



Capability Presentation

Presented by: Mike Surridge - General Manager



Capability

Fluid Dynamics Pty Ltd, an Australian owned and operated company specialising in heat exchangers since 1981, is certified ISO 9001:2015 and can design and verify to most compliance standards including:

API 661 norms; AS1210; ASME 'U' Stamp; PED etc..

In over 40 years of operation Fluid Dynamics has built an enviable reputation for being able to design, manufacture, supply, re-engineer, refurbish, clean and test a huge range of heat exchangers at its fully equipped facility.

We carry a large range of stock and equipment for even the most complicated of projects with our product range being constantly extended and updated to include the latest designs.

As we are not tied to any single brand we are completely unrestrained in what solutions we can offer – the best solution that suits our customers, not the 'solution' that suits the supplier

Our unique business model allows us to supply both OEM and aftermarket heat exchangers with custom designs, modifications, refurbishment, parts and service for almost any type of heat exchanger to suit our customers needs. Fluid Dynamics will always offer the best solution and the best quality at very competitive pricing - all backed up by a proud Australian company specialising in heat exchangers



Heat Transfer



Fluid Dynamics has remained at the forefront of heat exchanger technologies since 1981. From our base in Melbourne we offer the following services to our very broad customer base:.



Fabrication & Service Facility



Ultrasonic Cleaning System



In House Inspection and Testing



Design, Sales and Service for new, replacement & rebuild of all heat exchangers



Accreditation to ISO 9001 SAI Global



Site Installation Capability



Site Inspection



Strategic supply partners to enhance our own manufactured heat exchanger technologies



