

Set up & go – ABIBUG 300

Orbital welding system for pipe production

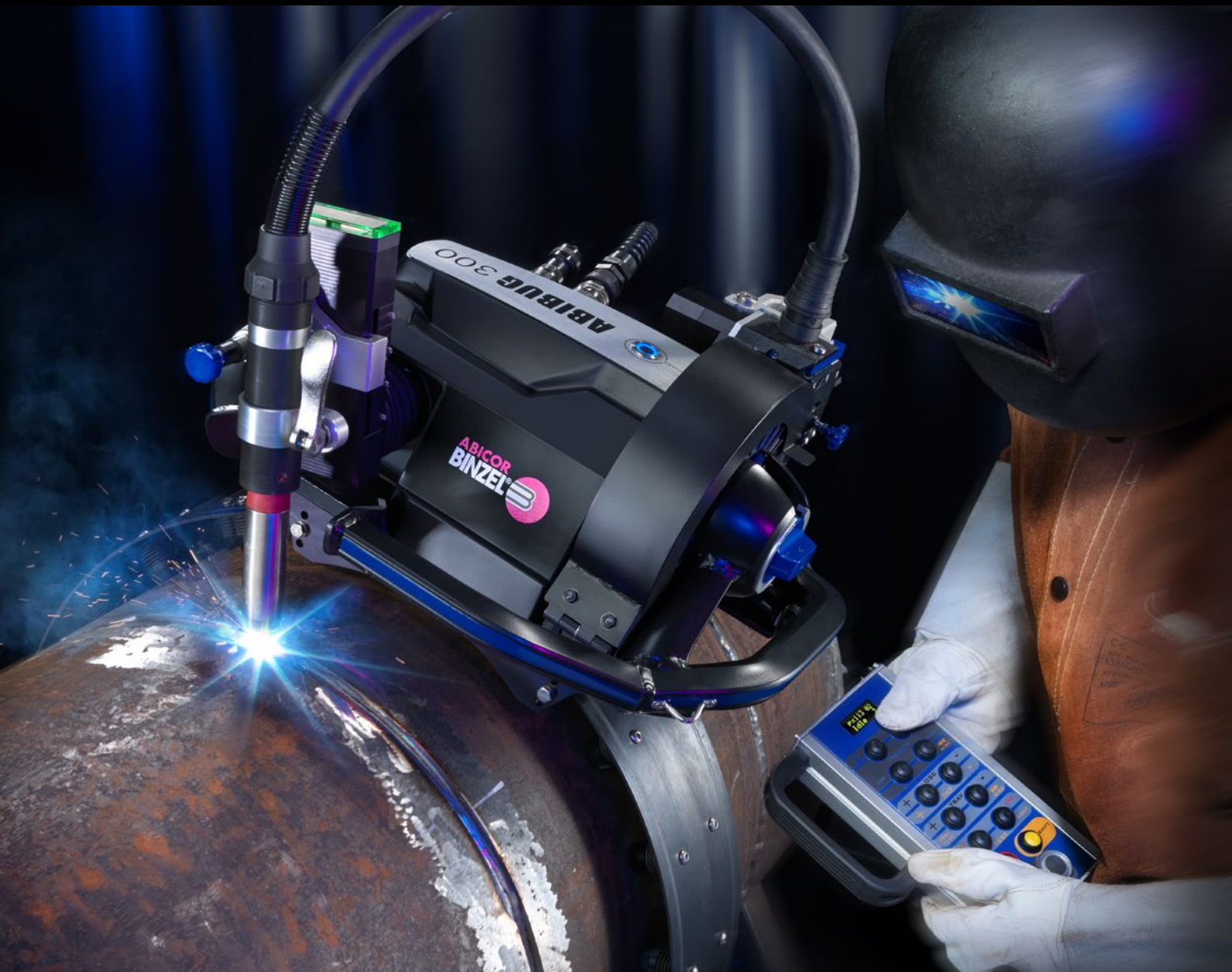
Welding pipes on site or in the production hall – with the ABIBUG 300 this can be done precisely, quickly and easily. The unique design and operating concept with patented solutions for handling and ergonomics makes the difference.

In comparison with manual welding, filler and covering layers can be realised with cored wire electrodes up to 4 times faster and with constantly higher quality.

Welcome to the next level of partially automated pipe welding.



