

EST. 1974

STAINLESS

TANK & MIX

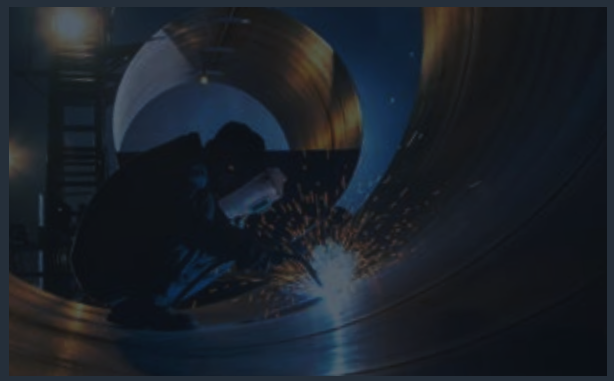
EXCELLENCE IN STAINLESS • UNIQUE SOLUTIONS

CAPABILITY STATEMENT

2026


Excellence in
Stainless Steel.
Unique Solutions.

Contents



Capability Categories P9



Case Studies P25

Our Story	4
Stainless Tank & Mix History	5
What We Do?	6
Our Process	7
Capability Overview	8
Capability Categories	9
Tanks & Vessels	10-13
Mixers & Blenders	14-17
Turnkey Solutions	18-20
Custom Fabrication & Pipework	21-24
Case Studies	25
Case Study 1 - Tanks & Vessels: 2000 Litre Pressure / Vacuum Contra-Mix Tank	26
Case Study 2 - Mixers & Blenders: 1000 Litre Mobile Ribbon Blender	27
Case Study 3 - Turnkey Solutions: Concrete Additive Production Plant	28
Case Study 4 - Custom Fabrication & Pipework: Production Platform With Ribbon Blender	29
Meet Our Team	30-32
Our Clients	33
Why Choose Stainless Tank & Mix?	34

Our Story

For more than five decades, Stainless Tank & Mix (STM) has stood at the forefront of stainless-steel design and fabrication in Australia. Combining craftsmanship, innovation, and integrity to deliver unique, high-performance process solutions for the food, beverage, pharmaceutical, and chemical industries.

Founded in 1974 by Chris Firth under the name Camair Industries, the company began with a focus on custom stainless fabrication for the food and chemical sectors. What started as a small family business known for precision and trust has evolved into a nationally respected design-and-construct partner, providing end-to-end solutions from engineering design through to fabrication, installation, and commissioning. Under Brendan Firth's leadership, STM has evolved significantly through strategic investment in people, technology and operational excellence.

Today, the business provides comprehensive in-house capability across 3D design and simulation, lean manufacturing, process engineering and turnkey project delivery.

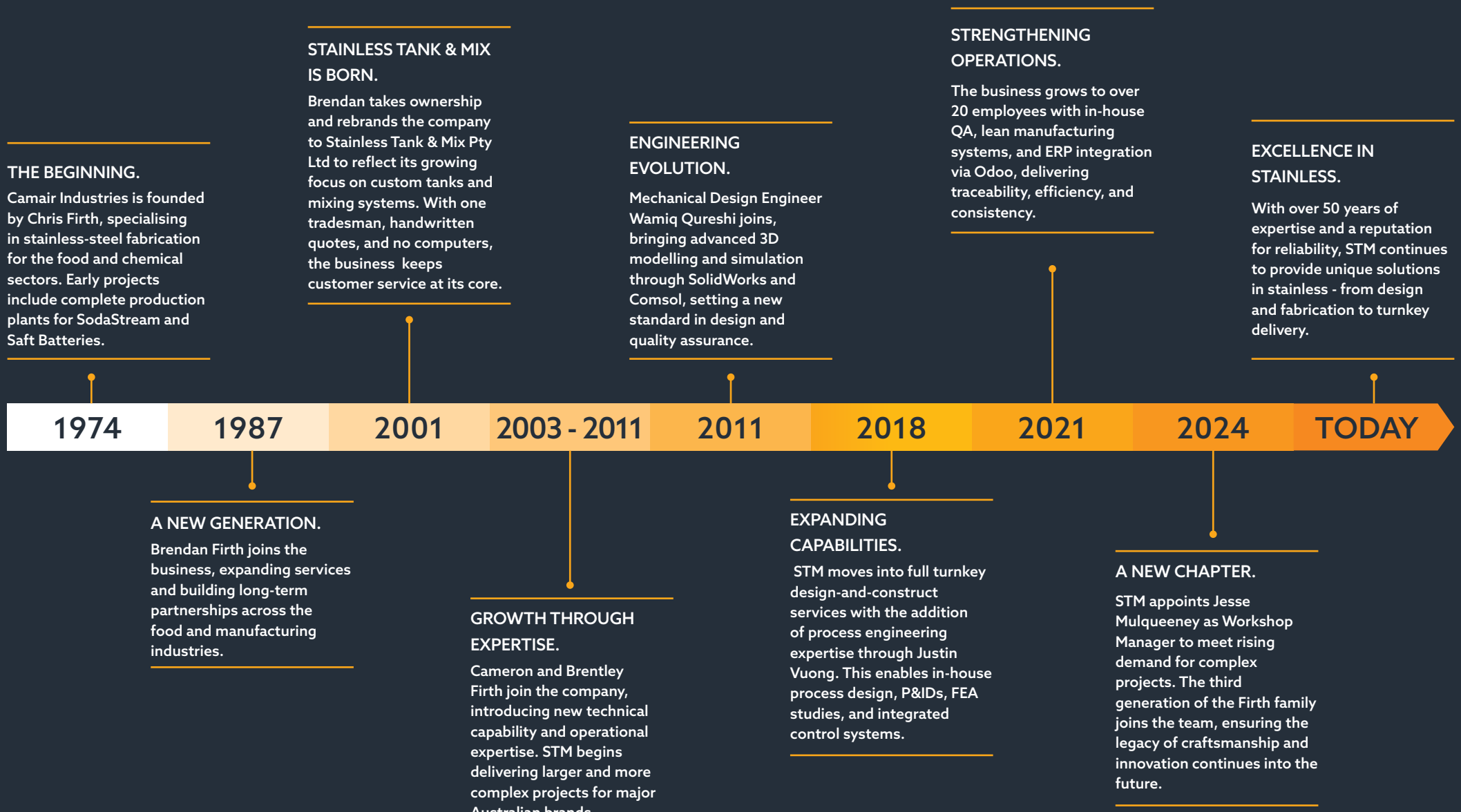
Behind every project is a team that takes genuine pride in its work and the culture that supports it. STM employees are skilled, motivated and respected in their trade, bringing a strong focus on safety, teamwork and continual improvement. We invest above industry standards in wages, training and facilities to ensure consistent quality and care in everything we produce.

