

### Smart pumping your entire system

Here's a giant leap forward for variable speed pumping: the Self-Sensing Series with ProBalance®. At the heart is the patent pending SelfSensing ProBalance technology. The VFD's SelfSensing capabilities make fast, accurate do-it-yourself system balancing easy. Reduced balancing contractor costs, no expensive wiring, and no additional sensors required. Apply to ALL your pumping needs: both constant flow chiller/boiler pumps and secondary variable flow pumps! Now also available ECM motor options and eLink™.

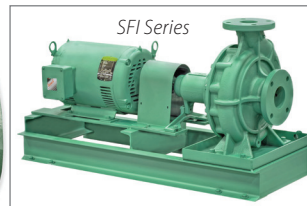


KV/SKV Series

Pump-Mounted Drive



Wall-Mounted Drive



SFI Series



SCI Series

Optimized Efficiency **O<sub>e</sub>**  
Featuring **ECM** Technology

Self**Sensing** Series  
WITH **ProBalance**®

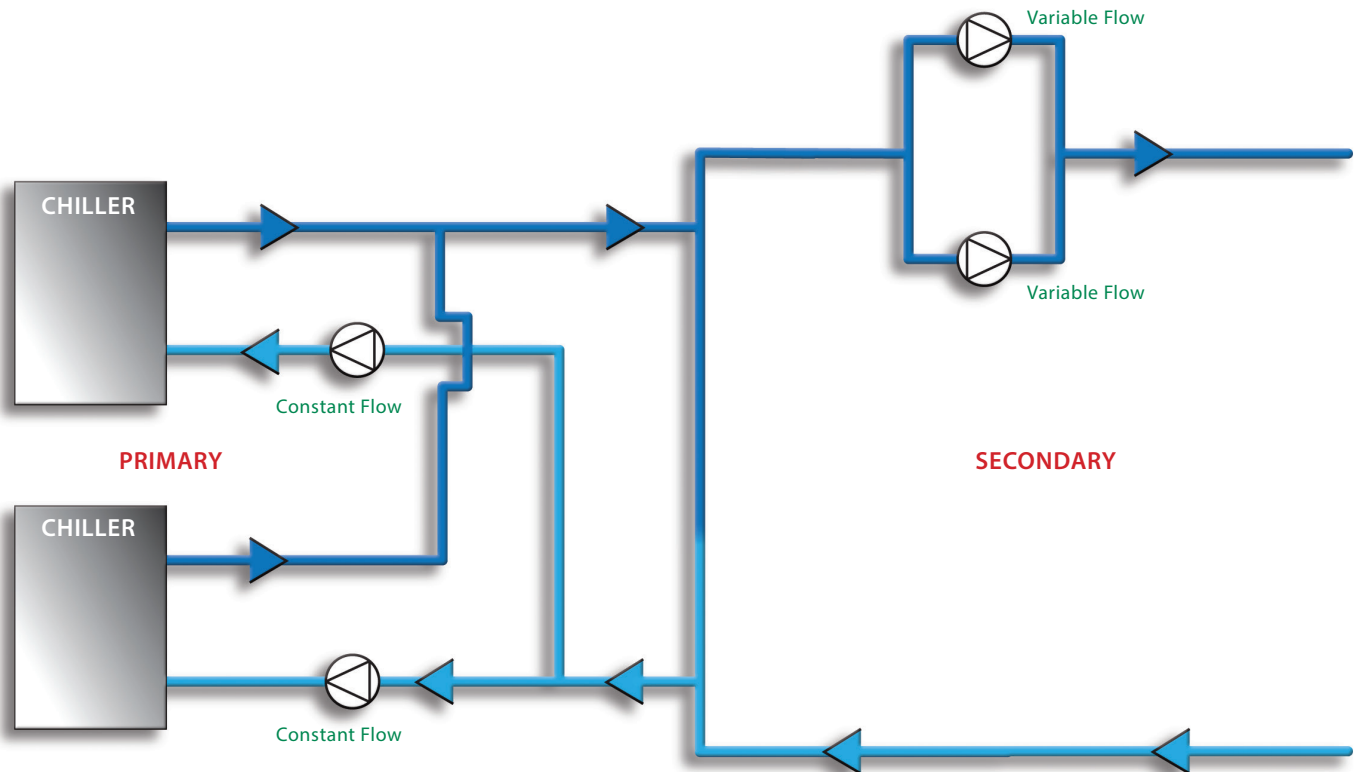


## The benefits of Constant Flow SelfSensing pumps:

- Balancing through reduced speed – not false head
- Reduced speed increases equipment life
- Auto-adjust over the life and fouling of the system
- SelfSensing ProBalance® reduces balancing contractor expenses and hassles

