



# HYDROMAX™

Hot Water Makers®



Efficiency at its Best™



# HYDROMAX™

Amtrol's invention of the indirect-fired water heater, over 30 years ago, represented an innovative solution to providing fast, efficient and reliable hot water. In the years since, Amtrol has been dedicated to the continuous improvement of Hot Water Maker® performance and longevity. HydroMax™, with its unique features and appliance-like appearance, is the next generation of Amtrol Hot Water Makers. Made in the USA at our ISO9001:2008 registered facilities, HydroMax is Hydronic Efficiency to the Max™!



American Tube Products  
founded in West Warwick,  
Rhode Island

**1946**



Invented the  
pre-pressurized  
well tank

**1963**



Built current  
Rhode Island  
manufacturing  
facility

**1972**

Invented the  
indirect-fired  
Hot Water Maker

**1980**



Opened the  
Amtrol Education  
Center

**1988**



AMTROL  
registered ISO 9001

**1992**



**1954**

Invented the  
diaphragm  
expansion tank



**1967**

Invented the  
refrigerant  
gas cylinder



**1975**

Entered  
commercial  
products business



**1986**

Invented the  
top coil indirect  
Hot Water Maker

**1991**

Invented the  
thermal  
expansion tank



**1994**

Opened  
Amtrol  
Canada

# A Change for the Better.



## Appliance-Like Appearance

Finally, an indirect-fired water heater that looks as good as the fixtures it supplies. HydroMax™ is a revolution in modern design and technology.

## Easy to Install and Operate

Every aspect of HydroMax is designed to simplify installation and improve user satisfaction.

## Energy Efficiency at its Best

HydroMax is engineered to save energy without sacrificing comfort. Intelligent control technology and a unique tank design work together to provide the best of both worlds.

## Reliable - No Call Backs

Amtrol believes that an indirect water heater is an integral part of a home's heating system. HydroMax incorporates modern materials and proprietary design features to ensure years of trouble-free service.



Introduced stainless steel coil plate to meet low-lead standards

**1995**



Introduced high strength, low-lead, forged bronze coil plate

**2000**



Invented the composite metal LP tank

**2005**



Introduced CH-Series Hot Water Makers

Introduced Amtrol Rewards™

**2009**



Introduced 180°F Rated Poly Bottle

**2011**

Launched HydroMax Hot Water Makers

**2012**



**1997**

Acquired ALFA Cylinder Manufacturing in Portugal



**2003**

Introduced TD Series™ Hot Water Makers



**2008**

Released surge-resistant digital control



**2010**

Launched Next Generation Well-X-Trol®



Tanks on Tour™ mobile education center



# HYDROMAX™

## Copper Rough-In Piping

- No threaded fittings required.
- Factory installed Type M copper.

## Aquastat Option

- Fast-acting dial control.
- 8 foot universal 10K Ohm temp sensor integrates boiler controls.

## Triple-Shell Construction

### Deep Drawn Steel

- Offers twice the strength of traditional construction.
- Tuf-Kote™ HG finish withstands damp and harsh environments.

### Urethane Insulation

- Reaction Injection Molded (RIM) to eliminate gaps and voids.
- Form-fitting clamshell design minimizes heat loss.

### Bi-Modal HDPE Poly Bottle

- Corrosion-proof material is impervious to chlorides, scale and aggressive water.
- High Density Polyethylene (HDPE) bottle for clean, fresh water.
- Advanced high-temp polymer rated to 180°F.

## Pre-Installed Drain Valve

- Bottom mount completely empties tank.
- Sediment trap captures and flushes debris.



## Flexible Warranty Protection Plan

- 7 Year Warranty with Limited Lifetime option.
- Consumer upgrade kit included in every carton.



# Hydronic Efficiency To The Max™.

## Ener-G-NET™ Digital Control Instantaneous Indirect Technology™

### Full Access Housing

- Enclosed piping for safety and appearance.
- Two piece snap-fit design for easy access.

### Integrated Heat Trap

- Keeps stored water in the tank.
- Patented soft-seat design.



### Hi-Delta Heat Exchanger

- Removable for cleaning without draining tank.
- Optimal coil spacing for superior performance.
- Energy efficient and scale resistant.

### Turbulator™ Inlet Distributor

- Agitates water to reduce sediment buildup.
- High velocity spray action cleans coil to maintain peak performance.

### T & P Blowdown Tube

- Pre-bent tube is ready to install.
- Pre-cut to proper length to meet plumbing codes.

### DuraBase™ Composite Stand

- Rugged material withstands rough handling.
- Place HydroMax directly on floor to eliminate need for cement blocks.
- Engineered for strength; tested to withstand over 2,500 lbs.



### User Modes

#### Standard



- Traditional operating mode.
- Provides maximum hot water availability.

#### Efficiency



- Reduces boiler cycling during idle periods.
- Senses demand to deliver hot water when it's needed.

#### Vacation



- Standby setting for extended periods of inactivity.
- One-touch restores normal operation.

### Installer Settings

#### Temperature



- Accurate within 1°F.

#### Differential



- Set as narrow as 5°F for constant temperature.

#### Post Purge



- Captures waste boiler heat for added savings.

#### Priority



- Maximizes hot water availability.

#### Heat Transfer Display



- Displays real-time BTU transfer.

### Built-in Diagnostics

Error codes quickly identify potential problems and provide an audible alert before damage occurs.

