

SDA SERIES



High Capacity
Dehumidifying Dryers

600-3000 CFM HIGH CAPACITY DEHUMIDIFYING DRYERS

Dehumidifying dryers remove internal and external moisture from thermoplastic pellets and regrind before processing, independent of climate or ambient air conditions.

Sterling SDA Series drying systems are designed for continuous, 24 hour operation and offer an energy efficient HiCore™ design that can reduce energy costs by 10-15%. A dry-air automatic regeneration circuit uses -40°F dewpoint air to regenerate and cool desiccant beds and maintain a consistent -40°F dew point to process.

Sterling SDA large dehumidifying dryers feature fewer moving parts, making them more reliable, less expensive, and easier to maintain than other models. The dryer cabinet is designed for maximum safety. Premium quality HiCore™ (Heat in Core) Desiccant Bed Technology provide dependable service.



Features

- Drying temperature average of 180° F to 300° F (82°-149°C)
- High 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.
- Electrically-actuated bed switching valve
- Stainless steel heater boxes, desiccant tanks, filter housing, and internal manifolds
- NFPA 79, UL and CUL machinery electrical standards, including NEMA 12 controls, components and 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 and 400/3/50 (derate cfm by 17% for 50 Hz applications)
- 600, 850, 1000, 1250, 1500, 2000, or 3000 cfm (1000, 1450, 1700, 2100, 1550, 3400, 4250, 5100 m³/h)
- Average dew point temperature of -40 °F (-40°C)

Options

- Low temperature operation 120°F to 180°F (49° to 82°C), includes a pre-cooler to cool the dry air before entering the process air heater
- High temperature operation 250°F to 400°F (121° to 204°C), includes insulated process delivery air hose, additional heaters, electronics to support this operation, return air aftercooler to maximize the efficiency of the dryer
- Plasticizer trap/after-cooler with filter
- Overdrying protection
- Automatic airflow reduction valve
- Closed-loop cooling valve
- 15°F to -40°F (-9° to -40°C) dew point or 15° to 80°F (-9° to 27° C) dewpoint
- Sound insulation package for under 85 dba noise level (not required on SDA 1000, SDA 1450, and SDA 1700)
- Dust collector
- Remote operator interface
- Ethernet module for remote communication
- Hopper mounting of the process heater box
- High performance (HP) models with multiple regenerative blowers

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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)
SDA1000	600 (1015)	8 (203)	67 (170)	80 (203)	63 (160)	2100 (953)
SDA 1450	850 (1440)	8 (203)	67 (170)	80 (203)	63 (160)	2200 (998)
SDA 1700	1000 (1695)	10 (254)	81 (206)	116 (295)	73 (185)	2950 (1338)
SDA 2100	1250 (2120)	10 (254)	81 (206)	116 (295)	73 (185)	4350 (1973)
SDA 2550	1500 (2545)	10 (254)	81 (206)	116 (295)	73 (185)	4700 (2131)
SDA 3400	2000 (3395)	12 (305)	83 (210)	148 (376)	73 (185)	6500 (2948)
SDA 4250	2500 (4245)	12 (305)	83 (210)	148 (376)	73 (185)	7300 (3311)
SDA 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
SDA1000	152	137	79	69	55
SDA 1450	217	196	113	98	78
SDA 1700	249	225	129	112	90
SDA 2100	314	284	163	142	114
SDA 2550	378	341	197	171	137
SDA 3400	n/a	n/a	270	234	188
SDA 4250	n/a	n/a	339	294	236
SDA 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
SDA1000	207	187	108	94	75
SDA 1450	296	267	154	134	107
SDA 1700	342	309	178	154	123
SDA 2100	430	389	224	194	156
SDA 2550	n/a	n/a	269	234	187
SDA 3400	n/a	n/a	366	318	254
SDA 4250	n/a	n/a	n/a	399	319
SDA 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 Options

- Audible alarm with silence button
- Digital dewpoint monitor to -40°F

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

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NOTES:

