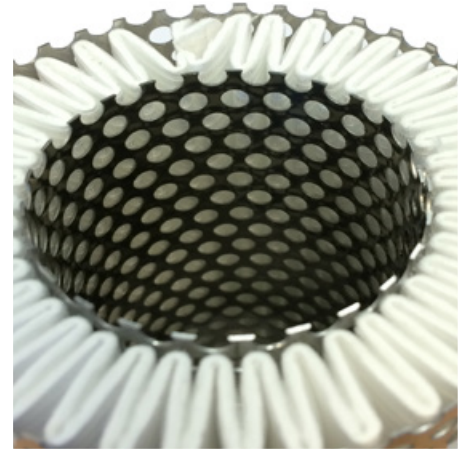


# OIL-X Die-cast Aluminium Compressed Air Filters

Grade AO General Purpose & Grade AA High Efficiency Coalescing & Dry Particulate Filters  
(1/4" ~ 3")



## Coalescing & Dry Particulate Filters

Coalescing filters are the most important items of purification equipment in any compressed air system. They are designed to treat 6 of the 10 main contaminants found in compressed air (aerosols of oil & water and solid particulates such as atmospheric particulate, rust, pipescale and micro-organisms).

The origins of modern compressed air filtration can be traced back to domnick hunter in 1963, it was the first company to use microfibre filter media for purification applications, changing the compressed air industry forever. The OIL-X filter range was the first filter range to fully utilise this ground breaking technology and has always been synonymous with high quality compressed air. Now in the 21st century, the OIL-X name remains, but the technology has evolved beyond recognition.

## Parker domnick hunter OIL-X

Since the introduction of the first OIL-X range, Parker domnick hunter has continued to develop both the compressed air filter and the standards governing compressed air quality. Constantly innovated, OIL-X has become the leading technology for compressed air filtration, providing the exact balance between air quality, energy efficiency and low lifetime costs.



## Advantages

- Meets or exceeds the requirements for delivered air quality shown in all editions of ISO8573-1, the international standard for compressed air quality
- Deep pleated filter element – Filter media is constructed to reduce air flow velocity and pressure loss whilst providing increased dirt holding capacity, and improved filtration efficiency
- Flow management system - Engineered to provide smooth air flow from entry to exit, the filter element design includes a 90-degree elbow, turning vanes and conical flow diffuser to promote a consistent, optimum air flow with minimal pressure loss
- Filter Media Optimisation - The flow management system also evenly distributes compressed air flow throughout the element ensuring optimum filtration performance again with low pressure loss
- Parker OIL-X coalescing and dry particulate filters are fully tested – In accordance with ISO12500-1 / ISO8573-2 for oil aerosol and ISO8573-4 for particulate
- Filtration performance independently validated - by Lloyds Register
- Parker OIL-X materials of construction are FDA Title 21 CFR compliant & EX1935/2004 exempt
- Air Quality Guarantee - The only filter range to offer a one year air quality guarantee
- Housing Guarantee - 10 year guarantee on filter housings



ENGINEERING YOUR SUCCESS.

# Grade AO General Purpose Coalescing Filter

## Filtration Performance

| Filtration Grade | Filter Type | Particle Reduction (inc water & oil aerosols) | Max Remaining Oil Content at 21°C (70°F) | Filtration Efficiency | Change Element Every | Precede with Filtration Grade |
|------------------|-------------|---|--|-----------------------|----------------------|-------------------------------|
| AO               | Coalescing  | Down to 1 micron                              | 0.5 mg/m <sup>3</sup><br>0.5 ppm(w)      | 99.925%               | 12 months            | WS (for bulk liquid)          |

## Technical Data

| Filtration Grade | Filter Models                | Min Operating Pressure |       | Max Operating Pressure |       | Min Operating Temperature |    | Max Operating Temperature |     |
|------------------|------------------------------|------------------------|-------|------------------------|-------|---------------------------|----|---------------------------|-----|
|                  |                              | bar g                  | psi g | bar g                  | psi g | °C                        | °F | °C                        | °F  |
| AO               | PX010 - PX055 (Float Drain)  | 1.5                    | 22    | 16                     | 232   | 2                         | 35 | 65                        | 149 |
| AO               | PX010 - PX055 (Manual Drain) | 1                      | 15    | 20                     | 290   | 2                         | 35 | 80                        | 176 |

**Flow Rates** Stated flows are for operation at 7 bar (g) (102 psi g) with reference to 20°C, 1 bar (a), 0% relative water vapour pressure.

| Model   | Pipe Size | L/S | m <sup>3</sup> /min | m <sup>3</sup> /hr | cfm  | Replacement Element | No. | Initial Saturated Differential Pressure |     |          |     |          |     |          |     |
|---|-----------|-----|---------------------|--------------------|------|---------------------|-----|---|-----|----------|-----|----------|-----|----------|-----|
|   |           |     |                     |                    |      |                     |     | 100% Flow                               |     | 75% Flow |     | 50% Flow |     | 25% Flow |     |
|   |           |     |                     |                    |      |                     |     | mbar                                    | psi | mbar     | psi | mbar     | psi | mbar     | psi |
| AOPX010A <input type="checkbox"/> G <input type="checkbox"/> FX | ¼"        | 10  | 0.6                 | 36                 | 21   | P010AO              | 1   | 123                                     | 1.8 | 84       | 1.2 | 53       | 0.8 | 27       | 0.4 |
| AOPX010B <input type="checkbox"/> G <input type="checkbox"/> FX | ⅜"        | 10  | 0.6                 | 36                 | 21   | P010AO              | 1   | 124                                     | 1.8 | 85       | 1.2 | 55       | 0.8 | 30       | 0.4 |
| AOPX010C <input type="checkbox"/> G <input type="checkbox"/> FX | ½"        | 10  | 0.6                 | 36                 | 21   | P010AO              | 1   | 121                                     | 1.8 | 82       | 1.2 | 44       | 0.6 | 15       | 0.2 |
| AOPX015B <input type="checkbox"/> G <input type="checkbox"/> FX | ⅜"        | 20  | 1.2                 | 72                 | 42   | P015AO              | 1   | 122                                     | 1.8 | 84       | 1.2 | 46       | 0.7 | 20       | 0.3 |
| AOPX015C <input type="checkbox"/> G <input type="checkbox"/> FX | ½"        | 20  | 1.2                 | 72                 | 42   | P015AO              | 1   | 91                                      | 1.3 | 53       | 0.8 | 31       | 0.4 | 13       | 0.2 |
| AOPX020C <input type="checkbox"/> G <input type="checkbox"/> FX | ½"        | 30  | 1.8                 | 108                | 64   | P020AO              | 1   | 124                                     | 1.8 | 82       | 1.2 | 45       | 0.7 | 20       | 0.3 |
| AOPX020D <input type="checkbox"/> G <input type="checkbox"/> FX | ¾"        | 30  | 1.8                 | 108                | 64   | P020AO              | 1   | 113                                     | 1.6 | 72       | 1.0 | 34       | 0.5 | 10       | 0.1 |
| AOPX025D <input type="checkbox"/> G <input type="checkbox"/> FX | ¾"        | 60  | 3.6                 | 216                | 127  | P025AO              | 1   | 125                                     | 1.8 | 80       | 1.2 | 43       | 0.6 | 21       | 0.3 |
| AOPX025E <input type="checkbox"/> G <input type="checkbox"/> FX | 1"        | 60  | 3.6                 | 216                | 127  | P025AO              | 1   | 80                                      | 1.2 | 50       | 0.7 | 27       | 0.4 | 11       | 0.2 |
| AOPX030E <input type="checkbox"/> G <input type="checkbox"/> FX | 1"        | 110 | 6.6                 | 396                | 233  | P030AO              | 1   | 125                                     | 1.8 | 80       | 1.2 | 42       | 0.6 | 30       | 0.4 |
| AOPX030G <input type="checkbox"/> G <input type="checkbox"/> FX | 1 ½"      | 110 | 6.6                 | 396                | 233  | P030AO              | 1   | 90                                      | 1.3 | 49       | 0.7 | 27       | 0.4 | 9        | 0.1 |
| AOPX035G <input type="checkbox"/> G <input type="checkbox"/> FX | 1 ½"      | 160 | 9.6                 | 576                | 339  | P035AO              | 1   | 81                                      | 1.2 | 44       | 0.6 | 18       | 0.3 | 5        | 0.1 |
| AOPX040H <input type="checkbox"/> G <input type="checkbox"/> FX | 2"        | 220 | 13.2                | 792                | 466  | P040AO              | 1   | 113                                     | 1.6 | 69       | 1.0 | 40       | 0.6 | 20       | 0.3 |
| AOPX045H <input type="checkbox"/> G <input type="checkbox"/> FX | 2"        | 330 | 19.8                | 1188               | 699  | P045AO              | 1   | 123                                     | 1.8 | 81       | 1.2 | 44       | 0.6 | 21       | 0.3 |
| AOPX045I <input type="checkbox"/> G <input type="checkbox"/> FX | 2 ½"      | 330 | 19.8                | 1188               | 699  | P045AO              | 1   | 95                                      | 1.4 | 64       | 0.9 | 35       | 0.5 | 15       | 0.2 |
| AOPX050I <input type="checkbox"/> G <input type="checkbox"/> FX | 2 ½"      | 430 | 25.9                | 1548               | 911  | P050AO              | 1   | 116                                     | 1.7 | 75       | 1.1 | 42       | 0.6 | 17       | 0.2 |
| AOPX055I <input type="checkbox"/> G <input type="checkbox"/> FX | 2 ½"      | 620 | 37.3                | 2232               | 1314 | P055AO              | 1   | 123                                     | 1.8 | 81       | 1.2 | 45       | 0.7 | 24       | 0.3 |
| AOPX055J <input type="checkbox"/> G <input type="checkbox"/> FX | 3"        | 620 | 37.3                | 2232               | 1314 | P055AO              | 1   | 112                                     | 1.6 | 55       | 0.8 | 32       | 0.5 | 17       | 0.2 |

Select  G for BSPP Threads / Select  N for NPT Threads

When selecting a coalescing filter for pressures above 16 bar g (232 psi g), use manual drain version and fit an external automatic drain.

## Product Selection & Correction Factors

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

1. Obtain the minimum operating (inlet) pressure and maximum compressed air flow rate at the inlet of the filter.
2. Select the correction factor for minimum inlet pressure from the CFMIP table (always round down e.g. for 5.3 bar, use 5 bar correction factor)
3. Calculate the minimum filtration capacity. Minimum Filtration Capacity = Compressed Air Flow Rate x CFMIP
4. Using the minimum filtration capacity, select a filter model from the flow rate tables above (filter selected must have a flow rate equal to or greater than the minimum filtration capacity).

## CFMIP - Correction Factor Minimum Inlet Pressure

| Minimum Inlet Pressure   | bar g | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                          | psi g | 15   | 29   | 44   | 58   | 73   | 87   | 100  | 116  | 131  | 145  | 160  | 174  | 189  | 203  | 218  | 232  | 248  | 263  | 277  | 290  |
| <b>Correction Factor</b> |       | 2.65 | 1.87 | 1.53 | 1.32 | 1.18 | 1.08 | 1.00 | 0.94 | 0.88 | 0.84 | 0.80 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.61 | 0.59 |

# Grade AA High Efficiency Coalescing Filter

## Filtration Performance

| Filtration Grade | Filter Type | Particle Reduction (inc water & oil aerosols) | Max Remaining Oil Content at 21°C (70°F) | Filtration Efficiency | Change Element Every | Precede with Filtration Grade |
|------------------|-------------|---|--|-----------------------|----------------------|-------------------------------|
| AA               | Coalescing  | Down to 0.01 micron                           | 0.01 mg/m <sup>3</sup><br>0.01 ppm(w)    | 99.9999%              | 12 months            | AO                            |

## Technical Data

| Filtration Grade | Filter Models                | Min Operating Pressure |       | Max Operating Pressure |       | Min Operating Temperature |    | Max Operating Temperature |     |
|------------------|------------------------------|------------------------|-------|------------------------|-------|---------------------------|----|---------------------------|-----|
|                  |                              | bar g                  | psi g | bar g                  | psi g | °C                        | °F | °C                        | °F  |
| AA               | PX010 - PX055 (Float Drain)  | 1.5                    | 22    | 16                     | 232   | 2                         | 35 | 65                        | 149 |
| AA               | PX010 - PX055 (Manual Drain) | 1                      | 15    | 20                     | 290   | 2                         | 35 | 80                        | 176 |

**Flow Rates** Stated flows are for operation at 7 bar (g) (102 psi g) with reference to 20°C, 1 bar (a), 0% relative water vapour pressure.

