



F L O W M E T E R I N G E Q U I P M E N T

*Product Summary*

HVAC  
Commercial  
Products



1-800-632-7337

www.preso.com

# Product Summary

## B+ Balance Flow Control

Preso's B+ balancing valves are Venturi style, manual balancing valves offered in sizes 1/2" to 10". The B+ features Preso's "Low Loss" Venturi design, unsurpassed in the industry for low permanent pressure loss and low energy consumption. The 1/2" to 2" models are constructed of brass with sweat or FNPT process connections. Larger size models ranging from 2-1/2" to 10" are constructed of cast iron and are available with flanged class 125# or grooved coupling ends. Class 250# flanged valves are available from 2-1/2" to 4".

### Features:

- Installs with minimal upstream and downstream piping requirements
- Mounts in any position
- Fixed orifice – allows for quick and accurate balancing
- Available in 15 sizes from 1/2" to 10"
- Memory lock mechanism handle for sizes 1/2" to 10"

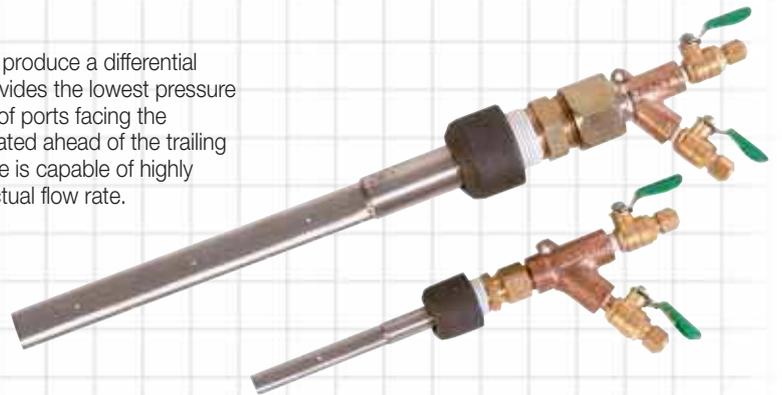


## BAR Ellipse® Annular Element

The Ellipse annular flow device is a primary flow sensor designed to produce a differential pressure that is proportional to flow. Its patented elliptical shape provides the lowest pressure loss in the industry. The Ellipse flow meter is designed with a series of ports facing the upstream velocity pressures and flow sensing ports strategically located ahead of the trailing edge flow separation. As a result of this innovative design, the Ellipse is capable of highly accurate, precise flow measurements that are proportional to the actual flow rate.

### Features:

- Turndown ratio of 17:1; no vacuum effects
- No vortex generation
- Accuracy of  $\pm 3/4\%$  uncalibrated
- No moving parts equals long, trouble-free service life



## BHL Ellipse® Annular Hot-Tap Element & BHR Ellipse® Annular Wet-Tap Element

The Ellipse annular flow device is also offered in a hot-tap or wet-tap version. The BHL Annular Hot-Tap Element is suitable for high pressure applications in pipe sizes from 2" to 24". Preso also offers the model BHR used for wet-tap low pressure installations in pipe sizes beginning at 2" up to 24". The models BHL and BHR utilize the same patented design as the BAR to produce a differential pressure that is proportional to flow.

### Features:

- Accuracy of  $\pm 3/4\%$  uncalibrated
- Repeatability of  $\pm 0.1\%$  of readings
- Hot-Tap models can be installed without system shutdown
- Low installation cost
- Wet-Tap models can be installed without draining the system



## BIN Pitot Tube

The BIN is a highly reliable averaging Pitot tube which generates a pressure differential between its upstream (stagnation) ports and its downstream (static) ports that is proportional to the flow rate squared. It can be used to measure liquid or air in pipe sizes between 2" up to 24". An opposite side support is supplied standard on pipe sizes 8" and larger.

