

MCF-35

MCVD preform furnace

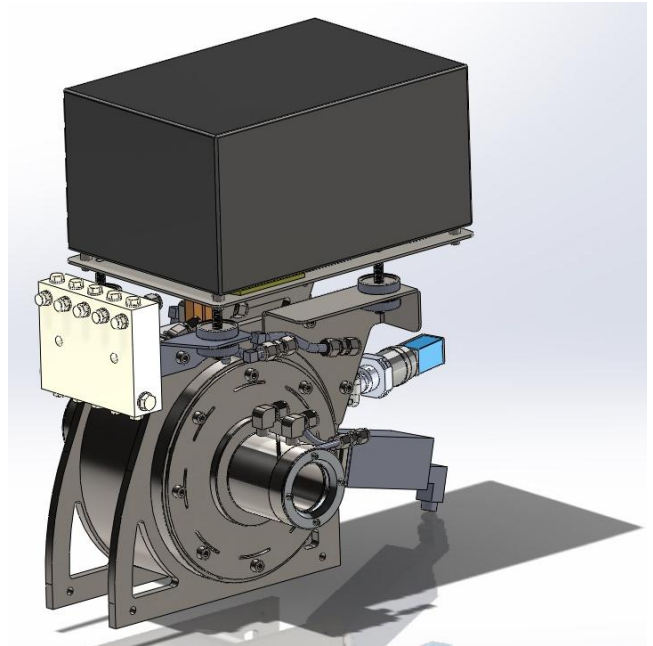


Introduction & Application

MCF-35 MCVD furnace is a powerful, symmetrical and accurately adjustable heat source developed for advanced MCVD process. It reduces influence of asymmetric burner flame on final preform geometry while shortening fabrication time significantly, thus limiting the OH- diffusion for reduced water peak.

Description

MCF-35 is designed to work with substrate tubes with outer diameter (OD) from 25 to 50 mm. It is a graphite inductive type of furnace of proven design, used in industry for over a decade. CVD furnace system consists of furnace body, power source, pyrometer, cooling water and inert gas connections and electrical control cabinet, and easily integrated with any existing or new MCVD system or glass working lathe. To provide optimal performance with different sizes of substrate tubes, two different sets of exchangeable gas windows and internal graphite parts are used. Furnace disassembly and maintenance is extremely straightforward, while all graphite and insulation parts are of simple geometric shape to reduce their fabrication cost. Jutronic 44 or 66 kVA inductive power supply is provided with MCF-35, with end transformer and capacitor bank.

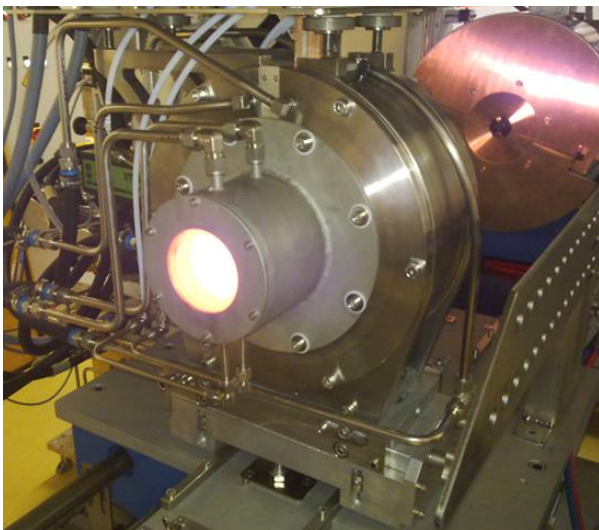


Control system

Control system for MCF furnaces is integrated with Optacore's WinMCVD control system. Operation in automatic (closed loop PID control) and manual mode (setting power). If MCF-35 furnace is delivered as stand-alone device a separate control system has to be provided.

Accessories & Option

MCF-35 is equipped with a pyrometer reading graphite heating element temperature. As option, pyrometer for monitoring substrate tube surface temperature in hot zone is provided (see specifications). Endoscope for hot zone observation is available as option. For safety, sensing of protective gas and cooling water flow is provided.



Specifications

Furnace MCF-35:	
Heating element ID	55 – 80 mm
Tube diameter	15 – 50 mm
Furnace width	approx. 290 mm
Furnace outer diameter	approx. 400 mm
Weight of the furnace	40 kg (without accessories)
Max temperature	2400 °C recommended
Temperature accuracy	± 2 °C or better
Pyrometer	Raytek FM series, 1 µm range
Measurement range	1000 – 2500 °C
Tube pyrometer	Impac LS-140, 5µm range
Power	44 or 66 kVA, 3 phase, 400 V 50 Hz
Cooling water	Average 25 slm

NOTE: Detailed specification available from Optacore.

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Note: Optacore reserves the right to change construction and/or specification of this product without notice.