

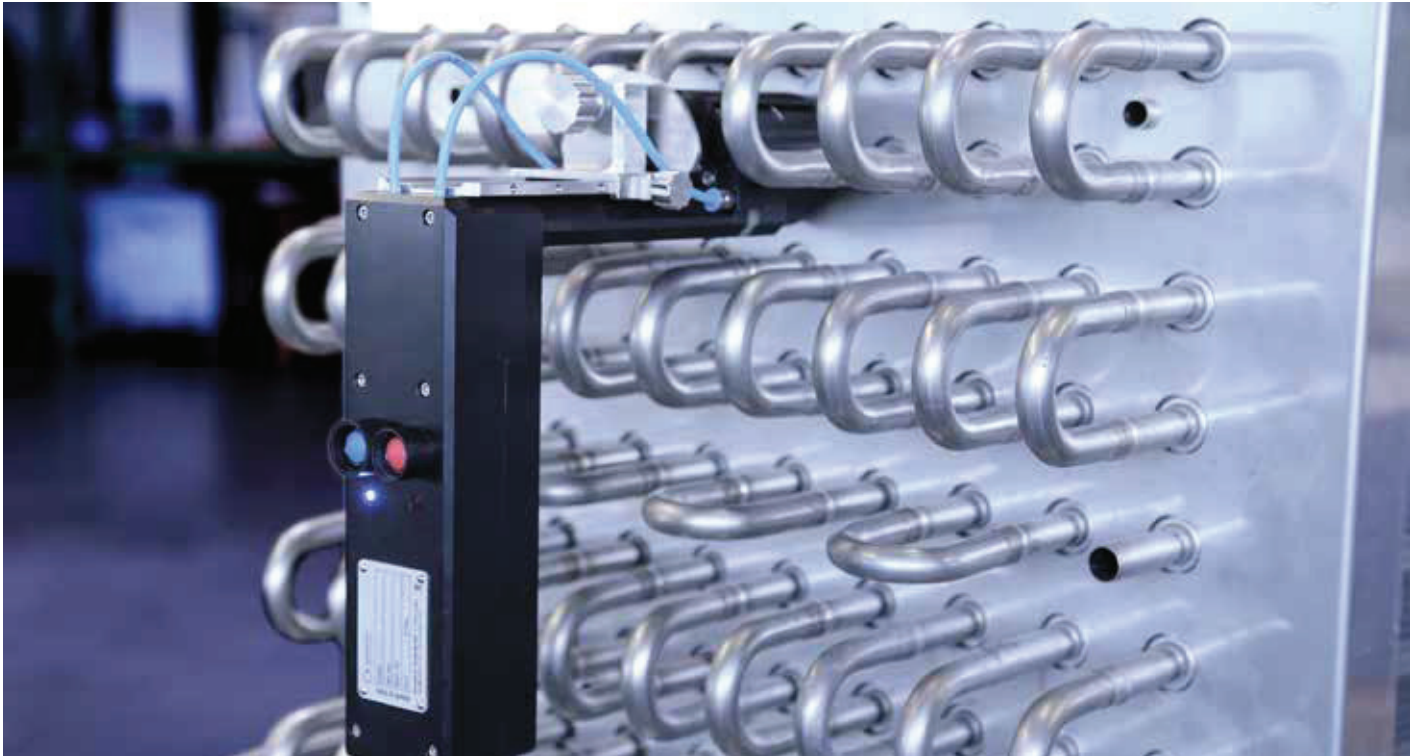
HX 16P, HX 22P

Enclosed orbital weld heads

The orbital weld heads HX for compact cooling systems are setting new standards!

"HX" stands for "heat exchanger" and for the welding of pre-mounted elbows in tight pipe bundles of heat exchangers into a pipe coil.

There is no other solution as effective as this one in the world!



Due to their compact size, all fully closed or open orbital weld heads commonly available on the market are not suitable for being positioned between the individual pipes of finned heat exchangers.

The HX series scores points in the areas of economy and efficiency when compared to conventional weld heads: The pipe ends of a heat exchanger can be fully fitted with elbows before joining and then welded in any order. For conventional orbital weld heads, the principle of fit elbow, weld, fit elbow, weld etc. applies, always starting from the center of the pipe sheet and working outward. If quality testing reveals a faulty weld later on, all elbows must be disconnected and new ones must be welded on in the worst case scenario (fault in the middle of the bundle) due to the accessibility factor. With the HX head, only the affected elbow would have to be replaced.

