

HYDROTHERM

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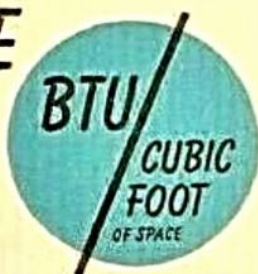
TRADE MARK REG. U. S. PAT. OFF.

THE MIDGET AUTOMATIC GAS HEATING PLANT FOR HOT WATER SYSTEMS

MORE



MORE



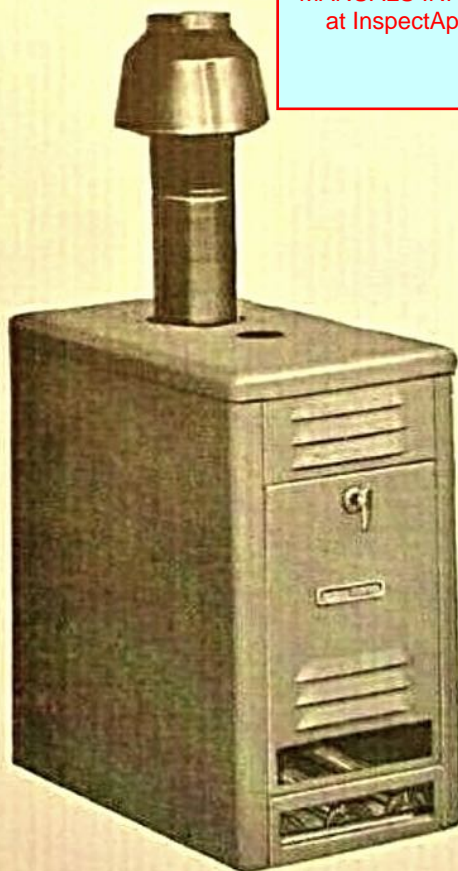
HYDROTHERM represents an outstanding development in gas heating engineering. Its unique construction, fully patented, induces a rapid and positive circulation of water through the heating system. It has a higher capacity in ratio to size and weight than ever before attained.

HYDROTHERM has proved its dependability, efficiency and safety in more than five years of operation when it was produced on a limited scale as the H. & A. Gas Boiler. It has come to be known as the world's smallest home heating plant with highest BTU output for its size and weight.

CLICK ANYWHERE ON THIS PAGE TO RETURN TO HYDROTHERM BOILER MANUALS INFORMATION at InspectApedia.com



HYDROTHERM 2HW3
288 sq. ft. installed radiation
Weight: 234 lb. Size: 13"x26"x26"



HYDROTHERM 2HW5
400 sq. ft. installed radiation
Weight: 356 lb. Size: 18"x27"x30"



HYDROTHERM 2 1/2 HW5
880 sq. ft. installed radiation
Weight: 650 lb. Size: 20"x35"x36"

HYDROTHERM

TRADE MARK REG. U. S. PAT. OFF.

The carefully engineered Hydrotherm, fully patented, is the most nearly perfect central gas heating plant for residential hot water heating systems. To the recognized comfort and cleanliness of gas hot water heating, it adds the advantages of compactness, economy and dependability. Its small water capacity makes it particularly desirable for modern convector and panel heating systems. The standard ratings in which Hydrotherms are available cover heating requirements from small homes to large residences.

In multiple family dwellings and apartment houses, the

heating load can be economically handled by a group of Hydrotherms. In this case one Hydrotherm is installed in the kitchen or utility room of each apartment or a bank of Hydrotherms is arranged in the basement. The tenant adjusts his own thermostat to his heating comfort—thus removing the heating responsibility from the landlord.

The Hydrotherm is also highly efficient as a DIRECT HOT WATER HEATER to supply large storage tanks for residential, commercial and industrial use. Hydrotherms can be furnished for operation on manufactured, mixed, natural or liquefied petroleum gases.