Suppliers and clients alike describe STM as reliable, honest, and professional, a partner that delivers on time, communicates clearly, and stands by its word. The workshop operates under ISO-aligned safety systems, lean manufacturing procedures, and ERP-driven traceability through Odoo, ensuring every quote, invoice, and fabrication file is accurate, transparent, and compliant.

We're also proud to give back by supporting community projects, championing environmental awareness, and maintaining a workplace our people are proud to call home.

Now into its third generation, STM remains a family-owned company where innovation meets craftsmanship with proof that traditional values and modern engineering can coexist to create exceptional results in stainless steel.

Stainless Tank & Mix History



1974 — THE BEGINNING.

Camair Industries is founded by Chris Firth, specialising in stainless-steel fabrication for the food and chemical sectors. Early projects include complete production plants for SodaStream and Saft Batteries.

1987 — A NEW GENERATION.

Brendan Firth joins the business, expanding services and building long-term partnerships across the food and manufacturing industries.

2001 — STAINLESS TANK & MIX IS BORN.

Brendan takes ownership and rebrands the company to Stainless Tank & Mix Pty Ltd to reflect its growing focus on custom tanks and mixing systems. With one tradesman, handwritten quotes, and no computers, the business keeps customer service at its core.

2003 - 2011 — GROWTH THROUGH EXPERTISE.

Cameron and Brentley Firth join the company, introducing new technical capability and operational expertise. STM begins delivering larger and more complex projects for major Australian brands.

2011 — ENGINEERING EVOLUTION.

Mechanical Design Engineer Wamiq Qureshi joins, bringing advanced 3D modelling and simulation through SolidWorks and Comsol, setting a new standard in design and quality assurance.

2018 — EXPANDING CAPABILITIES.

STM moves into full turnkey design-and-construct services with the addition of process engineering expertise through Justin Vuong. This enables in-house process design, P&IDs, FEA studies, and integrated control systems.

2021 — STRENGTHENING OPERATIONS.

The business grows to over 20 employees with in-house QA, lean manufacturing systems, and ERP integration via Odoo, delivering traceability, efficiency, and consistency.

2024 — A NEW CHAPTER.

STM appoints Jesse Mulqueeney as Workshop Manager to meet rising demand for complex projects. The third generation of the Firth family joins the team, ensuring the legacy of craftsmanship and innovation continues into the future.

TODAY — EXCELLENCE IN STAINLESS.

With over 50 years of expertise and a reputation for reliability, STM continues to provide unique solutions in stainless - from design and fabrication to turnkey delivery.

What We Do?

At Stainless Tank & Mix , we design, engineer, and manufacture precision stainless-steel equipment and process systems that drive performance, safety and reliability across Australia's most demanding industries. With over 50 years of experience, we combine deep technical expertise with modern design capability to deliver end-to-end solutions - from concept and 3D modelling through to fabrication, installation and commissioning.

Whether it's a complex turnkey plant or a one-off custom vessel, every project reflects the same commitment to quality, compliance, and craftsmanship that defines the STM brand.

Our Core Offerings

TANKS & VESSELS	MIXERS & BLENDERS	TURNKEY SOLUTIONS	CUSTOM FABRICATION, PIPEWORK, DUCTWORK & PLATFORM
Silos, and large storage vessels	**Liquid Blenders** Contra-rotating mixers, High shear mixing, cage mixers, Anchor shear combinations, magnetic drive mixers, helical ribbons, bottom and side entry agitators	Full design-and-construct capability	Custom built large diameter ductwork, pipework and spooling
Process vessels, jacketed vessels and pressure vessels		3D modelling, simulation, FEA and process engineering	Stainless steel platforms and staircases
Mobile vessels IBC's. vats and drums		Installation, commissioning and documentation	Custom built cabinetry
Mirror polished pharmaceutical vessels	**Powder Blenders** Ribbon blenders, paddle blenders, plough blenders Sifters – rotary and vibratory	One supplier, one point of accountability	Custom designed and built machine parts and or tool caddies

Industries We Serve

STM supports a wide range of Australian industries including:

• **Food & Beverage** • **Dairy** • **Pharmaceuticals** • **Chemicals & Cosmetics** • **Process Engineering**

