

HX 12P, HX 25P

NEW

Closed orbital weld heads

Weld stainless steel tubes economically and with high quality with the TIG procedure:

The worldwide unique HX orbital weld heads with their automated welding technology are THE solution for an efficient as well as high-quality production. Pre-mounted tube elbows such as in heat exchanger production, even in narrow tube bundles, can be connected reliably, quickly and securely with stainless steel tubes.



Dramatically shorter welding times Welding times 30 s per tube	✓
Up to 250 welds per head and shift	✓
50% less preparation time in contrast to manual work	✓
Tube spacings: HX 12P: Below 40 mm (1:57") HX 25P: Below 60 mm (2:36")	✓
For tube outer diameters: HX 12P: 9.5 ... 13.3 mm (0.37" ... 0.52") HX 25P: 18.0 ... 25.4 (0.71" ... 1:00")	✓
Highly resilient through liquid-cooled rotor housing	✓
Horizontal, lateral and inclined welding position possible	✓
Very robust and ergonomic design	✓
Best welding results even with semi-skilled personnel	✓

In addition to the HX 12P and HX 25P, this series also includes the HX 16P.

The welding of tube elbows in heat exchanger production is laborious for a manual welding procedure. In the long run it is also not ensured that the welder reaches a constantly high quality and thus achieves sealing of all tube elbows. This results in expensive rework and high reject rates.

While conventional weld heads require a lot of space between the tubes for positioning, the narrow HX heads allow for very compact heat exchangers with high tube density and thus a high degree of effectiveness to be achieved. Tube spacings under 40 mm (1.57") are possible with the HX 12P and under 60 mm (2.36") with the HX 25P.

Handling is also easy: The HX head is swiveled open, laid around the tube and fixated pneumatically self-retaining at the push of a button. A limit stop with rough and fine adjustment helps with secure

positioning at the tube. After the starting process the water-cooled head is flooded with argon gas and welding takes place automatically in consistent quality. The Orbitalum system ensures a clean weld penetration completely without recess, gaps or grates inside the tube. Clamping and starting is carried out via the button at the weld head.

Best welding results - even with semi-skilled personnel

The Orbitalum welding power sources automatically detect the connected HX head with its provided parameters, so that the operator only has to call up their specified welding program and start the process before beginning to weld. Working with the Orbitalum system is so easy and reliable that even semi-skilled operators achieve top welding results. Practice has shown that with the Orbitalum system the reject rate is reduced from 4% to below 0.7%. Another advantage: An operator can operate multiple weld heads at the same time – which significant-

ly increases the manufacturing efficiency. The closed weld chamber and continuous process also result in no annealing colors arising, so that expensive rework such as pickling or passivating is generally not required.

Compact design results in simple handling.

In contrast to open weld heads, all connections for current, gas and cooling water are integrated in the HX head. For good handling the Orbitalum heads are connected with a 7.5 m long, flexible hose with the welding power supply. The HX 12P and HX 25P furthermore impresses with a very straight design, which allows for easy rotation of the head at the heat exchanger. The entire unit can be hung on a balancer to relieve the operator.



Extremely narrow design - ideal for welding pre-mounted arcs in narrow tube bundles
 Including pneumatic box



Optionally available:
 Diameter-specific
 Clamping inserts



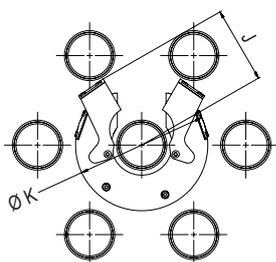
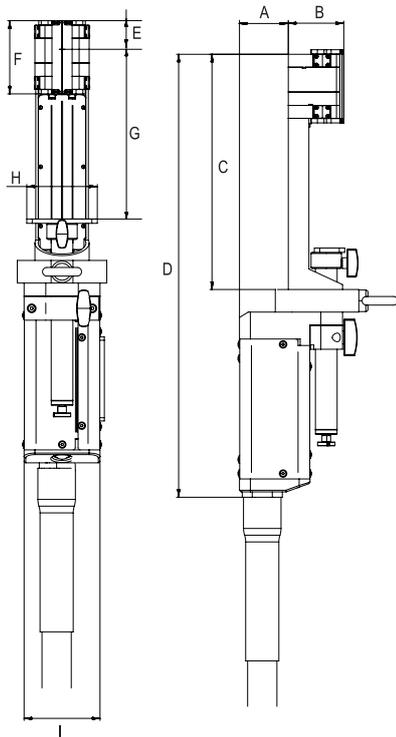
Optionally available:
 Ground cable



