Desiccant Drying

DRYPOINT® XF

hyper-intelligent heated desiccant drying

Truth in Compressed Air.

BEKO

DRYPOINT® XF Heated Desiccant Dryers

At a Glance

Regenerative desiccant dryers are frequently found in industrial applications around the world. These dryers use a desiccant material, which adsorbs the water vapor in the air stream. Heated regenerative type desiccant dryers utilize an external heater to regenerate the desiccant in one tower while the other tower dries the compressed air to a very low dew point. The XFi models use patented, hyper-intelligent technology and autonomous systems to control the performance and maximize cost savings.

Features and Benefits

Auto-purge Rate & User Modes

Auto-adjusting purge rates and user presets for fully customizable operation

Advanced ecoIntelligent PLC

Automatically calculates the most energy efficient mode of operation at any given time

Maximum Energy Savings

Up to 90% energy savings compared to a conventional regenerative dryer

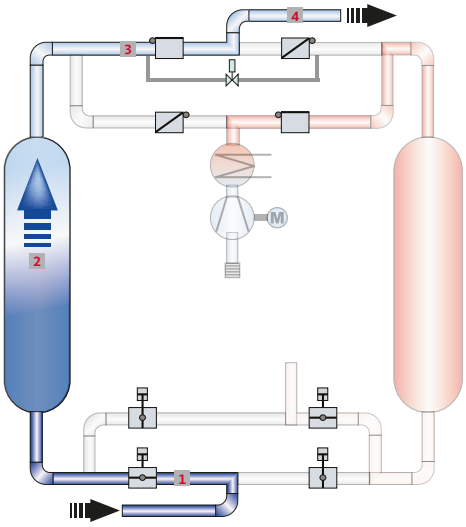
BEKOTOUCH 2 Interface

Easy to read, 7" touch screen display with animated P&ID plus free firmware updates

Modular Configuration

Engineered to be quickly and easily customized to suit any application with reduced lead-times

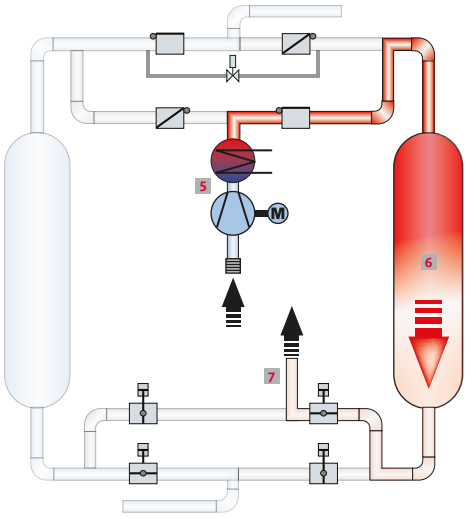
How it Works



Adsorption Phase

Extended Operating Cycles

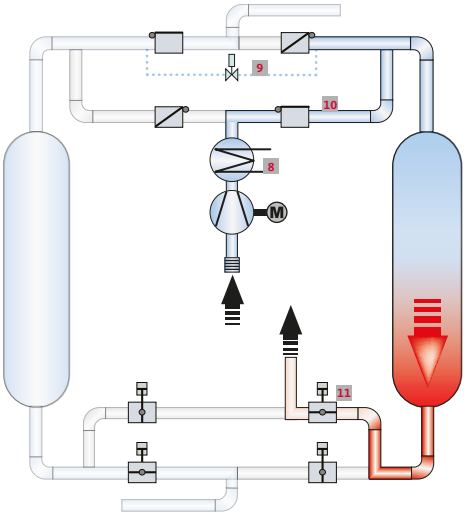
Saturated compressed air enters the dryer and flows through the open inlet valve **[1]**. Air flows upward through the tower where the desiccant extracts and retains water vapor **[2]**, thereby lowering the dew point, before exiting the top of the tower. The dry air passes through the outlet check valve **[3]** before exiting the dryer to the air distribution system **[4]**. The standard dew point demand system extends the adsorption phase up to 24 hours, or until the desiccant reaches a saturated state where regeneration is required, to deliver the desired outlet dew point.



Regeneration Phase

Reduced Regeneration Time and Temperature

The blower forces ambient air across an in-line heater **[5]** and pushes it into the regeneration tower under atmospheric pressures. This heated, dry air, flows through the tower **[6]**, evaporating water from the moisture laden desiccant, before exiting near the bottom of the tower. This moist air passes through the exhaust valve and is vented to open atmosphere **[7]**. Based on ambient and system conditions, the advanced ecoIntelligent PLC monitors regeneration to optimize the blower and heater operation, as well as the heater time and temperature to maximize efficiency.