| Model    | Pipe Size | L/S  | m <sup>3</sup> /min | m <sup>3</sup> /hr | cfm  | Replacement Element | No.    | Initial Saturated Differential Pressure |     |          |     |          |     |          |     |     |
|----------|-----------|------|---------------------|--------------------|------|---------------------|--------|---|-----|----------|-----|----------|-----|----------|-----|-----|
|          |           |      |                     |                    |      |                     |        | 100% Flow                               |     | 75% Flow |     | 50% Flow |     | 25% Flow |     |     |
|          |           |      |                     |                    |      |                     |        | mbar                                    | psi | mbar     | psi | mbar     | psi | mbar     | psi |     |
| AAPX010A | G FX      | ½"   | 10                  | 0.6                | 36   | 21                  | P010AA | 1                                       | 117 | 1.7      | 83  | 1.2      | 50  | 0.7      | 25  | 0.4 |
| AAPX010B | G FX      | ¾"   | 10                  | 0.6                | 36   | 21                  | P010AA | 1                                       | 121 | 1.8      | 85  | 1.2      | 52  | 0.8      | 27  | 0.4 |
| AAPX010C | G FX      | ½"   | 10                  | 0.6                | 36   | 21                  | P010AA | 1                                       | 111 | 1.6      | 75  | 1.1      | 41  | 0.6      | 20  | 0.3 |
| AAPX015B | G FX      | ¾"   | 20                  | 1.2                | 72   | 42                  | P015AA | 1                                       | 115 | 1.7      | 79  | 1.1      | 44  | 0.6      | 24  | 0.3 |
| AAPX015C | G FX      | ½"   | 20                  | 1.2                | 72   | 42                  | P015AA | 1                                       | 80  | 1.2      | 51  | 0.7      | 27  | 0.4      | 12  | 0.2 |
| AAPX020C | G FX      | ½"   | 30                  | 1.8                | 108  | 64                  | P020AA | 1                                       | 122 | 1.8      | 80  | 1.2      | 41  | 0.6      | 18  | 0.3 |
| AAPX020D | G FX      | ¾"   | 30                  | 1.8                | 108  | 64                  | P020AA | 1                                       | 100 | 1.5      | 60  | 0.9      | 37  | 0.5      | 24  | 0.3 |
| AAPX025D | G FX      | ¾"   | 60                  | 3.6                | 216  | 127                 | P025AA | 1                                       | 86  | 1.2      | 57  | 0.8      | 33  | 0.5      | 10  | 0.1 |
| AAPX025E | G FX      | 1"   | 60                  | 3.6                | 216  | 127                 | P025AA | 1                                       | 66  | 1.0      | 45  | 0.7      | 25  | 0.4      | 10  | 0.1 |
| AAPX030E | G FX      | 1"   | 110                 | 6.6                | 396  | 233                 | P030AA | 1                                       | 122 | 1.8      | 82  | 1.2      | 42  | 0.6      | 11  | 0.2 |
| AAPX030G | G FX      | 1 ½" | 110                 | 6.6                | 396  | 233                 | P030AA | 1                                       | 104 | 1.5      | 55  | 0.8      | 30  | 0.4      | 10  | 0.1 |
| AAPX035G | G FX      | 1 ½" | 160                 | 9.6                | 576  | 339                 | P035AA | 1                                       | 75  | 1.1      | 45  | 0.7      | 20  | 0.3      | 5   | 0.1 |
| AAPX040H | G FX      | 2"   | 220                 | 13.2               | 792  | 466                 | P040AA | 1                                       | 90  | 1.3      | 60  | 0.9      | 40  | 0.6      | 20  | 0.3 |
| AAPX045H | G FX      | 2"   | 330                 | 19.8               | 1188 | 699                 | P045AA | 1                                       | 108 | 1.6      | 71  | 1.0      | 35  | 0.5      | 12  | 0.2 |
| AAPX045I | G FX      | 2 ½" | 330                 | 19.8               | 1188 | 699                 | P045AA | 1                                       | 108 | 1.6      | 70  | 1.0      | 32  | 0.5      | 15  | 0.2 |
| AAPX050I | G FX      | 2 ½" | 430                 | 25.9               | 1548 | 911                 | P050AA | 1                                       | 90  | 1.3      | 66  | 1.0      | 43  | 0.6      | 18  | 0.3 |
| AAPX055I | G FX      | 2 ½" | 620                 | 37.3               | 2232 | 1314                | P055AA | 1                                       | 119 | 1.7      | 78  | 1.1      | 44  | 0.6      | 21  | 0.3 |
| AAPX055J | G FX      | 3"   | 620                 | 37.3               | 2232 | 1314                | P055AA | 1                                       | 104 | 1.5      | 52  | 0.8      | 25  | 0.4      | 17  | 0.2 |

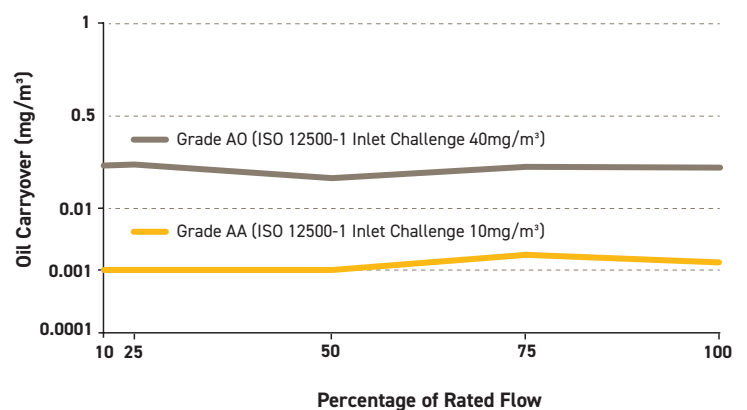
Select **G** for BSPP Threads / Select **N** for NPT Threads

When selecting a coalescing filter for pressures above 16 bar g (232 psi g), use manual drain version and fit an external automatic drain.

