



# RELIABLE PARTNER FOR ENGINEERING CASTING & FORGING SOLUTIONS





## WHO WE ARE AND WHAT WE DO

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**WELD2CAST Engineering AB** is a Swedish one-stop supplier of Engineering Casting and Forging Solutions for the Scandinavian and North European market, including Germany and The Netherlands.

We specialize in the development, manufacture and supply of custom-made (OEM) mechanical components of the very highest quality at an extremely competitive price. Our strength include the supply of finished precision-machined and assembled Castings and Forgings in small and medium quantities from 0.1 kg – 200 kg via our production centres in Europe, Turkey, China and South-east Asia. From our logistic centres in Sweden and Denmark we stock and supply our customers with engineered components on a flexible day-to-day delivery basis, ensuring delivery times are met and our clients do not have to be concerned about the delivery turnaround times.



**Tailormade Solutions**

## WELD2CAST

### CASTINGS

**WELD2CAST Engineering AB** supplies a large range of finish-machined and engineering components in different casting techniques such as:

- ✔ SAND CASTING
- ✔ INVESTMENT CASTING (Water Glass and Silica Sol)
- ✔ SHELL MOULDING
- ✔ GRAVITY DIE CASTING
- ✔ LOST FOAM CASTING
- ✔ HIGH-PRESSURE DIE CASTING
- ✔ SINTERING

All in many varieties of metal alloys like: Iron, Ductile Iron, Stainless steel, Alloy steel, Carbon steel, Aluminium and Brass alloys. We specialize in deliveries of engineered castings in small and medium quantities ranging in size from 0.05 kg/pcs. – 200 kg/pcs. With our leadership's 25 years of combined experience in casting, CNC machining and surface treatments ensure we provide the best production methods in manufacturing products tailormade to your specific requirements.



# WELD2CAST

## FORGINGS

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**WELD2CAST'S** considerable experience enables us to produce engineered forgings in an extensive range of materials including carbon, alloy, stainless and heat-resisting steels. In addition, we also produce in non-ferrous materials, aluminium, copper, and brass.

Typical heat treatment techniques applied to our forgings include hardening, tempering, annealing, normalising, stress relieving, and solution annealing.

### WELD2CAST's Forging Techniques

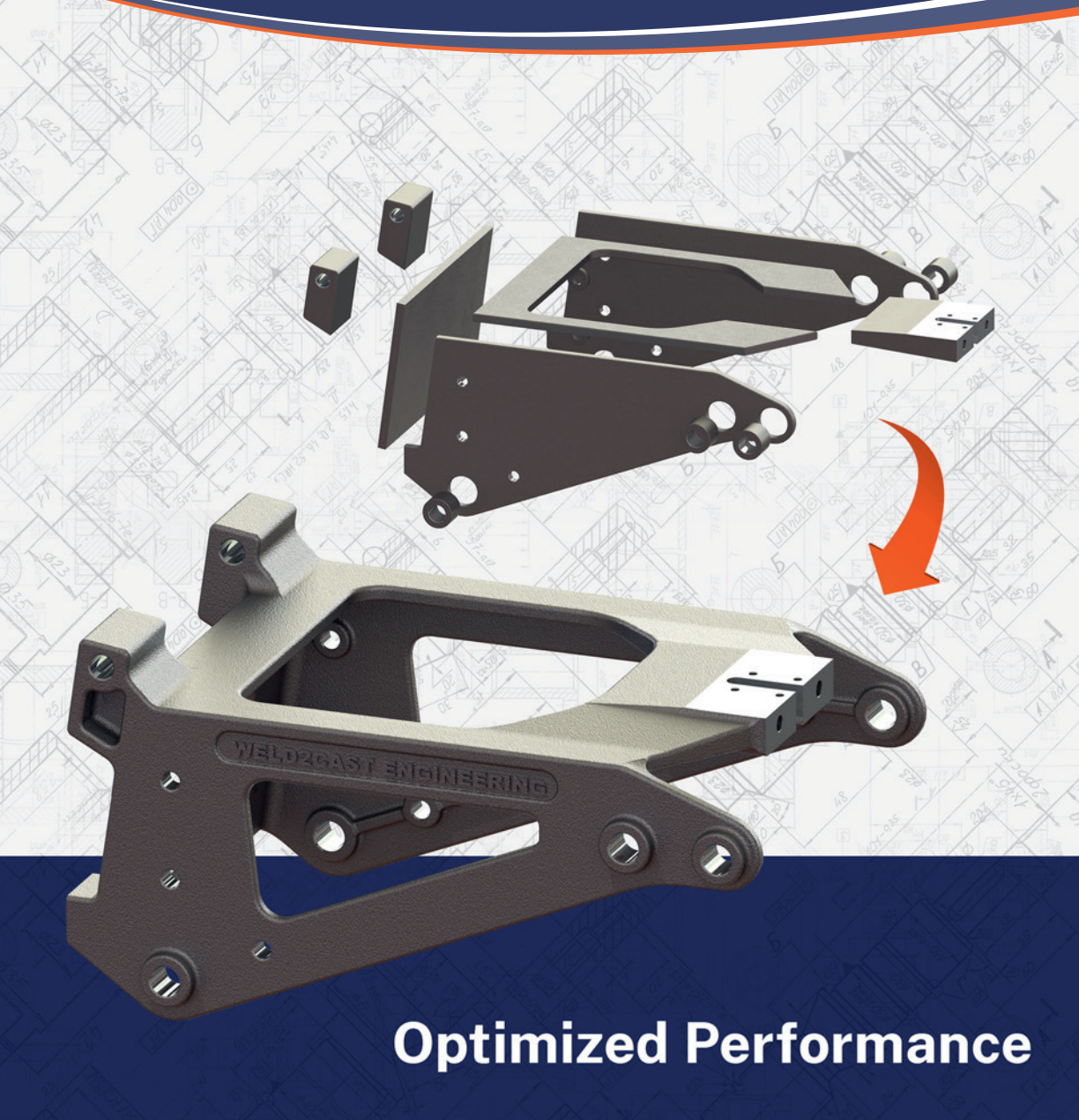
- ✔ CLOSED DIE FORGINGS (Precision forgings)
- ✔ OPEN DIE FORGINGS
- ✔ COLD FORGINGS
- ✔ SEAMLESS AND ROLLED RING FORGINGS

