Adsorption Dryer Housings

PRODUCT FEATURES / BENEFITS

- Replaceable Adsorbent
- 5 Micron Filter Pads Included
- Full Contact with Adsorbent / Functional Mini-Dryers
- Up To 5,000 PSIG
- Dryers / Gas Purifiers
- Prevent "Freeze Outs"
- Instrument Air Protection

-Our **ADS (Adsorption Housing Series)** dryer housings are a robust and flexible solution for point-of-use air purification. Available across our product line, nearly all standard housings can be configured as ADS units—complete with integrated filter pads and desiccant media.

The ADS Series expands on the proven performance of our **Disposable In-Line Adsorbers (DIA)** and **In-Line Column Assemblies (IACH/IAAH)**, offering enhanced serviceability, increased desiccant life, and superior media contact time—all while maintaining low pressure drop.

Key Features

- Easy desiccant replacement
- Longer service life and high adsorption efficiency
- Minimal pressure drop
- Compatible with pleated 3-micron post-filters for critical applications
- Standard housings with modified internals for loose-fill desiccant
- T-type design allows for easy installation and filter series integration
- Simple and cost-effective servicing

Desiccant Options
(See last page for full list of available adsorbents)

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.

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.

Design:

ADS Series housings use a modified internal layout within our standard housings to accommodate loose-fill desiccant. Wet gas enters the housing and is directed down a central hollow stack to the base, where it is diffused evenly through a **25-micron stainless steel frit**. The gas then flows upward through the desiccant bed, where moisture or oil vapor is adsorbed. Before exiting the housing, the treated gas passes through a **5-micron filter pad** with a **support disc**, minimizing the risk of desiccant media migration into downstream equipment.

The **T-type configuration** of the ADS Series simplifies installation, enabling easy integration with pre-filters and post-filters in a single footprint. This design streamlines servicing, making desiccant change-outs fast, convenient, and economical.

Nylon / Polycarbonate Version for Visual Monitoring

The nylon/poly version offers reliable performance in a compact and durable design. Clear bowls allow for effortless visual monitoring of desiccant color changes, taking the guesswork out of media life and ensuring timely replacement.

Key Features:

- **Compact Design** – Saves space and fits easily into tight installations
- **Clear Bowls** – Quick, visual indication of desiccant status
- **Easy Mounting** – Simplifies installation and maintenance

Perfect for environments where precision and reliability are essential.

Nylon Version[1]	Maximum Pressure	Connection (NPT)	Volume (cc)	Maximum Flow Rate [2]	Replacement Adsorbent	Dimensions Diameter / Length
700N-ADS-xx	100 PSIG	1/8”	45	2	RBIA-45-XX	1.57” / 4.72”
705N-ADS-xx	100 PSIG	1/4”	45	2	RBIA-45-XX	1.57” / 4.72”
750N-ADS-xx	100 PSIG	1/4”	165	8	RBIA-165-XX	2.74” / 6.50”
755N-ADS-xx	100 PSIG	1/2”	165	8	RBIA-165-XX	2.74” / 6.50”
772N-ADS-xx	100 PSIG	1/4”	315	12	RBIA-315-XX	2.74” / 10.38”
775N-ADS-xx	100 PSIG	1/2”	315	12	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
(2) Recommended Flow Rate for Optimal Performance

Polycarbonate Version [1]	Maximum Pressure	Connection (NPT)	Volume (cc)	Maximum Flow Rate [2]	Replacement Adsorbent	Dimensions Diameter / Length
300-ADS-xx	150 PSIG	1/8”	45	2	RBIA-45-XX	1.57” / 4.72”
305-ADS-xx	150 PSIG	1/4”	45	2	RBIA-45-XX	1.57” / 4.72”
350-ADS-xx	150 PSIG	1/4”	165	8	RBIA-165-XX	2.74” / 6.50”
355-ADS-xx	150 PSIG	1/2”	165	8	RBIA-165-XX	2.74” / 6.50”
375-ADS-xx	150 PSIG	1/2”	315	12	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
(2) Recommended Flow Rate for Optimal Performance

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.