CONSTRUCTION

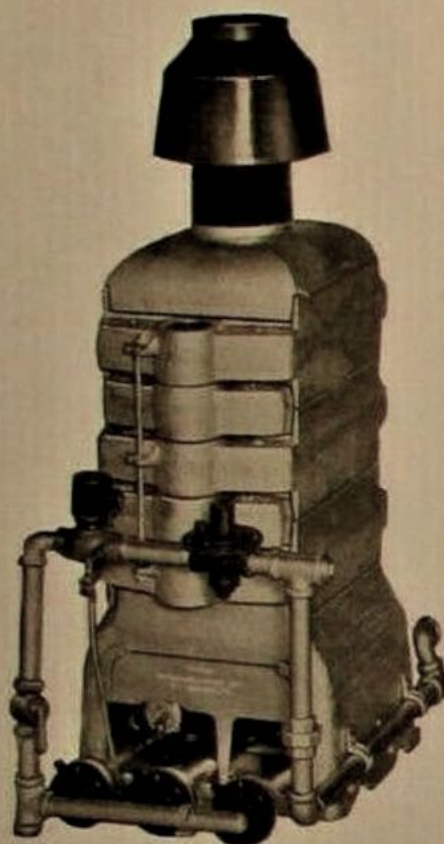
ABSORPTION UNIT • Contrary to conventional designs, the Hydrotherm absorption unit has horizontal sections, deep ribbed, overlapped and connected in zig-zag. This fully patented design gives a maximum heat transfer surface for a minimum water volume resulting in great efficiency and quick pick-up. The staggered connection of sections creates a very positive circulating force without the use of circulators. The absorption unit is completely assembled and tested at the factory at 250 lb. water pressure.

BURNERS • A clean, efficient and silent combustion is obtained through raised port cast iron burners carefully designed for each type of gas. The orifices are of brass and are fitted into the mixer tubes which carry adjustable air shutters.

DOMES AND DRAFT HOOD • All flue gases are collected by a one-piece cast iron dome and guided into an AGA type draft hood, which prevents up and down drafts from interfering with efficient operation of the burner.

JACKET • All Hydrotherms are furnished with heat insulation and beautiful DeLuxe Jacket in gray Hammeroid finish. This jacket encloses all controls. It can be installed or removed without disturbing piping and electrical connections.

INSTALLATION • To facilitate installation, the Hydrotherm is delivered knocked down in three parts: the absorption unit, the jacket and the boiler base with burner and controls. These parts can be easily handled and assembled as outlined in installation instructions furnished with each unit.



HYDROTHERM 2HW5

Jacket Removed

400 sq. ft. installed radiation

Weight: 356 lb. Size: 18"x27"x30"

OPERATION

AUTOMATIC • The Hydrotherm is entirely automatic in its operation and will respond instantly to the demands of the room Thermostat. It is equipped with all necessary controls ready for connection to the gas main. The low water capacity of Hydrotherm precludes sluggish action and prevents wasteful temperature peaks resulting from excessive heat storage. This is of particular significance for convector and panel heating systems.

GAS CONTROL VALVE • The flow of gas to the burner is controlled by a specially designed magnetic gas valve which assures silent and dependable operation under all conditions.

SAFETY PILOT • In case of gas failure, the bimetallic safety pilot will interrupt the main gas supply automatically. It has to be relighted when the gas supply is reestablished.

HIGH TEMPERATURE LIMIT • Each Hydrotherm is equipped with a bimetallic high limit control switch, which will interrupt the gas flow if temperatures in excess of 220° F. are encountered. It cannot be tampered with and needs no adjustment to specific water temperatures.

GAS PRESSURE REGULATOR • To assure gas supply at constant pressure regardless of supply line variations, each Hydrotherm is provided with a reliable gas pressure regulator which can be adjusted easily.

ACCESSORIES • For power supply, a 110/24 volt, 60 cycle transformer and 40 feet of 2 conductor wire are supplied with each Hydrotherm. Room Thermostat is not included but will be supplied as extra equipment when specified.

CAPACITY RANGE OF HYDROTHERMS

HYDROTHERM Model No.	A.G.A. RATINGS		Net Available B.T.U. Per Hour	Water 170° F. Radiation Sq. Ft. Direct Will Supply	CAPACITY FOR HOT WATER STORAGE TANKS Gallons per Hour for Temperature Rise Shown				
	Btu Input	Water Rating Sq. Ft.			40°	60°	80°	100°	120°
2HW3	72 000	384	57 600	288	170	113	85	68	56
2HW5	100 000	530	80 000	400	238	158	109	95	79
2HW6*	144 000	768	115 200	576	242	228	171	137	114
2HW8*	172 000	914	137 600	688	410	274	205	164	137
2HW10*	200 000	1060	160 000	800	475	317	237	190	158
2½HW3	150 000 Est.	800	120 000	600	357	237	163	142	118
2½HW5	220 000 Est.	1173	176 000	880	524	348	240	209	174

