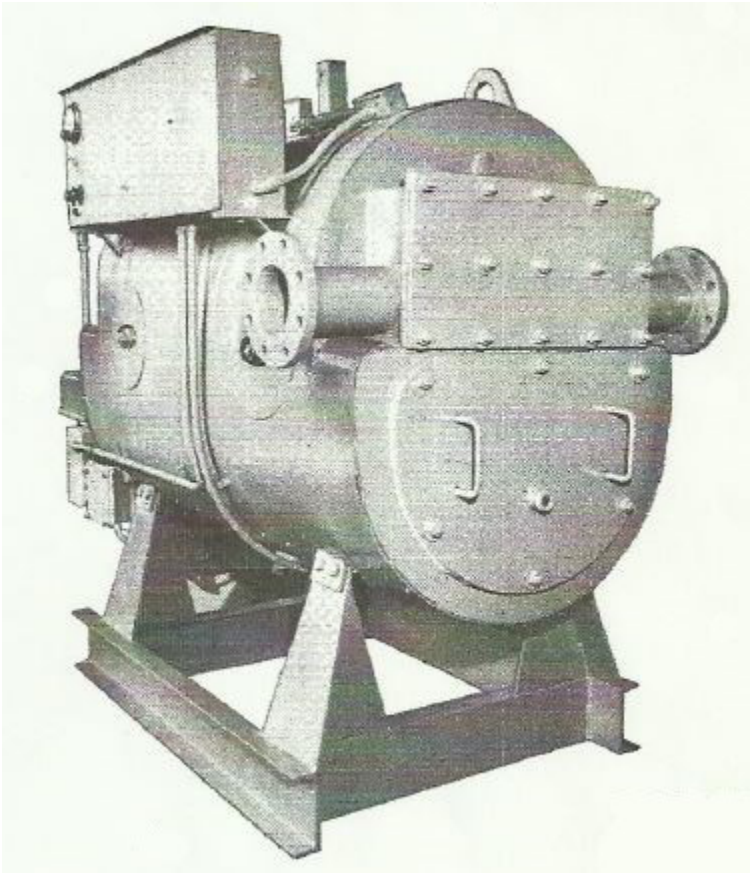
CYCLOTHERM DIGESTER HEATER



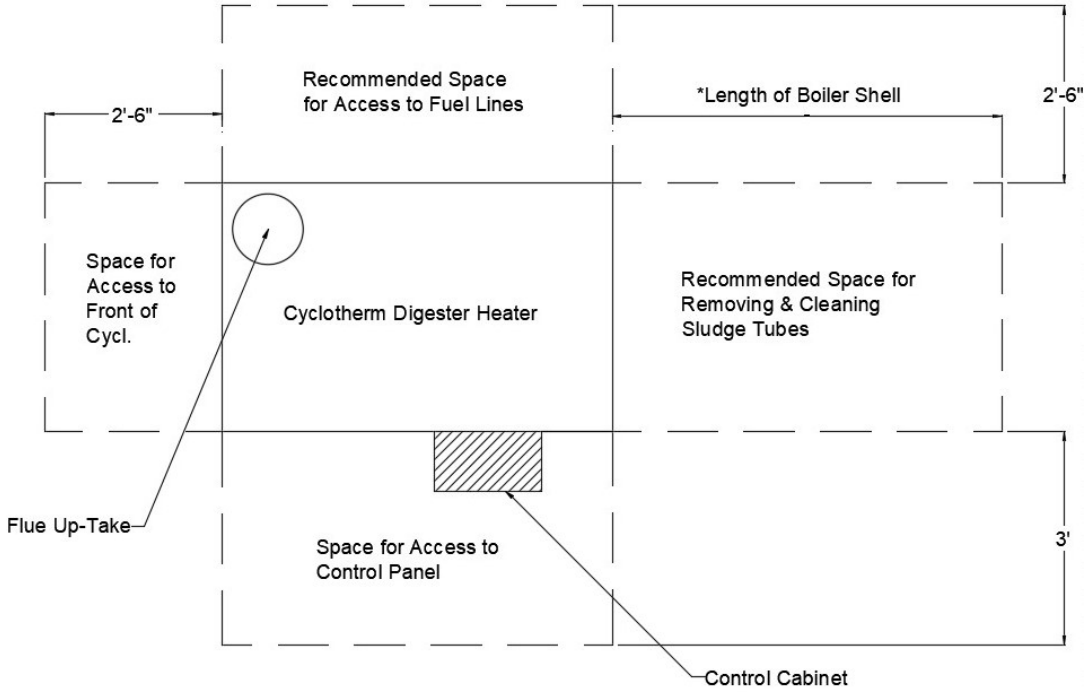
Cyclotherm has a package unit for sewage sludge heating. The unit is a combination heat exchanger with an integral source of heat together with provisions for utilizing heat from natural gas engines. Complete automatic operation is provided. The Cyclotherm method of combustion is primarily responsible for the high efficiencies realized by this heater. The Cyclotherm burner, an integral part of the unit, provides automatic conversion from sewage gas to an auxiliary fuel. In addition to the high efficiency and flexibility, this unit is characterized by compactness, low cost of maintenance, and ease of control.

Either front sludge connections or rear sludge connections can be furnished.

All metal drip-proof control cabinet, factory wired and tested.

Cyclotherm Digester Heater ready for shipment.

Space Requirements for Cyclotherm Digester Heater



Cyclotherm Sludge Heater B.T.U./HR	Overall Dimensions		
	WIDTH	LENGTH	HEIGHT
250,000-S	3'-6"	6'-3 ½"	5'-0"
250,000-R	3'-6"	6'-6 ¼"	5'-0"
500,000-S	3'-6"	9'-11"	5'-0"
500,000-R	3'-6"	10'-1 ¾"	5'-0"
750,000-S	4'-2"	10'-11"	6'-3"
750,000-R	4'-2"	11"-2 ¾"	6'-3"
1,000,000-S	4'-2"	13'-3"	6'-3"
1,000,000-R	4'-2"	13'-6 ¾"	6'-3"

ADVANTAGES OF THE CYCLOTHERM HEAT TRANSFER SYSTEM

a. The Cyclotherm unit accomplishes complete combustion of the fuel, resulting in highly efficient transfer from fuel to useful heat.

b. The unit, being relatively small in overall dimensions, occupies very little space where installed.

c. A completely assembled, test fired unit is delivered to the customer.

d. Conveniently located handholes, removable one-piece front and rear covers and a front flue box cleanout and relief door provide for speedy inspection and maintenance of all parts of the unit. Removal of the front and rear covers allows access to all sludge tubes.

e. Complete combustion of the fuel results in the need of only a simple flue vent instead of a stack, exhaust fan and motor.

f. A high rate of water circulation within the unit, effected by the simple two-pass construction results in a faster rate of heat transfer.

g. The ends of the steel sludge tubes are welded in place providing a leak-proof joint and meeting the ASME boiler test code.

h. Each unit requires only one low horsepower motor.

i. The furnace tube is continuously swept clean by the cyclonic movement of the air.

j. Refractory lining is not needed in the furnace tube. Only the burner head, rear cover and furnace extension require protection from the flame.

k. Standard fittings and connection are used through the unit, and all parts in the control panel are of standard design.

l. Hot water from the unit can be used to heat the control building.

m. The unit, being completely assembled on a steel base, requires no special excavation of foundation.

n. The Cyclotherm burner is designed to burn sewage gas, service gas or light oil or independent operation of any combination of two fuels. Automatic conversion from one fuel to another is provided.

o. In case of any lack of fuel, water or gas, the entire unit is automatically shut down.