



**Commercial  
hydronics  
experts.**

  
**Taco**<sup>®</sup>  
systems made **easy**<sup>®</sup>  
[www.taco-hvac.com](http://www.taco-hvac.com)

## FI Series Pumps

### End Suction Split Coupled Base/Frame Mounted

GPM: 40 - 4,000  
Head (ft): 10 - 380  
HP: 1/3 - 200  
SIZES: 1-1/4" — 10"



Cast iron casing with integrally cast feet enables pump to be bolted to base for sturdier installation. Allows for back pull without disturbing piping.

Low-cost, replaceable wear rings protect casing during normal operation.

Standard ceramic seals promote product flexibility, enabling basic

product offering to meet a wide range of application requirements.

Dry shaft design ensures shaft is never exposed to system fluid, eliminates need for expensive corrosion-resistant shaft, and simplifies sleeve and seal removal/reassembly.

Rear pullout design allows pump to be serviced without disturbing system piping.

1/4 NPT pressure tapping on suction and discharge connections.

Easy-to-replace slip-on shaft sleeve facilitates seal maintenance in the field and lowers long-term maintenance costs.

Flush seal line tap allows installation of filter to protect seal from particles present in open systems.

Top centerline discharge design simplifies piping layouts, reduces piping strain, and makes the pump self-venting.

## CI Series Pumps

### End Suction Close Coupled Foot Mounted

GPM: 40 - 2,200  
Head (ft): 10 - 380  
HP: 1/3 - 50  
SIZES: 1-1/4" — 8"



Flush seal line taps allow for installation of filter to protect seal from particles present in open systems.

1/4 NPT pressure tapping on suction and discharge connections.

Standard ceramic seals promote product flexibility, enabling basic product offering to meet a wide range of application requirements.

Low-cost, replaceable wear rings protect casing during normal operation.

Top centerline discharge design simplifies piping layouts, reduces piping strain, and makes pump self-venting.

Cast iron casing with integrally cast feet enables pump to be bolted to a housekeeping pad for sturdier installation and still allow back pullout without disturbing the piping.

Dry shaft design ensures shaft is never exposed to system fluid,

eliminates need for expensive corrosion-resistant shaft, and simplifies sleeve and seal removal/reassembly.

Easy-to-replace slip-on shaft sleeve facilitates seal maintenance in the field and lowers long-term maintenance costs.

Rear pullout design allows pump to be serviced without disturbing system piping.

## KS Series Pumps

### Vertical In-Line Split Coupled

GPM: 40 - 12,000  
Head (ft): 10 - 380  
HP: 3/4 - 600  
SIZES: 1-1/2" — 14"



Designed for optimum performance and ease of installation and maintenance. Ideal for HVAC and industrial applications.

The split coupler design permits changing of the seal without disturbing the motor or the piping.

The axial load is hydraulically balanced to increase bearing life, better

pump efficiencies, and lower NPSH requirements.

The recirculating line flushes seal faces and extends seal life.

Optimum pump efficiency is achieved by close running impeller to casing clearances.

## KV Series Pumps

### Vertical In-Line Close Coupled

GPM: 40 - 2,400  
Head (ft): 10 - 380  
HP: 3/4 - 100  
SIZES: 1-1/2" — 8"



Designed for optimum performance and ease of installation and maintenance.

Ideal for HVAC and industrial applications.

Space saving design that doesn't require isolation pads.

Closed coupled design provides improved alignment and increased seal life.

The axial load is hydraulically balanced to increase bearing life, better pump efficiencies, and lower NPSH requirements.

The recirculating line flushes seal faces and extends seal life.

Optimum pump efficiency is achieved by close running impeller to casing clearances.

