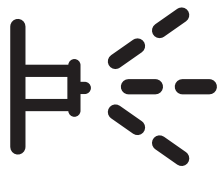


SPRAY WASHING UNITS





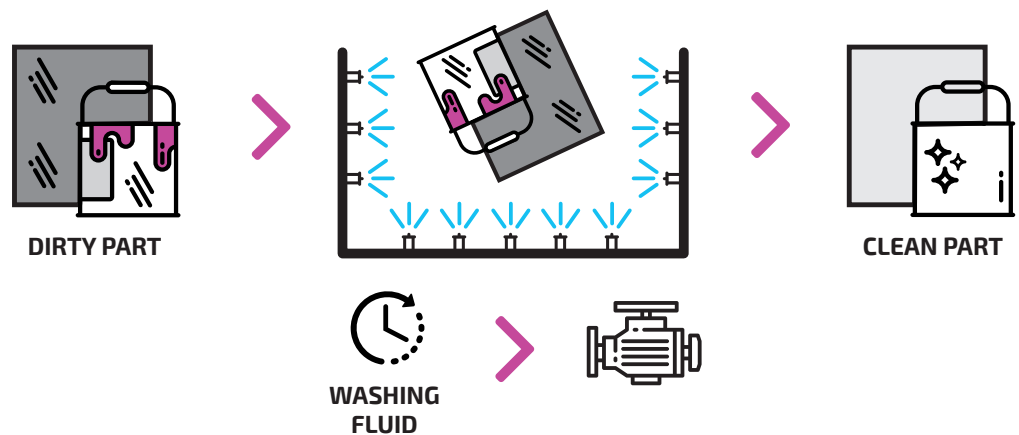
SPRAY WASHING UNITS

INDUSTRIAL WASHING: A PHYSICAL/CHEMICAL PROCESS

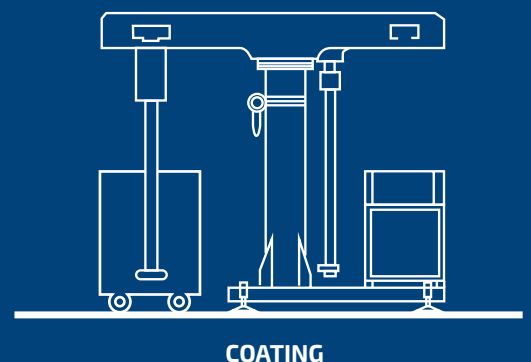
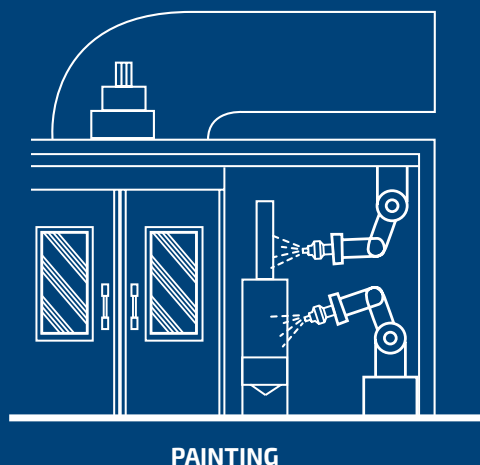
Industrial washing is one of the **most critical steps in the production process**. Not only does it guarantee the level of cleanliness required by the subsequent steps in the process, it must also maintain the quality and functional specifications of the part. In **many industries** (metal fabrication, automotive, packaging and aerospace) part **washing** systems play a **crucial role** in the process. Part washing currently accounts for almost 20% of production costs, and this percentage is certain to increase.

DEEP, EFFICIENT CLEANING

All solutions IST adapts to the client's production process guarantee **deep, efficient cleaning of the part**. IST offers a wide range of products suited to any requirement, from the small workshop to large scale industrial production. IST machines offer **a safer and more effective solution than manual washing**, which is dependent on the operator's ability and is therefore not repeatable. Our systems, on the other hand, guarantee constant uniform quality, unaffected by the ability of the operator, also in light of the fact that washing department staff may change frequently. The operator is responsible for loading the parts and launching the wash cycle; he is then free to do other - more profitable - work while the machine is working.



A support ...



MODULAR DESIGN AND PLUG&PLAY INSTALLATION

The **modular design** of our products enables the client to configure the machine in relation to his requirements, and upgrade his IST washing equipment as they change.

The **design** of our industrial washing systems assists in organising and tidying up the washing and production areas. Designed with a user friendly **plug&play** philosophy, our machines have no commissioning costs: they do not require foundation work or other preparations for installation, and enable the user to start using them straight away. The control panel, which is always on board the machine, excludes the need to install the control unit in an unclassified zone.

