

**Reliable**

Reliable quality products

**Trustable**

We put our reputation in first position

**Responsible**

What we promise what we do.

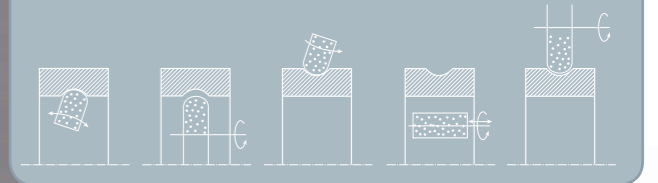
***We believe, we can, we just do it.*****Suzhou Gudwill Grinding Technology Co., Ltd.****Add:** RM 1129,NO.18, LONGSHAN SOUTH RD, GUANGFU, WUZHONG, SUZHOU, CHINA**Mobile/WhatsApp:** +86-188 9696 7812, +86-173 7273 9851**Tel:** +86-0512-65580060**Email:** sales@gudwill.cn**Web:** www.gudwill.cn

Gudwill 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 Groove 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 inverter timing</li> <li>○ Work spindle driving is adopted with imported 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 gauging 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 common frequency conversion motor to regulate speed and imported precision bearing unit Oscillation mechanism is adopted with common frequency conversion motor to regulate 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 oscillation 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 structure</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 inverter to adjust speed</li> <li>○ Work spindle driving is adopted with frequency conversion timing motor and imported 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 oscillation 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 structure 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) (μm)	Roughness (μm)			
3MZ131	φ5-φ10	5-10	P4/P5	0.8	0.32	5-10	4.5	1.25
3MZ133	φ10-φ30	8-20		0.8	0.32	8-20	13	3.5
3MZ135	φ17-φ50	10-32		1	0.32	10-30	13	3.5
3MZ1310	φ40-φ100	20-50	Processing accuracy	1.5	0.32	15-45	16	4.5
3MZ1316	φ80-φ160	20-70		2	0.32	20-50	20	5
3MZ1325	φ120-φ250	40-120		3	0.32	50-100	25	8
3MZ1340	φ200-φ400	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) (μm)	(μm) Roughness			
3MZ201	φ5-φ10	5-10	P4/P5	1	0.32	5-10	8	1.25
3MZ203	φ10-φ30	8-20		1	0.32	8-20	14	3
3MZ205	φ17-φ50	10-32		1.2	0.32	10-30	18	3
3MZ2010	φ40-φ100	20-50	Processing accuracy	1.5	0.32	15-45	30	4.5
3MZ2016	φ80-φ160	20-70		2	0.32	20-50	30	5
3MZ2025	φ120-φ250	40-120		3	0.32	50-100	40	8
3MZ2040	φ200-φ400	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) (μm)	(μm) Roughness			
3MZ143	φ18-φ30	5-10	P4/P5	OR+0.3	0.32	8-10	8	1.25
3MZ146	φ26-φ62	8-20		OR+0.3	0.32	10-20	19	3
3MZ1410	φ40-φ100	10-32		OR+0.3	0.32	10-30	25	3
3MZ1420	φ100-φ200	20-50	Processing accuracy	OR+0.5	0.32	20-45	30	4.5
3MZ1425	φ120-φ250	20-70		OR+0.8	0.32	30-60	30	5
3MZ1435	φ200-φ350	40-120		OR+0.8	0.32	50-100	40	8
3MZ1450	φ250-φ500	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	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		0.08	9	4
3MZ3116	φ80-φ160	20-70		~450	~3000			10	4.5
3MZ3125	φ120-φ250	40-120		~400	~2000		0.08□	10	5
3MZ3140	φ200-φ400	50-180		~400	~1500			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	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		0.08	9	4
3MZ3225	φ120-φ250	20-70		~450	~3000			10	4.5
3MZ3235	φ200-φ350	40-120		~400	~2000		0.08□	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
- "rossed 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 convexity 1-8μm (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 convexity 1-8μm (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



### Auto Turning Production Line for Hub Bearing (First Generation)

名称Name	型号Model	数量Qty.	加工范围(mm)Processing range
数控车床CNC lathe	RFCX20	2	工件外径 Outer diameter: D=φ45~φ100 工件内径 Inner bore: d=φ25~φ60 工件宽度 Width: B=60
上料机Loading Machine		1	
下料机Unloading Machine		1	
机械手Manipulator		1	
自动夹具Automatic Fixture		2	
工件自动掉头装置Automatic Workpiece Reversing Equipment		2	
自动排屑装置Automatic Chip Conveyor		2	

#### RFCX20参数表Parameters

项目Item	技术参数Technical parameter	
加工范围 Processing range	床身上最大回转直径Max slew diameter for machine bed	φ 480mm
	床鞍上最大回转直径Max slew diameter for machine saddle	φ 200mm
	最大车削直径Max turning diameter	φ 200mm
	最大车削长度Max turning length	300mm
	纵向最大行程 (Z轴) Longitudinal max stroke (Z axis)	330mm
	横向最大行程 (X轴) Cross max stroke (X axis)	300mm (排刀gang tool/aligning tool)
主轴 Spindle	主轴最高转速Spindle max rotating speed	4000rpm
	主轴锥孔Spindle tapered bore	莫氏5 Morse 5
	主轴功率Spindle power	7.5/11kw
	主轴头部尺寸Spindle head size	A2-5
	主轴通孔直径Spindle through hole diameter	φ 38mm
进给系统Feed System	快移速度Rapid feed	X:12m/min, Z:20m/min
	伺服电机扭矩Servo motor torque	X轴:7Nm, Z轴:11Nm
冷却排屑 防护系统 Coolant System	冷却箱容积Coolant tank volume	100L
	排屑系统Chip discharging system	自动后排屑器+切屑车Auto behind chip discharger + chip cart
	防护系统Protection system	全封闭大防护罩Fully enclosed big protection cover
液压气动系统 Hydraulic Pneumatic	液压系统Hydraulic system	P=3.5Mpa, Q=30L/min
	润滑系统Lubrication system	定时定量润滑Timely lubrication with rated volume
精度 Precision	定位精度Positioning accuracy	X:0.012mm, Z:0.015mm
	重复定位精度Repetitive positioning accuracy	X:0.006mm, Z:0.007mm
机床外型尺寸(长x宽x高)Machine outline dimensions(LxWxH)	3000 x 1650 x 1700	
机床重量Machine Weight	约about 4000kg	
数控系统Digital Control System	FANUC oi system系统	
自动上下料系统Auto loading and unloading system	另配additional	