## GT Series Pumps Horizontal Split Case

GPM: 2,000 - 18,000  
Head (ft): 20 - 430  
HP: 30 - 1,500  
SIZES: 10" — 18"



GT Series Single-Stage, Double Suction Horizontal Split Case Pumps provide the ultimate in reliability and ease of installation

- Cast Iron Pump Casing
- High-efficiency Double Suction Bronze or Stainless Steel Impeller
- Carbon Steel or Stainless Steel Shaft
- Bronze or Stainless Steel Shaft Sleeve
- Mechanical Seal Handles a wide range of applications with superior longevity

## TA Series Pumps Horizontal Split Case

GPM: 100 - 5,500  
Head (ft): 15 - 390  
HP: 1 - 400  
SIZES: 2" — 12"



Impeller is designed to assure minimum NPSH requirements and maximum pump efficiency.

Mechanical seal option reduces shaft length and minimizes shaft deflection, thereby increasing both seal and bearing life.

Double suction design virtually eliminates axial thrust and reduces bearing loading, promoting maximum bearing life.

Rugged, heavy-duty casing design allows higher working pressures, provides greater structural integrity, and reduces the risk of distortion.

Top half of casing is easily removed for easy service of the rotating unit without disturbing piping.

Low-cost, replaceable wear rings protect casing during normal operation.

## TC Series Pumps Vertical Split Case

GPM: 100 - 11,000  
Head (ft): 15 - 500  
HP: 1 - 400  
SIZES: 2" — 12"



TC Series Single-Stage, Double Suction Vertical Split Case Pumps provide the ultimate in reliability and ease of installation for heating, air conditioning, pressure boosting, cooling water transfer, and water supply applications.

Quiet, dependable and proven performance: that's the TC Series.



## VT Series Pumps

### Vertical Turbine

GPM: 60 - 7,500  
Head (ft): 10 - Several thousand  
HP: 1/2 — 300  
SIZES: 6" — 18" Bowls  
4" — 12" Heads



Taco VT Series Vertical Turbine Pumps provide the ultimate in reliability and ease of installation. Applications include condenser water, chilled water, water transfer, pressure boosting and water supply. Quiet, dependable, with proven performance: that's the Taco VT Series of pumps.

- Ductile iron discharge heads
- 250 psi ductile iron stuffing box with stainless steel packing glands
- Steel baseplate (option)
- Standard 416 stainless steel shafting & couplings
- Assembled with stainless steel bolts and impeller collets
- Stainless steel basket strainer (option)

- GE and US VHS motors standard with non-reverse ratchet and space heaters
- High profile discharge head allows 2 piece head shaft
- Dual 1/4" air release ports at top of discharge flange
- 4" thru 10" discharge heads have matching centerlines
- Stainless steel bearing retainers
- Investment cast stainless steel impellers
- Epoxy lined cast iron intermediate bowls

## VM Series Pumps

### Vertical Multistage

GPM: 2 - 115  
Head (ft): 300 - 825  
HP: 1/2 — 25  
SIZES: 1-1/4" — 2"



These pumps are designed to efficiently circulate heated or chilled water in large residential and commercial hydronic or solar systems.

- Proven Performance
- Dependable, Quiet Operation
- Built to Last—Quality design, materials and construction throughout.
- Rugged Motor—Available in single and three-phase and all standard voltages. (Built-in overload protection on single-phase models.)
- 100% Factory Tested

## 1600 Series Pumps

### In-Line

GPM: 20 - 200  
Head (ft): 10 - 68  
HP: 1/4 — 3  
SIZES: 1-1/2" — 2"



Rugged casing design has maximum operating pressure of 175 psi and a maximum operating temperature of 300°F. The 1600 Series is offered in cast iron bronze-fitted or all-bronze construction.

Permanently lubricated long-life bearing cartridge replaces conventional "wick" type bearing/bracket assembly. Single bearing cartridge services the entire product line.

One-piece enclosed impeller assures long life and higher pump efficiencies.

Standard mechanical seal assures maximum flexibility. One seal fits all models; several materials available.

Flexible coupler absorbs shock, vibration and misalignment that could be transmitted to the car-

tridge and motor bearings while also isolating and preventing any motor related noise or vibrations from being transmitted to the system.

Resilient mounted motor ensures quiet, reliable pump operation.

One bearing cartridge, one seal, and two motor frames fit all pump models, assuring superior parts flexibility.

