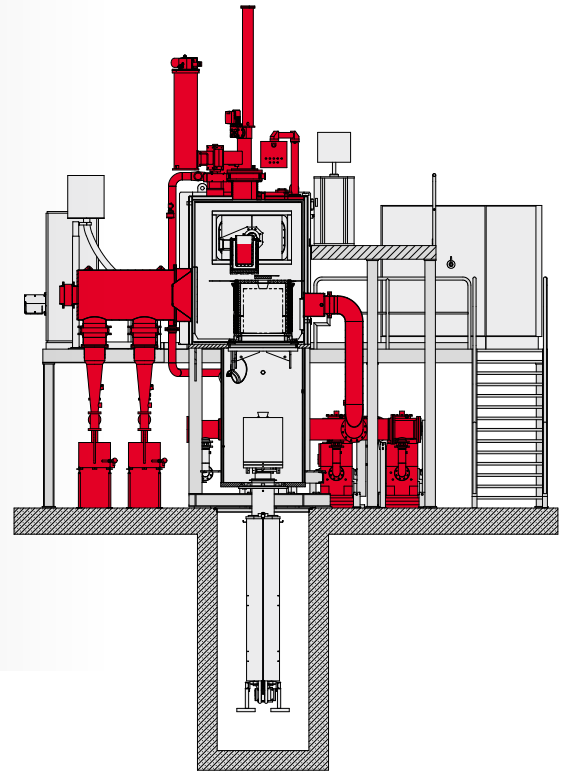


# VIM-IC

ALD Solution Provider with  
Market Leading Casting  
Technology based on

- 50 years experience
- Hundreds of installations
- Customized systems for a large variety of products and processes



## Customized Systems

ALD cover a melt weight range from 1 kg to 750 kg for all kind 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.



**Vertical furnace for the production of blades, vanes and structural parts for aircraft engines and industrial gas turbines**



**Mass production of turbo charger impellers**



**VIM-IC**



### Technical Data **Standard Furnace** **Types Solidification Mode**

		VIM-IC 5 E/DS/SC	VIM-IC 10 E/DS/SC	VIM-IC 20 E/DS/SC
<b>Nominal Furnace Capacity</b>	[liters]	5	10	20
<b>Max. Cast Weight (Ni-Base-Alloy)</b>	[kg]	50	100	200
<b>Max. E-Mold Diameter x Height</b>	[mm]	500 x 600	900 x 1000	1000 x 1300
<b>Max. DS/SC-Mold Diameter</b>	[mm]	400 x 500	600 x 760	800 x 900
<b>Standard Melt Power Supply</b>	[kW]	150/175	200/250	250/350
<b>Typical Operation Vacuum</b>	[Pa]	0.05 - 0.5	0.05 - 0.5	0.5
<b>Cooling Water Consumption</b>				
for E-Furnace	[l/min]	330	380	430
for DS/SC-Furnace	[l/min]	450	540	650
<b>Connected Load (with Melt Power Supply)</b>				
for E-Furnace	[kVA]	300	450	600
for DS/SC-Furnace	[kVA]	400	580	700
<b>System Dimensions</b>				
Length x Width x Height	[m]	6 x 7 x 6	7 x 8 x 7.6	8 x 8 x 8.6
Pit Depth	[m]	3	3.6	4

### Technical Data **Special Furnace** **Types Solidification Mode**

		VIM-IC 40 E/DS/SC	VIM-IC 1 DS/SC/LMC	VIM-IC 1 E
<b>Nominal Furnace Capacity</b>	[liters]	40	1	1,5
<b>Max. Cast Weight (Ni-Base-Alloy)</b>	[kg]	500	5	12
<b>Max. E-Mold Diameter x Height</b>	[mm]	1500 x 1800	-	400 x 500
<b>Max. DS/SC-Mold Diameter</b>	[mm]	1000 x 1500	150 x 300	-
<b>Standard Melt Power Supply</b>	[kW]	350/450	60	150
<b>Typical Operation Vacuum</b>	[Pa]	0.5	0.05	5
<b>Cooling Water Consumption</b>				
for E-Furnace	[l/min]	950	-	230
for DS/SC-Furnace	[l/min]	1250	220	-
<b>Connected Load (with Melt Power Supply)</b>				
for E-Furnace	[kVA]	900	-	200
for DS/SC-Furnace	[kVA]	1300	180	-
<b>System Dimensions</b>				
Length x Width x Height	[m]	15 x 10 x 7.5	8 x 7 x 4	5 x 4 x 3.5
Pit Depth	[m]	no pit	no pit	no pit

Additional Versions on Request

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**You can find the addresses of all our sales partners and subsidiaries on [www.ald-vt.com](http://www.ald-vt.com).**