- Robust Environment
- CRN Approved

Aluminum Version (1)	Maximum Pressure	Connection (NPT)	Volume (cc)	Maximum Flow Rate (2)	Replacement Adsorbent	Dimensions Diameter / Length
300A-ADS-xx	500 PSIG	1/8”	45	2	RBIA-45-XX	1.57” / 4.72”
305A-ADS-xx	500 PSIG	1/4”	45	2	RBIA-45-XX	1.57” / 4.72”
350A-ADS-xx	500 PSIG	1/4”	165	8	RBIA-165-XX	2.74” / 6.50”
355A-ADS-xx	500 PSIG	1/2”	165	8	RBIA-165-XX	2.74” / 6.50”
375A-ADS-xx	500 PSIG	1/2”	315	12	RBIA-315-XX	2.74” / 10.38”
380AHP-ADS-xx	1500 PSIG	3/4”	675	15	RBIA-675-XX	4.33” / 12.09”
383AHP-ADS-xx	1500 PSIG	1”	675	15	RBIA-675-XX	4.33” / 12.09”
380AHP-241-ADS-xx	1500 PSIG	3/4”	1100	17	RBIA-1100-xx	4.33” / 15.67”
383AHP-241-ADS-xx	1500 PSIG	1”	1100	17	RBIA-1100-xx	4.33” / 15.67”
385AHP-ADS-xx	1000 PSIG	1 1/2”	1500	30	RBIA-1500-XX	5.51” / 15.24”
390AHP-ADS-xx	1000 PSIG	2”	3000	60	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) Recommended Flow Rate for Optimal Performance

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

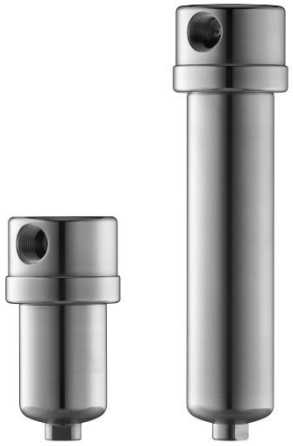
Stainless Steel Version (1)	Maximum Pressure	Connection (NPT)	Volume (cc)	Maximum Flow Rate (2)	Replacement Adsorbent	Dimensions Diameter / Length
114-ADS-xx	5000 PSIG	1/8"	20	2	RBIA-20-XX	1.42" / 2.92"
114HP-ADS-xx	10,000 PSIG	1/8"	26	2	RBIA-26-XX	2.56" / 4.13"
116-ADS-xx	5000 PSIG	1/4"	20	2	RBIA-20-XX	1.42" / 2.92"
116HP-ADS-xx	10,000 PSIG	1/4"	26	2	RBIA-26-XX	2.56" / 4.13"
124-ADS-xx	5000 PSIG	1/8"	30	3	RBIA-30-XX	1.42" / 3.98"
124HP-ADS-xx	10,000 PSIG	1/8"	40	3	RBIA-30-XX	2.56" / 5.12"
126-ADS-xx	5000 PSIG	1/4"	30	3	RBIA-40-XX	1.42" / 3.98"
126HP-ADS-xx	10,000 PSIG	1/4"	40	3	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
(2) Recommended Flow Rate for Optimal Performance

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)	Maximum Pressure	Connection (NPT)	Volume (cc)	Maximum Flow Rate (2)	Replacement Adsorbent	Dimensions Diameter / Length
134-ADS-xx	1500 PSIG	1/4"	110	8	RBIA-110-XX	2.36" / 4.80"
134HP-ADS-xx	3000 PSIG	1/4"	115	8	RBIA-115-XX	2.52" / 5.04"
134HHP-ADS-xx	6000 PSIG	1/4"	160	8	RBIA-160-xx	3.34" / 6.37"
136-ADS-xx	1500 PSIG	1/2"	110	8	RBIA-110-XX	2.36" / 4.80"
136HP-ADS-xx	3000 PSIG	1/2"	115	8	RBIA-115-XX	2.52" / 5.04"
136HHP-ADS-xx	6000 PSIG	1/2"	160	8	RBIA-160-xx	3.34" / 6.37"
144-ADS-xx	1500 PSIG	1/4"	265	15	RBIA-265-xx	2.36" / 9.29"
144HP-ADS-xx	3000 PSIG	1/4"	300	15	RBIA-300-xx	2.52" / 9.53"
144HHP-ADS-xx	6000 PSIG	1/4"	320	15	RBIA-320-xx	3.34" / 11.06"
146-ADS-xx	1500 PSIG	1/2"	265	15	RBIA-265-xx	2.36" / 9.29"
146HP-ADS-xx	3000 PSIG	1/2"	300	15	RBIA-300-xx	2.52" / 9.53"
146HHP-ADS-xx	6000 PSIG	1/2"	320	15	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) Recommended Flow Rate for Optimal Performance

