

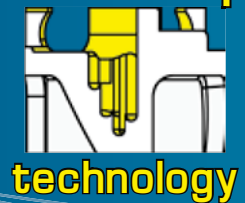


**SprayNozzle** ENGINEERING  
Total Spraying Solutions



# M-Series tank cleaning solutions

The washer with the unique patented **Flow Step** rotor



**technology**

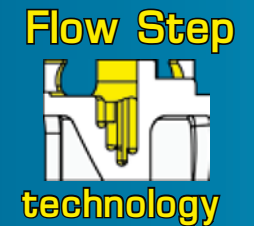
CIP spray nozzles designed to  
provide superior tank cleaning  
results at low operating pressures.  
Your solution to cleaner tanks  
with less water.

food  
beverage  
pharmaceutical  
chemical processing

**Total Spraying Solutions**

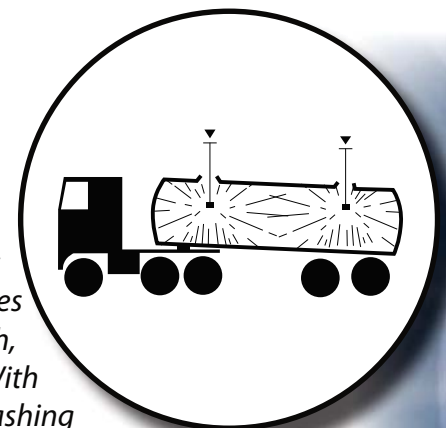
**Now in PVDF!**  
for affordable durability.  
Also available in  
Acetal & PTFE

# M-Series tank cleaning solutions

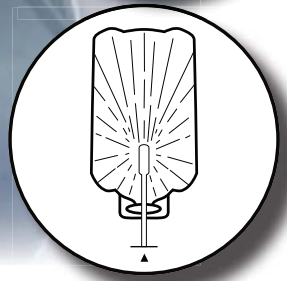
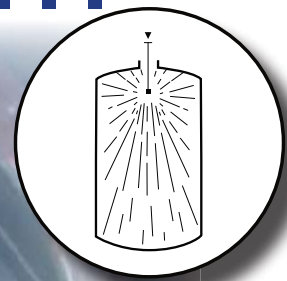
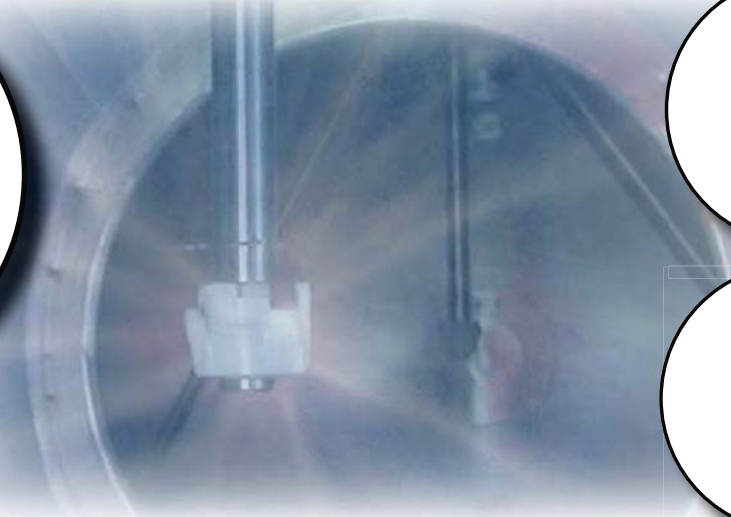


## ... identify the problem!

**Spray ball** The typical spray balls found in storage tanks are extremely inefficient and costly to operate. This is because they require large volumes of water and chemical just to reach, wet and cover the tank interior. With inefficient reach, the wetting, washing and rinsing performance is severely compromised, resulting in excessively long wash times. Poor impact efficiency also compounds this problem.



