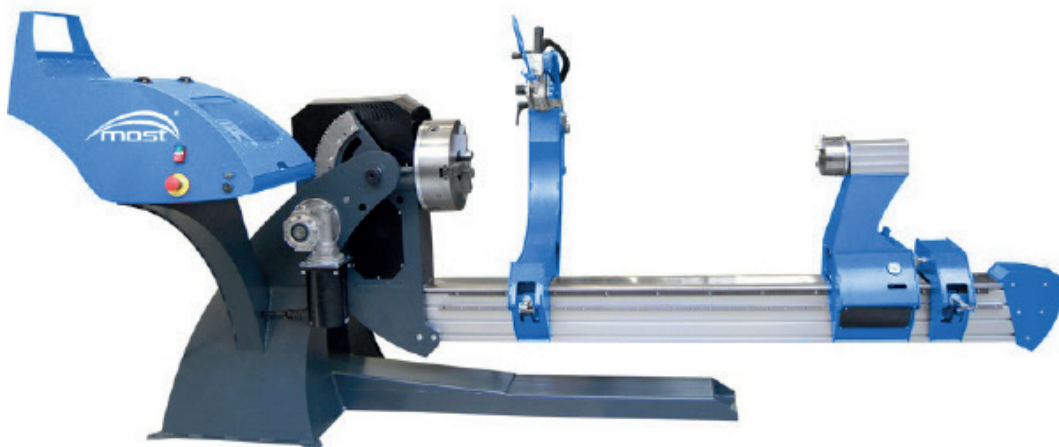


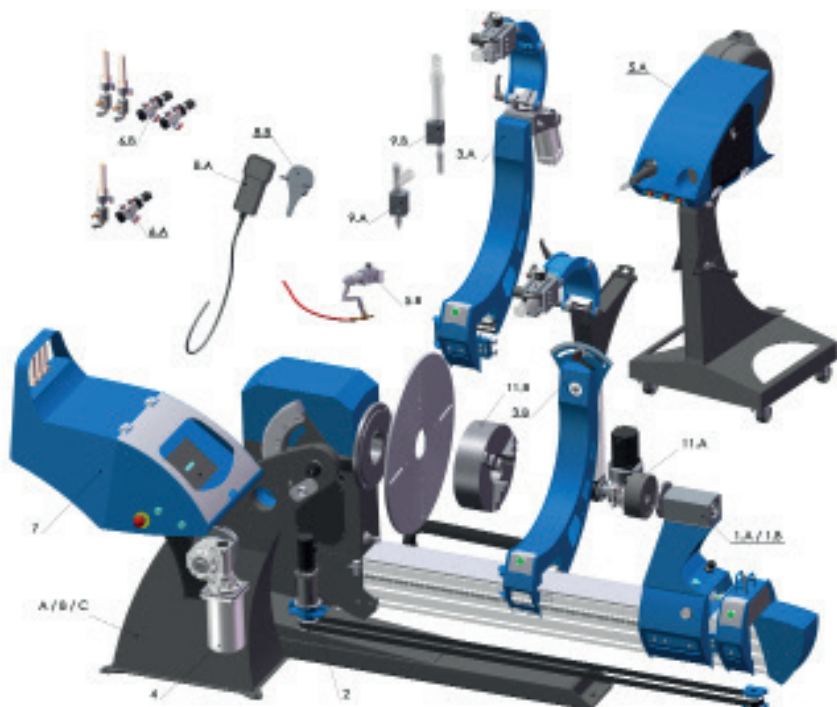
MPWOS-1000/1500 is an unique and universal welding orbital system of new generation, which was designed to reach the perfect ergonomics with maintenance of high technology. The detailed construction, covering linear guides, makes this unit suitable for MIG/MAG welding, without a negative impact on the lifespan on machine components. Maximal diameter of welded material – 650 mm, maximal length of weldment up to 1450 mm.

The modern construction carries the massive spindle with hole of 108 mm, below the spindle there is a main support with wire feeders, by which the tailstock and arm of welding torch are carried. By the solution of the spindle the use of operating plate with maximum diameter up to 650 mm is allowed, also universal torch 315 mm with a hole of 108 mm can be used. The tailstock has a hole of 28 mm, with a standardized flange suitable for universal torch 125 mm. It is possible to equip the machine with two universal torches 315 mm with through hole 108 mm. the whole support of the arm can be tilted in the range of 0-90°, elevation with use of the motor. It allows to set accurately any of the position in order to optimize the welding processes. Arm of the welding torch has a pneumatic moving and its function is controlled by the control system. The control system MCS-X is placed on the left side of machine, considering the perfect ergonomics.