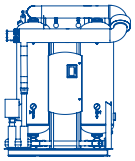
Cooling Phase

Reduced Cooling Time or Reduced or No Purge

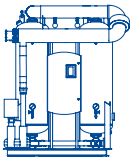
After the heater turns off **[8]**, the blower cools the heater down to a preset temperature. After that temperature is reached, the ecoIntelligent PLC will select the optimal method of desiccant bed cooling, whether via purge air **[9]** or ambient air **[10]**. Based on ambient and system conditions, the ecoIntelligent PLC monitors the cooling temperature and optimizes the purge amount from 3% to zero purge for maximum efficiency. After cooling conditions are met, the exhaust valve then closes **[11]** and the vessel is re-pressurized. The air flow through the dryer will then reverse.

DRYPOINT® XF Heated Desiccant Dryers

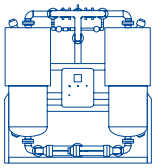
Compare



XFe Series
Economy Heated Blower Purge



XFi Series
ecoIntelligent Heated Blower Auto-purge



ACH Series
Heated Purge

	XFe Series Economy Heated Blower Purge	XFi Series ecoIntelligent Heated Blower Auto-purge	ACH Series Heated Purge
Flow Rates	800 - 6,000 scfm	800 - 6,000 scfm	70 - 4,050 scfm
Standard Outlet Pressure Dew Point | Optional	-40 °F	-40 °F	-40 °F | -80 °F
Maximum Inlet Air Temperature	120 °F	120 °F	120 °F
Maximum Operating Pressure | Optional	150 psig	150 psig	150 psig | 250 psig
Average Purge Air	3%	0-3%	7%
Available Options	Mounted filters, 3-valve bypass, Outdoor package, Dew point demand control, Tower insulation, Valve position indicators, Cover3More extended warranty	Mounted filters, 3-valve bypass, Outdoor package, Tower insulation, Valve position indicators, Cover3More extended warranty	Mounted filters, 3-valve bypass, Dew point demand control, Tower insulation, Cover3More extended warranty

Product Family

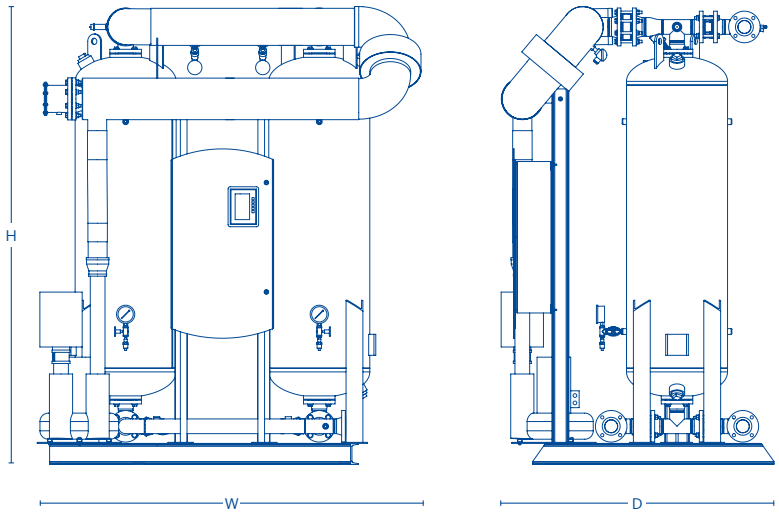
Heat regenerated and blower operated desiccant air dryers

Technical Details

DRYPOINT® XFe Economy Heated Blower Purge Desiccant Dryers

with external heated blower, high performance valves and **BEKO**TOUCH 2 interface

- Standard outlet pressure dew point: -40 °F
- Electrical power supply: 460 VAC / 3 Ph / 60 Hz
- Required pre-filtration grade SX: .01 µm | Required post-filtration grade FX: 1 µm
- cUL certified controls with NEMA 4 indoor rating
- Min. / max. inlet air temperature: 40 °F / 120 °F
- Min. / max. ambient temperature: 40 °F / 120 °F
- Min. / max. operating pressure: 60 / 150 psig



