ROTAJET by PRI

ROTAJETSYSTEMS.COM

COMPLETE IBC WASHING LINE

About Us

Based in Wakefield, West Yorkshire, UK, Rotajet Systems manufacture industrial solutions for washing and reconditioning IBC's, pails and drums.

Our machinery is used throughout industry. Supplying smaller manufactures to large blue chip organisations across the globe.

Machinery we supply

Rotajet machinery is typically used in the industries below:

- Container Reconditioning Companies
- Chemical Manufactures
- Recycling Companies
- Surface Coatings Manufactures
- Transport and Logistics
- Contract Filling

And many more...

Companies who have our machines installed:

AkzoNobel

PPG

TRIMITE GLOBAL COATINGS

WasteCare WeCare about recycling

Tetrosyl

Sustainability

We are committed to helping businesses reduce their carbon footprint and adopt more eco-friendly, streamlined practices, all while being cost efficient. Our advanced washing systems are designed to minimize water usage and energy consumption, while also providing superior cleaning and drying performance at affordable costs.

MADE IN THE UK

MANUFACTURED IN UK

UK MANUFACTURING

GLOBAL DISTRIBUTION

Working with some of the world's biggest brands, we've installed machines across the globe. Each machine we sell is completely constructed and undertake factory approval tests prior to being sent to the customer.

US MANUFACTURING

PRI

Through rising demand in the States, Rotajet's US partners PRI Systems, have begun production of the IBC wash lines in their Dupo, Illinois manufacturing facility.

This allows Rotajet machinery to be manufactured and supplied easier than ever to our US, Canadian and Mexican customers.

MADE IN USA

Our modular range

The Rotajet RJ-IW range is built up of modular units, meaning the design can be added to, adjusted and cater to individual needs.

The RJ-IW consists of:

RJ-IWE- External wash
RJ-IW- Internal wash
RJ-TVS- Bulk liquid removal
RJ-DIBC- Thermal dryer
RJ-PT- IBC Pressure Tester

How do we do it?

Cleaning any contamination requires a specific amount of energy. This is achieved through a combination of pressure, temperature, chemical and time.

The RJ-IW washer is fitted with a high-pressure pump which results in quicker cycle times, lower operating temperatures, and less aggressive cleaning chemicals. This ultimately leads to lower operating costs, and less effluent produced when compared to low pressure systems available.

The system above is a typical example of a complete IBC line comprising of the external wash, internal wash and rinse, a tipping vac station to de-water, a thermal dryer and a pressure tester.

The RJ-IW modular range

This adaptable, automatic IBC washing and reconditioning system typically consists of 5 stages: external wash, optional chemical wash, rinse, liquid removal, pressure test and finally thermal drying. As a modular system, additional sections can be added at anytime to increase functionality or capacity.

EXTERNAL WASH (RJ-IWE)

The RJ-IWE exterior IBC washing station consists of a 360° rotating bed, allowing the operator to access all exterior surfaces of the IBC. The integrated pressure washer is used to remove external contamination labels and stubborn stains.

INTERNAL WASH UNIT (RJ-IW)

For complete cleaning coverage an x/y 360° degree electric, air or pump pressure driven nozzle is used. Depending on the contamination being removed, either water or aqueous based detergent are used as a cleaning solution.

FRESHWATER RINSE (RJ-IW)

This machine is used to rinse the IBC to ensure no residual wash chemicals are present prior to the vac station.

THERMAL DRYER (RJ-DIBC)

The IBC drying station comprises of a roller track, housing, and a high-volume heated air blower. This ensures the IBC's are completely dry prior to it's next stage.

TIPPING VAC STATION (RJ-TVS)

The tipping vac station is used to remove excess liquor prior to thermal drying. This speeds up the drying process and increases efficiency.

The tipping vac station can also be used at the start of the process to remove excess contamination from the IBC, resulting in less effluent being produced.

