



KMK, KMO, KMS, KEG

AVP

**CIRCULAR WELDING MACHINES**

# CIRCULAR WELDING MACHINES

## CODING SYSTEM:

**KMO**



Machine type identifier

**4**



Load capacity  
(4 = 400 kg)

**0**



Welding process\*

**1**



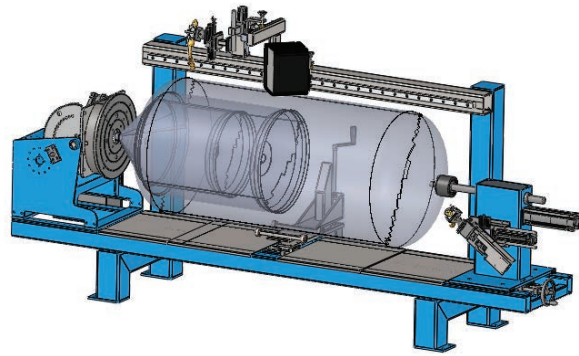
Quantity of welding torches

## \*WELDING PROCESS

0. TIG (GTAW)
1. MIG / MAG (GMAW)
2. SAW
3. PLASMA
9. LASER



**KMK 411**



**KMK 411**



**KMK WELDING CELL**



**KMK 102 (mini edition)**

Circular welding machines are typically used for **high-volume circular welding** tasks, such as joining cylinders (e.g., boilers, fire extinguishers, pipes, air tanks, and smaller pressure vessels). The torch positioning and welding process resembles that of VSV machines, for movement utilizing precision linear rails and for control a similar user interface. Once the welding piece is clamped in place, **all operations are carried out automatically**, including positioning, clamping, and welding. Specially designed tools may be used for clamping when necessary. The machine is controlled by a PLC unit (Programmable Logic Controller). Digital welding parameters enable precise machine configuration prior to welding. Various power sources can be utilized for welding.

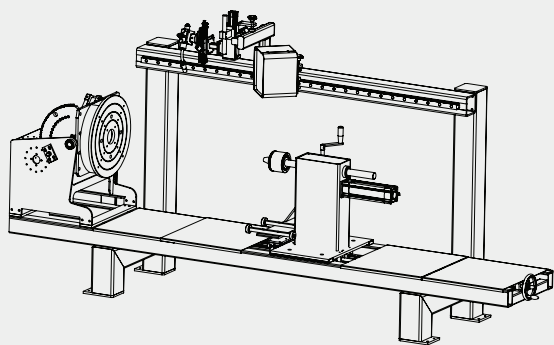
## OPTIONS:

- Multi-seam welding (multiple torches),
- laser or tactile seam tracking,
- welding cameras,
- wired or wireless remote control,
- segment welding (numerical programming),
- touch display.

## CIRCULAR WELDING MACHINES: TYPES

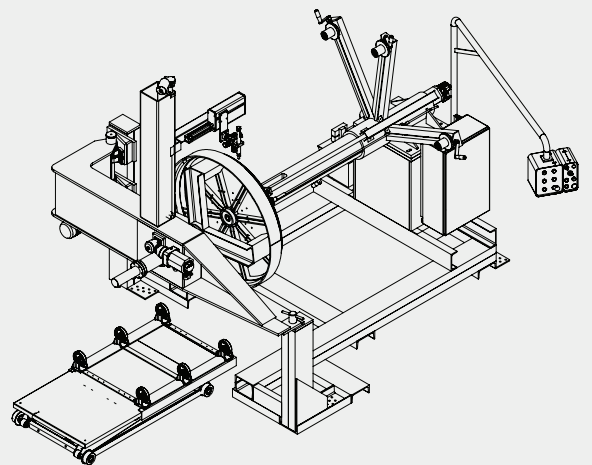
### **KMK**

KMK is a circular welding machine that features a fixed rotary unit on one side and a movable clamping unit (tailstock) on the other side. These machines can weld multiple seams simultaneously.