DRYPOINT® XFe	XFe 800	XFe 1000	XFe 1200	XFe 1500	XFe 1800
Connection Size (NPT)	2½" Flange	2½" Flange	3" Flange	3" Flange	4" Flange
Flow Rate (scfm)	800	1000	1200	1500	1800
Dimensions and Weight					
H x W x D (inches)	103 x 77 x 56	103 x 78 x 58	109 x 89 x 65	93 x 90 x 66	112 x 89 x 69
Empty Weight (lbs)	3,600	4,050	4,700	5,852	6,957
Total Fill (lbs)	1,260	1,570	1,890	2,370	2,840

DRYPOINT® XFe	XFe 2300	XFe 2800	XFe 3300	XFe 4000	XFe 5000	XFe 6000
Connection Size (NPT)	4" Flange	4" Flange	6" Flange	6" Flange	6" Flange	6" Flange
Flow Rate (scfm)	2300	2800	3300	4000	5000	6000
Dimensions and Weight						
H x W x D (inches)	105 x 118 x 96	119 x 130 x 86	117 x 140 x 101	138 x 133 x 105	136 x 147 x 102	127 x 158 x 97
Empty Weight (lbs)	8,763	10,539	12,419	16,089	16,089	23,456
Total Fill (lbs)	3,640	4,390	5,180	6,260	7,820	9,380

Correction Factor

Operating Pressure (psig)	60	70	80	90	100	110	120	130	140	150
Correction Factor	.65	.73	.82	.91	1.00	1.09	1.18	1.27	1.35	1.44

Inlet Air Temperature °F	90	95	100	110	115	120
Correction Factor	1.15	1.06	1.00	.82	.60	.51

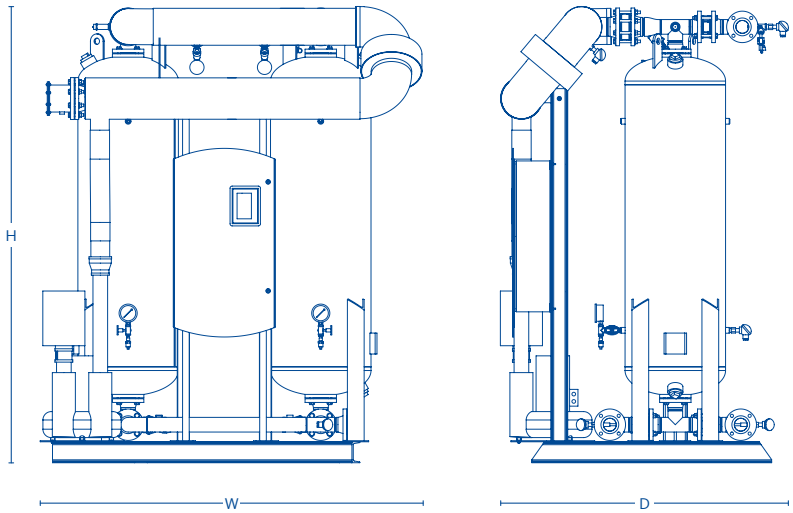
The correction factors on this page provide an estimation of the performance that can be achieved with the model sizes shown. Sizing must be done by a product specialist, please consult your BEKO Technologies representative.

Technical Details

DRYPOINT® XFi ecoIntelligent Heated Blower Auto-purge Desiccant Dryers

with environmentally aware, auto-adjusting ecoIntelligence software and **BEKO**TOUCH 2 interface

- Standard outlet pressure dew point: -40 °F
- Electrical power supply: 460 VAC / 3 Ph / 60 Hz
- Required pre-filtration grade SX: .01 µm | Required post-filtration grade FX: 1 µm
- cUL certified controls with NEMA 4 indoor rating
- Min. / max. inlet air temperature: 40 °F / 120 °F
- Min. / max. ambient temperature: 40 °F / 120 °F
- Min. / max. operating pressure: 60 / 150 psig



DRYPOINT® XFi	XFi 800	XFi 1000	XFi 1200	XFi 1500	XFi 1800
Connection Size (NPT)	2½" Flange	2½" Flange	3" Flange	3" Flange	4" Flange
Flow Rate (scfm)	800	1000	1200	1500	1800
Dimensions and Weight					
H x W x D (inches)	103 x 77 x 66	103 x 78 x 58	109 x 89 x 65	93 x 90 x 66	112 x 89 x 69
Empty Weight (lbs)	3,600	4,050	4,700	5,852	6,957
Total Fill (lbs)	1,260	1,570	1,890	2,370	2,840