## Filtration Tested In Accordance With

| Filtration Grade                         | AO with float drain                                     | AA with float drain                                     |
|--|---|---|
| Filter Type                              | Coalescing  | Coalescing  |
| Test Methods Used                        | ISO 8573-2:2018<br>ISO 8573-4: 2019<br>ISO 12500-1:2007 | ISO 8573-2:2018<br>ISO 8573-4: 2019<br>ISO 12500-1:2007 |
| ISO12500-1 Inlet Challenge Concentration | 40 mg of oil aerosol per cubic metre of compressed air  | 10 mg of oil aerosol per cubic metre of compressed air  |

## OIL-X Grade AO & AA Oil Carryover versus Flow



# Grade AO General Purpose Dry Particulate Filter

## Filtration Performance

| Filtration Grade | Filter Type     | Particle Reduction (inc water & oil aerosols) | Max Remaining Oil Content at 21°C (70°F) | Filtration Efficiency | Change Element Every | Precede with Filtration Grade |
|------------------|-----------------|---|--|-----------------------|----------------------|-------------------------------|
| AO               | Dry Particulate | Down to 1 micron                              | Not Applicable                           | 99.925%               | 12 months            | Not Applicable                |

## Technical Data

| Filtration Grade | Filter Models                | Min Operating Pressure |       | Max Operating Pressure |       | Min Operating Temperature |    | Max Operating Temperature |     |
|------------------|------------------------------|------------------------|-------|------------------------|-------|---------------------------|----|---------------------------|-----|
|                  |                              | bar g                  | psi g | bar g                  | psi g | °C                        | °F | °C                        | °F  |
| AO               | PX010 - PX055 (Float Drain)  | 1.5                    | 22    | 16                     | 232   | 2                         | 35 | 65                        | 149 |
| AO               | PX010 - PX055 (Manual Drain) | 1                      | 15    | 20                     | 290   | 2                         | 35 | 80                        | 176 |

**Flow Rates** Stated flows are for operation at 7 bar (g) (102 psi g) with reference to 20°C, 1 bar (a), 0% relative water vapour pressure.

| Model   | Pipe Size | L/S | m³/min | m³/hr | cfm  | Replacement Element | No. | Initial Dry Differential Pressure |     |          |     |          |     |          |     |
|---|-----------|-----|--------|-------|------|---------------------|-----|-----------------------------------|-----|----------|-----|----------|-----|----------|-----|
|   |           |     |        |       |      |                     |     | 100% Flow                         |     | 75% Flow |     | 50% Flow |     | 25% Flow |     |
|   |           |     |        |       |      |                     |     | mbar                              | psi | mbar     | psi | mbar     | psi | mbar     | psi |
| AOPX010A <input type="checkbox"/> G <input type="checkbox"/> MX | ½"        | 10  | 0.6    | 36    | 21   | P010AO              | 1   | 61                                | 0.9 | 40       | 0.6 | 20       | 0.3 | 9        | 0.1 |
| AOPX010B <input type="checkbox"/> G <input type="checkbox"/> MX | ¾"        | 10  | 0.6    | 36    | 21   | P010AO              | 1   | 63                                | 0.9 | 43       | 0.6 | 22       | 0.3 | 11       | 0.2 |
| AOPX010C <input type="checkbox"/> G <input type="checkbox"/> MX | ½"        | 10  | 0.6    | 36    | 21   | P010AO              | 1   | 58                                | 0.8 | 35       | 0.5 | 20       | 0.3 | 11       | 0.2 |
| AOPX015B <input type="checkbox"/> G <input type="checkbox"/> MX | ¾"        | 20  | 1.2    | 72    | 42   | P015AO              | 1   | 60                                | 0.9 | 38       | 0.6 | 23       | 0.3 | 12       | 0.2 |
| AOPX015C <input type="checkbox"/> G <input type="checkbox"/> MX | ½"        | 20  | 1.2    | 72    | 42   | P015AO              | 1   | 27                                | 0.4 | 15       | 0.2 | 10       | 0.1 | 5        | 0.1 |
| AOPX020C <input type="checkbox"/> G <input type="checkbox"/> MX | ½"        | 30  | 1.8    | 108   | 64   | P020AO              | 1   | 58                                | 0.8 | 35       | 0.5 | 15       | 0.2 | 8        | 0.1 |
| AOPX020D <input type="checkbox"/> G <input type="checkbox"/> MX | ¾"        | 30  | 1.8    | 108   | 64   | P020AO              | 1   | 38                                | 0.6 | 20       | 0.3 | 10       | 0.1 | 5        | 0.1 |
| AOPX025D <input type="checkbox"/> G <input type="checkbox"/> MX | ¾"        | 60  | 3.6    | 216   | 127  | P025AO              | 1   | 54                                | 0.8 | 39       | 0.6 | 21       | 0.3 | 8        | 0.1 |
| AOPX025E <input type="checkbox"/> G <input type="checkbox"/> MX | 1"        | 60  | 3.6    | 216   | 127  | P025AO              | 1   | 22                                | 0.3 | 15       | 0.2 | 9        | 0.1 | 5        | 0.1 |
| AOPX030E <input type="checkbox"/> G <input type="checkbox"/> MX | 1"        | 110 | 6.6    | 396   | 233  | P030AO              | 1   | 56                                | 0.8 | 38       | 0.6 | 20       | 0.3 | 7        | 0.1 |
| AOPX030G <input type="checkbox"/> G <input type="checkbox"/> MX | 1 ½"      | 110 | 6.6    | 396   | 233  | P030AO              | 1   | 42                                | 0.6 | 26       | 0.4 | 12       | 0.2 | 6        | 0.1 |
| AOPX035G <input type="checkbox"/> G <input type="checkbox"/> MX | 1 ½"      | 160 | 9.6    | 576   | 339  | P035AO              | 1   | 19                                | 0.3 | 9        | 0.1 | 5        | 0.1 | 2        | 0.0 |
| AOPX040H <input type="checkbox"/> G <input type="checkbox"/> MX | 2"        | 220 | 13.2   | 792   | 466  | P040AO              | 1   | 31                                | 0.4 | 19       | 0.3 | 16       | 0.2 | 7        | 0.1 |
| AOPX045H <input type="checkbox"/> G <input type="checkbox"/> MX | 2"        | 330 | 19.8   | 1188  | 699  | P045AO              | 1   | 51                                | 0.7 | 36       | 0.5 | 18       | 0.3 | 8        | 0.1 |
| AOPX045I <input type="checkbox"/> G <input type="checkbox"/> MX | 2 ½"      | 330 | 19.8   | 1188  | 699  | P045AO              | 1   | 40                                | 0.6 | 27       | 0.4 | 12       | 0.2 | 6        | 0.1 |
| AOPX050I <input type="checkbox"/> G <input type="checkbox"/> MX | 2 ½"      | 430 | 25.9   | 1548  | 911  | P050AO              | 1   | 36                                | 0.5 | 23       | 0.3 | 16       | 0.2 | 7        | 0.1 |
| AOPX055I <input type="checkbox"/> G <input type="checkbox"/> MX | 2 ½"      | 620 | 37.3   | 2232  | 1314 | P055AO              | 1   | 38                                | 0.6 | 25       | 0.4 | 17       | 0.2 | 10       | 0.1 |
| AOPX055J <input type="checkbox"/> G <input type="checkbox"/> MX | 3"        | 620 | 37.3   | 2232  | 1314 | P055AO              | 1   | 51                                | 0.7 | 32       | 0.5 | 17       | 0.2 | 8        | 0.1 |

Select  G for BSPP Threads / Select  N for NPT Threads

When selecting a coalescing filter for pressures above 16 bar g (232 psi g), use manual drain version and fit an external automatic drain.

