HX 12P, HX 25P

NEW

Closed orbital weld heads

Weld stainless steel pipes 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 pipe bundles, can be connected reliably, quickly and securely with stainless steel pipes.



- **Dramatically shorter welding times** Welding times 30 s per pipe ✓
- **Up to 250 welds** per head and shift ✓
- **50% less preparation time** in contrast to manual work ✓
- **Pipe spacings:** HX 12P: Below 40 mm (1:57") HX 25P: Below 60 mm (2:36") ✓
- **For pipe 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 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. Pipe 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 pipe 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.

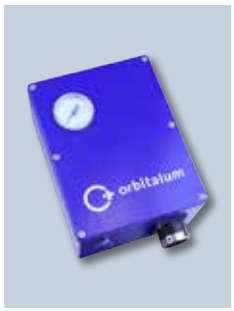
Best welding results - even with semi-skilled personnel
The Orbitalum welding power sources automatically detect the connected HX head with its provided parameters, so that the operator only has to call up their specified welding program and start the process before beginning to weld. Working with the 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 significantly 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.

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Extremely narrow design - ideal for welding pre-mounted arcs in narrow pipe bundles



Including pneumatic box



Optionally available: Diameter-specific Clamping inserts



Optionally available: Ground cable



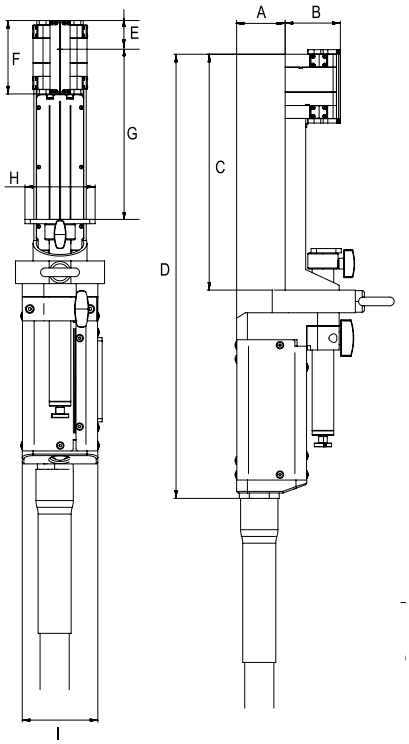
Optionally available: Adjustable bar pressure reducer for argon

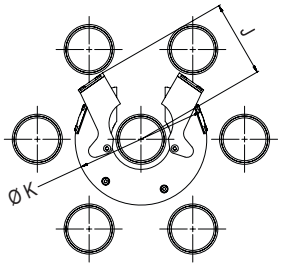


The perfect supplement: Smart Welder Plus Plus









APPLICATION AREA		HX 12P		HX 25P	
Code		847 000 010		845 000 010	
Pipe 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]	[inch]
Dimension "**A**"		45.0	1.772	62.0	2.441
Dimension "**B**"		52.0	2.047	68.0	2.677
Dimension "**C**"		219.0	8.622	278.0	10.945
Dimension "**D**"		412.0	16.220	496.0	19.528
Dimension "**E**" (electrode), min.		30.0	1.181	35.0	1.378
Dimension "**F**"		70.0	2.756	80.0	3.150
Dimension "**G**" to max.		155.0	7.283	210.0	8.268
Dimension "**H**"		65.0	2.559	80.0	3.150
Dimension "**I**"		70.0	2.756	100.0	3.937
Dimension "**J**" (Ø)		33.0	1.299	43.0	1.693
Dimension "**K**"		50.0	1.969	72.0	2.835
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:		• 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



Closed orbital weld heads

HX 12P, HX 16P, HX 25P



HX 12P / HX 25P



HX 16P



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

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

- Clamping inserts
- Ground cable
- Bar pressure reducer "Argon"

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
- Bar pressure reducer "Argon"
- Ground cable
- WS2 tungsten electrodes
- ESG electrode grinders
- Welding current connection adapter set
- Balancer spring

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Accessories for HX

Clamping inserts

Made of stainless steel.
Two clamping inserts are required for each tube diameter.
Further dimensions on request.



Clamping inserts

ITEM	TUBE OD		FOR HX 12P		FOR HX 16P		FOR HX 25P	
	[MM]	[INCH]	CODE	KG	CODE	KG	CODE	KG
Clamping insert	9.50	0.374	**847 002 020**	0.018	-	-	-	-
Clamping insert	11.00	0.433	**847 002 027**	0.003	-	-	-	-
Clamping insert	12.00	0.472	**847 002 021**	0.018	-	-	-	-
Clamping insert	12.40	0.488	**847 002 026**	0.002	-	-	-	-
Clamping insert	12.43	0.489	**847 002 024**	-	-	-	-	-
Clamping insert	12.70	0.500	**847 002 023**	0.018	-	-	-	-
Clamping insert	13.30	0.524	**847 002 025**	0.002	-	-	-	-
Clamping insert	15.00	0.591	-	-	**848 002 303**	0.005	-	-
Clamping insert	15.75	0.620	-	-	**848 002 305**	0.004	-	-
Clamping insert	15.88	0.625	-	-	**848 002 306**	0.002	-	-
Clamping insert	16.00	0.630	-	-	**848 002 307**	0.002	-	-
Clamping insert	16.20	0.638	-	-	**848 002 308**	0.002	-	-
Clamping insert	16.30	0.642	-	-	**848 002 309**	0.002	-	-
Clamping insert	16.50	0.650	-	-	**848 002 310**	0.002	-	-
Clamping insert	16.60	0.654	-	-	**848 002 311**	0.002	-	-
Clamping insert	18.00	0.709	-	-	-	-	-	-
Clamping insert	19.05	0.750	-	-	-	-	-	-
Clamping insert	20.00	0.787	-	-	-	-	**845 002 210**	-
Clamping insert	22.00	0.866	-	-	-	-	**845 002 208**	-
Clamping insert	22.22	0.875	-	-	-	-	**845 002 214**	-
Clamping insert	23.00	0.906	-	-	-	-	**845 002 211**	-
Clamping insert	25.00	0.984	-	-	-	-	**845 002 209**	-
Clamping insert	25.40	1.000	-	-	-	-	**845 002 212**	-

Bar pressure reducer "Argon"

Adjustable bar pressure reducer for argon for pneumatic clamping of the HX.



Bar pressure reducer "Argon"

TECHNICAL SPECIFICATIONS	BAR PRESSURE REDUCER "ARGON"
Max. input pressure	230 bar
Output pressure	0 - 10 bar
Bottle connection	W21.8x1/14"
Hose connection	G 1/4"

ITEM	CODE	KG
Bar pressure reducer "Argon"	**888 000 006**	1.428

Other accessories for orbital welding

- ESG electrode grinders
- ORBmax residual oxygen meter
- WS2 tungsten electrodes
- Welding current connection adapter set

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