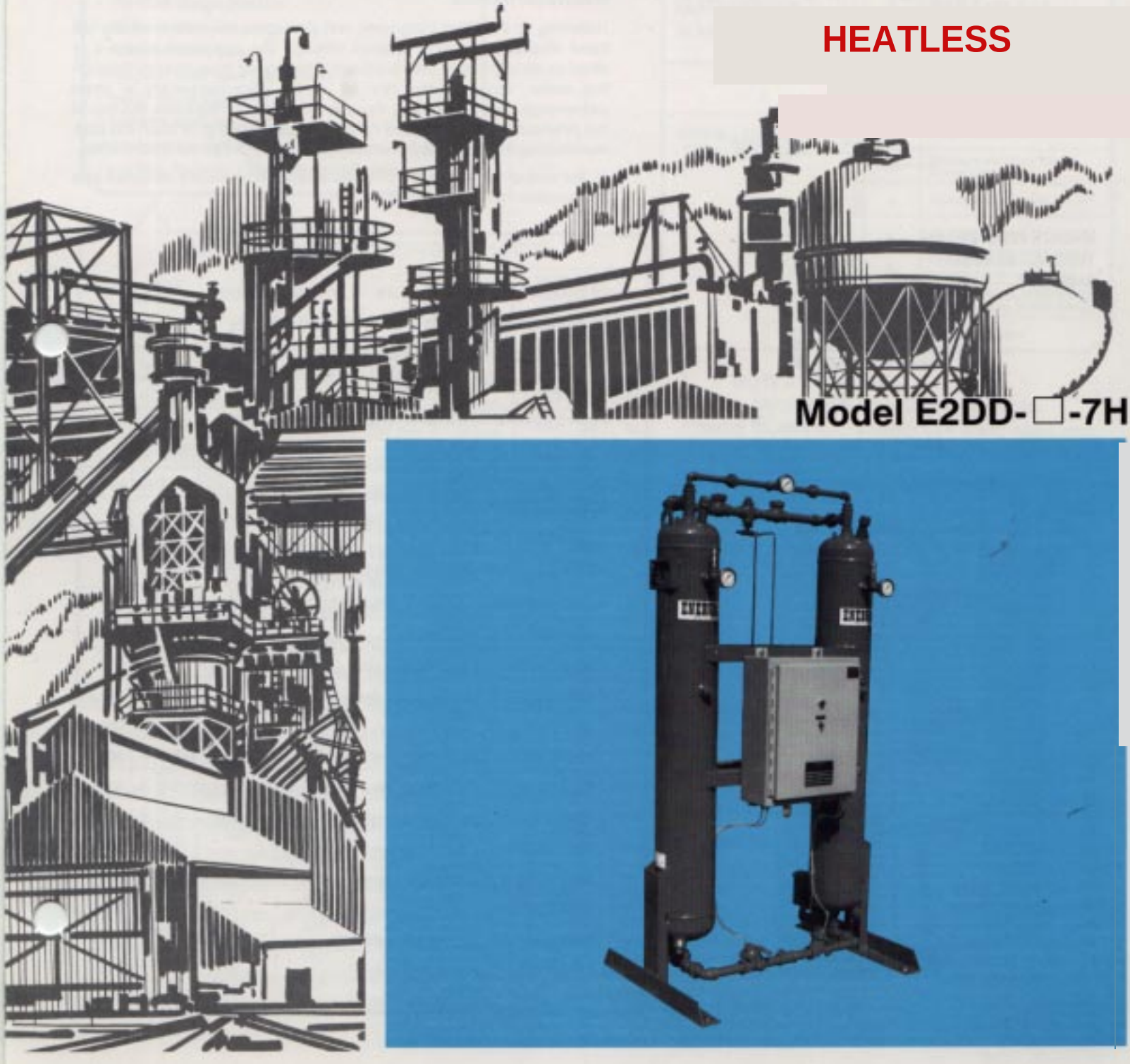
BULLETIN 7.70.000

# ENERVAC
## CORPORATION

Engineers and Manufacturers of

# AIR and GAS *DRYERS*

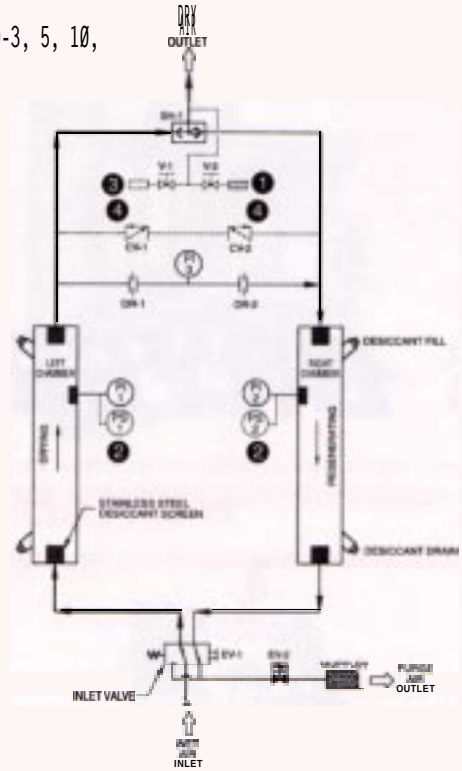
## HEATLESS



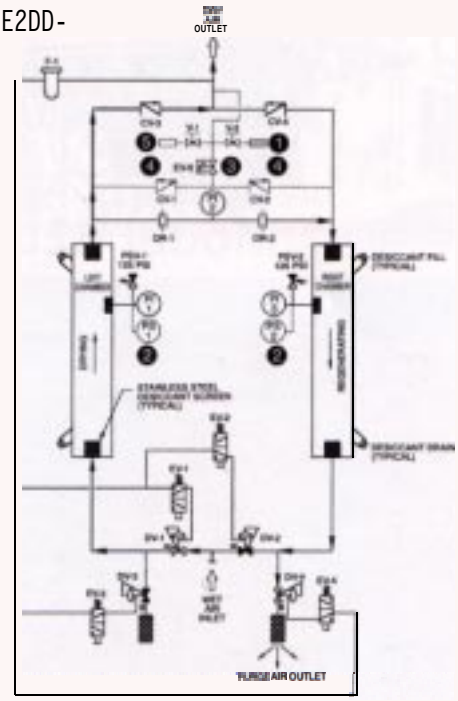
Model E2DD-□-7H

## 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

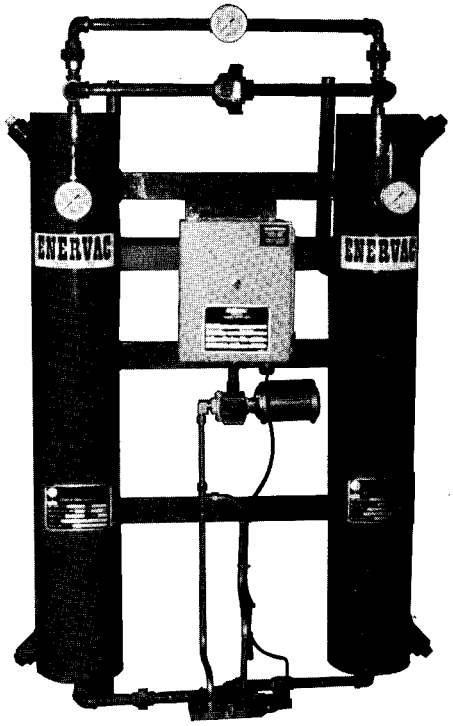
| | CODE | OPTIONS |
|---|---|---|
| NEMA CYCLE | A | 4 Minute Cycle Minus 100°F Dewpoint |
| ELECTRICAL INPUT | 11 | 110v/60hz/1ph |
| | 21 | 220v/60hz/1ph |
| ELECTRICAL CLASSIFICATION | 4 | NEMA 4, waterproof |
| | 7 | NEMA 7, expl. proof |
| ALARMS & CONTROLS | S | Switching Failure |
| | H | High 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 | 3/8" NPT | 32" 813 mm | 24" 609 mm | 11" 280 mm | 115 lbs. 53 kgs. | 16 | 18 | 20 |
| 20 | 3/8" 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 | 9600 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.

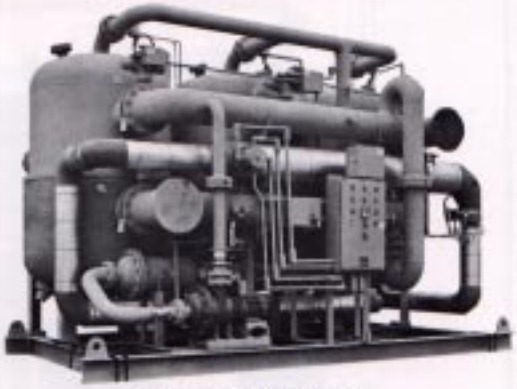



E2DD-30-7H-A

*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 silicons - 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.

## $SF_6$ GAS SERVICE CART

$SF_6$ Gas Service Carts are designed to meet today's requirements for efficient $SF_6$ 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**

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