

# ENERVAC

CORPORATION

Engineers and Manufacturers of

## AIR and GAS DRYERS

HEATLESS

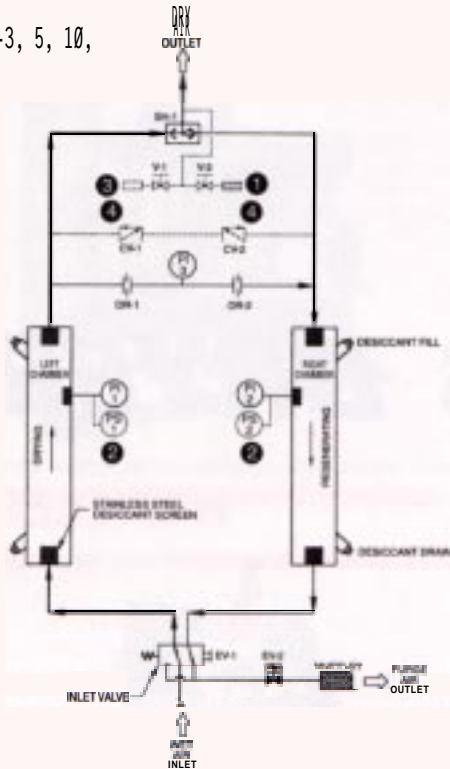


Model E2DD-□-7H

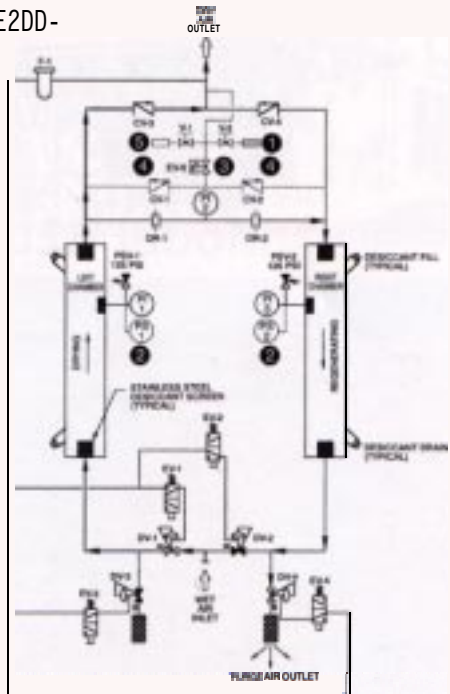


## FLOW DIAGRAMS

MODELS E2DD-3, 5, 10,  
20, 30 -7H-A



MODELS E2DD-45-7H-A  
THRU MODEL E2DD-  
2400-7H-A



### SYMBOL LEGEND

CV	- CHECK VALVE
DV	- DIAPHRAGM VALVE
EV	- SOLENOID VALVE
F	- FILTER
FM	- FLOWMETER
OR	- ORIFICE
PI	- PRESSURE GAUGE
PS	- PRESSURE SWITCH
PSV	- PRESSURE RELIEF VALVE
SH	- SHUTTLE VALVE
V	- VALVE (GLOBE, NEEDLE OR BALL)

### OPTIONAL EQUIPMENT

1. COLOUR DEW POINT INDICATOR (OPTION 'C' ONLY)
2. SWITCHING FAILURE/PURGE FAILURE (OPTION 'S' ONLY)
3. HYGROMETER ALARM PROBE (OPTION 'R' ONLY)
4. REPRESSURIZATION CHECK VALVE (4 MIN. CYCLE - OPTION 'A' ONLY)
5. REPRESSURIZATION VALVE (4 MIN. CYCLE - OPTION 'A' ONLY)
6. PURGE METER (OPTION 'F' ONLY)
7. PURGE METER THROTTLING VALVE (OPTION 'P' ONLY)

## Model E2DD-□-7H

### Description

The Enervac Heatless Model 7H is based on a design of simplicity, ease of installation and reliability of components.

The well known principal of Heatless drying is utilized in a unique design which uses fewer components than other designs on the market.

All models are designed to maintain a continuous dry gas effluent of -40°F at pressure or better. Each model is designed for 150 PSIG pressure to the latest ASME code.

The design consists of 2 identical chambers filled with desiccant, one serving as drying medium, while the other is undergoing a reactivation process.

Referring to the Flow Diagrams, wet air enters the bottom of the left hand chamber, passing upward through the desiccant where it is dried to an extremely low dewpoint. The dry air then passes through the outlet valve to the dry air outlet. Simultaneously a small percentage of dry gas flows through the purge orifices into the top of the previously depressurized right chamber, passing through the bed, reactivating the desiccant and out through the purge exhaust muffler.

At the end of the cycle the chambers are automatically reversed and the process repeats.

