

Positioner

Technical Specification

Welding/Cutting expert

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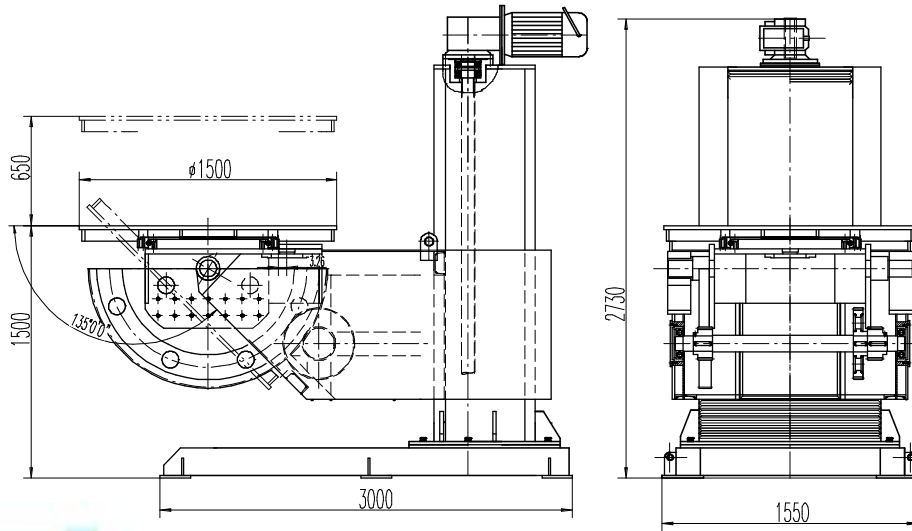


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1. Overall introduction(seat type)

Positioner is a professional equipment designed according to the customer’s welding needs, utilizing advanced technology. It lifts, rotates, and turns the work table to make sure the weld groove in the best welding position. The rotation of the work table is regulated by ‘frequency converter steplessly. The linkage connection on the electrical box makes the positioner able to realize linkage function with manipulator and welding power source.



Position drawing (For reference only)

Parameter for all models:

Model	TB1-6	TB2-12	TB1-20	TB1-30	TB1-40	TB1-50	TB1-80	TB1-100	TB1-150	TB1-200	TB1-250	TB1-500
Load(kg)	600	120	200	300	400	500	800	1000	1500	2000	2500	5000
Rotating speed(r/min)	0.1-1	0.09-0.9	0.09-0.9	0.06-0.6	0.06-0.6	0.05-0.5	0.02-0.2	0.05-0.5	0.02-0.2	0.04-0.4	0.004-0.4	0.02-0.4
Turning speed(r/min)	0.75	0.37	0.37	0.27	0.27	0.27	0.25	0.24	0.15	0.15	0.15	0.15
Turning angle(degree)	0-12	0-12	0-12	0-12	0-12	0-12	0-12	0-12	0-90	45-90	45-90	45-90
Diameter of work table(mm)	800	110	120	130	140	160	180	2000	2200	2500	3000	5000
Height of work table(mm)	830	110	120	149	150	152	180	2030	2300	2400	2400	3225
Allowable work piece off-center(mm)	Max	150	200	200	200	200	200	200	200	200	200	200
	eccentricity	200	250	300	300	300	300	350	400	500	500	500

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Rotating motor power(kw)		0.37	1.5	1.5	1.5	1.5	2.2	3	4	4	2x2. 2	2x3	2x7. 5
Turning motor power(km)		0.37	0.75	1.1	2.2	2.2	3	4	5.5	7.5	2x3	2x5.5	2x11

2. Characteristics

The positioner's work table can rotate 360 degrees continually, and turn 135 degrees. The work piece can be lifted or descended to adjust the height. The positioner comprises the rotating work table, rotating driving system, electrical conductor, tilt driving mechanism, lifting driving device, positioner base and electrical controlling system.

1) Rotating work table: Work table is driven by AC frequency converter motor through gear-turbo reducer & gear pair. Work table has the self-lock function to make sure when the load eccentricity is within the specified range; the work table is securely locked. Driving motor adopts AC frequency converter, speed regulating range is 2-50Hz, constant torque.

2) Work table is made by high quality steel, and treated by annealing and fine machining.

3) Work table turning. Work table is driven by AC turbo reducer to turn 0-135 degrees forward continuously. It can be stopped or continued moving within the scope during the turning process.

4) There is a turbo reducer with self-locked function at the final collector. Turning gear is modulated and processed by 40CrMnMo.

5) Two extreme positions with reliable limit control devices, and travel switch controls the turning. There is an angle indicator installed at the side of machine to indicate tilt angle.

6) There is a lifting device at the top of column. Driven by reducer, beam lift & descend by screw rod. Beam can stay at any height within the travel length, travel switch installed at the extreme position.

7) Electrical conductive device: It is installed under the work table. Electrical resistance of conductive device should not be over 1mΩ.

8) Electrical control system

Each driving motor' control system is installed in the control cabinet. Control cabinet is separately installed with main power switch and quick connector. There is a manual operator with all operation buttons, including emergency stop button. Suspension device is also built in, when not in use, the manual operator can be hung on positioner.

All cables with reliable insulation and external force protection. Protection case is used when cable contacts with metal parts. Reliable anti-nuisance measures adopted by control system, and over-loading protection, power-off protection also applied

3. Equipment standard

JB/T 8833-2001	Welding positioner
GB/T10089-1988	Cylinder turbo and worm precision
GB/T1184-1996	Common difference of figure and position
GB1356-1988	Involute cylinder gear standard
GB100-1995	Involute cylinder gear precision
GB4064-1986	Principles of design for electrical equipment safety
GB6988-1986	CAD

4. Equipment supply

- 1) Positioner body: 1set
- 2) Electrical control cabinet and hand operated device: 1set
- 3) Technical documents: Operation manual, quality certificate, drawing, packing list.



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