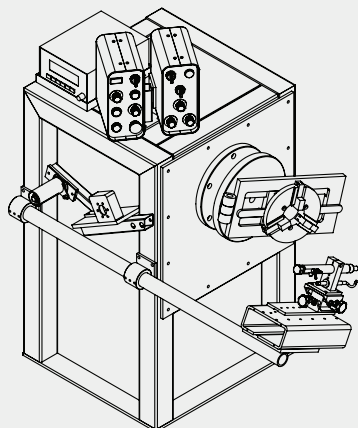
### **KMO**

The KMO is a specialized circular welding machine designed for thin tubes and pipes. It features a state-of-the-art hydraulic clamping solution that holds the weld piece from the inside while also providing shielding with protective gas (copper rail).



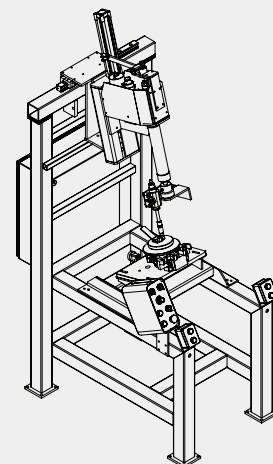
### **KMS**

KMS can be used for welding chimney elbows and similar parts. In this type, the torch is fixed and welds from the side while the workpiece rotates.

