



Adsorption Dryer Housings

Features

- Replaceable Adsorbent
- 5 Micron Filter Pads Included
- Full Contact with Adsorbent
- Functional Mini-Dryers
- Up to 5,000 PSIG

Applications

- High Volume Dryers
- Gas Purifiers
- Prevent "Freeze Outs"
- Valve Actuation
- Instrument Air Protection

Our **Adsorption Housing Series (ADS)** dryer housings are available throughout our product range. Virtually all standard housings can be ordered as ADS housings complete with integral filter pads and desiccant material. The units are an extension of our Disposable In-Line Adsorbers (DIA) and In-Line Columns (IACH/IAAH) assemblies. The ADS series is designed for easy desiccant change-outs, longer life, and more efficient contact time with low pressure drops. A pleated 3 micron post filter is also recommended for complete desiccant dust in critical applications.



Desiccant types (Complete List of Adsorbents on Last Page)

Silica Gel – We utilize an indicating silica gel which goes from a blue to pink when spent. It provides maximum moisture adsorption and dew points down to -40°F when sized properly. Sight Glasses (denoted STG) are recommended on housings to visually monitor the change in color, and life of the media.

Molecular Sieve – Are crystalline, metallic aluminum silicates. The type 4A offer exceptional water vapor adsorption characteristics. Dewpoints are attainable to -40°F.

Carbon – We utilize coconut carbon which has high fiber content and surface area for added oil vapor adsorption efficiency. Since carbon does not change color, sight glasses are not recommended.

Design:

The ADS series utilizes our standard housings with modified internals which allow loose desiccant to fill the bowl. As wet gas flows into the housing, it is directed down a hollow stack to the base of the bowl where it is defused through a 25 micron stainless steel frit. At this point the gas rises through a bed of desiccant and exits through a 5 micron filter pad with a backup disc to reduce the risk of media migration. As the gas/air rises through the desiccant, it is scrubbed of moisture or oil vapor depending on the media.

The ADS housings T-Type design make installation simple and allow pre-filters and post particulate filters to be easily piped in a series utilizing one foot print. Likewise, this blueprint makes servicing the desiccant media simple, fast, convenient, and economical.

Nylon / Polycarbonate Version for Visual Monitoring

The nylon poly version is ideal for point of use instrument air purification and laboratory applications. The clear bowls make visual monitoring of desiccant color change quick and simple, eliminating the guess work out of media life.

- Compact Design
- Easy Mounting



Nylon Version ⁽¹⁾	Maximum Pressure	Connection (NPT)	Volume (cc)	Replacement Adsorbent	Dimensions	
					Diameter	Length
700N-ADS-xx	100 PSIG	1/8"	45	RBIA-45-XX	1.57"	4.72"
705N-ADS-xx	100 PSIG	1/4"	45	RBIA-45-XX	1.57"	4.72"
750N-ADS-xx	100 PSIG	1/4"	165	RBIA-165-XX	2.74"	6.50"
755N-ADS-xx	100 PSIG	1/2"	165	RBIA-165-XX	2.74"	6.50"
772N-ADS-xx	100 PSIG	1/4"	315	RBIA-315-XX	2.74"	10.38"
775N-ADS-xx	100 PSIG	1/2"	315	RBIA-315-XX	2.74"	10.38"

Notes: (1) Replace "XX" with adsorption grade required, CC, 4A, 13X, SG, DR, MB, PP, HO, SB, CS

Polycarbonate Version ⁽¹⁾	Maximum Pressure	Connection (NPT)	Volume (cc)	Replacement Adsorbent	Dimensions	
					Diameter	Length
300-ADS-xx	150 PSIG	1/8"	45	RBIA-45-XX	1.57"	4.72"
305-ADS-xx	150 PSIG	1/4"	45	RBIA-45-XX	1.57"	4.72"
350-ADS-xx	150 PSIG	1/4"	165	RBIA-165-XX	2.74"	6.50"
355-ADS-xx	150 PSIG	1/2"	165	RBIA-165-XX	2.74"	6.50"
375-ADS-xx	150 PSIG	1/2"	315	RBIA-315-XX	2.74"	10.38"

Notes: (1) Replace "XX" with adsorption grade required, CC, 4A, 13X, SG, DR, MB, PP, HO, SB, CS

Aluminum Version for Demanding Applications (1500 PSIG)

For demanding applications with higher pressures (up to 1500PSIG) we recommend our aluminum ADS housings. The robust machined anodized aluminum units deliver purification in harsh environments. Sight glasses may be added to assist in monitoring silica gel color change, thus allowing better operator service control.

