

# JOHN BROOKS

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## INDUSTRIAL AUTOMATION

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# PRODUCT GUIDE

*John Brooks proudly partners with a range of leading brands, including:*



## WELCOME

John Brooks is an engineering company specialising in Industrial Automation for Manufacturing, Dairy and Wine industries. We pride ourselves on our history of being able to recommend and find industrial products to meet our customer's needs and provide the support to them with a personal relationship that matters. John Brooks supports high quality products from suppliers across the industrial, mechanical and electrical spectrum.

Our Warehouses hold in stock Variable Speed Drives, Motors, Gearboxes, Bearings, Belts and various other industrial components. However, we do not only stock spare parts, but provide skilled and trained engineers to assist companies in gathering specifications and being able to put together an engineered solution to meet your needs.

Our company has three branches in New Zealand with subject matter experts across various product ranges and applications. John Brooks not only provides a great procurement of industrial components but we have the skills and expertise to provide automation solutions and integration. We have commissioned automation jobs with various well-known companies across the nation. John Brooks creates its own products, and supply dairy and wine products to the New Zealand and international markets.

John Brooks Ltd is able to help you with your engineering needs – contact our Auckland, Wellington and Christchurch offices for more information.



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## COUPLINGS

John Brooks carries a large variety of couplings, along with a complete range of small to large couplings which are also available to order.

With a comprehensive range of materials, sizes, large bores, and torque ratings available, we can provide you with the right product for the job.

**Some of our range includes:**

- **Shaft couplings (taper grid resilient coupling).** Gives positive protection against the damaging effects of shock impact loads and vibration
- **Crowned and barreled tooth couplings.** Gear couplings using steel hubs and polyimide nylon outer sleeve ideal for hydraulic pump applications
- **Flexible Jaw Shaft Couplings.** For electric motors, which absorb shock and give high abrasion and wear resistance, as well as accommodating misalignment
- **Torque limiters and safety couplings.** Providing overload protection to machinery
- **Quantum locking assemblies.** Replacements for taper lock bushes
- **Flexible Belt couplings.** The quick, low cost solution for coupling maintenance problems. Available in stainless steel available as spacer type no tools required to change elements
- **Tyre couplings.** Tyre couplings employ a non-lubricated elastomeric flexing member loaded in shear. Allows maximum misalignments both angular and radial
- **Zero-backlash couplings**

## GEARBOXES

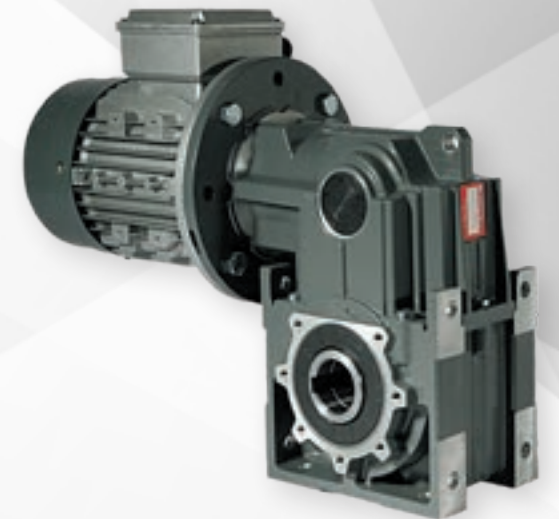
John Brooks supply a variety of gearboxes manufactured from the highest quality materials and using the latest technology to suit a wide range of requirements. The following gearboxes are available in a variety of specifications:

### Bevel Helical Gearboxes

- Manufactured with two and three reduction stages
- Designed for fractional and medium powers as mainly used in conveyor drives
- Especially suitable for outdoor applications
- Long lasting monolithic frame design ensure no oil leaks and service free operation
- Designed according to ISO design standard
- Robust framework does not deflect under running torque
- Hollow and solid output shafts, foot, flange or torque arm fixing are also available

### Worm Reduction Units

- Manufactured in a range of cast aluminium, cast iron and lightweight aluminium alloy depending on model
- Combine innovative design and high performance
- Power applications with medium and fractional power similar to solutions with double worm
- Smooth running and low noise
- High radiating efficiency
- Good looking appearance, durable service life and compact design
- Suitable for torque arm installation, flange mounting, or mounting from any face
- Also included are Brooksdrive gearboxes, which can be incorporated with any of our Metric IEC frame AC or DC motors to make a cost-effective gearmotor which is one of the most price effective in the market







### In-line Helical Gearboxes

- General purpose, medium and fractional power drives
- Come in 7 sizes with dimensions that match industry standards
- Housings and covers of aluminium die cast up to size 4, and cast iron from size 5
- 2 and 3 stage gear trains
- Long life lubrication

### Cycloidal Gearboxes

Brooks Cyclo is a hollow input, concentric shaft cycloidal gearbox designed to accept standard IEC flanged motors. John Brooks offers a wide range of sizes and ratios at competitive prices. Some of the advantages of using a Cycloidal design over a conventional gear tooth designed reducer include:

- Rolling elements ensure high mechanical and thermal efficiency
- Shock overload rating of 500% as gear forces are predominantly radial rather than tangential
- Ideal for stop/start operations
- A wide range of models and sizes with reductions of 6:1 through to 7569:1 in either single or double reduction
- High overhung load capacity
- Long life and low maintenance

### Right Angle Bevel & Mechanical Reversing Gears

- Right Angle Spiral Bevel Gearboxes with 1 and 2 outputs
- Shafts available in 1:1, 2:1 and 3:1 ratios
- Mechanical reversing gears have the ability of reversing the output shaft and offer forward idle and reverse of the output shaft



### TIMING PULLEYS & BELTS

John Brooks supplies both imperial and metric belts and pulleys. We also offer a very cost effective custom pulley making service for rare, special, or hard to find pulleys. The range includes:

- **Imperial:** MXL, XL, L, H, XH and XXH
- **Metric:** 3M, 5M, 8M, 14M, 20M, T5 and T10

### V PULLEYS & BELTS

The raw edge V-Belts stocked at John Brooks were specially developed to meet exacting demands regarding power output and smooth running.

- **Cogged Belts:** Tighter bending radius that maintains cross sectional shape resulting in greater torque transfer (grip).
- **Cooling:** Heat is the biggest cause of deterioration in belts, and the internal cogs create air turbulence that dissipates the heat from the belt
- **Construction:** Made using two types of rubber and Kevlar fibers. These belts don't stretch, and are very robust meaning they only bend in the directions that they are intended to.

The range includes:

- **Heavy duty raw edge cog belts.** Classical range sizes in ZX, AX, BX, CX and DX, while Wedge sizes XPZ, XPA, XPB and XPC
- **Poly V belts.** We can also source that hard to find belt
- **Garden belts and power rated belts** for the lawn and garden, plus the agricultural industry
- **Banded V belts,** double sided belts and flat belts also available on request
- **Volta round belting,** which can be cut to size and joined either onsite or at the workshop



To accompany the V belts, we also stock, or obtain at short notice, a range of V pulleys.

