

Progress Supply Inc.

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Helpful information for HVAC/R & Controls Contractors from Progress Supply Inc.

PROGRESS SUPPLY ANNOUNCES THE HYDRO THERM RESIDENTIAL AND COMMERCIAL BOILER LINE

Progress Supply is proud to announce the acquisition of the **HydroTherm** line of hot water and steam boilers and hot water heaters. **HydroTherm** has been a leader in the manufacture of cast iron and Multi-Pulse boilers for 50 years.

They offer a complete line of residential gas and oil-fired boilers designed for the needs of homes and apartments. The breadth of **HydroTherm's** residential product line offers you the widest range of value and performance. From the most economical HC residential boiler to the high-efficiency HI two-stage boiler, **HydroTherm** has the right performance choice for your installation.

At Progress Supply, we maintain an inventory geared to match the needs of our customers. If we don't have the product of choice, we can have your boilers built to order and delivered in days, not weeks. We maintain stock inventories of HC residential cast iron boilers and MR Series Multi-Temp commercial boilers, with a complete inventory of Pulse 90% plus efficiency boilers for immediate delivery.

HC Series Residential

Simple and efficient, these gas-fired boilers are built for easy installation, trouble-free performance, and overall value. The compact design fits easily through standard 30-inch doors. The horizontal sectional cast iron absorption unit is fully assembled and provides high-efficiency heat transfer. They come in 65,000 through 165,000 input models.

MR Series Commercial

The MR Series has been designed with modular staging to maximize performance and efficiency with natural gas and propane-fired systems. For natural gas systems, burners are manufactured from aluminized steel. For propane systems, burners are stainless steel. The base section is fabricated from cast iron plates,

HydroTherm®
YOUR PERFORMANCE CHOICE

providing greater resistance to high temperatures and corrosion. The base assembly design permits simple removal of burners and manifold assembly for easy servicing. They come in 360,000 to 2,400,000 input.

Multi-Pulse

HydroTherm's Multi-Pulse gas-fired boilers offer the ultimate in performance for hot water heating. The patented design provides maximum heat transfer, making **Multi-Pulse** among the most energy-efficient and environmentally clean hydronic heating unit available. The system features a welded heat exchanger with cast, stainless steel pulse combustion chamber and a welded steel pressure vessel with spiral stainless steel fired tubes. **Multi-Pulse** systems are designed to perform and built to last. These high-efficiency units work well in heat pump loop applications.

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THE PROGRESS REPORT

OCTOBER, 2004

TECH TIPS

By Alex Cole

Service Valves

The typical **service valve** is composed of four essential parts:

- ▶ Line connection
- ▶ Valve stem
- ▶ Service opening or gauge port
- ▶ Compressor connection

When the valve is back-seated (the stem is all the way out), the gauge port is closed and the valve is open, allowing refrigerant to flow through the system. If the valve is front-seated (stem all the way in), the gauge port is open to the compressor connection and the refrigerant line (suction or discharge) connection is closed.

In order to read the pressure while the valve is open, the valve should be back-seated, then turned once or twice to slightly open all three connections: the gauge port, line, and compressor. This allows both the compressor and refrigerant line to be open and vapor pressure to flow through. At the gauge port, you can check system pressure and charge or reclaim refrigerant.

When Brazing a Service Valve

Make sure the valve is mid-seated before brazing. The heat from brazing a full front-seated or back-seated valve can cause the button of the valve stem (inside the valve) to "weld" to the seating area on the inside of the body of the valve.

A technique called "wet-ragging" can also help. Soak a rag in cold water and wrap it around the service valve before brazing. Make sure water does not enter the valve.

When Opening a Service Valve

Make sure the service valve is secure (in a vice, bolted down, or attached with the rotalock connection), before attempting to open the packing nut or valve stem.

