

# Electron Beam Evaporator (EBE-ST)

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The Electron Beam Evaporator - Standard (EBE-ST) is designed for use in a MBE system for evaporation of various materials with low vapor pressure. The heating of the material is performed by electron beam bombardment. Due to the evaporated source material there can be used either a crucible, where the source material is filled in, or the source material is shaped like a rod, from which the material sublimates by heating with electron bombardment. The evaporator is built on a cluster flange with water cooling shroud. On top of the cooling shroud, the filament holder and the flux measuring system are mounted. The crucible (or the rod) is equipped with a separate cooling unit. The filament is made from a Tungsten-Thorium Oxide wire. The use of the E-Beam Evaporator in a more vertical mounting position is preferable, because the water cooling can work most effectively and the risk to flow out liquid material from the crucible is low.

## Available equipment

- Unit for vacuum isolation
- Filament kit

TYPE	EBE-ST	
TEMPERATURE RANGE	up to 2700 °C	
HEATING SYSTEM	e-beam heating bombardment self-supported wire filament	
EVAPORATION FROM	rod or 0,8 cc crucible	
MEASUREMENT	flux meter	
BAKE-OUT TEMP.	200 °C	
FLANGE SIZE	DN 40 CF   63	or as specified
MAX. OUTER DIAMETER	38 mm	or as specified
MIN. UHV LENGTH	180 mm	
COOLING	integrated water cooling	
COOLING DATA	water consumption:	1l/min
	temperature:	5 - 15 °C
	connection:	ø 6 mm
POWER SUPPLY	EBE-PS	
MAX. VOLTAGE TARGET	1 kV	
MAX. EMISSION CURRENT	100 mA	
MAX. CURRENT FILAMENT	2,2 A	
OPTIONAL		
CRUCIBLE SIZE	0,8 cc	
CRUCIBLE MATERIAL	W   Ta	others on request
ROD DIAMETER	3 - 6 mm	
SHUTTER	integrated rotary shutter manual, pneumatical or electrical actuation <a href="#">SHUTTER DATA SHEET</a>	
CABLE	length 6 m, including HV and flux others on request	

## 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

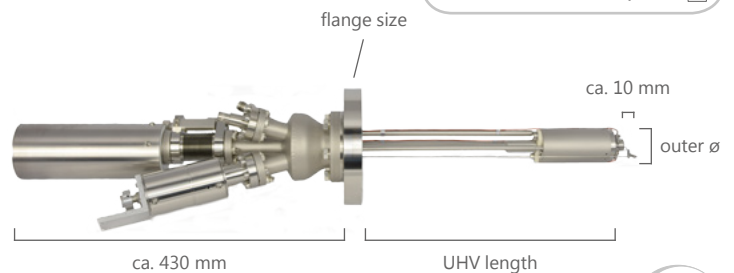
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No

\* and MgF<sub>2</sub>, CaF<sub>2</sub>, MgO

Evaporation Guide of Elements 

## 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