

P16, P16 AVC, P20

Tube-to-tube-sheet orbital weld heads

Our P series is characterized by special design features intended to ensure easy handling combined with a high level of economy and functionality.

With extreme precision, these tube-to-tube-sheet orbital weld heads will produce several thousand weld seams at constant quality.



Tube-to-tube-welding on large-scale heat exchanger with highest precision and efficiency

Easy handling and a maximum of functionality

Water-cooled weld head up to 30° freely pivotable

With this TIG weld heads, it is no longer a problem to weld tubes to tubesheets with the highest of accuracy and consistent quality

Its water cooling is fed right to the TIG burner head, which ensures more precise working and consistent quality of the welding process, as well as extending the power-on time. The burner head can be pivoted freely by up to 30° - this function is valuable, for instance, on tubes that are entering tubesheets at an angle or in restricted spaces.

ADDITIONAL FEATURES:

- Completely water-cooled weld head housing (P16/P16 AVC only)
- Burner head can be pivoted freely by up to 30° (reduced diameter range)

- Weld seam geometries: Recessed, flush and protruded tubes
- Current transmission via multi-plate clutch
- Gas/water transmission via rotating coupling
- Three-point mounting made of stainless steel
- Manually electrode positioning
Stroke +/- 5 mm
- Special burner heads adaptable, e.g. for box-header welding (P16, P16 AVC only) or for IBW/internal bore welding (with/without cold wire)
- Positioning on the tube to be welded is by means of a centering tool that is placed on a retaining arbor (available option)
- The weld heads with integrated cold wire unit additionally include a retaining mechanism for $\varnothing 100$ mm/1 kg (3.937"/2.2 lbs) standard wire reels

- Revolving wire feed on the rotational axis of the TIG burner prevents the additional wire from twisting when it exits the wire nozzle (only P16/P16 AVC)
- Three-point mounting included
- 7.5 m (24.6 ft) hose package and tool set included

ADDITIONAL FEATURES P16 AVC:

- Equipped with an electric arc voltage control (AVC) - only applicable in combination with the orbital welding power supply ORBIMAT 300 CA AVC/OSC
- Cold wire unit included

APPLICATION RANGE		P16	P16 AVC	P20
Code	with cold wire unit	831 000 001	831 000 002	832 000 002
	without cold wire unit	831 000 003	831 000 004	832 000 001
From tube ID to tube OD		10 - 78 mm*	12 - 100 mm*	10 - 70 mm*
		0.394" - 3.071"*	0.470" - 3.937"*	0.394" - 2.756"*
TECHNICAL DATA		P16	P16 AVC	P20
Weight of machine	with cold wire unit	17.5 kg	18.3 kg	12.75 kg
	without cold wire unit	38.6 lbs	40.3 lbs	28.1 lbs
		16.2 kg	-	11.5 kg
		35.7 lbs		25.4 lbs
Weight of cold wire unit		1.0 kg	1.0 kg	1.0 kg
		2.2 lbs	2.2 lbs	2.2 lbs
Cold wire unit Ø		1.0 kg	1.0 kg	100 mm
		2.2 lbs	2.2 lbs	3.937"
Hose package length		7.5 m	7.5 m	7.5 m
		24.6 ft	24.6 ft	24.6 ft
SCOPE OF DELIVERY				
Including:		<ul style="list-style-type: none"> • 1 Tube-to-tube-sheet orbital weld head P16, P16 AVC or P20 • 1 Three-point mount • 1 Durable storage and shipping case • 1 Tool set • 1 Operating instructions and spare parts list 		
Suitable accessories (available option):		<ul style="list-style-type: none"> • Centering tools and retaining arbors • Special torches (e.g. for boxheader or internal bore welding (IBW)) • Cold wire feed units (retrofit kits) • Spring balancers • Closed gas covers • Front cages • Pneumatic centering devices • Pneumatic centering tools • ESG tungsten grinders • Earth cable • Hose package extensions • Pressure regulator • Inspection set • WS2 tungsten electrodes 		
DIMENSIONS		P16	P16 AVC	P20
Dimension "A"		182.97 mm	187.05 mm	175.00 mm
		7.204"	7.364"	6.890"
Dimension "B"		427.25 mm	427.25 mm	400.00 mm
		16.821"	16.821"	15.748"
Dimension "C"		344.00 mm	344.00 mm	331.40 mm
		13.543"	13.543"	13.047"
Dimension "D"		80.00 mm	80.00 mm	72.00 mm
		3.150"	3.150"	2.835"
Dimension "E"		95.50 mm	95.50 mm	87.50 mm
		3.760"	3.760"	3.445"
Dimension "F"		466.00 mm	582.00 mm	461.16 mm
		18.346"	22.913"	18.156"

* Smaller and larger dimensions on request.



P16



P20