## The benefits of Variable Flow SelfSensing pumps:

- Lower install costs – no sensors or wiring
- No error in setpoint
- Improved system efficiency and performance
- Reduced coordination and construction schedule with SelfSensing ProBalance®

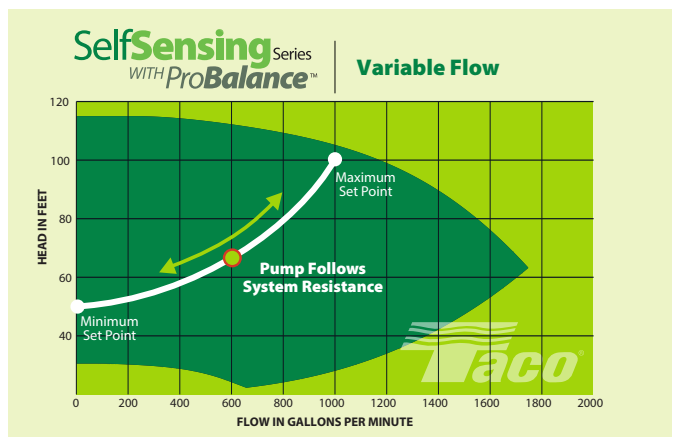
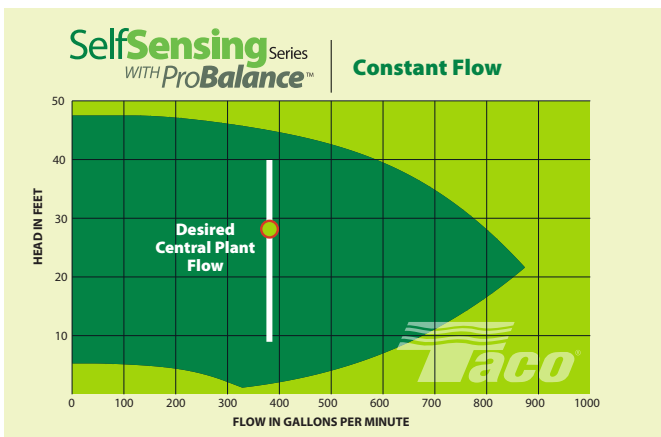


### Constant Flow Mode

SelfSensing CONSTANT flow is self-balancing and automatically adjusts speed to maintain user-defined flow set point.

### Variable Flow Mode

SelfSensing VARIABLE flow adapts to system pressure variations and automatically follows the system resistance curve to meet demand.



## A giant leap forward for variable speed pumping

The Self-Sensing Series with ProBalance®. At the heart is the patent pending SelfSensing ProBalance technology. The VFD's SelfSensing capabilities make fast, accurate do-it-yourself system balancing easy. Reduced balancing contractor costs, no expensive wiring, and no additional sensors required. Apply to ALL your pumping needs: both constant flow chiller/boiler pumps and secondary variable flow pumps!

- Integrated pump and drive
- Pump automatically responds to system demand changes
- No remote sensors
- No complex wiring
- Multiple modes:
  - Constant flow
  - Constant pressure
  - Flow compensation
  - Duplex pump alternation

## Parallel Pumping Configuration

The SelfSensing Modulating Pump Controller (MPC) stages individual pumps in parallel configuration for best overall pumping efficiency. The MPC is capable of operating 2 to 4 pumps in parallel for maximum efficiency. The Sensorless Parallel Pump Controller provides single building automation systems connection in either BACnet MSTP or Modbus.

## The ultimate in pump protection and electrical safety.

The SelfSensing Series also features automatic alerts with optional shutdown for no-flow, dry-run, and end-of-curve operation. That means the seal is safe should someone forget to open a valve or to run the pump without water. What's more, the unit is electronically protected for overload and locked rotor conditions per UL 778 and CSA C22.2 No. 108, so the motor is protected — a real crowd pleaser for insurance companies.



## Presenting DIY Balancing

Every HVAC pump needs to be balanced by an expert who must account for construction variables and safety factors. Whether constant or variable speed, the balancing process has to be addressed at commissioning and startup. But what if you could zero in on the true system resistance without inducing false head and balance the pump yourself? You can with Taco's SelfSensing ProBalance® technology.