This range includes:

- Taper lock
- Biloc
- Stenco Aluminum pre-bored
- Stationary adjustable
- Cast Iron
- Hi-Lo variable speed pulleys



### ROD ENDS & SPHERICAL BEARINGS

John Brooks stocks a full range of rod ends and spherical bearings to meet a variety of applications, some of which require custom engineered units or special materials.

The range covers a wide range of requirements which include the following options:

- Made from carbon steel and/or high-performance alloy for the race car industry
- Metric sizes ranging from 3 to 30mm
- Imperial sizes ranging from 3/16" to 1"
- Male and female shank type
- Left and right-handed thread

### MOUNTED BEARINGS

The spherical roller bearing has the most effective easy on, easy off adaptor mounting and removal system. Not only does this patented system provide a concentric grip for superior holding on the shaft, but it reduces the fretting corrosion caused by traditional setscrews and vibration.

Key features of the John Brooks mounted bearing range include:

- Steel cage provides precision roller guidance
- Outer ring riding two-piece guide ring minimises heat generation
- Tapered seal land maintains full contact when misaligned
- Patented Nitrile triple lip seal resists heat and chemical background
- Ease in mounting and dismounting with patented adapter system
- Adapter sleeve improves concentricity and reduces inherent vibration

### PLASTIC BEARING HOUSINGS

As a good alternative to stainless steel bearings, plastic bearings have many advantages. Some of those advantages in the John Brooks range include:

- Corrosion resistant
- Lubrication and maintenance free – no attraction to dust and contaminants
- Stainless steel and chrome bearing inserts
- Low weight and low friction resistance
- Long life
- Robust open and closed covers that don't fall off
- Temperature resistance of up to 350°C
- Bearing housings available in Pillow Block, Flange and Take-up





**CONVEYOR CHAINS, BELTING  
& CONVEYOR COMPONENTS**

Stocked at John Brooks are premium quality slat band chain and components which have been proven within the international market. Sizes stocked include 812, 820, 880 and 881 slat band chains in low friction acetal, with split sprockets and wear strip.

The range was developed to be used for a large range of industrial applications, including:

- Packing
- Glass
- Bottling
- Pharmaceutical
- Chemical
- Food
- Mechanical

With a range of conveyor products available, John Brooks has your full conveyor solution. With versatile and robust designs, products include:

- **Skate Wheels.** Versatile product that can be used in a variety of applications
- **Pipe Rollers**
- **Powered Roller.** Powered accumulation conveyors. Safe, quiet and efficient
- **Bearings and Endcaps.** A large range of bearings and endcaps
- **Stainless Steel Rollers**
- **Light Roll.** Lightweight galvanised gravity with conveyors
- **Ezyroll.** A robust gravity conveyor with a range of rollers to suit
- **Multidirectional Rollers**
- **Galvanised Rollers**
- **Miniroll.** Robust roller system with multiple uses
- **Chain.** Thermoplastic chain and components
- **Tranzbelt.** Flat belt conveyors

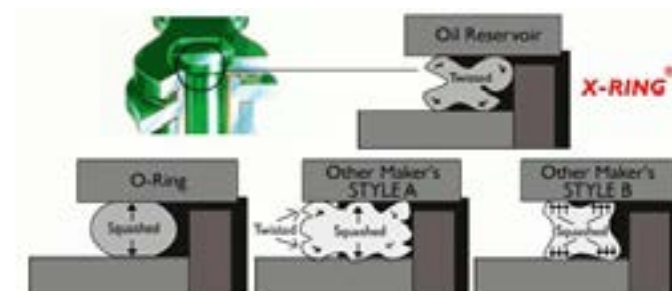
**TRANSMISSION CHAIN  
& SPROCKETS**

John Brooks is the importer and distributor of high quality Japanese industrial built roller chain.

Shelf stock includes both BS and ANSI (ASA) in a wide range of pitches and materials, including O-ring, X-ring (will provide up to 30 times the wear life of standard chain) and corrosion resistant chain. Also available to order are agricultural and specialised conveying chains.

Fully machined steel sprockets are available in all popular BS pitches and sizes, while ANSI sprockets and double pitch sprockets for conveying chains are also available on short delivery.

Specialised sprockets can be custom made to order by John Brooks to ensure you have the correct size for the job.







### AUTOMATIC LUBRICATORS

John Brooks has automatic lubricators available in a range of greases and oils for different applications. It takes the guess work out of a lubrication schedule, ensuring bearings are consistently lubricated. This in turn prevents potentially costly equipment repair and/or production downtime.

Key features include:

- Lubricant injection continuously for a preset period from 1 to 12 months
- Screws directly to a standard grease nipple socket
- Gas operated output
- Activated by an organic chemical reaction
- Requires no batteries
- Approved for hazardous areas and can operate underwater

### ACTUATORS

A large variety of actuators are on offer at John Brooks, with options available to fit a range of industries and applications:

- Ball Screw and Roller Screw type linear actuators
- Actuators capable of loads in excess of 10 ton
- Connections to all types of motors
- Controls to drive single and multiple actuators in parallel with load limiting
- Rugged construction for heavy shock loads
- Ability to operate in extreme conditions giving precise and reliable movements
- Linear guided with high precision
- Long run
- Stainless steel options available

### MACHINE/CONVEYOR FRAMING

The John Brooks range of machine/conveyor framing delivers high quality extrusion and conveyor technology as well as linear motion systems for material handling and assembly applications.

The idea of the modular automation system is to use the least possible number of components to offer a maximum number of possible solutions. This translates into time and cost savings in design, logistics, storage, training and assembly.

Some of the key features of the range are:

- Built to a large variety of customer specifications for your conveyor and machine framing needs
- Modular construction
- Low maintenance
- Built to the highest quality standards

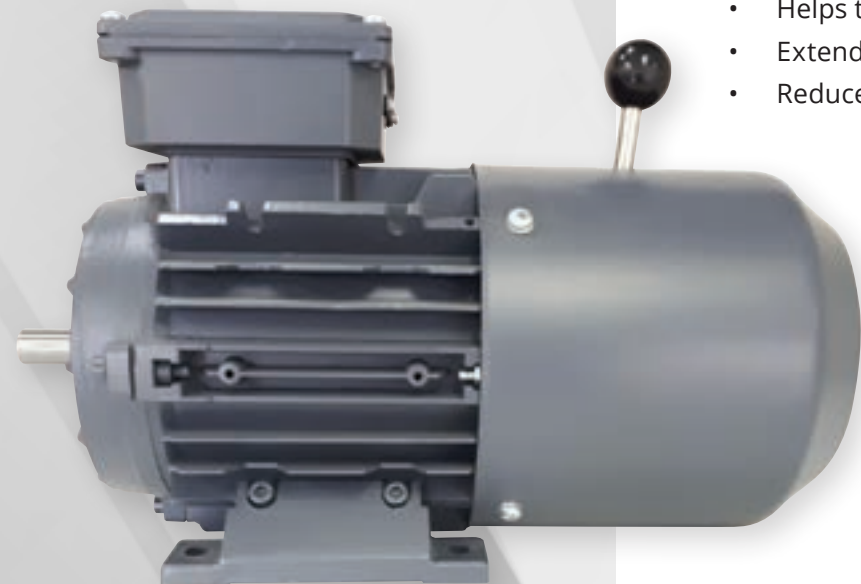
### LINEAR MOTION

John Brooks stocks a range of linear motion, V guides and circular continuous motion products.

