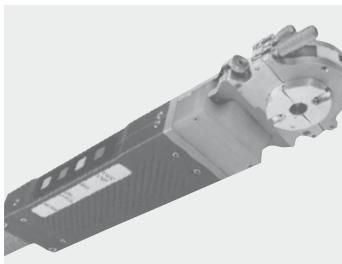




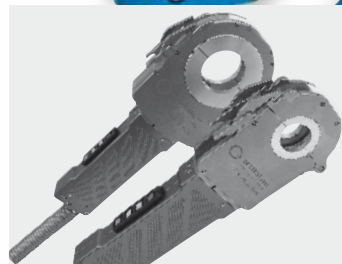
**ORBIWELD - totally enclosed, extra thin orbital tube weld heads!**



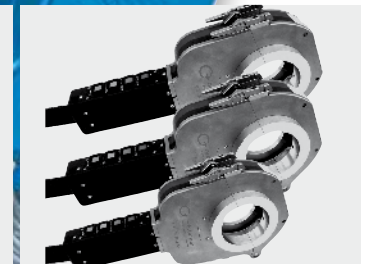
**ORBIWELD 12**  
Microweldhead for tubes from  $\varnothing$  3 - 12.7 mm (0.118 - 0.500"). The ideal solution for semiconductor industries and wherever you have extreme low clearances.



**ORBIWELD 19**  
Closed orbital weld head for tube diameters from 3 19.05 mm (0.118 - 0.750"). Extremely small yet rugged design provides very high duty cycle production rates through an integral watercooled body design.



**ORBIWELD 38S, 76S, 115S, 170S**  
Totally enclosed, extra thin orbital tube weld heads for applications with tight access restrictions.



**ORBIWELD 65, 115, 170**  
Enclosed orbital weld heads with sturdy design for highest thermal requirements.

# Overview enclosed weld heads

## Enclosed weld heads ORBIWELD / ORBIWELD S

Model		OW 12	OW 19	OW 38S	OW 65	OW 76S	OW 115	OW 115S	OW 170
Code		821 000 001	822 000 001	826 000 001	823 000 001	827 000 001	824 000 001	828 000 001	825 000 001
Tube Ø	[mm]	3 - 12,7	3 - 19,05	3 - 39	6 - 70	6 - 77	20 - 115	20 - 115	50 - 170
	[inch]	1/8 - 5	1/8 - 7.5	1/8 - 1.5	1/4 - 2.5	1/4 - 3	3/4 - 4.5	3/4 - 4.5	2 - 6
Rotor Ø	[mm]	40	58	82	129	122	183	191	252
	[inch]	1.575	2.283	3.228	5.079	4.803	7.205	7.520	9.921