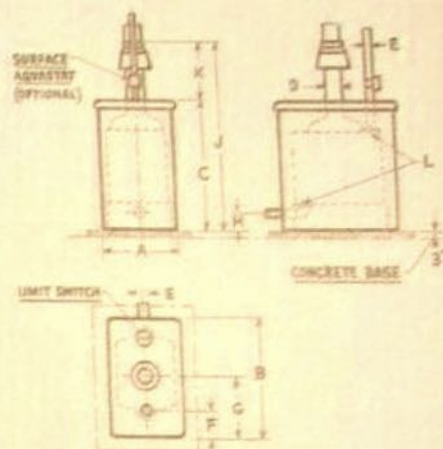
*Dual Units



SPECIFICATIONS FOR SINGLE INSTALLATIONS

Single HYDROTHERM installations are ideal for individual homes. Their compact sizes and attractive appearance permit installation in the basement, game room, kitchen or hallway. Single HYDROTHERMS can be economically used for heating individual apartments in large buildings. In such cases HYDROTHERMS are installed in each apartment or grouped in the basement. A separate thermostat and gas meter for each HYDROTHERM allows each tenant to pay for the heat to meet his individual requirements. He thus has complete control over his own heating comfort at all times.

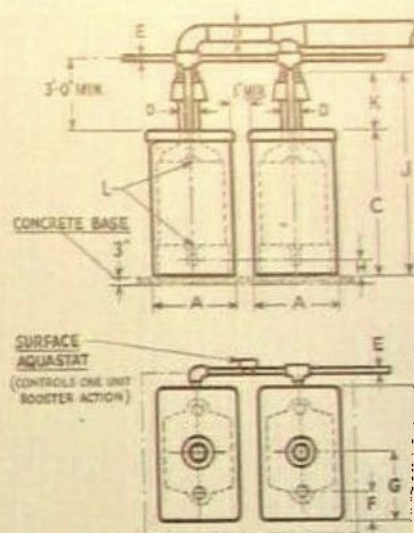
		2HW3	2HW5	2½HW3	2½HW5
A	Width	13"	18"	20"	20"
B	Length	26"	27"	35"	35"
C	Height	26"	30"	36"	36"
D	Flue Size	5"	5"	8"	8"
E	Min. Main Size	½"	1"	1"	1½"
F	Feed Location	9"	9½"	10"	10"
G	Flue Location	16½"	16½"	20½"	20½"
H	Return Location	5"	8¼"	8¼"	8¼"
J	Overall Height	42"	50"	56"	56"
K	Min. Flue Height	16"	20"	20"	20"
L	Water Tappings	2"	2"	2½"	2½"
	Shipping Weight, Lbs.	234	356	450	650



SPECIFICATIONS FOR DUAL INSTALLATIONS

Dual HYDROTHERM installations are used in large individual homes requiring greater capacity than can be handled by the single units. They offer extreme flexibility of operation through the use of dual controls which permit both units to operate in cold weather for quick pick-up and maximum delivery of heat. After the room reaches normal temperature one unit only will automatically carry the heating load. This eliminates waste of fuel by burning only the amount of gas necessary to keep the home at the correct temperature. It also reduces fluctuations of room temperatures.

		2HW6	2HW8	2HW10
A	Width	27"	37"	37"
B	Length	26"	27"	27"
C	Height	26"	30"	30"
D	Flue Size	2-5"	2-5"	2-5"
E	Min. Main Size	1"	1½"	1½"
F	Feed Location	9½"	10"	10"
G	Flue Location	16½"	16½"	16½"
H	Return Location	5"	8¼"	8¼"
J	Overall Height	42"	50"	50"
K	Min. Flue Height	16"	20"	20"
L	Water Tappings	2-2"	2-2"	2-2"
	Shipping Weight, Lbs.	468	590	712