PRESSURE TESTER (RJ-IPT)

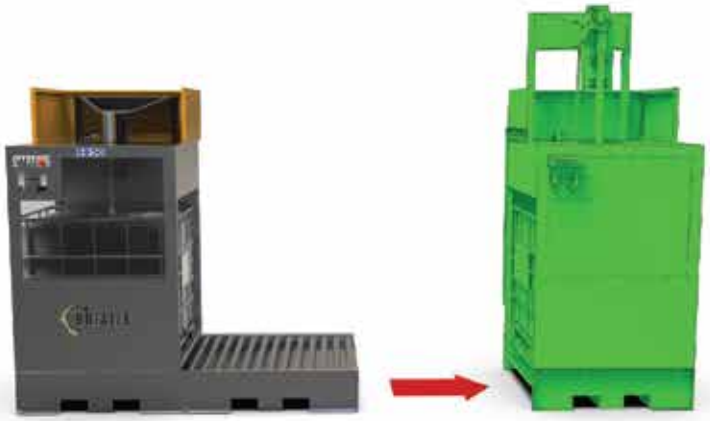
The IBC pressure tester uses pressurised air to detect leaks in the IBC and valve.
The unit is fitted with data logging and an in process traffic light system.

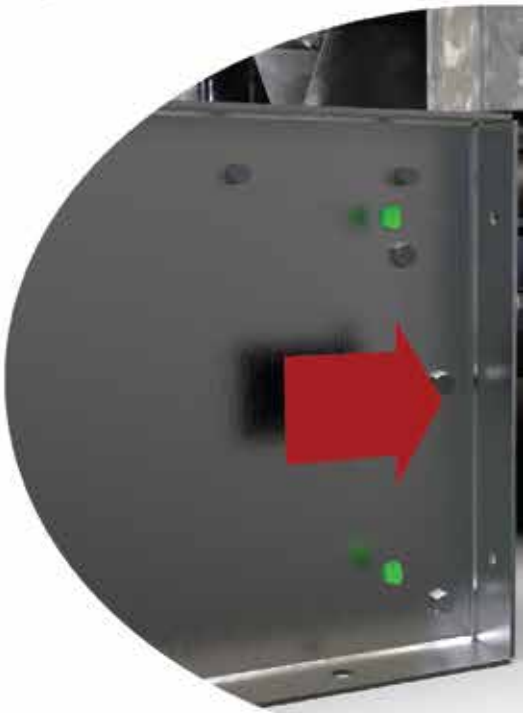
How our Module System works

Each of our IBC modules operate individually and are free standing. To cater to a range of needs and processes, these modules fit together to create one continuous line to process IBCs.
This line can be easily expanded, and customised with the easy bolt on design.

A modular bolt-on design means our customers can expand their facility in line with their business growth. This allows modules to be added to increase throughput or capability as required, without disruptive factory moves and installations.

Below is an example of how the system can be easily adapted for increased throughputs and processes required.

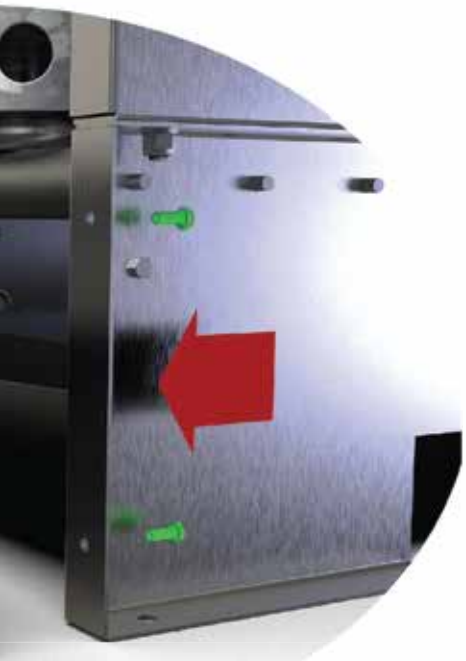




1 A client has a standalone IBC washing station. Due to production changes they now require both clean and dry IBCs prior to filling. The RJ-DIBC drying unit is easily retrofitted into their existing system to meet his requirement.

