

## **M-Line Mobile High Pressure washer**

- High efficiency,  
cost effective validatable cleaning solutions
- Ideal for bins, tanks and CIP of a wide variety  
of processing equipment
- Combines high pressure and low flow rate  
to minimize media consumption
- Advanced technology,  
innovative "light and ergonomic" design  
to improve mobility
- Add-on drying and water tank modules



The M-Line provides high-performance cleaning solutions thanks to the extraordinary mechanical action of the water supplied by a pump capable of generating up to 80 bar (1,200 PSI) pressure at nozzle level combined with a water flow rate as low as 40 l/min (9 gal/min) for a reduced water consumption.

With its wheel mounted ABS anti-scratch casing, a neat and attractive design that improves ergonomics, movement throughout the different sites where washing procedures are required, is made much easier and practical.

All surfaces in contact with fluids are made of AISI316L stainless steel with high quality sanitary grade components supplied with all the certificates to comply with the latest regulatory standards.

The system is managed by a PLC with software compliant with GAMP5 guidelines.

User ID and log-in, password protected menus for maintenance, calibration and alarms as well as storage of 30 different working recipes are managed by a 7" touch screen.

At the end of each washing cycle an on-board printer generates a comprehensive batch report with critical parameters.

A patented chemical dosing system allows the cleaning process to be improved by injecting different types of chemicals.

Up to 2 dosing units and detergent tanks are housed inside the unit together with low level sensor and flow meter for accurate dosage of the chemical during the washing stage of the cycle.

The system is designed to minimize the use of chemicals thus reducing the need for effluent treatment as well as detergent consumption.

Multiple inlets allow the use of different types of water within the same cycle leaving the user to choose the most suitable media in order to optimize the overall cost per cycle.

Two quick-lock high pressure connections are placed on the side of the unit for unlimited cleaning tasks using the different accessories provided such as the hydrokinetic lances positioned inside the tank to be cleaned and/or the multipurpose lance with limited pressure (max 20 bar / 290 PSI) for manual cleaning operations. Connections are made via a high pressure flexible hose with a stainless steel shield to improve robustness and safety.

On completion of the cleaning cycles the piping is flushed with filtered compressed air to eliminate any residue of water and prevent any growth of microbiological contamination when the unit is not in use.



M-Line high pressure mobile unit



Control console



Hydrokinetic head in operation

The availability of a wide range of accessories makes the M-Line suitable for unlimited washing solutions.

Regardless of the challenge, the approach always consists in placing the low flow rate/high pressure hydrokinetic heads in the most suitable spot thus ensuring total coverage. The hydrokinetic heads designs a sphere inside the volume to clean mechanically and chemically removing all the contamination thanks to the perfect mix of time, pressure, temperature and chemicals whenever required although not mandatory.

The most common application of the M-Line is the cleaning of the internal surfaces of bins which are directly in contact with the product.

The typical bin washing set-up is made up of the washing machine with the hydrokinetic lance mounted on a special lid designed to prevent water splashes from the bin upper opening whilst guaranteeing the neck cleaning.

The lid, featuring also a connection point for the drying module, may be placed on top of the bin by hand or automatically by means of a lifting column that speeds up the cleaning process minimizing the operator's work.

This system offers a cost effective solution to process all the different sizes of bins available on the market.

CIP of processing equipment requires an deep understanding of the engineering of the device to clean, accurate feasibility study, preparation of a cleaning procedure and several tests to verify the effectiveness of the process. All these activities require perfect synchronization between the client and IWT in order to share information regarding the targets to achieve and that's why we are ready to partner with you to offer the most suitable cleaning solutions.



Bin washing/drying station



Hydrokinetic head



Bin washing in progress



Manual lance

The add-on drying module allows complete washing-drying process within the same cycle. This module is available as an integral part of the high pressure washing unit as well as a stand-alone piece of equipment featuring a high efficiency air blower, HEPA filter with DOP ports, pressure gauge for filter clogging monitoring and a dedicated electrical heating system. The system is completed by a flexible hose that conveys hot air where needed. The integrated drying module comes as an integral part of the machine and is managed and set through the same controller and the same touch screen. At the end of the cycle, a single batch report comprising both the washing and drying cycles is printed by the system.

The stand-alone drying module features an independent PLC and touch screen and comes as a completely separate unit.

Washing and drying by means of two separate units offers a huge advantage in terms of cycle-time especially when multiple washing tasks within a limited period of time are required.

To allow cleaning procedure in remote locations where connection to the mains water is not available or water quality is not suitable for the purpose, the M-Line can be combined with a tank module where water is stored and made available in the location where washing is required. The tank is entirely made of mirror finish AISI316L and is equipped with an electrical heating system, insulation to minimize heat loss, water level sensors as well as a temperature controller, an on-board electrical cabinet and wheels for ease of transportation throughout the facility.



M-Line & Drying unit - Range of applicability

## TECHNICAL SHEET

### M-Line - Main features

Overall dimensions (L x W x H)	1,380 x 755 x 1,225 mm / 54 x 30 x 49 Inch
Overall weight	< 350 Kg / 770 lb
Water pressure	20 to 80 bar (adjustable)
Water max temperature	90°C / 194°F

### Drying module - Main features

Overall dimensions (L x W x H)	820 x 600 x 1500 mm / 33 x 24 x 60 Inch
Overall weight	150 Kg / 330 lb
Air flow rate and filtration	Max 800 m <sup>3</sup> /h / 28,000 ft <sup>3</sup> /h - HEPA H13 - Pre-Filter G2 grade
Air temperature set point	Max 70°C / 158°F

## Options and accessories

- Water conductivity control (5WMLSCR).
- Chemical dosing system (5WMLSP).
- Hydrokinetic cleaning head (5WMLSHCH).
- Unidirectional hand held jet gun (5WMLSAHJG).
- Lid (for bin processing) (5WMLSLID).
- Lid lifting column (for bin processing) (5WMLSLLC).
- Mobile water tank featuring heating system (5WMLTTM).
- Drying Unit (5WMLDDU).

## Related Products

To maximise operational efficiency and learn more about these products contact your local representative.



**W300 Series**  
**Pharmaceutical grade washer**  
Designed to meet the most stringent requirement of pharmaceutical industry it provides excellent cleaning and drying performance combined with a minimal footprint, high quality standard, safety and compliancy to the main regulatory standards.



**GP Decontamination Lock**  
Designed to meet the specific needs of pharmaceutical and biotech industry it provides fast and effective low temperature decontamination process complementary to the autoclave sterilization by means of vaporized hydrogen peroxide featuring high quality standard, safety and safeguard of the environment thanks to the on-board catalyzer.



**C-Line**  
**High Pressure Cabin Washer**  
Designed to meet the most stringent requirement of pharmaceutical industry provides excellent cleaning and drying of bins, tanks, drums and bulk containers in general. High quality standard, safety and compliancy to the main regulatory standards are trademark of quality by design.



HEADQUARTERS  
IWT s.r.l. | Tel. +39 0332.96701 • www.iwtsrl.it • E-mail: pharma@iwtsrl.it



ISO-9001:2008 - Cert. n° 3406/1



Product sizes may undergo modifications. Please contact your local dealer for more information.

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