HEAT RECOVERY

Waste Heat Recovery
Heat Recovery Consultancy

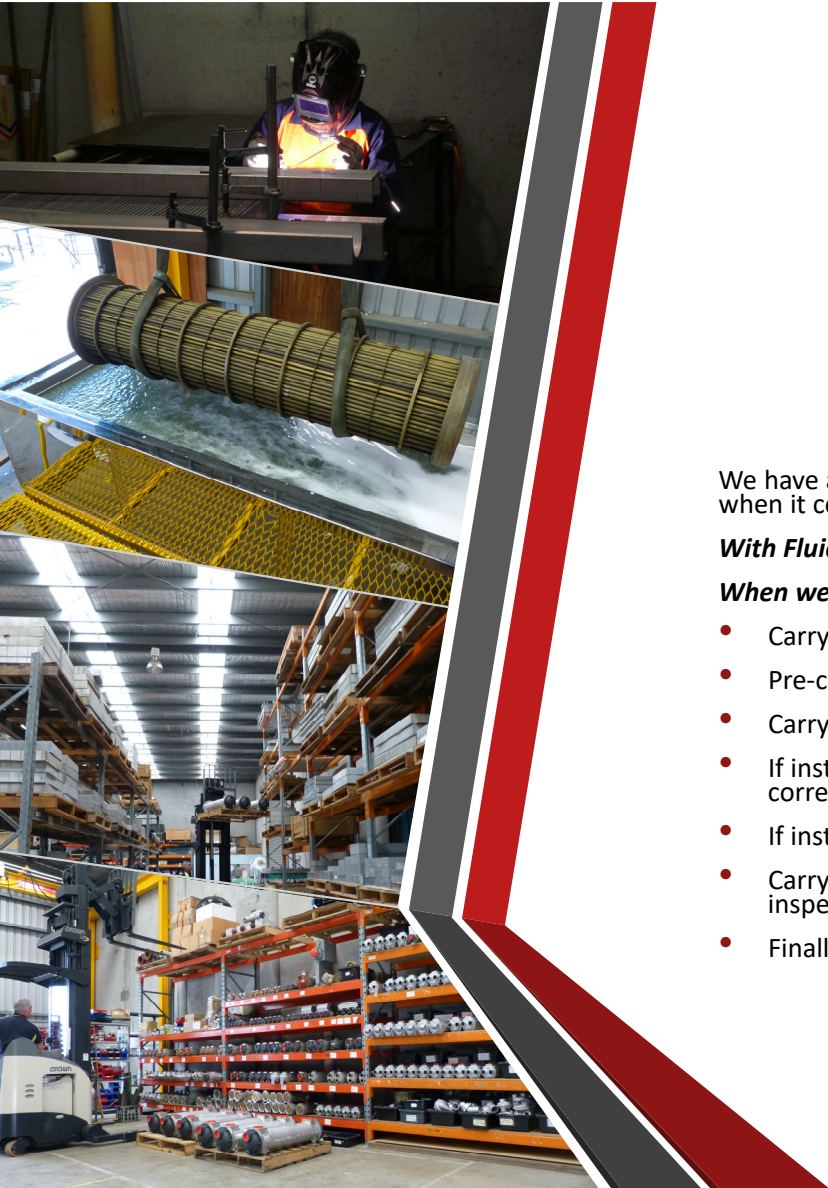
Factory & Facilities

We have a dedicated team of fitters, welders and in house service technicians who know what is needed when it comes to your heat exchangers.

With Fluid Dynamics your heat exchangers are in good hands.

When we receive your unit our team will :-

- Carry out initial inspection and detail findings
- Pre-clean the heat exchanger if required
- Carry out a preliminary pressure test and further assess the unit
- If instructed, contact you to discuss all findings in detail and advise our recommendations and what corrective actions should be taken.
- If instructed, clean the heat exchanger using our advanced ultrasonic cleaning system
- Carry out final assembly; replace all seals as required; carry out final pressure test and a close inspection. All findings and results are noted.
- Finally your unit will be dried, painted if instructed, packed and made ready for delivery.



Our Current Product Range



- Bar & Plate
- Shell & Tube
- Scrape Surface (SSHE)
- Plate & Frame / Semi Welded
- Fully Welded
- Brazed Plate
- Fin Tube Coil
- Dry Coolers
- Air Cooled Condensers
- Shell & Tube
- Corrugated Shell & Tube
- WHRU
- Custom build



Gasketed Plate Heat Exchangers

OEM or our own FluidEX® Range

Wide range

Modern / Efficient

Industrial

Painted frames

Hygienic

All stainless-steel frames

Plate Materials

316, 304, Titanium,
Hastelloy, Inconel, etc.

Gasket Materials

HT NBR, HT EDPM, HNBR,
Viton

Capacity

1m³/h to 4,500m³/h

25bar

Max working pressure

Operating Temps

-20°C to +190°C

Standard Connections

DN25 to DN500

Hygienic Dairy Fittings

Connections

1" to 6"



Plate Heat Exchanger Technologies

- Fluid Dynamics is now the proud Australian Partner of SPX FLOW for the APV Range of Gasketed & Semi Welded Plate Heat Exchanger Technologies.
 - Fluid Dynamics offers SPX FLOW's range of genuine OEM APV Gasketed Plate Heat Exchangers with parts and gaskets in all sizes and styles for all applications
 - With capacities ranging up 4,500 m³/h, our units are optimised to meet specific temperature demands and capacities in most applications and can be used with high working pressures
- Gasketed
 - Double Wall – Duo Safety
 - Semi Welded
 - Aftermarket Spare Parts
 - APV Plates – All Supported Models
 - APV Gaskets – All Supported Models

APV[®]
SPX
WHERE IDEAS MEET INDUSTRY

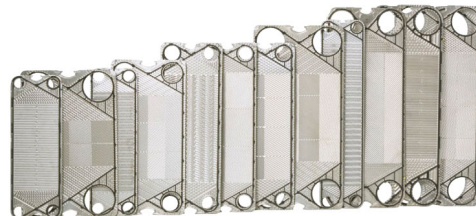


Plate Heat Exchangers Spares & Service

- Fluid Dynamics can also provide our FluidEx® Plate Heat Exchanger range including Plates & Gaskets for : -
 - APV, Alfa Laval, GEA, Vicarb, Mueller, Sondex, Tranter, Hisaka, Reheat, HRS, Sepak, AHTT, API Schmidt Bretton, Arsopi, Barriquand, Fischer, Funke, SWEP ...*
- On-site service, gas testing and maintenance of your PHE units
- In-house cleaning and crack detection of plate packs
- Ultrasonic cleaning system for plates and associated components
- In-house refurbishment and rebuilding of plate heat exchangers
- Redesign and design changes for most ranges possible
- Swap out frames for many sizes with minimal modifications required
- Flexibility to offer tailored service and spares solutions to meet specific requirements and needs



Fully Welded Heat Exchangers



SUITABLE FOR A WIDE RANGE OF APPLICATIONS



GAS TO LIQUID
OR
GAS TO GAS



ALUMINA
SLURRIES OR
SIMILAR
PROCESSES,
ELUATES ETC.