## Electrode lengths/diameter for enclosed weld heads

Model	OW 12		OW 19		OW 38S		OW 65		OW 76S		OW 115		OW 115S		OW 170	
	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]
Rotor Ø	40,00	1.575	58,00	2.283	82,00	3.228	129,00	5.079	122,00	4.803	183,00	7.204	191,00	7.520	252,00	9.921
Tungsten Electrode Ø	1,0	0.039	1,6	0.063	1,6	0.063	1,6	0.063	1,6	0.063	1,6	0.063	1,6	0.063	1,6	0.063
Tube Ø	Electrode length min. - max. with weld head:															
	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]
	3,17	0.125	13,5	0.50	22,5	0.90	34,5	1.35								
	6,00	0.236	12,5	0.45	21,5	0.80	33,5	1.30	57,0	2.20	53,5	2.10				
	6,35	0.250	12,0	0.45	21,0	0.80	33,0	1.30	56,5	2.20	53,0	2.05				
	8,00	0.315	11,5	0.45	20,5	0.80	32,5	1.25	56,0	2.20	52,5	2.05				
	9,53	0.375	10,5	0.40	19,5	0.75	31,5	1.20	55,0	2.15	51,5	2.00				
	10,00	0.394	10,5	0.40	19,5	0.75	31,5	1.20	55,0	2.15	51,5	2.00				
	10,20	0.402	10,0	0.40	19,0	0.75	31,0	1.20	54,5	2.15	51,0	2.00				
	12,00	0.472	9,5	0.35	18,5	0.70	30,5	1.20	54,0	2.10	50,5	1.95				
	12,70	0.500	9,0	0.35	18,0	0.70	30,0	1.15	53,5	2.10	50,0	1.95				
	13,00	0.512			18,0	0.70	30,0	1.15	53,5	2.10	50,0	1.95				
	13,50	0.531			17,5	0.65	29,5	1.15	53,0	2.05	49,5	1.95				
	15,88	0.625			16,5	0.65	28,5	1.10	52,0	2.00	48,5	1.90				
	16,00	0.630			16,5	0.60	28,5	1.10	52,0	2.00	48,5	1.90				
	17,20	0.677			15,5	0.60	27,5	1.05	51,0	2.00	47,5	1.85				
	18,00	0.709			15,5	0.60	27,5	1.05	51,0	2.00	47,5	1.85				
	19,00	0.748			15,0	0.55	27,0	1.05	50,5	1.95	47,0	1.85				
	19,05	0.750			14,5	0.55	26,5	1.05	50,0	1.95	46,5	1.80				
	20,00	0.787					26,5	1.00	50,0	1.95	46,5	1.80	77,0	3.00	81,0	3.15
	21,30	0.839					25,5	1.00	49,0	1.90	45,5	1.80	76,0	3.00	80,0	3.15
	22,00	0.866					25,5	1.00	49,0	1.90	45,5	1.75	76,0	2.95	80,0	3.10
	23,00	0.906					25,0	0.95	48,5	1.90	45,0	1.75	75,5	2.95	79,5	3.10
	25,40	1.000					23,5	0.90	47,0	1.85	43,5	1.70	74,0	2.90	78,0	3.05
	26,90	1.059					23,0	0.90	46,5	1.80	43,0	1.65	73,5	2.85	77,5	3.05
	28,00	1.102					22,5	0.85	46,0	1.80	42,5	1.65	73,0	2.85	77,0	3.00
	29,00	1.142					22,0	0.85	45,5	1.75	42,0	1.65	72,5	2.85	76,5	3.00
	30,00	1.181					21,5	0.80	45,0	1.75	41,5	1.60	72,0	2.80	76,0	2.95
	33,70	1.327					19,5	0.75	43,0	1.65	39,5	1.55	70,0	2.75	74,0	2.90
	35,00	1.378					19,0	0.70	42,5	1.65	39,0	1.50	69,5	2.70	73,5	2.85
	38,10	1.500					17,0	0.65	40,5	1.60	37,0	1.45	67,5	2.65	71,5	2.80
	40,00	1.575							40,0	1.55	36,5	1.40	67,0	2.60	71,0	2.75
	41,00	1.614							39,5	1.55	36,0	1.40	66,5	2.60	70,5	2.75
	42,40	1.669							38,5	1.50	35,0	1.35	65,5	2.55	69,5	2.70
	44,50	1.752							37,5	1.45	34,0	1.30	64,5	2.50	68,5	2.70
	48,30	1.902							35,5	1.40	32,0	1.25	62,5	2.45	66,5	2.60
	50,80	2.000							34,5	1.35	31,0	1.20	61,5	2.40	65,5	2.55
	51,00	2.008							34,5	1.35	31,0	1.20	61,5	2.40	65,5	2.55
	52,00	2.047							34,0	1.30	30,5	1.20	61,0	2.40	65,0	2.55
	53,00	2.087							33,5	1.30	30,0	1.15	60,5	2.35	64,5	2.50
	54,00	2.126							33,0	1.25	29,5	1.15	60,0	2.35	64,0	2.50
	60,30	2.374							29,5	1.15	26,0	1.00	56,5	2.20	60,5	2.35
	63,50	2.500							28,0	1.10	24,5	0.95	55,0	2.15	59,0	2.30
	70,00	2.756							25,0	0.95	21,5	0.80	52,0	2.00	56,0	2.20
	76,10	2.996									18,0	0.70	48,5	1.90	52,5	2.05
	76,20	3.000									18,0	0.70	48,5	1.90	52,5	2.05
	85,00	3.346											44,5	1.75	48,5	1.90
	88,90	3.500											42,5	1.65	46,5	1.80
	101,60	4.000											36,0	1.40	40,0	1.55
	104,00	4.094											35,0	1.35	39,0	1.50
	108,00	4.252											33,0	1.25	37,0	1.45
	114,30	4.500											2,5	1.15	33,5	1.30
	127,00	5.000														58,0
	129,00	5.079														57,0
	139,70	5.500														51,5
	152,40	6.000														45,0
	154,00	6.063														44,5
	165,10	6.500														38,5
	168,30	6.626														37,0