## A CLEANER TANK WITH LESS WATER...



## find the solution... M-Series tank washers with patented Flow Step performance

As a direct replacement for spray balls in standard pressure applications, the M-Series delivers more efficient distribution, greater impact and faster C.I.P cycles. This means less waste water and chemical treatment costs, saving you time and money.

### YOUR BIGGEST STEP FORWARD IS TO REPLACE SPRAY BALLS WITH THE M-SERIES TANK WASHER

The M-Series tank washer makes similar styles of tank washers and spray balls virtually obsolete. This is achieved by a number of unique patented features including **Flow Step** technology helping ensure superior hydraulic impact, a more thorough tank clean and less trouble in operation. The benefits gained allow increased cleaning efficiency and shorter cleaning cycles, providing major savings in water and cleaning chemical use. This equals major cost savings to the operator.

#### A true 360° spray

Special emphasis is placed upon backward cleaning at points of entry, along with a concentrated forward wash-jet to assist cleaning items such as centralised agitators<sup>†</sup> etc. In this way, the M-Series produces a superior cleaning action in a true 360 degree spray<sup>†</sup> when compared with similar cleaning devices.

#### Customise your M-Series washer

To control flow, the M-Series uses a standard 10 slot flow director which is specially designed to provide superior tank cleaning results at reduced pressures and flows. If your needs are special, custom units using non-standard flow directors and rotors can help tailor your flow and performance to suit specific requirements. Slot combinations of 2, 4, 6, and 8 are available upon request.



STANDARD 10 SLOT



CUSTOM 4 SLOT



CUSTOM 2 SLOT

#### M-Series for every application

The M-Series sanitary design is ideal for CIP tank cleaning applications in the Wine, Food & Beverage, Dairy, Chemical, Pharmaceutical and a wide variety of other applications and industries. Contact us with your special requirements.

### M-SERIES IS ALSO A STEP AHEAD OF OTHER ROTATING WASHER DESIGNS.

#### Patented rotor design is truly a STEP ahead

A unique patented stepped rotor design is powered by the cleaning fluid itself. The rotor steps are strategically arranged to channel the cleaning fluid into distinct concentrated streams of water to hit tank surfaces where they are needed most. These streams impart a greater hydraulic impact whilst reducing non-productive spray mist. Reduction of spray mist allows the formation of larger spray droplets from these step formed jet streams, which provides a higher degree of washing impact and more efficient wetting in comparison to competitive units.

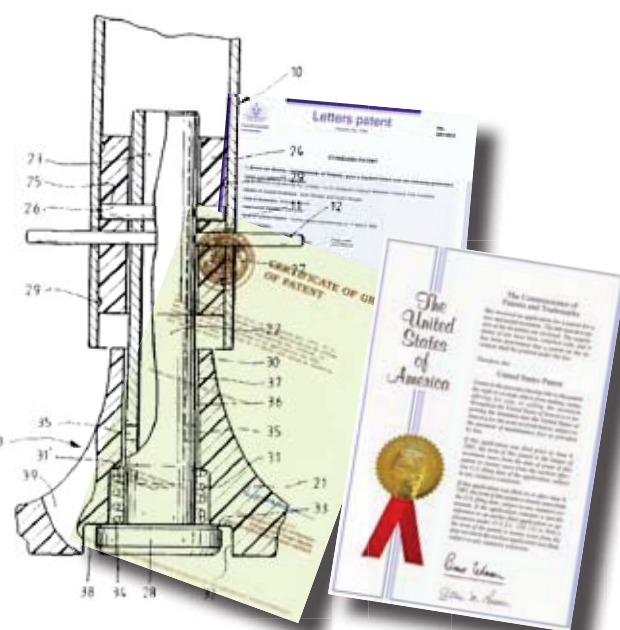
#### Patented self cleaning action was the next STEP to improved reliability

Unique patented self cleaning features of the M-Series tank washer have allowed for major improvements towards trouble free operation and sets us apart from the competition. This is achieved via a special bearing system that allows typical fluctuations in water pressure to purge any obstructions away from the bearing surfaces. Competitive washers can readily allow obstructions to jam within the bearing surfaces and impede rotation. No lubrication is required other than the cleaning fluid itself and there are no ball bearings to lock-up, corrode or break down.

