



**doucette**  
industries, inc



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## Item # CADS 16.5M5.5, CADS Series Ammonia Desuperheaters (25 to 325 tons)

For Ammonia Refrigeration Systems

Heats Hot Water Utilizing Waste Heat From Industrial Refrigeration Systems

The Doucette CADS Extends Your Hot Water Capability Inexpensively

- Lowers hot water heating costs by utilizing waste heat
- Heats potable water up to 140 °F
- Reduces refrigeration operating costs 3% to 5% by adding the equivalent of 15% more condenser capacity
- Typical Payback Period of Two Years or Less
- Vented double-wall construction prevents cross contamination
- UL and USDA Listed with CRN

The Doucette Industries CADS Series Ammonia Desuperheater/Water Heater™ delivers cost-effective energy savings by heating potable water through the recovery of waste heat from industrial refrigeration systems. The CADS unit supplements potable hot water heating used for process applications by capturing "superheat" which accounts for approximately 10% to 15% of the total system heat of rejection. The CADS Series can effectively heat the water up to 140 °F.

- Food Processing Plants
- Food Distribution Plants
- Beverage Plants
- Ice Rinks

### Specifications

TR	75 tons
Cleanability	Mechanical
Refrig. Conn.	2 1/2" BW
Water Conn.	3/4" MPT
Length	68-1/4 "
Width	10-1/2 "



20 Leigh Drive,  
York, Pennsylvania 17406-8474



Website: [www.doucetteindustries.com](http://www.doucetteindustries.com)



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Residential/Light Commercial: [AdamM@doucetteindustries.com](mailto:AdamM@doucetteindustries.com)



Height	27-15/16 "
Weight	500 lbs
GPM <sup>1</sup>	3.69 gpm
Application	Reciprocating Compressor

<sup>1</sup> Performance: GPM of potable water heated from 60°F to 110°F with TR shown and 220°F discharge temperature.

### Field-Proven Performance

The CADS Series utilizes efficient counterflow design with low refrigerant pressure drop for efficient operation. The CADS Series includes positive oil and liquid refrigerant return design for compressor protection, and the unit is equipped with high pressure water fittings for mechanical cleaning.

### Vented Double Wall for Safety and Reliability

The CADS series of ammonia Desuperheater / Water Heater tubes are designed with vented double-wall stainless steel construction for an added measure of safety and reliability. The double-wall system prevents contamination of the potable water from the refrigeration circuit and guarantees Desuperheater compliance with all code requirements. Each tube is fluted such that a vent path is created between the outer and inner tube. If a tube leak should ever occur, the gas vents to the atmosphere for easy detection. This double protection system is endorsed by the USDA for food protection.

### Applicable to All Brands of Ammonia Refrigeration Equipment

Doucette Desuperheaters can be used for hot water with any industrial refrigeration system where waste heat is available. The unit is designed to integrate with all brands of compressors including: Frick, FES, Vilter, Mycom and others.



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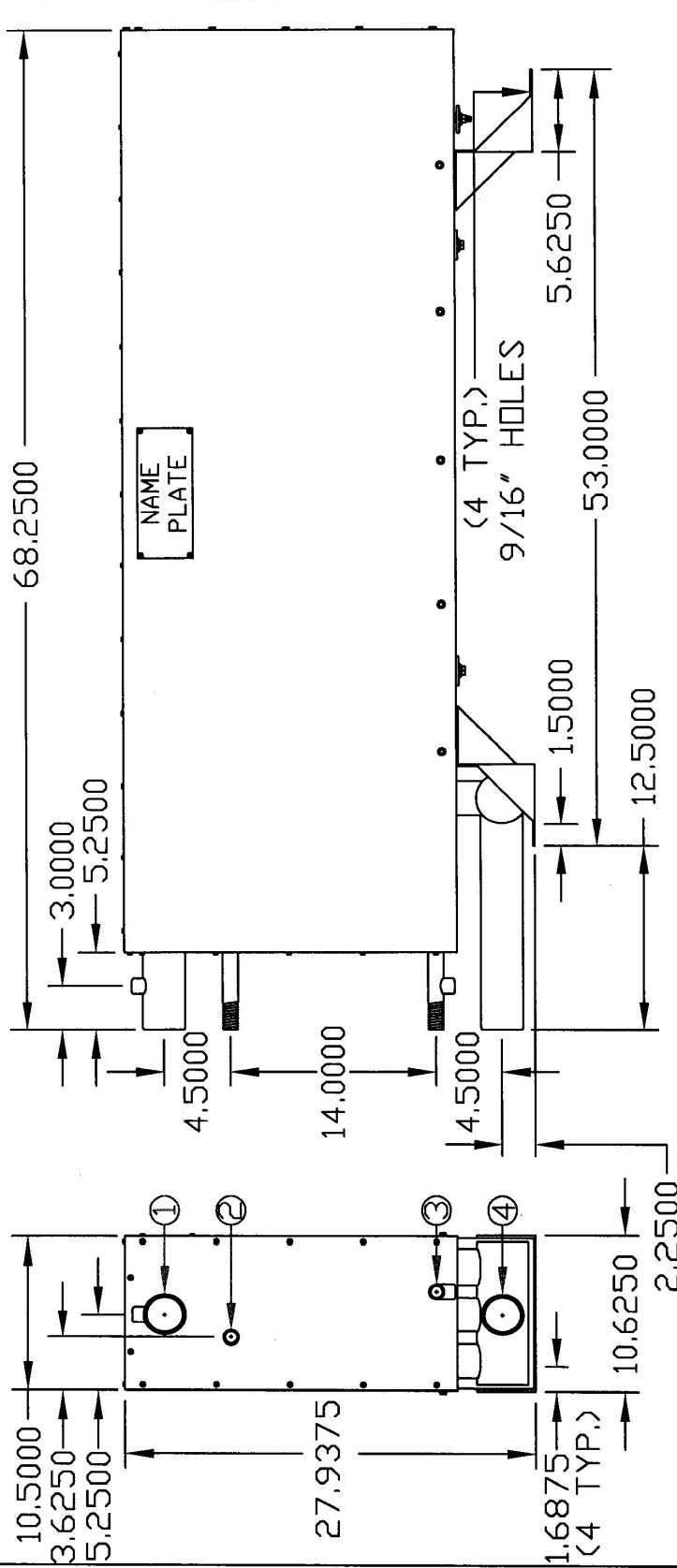
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DESIGN PRESSURE:  
SHELLSIDE 300PSIG  
TUBESIDE 150PSIG

NOTES:  
(1) 1/2" RELIEF FITTING REQUIRED, TOPSIDE CONNECTION #1  
(1) 1/2" DRAIN FITTING REQUIRED, BOTTOMSIDE CONNECTION #3

CONNECTIONS:  
1> AMMONIA SUPPLY 2-1/2" NDM SCH 40 A53B BUTT WELD  
2> WATER RETURN 3/4" NDM 304/304L S/S MPT  
3> WATER SUPPLY 3/4" NDM 304/304L S/S MPT  
4> AMMONIA RETURN 2-1/2" NDM SCH 40 A53B BUTT WELD

TOLERANCES	DOUCETTE INDUSTRIES, INC.	
DECIMAL	SCALE	DRAWN BY: MLB
± 0.1250	.09375	APP. BY: RJR
	TITLE	
	CADS 16.5M5.5/1P-8T (C)	
	DATE	DRAWING NUMBER
	4/14/04	98205
GAUGE	20	ALL DIMENSIONS INCHES, UNLESS SPECIFIED

63 X 10.5 X 22.625



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