Fire Assay/Cupellation Furnaces up to 1300 °C

Cupellation is a process to separate precious metals, such as gold or silver, from alloys with base metals. During the process, aggressive gases that attack the insulation and the heating are released. Cupellation furnaces N ../13 CUP are especially designed for the very demanding process requirements.

The furnace chamber consists of a ceramic muffle, which offers very good protection for the heating elements and insulation against the vapors. A special fresh-air and exhaust air system guides exhaust gases directly into the exhaust hood of the cupellation furnace. At the same time, fresh air is lead into the furnace atmosphere. The integrated exhaust hood on top of the furnace and above the door is the interface to the customer's required exhaust air system. The design is very-maintenance friendly; all wear and tear parts on the furnace, which are f.i. the ceramic muffle and the heating elements, can be replaced easily.

Cupellation furnaces N 4/13 CUP as a tabletop model and N 10/13 CUP are designed especially for cupellation. Due of its high chamber design, model N 30/13 CUP can also be used for crucible melting. Pit-type furnace S 73/HS is especially designed for crucible melting.

Cupellation furnace N 4/13 CUP as a tabletop model

Standard Equipment of Cupellation Furnace N 4/13 CUP

- Compact tabletop model
- Ceramic muffle to protect the heating elements and insulation
- Furnace chamber is heated from three sides (floor and sides) with heating elements on support tubes
- Extraction system with integrated exhaust hood on top of the furnace and above the door to connect to the customer's exhaust air system
- Manual lift door

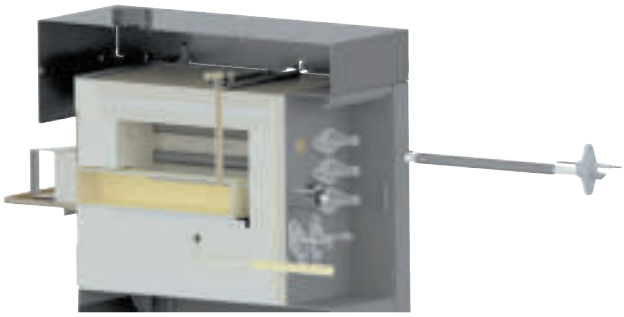
Additional Equipment for Cupellation Furnace N 4/13 CUP

- Over-temperature limiter with adjustable cutout temperature as temperature limiter to protect the furnace and load

Cupellation furnace N 10/13 CUP with closing brick and base on castors

Standard Equipment of Cupellation Furnaces N 10/13 CUP and N 30/13 CUP

- Ceramic muffle to protect the heating elements and insulation
- Furnace chamber is heated from 4 sides with heating elements on support tubes
- The heating elements can be easily replaced as one unit
- Furnace chamber ventilated as additional protection for the heating elements
- Precise temperature control with control thermocouple directly in the muffle
- Closing brick for the muffle with handle for N 10/13 CUP
- Electro-mechanic lift door for N 30/13 CUP
- Bench/surface in front of muffle
- Special fresh-air and exhaust air system for the ceramic muffle. Exhaust gases are directly guided into the exhaust hood via a ceramic tube at the back of the muffle. The air exchange rate is adjustable.
- Extraction system with integrated exhaust hood on top of the furnace and above the door to connect to the customer's exhaust air system
- Over-temperature limiter with adjustable cutout temperature as temperature limiter to protect the furnace and load



Compact heating element, easy to replace (cupellation furnaces N 10/13 CUP and N 30/13 CUP)

Additional Equipment for Cupellation Furnaces N 10/13 CUP and N 30/13 CUP

- Electro-mechanic lift door for N 10/13 CUP
- Swiveling inspection window as heat protection
- Timer to program switching on and off times (preset temperature)
- Base mounted on castors

Pit-type furnace S 73/HS with split lid

Standard Equipment of Pit-Type Furnace S 73/HS

- Compact pit-type furnace for crucible melting
- Split lid, opened manually by swiveling
- Heating from four sides
- Heating elements and floor protected against friction and aggressive substances with silicon carbide tiles
- Furnace chamber ventilated as additional protection for the heating elements
- Exhaust air box with insulated tube to the rear. Facilities for connection to customer's necessary extraction system.

Additional Equipment for Pit-Type Furnace S 73/HS

- Manual rolling lid
- Pneumatic rolling lid
- Over-temperature limiter with adjustable cutout temperature as temperature limiter to protect the furnace and load
- Timer to program switching on and off times (preset temperature)

Model	Tmax	Inner dimensions in mm			Volume	Outer dimensions[1] in mm			Connected	Electrical	Weight
	°C	w	d	h	in l	W	D	H	load[3] kW	connection*	in kg
N 4/13 CUP	1280	185	250	80	3.7	600[2]	770	750	3	1-phase	100
N 10/13 CUP	1300	250	540	95	8.0	900	1200	1850	15	3-phase	380
N 30/13 CUP	1300	250	500	200	25.0	1000	1200	2250	15	3-phase	430
S 73/HS	1300	530	380	360	73.0	1050	1530	900	26	3-phase	890

[1]External dimensions vary when furnace is equipped with additional equipment. Dimensions on request.
*Please see page 84 for more information about supply voltage
[2]Plus 200 mm for controller
[3]The connected load refers to the standard furnace and may increase for a furnace with additional equipment. For furnaces with connection options for multi-range voltages, the connected load applies to the highest permissible connected voltage.

Pit-type furnace S 73/HS with rolling lid

Sides and floor lined with silicon carbide tiles as protection for pit-type furnace S 73/HS

N 10/13 CUP with optional electromotoric lift door