WHITLOCK • MATERIAL HANDLING

## ADLG SERIES GAS DEHUMIDIFYING DRYERS

ADLG high-capacity, low-cost gas-fired dryers deliver consistent temperature (+/- 1ºF) and –40ºF dew point even in high-humidity environments. These dryers are able to reduce energy costs 50% to 85% over electric dryers and will dry high throughput materials centrally or beside the machine.

The unique energy-efficient design features Hi-Core™ Technology, which places the gas-fired heating element inside the hollow core of the desiccant canister, allowing faster regeneration and cooling of the desiccant in less than one hour. All the models are available in three temperature ranges—standard, low and high heat. With the advanced PLC control, the features can be easily expanded to take advantage of additional energy savings options.

ADLG Series Dryer

## STANDARD FEATURES

- *Expandable PLC control (AP1) displaying the process temperature and dew point as low as –40°F. Display of process temperature set point and actual*
  - *Standard units 180ºF to 250ºF*
  - *Low temperature units 120ºF to 180ºF*
  - *High temperature units 250ºF to 400ºF*
- *High process and regeneration temperature control safeties*
- *13X desiccant (molecular sieve)*
- *Easy to access process, regeneration, and combustion air filters*
- *High-pressure centrifugal blower (peripheral blowers available) delivers stated airflow under load. (High performance dryers are equipped with multiple regenerative blowers.)*
- *Electrically-actuated air valve*
- *PLC control including dew point meter with regeneration on demand, 7 day timer, dirty filter indication, airflow monitoring, and temperature set back*
- *NFPA86, UL, AGA and CGA machinery electrical standards*
- *Supply voltage (specify): 208, 230, 460, 575/3/60*
- *Can be run using natural gas or propane*
- *Dirty filter indication*
  - *Process air*
  - *Regeneration air*
  - *Composition air*
- *Stainless steel desiccant tanks, filter housings and after-coolers*

## OPTIONAL FEATURES

- *Low temperature operation 120ºF - 180ºF*
  - *Includes a pre-cooler to cool the dry air before entering process air heat exchanger*
- *High temperature operation 250ºF - 400ºF*
  - *Includes insulated proces delivery air hose, larger burner/gas heat exchangers, additional electronics to support this operation, return air after-cooler*
- *Stainless steel plasticizer trap/after-cooler with filter*
- *Material miser valve (overdrying protection)*
- *Temperature set back (overdrying protection) may require low temperature option*
- *Closed-loop regeneration cooling valve includes cooling coil*
- *15ºF to -40ºF dewpoint meter or 15ºF to -80ºF dewpoint meter*
- *Sound insulation package for under 85 dba noise level (not required on ADLG 1000, ADLG 1450, and ADLG 1700)*
- *Dust collector*
- *AP1+ controller includes PLC features plus 5" x 4" touch-screen*
- *Remote operator interface*
- *400/3/50 voltage (De-rate cfm by 17% for 50 hz applications)*
- *Ethernet module for remote communication*
- *CSA approval, UL rating, or CE compliance*

## SPECIFICATIONS

| Model | Airflow, cfm ($m^3$/hr) | Air inlet/outlet OD, in. (mm) | Height, in. (cm) | Depth, in. (cm) | Width, in. (cm) | Shipping weight, lbs. (kg) |
|---|---|---|---|---|---|---|
| ADLG 1000 | 600 (1015) | 8 (203) | 67 (170) | 98 (249) | 63 (160) | 2950 (1338) |
| ADLG 1450 | 850 (1440) | 8 (203) | 67 (170) | 98 (249) | 63 (160) | 3050 (1383) |
| ADLG 1700 | 1000 (1695) | 10 (254) | 81 (206) | 116 (295) | 73 (185) | 4125 (1871) |
| ADLG 2100 | 1250 (2120) | 10 (254) | 81 (206) | 116 (295) | 73 (185) | 4850 (2200) |
| ADLG 2550 | 1500 (2545) | 10 (254) | 81 (206) | 116 (295) | 73 (185) | 5050 (2291) |
| ADLG 3400 | 2000 (3395) | 12 (305) | 83 (211) | 148 (376) | 73 (185) | 8125 (3685) |
| ADLG 4250 | 2500 (4245) | 12 (305) | 83 (211) | 148 (376) | 73 (185) | 8875 (4025) |
| ADLG 5100 | 3000 (5095) | 12 (305) | 83 (211) | 148 (376) | 73 (185) | 9050 (4105) |

## GAS FLOW REQUIREMENTS

| Model | Low heat gas flow rate, CFH | High heat gas flow rate, CFH | Exhaust duct sizes, in. (mm) | Combined flue air flow, cfm |
|---|---|---|---|---|
| ADLG 1000 | 159 | 227 | 3 (76) | 87 |
| ADLG 1450 | 225 | 322 | 3 (76) | 123 |
| ADLG 1700 | 265 | 378 | 4 (102) | 145 |
| ADLG 2100 | 331 | 473 | 4 (102) | 182 |
| ADLG 2550 | 397 | 568 | 5 (127) | 218 |
| ADLG 3400 | 528 | 756 | 5 (127) | 290 |
| ADLG 4250 | 661 | 945 | 6 (152) | 363 |
| ADLG 5100 | 793 | 1134 | 6 (152) | 436 |

## ELECTRICAL SPECIFICATIONS

| Model | FLA @ 208/3/60 | FLA @ 230/3/60 | FLA @ 400/3/50 | FLA @ 460/3/60 | FLA @ 575/3/60 |
|---|---|---|---|---|---|
| ADLG 1000 | 36 | 33 | 19 | 16 | 13 |
| ADLG 1450 | 47 | 43 | 25 | 22 | 17 |
| ADLG 1700 | 48 | 44 | 25 | 22 | 17 |
| ADLG 2100 | 61 | 55 | 32 | 28 | 22 |
| ADLG 2550 | 75 | 67 | 39 | 34 | 27 |
| ADLG 3400 | 120 | 109 | 62 | 54 | 43 |
| ADLG 4250 | 150 | 136 | 78 | 67 | 54 |
| ADLG 5100 | 191 | 173 | 99 | 87 | 69 |

The AP1 PLC controlled system includes a touch-screen interface.

## AP1 CONTROLLER FEATURES

- *Touch-screen interface provides clear information about desiccant bed regeneration, process temperature, and dewpoint*
- *Off-the-shelf programmable controller monitors and controls the drying and conveying system*
- *Allows simple start-up, shut-down, and adjustment of drying and conveying parameters*
- *Integral PID temperature control with display of setpoint and actual process temperature*
- *Display of "actual" dewpoint*
- *Alarm indication also includes high temperature conditions,dirty filters, and heater failure*
- *Dryer "auto shutdown" sequence*
- *Loop break alarm*
- *7 day timer*
- *Material over-drying protection*

## AP1 CONTROLLER OPTION

- *Ethernet module*