#### A material for every application

The M-Series consists of a standard shaft/body manufactured in a high grade stainless steel (AISI 316), with a rotor and flow director available in a choice of (FDA approved) materials: **ACETAL-CoPolymer<sup>††</sup>, PVDF or PTFE**. Full PTFE units are also available. Full material certification and traceability available on request.

<sup>†</sup> model M-50-11 only   <sup>‡</sup>Radius = Effective Contact Distance   <sup>††</sup> Contact factory for chemical and temperature compatibility charts, always check compatibility of Tank Washer materials to cleaning medium.



**Patented performance  
designed in Australia**



# M-Series *Flow Step* Technology

## Technical Data & Performance Information - 10 Slot Models

**MATERIALS OF CONSTRUCTION** The M-Series consists of a standard shaft/body manufactured in a high grade stainless steel (AISI 316), with a rotor and flow director available in a choice of (FDA approved) materials: ACETAL-CoPolymer††, PVDF or PTFE. Full PTFE units are also available. Full material certification and traceability available on request.

### M-30 KEG/TANK WASHERS

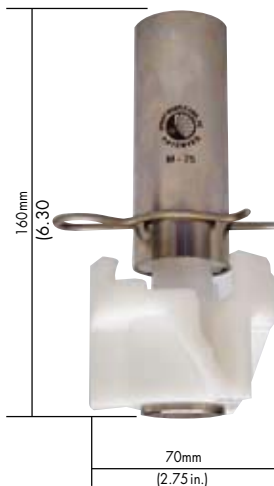


Cleaner Type: M-30 Keg/Tank Washer  
Pressure: Recommended 1.5 Bar.G min (30psi)  
Connection: Standard male threaded ½" BSP pipe. (NPT and other connections available.)  
Weight: 0.27kg (9.5oz.)  
Operation: Self operated by cleaning fluid  
Temperature: Acetal 120°C (248°F) Max  
PVDF 120°C (248°F) Max  
PTFE 150°C (302°F) Max  
316SS 430°C (806°F) Max

Pressure BAR/psi	Flowrate		Radius*Jet wetting m/ft
	L/m	U.S GPM	
1.4/20	87	23	Maximum coverage not applicable for close radius applications
2.1/30	106	28	
2.8/40	121	32	
3.4/50	136	36	
4.1/60	148	39	

\* For Higher or Lower operation pressures/flow, contact factory

### M-75 MK II TANK WASHERS

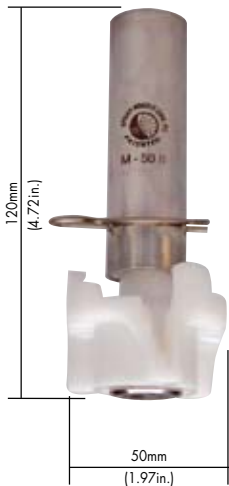


Cleaner Type: M-75 II  
Pressure: Recommended 1.5 Bar.G min (30psi)  
Connection: Standard butt weld 1½" O.D. Tube (Special order connections available.)  
Weight: 0.44kg (15.5oz.)  
Operation: Self operated by cleaning fluid  
Temperature: Acetal 120°C (248°F) Max  
PVDF 120°C (248°F) Max  
PTFE 150°C (302°F) Max  
316SS 430°C (806°F) Max

Pressure BAR/psi	Flowrate		Radius*Jet wetting m/ft
	L/m	U.S GPM	
1.4/20	167	44	2.6/8
2.1/30	204	54	2.7/9
2.8/40	235	62	2.7/9
3.4/50	250	66	3/10
4.1/60	276	73	3.5/11

\* For Higher or Lower operation pressures/flow, contact factory  
\*\* All flows are based on standard 10 slot flow director. 2,4,6,8 Slot available on request for low flow application.

