2000		10	5	
3MZ3250	φ250-φ500	50-180		~400	~1500		10	5	





## Taper roller bearing grinding line

- ⊙ Automation line is adopted with world lead technique, such as AE self-adoption control system, quick approach/prevent impact ect, all the control system and machine toolings are international famous brand, have the specialty of high precision, high efficiency and long lifetime.
- ⊙ Automation line have technical data choices function, can base on grind cuts self-adoption control. have diversion error feedback and then adjust by itself. Automatic alarming when Grinding Wheel not in good position. piece size and tolerance automatic stop. machine trouble automatically alarming.
- ⊙ Automation line is adopted high efficiency, stabilize loading, passport and make up system, reduce cost, promote quality.

## Taper roller bearing grinding line series and processing range

- ⊙ GW60Z middle and small taper roller bearing grinding line, suit for inner ring ID $\phi$ 17-60mm, outer ring OD $\phi$ 40-100mm taper roller bearing ring grinding super finishing
- ⊙ GW100Z middle taper roller bearing grinding line, suit for inner ring ID $\phi$ 40-100mm, outer ring OD $\phi$ 100-200mm taper roller bearing ring grinding super finishing.
- ⊙ GW160Z large and middle taper roller bearing grinding line, suit for inner ring ID $\phi$ 80-160mm, outer ring OD $\phi$ 120-250mm taper roller grinding super finishing.



## Taper roller bearing grinding line

Auto taper roller bearing inner ring race way grinding machine



- Imported PLC and touch screen, grinding feeding is adopted with AC servo control
- Imported linear guideway and ball screw assembly
- Imported self-adaption control system, anti-collision control system and wheel auto dynamic balancing system(optional)
- Wheel spindle is adopted with precision bearing, air-sealed unit and imported inverter timing
- Work spindle driving is adopted with imported motor and precision bearing unit Tri-axis servo transmission and dressing slide differential.

Auto taper roller bearing inner ring flange grinding machine



- Imported PLC and touch screen, grinding feeding is adopted with AC servo control
- Imported linear guideway and ball screw assembly
- Imported self-adaption control system, anti-collision control system and in process gauging auto feedback control system(optional)
- Wheel and work spindle driving is adopted with imported motor and precision bearing unit
- Oscillation mechanism is adopted with imported inverter motor driven "crossed roller" rolling guideway

Auto taper roller bearing inner bore grinding machine



- Imported PLC and touch screen, grinding feeding is adopted with AC servo control
- Imported linear guideway and ball screw assembly
- Imported self-adaption control system, anti-collision control system and in process gauging auto feedback control system (optional)
- Wheel motor is adopted with hi-speed and hi-power electric spindle, spindle driving is adopted with imported inverter timing
- Work spindle driving is adopted with imported motor and imported precision bearing unit guideway

Auto taper roller bearing outer ring race way grinding machine



- Imported PLC and touch screen, grinding feeding is adopted with AC servo control
- Imported linear guideway and ball screw assembly
- Imported self-adaption control system, anti-collision control system(optional)
- Wheel motor is adopted with hi-speed and hi-power electric spindle, spindle driving is adopted with imported inverter timing
- Work spindle driving is adopted with imported motor and precision bearing unit Bi-axis servo control and differential wheel dressing, wheel dressing generatrix for work groove crowning

Auto taper roller bearing inner ring race super finishing



- Back-fork type bore centering end face pressing mechanism
- Work rotating speed is for imported inverter timing with convenient adjustment
- Oil stone pressure adjustable, oil stone auto compensation and exchange warning
- Oil stone oscillation head is adopted with servo controlled reciprocating mechanism to accomplish crown super finishing
- Interior work transferring for tight structure Single station rough and fine two step super finishing process

Auto taper roller bearing outer ring race super finishing



- OD centering end face pressing mechanism and ceramic shoes
- Work rotating speed timing adopts imported inverter timing for easy adjustment
- Oil stone pressure adjustable, oil stone auto compensation and auto exchange warning
- Oil stone oscillation is adopted with servo controlled reciprocating oscillation mechanism to accomplish crown super finishing
- Interior work transferring for tight structure Synchronous rough and fine super finishing process for single station



## Taper roller bearing grinding line



Auto taper roller bearing inner ring race way grinding machine

型 号 model	加工范围range		加工精度 Processing accuracy			生产效率 Efficiency (s)	总功率 Power (Kw)	重量 Weight (t)
	内径ID (mm)	宽度(mm) width	尺寸精度 Dimension accuracy	圆度 (2-15波) Roundness (μm)	粗糙度 (μm) Roughness			
3MZ216	Φ15-Φ60	10-40	P4/P5/P6 级加工精度 Processing accuracy	1.0	0.32	10-30	13	3.5
3MZ2110	Φ40-Φ100	20-70		1.5	0.32	15-45	16	5
3MZ2116	Φ80-Φ160	30-80		2	0.32	20-50	22	5.5
3MZ2125	Φ120-Φ250	40-120		3	0.32	50-100	35	10
3MZ2140	Φ200-Φ400	50-180		4	0.32	60-120	40	11