## 1900 Series Pumps

### Close Coupled

### In-Line

GPM: 20 - 250  
Head (ft): 10 - 160  
HP: 1/4 — 7-1/2"  
SIZES: 1-1/2" — 2"



Close coupled compact design is energy efficient and installs anywhere in the piping layout.

Self-supporting design allows horizontal or vertical installation.

Pump and sealed ball bearing motor are maintenance-free

Rear pullout design and standard motor promote simple, easy service.

One seal and shaft sleeve fits all models, assuring superior parts flexibility.

## 2400 Series Circulators

### In-Line

GPM: 10 - 140  
Head (ft): 2 - 50  
HP: 1/10 — 1/2  
SIZES: 3/4" — 3"



## 110-120 Series Circulators

### In-Line

GPM: 5 - 65  
Head (ft): 2 - 22  
HP: 1/12 — 1/3  
SIZES: 3/4" — 2"



## 121-138 Series Circulators

### In-Line

GPM: 10 - 150  
Head (ft): 5 - 38  
HP: 1/4 — 1  
SIZES: 2-1/2" — 3"



## SCX1700 Series Pumps

### Stainless Steel Close Coupled

GPM: 10 - 100  
Head (ft): 25 - 135  
HP: 1/2 — 2-1/2  
SIZES: 1" — 1-1/2"



## 00® Series Circulators

### Cartridge / Wet Rotor

GPM: 0 - 50  
Head (ft): 0 - 35  
HP: 1/40 — 1/6  
SIZES: 1/2" — 2"



## Variable Speed 00® Series Circulators

### Cartridge / Wet Rotor

GPM: 0 - 50  
Head (ft): 0 - 35  
HP: 1/40 — 1/6  
SIZES: 1/2" — 2"



## 3-Speed 00® Series Circulators

### Cartridge / Wet Rotor

GPM: 0 - 29  
Head (ft): 0 - 21  
HP: 1/20  
SIZES: 3/4" — 1-1/2"



## LoadMatch® Series Circulators

### Cartridge / Wet Rotor

#### Commercial

GPM: 0 - 50  
Head (ft): 0 - 35  
HP: 1/40 — 1/6  
SIZES: 1/2" — 2"





## Plus Two Multi-Purpose Valve

### Horizontal or Vertical installation

GPM: 20 - 10,000  
SIZES: 1-1/2" — 14"



Five (5) Valves in one:

- Shut-off valve
- Flow Control Valve (Globe Style)
- Non slam check valve
- Flow Metering Valve
- Straight Pattern Valve can be converted to a right angle pattern valve

Low pressure drop (Equal to or better than any comparable valve on the market today)

Suitable for 125 and 250 PSI W.P.

## Suction Diffuser Rear Strainer Pullout (RSP)

### Suitable for 125 & 250 PSI W.P.

GPM: 20 - 10,000  
SIZES: 1-1/2" — 16"



Full Length Straightening Vane Assembly ensures uniform flow to the suction inlet of the pump

Oversized Body Cylinder ensures minimal pressure drop

Removable Cover Plate and reusable "O" ring allows for easy access and maintenance of Permanent Strainer

Blow Down port allows for routine maintenance and removal of sediment and debris

Optional Magnetic Insert to trap small metallic particles

Specifically designed to serve the needs of commercial HVAC and industrial applications.

## Accu-Flo Balancing Valve

### Fixed Port Venturi Balancing Valve

GPM: 1/2 - 1000  
SIZES: 1/2" — 4"



Flow measurement independent of stem and ball position.

Modified venturi flow measurement section ensures precise and consistent differential pressure readings.

Positive shut-off ball valve for service work.

Can be installed in any position

Tamper resistant memory stop

1/2" – 2" available in sweat and NPT connections.

2-1/2", 3" and 4" available flanged connections.

## Plate & Frame Heat Exchangers

**ASME designed and constructed**

GPM: 50 - 7000

CONNECTION SIZES: 1" — 20"



Computerized product selection helps you choose the heat exchanger that's just right for your application. Their compact size and ease of servicing, coupled with Taco dependability, make the PF Series the perfect choice.

