



# **YD Series**

# **Compressed Air Filters**

PF/AO/AA/AX/ACS/AR/AAR, 5 micron to 0.01 micron Air flow rates from 1.0 to 37.2 m³/min 16 bar (232 psig)



# **Your Benefits from YD Series Air Filter Elements**

The compression process introduces lubricant and wear particles into the system, piping distribution and storage tanks foster contaminants in the form of rust, pipe scale and bacteria. PF, AO, AA,AX,ACS, AR and AAR filters efficiently remove these contaminants to provide the best air purity and protect downstream equipment and your processes, saving costs.

### Coarse Pre-Filtration

As a primary filter, particles whose diameter down to  $5 \mu m$  can be removed, the max. residual oil content is negligible.

#### High Efficiency General Purpose

High efficiency general protection, dust particles, water mist & oil mist whose diameter down to  $1\mu m$  can be removed, the residual content of oil mist does not exceed  $0.6~mg/m^3$  ( $21^{\circ}C$ ),1ppm(w), changed every 8000~hours.

## High Efficiency Oil Removal Filtration

Dust particles, water mist and oil mist down to 0.01µm can be removed, the residual content of oil mist does not exceed 0.01mg/m³ (21°C), 0.01ppm(w), changed every 8000 hours.

### Ultra High Efficiency Filtration

Ultra-efficient filtration, solid particles, liquids, oil aerosols, odors, and vapors are effectively removed at a high efficiency of 99.99% as small as 0.01 micron, the residual content of oil mist does not exceed 0.001mg/m³ (21°C),0.001ppm(w), changed every 8000 hours.

# ACS Oil Vapor Reduction

Activated carbon filter element made from thousands of activated carbon granules of sufficient thickness, giving a superior adsorption capacity on a longer time. Oil vapor & odor can be removed, the max. resident content of oil vapor does not exceed 0.003 mg/m³ (21°C), 0.003 ppm(w), changed when oil vapor detected.

#### General Purpose Dust Filtration

Dry particle removal down to 1  $\mu m$ , installed after adsorption air dryer, change every 6000 hours.

#### High Efficiency Dust Filtration

Dry particles removal down to 0.01µm can be removed, installed after adsorption air dryer, change every 6000 hours.

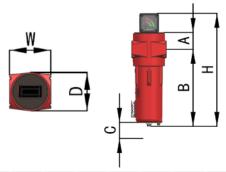




# **Product Selection**

Below flow rates of compressed air are calculated in rated working pressure of 7 bar (100 psi g) with reference to 20  $^{\circ}$ C.