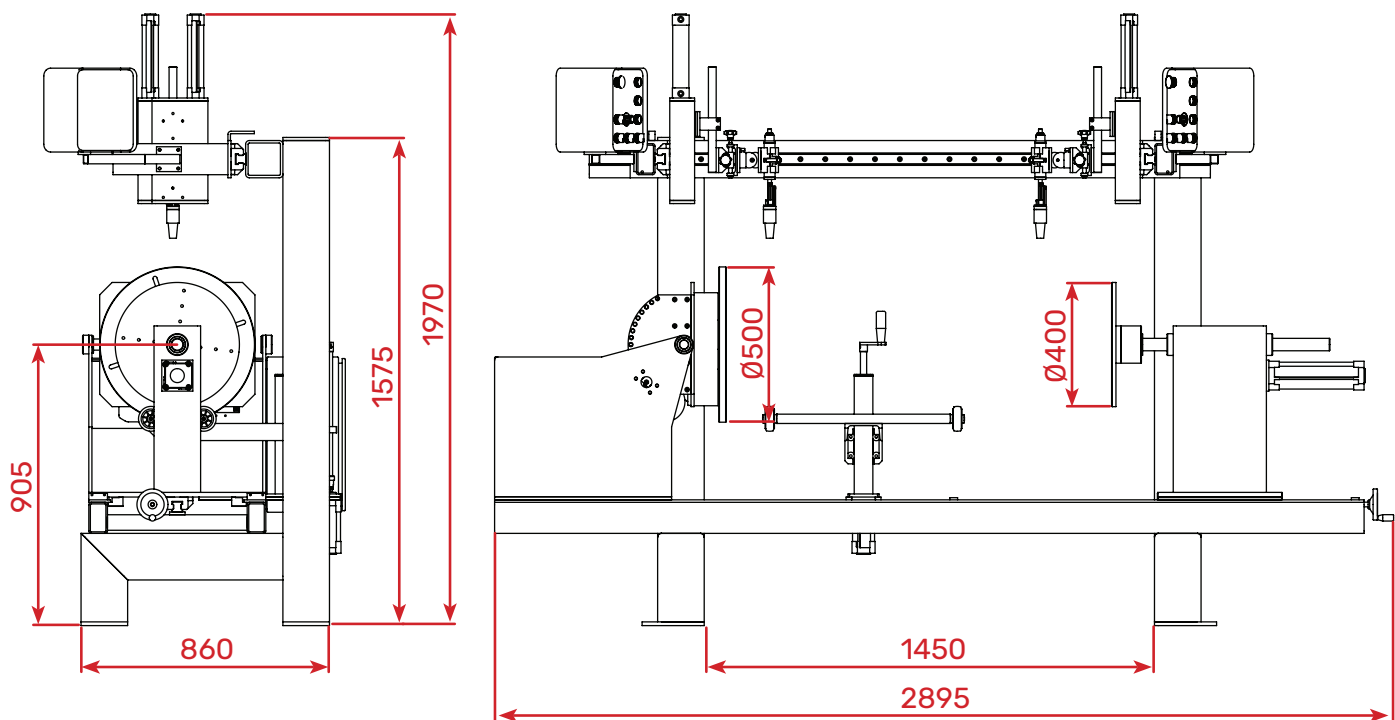


### **KEG**

This type is different from others because the workpiece remains stationary while the welding torch rotates. This enables the welding of hard-to-reach areas, such as fittings or inlets, for instance.

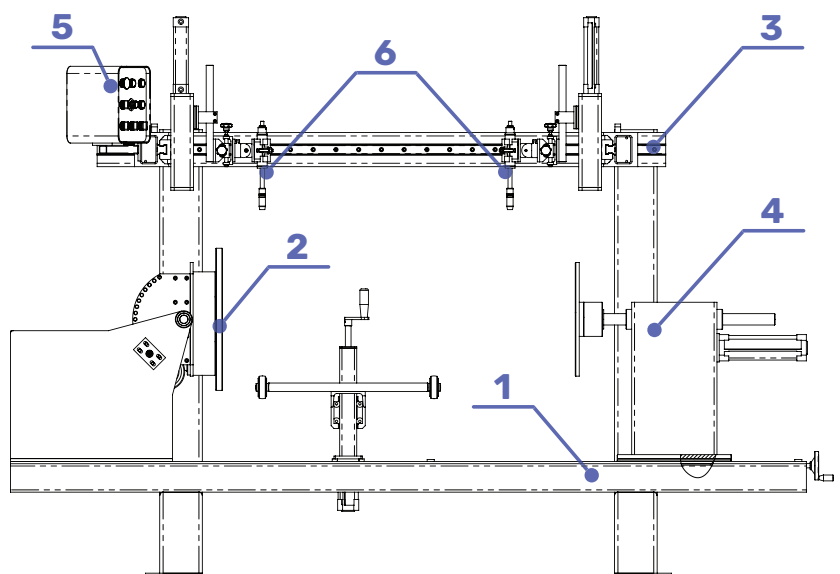


# CIRCULAR WELDING MACHINES: **KMK**



**KMK 412 (dimensions)**

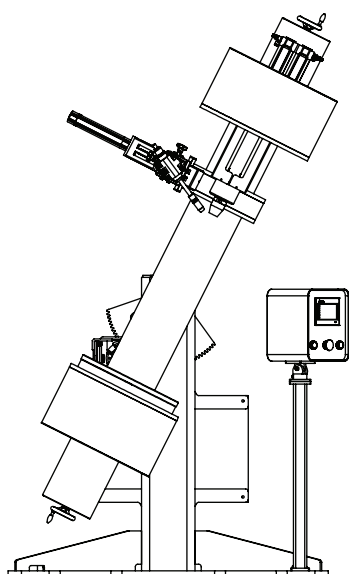
- ① **Framework**
  - Fixed table,
  - movable tailstock.
- ② **Rotary table**
  - Custom diameter,
  - clamping devices.
- ③ **Bridge**
  - Horizontal torch movement,
  - one or more torches.
- ④ **Tailstock**
  - Pneumatic,
  - optional clamping tools.
- ⑤ **Command cabinet**
  - Parameter setup and manual commands.
- ⑥ **Welding torch**
  - Most types of torches can be installed.



KMK is a versatile circular welding machine that offers the flexibility of performing **both circular and longitudinal welding**. It is commonly used for welding tube end caps, and when equipped with two torches, both ends can be welded simultaneously. The dimensions of the welding piece and welding parameters can be fully customized to suit the specific application.