## TFP & TMP Brazed Plate Heat Exchangers

**ASME designed and constructed**

GPM: 1 - 200

5" x 12" and 10" x 20"

CONNECTION SIZES: 3/4" — 2"



Rugged, reliable Taco Brazed Plate Heat Exchangers represent the latest technology in high-performance heat exchangers.

These compact units feature copper brazed, stainless steel plates that offer a highly-efficient, low fouling transfer service. All units have male pipe thread fittings and mounting stud bolts are standard.

## Shell & Tube Heat Exchangers

**U and Straight  
Steam to Liquid  
Liquid to Liquid**

CONNECTION SIZES: 1" — 14"

4" - 30" diameter

Up to 10' long



## Shell & Tube Heat Exchangers

**Leak Guard, Double Wall  
Steam to Liquid  
Liquid to Liquid**

CONNECTION SIZES: 1" — 14"

4" - 30" diameter

Up to 10' long



## 4900 Series Air & Air/Dirt Separators

**ASME designed and constructed**

GPM: 0 - 30,000

CONNECTION SIZES: 3/4" — 36"

Optional removable Heads  
and Pall Ring baskets  
(recommended on open systems)



Micro Air bubble removal to 18 Microns  
Dirt particle removal below 30 Microns  
Size range from 2" to 36" / W.P. at 125,  
150 or 250 PSI.

## ACT Tangential Air Separators

**ASME #125 construction**

GPM: 0 - 10,000

CONNECTION SIZES: 2" — 36"



Save money and extend the life of system pumps, piping and components with Taco ACT Series air removal units. The ACT air separator is designed and constructed to the ASME Boiler & Pressure Vessel Code, Section VIII, Division I for unfired vessels.

## 5900 FlexBalance and 5900 FlexBalance~Plus Hydraulic Balancer

**Designed, Manufactured and tested to  
ASME Section VIII, Div. 1**

GPM: 0 - 1,500

CONNECTION SIZES: 2" — 12"



5900  
FlexBalance

5900  
FlexBalance~Plus

Patented 5900 FlexBalance and FlexBalance~Plus Separators act as a hydraulic bridge between the primary and secondary circuits in hydronic heating and cooling applications.

The FlexBalance~Plus product line incorporates patented Pall Ring technology for deep micro-bubble and dirt removal.

## Air Separators

**ASME #125 construction**

GPM: 0 - 10,000

CONNECTION SIZES: 2" — 36"



Stainless steel removable strainer (optional)  
375°F max. operating temperature Higher  
working pressures available.

## CA Expansion Tanks

**CAPACITY:** 23 — 2,640 Gallons  
(90 -10,000 liters)

**DIAMETER:** 20" — 72"

**HEIGHT:** 29" — 160"

Field replaceable, heavy-duty butyl full acceptance rubber bladder removes easily for inspection.\*

## CX Expansion Tanks

**CAPACITY:** 8 — 92 Gallons  
(29 -171 liters)

**DIAMETER:** 14" — 24"

**HEIGHT:** 22" — 60"

Heavy-duty butyl rubber diaphragm expansion tank allows permanent separation of air and water.\*

## PAX Expansion Tanks

**CAPACITY:** 8 — 132 Gallons  
(30-500 liters)

**DIAMETER:** 14" — 24"

**HEIGHT:** 25" — 85"

Heavy duty partial acceptance rubber bladder design for potable water systems.\*

## CBX Expansion Tanks

**CAPACITY:** 4 — 160 Gallons  
(15-600 liters)

**DIAMETER:** 14" — 30"

**HEIGHT:** 15" — 80"

Molded rubber membrane allows permanent separation of air and hydronic system fluid. Field removable partial acceptance membrane design specifically developed for smaller heating and chilled water systems.\*

## PS Expansion Tanks

**CAPACITY:** 15 — 515 Gallons  
(57-1893 liters)

**DIAMETER:** 14" — 36"

**HEIGHT:** 25" — 127"

Available in either red oxide painted or galvanized. Optional saddles for horizontal installations are available.\*



Most Taco Expansion Tanks are available with either bladders or diaphragms so that water and air are permanently separated. No absorption can take place at any point during the system cycle, and you avoid the problems of waterlogged tanks, air-bound terminal units, excessive corrosion, inefficient balancing and pump cavitations.

