

we are  
alimex

**WORLD LEADERS IN PRECISION ALUMINIUM**  
world class product quality. excellence in delivery performance.  
outstanding customer service.

# WE ARE ALIMEX

world leaders in  
precision aluminium.



We are **market founder** and **leading provider** of high precision quality aluminium cast products.

Leading technology based on **more than 40 years of experience** in aluminium production and processing.

Through **continuous product innovations** we have achieved a leading position in both the German and the global market alike.

**Worldwide success.** Expansion of the alimex Group in Europe, America, Asia.

Currently **180 employees.**

# CORE BUSINESS

our key capabilities.

Development, production, processing & distribution of high precision aluminium cast products.

## INDUSTRY PRODUCTS

plates

-

cuts and blocks

-

complex CNC components

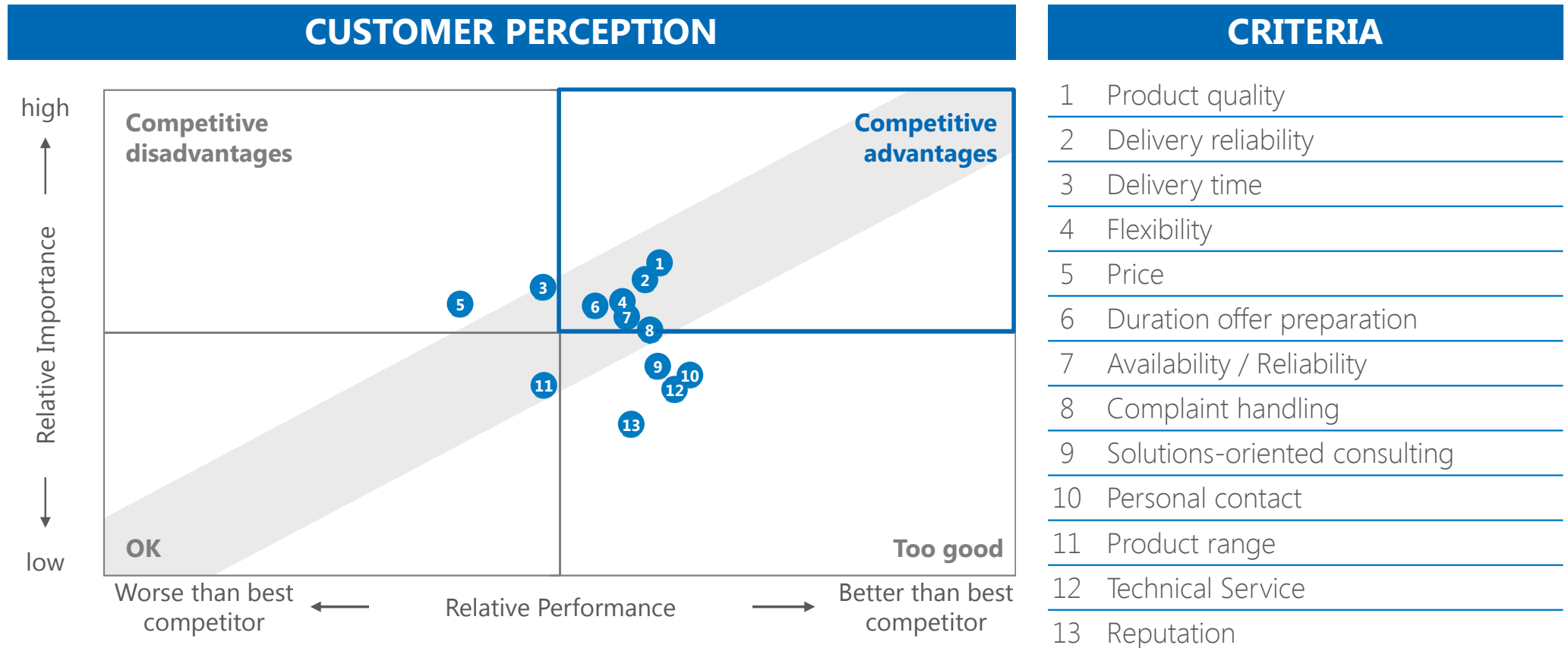
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**Centre of Research & Excellence (CoRE)**



# COMPETITIVE POSITIONING

90% of our clients would recommend alimex.



# TARGET MARKETS

numerous market applications.

**SOLAR /  
SEMICONDUCTOR /  
DISPLAY**



**MACHINERY /  
GENERAL  
ENGINEERING**



**MEDICAL  
EQUIPMENT**



**AUTOMOTIVE**



# ALIMEX TODAY

*Today, still a family owned business, aluminium cast plates remain at the heart of alimex, complimented by the introduction of precision CNC machined components in 2000*



alimex UK



alimex Germany



alimex Americas



alimex Benelux

alimex APAC

# ALIMEX PRODUCT PORTFOLIO

## alimex Cast Plate: 5080, 5754, ACP 7

Fine grain structure, low porosity and excellent machining characteristics all define the cost saving and value added attributes of every block or plate of ACP. Offered with Precision Machined (P) or Raw Sawn (R) surface finishes. Our flatness and tolerances are industry leading, predicible and precise.