Our Process



CONCEPT
STEP 1

Understanding the brief and building a thorough scope



DESIGN
STEP 2

Engineering, 3D modelling, and design approval



FABRICATION
STEP 3

Precision manufacturing with full traceability



QA
STEP 4

Inspection, testing, and quality assurance



INSTALLATION
STEP 5

On-site assembly and integration of equipment



COMMISSIONING & HANDOVER
STEP 6

Ensuring performance and customer sign-off



Capability Overview

Capability Categories

TANKS & VESSELS



MIXERS & BLENDERS



TURNKEY SOLUTIONS



CUSTOM FABRICATION & PIPEWORK



Tanks & Vessels

Stainless Tank & Mix (STM) designs, engineers and manufactures high-performance stainless-steel tanks and vessels for process, storage and hygienic applications. Our systems are used across food, beverage, pharmaceutical, chemical and industrial facilities where quality, traceability and operational reliability are critical. Every tank is custom-built to specification, ensuring seamless integration with existing equipment, process requirements and site constraints. STM provides end-to-end capability, from 3D modelling and engineering validation through to fabrication, testing, documentation and commissioning. The result is a compliant, purpose-built asset designed for long service life and consistent performance.

Capabilities

We produce a wide range of tank and vessel types including atmospheric storage tanks, vertical and horizontal silos, jacketed process vessels, pressure-rated units, mobile tanks, IBCs and specialised stainless-steel containers. Our offering covers both one-off builds and large-volume projects, with flexible manufacturing options to suit transport, installation and operational requirements.

Design & Engineering

Our design approach combines traditional fabrication expertise with modern engineering tools. All tanks can be modelled in 3D CAD, with Finite Element Analysis (FEA) available to verify structural integrity, thermal performance and pressure resistance. Where required, vessels are designed to AS1210 pressure vessel standards, with nozzle configuration, access, internals and instrumentation tailored to the intended process environment. Sanitary applications can be specified with internal surface finishes to ≤ 0.4 Ra µm, CIP spray systems, passivated welds and fully polished internals to support cleanability, hygiene, and audit compliance.

Tank Types & Configurations

PROCESS VESSELS	For mixing, heating/cooling, blending, reaction or storage under process conditions.
STORAGE TANKS & SILOS	Vertical or horizontal, for liquid or bulk solids, with optional storage-grade features.
PRESSURE-RATED VESSELS	Designed to meet pressure requirements where required (e.g. containing gases or pressurised liquids).
MOBILE, SKID MOUNTED TANKS & IBC's	Portable, modular, relocatable tanks or IBC's for flexible installations or constrained-space sites.
JACKETED / INSULATED TANKS	For temperature-controlled storage or processing (heating / cooling jackets, insulation, cladding).

Material, Design & Construction Standards

Material grades: Commonly 304, 316, 316L stainless steel; duplex and higher alloys available for corrosive, aggressive, or specialised chemical environments.

Welding & Fabrication: Orbital TIG welding using qualified weld procedures; full weld mapping; passivation; external welds seam-polished and buffed.

Design & Engineering:

- 3D CAD modelling for custom geometry and site-specific integration (inlets/outlets, nozzles, manways, skids, legs, flanges).
- Finite Element Analysis (FEA) when required — for pressure, load, thermal cycle, or structural integrity assessments.
- Internal finish specification: polished sanitary-grade surfaces (e.g. ≤ 0.4 Ra µm) available for hygiene-sensitive applications (food, beverage, pharma).

Jackets, Insulation & Cladding Options: Dimple-jacket, half-pipe, coil-jacket, double-skin jackets; thermal insulation (rockwool, urethane, etc.); outer stainless cladding or hygienic finishes.

Accessories & Internals: Internal baffles, coils, heating/cooling jackets, CIP spray balls / systems, mixing nozzles, agitator supports, man-ways, sight-glass ports, discharge valves, sample ports, vents/pressure reliefs, drain connections, support legs or skids, insulation jackets, lifting lugs.

Quality Assurance, Documentation & Traceability

- Full material traceability and certification for all stainless plate/plate-stock used.
- Weld procedure specification (WPS/PQR) documentation, with non-destructive testing (e.g. dye-penetrant, where required), hydrostatic test or pressure test, and documentation of FAT (factory acceptance test) if required.
- As-built drawings, as-built welding logs, material certifications, inspection reports and passivation documentation supplied.
- ERP-based project and documentation control for traceability of revisions, client sign-off packages, change orders, and traceable quoting/invoicing.

Compliance, Safety & Hygiene Standards

- Tanks designed to comply with relevant pressure vessel standards, where applicable (e.g. AS 1210 in Australia for pressure vessel design).
- Hygienic surface finishes and polishing for food, beverage and pharmaceutical applications, ensuring cleanability, sanitation, and suitability for CIP/COP processes.
- Construction and installation practices minimise contamination risk (full weld sealing, sanitary fittings, smooth internal surfaces).

Tanks & Vessels Gallery




































Mixers & Blenders

Stainless Tank & Mix (STM) designs and manufactures custom stainless-steel mixing systems for liquid, powder and combined batch applications. Our mixers and blenders are used across food, beverage, pharmaceutical, cosmetic and chemical manufacturing where hygiene, consistency and system reliability are essential. Each system is engineered for efficient shear performance, temperature control, dispersion and batch uniformity, with full integration into existing tanks, dosing systems, CIP processes and automation platforms.

