

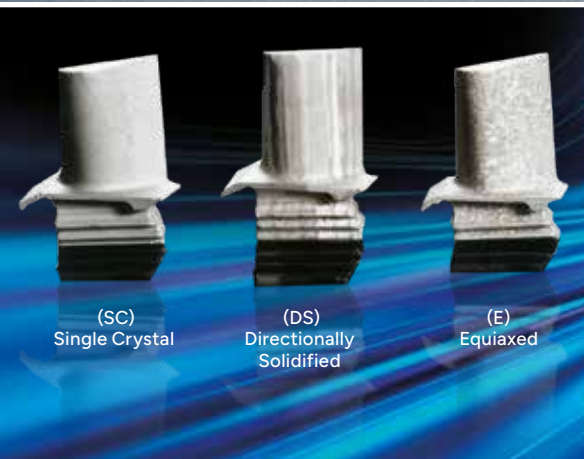
**ALD Vacuum Technologies**

High Tech is our Business

**VIM-IC**

Vacuum Induction Melting - Investment Casting

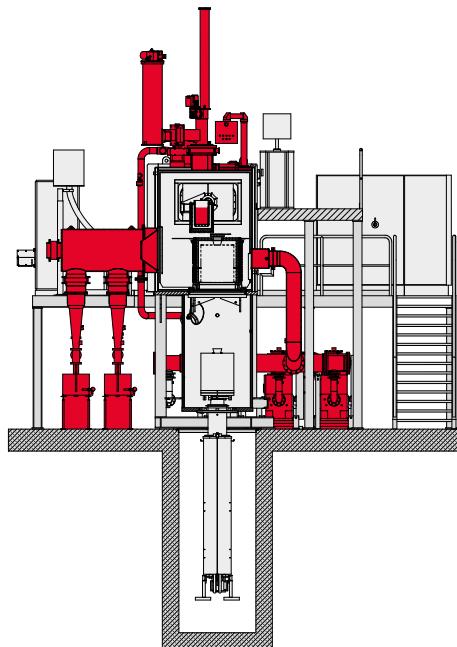




## High Volume Production Systems

ALD offers modern state-of-the-art production systems which significantly contribute to the cost-effectiveness of a high quality production.

ALD furnaces are industrial systems – designed for easy operation, comfortable maintenance, high casting quality and production volumes. Details have been improved through decades of experience in the field.



**ALD furnaces are designed to ensure that turbine blades, vanes, impellers and structural parts meet the highest specifications**

- ▶ Aircraft industry
- ▶ Power generators
- ▶ Automotive industry
- ▶ Medical/chemical/electronic industries





## ALD is a world leader in vacuum investment casting

The product has been installed in hundreds of locations over the course of five decades, providing specifications being based on a wealth of experiences and continuous improvements.



### Our tailor-made solutions offer

- ▶ Optimum mold heating devices with either resistance or induction heating.
- ▶ Broad range of cooling technologies from radiation cooling to complex liquid metal cooling.

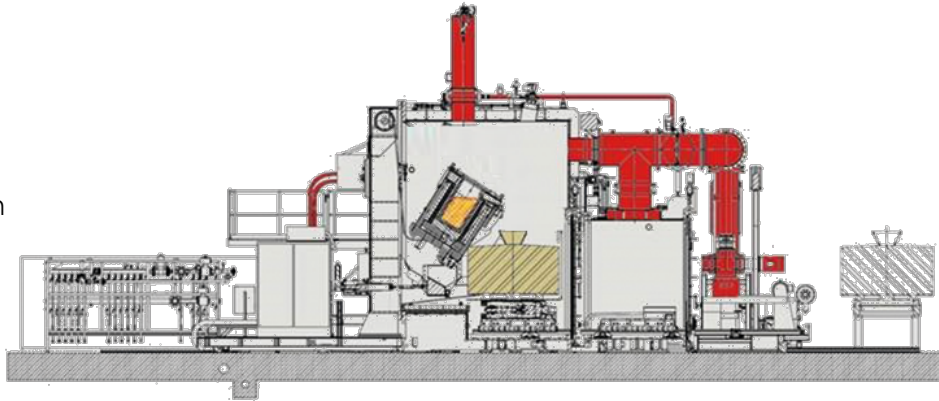


**Our equipment design is based on detailed process know-how and extensive long term experience**



## Special Casting Furnaces

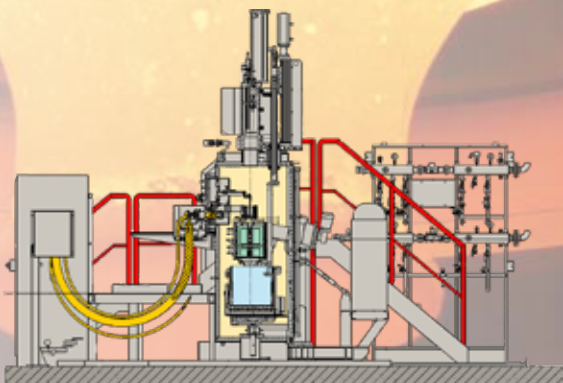
Horizontal Furnaces for the production of large structural components with low process cycle times.



## LMC R&D furnace

The LMC Technology is of particular interest for the production of large DS/SC components where specific thermal gradients are required to enhance quality and productivity. ALD has built several LMC furnaces to cast weights up to 150 kg and mold dimensions of 800 mm dia. and 1000 mm height.