Auto taper roller bearing inner ring flange grinding machine

型 号 model	加工范围range		加工精度 Processing accuracy			生产效率 Efficiency (s)	总功率 Power (Kw)	重量 Weight (t)
	内径ID (mm)	宽度(mm) width	尺寸精度 Dimension accuracy	平行度 Roundness (μm)	粗糙度 (μm) Roughness			
3MZ226	Φ15-Φ60	10-40	P4/P5/P6 级加工精度 Processing accuracy	4	0.32	10-30	25	3.5
3MZ2210	Φ40-Φ100	20-70		5	0.32	15-45	30	4.5
3MZ2216	Φ80-Φ160	30-80		8	0.32	20-50	30	5
3MZ2225	Φ120-Φ250	40-120		10	0.32	50-100	40	7
3MZ2240	Φ200-Φ400	50-180		10	0.32	60-120	45	8



Auto taper roller bearing inner bore grinding machine

型 号 model	加工范围range		加工精度 Processing accuracy			生产效率 Efficiency (s)	总功率 Power (Kw)	重量 Weight (t)
	内径ID (mm)	宽度(mm) width	尺寸精度 Dimension accuracy	圆度 (2-15波) Roundness (μm)	粗糙度 (μm) Roughness			
3MZ206	Φ15-Φ60	10-40	P4/P5/P6 级加工精度 Processing accuracy	1.2	0.32	10-30	20	3.5
3MZ2010	Φ40-Φ100	20-70		1.5	0.32	15-45	25	4.5
3MZ2016	Φ80-Φ160	30-80		2	0.4	20-50	25	5
3MZ2025	Φ120-Φ250	40-120		3	0.32	50-100	40	8
3MZ2040	Φ200-Φ400	50-180		4	0.32	60-120	45	9



Auto taper roller bearing outer ring race way grinding machine

型 号 model	加工范围range		加工精度 Processing accuracy			生产效率 Efficiency (s)	总功率 Power (Kw)	重量 Weight (t)
	外径OD (mm)	宽度(mm) width	尺寸精度 Dimension accuracy	圆度 (2-15波) Roundness (μm)	粗糙度 (μm) Roughness			
3MZ2310	Φ40-Φ100	10-40	P4/P5/P6 级加工精度 Processing accuracy	0.3	0.32	10-30	20	3.5
3MZ2320	Φ80-Φ200	20-70		0.5	0.32	15-45	25	5
3MZ2325	Φ120-Φ250	30-80		0.8	0.32	20-50	25	5.5
3MZ2335	Φ200-Φ350	40-120		1.2	0.32	50-100	20	8
3MZ2350	Φ250-Φ500	50-180		2	0.32	60-120	25	9



Auto taper roller bearing inner ring race super finishing

型 号 model	加工范围range		加工精度 Processing accuracy			生产效率 Efficiency (s)	总功率 Power (Kw)	重量 Weight (t)
	内径ID (mm)	宽度(mm) width	尺寸精度 Dimension accuracy	圆度 (2-500波) Roundness (μm)	粗糙度 (μm) Roughness			
3MZ336	Φ15-Φ60	10-40	滚道直线或中凸 1-8mm(根据工 艺要求而设定) race way straight or convexity1-8μm (according to the technical request)	平均改善 20%以上 average im- prove above 20%	0.08~0.16	10-30	7	3
3MZ3310	Φ40-Φ100	20-70				15-45	10	4.5
3MZ3316	Φ80-Φ160	30-80				20-50	10	5
3MZ3330	Φ120-Φ250	40-120				50-100	10	5.5
3MZ3340	Φ200-Φ400	50-180				60-120	10	5.5



Auto taper roller bearing outer ring race super finishing

型 号 model	加工范围range		加工精度 Processing accuracy			生产效率 Efficiency (s)	总功率 Power (Kw)	重量 Weight (t)
	外径OD (mm)	宽度(mm) width	尺寸精度 Dimension accuracy	圆度 (2-500波) Roundness (μm)	粗糙度 (μm) Roughness			
3MZ3410	Φ40-Φ100	10-40	滚道直线或中凸 1-8mm(根据工 艺要求而设定) race way straight or convexity1-8μm (according to the technical request)	平均改善 20%以上 average im- prove above 20%	0.08~0.16	10-30	7	3
3MZ3420	Φ100-Φ200	20-70				15-45	10	4.5
3MZ3425	Φ120-Φ250	30-80				20-50	10	5
3MZ3435	Φ200-Φ350	40-120				50-100	10	5.5
3MZ3450	Φ250-Φ500	50-180				60-120	10	5.5