

Single Filament Cell (SFC)

sales@createc.de | www.createc.de

The Single Filament Cell is designed for evaporation of materials with medium vapor pressure. The radiation heating system consists of a wire filament and PBN insulators surrounded by a shielding to minimize heat radiation. Direct heat transfer from the filament to the crucible reduces the power consumption and gives an excellent control of the flux.

Available versions

- SFC-HL | Hot-lip filament to avoid condensation at the crucible orifice
- SFC made from molybdenum
- SFC with flip-shutter
- Downward looking | Face-down version
- Multiple cells



Elements to be evaporated

H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Lr	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Uut	Fl	Uup	Lv	Uus	Uuo

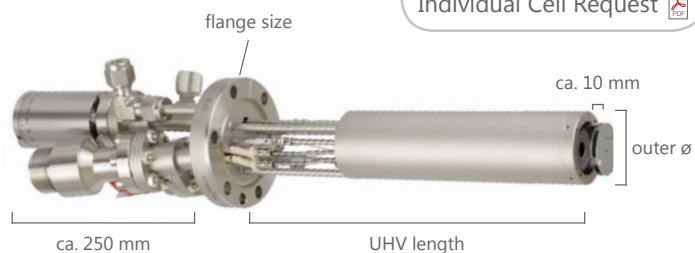
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Hb
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No

Evaporation Guide of Elements 

TYPE	SFC
TEMPERATURE RANGE	50 –1400 °C
HEATING SYSTEM	wire filament, radiation heating
TEMPERATURE STABILITY	± 0.1 °C depending on the PID controller
THERMOCOUPLE	type C
MAX. OUTGAS TEMP.	1500 °C
MAX. POWER	360 W 25 cc crucible
MAX. CURRENT	12 A 25 cc crucible
BAKE-OUT TEMP.	250 °C
FLANGE SIZE	DN 40 CF 63 100 160 others on request
MAX. OUTER DIAMETER	38 mm 61 mm 97 mm or as specified
MIN. UHV LENGTH	180 mm
OPTIONAL	
COOLING	integrated water cooling separated cooling jacket
COOLING DATA	water consumption: 1l/min 25 cc crucible temperature: 5 - 15 °C connection: ø 6 mm
CRUCIBLE SIZE	2 - 800 cc
CRUCIBLE MATERIAL	PBN PNG W Ta Mo Quartz Al ₂ O ₃ VC CRUCIBLE DATA SHEET
CRUCIBLE INSERT	on request
SHUTTER	integrated rotary shutter manual, pneumatical or electrical actuation SHUTTER DATA SHEET
POWER SUPPLY	PS - S800
CABLE	length 6 m (bakeable) others on request

How to order?

Individual Cell Request 



SUPPORT	support@createc.de
APPROVAL	Drawing will be provided before manufacturing
CONDITIONING	Heated to maximum temperature with and without crucible
DOCUMENTATION	User manual will be provided with the delivery
SHIPPING	In stainless steel container under dry nitrogen
SERVICE	On request, a general overhaul can be performed after long-term use