Pressure control is the simplest and most immediate method of reducing leakage. However, without electronic control, a PRV (Pressure Reducing Valve) must be set up to ensure a guaranteed minimum pressure to the critical (usually highest) point in the network under “worst case” maximum flow conditions. During periods of lower flow, this set up leads to higher pressures than are necessary.

Active pressure management using PRV controllers enables pressure to be optimized with changing demand.

ControlMate-FM allows the pressure into a zone to be continually adjusted to any desired value, which is intelligently calculated by the controller according to the zone’s actual demand (flow modulation) or according to a pre-programmed time of day.

The ControlMate range enables the outlet pressure of a PRV to be controlled reliably and safely.

**KEY BENEFITS**

- Maximum potential water savings.
- Improved level of service to consumers.
- Continuously variable outlet pressure profiling.
- Eliminates pressure “shocks” to system – reducing burst frequency.
- Outlet pressure can be set remotely – no need to visit site.
- Optimise profile according to demand or time (e.g. summer/winter)
- In-built pulse unit failure (zero flow) detection and automatic response.
- Modular construction for ease of access to controls.
- Fully compatible with Hydraulic Actuator.
- GSM/SMS/GPRS communication available.
- No external power supply requirements.
- Powered by an internal battery with an expected operational life of over five years.
**Display Type**
2 line x 16 character backlit super-twist

**Communication & Programming**
Local interface: Sealed local display, with 2 push-button switches
Infra-red communication: Ultra-high speed 20kBaud link via I/R probe to standard RS232 port on PC
Telemetry: Connector for multi-communication options: BABT-approved internal modem or multi-communication link for PAKNET, GSM, radio, etc.
SMS/GSM/GPRS communication available via ControllerCom add-on

**Pressure Channel**
Sensor type: Inbuilt pressure transducer 0-16 bar as standard, but other ratings are available on special request. External transducers optional.
Accuracy: Typically - 0.2% of full-scale range
Pressure connection: Quick-fit nickel plated brass connector and push-fit 6mm connector

**Flow Channel**
Sensor type (pulse input): Solid state PD10, LRP, PSM or any other form of volt-free pulsed signal
Input frequency: 0-100Hz pulse input, requiring minimum mark 10mS, minimum space 10mS
Connector: 10-pin military specification, to IP68

**Data Storage**
Channels: 2 pressure + 1 flow (additional flow optional)
Memory capacity: (120kbytes scrolling memory with storage for 60,000 values
Logging interval: 10s, 30s, 1min, 5min, 15min, 60min
Sampling interval: As above but independent of logging interval

**Power Source**
Battery type: Fully-sealed internal lithium batteries with expected operating life of 5 years or more

**Operating Environment**
Temperature: -15ºC to +60ºC, must avoid freezing of water connections
Operating pressure range: Depends on configuration, but the maximum downstream pressure not to exceed 90m

**Physical Characteristics**
Construction: Modular two-part die cast aluminum housing with handle
Dimensions: 2 parts of 325mm x 143mm x 80mm
Weight: 2 x 3.5kg
Protection: to IP68

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**Before pressure management:** Constant pressure throughout a week of fluctuating daily demand.
Total flow into the zone of 3 million gallons in one week.

**After pressure management:** Pressure is now closely matched to demand. Total flow of 2.8 million gallons in the week. Water savings of 200,000 gallons!