## Product Selection & Correction Factors

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

1. Obtain the minimum operating (inlet) pressure and maximum compressed air flow rate at the inlet of the filter.
2. Select the correction factor for minimum inlet pressure from the CFMIP table (always round down e.g. for 5.3 bar, use 5 bar correction factor)
3. Calculate the minimum filtration capacity. Minimum Filtration Capacity = Compressed Air Flow Rate x CFMIP
4. Using the minimum filtration capacity, select a filter model from the flow rate tables above (filter selected must have a flow rate equal to or greater than the minimum filtration capacity).

## CFMIP - Correction Factor Minimum Inlet Pressure

| Minimum Inlet Pressure   | bar g | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                          | psi g | 15   | 29   | 44   | 58   | 73   | 87   | 100  | 116  | 131  | 145  | 160  | 174  | 189  | 203  | 218  | 232  | 248  | 263  | 277  | 290  |
| <b>Correction Factor</b> |       | 2.65 | 1.87 | 1.53 | 1.32 | 1.18 | 1.08 | 1.00 | 0.94 | 0.88 | 0.84 | 0.80 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.61 | 0.59 |

# Grade AA High Efficiency Dry Particulate Filter

## Filtration Performance

| Filtration Grade | Filter Type    | Particle Reduction (inc water & oil aerosols) | Max Remaining Oil Content at 21°C (70°F) | Filtration Efficiency | Change Element Every | Precede with Filtration Grade |
|------------------|----------------|---|--|-----------------------|----------------------|-------------------------------|
| AA               | Not Applicable | Down to 0.01 micron                           | Not Applicable                           | 99.9999%              | 12 months            | AO Dry Particulate            |

## Technical Data

| Filtration Grade | Filter Models                | Min Operating Pressure |       | Max Operating Pressure |       | Min Operating Temperature |    | Max Operating Temperature |     |
|------------------|------------------------------|------------------------|-------|------------------------|-------|---------------------------|----|---------------------------|-----|
|                  |                              | bar g                  | psi g | bar g                  | psi g | °C                        | °F | °C                        | °F  |
| AA               | PX010 - PX055 (Float Drain)  | 1.5                    | 22    | 16                     | 232   | 2                         | 35 | 65                        | 149 |
| AA               | PX010 - PX055 (Manual Drain) | 1                      | 15    | 20                     | 290   | 2                         | 35 | 80                        | 176 |

**Flow Rates** Stated flows are for operation at 7 bar (g) (102 psi g) with reference to 20°C, 1 bar (a), 0% relative water vapour pressure.

| Model    | Pipe Size | L/S | m³/min | m³/hr | cfm  | Replacement Element | No.    | Initial Dry Differential Pressure |     |          |     |          |     |          |     |     |
|----------|-----------|-----|--------|-------|------|---------------------|--------|-----------------------------------|-----|----------|-----|----------|-----|----------|-----|-----|
|          |           |     |        |       |      |                     |        | 100% Flow                         |     | 75% Flow |     | 50% Flow |     | 25% Flow |     |     |
|          |           |     |        |       |      |                     |        | mbar                              | psi | mbar     | psi | mbar     | psi | mbar     | psi |     |
| AAPX010A | G MX      | ½"  | 10     | 0.6   | 36   | 21                  | P010AA | 1                                 | 64  | 0.9      | 36  | 0.5      | 21  | 0.3      | 10  | 0.1 |
| AAPX010B | G MX      | ¾"  | 10     | 0.6   | 36   | 21                  | P010AA | 1                                 | 65  | 0.9      | 38  | 0.6      | 22  | 0.3      | 11  | 0.2 |
| AAPX010C | G MX      | ½"  | 10     | 0.6   | 36   | 21                  | P010AA | 1                                 | 63  | 0.9      | 39  | 0.6      | 20  | 0.3      | 10  | 0.1 |
| AAPX015B | G MX      | ¾"  | 20     | 1.2   | 72   | 42                  | P015AA | 1                                 | 66  | 1.0      | 41  | 0.6      | 21  | 0.3      | 12  | 0.2 |
| AAPX015C | G MX      | ½"  | 20     | 1.2   | 72   | 42                  | P015AA | 1                                 | 22  | 0.3      | 51  | 0.7      | 27  | 0.4      | 11  | 0.2 |
| AAPX020C | G MX      | ½"  | 30     | 1.8   | 108  | 64                  | P020AA | 1                                 | 64  | 0.9      | 41  | 0.6      | 18  | 0.3      | 8   | 0.1 |
| AAPX020D | G MX      | ¾"  | 30     | 1.8   | 108  | 64                  | P020AA | 1                                 | 42  | 0.6      | 22  | 0.3      | 10  | 0.1      | 5   | 0.1 |
| AAPX025D | G MX      | ¾"  | 60     | 3.6   | 216  | 127                 | P025AA | 1                                 | 27  | 0.4      | 19  | 0.3      | 10  | 0.1      | 4   | 0.1 |
| AAPX025E | G MX      | 1"  | 60     | 3.6   | 216  | 127                 | P025AA | 1                                 | 29  | 0.4      | 19  | 0.3      | 10  | 0.1      | 5   | 0.1 |
| AAPX030E | G MX      | 1"  | 110    | 6.6   | 396  | 233                 | P030AA | 1                                 | 62  | 0.9      | 49  | 0.7      | 25  | 0.4      | 8   | 0.1 |
| AAPX030G | G MX      | 1½" | 110    | 6.6   | 396  | 233                 | P030AA | 1                                 | 45  | 0.7      | 27  | 0.4      | 13  | 0.2      | 5   | 0.1 |
| AAPX035G | G MX      | 1½" | 160    | 9.6   | 576  | 339                 | P035AA | 1                                 | 22  | 0.3      | 10  | 0.1      | 5   | 0.1      | 2   | 0.0 |
| AAPX040H | G MX      | 2"  | 220    | 13.2  | 792  | 466                 | P040AA | 1                                 | 36  | 0.5      | 24  | 0.3      | 15  | 0.2      | 8   | 0.1 |
| AAPX045H | G MX      | 2"  | 330    | 19.8  | 1188 | 699                 | P045AA | 1                                 | 47  | 0.7      | 25  | 0.4      | 18  | 0.3      | 15  | 0.2 |
| AAPX045I | G MX      | 2½" | 330    | 19.8  | 1188 | 699                 | P045AA | 1                                 | 47  | 0.7      | 30  | 0.4      | 17  | 0.2      | 8   | 0.1 |
| AAPX050I | G MX      | 2½" | 430    | 25.9  | 1548 | 911                 | P050AA | 1                                 | 40  | 0.6      | 27  | 0.4      | 16  | 0.2      | 8   | 0.1 |
| AAPX055I | G MX      | 2½" | 620    | 37.3  | 2232 | 1314                | P055AA | 1                                 | 45  | 0.7      | 27  | 0.4      | 17  | 0.2      | 10  | 0.1 |
| AAPX055J | G MX      | 3"  | 620    | 37.3  | 2232 | 1314                | P055AA | 1                                 | 54  | 0.8      | 35  | 0.5      | 17  | 0.2      | 9   | 0.1 |

