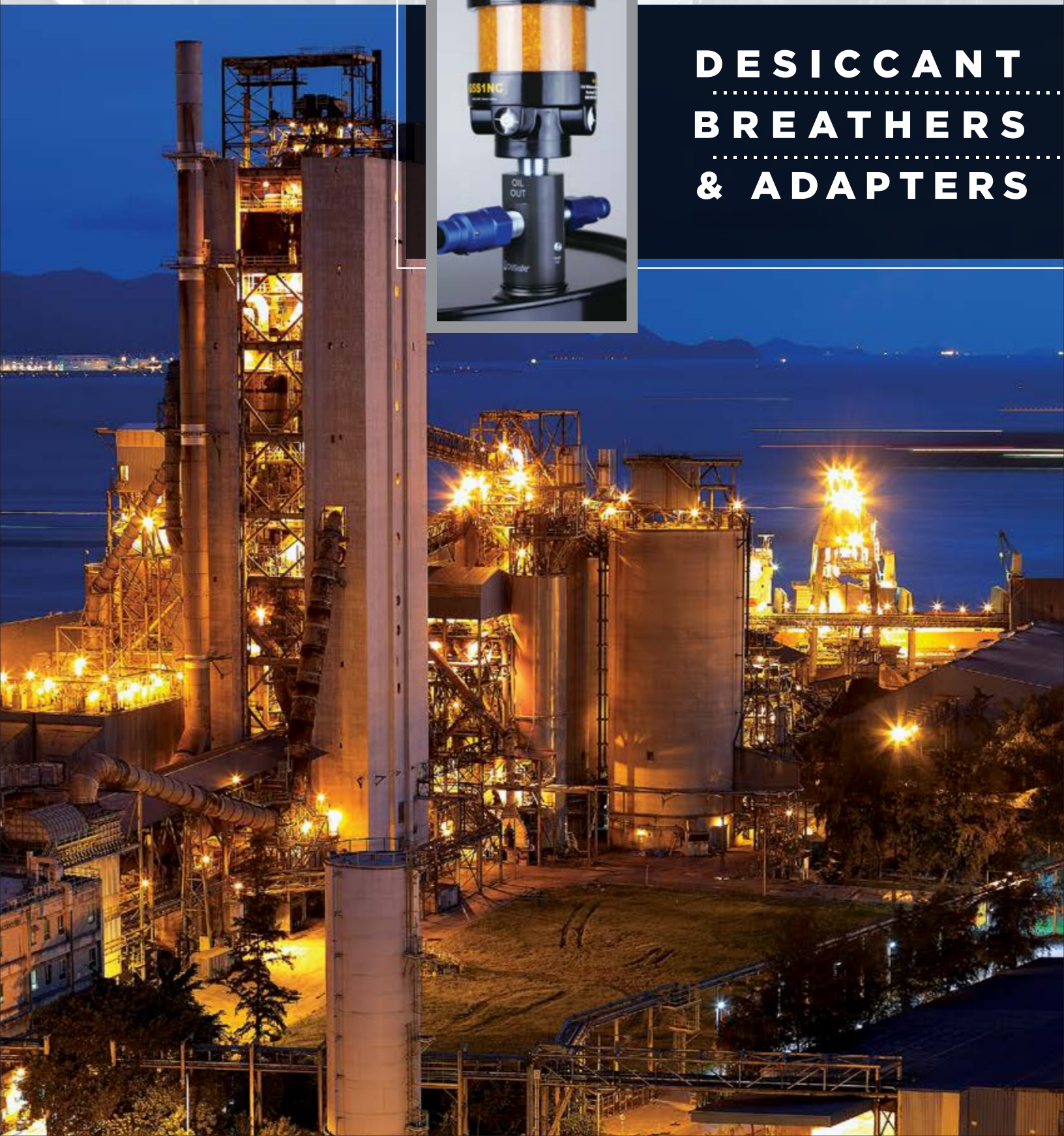




# DESICCANT BREATHERS & ADAPTERS





Air Sentry® set the standard for contamination control breather technology in 1997, creating new state-of-the-art features that reduced particulate and moisture contamination. This innovative breather line was the first to integrate check valve technology and the first to offer replacement desiccant/filter cartridges, significantly reducing maintenance costs.

