NITIUM SINTERING FURNACE

Bring control to every cycle.

A removable alumina chamber. Accessible bottom loading.
A staged temperature programme, with operation up to 1,400°C.



1,400°C
Maximum operating temperature

34 STEPS
Temperature programme

15.6-INCH HMI
Side-mounted touch display

A DEDICATED HEATING REGION

Heat around the chamber. Control the cycle.

A ring of U-shaped $MoSi_2$ elements surrounds the sample chamber. Layered ceramic insulation defines the fixed heating enclosure and its bottom entry.



$MoSi_2$ ELEMENTS

U-shaped heating elements arranged around the chamber in the fixed upper zone.

LAYERED INSULATION

Stacked ceramic layers form the cavity around the heating region.

BOTTOM ENTRY

The stepped chamber support rises from below to close the heating enclosure.

1,400°C

MAXIMUM OPERATING TEMPERATURE

Programmable heating for the selected sintering cycle.

THE CHAMBER COMES TO YOU

Prepare the load.
Then bring it inside.

Slide the chamber out to place samples on the footing. Replace and secure the alumina dome, retract the platform, then raise it into the fixed heating enclosure.



Lowered platform, extended for loading and retrieval.

Removable alumina dome

Lift off the dome to access the circular footing and arrange your samples.

Guided horizontal travel

Two NEMA23 drives move the sample platform along parallel linear rails.

A separate vertical lift

Jack screws raise the chamber into the fixed upper enclosure. The furnace is locked for the cycle.

SLIDE OUT → RETRACT → RAISE & LOCK

UP TO 34 TEMPERATURE STEPS

Define the sequence.
See the process.

Set the temperature programme using a large 15.6-inch touch HMI. The side-mounted display places the interface alongside the loading area, outside the cabinet.



34 PROGRAMME STEPS

Arrange temperature settings as a staged sequence for the selected load.

15.6" TOUCH HMI

FHD display with projected capacitive touch in a large landscape format.

Programmable temperature control and PLC-based machine control bring the thermal cycle and platform operation into one furnace system.

TWO MOTIONS. ONE LOADING SEQUENCE.

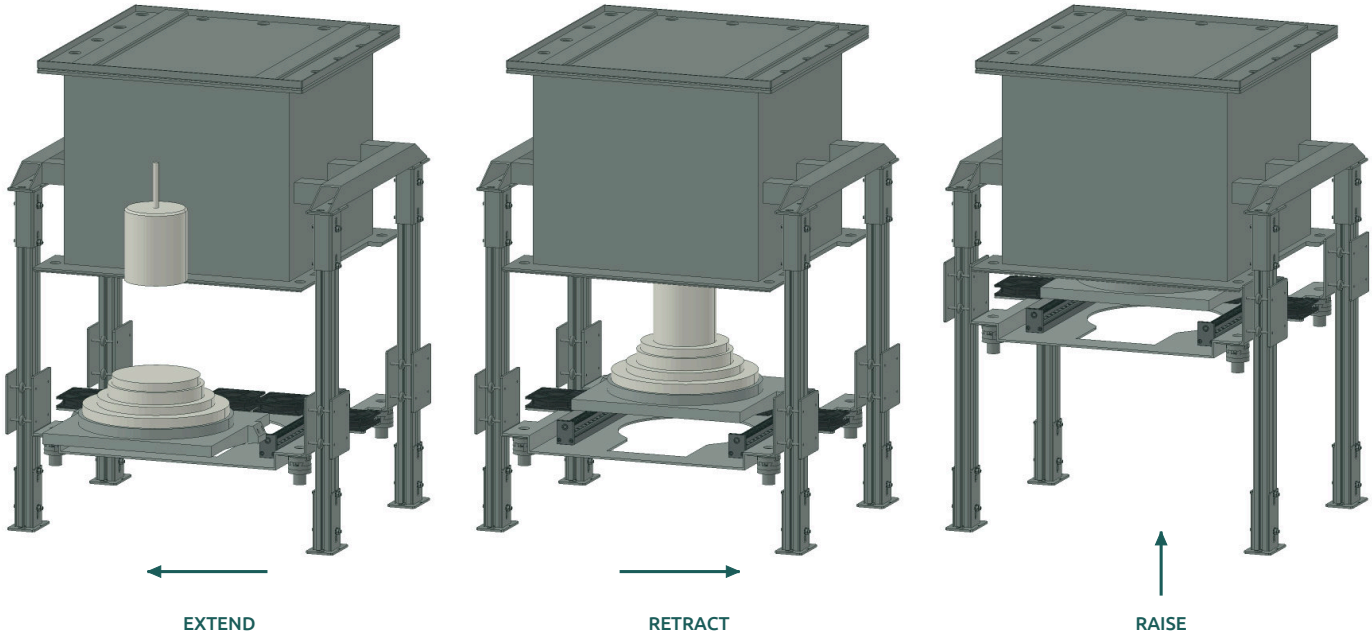
Load. Position. Sinter. Retrieve with access.