# CIRCULAR WELDING MACHINES: KMK-T



**KMK-T 111**



**WELDING**



**KMK-T 111**

The KMK-T circular welding machine is a modified version of our KMK machines. In addition to the functionalities offered by the KMK, the KMK-T **can be tilted from 0° to 90°**, with manual or motorized options available. This means that the machine can be positioned either vertically, like a rotary welding table, or horizontally, similar to a standard KMK machine. This flexibility **allows for the welding of complex parts that require specific tilting angles** to achieve the best possible welding torch position. This machine can be used for circular, but not for longitudinal welding.

The KMK-T consists of three main units: the rotary table, torch support, and tailstock. All three units can be manually moved along the axis using a handle (spindle). They are mounted on precision linear rails, positioned at the back of the machine to ensure they are clear of welding sparks. The torch can be manually rotated and adjusted in multiple axes to set the desired angle. After welding, the torch automatically retracts to ease the unclamping process.

Additionally, we offer the option to create custom clamping tools for this machine.

		<b>KMK-T 111</b>
Load capacity	kg	100-400
Max. weldpiece length		1.300
Max. weldpiece diameter	mm	Ø600
Table diameter		Ø400
Rotation speed	RPM	0,2 - 5
Tilt angle / inclination	°	0 - 90

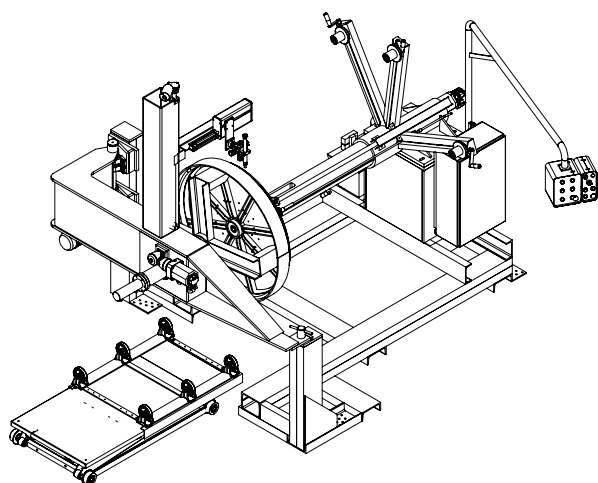
## CIRCULAR WELDING MACHINES: **KMO**



**KMO 801 (standard)**



**KMO 801 (sliding door)**



**KMO 801**



**PRODUCT EXAMPLE**

Circular welding machines **KMO** are specifically designed for **welding the bottoms and tubes** of containers. We have engineered a **hydraulic clamping device** that ensures precise and secure clamping of both the tube (cylinder) and the bottom. The clamping is done from the inside of the tube which ensures that it is round **and also includes protection gas flow**. That allows for automatic welding **without the need for prior tack binding welds**. The inner device is equipped with a built-in argon fan to protect the root of the weld.

The machine can be opened at its end for the insertion of tubes. The tube is supported on two sides. At the back there are bearing supports that can each be manually extended to fit the required diameter. The bearings can also be moved longitudinally (motorized) depending on the tube length. The front support is the aforementioned hydraulic clamping device with copper rail, which can be replaced as needed based on the diameter of the tube.

## CIRCULAR WELDING MACHINES: KMS



KMS 201



KMS 201



PRODUCT EXAMPLE (chimney elbow)

KMS machine is used for **automatic circular welding** of chimney angle knees and other circular elements. The torch movement is pneumatic - with the AVC controller. Machine has a built in program for welding 360 ° + overlap.

Welding a specific part (segment) of the circular weld path can easily be programmed by the operator. Direction, speed and other parameters can be set, with similar controls to our other machines.



**KEG 111 (workpiece)**



**KEG 111**

KEG machines are used for automatic circular welding. **The workpiece remains clamped stationary while the welding torch rotates over 360°.** This enables the welding of hard-to-reach areas, such as fittings, pipes of water heaters, inlets, etc.

- Torch rotation/spin speed 2- 20 RPM,
- max. pipe diameter 40 mm,
- pneumatic torch movement,
- pneumatic movement from first to second pipe,
- water cooled machine torch with elements for precise torch positioning,
- pneumatic tools,
- numerical machine control; after welding the torch returns to start position.