



**MECHANICAL ENGINEERS**  
**WHEN & WHERE YOU NEED THEM**

**CALIBER DESIGN**  
ENGINEERING | ANALYSIS | MECHANICAL DESIGN





# CALIBER DESIGN

ENGINEERING | ANALYSIS | MECHANICAL DESIGN

## MECHANICAL ENGINEERS WHEN & WHERE YOU NEED THEM

Our team of 50+ mechanical engineers work secondment with clients around New Zealand on a project-by-project basis.

We have a diverse range of skills and experience, from machine design, product design, and FEA to project engineering on large industrial sites.

Our expertise in project engineering encompasses more than just design; it's about making projects happen—from the initial concept to final completion, and every step in between.

Our engineers are seconded to work on your site, collaborating with your team and working under your direction.



The skills you need



On your site



Under your control



Task focused



On-demand

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## WE DRIVE PROJECTS TO SUCCESS

From startups to multi-nationals, production facilities to OEMs ... we work with some of New Zealand's most innovative businesses, across many different industries, including materials and food handling, aerospace, appliance manufacturing, marine, agriculture, medical ... and a huge range of niche kiwi businesses that are leading the way in innovation.

We provide the essential horsepower your team needs to push projects over the finish line. Whether it's navigating through peak workloads, filling short-term gaps, or delivering projects on time, our engineers are embedded in your team and fully focused on your project. Our on-demand resources allow you to scale effortlessly, ensuring that you can tackle any project with the confidence that comes from having expert support.

## OUR DIFFERENCE

Caliber are different from a standard consultancy or contractor because:

- Our engineers are seconded to work on your site, collaborating with your team and working under your guidance.
- Our systems ensure that you benefit from the entire Caliber Network when you have a Caliber engineer working on your project—that's 350+ years experience!
- All documentation and Intellectual Property is retained by you, the client.

- Our hourly rates are cost-effective and our systems are built to support the seconded model.
- We provide outstanding weekly reports that detail exactly what has been achieved, any issues, and track against cost and timeline estimates.
- We are happy to share our suite of best practice processes, procedures, and templates.

## OUR COMMITMENT TO YOU

We are committed to going above and beyond for our clients; providing exceptional service and expertise. Our engineers meet regularly with their Caliber Technical Lead to refine their work, and our Regional Managers communicate proactively with clients. This approach ensures a seamless quality service, guaranteeing our engineers not only meet but exceed your expectations.

**Clear planning and procedures** - to ensure everyone is clear about what the job entails and the deliverables.

**Weekly status report** - an email that outlines what has been done, the plan for the week, any issues, any variations or 'out of scope' requests, and any opportunities we can see to improve the project we're working on.

**Support** - Caliber engineers are backed by the Caliber Network—a tight team of experienced colleagues and a powerful suite of proven resources that they can call on.

**Leadership** - Caliber leadership stands firmly behind every one of our engineers. You'll receive a regular phone call (as agreed upfront) from one of our leadership team to ensure the project is on target and you are happy with Caliber's performance.

**Budget** - we will not go over budget without approval.

**Deadlines** - we appreciate the need to meet deadlines and will work with you to ensure your deadlines are met. Our employees have the flexibility to put in the extra hours when required to get the job done—we will not go over time without discussion.

**Professional, passionate engineers that will hit the ground running.**

**Engineers that will quickly adopt your processes and systems** ... but with the experience and resources to pull from when/if required.

**Rotational policy** - ensures the consistent availability of engineers who are well-versed in your systems. Through carefully managed handovers, we ensure this policy complements the seamless delivery of your projects.

**Quality work** - whether our engineers are seconded to your site or working remote, you are assured of a quality job. Our systems are set up to follow best practice and provide the best opportunity for success.

## CORE VALUES



Focus on the customer and everything else will follow



Do the right thing and do things right



Learning is a must



Professional, responsible, accountable



Real transparency



Make commercially focused sustainable decisions

## SERVICES

Caliber provides high quality, cost effective mechanical design services that will quickly increase your capacity and expertise. We call it seconded engineering, where we place engineers in your premises to work as part of your team.

**Machine Design:** We design and refine machines for improved performance, efficiency, and safety.

**Product Design:** From ideation and concepting to prototype and final product development, we can help you get your design to market.

**FE Analysis:** Using analysis techniques like FEA, CFD, and FMEA, we enhance design quality and durability upfront, reducing risks and cutting costs.

**Project Engineering:** Bridging engineering disciplines, we manage the intricacies of projects from site work to commissioning, ensuring projects are completed in-spec and on time.

