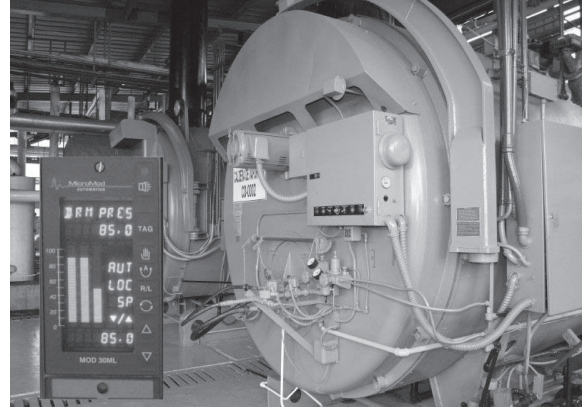


STEAMPAK Series BoilerPAK

Pressure Control for Jackshaft Boilers

- **Replaces obsolete, hard-to-maintain controls**
- **Easy upgrade from on/off to efficient modulating control**
- **Industry standard communications to HMI and Building Automation systems**
- **Online selection of Pressure Controller or Bias Station functionality**
- **Easy integration with Burner Management systems (BMS)**



SYSTEM DESCRIPTION

BoilerPAK is a pre-engineered control package that provides modulating pressure control for a single- or dual-fuel jackshaft boiler. It's ideal for upgrading on-off or proportional-only controls often supplied with a package boiler.

Unlike on-off control that causes wear on mechanical equipment and burner controls and subjects the boiler to thermal shocks every time it fires, or simple proportional-only pressure controllers that can't eliminate offset or respond to large or rapid load changes, BoilerPAK can keep your boiler firing over the whole range to maximize thermal efficiency and minimize thermal stress.

BoilerPAK can be used as a standalone pressure controller or with a plant master controller such as MicroMod's PlantPAK. It can be set up during commissioning to act as a Pressure controller receiving its input signal from a drum pressure transmitter, as a Bias Station receiving its input from a plant master controller, or as a Dual Mode controller, allowing the operator to switch between control strategies if necessary.

If the controller is set up for Dual Mode and is being used as a Bias Station, the pressure control loop tracks the output of the Bias station. If the controller is being used as a Pressure controller, the bias station tracks the output of the pressure controller. This provides bumpless transfer in the event the operator must change the function of the controller.

Inputs are provided for Low Fire, Purge and Release-to-Auto signals from the flame safety system. To provide for additional safety and ease of operation the control strategy includes mode interlocks that prevent the operator from switching to Automatic control mode if the correct Low Fire, Purge and Release-to-Auto signals are not received.

EQUIPMENT DESCRIPTION

The BoilerPAK controller includes:

- BoilerPAK controller, pre-configured for pressure control of a single- or dual-fuel jackshaft boiler
- All necessary documentation for the installation, startup and operation of the system.

The BoilerPAK controller is a multiloop controller with modular I/O. It has an integral high-visibility display with clear, informative screens for ease of operation. The base controller includes the CPU, power supply, display, and field I/O terminations. The controller memory is non-volatile RAM which contains the configured database and all current process parameters. The power supply is 85-250Vac or 24Vcd, and the front panel is designed to NEMA 4. The controller also provides failsafe and power fail-recovery settings for all configured parameters and output points. Isolated, single-point I/O protects the controller and adjacent signals from electrical damage and ensures continued operation. Each controller includes RS-485 Modbus RTU communications as standard.

BoilerPAK OPTIONS

Remote Faceplate - the BoilerPAK controller can be ordered in a flushmount package with a remote faceplate for installation in shallow panels. The faceplate can be mounted up to 8 feet (2.4 meters) from the controller body. The remote mounted faceplate is gasketed and sealed in the same manner as the standard faceplate but does not carry the NEMA 4 rating.

Backup Memory Module - provides redundant, removable nonvolatile RAM which backs up the controller database. In addition, if left on the controller during operation, it is updated every 50ms with current process data such as output values, controller mode, tuning parameters etc. This allows immediate restart of the system after a power outage or equipment failure, with the latest values.

Field Instrumentation - MicroMod can provide a pressure transmitter, O₂ analyzer and other field instruments. Contact our Sales or Customer Service department for assistance.

Custom Application Engineering - if the standard BoilerPAK configuration doesn't meet your application needs, MicroMod will work with you to develop a cost-effective solution to improve your boiler's efficiency and provide better response to load changes.