2 The system is now fitted with a drying unit and the client can produce clean and dry IBCs.

5 To ensure the integrity of the IBCs, a RJ-PT Pressure Testing station is fitted after drying.



4 The above picture shows the RJ-TVS station now in place.

3 To increase drying capacity an additional RJ-TVS Tipping Vac station is retrofitted into the line. This addition will allow more IBCs/hour to be processed.

THE RJ-IW MODULES

IBC Roller tracks (RJ-IRT-)

Rotajet RJ transfer systems are a gravity roller track that reduces the force needed to move the container over distance. This allows the operator to easily locate the IBCs to the needed wash/rinse/drying etc. stations.

The transfer system are fitted with corosion resistant *, stainless steel drip tray and stainless steel rollers.

IBC TRANSFER STATION
WITH DRIP TRAY

The drip tray is designed to collect any liquids or debris. This facilitates a clean and tidy working environment. The drip trays are easily cleaned using a pressure washer.

IBC TRANSFER STATION
WITH INCLINED ROLLER

The inclined roller allows the IBCs to be easily loaded on and off the line. This is particularly ideal for the start and end of a line.

*For client's using halides contact us for our recommendations

Exterior IBC washing : RJ-IWE

This stage removes external contamination and stubborn stains from the IBC's. Ideal for removing labels and particularly important for reconditioning companies where the IBCs are intended for resale.

How does it work?

The RJ-IWE exterior IBC washing station consists of a 360° rotating bed. This allows the operator to access all exterior surfaces of the IBC.

Using a pressure washer the operator can then remove the surface contamination.

Features

- Ergonomically designed 360° turntable

All wet parts stainless steel

- Side walls and over spray canopy
- Heating and water recirculation

available

Water efficient system

Water is delivered to the outside of the IBC at 200 BAR by an external pressure washer lance. This process can be used with either hot or cold water. If the water is recirculated, we recommend a fine filtration system is installed to protect the pump.

To reduce your water consumption, recirculation is available as an optional extra.

Enhance system efficiency

By removing labels at this stage, this process prevents any mistake or errors with cross-labeling once the container has been refilled.

This module can be used with any existing pump or we can offer our RJ pressure washer as an optional extra.

Integrating a high pressure wash, drainage, canopy and a 360° rotating bed into a one unit, manageable station.

Optional Extra: RJ pump

Height/Width/Length (mm)	2560/ 1453/ 1540
Minimum air pressure	5.5 BAR
Pump Power	5.6kW/7.5HP
Pump pressure	200 BAR/3000 PSI
Electric	3 Phase. 415v, 50Hz
Flow Rate	15L/min
Inlet/outlet	1/2” Male/3/8” Male

THE RJ-IW MODULES

Interior IBC washing : RJ-IW

The RJ-IW uses pressurised hot or cold water or water based solutions for the removal of contamination in the IBCs. Typically, ambient temperatures are used for water-based residues. Heated caustic or detergent solutions are used for more difficult to remove contamination.

How Does it work?

The wash stage either uses caustic solution or aqueous detergents, depending on the contaminants present. To ensure complete coverage an electrically driven, high pressure nozzle is used. The nozzle is fitted with pencil jets which rotate 360°on both the X and Y axis, delivering pressurised water at 200 BAR with a flow rate of 15L/min.

High Performance

Washing at high pressure reduces the demand on other cleaning parameters, including temperatures, chemicals, and cleaning time. The 360° rotating spray nozzle ensures that every inch of the IBC's interior is reached, delivering in reliable and repeatable results.

