



METALPRESS

Division of Axiom Machinery Inc.

DIE/MOLD WATER CHANNEL CLEANING UNIT

Restore Cooling Flow. Reduce Downtime.
Improve Mold & Die Performance.

MDM Series



metalpressmachinery.com



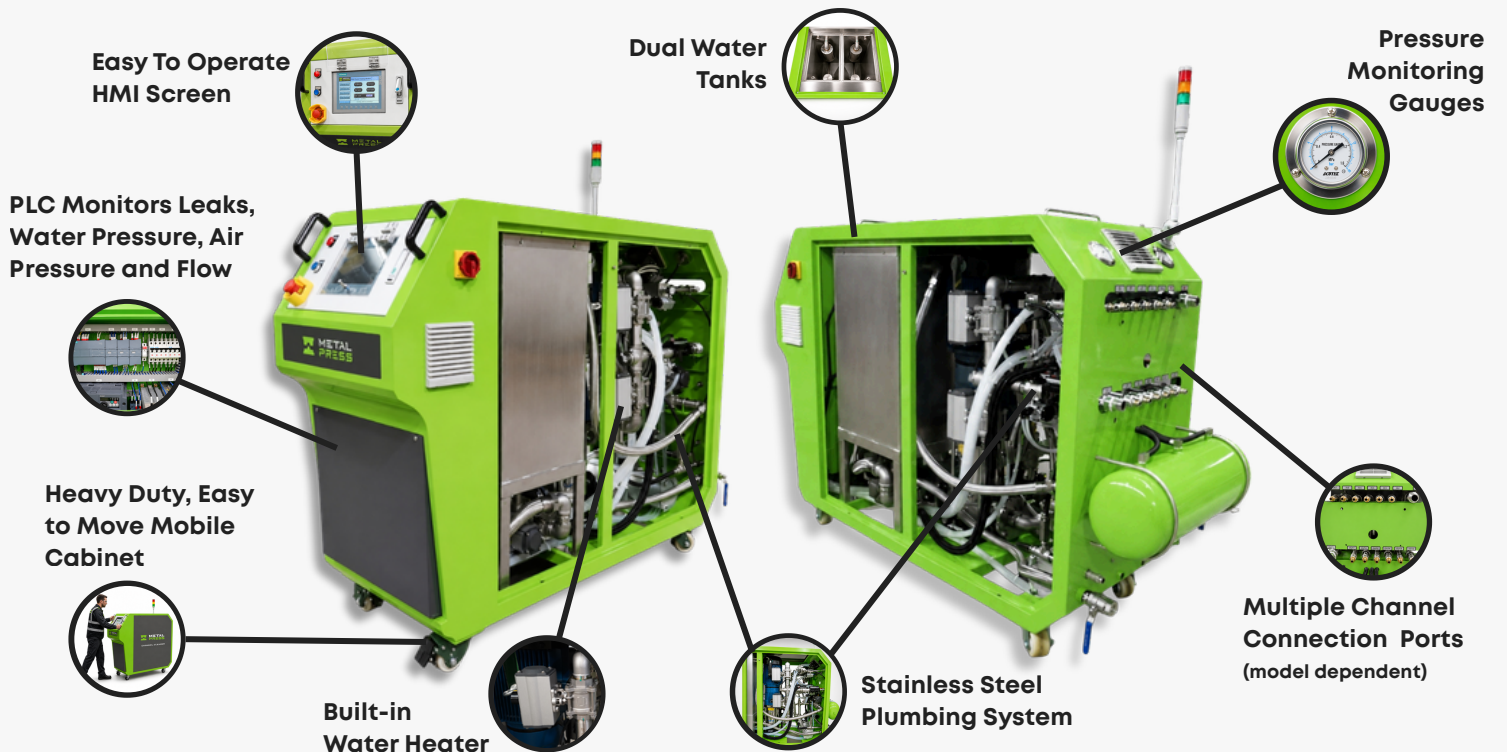
A NEW STANDARD FOR MOLD & DIE COOLING MAINTENANCE



Water Channel Cleaning Units Built for Cleaner More Efficient Molds, Dies and Other Equipment

The MetalPress MDM Series is engineered to clean internal water channels in injection molds, die-casting molds and tooling systems. By removing scale, rust, sludge, mineral buildup, and other internal restrictions, the MDM Series helps restore cooling flow, stabilize mold temperature and improve production consistency.

