Compressed Air & Gas Desiccant Dryers

For Point of Use and OEM Applications

Bulletin 1300 - 850/USA

Finite®

Dryers

FDD DESICCANT DRYER SERIES

- **1/4" to 1" NPT Ports**
- **Capacities to 60 SCFM**
- **Pressure Dewpoints Down to -40° F**

Finite® Filter's unique in-line air/gas dryer system is engineered for easy desiccant changeouts, longer life and lower pressure drop.

The FDD Series is designed to remove water vapor and aerosols at point-of-use for intermittent flows up to 60 SCFM. Finite dryers do not require steady flow for constant dewpoint supression.
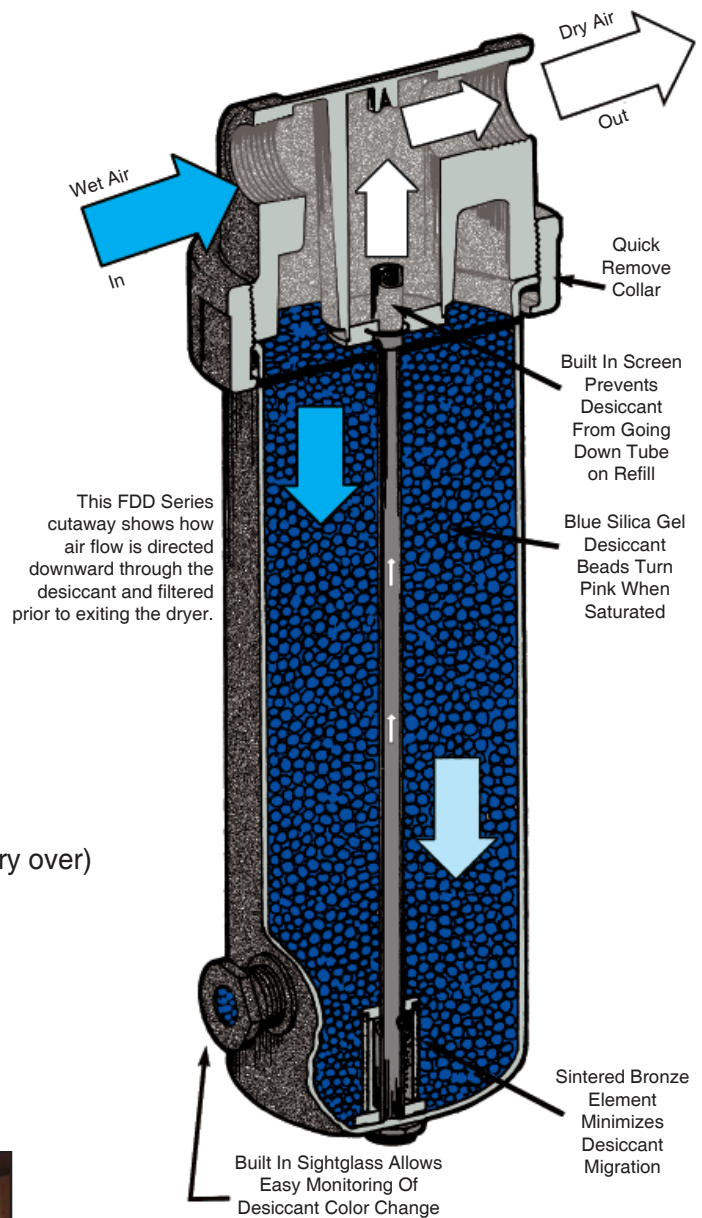
A color changing moisture indicator with visual sight gauge indicates the need for desiccant replacement.

STANDARD FEATURES

- Zinc Head/Steel Bowl with Integral Sightglass
- Sintered Bronze Elements (prevent desiccant carry over)
- Collar Designed for Easy Changeouts
- Maximum Operating Temperature: 180° F
- Maximum Working Pressure: 300 PSI
- Optimum Working Temperature: Below 100° F

Wet Air

In

Dry Air

Out

Quick Remove Collar

Built In Screen Prevents Desiccant From Going Down Tube on Refill

Blue Silica Gel Desiccant Beads Turn Pink When Saturated

This FDD Series cutaway shows how air flow is directed downward through the desiccant and filtered prior to exiting the dryer.

Sintered Bronze Element Minimizes Desiccant Migration

Built In Sightglass Allows Easy Monitoring Of Desiccant Color Change

The new FDD Series offers clean dry air for intermittent usage.

APPLICATIONS

- Intermittent Air Use
- Clean, Dry Air for Pneumatic Applications
- Instrument Protection
- Air Tools Protection Against Gumming and Oxidation
- Auto Body Paint Systems - Helps Prevent Fish Eye Defects
- Valve Actuation - Instrument Air

Dryers

DESICCANT TYPES

SILICA GEL — Finite Filter's 100 percent indicating silica gel provides Maximum moisture adsorption and dewpoints down to -40° F.

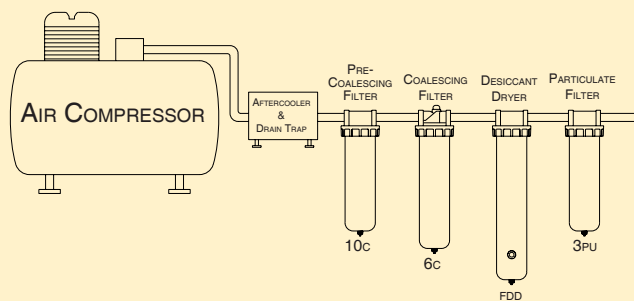*Silica Gel a popular choice for the FDD series.*

Outstanding features of Silica Gel include:
- High adsorption capacity - average surface area for each bead is over 200 ft^2
- Low abrasion, due to high mechanical strength for long service life
- Ideal packing in bowl due to bead shape
- Uniform color change
- Excellent regeneration characteristics

As the silica beads adsorb moisture, they change from blue to pink, indicating the need for replacement or regeneration. The desiccant can be regenerated by heating in a drying oven to a temperature higher than 212° F but not over 350° F. Desiccant may also be regenerated in microwave ovens.