Guaranteed process reliability and work effectiveness: ABIBUG 300 – the partially automated system solution for highest quality welding results



Partial automation made easy

Easy handling, durability and efficiency are basic requirements for partially automated pipe welding. For this purpose, the ABIBUG 300 together with the associated positioning bands and machine torches offers a reliable and effective solution. Developed with focus on functionality and ease of use. The low weight of the ABIBUG 300 of less than 15 kg allows easy transport and permits operation by only one person. Its ergonomic design and intuitive controls allow easy installation and handling.

The ABIBUG 300 can basically be used with all analogue communicating welding power sources. It can be used with an integrated spool system for 5 kg plastic spools S200 (DIN EN ISO 17632) as well as for direct connection to the wire feed unit of the welding power source.

Flawless results with filler and cover layers on pipes from a diameter $\geq 10.75''$, thanks to infinitely variable adjustment of the work angle and the free wire length (stick-out).

The advantages at a glance

- Up to 400% more efficient for filler and cover layers compared to manual welding
- Easy handling and operation
- Robust space frame design and low weight
- Also suitable for external wire feeding
- Integrated position sensor – automatic welding parameter adjustment depending on working position

Technical data in detail



ABIBUG 300

Power consumption	240 W
Weight	13.5 kg (depending on equipment)
Dimensions	474 x 403 x 519 mm (LxWxH)
Adjustability of welding torch	
• horizontal	65 mm
• vertical	50 mm
• angle of inclination	±25°
Oscillation	
• width	35 mm
• timing	0–25 oscillation movements/cm
• cross dwell time	0–∞ (infinitely variable separately)
Moving speed	0–160 cm/min
Wire feed speed	0–16 m/min
Pipe diameter	≥ 10.75"

Machine torch ABIMIG® MT 305 PIPE

Welding process	MIG/MAG
Wire types	solid wire, filler wire
Wire-Ø	1.0–1.2 mm
Cooling	air cooled
Gas types	DIN EN ISO 14175
Rating (EN 60974-7)	320 A/60 % ED

The outstanding properties of the ABIBUG 300

Undercarriage



Unique, patented »rollercoaster undercarriage« with triple guidance – precise and durable. Thanks to the extremely tight tolerances in the drive, exact wire positioning is ensured in all positions. Flexible use for all pipe diameters.

Quick positioning



With just one push of a button, the ABIBUG 300 can be guided to any position on the band in seconds. Equipped with four buttons, it offers optimum accessibility in every position.

Quick torch adjustment



The simple pull release allows the torch to be adjusted in no time at all. This provides an ideal position for replacing wear parts.

Wire feed unit



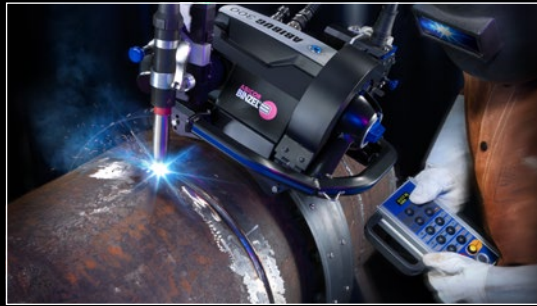
The 5-stage adjustability allows manual dosing of the contact pressure, e.g. for different types of filler materials.

Spool system



The patented bayonet quick release provides unmatched speed and safety when replacing spools.

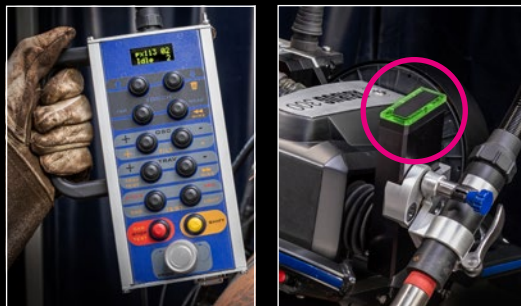
Parameterisation and programming



There are eleven customisable welding programs. In this way, oscillation, moving speed and torch position can be defined individually. The programming software is part of the extensive standard equipment.

An integrated position sensor enables automated job changes depending on the working position.

Operation



The robust aluminum frame is designed for use in extreme conditions. A selection of pre-installed welding programs can also be retrieved. Furthermore, process parameters can be adjusted to a predefined extent.

The **LED signal light** on the torch mount provides easy monitoring of the operating status.