Built for industrial mold maintenance departments, mold shops, die-casting operations, and injection molding facilities, the MDM Series helps reduce manual cleaning, prevent cooling-related defects and keep molds running at peak performance.



MDM SERIES KEY FEATURES & OPTIONS



COMPLETE MOLD/DIE CLEANING SOLUTION

01

CLEANING

- One-Click Auto Start
- Cavitation Cleaning
- Pulse Blasting
- Cleans in Both Directions

TESTING

- Leak Test
- Water Pressure Test
- Air Pressure Test
- Channel Flow Test

RECORDING

- Cleaning Record
- Alarm Record
- Mold/Die Record
- Exportable Record

AUTOMATION

- Automatic Drainage
- Automatic Water Replenishment
- Water Heating Function



AUTOMATIC CHANNEL CLEANING

02

The MetalPress MDM Series automates the cleaning of internal mold water channels to help remove scale, rust, sludge and mineral buildup. Automated cleaning helps reduce manual maintenance work, restore coolant flow and improve mold temperature stability.



MULTI-CHANNEL CONNECTION

03

The MDM Series is equipped with multiple inlet and outlet connection ports (number of ports depends on model) for cleaning up to several mold cooling circuits. This allows maintenance teams to connect directly to mold water lines and clean multiple channels more efficiently. All ports work and are controlled independently.



ADVANCED HMI & PLC CONTROL

04

The easy-to-operate HMI screen gives operators clear control over cleaning cycles, timing, pulse blasting, pressure results, leak results, rinse drainage and auto drying functions. Centralized controls help make the cleaning process more repeatable and easier to manage. Assign each mold a number and track its performance over time.



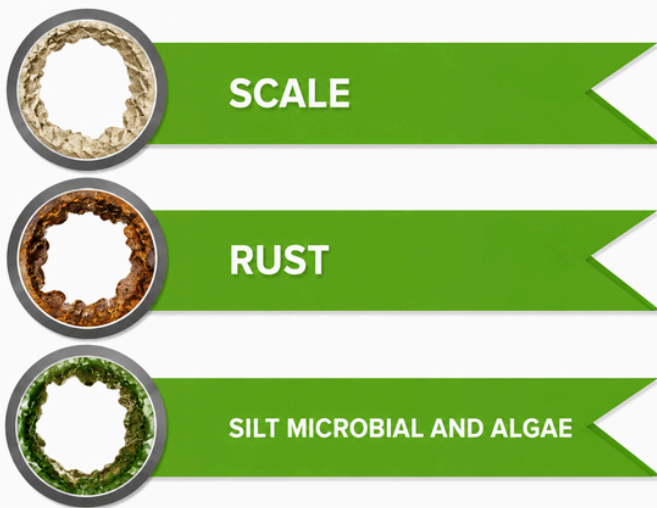
STAINLESS STEEL PLUMBING

05

The MDM Series features a robust stainless-steel pumping and fluid-circuit system, including tanks and filtration components. The open service-side design on both sides allows easier inspection, servicing and maintenance access.

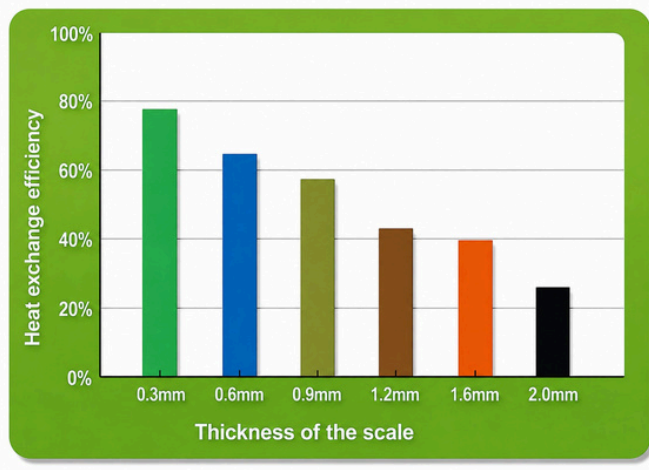
WHY CLEANING MOLD WATER CHANNELS BOOSTS PERFORMANCE

When mold water channels become restricted, the entire molding process loses stability. Scale, rust, sludge, and mineral buildup reduce water flow through the cooling circuits, making it harder for the mold to transfer heat evenly.



Poor cooling can lead to longer cycle times, inconsistent part quality, hot spots, warping, sink marks, dimensional variation and more frequent production interruptions.

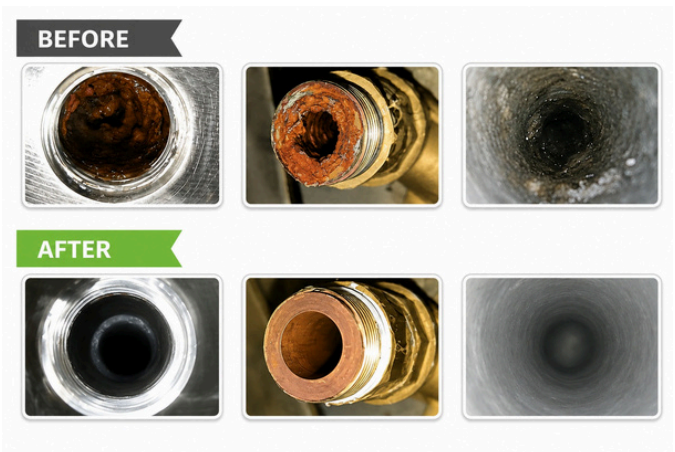
The drop in cooling efficiency is substantial.



The challenge is that the problem is usually hidden inside the mold. Operators may see the symptoms on the production floor, but the real restriction is often buried inside the internal cooling passages.

Without regular cleaning, the mold runs hotter, cooling becomes less predictable, and maintenance teams are forced to react after quality issues or downtime have already occurred.

The MetalPress MDM Series helps restore performance by cleaning internal water channels without full mold disassembly.

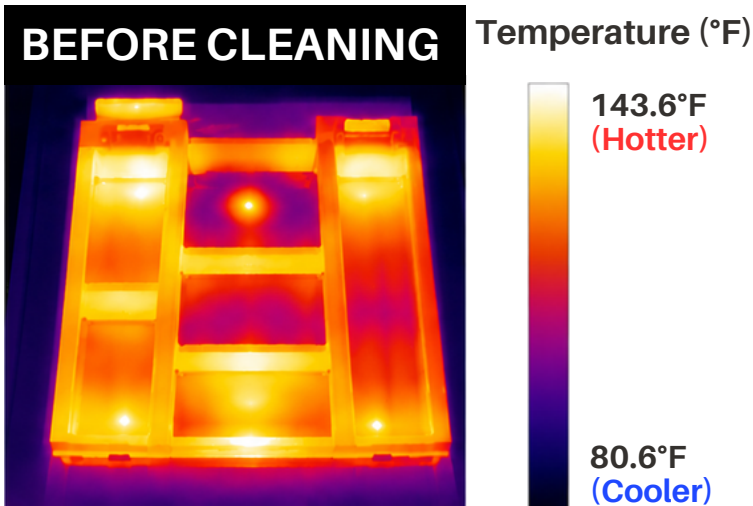


By improving water flow through the mold cooling circuits, the MDM Series helps stabilize mold temperature, reduce downtime, protect mold life and support more consistent production.

For injection molding, die casting, and mold maintenance teams, cleaner water channels mean better cooling, fewer defects and stronger long-term productivity.

CHANNEL CLEANING **REAL WORLD** RESULTS

BEFORE CLEANING

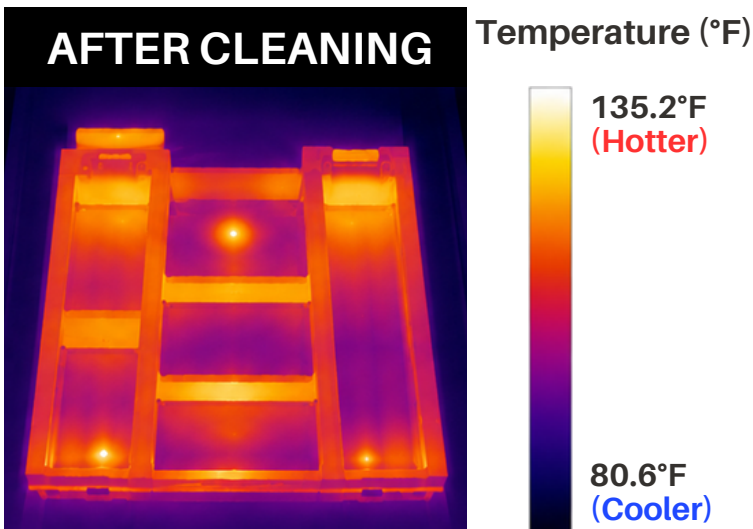


Molding Cycle Shortened by

8

Seconds

AFTER CLEANING



Reducing mold cooling time by 8 seconds can generate substantial operational savings over the course of a day, week, and year—especially in high-volume molding operations. In many injection molding and die casting facilities, cooling time represents the largest portion of the total production cycle. When each cycle is shortened by 8 seconds, more parts can be produced using the same machine, tooling, labor, and floor space.

For example, if a mold originally runs on a 40-second cycle, reducing the cycle to 32 seconds increases production capacity by approximately 25%. Over a 24-hour production period, this can translate into thousands of additional parts produced without purchasing additional machinery.

Shorter cycle times also reduce:

- machine operating costs per part
- energy consumption
- labor cost per unit
- tooling exposure time and thermal stress

In addition, improved cooling efficiency creates more stable mold temperatures, which helps reduce scrap, improve product consistency, and extend mold life. Over weeks and months of production, these savings can become extremely significant.



Lower average temperature



Reduced hot spots and variation



Shorter molding cycle time



Extended tooling life & shorter maintenance



Reduced downtime & lower operating cost



Better part quality & process stability

CAN THIS MACHINE CLEAN MORE THAN JUST MOLDS?

Yes. The MDM Series is built for more than mold and die cooling channel cleaning. With two port sizes, it can handle both precision tooling circuits and larger industrial cooling systems.

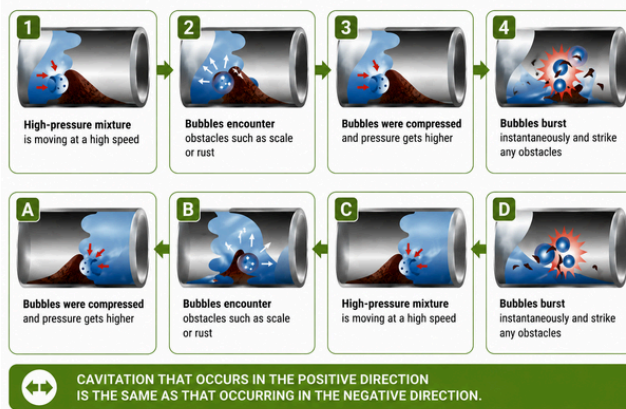
Smaller ports are used for mold and die channels, helping remove scale, rust, algae, and mineral buildup to restore flow and improve heat transfer.

Larger ports expand the machine's use to heat exchangers, temperature control units, water chillers, dehumidifiers, dryers and other equipment with internal cooling lines.

By keeping water circuits clean, the MDM Series helps reduce downtime, extend equipment life and improve cooling performance across the facility.

The MetalPress MDM Series uses advanced cavitation pulse cleaning technology to remove scale, rust, carbon buildup, biological contamination, and debris from internal mold cooling channels.

The system combines high-pressure air and high-pressure water and releases the mixture in controlled pulses that generate microscopic cavitation bubbles inside the pipeline.



As these bubbles rapidly compress and collapse, they create powerful micro-shockwaves that break apart scale and contamination attached to internal channel walls. The pulsed cleaning flow operates in both forward and reverse directions, ensuring complete removal of buildup throughout complex mold cooling passages.

This physical cleaning method restores cooling flow performance while eliminating the need for aggressive chemical treatments or manual cleaning.



THE RANGE

FIVE MODELS. FROM 4 TO 7 CHANNELS.



MDM SERIES SPECIFICATIONS – US STANDARD

MODEL	MDM-11	MDM-15	MDM-22	MDM-30	MDM-55
 Number of Channels (each channel has 1 input and 1 output)	2	4	4 + 1	6 + 1	6 + 1
 Connection Size	3/8" x 4	3/8" x 8	3/8" x 8 + 1" x 2	3/8" x 12 + 1" x 2	1/2" x 12 + 1-1/2" x 2
 Applicable Mold/Die Size	Small Mold/Die	Small to Medium Mold/Die	Medium Mold/Die	Medium to Large Mold/Die	Large Mold/Die
 Water Tank Volume	10.6 gal	26.4 gal / 13.2 gal + 13.2 gal	26.4 gal / 13.2 gal + 13.2 gal	31.7 gal / 15.8 gal + 15.8 gal	31.7 gal / 15.8 gal + 15.8 gal
 Water Flow	8 gal/min (max)	13 gal/min (max)	22 gal/min (max)	44 gal/min (max)	66 gal/min (max)
 Number Of Water Tanks	One	One or two	One or two	One or two	One or two
 Power of Water Pump	1.5 hp	2 hp	3 hp	4 hp	7.5 hp
 Overall Dimension (L x W x H)	39.4 x 19.7 x 31.5 in	55.1 x 19.7 x 47.2 in	55.1 x 19.7 x 47.2 in	63 x 23.6 x 47.2 in	63 x 23.6 x 47.2 in
 Weight	397 lbs	794 lbs	860 lbs	1,014 lbs	1,014 lbs

MDM SERIES SPECIFICATIONS – METRIC STANDARD

MODEL	MDM-11	MDM-15	MDM-22	MDM-30	MDM-55
 Number of Channels (each channel has 1 input and 1 output)	2	4	4 + 1	6 + 1	6 + 1
 Connection Size	DIN 10 x 4	DIN 10 x 8	DIN 10 x 8 + DIN 25 x 2	DIN 10 x 12 + DIN 25 x 2	DIN 15 x 12 + DIN 40 x 2
 Applicable Mold/Die Size	Small Mold/Die	Small to Medium Mold/Die	Medium Mold/Die	Medium to Large Mold/Die	Large Mold/Die
 Water Tank Volume	40 L	100 L / 50 L + 50 L	100 L / 50 L + 50 L	120 L / 60 L + 60 L	120 L / 60 L + 60 L
 Water Flow	30 L/min (max)	50 L/min (max)	83 L/min (max)	166 L/min (max)	250 L/min (max)
 Number Of Water Tanks	One	One or two	One or two	One or two	One or two
 Power of Water Pump	1.1 kW	1.5 kW	2.2 kW	3 kW	5.5 kW
 Overall Dimension (L x W x H)	1000 x 500 x 800 mm	1400 x 500 x 1200 mm	1400 x 500 x 1200 mm	1600 x 600 x 1200 mm	1600 x 600 x 1200 mm
 Weight	180 kg	360 kg	390 kg	460 kg	460 kg

**READY TO CLEAN
YOUR MOLDS OR DIES?**



**Improve Cooling Efficiency.
Save Energy Costs.
Increase ROI.**



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