

Equipment for Annealing After Laser Sintering

Protective Gas Boxes for Models LH 15/12 - LH 60/12

Protective Gas Boxes with Loading from the Top

Due to the high interior of the chamber furnaces LH 15/12 - LH 60/12 with gas supply box, these models are ideally suited for higher batches during stress relief annealing after laser sintering of cobalt chrome. The gas supply boxes have a standard batch thermocouple type K, which can be used for charge control.



The gas supply box is made of heat-resistant material 1.4841 (DIN) and can be used up to a maximum temperature of 1100 °C. For working temperatures up to 1150 °C we offer gas boxes made of 2.4633 (DIN). The lid is equipped with a fiber seal and a locking bolt. The boxes have a lid for loading from above, protective gas inlet and outlet.

The protective gas pipe runs through the floor into the box. This is used to flush the box with non-flammable protective gases such as argon. The protective gas inlet and outlet is guided through the furnace collar on the left in the case of a furnace with hinged door, and through the lower furnace collar in the case of the lift door version. For the protective gas connection, a quick coupling with hose connection (inner diameter 9 mm) is included in the scope of delivery.

The scope of delivery also includes a charge thermocouple type K, which can be used for charge control. The gas supply box can be used for temperatures up to 1100 °C. For working temperatures up to 1150 °C we offer gas supply boxes made of 2.4633 (DIN).

Protective gas box for furnaces with hinged door

Article no.	Furnace	Inner dimensions in mm			Outer dimensions in mm ¹			Charging method of the box
		w	d	h	W	D	H	
631001276	LH 15/..	100	100	100	165	182	166	draw hook
631001277	LH 30/..	170	170	170	235	252	236	draw hook
631001278	LH 60/..	250	250	250	315	332	316	draw hook

Article no. 601655055, 1 set of fiber insulation cord, 5 strips of 610 mm each

Work space = box inner dimensions: - 30 mm to all sides

Larger boxes and custom dimensions available upon request

¹ Without piping



Protective Gas Boxes with Charging from the Front

Design as the described protective gas boxes, but with charging from the front. These protective gas boxes remain in the oven and are equipped with a lid that can be opened to the front. After the lid has been opened, the batch can be removed directly.

Article no.	Furnace	Inner dimensions in mm			Outer dimensions in mm ¹			Charging method of the box
		w	d	h	W	D	H	
631001310	LH 15/..	100	100	100	170	148	194	-
631001311	LH 30/..	170	170	170	240	218	264	-
631001312	LH 60/..	250	250	250	320	298	344	-

Article no. 601655055, 1 set of fiber insulation cord, 5 strips of 610 mm each

Work space = box inner dimensions: - 30 mm to all sides

Larger boxes and custom dimensions available upon request

¹ Without piping

Protective gas box which stays in the furnace

Protective Gas Boxes for Models N 7/H - N 41/H

Protective Gas Box made of 1.4841

The protective gas boxes with gas inlet and outlet are necessary for annealing of frameworks made of Cobalt-Chromium after laser sintering. The gassing box will be flushed with non-flammable inert gases, such as argon.

The gas box made of heat-resistant material 1.4841 (DIN) is supplied with cover, sealed with ceramic fiber, protective gas inlet and outlet through the upper furnace collar and sealing profile as well as incl. quick coupling with 3/8" hose connection. The scope of delivery also includes a batch thermocouple type K, which can be used for charge control. The gas supply box can be used for temperatures up to 1100°C. For working temperatures up to 1150°C we offer gas boxes made of 2.4633 (DIN).



Box with protective gas connection

Gas Feed Fitting with Solenoid Valve

The protective gas box, described above, is additionally equipped with manual gas feed fitting and solenoid valve for gas bottles.

Included is a pressure reducing valve with built-in flow meter, indicating the bottle pressure, which is controlled by the extra function of the controller. The built-in flow meter with float ball allows a good readability of the gas flow. The inlet pressure is 200 bar, the outlet pressure equals to 4 bar. Included in the delivery scope is a 4 m long connecting tube 3/8" and a screw connection for gas bottles.



Charge Control for the Protective Gas Box

The heating and cooling processes can be individually adapted to the charge in the protective gas box. The temperature in the protective gas box is measured using an additional thermocouple. With the P470 controller, the furnace chamber temperature and the temperature inside the protective gas box are compared and the furnace chamber temperature is controlled in such a way that the desired temperature curve in the protective gas box is maintained.



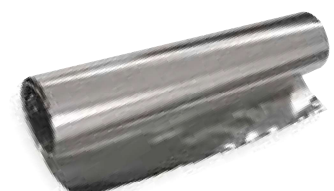
Annealing/Hardening Foils and Charging Plates

To protecting the furnace floor against mechanical damage a charging plate made of 1.4841 raw material is necessary. This plate has a three-side edging for an maximum temperatures of 1100 °C.

For protection the charge against oxidation and decarbonization we offer annealing and hardening foils for max. working temperatures up to 1200 °C.



Charging plate



Stainless steel heat treating foil