



网带式气体保护连续钎焊炉

Mesh-belt controlled atmosphere continuous brazing furnace

据统计,全世界80%的空调压缩机储液器由奥杰钎焊炉进行钎焊,国际著名空调生产厂家,如松下、东芝、三菱、日立、LG、TCL、美的、海尔、格力、格兰仕等都使用奥杰公司生产的钎焊炉。在空调制冷行业,奥杰钎焊炉已经占有超过70%的国内市场份额,不仅仅是空调压缩机储液器,而且还有各种阀体、管件的钎焊。奥杰钎焊正在为全世界制造用户满意的产品。

自1998年奥杰制造出中国第一台可钎焊汽车用不锈钢燃油分配器的网带式气体保护连续钎焊炉以来,奥杰钎焊炉已被包括日本丰田、联合电子(博士)、美国德尔福、日本山清、上海大众、一汽大众、东风汽车、安徽合力潍坊柴油机厂、无锡柴油机厂、大连柴油机厂等知名企业及其供应商选用,在汽车及柴油机制造行业内享有极高的声誉。

According to statistics, 80% of accumulators for air conditioning compressors in the world are brazed in Aojie Brazing Furnace. The suppliers of world famous air conditioning manufactures such as Panasonic, Toshiba, Mitsubishi, Hitachi, LG, TCL, Midea, Haier, Gree, and Galanz ect. Have all selected Aojie brazing furnaces. In the industries of air conditioning and refrigeration, Aojie Brazing Furnaces have occupied over 70% domestic market share. They are not only used for brazing air conditioning compressors but also for brazing various valves and pipes. Aojie brazing Furnaces are brazing products to our customers satisfaction worldwide.

Aojie made its first mesh-belt controlled atmosphere, continuous brazing stainless steel fuel distributor for the automotive industry. The brazing furnaces made by have been selected for use by the enterprise of Toyota, United Electronics (Bosch), US Delphi, Japan YAMASEI, Shanghai Volkswagen, FAW-Volkswagen, Dongfeng Automobile, Anhui HeLi, Wuxi Diesel Engine Works, Weichai Power and Deutz Dalian Diesel Engine Plant, etc. Aojie brazing furnaces have earned a great reputation in the automobile and diesel engine manufacturing industry.

主要用途 Main use

广泛地应用于汽车、柴油车、航空、航天、空调制冷、燃气热水器、电水壶、豆浆机、板式换热器等行业的不锈钢、碳钢、紫铜、黄铜、铝、陶瓷等零件的钎焊及光亮退火,固熔等。

The continuous brazing furnace is widely used for stainless steel, carbon steel, brass, copper, ceramic parts brazing and

bright treatment in industrial of automobile, diesel engine, aero-space aviation, air conditioning refrigeration, gas water heater, electron and electric kettle, soybean milk machine, plate heat exchanger etc.

型号 Model	RCWE 12-13×180×8	RCWE 12-18×260×16	RCWE 12-22×260×16	RCWE 12-22×300×16	RCWE 9-31×280×30	RCWE 12-31×300×16	RCWE 12-31×300×22	RCWE 12-35×350×20
功率 Rated Power(kw)	30	45	60	60	90	90	100	100
最高工作温度 Max. Operating Temperature	1150	1150	1150	1150	950	1150	1150	1150
网带宽度 Belt Width(mm)	130	180	220	220	310	310	310	350
工作区尺度 Chamber Dimension (W×L×Hm)	160×180×80	210×260×160	260×260×160	260×300×160	350×280×300	350×300×160	350×300×220	390×350×200
保护气种类 Protective Atmosphere	氮分解气, 放热式气, 氮氢混合物, 纯氢气, 纯氮气 EXOTHERMIC, DISSOCIATED AMMONIA, MIXED NITROGEN HYDROGEN, PURE HYDROGEN, PURE NITROGEN							
型号 Model	RCWE 12-40×350×24	RCWE 9-42×350×30	RCWE 12-42×450×16	RCWE 12-45×450×16	RCWE 12-45×350×30	RCWE 6-58×650×10	RCWE 12-60×460×16	RCWE 12-65×450×14
功率 Rated Power(kw)	110	120	120	145	145	168	150	200
最高工作温度 Max. Operating Temperature	1150	950	1150	1150	1150	650	1150	1150
网带宽度 Belt Width(mm)	400	420	420	450	450	580	600	650
工作区尺度 Chamber Dimension (W×L×Hm)	450×350×245	460×350×300	490×450×160	490×450×160	490×350×300	630×650×100	660×460×160	700×450×140
保护气种类 Protective Atmosphere	氮分解气, 放热式气, 氮氢混合物, 纯氢气, 纯氮气 EXOTHERMIC, DISSOCIATED AMMONIA, MIXED NITROGEN HYDROGEN, PURE HYDROGEN, PURE NITROGEN							