### Features:

- Accuracy of  $\pm 3\%$
- Easy, low-cost installation - great for retrofits
- Very low pressure drop
- Bi-directional flow measurement capability



# Product Summary

## ThermoTrack® Energy Flow Management System

The ThermoTrack Ultrasonic Transit Time Flow Management System is a non-invasive HVACR energy flow monitoring solution for commercial and industrial buildings. ThermoTrack is built on a non-invasive platform, as a result all system components clamp to the outside of existing pipe, making it ideal for retrofit applications. Simply strap the flow and temperature transducers to the outside of the pipe wall and the system is ready to measure. In addition, several units can be daisy-chained and wired into a single personal computer for a convenient central monitoring and billing system. ThermoTrack's design is inexpensive to install; requiring no rebuilding, no system drainage, and no system downtime all resulting in measurable cost savings.

### Features:

- Suitable for conductive liquids
- Digital output to a PC for energy monitoring/billing of discrete units within a building
- PC communications (com) port supports a 3-wire network that can contain up to 128 discrete ThermoTrack energy units
- All meter components clamp to the outside of the pipe - no downtime for installation



## CV Venturi

The CV Venturi Flow Meter is a differential pressure element designed to accurately measure the flow of liquids, gases or steam by forcing the flow into a smaller diameter section of pipe, then measuring the pressure differences between the unrestricted flow and the restricted flow. It can easily be installed in any position with minimal straight pipe requirements (5 pipe diameters upstream and 2 pipe diameters downstream).

### Features:

- Accuracy of  $\pm 2\%$  of readings uncalibrated
- Repeatability of  $\pm 0.1\%$  of readings
- Turndown ratio of 10:1
- Low permanent pressure-loss design
- Available in sizes 1/2" to 48"



## Air Flow Measuring Station

Preso manufactures three air flow station models: AYR, SYR-RYR, and SYP-RYP. Preso's stations use the patented "Ellipse" elliptical shaped flow sensors. Sensors are available in multi-point averaging formats and complete duct section flow stations with averaging arrays.

### Advantages and features include:

- Light weight
- Easy installation
- High accuracy
- Low cost

### Models:

- AYR Model - insertion style sensor (rectangular or circular ducts)
- SYR-RYR - ASHRAE averaging array (rectangular or circular ducts)
- SYP-RYP - ASHRAE averaging array (rectangular or circular ducts with built-in flow straighteners)



## GM & GMD Differential Pressure Gages

Preso GM & GMD gages accurately measure differential pressure between two points. Offered in a variety of mounting configurations such as flush panel, pipe and surface mount or select a portable kit for field applications. Both the lightweight GM portable kit and the GMD Direct-Readout Meter are suitable for differential pressure measurement across Venturis, Pitot tubes, orifice plates, filters, heat exchangers, etc. The GM & GMD gages come equipped with a large dial that features a 270° arc for fast and accurate readings.

### Features:

- Accuracy is  $\pm 1-3/4\%$
- Maximum line pressure is 500 psi
- Maximum overpressure is 60 psi
- Maximum temperature is 180 °F
- GMD provides readout in flow units



# Preso Case Study

## Background

Energy management is one of the most critical aspects of building maintenance and operations. Recently, one of the largest property management companies in North America contacted Preso with a special challenge: the tenants of a large telecommunications building were unhappy with the way they were being charged for energy use. Since energy bills were based only on square footage, customers using less energy to cool their offices and equipment were subsidizing the energy bills of customers using more. This discrepancy was not acceptable.