Capabilities

STM provides a complete range of liquid and powder mixing solutions, from top-entry and side-entry agitators to high-shear and contra-rotating systems for complex emulsions. We also produce portable mixers, sanitary magnetic-drive units and packaged mixer assemblies for flexible plant use. Powder capabilities include ribbon blenders, paddle and plough mixers, and hybrid wet/dry systems for batching, coating and continuous processing. All systems are available with customised mixer geometry, drive configuration and process control options suited to the required batch size, product characteristics and production environment.

Design & Engineering

STM combines proven mechanical principles with advanced engineering tools to ensure reliable mixing performance. Mixers and blenders are modelled in 3D CAD for footprint planning and integration, with Finite Element Analysis (FEA) available for shaft sizing, structural integrity and vibration assessment. Key parameters such as impeller geometry, tip speed, torque and power draw are selected based on viscosity, particle size and desired shear characteristics. Engineering options include variable speed drives (VSDs), mechanical seals, bearing assemblies and full automation connectivity - delivering repeatable results and long-term operational reliability.

Mixer & Blender Types

LIQUID MIXING SYSTEMS	POWDER BLENDING SYSTEMS	COMBINED SYSTEMS
• Top-entry agitators	• Ribbon blenders	• Integrated mixing and process tanks
• Side-entry mixers	• Paddle blenders	• Heating/cooling jackets for temperature-controlled mixing
• Clamp-on portable mixers	• Plough blenders	• CIP spray assemblies for fast changeover and sanitation
• High-shear batch and inline systems	• Auger and screw mixers	• Skid-mounted systems for modular installation
• Magnetic drive mixers	• Dry batch systems	
• Cage mixers	• Hybrid dry-wet transfer applications	
• Anchor, propeller, ribbon and helical designs		

Construction & Materials

Mixers and blenders are built using 304, 316 or 316L stainless steel, with optional duplex alloys where required for corrosive or abrasive materials. Weld procedures follow sanitary and fabrication standards suitable for hygiene-critical environments.

Engineering options include:

• **IMPELLER STYLES**	Propeller, paddle, helical, turbine, ribbon, anchor and high-shear heads
• **DRIVE ASSEMBLIES**	Gearbox drives, direct drives, top-mounted and side-mounted drives
• **MOUNTING OPTIONS**	Flanged, tripod, pedestal, tank-mounted, skid-mounted or portable frame units
• **SURFACE FINISHES**	Sanitary polishing, passivation, electropolishing (where specified)

Quality Assurance, Documentation & Traceability

STM applies the same QA principles used in tank fabrication to our mixer and blender projects. Documentation packages can include:

- Material certificates for wetted components
- Weld mapping and passivation records
- FAT procedures and test reports
- Electrical and mechanical commissioning documentation
- Operating and maintenance manuals
- ERP-controlled traceability via Odoo

Compliance & Hygiene

STM mixers and blenders are suitable for:

- CIP (Clean-in-Place) and COP (Clean-Out-of-Place) systems
- Sanitary and hygienic fittings (Tri-Clamp, DIN, SMS etc.)
- Low-turbulence designs for low-shear or sensitive products
- High shear systems for emulsions or colloidal dispersions
- Internal surface finishes can be specified to ≤ 0.4 Ra µm to minimise product retention, microbial risk and cleaning downtime.

Mixers & Blenders Gallery




















Mops











Turnkey Solutions

Stainless Tank & Mix (STM) delivers complete turnkey process systems designed to simplify project delivery and ensure performance from concept through to commissioning. Our turnkey approach integrates engineering design, fabrication, installation and documentation into a single, coordinated package. This allows clients to reduce interface risk, maintain quality control and achieve predictable project outcomes across food, beverage, pharmaceutical, cosmetic and chemical production environments.

Capabilities

STM provides end-to-end solutions that cover process layout development, equipment fabrication, mechanical and electrical integration, and full system commissioning. Our turnkey offering includes process tanks, mixers, pipework, skids, access platforms, CIP systems, heat exchange equipment, instrumentation and automation interfaces. We manage project scoping, procurement, scheduling and coordination with site services, delivering complete systems that operate as designed with minimal disruption to existing production facilities.

Design & Engineering

STM applies structured engineering disciplines to ensure turnkey systems are built to specification and ready to perform from day one. All layouts are developed in 3D CAD to coordinate clearances, line routing, access, operator ergonomics and tie-ins to existing infrastructure. Mechanical, thermal and process design principles are applied to equipment selection, including Finite Element Analysis (FEA) where needed to validate structural performance. Control system integration can be supported with instrumentation specification, panel design, PLC connectivity, and VSD control for precise process management. Detailed documentation is provided throughout to support approvals, fabrication, installation sequencing and commissioning.

Types & Configurations

STM turnkey solutions are adaptable and can be delivered in multiple configuration formats depending on site conditions and process objectives. Common system types include:

- **Modular Process Skids** *(Factory-built, fully wired, ready for site services)*
- **Batch Mixing and Blending Suites** *(Liquid, powder or combined operations)*
- **Heat Transfer and Pasteurisation Systems** *(Jacketed, coil or plate heat exchange)*
- **Ingredient Handling Systems** *(Dosing, weighing, transfer and storage)*
- **Cip and Sanitation Systems** *(In-place cleaning circuits and automated cycles)*
- **Platform and Access Systems** *(Operator safety, inspection and control access)*

Turnkey configurations can be designed for new installations, retrofits, plant expansion or production line upgrades, with tailored interfaces to existing pipework, control systems and utility services.

