

MWOS – MOST Welding Orbital System

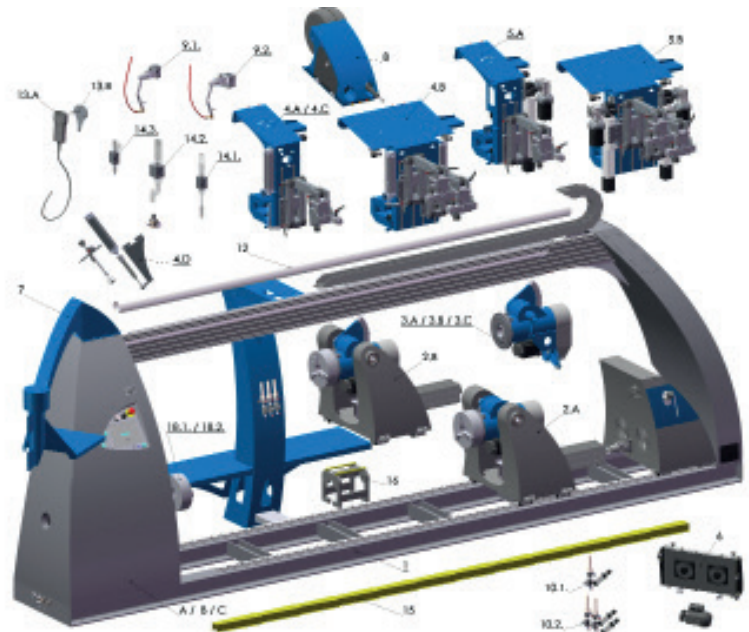


This unit is an universal production system of new generation, which was designed to reach the perfect ergonomics with maintenance of high technology. The detailed construction means a wide range of possibilities for this production unit. Wide range of sizes of weld material and the exceptional addition of accessories provides a wide range of high flexibilities of the final constructional possibilities. This unit can be equipped with one or two weld heads, with one or two armed torches possible to apply. It significantly extends applications of this unit, including the supply control of the welding processes, such as pneumatic-mechanical copy system, or camera scanning.

- The unit can be delivered in different length versions of welded parts.
- Choice between using the universal torch or operating plate (single-purpose accessories).
- Mechanical or hydraulic support allow to transfer when welding long objects.
- Choice between one arm/two arm support for the torch, with possibility of choosing the combination of welding methods on each of arms.
- Tilting tailstock with a tilt angle range of 0-90° allows to weld in the same positions as positioner. Function of pneumatic pressing.
- Systems of weld tracing: pneumatic-mechanical, electro-mechanical, arc voltage sensing (AVC).
- The cooling system integrated into control system out of 8.5 kW, suitable for cooling of all the devices.
- Choice of controlled motoric axis: X, Z, T, Y axis, jointed axis of torch.
- Choice of the digital cold wire feeder type on the basis of the whole machine configuration.
- The unit comes with the welding sources suitable for TIG DC, TIG AC, PLASMA, MAG PULSE welding methods provided with function of digital communication with welding machine.
- Possibility of integration of flexible air duct directly to the machine structure (welding fumes extraction), which can be connected to the central filtration system.



Model	MWOS-A2	MWOS-A5
Max. static load	2200 kg	5200 kg
Between shank and tailstock (operating)	max 16 500 mm	max 16 500 mm
Max. diameter of the product	1000 mm	1500 mm
Rotation inertia of the spindle in driven section a	v01: 1066 Nm v02: 1776,6 Nm v03: 2487,2 Nm	v01: 1918,7 Nm v02: 3197,9 Nm v03: 4477 Nm
Rotation inertia of tailstock (sync with the main drive)- optional	v01: 1066 Nm v02: 1776,6 Nm v03: 2487,2 Nm	v01: 1918,7 Nm v02: 3197,9 Nm v03: 4477 Nm
Range of the main spindle speed (reactive section alternatively)	v01: 0,01-5,6 rpm v02: 0,01-3,3 rpm v03: 0,01-2,4 rpm	v01: 0,01-5,6 rpm v02: 0,01-3,3 rpm v03: 0,01-2,4 rpm
Hole through spindle	78 mm	108 mm
Pneumatic force of tailstock	300 mm	300 mm
Welding method	MIG/MAG, TIG, Plasma	MIG/MAG, TIG, Plasma
Duty cycle	100%	100%
Motor power	550 A (DC) 450 A (AC)	550 A (DC) 450 A (AC)
Voltage	3x400 V 50/60 Hz	3x400 V 50/60 Hz
Protection class	IP21	IP21
Weight (at operating length of 2500 mm)	1260 kg	1650 kg
Dimensions (at operating length of 2500 mm)	2600x1100x4300 mm	3200x1400x4900 mm
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.