## The Challenge

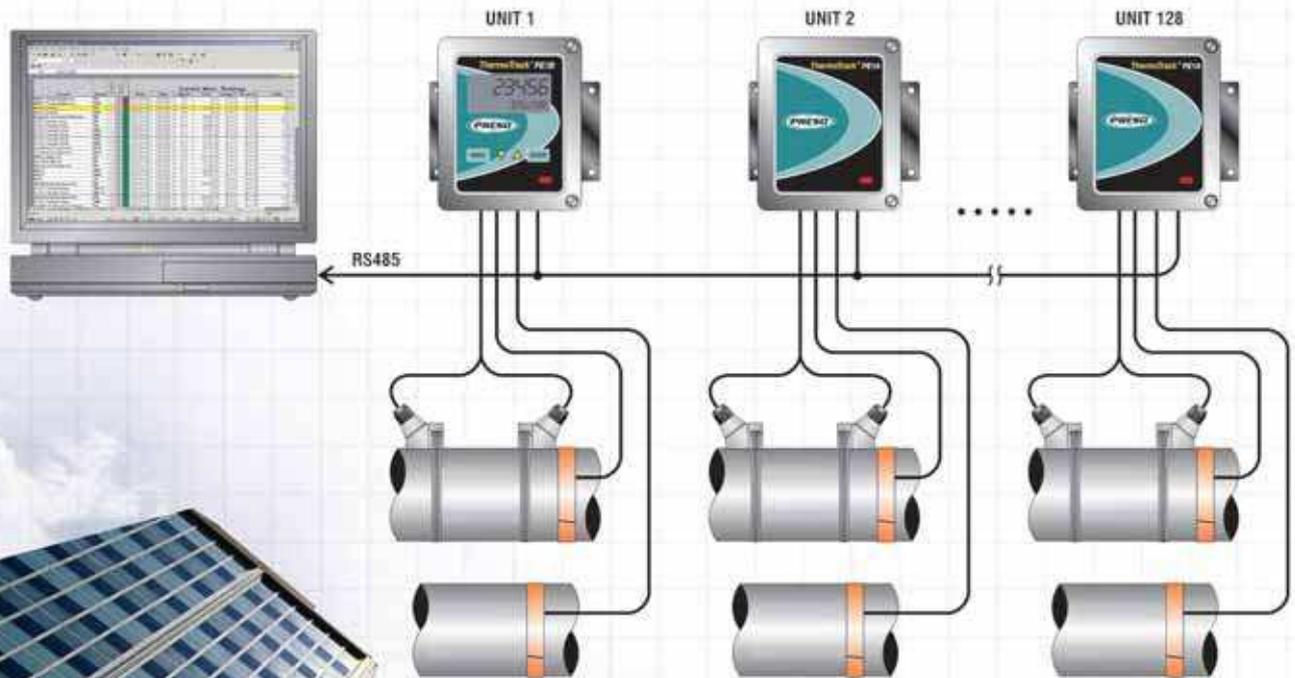
Install an energy metering system that will allow individual tenants to be billed only for the energy they use. Because of the building's existing infrastructure, the system must drop in easily, with little or no downtime. Finally, the operation of this system must not add significant costs to building management.

## The Solution

Preso's ThermoTrack® Energy Flow Management System - a completely non-invasive meter that measures flow and temperature on supply and return water lines. ThermoTrack combines transit time ultrasonic technology with highly accurate temperature sensors to provide precision energy measurement in BTUs, Watts, calories or tons.

The non-invasive design is inexpensive to install, requiring no downtime, no rebuilding and no interference with the operation of the existing HVAC system. Simply strap on the flow and temperature transducers and the system is ready to measure.

With the ThermoTrack and a PC, up to 128 discrete energy zones may be monitored on a single three-wire RS485 digital communication network. With the addition of a simple software file used with Microsoft® Excel, a single individual at one computer can administer a cost-effective energy station for an entire building. Software features include real-time energy rate and temperature sampling, totalization in selectable units and time frame, and meter status checking. Most importantly, with the ThermoTrack system, tenants may be billed only for the exact amount of energy that they use.



FLOW METERING EQUIPMENT

8635 Washington Avenue, Racine, WI 53406-3738 USA  
Toll Free: 800-632-7337 • Tel: 262-639-6770 • Fax: 262-639-2267

Preso, Ellipse, and ThermoTrack are registered trademarks of Racine Federated Inc. • Windows is a registered trademark of Microsoft Corporation

**1-800-632-7337**

**www.preso.com**

**info@preso.com**

©2005 Preso Form #4-25-05 Rev.1 4/05 Printed in USA