

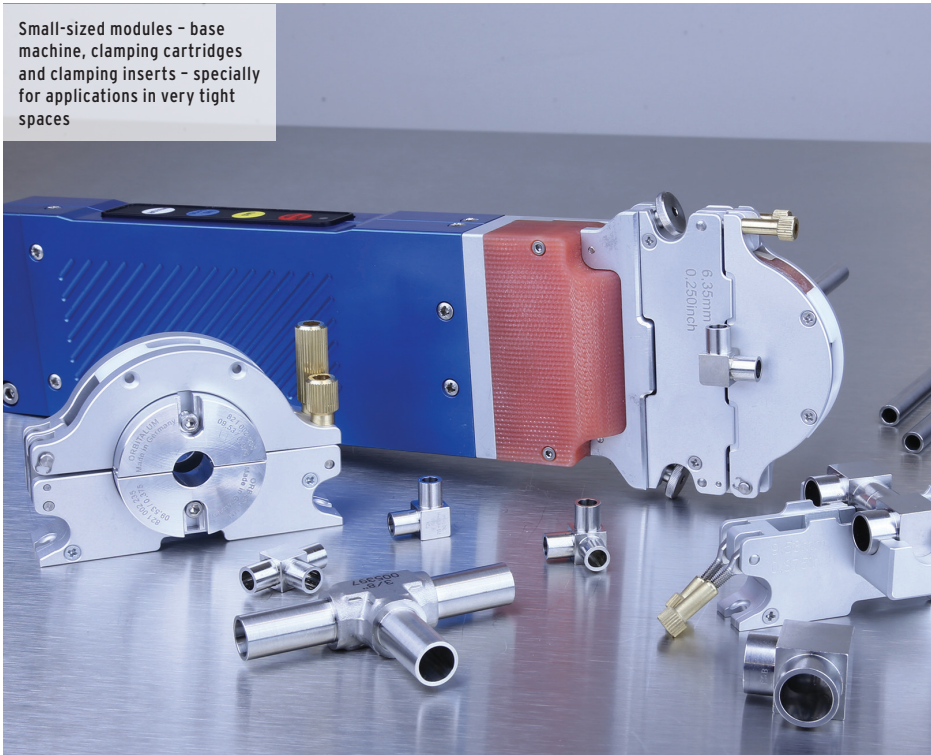
# ORBIWELD 12

Compact TIG weld head  
- ideal for tight spaces

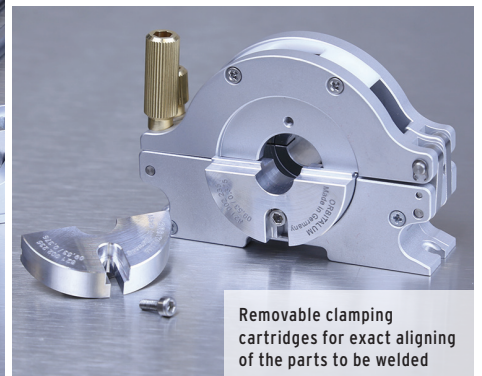
## Micro weld head

It doesn't get any smaller or more effective than this: Thanks to its extremely narrow construction the OW 12 offers a unique diversity of functions as well as a high duty cycle previously unknown in weld heads of this size through its liquid cooling. This micro weld head is a compact space-saving marvel and guarantees continually reproducible, high-quality weld seams, even with high currents. Particularly suitable for welding all common microfittings!

Small-sized modules - base machine, clamping cartridges and clamping inserts - specially for applications in very tight spaces



Extremely narrow design and yet highly durable thanks to intensive liquid cooling system



Removable clamping cartridges for exact aligning of the parts to be welded

**The OW 12 with its small-sized modules - basic machine, clamping cartridges and clamping inserts - is the ideal tool for work under tight spaces such as the semiconductor industry, aerospace, pharmaceutical industry as well as the ultra pure water supply sectors.**

All the important commands for welding can be transmitted to the power supply via a control panel built into the robust and durable aluminum handle, so that no additional remote control is required.

The removable clamping cartridge enables accurate alignment with the parts to be welded, even where there is very little space.