## THE GOLD STANDARD IN CONTAMINATION CONTROL



The clear view 360 degree design makes it easy to inspect the saturation of the color-changing silica gel from a distance. The inert silica gel turns from gold to dark green to visually indicate the adsorption of moisture and confirm the breather is getting the job done.

Air Sentry products cover a wide range of application requirements. The line consists of Good, Better and Best options designed to meet your specific application and duration specifications.



### GOOD

#### Z-SERIES

Limited Space  
Applications -  
Fully Disposable

#### D-SERIES

Stationary Applications -  
Fully Disposable

### BETTER

#### X-SERIES

High Humidity/High Dust  
Applications - Replacement  
Cartridges Available

### BEST

#### GUARDIAN®

Ideal for Most  
Applications - Replacement  
Cartridges Available -  
Customizable Modular  
Add-ons

Contact us or visit our website to learn more about other series, models and configuration options not listed in this brochure.

## Desiccant Breathers

### Z-SERIES

*Z-Series breathers are fully disposable and are designed for applications where space is limited or air flow requirements are lower than 5 cfm. The Z-Series is typically used on gearboxes and low fluid volume applications where mounting space is limited or where a larger breather will not fit without remote mounting.*



**Limited Space Applications - Gearboxes • Drums • Totes • Small Oil Containers**

| Model        | Height<br>in. (cm) | Diameter<br>in. (cm) | Mounting<br>Connection | Silica Gel<br>lbs. (kg) | Maximum<br>Adsorption<br>Capacity<br>fl. oz. (mL) | Maximum<br>Air Flow<br>(cfm) | Maximum<br>Reservoir<br>Fluid Flow<br>(gpm) | Type of<br>Medium |
|--------------|--------------------|----------------------|------------------------|-------------------------|---------------------------------------------------|------------------------------|---------------------------------------------|-------------------|
| <b>Z-131</b> | 2 (5.1)            | 2 (5.1)              | 1/2" FNPT              | 0.08 (0.04)             | 0.49 (14)                                         | 5                            | 37                                          | Silica Gel        |
| <b>Z-132</b> | 3.25 (8.3)         | 2 (5.1)              | 1/2" FNPT              | 0.1 (0.05)              | 0.92 (27)                                         | 5                            | 37                                          | Silica Gel        |
| <b>Z-133</b> | 2 (5.1)            | 3.25 (8.3)           | 1/2" FNPT              | 0.3 (0.1)               | 1.84 (54)                                         | 5                            | 37                                          | Silica Gel        |
| <b>Z-134</b> | 3.25 (8.3)         | 3.25 (8.3)           | 1/2" FNPT              | 0.5 (0.2)               | 3.06 (90)                                         | 5                            | 37                                          | Silica Gel        |
| <b>Z-135</b> | 5.5 (14.0)         | 3.25 (8.3)           | 1/2" FNPT              | 0.8 (0.4)               | 4.91 (145)                                        | 5                            | 37                                          | Silica Gel        |

### D-SERIES

*D-Series breathers feature numerous models in a variety of sizes, they are fully disposable and designed to satisfy the requirements of most stationary fluid management applications. The breathers provide application flexibility by using 100% silica gel for moisture adsorption. All D-Series models feature 2-micron solid particle filtration and are available with airflow ratings of 20 cfm.*