### M-50 MK II



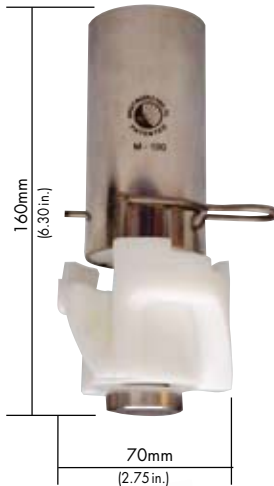
Cleaner Type: M-50 II  
Pressure: Recommended 1.5 Bar.G min (30psi)  
Connection: Standard butt weld 1" O.D. Tube. (Special order connections available.)  
Weight: 0.19kg (6.5oz.)  
Operation: Self operated by cleaning fluid  
Temperature: Acetal 120°C (248°F) Max  
PVDF 120°C (248°F) Max  
PTFE 150°C (302°F) Max  
316SS 430°C (806°F) Max

NOTE: Full PTFE units available M-50 II

Pressure BAR/psi	Flowrate		Radius*Jet wetting m/ft
	L/m	U.S GPM	
1.4/20	76	20	1.8/6
2.1/30	95	25	2.1/7
2.8/40	110	29	2.1/7
3.4/50	125	33	1.8/6
4.1/60	132	35	1.5/5

\* For Higher or Lower operation pressures/flow, contact factory  
\*\* All flows are based on standard 10 slot flow director. 2,4,6,8 Slot available on request for low flow application.

### M-100 MK II TANK WASHERS



Cleaner Type: M-100 II  
Pressure: Recommended 1.5 Bar.G min (30psi)  
Connection: Standard butt weld 2" O.D. Tube. (Special order connections available.)  
Weight: 0.50kg (17.64oz.)  
Operation: Self operated by cleaning fluid  
Temperature: Acetal 120°C (248°F) Max  
PVDF 120°C (248°F) Max  
PTFE 150°C (302°F) Max  
316SS 430°C (806°F) Max

Pressure BAR/psi	Flowrate		Radius*Jet wetting m/ft
	L/m	U.S GPM	
1.4/20	430.00	113.60	1.8/6
2.1/30	500.00	132.09	2.6/8
2.8/40	585.00	154.67	3.0/10
3.4/50	661.00	174.80	2.7/9
4.1/60	708.33	187.12	2.6/8

\* For Higher or Lower operation pressures/flow, contact factory  
\*\* All flows are based on standard 10 slot flow director. 2,4,6,8 Slot available on request for low flow application.



### MELBOURNE, AUSTRALIA

1-8/27 Shearson Crescent, Mentone, Vic. 3194  
P +61 (0)3 9583 2368 • F +61 (0)3 9585 0218  
[sales@spraynozzle.com.au](mailto:sales@spraynozzle.com.au)

These products are protected by the following patent numbers: Australian Patent 691903, United Kingdom patent 2302048, United States Patent 5823435, United States Patent 359340, Australian Design no. 104215, 104613, 121769, 124600. Other possible patents pending.

### Distributed by:

### NEW ZEALAND / PACIFIC RIM

532c Grey Street, Hamilton East, NZ 3216  
P +64 (0)7 839 6444 • F +64 (0)7 839 6445  
[sales@spraynozzle.co.nz](mailto:sales@spraynozzle.co.nz)

Warranty: The manufacturer will replace, repair or refund the purchase price of The Product at their option, free of charges, except transportation, if defective in their manufacture. Claims must be notified to the manufacturer in writing within 90 days of sale or shipment either of which occurs first. The Product should be returned to the place of purchase. This warranty is exclusive remedy and the Manufacturer/Distributor shall not be liable for consequential damages, injury or commercial loss. The Manufacturer/Distributor makes no warranty of fitness for a particular purpose and makes no other warranty, express or implied arising from the course of dealing or usage in trade. Specification subject to change without notice. Chemical, Temperature and pressure compatibility is the responsibility of purchaser, compatibility charts available at request. †Radius = Effective Contact Distance © Spray Nozzle Engineering Pty Ltd Australia / New Zealand MSERAus4ppFeb11 © Feb 11