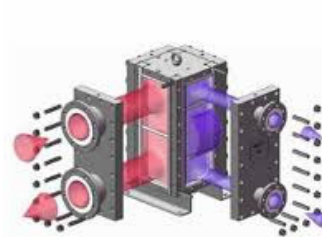
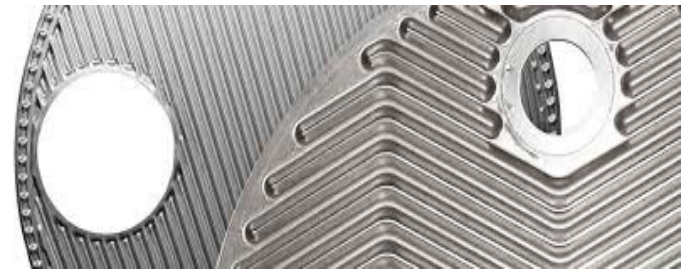
HAZARDOUS
FLUIDS –
CHEMICALS AND
PETROCHEMICAL



HIGH PRESSURE
APPLICATIONS,
VAPOURS AND
REFRIGERANTS



REFRIGERATION
AND CO₂



FluidEX[®] Brazed Plate Heat Exchangers

Very large range

Suit almost any application.

Brazing

Copper or Nickel

Very compact

High Thermal Efficiency.

Easy Installation

Long life

Proven
Durability & Reliability

Corrosion Resistant

available

Materials

316L, SMO254 plates, Cu
& Ni Brazing

Twin Wall

Safety Plates

available

Dedicated Oil Coolers

(DOC)



Bar and Plate (Aluminium & Copper)



- Large stock of components carried at all times
- Ability to custom build to just about any size
- Aftermarket units are a specialty – quicker, cheaper and stronger than OEM
- Replacement / Renewal of existing core
- Cooling systems can be fitted with 12v/24v DC, 3 phase hydraulic and Pneumatic motors,
- Shrouds, mounting base, stone guards can also be supplied
- BSP port sizes and locations are fitted to individual requirements
- High performance for heavy duty hydraulic and lubricating applications
- Maximum working pressure 26bar
- Service, Testing, Repair and Ultrasonic Cleaning
- Serving all industry sectors



Oil Cooler solutions

Fluid Dynamics is your one stop solution for automotive and industrial oil coolers

Fluid Dynamics is an Australian owned and operated company specialising in a wide range of heat exchangers.

- Full service for oil coolers including ultrasonic cleaning, testing, repair re-engineer and replacement.
- Large range of stock and equipment for even the most complicated projects.
- Supply of OEM and aftermarket oil coolers ensuring the best solution, the best quality, and very competitive pricing.

Fluid Dynamics - for all your oil cooler needs



Coil & Finned Tube Heat Exchangers

All industries served to the highest standards

All types of Coils & Finned Tube units designed & manufactured to all major industrial standards.

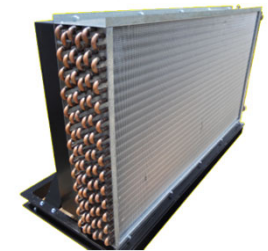
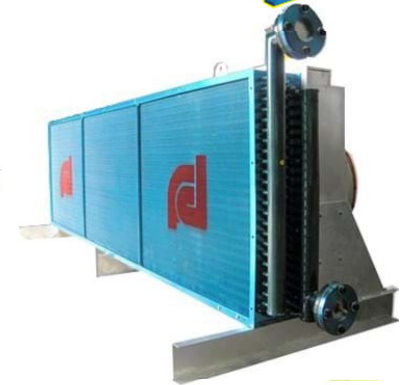
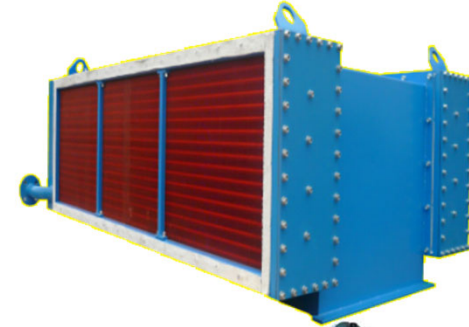


Special coatings applied to all coil units where required

Dry coolers – single through to multi core, multi fan, condensers and adiabatic coolers