**Stationary Applications - Oil Storage Tanks • Fluid Reservoirs • Transformers • Pumps • Gearboxes**

| Model        | Height<br>in. (cm) | Diameter<br>in. (cm) | Mounting<br>Connection | Silica Gel<br>lbs. (kg) | Maximum<br>Adsorption<br>Capacity<br>fl. oz. (mL) | Maximum<br>Air Flow<br>(cfm) | Maximum<br>Reservoir<br>Fluid Flow<br>(gpm) | Type of<br>Medium |
|--------------|--------------------|----------------------|------------------------|-------------------------|---------------------------------------------------|------------------------------|---------------------------------------------|-------------------|
| <b>D-100</b> | 3.5 (8.9)          | 5 (12.7)             | 1" slip fit            | 0.8 (0.4)               | 4.91 (145)                                        | 20                           | 150                                         | Silica Gel        |
| <b>D-101</b> | 5 (12.7)           | 5 (12.7)             | 1" slip fit            | 1.4 (0.6)               | 8.6 (254)                                         | 20                           | 150                                         | Silica Gel        |
| <b>D-102</b> | 8 (20.3)           | 5 (12.7)             | 1" slip fit            | 2.7 (1.2)               | 16.56 (489)                                       | 20                           | 150                                         | Silica Gel        |
| <b>D-103</b> | 8 (20.3)           | 5 (12.7)             | 1" MNPT                | 2.7 (1.2)               | 16.56 (489)                                       | 20                           | 150                                         | Silica Gel        |
| <b>D-104</b> | 8 (20.3)           | 5 (12.7)             | 2" MNPT                | 2.7 (1.2)               | 16.56 (489)                                       | 20                           | 150                                         | Silica Gel        |
| <b>D-108</b> | 10 (25.4)          | 5 (12.7)             | 2" MNPT                | 3.5 (1.6)               | 21.47 (634)                                       | 20                           | 150                                         | Silica Gel        |
| <b>D-154</b> | 5 (12.7)           | 5 (12.7)             | 1" MNPT                | 1.4 (0.6)               | 8.6 (254)                                         | 20                           | 150                                         | Silica Gel        |



## X-SERIES

*X-Series breathers are a better solution for high humidity and high dust environments. This breather series offers replacement cartridges for each breather. To extend desiccant life, the X-Series incorporates two check valves into a reusable top cap. The check valves provide a closed system until airflow is required, thus extending the service life of the desiccant. The intake check valve allows airflow into the breather only when differential pressure between the atmosphere and fluid reservoir exceeds a 0.1-psi threshold (cracking pressure of the check valves). The exhaust check valve permits air to exit the reservoir when the differential pressure exceeds 0.1-psi.*



**High Humidity/High Dust Applications - Paper Mills • Wash-Down Areas • Steam-Cleaning Rooms • Mine Quarries**

| Model                        | Check Valve<br>PSI In/Out | Height<br>in. (cm) | Diameter<br>in. (cm) | Mounting<br>Connection | Silica Gel<br>lbs. (kg) | Maximum<br>Adsorption<br>Capacity<br>fl. oz. (mL) | Maximum<br>Air Flow<br>(cfm) | Maximum<br>Reservoir<br>Fluid Flow<br>(gpm) | Type of<br>Medium | Uses<br>Replacement<br>Cartridge |
|------------------------------|---------------------------|--------------------|----------------------|------------------------|-------------------------|---------------------------------------------------|------------------------------|---------------------------------------------|-------------------|----------------------------------|
| <b>X-100</b><br>(mini model) | 0.3 (0.3)                 | 6.25 (15.9)        | 3.25 (8.3)           | 1/2" FNPT              | 0.8 (0.4)               | 4.91 (145)                                        | 10                           | 75                                          | Silica Gel        | L-143                            |
| <b>X-501</b>                 | 0.1 (0.1)                 | 7 (17.8)           | 5 (12.7)             | 1" slip fit            | 1.4 (0.6)               | 8.6 (254)                                         | 20                           | 150                                         | Silica Gel        | A-341                            |
| <b>X-503</b>                 | 0.1 (0.1)                 | 7 (17.8)           | 5 (12.7)             | 1" MNPT                | 1.4 (0.6)               | 8.6 (254)                                         | 20                           | 150                                         | Silica Gel        | A-345                            |
| <b>X-505</b>                 | 0.1 (0.1)                 | 10 (25.4)          | 5 (12.7)             | 1" MNPT                | 2.7 (1.2)               | 16.56 (489)                                       | 20                           | 150                                         | Silica Gel        | A-346                            |
| <b>X-521</b>                 | 0.1 (0.1)                 | 7 (17.8)           | 5 (12.7)             | 2" MNPT                | 1.4 (0.6)               | 8.6 (254)                                         | 20                           | 150                                         | Silica Gel        | A-343                            |
| <b>X-522</b>                 | 0.1 (0.1)                 | 10 (25.4)          | 5 (12.7)             | 2" MNPT                | 2.7 (1.2)               | 16.56 (489)                                       | 20                           | 150                                         | Silica Gel        | A-344                            |