### Application

- Removes moisture from process air and gases,
- Eliminates condensation and freeze-up.
- Prevents moisture corrosion.
- Protects pneumatic instruments, valves and tools.

### Features

- Simplified design,
- Low maintenance costs, few parts.
- Pneumatically operated, diaphragm sealed main valves.  
(See Note 2 opposite page)
- Ideal for flows 5 SCFM and up.
- Minus 40°F outlet pressure dewpoint or better, on a 10 minute nema cycle.

NOTE Minus 100°F dewpoint on a 4 minute nema cycle.

- Various options available. See MODEL NOMENCLATURE opposite.
- Dryer corrosion reduced due to low temperature operation and reactivation.
- Fail safe, automatically maintains low dewpoint long after electric power failure.
- Stainless steel desiccant supports.
- Lower initial installation cost.

# MODEL NOMENCLATURE CHART

**A** Automatic operation. All functions are initiated by a control timer.

**E2DD- [ ] - 7H - [ ] - [ ]**

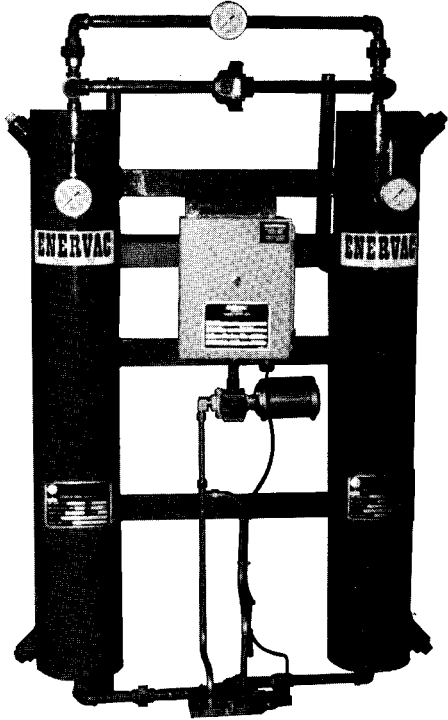
- STANDARD FEATURES**
- NEMA 1 electrics
  - Control Cabinet NEMA 12
  - 10 minute Nema Cycle
  - On-Off Switch
  - 150 PSIG design pressure
  - Chamber pressure gauge
  - Purge indicator gauge
  - Chamber relief valve (see note 1)
  - Power failure protection
  - Stainless steel desiccant screens
  - Diaphragm sealed main switching valves (see note 2)
  - 110 Volt, 60 Hertz, 1 Phase Electrical ratings

	CODE	OPTIONS
NEMA CYCLE	A	4 Minute Cycle Minus 100°F Dewpoint
ELECTRICAL INPUT	11 21	110v/60hz/1ph 220v/60hz/1ph
ELECTRICAL CLASSIFICATION	4 7	NEMA 4, waterproof NEMA 7, expl. proof
ALARMS & CONTROLS	S	Switching Failure
	H	High Humidity, -30 to -80°F dewpoint
	R	Purge Failure Alarm
MISCELLANEOUS	P	Purge Rotometer
	C	Moisture indicator Visual colour change
	5	Non-copper bearing Alloys
	6	All Steel Construction
	8	Change tubing only from copper to stainless steel
	9	Change standard Malleable iron fittings to 3000# fittings
	X	Special Options