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特点:

- 加热马弗的最新设计取得了国家专利，材料选用瑞典产含稀土元素的耐热不锈钢，机构合理，热变形小，提高了使用寿命，在正常工作条件下（炉温1120℃），使用寿命可达1.5年以上，炉温在950℃以下时，其使用寿命不大于3年。
- 冷却段采用内马弗与冷却水套焊接焊缝分离技术，保证了冷却马弗不漏水，此项技术已获国家专利。
- 冷却段马弗内可选配安装热交换器，大大提升工件的冷却速度。
- 可选配自动充氮装置，防止在保护气欠压或停电时，炉膛内保护气氛不足而造成的设备及工件氧化。
- 加热区控制采用无极调压，保证炉温持续稳定。
- 选用进口炉衬材料，降低耗能。
- 独特的防爆设计及多种报警连锁，保证钎焊炉安全运行。

水、气路系统

Water, gas system



Features:

- Longer muffle span: Patented heating muffle is guaranteed for 1.5 years under normal condition (1120℃) and 3 years for lower temperature (less than 950℃).
- Cooling muffle is under the examination and approval for invention patent, and guarantees the muffle does not leak.
- Cooling section with heat exchanger greatly improves cooling speed.
- The automatic nitrogen charging device protects the equipment and workpieces from oxidation.
- Individual Continuous Variable Control System (ICVC) ensures very high temperature accuracy and uniformity.
- Imported lining material reduces energy consumption.
- Automatic control with multiple protective features ensures the safety of both the furnace and operators.



气氛发生器 Gas generator



氨分解装置 Ammonia Dissociator

氨分解装置用来生产氢-氮混合保护气，在该保护气氛下钎焊时能净化工件表面，使在高温状态下工件不被氧化。保护气氛也合适其他需要用氢气进行热处理的场合，例如不锈钢的退火以及粉末冶金零件的烧结等。奥杰氨分解装置采用瑞典进口耐热不锈钢炉胆和合金电热丝，具有高温强度高，寿命长，不易损坏的特点。由于采用高保温性能的炉衬材料，炉内温度均匀，热耗小。

为使氨分解装置安全运行，装置中设有水压欠压、氨气欠压、分解气超压等报警保护装置。

Ammonia dissociator is used to produce mixed gas (Hydrogen and Nitrogen) to protect parts from oxidizing while brazed in high temperature. This protective atmosphere also adapts to stainless steel annealing and powder metal sintering etc. Aojie's Ammonia Dissociator is provided with imported heat resisting alloy retorts, electrical heating elements and high-quality insulation materials which ensure durability, longer life and keep furnace temperature uniformity with low heat consumption.

Warning devices of low water pressure, low ammonia pressure and over dissociated gas, etc. assure the safe operation of the equipment.

氨分解气体发生器参数 (Ammonia Dissociated Gas Generator Parameters)

	型号 Model	产气量 Gas Production Nm ³ /h	产品气成分 Production Component	液氨耗量 Liquid Ammonia Consumption kg/h	露点 Dew Point °C	氧含量 Oxygen Content ppm	功率 Power KW	冷却水耗量 Cooling Water Consumption t/h	外形尺寸 Overall Dimension
氨分解及 纯化装置 Double Purification	AJSSZ-10A	10		4			15	0.5	2700 × 1350 × 1800
	AJSSZ-20A	20		8			30	1	3000 × 1600 × 2000
	AJSSZ-30A	30	75%:H ₂ +25%:N ₂	12	≤-70	≤3	40	1.5	3000 × 1600 × 2100
	AJSSZ-40A	40		16			55	2	3300 × 1900 × 2300
	AJSSZ-50A	50		20			70	3	φ 1800 × 2000 2000 × 1800 × 2000