## WELD2CAST'S ADVANTAGES

AND RESOURCES FOR YOUR ENGINEERED CASTINGS.

	Sand Casting	Investment Casting (Water Glass)	Investment Casting (Silica Sol)	Shell Moulding Casting	Gravity Die Casting	High-Pressure Die Casting	Lost Foam Casting	Sintering
Metals	Ferrous and Non-Ferrous	Most Ferrous	Most Ferrous	Most Ferrous	Only Non-Ferrous	Only Non-Ferrous	Most Ferrous	Ferrous and Non-Ferrous
Size of Components	All Sizes	Small and medium	Small	Medium	Medium and big	Small and medium	Medium	Very small
Weight of Components (Kg)	1 (kg) - Many tonnes	0,25 - 50 (kg)	0,1 - 30 (kg)	1 - 50 (kg)	1 - 100 (kg)	0,2 - 20 (kg)	1 - 200 (kg)	0,05 - 1 (kg)
Flexibility of design for conversion from weldments to castings	High	<b>Very Excellent*</b>	Excellent	High	Moderate	Relative high	High	Moderate
Production unit (pcs)	Suitable for very low and medium series	Suitable for low and medium series MOQ 50 pcs	Suitable for low and medium series MOQ 100 pcs	Suitable for low and medium series MOQ 300 pcs	Suitable for low and medium series MOQ 100 pcs	Suitable for medium and high series MOQ 1000 pcs	Suitable for medium series MOQ 500 - 1000 pcs	Suitable for high series MOQ 10 000 pcs
Cost of tooling/mould	Low	Low	Low	Moderate	Low	Moderate	High	Higher
Needs of secondary machining	High	Moderate	Low	Low	Moderate	Very Low	Low	None
Product manufacture cost	Low	Low	Medium	Medium	Low	Medium	Medium/High	Very High
Dimension casting tolerance acc. with ISO 8062	CT10 - CT12	CT7 - CT9	CT4 - CT6	CT7 - CT8	CT7 - CT8	CT4 - CT5	CT7 - CT8	CT1 - CT2
Minimum of cast wall thickness	6 - 8 mm	4 - 5 mm	2 mm	5 mm	4 mm	2,5 mm	3 mm	3 - 4 mm
Draft angle need (deg °)	± 2,0 °	± 1,0 °	± 0,5 °	± 1,0 °	± 1,0 °	± 0,5 °	± 1,5 °	± 0,1 °
Surface finish (Ra) μ	Ra 50 μ	Ra 25 μ	Ra 3,2 μ	Ra 25 μ	Ra 12,5 μ	Ra 3,2 μ	Ra 25 μ	Ra 3,2 μ
Casting Alloys	Iron	Low-Alloy Steel	Low-Alloy Steel	Ductile Iron	Aluminium	Aluminium	Iron	Iron
	Ductile Iron	High-Alloy Steel	High-Alloy Steel	ADI (Austempered ductile iron)	Copper	Zinc	Ductile Iron	Low-Alloy Steel
	ADI (Austempered ductile iron)	Stainless Steel	Stainless Steel	Low-Alloy Steel		Magnesium	ADI (Austempered ductile iron)	High-Alloy Steel
	Low-Alloy Steel	Hastelloy	Duplex Stainless Steel	High-Alloy Steel			Low-Alloy Steel	Magnesium
	High-Alloy Steel		Titatium	Stainless Steel			High-Alloy Steel	
	Stainless Steel			Duplex Stainless Steel			Copper	
	Aluminium							
	Copper							
Bronze								

