



## **INNOVATION: Desiccant Drying Technology**

# **Class-leading Heated Blower Operated Purge Dryers**

BEKO Technologies, Corp.

From  
Most innovation involves doing the things we do every day a little bit better rather than creating something completely new and different.

to  
**But occasionally, a new technology, an old problem, and a big (often simple) idea turn into a “new to the world” innovation.**

# Introducing DRYPOINT® XF



**PATENTED** ecoIntelligent Desiccant Drying

New User Interface

Intelligent Performance

Simplified Design



Improved Reliability

Maintenance Friendly

# Design DRYPOINT® XF



# Design DRYPOINT® XF

Stainless steel  
heavy-duty check valves

Fully optimized to create  
a smaller overall footprint

High-performance  
butterfly valves

Easy access outlets

Highly effective  
regenerative-type blower



# Function DRYPOINT® XF

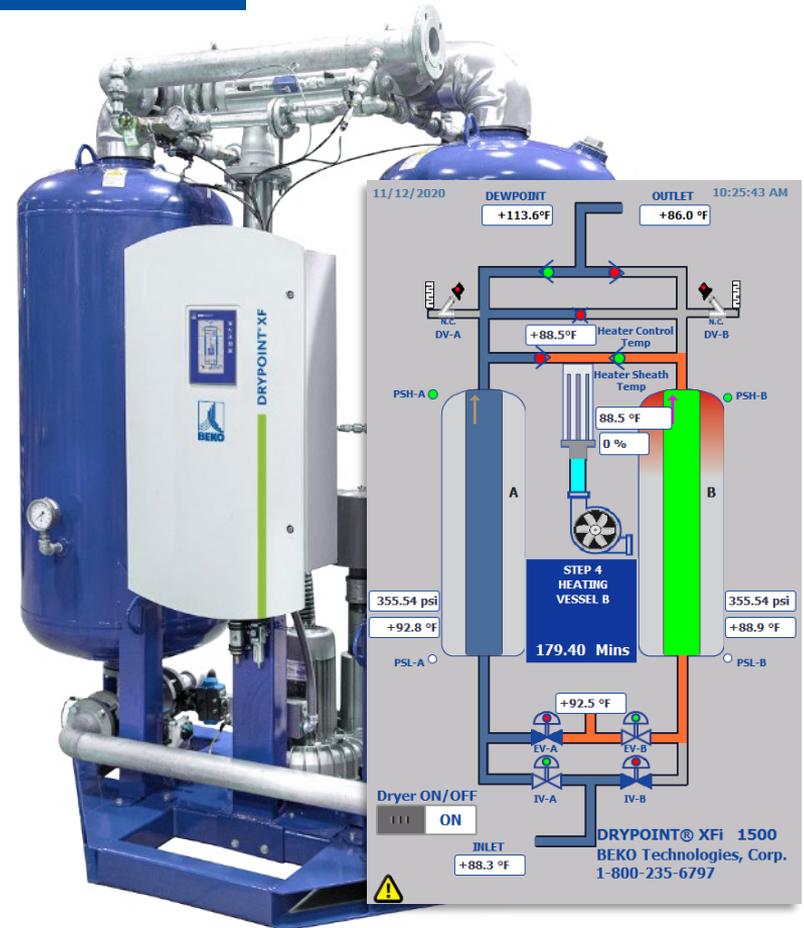
- › Saturated compressed air enters the open inlet valve and flows upward through the tower. The desiccant adsorbs the moisture [1], delivering dry air downstream.
- › The saturated offline tower is regenerated as the blower forces ambient air across an in-line heater and pushes it downward [2] through the regenerating tower. This heated, dry air extracts water from the moisture-laden desiccant and is vented to the atmosphere through an exhaust valve at the bottom of the dryer.
- › The regenerated tower is initially cooled by turning off the heater and running the blower [3]. A small amount (3% average) of dry purge air is used to reach the required temperature. XFi models with ecoIntelligent mode can further reduce purge consumption down to 0.5%.
- › Once the target temperature is reached, the exhaust valve [4] closes, and the vessel is re-pressurized.