Formula: Electrode length =  $\frac{\text{Rotor } \varnothing - \text{Tube } \varnothing}{2}$  - Electrode interval (generally 1,5 mm) - 3

# Dimensions (mm) Enclosed Orbital Weld Heads

OW 12 Version A (narrow)	OW 12 Version B (wide)	ORBIWELD 19
ORBIWELD 38S	ORBIWELD 76S	ORBIWELD 115S
ORBIWELD 65	ORBIWELD 115	ORBIWELD 170

# Enclosed orbital weld heads ORBIWELD

## Microweld head ORBIWELD 12

The ideal solution for welds in the semiconductor industry and in all applications where space is very limited. Also particularly suitable for welding all common microfittings.

With its extremely compact design and different clamping cartridges, the ORBIWELD 12 microweld head offers a uniquely versatile functionality and a high power-on time previously unknown for weld heads of this size thanks to the water coolant system. With an ORBIMAT series power supply you now have a highly accurate welding system that is yet simple to handle.

- Quick change system for clamping shells.
- Remote control built into the handle.
- Extremely narrow clamping cartridges (Version A).
- Wide clamping cartridge (Version B) with exchangeable clamping shells for standard applications.
- The removable clamping cartridge enables accurate alignment with the parts to be welded, even where there is very little space.

Including 7.5 m (24.6 ft) hose package and tool set.

For cable assembly extensions see page 40.

The clamping cartridges and clamping shell shells should be ordered separately (see below).



*OW 12 with wide clamping cartridge (version B) and exchangeable clamping shells*



*OW 12 with narrow clamping cartridge (version A) especially for welding microfittings.*

Article	Tube OD [mm]	Tube OD [inch]	Code	Weight weld head [kg]	Dispatch weight [kg]
Microweld head OW 12	3,00 - 12,70	0.118 - 0.500	821 000 001	5,700	11,000

## Exchangeable clamping cartridges for OW 12 version A (narrow)

Clamping cartridges with a total width of only 12.7 mm (0.5 inch) can be supplied (version A, see below) for welding microfittings and other applications with very limited chuck lengths. For version A a separate clamping cartridge is required for every tube diameter.

Article	Tube OD [mm]	Tube OD [inch]	Code	kg
Clamping cartridge OW 12 version A narrow	3,00	0.118	821 050 101	-
Clamping cartridge OW 12 version A narrow	3,17	0.125	821 050 102	-
Clamping cartridge OW 12 version A narrow	4,00	0.157	821 050 103	-
Clamping cartridge OW 12 version A narrow	4,76	0.187	821 050 104	-
Clamping cartridge OW 12 version A narrow	4,78	0.188	821 050 105	-
Clamping cartridge OW 12 version A narrow	5,00	0.197	821 050 106	-
Clamping cartridge OW 12 version A narrow	6,00	0.236	821 050 107	-
Clamping cartridge OW 12 version A narrow	6,35	0.250	821 050 108	-
Clamping cartridge OW 12 version A narrow	7,00	0.276	821 050 109	-
Clamping cartridge OW 12 version A narrow	7,94	0.313	821 050 110	-
Clamping cartridge OW 12 version A narrow	8,00	0.315	821 050 111	-
Clamping cartridge OW 12 version A narrow	9,00	0.354	821 050 112	-
Clamping cartridge OW 12 version A narrow	9,53	0.375	821 050 113	-
Clamping cartridge OW 12 version A narrow	10,00	0.394	821 050 114	-
Clamping cartridge OW 12 version A narrow	10,10	0.398	821 050 115	-
Clamping cartridge OW 12 version A narrow	10,20	0.402	821 050 116	-
Clamping cartridge OW 12 version A narrow	10,30	0.406	821 050 117	-
Clamping cartridge OW 12 version A narrow	10,50	0.413	821 050 118	-
Clamping cartridge OW 12 version A narrow	11,00	0.433	821 050 119	-
Clamping cartridge OW 12 version A narrow	11,90	0.469	821 050 120	-



