UL-Standard 5 Side Heating Atmosphere Controlled Muffle Furnace (1200°C 16 x 16x 16" 64 L) - KSL-1200X-AC-5S

KSL-1200X- AC-5S (Updated from KSL-1100X- AC from 8/15/14) is a five side heating atmosphere controlled muffle furnace, which is designed for material synthesis under controlled inert gas atmosphere up to 1100 ºC with better temperature uniformity. The furnace consists of high-quality alumina fiber brick and Kathal Fe-Cr-Al heating elements with 64L capacity, as well as vacuum sealed steel case with water cooling jacket. It is an ideal tool for preparing new materials which require a heat treatment under inert gas or oxidizing gas.

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SPECIFICATIONS:

Furnace Structure	- Double layer stainless steel structure for maximum vacuum and safety, which can stand at positive pressure up to 0.06Mpa and vacuum up to - 0.09Mpa - Water cooling front door and air cooling shell - Built in Pressure gauge, vacuum valves, and two gas flowmeters
Chamber Interior	- Five sides heating, e.g. left, right, bottom, back, and front, to achieve better temperature uniformity than three sides heating. - Energy saving 1500 grade fibrous alumina insulation - High purity and reflective Al_2O_3 coating for max energy saving. - **Kanthal 1350℃ grade Fe-Cr-Al resistance heating wire** - Heated chamber: 400x 400x 400 mm (~ 16"x16" x16"), 64 Liter

Working Temperature & Constant Temperature Zone	- Continuous Working Temperature 1100° C
	- Maximum Working Temperature 1200℃ (< 1 hrs)
	- Constant temperature zone:
	    ○ +/- 1℃ within center 250 mm cubic zone
	    ○ +/- 5℃ within center 300 mm cubic zone

Maximum Sample Loading	- 35 kg
Temperature Controller	- FA-YD518P-AG temperature controller is included. - Proportional–integral–derivative control (PID control) and auto-tune function - 30 segments programmed with ramping, cooling and dwelling steps - Built-in over-temperature alarm and thermocouple failure alarm - +/- 1 ℃ temperature control accuracy - Default DB9 PC communication port - MET Certified
Temperature controller (optional)	- MTS02-Y Temperature control software kit (for YD518P series controllers) + brand new laptop package is available at the options bar. Click for the detail information about the MTS02-Y software kit. - You may upgrade the temperature controller to the Eurotherm Temperature Controller which is fully compatible with LabVIEW with +/- 0.1℃ accuracy. This package includes a Eurotherm programmer, a communication cable (RS485 - USB) and a software CD. Click the pic left to view the full spec of the Eurotherm temperature controller.
Thermocouple	- Omega Dual K Type Thermocouple 12"L 1/4" OD

Heating Rate	- < 10 ℃ / min recommended - 20 ℃/ min Max.
Temperature Accuracy	- +/- 1℃
Gas flow control & Vacuum Valve	- Two larger flowmeters are installed in front panel of furnace to allow two types of gas mixing and flowing at same time - One KF 25 vacuum port is installed in left of furnace to remove air by vacuum pump before filling gas - One heavy duty vacuum pump (CE certified) built in bottom furnace. You may choose a UL certified pump at extra cost
Water Cooling	- A 16L/min recirculating water chiller is included for cooling furnace - Short water power off and Over temperature alarm built in
Power & Working Voltage	- **9.5 KW, 208 - 240V single phase, 50/60Hz** - Three phase, AC 380V - 460V available upon request. - Note：Power cable included, but without a plug. Please install a plug by your own
Compliance	- CE Certified - All electric components (>24V) are UL / MET / CSA certified - The furnace is ready to pass TUV(UL61010) or CSA certification at extra cost. (please click mark below to learn details
Dimension & Net Weight	- H2050mm X W 1280mm x 1200 L - Net weight: 476 Kg
Shipping Weight & Dimension	- **2000 lbs** - **57" x 54"x 91"**

Warranty	- One-year limited warranty with lifetime support - We reserve right to upgrade furnace structure for better performance without notice

Warning & Application note	- Max pressure of this furnace is 7.5 PSI （0.5 atm）. You must install a pressure regulator on your gas tank to avoid over-pressured. Click here to learn the installation of a gas regulator. - This furnace also can be modified as a larger CVD furnace system with a proper gas delivery system. Please contact us to discuss your special application. - This furnace can not use corrosive gasses which react with FeCrAl alloy heating element! - Toxic, corrosive or flammable gasses are not recommended for use with this furnace. Please consult with our engineering team for more details *Attention: A two-stage pressure regulator must be installed on the gas cylinder to limit the pressure to below 3 PSI for safe operation.* Click here to learn the installation of a gas regulator.