DRYPOINT® XFi	XFi 2300	XFi 2800	XFi 3300	XFi 4000	XFi 5000	XFi 6000
Connection Size (NPT)	4" Flange	4" Flange	6" Flange	6" Flange	6" Flange	6" Flange
Flow Rate (scfm)	2300	2800	3300	4000	5000	6000
Dimensions and Weight						
H x W x D (inches)	105 x 118 x 96	119 x 130 x 86	117 x 140 x 101	138 x 133 x 105	136 x 147 x 102	127 x 158 x 97
Empty Weight (lbs)	8,763	10,539	12,419	16,089	16,089	23,456
Total Fill (lbs)	3,640	4,390	5,180	6,260	7,820	9,380

Correction Factor

Operating Pressure (psig)	60	70	80	90	100	110	120	130	140	150
Correction Factor	.65	.73	.82	.91	1.00	1.09	1.18	1.27	1.35	1.44

Inlet Air Temperature °F	90	95	100	110	115	120
Correction Factor	1.15	1.06	1.00	.82	.60	.51

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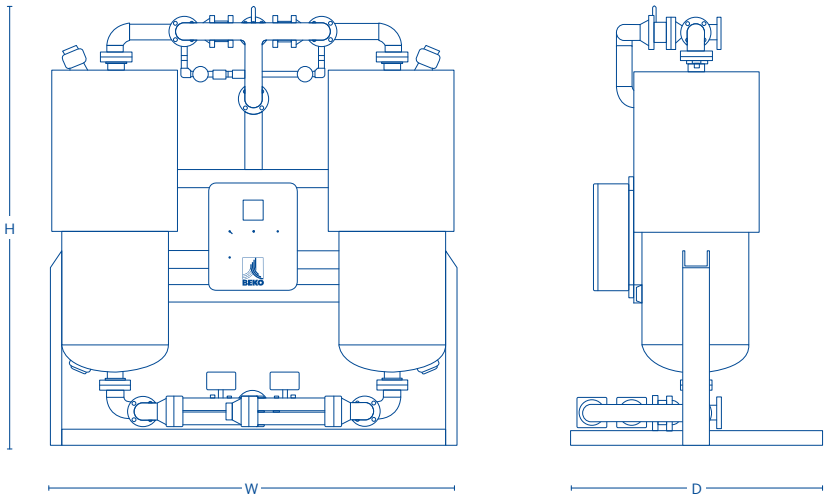
Technical Details

DRYPOINT® ACH Heated Purge Desiccant Dryers

with PLC controller and optional insulation

- Standard outlet pressure dew point: -40 °F
- Optional outlet pressure dew point: -80 °F
- Electrical power supply: 460 VAC / 3 Ph / 60 Hz
- Required pre-filtration grade SX: .01 µm | Required post-filtration grade FX: 1 µm
- NEMA 4 indoor
- Min. / max. inlet air temperature: 40 °F / 120 °F
- Min. / max. ambient temperature: 40 °F / 120 °F
- Min. / max. operating pressure: 60 / 150 psig
- Optional operating pressure: 250 psig



DRYPOINT® ACH	ACH 70	ACH 130	ACH 180	ACH 260	ACH 355	ACH 460	ACH 575
Connection size (NPT)	¾"	1"	1"	1½"	1½"	2"	2"
Flow Rate (scfm)	70	130	180	260	355	460	575
Dimensions and Weight							
H x W x D (inches)	72 x 50 x 22	72 x 54 x 24	90 x 54 x 36	92 x 60 x 24	92 x 62 x 26	96 x 70 x 42	96 x 72 x 30
Empty Weight (lbs)	475	600	700	1,078	1,225	1,372	1,764
Total Fill (lbs)	100	180	250	360	490	640	800

DRYPOINT® ACH	ACH 720	ACH 1010	ACH 1300	ACH 1725	ACH 2350	ACH 3250	ACH 4050
Connection size (NPT)	2½"	3" Flange	3" Flange	4" Flange	4" Flange	6" Flange	6" Flange
Flow Rate (scfm)	720	1010	1300	1725	2350	3250	4050
Dimensions and Weight							
H x W x D (inches)	96 x 90 x 38	96 x 96 x 42	108 x 96 x 56	112 x 104 x 48	120 x 120 x 54	120 x 144 x 56	120 x 144 x 60
Empty Weight (lbs)	2,352	4,704	5,390	6,272	8,036	11,760	12,740
Total Fill (lbs)	1,000	1,400	1,800	2,400	3,300	4,500	5,600

