








Table 1. Tabulated MTI Atmosphere Controlled Box Furnaces

No	Model	Chamber Dimension L xWxH	Volume	Heating Rate	Working temperature	Features	Item Image
1	KSL-1100X-HV-LD	-			Max: 1100 °C (<1 hours) Cont: 1000 °C	It is a compact high vacuum crucible melting furnace designed for melting noble metals, such as Al, Au, Li In , Li, Mg, etc. under the vacuum up to 10 <sup>-6</sup> Torr up to 1100°C Max, and also can be used as annealing and sintering furnace for material research. 30 segment programmable temperature controller is built-in with +/- 1°C accuracy.	
2	VBF-1200X-H8		7.6 L	Max: 20°C/min Cont: 10°C/min	Max: 1100 °C (<30 hours) Cont: 1000 °C	It is a compact vacuum furnace. It equips a 7.5" ID x 13.4"L Quartz tube chamber sitting horizontally. Water-cooled stainless steel vacuum flanges with valves are installed to achieve a vacuum of up to 10 <sup>-5</sup> Torr via turbopump. It is designed for calcining or annealing semiconductor wafers (up to 6") under vacuum or various other gas atmospheres with a temperature of up to 1100°C. It also can also be used as a vacuum brazing furnace for fusing small parts.	
3	VBF-1200X-V9	9" Od x 8.6" ID x 13.4 "L	8L	Max: 20°C/min Recommended: 10°C/min	Max: 1100°C (<30 min) Cont: 1000°C	VBF-1200X-V9 is a Vertical vacuum-sealed furnace. It equips a 9"OD x 8.6" ID x 13.4"L Quartz tube chamber with stainless steel flange and valves, which can achieve a vacuum of 10 <sup>-5</sup> via Torr turbopump. It is designed for calcining or annealing semiconductor wafers (up to 8") under vacuum or various other gas atmospheres with a temperature up to 1100°C.	

4	VBF-1200X-E8	8.6"ID	7.6 L	-	Max: 1100°C Cont: 1100°C	VBF-1200X-E8 is a vertical vacuum furnace with the quartz chamber of 8.6" ID x 13.4"L- and an automatic bottom loading mechanism designed for easy sample loading. Water-cooled SS vacuum flanges are lifted via the motor and can achieve vacuum $10^{-2}$ to $10^{-5}$ torr through a mechanical or molecular pump. It is designed for sintering material or annealing semiconductor wafers (up to 6") under vacuum or various other gas atmospheres with a temperature up to 1100°C. A programmable temperature controller, vacuum pump, and recirculating water chiller are included for immediate use.	 CE
10	VBF-1600X-B	11" I.D	13 L	Max: 10°C/min	Max: 1160°C Cont: 800°C -1600°C	VBF-1600X-B is a vertical atmosphere controlled furnace with an 11" I.D. x 13"L sealed chamber and automatic bottom loading mechanism. Water-cooled SS vacuum flanges are lifted via the motor and can achieve vacuum $10^{-2}$ torr through a mechanical pump. It is designed for sintering material or annealing semiconductor wafers under vacuum or various other gas atmospheres with a temperature up to 1600°C. A programmable temperature controller, vacuum pump, and recirculating water chiller are included for immediate use.	
11	KSL-1200X-AC-5S	16"x16"x16"	64 L	Max: 20°C/ min	Max: 1200°C (<1 hrs) Cont: 1100°C	KSL-1200X- AC-5S is a five side heating atmosphere controlled muffle furnace, which is designed for material synthesis under controlled inert gas atmosphere up to 1100 °C 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 a vacuum-sealed steel case with a water	 CE

						cooling jacket. It is an ideal tool for preparing new materials which require a heat treatment under inert gas or oxidizing gas.	
12	KSL-1700X-HG	8x8x8"	8 L	Max: 5°C/ min	Max: 1650°C (<1 hrs) Cont: 300-1600°C	KSL-1700X-HG is a Hybrid box furnace for both of hydrogen treatment up to 1650 °C. The furnace consists of high-quality alumina fiber bricks and Mo alloy heating elements with a heating chamber of 8"x 8"x8", and an automatic H2 burning system. It is an ideal tool for preparing new materials that require Inert gas and reducing atmosphere.	
13	KSL-1700X-H2	8x8x8"	8 L	Max: 5°C/ min	Max: 1650°C (<1 hrs) Cont: 1600°C	KSL1700X-H2 is CE certified box furnace designed for material synthesis under dry hydrogen or inert gas (Ar and He) up to 1650 °C. The furnace consists of high-quality alumina fiber bricks and Mo alloy heating elements with a heating chamber of 8"x 8"x8", as well as a vacuum-sealed steel case with water cooling jacket and automatic H2 burning system. It is an ideal tool for preparing new materials which require reducing atmosphere, such as phosphorous and Ti alloy and also heat treating materials under inert gas.	