Construction & Materials

Construction & Materials

- **Stainless steel grades:** 304, 316, 316L, duplex alloys
- Fabricated tankage, platforms, frames and process pipework
- Sanitary fittings and valves (Tri-Clamp, DIN, SMS and flanged systems)
- Integration of insulation, cladding and non-slip surface treatments
- Skid-mounted assemblies for rapid installation and reduced site disruption

Quality Assurance, Documentation & Traceability

- Weld procedure specifications, weld mapping and surface finish records
- Material certificates and passivation documentation for wetted components
- Factory Acceptance Testing (FAT) prior to delivery where required
- As-built drawings, P&IDs, electrical schematics and operating manuals
- ERP-controlled document management and revision control through Odoo

Compliance & Hygiene

- Designed to meet relevant standards including AS1210
- Hygienic welding and smooth internal surfaces for cleanability
- CIP/COP compatible layouts to reduce contamination risk
- Sanitary system design to eliminate dead legs and ensure drainability
- Material and component selection suitable for HACCP environments

Applications

Turnkey systems are deployed for:

- Product formulation and batch production
- Facility expansions and process line upgrades
- Ingredient handling, dosing and transfer systems
- Heating, cooling and pasteurisation modules
- Hygienic food, beverage and pharmaceutical installations

Turnkey Solutions Gallery














Custom Fabrication & Pipework

Stainless Tank & Mix (STM) provides custom stainless-steel fabrication and process pipework services to support production facilities across food, beverage, pharmaceutical, cosmetic and chemical industries. Our fabrication capability covers standalone components, plant upgrades, site installations and full process line development. We specialise in hygienic stainless systems where precision, cleanability and long-term durability are essential. STM manages projects from design through to installation, ensuring every fabricated component interfaces correctly with existing equipment, site services and commissioning requirements.

Capabilities

STM delivers complete stainless-steel fabrication services including process pipework, platforms, structural frames, manifolds, pump sets, transfer systems and hygienic utility connections. We support one-off fabrication, production line modifications, shut-down works and project-based installation. Our team works with site engineers, process managers and project stakeholders to develop solutions tailored to product flow, site access, build sequence and sanitation requirements. Whether fabricating a simple spool or a complex multi-branch line, STM provides reliable construction and installation with full QA documentation.

Design & Engineering

Our design approach focuses on performance, safety and integration. STM uses 3D CAD design to develop accurate fit-ups, flange alignments, routing paths and tie-points for pipework and fabricated assemblies. Finite Element Analysis (FEA) can be applied to structural supports, platform assemblies, pressure-rated pipe components and high-stress areas. We design for flow efficiency, drainability, operator safety, access for maintenance, and compatibility with CIP/COP processes where required. Engineering support extends to valve selection, instrument positioning, mounting hardware, bracketry, and integration with pumps, tanks, mixers and heat exchange equipment.

Types & Configurations

STM provides fabrication and installation for:

- Hygienic process pipework (product lines, recirculation and CIP)
- Structural platforms, access ladders and handrails
- Pump skids, dosing stations and valve manifolds
- Product transfer lines (liquid, powder and slurry handling)
- Ingredient receiving and distribution systems
- Mobile and skid-mounted process frames
- Utility connections (steam, hot water, chilled water, air and cleaning media)

Configurations are available for greenfield installations, retrofit works, facility expansions, shutdown projects and production line reconfiguration.

Construction & Materials

Construction & Materials

- **Stainless steel grades:** 304, 316, 316L and duplex alloys
- Sanitary pipework systems using **Tri-Clamp, DIN, SMS and flanged connections**
- TIG welded and pickled/passivated joints for hygiene and corrosion resistance
- Hygienic tube, schedule pipe, bends, tees, reducers and specialty fittings
- Fabrication of stainless **platforms, frames, guards and supports**
- Surface finish options including brush, polished and sanitary finishes

Quality Assurance, Documentation & Traceability

- Weld procedure specifications and **weld mapping** for critical systems
- Material certificates for all wetted components
- Dye-penetrant testing, hydrostatic testing and pressure validation where required
- As-built drawings, fabrication records and passivation documentation
- ERP-controlled document traceability via **Odoo**
- Installation sign-off, commissioning reports and handover documentation

Compliance & Hygiene

- Designed for CIP/COP compatibility and hygienic cleanability
- Smooth internal surfaces to minimise retention and contamination points
- Dead-leg elimination and full drainability in process lines
- Construction suitable for HACCP and food-grade environments
- Hygienic welding techniques for sanitary service areas

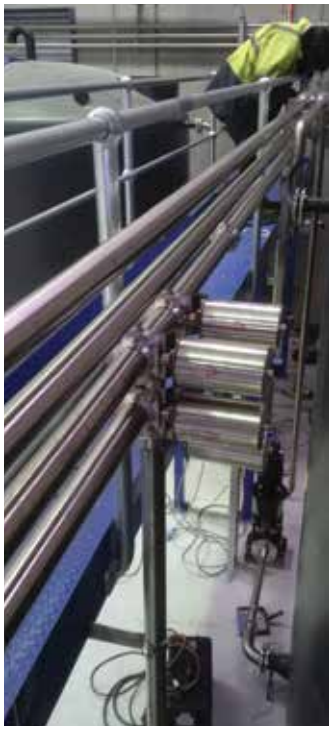
Applications

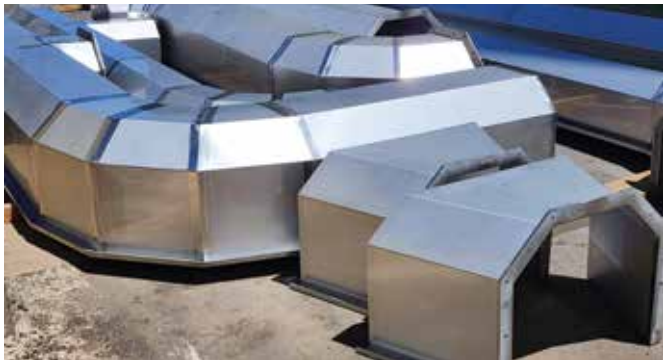
Custom fabrication and pipework services are commonly used for:

