WHITLOCK • MATERIAL HANDLING

LARGE ADL SERIES ELECTRIC DEHUMIDIFYING DRYERS

ADL Series dryers are designed to dry (remove 1% water per hour) hygroscopic pelletized plastic material, when used in conjunction with an appropriately sized drying hopper. The unique energy-efficient design features Hi-Core™ Technology, which places the electric 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.

ADL Series Dryer

STANDARD FEATURES

- *Standard off-the-shelf programmable controller and 1/16 DIN digital temperature control*
  - *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 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*
- *NFPA79, UL and CUL machinery electrical standards, including NEMA 12 controls, components & enclosure; lockable electrical disconnect; branch fusing; regeneration temperature control; "Process high temp" indication light and audible alarm; and sequence shutdown switch*
- *Supply voltage (specify): 208, 230, 460, 575/3/60*
- *Dirty filter check, both process and regeneration*
- *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 heater*
- *High temperature operation 250ºF - 400ºF includes insulated process delivery air base, additional heaters, electronics to support this operation, and return air after-cooler to maximize the efficiency of the dryer*
- *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 ADL 1000, ADL 1450, and ADL 1700)*
- *Dust collector*
- *PLC (AP1) control including dew point meter with regeneration demand, 7 day timer, dirty filter indication, airflow monitoring, and temperature set back*
- *PLC+ (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 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)
ADL1000	600 (1015)	8 (203)	67 (170)	80 (203)	63 (160)	2100 (953)
ADL 1450	850 (1440)	8 (203)	67 (170)	80 (203)	63 (160)	2200 (998)
ADL 1700	1000 (1695)	10 (254)	81 (206)	116 (295)	73 (185)	2950 (1338)
ADL 2100	1250 (2120)	10 (254)	81 (206)	116 (295)	73 (185)	4350 (1973)
ADL 2550	1500 (2545)	10 (254)	81 (206)	116 (295)	73 (185)	4700 (2131)
ADL 3400	2000 (3395)	12 (305)	83 (210)	148 (376)	73 (185)	6500 (2948)
ADL 4250	2500 (4245)	12 (305)	83 (210)	148 (376)	73 (185)	7300 (3311)
ADL 5100	3000 (5095)	12 (305)	83 (210)	148 (376)	73 (185)	8450 (3833)

ELECTRICAL SPECIFICATIONS: LOW HEAT AND STANDARD

Model	FLA @ 208/3/60	FLA @ 230/3/60	FLA @ 400/3/50	FLA @ 460/3/60	FLA @ 575/3/60
ADL1000	152	137	79	69	55
ADL 1450	217	196	113	98	78
ADL 1700	249	225	129	112	90
ADL 2100	314	284	163	142	114
ADL 2550	378	341	197	171	137
ADL 3400	n/a	n/a	270	234	188
ADL 4250	n/a	n/a	339	294	236
ADL 5100	n/a	n/a	424	370	295

ELECTRICAL SPECIFICATIONS: HIGH HEAT

Model	FLA @ 208/3/60	FLA @ 230/3/60	FLA @ 400/3/50	FLA @ 460/3/60	FLA @ 575/3/60
ADL1000	207	187	108	94	75
ADL 1450	296	267	154	134	107
ADL 1700	342	309	178	154	123
ADL 2100	430	389	224	194	156
ADL 2550	n/a	n/a	269	234	187
ADL 3400	n/a	n/a	366	318	254
ADL 4250	n/a	n/a	n/a	399	319
ADL 5100	n/a	n/a	n/a	494	395

STANDARD CONTROL SYSTEM FEATURES

- *Off-the-shelf 1/16 DIN temperature controller with auto tune and PID*
- *Programmable logic based control system*
- *Enclosure meets NFPA 79, UL and CUL electrical standards*
- *Non-fused disconnect*
- *High process temperature alarm light*
- *Temperature controlled regeneration with safety*

The standard control system features digital temperature control.

STANDARD CONTROL SYSTEM OPTION

- *Audible alarm with silence button*
- *Digital dewpoint monitor to -40ºF*

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*

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

AP1 CONTROLLER OPTION

- *Ethernet module*

NOTES: