

Miller has been a pioneering leader in providing

industry with the best-performing boiler control,

More than 75 years later, that proud tradition

service continues to be **the solid foundation**

M&M is mindful of its rich, storied past

accomplishments and achievements.



1924

1946

*A Proud
Company*

*With a Rich
Heritage*

1971

2000



McDonnell & Miller



Since its beginning in 1924, McDonnell &

the residential, commercial and industrial HVAC

liquid level control and flow switch products.

of quality, reliability and strong customer

of the company. Today, **in the 21st century,**

and pauses to reflect on its corporate

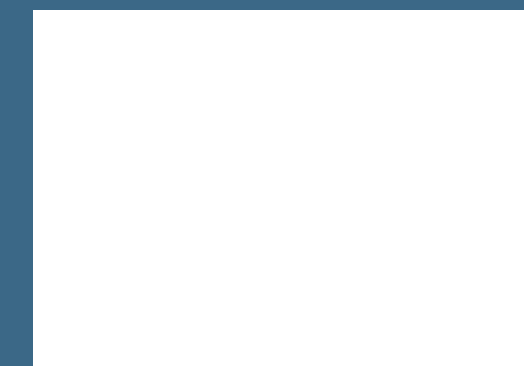
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Experts in the field, McDonnell & Miller representatives have the answers you need to your toughest boiler control questions.

Flow Switches

Flow switch options may include alternate materials, BSPT threads and connections, flow rate adjustment, enclosure types, CE conformance and more. Please consult catalog or call factory for details.

Series FS1/FS6

The Series FS1 and FS6 are designed for general and heavy-duty applications where high sensitivity is required. The FS1 is used for moderate or low flow rate systems such as air conditioning, heating and hydronic systems, water, fuel oil, some viscous liquids and oils in process work. The FS6 is used for such things as treatment systems, cooling systems for electronic circuits, compressors, booster pumps and bearings and other applications that need instant switching.



Series FS4-3

Universal design serves the widest variety of applications. The Series FS4-3 is designed to start or stop electronically operated equipment such as signal lights, alarms, motors, automatic burners, metering devices and others.



Series FS5

Designed for general applications requiring low flow-rate sensitivity. Its in-line configuration eliminates need for pipe tee. Single pole, double-throw snap switch. Sensitivity adjusting screw makes flow adjustment easy.



Series FS7-4

The Series FS7-4 features a universal design that serves the widest variety of large pipe applications, including heating and hydronic systems, air conditioning, refrigeration and process work.



Series FS8-W

The Series FS8-W is designed for general-purpose applications with environmental exposure, or those requiring a water-tight, dust-tight or a NEMA 4X-rated flow switch. Optional features include BSPT threads and gold-plated contacts.



Series AF

The Series AF provides a positive and economical way to detect change or loss of air flow velocity caused by a closed damper or fan inlet, a loose fan wheel, a slipped or broken fanbelt, a dirty or clogged filter or an overload on a fan motor switch. The Series AF1 flow switches are designed for medium and higher velocity systems. Models AF2 and AF3 are for systems with lower air-flow velocities.



Boiler Controls – Electronic



Series RB

The Series RB-24, RB-120 and RB-122 low water cut-offs guard against the dangers of low water conditions in residential hot water boilers. These UL®-listed, conductive-type water detection controls feature a quick-mount probe for easy installation, inspection or replacement. Totally electronic operation, no blow down required.



Series PS-800

The Series PS-800 low water cut-offs (24v or 120v) are designed for steam boilers up to 15 psi or hot-water boilers up to 160 psi, 250°F (121°C).



Series PS-850

The Series PS-850 is designed for residential, commercial and industrial applications on hot water boilers. Totally electronic operation; no blow down required. No lock-out with loss of power (if probe is in water). Model PS-852 meets ANSI specification Z21.13a. Maximum water pressure 250°F (121°C).



Series 750

Designed for commercial and industrial applications, the Series 750 features electronic circuitry with remote conductance probe level sensing. Model 750-MT-120 meets ASME Code CSD-1 requirements. Probe lengths 4-1/2"-36" (11.4 - 91.4cm). Maximum ambient temperature 120°F. Voltage across probe to ground 14 VAC.



Boiler Controls – Mechanical

Series 42 & 42S

Low Water Cut-Offs for Steam Boilers
The Series 42 is designed for residential, commercial and industrial low- and medium-pressure steam boilers with a separate water column. For boilers of any steam capacity. Maximum pressure 50 psi (3.5kg/cm²).



Series 47

Mechanical Water Feeders
Designed for steam and hot water boilers with cold water feed, the Series 47 can be used as a mechanical or electronic low water cut-off. Can be field upgraded with a No. 2 switch to add water cut-off function. Maximum water supply 150 psi (10.5 kg/cm²).



Series 51

Water Feeder
The Series 51 Water Feeder is designed for low-pressure steam and water boilers larger than 5,000 sq. ft. (465m²) capacity with cold water feed. Can be upgraded with a No. 2 switch to add low water cut-off function. Maximum water supply pressure 150 psi (10.5 kg/cm²).



Series 67

Low Water Cut-Offs for Steam Boilers
Designed for gas and oil-fired steam boilers (24v or 120v) of any size up to 20 psi (1.4 kg/cm²), the Series 67 Float-Type Low Water Cut-Off Control provides proven performance and easy blow down.



- For residential and commercial applications
- For boilers of any steaming capacity

- Quick hook-up fittings
- Adjustable BX outlet for easy installation

Series 93 & 94

Low Water Cut-Offs for Steam Boilers
The Series 93 is designed to maintain consistent water level, regardless of pressure, for commercial and industrial low- or high-pressure steam boilers of any capacity. Maximum pressure 150 psi (10.5 kg/cm²). No. 5 switch included.