# Function DRYPOINT® XFi

## Intelligent Performance, The Smart Choice

- › Three user-selectable operating modes:
  - › Desired pressure dew point performance
  - › Use case by moisture load into the dryer
  - › **ecoIntelligent mode** with an adaptive algorithm to determine optimal purge rates in real-time
- › The average purge rate varies between 0.5-3%
- › Delivers an ISO Class 2, -40 °F outlet pressure dew point for 24/7 operation
- › Adaptive heating feature
  - › Varies the heating parameters based on dryer loading and ambient air conditions
- › Adaptive cooling feature
  - › Varies the cooling parameters based on dryer loading and ambient air conditions



# Function DRYPOINT® XFe

- › Eight-hour NEMA cycle
- › Two user-selectable operating modes:
  - › Desired pressure dew point performance (optional)
  - › Use case by moisture load into the dryer
- › Maximum performance delivery continuous -40 °F outlet pressure dew points at rated load with an average purge rate of 3%
- › Energy savings are easily realized with the dew point demand option, which can extend the drying cycle in times of reduced air flow demand.



# Features DRYPOINT® XF



Patented



Intuitive



Inspiration



Compact



Quick



Optimized



IIoT Ready



Reliable



Innovative



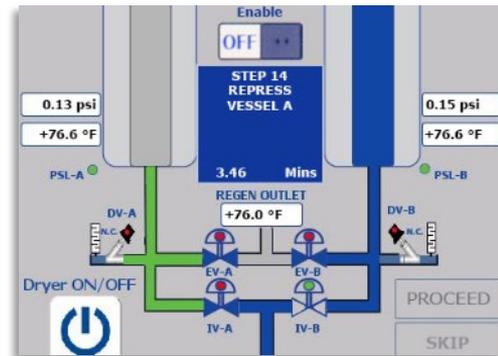
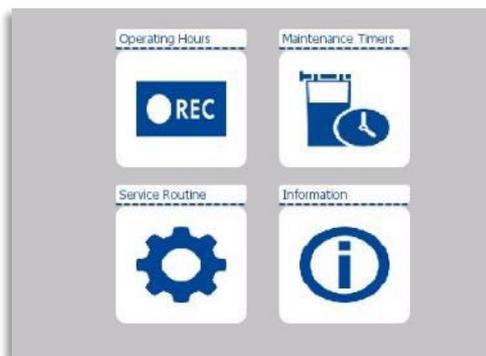
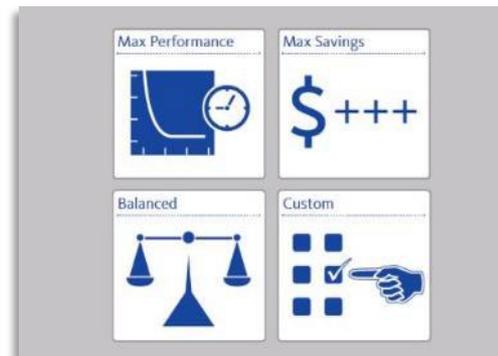
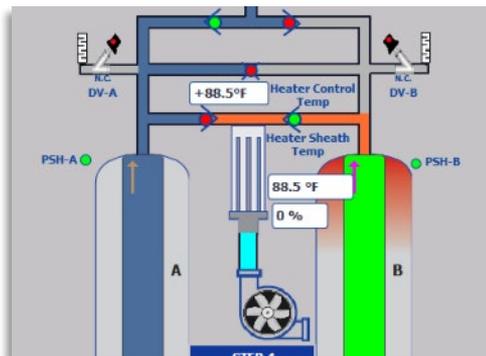
Efficient

- › **ecoIntelligent** algorithm
  - › Patented autonomous control continually monitors ambient/process conditions and automatically adjusts machine performance to maximize efficiency
- › IIoT-ready operation
  - › Standard Modbus TCP output communications available from the HMI Ethernet port
- › Immediate energy data reporting