Belt and ball screw driven actuators are available in sealed construction, and motor adapter mounts are available to fit most brushless servo and stepper motors for precise carriage positioning.







## AC MOTORS

John Brooks provides a wide selection of AC and DC motors, supplying the highest quality to the New Zealand market. The extensive range covers single and three phase TEFC electric motors in both aluminium and cast iron.

- Competitive price and stock availability
- Removable feet for multi mount design
- Low lead time for motors not in stock
- 1 and 3 phase AC motors
- Cast Iron IP66 and Aluminium
- Large power ratings stocking up to 110kw
- Operating parameters include 220V to 240V at 50hz supply (1 phase) and 460V 3 phase

## SMART MOTOR SENSOR

Smart Sensor is a condition monitoring solution that makes predictive maintenance possible for almost all low voltage motors. By monitoring and analysing data on motor operating parameters, it enables motor users to optimise their maintenance. Key benefits of this technology include:

- Helps to reduce downtime by as much as 70%
- Extend motor lifetimes by up to 30%
- Reduce energy consumption by up to 10%

## WASHDOWN STAINLESS STEEL MOTORS & GEARBOXES

John Brooks is a distributor of stainless steel motors and gearboxes, designed to withstand the toughest and most extreme of conditions. Rated at IP67 or IP69, they are secure against high ambient temperatures, high humidity, water and steam. Benefits of these stainless-steel motors and gearboxes include:

- Underwater testing as standard
- Significant cost savings over the life cycle, offsetting the initial capital cost of stainless
- Viable long-term option, as cast iron and aluminium units regularly fail when subjected to extreme conditions
- Standard IEC metric frame with B3 and B5, B14 flanges. We can even supply motors with flanges to suit other manufactures gearboxes, making retrofitting easy.
- Motors have received CSA approval and have been certified under USA premium efficiency and MEPS





## DC DRIVES & CONTROLS

Here at John Brooks, we stock the controls that dominate the fractional to 800kW AC and DC motor speed control market.

### Features:

- Patented direct-fed CL circuit
- Current feedback priority
- Timed current limit (electronic overload protection)
- Plug-in horsepower resistor
- Current selection, quick jump
- Short circuit protection
- Active PWM power bridge

The PL/PLX range has an extensive library of standard software blocks and can take control of the most demanding motion tasks of larger KW applications.

### Features:

- 40-character alpha-numeric backlit displays
- A full set of centre winding blocks
- Field weakener function for extended speed range
- UL, CuL and CE approved
- Available in both 2 and 4 quadrant versions
- 3 chassis sizes with models rated from 5 to 265kW
- Drivelink software allows easy setup on PC

## AC DRIVES & CONTROLS

John Brooks supplies a range of AC Drives and controllers for a wide variety of uses to cover 1 phase and 3 phase power input into 3 phase motors. The models listed below all contain built in communications and PLC, enabling one unit to do the job.

### Compact

A compact, robust, and versatile AC Drive with standard modbus communication. Offering the most economical motor drive solution for industrial applications and OEM's.

### Features:

- Output frequency up to 599Hz
- Built in digital display and keypad, including speed adjustment potentiometer
- Compact space saving design
- RJ45 interface for PC and copy module
- IP20
- Single phase 220V supply 0.18 kw to 2.2kw and 3 phase 400V from 0.75 kw to 11kw

### Normal Duty and IP 66

The E510S, a compact variable frequency and sensor less vector drive.

### Features:

- High end sensor and vector mode. Built in PLC and sequencer
- Safe torque off (STO) built in
- Auto-tuning support
- Conformity to global standards
- Several types of control modes
- High efficiency PM motor driving
- Single phase 220V supply 0.18 kw to 2.2kw and 3 phase 400V from 0.75 kw to 18.5kw
- IP66 available in all sizes





**Heavy Duty**

The A510 is built to support many industries, such as elevators, cranes, compressors and more.

**Features:**

- 3 phase motors with V/F, encoderless vector, closed loop flux vector and PM brushless
- 7 types of motor control. Built in PLC and sequencer
- Dual core processors
- Advanced motor auto-tune function
- Wide range of application
- Ultra-Low motor noise
- 3 phase 400V from 0.75 kw to 280kw
- 200% Starting Torque

**Fan & Pump**

F510 is ideal for fan and pump control which meets protection level IP55 to provide various options for harsh environments.

**Features:**

- Pump cascade control – 1-8 pump option card can control up to 8 pumps
- Fire override mode
- Built in multi pump control
- Possess constant pressure control technology with 5 template options
- Built in PLC
- 3 phase 400V from 3.7 kw to 317kw
- IP55 available in all sizes

**ENCODERS & TRANSDUCERS**

John Brooks can supply more than 400 options (Incremental, Absolute Encoder Sensors, Linear Transducers and accessories), one of the strengths being that we can deliver a custom solution to the customer's needs.

**MINIATURE & PRECISION MOTORS & DRIVES****AC Motors**

- Operate by simply connecting a capacitor and supplying power from a commercial power supply
- Include the basic induction and reversible motor
- In addition, John Brooks can supply electromagnetic brake, synchronous, torque, and watertight/dust resistant motors

**Brushless Motors / AC Speed Control Motors**

- Ideal for applications that require precise control of speed
- Wide ranging function and performance
- Servo and stepper motors control speed with a pulse train
- Induction and brushless DC motor controls speed with an external resistor and/or DC voltage

**Stepper Motors**

- Used to achieve precise positioning via digital control
- Operates by accurately synchronising with the pulse signal output from the controller to the driver
- Ideal for applications requiring quick positioning over a short distance
- Ability to produce high torque at low speed while minimising vibration