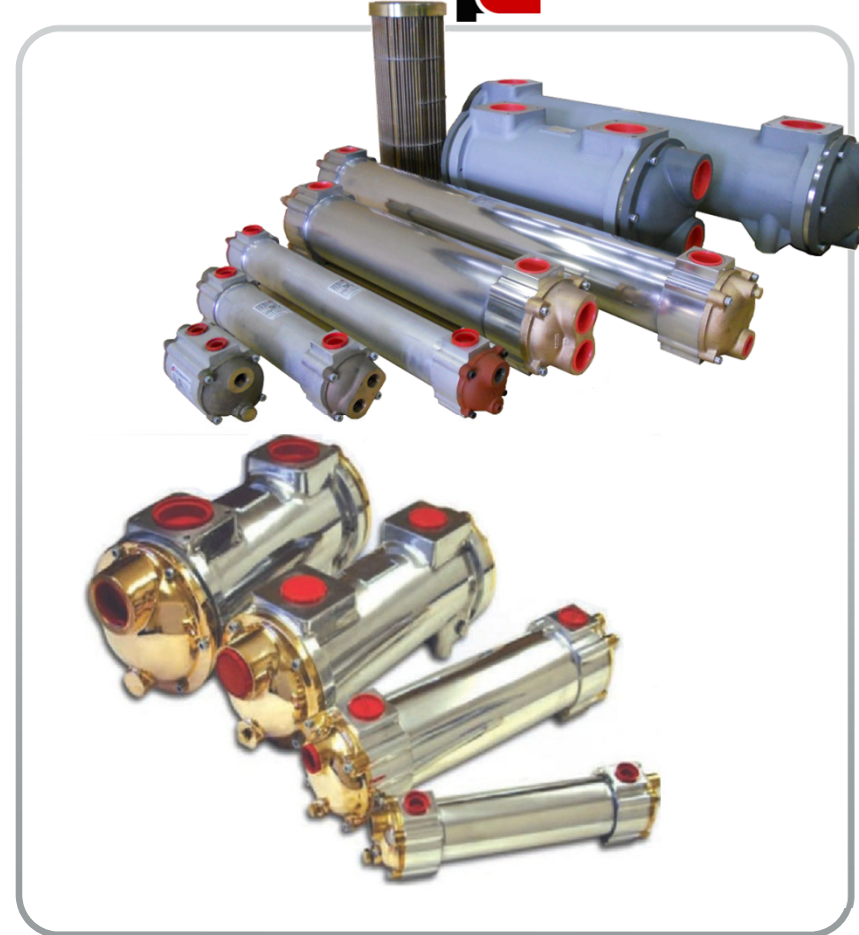
Round tubes, elliptical tubes, compact fin, single fin, spiral fin, rectangular fin

All materials available including carbon steel tubes and fins, Cu tube and fin or Ali fin, CuNi tubes and stainless or Ali fin, stainless tube and fin