Optionally available:
 Adjustable bar pressure reducer
 for argon



The perfect supplement: Orbital
 welding power sources ORBIMAT
 for argon



APPLICATION AREA	HX 12P	HX 25P	
Code	847 000 010	845 000 010	
Tube OD, min. - max.*	9.5 - 13.3 mm/0.374" - 0.524"	18.0 - 25.4 mm/0.708" - 1.000"	
Wall thickness, min. - max.	0.5 - 0.8 mm/0.02" - 0.03"	0.5 - 1.0 mm/0.016" - 0.039"	
TECHNICAL SPECIFICATIONS	HX 12P	HX 25P	
Electrode diameter	1.6 mm/0.063"	1.6 mm/0.063"	
Machine weight including hose package	6.4 kg/14.1 lbs	18.5 kg/40.8 lbs	
Hose package length	7.5 m/24.6 ft	7.5 m/24.6 ft	
TECHNICAL SPECIFICATIONS	PNEUMATICS BOX	PNEUMATICS BOX	
Input medium	Argon	Argon	
Recommended input pressure	6 bar / 87 PSI	6 bar / 87 PSI	
DIMENSIONS	HX 12P	HX 25P	
	[mm]	[inch]	[mm]
Dimension "A"	45.0	1.772	62.0
Dimension "B"	52.0	2.047	68.0
Dimension "C"	219.0	8.622	278.0
Dimension "D"	412.0	16.220	496.0
Dimension "E" (electrode), min.	30.0	1.181	35.0
Dimension "F"	70.0	2.756	80.0
Dimension "G" to max.	155.0	7.283	210.0
Dimension "H"	65.0	2.559	80.0
Dimension "I"	70.0	2.756	100.0
Dimension "J" (Ø)	33.0	1.299	43.0
Dimension "K"	50.0	1.969	72.0
SCOPE OF DELIVERY	HX 12P	HX 25P	
Orbital weld head of the HX series	PCS. 1	1	
transport case	PCS. 1	1	
Pneumatics box	PCS. 1	1	
Supply hose (2 m/6.56 ft) for pneumatics box	PCS. 1	1	
Swivel bracket pair	Pair 1	1	
Elbow stop	PCS. 1	1	
Tool set	set 1	1	
Operating instructions and spare part list	set 1	1	
SUITABLE ACCESSORIES:			
Optionally available:	<ul style="list-style-type: none"> • Clamping inserts • Bar pressure reducer "Argon" • Ground cable • WS2 tungsten electrodes • ESG electrode grinders 		

Technical specifications are non-binding. They do not constitute any assurance of properties. We reserve the right to make changes.

* Other dimensions on request





HX 12P / HX 25P



HX 16P



Pneumatics box
(included in the scope of delivery of the HX heads)

Closed orbital weld heads

HX 12P, HX 16P, HX 25P

Properties, application area, technical specifications and delivery scope, see page 52 and page 54.

The following accessories are mandatory for the use of the HX orbital weld heads and must be ordered separately:

- Clamping inserts, see page 57
- Ground cable, see page 93
- Bar pressure reducer "Argon", see page 57

ITEM	CODE	MACHINE WEIGHT KG*	SHIPPING WEIGHT KG
Orbital weld head HX 12P	847 000 010	6.400	14.100
Orbital weld head HX 16P	848 000 010	5.900	16.600
Orbital weld head HX 25P	845 000 010	18.500	40.800

* Machine weight including hose package

Suitable accessories (optionally available):

- Clamping inserts, see page 57
- Bar pressure reducer "Argon", see page 57
- Ground cable, see page 93
- WS2 tungsten electrodes, see page 94
- ESG electrode grinders, see page 86
- Welding current connection adapter set, see page 95

CLOSED ORBITAL WELD HEADS