\* Each of these tank model is fabricated in accordance with ASME Section VIII, Div. 1 to assure highest quality and performance.

## LoadMatch® System

New generation LoadMatch® hydronic piping distribution systems utilize a primary single pipe loop joined with a decoupled secondary piping loop for all terminal units. In addition maintenance free wet rotor circulators are substituted for control valves in this decoupled secondary loop. This unique combination of technologies achieves:

### Better comfort

Because a LoadMatch® system is self balancing, consistent flow delivers better comfort. All loads operate separately from one another. The secondary flow that circulates through each

terminal is independent of the system's primary distribution pumps.

### Lower first costs

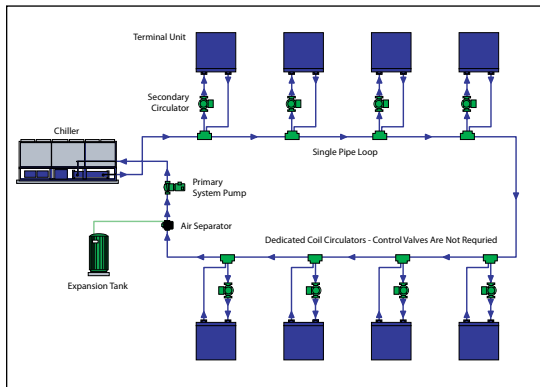
Fewer parts, about 40% less pipe and fittings, no control valves and almost no balancing reduces first costs.

### Lower operating costs

With less pipe, compared to a conventional reverse return system, and the elimination of control valves and most balancing valves, lower pump head and less power is required to move the water.

### Lower maintenance costs

Taco LoadMatch® wet rotor circulators are maintenance free. They come with a standard 3 year warranty compared to a typical control valve of 1 year. Unlike control valves they have no shaft seal (packing gland) to leak. In addition there is no coupling or bearing assembly.



LoadMatch® Family of Circulators

## Reduced design, construction, start-up and commissioning time

Our Taco Design Suite of software will allow you to reduce design time by up to 30%. The reduction in pipe, control and balance valves will reduce construction time. The elimination of balance valves and balancing will reduce start-up and commissioning time

## Green HVAC Systems

Essentially, the LoadMatch® single pipe system replaces all the expensive and energy consuming control valves and most balancing valves with small, low KW circulators. The circulators HELP deliver the water to where it needs to go, as opposed to FORCING the water to go where it doesn't want to. This results in less energy to transport BTU's in a building. In addition, the savings in materials reduces the impact of the building on both the local and global environment since fewer raw materials are mined, processed and transported to the site.



LoadMatch® Twin Tee®

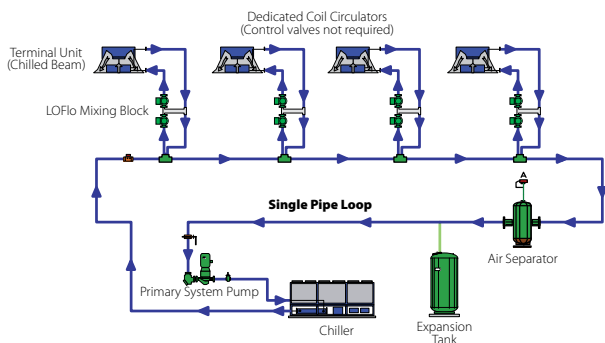


## LOFlo™ Systems

In the past few decades radiant and chilled beam cooling and heating systems have progressed and are recognized as one of the most comfortable and, from the standpoint of energy use and materials, highly efficient HVAC systems available on the market today

## Lower Operating Costs

Mix up low temperature chilled water (40°F) for radiant chilled ceilings or chilled beams (60°F) thereby achieving significantly higher delta T's (20°F) and lower flow rates of 3/4 to 1/2 less than conventional chilled beams of 5°F delta T and conventional chilled water systems of 10°F delta T.