This design-based advantage also makes the Orbitalum system the ideal tool for unbeatably cost-effective repairs.

In contrast to open weld heads with a cumbersome hose assembly, all connections for power, gas and cooling liquid are permanently integrated in the HX.

All orbital welding power sources from Orbitalum automatically detect the head and its properties so that the operator only has to call up his or her specified jointing program and start the joining process before beginning to weld.

Traditionally, complex heat exchangers for cooling systems were made of copper and soldered with the pipe elbows. The high price of copper prompted manufacturers to switch over to stainless steel for production. Stainless steel can only be joined economically, reliably

and in high quality with tungsten inert gas (TIG) welding in conjunction with mechanized orbital welding.

FURTHER FEATURES:

- Pneumatic clamping system for easy mounting on the pipe elbow
- Highly durable thanks to liquid-cooled rotor housing
- Horizontal, vertical and tilted welding positions are possible
- Very robust and ergonomic design
- Fast and easy mounting at the tube
- Self-retaining weld head thanks to the patented fixation mechanism via pistons which saves up to 80% of the preparation time
- External stop for adjusting the electrode position



HX 16P



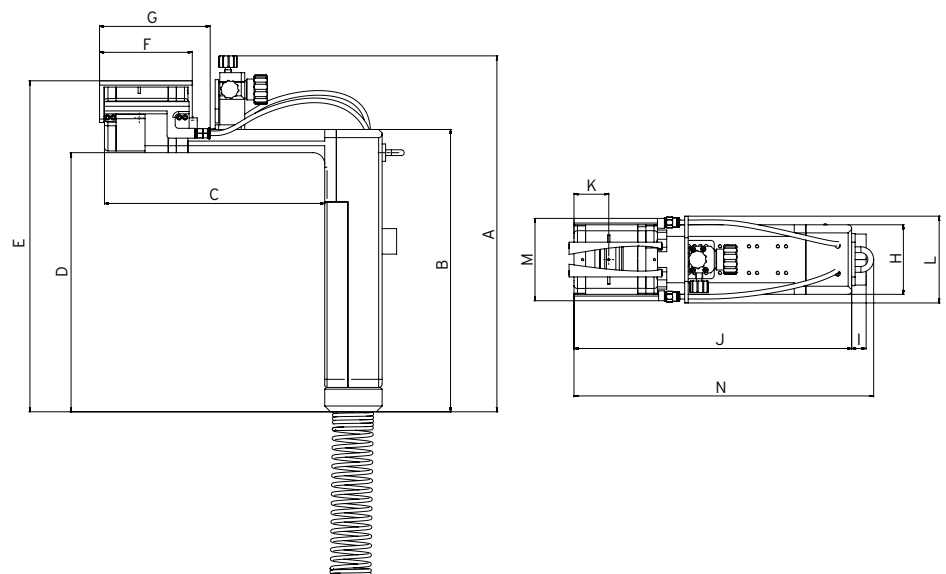
HX 22P



Pneumatic box

APPLICATION RANGE	HX 16P	HX 22P		
Code	848 000 010	846 000 010		
Tube OD, min. - max.*	15.0 - 16.8 mm 0.591" - 0.661"	18.0 - 22.0 mm 0.709" - 0.866"		
TECHNICAL DATA	HX 16P	HX 22P		
Electrode Ø	1.6 mm 0.063"	1.6 mm 0.063"		
Machine weight including hose package	5.9 kg 13.0 lbs	5.9 kg 13.0 lbs		
Hose package length	7.5 m 24.6 ft	7.5 m 24.6 ft		
TECHNICAL DATA	PNEUMATIC BOX			
Input	Argon			
Recommended input pressure	8 bar/116PSI			
SCOPE OF DELIVERY	Including: <ul style="list-style-type: none"> • 1 Enclosed orbital weld head HX 16P or HX 22P • 1 Durable storage and shipping case • 1 Pneumatic box • 1 Supply hose (3 m/9.84 ft) for pneumatic box • 1 Pivoting arm (set) for pipes up to OD 16.80 mm (0.661") • 1 Elbow stop • 1 Sheet stop alignment kit • 1 Tool set • 1 Operating instructions and spare parts list 			
Suitable accessories (available option):	<ul style="list-style-type: none"> • Clamping inserts • Bar pressure regulator Argon • Earth cable • WS2 tungsten electrodes • ESG tungsten grinders 			
DIMENSIONS	HX 16P		HX 22P	
	[mm]	[inch]	[mm]	[inch]
Dimension "A"	307.00	12.087	305.50	12.028
Dimension "B"	243.50	9.587	242.00	9.528
Dimension "C"	190.00	7.480	190.00	7.480
Dimension "D"	223.50	8.799	223.50	8.799
Dimension "E"	285.50	11.240	285.50	11.240
Dimension "F"	80.00	3.150	80.00	3.150
Dimension "G"	95.45	3.758	97.30	3.831
