

WALLCOLMONOY
PRECISION COMPONENTS

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ENGINEERED CAST OR FULLY MACHINED COMPONENTS

Designed to optimise wear, corrosion and heat-resistant performance.

ADVANCED METALLURGY AND MANUFACTURING FOR PRECISELY ENGINEERED COMPONENTS





PRECISION CASTINGS FOR WEAR, CORROSION, AND HIGH-TEMPERATURE APPLICATIONS

Wall Colmonoy's Precision Components combines deep metallurgical expertise with advanced manufacturing to produce high-performance castings and engineered components for demanding operating environments.

From our facility in Pontardawe, Swansea, UK, we serve customers across global markets including aerospace, defence, energy, oil and gas, and other industrial industries.

We design and manufacture precision-engineered components to withstand wear, corrosion, abrasion, and high temperatures - delivering proven performance in critical applications.

With the capability to produce some of the largest precision castings in the UK and Europe, we support complex requirements through advanced materials expertise, tailored engineering, and agile product development. Technologies, including digital twin modelling, 3D scanning, and reverse engineering help us solve engineering challenges, optimise component designs, and accelerate development.

HIGH-QUALITY COMPONENTS

Wall Colmonoy operates to internationally recognised quality standards, supported by robust processes, documentation, and controls.

This commitment to manufacturing excellence provides customers with confidence in the quality, consistency, and traceability of every component we deliver.

CERTIFICATIONS AND INDUSTRY STANDARDS

- ISO 9001:2015
- AS9100D / EN 9100 (AEROBRAZE)
- NADCAP HEAT TREATMENT / BRAZING (AEROBRAZE)
- ISO 14001:2015
- CYBER ESSENTIALS CERTIFIED PLUS

WHERE ADVANCED ENGINEERING CAPABILITY MEETS PROVEN MANUFACTURING EXPERIENCE

Located in Pontardawe, Swansea, UK, Wall Colmonoy is purpose-built to support the production of high-performance cast and engineered components for demanding industrial environments.

As part of the broader Wall Colmonoy manufacturing network, the 9,590m2 Swansea location combines decades of metallurgical knowledge with modern casting and alloy processing technology to deliver consistent, high-quality results for customers around the world.

Our facilities support a comprehensive range of precision component manufacturing processes, from alloy melting and casting to high-temperature coatings, brazing, heat treatment, HIPping, additive manufacturing, machining, finishing, and final inspection.

This integrated approach allows us to maintain tight control over quality, lead times, and process consistency - producing complex components with the reliability and repeatability our customers depend on.





ADVANCED CASTING TECHNOLOGY Our casting equipment enables the production of components with superior structural integrity and minimal defects.

IN-HOUSE QUALITY CONTROL Rigorous inspection and testing processes ensure every component meets strict dimensional and material specifications.

INTEGRATED MANUFACTURING PROCESSES From alloy melting and casting to high-temperature coatings, brazing, heat treatment, HIPping, additive manufacturing, machining, finishing, and final inspection, our operations are designed to deliver consistent quality and efficient turnaround times.

ON-SITE MACHINE SHOP Our 2180m2 on-site machine shop enables us to deliver fully machined components, with consideration built in from early design collaboration through to the delivery of certified, fully finished parts.

SPECIALISED ALLOY PROCESSING We work with a range of high-performance super alloys engineered to withstand extreme temperatures, corrosion, and wear.

EXPERIENCED METALLURGICAL TEAM Our engineers and technicians bring decades of experience in alloy development, casting processes, brazing solutions, and precision manufacturing.

SOLVING COMPLEX ENGINEERING CHALLENGES AND OPTIMISING COMPONENT DESIGN FOR OUR CUSTOMERS



FULLY INTEGRATED MANUFACTURING FOR DEMANDING APPLICATIONS

From design and precision casting to CNC machining and specialised processes such as heat treatment, brazing, HIPping, and additive manufacturing, our integrated manufacturing capabilities ensure consistent quality, dimensional accuracy, and repeatable performance.



COMPLETE MANUFACTURING SOLUTIONS

- **INVESTMENT CASTING** COMPLEX, HIGH-PRECISION CASTINGS
- **VACUUM PRECISION CASTING** HIGH-PURITY CRITICAL COMPONENTS
- **CENTRIFUGAL CASTING** DENSE, HIGH-INTEGRITY CYLINDRICAL PARTS
- **SAND CASTING** COST-EFFECTIVE LARGE COMPONENTS
- **CNC MACHINING** TIGHT TOLERANCE FINISHED COMPONENTS
- **SPECIAL PROCESSES** HEAT TREATMENT, HIP AND FINISHING SERVICES
- **BRAZED ASSEMBLIES** HIGH-INTEGRITY ASSEMBLIES
- **HVOF COATINGS** EXTENDED WEAR AND CORROSION RESISTANCE
- **DESIGN & PRODUCT DEVELOPMENT** ENGINEERING SUPPORT FROM CONCEPT TO PRODUCTION
- **SIMULATION & VALIDATION** PROCESS OPTIMIZATION THROUGH DIGITAL SIMULATION
- **ADDITIVE MANUFACTURING** COMPLEX GEOMETRIES AND RAPID DEVELOPMENT
- **WALLCARB™** ADVANCED TUNGSTEN CARBIDE COMPONENTS



METALLURGICAL EXPERTISE BUILT INTO EVERY CASTING

Wall Colmonoy brings decades of metallurgical expertise to the selection, development, and processing of high-performance alloys for critical applications.