Select **G** for BSPP Threads / Select **N** for NPT Threads

When selecting a coalescing filter for pressures above 16 bar g (232 psi g), use manual drain version and fit an external automatic drain.

## Filtration Tested In Accordance With

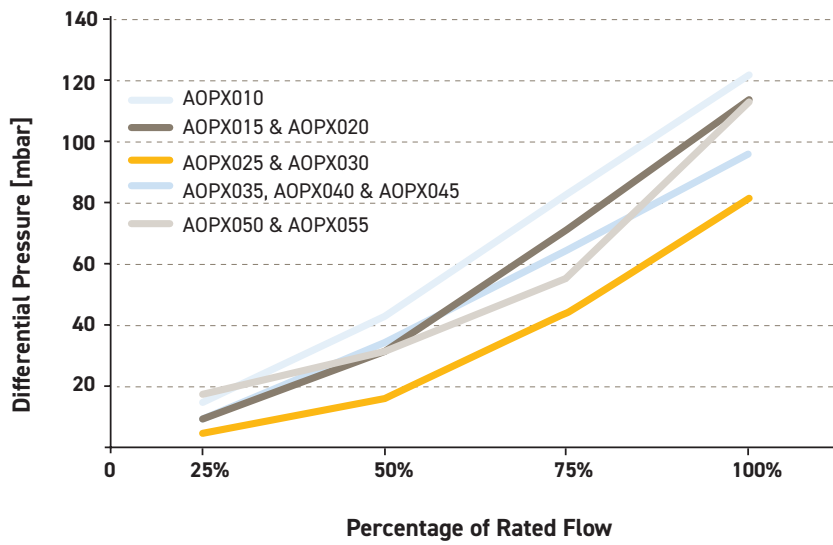
| Filtration Grade                         | AO with manual drain | AA with manual drain |
|--|----------------------|----------------------|
| Filter Type                              | Dry Particulate      | Dry Particulate      |
| Test Methods Used                        | ISO8573-4            | ISO8573-4            |
| ISO12500-1 Inlet Challenge Concentration | Not Applicable       | Not Applicable       |

## ISO8573-1:2010 Classifications for OIL-X Grades

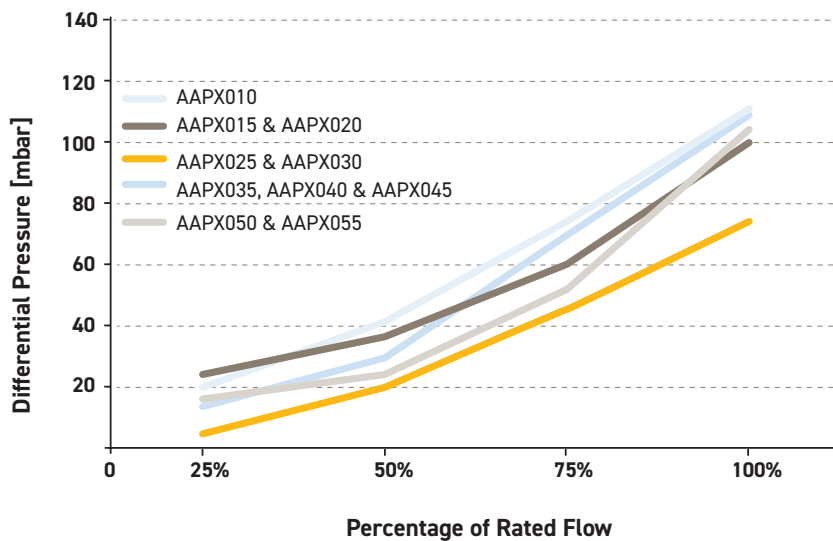
| ISO 8573-1:2010 CLASS | Solid Particulate    |                              | Water                      | Oil  |
|-----------------------|----------------------|------------------------------|----------------------------|--|
|                       | Wet Particulate      | Dry Particulate              | Vapour                     |  |
| 0                     | —                    | —                            | —                          | OIL-X Grades AO + AA + OVR                               |
| 1                     | OIL-X Grades AO + AA | OIL-X Grades AO (M) + AA (M) | Dryer sized for <-70°C PDP | OIL-X Grades AO + AA + OVR<br>OIL-X Grades AO + AA + ACS |
| 2                     | OIL-X Grade AO       | OIL-X Grade AO (M)           | Dryer sized for <-40°C PDP | OIL-X Grades AO + AA                                     |
| 3                     | OIL-X Grade AO       | OIL-X Grade AO (M)           | Dryer sized for <-20°C PDP | OIL-X Grades AO  |
| 4                     | OIL-X Grade AO       | OIL-X Grade AO (M)           | Dryer sized for <+3°C PDP  | OIL-X Grades AO  |
| 5                     | OIL-X Grade AO       | OIL-X Grade AO (M)           | Dryer sized for <+7°C PDP  | —  |
| 6                     | —                    | —                            | Dryer sized for <+10°C PDP | —  |

