



AEC

Blending | Conveying | **Drying**
Process Cooling | Heat Transfer | Size Reduction

NGX Series

Desiccant Bed Dryer



Best-in-Class Drying Performance

Energy Efficient

Flexible Configurations

Advanced Controls

Best-in-class performance and efficiency packed into a sophisticated and flexible design. Processing from 20 to 390 pounds per hour.

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Best-in-Class Drying Performance

Produce High-Quality Parts

The highly capable dual-bed dryer maintains a consistent dew point below -40° degrees in most resins & operating conditions throughout the drying cycle.

Energy Efficient

Reduce Operating Costs

Optimized desiccant beds and regeneration cycle provide increased efficiency that lowers energy consumption by 27% when compared to wheel drying technology.

Flexible Configurations

Optimize Floor Space Utilization

Portable carts, integrated conveying, and machine mounted configurations allow integration into nearly any unique factory footprint.

Advanced Controls

Improve Factory Intelligence

Color Touch Screen, Allen-Bradley PLC, and two-way remote monitoring capabilities provide a robust platform to easily capture and act on process data.

NGX SERIES DESICCANT BED DRYER

Performance Paired With Efficiency

Since 1957, AEC has been the leader in drying equipment for the plastics processing industry. The NGX Series Desiccant Bed Dryer leverages the AEC legacy and expertise to provide a system that is suited for most drying applications including extrusion, injection molding, and blow molding.

The NGX Series Dryer utilizes sophisticated control algorithms that optimize each adsorption and regeneration cycle for the ideal balance of performance and efficiency. Many competitive dryers run at a constant energy consumption profile, which results in higher energy usage. The NGX Series Dryer can save up to 27% in energy costs without sacrificing performance.

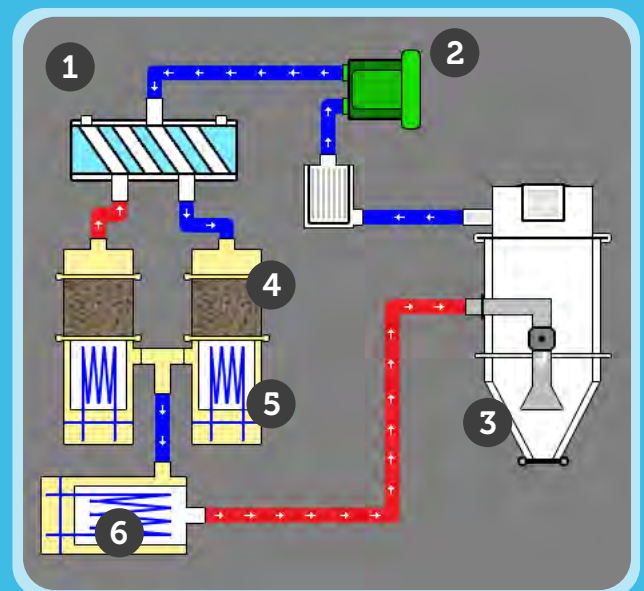


How Does a Single Blower Dryer Work?

Single- and dual-blower desiccant dryers are similar in that both types deliver excellent performance. A dual-blower dryer has a blower for process air and an additional blower for regeneration air. Whereas, a single-blower dryer simply has one blower that provides process, regeneration and cooling air flow. This is possible due to an advanced controls package and switching valve. The switching valve directs air to the desiccant beds as dictated by the advanced controls. The desiccant beds alternate between material drying and regeneration, ultimately providing dry resin while using a small amount of energy.

Major benefits to a single-blower design:

- Smaller footprint freeing up precious floorspace
- Fewer major components to maintain
- Energy efficiency resulting in low cost of ownership



1) Switching Valve 2) Blower 3) Drying Hopper
4) Desiccant Cans 5) Regeneration Heater 6) Process Heater