◎ Dx气氛发生器

DX Atmosphere Generator



放热式气氛是一种保护气氛，浓型放热气氛主要用于铸、锻件的退火、正火，低、中碳钢光洁退火、淬火，钢件回火等的加热保护。淡型放热式气氛常用做铜及铜合金的光亮处理，可锻铸铁退火加热保护，及不锈钢工件的发绿、发黑等处理。

Exothermic atmosphere is a kind of protective atmosphere. Thick exothermic atmosphere is mainly used as heat protector during annealing and normalizing process for casting and forging parts, brightness annealing and quenching process for mild steel and medium carbon steel, tempering process for steel parts. Thin exothermic atmosphere is usually used in brightness treatment process for copper and copper alloys, annealing process for forgeable cast iron, bluing treatment and blacking treatment.

放热式气体发生器参数 Exothermic Gas Generator Parameters

型号 Model	产气量 Gas production	产品气成分 Production Component	原料气耗量 Material Consumption	原料气名称 Material Gas LPG	露点 Dew Point	冷却水耗量 Cooling Water Consumption	功率 Power
AJ DX-60	60Nm ³ /h	Co≈8% Co2≈8% H2≈6% N2≈78%	3Nm ³ /h	C4H10 (67%) + C3H8 (33%)	>4°C	8t/h	6kg
AJ DX-80	80Nm ³ /h		5Nm ³ /h		>4°C	11t/h	10kg

台车炉 Car bottom furnace

为了适应航空、航天工业发展的需要，奥杰研发了对炉温均匀度高精度要求的大型台车式电加热炉。其有效工作室的尺寸为长4500mm×宽2200mm×高1300mm，最高工作温度为1150℃，炉温均匀度≤±5℃。实测在500℃为±3.15℃，在940℃为±2.80℃，在1010℃时为±2.70℃。

To meet the need of Aero-space industry development, Aojie developed the large scale car bottom type electric heating furnace which can satisfy the requirement for high precision of furnace temperature uniformity. Effective working chamber size: 4500mm (L) × 2200mm (W) × 1300mm (H) Maximum operating temperature: 1150℃. Furnace temperature uniformity: ≤ ± 5℃

(Actual measurement data: ±3.15℃ at 500℃ furnace temperature, ±2.80℃ at 940℃ and ±2.70℃ at 1010℃).



高、中、低温高精度台车电加热炉参数 High, intermediate and low temperature high precision car bottom electric heating furnace

型号 Model	额定功率 Rate Power KW	额定温度 Rate Temperature ℃	有效工作空间尺寸 Chamber Dimension (L × W × H) mm	炉温均匀度 Furnace Temperature Uniformity ℃	炉温稳定度 Furnace Temperature Stability ℃	外型尺寸 Overall Dimension (L × W × H) mm
AJRT-380	380	1150	3600 × 1400 × 1000	≤5	±1	6100 × 3500 × 6000
AJRT-450	450	1150	3200 × 1800 × 1000	≤5	±1	5700 × 3700 × 6000
AJRT-600	560	1150	4200 × 2000 × 1000	≤5	±1	6900 × 4300 × 6500
AJRT-700	700	1150	4500 × 2200 × 1300	≤5	±1	7110 × 4400 × 6700

注：可按用户要求的有效工作空间尺寸设计制造。

Note: Customized dimensions of effective working zone upon client's requirements.

气体保护连续烧结炉 Controlled atmosphere continuous sintering furnace

主要用途 Main use

主要用于粉末冶金铜基，铁基零件和各种复合材料在含氧量极低的保护气氛下进行烧结。它由脱蜡炉、预热炉、烧结炉、冷却段、电气控制柜等组成一条生产线。

The continuous sintering furnace utilizes an extremely low oxygen protective atmosphere, which is ideally suited for high-temperature sintering of copper based, Fe-based powder metallurgy structural parts and various composites. Its modular design consists of dewaxing section, preheating section, sintering section, variable-cooling section and electric control cabinet.

