McDonnell & Miller, Inc.

Safety Devices for Steam and Hot Water Heating Boilers and Hot Water Tanks

3500 N. Spaulding Ave., Chicago 18, Illinois

Doing One Thing Well

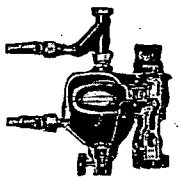
The McDonnell line consists of the following safety devices: (1) **For Low Pressure Steam Boilers** . . . Boiler water feeders, low water fuel cut-offs and combined feeders and cut-offs; (2) **For Higher Pressure Steam Boilers** . . . Pump controls, low water fuel cut-offs and low water alarms for pressures to 150 lbs, and receiver make-up water feeders; (3) **For Hot Water Space Heating Boilers** . . . ASME pressure relief valves, boiler water feeders, low water fuel cut-offs and combined feeders and cut-offs; (4) **For Domestic Hot Water Tanks and Heaters** . . . ASME pressure relief valves, temperature relief valves and combination T & P relief valves. McDonnell also manufactures liquid level controls for humidifying pans and many other applications.

1 LOW PRESSURE STEAM BOILERS

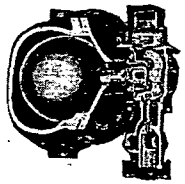
Service Recommendations

Boiler Size	Maximum Steam Pressure	McDonnell Product to Use	
		For Automatically Fired Jobs	For Hand Fired Jobs
Boiler Water Feeders and Feeder Cut-Off Combinations			
Up to 5000 sq ft	25 lbs	No. 47-2	No. 47
Above 5000 sq ft	35 lbs	No. 51-2	No. 51
Any size	75 lbs	No. 53-2	No. 53
Low Water Fuel Cut-Offs (*for Automatically Fired Jobs*)			
Any size	20 lbs	No. 67	
Any size	50 lbs	No. 63	

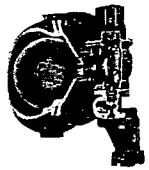
McDONNELL Boiler Water Feeders and Feeder Cut-off Combinations



McDonnell No. 47-2



McDonnell No. 51-2

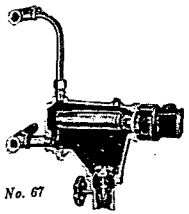


McDonnell No. 53-2

McDonnell No. 47-2 Feeds water when necessary to maintain safe water level in boiler. If water level for any reason falls into emergency zone, cut-off switch cuts burner circuit until emergency has passed. Has "Quick-Hook-Up" for installation in gage glass tappings; "cool" feed valve; extra-deep sediment chamber; stainless steel valve and seat; *ASME* approved blow-off valve. Also available for hand fired jobs without No. 2 Switch, as No. 47 Feeder.

McDonnell No. 51-2 is same as No. 47-2, except it has greater feeding capacity for larger boilers, and is installed with 1 in. equalizing pipes instead of "Quick-Hook-Up." Also available for hand fired boilers without No. 2 Switch, as No. 51 Feeder.

For boilers operating at higher pressures, from 35 to 75 lbs, use **McDonnell No. 53-2** (or No. 53, without switch).



No. 67

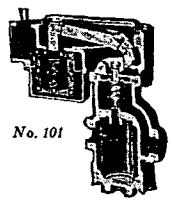
McDonnell Low Water Cut-offs
For automatically fired steam boilers of any size
Maximum steam pressure, 20 lbs.

No. 67 has McDonnell "Quick-Hook-Up" for installation in gage glass tappings; deep sediment chamber with large opening blow-off valve; packless non-binding construction; adjustable terminal box; snap-action twin switches. One switch can sound low water alarm, or control McDonnell No. 101 Electric Water Feeder; second switch cuts burner current if water level drops into emergency zone.

No. 61 has same mechanism as No. 67 but has larger body for installation with 1 in. equalizing pipes.

69 Series "Built-ins" meet same operating conditions, fit 2½ in. tappings provided by many boiler manufacturers. Order by boiler make, model.

McDonnell No. 101 Electric Boiler Water Feeder
For boilers up to 5000 sq ft capacity.

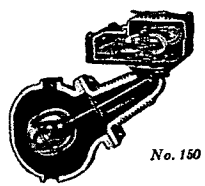


No. 101

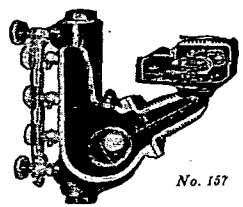
For use with No. 67 Low Water Cut-off, No. 61 or "Built-ins" which are standard equipment on many modern heating boilers. Its use converts cut-off into feeder cut-off combination.

2 HIGHER PRESSURE STEAM BOILERS

McDonnell Pump Control, Low Water Fuel Cut-off and Alarm Switch for steam boilers of any size; maximum steam pressure, 150 lbs.



No. 150



No. 157

The **McDonnell No. 150** Pump Control, Cut-off and Alarm switch for high pressure and temperature. Has two switches; one controls electric feed pump or electric valve in line to steam pump; second stops burner on greater float drop and completes alarm circuit. *Underwriters' Laboratories* approved. No. 150 has automatic reset; for manual reset order No. 150-M.

No. 157 is same as No. 150, but has integral water column which simplifies installation, assures ideal reproduction of boiler water level in float chamber, and provides effective direct blow down. Available with varying water column sizes and tappings to suit practically all conditions. No. 157 has automatic reset; for manual reset order No. 157-M. (Tri-cocks and gage glass not included.)

Operation of No. 150 or No. 157

Typical hook-up of the McDonnell No. 150 is shown at right. When water level drops, No. 150 starts pump and stops it when normal level is restored. In emergency, cut-off switch stops burner; terminals for low water alarm are also provided.

This method holds boiler water level within the close limits necessary to attain maximum steaming efficiency. Note McDonnell No. 27 make-up feeder on receiving tank. Drawings are available for all operating conditions, including two or more boilers supplied by one pump.