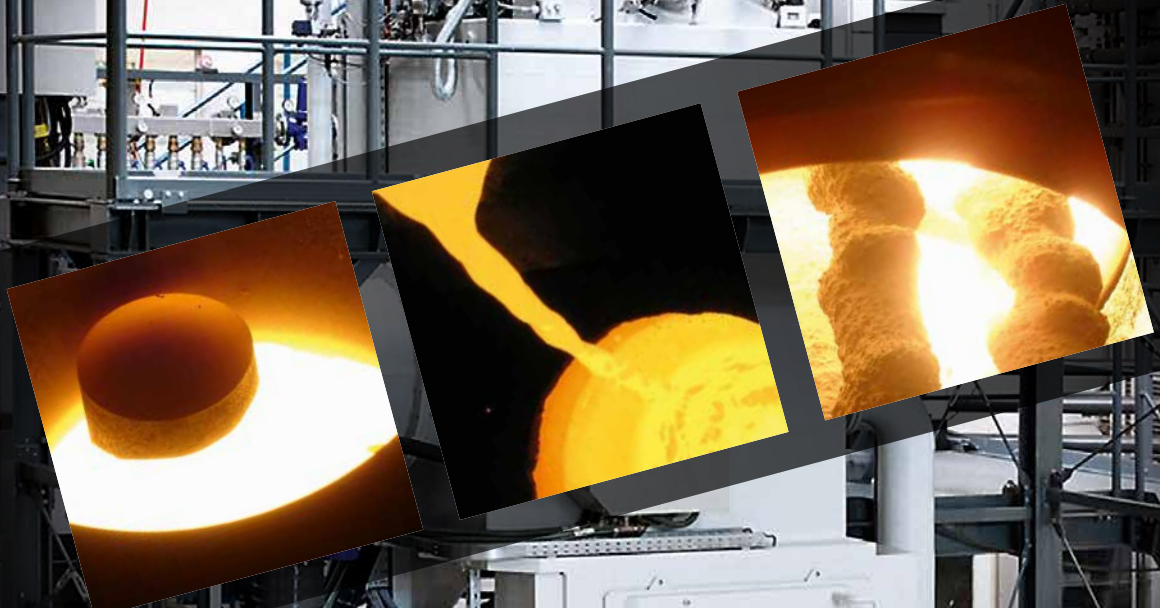
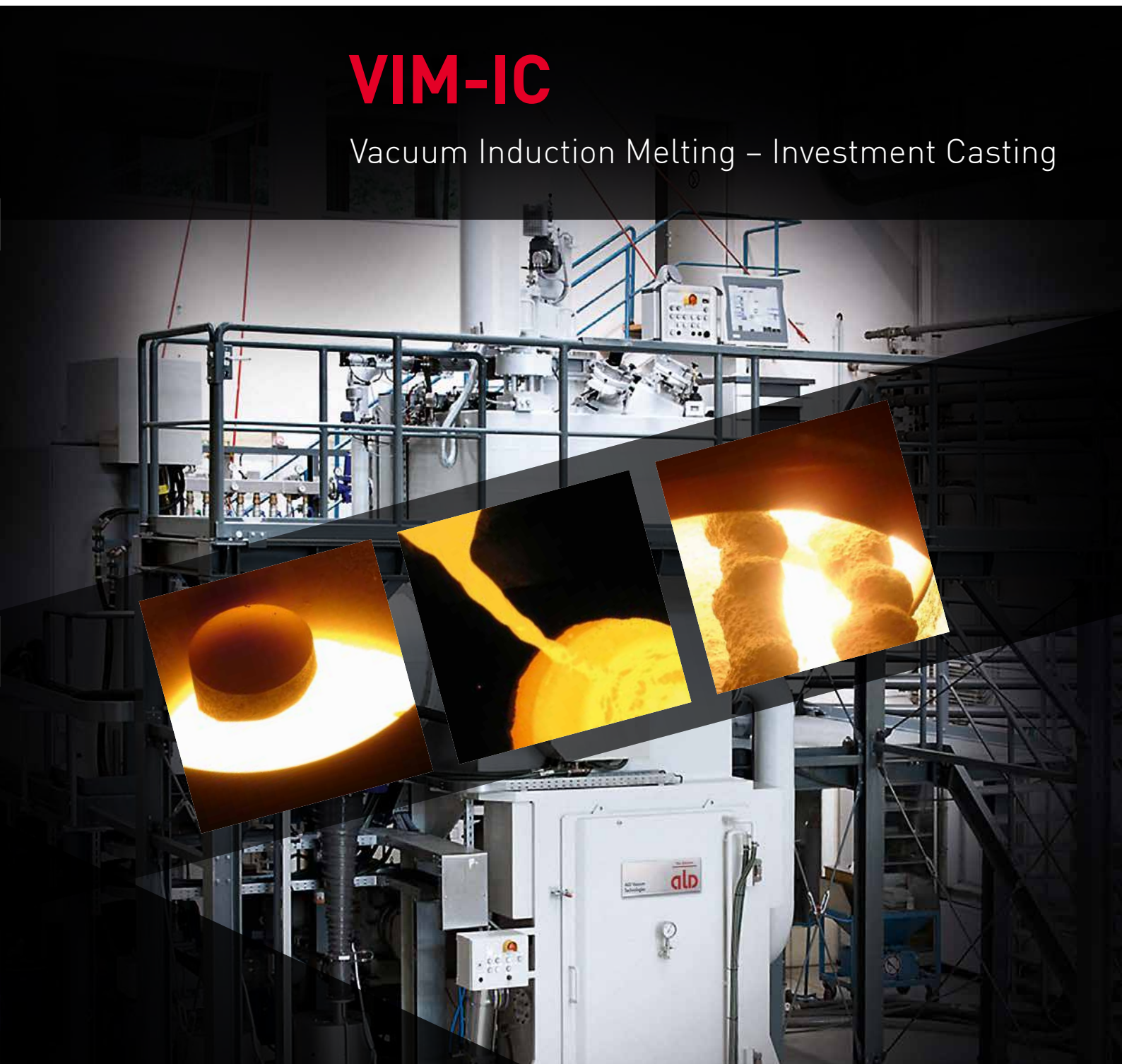