Series 150 & 150S

Low Water Cut-Offs for Steam Boilers
The Series 150 Float-Type Low Water Cut-Off Control is designed for boiler applications up to 150 psi (10.5 kg/cm²).



Liquid Level Controls – Electronic

Series LPC 2000

The Series LPC 2000 is designed for industrial and commercial level sensing and pump control of cooling towers, tanks, water fountains, condensate units and others. Features include digital technology using micro-controller. Directly switches to 1 HP motor. Compact size. Time-delay feature prevents process disturbances from water level surges.



Series PCH & PCL

The Series PCH and PCL are designed for sophisticated multilevel control in tanks, boilers and hydronic systems. Features Teflon®-coated probes to provide protection from false signals (available on 24"-72" [610-1829mm] probes). No blow down required. Control enclosures are NEMA 1-rated and remote sensors are NEMA 4-rated. Optional features include manual reset switch, alternate pump switch and 28-volt probe.



Series 21

Make-Up Water Feeder
Designed for boiler receiver tanks. Its direct mount eliminates need for equalizing connections. Soft seat provides positive seal. Maximum water supply pressure 150 psi (10.5 kg/cm²).



Series PFC

The Series PFC is designed for proportional control of pneumatic valves or relays in heating, air conditioning and process systems in hazardous or non-hazardous locations. Provides an air pressure signal proportional to the liquid level. Available as Direct Acting or Reverse Acting. Maximum water temperature 406°F (208°C).



Series VFS

The Series VFS is a general-purpose NEMA 1-rated liquid level control for a variety of industrial and commercial applications such as boilers and tanks, high and low alarms and pumps. Can be used in pairs to start and stop auxiliary equipment between any desired levels.



Liquid Level Controls – Mechanical

Model 1A

Float-type vent with adjustable port for true proportional venting — 6 port settings from slow (1) to fast (6). Maximum operating pressure 1-1/2 psig (0.1 bar). Maximum pressure 10 psig (0.7 bar).



Model 40

Designed for ordinary one-pipe system that does not require proportional venting. Single non-adjustable port.



Model 78

Designed for use on high-pressure hot or cold water or glycol mains and process applications with specific gravity greater than 0.7. Built-in check valve.



Model 79

Designed for use on hot, cold or glycol water mains and process applications with specific gravity greater than 0.7. Built-in check valve.



Here's a look back at some of our important moments and milestones



1924

Everett Nicholas McDonnell (at left) and Pat Miller form McDonnell & Miller, Inc. (M&M), headquartered in the Wrigley building in Chicago, Illinois. The company's first products included automatic boiler water feeders for low-pressure steam boilers.



1930s

M&M recognizes immediate need for boiler safety device with the advent of oil and gas-fired boilers with automatic burners. It develops its first low water cut-off line for hot water and steam boilers. M&M is granted a patent on its development of a cold water feed valve.



1950s

M&M develops new flow switch line for steam engines and later for boilers and air conditioning. Today, the flow switch line is one of the broadest in the world, with many HVAC applications.



1986

Inspired by JIT (Just-In-Time) philosophy to improve efficiency and shorten lead time, the first manufacturing cell for the Series FS8 flow switch was established. After proven success, cells for other products were built.



1971

M&M is acquired by ITT and made part of the Fluid Handling Division, which also includes Bell & Gossett, Domestic and Hoffman Pump, and Hoffman Specialty.



1988
Hoffman Specialty Company Product line is moved to the McDonnell & Miller plant in Chicago, Illinois.



1994

M&M is the recipient of the coveted ISO 9001 Certification. These worldwide standards provide uniform measures of quality procedures in manufacturing and service organizations.

1999

McDonnell & Miller celebrates its 75th year in business.



1997

M&M became the first company in Illinois and the first North American ITT Fluid Technology division to earn the ISO 14001 Certification of worldwide environmental management system standards.

Hoffman Specialty Steam Traps and Regulators

Series B Inverted Bucket Trap

Ideal for draining air and condensate from steam lines and processing equipment, as well as applications having a lift in the return line. Series B bucket traps have optional strainers and thermic vents. And since they handle operating pressures up to 250 psig (17.3 bar) and capacities to 20,000 lb./hr., 2" (50mm) NPT traps represent the perfect complement to steam cookers, heated vats and pressing machinery.



Series 17C Thermostatic Traps

The Series 17C Balanced Pressure Thermostatic Steam Traps are for institutional, commercial and residential heating systems applications such as schools, hospitals, apartment buildings, homes or others where low or moderate water hammer may occur.



Series H Float & Thermostatic Traps

Extra-versatile piping options make the Bear Trap Series H float and thermostatic traps not only tougher, but more flexible, too. Special design inlet features two inlets and outlets for easy piping and system monitoring. Capacities to 5,300 lb./hr. Operating pressures to 175 psig, 3/4"-2" (20-50mm) NPT.



Series 650 Thermodisc Traps

If high-pressure drips and steam-tracing applications are a tough problem, the Bear Trap thermodisc steam trap is the answer. Capacities to 2,850 lb./hr. (1293 kg/hr.) and pressure tolerances to 600 psig (41.4 bar) give this model plenty of muscle. Features replaceable seat and disc for easy service. Series 655T-658T features Teflon® gaskets, which prevent contamination, sized from 3/8"-1" NPT.



Series 2000 Regulators

The Series 2000 consists of main valves, pilot valves, wells and hardware kits. It is designed to meet a wide range of temperature, pressure and capacity requirements and provide accurate, dependable low-maintenance operation.