\*WELD2CAST'S most popular method



**Optimized Performance**

## ENGINEERING VALUE TO OUR CUSTOMERS

**WELD2CAST Key Engineering specialty** is to help customers to convert and design simple and complex weldments into weight-saving and cost-efficient engineered castings or forgings.

Our R&D and technical teams have more than 25 years of combined experience in the development and design of complex weldments into castings or forgings. Converting fabrications, weldments or solid assemblies into one-piece castings or forgings offers significant advantages:

### Advantages of converting a welded part to a Casting

- ✔ IMPROVES PRODUCT PERFORMANCE  
(Strength, Wear resistance, Toughness)
- ✔ REDUCES NUMBER OF COMPONENTS
- ✔ REDUCES WEIGHT
- ✔ REDUCES TOTAL COST UP TO 40%
- ✔ REMOVES STRESS IN JOINTS  
and welding deformations with a one-piece casting
- ✔ SAVES INTERNAL ENGINEERING TIME



**“One-Stop” Solution**

## **FOR ALL YOUR PRECISION-MACHINING NEEDS**

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**WELD2CAST Engineering AB** is a Single-Source Solution for all your pre- and finish-machined castings and forgings.

We offer a full range of precision-machining services, which include:

### **Machining Capabilities**

- ✔ 5 AND 6 AXIS MACHINING CENTRES
- ✔ TURNING
- ✔ MILLING
- ✔ DRILLING
- ✔ THREADING EXTERNAL AND INTERNAL
- ✔ CMM MEASUREMENT INSPECTION



**We Take Care of the Process**

## **SURFACE-FINISHING** PROCESS

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**WELD2CAST Engineering AB** can offer several surface-finish options for your engineered castings and forgings to suit our customers' requirements.

We have longstanding relationships with our surface-finishing suppliers, working closely with them to ensure we maintain a stable and efficient supply chain so that our customers receive the smoothest possible service.

### **Our Surface Finishing Capabilities**

- ✔ WET PAINTING
- ✔ POWDER COATING PAINTING
- ✔ EC-COATING (Electrodeposition coating)
- ✔ ELECTROLYTIC ZINC PLATING
- ✔ ELECTROLYTIC ZINC-NICKEL PLATING (Zn, Ni) 12-15%
- ✔ ZINC FLAKE (Geomet) / DACROMET 6 $\mu$ , 10 $\mu$  & 12 $\mu$
- ✔ HOT-DIP GALVANISATION (HDG)
- ✔ BLACK OXIDE COATING
- ✔ POLISH & MIRROR POLISHING  
(Stainless & Aluminium castings)
- ✔ NITROCARBURISING





**For All Your Needs**

## WELD2CAST'S ENGINEERED ASSEMBLIES

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**WELD2CAST Engineering AB** offer you a single source assembled solution for all your mechanical components to reduce total cost, better transparency and improved flexibility.

We can deliver your Castings and Forgings include precision machining, with any kinds of surface treatment, pre-assemblies like plain or ball bearings, fasteners and similar parts directly to your assembly line.