**ALD Vacuum Technologies**

High Tech is our Business

# VIM-IC

Vacuum Induction Melting – Investment Casting



# VIM-IC

## High Volume Production Systems

for turbine blades, vanes, impellers and structural parts to meet the highest specifications from the

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



Equiaxed (E)

Directionally Solidified (DS)

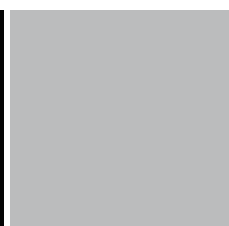
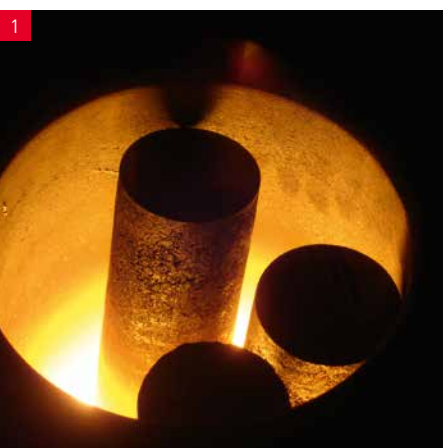
Single Crystal (SC)



**ALD are world leaders in Vacuum Investment Casting Technology. Our equipment design is based on detailed process know how and extensive long term experience.**

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.



1. Melting  
2. Temperature Measuring  
3. Pouring  
4. Withdrawal



# VIM-IC

Furnace Design  
for Easy Operation  
and Comfortable  
Maintenance

VIM-IC 10 E/DS/SC with  
induction mold heater and  
large service platform

ALD furnaces are industrial systems – designed for easy operation, comfortable maintenance, high casting qualities and production volumes. Details have been improved through decades of experience in the field. The result: market leading production technology.

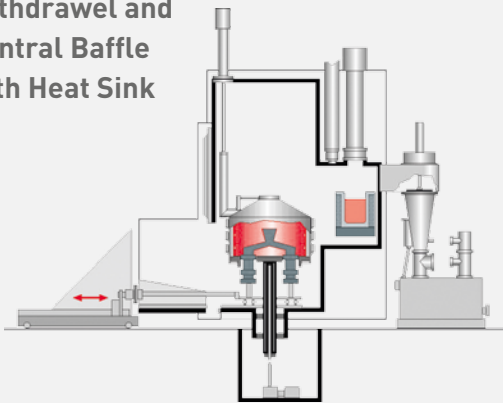


- 1 Resistance mold heater
- 2 Main control station – visualization monitor with touch screen
- 3 Tilting device and power lead for induction coil

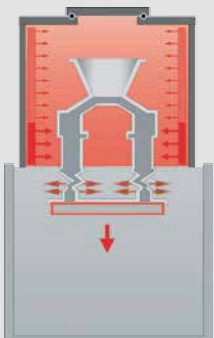


# Special Casting Furnaces

Horizontal Furnaces for the Production of Large E and DS/SC Components with Vibration-free Withdrawal and Central Baffle with Heat Sink



Liquid Metal Cooling (LMC) – with Advanced Cooling Technology



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.

LMC R&D furnace



Tin bath container with stirring devices for molds dia. 800 mm x height 1000 mm