## OTHER SERVICES

- Engineering calculations
- Testing & validation
- Procurement & supplier selection
- Technical support for CAPEX projects
- Research & development
- Industrial design
- Reliability & maintenance support
- Commissioning support

*“Stabicraft Marine had multiple projects underway at any one time and we urgently required specialist industrial design resource to ensure the project was thoroughly explored through experienced design thinking. Caliber Design not only provided the experience required to maximise the projects potential but were dynamic enough to accommodate moving timeframes and brief updates thus strengthening the B2B relationship.”*

**Daniel Upperton** | Adventure Engineer,  
STABICRAFT

## SYSTEMS & STANDARDS

We have developed a suite of robust design and project engineering systems and templates, based on industry best practice. We are happy to share these, and many of our clients choose to adopt or modify them to suit their own requirements.

## SOFTWARE

We use the software that our clients require for their project, and can supply our own hardware and software. Our team has extensive experience across various platforms, including SolidWorks, Inventor, AutoCAD, NX, and Onshape. Many of our team are SolidWorks and Inventor accredited professionals. They are quick to learn new software as required.



## MACHINE DESIGN

Our team of experienced engineers specialises in designing and optimising machines and mechanical systems to enhance performance, reduce operational costs, and improve overall efficiency.

We work closely with our clients to understand their specific requirements and challenges, ensuring that the machines we design are fit for purpose. Whether you need custom machinery or equipment modifications or upgrades, our engineers can help.

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### How we can help with Machine Design:

**Customised Machine Solutions:** Our engineers specialise in designing machines tailored for peak performance, efficiency, and safety. Our custom approach ensures machinery that is innovative, reliable, and durable.

**Expert Engineering Team:** Our industry-certified professionals boast extensive experience across SolidWorks, Inventor, AutoCAD, NX, and Onshape, allowing for seamless integration with your project using your preferred design tools.

**Advanced Design Techniques:** We employ FE analysis early in the design process to test for stress, vibration, buckling, fatigue, and heat dissipation, enhancing machine quality and durability while reducing risk and cost.

**Efficient Development Process:** Our development framework optimises every design aspect for manufacturability and compliance, streamlining the process from concept to commissioning.

**Collaborative Project Management:** By fostering close coordination between engineering disciplines, we ensure cohesive project outcomes.

**Innovation and Sustainability:** Our commitment to sustainable machine design aims to minimise environmental impact without compromising efficiency or effectiveness.

**Technology and Tools:** Access to the latest technology and our own hardware resources equips us to tackle complex challenges, from simulation tools to custom macros.

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## MORE INFO?

### CASE STUDIES



### DRAWING SYSTEMS & PROCEDURES

8 key ideas for working smarter



*"It is hard finding people like yourself who you can just give a vague outline to and let them go away and start designing something that has a decent amount of thought around it."*

**Egan Bowden** | Design Engineer, ROCKLABS



## PRODUCT DESIGN

Whether you're looking to bring a new product to market, improve an existing one, or improve your design processes, our team of skilled and creative engineers can help at any stage of the process—from ideation and conceptualisation to prototyping and final product development.

In addition to our talented in-house team, we have established a broad network of experts who we collaborate with, including intellectual property, certification, commercialisation, and sustainability. Through these partnerships, we can provide our clients with a comprehensive range of services to ensure the success of their product development projects.

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### How we can help with Product Design:

**Streamlined Development Process:** We enhance product design through a robust development process, ensuring market fit, reduced timeframes, and cost savings.

**Deep Customer Insight:** Understanding customer needs informs our design phase, setting your product apart in the market for a longer lifecycle and higher margins.

**Value Chain Engagement:** Identifying and engaging with key stakeholders provides insights that drive product innovation.

**Clear Documentation of Requirements:** We create concise design briefs, aligning all stakeholders and maintaining project focus.

**Fostering Innovation:** A positive team environment is key to generating innovative product design solutions.

**Leveraging Technology:** Our ability to harness cutting-edge technology and expertise, even outsourcing when beneficial, ensures access to the best tools without the overheads.

**Sustainability Focus:** We advocate for designs that consider environmental impact throughout the product lifecycle, aiming for the smallest footprint.

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### MORE INFO?