MOLECULAR SIEVE — Molecular sieves are crystalline, metallic aluminum silicates. The type 4A offers exceptional water vapor adsorption characteristics. Dewpoints are attainable to -40° F.

RECOMMENDED INSTALLATION

AIR COMPRESSOR

AFTERCOOLER & DRAIN TRAP

PRE-COALESCING FILTER

COALESCING FILTER

DESICCANT DRYER

PARTICULATE FILTER

10c   6c   FDD   3PU

- Always place a moisture separator and/or pre-coalescing filter upstream to remove bulk liquids

- Always place a coalescing filter upstream to remove oil. Desiccant coated with oil will not adsorb moisture

- A 3 micron (or better) particulate filter is recommended downstream to remove desiccant dust in critical applications

WHY **Finite®** DESICCANT DRYERS?

Finite® desiccant dryers are the simplest and most reliable method of ensuring your sensitive pneumatic equipment is not exposed to damaging moisture. When air is compressed, the temperature of air is increased as is its capacity to hold moisture. As the hot moist air travels downstream through the pipelines, it cools, allowing the moisture to condense. Aftercoolers, filters, drain traps and drip legs are effective for removing condensate. For removing residual water vapor and aerosols, use the Finite desiccant dryer.

FDD15
- 1/4" - 3/4" NPT
- Flows to 15 SCFM
- Low Flow Intermittent Use

FDD30
- 3/8" - 1" NPT
- Flows to 30 SCFM
- Medium Flow for Intermittent Use or Longer Time Between Desiccant Changeouts

HOW DO THEY WORK?

FDD60
- 1/2" - 1" NPT
- Flows to 60 SCFM
- For Intermittent Use or Longer Time Between Desiccant Changeouts

As the wet compressed air flows through the inlet port and down through the bed of desiccant, the desiccant beads adsorb the water vapor and aerosols. The silica gel beads are so effective in adsorption, the air humidity can be reduced to a -40° F pressure dew point. Unless your compressed air is exposed to a temperature below the dewpoint, there will be no further condensation forming in your air lines.

After the moisture has been removed, the dry air passes through a sintered bronze element, up the center tube, and exits through the outlet port. As long as the desiccant is replaced regularly, your equipment will receive ultra dry, moisture-free air.

This sight gauge shows the color of the silica gel. When the gel turns from blue to pink, it is time to change the desiccant.

Parker
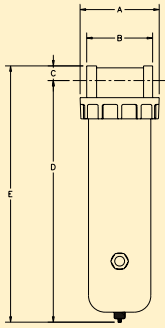
DIMENSIONS

	A*	B*	C	D	E	Weight
FDD15	4 15/16	4 1/16	13/16	12 11/16	13 1/2	8 lbs.
FDD30	4 15/16	4 1/16	13/16	22 7/16	23 1/4	13 lbs.
FDD60	4 15/16	4 1/16	13/16	29 7/16	30 1/4	20 lbs.

*Dimensions A & B do not include reducer bushings

Note: Weight is for housing only. Bowl removal requires a minimum of 2".

ORDERING INFORMATION

MODEL NO. HOUSING ONLY**	PIPE SIZE (NPT)	FLOW CAPACITY	BOWL CAPACITY DESICCANT (LBS)
FDD15-02*	1/4"	15 SCFM	2 1/2
FDD15-03*	3/8"	15 SCFM	2 1/2
FDD15-04*	1/2"	15 SCFM	2 1/2
FDD15-06	3/4"	15 SCFM	2 1/2
FDD30-03*	3/8"	30 SCFM	5
FDD30-04*	1/2"	30 SCFM	5
FDD30-06	3/4"	30 SCFM	5
FDD30-08	1"	30 SCFM	5
FDD60-04*	1/2"	60 SCFM	10
FDD60-06	3/4"	60 SCFM	10
FDD60-08	1"	60 SCFM	10

*These dryers supplied with reducer bushings.

**Desiccant sold separately.

DESICCANT TYPE	5 LB CAN	MASTER PACK 4x5 LB CAN
Silica Gel (all indicating)	FSGM100-1	FSGM100-4
Molecular Sieve (non-indicating)	FMS100-1	FMS100-4

For detailed performance curves, please contact Finite® Filter.

SPARE PARTS

MODEL NUMBER	REPAIR KIT	ELEMENTS
FDD15	FRKDD15-02-06	F504Z77-90
FDD30	FRKDD30-03-08	F504Z77-90
FDD60	FRKDD60-03-08	EK602B-BR

Note: A repair kit consists of a filter element, filter retainer, o-ring, stud, bottom nut, PVC tube and a strainer.

PERFORMANCE

The flow capacities in the table are nominal ratings provided for reference. These capacities are recommended for minimal pressure drop and average desiccant life. A supply of low flow/low humidity air will provide longer desiccant life, whereas high flow/high humidity air will require more frequent desiccant changes.

Installed in an application with intermittent flow, Finite desiccant dryers will typically dry air for weeks before the silica gel desiccant requires replacement or regeneration.

DID YOU KNOW ?

When a grade 6 microglass coalescer is installed ahead of an FDD Dryer, 99.97% of all contaminants are removed and desiccant life is greatly enhanced.

Dryers

Parker Hannifin Corporation
Finite Filter Operation
Oxford, MI