### RFLX-60LG Auto Grinding Production Line for Hub Bearing (First Generation)

名称Name	型号Model	数量Qty.	加工范围(mm) Processing range
全自动汽车轮毂轴承外圈沟磨床 Automatic Hub Bearing Outer Ring Groove Grinder	3MZE1410	2	工件外径Outer diameter: D=φ45~φ100
全自动汽车轮毂轴承内圈沟磨床 Automatic Hub Bearing Inner Ring Groove Grinder	3MZA136	1	
全自动汽车轮毂轴承内圈内孔磨床 Automatic Hub Bearing Inner Ring Inner Bore Grinder	3MZD206	1	
全自动汽车轮毂轴承内圈沟超精机 Automatic Hub Bearing Inner Ring Groove Super finishing Machine	3MZD316	1	
全自动汽车轮毂轴承外圈沟超精机 Automatic Hub Bearing Outer Ring Groove Super finishing Machine	3MZE3210	1	
内径机外检测机 Bearing Bore Post Process Gauging Machine		1	工件内径Inner bore: d=φ25~φ60
上料机 Loading Machine		2	工件宽度Width: B=20~60
理料机 Unloading Machine		2	
连线装置 Transfer Lines Between Machines		1	

## Auto Turning Production Line for Hub Bearing ( Second, Third Generations)

名称Name	型号Model	数量Qty.	加工范围(mm)Processing range
并列双主轴数控车床Parallel Twin-spindle CNC Lathe	RFCF20D	2	ø25~ø200
上料机Loading Machine		1	
下料机Unloading Machine		1	
机械手Manipulator		1	
自动夹具Automatic Fixture		1	
工件自动掉头装置Automatic Workpiece Reversing Device		1	
自动排屑装置Automatic Chip Conveyor		2	

### RFCF20D参数表Parameters

项目Item	技术参数Technical parameter	
主轴数量Spindle No.	2	
两主轴间距Distance between two main Spindle	440mm	
卡盘尺寸 Chuck	标准Standard	254mm
	任选Optional	
回转刀夹工位数 Tool No.	标准Standard	10 x 2
	任选Optional	12 x 2
主轴头部尺寸Spindle Nose size	A2-6	
主轴通孔Hole through Spindle	52mm	
主轴轴径Spindle Diameter	100mm	
主轴最高转速Max. Spindle Speed	3500r/min	
主轴电机功率 Spindle motor power	标准Standard	11/15Kw x 2
	任选Optional	15/18.5Kw x 2
整机重量Total Weight	8000kg	



## RFLX-60LG2/3 Auto Grinding Production Line for Hub Bearing (Second, Third Generation)

名称Name	型号Model	数量Qty.	加工范围(mm) Processing range
全自动汽车轮毂轴承内法兰沟道外圆复合磨床 Auto taper roller bearing inner ring grinding machine	3MZA1320	2	法兰直径Outer diameter: D=φ200 宽度B=120  工件内径Inner bore: d=φ25~φ60  内圈宽度Inner and Outer ring: B=20~40  轮毂宽度Hub width: B= ~100
全自动汽车轮毂轴承外圈外圆磨床 Automatic Hub Bearing Outer Ring Cylindrical Grinder	3MZEY1316	1	
全自动汽车轮毂轴承内圈沟道端面复合磨床 Automatic Hub Bearing Inner Ring Groove Face Composite Grinder	3MZA130(3MZA136)	1	
全自动汽车轮毂轴承内圈外圆磨床 Automatic Hub Bearing Inner Ring Cylindrical Grinder	3MZY1310	1	
全自动汽车轮毂轴承外圈沟道磨床 Automatic Hub Bearing Outer Ring Groove Grinder	3MZE1420	2	
全自动汽车轮毂轴承内圈内孔磨床 Automatic Hub Bearing Inner Ring Inner Bore Grinder	3MZD2010(3MZD206)	1	
全自动汽车轮毂轴承内法兰沟道超精机 Automatic Automobile Wheel Hub Bearing Inner Flange Race Super-finishing Machine	3MZA3120(3MZD316)	1	
全自动汽车轮毂轴承内圈沟道超精机 Automatic Hub Bearing Inner Ring Groove Super finishing Machine	3MZD3110(3MZD316)	1	
全自动汽车轮毂轴承外圈沟道超精机 Automatic Hub Bearing Outer Ring Groove Super finishing Machine	3MZE3220	1	
内径机外检测机 Bearing Bore Post Process Gauging Machine		1	
上料机 Loading Machine		2	
理料机 Unloading Machine		2	
连线装置 Transfer Lines between Machines		1	