Dimension "H"	60.00	2.362	60.00	2.362
Dimension "I"	12.50	0.492	12.50	0.492
Dimension "J"	239.50	9.429	239.50	9.429
Dimension "K"	30.00	1.181	30.00	1.181
Dimension "L"	74.85	2.947	74.85	2.947
Dimension "M"	71.00	2.795	77.00	3.031
Dimension "N"	258.50	10.177	258.80	10.189

* Other dimensions on request



The technical data are not binding. They are not warranted characteristics and are subject to change. Please consult our general conditions of supply.

Enclosed orbital weld heads

HX 16P, HX 22P

Features, application range, technical data and scope of delivery, see page 43.

The following accessories are essentially required for operating the HX enclosed orbital weld heads and must be ordered separately:

- Clamping inserts, see page 46
- Earth cable, see page 82
- Bar pressure regulator "Argon", see page 46

ARTICLE	CODE	WEIGHT OF MACHINE KG*	DISPATCH WEIGHT KG
Enclosed orbital weld head HX 16P	848 000 010	5,900	16,600
Enclosed orbital weld head HX 22P	846 000 010	5,900	16,600

* Machine weight including hose package

Suitable accessories (available option):

- Clamping inserts, see page 46
- Bar pressure regulator "Argon", see page 46
- Earth cable, see page 82
- WS2 tungsten electrodes, see page 83
- ESG tungsten grinders, see page 75



HX 16P



HX 22P



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

ENCLOSED ORBITAL WELD HEADS



Clamping inserts

Accessories for HX

Clamping inserts

Made of stainless steel.
2 clamping inserts for each dimension are required.

ARTICLE	PIPE OD [MM]	PIPE OD [INCH]	FOR HX 16P		FOR HX 22P		
			CODE	KG	CODE	KG	KG
Clamping insert	12.70	0.500	848 002 301	0.006	-	-	-
Clamping insert	13.30	0.542	848 002 302	0.006	-	-	-
Clamping insert	15.00	0.591	848 002 303	0.005	-	-	-
Clamping insert	15.50	0.610	848 002 304	0.004	-	-	-
Clamping insert	15.75	0.620	848 002 305	0.004	-	-	-
Clamping insert	15.80	0.622	848 002 313	0.003	-	-	-
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	16.80	0.661	848 002 314	0.002	-	-	-
Clamping insert	18.00	0.709	-	-	846 002 201	-	0.010
Clamping insert	19.05	0.750	-	-	846 002 202	-	0.009
Clamping insert	20.00	0.787	-	-	846 002 203	-	0.008
Clamping insert	22.00	0.866	-	-	846 002 204	-	0.006
Clamping insert	22.22	0.875	-	-	846 002 205	-	0.005



Bar pressure regulator "Argon"

Bar pressure regulator "Argon"

Adjustable bar pressure regulator for Argon for pneumatic clamping of the HX 16P and HX 22P.

TECHNICAL DATA	BAR PRESSURE REGULATOR "ARGON"
Inlet pressure (max.)	230 bar
Outlet pressure	0 - 10 bar
Gas cylinder connection	W21.8x1/14"
Hose connection	G 1/4"

ARTICLE	CODE	KG
Bar pressure regulator "Argon"	888 000 006	1.428

Other accessories for orbital welding

- ESG tungsten grinders, see page 75
- ORBmax residual oxygen meter, see page 79
- WS2 tungsten electrodes, see page 83