Frame & housing



The »space frame« serves as a grip option and shock protection at the same time. The circumferential shape enables easy handling in all positions. In addition, all relevant components are protected by a robust GRP housing.

Handling



The ABIBUG 300 can be taken off sideways from the positioning band or put back on again with just a simple pull on the patented release mechanism.

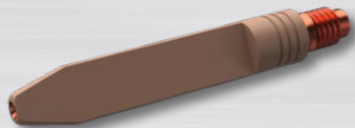
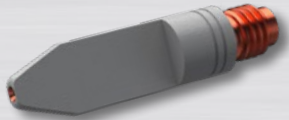
ABIBUG 300



ABIBUG 300 system components – unbeatable together

Coated contact tips

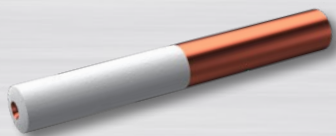
Spade



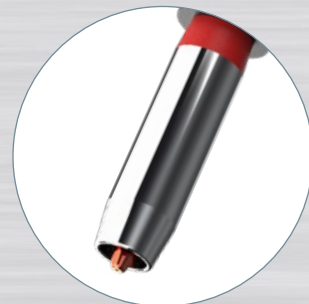
Conical



Cylindrical



ABIMIG® MT 305 PIPE



Coated contact tips

Coated contact tips from ABICOR BINZEL offer significant advantages, especially for narrow gap welding on pipe connections: their coating prevents unwanted arcs and short circuits. The thermal load on the contact tip and the adhesion of welding spatter are reduced and the service life is thus significantly extended. All coated contact tips with an M8 thread fit e.g. the ABIMIG® MT 305 PIPE and can be used for efficient and reliable narrow gap welding of pipes.

ABICOR BINZEL offers various geometries for coated contact tips for almost every application in narrow gap welding, pipe connection welding and high-temperature processes. More detailed information can be found on the ABICOR BINZEL website.

MIG/MAG machine torch ABIMIG® MT 305 PIPE

The ABIMIG® MT 305 PIPE air cooled machine torch designed for the ABIBUG 300 is based on the ABIMIG® torch series from ABICOR BINZEL, which has been tried and tested for decades. The wear parts system of these welding torch types with the high-temperature-resistant screwed gas nozzle and its robust construction is designed for long service lives and ensures a long duty cycle as well as uninterrupted work. The geometry of the contact tip holder ensures a uniform, laminar gas flow and thus optimal shielding gas coverage.

With regard to wire feeding, flexibility, length and power reserve, the special ABICOR BINZEL coaxial cable of the ABIMIG® MT 305 PIPE is designed for the typical fields of application in orbital welding and, together with the ABIBUG 300 automatic welding system, forms the ideal system solution.

Positioning bands



Positioning bands

Positioning bands from ABICOR BINZEL for partially and automated orbital welding are robust and durable and can be easily mounted on all pipe diameters in just a few simple steps. The positioning bands are available in VA steel, duplex steel or spring steel, depending on the customer's requirements.

In addition, various options can be selected, such as:

- with hinge for small diameter pipes (6.625" - 12.75")
- as a continuously closed band for medium pipes (14" - 48")
- two or more shell segments for large pipe diameters (50" - ∞)

Positioning bands or guide rails are available for almost all standard orbital welding systems. All positioning bands are manufactured individually on a job-related basis. Please contact our sales team for the final configuration and order.

ABICOR BINZEL will be happy to support you with advice and service of individual solutions.

Order overview

ABIBUG 300



Control panel ABIBUG 300



Machine torch ABIMIG® MT 305 PIPE



Pos.	Description	Part-No.
1	ABIBUG 300 MIG/MAG orbital welding system, 230 V, complete with ABIMIG® MT 305 PIPE, air cooled	527.0001.1
not fig.	ABIBUG 300 MIG/MAG orbital welding system, welding head	527.0002.1
2	ABIBUG 300 operating unit, complete	527.0003.1
not fig.	ABIBUG 300 power pack, analogue, complete	527.0045.1
not fig.	ABIBUG 300 transport case, complete	527.0006.1
3	ABIMIG® MT 305 PIPE machine torch, air cooled, onboard	916.0022.1
not fig.	ABIMIG® MT 555 D TS machine torch, liquid cooled, external*	766.1805.1

* An additional bracket is required for connection.



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