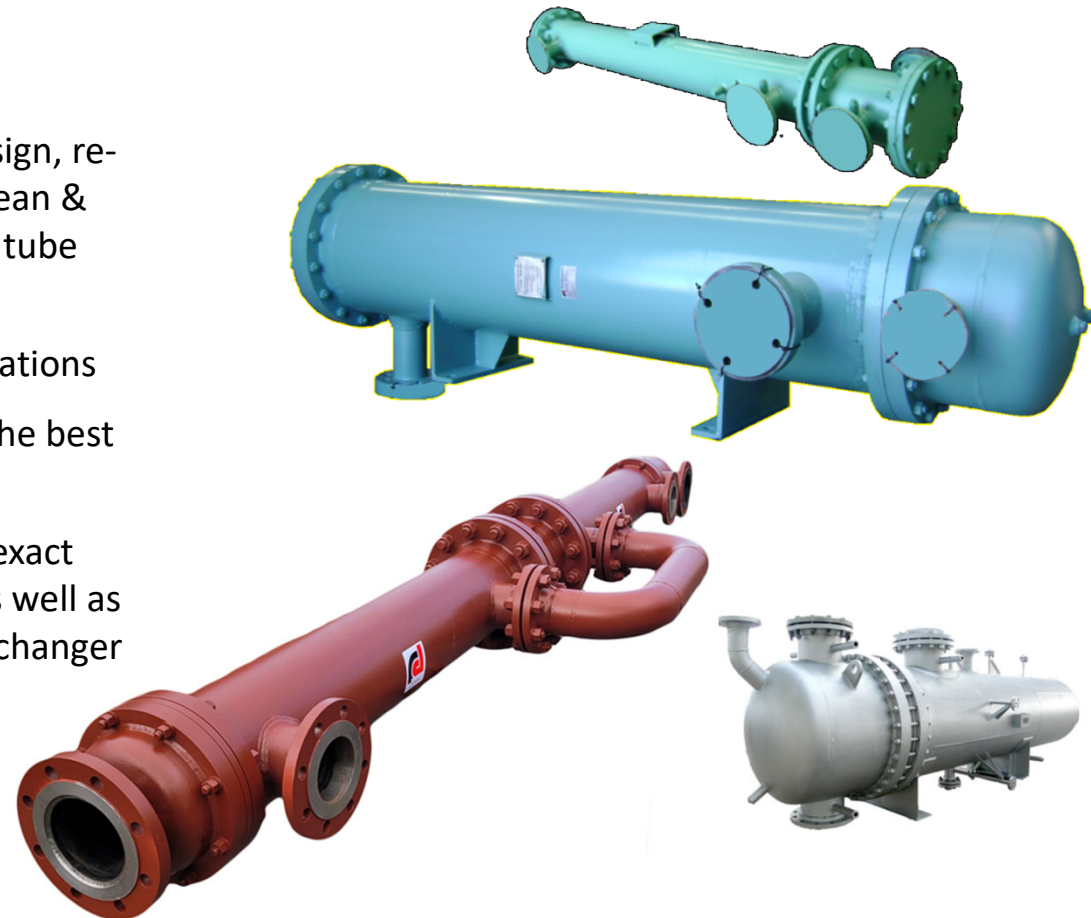
Shell & Tube (off the shelf)

- Fluid Dynamics has been synonymous with shell and tube heat exchangers for over 40 years
- One of Australia's largest Stockists of shell & tube oil coolers, Custom Build, transmission oil coolers & water to water coolers. Most standard ranges are available ex stock
- We offer a full range of services including like for like replacements, new units, repairs, testing, service and ultrasonic cleaning, new tube bundles, repairs to existing tube bundles and re-tubing. All carried out in our well-equipped Hallam factory
- Ideal for many applications – marine, industrial, on-road & off-road etc.



Shell & Tube-Custom Build

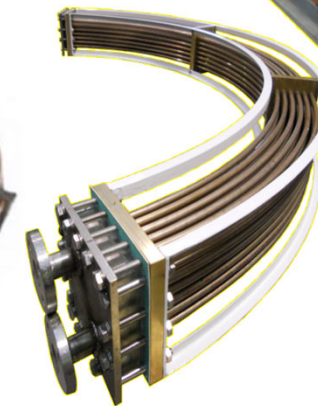
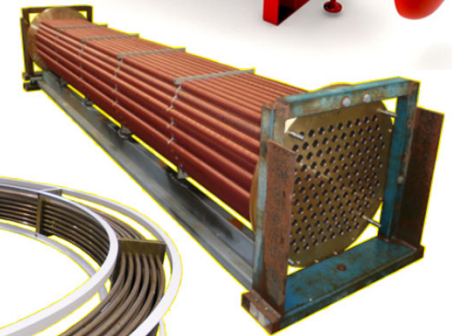
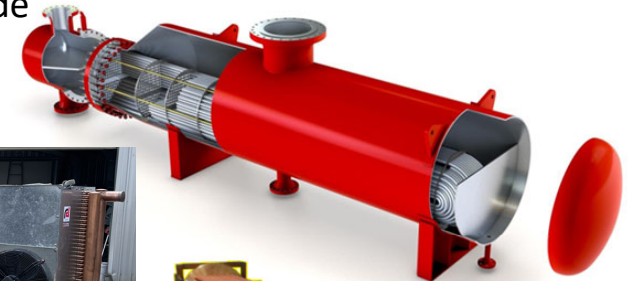
- One our key strengths is our ability to design, re-engineer, manufacture, refurbish, test, clean & and repair all types and sizes of shell and tube heat exchangers
- We provide heat exchangers for all applications
- Built to the highest standards and using the best quality materials
- We can provide new tube stacks built to exact standards to fit in to your existing shell as well as manufacture the entire shell and tube exchanger



Special Project Heat Exchangers

At Fluid Dynamics we pride ourselves in our skills and ability to provide solutions for almost every project.

