

SDAG SERIES



Gas-Fired Dry-Air Dryer

600-3000 CFM GAS-FIRED HIGH CAPACITY DRYERS

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

Sterling SDAG 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 SDAG 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 delivers stated airflow under load)
- Electrically-actuated bed switching valve
- Stainless steel gas heat exchangers, desiccant tanks, filter housing, and internal manifolds
- NFPA86, UL, AGA, and CGA machinery electrical standards
- Supply voltage (specify): 208, 230, 460, 575/3/60 and 400/3/50 (derate cfm by 17% for 50 Hz applications)
- Can be run using natural gas or propane
- 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-180°F (49°-82°C), includes a pre-cooler to cool the dry air before entering the process air heater
- High temperature operation 250°F-400°F (121°-204°C), includes insulated process delivery air hose, additional heaters, electronics to support this operation, return air available) aftercooler to maximize the efficiency of the dryer
- Plasticizer trap/after-cooler with filter
- Automatic airflow reduction valve
- Overdrying protection
- Closed-loop cooling valve
- 15°F to -40°F (-9° to -40°C) dew point or 15°-80°F (-9° to 27° C) dewpoint
- Sound insulation package for under 85 dba noise level (not required on SDAG 1000, SDAG 1450, and SDAG1700)
- Dust collector
- Remote operator interface
- Ethernet module for remote communication
- Hopper mounting of the gas heat exchanger
- 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)
SDAG 1000	600 (1015)	8 (203)	67 (170)	98 (249)	63 (160)	2950 (1338)
SDAG 1450	850 (1440)	8 (203)	67 (170)	98 (249)	63 (160)	3050 (1383)
SDAG 1700	1000 (1695)	10 (254)	81 (206)	116 (295)	73 (185)	4125 (1871)
SDAG 2100	1250 (2120)	10 (254)	81 (206)	116 (295)	73 (185)	4850 (2200)
SDAG 2550	1500 (2545)	10 (254)	81 (206)	116 (295)	73 (185)	5050 (2291)
SDAG 3400	2000 (3395)	12 (305)	83 (211)	148 (376)	73 (185)	8125 (3685)
SDAG 4250	2500 (4245)	12 (305)	83 (211)	148 (376)	73 (185)	8875 (4025)
SDAG 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
SDAG 1000	159	227	3 (76)	87
SDAG 1450	225	322	3 (76)	123
SDAG 1700	265	378	4 (102)	145
SDAG 2100	331	473	4 (102)	182
SDAG 2550	397	568	5 (127)	218
SDAG 3400	528	756	5 (127)	290
SDAG 4250	661	945	6 (152)	363
SDAG 5100	793	1134	6 (152)	436



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

ELECTRICAL SPECIFICATIONS

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