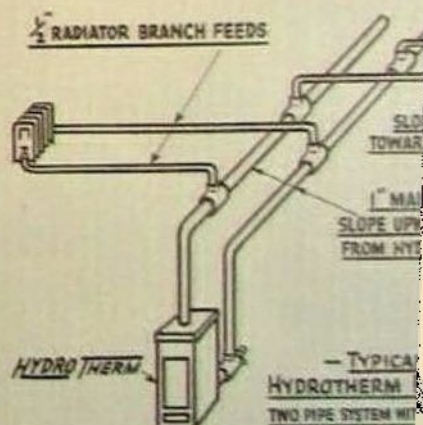
APPLICATIONS TO HOT WATER HEATING SYSTEMS

TWO PIPE SYSTEM • HYDROTHERMS make the standard two pipe system a very economical and reliable installation through use of smaller pipe sizes than normally required. The diagram shows such a typical installation with recommended pipe sizes which will work efficiently without circulators on all systems where the radiators are not below the HYDROTHERM level.

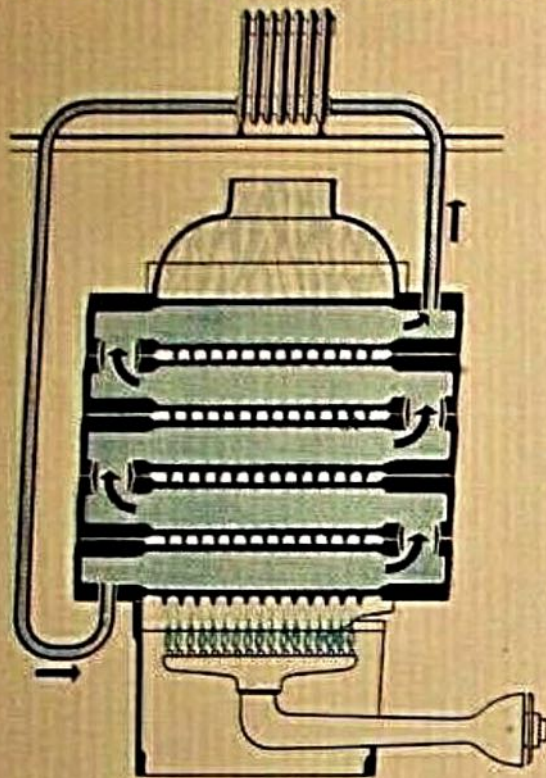
ONE PIPE SYSTEM • HYDROTHERMS operate perfectly on one pipe systems in which case a circulator may be installed if required by the particular lay-out used. On these installations, any type of one-pipe fittings may be installed to give satisfactory circulation through individual radiators.

CONVECTOR SYSTEM • The extremely small water capacity of HYDROTHERMS (1½ to 8 gallons depending on size) makes it extremely efficient for use with modern convector systems. The popularity of convector radiators is based on their quick response to the room thermostat which results from the small heat storage in radiators designed for minimum water capacity. It is important to preserve this advantage by not using boilers having excessive water capacity.

PANEL AND RADIANT SYSTEMS • HYDROTHERMS are ideal for use on panel and radiant heating systems due to their small water capacity which permits close temperature control. In homes without basements, HYDROTHERMS may be easily accommodated in a small closet or in the attic.

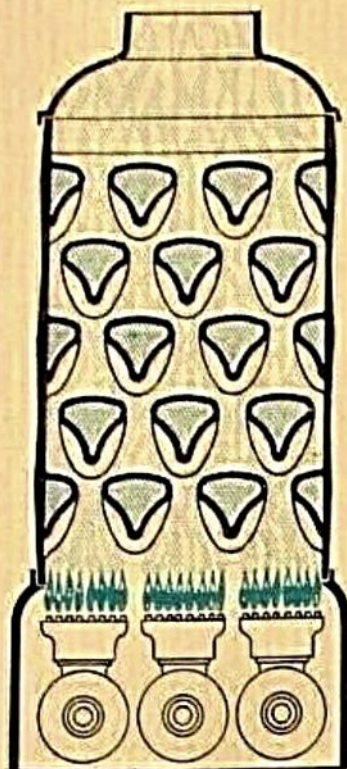


OPERATING PRINCIPLE OF HYDROTHERM



WATER CIRCUIT OF HYDROTHERM

zig-zag flow of water through the horizontal sections produces undesirable internal circulation within the absorption unit. generates a positive pressure which assures rapid and continuous circulation of hot water through the entire heating system.



HEAT TRANSFER OF HYDROTHERM

Deep ribbed, staggered, horizontal sections of patented design provide a tremendous heat absorbing surface in a minimum of space. This assures highest fuel economy.

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