Correction Factor

Operating Pressure (psig)	60	70	80	90	100	110	120	130	140	150
Correction Factor	.65	.73	.82	.91	1.00	1.09	1.18	1.27	1.35	1.44

Inlet Air Temperature °F	90	95	100	110	115	120
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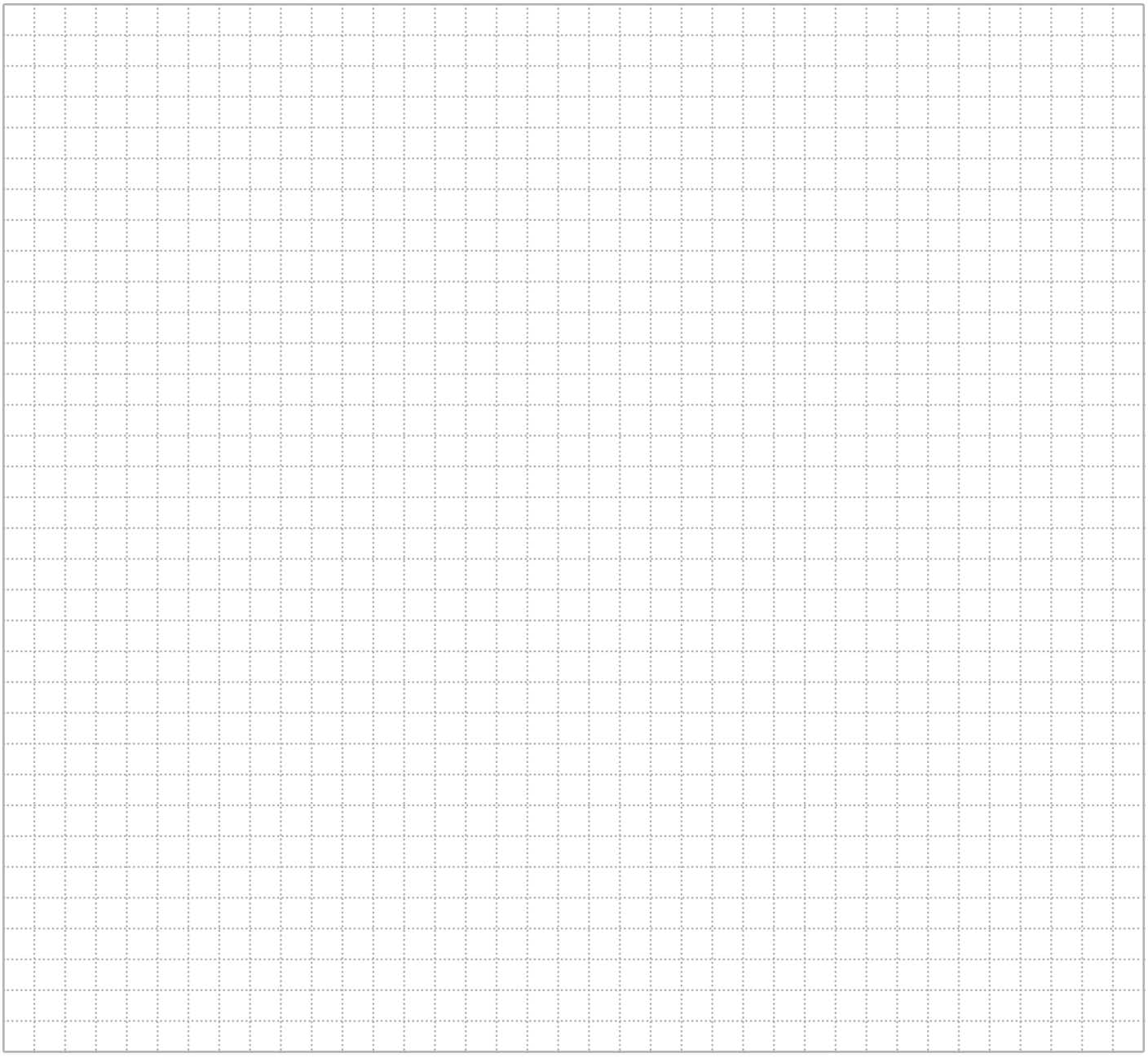
Reliable | Efficient | Innovative

What can we do for you?



BEKO TECHNOLOGIES CORP.
900 Great Southwest Pkwy SW
Atlanta, GA 30336
USA

Phone +1 (404) 924-6900
Fax +1 (404) 629-6666
www.bekousa.com

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CAGI Compressed Air & Gas Institute

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