## GUARDIAN®

*GUARDIAN is Air Sentry's industry leading breather series. Some models feature an isolation check valve that keeps exhaust air from depleting the desiccant and protects from volatile fumes and splashing fluids. The GUARDIAN's casing is constructed from Tritan®, a patented material highly resistant to impact and chemicals with a broad range of operating temperatures. These unique features equate to a longer life for your breather and your equipment.*



*GUARDIAN's modular construction and optional add-on features allow you to customize each Guardian model to your specific application requirements. From the isolation check valve, to its stackable design, from its wash-down cap, or its compound indicating gauge, to the high-capacity HEPA filter, the GUARDIAN will last longer and reduce downtime giving you the flexibility you need to protect your industrial assets.*

**Ideal for Most Applications - The only desiccant breather series that Air Sentry recommends for diesel fuel applications\* (not recommended for other fuel applications)**

\*Guardian breathers used on diesel fuel applications must be accompanied with an isolation check valve. See Guardian models ending in NC, NG, NGC. Not available in models ending in N.



| Model    | Check Valve PSI In/Out | Height in. (cm) | Diameter in. | Mounting Connection* | Silica Gel lbs. (kg) | Maximum Adsorption Capacity fl. oz. (mL) | Maximum Air Flow (cfm) | Maximum Reservoir Fluid Flow (gpm) | Type of Medium | Isolation Check Valve | Compound Indicating Gauge | Uses Replacement Cartridge |
|----------|------------------------|-----------------|--------------|----------------------|----------------------|------------------------------------------|------------------------|------------------------------------|----------------|-----------------------|---------------------------|----------------------------|
| G5SIN    | 0.1/0.1                | 9 (22.3)        | 5.125        | 1" NPT               | 1.5 (0.68)           | 9.2 (272)                                | 25                     | 187                                | Silica Gel     | No                    | No                        | GRC5S                      |
| G5SING   | 0.1/0.1                | 9 (22.3)        | 5.125        | 1" NPT               | 1.5 (0.68)           | 9.2 (272)                                | 25                     | 187                                | Silica Gel     | No                    | Yes                       | GRC5S                      |
| G5SINC   | 0.1/0.1                | 9 (22.3)        | 5.125        | 1" NPT               | 1.5 (0.68)           | 9.2 (272)                                | 25                     | 187                                | Silica Gel     | Yes                   | No                        | GRC5SC                     |
| G5SINGC  | 0.1/0.1                | 9 (22.3)        | 5.125        | 1" NPT               | 1.5 (0.68)           | 9.2 (272)                                | 25                     | 187                                | Silica Gel     | Yes                   | Yes                       | GRC5SC                     |
| G8SIN    | 0.1/0.1                | 12 (30.5)       | 5.125        | 1" NPT               | 2.8 (1.27)           | 17 (508.7)                               | 25                     | 187                                | Silica Gel     | No                    | No                        | GRC8S                      |
| G8SING   | 0.1/0.1                | 12 (30.5)       | 5.125        | 1" NPT               | 2.8 (1.27)           | 17 (508.7)                               | 25                     | 187                                | Silica Gel     | No                    | Yes                       | GRC8S                      |
| G8SINC   | 0.1/0.1                | 12 (30.5)       | 5.125        | 1" NPT               | 2.8 (1.27)           | 17 (508.7)                               | 25                     | 187                                | Silica Gel     | Yes                   | No                        | GRC8SC                     |
| G8SINGC  | 0.1/0.1                | 12 (30.5)       | 5.125        | 1" NPT               | 2.8 (1.27)           | 17 (508.7)                               | 25                     | 187                                | Silica Gel     | Yes                   | Yes                       | GRC8SC                     |
| G12SIN   | 0.1/0.1                | 16 (40.6)       | 5.125        | 1" NPT               | 4.5 (2)              | 27.6 (816)                               | 25                     | 187                                | Silica Gel     | No                    | No                        | GRC12S                     |
| G12SING  | 0.1/0.1                | 16 (40.6)       | 5.125        | 1" NPT               | 4.5 (2)              | 27.6 (816)                               | 25                     | 187                                | Silica Gel     | No                    | Yes                       | GRC12S                     |
| G12SINC  | 0.1/0.1                | 16 (40.6)       | 5.125        | 1" NPT               | 4.5 (2)              | 27.6 (816)                               | 25                     | 187                                | Silica Gel     | Yes                   | No                        | GRC12SC                    |
| G12SINGC | 0.1/0.1                | 16 (40.6)       | 5.125        | 1" NPT               | 4.5 (2)              | 27.6 (816)                               | 25                     | 187                                | Silica Gel     | Yes                   | Yes                       | GRC12SC                    |