(cont'd on p. 3)

ANNOUNCING ANOTHER HYDRO THERM BREAKTHROUGH — THE KN-10

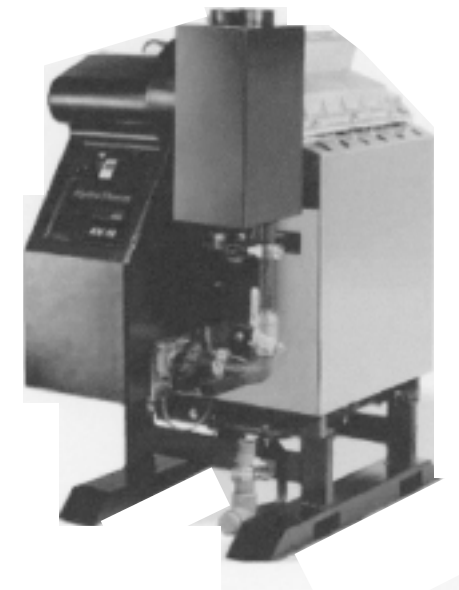
It's the biggest breakthrough in boiler design in years.

The new **HydroTherm KN-10** cast iron, direct vent coiler combines the high-efficiency and compact footprint of modern copper boilers **plus** the long life performance of cast iron. Also, with design features that meet the demanding requirements of today's high-efficiency heating system applications.

The **KN-10** packs up to 1 million BTU's in a compact footprint, with efficiency up to 93%. Features include 3:1 turndown, condensing design, precision-machined cast iron sections with graphite port connections and corrosion-resistant ceramic burner for longer service life. And, its low noise blower and low velocity burner make for whisper-quiet operation, with low CO and NOx emission.

The **KN-10** also fits through a standard doorway for easy installation. Direct vent capability provides installation flexibility. Down fire design simplifies burner service, and all critical components are easily accessible. Self-diagnostic controls monitor all interlocks and provide fault information to minimize downtime. The **KN-10** system can accept 33° water temperatures without thermal shock.

Two new models will be introduced next Spring, with capacities from 600,000 to 2 million BTUs.



TECH TIPS (cont'd from p. 2)

Verify whether the valve employs a packing gland nut (many Copeland service valves do). The packing nut helps to ensure a leak-free seal. It is typically brass and is found at the base of the valve stem. It must be loosened by a quarter to a full turn before opening the valve. Make sure to tighten the nut when you are finished manipulating the valve stem.

Use the right tools! Service valves on Copeland condensing units have a torque requirement of 22-25 ft. lbs. in order to have a leak-free seal when the units leave our plant. You will only be able to open a service valve with the appropriately-sized service valve wrench. Do not attempt to open a service valve with an adjustable wrench. You may round the valve stem edges and the valve will be useless.

If all else fails and the stem appears stuck, **lightly** tap the end of the valve stem with a hammer and the valve should open. **NOTE: If the packing gland nut is not loosened, the valve could be damaged.**

Heat Pump Systems

With the heating season upon us and more heat pumps being used, here is a helpful hint in diagnosing and troubleshooting. Keep in mind that the heat pump cycle is an air conditioning system running in reverse. The additional components are not complicated and can be easy to troubleshoot.

Checking the Reversing Valve

- Measure the inlet suction pressure temperature at the inlet to the valve and compare it to the suction vapor temperature leaving the common suction connection. There should be around 7°-10°F between these two readings.
- If temperatures are higher than 7°-10°F, hot gas is escaping into the suction vapor due to incomplete shifting of the slide assembly. Reversing valve would be recommended to be replaced due to debris or dirt that prevents the slide from responding to the pressure force and properly shifting between heating and cooling modes.

OTHER HYDRO THERM BOILERS AVAILABLE FROM PROGRESS SUPPLY

R Series	180,000 to 300,00 Input Residential
ID & HI Series	Power Vent Gas Water Boilers Residential
VS & VGA	Atmospheric Gas Steam Boilers Residential
MO	Oil Fires Water Boilers
MG Series	Power Gas Water Boilers
MOP Series	Dual Fuel Oil/Gas Water Boilers
MC & MCI	Water Heaters