**Er1:** Sensor Error  
**Er2:** Overheating

**Er3:** Slow Heating  
**Er4:** Water Alarm



# Specifications & Sizing

## Models & Specifications



Model Number	Capacity (gallons)	Height (inches)	Diameter (inches)	Shipping Weight (lbs.)	Control Type	Domestic Water	Boiler Supply/Return
HM-41L	41	48	22	124	Ener-G-Net	3/4" Sweat	3/4" Sweat
HM-41Z	41	48	22	124	Mechanical	3/4" Sweat	3/4" Sweat
HM-80L	80	49	26	180	Ener-G-Net	3/4" Sweat	3/4" Sweat
HM-80Z	80	49	26	180	Mechanical	3/4" Sweat	3/4" Sweat

## Residential Sizing



Boiler BTU Rating	Bathrooms			
	1 - 1½	2 - 3	4 - 5	6+
50,000				Commercial Hot Water Maker
60,000				
70,000				HM-80
80,000				
90,000				HM-41
100,000				
110,000				HM-41
120,000				
130,000				HM-41
140,000				

Consult Amtrol for heavy demands; including large whirlpool tubs, multi-head showers and other dump load applications.

## Hot Water Performance



Boiler Net Output (BTU per Hour)	HM-41 Models		HM-80 Models	
	First Hour Rating (90°F Rise)	Continuous Flow (70°F Rise)	First Hour Rating (90°F Rise)	Continuous Flow (70°F Rise)
40,000	89	69	120	69
60,000	116	104	147	104
80,000	149	139	174	139
100,000	170	173	201	173
120,000	197	208	228	208
140,000	224	242	255	242

# The Best Solution.

There are many choices for heating water but only one provides the best combination of performance and efficiency: an Indirect-Fired Water Heater. Using the home's existing boiler energy minimizes fuel use and maximizes hot water output. See how HydroMax™ surpasses all other water heater technologies in comfort and fuel savings.

## Residential Water Heater Comparison

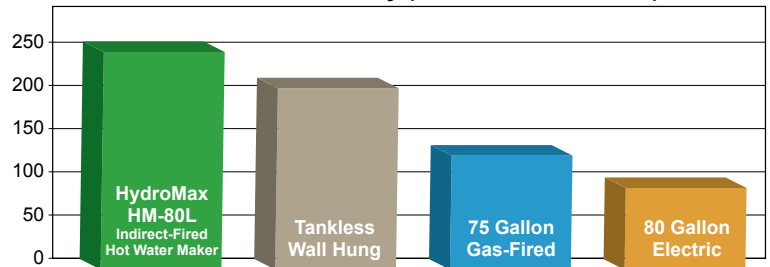
### HydroMax

Utilizes existing boiler energy to heat water.



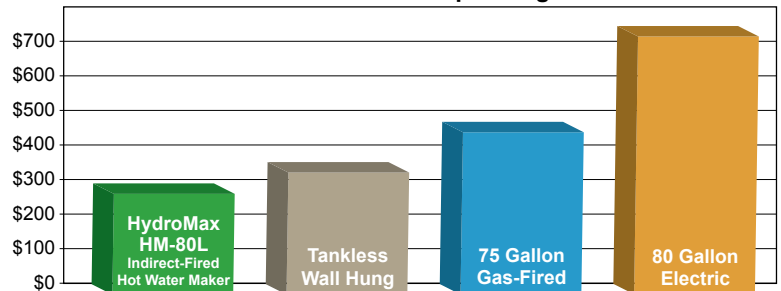
- Best hot water output.
- Highest overall efficiency.
- Insulated storage for peak demands.
- Installs almost anywhere. No flame, flue or fuel lines.
- Non-metallic water reservoir for long life and cleaner water.
- Instantaneous Indirect Technology™ reduces unwanted cycling and provides endless hot water.
- Removable heat exchanger can be easily cleaned.

### Hot Water Availability (Gallons in First Hour)



Data based on published manufacturer ratings for high-output models. Heat Input: Indirect 140,000 BTUH; Tankless 199,000 BTUH; Gas 70,000 BTUH; Electric 5500W

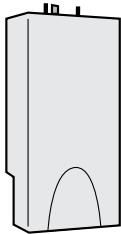
### Estimated Annual Operating Cost



Costs based on US Department of Energy (DOE) guidelines for a four person household. Energy Factor (EF/CAE): Boiler/Indirect .85, Tankless .82, Gas .59, Electric .92

### Tankless Wall-Hung

Water is heated as it flows through unit.



- ✔ Small footprint.
- ✔ Good firing efficiency.
- ✘ No storage. Simultaneous demands often exceed heater capacity.
- ✘ Requires dedicated flue.
- ✘ Gas supply line often needs to be upsized.
- ✘ Delayed start extends wait time for hot water.
- ✘ Can take over 20 years to achieve payback.
- ✘ Sensitive to scale buildup.

### Conventional Gas-Fired

Natural Gas or LP flame heats stored water.



- ✔ Better hot water output than electric.
- ✔ Popular replacement for many homes.
- ✘ May take over an hour to reheat.
- ✘ Conventional models offer poor efficiency.
- ✘ Heat loss typically high during idle periods.

### Conventional Electric

Electric elements heat stored water.



- ✔ Least expensive to purchase and install.
- ✔ Simple hookup, no flue or fuel lines.
- ✘ Poor hot water recovery performance.
- ✘ Electricity is typically the most expensive water heating method.
- ✘ Heating elements and anode rod often require service.



# Amtrol Advantage™

Whenever you choose Amtrol, you're getting more than just a great product.

The Amtrol Advantage combines the Industry's best brands with world class customer service and valuable installer initiatives.

- Amtrol Rewards™ Installer Points Program
- Tanks on Tour™ Mobile Training Vehicle
- Amtrol Racing Team



# AMTROL Advantage™



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