- Production line extensions and modification
- Ingredient transfer and distribution systems
- Mixing, batching and blending process lines
- Heating/cooling circuit installations
- Pasteurisation, CIP and recirculation loops
- Equipment tie-ins and plant relocation projects

Custom Fabrication & Pipework Gallery





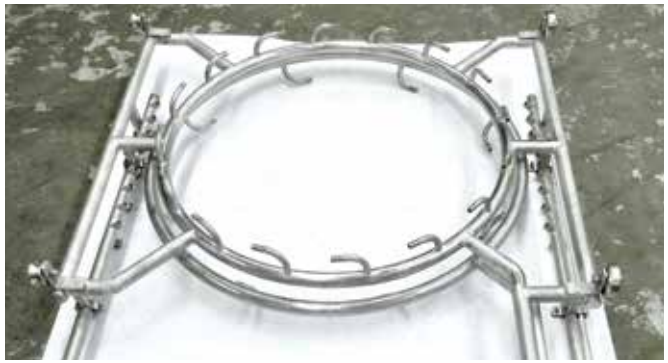







Custom Fabrication & Pipework Gallery Continued...













Case Studies

2,000 Litre Pressure / Vacuum Contra-Mix Tank



TANKS & VESSELS

1,000 Litre Mobile Ribbon Blender



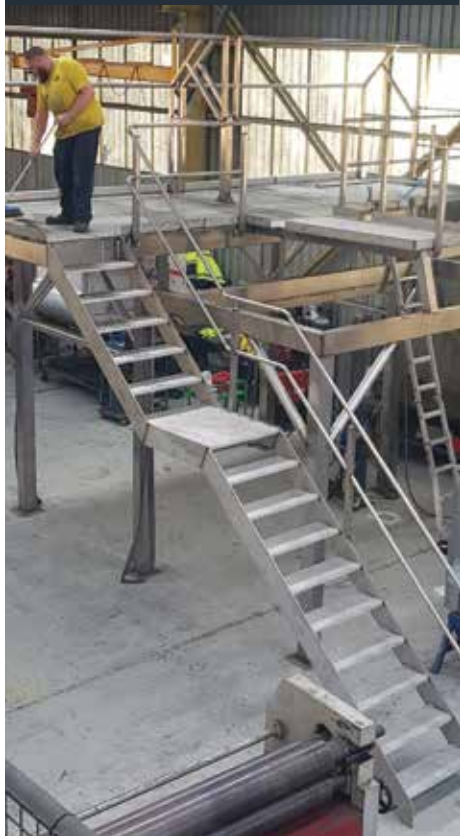
MIXERS & BLENDERS

Concrete Additive Production Plants



TURNKEY SOLUTIONS

Production Platform With Integrated Ribbon Blender



CUSTOM FABRICATION & PIPEWORK

Tank & Vessel Project

Project: 2,000 litre pressure / vacuum contra-mix tank

Location: Sydney, NSW

Sector: Contract packing company

Completion Date: Feb 2020 + Sept 2024

Overview:

The client had previously purchased a contra-mix tank from an overseas supplier but experienced ongoing performance issues and limited access to technical support and servicing. They required a reliable, locally supported solution that could be tailored to their operational needs and maintained over the long term.

Outcome / Results:

Solution: A custom 2,000-litre pressure and vacuum contra-mix tank was designed and supplied to meet the client's specific production requirements. The project included direct consultation, on-site discussions and ongoing technical support to ensure the system performed reliably and integrated seamlessly into existing operations.

Outcome: The performance and reliability of the first unit delivered in 2020 led the client to place a repeat order for an identical tank in 2024, demonstrating strong satisfaction with both the equipment and the service provided.

Client Feedback Testimonial

While the client acknowledged that lower-cost options were available overseas, they valued the quality of the finished product, clear communication and the ability to work directly with a local team who could visit their site, understand their requirements and provide ongoing support.



