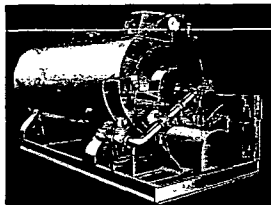




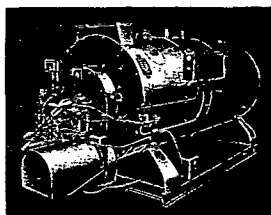
Steam and Hot Water Generators

CYCLOTHERM[®] DIVISION
General Offices: OSWEGO, NEW YORK

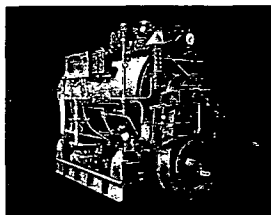
Exclusive manufacturer of packaged steam and hot water generators using the patented principle of "Cyclonic Combustion."



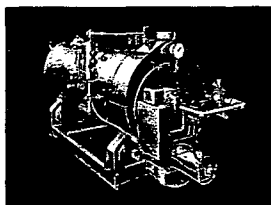
Cyclotherm Industrial Line



Cyclotherm (CW) Hot Water Line



Cyclotherm MC (Marine) Line



Cyclotherm (CE) Line

SPECIAL CONDITIONS

Specifications are descriptive and not a representation. Equipment described or the equivalent furnished for either steam or hot water. Cyclotherm Division National-U.S. Radiator Corp. reserves the right to alter, without notice, dimensions, designs and components of Cyclotherm units.

Guaranteed Minimum 80 Percent Efficiency. With Cyclonic Combustion, a patented Cyclotherm combustion principle, 65 percent heat transfer is reached in the combustion chamber alone and 15 percent more in one pass of return tubes. 80 percent efficiency — or better — in two passes.

Compact. By eliminating superfluous tubes and passes, Cyclotherm produces maximum steam in minimum dimensions. Up to one-third smaller than other package boilers.

Low Maintenance Costs. Cyclotherm parts are easy to get at, easy to clean. Simplified construction eliminates many man-hours of maintenance.

Shipped Complete. A complete package, Cyclotherm is ready to operate when shipped. One manufacturing responsibility behind the entire job.

Automatic Controls. On models up to 60 hp, burner automatically shuts off when steam demand is satisfied, automatically turns on when more steam is needed. On larger models, electronic controls modulate firing rate so that equipment may be operated at from 30 percent to 100 percent of capacity without loss of efficiency.

No special foundation or excavation is needed. You can relocate your Cyclotherm if you change your plant layout.

No Costly Stack. Cyclotherm requires only a simple flue.

Quick Changeover. Burning oil and/or gas, Cyclotherm offers an easy and quick changeover. You burn whichever fuel is more economical.

Full Power from a cold start is reached in 15 to 20 minutes.

Conforms to Codes. Cyclotherm conforms to ASME codes and carries Underwriters' Laboratories label.

World-wide Service Facilities. Cyclotherm Sales Engineers are ready to serve you wherever you are located.

One Year Warranty. If there is any defect in materials or workmanship within one year of the date of adjustment, Cyclotherm will repair or replace the defective part without any cost to you.

CYCLOTHERM STEAM GENERATORS

Model No.	Output Btu Per Hr	Steam Per Hr Lbs	Equivalent Radiation Sq Ft	Overall Dimensions			
				Height	Width Light Oil	Width Heavy Oil	Length
C-500	502,500	518	2090	3'5 1/4"	3'2 1/4"	5'9"	5'9"
C-700	670,000	690	2792	4'1 1/2"	3'9"	5'10"	7'5"
C-1000	1,005,000	1035	4188	4'1 1/2"	3'9"	5'10"	7'5"
C-1400	1,340,000	1380	5583	4'5"	4'0"	8'8"	8'8"
C-1725	1,675,000	1725	6980	5'3 1/2"	4'3"	9'4"	9'4"
C-2100	2,010,000	2070	8375	5'9"	4'3"	10'6"	10'6"
C-2800	2,680,000	2760	11167	5'6 1/2"	4'8"	12'2"	12'2"
C-3500	3,350,000	3450	13959	6'1 1/2"	5'5"	13'8"	13'8"
C-4400	4,187,500	4315	17448	6'3 1/2"	5'10"	14'5 1/2"	14'5 1/2"
C-5200	5,025,000	5175	20938	7'1 1/2"	5'6"	16'5 1/2"	16'5 1/2"
C-7000	6,700,000	6900	27917	7'8 1/2"	7'1"	18'6 1/2"	18'6 1/2"
C-8700	8,375,000	8625	34896	8'6 1/2"	7'6"	18'10"	18'10"
C-10500	10,050,000	10350	41875	8'6 1/2"	7'6"	20'9"	20'9"
C-12000	11,725,000	12075	48854	8'6 1/2"	7'6"	20'9"	20'9"
C-13800	13,400,000	13800	55833	8'10"	7'6"	20'9"	20'9"
C-17500	16,750,000	17250	69792	9'4 1/2"	8'0"	21'1"	21'1"
C-21000	20,100,000	20700	83750	9'4 1/2"	8'0"	21'1"	21'1"
C-26000	25,125,000	25875	104688	10'7 1/2"	9'9"	28'0"	28'0"