\*Upon request the mounting connection can be ordered in 2" NPT and 1" BSP.

## Guardian Modular Add-ons

### HIGH-CAPACITY AIR FILTER - GHCAF

Can be used with a desiccant cartridge or as a standalone particle filter. The High-Capacity Air Filters' 0.3-micron HEPA filter is 99.97% efficient. Ideal for extremely dirty/dusty environments.



### MODULAR STACKABLE RING - GMSR

By using the Modular Stackable Ring, you are able to attach GUARDIAN breather cartridges to extend the service life. This stackable ring also allows for the addition of the High-Capacity Air Filter and Activated Carbon Filter.



### SHIELD WASH-DOWN CAP - GSWDC

The cap provides a barrier in environments where equipment wash down happens frequently and in dusty environments. This prevents any direct spray from opening check valves in the top cap. The Shield Wash-Down Cap is designed for use in food processing, mining, cement, pulp and paper facilities and outdoors.



### COMPOUND INDICATING GAUGE\*

This proprietary Compound Indicating Gauge is an accurate indicator of filter conditions.

\*See Guardian models ending in NC, NG, NGC.



### ISOLATION CHECK VALVE\*

The Isolation Check Valve isolates the adsorbent from exhaust air to lengthen the service life of the desiccant while also protecting it from volatile fumes and splashing fluids.

\*See Guardian models ending in NC, NG, NGC, not available in models ending in N. Recommended for use on storage tanks, fluid reservoirs and gearboxes where fumes and splashing fluids occur.



**Applications: Gearboxes, Hydraulic Systems, Storage Tanks for Lubricants and Diesel Fuels**





## Adapter Add-ons



**Adapter Kits are available in a dark gray color and configured with Colorized Quick Connects\* available in 10 familiar OilSafe colors or silver, no Quick Connects or Iso-b Quick Connects.**



### DRUM ADAPTER KIT

*Drum Adapter Kits allow breathers to be installed on any storage tank or drum. There's never been a cleaner, more effective way to store, filter and pump lubricants from a drum. The unique design ensures all fluid handling is managed through dedicated adapters.*

### HYDRAULIC RESERVOIR ADAPTER KIT

*Hydraulic Reservoir Adapter Kits allow breathers to be installed on any hydraulic fluid tank or reservoir. The aluminum adapters have quick connects in two sizes for pumping oil in and out, allowing the system to remain closed to the environment at all times.*

### GEARBOX ADAPTER KIT

*Gearbox Adapter Kits allow breathers to be installed on any gearbox. Oil can be pumped in or out without opening the gearbox to atmosphere. Offline filtration, oil changes and sampling can be handled through the adapter.*

### DOMED FLANGE ADAPTER

*Domed Flange Adapters provide a low profile yet rugged way to mount a 1" NPT desiccant breather to a hydraulic reservoir.*

### SPLASH ADAPTER

*Splash Adapters are ideal for applications where splashing fluids can exit the reservoir and hit the bottom of a desiccant breather. Ideal for mobile equipment.*

\*Colorized Quick Connects have been inspected to ensure anodized colors are within OilSafe color spectrum scope. Color and shade can vary on anodized components, this will not impact performance of product.



Air Sentry is a product line of Whitmore.



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