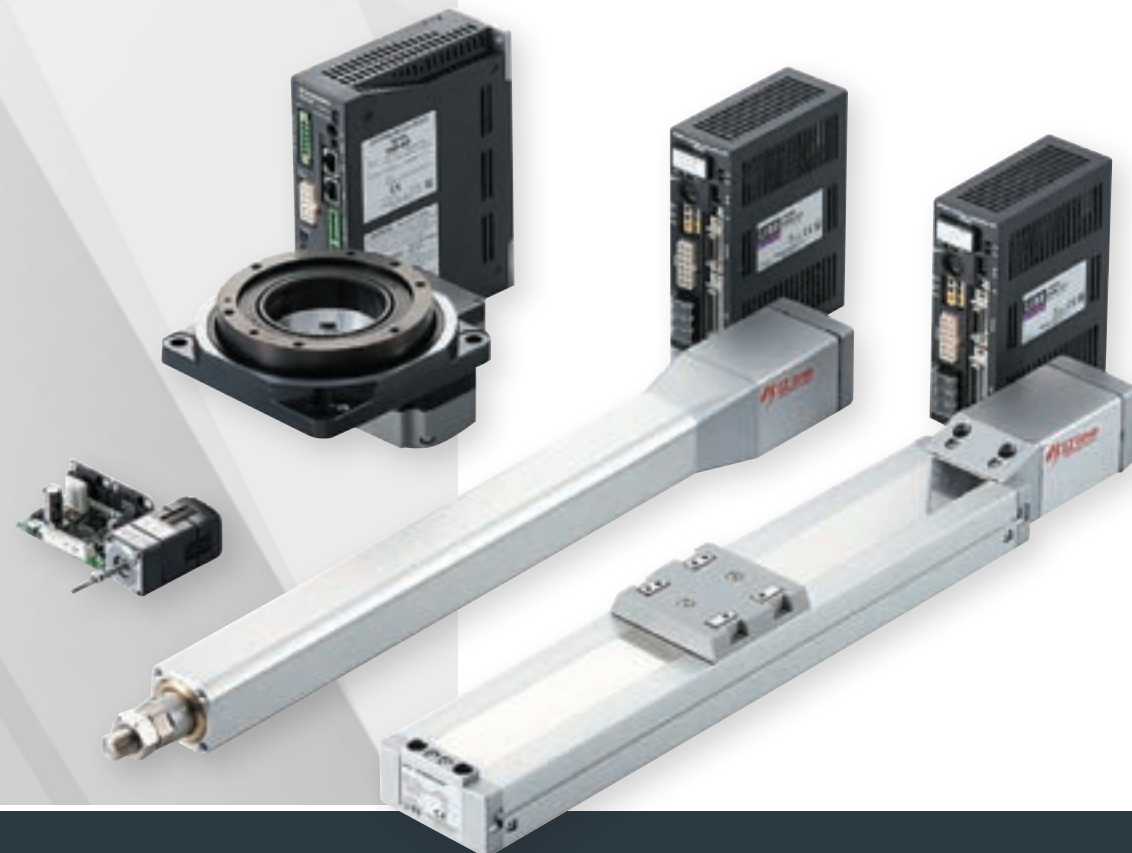
### Servo Motors

- Specialised for high response, high precision positioning
- Composed of three elements: the motor, encoder and the driver
- Capable of accurate rotation angle and speed control, so can be used with a variety of equipment
- Easy to operate, and allows for smooth operation with large inertial loads and belt mechanism
- In addition, John Brooks can supply electromagnetic brake, synchronous, torque, and watertight/dust resistant motors



### Linear and Rotary Actuators

- A linear motion product incorporating a motor and linear motion mechanism
- John Brooks offers the supply of a wide range of linear motion products
- Available in many shapes and sizes, featuring different motor types, drive methods and power inputs



### HMI SCREENS

The X2 series is the next generation of HMI's distributed by John Brooks. Six product families combine great design with strong performance to power your HMI solutions, sized from 4" – 21". Fast screen changes and program execution are delivered throughout the X2 range by power efficient ARM9 processors all the way up to the latest quad core ARM Cortex-A9 processors. Panels are equipped with single, dual or quad core processors, giving the operating system vast resources to execute program tasks.

- **X2 Base.** Cost-effective, full functionality HMI's
- **X2 Pro.** High performance HMIs for all automation needs
- **X2 Marine.** Built for life at sea. Black surround and fully dimmable
- **X2 Control.** Integrated CODESYS control
- **X2 Motion.** Integrated CODESYS motion and control
- **X2 Extreme.** Rugged HMIs for tough environment

#### Key features include:

- Superior CPU performance
- Robust and reliable
- Prepared for any environment
- Free software and included features like data gathering that will export in Excel, net programming and built in web browser for manual storage, just to name a few







## POWER SUPPLIES

John Brooks carries a range of power supply units offering wattage from 18 to 480W, and DC voltage out in 24, 48 and 72V.

Some of the key features of these power supplies are:

- Compact design
- 200 to 500-volt single phase in and DC out
- High efficiency up to 90%
- Universal and selectable input voltage
- Rail mountable
- Parallel function available (switch)
- P.F.C function available
- Short circuit protection

## PLC'S

The range of PLC's available at John Brooks incorporates a "System on Chip" (SoC), which represents high functionality and reliability with exceptional value. Also available are an all in one PLC and screen.

The BGA chip consists of over 120,000 gates which integrates powerful features such as:

- A central Processing Unit (CPU)
- Expandable Memory
- Hardware Logic Solver (HLS)
- 5 high-speed communication ports
- 4 sets of hardware high-speed counters/timers
- 4 axes of high-speed pulse outputs for NC positioning control (with linear interpolation)
- Large range of high-speed inputs and outputs
- Free software
- Expandable I/O, Analog and temperature modules



## SMART RELAYS

The John Brooks range of smart relays are a low-cost alternative to PLC's. Simple to use programmable relays are ideal for machine automation, HVAC systems, instrumentation logic interfacing, remote I/O and process control applications.

- Free software, with no subscriptions required
- Expandable up to 44 I/O
- Modules for digital I/O, analogue and temperatures input, analogue output
- 2 pulse width modulated outputs, up to 1kHz output
- Comms support through Serial interface expansion modules that offers Profibus, DeviceNet, ModBus
- Comms ethernet expansion module
- Ladder logic and function block programming formats
- Real time clock with battery backup for 240 hours Remote I/O

## REMOTE I/O SYSTEMS

Remote I/O systems available at John Brooks allow you to add additional I/O systems via a network.

Features of this technology are:

- Modular sub components that are DIN Rail mounted
- Expandable selection of digital inputs, outputs, temp sensors, analogue input, analogue output
- Prevent multiple long cable runs per I/O by centralising communications over ethernet cable
- Pairs well with HMI screens





## REMOTE GATEWAYS

John Brooks can supply Remote Gateway solutions which utilise the latest communication technology. It allows users to create connections to the cloud and the internet, gain remote access and monitoring, and access through flexible connections, e.g. LAN, Wan, WIFI, 3G, 4G.

Remote gateways enable the Internet of Things (IOT) to provide:

- Remote maintenance
- Predictive maintenance
- Asset management
- Remote metering
- Multi-site building management



## MACHINE CONNECTIVITY

John Brooks provides solutions to solve the problem of wireless connectivity to machines. Simply attach the bolt-on system onto a cabinet or machine to enable wireless access.

Advantages of this technology include:

- Transmission via Bluetooth, Bluetooth low energy or Wireless LAN
- Connects machines via Ethernet, Serial RS-232/485 or CAN
- All-in-one solution – everything is integrated
- Max range of 100m
- IP67 rated



## SENSORS

John Brooks stock and can supply a range of sensors which have many different applications.

Some of the sensors include:

- Temperature
- Analogue
- Infrared
- Proximity
- Limit Switches
- Ultra-Sonic

## LINEAR MOTORS

Linear motors, guided actuators, servo drives and magspring constant force springs are all part of the range at John Brooks. The motors provide extremely long life, high dynamics and high repeatability at a moderate cost. Available for wash down applications, these motors are widely used in packaging, material handling and the healthcare industry.

