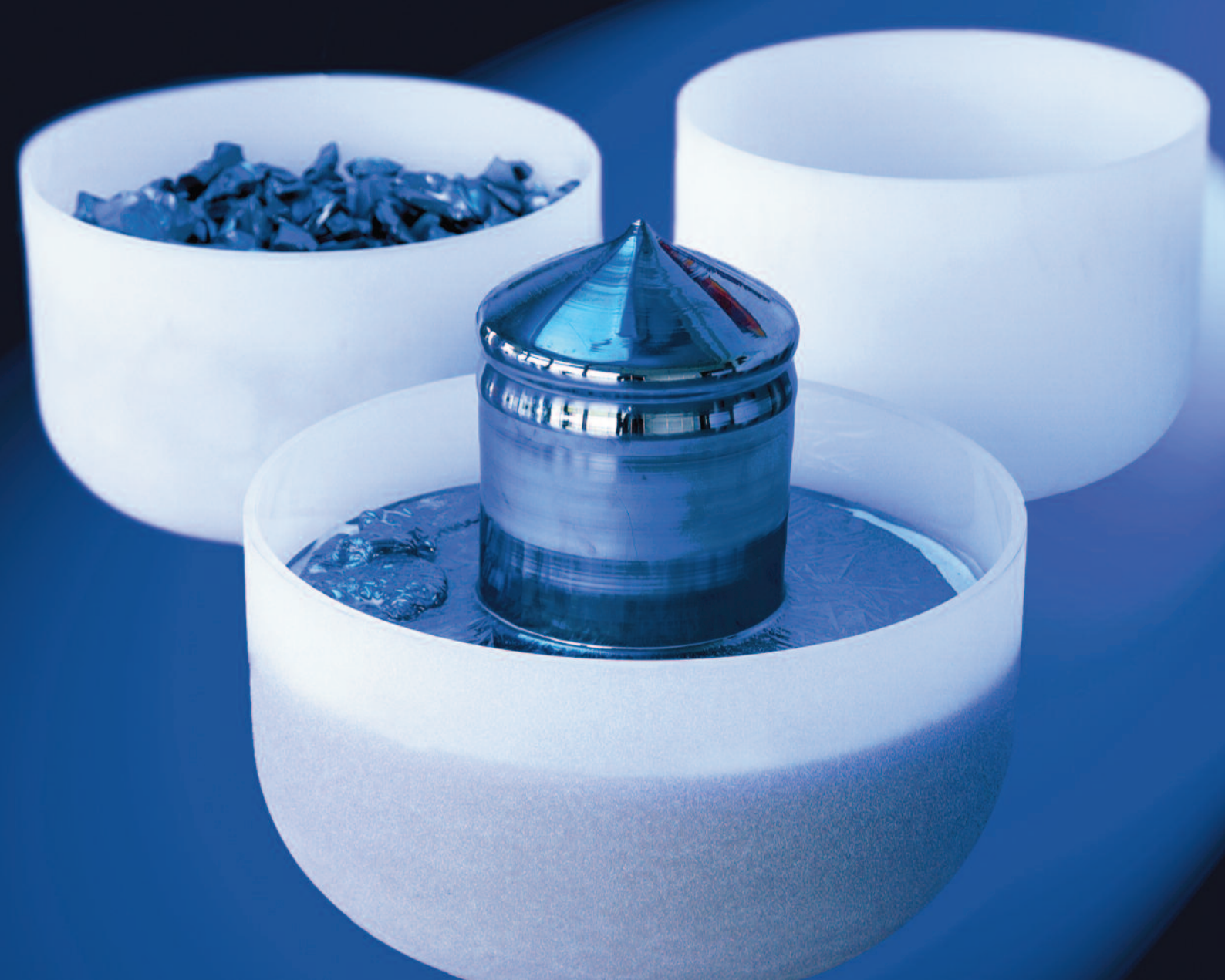


Heraeus



**Heraeus Crucibles for
Semiconductor Wafers**

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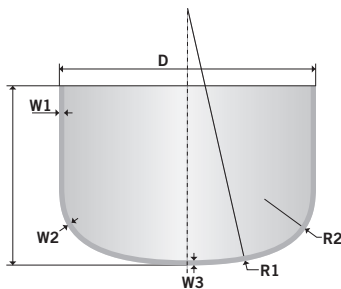
Heraeus produces quartz glass crucibles for CZ-crystal-growing for customers in the semiconductor industry. In close cooperation with our customers we develop crucibles that are tailored to the processes of our customers. Our product portfolio covers quartz glass crucibles with diameters from 18" to 36" made from natural as well as synthetic and Ba-doped quartz glass qualities. These are designed according to the stringent requirements of the semiconductor industry.

Heraeus quartz glass crucibles are available in 18", 20", 22", 24", 28", 32" and 36" sizes. The specifications are tailored to the needs of every single customer in order to find an individual optimum in Cost of Ownership (CoO).

Heraeus Quarzglas can provide a wide range of inner layer materials e.g. purified natural quartz, ultra high purity synthetic quartz glass, and Barium doped quartz.

Standard dimensions, other dimensions on request

(mm)	crucible	18"	20"	20"	22"	22"	24"	24"	28"	32"	36"
D	outer diameter	457 ± 3	506 ± 3	503 ± 3	559 ± 3	559 ± 3	613 ± 3	610 ± 3	706 ± 3	812 ± 3	910 ± 5
H	height (tolerance ± 2)	up to 470	up to 470	up to 470	up to 470	up to 470	up to 470	up to 470	up to 530	up to 530	up to 530
W1	wall thickness 1	10 ± 2	10 ± 3	10 ± 3	10 ± 3	10 ± 3	11 ± 3	11 ± 3	13 ± 4	16 ± 4	16 ± 5
W2	wall thickness 2	12 ± 2	10 ± 3	10 ± 3	12 ± 3	12 ± 3	12 ± 3	12 ± 3	17 ± 3	24 ± 5	26 ± 5
W3	wall thickness 3	9.5 ± 2	10 ± 3	10 ± 3	9.5 ± 3	11 ± 3	11 ± 3	11 ± 3	13 ± 4	14 ± 3	17 ± 4
R1	radius 1	457	508	508	558	558	610	610	708	810	914
R2	radius 2	90	127	127	110	90	127	120	140	170	180



Used Materials

Natural Quartz raw materials

Various natural quartz sands are used for the production of our crucibles. The used raw materials are optimized for the customer application. All different quartz sand qualities are purified and controlled at Heraeus in order to ensure a constantly high level of quality and purity.

Synthetic Quartz raw materials

Heraeus is one of the largest producers of synthetic quartz glass. Our crucibles can be made with doped or undoped inner layers of synthetic quartz glass with customized properties.

Ba-doped Quartz raw material

For special applications Heraeus can also provide crucibles with a special patented Ba-doped inner layer.

Germany

Heraeus Quarzglas GmbH & Co. KG

Dr. Walter Lehmann

Heraeusstraße

06803 Bitterfeld-Wolfen, Germany

Phone +49 6181 35-8925

Fax +49 6181 35-8938

crucibles@heraeus.com

www.crucibles.heraeus-quarzglas.com