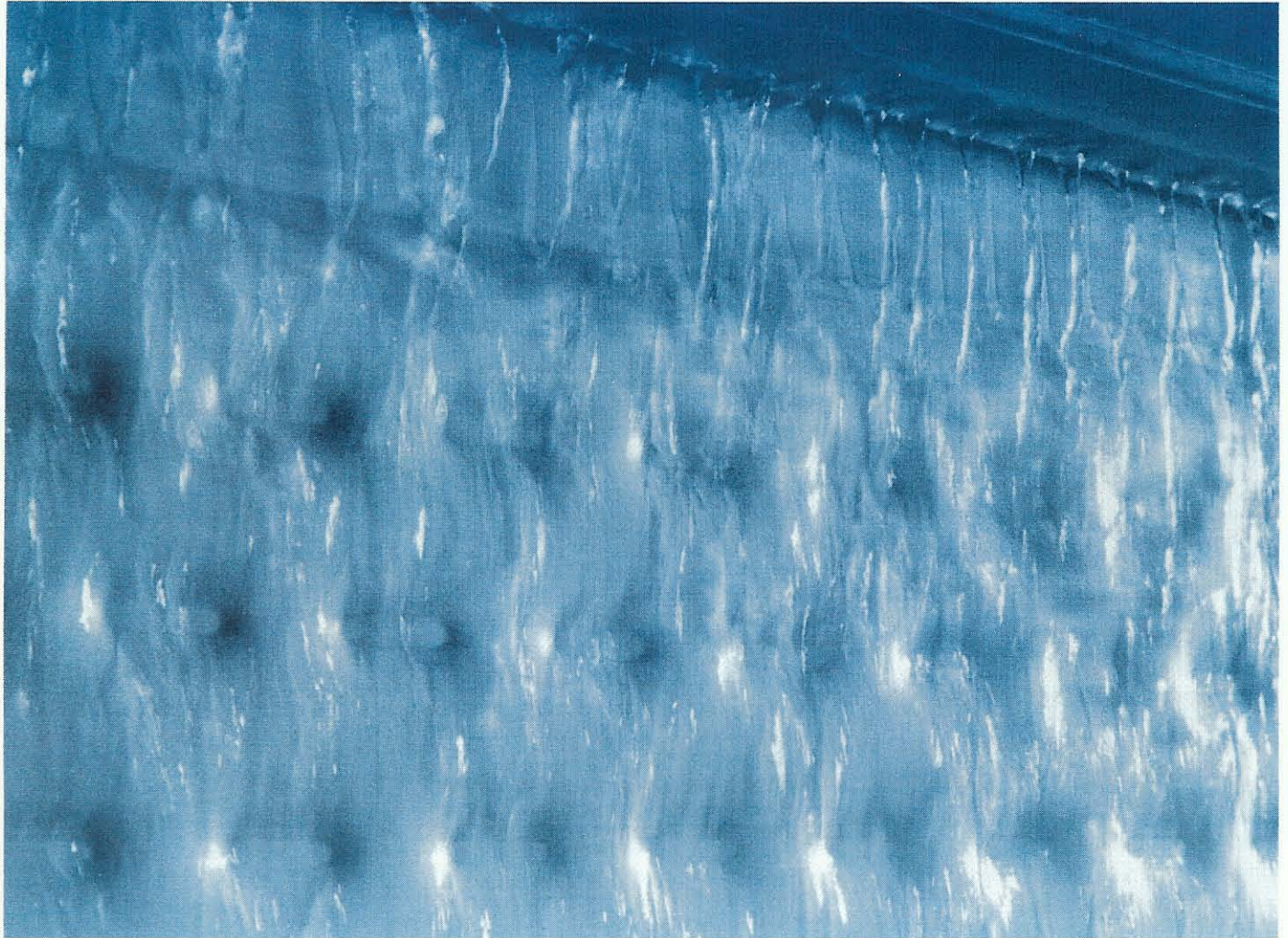


# TURBO

LIQUID HEAT EXCHANGERS



## HTD/HF Series

The Falling Film Plate Type  
Heat Exchangers with Larger and  
More Plate Sizes for Higher Production.