Features:

- Full stainless steel wet parts construction
- 360° Rotating nozzle
- Fitted with roller tracks and housing
- High pressure pump
- Integrated drip tray
- Easy access controls
- Ergonomically designed control panel

Single stage wash

(RJ-IW/1)

The single stage wash is ideal for rinsing containers to remove hazardous waste and chemicals prior to transporting. This accommodates hot or cold in-feed water.

Wash and Rinse

(RJ-IW/2)

This is a two stage wash and rinse station.
The first stage: wash, can be used with filtered grey or processed water while the second stage is a clean fresh water rinse.

Chemical Wash and Rinse

(RJ-IW/C)

For difficult to clean residues. The first stage wash is used with a combination of high pressure and cleaning chemicals. The residual cleaning chemicals are rinsed with the second stage fresh water rinse.

To account for varying cleaning requirements, the Rotajet IW series offers IBC Washers with a single stage wash (RJ-IW/1), single stage wash and rinse (RJ-IW/2), and a chemical stage wash and rinse (RJ-IW/C).

This system can be used with both hot and cold in-feeds.

Height/ Width/ Length (mm)	2560/ 453/1540
Minimum air pressure	5.5 BAR
Pump Power	5.6kW/ 7.5HP
Pump pressure	200 BAR MAX
Electric	3 Phase. 415v, 50Hz
Flow Rate	15L/min
Material of construction	304ss
Inlet/outlet	1/2" Male. 3/8" Male

THE RJ-IW MODULES

IBC Liquid removal : RJ-TVS

The tipping vac station is used to remove residual liquid at the base of the IBC. The residual liquids are removed by a vacuum.

How does it work?

The pneumatically powered foot pedal will tip the IBC forward ,allowing all the interior liquids to pool to one side and be easily accessed.

The station is manufactured with an easy pull-down vacuum arm. Using this, the operator pushes the nozzle through the top of the IBC and turns on the vacuum to suck the pooled liquids from the bottom of the IBC.

Easy-to-use pull down design.

Once liquid has been removed, the vacuum arm can be manually placed into the start position with the aid of a spring, whilst the 'stop' button on the control panel will turn off the vacuum.

With each cycle taking just a few minutes, the tipping vac station is the ideal way to prepare IBCs.

As part of a line:

By positioning the module prior to the thermal IBC dryer, the RJ-TVS will remove the bulk of excess liquid that pools after washing. This process means less energy is required by the thermal dryer requiring it to be ran for a shorter amount of time.

With the high level of accuracy provided by the tipping vac station, the thermal drying stage of the process can be reduced by minutes, thus increasing the overall throughput rate of the reconditioning line copiously.

As an standalone unit:

The RJ-TVS is ideal to use prior to washing to remove any valuable product remaining in the IBC. Because of the shape design of the IBC, 2L of liquid can be lost per drum if not removed.

THE RJ-IW MODULES

IBC thermal dryer : RJ-DIBC

The RJ-DIBC Thermal drying station comprises of an integrated roller track, housing, and a high-volume heated air blower to thermally dry the interior of the IBC's.

How does it work?

The Rotajet RJ DIBC is fitted with a high-volume heated air blower which is lowered down pneumatically into the IBC by the operator. As the drying cycle starts, a high-volume blower transfers heated air into the container.

The excess water in the IBC is vaporised resulting in a dry IBC ready for reuse.

Hot air blower
The hot air blower allows control over temperature and air

The control panel allows the operator to control the time, temperature and airflow of the thermal dryer.