## alimex Eloxpure®: 5080, 5754

In-House R&D developed product consistently offering improved anodising, with maximum technical and visual performance.

## alimex Rolled Plate: 5083, 6082, 7075

PLANAL products are a range of rolled aluminium plates with precision machined surfaces. Industry leading material with unmatched flatness and tolerances



Bespoke Client Training

13/04/2018

© alimex Precision In Aluminium



**ACP 5080(R) ELOXPURE®**

ACP 5080 Eloxpure® erfüllt alle Parameter hinsichtlich der Optimierung aller kritischer Anforderungen an das Eloxieren und Hartbleichen. Durch intensive Forschung & Entwicklung ist es gelungen, eine nicht vergleichbare Top-Qualität zu schaffen. Gegenüber der häufig eingesetzten Präzisionsplatte ACP 5080 realisiert sich ELOXPURE® durch eine wesentlich verbesserte Anodisierbarkeit aus und wird dabei maximalen technischen und optischen Ansprüchen mit konstanten Ergebnissen gerecht.

ACP 5080 Eloxpure® can achieve the best possible finishing specifications for anodising and hard anodising. Through intensive research & development we have successfully developed and produced the most leading material. Based on the commonly used high grade alimex precision cast plate ACP 5080, our ACP 5080 ELOXPURE® consistently offers substantially improved anodising, with maximum technical and visual performance.

PLANAL 5083 / 6082 / 7075

PLANAL Produkte sind hochpräzise, geschliffene Aluminiumbleche, die für eine Vielzahl von Anwendungen im Maschinenbau, in der Luftfahrt, in der Automobilindustrie, in der Schiffbauindustrie, in der Raumfahrt und in der Medizintechnik eingesetzt werden. Sie sind durch ihre hervorragende Oberflächenqualität und ihre hohe mechanische Festigkeit gekennzeichnet.

ACP 5080

ACP 5080 ist eine speziallegierte Präzisionsgussplatte mit sehr ausgeprägten mechanischen Eigenschaften. Die feinkörnige und poröse Aluminium-Gussgefüge wird durch eine sorgfältige Wärmebehandlung homogenisiert und überaus weitestgehend. Die Formstabilität bleibt optimal erhalten. Die Oberflächen von ACP 5080 liegt in der Leistungsfähigkeit der Oberfläche. Jede Platte wird abschließend kontrolliert und überprüfbar, mit einer strahlendsten resultiert.

High precision aluminium cast plate, ACP 5080, is precision surface machined on both sides to industry leading close tolerance standards. Fine grain structure, low porosity and excellent machining characteristics all define the cost saving and value added attributes of ACP 5080. Superb industry leading material dimensional stability is achieved in every plate of ACP 5080; thanks to proprietary processes and manufacturing control, our flatness and tolerances are industry leading, predictable and precise.

**ACP 7 / ACP 7R**

Chemische Zusammensetzung	
DIN EN 573-2 (AlMg1,2)	
Spezifische Eigenschaften	Wert
Schmelztemperatur (T <sub>M</sub> )	640
Ausdehnungskoeffizient (α <sub>10-20</sub> )	23,5
Bruchdehnung (δ <sub>5</sub> )	10
Bruchdehnung (δ <sub>10</sub> )	8
Bruchdehnung (δ <sub>100</sub> )	10

**Typische Mechanische Eigenschaften**

DIN EN 573-2	
Bruchdehnung (δ <sub>5</sub> )	10
Bruchdehnung (δ <sub>10</sub> )	8
Bruchdehnung (δ <sub>100</sub> )	10

**Typische Physikalische Eigenschaften**

DIN EN 573-2	
Dichte (ρ)	2,70
Wärmeleitfähigkeit (λ)	110
Elektrische Leitfähigkeit (σ)	35-40
Wärmeausdehnungskoeffizient (α <sub>10-20</sub> )	23,5

**ACP 5754(R) ELOXPURE®**

ACP 5754 Eloxpure® erfüllt alle Parameter hinsichtlich der Optimierung aller kritischer Anforderungen an das Eloxieren und Hartbleichen. Durch intensive Forschung & Entwicklung ist es gelungen, eine nicht vergleichbare Top-Qualität zu schaffen. Gegenüber der häufig eingesetzten Präzisionsplatte ACP 5754, realisiert sich ELOXPURE® durch eine wesentlich verbesserte Anodisierbarkeit aus und wird dabei maximalen technischen und optischen Ansprüchen mit konstanten Ergebnissen gerecht.