## BEKOTOUCH2 Controller

- › Modern and powerful touchscreen controls that are easy to use
- › 7" full-color HMI
- › Home screen featuring a live process view
- › Quick verification of operating status even at a distance
- › Reporting and trend data included
- › Output communication protocols, including Modbus TCP/IP
- › Complete maintenance and spare parts list built in



# Features DRYPOINT® XF

- › Open coil-type regeneration heater
- › Greater heat transfer rate than immersion-type heaters
- › The rapid response results in more efficient heating and, in turn, shorter regeneration cycles
- › Self-contained with stainless-steel housing
  - › No additional housing required
- › High flow capacity and low pressure drop
- › Compact design contributes to the reduced overall footprint



# Features DRYPOINT® XF



- › Efficient regenerative-type blowers
- › Reliable and quiet performance with protective standard features.
  - › Intake air filter
  - › Flow switch
  - › Pressure relief valve
- › Standard blowers are rated for operation up to 1,500 feet above sea level
  - › Most models are suitable for higher elevations as standard
- › A dual blower and heater arrangement is used for models 3300 to 6000



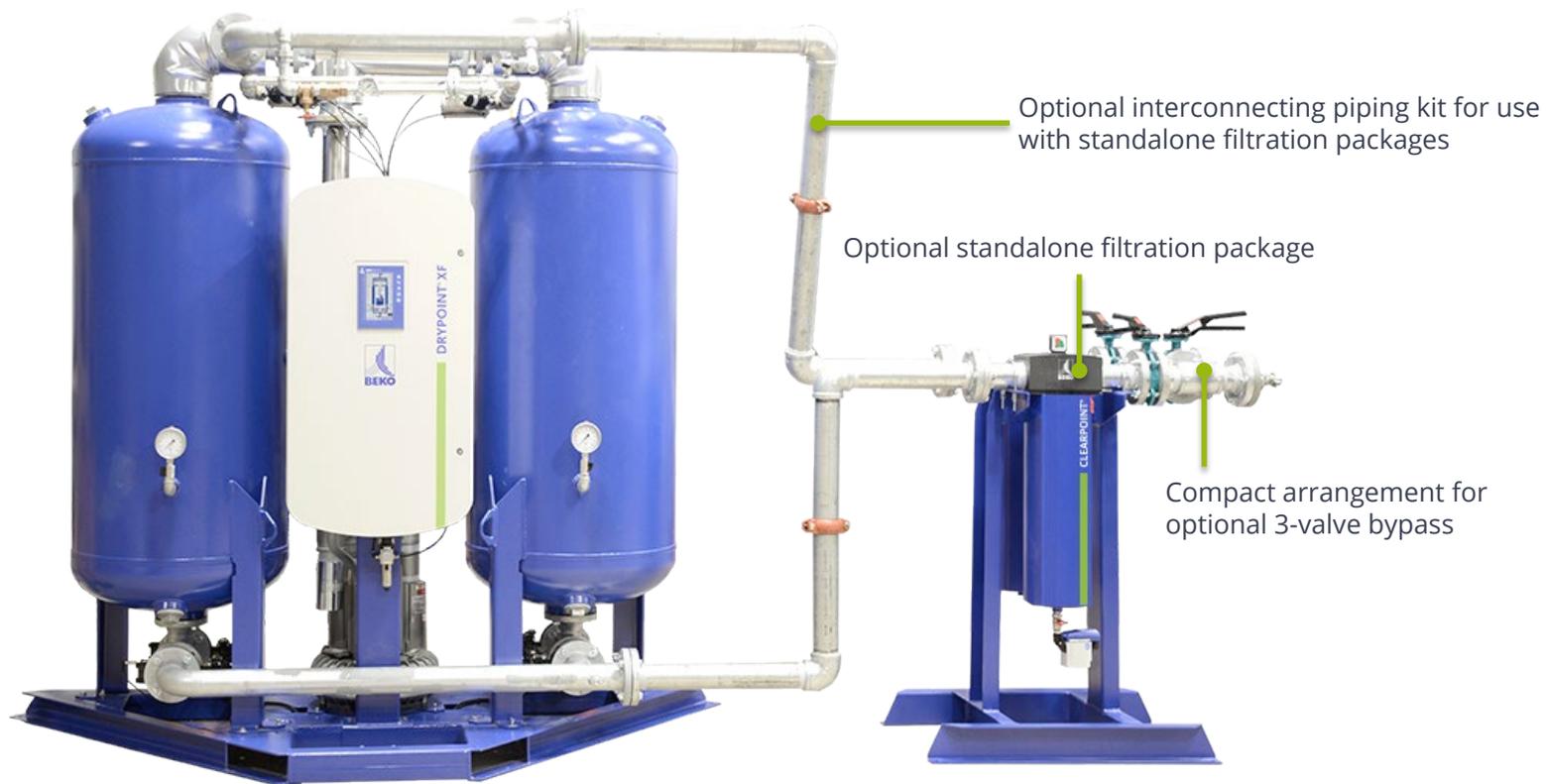
- › High-performance butterfly valves
  - › Double-acting pneumatic actuators for reliable operation
  - › Position indicators with end-of-travel limit switches standard for XFi, optional for XFe
- › High-temperature regeneration check valves
  - › Stainless steel construction
  - › Springless single-door design
  - › Metal seat with no resilient materials to wear or fail