*Clamping cartridge for OW 12 Version A (schmal)*

Article	Tube OD [mm]	Tube OD [inch]	Code		kg
Clamping cartridge OW 12 microfitting	3,17	0.125	821 050 029		-
Clamping cartridge OW 12 microfitting	6,00	0.236	821 050 040		-
Clamping cartridge OW 12 microfitting	6,35	0.250	821 050 030		-
Clamping cartridge OW 12 microfitting	8,00	0.315	821 050 041		-
Clamping cartridge OW 12 microfitting	9,53	0.375	821 050 050		-
Clamping cartridge OW 12 microfitting	10,00	0.394	821 050 042		-
Clamping cartridge OW 12 microfitting	12,00	0.472	821 050 055		-
Clamping cartridge OW 12 microfitting	12,70	0.500	821 050 060		-

## Orbital weld head OW 19

Enclosed orbital weld heads for tubes and microfittings.

Extremely narrow design and yet highly durable thanks to intensive water cooling system. The small dimensions of the OW 19 weld head make it ideal for applications where space is very limited, as is often the case in the semiconductor, air and aerospace, pharmaceutical and ultra pure water supply sectors.

- The 3-part clamping mechanism ensures that the head can be clamped in the most confined spaces, as even when open no parts protrude beyond the contour of the head. Equally, an exact alignment, with no misalignment is guaranteed with the parts to be welded.
- Using the keypad built into the handle, it is possible to specify all the necessary commands to the power supply without an additional remote control.

Including 7.5 m (24.6 ft) hose package and tool set.

The clamping shell should be ordered separately.



Orbital weld head OW 19

Article	Tube OD [mm]	Tube OD [inch]	Code		Weight weld head [kg]	Dispatch weight [kg]
Orbital weld head OW 19	3,00 - 19,05	0.118 - 0.750	822 000 001		7,500	14,800

## Clamping shells set for OW 19

One set of clamping shells consists of 6 shells.

There are 2 version of clamping shells:

- Version „W“ (wide) for standard applications.
- Version „S“ (narrow) for applications in extremely conditions with low clearances.



Clamping shells set W OW 19 wide (6 pcs.)

Article	Tube OD [mm]	Tube OD [inch]	Code		kg
Clamping shells set W OW 19 wide (6pcs.)	3,00	0.118	822 002 120		-
Clamping shells set W OW 19 wide (6pcs.)	3,17	0.125	822 002 121		-
Clamping shells set W OW 19 wide (6pcs.)	3,18	0.125	822 002 122		-
Clamping shells set W OW 19 wide (6pcs.)	3,95	0.156	822 002 123		-
Clamping shells set W OW 19 wide (6pcs.)	4,00	0.157	822 002 124		-
Clamping shells set W OW 19 wide (6pcs.)	4,76	0.187	822 002 125		-
Clamping shells set W OW 19 wide (6pcs.)	4,78	0.188	822 002 126		-
Clamping shells set W OW 19 wide (6pcs.)	5,95	0.234	822 002 127		-
Clamping shells set W OW 19 wide (6pcs.)	6,00	0.236	822 002 128		-
Clamping shells set W OW 19 wide (6pcs.)	6,35	0.250	822 002 129		-
Clamping shells set W OW 19 wide (6pcs.)	7,00	0.276	822 002 130		-
Clamping shells set W OW 19 wide (6pcs.)	7,50	0.295	822 002 131		-
Clamping shells set W OW 19 wide (6pcs.)	7,94	0.313	822 002 132		-
Clamping shells set W OW 19 wide (6pcs.)	8,00	0.315	822 002 133		-
Clamping shells set W OW 19 wide (6pcs.)	9,00	0.354	822 002 134		-
Clamping shells set W OW 19 wide (6pcs.)	9,53	0.375	822 002 135		-
Clamping shells set W OW 19 wide (6pcs.)	9,95	0.392	822 002 136		-