ACP 5754 Eloxpure® can achieve the best possible finishing specifications for anodising and hard anodising. Through intensive research & development we have successfully developed and produced the most leading material. Based on the commonly used high grade alimex precision cast plate ACP 5754, our ACP 5754 ELOXPURE® consistently offers substantially improved anodising, with maximum technical and visual performance.

**Chemische Zusammensetzung**

DIN EN 5754 (AlMgZn) gem. DIN EN 5754-2

**Spezifische Eigenschaften**

DIN EN 5754-2	
Schmelztemperatur (T <sub>M</sub> )	640
Ausdehnungskoeffizient (α <sub>10-20</sub> )	23,5
Bruchdehnung (δ <sub>5</sub> )	10
Bruchdehnung (δ <sub>10</sub> )	8
Bruchdehnung (δ <sub>100</sub> )	10

**Chemical Composition**

DIN EN 5754 (AlMgZn) gem. DIN EN 5754-2

**Material Properties**

DIN EN 5754-2	
Melting point (T <sub>M</sub> )	640
Expansion coefficient (α <sub>10-20</sub> )	23,5
Elongation (δ <sub>5</sub> )	10
Elongation (δ <sub>10</sub> )	8
Elongation (δ <sub>100</sub> )	10

# ALIMEX CAST TOOLING PLATE PRODUCTION

## Slab Production and alimex Quality Control

- Vertical DC Casting Process by others
- alimex Chemical Composition
- alimex Casting Parameters
- alimex In-House Bespoke Heat Treatment

## alimex Cast Slab Benefits

- ✓ Fine Grain Structure
- ✓ Low Porosity
- ✓ Market Leading Mechanical Properties
- ✓ Full Stress Relieved Product
- ✓ World Class Quality
- ✓ Product Reliability and Repeatability



**Processing to alimex Cast Plates for surface machined- or sawn plates**

Processing to rolled plates



# ALIMEX IN HOUSE HEAT TREATMENT FACILITY

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## Bespoke Heat Treatment Facility

- Designed and Developed by alimex
- A Truly Unique bespoke solution
- Resource Saving and Environmentally Friendly
- Various Heat Treatment possibilities for alimex Products
- 550 Tonne capacity for various slab sizes
- In-House Heat Treatment Processing
- Over 40 years of development and optimisation
- Finely tuned Heat Treatment for Optimal Results
- Repeatability and Quality Guaranteed

# ALIMEX PRODUCTION – PLATES AND BLOCKS

## alimex Cast Plate & Block Production

- Maximum Thickness of 1000mm
- Horizontally Sawn in cold Condition
- Surface Machined in cold Condition
- Top and Bottom Surfaces Ready for use
- All plates and blocks have the same
  - Mechanical Properties throughout
  - No Inherent Stresses
  - PVC Coated on Both Sides



## alimex Cast Plate & Block Benefits

- ✓ Fine Grain Structure
- ✓ Low Porosity
- ✓ Market Leading Mechanical Properties
- ✓ Full Stress Relieved Product
- ✓ World Class Quality
- ✓ Product Reliability and Repeatability

	alimex Cast Plate	Rolled Plate
Flatness	Deviation 0,13 – 0,4mm	Deviation 3,00 – 9,5mm
Surface Finish (Ra)	<0,3µm	Typical 80µm – 115µm
Thickness Tolerance	± 0,1mm (Machined Only)	± 0,3 – ± 3,3mm
Thickness	5 – 250mm Machined (P) 8 – 1060mm Sawn (R)	5 – 300mm
Stability	Very Stable	Not Guaranteed
<b><i>ACP in many circumstances can replace Rolled Plate and MIC 6 Cast Plate</i></b>		

# Precision CNC Machining

**alimex**<sup>®</sup>  
PRECISION IN ALUMINIUM



# Precision CNC Machining



## OUR MACHINERY PORTOFOLIO CURRENTLY INCLUDES THE FOLLOWING

### DECKEL MAHO 1600S

CNC Universal Milling Machine  
Workspace / driveway  
X = 1600 mm  
Y = 800 mm  
Z = 550 mm

### DMU 200P (3 + 2 AXIS)

CNC Universal Milling Machine  
Workspace / driveway  
X = 1800 mm  
Y = 2000 mm  
Z = 1100 mm

### JUNGENTHAL

Horizontal Rotating Table Lathe  
Workspace / driveway  
Turntable- $\phi$  1500 mm  
Diameter- $\phi$  1400 mm  
Max Material Thickness 500 mm

### DOOSAN MECATEC 1400 H

CNC Universal Milling Machine  
Workspace / driveway  
X = 1400 mm  
Y = 700 mm  
Z = 625 mm