**BROADER SELECTIVITY**

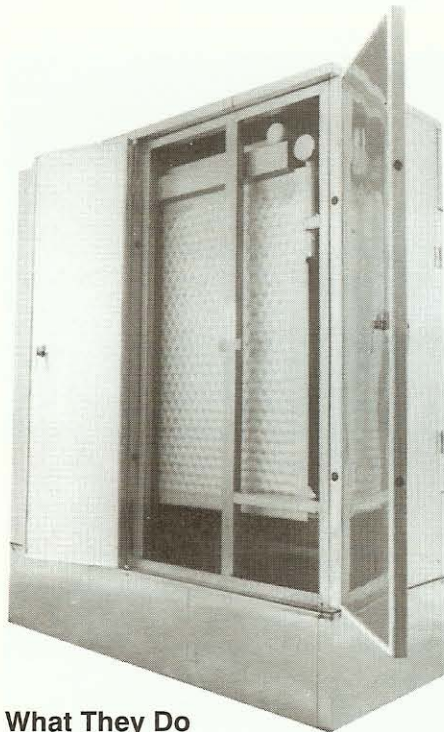
**BETTER PERFORMANCE**

**LOWER OPERATING COST**

**FOOD/BEVERAGE/CHEMICAL/MANUFACTURING**

# HTD (High Temperature Difference/HF (High Flow) Series

## LIQUID HEAT EXCHANGERS



### What They Do

HTD and HF Series Heat Exchangers transfer heat to a thin film of liquid falling on the outside of a plate. The refrigerant is contained on the plate's inside.

**HTD SERIES** stands for High Temperature Difference. Fluids are chilled or heated over large temperature differences, ranging from 5°F to 60°F. A relatively low fluid flow accompanies the high temperature difference.

**HF SERIES** stands for High Flow. Fluids are chilled over narrow temperature differences, ranging from 1°F to 2°F. The plate's long, narrow geometrical configuration enables high fluid flow for low temperature differences.

Equipment to accomplish these concepts has been researched and

developed by Turbo engineers for years. Computerized engineering design and welding manufacturing now make available capable heat transfer equipment for a multitude of applications across the spectrum of industry. This broad experience is now being put to use in fluid chilling, as well as the transfer of heat, for specific new markets.

What makes these the world's finest liquid heat exchangers? It's in the experience that really counts. That's where we've obtained the many differences that make these units the most cost effective in the industry.



## APPLICATIONS / EXPERIENCE

### FOOD

- Fish Red Water
- Poultry Red Water
- Offal Processing
- Red Meat Spray Water
- Bakery Ingredient Water
- Live Lobster Storage
- Steamed Crayfish
- Pickle Brine
- Blanched Vegetable Cooling
- Processed Meat Brines
- Packaged Produce
- Packaged Soups
- Syrup Packages
- Raw Fish
- Cheese Vats
- Produce Field Heat Removal
- Immersion Freezers
- Citrus Fruit Washing
- Refrigerated Sea Water
- Ice Machine Prechiller
- Chopped Lettuce
- Calcium Chloride Solutions

### BEVERAGE

- Orange Juice
- Soft Drink Water
- Wine Vat Cooling
- Grape Juice Chilling
- Juice Concentrate Water
- Dextrose
- Dairy Chilled H<sub>2</sub>O Systems
- Dairy Glycol Systems
- Ice Bank Prechillers

### CHEMICAL

- Chemical Reaction Control
- Pharmaceuticals
- Paper Manufacturing
- Pulp and Paper
- Acid Solution Recovery
- Sodium Chloride Solutions
- Dyes
- Mineral Recovery

### MANUFACTURING

- Concrete Chilled Water
- Plastics Molding
- Laser Equipment Cooling
- Thermal Storage Water Prechill
- Marine Engine Test Tanks
- Demineralized Water
- Cyclotron Cooling
- Photographic paper
- Waste Water Heat Recovery
- Quench Tanks

## BROADER SELECTIVITY

Turbo offers users greater selectivity with a complete line of standard HTD/HF units. Standard plate sizes: 48" x 60", 72" x 60", 96" x 60", 144" x 24". Choice of freon or ammonia refrigerants. Packaged evaporation and condensing units. Many options are available. For flooded systems. For re-circulating systems.