#### CASE STUDIES

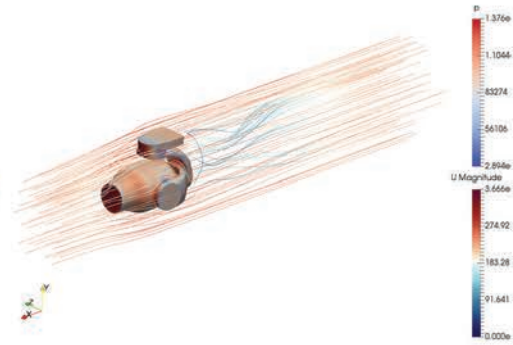
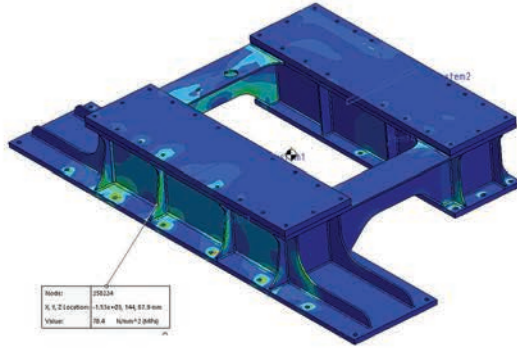


#### PRODUCT DEVELOPMENT 7 steps to success



*"Right from the outset, it was easy to communicate with the team. Their understanding of our requirements in detail and their subject knowledge made the whole process easy."*

**Krish Mukunth** | Operations Manager,  
IBEX INDUSTRIES



## FE ANALYSIS

**Analysis (such as FEA, CFD, or FMEA) enables you to road test your design before going anywhere near a production facility. You can analyse the performance of individual parts or assemblies throughout their lifespan and accurately predict and identify potential design issues, minimising risk to your product, profits, and overall business success.**

**Caliber Design engineers are skilled analysts and can use these skills to help you improve the quality and durability of your products while reducing the risk of costly design errors.**

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### How we can help with FE Analysis:

**Simulation Expertise:** We specialise in simulating how products perform under real-world conditions, ensuring designs are robust from the start.

**Comprehensive Testing:** Early testing identifies potential issues, covering stress, vibration, buckling, fatigue, and thermal conditions.

**Integration into Design Cycle:** We recommend that FEA is integrated into the design process to bolster innovation and efficiency.

**Tailored FEA Selection:** We choose the right FEA approach based on your product's specifics, ensuring precise and relevant analysis.

**Quality Assurance:** Beyond software results, we back up FEA with hand calculations and physical testing for unmatched reliability.

**Collaborative Design Review and Post-Analysis Support:** Working closely with you before and after analysis ensures optimal design outcomes and refinements.

**Compliance and Certification Support:** We can assist in ensuring your design and analysis meet all industry standards and regulatory requirements, paving the way for a smooth certification process.

**Valued Expertise:** Caliber Design engineers are skilled analysts can help improve the quality and durability of your products while reducing the risk of costly design errors.

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### MORE INFO?

#### CASE STUDIES



#### WHY USE FEA?

An introduction to Finite Element Analysis



*"They quickly grasped what we needed and then set out to achieve that, giving us clear and concise results."*

**Brad Hurdell | CEO,  
SHOTOVER CAMERA SYSTEMS**



## PROJECT ENGINEERING

Project engineers play a pivotal role in managing the technical intricacies of multifaceted projects. Caliber project engineers act as the linchpin between various engineering disciplines, ensuring seamless coordination and communication. By taking responsibility for the detailed aspects of a project, they enable project managers to maintain a broader strategic focus.

Caliber's project engineers oversee everything from site work and design to commissioning, with an unwavering commitment to achieving project completion within specifications and on schedule.

Our project engineers all have a solid technical background, having worked as design engineers across a range of industries and on many projects giving them a wide range of experience. We use our significant design experience to scope out project requirements and build specifications. We can then put the framework in place to ensure a project moves through a structured implementation process. Whilst our project engineers are not intended on managing the programme persay, we utilise project management techniques within the client's framework to assist in balancing Cost, Scope and Time from a technical point of view.

As with Caliber's design engineering service, our project engineering service is backed up with systems, procedures, and templates to create a well-structured approach.