STANDARD BURNER ARRANGEMENTS

Package Steam Generators		Cyclotherm Models	
Fuel		C-500 through C-26,000	
Light Oil Nos. 1, 2, 3, or Diesel 25-44 API Gravity		C-500 through C-26,000	
Heavy Oil Nos. 4, 5, 6, 14-26 API Gravity		C-500 through C-26,000	
Gas, mfg., mixed and natural		C-500 through C-26,000	
Comb., light oil or gas		C-500 through C-26,000	
Comb., heavy oil or gas		C-500 through C-26,000	
Package Hot Water Generators		Cyclotherm Models	
Fuel		CW-7 through CW-70	
Light Oil Nos. 1, 2, 3, or Diesel 25-44 API Gravity		CW-7 through CW-70	
Heavy Oil Nos. 4, 5, 6, 14-26 API Gravity		CW-7 through CW-70	
Gas, mfg., mixed and natural		CW-7 through CW-70	
Comb., light oil or gas		CW-7 through CW-70	
Comb., heavy oil or gas		CW-28 through CW-70	

CYCLOTHERM HOT WATER GENERATORS

Model No.	Output Btu per Hr	Overall Dimensions			
		Height	Width Light Oil	Width Heavy Oil	Length
CW-7	670,000	48 3/4"	37"	37"	81"
CW-10	1,005,000	53 1/2"	38"	38"	85"
CW-14	1,340,000	58 1/2"	38"	38"	89"
CW-17	1,675,000	58 1/2"	43"	43"	102"
CW-21	2,010,000	58 1/2"	43"	43"	115"
CW-28	2,680,000	70 1/2"	52"	58"	134 1/2"
CW-35	3,350,000	70 1/2"	52"	60"	158"
CW-44	4,187,500	80 1/2"	67"	79"	154 1/2"
CW-52	5,025,000	82 1/2"	67"	79"	177"
CW-70	6,700,000	87 1/2"	72"	84"	187 1/2"

Air Conditioning and Refrigeration

drayer-hanson DIVISION
General Offices: LOS ANGELES, CALIFORNIA



Key West-Coast designer and manufacturer of complete lines of central-station, high and low-pressure air handling equipment; condensing units . . . evaporative and air-cooled; cooling towers; coils . . . Freon, water, steam and ammonia; plus Commercial Refrigeration . . . hot gas, electric defrost. Since 1910—a leading supplier to Military, Commercial, Industrial and Residential projects, domestically and abroad.

AIR CONDITIONING SYSTEM APPLICATIONS

Cooling, heating, ventilating, filtering, humidifying, dehumidifying, closed-circuit evaporative water cooling.

"SPOTAIRE" ROOM-BY ROOM AIR CONDITIONERS: d-h "LRC": ceiling-suspended basic unit, concealed or deluxe cabinet; 4 models, 200 through 600 cfm. (ILLUS. A, basic unit) d-h "VRC": concealed or deluxe consoles; 4 models, 200 through 600 cfm. d-h "HRC": 3 suspended types, 19 models, 300 through 1750 cfm. QUIET BEYOND BELIEF!

AIR HANDLING UNITS: d-h "CSH": ceiling suspended (ILLUS. B). d-h "CSV": floor mounted. Both: 15 models, 600 through 28,000 cfm.

HIGH-PRESSURE BLOW THROUGH: d-h "HCD": hot and cold deck (ILLUS. C). "HPF": 10 models, 1750 through 32,250 cfm.

VENTILATING UNITS: d-h "AM": 600 through 32,250 cfm. 15 sizes.

MULTIZONE TYPES: d-h "FLEXAZONE": for simultaneous, independent, variable heating, cooling, ventilating; 1750 through 32,250 cfm. 9 sizes.

EVAPORATIVE CONDENSERS: d-h "PERMA-FAN": 13 models; 5 through 110 ton, for Freon, ammonia and water. (ILLUS. D).

COILS: d-h Extended Surface; steam, water, DX, ammonia, brine.

COOLING TOWERS: d-h "WMT": 13 models, 5 through 100 ton.

AIR-COOLED CONDENSERS: d-h "ACC": 13 models, 3 through 80 ton.

COMMERCIAL REFRIGERATION EQUIPMENT

(Complete lines low-side refrigeration for product/produce cooling).

d-h "FLOCOLD" UNIT COOLERS: Freon and ammonia. 42 models; 750 through 11,000 cfm. (ILLUS. E).

d-h "SPASAVER": Freon and ammonia. 23 models; 730 through 440 cfm.

d-h "MCR" MEAT-CUTTING ROOM UNITS: 14 models; 730 through 1750 cfm.

d-h "HOT SHOT": Freon and ammonia. Automatic electric defrost, 14 models; 700 through 3700 cfm.

d-h PRODUCT COOLERS: Freon and ammonia. Floor type/ceiling type. 108 models; 1500 through 30,000 cfm.

MEMBER AMCA

1960—OUR 50TH YEAR!