Total flexibility in standard design for plate sizes, reservoir capacities, water distribution systems. These models can handle all kinds of fluids safely, efficiently. From clean water to contaminated liquids with solids. Even moderately viscous solutions can be chilled economically.

## BETTER PERFORMANCE

It's the highly effective falling film heat transfer system. You can chill free flowing liquids to within one Fahrenheit degree of the freeze point. Solids up to 1/4 inch diameter can pass through the water circuit.

No freeze-up problems. Water, brines, glycol solutions, all with comparable characteristics can be control-chilled within a degree of their freezing points. Designed and built to produce controlled temperatures for hours, weeks, months, even years of continuous operation.

## LOWER OPERATING COST

These units are virtually trouble-free. And that results in more production time, more user operating profits without product contamination. Easy to clean and inspect. Very little downtime for any maintenance. All of the stainless steel construction for long life and corrosion resistance. The HTD/HF Series can solve almost any problem of chilling circulating water, beverages, juices, syrup, chemicals, process liquids of practically any kind. Highly efficient falling film heat transfer systems without freeze-up problems are designed to-the-job. They can help cut operating costs substantially.

# HTD/HF Series Comparison

## COMPARE THE MANY DIFFERENCES IN LIQUID HEAT EXCHANGER TECHNOLOGY

Liquid Heat Exchangers may appear alike. But don't be fooled by what you see ... or may not see. There are differences. Differences that can have important meaning for you. This graphic comparison shows how Turbo's experience, facilities, basic design, and skilled people can make a difference. Turbo does make the difference.

ITEM	TURBO	BRAND M	BRAND J
2 Inch Square Tubing Frames	Y	Structural Angles	Structural Angles
16 Gauge Plates	Y	18 Gauge	18 Gauge
Double Seal Welded Plate Edges	Y	N	N
Hinged Doors	Y	N	N
Plate Sizes	4	1	2
Insulation	Total	Partial	Partial
Overflow Drain	Y	N	N
Stainless Steel piping	Y	Y	Carbon Steel
Reservoir Capacity Selections	7 sizes	2 sizes	Special Order

## HTD/HF Series Specifications

### LIQUID HEAT EXCHANGERS

Through design and development, modern facilities and specialized skills, Turbo Liquid Heat Exchangers have become known as the most efficient, cost effective units in the industry. You can look to Turbo now and in the future, because we're not through yet. We're convinced that the best can be made still better.

#### DURABILITY

- 304 or 304L Construction
- 2 Inch Square Tubing Frames
- 16 Gauge Plates
- Schedule 10 Stainless Steel Refrigerant Headers
- Welded Construction
- Double Welded Plate Edges
- Heavy-Duty Hardware

#### RELIABILITY

- ASME Code Design
- 200 PSI-MOP
- 1°F to 2°F of Freeze Point
- No Damage from Freeze-Up
- 1 Year Warranty
- Easy Access for Cleaning
- Fully Researched Heat Transfer

#### OPERABILITY

- USDA Acceptance
- Various Door Configurations
- 2 Inch Insulation - Evaporator & Reservoir
- Freons, NH<sub>3</sub> and Glycols
- Adjustable Legs
- Hinged Doors
- Refrofit Capacity Increase
- 4 Reservoir Sizes for Each plate Size