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)	Maximum Pressure	Connection (NPT)	Volume (cc)	Maximum Flow Rate (2)	Replacement Adsorbent	Dimensions Diameter / Length
150-ADS-xx	1500 PSIG	1”	1500	30	RBIA-1500-xx	4.33” / 15.04”
150HP-ADS-xx	3000 PSIG	1”	1500	30	RBIA-1500-xx	4.72” / 14.29”
150HHP-ADS-xx	6000 PSIG	1”	1500	30	RBIA-1500-xx	5.90” / 17.09”
151-ADS-xx	1500 PSIG	1 1/2”	1500	30	RBIA-1500-xx	4.33” / 15.04”
151HP-ADS-xx	3000 PSIG	1 1/2”	1500	30	RBIA-1500-xx	5.11” / 15.47”
151HHP-ADS-xx	6000 PSIG	1 1/2”	1500	30	RBIA-1500-xx	5.90” / 17.09”
152-ADS-xx	1500 PSIG	2”	1500	30	RBIA-1500-xx	4.52” / 15.83”
152HP-ADS-xx	3000 PSIG	2”	1500	30	RBIA-1500-xx	5.11” / 15.47”
152HHP-ADS-xx	6000 PSIG	2”	1500	30	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) Recommended Flow Rate for Optimal Performance

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

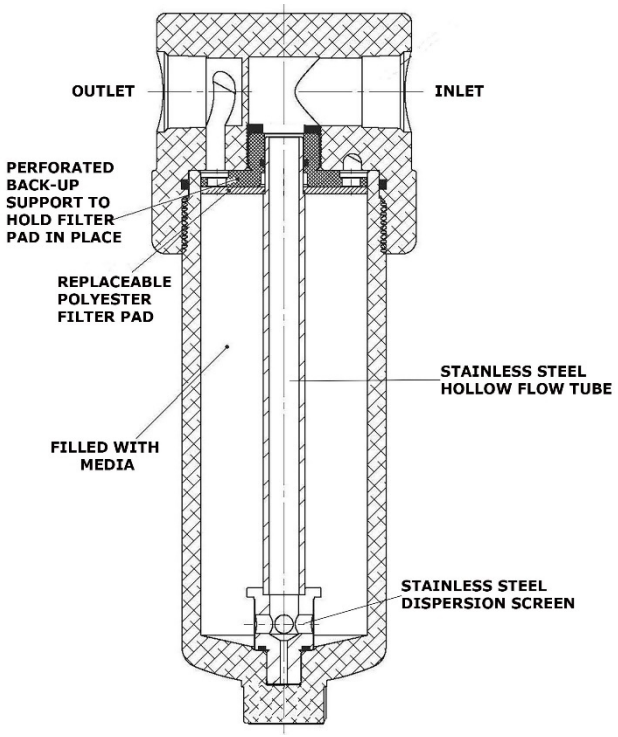
Stainless Steel Version (1)	Maximum Pressure	Connection (NPT)	Volume (cc)	Maximum Flow Rate (2)	Replacement Adsorbent	Dimensions Diameter / Length
160-ADS-xx	1500 PSIG	1”	2700	60	RBIA-2700-xx	4.33” / 24.49”
160HP-ADS-xx	3000 PSIG	1”	2222	60	RBIA-2222-xx	4.72” / 23.98”
160HHP-ADS-xx	6000 PSIG	1”	2222	60	RBIA-2222-xx	6.50” / 26.77”
161-ADS-xx	1500 PSIG	1 1/2”	2700	60	RBIA-2700-xx	4.33” / 24.49”
161HP-ADS-xx	3000 PSIG	1 1/2”	2222	60	RBIA-2222-xx	5.11” / 25.16”
161HHP-ADS-xx	6000 PSIG	1 1/2”	2222	60	RBIA-2222-xx	6.50” / 26.77”
162-ADS-xx	1500 PSIG	2”	2700	60	RBIA-2700-xx	4.52” / 25.27”
162HP-ADS-xx	3000 PSIG	2”	2222	60	RBIA-2222-xx	5.11” / 25.16”
162HHP-ADS-xx	6000 PSIG	2”	2222	60	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) Recommended Flow Rate for Optimal Performance

PRODUCT FEATURES / BENEFITS

- Variety of Media Available
- Hollow Tube Design Utilizes Entire Adsorption Media Bed
- T-Type Housing Design for Easy Installation & Quick Media Replacement

Standard ADS T-Type Design



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_2S, SO_X
Molecular Sieve 13X	**13X**	Adsorption of CO_2, NH_3, H_2S, 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, HCI
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