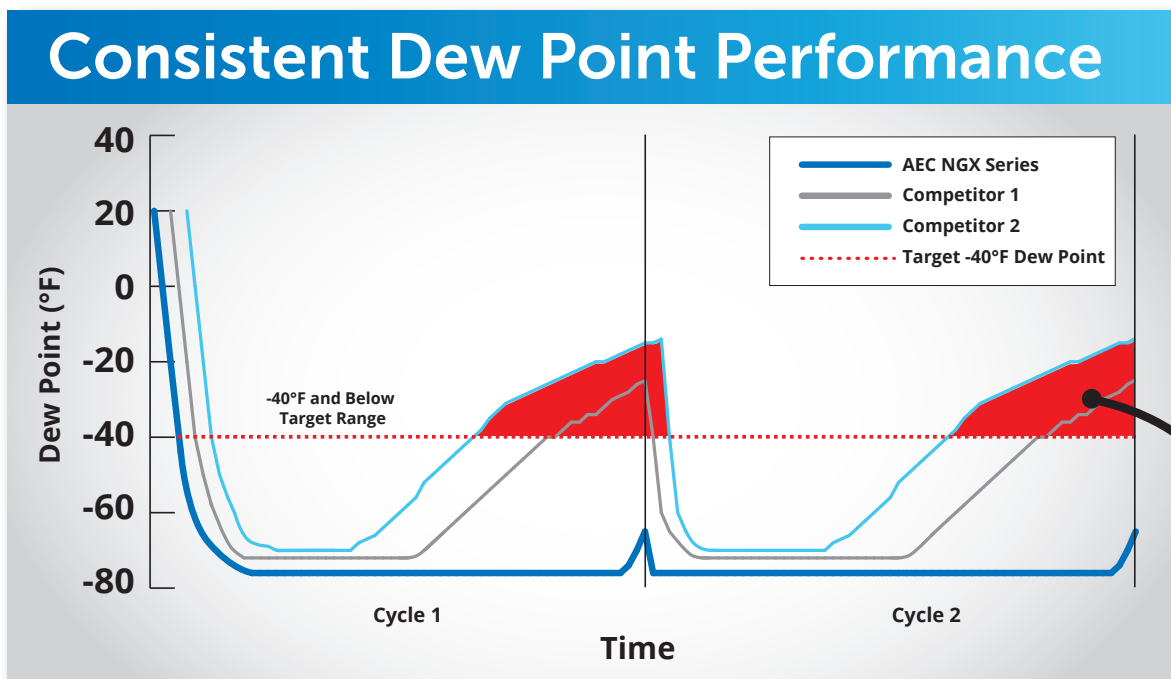
NGX SERIES DESICCANT BED DRYER

Best-in-Class Drying Performance Maintains Quality

Desiccant Bed Drying Technology is Known for Excellent Drying Performance

When conditions get tough, the NGX Series Desiccant Bed Dryer delivers. The NGX Series was engineered to improve the desiccant bed concept by optimizing air flow, temperature and time duration.

The NGX Dryer also adjusts the regeneration cycle based on operating conditions. If dew point or material moisture levels change, the smart control system adjusts the regeneration cycle accordingly. Additionally, over-dry protection comes standard to protect sensitive resin. The result is efficient, best-in-class drying performance.



Examples of Quality Variations in Parts



Percentage of rejected parts increases if materials are not dried properly to a target dew point of -40° F or below.

Engineered for Efficiency

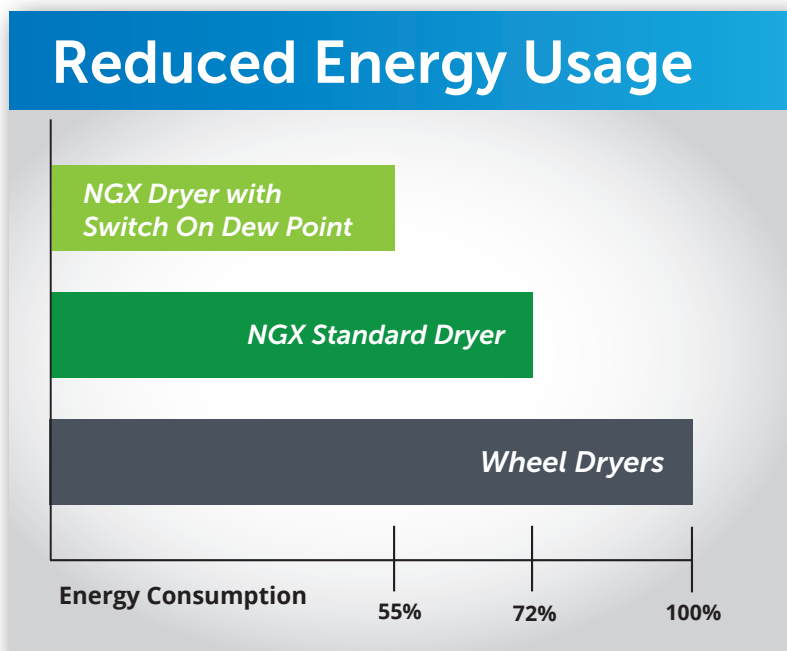
The NGX Series Desiccant Bed Dryer Reduces Operating Costs

Compared to a typical wheel dryer technology, the NGX Dryer saves 27% in energy costs. Regeneration heating time is precisely controlled with sophisticated algorithms to optimize performance and efficiency. In contrast to a typical wheel dryer, a desiccant bed dryer turns off the heater during the cooling cycle and minimizes heating airflow during regeneration. On average, the NGX regeneration heater only runs 65% of the time compared to a wheel dryer running 100% of the time.