### Roles & Responsibilities

The project engineers are capable of the following aspects of engineering management as required by specific projects:

#### TECHNICAL

- Specification writing and reviewing
- Gathering information from customers and suppliers
- Working with other engineering disciplines
- Engineering design
- Delivering work packages for review
- Running design reviews
- Documentation
- Engineering BOMs
- Working with certifying engineers and external contractors
- Transfer of all IP to client throughout the project

#### MANAGERIAL

- Managing the mechanical engineering component of a project
- Tracking project timeline and budget against actual
- Managing groups of design engineers, both from Caliber and the client
- Mentoring the team
- Risk identification and management
- Liaising/Reporting to a project manager
- Working with suppliers
- Stakeholder Management

#### SITE WORK

- Site inspection and documenting findings
- Managing manufacture and assembly
- Factory acceptance testing/site acceptance testing
- Installation
- Commissioning
- Problem Solving

### MORE INFO?

CASE  
STUDIES







### How we can help on Industrial Sites

- 2D and 3D site layouts to support all stages of projects
- Compiling technical documentation such as feasibility studies, cost estimates and supporting information for CAPEX proposals
- Piping & Instrumentation Diagrams (P&ID) and Interface Schedules
- Project engineering resource sourcing, collating and supplying site information to third parties undertaking larger Design and Build Contracts
- Detailed site measurements and as-built markups and drawings
- 3D modelling and fabrication drawings of pipework and supports, interfacing with existing services
- Project documentation preparation such as scope of works, project plans, and reporting
- Detailed design, analysis and drawings for low-risk machinery and access platforms
- Coordination and review with key stakeholders throughout the project

### How we can help OEMs

- Specification writing and reviewing through gathering information from customers and suppliers
- Layouts and high level concept development
- Engineering design and BOMs
- Coordinating certifying engineers and external contractors
- Tracking project timeline and budget against actual
- Risk identification and management
- Liaising/Reporting to project management
- Managing suppliers project timelines
- Site inspection and documenting findings
- Managing manufacture and assembly
- Factory acceptance testing
- Site acceptance testing
- Installation, commissioning, & problem solving

*“The Caliber engineer handled contractors well to ensure the project ran smoothly, and resolved issues effectively when they popped up. We’re new to working with Caliber, but have been impressed so far and would use them again for future projects.”*

**Daniel Pereira** | Energy Projects Engineer,  
OPEN COUNTRY

*“Delivering a great result for our client was the key for us on this project, Caliber helped us do this by providing an engineer to work on the project while we were recruiting for permanent staff. This meant we were able to deliver a great result for our client while also servicing other projects.”*

**Brett Hawkes** | General Manager,  
VORTEX ENGINEERING

*“We were happy with the results. Happy with the technical aspect and professionalism, the reporting, the communication.”*

**Cory Murray** | Quality & Design Manager,  
PAGE MACRAE

## OUR CLIENTS

Caliber Design engineers work with some of New Zealand's most innovative businesses. We have clients in every corner of the engineering industry in the country:

3D Industrial  
AceDoor Systems  
Acqua by Davey  
Advanced Aerospace  
Advance Fluid Control  
AgResearch  
AIM Altitude  
Alert Engineering  
Allied Industrial Engineering  
Allied Water Systems  
Alstef New Zealand  
Apercure Surgical  
APD  
APS  
Argus Fire Protection  
Argus Heating  
Ashworth & Taylor Sheetmetals  
Aucom Electronics  
Aurora Process Solutions  
Auto Mossa Equipment  
Automac Engineering  
Babcock (NZ)  
Ballance Agri-Nutrients  
Basis NZ  
Belcanto Group  
Bersham Holdings  
Biocell Corporation  
BLM Engineering  
BlueLab Co  
BOC  
Bottstra  
Bu-Mac Engineering  
Buckley Systems  
Built  
C-Quip International  
Cavotec MoorMaster  
CF Engineering  
Commercial Dive Specialists  
Coollogic Refrigeration  
CS For Doors  
CST Wastewater Solutions  
Cubic Defence New Zealand  
Cuthbert Stewart  
Daiken New Zealand  
Dairyworks  
Daifuku BCS New Zealand  
Datamars  
Design Energy  
DKJ Welding Services  
Dyno  
Electronic Navigation  
Enatel  
ENI Engineering  
Enphase Energy New Zealand  
Expedite Projects  
Fabrum Solutions  
Facteon Intelligent Technology  
Fairfit Metal Productions  
FI Innovations  
Fisher & Paykel Technologies Holdings  
Fisher and Paykel NZ  
Fletcher Steel  
Fonterra

