



Shawahed Advanced Industrial Co.,ltd. شركة شواهد المتقدمة الصناعية

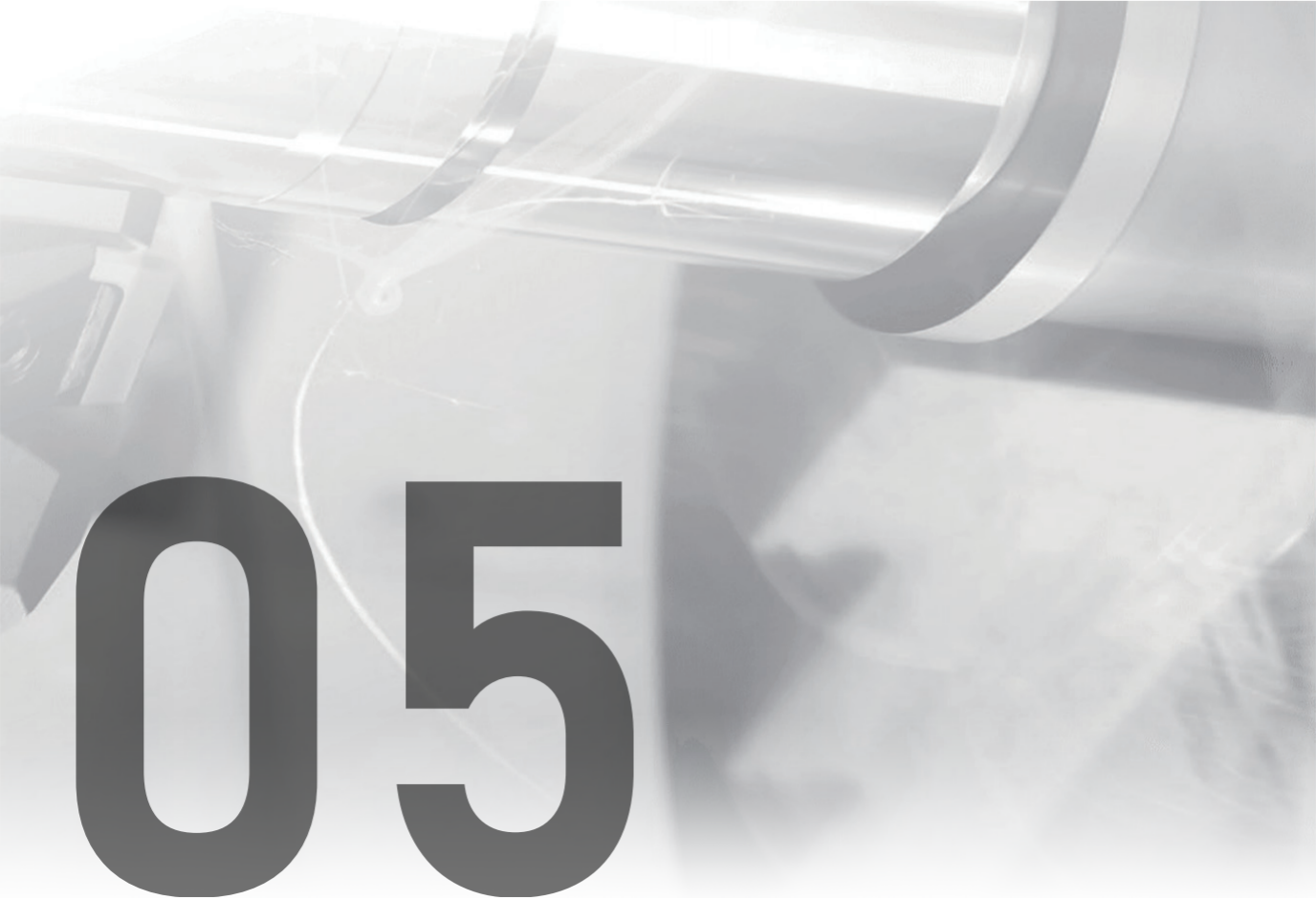
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COMPREHENSIVE CATALOG

SHAWAHED



05

Optical Grinding Machine



شركة شواهد المتقدمة الصناعية
Shawahed Advanced Industrial Co.



P-ONE

OPTICAL CURVE PROJECTION GRINDER



P-TWO

OPTICAL CURVE PROJECTION GRINDER



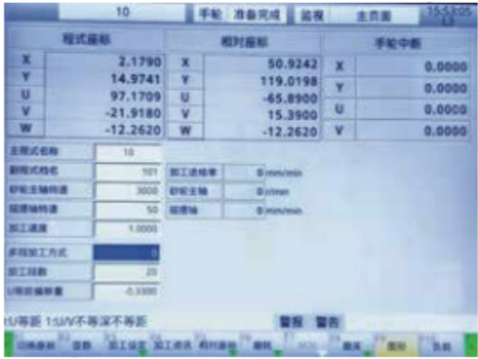
MODEL FEATURES

- 1. The machine bed, lifting platform and other components are made of high-quality HT350 castings which have undergone annealing and aging treatment. Through finite element analysis and optimized design, the reasonable structural strength provides high rigidity and stability.
- 2. Pre-tightened THK guideways and ball screws with feedback of entirely close-loop 0.0001mm grating ruler to ensure axial operation accuracy.
- 3. Ultra high-precision electric spindle with rotating speed 0-24000 rpm.
- 4. High-precision projection system of "20 x" and "50 x" switching with energy-saving LED light source to extend service life.
- 5. The control system can achieve 4-axis linkage (2-axis interpolation) machining so as to improve machining efficiency.
- 6. This machine is suitable for industries such as aerospace, automobile, ship-building, precision electronics, cutting tools, grinding tools, and molds due to its high rigidity and precision. It is ideal equipment for processing high-precision terminals, LED, SMD, precision shrapnel molds, inspection tools, cutting blades, and diamond rollers.