Image: inside 2000 litre pressure / vacuum contra-mix tank



Image: Final product

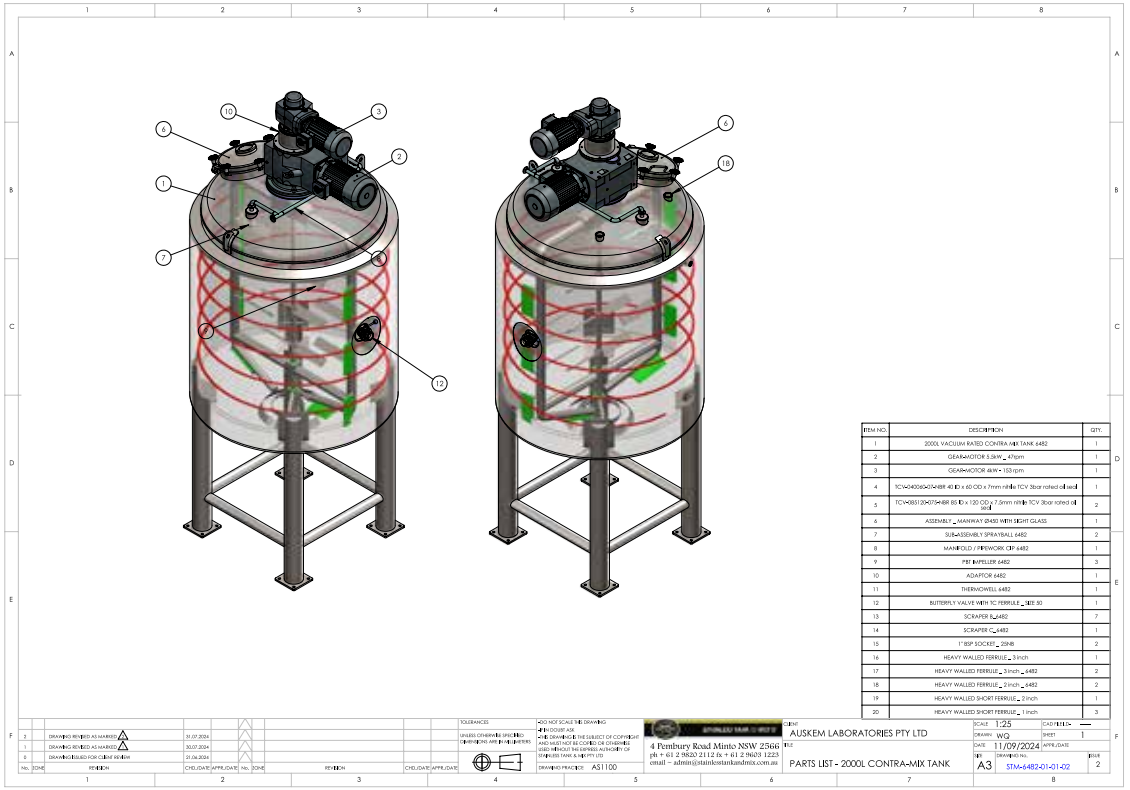


Image: Technical drawing 2000L Contra-mix Tank.

Mixer & Blender Case Study

Project: 1,000 litre mobile ribbon blender

Client: Leading spice manufacturer

Location: Sydney, NSW

Sector: Food & beverage - spices

Completion Date: Feb 2021

Overview:

Following detailed consultation, the client selected a 1,000-litre working capacity ribbon blender to suit their production volumes. A key requirement was mobility, allowing the unit to be removed from the production area for thorough wet cleaning, ensuring no cross-contamination between batches.

The blender was designed with a full access platform and stairs to improve operator safety and ease of use. A hinged loading hopper was incorporated into the lid and fitted with a dust extraction point to minimise airborne dust during ingredient loading.

The loading hopper was also configured to accept standard off-the-shelf vibratory sifter screens, allowing for quick changeovers while reducing long-term replacement and maintenance costs.

The control box was positioned for easy operator access, and the blender was equipped with Category 3 safety systems. This included a safety interlock that remained locked until the motor had fully run down, ensuring compliance with safety requirements and protecting operators during operation and maintenance.

Outcome / Results:

The project delivered a safe, efficient and contamination-controlled blending solution that met all operational requirements. The client was highly satisfied with the result and has continued to place repeat equipment orders, choosing locally engineered solutions over lower-cost overseas alternatives.







Image left: 1000 litre mobile ribbon blender with operator platform.Top right: 1000 litre mobile ribbon blender - lid detail. Bottom right: 1000 litre mobile ribbon blender - hinged loading hatch with removable screens.

Turnkey Solution Case Study

Project: Concrete additive production plants (2 installations)

Location: Sydney, NSW and Perth, WA

Sector: Chemical manufacturing – concrete additives

Completion Date: July 2016 and July 2017

Overview:

The project originated from an initial enquiry for three mixing tanks at a small manufacturing facility. Through detailed consultation, it became clear that a fully integrated production solution was required rather than standalone equipment.

Leveraging extensive expertise in pre-weighing systems, valving and process automation, a fully automated concrete additive production plant was designed and delivered. With the exception of the plastic storage tanks and the bulk bag unloader and powder elevator, the complete plant scope was engineered, supplied and commissioned as a turnkey solution.

The system was fully automated and controlled via an intuitive HMI interface, providing reliable, repeatable operation and simplified operator interaction.

Following the successful delivery and performance of the Sydney plant, the client engaged us to design and construct a second, identical facility in Perth.

Scope of Works

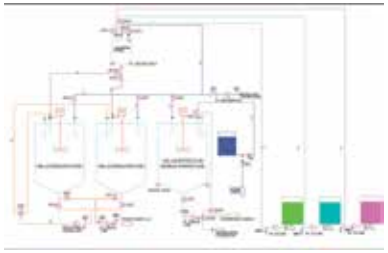
- Process design and plant engineering
- Mixing systems and automation
- Pre-weighing and valving systems
- Integrated control system with HMI
- Water supply systems
- Compressed air systems
- Electrical and control infrastructure
- Plant modelling and layout





Images top left and bottom left: Final Product.
Top right: Control Panel
Middle right: Technical drawings - Accelerator Tank.
Bottom right: 3D drawing.







Outcome / Results:

Both plants continue to operate successfully, delivering consistent production and reliable performance. The success of the first installation directly led to the award of the second project.

The use of detailed 3D plant modelling allowed the client to clearly visualise the full system prior to construction, provide informed feedback during the design phase, and gain confidence in the final outcome.

Production Platform Case Study

Project: Production platform with integrated ribbon blender

Location: Sydney, NSW

Sector: Food and beverage – powdered food ingredients

Completion Date: March 2021

Overview:

This project was delivered for a long-standing client with whom we have worked for over 30 years. The scope required a highly customised production platform designed to operate within tight spatial constraints while meeting hygiene, safety and operational requirements.