### Liquid Metal Cooling (LMC) – with Advanced Cooling Technology



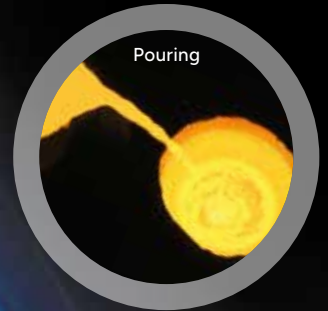
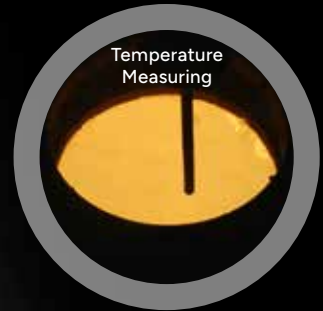
# Furnace Design for Easy Operation & Comfortable Maintenance

## Customized Systems

ALD VIM-IC systems are available for charge weights ranging from 1 kg to 1000 kg for all kinds of processes:

- ▶ Small single chamber furnaces for turbo charger wheels
- ▶ Vertical multiple chamber furnaces for turbine blades
- ▶ Horizontal multiple chamber furnaces for large structural parts

We are able to customize our systems to your individual requirements.



		VIM-IC 5 E/DS/SC	VIM-IC 10 E/DS/SC	VIM-IC 20 E/DS/SC	VIM-IC 40 E/DS/SC	VIM-IC 1 DS/SC/LMC	VIM-IC 1 E
Nominal Furnace Capacity	[liters]	5	10	20	40	1	1,5
Max. Cast Weight (Ni-Base-Alloy)	[kg]	50	100	200	500	5	12
Max. E-Mold Diameter x Height	[mm]	500 x 600	900 x 1000	1000 x 1300	1500 x 1800	–	400 x 500
Max. DS/SC-Mold Diameter	[mm]	400 x 500	600 x 760	800 x 900	1000 x 1500	150 x 300	–
Standard Melt Power Supply	[kW]	150/175	200/250	250/350	350/450	60	150
Typical Operation Vacuum	[Pa]	0.05 - 0.5	0.05 - 0.5	0.5	0.5	0.05	5
Cooling Water Consumption							
for E-Furnace	[l/min]	330	380	430	950	–	230
for DS/SC-Furnace	[l/min]	450	540	650	1250	220	–
Connected Load (with Melt Power Supply)							
for E-Furnace	[kVA]	300	450	600	900	–	200
for DS/SC-Furnace	[kVA]	400	580	700	1300	180	–
System Dimensions							
Length x Width x Height	[m]	6 x 7 x 6	7 x 8 x 7.6	8 x 8 x 8.6	15 x 10 x 7.5	8 x 7 x 4	5 x 4 x 3.5
Pit Depth	[m]	3	3.6	4	no pit	no pit	no pit





## ALD – Leading Supplier for Advanced Vacuum Furnaces

Being one of the leading suppliers of vacuum plants and process technology we supply the entire vacuum metallurgy and vacuum heat treatment sector with our high-tech products and processes. ALD offers individual solutions for the best economic performance. We offer worldwide support and maintenance service for our high-quality plants during their entire lifecycle. Each newly delivered ALD plant meets the latest digital standards and is characterized by a particularly high level of environmental compatibility.

**150+ YEARS EXPERIENCE** – A Young Company with History

### ALD Vacuum Technologies

Otto-von-Guericke Platz 1  
63457 Hanau, Germany  
Phone: +49 6181 307-0  
Fax: +49 6181 307-3290  
E-Mail: [info@ald-vt.com](mailto:info@ald-vt.com)

**ALD Vacuum Technologies  
North America, Inc. (USA)**  
[parts@ald-usa.com](mailto:parts@ald-usa.com)  
Phone: +1 860 386 7227

**ALD France**  
[service-fr@ald-france.eu](mailto:service-fr@ald-france.eu)  
Phone: +33 4 76 33 64 40

**ALD Vacuum Technologies  
(Thailand) Co. Ltd.**  
[SouthEastAsia@ald-vt.com](mailto:SouthEastAsia@ald-vt.com)  
Phone: +66 2 550 7880

**OOO ALD Vacuum  
Technologies (Russia)**  
[www.ald-russia.ru](http://www.ald-russia.ru)  
[info@ald-russia.ru](mailto:info@ald-russia.ru)  
Phone: +7 495 78767 34

**ALD Vacuum Technologies  
India Pvt. Ltd.**  
[AS@aldvt-india.com](mailto:AS@aldvt-india.com)  
Phone: +91 91520 03246/47

**ALD-C&K Vacuum Technologies  
(Suzhou) Co., Ltd. (PR China)**  
[www.ald-cnkn.com](http://www.ald-cnkn.com)  
[Service@ald-cnkn.com](mailto:Service@ald-cnkn.com)  
Phone: +86 512 6385 8833

**ALD Thermo Technologies  
Far East Co. Ltd. (Japan)**  
In charge of: Japan,  
South Korea, Taiwan  
[infoFE@ald-vt.de](mailto:infoFE@ald-vt.de)  
Phone: +81 3 5961 3017