- Robust Environment
- CRN Approved
- Sight Glasses Available



Aluminum Version (1) (2)	Maximum Pressure	Connection (NPT)	Volume (cc)	Replacement Adsorbent	Dimensions Diameter Length
300A-ADS-xx	500 PSIG	1/8"	45	RBIA-45-XX	1.57" 4.72"
305A-ADS-xx	500 PSIG	1/4"	45	RBIA-45-XX	1.57" 4.72"
350A-ADS-xx	500 PSIG	1/4"	165	RBIA-165-XX	2.74" 6.50"
355A-ADS-xx	500 PSIG	1/2"	165	RBIA-165-XX	2.74" 6.50"
375A-ADS-xx	500 PSIG	1/2"	315	RBIA-315-XX	2.74" 10.38"
380AHP-ADS-STG-xx	1500 PSIG	3/4"	675	RBIA-675-XX	4.33" 12.09"
383AHP-ADS-STG-xx	1500 PSIG	1"	675	RBIA-675-XX	4.33" 12.09"
380AHP-241-ADS-xx	1500 PSIG	3/4"	1100	RBIA-1100-xx	4.33" 15.67"
383AHP-241-ADS-xx	1500 PSIG	1"	1100	RBIA-1100-xx	4.33" 15.67"
385AHP-ADS-STG-xx	1000 PSIG	1 1/2"	1500	RBIA-1500-XX	5.51" 15.24"
390AHP-ADS-STG-xx	1000 PSIG	2"	3000	RBIA-3000-XX	5.51" 24.92"

Notes: (1) Replace "XX" with adsorption grade required, CC, 4A, 13X, SG, DR, MB, PP, HO, SB, CS
(2) Sight Glass Standard on Models 380AHP, 385AHP, & 390AHP. Optional Accessories on 355A and 370A Housings

Stainless Steel Version for Demanding High Pressure Applications (5000 & 10,000 PSIG)

The 114-126HP series provides point-of-use desiccant protection in an ultra-high pressure package. The all Stainless Steel construction satisfies most compatibility issues.

- High Pressure
- CRN Approved
- Easily Serviced



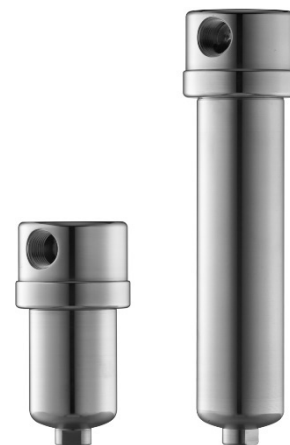
Stainless Steel Version ⁽¹⁾	Maximum Pressure	Connection (NPT)	Volume (cc)	Replacement Adsorbent	Dimensions	
					Diameter	Length
114-ADS-xx	5000 PSIG	1/8"	20	RBIA-20-XX	1.42"	2.92"
114HP-ADS-xx	10,000 PSIG	1/8"	26	RBIA-26-XX	2.56"	4.13"
116-ADS-xx	5000 PSIG	1/4"	20	RBIA-20-XX	1.42"	2.92"
116HP-ADS-xx	10,000 PSIG	1/4"	26	RBIA-26-XX	2.56"	4.13"
124-ADS-xx	5000 PSIG	1/8"	30	RBIA-30-XX	1.42"	3.98"
124HP-ADS-xx	10,000 PSIG	1/8"	40	RBIA-40-XX	2.56"	5.12"
126-ADS-xx	5000 PSIG	1/4"	30	RBIA-30-XX	1.42"	3.98"
126HP-ADS-xx	10,000 PSIG	1/4"	40	RBIA-40-XX	2.56"	5.12"

Notes: (1) Replace "XX" with adsorption grade required, CC, 4A, 13X, SG, DR, MB, PP, HO, SB, CS

Stainless Steel Version for Demanding High Pressure Applications (Up To 6000 PSIG)

The ADS housings T-Type design make installation simple and allow pre-filters and post particulate filters to be easily piped in a series utilizing one foot print. Likewise, this blueprint makes servicing the desiccant media simple, fast, convenient, and economical.

- High Pressure
- CRN Approved



Stainless Steel Version ⁽¹⁾ ⁽²⁾	Maximum Pressure	Connection (NPT)	Volume (cc)	Replacement Adsorbent	Dimensions	
					Diameter	Length
134-ADS-xx	1500 PSIG	1/4"	110	RBIA-110-XX	2.36"	4.80"
134HP-ADS-xx	3000 PSIG	1/4"	115	RBIA-115-XX	2.52"	5.04"
134HHP-ADS-xx	6000 PSIG	1/4"	160	RBIA-160-xx	3.34"	6.37"
136-ADS-xx	1500 PSIG	1/2"	110	RBIA-110-XX	2.36"	4.80"
136HP-ADS-xx	3000 PSIG	1/2"	115	RBIA-115-XX	2.52"	5.04"
136HHP-ADS-xx	6000 PSIG	1/2"	160	RBIA-160-xx	3.34"	6.37"
144-ADS-xx	1500 PSIG	1/4"	265	RBIA-265-xx	2.36"	9.29"
144HP-ADS-xx	3000 PSIG	1/4"	300	RBIA-300-xx	2.52"	9.53"
144HHP-ADS-xx	6000 PSIG	1/4"	320	RBIA-320-xx	3.34"	11.06"
146-ADS-xx	1500 PSIG	1/2"	265	RBIA-265-xx	2.36"	9.29"
146HP-ADS-xx	3000 PSIG	1/2"	300	RBIA-300-xx	2.52"	9.53"
146HHP-ADS-xx	6000 PSIG	1/2"	320	RBIA-320-xx	3.34"	11.06"

Notes: (1) Replace "XX" with adsorption grade required, CC, 4A, 13X, SG, DR, MB, PP, HO, SB, CS
(2) Sight Glass Option Available on Models 134 or Larger

Stainless Steel Version for Demanding High Pressure Applications (Up To 6000 PSIG)

The 150 series is our large standard size ADS product offering up to 1500cc of media. Typically used on critical high flow systems. Redundant set-up is recommended for continuation of the purification process.