MADE TO MEASURE SOLUTIONS

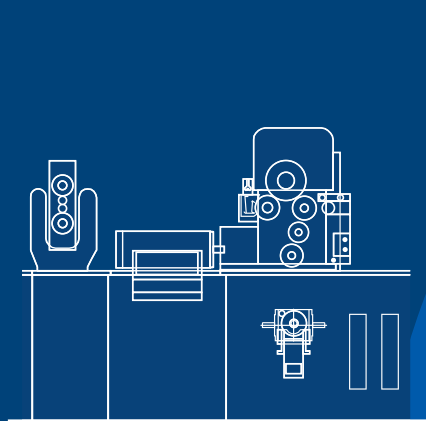
The ability to integrate our washing systems into existing production lines is one of IST's core selling points. The majority of our machines are **made to measure solutions**: the loading system, part layout, washing circuits, filtration systems and washing fluid treatment solutions are all designed in relation to the type of processing, the parts in question and level of automation of the line. When designing such systems, we consider the weight - which may also be very high - of the parts, the duration of the loading and unloading cycles and the requirement to repeat them without variation.

TOMORROW'S STANDARDS

In all industries, thorough cleaning of parts is critical to guaranteeing **constant, high quality results** and sets ever new challenges for cleaning technologies.

IST has always been attentive to the evolution of surface cleaning standards in all industries, and which currently accepted processes will be outdated by **changes in the market place**.

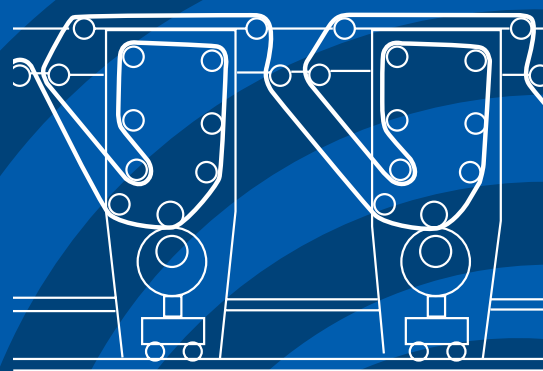
... for each production process



NARROW WEB



CENTRAL DRUM



ROTOGRAVURE

Installation ATEX - ZONE 1

Application
Doctor blades / Ink
reservoirs / Flexo and
rotogravure machine
parts / Ink recirculation
reservoirs / Panels /
Miscellaneous
equipment



Flammable
solvents



Automatic operation:
wash/rinse/suction



Wash with ATEX rated
electric pump



Touch Screen
e PLC



Personalisable
cycles

XTR - XTR M

THE STRENGTH OF RELIABILITY

XTR machines are the best choice for completing your cleaning department. Not only are they silent running, with low emissions and detailed design, they are also fully **plug&play**. They stand out from the competition for type of installation, **ergonomics and loading capacity**. All models have a PLC control panel mounted on board the machine itself in an ATEX enclosure. The customisable part trolleys enable the operator to collect the material requiring washing in around the plant and effortlessly move it to the machine itself. 3D simulation makes it possible to optimise part loading, so that the **oscillating movement** of the dispensers sprays them evenly with high washing power jets, leaving no part unwashed. The cycle is divided into three steps: **wash, rinse and suction**.

Model	L (mm)	W (mm)	H (mm)
XTR 1000	1900	1000	600
XTR 2000	1900	2000 (1000 + 1000)	600
XTR 3000	1900	3000 (1500 + 1500)	600
XTR M 1000 /PLUS*	1900/2400*	1000	600
XTR M 2000 /PLUS*	1900/2400*	2000 (1000 + 1000)	600
XTR M 3000 /PLUS*	1900/2400*	3000 (1500 + 1500)	600

THE BENEFITS OF THE XTR SERIES

RELIABILITY

- hose movement system located outside the wash area
- all parts in contact with the wash fluid are made in stainless steel

SAFETY FEATURES

- conforming with the highest standards, with materials treated for resistance to any mixture
- ATEX//EAC certification for unbeatable safety

EFFICACY

- the oscillating hose system enables the jets to impact the surfaces at a variety of angles and penetrate even where other machines fail to do so, so that even the most critical points are cleaned more thoroughly
- blade nozzles optimise the force of the washing fluid