| Model | Inlet/<br>Outlet<br>(Rc) | Rated Air Flow at 7 bar |             |        | Dimensions (mm) |              |               |    |     |                   |  |
|-------|--------------------------|-------------------------|-------------|--------|-----------------|--------------|---------------|----|-----|-------------------|--|
|       |                          | L/S                     | Nm3/<br>min | Scfm   | Width<br>(W)    | Depth<br>(D) | Height<br>(H) | А  | В   | C<br>(Left space) |  |
| YD017 | 1/2"                     | 16.7                    | 1.0         | 35.3   | 89              | 79           | 252           | 40 | 192 | 118               |  |
| YD025 | 3/4"                     | 25.0                    | 1.5         | 53.0   | 89              | 79           | 252           | 40 | 192 | 118               |  |
| YD030 | 1/2"                     | 30.0                    | 1.8         | 63.6   | 89              | 79           | 285           | 40 | 226 | 158               |  |
| YD035 | 3/4"                     | 33.3                    | 2.0         | 70.6   | 89              | 79           | 285           | 40 | 226 | 158               |  |
| YD058 | 3/4"                     | 46.7                    | 2.8         | 98.9   | 120             | 110          | 406           | 55 | 281 | 195               |  |
| YD068 | 1"                       | 60.0                    | 3.6         | 127.1  | 120             | 110          | 406           | 55 | 281 | 195               |  |
| YD080 | 1"                       | 80.0                    | 4.8         | 169.5  | 120             | 110          | 508           | 55 | 383 | 290               |  |
| YD145 | 1-1/2"                   | 120.0                   | 7.2         | 254.2  | 120             | 110          | 508           | 55 | 383 | 290               |  |
| YD220 | 2"                       | 200.0                   | 12.0        | 423.7  | 162             | 151          | 737           | 64 | 566 | 480               |  |
| YD260 | 2-1/2"                   | 233.3                   | 14.0        | 494.4  | 162             | 151          | 737           | 64 | 566 | 480               |  |
| YD330 | 2"                       | 267.2                   | 16.0        | 564.8  | 162             | 151          | 984           | 64 | 875 | 780               |  |
| YD360 | 2-1/2"                   | 317.3                   | 19.0        | 670.7  | 162             | 151          | 984           | 64 | 875 | 780               |  |
| YD405 | 2-1/2"                   | 367.4                   | 22.0        | 776.6  | 200             | 189          | 757           | 78 | 634 | 560               |  |
| YD430 | 3"                       | 467.6                   | 28.0        | 988.4  | 200             | 189          | 757           | 78 | 634 | 560               |  |
| YD620 | 3"                       | 620.0                   | 37.2        | 1313.6 | 200             | 189          | 1012          | 78 | 889 | 780               |  |



| Pressure   | Barg | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|            | Psig | 15   | 29   | 44   | 59   | 73   | 87   | 100  | 116  | 131  | 145  | 160  | 174  | 189  | 203  | 219  | 232  |
| Pressure C |      | 0.38 | 0.53 | 0.65 | 0.76 | 0.85 | 0.93 | 1.00 | 1.07 | 1.13 | 1.19 | 1.23 | 1.31 | 1.36 | 1.41 | 1.46 | 1.51 |

To correctly select an air filter model, the flow rate of the air filter must be adjusted for the minimum operating (inlet) pressure at the point of installation.

#### Calculate the adjust filtration capacity:

- 1.Minimum Filtration Capacity = Compressed Air Flow Rate x pressure correction factor rate.
- 2.Using the minimum filtration capacity, select an air filter model from the flow rate tables above (air filter selected must have a flow rate equal to or greater than the minimum filtration capacity).



# **Accessories Suited with Air Filters**









Differential pressure indicator/gauge

Liquid sight glass

Float internal drain

Float external drain

|       | Standard accessories suited on filter housing |                                   |              |                         |                         |                       |  |  |  |  |
|-------|---|-----------------------------------|--------------|-------------------------|-------------------------|-----------------------|--|--|--|--|
| Model | Differential pressure indicator               | Differential<br>pressure<br>gauge | Sight glass  | Internal float<br>drain | External float<br>drain | Manual drain<br>valve |  |  |  |  |
| YD017 | √   |                                   | V            | V                       |                         |                       |  |  |  |  |
| YD025 | $\checkmark$                                  |                                   | $\checkmark$ | $\checkmark$            |                         |                       |  |  |  |  |
| YD030 | $\checkmark$                                  |                                   | $\checkmark$ | $\checkmark$            |                         |                       |  |  |  |  |
| YD035 | $\checkmark$                                  |                                   | $\checkmark$ | $\checkmark$            |                         |                       |  |  |  |  |
| YD058 |   | $\checkmark$                      | $\checkmark$ | $\checkmark$            |                         | $\checkmark$          |  |  |  |  |
| YD068 |   | $\checkmark$                      | $\checkmark$ | $\checkmark$            |                         | $\checkmark$          |  |  |  |  |
| YD080 |   | $\checkmark$                      | $\checkmark$ | $\checkmark$            |                         | $\checkmark$          |  |  |  |  |
| YD145 |   | $\checkmark$                      | $\checkmark$ | $\checkmark$            |                         | $\checkmark$          |  |  |  |  |
| YD220 |   | $\checkmark$                      | $\checkmark$ |                         | $\checkmark$            | $\checkmark$          |  |  |  |  |
| YD260 |   | $\checkmark$                      | $\checkmark$ |                         | $\checkmark$            | $\checkmark$          |  |  |  |  |
| YD330 |   | $\checkmark$                      | $\checkmark$ |                         | $\checkmark$            | $\checkmark$          |  |  |  |  |
| YD360 |   | $\checkmark$                      | $\checkmark$ |                         | $\checkmark$            | $\checkmark$          |  |  |  |  |
| YD405 |   | $\sqrt{}$                         | $\checkmark$ |                         | $\checkmark$            | $\sqrt{}$             |  |  |  |  |
| YD430 |   | $\checkmark$                      | $\checkmark$ |                         | $\checkmark$            | $\sqrt{}$             |  |  |  |  |
| YD620 |   | $\sqrt{}$                         | $\sqrt{}$    |                         | $\sqrt{}$               | $\checkmark$          |  |  |  |  |