### ADDITIONAL FEATURES:

- Toolless quick change system for clamping cartridges and clamping inserts
- Wide clamping cartridge (Type "B") with exchangeable clamping shells for standard applications
- Extremely narrow clamping cartridges (Type "A") for welding microfittings and for other applications with very limited clamping lengths
- The head is 5.7 kg (12.6 lbs) light. All connections for electricity, gas and cooling water are firmly integrated in the OW 12
- To increase productivity, the optional ORBITWIN switching unit allows working with up to two heads in an alternating fashion, thus reducing conversion times and downtimes considerably
- Including highly flexible hose package (length: 7.5 m/24.6 ft) with strain relief to the power source - optionally extendable to up to 20.0 m (64 ft)

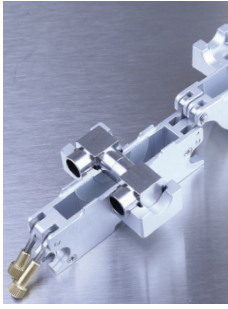
**The success model OW 12 has been optimized even further!**

**The result: A well-engineered weld head with unequalled robustness, high ease of use and even higher performance, for example through:**

- ✓ Higher temperature stability
- ✓ Improved ignition characteristics
- ✓ Optimized rotor guidance
- ✓ Optimized weld gas control
- ✓ Liquid-cooled
- ✓ Integrated control panel
- ✓ 7.5 m (24.6 ft) hose package



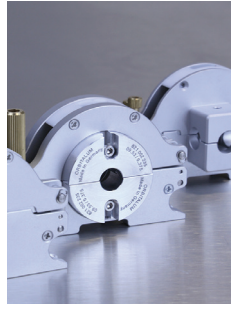
Robust and stable aluminum handle with integrated control panel



Quick change system for clamping shells



Particularly suitable for welding all common microfittings



Diameter-specific clamping cartridges - available separately



Aluminum clamping inserts for OW 12, type "B" (wide) - available separately

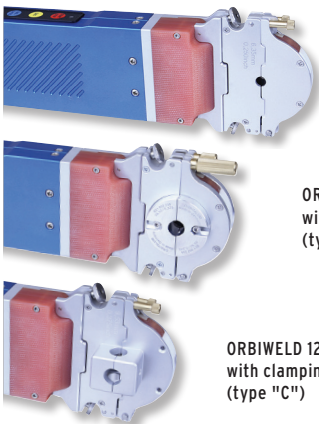


Comprehensive range of accessories, e.g. ORBmax residual oxygen meter

POSSIBLE APPLICATIONS OW 12:	MICROFITTING-TO-MICROFITTING	MICROFITTING-TO-TUBE	TUBE-TO-TUBE	ADVANTAGES
Clamping cartridges, type "A" (narrow)	x	x	x	High flexibility thanks to narrow design
Clamping cartridges, type "B" (wide)			x	Low cost due to exchangeable clamping inserts
Clamping cartridges, type "C" (microfittings)	x	x	x	Form-closed fastening of microfittings for precise alignment

APPLICATION RANGE	ORBIWELD 12
Code	<b>821 000 010</b>
Tube OD, min. - max.	3.0 - 12.7 mm 0.118" - 0.500"
Electrode Ø	1.0 mm 0.039"
Machine weight including hose package	4.8 kg 10.6 lbs
Hose package length	7.5 m 24.6 ft
SCOPE OF DELIVERY	
Including:	<ul style="list-style-type: none"> <li>• 1 Micro weld head ORBIWELD 12</li> <li>• 1 Durable storage and shipping case</li> <li>• 1 Tool set</li> <li>• 1 Feeler gauge</li> <li>• 1 Operating instructions and spare parts list</li> </ul>
Suitable accessories (available option):	<ul style="list-style-type: none"> <li>• Clamping cartridges for OW 12, type "A" (narrow)</li> <li>• Clamping cartridge for OW 12, type "B" (wide)</li> <li>• Clamping inserts for OW 12, type "B" (wide)</li> <li>• Clamping cartridges for OW 12, type "C"</li> <li>• ESG tungsten grinders</li> <li>• ORBmax residual oxygen meter</li> <li>• ORBIPURGE forming set</li> <li>• Hose package extensions</li> <li>• WS2 tungsten electrodes</li> </ul>