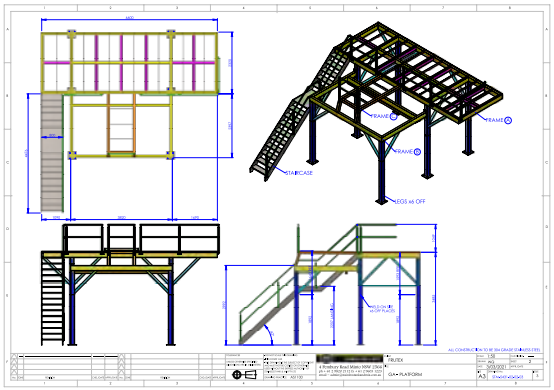
The chequer plate floor was engineered with precise fall to allow effective wash-down and drainage, with water directed to a designated drain point. Platform height was carefully calculated to achieve correct working height for operators while also accommodating downstream equipment beneath the ribbon blender. Ceiling height constraints required close coordination to maximise usable space without compromising safety or functionality.

To maintain clear access below the platform, the support structure was designed with a minimal number of legs while still achieving the required structural integrity and load capacity. Safety rollover gates were incorporated to allow pallets of raw materials to be safely transferred onto the platform during production.

Outcome / Results:

The platform delivered a safe, hygienic and efficient production environment tailored to the client's specific constraints. The successful execution of this project has led to ongoing repeat orders for additional production equipment.





Images left: Final Product.
Right: echnical drawings - AProduction platform with Ribbon Blender.
Bottom: Final Product.



Meet Our Team



Managing Director

Brendan Firth

Commencing in 1987, Brendan has developed a significant range of experience in many aspects of engineering and hands on fabrication over the last 38 years. Brendan's favourite occupation is to problem solve a customer's project particularly a customer who knows what they want as an end result, but not sure how to get there.



Operations Manager

Cameron Firth

Cameron joined the team in 2003 and with many years of hands on fabrication experience, now heads up the company operations with a specialty in technical knowhow of mechanical design, material selections, fabrication detail, crane setups and oversize load haulage.



Workshop Manager

Jesse Mulqueeney

Jesse joined the team in 2024 which was a move to introduce new blood outside the family. Jesse comes with extensive fabrication, project and management experience.



Sales Manager

Brentley Firth

Brentley joined the team in 2004 commencing on the factory floor, progressing to workshop foreman and thence to Sales Manager. His extensive hands-on experience places him well to understand possible solutions to customers requirements.



Mechanical Design Engineer

Wamiq Qureshi

Wamiq joined the team in 2011. He brings considerable qualifications not limited to Mech. Eng Degree Honors, and abilities in detailed 3D modelling and drafting, creating P&ID's, Simulation and FEA studies in Solidworks and Comsol, creating technical manuals, and creating high quality renders for marketing material.



Process / Project Design Engineer

Justin Vuong

Justin joined the team in 2018. He brings considerable qualifications not limited to a Masters in Engineering – Manufacturing and Management. Justins forte is process engineering and analysis, carrying out complex calculations and studies to assess the best solution for the customer.

Meet Our Team



Quality Assurance Officer

Mitchell Firth

Mitchell joined the team in 2014 commencing on the factory floor developed an eye for detail necessary for the role as quality assurance Officer.



Business Development Manager

John Mainwaring

John joined the team in 2026 to assist with developing the business. While John did an apprenticeship in boilermaking and was with that company for 8 years. He then branched into sales and thereafter business development.



Junior Project Design Engineer

Ricardo Santos

Ricardo joined the team in 2024. He brings the qualifications of a Bachelors degree in Mechatronics, Robotics and Automation. Ricardo's forte is excel driven iterations in SolidWorks which makes updating and coping with different variations in models significantly more efficiently.



Office Manager

Feviline Stewart

Fev joined the team in 2021. Fev had previous experience in banking and brings a cheerful nature to the office. She manages the admin side of the QA system, accounts, customer service and a wide range of general duties.

Additionally since 2001, we have employed a number of employees as apprentices who have stayed on (which we encourage) and prove to be a strong asset to the company with clear expectations of the ST&M quality our clients demand.

Our Clients


AB MAURI
Albright & Wilson
Experience Matters
Allied Mills
ALLIED PINNACLE
ANSTO
ARNOTT'S
ARYZTA
aspen
AUSTRALIA
AstraZeneca
BASF
We create chemistry
BEC
B&J
FOOD SERVICE
BOORTMALT
MASTERS OF MALT
BUNDABERG
SUGAR
Carlton & United Breweries
CATHAY
INDUSTRIES
Cerebos
Coca-Cola
CSIRO
CSR
Dairy Farmers
Darrell Lea
ECOLAB
FRESH START BAKERIES
Fulton Hogan
GEA
General Mills
Making Food People Love
goodman fielder
our homegrown food company
Green's
INGHAM'S
Always Good
JALCO
GROUP
Kellogg's
LACTALIS
AUSTRALIA
LION
Lipa
Primo
MARS
Nestlé
NEWLY WEDS FOODS
inspiring new tastes
nuplex
OPPENHEIMER
ORICA
PPG Industries
REDOX
Sanitarium
health & wellbeing
SIEMENS
Simplot
SPHERE
HEALTHCARE
SpiceMasters
STREETS
SUGAR
Australia
Sydney
WATER
Unilever
VEOLIA
Virbac

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INNOVATION BACKED BY EXPERIENCE

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