## The benefits of Do-It-Yourself balancing:

- You'll have control over your construction schedule and subcontractors
- Reduced installation costs
- You can help a LEED team get a job into their budget



## What kind of savings can you expect?

Balancing a constant flow system with Taco drives saves lots of energy and increases pump life dramatically. For example, a pump that would have run at 1750 rpm @ 60hz is balanced with technology to run at 1458 rpm @50hz. Now the pump consumes 57% of the horsepower and runs 291 fewer revolutions per minute. The savings translate to 419,000 cycles per day or 150M fewer cycles very year. As a result, the pump lasts longer, requires less maintenance, and uses less energy.

To illustrate, using best practices and balancing with drives saved a Tennessee hospital \$3,000 in yearly electrical costs on 100 hp chiller pumps running at 47 hz instead of 60 hz.

*ProBalance® feature not available in Parallel Pumping Configuration.*

## High Performance Packages

### Take your system to the next level with Taco's *Optimized Efficiency Packages*.

In today's environment, hydronic systems need to be up to date with the latest technology. The market is now driven towards high efficiency solutions by ever increasing regulations and environmental factors. Whether you need the best efficiency to combat high utilities or to reduce your carbon footprint, Taco has you covered.



By utilizing Permanent Magnet motor technology, Taco is bringing the largest ECMs available to the hydronic industry. In combination with our pumps, we aim to optimize your overall efficiency with the latest technology available. Don't get caught wishing you had a more efficient system, lead the charge with pumps that exceed regulations, utilize the latest technology available, and decrease total cost of ownership.

#### Features

Horsepower Range.....3 - 10hp  
RPM ..... 1750  
Voltage Options:  
3-10 HP = 230V/460V/60/3  
Motor Enclosure Type.....3-10 hp = TEFC  
Drive Enclosure Options ....NEMA 1, NEMA12, NEMA4X

#### Benefits

- Longer service life, more uptime and higher reliability
- Increased performance, quieter & smoother operation
- Reduced lubrication frequency, resulting in lower maintenance costs
- Low operating temperature
- Flatter motor efficiency profile than the equivalent induction motor as the speed & load decline

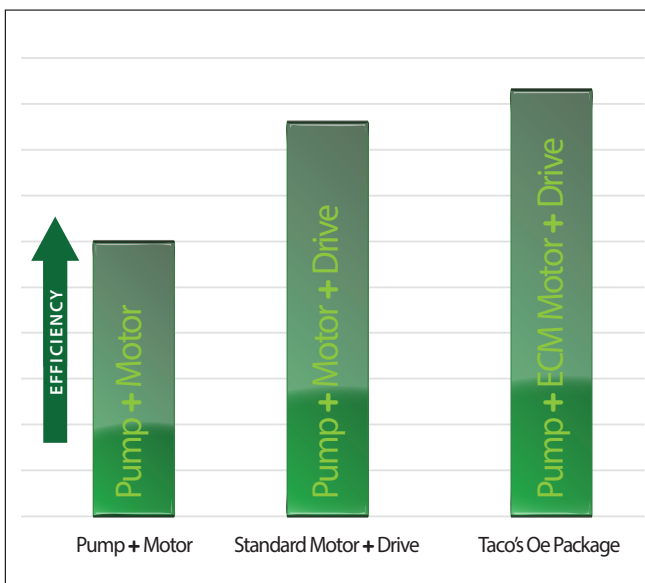
#### Oe Package

The Taco Oe package is designed to increase total efficiency. Taco not only meets, but exceeds the regulations passed down from the DOE. In doing so, we also deliver a complete package to our users that saves on energy and the environment.

Our Oe package is simple, we take our pump, add a Permanent Magnet motor, and top the equipment off with a drive to increase your savings at slower speeds! Taco is the first company to bring ECM technology to hydraulic pumps up to 10hp.

#### Oe Package including SelfSensing with ProBalance

Everything the Oe package has to offer and the added benefits of the Taco programmed SelfSensing Drives! Increase your performance with the Taco SelfSensing drives included with the Permanent Magnet motor pumps for the best energy rating Taco has to offer. The added benefits of DIY balancing will decrease the total cost of ownership over the lifetime of the pump.



*A Variable Frequency Drive is required to operate the Permanent Magnet motor. The Oe package cannot be sold without a drive.*



Taco Inc., 1160 Cranston Street, Cranston, RI 02920 / (401) 942-8000  
Taco (Canada) Ltd., 8450 Lawson Road, Unit #3, Milton, Ontario L9T 0J8 / (905) 564-9422