Formula Pty  
Freezing Solutions  
Futura Trailers  
George Weston Foods  
Giltrap Engineering  
Glenside Engineering  
Global Metal Solutions  
Globex Engineering  
Gracol Composites  
Groundline  
Hairspace  
Hall Spars NZ  
Hallmark Group  
Halter  
Hamilton Jet  
Hampden  
Harrows Contract Furniture  
Hella New Zealand  
High Performance Sport New Zealand  
Hosking Trailers  
Hot Lime Labs  
HydroWorks  
Hyvan Anaesthesia  
IBEX Industries  
IMAGR  
Industrial Site Services  
Industrial Tube Manufacturing  
Invenco  
Invert Robotics  
J & D McLellan  
Jagbe Industrial Supplies  
JMP Engineering  
Jo's Welding & Fabrication  
Johnson Innovations  
Jonassen Industrial Projects  
JP Marshall Engineering  
Kahu Inovations  
Kayasand  
Kids Ride Shotgun  
Ligar Polymers  
Lion NZ  
Livestock Improvement Corporation  
Locus Research  
Longveld  
Lyttelton Engineering  
MacDonald Industries  
Mainstream Engineering  
Manco Engineering Company  
Manson Engineering  
Marand Precision Engineering NZ  
Marley Flow Control NZ  
Marops  
Maskell Productions  
McLaren Stainless  
Metal Concepts  
MetalTech Engineering  
MHM Automation  
Mills Food & Dairy  
Milmeq  
Moda Systems NZ  
Modular Conveyors  
Monkey Toe Group  
Motion Design  
MPF Engineering  
Mulcahy Engineering  
Naut  
NDA Engineering  
New Zealand Aluminium Smelters  
New Zealand Whey  
Newsmith Pacific Systems  
Noske Rail  
Northern Forklifts

NZ Controls  
NZ Poultry  
Oasis Engineering  
Open Country Dairy  
Original Stone Company  
PFS Engineering  
Page & Macrae Engineering  
Pan Pac Forest Products  
Paneltech Contractors  
Precision  
Production Techniques  
Promax Engineered Plastics  
Protech Stainless  
Pure Manuka Honey  
PW Engineering  
Pyper Vision  
RBM Engineering  
ReGenerate  
Rendertech  
Rex Bionics  
Reynolds Group  
RML Machinery  
Robotics Plus  
Rocklabs  
RoofTG Pacific  
Rotaform Plastics  
Sanitarium Health Food Company  
Scott Technology  
SCS NZ Management  
StretchSense  
Service Engineers  
Sheetmetals  
Silver Fern Farms  
Simcro  
Simply Coffee  
Site Weld NZ  
Skookum Technology  
Smokai  
Southern Cross Engineering  
Southern Engineering Solutions  
Southstar Equipment  
Spectrum Aluminium  
Spinal Traction  
SprayHub  
SRS New Zealand  
Stabicraft Marine  
StackFlo  
Stafford Engineering  
Steelbro  
Superior Doors  
Synlait Milk  
Tasti Products  
Thor Poletest  
Tip Top Ice Cream Company  
Total Engineering  
Total Solutions  
Treadlite NZ  
Tree Nursery NZ  
Tubi NZ  
UBCO  
Ubiquitome  
Ullrich Machinery Corporation  
Unicrest Group  
United Steel  
Vortex Engineering  
Vynco Industries  
Waimea Group  
Watkins & Associates  
Wilkinson Transport Engineers  
Wine Grenade  
Wyma Engineering  
Zenith Interiors

## OUR TEAM

Our team consists of qualified mechanical engineers with hands-on experience in every phase of engineering projects, from ideation to commissioning. They are effective communicators and quickly adapt to any environment, contributing significant value from the start.

Caliber engineers are highly skilled in using various CAD platforms, and bring expertise in machine design, product design, project engineering, analysis, and testing.

We primarily hire intermediate-level, degree-qualified engineers, chosen for their ideal blend of experience, skills, knowledge, attitude, and communication skills.

All of our engineers are lifelong learners and benefit from Caliber's extensive Learning & Development Program.

*"Stackflo work on high value design contracts that simply cannot fail. The Caliber Design team are crucial to our business, providing great easy to work with talent at short notice. In a difficult recruitment market, Caliber have 'nailed' the selection and vetting of great talent."*

**Mark Robotham** | CEO, STACKFLO

### MORE INFO?

TEAM PAGE



CAREERS



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# COMPANY PROFILE

"The ideal engineer is a composite... not a scientist, not a mathematician, not a sociologist or a writer; but they may use the knowledge and techniques of any or all of these disciplines in solving engineering problems."

Nathan W. Dougherty | 1886 - 1977  
US Engineer, Educator & Athlete

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### ABOUT US

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Find out more at [www.caliberdesign.co.nz](http://www.caliberdesign.co.nz)



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*Proud to work with some  
of New Zealand's most  
innovative companies*

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