Features

- 200L Per Min at 130°c
- 5 Min cycle times
- All wetted parts constructed from stainless steel
- Fully modular Systems
- Roller track and housing unit
- Simple Operation

Phrases	1x
Voltage	230 V
Current	16 A
Power	3680 W
Frequency	50/60 Hz
Air temperature control	Closed loop
Article	142.645

THE RJ-IW MODULES

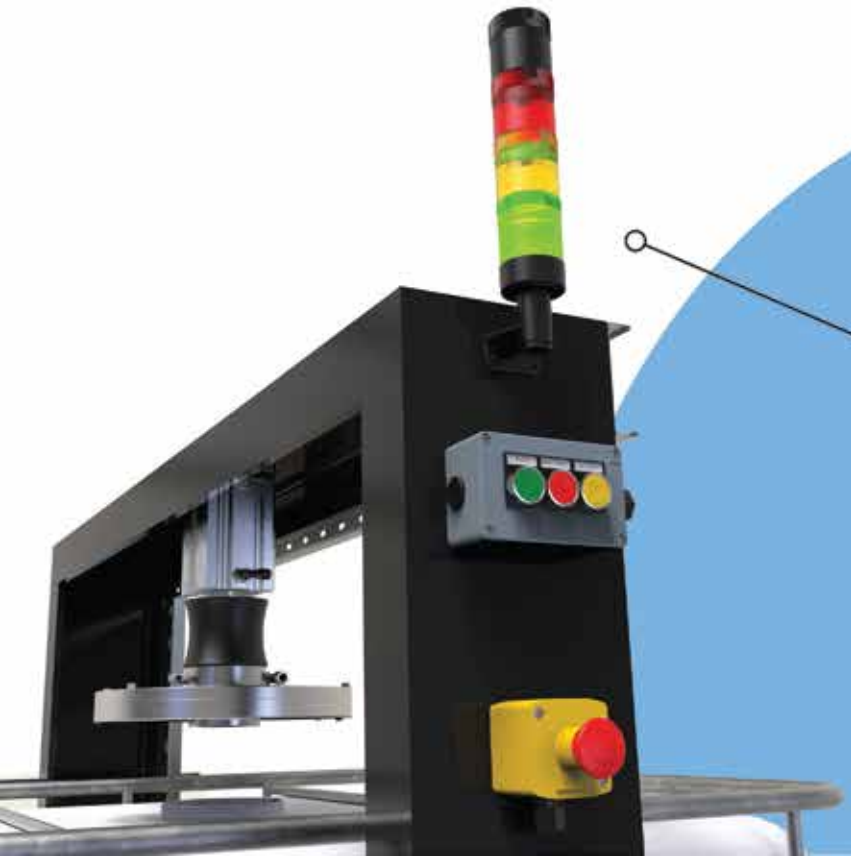
IBC Pressure tester : RJ-IPT

An IBC pressure tester is used to detect leaks in the IBC bottle and valve.

How does it work?

The RJ-IPT is fitted with a pneumatic cylinder, which when actuated will form an air tight seal with the neck of the IBC. Once the seal has been formed, the pressure tester releases pressurised air into the IBC to a pre-set pressure, which is held at contant pressure for a preset determined time. The pressure is monitored and any leaks or cracks in the IBC wall will be revealed as the IBC would not be able to maintain the air pressure.

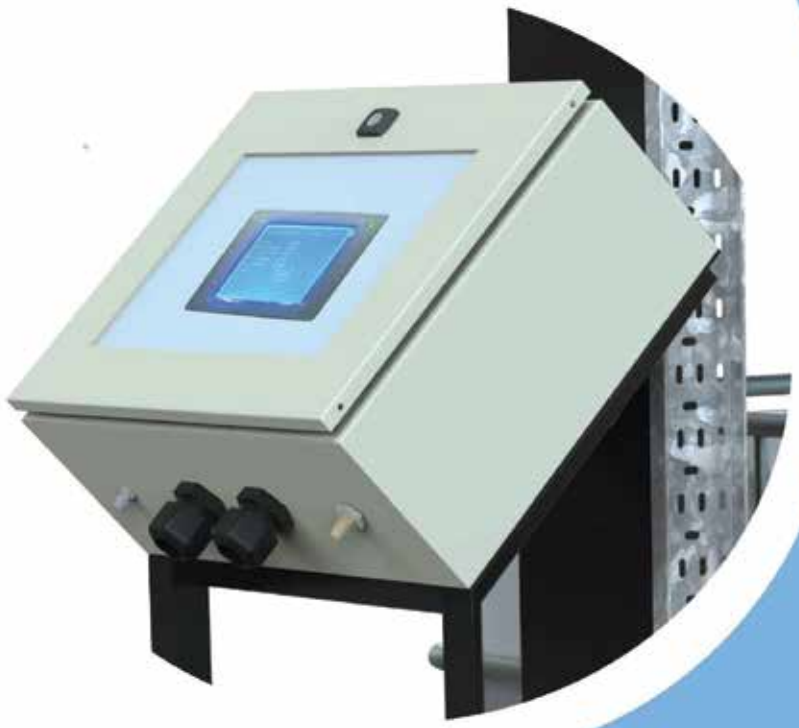
The IBC pressure tester will also identify any weaknesses in the container wall and will prevent unfit containers being re-used in the system