Optional Switch-On Dew Point Feature Provides Additional Energy Savings

During the cold winter months and cool summer nights, ambient dew points often drop substantially. The NGX takes advantage of these changing conditions in a smart way. AEC's Switch-On Dew Point option monitors critical parameters that allow the dryer to optimize each desiccant bed cycle time, resulting in energy reduction.



Trust the engineers at AEC to determine if the Switch-On Dew Point option is right for your facility.

NGX SERIES DESICCANT BED DRYER

Flexible System Configurations

Nomad All-In-One Drying and Conveying Solution

Take advantage of an all-in-one solution to drying with the compact Nomad Portable Integrated Conveying System. The NGX Nomad allows operators to automatically convey material to the drying hopper and the process machine with integrated controls. This means that no additions or expansions to existing conveying systems are required when adding a NGX Nomad Dryer to your system. In addition, when equipped with an optional RPV proportioning valve, two materials (typically virgin and regrind) can be automatically conveyed to the drying hopper, eliminating the need to mix the two prior to drying.



Cart Mounted

Available in single, double, or triple drying hopper carts to fit small and large processing needs.



Floor Mounted

Each dryer is available as a floor mounted unit with integrated casters. This configuration can be used with remote drying hoppers, remote machine mount drying hoppers, or as a direct replacement for an old dryer while still utilizing the existing drying hoppers.



Machine Mounted

The NGX-25 and NGX-50 are both available in a machine mount configuration that mounts the dryer and drying hopper directly to the feed throat of a process machine.



Advanced Controls

Intuitive Controls Provide Ease of Operation and Performance Monitoring

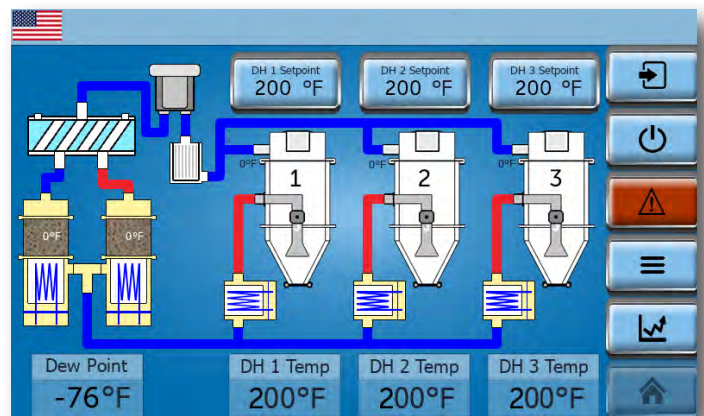
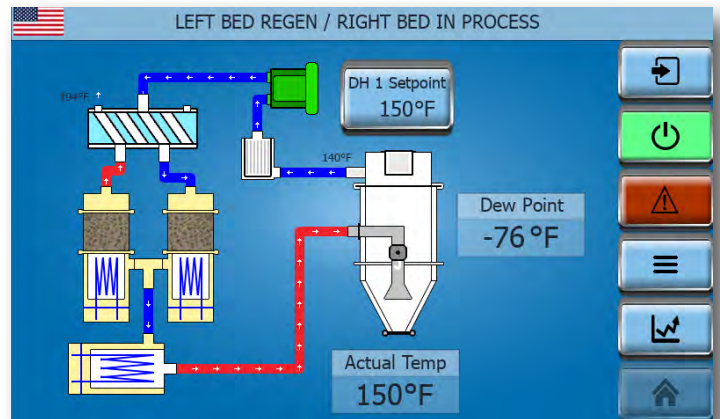
The NGX Series Dryer comes standard with an intuitive and industry-proven controls platform. The high-resolution 7" touch screen provides easy operation of the dryer. The colorful home screen displays an easy visual reference of all critical drying parameters and processes.

The layout is intuitive and allows the operator to quickly learn the functionality of the controls. The NGX Series Dryer uses proven Allen-Bradley PLC technology for consistent reliable performance.

The control interface gives operators power at their fingertips with many standard data logging capabilities. Trend charts show critical parameters that help analyze dryer performance and monitor the dryer for specific maintenance needs.

Plant managers can remotely monitor and control the dryer from any phone, tablet, or computer using the built in VNC server.

The PLC, color touch screen, and monitoring capabilities provide a great platform to capture and act on process data enabling a smarter plastics facility.



