

Machine classification		Piston ring (or sleeve) manufacturing process classification										Basic machine elements										Piston ring					21231	21422	21510	21400
																						Ultra-small-sized	Small-sized	Medium-sized	Large-sized	Extra-large-sized				
Function		Possible machining										Operation mode										Cast Iron					21231	21422	21510	21400
																						Steel								
Structure		Number of 1-cycle machining										NC control axis										0 10 50 100 200 1000 2000					21231	21422	21510	21400
																						Dressing								
Ring type		Machining shape										Through firm dressing										Roll dressing					21231	21422	21510	21400
																						In-stocker (Rail)								
Number of work heads		Machining spot										Loaders										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Process		Machining spot										Loaders										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Closing sleeve		Tailstock side										Work head side										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Work clamping system		Number of work										Machining shape										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Tailstock side		Jig										Carrier unit										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Work head side		Both-side pressing										Single-side mandrel										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Number of work heads		Multiple										Single-side pressing										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Structure		True circle										Outside diameter										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Function		Grinding										Grinding										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Grinding		Grinding										Grinding										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Horizontal		Pressure/oil										Grinding										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Vertical		Grinding										Grinding										In-stocker (Rail)					21231	21422	21510	21400
																						In-stocker (Rail)								
Grinding		Multiple										Full-auto										R-5MG					21231	21422	21510	21400
																						R-7MG								
Grinding		Multiple										Full-auto										OPG-1					21231	21422	21510	21400
																						PG-105-S								
Grinding		Multiple										Full-auto										PG-230					21231	21422	21510	21400
																						PCG-1-NC								
Grinding		Multiple										Full-auto										PCG-3-NC-S					21231	21422	21510	21400
																						PCG-3-NC-S								