DESIGN

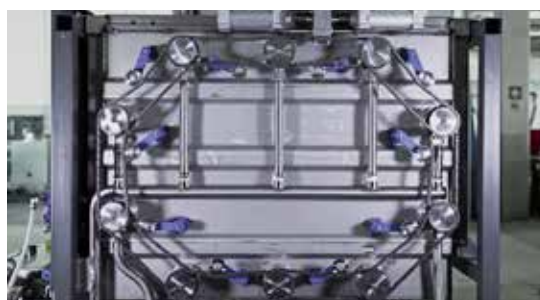
- its evolved design and innovative oscillating hoses make the XTR series stand out from the competition and enable it to satisfy the requirements of the most demanding applications

AUTOMATION

- preset programs automatically guarantee effective washing

CONVENIENCE

- the partial loading option assures greater flexibility and allows a single zone to be loaded without the need for the machine to be full before it is used, thus saving time and money





Installation ATEX - ZONE 1

Application
Doctor blade chambers
/ Ink reservoirs
/ Flexo and rotogravure
machine parts /
Ink recirculation
reservoirs /
Cans and bins /
Rotogravure rolls /
Miscellaneous
equipment



Flammable
solvents



100% pneumatic
operation



Safety and
ease of use



Highly
customisable

PN C-PN S-PN S PLUS

ADAPT WASHING TO YOUR OWN NEEDS

With 11 models available in **more than 30 configurations**, this line is the solution for the **most demanding clients** looking for equipment able to deep clean metal parts, buckets and bins, print rolls and mechanical components. With **more than 500 units manufactured**, the PN series is one of the most appreciated among our clients, for whom this machine is the answer to the most diverse washing applications. **Safe and easy to operate**, these models combine efficient washing – both fast and high quality – with guaranteed operator safety, thanks to the fact that he never comes into contact with hazardous substances. **Pneumatic operation** guarantees complete safety, even when handling flammable products. The wash fluid is stored in the service reservoir, and thus cannot evaporate into the atmosphere.

The reservoir drain and distilled solvent rinse cycles can be actuated either manually or automatically. It is also possible to combine any washing unit with a solvent regenerator, to minimise consumption.

New functions can be added or existing functions specialised quickly and easily, as in the following examples:

- a variety of solutions for **vapour aspiration** before opening
- pneumatic logic for **automating** all cycles
- concealed rotary heads for **can washing**
- **interchangeable** part holder grilles
- **rotary system** for rotogravure rolls with a dedicated shoulder washing circuit
- label printing **Anilox** roll handling system
- independent **rinse** circuit
- **soak** function for products which require prolonged chemical action

Model	L (mm)	W (mm)	H (mm)
PN 1000 C	900	500	300
PN 1500 C	1400	500	300
PN 2000 C	1900	500	300
PN 1500 S / S PLUS*	1400	500/650*	500
PN 2000 S / S PLUS*	1900	500/650*	500
PN 2500 S / S PLUS*	2400	500/650*	500
PN 3000 S / S PLUS*	2900	500/650*	500

THE BENEFITS OF THE PN SERIES

VERSATILITY

- thanks to IST's design and construction, a single machine can implement a variety of washing solutions

MAINTENANCE

- in consultation with our clients, we have designed a machine for heavy duty applications with simple, limited maintenance requirements

SAFETY FEATURES

- fully pneumatic operation
- ATEX/EAC certification
- can be used with aggressive and flammable products





Installation NON CLASSIFIED ZONE

Application
Doctor blades /
Ink reservoirs /
Flexo and rotogravure
machine parts
/ Panels / Ink
recirculation reservoirs /
Cans and bins /
Miscellaneous equipment



Water



Resistant to aggressive
detergents



Electric
wash pump



Touch Screen
e PLC



Personalisable
cycles

EL - EXL

BEYOND THE LIMITS OF MAXIMUM FLEXIBILITY

Thanks to the know-how gained over three decades, these **highly efficient** product series guarantee **outstanding cleaning** and an eco-friendly wash. Targeted water delivery, optimised filtration technology, faster heating of the wash fluid and a high performance pump optimised for better water circulation, combine to deliver tangible **savings** of power and water.

The EXL series also has exclusive rinse systems, like the separated circuit with chemical top-up, which **minimises the consumption** of chemical additives. The use of high quality materials means that the machines can be used with a variety of fluids, both acidic and basic, depending on the application.

These washing solutions for **non-flammable fluids** are adapted to the most diverse industrial applications. They are especially suited to print, coating and mechanical engineering applications, with ideal cleaning solutions for flexo, rotogravure and offset printing machine components: the gravure roll, doctor blade, ink recirculation reservoirs, casing panels and other equipment. The entire cycle is controlled by a **programmable microprocessor** with touch screen display, which displays the wash cycle data and reports faults and recommended routine maintenance jobs.