Options to Help You Get More from Your Production Floor.

Alarm Light & Horn

Audio and visual indication to aide in performance monitoring.

Ethernet Switch Kit

Allows simple integration into any compatible Ethernet network.

Volatile Trap

Critical for protecting internal components from a wide range of volatile compounds.

Pre-Cooler and After-Cooler

Bolt on coolers to optimize operation in low temperature or high temperature configuration.

NGX SERIES SPECIFICATIONS

NGX Model		NGX-25	NGX-50	NGX-100	NGX-150	NGX-200	NGX-300
Drying Temperature ¹ °F (°C)		120 - 375 °F (49 - 190 °C)					
Dew Point °F (°C)		-40° F (-40 °C)					
Blower hp (kW)		0.37 (0.28)	0.56 (0.42)	1.4 (1.05)	2.9 (2.2)	2.9 (2.2)	6.7 (5.0)
Power		480/3/60 (other voltages available)					
Full Load Amps		10	10.5	15.5	21.5	28.5	37
Standard Drying Hopper		WH75	WH150	WH300	WH400	WH600	WH800
Floor Mount	Dryer Height in. (cm)	42 (107)	42 (107)	48 (122)	53 (135)	53 (135)	53 (135)
	Dryer Width in. (cm)	20 (51)	20 (51)	22 (56)	36 (91)	36 (91)	36 (91)
	Dryer Depth in. (cm)	33 (84)	33 (84)	42 (107)	42 (107)	42 (107)	42 (107)
	Weight Dryer Only lbs. (kg)	285 (130)	305 (139)	350 (159)	650 (295)	720 (327)	780 (355)
Nomad	Height to top of Hopper (Standard) in. (cm)	57 (145)	71 (180)	88 (223)	**	**	**
	Overall Width in. (cm)	51 (130)	53 (135)	61 (154)	**	**	**
	Overall Depth in. (cm)	33 (84)	33 (84)	33 (84)	**	**	**
	Weight w/ Standard Hopper lbs. (kg)	782 (355)	861 (391)	1,113 (506)	**	**	**
	Dryer Hose Diameter in. (cm)	2 (5)	2 (5)	2.5 (6)	3.5 (9)	3.5 (9)	3.5 (9)
	Primary Conveying Distance ² ft. (m)	20' (6)					
	Secondary Conveying Distance ³ ft. (m)	20' (6)					
	Conveying Hose Diameter in. (cm)	1.5 (2.6)					
	Primary Conveying Blower hp (kW)	1 (0.75)					
	Secondary Conveying Blower hp (kW)	1 (0.75)					

1) Standard temperature range 180-250 °F. 2) Equivalent conveying feet from take off of drying hopper to process machine. 3) Equivalent conveying feet from material source to drying hopper. ** Consult factory for sizing information.

Polymer Acronym	Initial Moisture %	Drying Temp. °F (°C)	Drying Time		NGX-25	NGX-50	NGX-100	NGX-150	NGX-200	NGX-300
			Max	Min	Material Throughput Capacity lbs/hr (kg/hr)					
ABS	0.40	180 (82)	3.0	2.0	30 (14)	53 (24)	104 (47)	166 (75)	208 (95)	302 (137)
PA	0.40	160-180 (71-82)	3.0	3.0	27 (12)	47 (21)	93 (42)	149 (68)	186 (85)	270 (123)
PBT	0.30	250 (121)	3.0	2.0	23 (10)	40 (18)	79 (36)	126 (57)	157 (71)	229 (104)
PC	0.30	250 (121)	3.0	2.0	30 (14)	52 (24)	102 (46)	164 (75)	205 (93)	298 (135)
PET	0.30	325-375 (163-190)	6.0	4.0	21 (10)	38 (17)	74 (34)	118 (54)	148 (67)	215 (98)
PETG	0.30	160 (71)	4.0	4.0	39 (18)	68 (31)	134 (61)	215 (98)	268 (122)	390 (177)
PMMA	0.30	160-180 (71-82)	2.0	2.0	31 (14)	54 (25)	106 (48)	169 (77)	211 (96)	307 (140)
POM	0.60	210 (99)	2.0	2.0	25 (11)	44 (20)	87 (40)	139 (63)	174 (79)	253 (115)
PSU	0.30	275-325 (135-163)	4.0	2.0	24 (11)	43 (20)	84 (38)	134 (61)	168 (76)	244 (111)
SAN	0.60	180 (82)	2.0	2.0	27 (12)	46 (21)	91 (41)	146 (66)	182 (83)	265 (120)



Let us help you with your application. Contact our application engineers at:

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