MPWOS system configurations

| Model | MPWOS-1000 | MPWOS-1500 |
|--|--|--|
| Max. static load | 270 kg | 270 kg |
| Between shank and tailstock (operating) | max 1050 mm | max 1450 mm |
| Max. diameter of the product | 650 mm | 650 mm |
| Tilt angle range | 0-90° | 0-90° |
| Rotational inertia of the spindle in driven section | v01: 181,2 Nm v02: 362,4 Nm v03: 604 Nm | v01: 181,2 Nm v02: 362,4 Nm v03: 604 Nm |
| Rotational inertia of tailstock (sync with main drive)- optional | v01: 181,2 Nm v02: 362,4 Nm v03: 604 Nm | v01: 181,2 Nm v02: 362,4 Nm v03: 604 Nm |
| Range of the main spindle speed (active section alternatively) | v01: 0,02-11,1 rpm v02: 0,01-5,6 rpm v03: 0,01-3,3 rpm | v01: 0,02-11,1 rpm v02: 0,01-5,6 rpm v03: 0,01-3,3 rpm |
| Pneumatic tailstock force | 50 mm | 50 mm |
| Hole through spindle | 108 mm | 108 mm |
| Hole through spindle (reactive section) | 28,0 mm | 28,0 mm |
| Welding method | MIG/MAG, TIG, Plasma | MIG/MAG, TIG, Plasma |
| Duty cycle | 100% | 100% |
| Motor power | 450 A (DC) 350 A (AC) | 450 A (DC) 350 A (AC) |
| Voltage | 3x400 V 50/60 Hz | 3x400 V 50/60 Hz |
| Protection class | IP21 | IP21 |
| Weight | 295 kg | 325 kg |
| Dimensions | 1520x900x1750 mm | 1520x900x2050 mm |
| Control | MCS-X – MOST Control System | MCS-X – MOST Control System |



MCS-X – Most Control System

MCS-X – MOST Control System

The MCS-X control system provides a clear and easily understandable user interface with full programming capabilities and results in a higher level of production throughout the entire process.

Some of control features:

process control,
 diameter of the product, the way of rotation, angle of turning (maximal 720°, exactness 0,1°),
 axis rotation,
 delay/acceleration of the rotation before welding (time after the confirmation of the stable arc is sent by the welding machine),
 the precise closing/opening sequence and defect-free connection of beginning and end of the weld (angle and number),
 O-point – exact return to the start point,
 points (automatic calculation of angles on the basis of entering information, entering the number of tack welds).

Axis motoric:

in rotary mode of welding – the setting of the longitudinal welding position on the X axis and its acting during the operating cycle,
 in longitudinal mode of welding – the setting of the welding position, the delay of activity after the welding process has started, the final time of welding, finishing of the sequence, the acting during the operating cycle and radial position of the weld on the rotary axis,
 the angle of tailstock's spindle 0- 90°, the fluent movement using the extract drive of tailstock's tilt or with pneumatically controlled stroke.

Torch axis – pneumatic or electric supports.

Oscillation:

the delay of starting the oscillation after the sign of the stable arc is sent (sec),
 frequency of the oscillatory movement (Hz),
 right/centre/left divergence, in mm, separately for each sides, (exactness 0,1 mm).

Welding system with digital communication system equipped-CAN BUS

Forming gas – pre-blowing and after-blowing of forming gas functions

Programs – Memory Box:

the machine can memorize the own settings including the whole operating cycle. Programs saved in Memory boxes can be arbitrarily combined into the functional lines and create even the difficult operating cycle..

Optional accessories:

f AVC control when TIG and PLASMA welding (automated regulation of arc height),
 f joints/seam tracing (electromechanical indicator),
 f camera viewing system.

Standard applications:

The machine is universal and sophisticated production unit which can be used in industry. It is possible to weld rotary circumferential welds, angular welds in position PA/PB using the tilting tailstock and also fully-fledged welds can be done.

The production of pressure and non-pressure vessels from all materials and by using all the welding methods of arc welding (except SAW method) is really typical. Because of high exactness of the machine the machine parts, flanges, shafts, heat exchangers and tube sheets can be welded on this machine.

The machine is able to work in screw welding mode on the surface of the cylinder even on the surface of the operating plate (tilting 90°). A special kind of used software provides the possibility to weld each layer separately by using the controlled axis of the torch stroke.