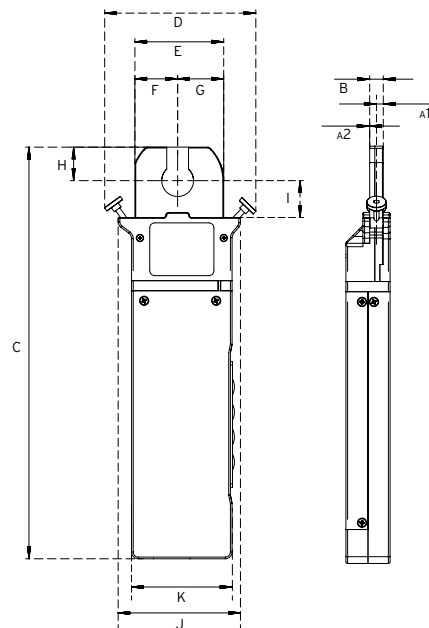
ORBIWELD 12	DIMENSION		ELECTRODE INTERVAL					
			CARTRIDGE TYPE "A"		CARTRIDGE TYPE "B"		CARTRIDGE TYPE "C"	
	[MM]	[INCH]	[MM]	[INCH]	[MM]	[INCH]	[MM]	[INCH]
Dimension "A1"	4.25	0.167	6.35	0.250	15.60	0.614	22.80	0.897
Dimension "A2"	3.75	0.148	5.85	0.230	15.10	0.594	21.90	0.863
Dimension "B"	8.00	0.315	12.20	0.480	30.70	1.209	44.70	1.760
Dimension "C"	245.70	9.673						
Dimension "D"	90.00	3.543						
Dimension "E"	53.00	2.087						
Dimension "F"	25.50	1.004						
Dimension "G"	27.50	1.083						
Dimension "H"	20.00	0.787						
Dimension "I"	22.00	0.866						
Dimension "J"	73.00	2.874						
Dimension "K"	60.00	2.362						



ORBIWELD 12 with narrow clamping cartridge (type "A")

ORBIWELD 12 with wide clamping cartridge (type "B")

ORBIWELD 12 with clamping cartridge for microfittings (type "C")



The technical data are not binding. They are not warranted characteristics and are subject to change.

## Micro weld head OW

### ORBIWELD 12

Features, application range, technical data and scope of delivery, see page 21.

Clamping cartridges and clamping inserts are not included in the scope of delivery (see from page 23).



ORBIWELD 12 with narrow clamping cartridge (type "A")



ORBIWELD 12 with wide clamping cartridge (type "B")



ORBIWELD 12 with clamping cartridge for microfittings (type "C")



Clamping cartridges for OW 12, type "A" (narrow)

ARTICLE	CODE	WEIGHT OF MACHINE KG*	DISPATCH WEIGHT KG
Micro weld head OW 12	821 000 010	4.800	11.000

\* Machine weight including hose package

### Suitable accessories (available option):

- Clamping cartridges for OW 12, type "A" (narrow), see page 23
- Clamping cartridge for OW 12, type "B" (wide), see page 23
- Clamping inserts for OW 12, type "B" (wide), see page 24
- Clamping cartridges for OW 12, type "C", see page 24
- Power connector adapter set, see page 83

### Clamping cartridges for OW 12, type "A" (narrow)

**NEW:** Made from dimensionally stable stainless steel with flip-up weld head cover "FlipCover" which enables to test and/or to readjust the electrode position before the welding procedure.

Clamping cartridges with a total width of only 12.2 mm (0.48") can be supplied for welding of microfittings and other applications with very limited clamping lengths (Type "A").

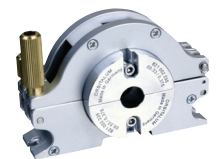
For type "A" a separate clamping cartridge is required for each tube diameter.