# **Filtration & Separation Solution for Industry**

Applications for compressed air are numerous and have requirements from very simple to highly strict, Our high efficiency air filters designed for removing contaminates to protect downstream of equipment and save costs. A typical air treatment system will include the follow component for most industry.

**Air dryer:** Installed after an air compressor, it removes moisture from compressed air using a refrigeration system or adsorption system, protecting pipelines and equipment from condensate.

**Water separator:** Installed in front of refrigerated air dryers and coalescing air filters to remove bulk liquids and wet solids, improving the whole compressed air system performance.

Air filter: Various types of air filters are available, including particulate and coalescing air filters, activated carbon filters, and dust filters installed after water separators to remove solid particles and oil vapor down to acceptable levels to protect downstream equipment and finished products.

**Auto drain:** Reliably and consistently discharge water for a wide range of compressed air applications including compressors, after coolers, air filters.

| Tire filling              | Injection molding          | Powder fluidization        | Air jet             |  |  |
|---------------------------|----------------------------|----------------------------|---------------------|--|--|
| PET bottle blowing        | Semiconductor              | Air filter after air dryer | Air bearing         |  |  |
| Dry bulk solids conveying | Packtage                   | Filled/capped beverages    | Aerial winch        |  |  |
| Dust collection           | Deodorant                  | Aerospace industry         | Grain color sorting |  |  |
| Cool down                 | Processing air             | Breathe the air            | Parts blasting      |  |  |
| Tablet coating            | Blow dust                  | Chemical Industry          | Spray paint         |  |  |
| Dairy Air                 | Bag cleaning               | Military equipment         | Sandblasting        |  |  |
| Liquid filling            | Nitrogen separation        | Pre-air filter             | Bottled gas         |  |  |
| Instrument gas            | Laser-cutting              | Air metering               | Pneumatic tools     |  |  |
| Pneumatic automation      | Ferment                    | Air agitator               | Air motor           |  |  |
| Pneumatic conveying       | Sprinkler system discharge | Ventilation                | Dental hand tools   |  |  |



# **OEM Capabilities**

When you need a special filter for a unique application, HSAIR experts are ready to work with you. We can tailor a configuration to meet your special need from the wide variety of filter media available. In addition, with LEAN manufacturing, we can produce specials in reasonable quantities, in a reasonable amount of time, at a reasonable price. Not only will this enhance the performance of your product, but it will benefit you with aftermarket sales of replacement elements.

#### OUR RANGES OF PRODUCTS INCLUDE THE FOLLOWING:

- Compressed air dryers
- Compressed air filters
- Compressed air water separators
- Alternative air filter elements
- Condensate auto drain
- Compressed air accessories
- Portable mask



Since 1998, a leading manufacturer of quality compressed air treatment in China



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