We work with a range of superalloys and specialty materials engineered to perform in environments exposed to extreme temperatures, corrosion, wear, and other challenging operating conditions.

Across aerospace, defence, nuclear, energy, and industrial markets, our metallurgists and engineers work closely with customers to match alloy chemistry, material properties, and processing routes to specific mechanical, environmental, and performance requirements.

PRECISION, PERFORMANCE, PARTNERSHIP

Wall Colmonoy combines nearly a century of manufacturing and metallurgical expertise with advanced engineering and production capabilities to deliver high-performance components. We partner closely with our customers to solve complex technical challenges.

INDUSTRIES WE SERVE

- FOOD PROCESSING & PACKAGING
- OIL & GAS
- AEROSPACE & DEFENCE
- NUCLEAR
- RENEWABLES & POWER GENERATION
- STEEL
- PUMPS & VALVES
- GLASS CONTAINER
- AUTOMOTIVE & MOTORSPORT



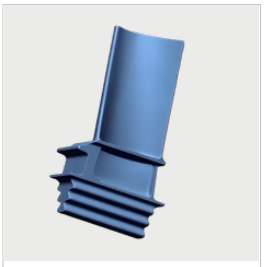
VALVE SEAT
Wallex® 6
Investment Cast
Food / Homogenisers



STATOR
Wallex® 6
Investment Cast
Oil & Gas



TURBINE BLISK
Inconel 738
Vacuum Investment Cast
Aerospace



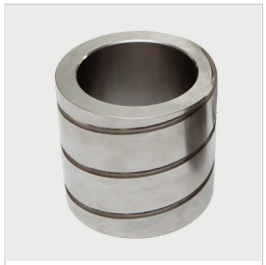
TURBINE BLADE
MAR-M-247
Vacuum Investment Cast
Aerospace



PUMP INDUCER
Wallex® 6
Investment Cast
Nuclear



STUB END
Wallex® 180
Investment Cast
Power Generation



SCROLL BRUSH
Wallex® 6
Investment Cast
Steel



METERING VALVE
Wallex® 6
Sand Cast
Pumps & Valves



NECK & RING INSERT
Colmonoy® 34G
Investment Cast
Glass



WASHERS & GUIDES
Wallex® 6
Investment Cast
Auto & Motor Sport

INTEGRATED CNC MACHINING FOR HIGH-PERFORMANCE COMPONENTS

Our integrated CNC machining capabilities deliver the accuracy, repeatability, and surface integrity required for complex, high-performance components.

Machining considerations are incorporated throughout the manufacturing process - from early design collaboration and process development through to certified, fully finished parts.

Using advanced CNC technology supported by highly skilled machinists, we produce complex geometries and tight tolerances in demanding materials for high-integrity applications.

Our capabilities support both development programmes and low-to-medium volume production, delivering consistent quality, precision, and performance from first part through production.



Our 2180m2 on-site machine shop enables us to deliver fully machined components, with consideration built in from early design collaboration through to the delivery of certified, fully finished parts.

MACHINING FACILITIES

TYPE	DIAMETER	LENGTH	TOLERANCE	SURFACE FINISH	WEIGHT
PROOF MACHINING	Ø25MM – 650MM	100MM – 600MM	± 1.0MM	3.2RA – 6.4RA	MAX. 350KG
CNC TURNING CELL	10MM – 845MM	MAX. 2000MM	± 0.05MM	0.4RA – 0.8RA	MAX. 300KG
CNC LARGE TURNING CELL	Ø3.0MM – 554MM	MAX. 2000MM	± 0.05MM	0.8RA – 1.6RA	MAX. 300KG
PRECISION MILLING	X:1524MM Y: 660MM Z: 520MM	MAX. Ø500MM			MAX. 400KG
CONVENTIONAL CYLINDRICAL GRINDING	300MM	685MM	± 0.02MM	0.1RA	MAX. 30KG
CNC CYLINDRICAL GRINDING		650MM	± 0.01MM	0.8RA	MAX. 30KG
HONING		MAX. 600MM	± 0.01MM	0.2RA	MAX. 300KG
LAPPING	1000MM	400MM	± 0.01MM	0.06RA	MAX. 300KG
EDM SINKING	X: 550MM Y: 370MM Z: 310MM	310MM	± 0.10MM	4.8RA MAX.	1000KG
EDM WIRE-CUTTING	X: 800 MM Y: 600 MM Z: 800MM	800MM	± 0.25MM	.4RA MAX.	MAX 3000KG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LET'S BUILD BETER COMPONENTS TOGETHER.
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