# OIL-X Grades AO & AA - Differential Pressure Curves

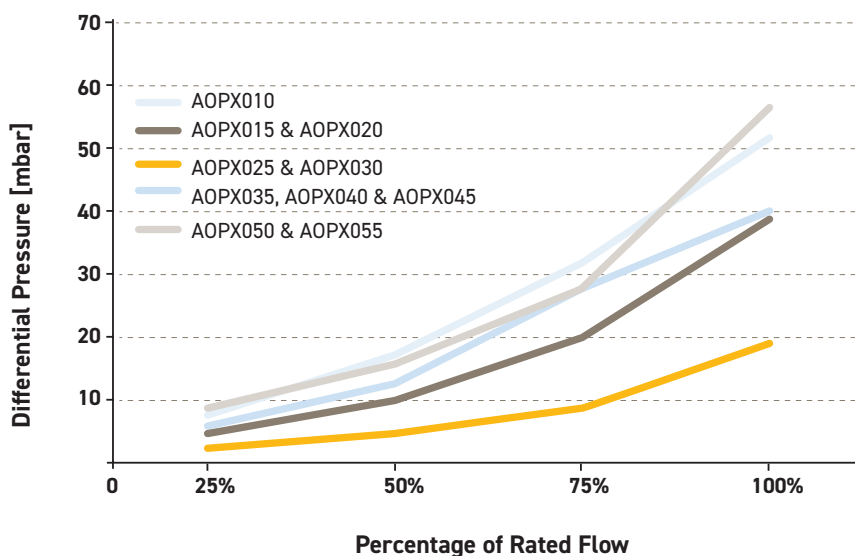
**OIL-X Grade AO Coalescing Filter**  
Initial Saturated Differential Pressure (25% - 100% Rated Flow)  
ISO12500-1 Challenge - 40mg/m<sup>3</sup>



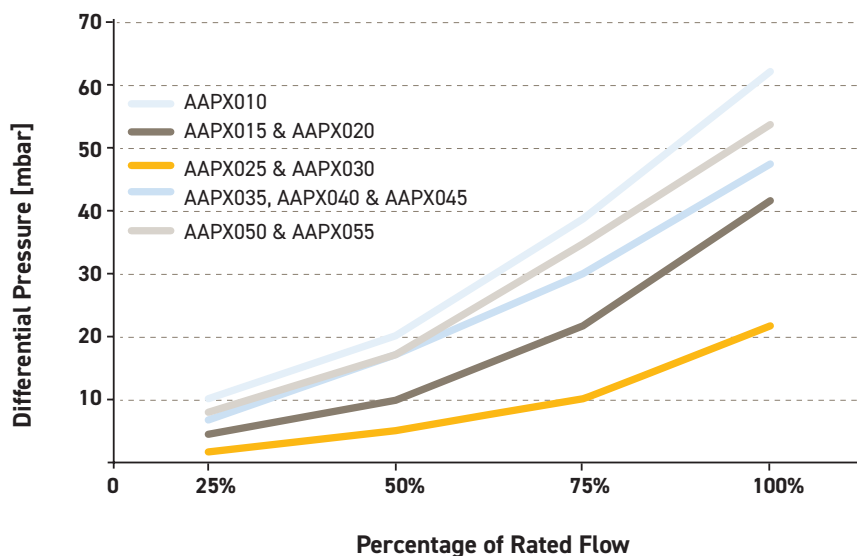
**OIL-X Grade AA Coalescing Filter**  
Initial Saturated Differential Pressure (25% - 100% Rated Flow)  
ISO12500-1 Challenge - 10mg/m<sup>3</sup>



**OIL-X Grade AO Dry Particulate Filter**  
Initial Dry Differential Pressure (25% - 100% Rated Flow)

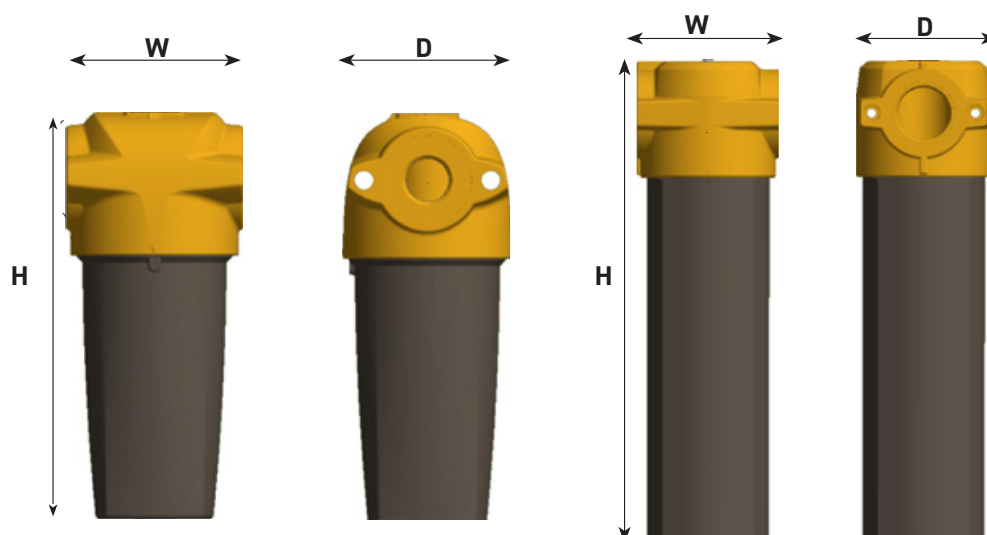


## OIL-X Grade AA Dry Particulate Filter Initial Dry Differential Pressure (25% - 100% Rated Flow)



### Weight & Dimensions

| Model | Height (H) |       | Width (W) |      | Depth (D) |      | Weight |       |
|-------|------------|-------|-----------|------|-----------|------|--------|-------|
|       | mm         | ins   | mm        | ins  | mm        | ins  | kg     | lbs   |
| 010   | 180        | 7.09  | 76        | 2.99 | 65        | 2.56 | 0.81   | 1.78  |
| 015   | 238        | 9.37  | 89        | 3.50 | 84        | 3.31 | 1.41   | 3.10  |
| 020   | 238        | 9.37  | 89        | 3.50 | 84        | 3.31 | 1.41   | 3.10  |
| 025   | 277        | 10.91 | 120       | 4.72 | 115       | 4.53 | 2.66   | 5.86  |
| 030   | 367        | 14.45 | 120       | 4.72 | 115       | 4.53 | 3.01   | 6.63  |
| 035   | 440        | 17.32 | 164       | 6.46 | 157       | 6.18 | 6.87   | 15.14 |
| 040   | 532        | 20.94 | 164       | 6.46 | 157       | 6.18 | 7.18   | 15.82 |
| 045   | 532        | 20.94 | 164       | 6.46 | 157       | 6.18 | 7.18   | 15.82 |
| 050   | 654        | 25.75 | 192       | 7.56 | 183       | 7.20 | 10.18  | 22.43 |
| 055   | 844        | 33.23 | 192       | 7.56 | 183       | 7.20 | 15.78  | 34.78 |