Model	L (mm)	W (mm)	H (mm)
EXL 2000	1900	1000	550
EXL 2500	2400	1000	550
EL 1500	1400	600	350
EL 2000	1900	600	470
EL 2500	2400	600	470

THE BENEFITS OF THE EL - EXL SERIES

RESISTANCE

- machines for working with aggressive detergents
- all parts in contact with the substances are made in stainless steel

EFFICACY

- high performance electric pump
- washing liquid heating system

AUTOMATION

- timed wash cycle
- piston-actuated automatic cover

EASE OF USE

- touch screen control panel and dedicated PLC with operating parameter logging and data display during operation
- routine maintenance and fault reporting
- customisable wash cycles





Installation
**NON CLASSIFIED
ZONE
ATEX - ZONE 1**

Application
**200 litre barrels,
1000 litre IBC cisterns,
stainless steel
reservoirs of various
sizes**



Solvent / Water



Modular



Compact



Safety and
ease of use



Efficient

DW - TW

TAKE CONTROL OF YOUR CLEANING PROCESSES

Along with its conventional models, IST offers two lines dedicated to washing **the most diverse storage** and process **tanks** (from 30 litre cans to 200 litre barrels, from IBC containers to reaction vessels for a vast variety of applications), designed to fit into working environments which require different processes in **multiple configurations**.

Model	L (mm)	W (mm)	H (mm)
DW S 8-60	1800	1240	2200
DW S 40-30	1800	1240	2200

Model	L (mm)	W (mm)	H (mm)
TW S 8-60	3000	2000	2500
TW S 40-30	3000	2000	2500

THE BENEFITS OF THE DW - TW SERIES

SAFETY AT WORK

- Cleaning containers by hand is a hazardous occupation due to the worker's exposure to hazardous chemicals, as well as being stressful due to the unergonomic movements demanded by the job. With IST, operators can work in **total safety** and make only **ergonomic movements**, thus optimising not only the quality of the cleaning job itself but also improving the quality of their work

ECOLOGICAL

- Environmental **sustainability** is a core concern for IST, which was established precisely to aid companies reduce their consumption of water and hazardous chemicals like solvents without compromising the **quality of the cleaning process** or contaminating the final product. The **modular design** of our systems enables us to easily modify the machines to adapt them to changing cleaning requirements without the need to purchase a new one and discard the old one, thus offering both economical and environmental **savings**

OPTIMISING THE MAN DAY

- Manually washing a container generally employs an operator for a period, on average, of 10 to 60 minutes. This is the time spent in taking the container to the washing area, washing it, replacing the container in the delivery area and all other operations involved in handling and maintaining fluids and washing tools. By contrast, **an automatic washing machine** takes around 2 minutes of the operator's time in loading the container, starting the machine, unloading the container, maintenance and other auxiliary activities; for a cycle which lasts on average 2-5 minutes, the operator need not even supervise the machine. This **reduces the time** spent in washing containers by around 80%. A worker's daily 8 hour shift corresponds to around 12-15 containers; companies which exceed this number can dedicate that single operator to managing an **IST machine**, which can handle at least 50-60 containers a day

REDUCING THE COST OF DISPOSING OF WASHING WASTE FLUIDS

- Manually washing a single container on average consumes 100-150 litres of water and 5-10 litres of solvent. Using an IST machine with water or solvent recirculation reduces this **consumption** to 15-20 litres of water and 1-3 litres of solvent. The amount of waste produced is thus reduced by 70%-90%, with an equally significant **reduction in the cost** of disposal and considerable ecological and economic **benefits**

REDUCING WASH FLUID COSTS

- A **reduction in the consumption** of wash fluid (water or solvent) of 70-90% also proportionally reduces the cost of the fluids themselves



Installation
NON CLASSIFIED ZONE

Application
Flexo printing plates



Water



Resistant to aggressive
detergents



Safety and
ease of use



Plug & Play

LCO

STURDY INDUSTRIAL MACHINES FOR PRINTING PLATE WASHING

The LCO series washing units have been designed for cleaning flexo printing plates.

This operation is often performed manually, using harsh solvents that dissolve ink but, over time, deteriorate the elastomer from which the precious plates are made.

The LCO series is an effective, low-cost solution that is much faster compared to other washing systems used in flexo printing.

These machines, built according to the highest quality standards, use non-aggressive liquids and a combination of brushes that swing alternately, thus assuring gentle and at the same time effective cleaning. With a width from 450 mm to 1,200 mm, they are capable of washing printing plates in any and all formats currently used.