**E2DD-7H DRYER SIZING AT 100°F**

MODEL NO.	IN/OUT CONNECTION	HEIGHT	LENGTH	WIDTH	SHIPPING WEIGHT	FLOW IN SCFM (PRESSURE IN PSIG)		
						90	100	110
3	¼" NPT	28" 711 mm	18" 457 mm	6" 152 mm	70 lbs. 32 kgs.	4	4.5	5
5	¼" NPT	28" 711 mm	18" 457 mm	6" 152 mm	80 lbs. 36 kgs.	8	9	10
10	⅜" NPT	32" 813 mm	24" 609 mm	11" 280 mm	115 lbs. 53 kgs.	16	18	20
20	⅜" NPT	44" 1118 mm	24" 609 mm	11" 280 mm	195 lbs. 89 kgs.	33	36	39
30	½" NPT	54" 1372 mm	34" 864 mm	15" 381 mm	295 lbs. 134 kgs.	49	54	59
40	¾" NPT	69" 1753 mm	34" 864 mm	15" 381 mm	490 lbs. 223 kgs.	66	72	78
65	1" NPT	72" 1829 mm	40" 1016 mm	32" 813 mm	650 lbs. 295 kgs.	107	117	127
100	1½" NPT	70" 1778 mm	48" 1219 mm	32" 813 mm	750 lbs. 341 kgs.	184	202	220
150	1½" NPT	86" 2184 mm	48" 1219 mm	32" 813 mm	900 lbs. 410 kgs.	267	292	317
200	2" NPT	76" 1930 mm	52" 1321 mm	32" 813 mm	1025 lbs. 466 kgs.	370	405	440
250	2" NPT	76" 1930 mm	56" 1422 mm	36" 914 mm	1275 lbs. 580 kgs.	493	540	587
325	2" NPT	84" 2134 mm	60" 1524 mm	38" 965 mm	1460 lbs. 664 kgs.	616	675	734
400	2" NPT	90" 2286 mm	60" 1524 mm	38" 965 mm	1955 lbs. 889 kgs.	780	855	929
500	3" FLG.	70" 1778 mm	66" 1676 mm	44" 1118 mm	2190 lbs. 995 kgs.	904	990	1076
600	3" FLG.	76" 1930 mm	66" 1676 mm	44" 1118 mm	2625 lbs. 1193 kgs.	1150	1260	1370
700	3" FLG.	86" 2184 mm	66" 1676 mm	44" 1118 mm	3025 lbs. 1375 kgs.	1314	1440	1565
800	3" FLG.	76" 1930 mm	68" 1727 mm	51" 1295 mm	3255 lbs. 1480 kgs.	1561	1710	1859
1000	4" FLG.	78" 1981 mm	68" 1727 mm	51" 1295 mm	4000 lbs. 1818 kgs.	1725	1890	2055
1100	4" FLG.	90" 2286 mm	68" 1727 mm	51" 1295 mm	4400 lbs. 2000 kgs.	1972	2160	2348
1200	4" FLG.	76" 1930 mm	95" 2413 mm	51" 1295 mm	4800 lbs. 2182 kgs.	2236	2450	2663
1300	4" FLG.	80" 2032 mm	95" 2413 mm	51" 1295 mm	5200 lbs. 2364 kgs.	2465	2700	2935
1800	4" FLG.	80" 2032 mm	101" 2565 mm	51" 1295 mm	7200 lbs. 3273 kgs.	3286	3600	3914
2400	6" FLG.	80" 2032 mm	107" 2718 mm	51" 1295 mm	9800 lbs. 4364 kgs.	4016	4400	4783

- NOTES**
1. Not available on models 5, 10 and 20.
  2. Models 5, 10 and 20 use a 4-way spool valve.



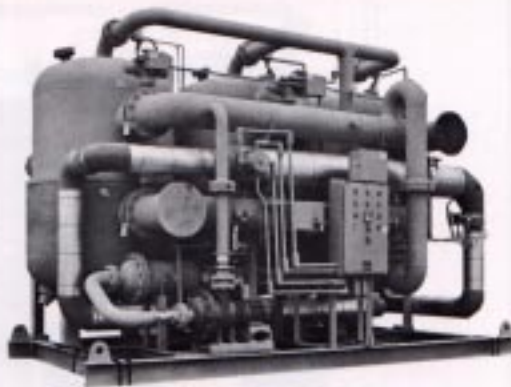
E2DD-30-7H-A 0279



Heat reactivated closed loops (zero purge) units



High Pressure Dryer



Custom designed units

**ENERVAC** produces a wide range of specialty products and systems, most of which are based on a high order of technology.

## Solving Tomorrow's Problems TODAY

### HIGH VACUUM DEGASIFICATION

For upgrading of new and used electrical insulating liquids, transformer oil, polybutenes and silicones - the removal of free and soluble water, free and dissolved air and gases and particulate matter. Mobile and stationary units in sizes to fit every need.

### HIGH PRESSURE DRYER

High pressure air dryers with pressures up to 4000 PSIG are designed specifically for the electrical utilities which employ Air Blast Circuit Breakers in their switching operations. The dryers feature fully automatic operation, all stainless steel construction and available Man Machine Interface.

### LUBE SYSTEMS

Oil circulating lubrication systems including pumps, tanks, filters, coolers, indicators and other accessory equipment in either packaged or component systems are available.

### SF<sub>6</sub> GAS SERVICE CART

SF<sub>6</sub> Gas Service Carts are designed to meet today's requirements for efficient SF<sub>6</sub> gas Reclaiming and Handling with no or minimal loss of gas to atmosphere. The Cart performs all the necessary functions to service a breaker. Purification, drying and filtration of the gas is performed during removal and charging operation.

### VACUUM DEHYDRATORS

Low vacuum units are available from Enervac Corporation for the continuous maintenance of the original chemical and physical qualities of lubricating, insulating, cooling, hydraulic and synthetic oils.

### INDUSTRIAL FILTERS

Industrial filtration equipment utilizing pleated paper, and other media to provide the exact degree of filtration and flow rate for virtually any application.

Representative

**ENERVAC**  
CORPORATION

700 FRANKLIN BLVD., CAMBRIDGE  
ONTARIO, CANADA N1R 5S9  
(519) 623-9890 FAX (519) 623-8250  
E-mail: sales@enervac.com  
Website: www.enervac.com