# Enclosed Orbital Weld Heads

## Enclosed orbital weld heads ORBIWELD S

### Orbital weld heads ORBIWELD 38S, 76S, 115S, 170S

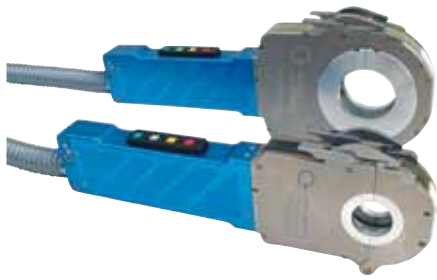
Enclosed orbital weld heads with extremely narrow design and therefore highly durable thanks to the intensive water cooling system. The small dimensions of the ORBIWELD S-weld head series make it ideal for applications where space is very limited, as is often the case in pharmaceutical and similar application sectors.

- Quick change system for clamping shells. The clamping shells are simply clipped in and out without any additional tools.
- Completely water cooled.
- Thanks to the extremely narrow design of the ORBIWELD S series, parts with short straight welding lengths can also be processed.
- Durable clamping connections in conjunction with clamping shells available for all tube dimensions guarantee that the parts to be welded are clamped securely without misalignment.
- 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.

Including 7.5 m (24.6 ft) hose package and tool set.

For cable assembly extensions see page 40.

The clamping shells should be ordered separately.



ORBIWELD 38S and ORBIWELD 76S



ORBIWELD 115S

Article	Tube OD [mm]	Tube OD [inch]	Code	Weight weld head [kg]	Dispatch weight [kg]
Orbital weld head OW 38S	3,00 - 38,10	1/8" - 1.5"	826 000 001	9,000	16,500
Orbital weld head OW 76S	6,00 - 77,00	1/4" - 3.0"	827 000 001	9,400	16,900
Orbital weld head OW 115S	20,00 - 115,00	3/4" - 4.5"	828 000 001	13,000	18,600

# Enclosed orbital weld heads ORBIWELD

## Orbital weld heads ORBIWELD 65, 115, 170

The ORBIWELD series is characterized by very high thermal load bearing capacity: It is therefore particularly suitable for applications in the chemical, pharmaceutical, and food industry, where ever greater demands are made on the closed weld heads by ever greater tube diameters and wall thicknesses.

Coolant channels running through the entire weld head body have provided for excellent heat dissipation that enable the ORBIWELD weld heads to work continuously even at high welding currents and intensive load. The closed design of the ORBIWELD series and the gas management system of the head ensure a permanent infiltration of the weld seam with during welding with insert gas, guaranteeing seams that are very low in welding colors.

- Quick change system for clamping shells. The clamping shells are simply clipped in and out without any additional tooling.
- Completely water cooled.
- Stable clamp connections in conjunction with clamping shells available for all tube dimensions guarantee secure clamping and centering of the parts to be welded without misalignment.
- 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.

Including 7.5 m (24.6 ft) hose package and tool set.

For cable assembly extensions see page 40.

The clamping shells should be ordered separately.



ORBIWELD 115

Article	Tube OD [mm]	Tube OD [inch]	Code	Weight weld head [kg]	Dispatch weight [kg]
Orbital weld head OW 65	6,00 - 70,00	1/4" - 2.5"	823 000 001	13,100	20,600
Orbital weld head OW 115	20,00 - 115,00	3/4" - 4.5"	824 000 001	15,100	22,600
Orbital weld head OW 170	50,00 - 170,00	2.0" - 6.0"	825 000 001	20,700	36,200

## Enclosed Orbital Weld Heads