- Thrust Bearing Coolers
- Hydrogen Coolers
- Large Transformer oil Coolers
- Generator Coolers
- Large Cooling Coil Systems
- No matter what the requirement Fluid Dynamics can provide the correct technology and solution to match it



Corrugated Tube Heat Exchangers



Highly efficient all stainless-steel shell and tubes with other materials available



Hard start through to multi-start corrugation designs for different fluids



Twice the heat transfer coefficient of smooth tube heat exchangers



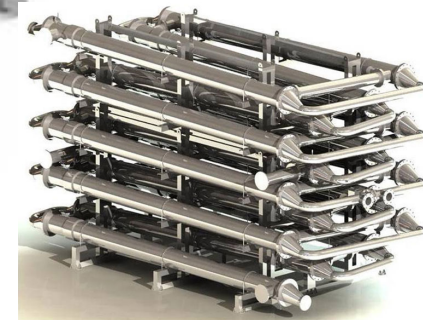
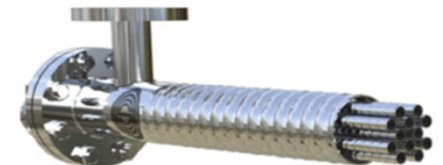
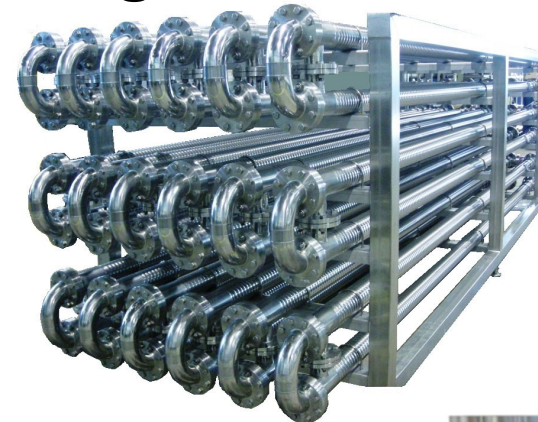
Suitable for almost every feasible hygienic or industrial application



Working temperatures up to 550°C



Ideal for shear-sensitive, viscous or highly viscous products



What Heat Transfer Application are you looking for?

- Heating
- Cooling
- Regeneration
- Pastuerisation
- Desuperheating
- 2 Stage Heating / Cooling
- Waste Heat / Energy Recovery
- Condensate Recovery
- Exhaust Gas Heat Recovery
- Evaporation
- Condensing



• Fluid Dynamics

If your application is not listed then please ask.

Ultrasonic Cleaning

- Our Ultrasonic Cleaning System uses special fluids (not harsh acids).
- Huge industrial sized tank
- Although it operates normally at 50°C to 60°C our system can heat to 90°C if required.
- When combined with the power of ultrasonics the system effectively removes carbon, rust, oil, epoxies, scale etc..



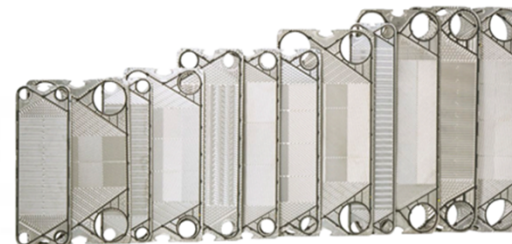
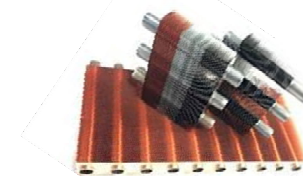
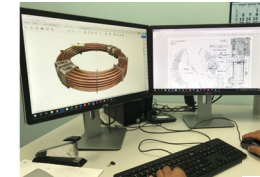
Heat Exchanger Spares

- Spare or Replacement Custom Heat Exchanger Re-Builds
- Spare or Replacement Tube Bundles & Tube Nests
- Spare or Replacement Tube Plates (blanked or pre drilled)
- Spare or Replacement Aluminium Cores
- Spare or Replacement Finned Tubes – (most types)
- Replacement Spare Parts for all plate heat exchanger makes including complete plate packs
- Replacement Brazed Plates, SWEP, SONDEX, APV, WTT, FUNKE etc.

Our tube bundles can be supplied from OEM or can be custom built to suit each requirement for your unit.