Mix down high temperature heating water (180°F) for radiant floor heating temperatures (100°F) thereby achieving significantly higher delta T's (80°F) and lower flow rates of 3/4 less than conventional heating water systems of 20°F delta T.

The mixing of standard temperature chilled water and heating water to radiant and chilled beam cooling and heating temperatures, used successfully for many years in radiant heating

## Better Comfort

LOFlo systems heat and cool principally through draft free radiant cooling and heating. This provides a much higher comfort level.

## Lower First Costs

Fewer parts, about 40% less pipe and fittings, no control valves and almost no balancing reduces first costs.



systems, is achieved by injection pumps in conjunction with LoadMatch® circulators.

## Lower Maintenance Costs

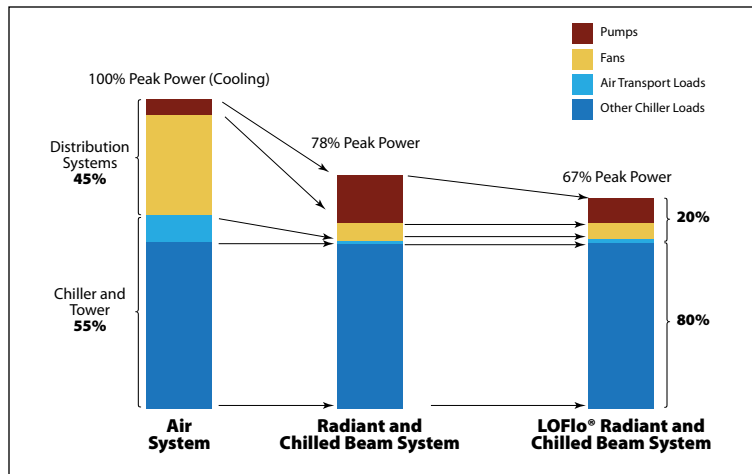
Taco LoadMatch® wet rotor circulators are maintenance free. They come with a standard 3 year warranty compared to a typical control valve of 1 year

## Reduced design, construction, start-up and commissioning time

Our Taco Design Suite of software will allow you to reduce design time by up to 30%. The elimination of balance valves and balancing will reduce start-up and commissioning time.

## Green HVAC Systems

LOFlo radiant and chilled beam cooling and heating systems achieve energy savings of up to 25% compared to conventional hydronic systems and 35% compared to conventional all air systems (VAV, VVT).



## iWorx. Flexible and cost effective.

iWorx from Taco Electronic Solutions is an affordable web-based building management monitoring and control system.



iWorx delivers a flexible, easily scalable means of complete building control for both single

locations and multi-building, multi-site installations from retail stores, offices and restaurants to apartments, religious buildings and single family residences. As a single source, fully integrated HVAC system control package, iWorx can reduce equipment operating and maintenance costs while maximizing building comfort

## Freedom from proprietary platforms

Every iWorx controller is ready to run out of the box. The LON-based, open protocol backbone of iWorx features application- and equipment-based controllers that are pre-programmed.



There's no software to buy or learn, no complicated field commissioning, and no subscriptions to buy. Just input set points then start controlling and monitoring the system on-site or through a web-enabled device.

## Self-configuring controllers

When new devices are introduced, the menu-driven, touch-screen controller (LCI-2) recognizes and integrates them into the system automatically. With one-touch integration adding more iWorx controllers is as simple as connecting a USB device to your home or office PC.