- › Regulated orifice purge system
- › Simple method for setting and adjusting the purge flow rate
- › Higher accuracy and easy verification of the purge flow rate
- › In-line arrangement of purge adjustment valve, angle body valve, pressure gauge, and fixed orifice that is adjustable
  - › Easy to set at the factory
  - › Easy to adjust in the field
  - › Easy to verify it is set correctly



# Features DRYPOINT® XF



## The Complete Range For All Applications

### Flow Rate [SCFM]

DRYPOINT® XFe: 800 – 6000 scfm

DRYPOINT® XFi: 800 – 6000 scfm

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>■ <i>Fixed</i> cycle times for heating, blower cooling, and purge cooling</li></ul> | <ul style="list-style-type: none"><li>■ <i>Adjustable</i> cycle times with various operating modes provides flexibility and energy savings</li></ul> |
| <ul style="list-style-type: none"><li>■ Blower cooling limited heater cool-down</li></ul>                                 | <ul style="list-style-type: none"><li>■ Blower cooling of desiccant when conditions allow</li></ul>  |
| <ul style="list-style-type: none"><li>■ Dew point demand system <i>optional</i></li></ul>                                 | <ul style="list-style-type: none"><li>■ Dew point demand system <i>standard</i></li></ul>  |
| <ul style="list-style-type: none"><li>■ Limited instrumentation</li></ul>   | <ul style="list-style-type: none"><li>■ Full suite of instrumentation</li></ul>  |
| <ul style="list-style-type: none"><li>■ Valve position indicators and limit switches <i>optional</i></li></ul>            | <ul style="list-style-type: none"><li>■ Valve position indicators and limit switches <i>standard</i></li></ul>                                       |

## Tailor Made Products and Sizing

DRYPOINT® X

### INQUIRY FORM DESSICANT DRYER

**GENERAL INFORMATION**

Date	<input style="width: 100%;" type="text"/>		
Customer Name / End User	<input style="width: 100%;" type="text"/>		
Customer ID No.	<input style="width: 100%;" type="text"/>		
Requested Delivery Date	<input style="width: 100%;" type="text"/>		
Included Project Specification <small>(Lot Document Title(s))</small>	Select	<input style="width: 100%;" type="text"/>	
Project Number <small>(Generated by BEKO Technologies, Corp.)</small>	<input style="width: 100%;" type="text"/>		

**AMBIENT CONDITIONS**

Type of Dryer	<input style="width: 100%;" type="text"/>				
Installation Location	<input style="width: 100%;" type="text"/>				
Environment Protection	<input style="width: 100%;" type="text"/>				
Ambient Temperature @ Dryer Location	min	<input style="width: 40%;" type="text"/>	max	<input style="width: 40%;" type="text"/>	Select Unit
Relative Humidity	min	<input style="width: 40%;" type="text"/>	max	<input style="width: 40%;" type="text"/>	%
Altitude	<input style="width: 100%;" type="text"/>				