Washing operations are managed by a PLC equipped with digital display, for full parameter control.

In addition, the brushes and filters are easy to remove, so as to help scheduled maintenance.

Finally, the casing panels can be opened to provide easy access from the inside of the machine.

Model	W (mm)
LCO 45	450
LCO 65	650
LCO 95	950
LCO 120	1200

THE BENEFITS OF THE LCO SERIES

RESISTANCE

- sturdy and robust structure
- stainless steel cover

EFFICACY

- depending on the models, 2 or 3 fine brushes with independently adjustable speed
- rinsing with recirculation water and dedicated pump
- washing fluid and rinsing water filtered using a dedicated tank

SAFETY

- cover closing by means of a safety sensor
- management of the chemical product minimum level in the tank

AUTOMATION

- automatic operation: START with optical sensor and STOP with encoder

EASE OF USE

- Dedicated PLC with display for cycle parameter monitoring
- fully removable service tank
- inlet conveyor and outlet panel



Installation ATEX - ZONE 1

Application
Miscellaneous small
size equipment



Flammable
solvents



100% pneumatic
operation



Safety and
ease of use



Plug & Play

EASY WASH

EASE OF USE, SAFETY AND LOW RUNNING COSTS

Easy Wash units are part washing tanks, available in two models (EW 600 and EW 900), ideal for **manually cleaning** small parts, since they prevent operator exposure to hazardous substances. They are made in stainless steel throughout and feature fully pneumatic operation.

Washing is initiated by the operator with a **foot pedal**.

The washing fluid is delivered by a brush with synthetic bristles.

The wash chamber is closed at the top with a glass panel and the wash cycle is done with sealed gloves, in **total safety**. This means that the units can be used to wash both fragile components and complicated mechanical assemblies.

The Easy Wash 900 A (automatic) allows the wash cycle to be **automated** thanks to the tubes inside the tank body, using a pneumatic timer to control the wash pump.

Model	L (mm)	W (mm)	H (mm)
EW 600	670	530	400
EW 900	870	530	400
EW 900A	870	530	400

THE BENEFITS OF THE EW SERIES

RESISTANCE

- suited for working even with flammable solvents, all parts in contact with the fluid in stainless steel throughout
- all parts in contact with the substances are made in stainless steel

SAFETY FEATURES

- pneumatic operation
- cover closed safety sensor
- ATEX/EAC certification

EASE OF USE

- pedal operated start/stop



Installation ATEX - ZONE 1

Application
Barrels and cans
up to 25 litres



Flammable
solvents



100% pneumatic
operation



Safety and
ease of use



Plug & Play

BW BIN WASHERS

TO TURN WASTE INTO A RESOURCE

The BW offers **exciting benefits** for a small investment: **reducing the cost** of disposing and replacing many types of containers, turning a hazardous special waste, costly and difficult to dispose of (such as contaminated cans), into a simple waste material which can also be reused. Once the container has been loaded and the cover closed, the cycle is initiated by a timer; throughout the wash cycle, **a rotary head**, powered by a dual membrane pneumatic pump, cleans the interior of the container, and recirculates the solvent into a storage tank.

Model	L (mm)	W (mm)	H (mm)
BW	500	500	450
BW Plus	500	500	600

THE BENEFITS OF THE BW SERIES

EFFICACY

- rotary heads for thorough internal cleaning

AUTOMATION

- timed wash cycles

RESISTANCE

- all parts in contact with the substances are made in stainless steel
- suited for working also with flammable solvents

SAFETY FEATURES

- ATEX/EAC certification
- cover closed safety sensor





CERTIFICATIONS SAFETY FIRST

Safety is a critical factor in the choice of a washing system. IST has a long, well established experience in flammable liquid treatment. Combining the benefits of the Made in Italy brand with the use of cutting technologies, our products conform to all EU legal requirements and those of many other countries.

Since 1997 our processes have been controlled by a certified Quality System, currently pursuant to UNI EN ISO 9001:2015.

In 2010 we obtained ATEX certification, currently issued by the notified body ALBARUBENS n. 2632, relating to equipment and components for use in potentially explosive atmospheres, pursuant to Directive 2014/34/EU.

EAC certification (Russia)

In 2012 we obtained the EAC Ex Conformity Mark: this attests that our products are explosion proof under the law of the Russian Federation.

ETL Listed Mark (USA and Canada)

Since 2012 we have been certified to use the North American ETL Mark (Electrical Testing Laboratories), which attests the conformity of our distillation equipment with the electrical, gas and other safety standards applicable in North America and Canada.





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