## Stock Keeping Solutions

## WELD2CAST'S PRODUCT SUPPLY CHAIN

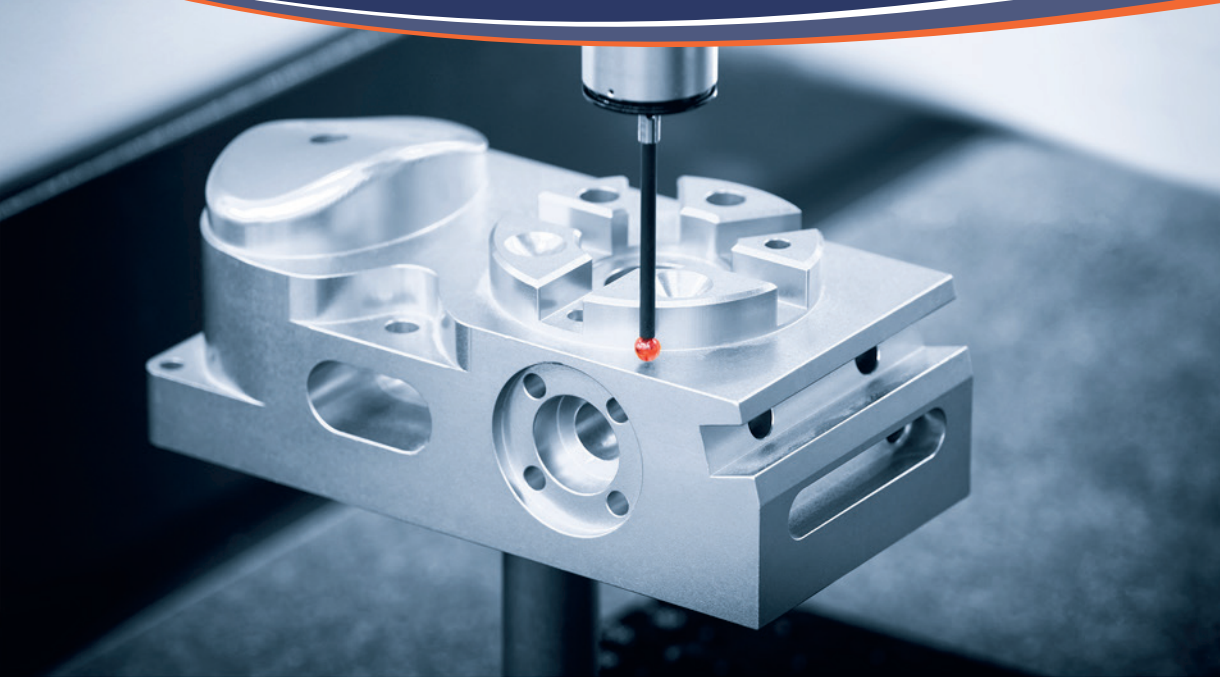
**WELD2CAST Engineering AB** appreciates the importance of product stockholding and have invested in the necessary warehousing and resources to provide our customers with product delivery on a continuous basis.

**With our strategically placed warehouses in**

- ✓ SWEDEN (Gothenburg and Stockholm)
- ✓ DENMARK (Herning)
- ✓ GERMANY (Hamburg)



Where we can stock and supply our Scandinavian and other North European customers with engineered components on a day-to-day delivery basis.



## THE HIGHEST PRODUCT QUALITY

**Casting and forging is our passion** – which also goes hand-in-hand with top quality, because what matters to us more than anything is to be a reliable and permanent partner to our customers.

We justify the trust that our customers place in WELD-2CAST Engineering with extensive quality assurance measures along the entire supply chain process, all of which are anchored in our...

### Quality (End-2-End) Management System

#### Asia-Based SQE Quality Inspectors

WELD2CAST can also deliver engineered components direct from Asia to your product line, using our Asia-based WELD2CAST team of SQE quality-control inspectors to ensure, monitor and inspect that the product meets the required standards before any shipment is arranged from any of our production centres.



## WELD2CAST'S ADDITIONAL CAPABILITIES

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- ✔ NON-STANDARD FASTENERS  
AND PRECISION COMPONENTS
- ✔ SHEET METAL FABRICATIONS
- ✔ SLIDE AND ROLLER BEARINGS



# ONE STOP 360°

ADD-VALUE ENGINEERING SUPPLIER

Warehouse Solution

Supply Chain

Quality Control

Assemblies

Engineering Service

Castings & Forgings

CNC-Machining

Surface Finishing