The MicroMod SteamPAK Series

BoilerPAK is just one of MicroMod's pre-engineered packages for industrial and institutional boiler controls. The SteamPAK family also includes:

DrumPAK - one, two- and three-element drum level control

PlantPAK - plant master controller, with optional lead/lag sequence control

TrimPAK - combustion control with fuel-air ratio and O₂ trim for jackshaft boilers

MeterPAK - Fully metered combustion control system with O₂ trim

BurnerPAK - Burner Management Systems

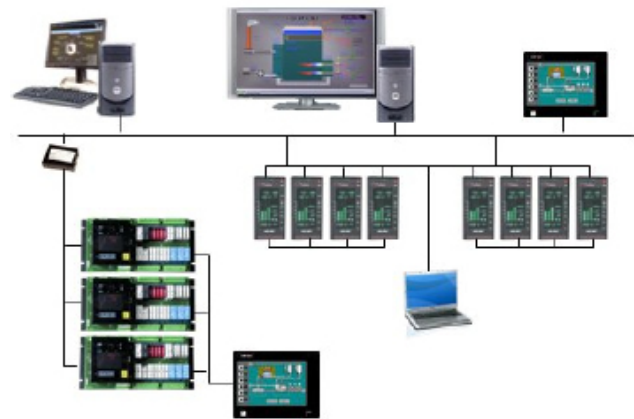
TrimPAK-PLUS - prewired combustion control panels with color touchscreen operator interface, for one or two boilers

Watchman - integrated boiler control panels for combustion and drum level control, with color touchscreen operator interface

Combustion control packages are also available for High Temperature Hot Water systems.

Plantwide System

All SteamPAK products can be integrated into a plantwide, Ethernet-based system with advanced operator stations, alarm/event logging and reporting.



Inputs / Outputs:

- Analog Inputs (4-20mA with transmitter power, isolated)
 - Steam Pressure
 - Plant Master
- Analog Outputs (4-20mA, isolated)
 - Fuel/Air Actuator
- Digital Inputs (110Vac, isolated)
 - Low Fire
 - Purge
 - Release-to-Auto
- Digital Output (110Vac, isolated)
 - Alarm Horn

Power Supply: 85-250V rms, 50-400Hz

Power Consumption (120V rms, 60Hz, Full load):
50W maximum

Operating temperature: 0 to +50°C

Storage Temperature: -40 to +75°C

Humidity: 5 to 95% RH, noncondensing

ORDERING INFORMATION

BoilerPAK is a licensed package. The following end-user information must be supplied with each package ordered:

- End-user Company Name
- Complete Address
- Contact Name
- Telephone Number
- Fax Number

	BLR	00	06	07	B
	01 - 03	04-05			08
BoilerPAK Jackshaft Controller	BLR				
Reserved Reserved Characters		00			
Mounting Standard Remote Faceplate			0 1		
Operator Language English Spanish				E S	
Design Level Design Level					B

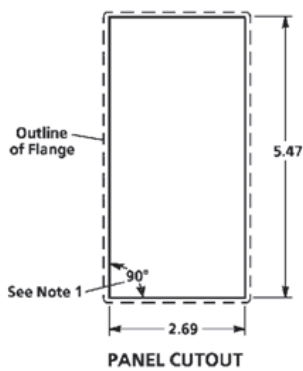
Available Options (please specify on order):

Backup Memory Module (blank)

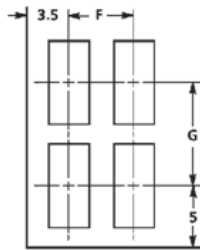
Field Instruments (pressure measurement / transmitter)

Custom Application Engineering - per hour

MOUNTING DIMENSIONS



DISTANCE BETWEEN CENTERS

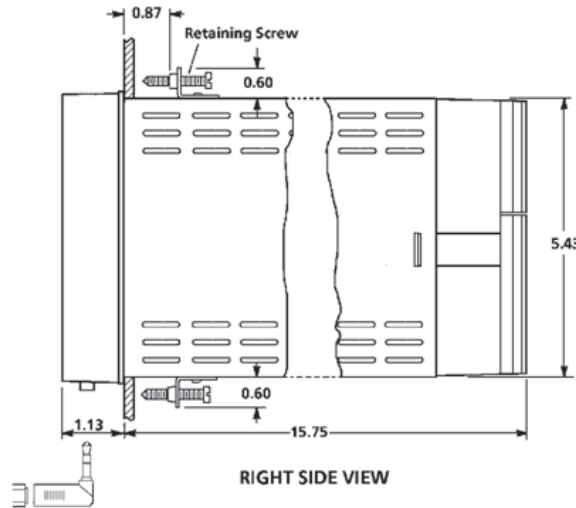
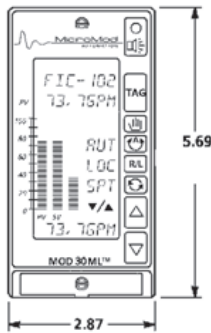


Distance between centers when mounting multiple controllers (inches)

	F	G
Recommended	4.0	8.0
Minimum	3.5	7.0

Notes:

- When mounting housings in a panel or in a rack with a bezel turn the retaining screws until the point touches the back of the panel or rack. Excessive tightening of retaining screws can distort the housing. The housing must be square after adjusting retaining screws.
- All dimensions in inches (mm)



inches	mm	inches	mm
0.6	15.2	5.43	137.9
0.87	22.1	5.47	138.9
1.13	28.7	5.69	144.5
2.69	68.3	7	177.8
2.87	72.9	8	203.2
3.5	88.9	15.75	400
4	101.6		

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