## HTD/HF Series. World's Finest.

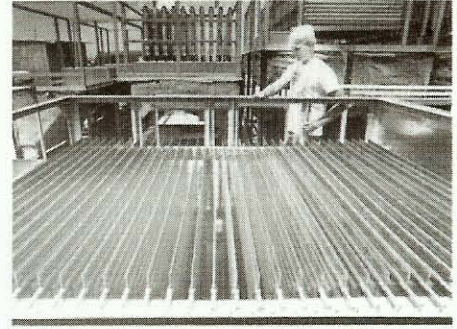
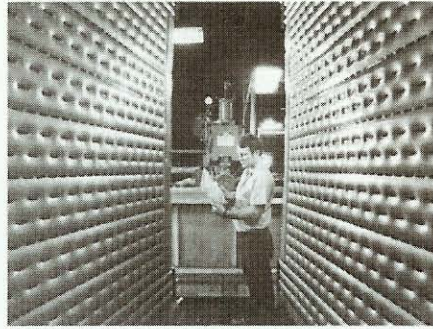
All these features dramatically demonstrate that Turbo does make the difference. When you combine broader selectivity, better performance, and lower operating cost, it spells out the benefits of durability, reliability and total operability.

Now, back all these advantages with the sales and engineering expertise available, and you can quickly see why we've made the claim of *the world's finest liquid heat exchangers*. Let a Turbo representative prove it to you with the facts for you to see.

# About Turbo

## A LEADERSHIP COMPANY

Turbo Refrigerating began manufacturing specialized ice making and industrial refrigeration systems in 1952. Our business philosophy has been a simple one. Offering equipment that increases output and reduces operating costs for the industries that require ice systems. Turbo has been the pioneer in industrial ice harvesting and consumer packaged ice in all these years. The company has become a world leader in ice harvesting, thermal storage systems and liquid heat exchangers.



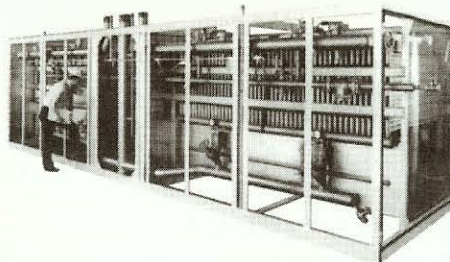
## Other Products

Turbo offers solutions to ice making, fluid heating and cooling problems. Not just a machinery maker, but a firm that offers concepts in equipment to help produce what the user needs. Ice making and ice harvesting products. Complete Thermal Storage Systems that produce cooling for buildings during peak periods when energy costs are the highest. Turbo Marine Refrigeration systems for fishing trawlers and seafood processing.

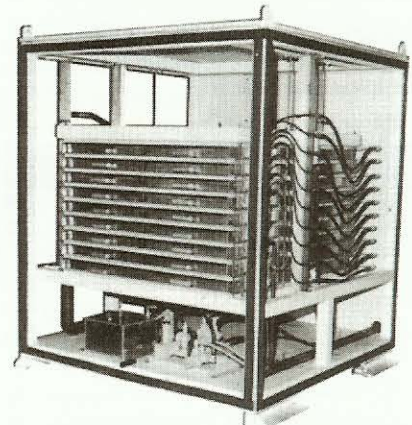
- FREON THERMAL STORAGE
- AMMONIA THERMAL STORAGE
- FREON PACKAGED ICE
- AMMONIA PACKAGED ICE
- COMMERCIAL ICE GENERATORS
- MARINE CONDENSING UNITS
- PLATE BANKS
- FREON INDUSTRIAL ICE
- AMMONIA INDUSTRIAL ICE
- INSTITUTIONAL ICE
- CUBE ICE
- ICE RAKES
- ICE BINS
- ICE SIZERS
- BLOCK PRESSES
- PNEUMATIC ICE CONVEYORS
- SPECIALTY PLATES
- INSULATED TANKS
- PLATE FREEZERS
- MARINE REFRIGERATION



Freon Ice Maker for industrial and commercial ice applications.



Flooded or recirculated Ammonia Ice Maker for central and dedicated refrigeration systems.



Horizontal Plate Freezer for onshore and offshore installations.



DESIGNED AND MANUFACTURED BY TURBO REFRIGERATING  
PO BOX 396 □ 1815 SHADY OAKS DRIVE □ DENTON, TEXAS 76202  
TELEPHONE 940-387-4301 □ FAX 940-382-0364  
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