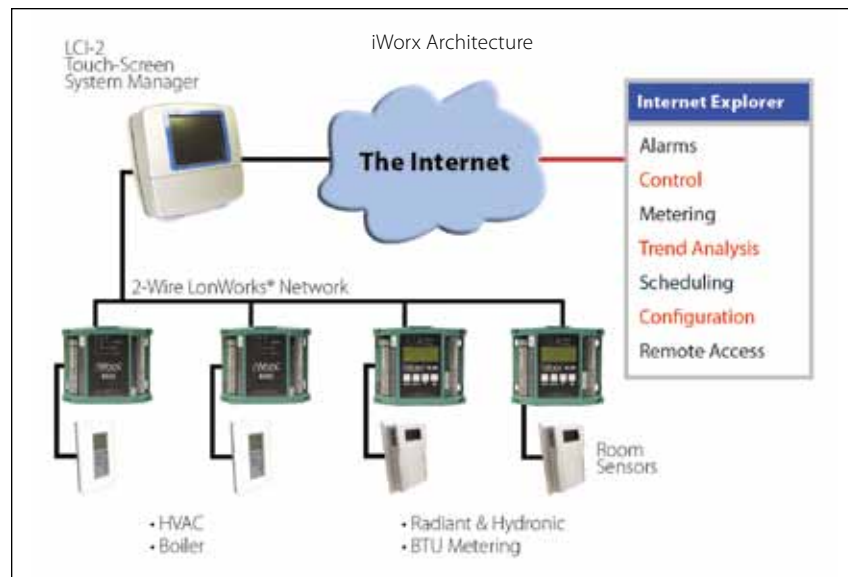
## At last, air & water play nice!

iWorx controllers are available for a broad range of HVAC and hydronic based applica-

tions and functions. There are iWorx controls for modulating, staged or single boiler control, for snow melt, radiant zones and mixing control, or even for operating forced air furnaces, air handlers, VAV's and chillers, to name a few. iWorx controller's one-touch integration, pre-programmed software functionality and easily scalable nature allows them to be mixed and matched to handle the demands of almost any light commercial or high-end residential system.

## Energy monitoring

For new energy applications and multiple unit buildings heat metering can be seamlessly integrated as part of an iWorx system, helping to preserve the building owner's asset value.



# Taco DesignSuite

systems made easy

## Taco Design Suite

The Design Suite is a free collection of tools that take the "time-consuming" out of hydronic system design. In fact, an entire LoadMatch® system can be designed in minutes from top to bottom!

## Load Tool

What used to be a pencil-breaking task is now mouse-click easy. Here are some features of the Load Tool:

- Interactive tools eliminate recalculation time for changes
- Default values for design parameters reduce input time
- Drag and drop capability allows grouping of room loads to higher level terminal and systems quickly and easily
- Import load data directly into Hydronic System Solutions files and drawings, saving time entering loads, design parameters, etc.

## System Analysis Tool

We designed the System Analysis Tool to save you even more time by allowing you to compare

different system configurations on the fly, in the design process.

- Selection software for HVAC Systems
- Interactive tool eliminates recalculation time for changes
- Quickly and easily compare HVAC system operating and life cycle costs at beginning of project
- System selection Wizard allows quick modeling of preconfigured systems

## Hydronic System Solutions®

With HS2 you can:

- Design and compare HVAC systems
- Eliminate recalculation time for changes
- Calculate plant total loads, flows
- Size pipe and equipment
- Select and schedule equipment
- Reduce errors
- Make design changes quickly and easily
- LoadMatch® Wizard allows modeling of systems in minutes



## iWorx Selection Wizard

We've created an online iWorx Selection Wizard that lets you create and specify iWorx projects in minutes. Just answer a few simple questions about the type of job and the iWorx Selection Wizard does the rest. In minutes, you have a complete submittal package that includes wiring and air flow diagrams, bill of materials, sequence of operations, associated instruction manuals and complete job specifications.

## TacoNet®

TacoNet is our premier product selection and specification tool for Taco equipment. Long acknowledged by the industry as the easiest software of its kind, TacoNet gives you all you need to save time and avoid errors. With TacoNet, you can:

- Enter all data quickly from one screen.
- Print submittals and schedules
- Save data.

Easy to learn software tools to design, analyze, and specify LoadMatch® Hydronic Systems in minutes.

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Taco, Inc., 1160 Cranston Street, Cranston, RI 02920 / (401) 942-8000 / Fax (401) 942-2360  
Taco (Canada) Ltd., 8450 Lawson Road, Unit#3, Milton, Ontario L9T 0J8 / (905) 564-9422 / Fax (905) 564-9436

[www.taco-hvac.com](http://www.taco-hvac.com)