特点 Features

- ◆ Electro-thermal alloy wire provides excellent temperature uniformity.
- ◆ Computerized control ensures stable atmosphere and even oxidation-free sintering effect.
- ◆ A combination of variable cooling methods achieves required cooling and hardening effect.
- ◆ 脱蜡炉、预热炉及烧结炉都采用电热合金丝加热，寿命长、可靠性高、炉温均匀性好。
- ◆ 高精度微机控制，保证气氛稳定，烧结均匀，无烧蚀氧化。
- ◆ 多种组合冷却方式可实现工艺要求的冷却硬化效果。



粉末冶金烧结炉技术参数 (Continuous Powder Metal Sintering Furnace Technical Parameters)

型号 Model	RCWES-250 × 114-AJ	RCWES-300 × 130-AJ	RCWES-360 × 130-AJ	RCWES-460 × 130-AJ
额定功率 (KW) Rated Power (KW)	105	115	180	230
电源电压 Voltage	380	380	380	380
脱蜡段最高温度 (℃) Max. Temp. of Dewaxing Section (℃)	580	580	580	580
预热段最高温度 (℃) Max. Temp. of Preheat Section (℃)	850	850	850	850
烧结段最高温度 (℃) Max. Temp. of Sintering Section (℃)	1150	1150	1150	1150
预烧段马弗尺寸 Muffle Dimension of Preheat Section (L × W × H mm)	2490 × 290 × 115	3000 × 320 × 130	4000 × 380 × 130	4000 × 480 × 130
预烧段炉体尺寸 Furnace Body Dim. of Preheat Section	2460 × 1550 × 1640	4000 × 1160 × 1750	4000 × 1250 × 1800	4000 × 1500 × 2000
烧结段尺寸 Sintering Section Dimension	4345 × 290 × 115	3000 × 360 × 150	4000 × 400 × 160	4000 × 500 × 160
烧结段炉体尺寸 Sintering Furnace Body Dimension	4350 × 1550 × 1640	4500 × 1600 × 1870	4200 × 1800 × 1900	4200 × 1900 × 2000
总体尺寸 Overall Dimension	16380 × 1550 × 1590	16000 × 1600 × 1870	20000 × 1800 × 1900	20000 × 1900 × 2000
网带宽度 Belt Width	250	300	360	460

钎焊材料 Filler metals

美国Lucasfilm-Milhaupt, Inc.是著名的Handy&Harman公司的子公司,同时也是世界钎焊技术的领导者,在钎焊领域享有盛名超过65年,其产品代表着钎焊材料的最高品质。Lucas-Milhaupt公司提供从各种填充合金,焊剂到钎焊零件设计,技术培训与咨询等全系列产品和服务,覆盖钎焊的所有领域。

Lucas-Milhaupt, Inc.公司授权西安奥杰为中国独家代理。西安奥杰销售各种钎焊材料,并为客户提供技术咨询与培训等服务。

Brazing Excellence For Over 65 Years, Lucas-Milhaupt is the complete source for metal joining products and services, such as alloys, fluxes, automated equipment, product design, training and technical assistance.

Lucas-Milhaupt has appointed Aojie to represent their line of Formulated brazing and soldering pastes and fluxes in China. Aojie's technical support staff assists customers in solving their brazing and soldering problems by recommending appropriate alloys and offering alternatives for their applications.



典型工件展示 Typical brazing parts

Customer Service

Aojie's Aim "The First Class Service, The Best Quality"

Before Service

Process Analysis

Feasibility Demonstration

Technical Consultation Service

Process Test

Integrative and Integrated Solution Including process and Brazing Material Solution

After service

Preparation in Advance, Layout, Water, Electricity, Gas and Drive Facility

Equipment Acceptance to Ensure Eligible Products for Clients

Specialized Technical Training

Quality Guarantee, Promise to Users Guarantees in three Respects

Supply Friendly and Efficient Service as On-site service and etc.