A traffic light system will provide a quick and simple reference on each containers status after each test.

Intergrated control panel

The system is fitted with a PLC and touch screen HMI, which can be integrated into a central control panel for large container reconditioning companies.
To ensure accurate data logging, all tests are automatically stored with a time stamp on a removable USB stick found in the operating panel. The system is fully data-logged, and provides a real-time clock with time and date stamp.



Test sequences can be initiated from either the "start" button, or by "another" device such as a photocell, limit switch or external control systems, depending on the device and requirements. The system will automatically perform a leak test. The result will then be displayed on the operator panel.

Electrical Power Supply	230 Volt, single phrase
Electrical Power Consumption	2 Amps MAX
Air Supply	4-10 bar
Air Consumption (litres)	30 L/min
Test Pressure	Adjustable, 15-50 mB
Cycle time	90 Seconds
Hole Size Detected	60 sec detects 1.0mm
Throughput	30 parts/hour

Other machines in our series

Pail Washers

With an intelligent two-stage design, our pail washing machinery utilises a chemical wash stage to remove heavy contamination through both chemical action and the physical impingement caused by the spray heads. Following this, a freshwater rinse is used to remove any remaining residue

RJ-CW-9/25
This container washer efficiently cleans up to 9 pails in a single cycle.

RJ-CW-12/25
Through chemical action, as well as the physical impingement caused by the powerful spray heads, 12 pails are able to be washed in one cycle.

RJ-CW-24/25
Capable of washing 24 containers in one single cycle, making it the highest capacity machine in the range.

Drum Washers

Buisinesses can pay extraordinary fees for disposing of their drums or, transportation costs to send them out to be laundered externally. With Rotajet, you can install a circular system and reduce your carbon footprint as well as your monthly outgoings.

RJ-DW1
This versatile machine is an ideal choice for companies who require less than 80 containers reconditioned within one work day.

RJ-DW2
This is a twin position machine with two independently operating wash chambers. The split design allows the operator to stagger the wash cycles, reducing reload time.

RJ-DW4
With a maximum throughput of 320 per shift, this four position drum washer is the largest dedicated drum washer in the DW series

As the Uk agents for Gemini, we supply and support Gemini's range of filling machinery and equipment. Together we offer solutions to fill pails, drums, IBC's and other containers

GEMINI

GemiFill-S
This container filler is highly accurate and can change filling volumes, fast and effectively for different measurements and containers.

GemiFill-DF
suitable for filling any sized vessel for example, 25l containers, 210l drums or standard 1000L IBC's.

Visit our website to find more filling machinery available drumwashing.com/small-container-filling/

GemiFill-GR
Pneumatical and electrical filling through a pump system. This machine is fully height adjustable to suit a range of container heights and sizes.

ROTAJET SYSTEMS

Rotajet Reconditioning Solutions

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GEMINI Filling | Dispensing | Cleaning

Gemini Techniek

Filling and dispensing solutions

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PRI

Progressive Recovery

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Container Reconditioning and washing machines

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