Processable parts

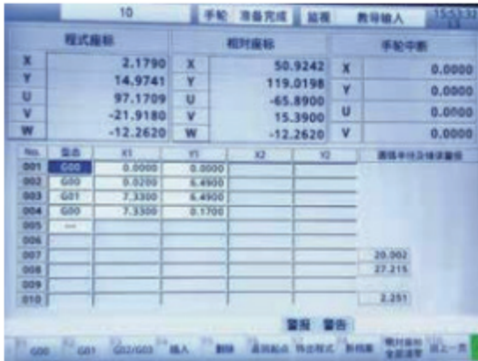


Angle funtion



Only X-axis handwheel can perform 8 types of cone machining, allowing for input of angle values or 2-point teaching. It is suitable for wheel angle profiling and cone manual processing.

Teaching mode



Processing programming can be conducted when records of action are made after grinding wheel tip simulates the shape changes on film magnification map. Complex calculations and NC language programming are not needed.

Arc function



Arc 3-point teaching automatically calculates central point, radius and direction. The radius can be manually processed with X-axis handwheel or by inputting value.

Four-axis linkage



Select the multi-stage machining mode, enter the number of machining segments, and carry out U-axis equidistant offset machining, or carry out UV-axis teaching input points, record the number of times its UV-axis positioning calls the subroutine, and carry out U-axis unequal distance multi-stage machining.

AUXILIARY PROCESSING FIXTURE



TSK160 Tilting Turntable

Working diameter: 160mm
Central hole mohist cone: 2
Central hole: 25x6mm
Worm gear transmission ratio: 1: 90
Tilting angle: 0-90
Workbench circumference scale: 360
Scale value of turntable handwheel: 1'



Precision Three Claws

Center height: 130mm
Clamping diameter: 4-160mm
Accuracy: 0.005mm
Rotating speed: 50-550rpm



High Precision B-Axis

Center height: 71mm
Clamping diameter: 0.005mm
Accuracy: 1.0-25mm
Rotating speed: 20-600rpm



Grinding Wheel Dresser

Outer diameter of grinding wheel: 32mm
Clamping diameter: 1.0-25mm
Rotating speed: 20-225rpm



200 Round Grinding Fixture

Center height: 104mm
Clamping diameter: 1.0-25mm
Maximum clamping diameter: 200mm
Rotating speed: 50-240rpm
Accuracy: 0.005mm



100 Round Fixture

Center height: 67mm
Clamping diameter: 1.0-25mm
Maximum clamping diameter: 120mm
Rotating speed: 50-900rpm
Accuracy: 0.005mm



PFH600M Precision Three Claws

Center height: 102mm
Clamping diameter: 3-80mm
Rotating speed: 50-600rpm
Accuracy: 0.005mm

PRODUCT PARAMETERS

Item			Unit	P-ONE	P-TWO
Projection screen	The measure of area		mm	540×420	
	Magnification ratio		Double	20×,50×	√
Light source	Lower lighting		/	LED	√
	Upperlighting		/	LED	√
Workbench	Work surface		mm	400x250	√
	Movement amount	Longitudiral	mm	240	√
		Transverse(V-axis)	mm	150	√
		Up and down(W-axis)	mm	100	√
	Feed rate	Fast feed G00	mm/min	2000	√
		Grinding feed GO1	mm	0.1-1000	√
Sand wheel platform	Linear axis	X-axis	mm	200	√
		Y-axis	mm	150	√
		Fast feed G00	mm/min	1500	√
		Grinding feed G01	mm/min	0.1~1000	√
	Angle	Front corner	o	(-2~20)	(-2~+5)
		Horizontal table	o	±15	√
		Wheel table turning angle	o	±15	√
	Lifting and lowering	W-axis	mm	0-150	0-80
		Lifting speed	rpm	30-300	√
	Grinding wheel shaft	Grinding wheel diameter	mm	65~100×4~6×22.23	√
			mm	120~180×3~10×31.75	√
		Rotation speed	rpm	0~24000	√
			rpm	1000-6000	√
		Spindle	/	High precision electricspindle	High precision static pressure spindle
Machine weight			kg	4000	√
Body area(length xwidth x height)			mm	1730x1775x2075	√
Noise			db	lower than 70	√
Power capacity			kva	18	√
Air pressure/flow rate			Mpa/NI/min	more than 0.6/500	√
Control equipment	NC		/	LNC	√
	Monitor		/	10.4inch colour	√
	Handwheel		/	2:X,Y(U,V)	√
	Pitch correction		/	standard	√
	Control of number of axes		/	four-axis	√