**INLET CONDITIONS**

Working Pressure @ Inlet to Dryer	min	<input style="width: 40%;" type="text"/>	max	<input style="width: 40%;" type="text"/>	Select Unit
Compressed Air Temperature @ Inlet to Dryer	min	<input style="width: 40%;" type="text"/>	max	<input style="width: 40%;" type="text"/>	Select Unit
Working Volume Flowrate @ Inlet to Dryer <small>(100 8573: 14.5m³/min, +60°F, 0% RH)</small>	min	<input style="width: 100%;" type="text"/>			
% Saturation @ Inlet to Dryer	<input style="width: 100%;" type="text"/>				

**OUTLET CONDITIONS**

Working Volume Flowrate @ Inlet to Dryer <small>(100 8573: 14.5m³/min, +60°F, 0% RH)</small>	Select Unit
Requested Pressure Dewpoint @ Dryer Outlet <small>(-40°F/°C 10)</small>	Select Unit

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### OPTIONS & ACCESSORIES DESSICANT DRYER

**REQUIRED EQUIPMENT** (Filtration automatically selected unless otherwise noted)

<input checked="" type="checkbox"/> Coalescing Pre Filter	<input style="width: 100%;" type="text"/>
<input checked="" type="checkbox"/> Particulate Post Filter	<input style="width: 100%;" type="text"/>

**ELECTRICAL / CERTIFICATION REQUIREMENTS**

Electrical Supply	<input style="width: 100%;" type="text"/>
Electrical Certification	<input style="width: 100%;" type="text"/>
Vessel Certification	<input style="width: 100%;" type="text"/>
Piping Fabrication Standard	<input style="width: 100%;" type="text"/>

**CONTROLS & EQUIPMENT OPTIONS**

Control Options	<input style="width: 100%;" type="text"/>
<input type="checkbox"/> Communication Protocol	<input style="width: 100%;" type="text"/>
<input type="checkbox"/> Bypass Options	<input style="width: 100%;" type="text"/>
<input type="checkbox"/> Ap Filter Alarm w/ Gauge	<input style="width: 100%;" type="text"/>
<input type="checkbox"/> Mounting of Required Filters	<input style="width: 100%;" type="text"/>
<input type="checkbox"/> Dewpoint Monitor w/ Display	<input style="width: 100%;" type="text"/>
<input type="checkbox"/> Humidity Demand Control <small>(Heated Dryer)</small>	<input style="width: 100%;" type="text"/>
<input type="checkbox"/> Tower Insulation <small>(Heated Dryers)</small>	<input style="width: 100%;" type="text"/>
<input type="checkbox"/> Failure to Switch Alarm	<input style="width: 100%;" type="text"/>
<input type="checkbox"/> Webpage w/ Data Logger	<input style="width: 100%;" type="text"/>

**LIST ADD. SPECIAL REQUIREMENTS / COMMENTS**

<input style="width: 100%;" type="text"/>
<input style="width: 100%;" type="text"/>
<input style="width: 100%;" type="text"/>

## Service Made Simple

### Ready Made Maintenance

Pre-packaged 1, and 3-year maintenance kits for each maintenance interval.

Pre-packaged to include:

- ✓ Filter elements
- ✓ BEKOMAT service units
- ✓ Exhaust muffler assembly parts
- ✓ Valve and solenoid and seal parts
- ✓ Convenient 25 lbs. bag desiccant



- › Pre- and post-sales support teams are fully trained on the new generation of dryers
- › Our highly qualified Technical Service department has decades of experience dealing with desiccant dryers of various types
  - › Application support
  - › Troubleshooting support
  - › Maintenance and repair support
  - › Remote and on-site service is available
- › Detailed and comprehensive instruction and operation manuals are available 24-7 online for all model types and sizes
  - › Video snippets covering the most frequently asked questions are planned to complement the written instructions





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