

Fan Air Disposal Vaporizers, FAD™

Thermax FAD™ Vaporizers are designed to accept low pressure Oxygen, Nitrogen and Argon Liquid Mix.

The FAD™ vaporizer consists of a Thermax designed cryogenic injector system housed in a vertical air duct. An up draft fan forces air over the injectors, rapidly vaporizing the cryogen and mixing the combined air-cryogen prior to exhausting to the surrounding atmosphere.

Design performance shown is based on exhaust mix temperature of 50°F below the air intake temperature. The smaller the approach temperature the lower the probability of fog bank formation.



Thermax FAD 250 on 55,000 lb/Hr O₂N₂ capacity at exit temperature 50°F below air temperature

Standard Features

- α Thermax stainless steel disposal injector system with copper or brass injectors
- α High performance tube axial belt drive fan assembly with belt-guard
- α Totally enclosed TEFC motor
- α Extended duty construction, corrosion resistant aluminum structural frame & duct/mix chamber
- α Low temperature signal
- α Motor starter with disconnect, NEMA 4
- α Auto-start temperature control
- α Withstands 100 mph winds and Zone 4 seismic forces
- α Stainless Steel Prop Shaft and hardware

Options

- α Air flow switch or air flow differential switch
- α High efficiency mill/chemical motor
- α Motor space heater
- α Vibration warning switch
- α Additional distributor rings for multi-flow disposal systems
- α LTCO thermocouple or RTD at Air Intake



Thermax injector test with liquid nitrogen



Fan Air Disposal Vaporizer FAD™

Standard Model Ratings and Dimensions							
Model	**O ₂ /N ₂ /Ar Lbs./Hr.	Fan H.P.	Connection NPT	Width inch*	Depth inch*	Height inch*	Weight Lbs.*
FAD10	2,000	1	2	30	30	94	500
FAD20	4,000	2	2	36	36	94	700
FAD30	6,000	3	2	42	40	100	900
FAD40	8,000	5	2.5	49	44	106	1,000
FAD50	10,000	5	2.5	55	48	102	1,200
FAD60	12,000	7.5	3	56	52	112	1,400
FAD80	16,000	7.5	3	64	54	122	1,500
FAD90	18,000	10	3.5	72	58	130	1,700
FAD100	20,000	10	3.5	76	60	130	1,800
FAD120	24,000	15	4	84	62	140	2,000
FAD150	50,000	30	4	94	62	200	3,500

* Approximate data for planning
 **Mix air/gas outlet at 50°F below air temperature, cryogen pressure at inlet 15 to 30 psig nominal



Operating Notes:

Installation should include liquid stop valve operated by auxiliary thermocouple or air flow switch at fan air intake. Unit normally is designed to operate for 8 to 48 hours between defrost of ice which collects on injector pipes.

Caution:

- Siting of the unit should take the following into account:
- Venting cryogenic liquid oxygen into the atmosphere causes oxygen enrichment of the air in the units' vicinity.
 - Under certain weather conditions operation of the unit for disposal of cryogenic liquids can cause a fog bank to form in the vicinity.

MODEL	Oxygen, Nitrogen, Argon lbs/Hr	
	AIR TEMP-EFFLUENT TEMP 50° F	MIX
FAD10	2,000 LBS/HR	
FAD20	4,000	
FAD30	6,000	
FAD40	8,000	
FAD50	10,000	
FAD60	12,000	
FAD80	16,000	
FAD90	18,000	
FAD100	20,000	
FAD120	24,000	
FAD150	30,000	
FAD200	40,000	
FAD250	50,000	

*Mix air/gas outlet at 50 °F below air temperature. Cryogen pressure at inlet 15 to 30 PSIG (NOM).

All tables shown on this Datasheet are intended as a guide that reflect our experience on these models. Actual performance may vary. Please call Thermax Inc. for specific applications. This product and/ or data was designed and/ or developed by Thermax Inc. and shall not be used in any way injurious to the interests of Thermax Inc. CRYODUCT™ and FAD™ are Thermax Trademarks.