- High Pressure
- CRN Approved



Stainless Steel Version ⁽¹⁾ ⁽²⁾	Maximum Pressure	Connection (NPT)	Volume (cc)	Replacement Adsorbent	Dimensions	
					Diameter	Length
150-ADS-xx	1500 PSIG	1"	1500	RBIA-1500-xx	4.33"	15.04"
150HP-ADS-xx	3000 PSIG	1"	1500	RBIA-1500-xx	4.72"	14.29"
150HHP-ADS-xx	6000 PSIG	1"	1500	RBIA-1500-xx	5.90"	17.09"
151-ADS-xx	1500 PSIG	1 1/2"	1500	RBIA-1500-xx	4.33"	15.04"
151HP-ADS-xx	3000 PSIG	1 1/2"	1500	RBIA-1500-xx	5.11"	15.47"
151HHP-ADS-xx	6000 PSIG	1 1/2"	1500	RBIA-1500-xx	5.90"	17.09"
152-ADS-xx	1500 PSIG	2"	1500	RBIA-1500-xx	4.52"	15.83"
152HP-ADS-xx	3000 PSIG	2"	1500	RBIA-1500-xx	5.11"	15.47"
152HHP-ADS-xx	6000 PSIG	2"	1500	RBIA-1500-xx	5.90"	17.09"

Notes: (1) Replace "XX" with adsorption grade required, CC, 4A, 13X, SG, DR, MB, PP, HO, SB, CS
(2) Sight Glass Option Available on Models 134 or Larger

Stainless Steel Version for Demanding High Pressure Applications (Up To 6000 PSIG)

The ADS housings T-Type design make installation simple and allow pre-filters and post particulate filters to be easily piped in a series utilizing one foot print. Likewise, this blueprint makes servicing the desiccant media simple, fast, convenient, and economical. The 160 series is our largest standard size ADS product offering up to 2700cc of media.

- High Pressure Service
- Large Volume Capacity



Stainless Steel Version ⁽¹⁾ ⁽²⁾	Maximum Pressure	Connection (NPT)	Volume (cc)	Replacement Adsorbent	Dimensions	
					Diameter	Length
160-ADS-xx	1500 PSIG	1"	2700	RBIA-2700-xx	4.33"	24.49"
160HP-ADS-xx	3000 PSIG	1"	2222	RBIA-2222-xx	4.72"	23.98"
160HHP-ADS-xx	6000 PSIG	1"	2222	RBIA-2222-xx	6.50"	26.77"
161-ADS-xx	1500 PSIG	1 1/2"	2700	RBIA-2700-xx	4.33"	24.49"
161HP-ADS-xx	3000 PSIG	1 1/2"	2222	RBIA-2222-xx	5.11"	25.16"
161HHP-ADS-xx	6000 PSIG	1 1/2"	2222	RBIA-2222-xx	6.50"	26.77"
162-ADS-xx	1500 PSIG	2"	2700	RBIA-2700-xx	4.52"	25.27"
162HP-ADS-xx	3000 PSIG	2"	2222	RBIA-2222-xx	5.11"	25.16"
162HHP-ADS-xx	6000 PSIG	2"	2222	RBIA-2222-xx	6.50"	26.77"

Notes: (1) Replace "XX" with adsorption grade required, CC, 4A, 13X, SG, DR, MB, PP, HO, SB, CS
(2) Sight Glass Option Available on Models 134 or Larger

Features

- Variety of Media Available for Immediate Delivery
- Sight Glass Models Available For Quick Color Change Monitoring of Silica Gel
- T-Type Housing Design for Easy Installation & Quick Media Replacement



Adsorbent	Code	Principles
Activated Carbon	CC	Adsorption of hydrocarbons and other organic vapors Zero Air Calibration
Molecular Sieve 4A	4A	Adsorption of CO ₂ , NH ₃ , H ₂ S, SO _x
Molecular Sieve 13X	13X	Adsorption of CO ₂ , NH ₃ , H ₂ S, SO _x , aromatics, amines
Silica Gel	SG	Adsorption of water vapor
Drierite - Anhydrous Calcium Sulfate	DR	Adsorption of water vapor
Mixed Bases	MB	Removal of acidic gases, CO ₂ , SO _x , NO _x , HCl
Potassium Permanganate	PP	Removal of SO _x , Hg, and other acidic gases
Hopcalite	HO	Removal of CO by catalytic oxidation to CO ₂
Sodium Bicarbonate	SB	Acid Neutralizer
Copper Sulfate	CS	Removal of ammonia