Our plate heat exchanger parts are normally Genuine OEM manufacture parts

Non genuine parts can be sourced for all makes with the exception being SPX/APV unless your unit is no longer supported and has reached its end of life and your not willing to replace old unit for new.



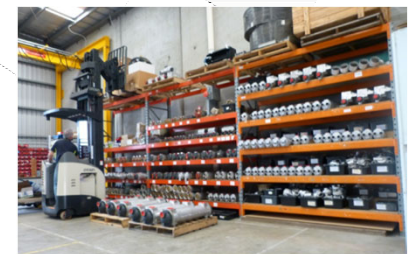
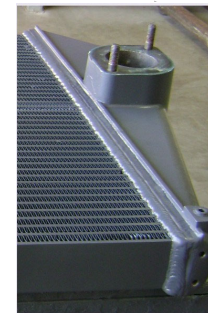
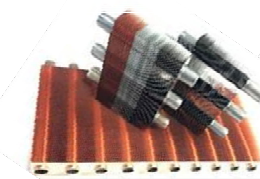
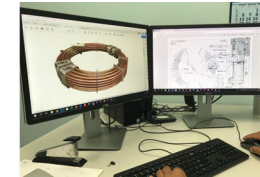
Heat Exchangers - In House Servicing



- In house Cleaning, Testing, Inspection & Repair of almost any type of Heat Exchanger:

Shell & Tube; Steel, Copper & Aluminium Radiators & Oil Coolers; Finned Coil; Finned Tube; Aluminium Bar & Plate; Thrust Bearing Coolers; Hydrogen Coolers; Condensers; Evaporators; Fin Pack Units, Fin Coil Units, Charge Air Coolers, Generator Coolers, etc.

- Custom Heat Exchanger Builds and Re-Builds
- Replacement Tube Bundles and Cores
- NDT - Eddy Current; Ultrasonic and Borescope
- Camera inspections of tubes and internal surfaces
- Material analysis
- Replacement Spare Parts
- Redesign and Design Engineering Services including site laser scanning and 3d modelling



Servicing & Maintenance on Your Site

Fluid Dynamics has an experienced and well-equipped team of professional heat exchanger service technicians covering all States in Australia and at your call.

Cleaning, Testing, Inspection & Repair

The list of what we can do on your site is extensive and includes:

- Onsite Inspection and Evaluation
- Inline Chemical Cleaning
- Installation and Removal
- Re-gasketing
- Replacement of Spare Parts
- Replacement of Plates and Plate Packs
- Complete Heat Exchanger Builds and Re-Builds
- Repair and Re-builds of Tube Bundles
- Finned tube removal and replacement
- Leak Detection
- Borescope Inspections
- Offsite Material & Failure analysis
- Non Destructive Testing - Eddy Current, Ultrasonic etc.
- Waste disposal etc.



All Heat Exchangers

Shell & Tube; Finned Tube; Finned Coil; Thrust Bearing; Plate (Gasketed, Welded and Semi-Welded); Aluminium Radiators etc.

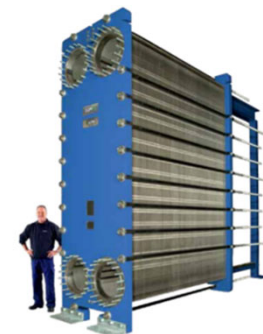
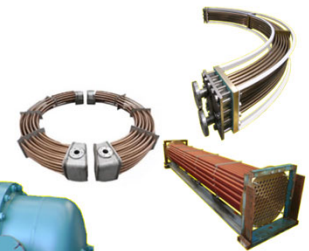
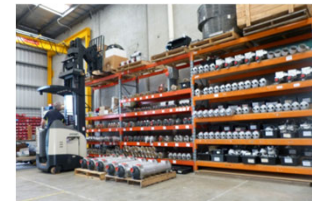
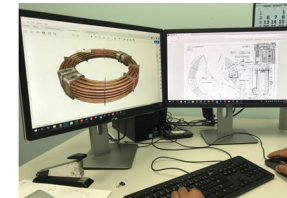
All Applications

Oil, Air and Water Cooling & Heating; Condensers & Evaporators; Generator Air Coolers; Refrigeration; Steam