Some of the key features of the motors include:

- Alternative to pneumatics with low running costs
- Forces from 44N up to 2500N with force control
- Stroke length up to 1770mm
- Part and fully stainless models
- Rated up to IP69
- ATEX rated explosion proof
- The moving slider is never in contact with the stator so speed up to 7.3 m/s are available with accuracy to +/-0.05mm







## MOTION CONTROL PRODUCTS

John Brooks offers a range of motion control products, providing a complete motion solution for machine automation. All of the motion controllers and intelligent servo drives are programmable in easy to use motion language.

### Products include:

- Brushless rotary and linear servo motors
- DC Servo motors
- Brushless Servo drives: single and three phases
- Inverter and vector drives
- Multi-axis motion controllers: Boxed and board level solutions
- Operator panels

### Servo Stepper Motors

- Stepper motors and separate controls
- Integrated motors and controller combinations (MDrive range)
- Stepper linear motion actuators, both ball screw and belt driven

### High Performance Industrial Motion Control

John Brooks supplies high performance motion control technology, which provides flexible and economical solutions for motion control applications. This enables control of complex high-speed automation, as well as machine control in many industries throughout New Zealand.

### Features:

- 1 to 64 axes of motion
- Compatibility with servo motors, stepper motors, piezo motors and hydraulic systems
- Common user interface and standard programming language
- Communication through all main bus options
- Bus mount, rack mount and standalone options
- Flexible and modular

## AC & DC FAILSAFE BRAKES

The John Brooks supplied AC and DC models are spring applied, power release AC and DC voltage brakes.

These are designed to release the brake and let the shaft rotate freely when power is supplied, and then instantaneously brake when power is cut off, preventing accidents and reducing danger and risk.



## TENSION CONTROL EQUIPMENT

Tension Control Equipment from John Brooks includes:

- Web viewer systems for multi-colour web printers
- Pneumatic and electromagnetic powder brakes and clutches
- Tension controllers
- Load cells
- Mechanical chucks
- Air expanding shafts and safety chucks
- Web guiding systems
- Rotary unions



## AUTOMATION SYSTEMS & JOHN BROOKS SERVICES

Our automation engineers can design, quote, develop and commission your automation or motion control project. This includes services like:

- Product sourcing
- OEM manufacturing
- Machine design and build, and stocking of components
- Control cabinet design and build
- Software programming
- Internet of Things (IOT) Architecture and Design

Some recent examples of successful projects:

- Rapid motion corrugated cardboard cut to length machine
- Linear or rotary travel water jet pin bone removal on fish fillet conveyor
- Service platforms to allow service engineers around the 737 and A320 aircraft body
- Synchronising 3 colour printing on both sides of plastic film
- Polishing 90° stainless steel bent tube
- Kiwifruit tray packing at 20 trays / min
- Testing lifetime of grinder brushes in minutes
- Carton box erecting
- HMI screen with data collection and operational control

## INDUSTRIAL ROBOTS

Put robots on your payroll with the help of John Brooks. Industrial robots can improve your productivity, profitability and safety, and can be designed and trained specifically to meet your business needs. Some of the varieties of robots available include:

- **Collaborative Robots** – Work safely alongside humans without the use of cages to increase productivity. John Brooks' range of collaborative robots can be trained by hand to complete tasks, without the need for computer programming
- **Articulated Arm:** The body is lightweight, compact, and the wrist of the hollow structure can effectively use the space dead angle to operate in a narrow area. The robot has high flexibility, safety, high accuracy and other characteristics. It is especially suitable for flexible production lines with limited working space, which can meet the requirements of precision, assembly, inspection, handling, loading and unloading
- **Spider:** The Spider Robot is designed for large working radius and big load applications. The robot can cooperate with visual location and conveyor belts, and can be widely used in packaging, materials handling, sorting and assembly etc.
- **SCARA:** SCARA multi-joint robot is a flexible and compact design, high rigidity, high speed and high precision. It is suitable for high-precision and high-volume industries such as rapid handling, visual sorting, assembly and screwing





## FLUID HANDLING RANGE

John Brooks offers world leading European designed fluid handling equipment to provide the highest quality of product to the New Zealand market. With everything you need close at hand, we carry a wide range of products for the food, beverage and pharmaceutical industries. Categories include:

- **Pumping.** Centrifugal, liquid ring and rotary lobe pumps
- **Flow management.** Butterfly, mix proof, single-seat, ball, regulating, automation, monitoring, and ultra-pure valves
- **Filtration and separation.** Membranes and accessories
- **Heating and cooling.** Plate heat exchanges, tubular and scraped surface heat exchanges
- **Tank optimisation.** Tank cleaning, agitators and mixers, tank covers, instrumentation and tank accessories

