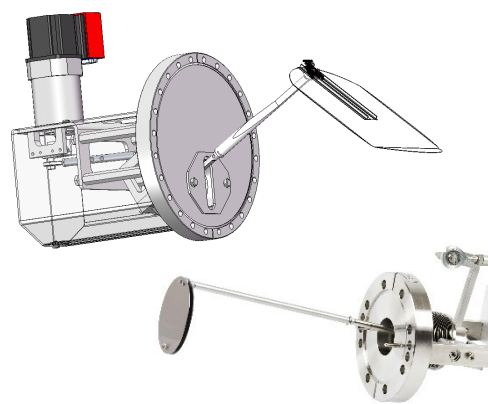


Cell Shutters

- Complete blocking of the flux
- Simple mechanical design
- No flakes
- No particle generation
- Minimizes flux transient
- Very long lifetime > 1 million cycles



Product introduction

Riber's flagship product rocking shutters are fitted to Compact 21 and MBE 412 / MBE 49 / MBE 6000 / MBE 7000 production systems.

Source shutters are driven by motors allowing for gentle and controlled opening and closing to reduce particle flaking and particle generation, as opposed to pneumatic shutters, which systematically exhibit brutal accelerations and decelerations when operating. The motion is performed so that in the closed position, the shutters cover the entire source

mouth. The shutter position for each effusion cell is controlled independently using Crystal Process control software.

The shutter blade is made of high-purity tantalum. The shaft is made of high-purity molybdenum. The shutter blade position is far enough away from the cell mouth to minimize flux transients, yet it is oversized to ensure the complete blocking of flux beams.

Self-contained assemblies facilitate maintenance, as it is only necessary to

unbolt a single flange to exchange either an entire shutter module or only a shutter plate.

Rocking Cell shutter assembly

All rocking source shutter guide and process commands are on the air side. Opening / Closing movement is transmitted by a bellow, powered by a stepper motor, controlled by the source shutter controller. For complete safety of the movement, the motor rotate between two limit switches.

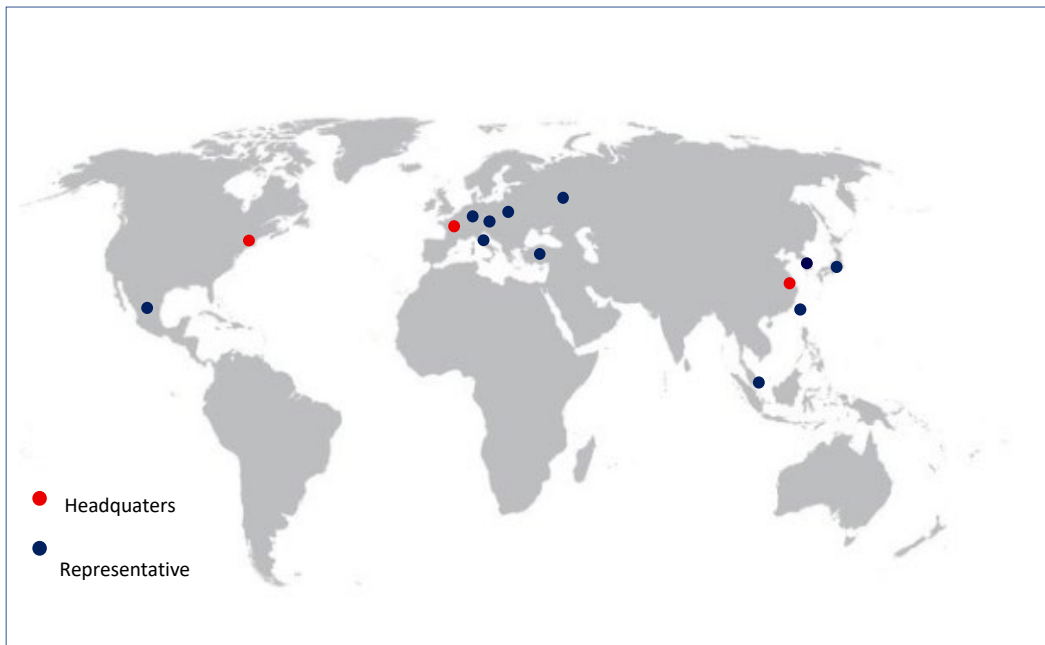
Specifications

Characteristics				
System compatibility	C21 series	MBE412	MBE49	MBE6000
Mounting flange	CF63	CF100	CF150	CF200
Bakeout temperature	250°C max, motor & cables unmounted			
Typical opening / closing speed (ms)	210	210	600	1400
Double blade version for Ga & In available	Yes	Yes	No	No
Confinement sarcophage available	No	No	Yes	Yes

Please consult Riber for specific requests, such as PBN or double blades

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