ARTICLE	TUBE OD [MM]	TUBE OD [INCH]	CODE	KG
Clamping cartridge VA for OW 12, Type "A" (narrow), V3	2.00	0.079	821 050 200	0.100
Clamping cartridge VA for OW 12, Type "A" (narrow), V3	3.00	0.118	821 050 201	0.100
Clamping cartridge VA for OW 12, Type "A" (narrow), V3	3.18	0.125	821 050 202	0.100
Clamping cartridge VA for OW 12, Type "A" (narrow), V3	6.00	0.236	821 050 203	0.100
Clamping cartridge VA for OW 12, Type "A" (narrow), V3	6.35	0.250	821 050 204	0.100
Clamping cartridge VA for OW 12, Type "A" (narrow), V3	8.00	0.315	821 050 205	0.100
Clamping cartridge VA for OW 12, Type "A" (narrow), V3	9.53	0.375	821 050 206	0.100
Clamping cartridge VA for OW 12, Type "A" (narrow), V3	10.00	0.394	821 050 207	0.100
Clamping cartridge VA for OW 12, Type "A" (narrow), V3	12.00	0.472	821 050 208	0.100
Clamping cartridge VA for OW 12, Type "A" (narrow), V3	12.70	0.500	821 050 209	0.100

### Clamping cartridge for OW 12, type "B" (wide)

When using the clamping cartridges, type "B", one set of clamping inserts is required in addition for each tube diameter.

ARTICLE	CODE	KG
Clamping cartridge for OW 12, type "B" (wide)	821 050 002	0.095



Clamping cartridge for OW 12, type "B" (wide)

#### ENCLOSED ORBITAL WELD HEADS



Clamping inserts for OW 12, type "B" (wide), 4 pcs.

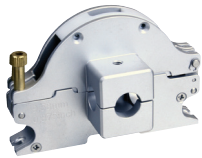
## Clamping inserts for OW 12, type "B" (wide)

Made of aluminum.

Can only be used in connection with the clamping cartridges, type "B".

One set of clamping inserts consists of 4 individual parts (2 inserts each side).

ARTICLE	TUBE OD [MM]	TUBE OD [INCH]	CODE	KG
Clamping insert for OW 12, type "B" (wide), 4 pcs.	3.00	0.118	821 002 220	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	3.18	0.125	821 002 222	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	4.00	0.157	821 002 224	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	6.00	0.236	821 002 228	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	6.35	0.250	821 002 229	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	7.00	0.276	821 002 230	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	7.94	0.313	821 002 232	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	8.00	0.315	821 002 233	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	9.00	0.354	821 002 234	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	9.53	0.375	821 002 235	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	10.00	0.394	821 002 237	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	12.00	0.472	821 002 243	0.050
Clamping insert for OW 12, type "B" (wide), 4 pcs.	12.70	0.500	821 002 245	0.050



Clamping cartridges for OW 12, type "C" (microfittings)

## Clamping cartridges for OW 12, type "C" (microfittings)

Form-closed fastening of microfittings for precise alignment.

For type "C" a separate clamping cartridge is required for each tube diameter.

Possible welding applications:

- Microfitting-to-microfitting
- Microfitting-to-tube
- Tube-to-tube

ARTICLE	TUBE OD [MM]	TUBE OD [INCH]	CODE	KG
Clamping cartridges for OW 12, type "C" (microfittings)	3.18	0.125	821 050 029	0.090
Clamping cartridges for OW 12, type "C" (microfittings)	6.00	0.236	821 050 040	0.090
Clamping cartridges for OW 12, type "C" (microfittings)	6.35	0.250	821 050 030	0.090
Clamping cartridges for OW 12, type "C" (microfittings)	8.00	0.315	821 050 041	0.090
Clamping cartridges for OW 12, type "C" (microfittings)	9.53	0.375	821 050 050	0.090
Clamping cartridges for OW 12, type "C" (microfittings)	10.00	0.394	821 050 042	0.090
Clamping cartridges for OW 12, type "C" (microfittings)	12.00	0.472	821 050 055	0.090
Clamping cartridges for OW 12, type "C" (microfittings)	12.70	0.500	821 050 060	0.090

## Other accessories for orbital welding

- ESG tungsten grinders, see page 75
- ORBmax residual oxygen meter, see page 79
- ORBIPURGE forming set, see page 82
- Hose package extensions, see page 82
- WS2 tungsten electrodes, see page 83
- Power connector adapter set, see page 83

### ENCLOSED ORBITAL WELD HEADS