## PLATE HEAT EXCHANGES

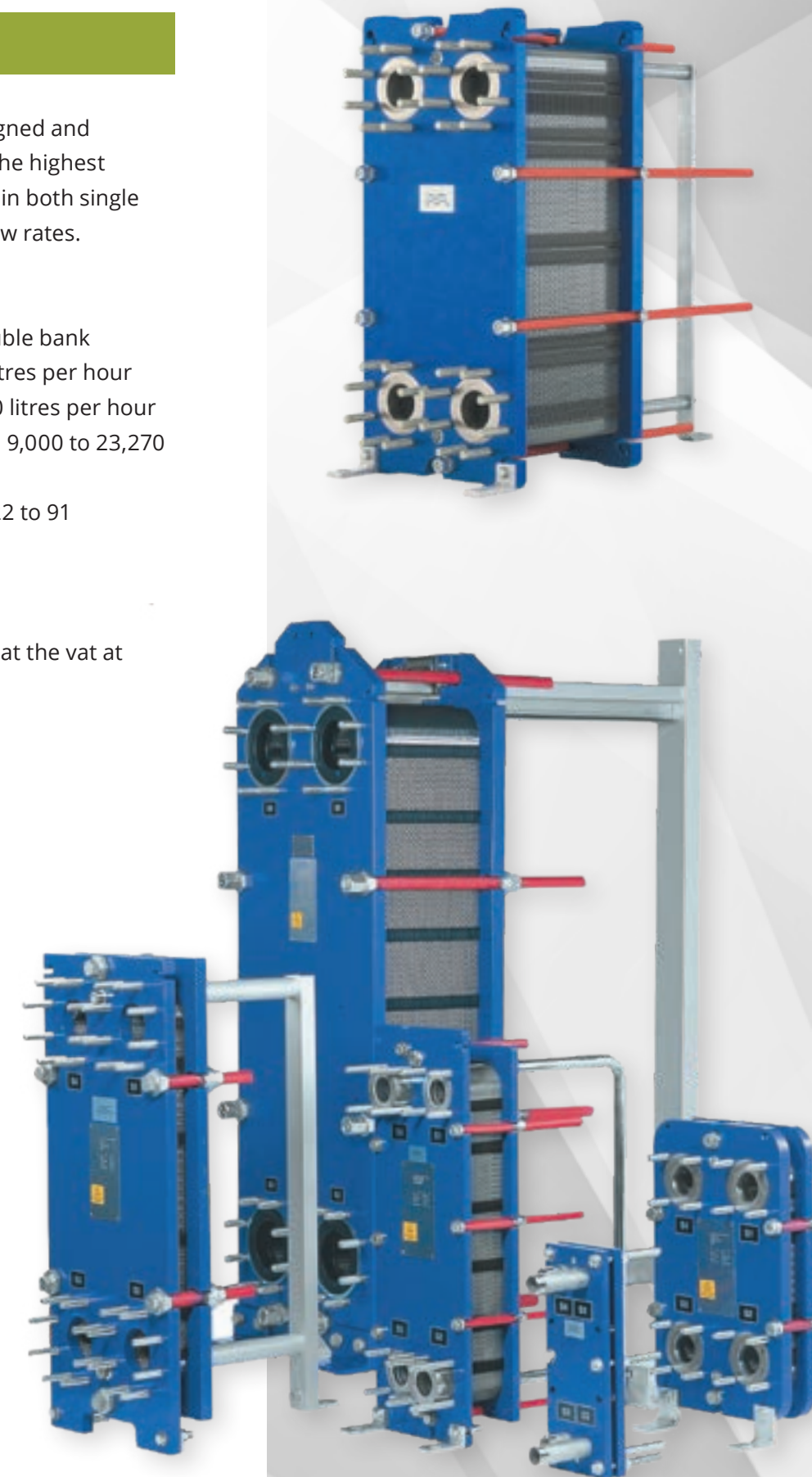
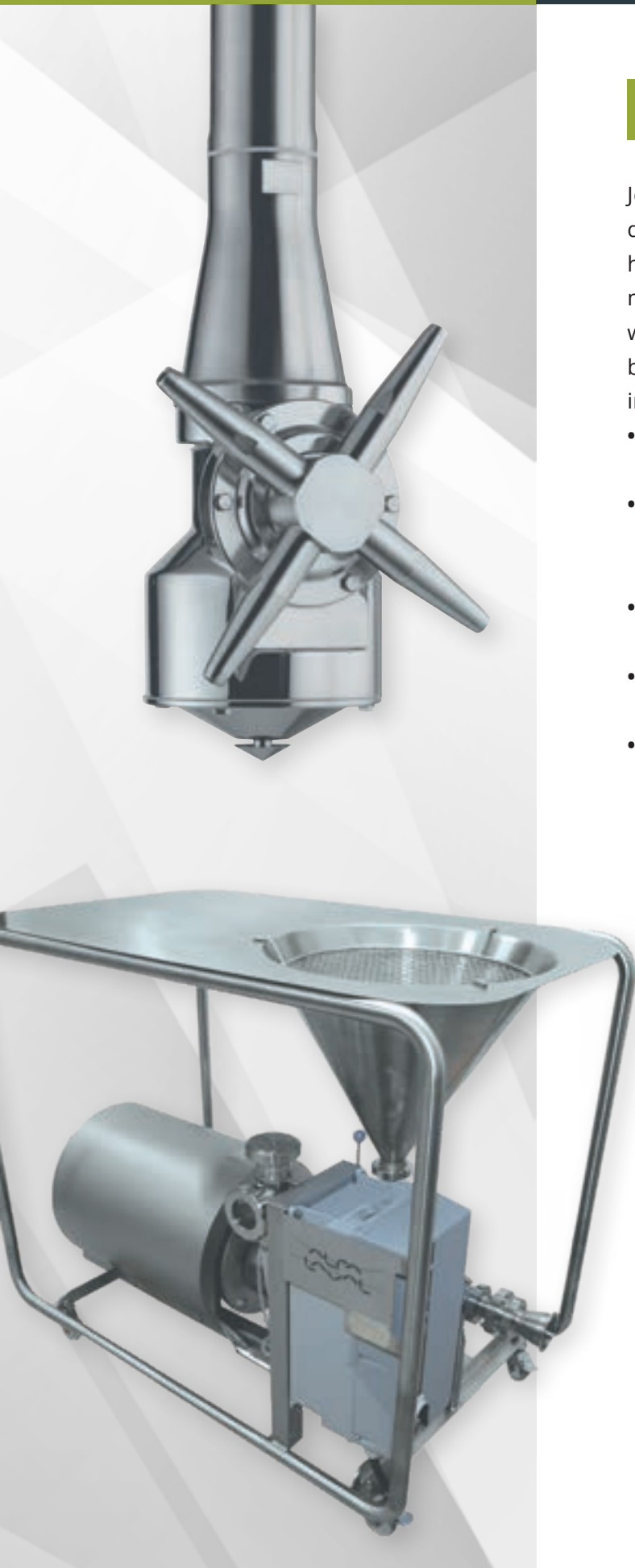
John Brooks' range of Swedish designed and engineered heat exchanges are of the highest quality and functionality. Available in both single and double bank with a range of flow rates.

**Features:**

- Available in both single and double bank
- Milk Flow from 3,000 to 8,000 litres per hour
- Water flow from 6,100 to 20,300 litres per hour
- Chilled Flow (double bank) from 9,000 to 23,270 litres per hour
- Number of plate options from 22 to 91

**Benefits:**

- High quality Swedish design
- Saves energy as milk is arriving at the vat at a colder temperature



## PUMPS

John Brooks carries a range of pumps for specific requirements and liquid pump solutions. These include centrifugal, flexible impellor and lobe pumps, which come in a range of sizes and pump flow rates.

## CENTRIFUGAL PUMP

John Brooks' centrifugal pump range covers premium, standard-duty and liquid ring pumps. They can be configured with multiple options and cover a wide range of flow rates and pressures.

## Features:

- Ideal for low viscosity products without the introduction of air
- Both standard and premium duty pumps available
- Sanitary design and approved compliance to worldwide hygiene standards
- Superior maintenance – shaft seal and O-rings changed in minutes

## FLEXIBLE IMPELLOR PUMP

The John Brooks range of flexible impellor pumps are manufactured to fulfil the needs of food processing, and have several advantages:

- Self-priming clockwise and anti-clockwise pumping of viscous and fluid products without stirring or emulsion of the liquid
- Pump head made of 316 stainless steel, and a food grade rubber impellor
- Gentle on the liquid it is pumping
- Pumps run from low speed (250 RPM) all the way up to full speed (1,300 RPM)
- Positive displacement pump
- Bypass function attachment, making purging lines easy as well as relieving pressure if recirculating while the pump is going

## LOBE PUMP

John Brooks rotary lobe pumps are designed for low, medium and high-viscosity media and offer gentle pumping action and reliable performance. With its robust construction, each pump is developed for a different type of demand and meets high standards of quality and reliability. Collectively, they provide operating economy and high flexibility of use.

## Features:

- Low or high viscosity, ideal for soft particles
- Access to over 30 different models
- Flowrates available up to 114 m<sup>3</sup>/hr
- Pressure up to 20 bar
- Modular build
- Fully cleanable CIP and SIP
- Universal mounting





**BROOKS FLUID PUMP CONTROLLER RANGE (WINE, BEER, FLUID)**

The Brooks Fluid Pump models are available to meet the needs of small boutique wineries through to large multinational brewing companies. Fine wine needs to be handled with care and that is why John Brooks developed the pump with Flow control system. The advanced flow control cabinet provides automatic control of various tasks such as fluid transfer, juicing, barrel filling, bottling, vat transfer and the remote control pendant allows you to watch fluid transfer from a distance. Centrifugal and Lobe pumps are also now available to transfer liquids at higher volumes and more viscosity.