Horizontal travel brings the chamber to the operator.
The jack-screw lift raises it into the fixed heating enclosure.

LOAD THE FOOTING

RETRACT BELOW THE HOOD

RAISE INTO THE HOT ZONE



Assembly views with casing removed. Loading positions illustrated.

01 Extend the platform

Keep the platform lowered. Extend it along the horizontal rails.

02 Remove the dome & load

Lift off the dome and place samples directly on the footing.

03 Cover & secure

Replace the alumina dome and secure it to the footing.

04 Retract into position

Move the chamber directly below the fixed upper enclosure.

05 Raise, lock & sinter

Activate the jack screws. Raise and lock the furnace, then run the programme.

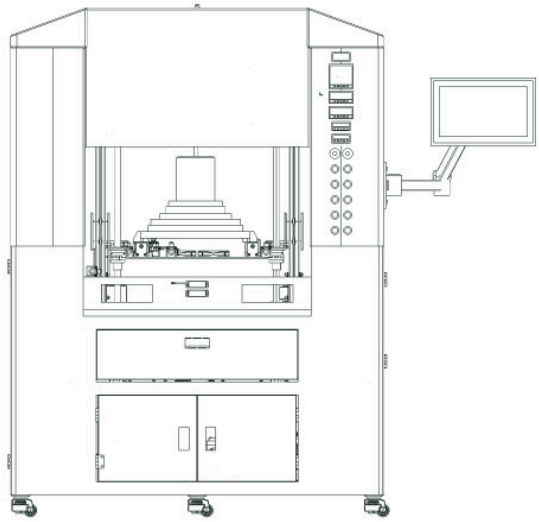
06 Lower & retrieve

After the cycle and safe cooling, lower the platform, extend it and retrieve samples.

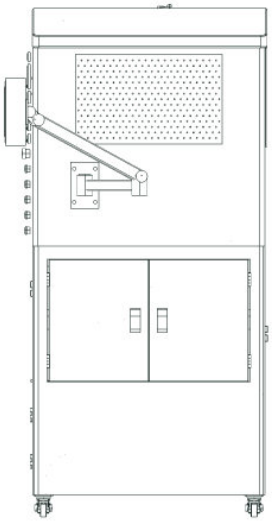
THE FURNACE AT A GLANCE

Built for a controlled sintering workflow.

A removable alumina chamber, two-axis bottom loading and a side-mounted touch interface in a broad stainless steel cabinet.



FRONT



RIGHT SIDE



FURNACE & SIDE HMI

Front and side views shown at the same scale.

Operating temperature	Up to 1,400°C
Temperature programme	Up to 34 steps
Operator interface	15.6-inch FHD touch; side-mounted
Sample chamber	Removable alumina dome and footing
Heating & insulation	$MoSi_2$; layered ceramic insulation
Horizontal travel	Twin linear rails; two NEMA23 drives

Vertical lift	Four linked jack screws
Leveling castors	Six: three front, three rear
Vacuum hardware	Vacuum pump and gauge
Process gas	Argon; mass flow and solenoid control
Machine control	PLC-based control
Protection circuits	Emergency stop, door interlocks, over-temperature circuit

Mechanical assembly (W × D × H): approximately **1,493 × 950 × 2,000 mm**.
Envelope derived from the STEP assembly; external HMI and support arm excluded.

Make sintering part of your workflow.

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