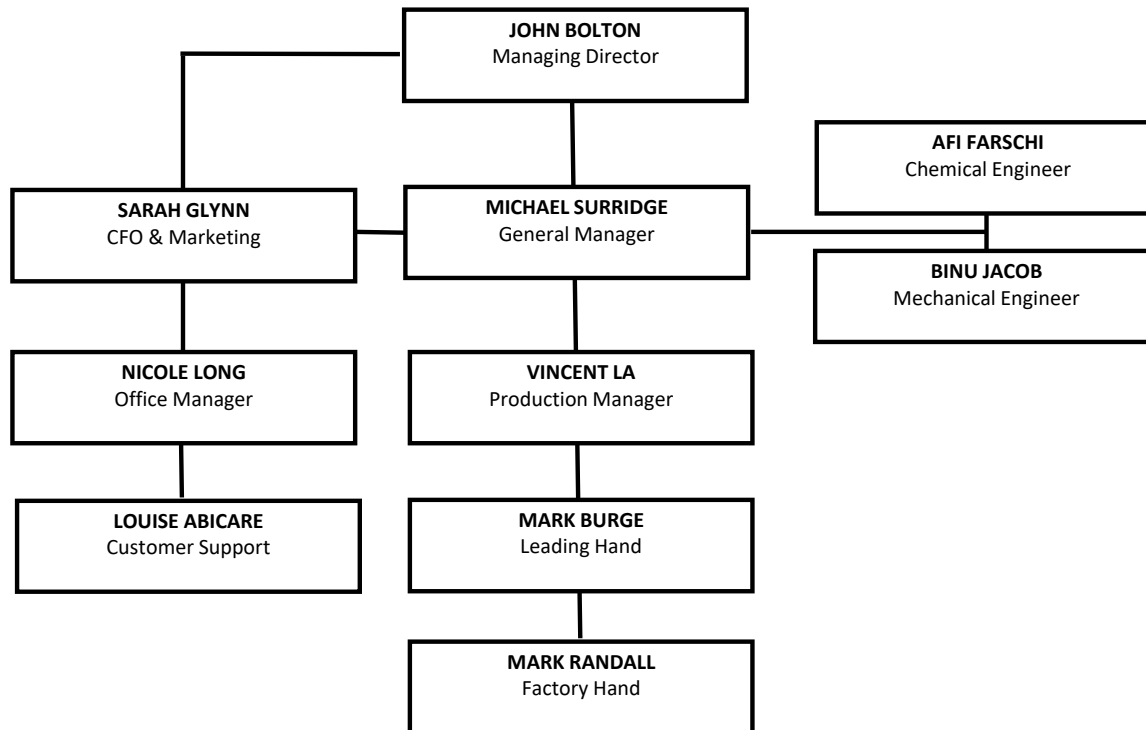
On Site Service



- **Cleaning, Testing, Inspection & Repair of almost any type of Heat Exchanger:**
Shell & Tube; Oil Coolers; Finned Coil; Finned Tube; Thrust Bearing Coolers; Plate and Shell & Tube Condensers & Evaporators; Coolers, Generator Coolers, etc.
- **Plate Heat Exchanger Builds and Re-Builds**
- **Replacement Tube Bundles and Re-builds**
- **Inline chemical cleaning, waste disposal**
- **Camera inspections of Shell & Tube internal tube nests and internal surfaces**
- **Offsite Material and Failure analysis**
- **Replacement Spare Parts, Replacement Plate Heat Exchanger Plate Packs**
- **Offsite cleaning and testing of Plate Heat Exchanger plate packs,**
- **Redesign and Design Engineering Services including site laser scanning and 3d modelling**
- **Onsite Inspection and Evaluation of your heat exchanger including but not limited to : Finned Tube Air Coolers, shell & Tube, Plate Heat Exchanger (Gasketed, Welded or Semi Welded), Custom Coolers such as Bearing Coolers etc.**



ORGANISATIONAL CHART



Some of our Valued Customers:



Fluid Dynamics Contacts & Location



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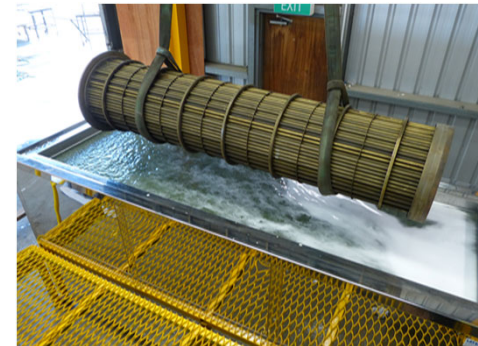
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The Heat Exchanger Specialists for all your Heat Exchanger Needs