**Features:**

- Flexible modular components to build the correct pump and control system for your needs
- Premium quality stainless steel
- Automatic Variable Speed controller
- Time sequencer mode
- Remote Control in attached pendant or wireless
- Flow Meter Integration
- A variety of fittings available to suit connections between popular brewing systems
- Mounted on a robust stainless-steel trolley
- Can be used for wine, beer, juice, honey, milk etc.

**Benefits:**

- Handles fluids gently and allows for accurate blending and bottling
- Pump auto-detects speed according to fluid flow making the transfer gentler
- The ability to watch the pumping process from a distance
- Wheel trolley to any location

**PUMP ACCESSORIES & UPGRADES****Wine Drive Upgrade/Conversion Kits**

- Allows for a cost-effective upgrade of Wine Flo
- Replacement of all automation components
- Update the front door, controller, connecting loom and VSD whilst keeping the rest of the components the same.

**Float**

- Starts and stops the pump automatically
- Speed of the pump is determined by the height of the float
- Basic on/off floats also available
- Automatic probe plugs into the same socket as remote control
- Can be used in a header tank on a bottling line
- Can be used in a juice tray under the press. When used for this application, run dry protection is inbuilt by default

**Run Dry Protection**

- Run dry sensor manifold senses whether the supply line is flooded or not, protecting the pump
- Programmable response delay, that can be turned on and off through the keypad
- Connects to the controller through a separate 5 pin connector in the bottom of the Wine-Flo cabinet
- CIP compatible and not effected by high temperatures

**Pressure Transducer mode**

- Pressure transducer manifold is fitted to the output of the pump
- Plugs into the same socket as the remote control

The pressure transducer has two operating modes: Constant Flo uses the transducer to start and stop





the pump. The speed of the pump is user defined, controlled by the keypad. The start and stop points are set in the function list and can be changed depending on the application.

Constant Pressure uses the transducer to start and stop the pump, however the pump speed is determined by the difference in pressure between the pressure target and the pressure in the line. The pump increases and decreases the speed to maintain a constant pressure.

#### Flow Meter

- Installed on a pipe attached to the pump
- Allows for specific measurements to be pumped
- Do a blend using flow meter, e.g. 1,000L of white and 1,000L of red wine
- Pump to a certain literage and then stop pumping
- Can also measure liquid that comes out, for future reference



#### VAT ALARM

The Brooks vat alarm is the ultimate tool for saving time and manpower in the winery. With models available for alarm triggering once the vat reaches a certain level(s), it means no more constant back and forward checking.

##### Features:

- Lets you know when your vat is full and approaching full by sounding an alarm
- Up to two set points
- All metal components built from 316 stainless steel
- 16 different alarm noises
- Runs on 230V single phase supply
- Adjustable top mount bracket



##### Benefits:

- Takes the guess work out of knowing when your vat is full or empty
- Saves time and manpower
- Allows other tasks to be done without constant checking
- Integration with Pump control to allow automatic turn off of the pump

#### WATER FLO

The Brooks Water Flo is a pressure operated variable speed controller for water pumps, which saves on energy and maintenance costs. The water pump becomes pressure controlled and automatically starts and stops, with water demand determining the pump speed using a pressure sensor, ensuring a pre-set constant pressure is maintained.

##### Features:

- Systems available for all types of sizes and power
- Water pump is pressure controlled by a pressure sensor
- Suitable for single and three phase supply
- Run-dry protection for your pump
- Durable stainless-steel enclosure
- Water-pump is soft started
- Energy Saving
- External interlinks

##### Benefits:

- Minimal water hammer and associated maintenance issues
- Pressure control means the pump automatically starts, stops and the water demand determines the pump speed, which equates to energy savings
- User friendly interface setup simplifies installation and operation







## GLYCOL REFRIGERATION UNITS

A range of flexible units that can both heat and chill your beer or wine. They allow the flexibility to heat up the fluid to a fermentation temperature, then it is able to keep it cool and maintain that temperature.

The popular Fire and Ice Glycol Chiller is an all in one stainless steel unit. It has inlet and outlet ports to service 5 containers at a time and different size units starting at 6.5KW up to 12.5KW. The unique feature of this unit is its portability, which allows it to be easily wheeled around a winery during harvest or a busy brewery.

### Features:

- Engineered high efficient heat exchanger
- Glycol pump, fluid bypass valve
- Insulated glycol reservoir
- Low watt density heating element (designed specifically for heating glycol)
- All insulated copper piping
- ETL (UL508) listed complete control panel w/ single point electrical connection, breakers, starters & safety switches
- Digital temperature controller
- Brass quick connects for supply and return glycol connection
- Powder coated steel frame stainless steel housing

### Benefits:

- Easy service and maintenance
- Energy savings due to high efficiency
- Reliability - Factory run tested and fully charged with refrigerant

## DAIRY TESTING

### Dairy Test Lite

Dairy Test Lite makes light work out of testing and checking the pulsation to make sure ratios are set to the manufacturers standards.

### Features:

- 5 sessions with 200 pulsation and 12 vacuum memories per session
- Real time pulsation and vacuum with adjustable alarms
- Inbuilt report, printed by PC
- Digital calibration

### Benefits:

- Makes light work out of testing
- 1-year warranty
- High accuracy measurement
- User software upgradeable

### Dairy Test Mini

The Mini Test is a cost-effective hand-held test kit for checking vacuum level and pulsation. It is a live and accurate visual display. If backup, printout and test results are needed, the Dairy Test Lite will be required.

### Features:

- Measures Pulsation (A+B, B, C, D, Rate) and Vacuum (Min, Avg & Max)
- Accurate ( $\pm 0.3\text{kPa}$  typical) with internal protective dust filter
- Large easy-to-read digital display
- Complete with carry case, spare batteries, manual and silicone tubing
- Uses two Alkaline 'AA' batteries

### Benefits:

- 1-year warranty
- Perfect unit for live and accurate results, without the need for backup





## DAIRY TEST ACCESSORIES

### Digital Vacuum Gauges

Dairy vacuum gauges are an accessory that sit on the vacuum line in the shed, giving an overview and accurate readings of pressure, as well as inbuilt liner hours meter.

## MILK PUMP CONTROLLERS

### DAIRY-FLO

Dairy Flo has been developed by John Brooks, to keep the flow of milk through the heat exchanger as low and constant as possible. The result enables the heat exchanger to extract a maximum amount of heat before it is delivered to the vat. The lower the milk delivery temperature, the lower the running electricity costs due to savings from the refrigeration plant.

#### Features:

- Highly adaptable input
- System is fully automatic with 410, 500 or 585mm probe
- Control is suitable for all types of milk lift pumps
- Stainless steel enclosure
- Motor and power protection built in
- Multiple modes (Milk, Wash, Energy Saving, Froth Control)

#### Benefits:

- Integrate into any existing plant
- Protected from the elements which results in less maintenance
- Removes froth in the receiving can
- One controller does all motor sizes up to 2.2kW (1 and 3 phase)

## DAIRY-FLO ACCESSORIES

### Milk Recovery System

The John Brooks milk recovery system allows the user to clear out the delivery line after milking, removing all the excess milk using compressed air to purge the milk delivery line. This is an alternative to having to use water which can contaminate the milk.