### FOOKE 905 LINEAR (5 AXIS)

CNC Universal Milling Machine  
Workspace / driveway  
X = 4500 mm  
Y = 3000 mm  
Z = 1500 mm

### VDF

Lathe Center  
Workspace / driveway  
Max. Diameter 400 mm  
Max. Length 900 mm

### DMU 200P (5 AXIS)

CNC Universal Milling Machine  
Workspace / driveway  
X = 1800 mm  
Y = 2000 mm  
Z = 1100 mm

### FOOKE ENDURA

CNC Universal Milling Machine  
Workspace / driveway  
X = 3100 mm  
Y = 2600 mm  
Z = 300 mm

### KMG WENZEL LH 65

Measuring Machine  
Workspace / driveway  
X = 650 mm  
Y = 1600 mm  
Z = 500 mm

### DMU 200P (5 AXIS)

CNC Universal Milling Machine  
Workspace / driveway  
X = 1800 mm  
Y = 2000 mm  
Z = 1100 mm

### DECKEL FP 2

CNC Universal Milling Machine  
Workspace / driveway  
X = 500 mm  
Y = 300 mm  
Z = 400 mm

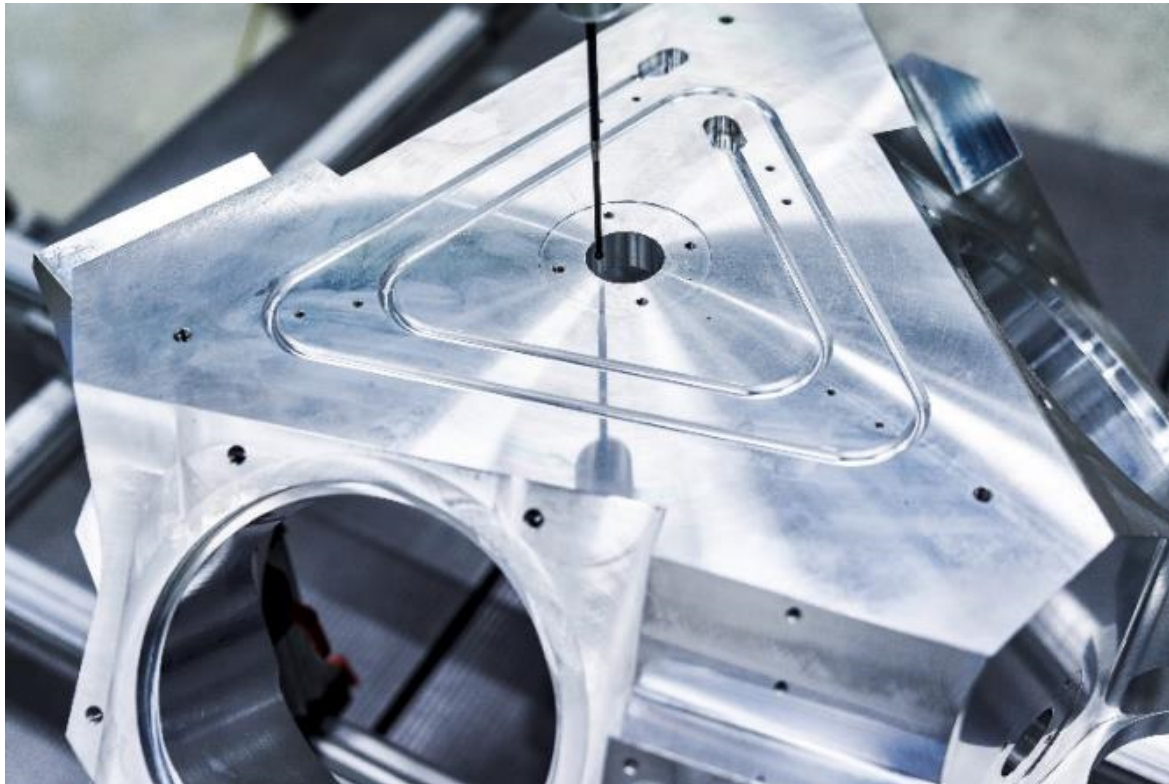
### KMG Zeiss MMZ-E

Measuring Machine  
Workspace / driveway  
X = 2000 mm  
Y = 4000 mm  
Z = 1500 mm

### DMU 270 P

CNC Universal Milling Machine  
Workspace / driveway  
X = 2700 mm  
Y = 2700 mm  
Z = 1600 mm

# Precision CNC Machining



## Aluminium Component Production

- Manufacturer for over 20 years
- References available on request
- Large 5 – Axis Capabilities  
(4500 x 3000 x 1500mm)
- Large CMM Capabilities  
(2000 x 4000 x 1500mm)
- Recent investments include:
  - DMU 270P (Q1 2018)
  - Cleaning & Packing Building
  - QA: ISO9001:2015 Approved

thank  
you!