

ALD Vacuum Technologies

High Tech is our Business

MonoTherm[®]

Vacuum Chamber Furnace for Highest Component Quality

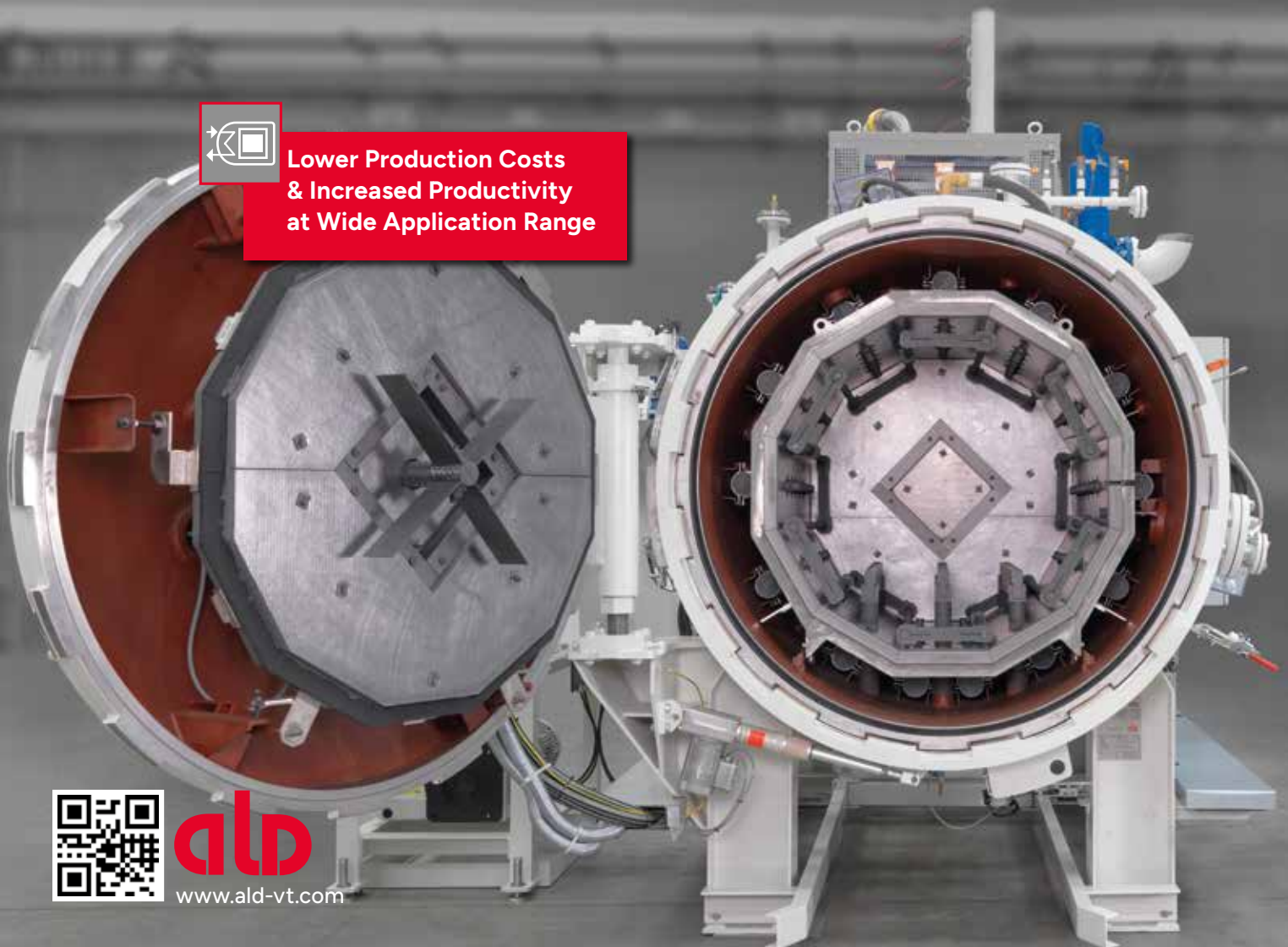


**Lower Production Costs
& Increased Productivity
at Wide Application Range**



ald

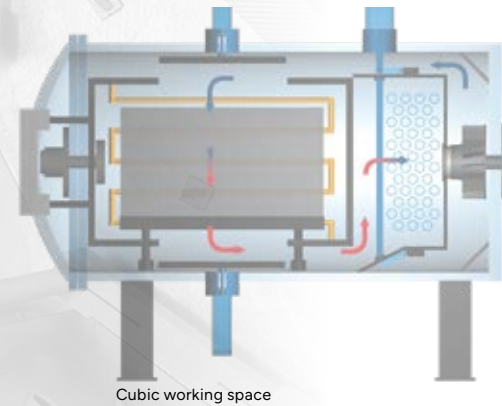
www.ald-vt.com



Improved Cost-Effectiveness & High Environmental Sustainability

HIGH ENERGY EFFICIENCY WITH MINIMAL COMPONENT DISTORTION & FLEXIBLE DESIGN

- Suitable for Annealing, Hardening, Tempering, Brazing & Case Hardening
- Easily adjustable electric heating & high temperature uniformity
- Optimal component surfaces eliminate subsequent machining
- Clean working environment free of oils, fumes & open flames
- Fast & consistent quenching with variable quenching speeds
- Cryogenic system for transformation of retained austenite
- Equipment for vacuum carburizing & carbonitriding
- High uniformity of carburization on the component & within the batch



TECHNICAL DATA	MONOTHERM
Charge dimensions* [mm]	400 x 400 x 600 600 x 600 x 900 900 x 900 x 1,200
Vacuum [mbar]	10 ⁻² low vacuum 10 ⁻⁵ high vacuum 1 - 15 partial pressure
Quench pressure [bar]	1.5 10 20
Space requirements [m]	5 x 3.5 x 7 5 x 3.7 x 8 6 x 4.5 x 10
Gross charge weight [kg]	200 600 - 1,000 1,500
Scope of application	N ₂ , He, Ar

*cubic / cylindrical working space

COOLING DIRECTION	
Vertical	top to bottom
Horizontal	left to right
Reverse	reverse of the respective flow
Vertical / Horizontal	four direction cooling
360°	uniform nozzle cooling



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