### Dairy Flo Conversion Kits

One of the other services that John Brooks provide is the upgrade of the Dairy Flo, by replacing the drive and front door, but keeping the original cabinet. This is a cost-effective upgrade and saves from replacing a full cabinet. It also keeps the existing mounting and installation all in place on the farm.

### Remote Purge Button

The speed of the milk pump is determined by the position of the float, but if the pump is not keeping up, the purge button can be used to speed up the pump for the duration of the button hold. This is a very useful solution for example, if you have a lot of froth. Alternatively, after milking when the floats at the bottom and the pump is turned off, purge can get rid of excess milk in the milk receiving can (pump out)

### 3 Operational Modes

- Milk mode offers constant flow for optimal milk cooling and variable flow
- Froth mode offers the control algorithm to suck froth from the receiving can for all pump types
- Wash mode retains higher pump speed during wash to prevent flooding of the plant and vacuum pump damage





**BROOKS MILK PUMP - ECONOMY**

The BMP-E is a cost effective and energy efficient milk pump controller that is quick and easy to install. Some of the key features include:

**Features:**

- All motor sizes up to 2.2kW, with larger models available on request
- 1 and 3 phase
- Automatic with analogue float options
- Suitable for all types of milk pumps
- IP66 and EMC compliant enclosure
- 24-month warranty

**Benefits:**

- Economic cost and energy efficient
- Easy and quick to install
- Environmentally friendly; conserves water whilst enhancing milk cooling
- Will withstand even the harshest conditions

**DAIRY-VAC**

The Dairy-Vac by John Brooks is different to all other controls offered to the dairy industry. We have designed a purpose-built control interface to manage and control the automation requirements of the modern dairy shed. The system has been developed to provide a high level of energy efficiency and control for all types of vacuum pumps used in the dairy industry. The simple to use interface takes all the guess work out of the setup procedure and operation of the unit.

**Features:**

- Suitable for 5.5 to 30kW motor sizes
- Purpose built controlled interface
- Used with various types of vacuum pumps

- Unique dairy industry vacuum pump controller
- Manage and control automation requirements
- Stainless steel cabinet

**Benefits:**

- Reduce energy costs by up to 75%
- Huge noise reduction
- Extends vacuum pump life, meaning lower cost in the long term
- Controlled starting/stopping extends motor life

**BROOKS VACUUM PUMP - ECONOMY**

John Brooks also produces the BVP-E, which has many of the core operating features of our vacuum controller for those with a smaller budget.

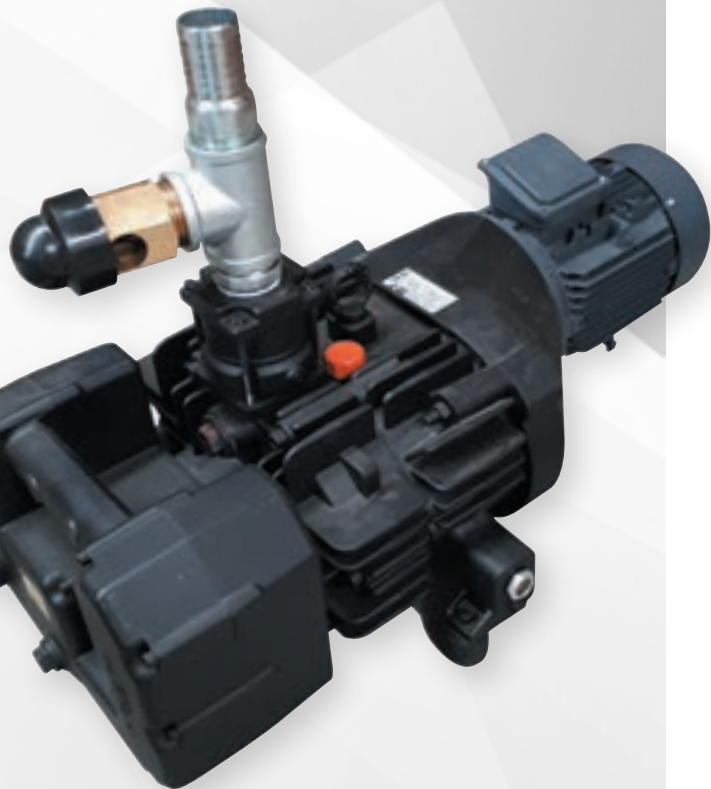
**Features:**

- Automated variable speed drive control from the transducer feedback sensor
- Compatible with all types of vacuum pumps
- Soft starting and stopping the vacuum motor
- Overload protection

**Benefits:**

- Saves money and energy
- Pump only runs at the speed required, allowing for less wear and tear and low noise
- Compatible with all types of vacuum pumps





## CLAW VACUUM PUMP

John Brooks brings you the latest in vacuum technology for milking plants, with the claw vacuum pump. It works completely oil free, meaning no more oil emissions or oil pollution. Due to sophisticated claw vacuum technology, they are able to achieve an extremely high level of energy consumption and performance which means energy savings of up to 60% when compared to conventional vacuum technology operating at the same pumping speed.

### Features:

- Oil free pump
- Latest in vacuum technology for milking plants
- Wear Free operation
- Unique smart silencer
- High energy efficiency and performance

### Benefits:

- Virtually maintenance free due to non-contact of parts inside the pump
- Consistently high suction throughout pump lifespan

## DAIRY MANAGEMENT SYSTEM

DAIRY MGR is the complete package for automating the Dairy shed for Milking Session, Plant Washing and Vat Washing as well as monitoring and recording a variety of data from these processes.

From milk temperatures, milking session start and finish times, plant and vat wash routines, and correct operation of your milking plant both during and after milking sessions. DAIRY MGR comes in both a basic and pro version, and is designed and built in New Zealand with NZ based tech support.

### Features:

- Retrofit into your existing plant
- Monitor, record and export milk temperature data (30 days)
- Monitor, record and export wash routine and temperature data
- Comes with all sensors and interlocks
- Industrial strength touch screen with real time dashboard of vacuum, milk line and vat temperatures
- Text message/email alert notifications
- Self-diagnosing faults within the plant
- Automate vat refrigeration and agitator
- Automate milk recovery in the pipework between milk pump and vat

### Extra features available in DAIRY MGR Pro:

- Comes with all pneumatic valves and chemical pumps to execute wash programs
- Manual override is possible if the need arises

### Benefits:

- Complete automation of your milking and wash schedules
- Reduces the risk of human error or equipment malfunction
- Be alerted of any issues straight away with text message and email notifications
- Helps comply with MPI regulations

### Some added extras for DAIRY MGR include:

- DAIRY MGR Accessories
- Remote Gateway
- Pit interface and alarm light







## **JOHN BROOKS**

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INDUSTRIAL AUTOMATION

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