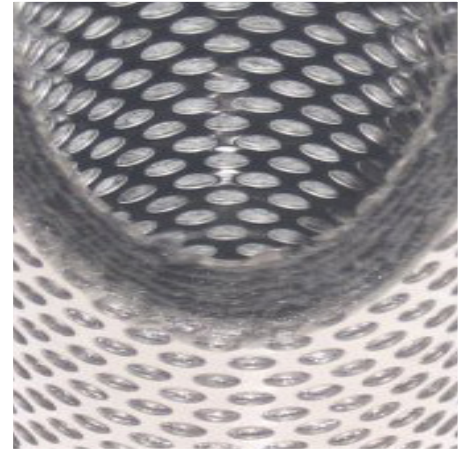


### Quality Assurance / IP Rating / Pressure Vessel Approvals

|   |   |
|---|---|
| <b>Development / Manufacture</b>                              | ISO 9001 / ISO 14001  |
| <b>Ingress Protection Rating</b>                              | Not Applicable  |
| <b>EU</b>   | Pressure vessel approved for fluid group 2 in accordance with the Pressure Equipment Directive 2014/68/EU |
| <b>USA</b>  | Approval to ASME VIII Div. 1 not required   |
| <b>AUS</b>  | Approval to AS1210 not required   |
| <b>RUSSIA</b>   | TR (formerly GOST-R)  |
| For use with Compressed Air, N <sub>2</sub> & CO <sub>2</sub> |   |

# OIL-X Die-cast Aluminium Compressed Air Filters

Grade ACS In-line, Point of Use  
Oil Vapour Reduction Filters (1/4" ~ 3")



## In-line, Point of Use Oil Vapour Reduction Filters

Oil vapour is present in all compressed air systems, even those using oil-free compressors. Left untreated, oil vapour can cool, condense and form liquid and aerosols of oil in the compressed air piping or at critical applications.

Whilst many systems are protected with plant scale oil vapour reduction systems in the compressor room such as the Parker OIL-X Grade OVR, years of contamination in the distribution piping from untreated compressed air can still lead to the presence of oil vapour, liquid and aerosol oil at the point of use.

Whilst additional Parker OIL-X Grade OVR can be installed at critical points of use to treat contamination in the distribution piping, these may be oversized for some smaller, point of use applications, therefore the Parker OIL-X Grade ACS filters can be used.

Using the same filter housings as their coalescing and dry particulate counterparts in the OIL-X range, Grade ACS filter elements differ in that they utilise a deep wrapped bed of carbon cloth to adsorb oil vapour.

It is important to note, in-line adsorption filter elements have a different life span compared to coalescing and dry particulate filters and require more frequent element changes. Should a 12 month service period be required, Parker OIL-X Grade OVR oil vapour reduction filters are recommended.



## Advantages

- Delivered air quality to ISO8573-1 Class 1 for total oil when used in conjunction with Parker OIL-X Grade AO & AA coalescing filters
- Tested in accordance with ISO8573-5
- 3rd party performance validated by Lloyds Register
- Designed for point of use installation - for plant scale protection or long adsorbent life use OIL-X Grade OVR
- Housing Guarantee - 10 year guarantee on filter housings



ENGINEERING YOUR SUCCESS.

# Grade ACS Point of Use Oil Vapour Reduction Filters

## Filtration Performance

| Filtration Grade | Filter Type          | Particle Reduction (inc water & oil aerosols) | Max Remaining Oil Content at 21°C (70°F) | Filtration Efficiency | Change Element Every        | Precede with Filtration Grade |
|------------------|----------------------|---|--|-----------------------|-----------------------------|-------------------------------|
| ACS              | Oil Vapour Reduction | N/A   | 0.003 mg/m <sup>3</sup><br>0.003 ppm(w)  | N/A                   | When oil vapour is detected | A0+AA                         |

## Technical Data

| Filtration Grade | Filter Models                | Min Operating Pressure |       | Max Operating Pressure |       | Min Operating Temperature |    | Max Operating Temperature |     |
|------------------|------------------------------|------------------------|-------|------------------------|-------|---------------------------|----|---------------------------|-----|
|                  |                              | bar g                  | psi g | bar g                  | psi g | °C                        | °F | °C                        | °F  |
| ACS              | PX010 - PX055 (Manual Drain) | 1                      | 15    | 20                     | 290   | 2                         | 35 | 50                        | 122 |

**Flow Rates** Stated flows are for operation at 7 bar (g) (102 psi g) with reference to 20°C, 1 bar (a), 0% relative water vapour pressure.

| Model                                 | Pipe Size | L/S | m <sup>3</sup> /min | m <sup>3</sup> /hr | cfm  | Replacement Element | No. | Initial Dry Differential Pressure |     |          |     |          |     |          |     |
|---------------------------------------|-----------|-----|---------------------|--------------------|------|---------------------|-----|-----------------------------------|-----|----------|-----|----------|-----|----------|-----|
|                                       |           |     |                     |                    |      |                     |     | 100% Flow                         |     | 75% Flow |     | 50% Flow |     | 25% Flow |     |
|                                       |           |     |                     |                    |      |                     |     | mbar                              | psi | mbar     | psi | mbar     | psi | mbar     | psi |
| ACSPX010A <input type="checkbox"/> MX | ¼"        | 10  | 0.6                 | 36                 | 21   | P010ACS             | 1   | 61                                | 0.9 | 35       | 0.5 | 15       | 0.2 | 9        | 0.1 |
| ACSPX010B <input type="checkbox"/> MX | ⅜"        | 10  | 0.6                 | 36                 | 21   | P010ACS             | 1   | 53                                | 0.8 | 32       | 0.5 | 19       | 0.3 | 8        | 0.1 |
| ACSPX010C <input type="checkbox"/> MX | ½"        | 10  | 0.6                 | 36                 | 21   | P010ACS             | 1   | 55                                | 0.8 | 31       | 0.4 | 18       | 0.3 | 7        | 0.1 |
| ACSPX015B <input type="checkbox"/> MX | ⅜"        | 20  | 1.2                 | 72                 | 42   | P015ACS             | 1   | 65                                | 0.9 | 33       | 0.5 | 13       | 0.2 | 5        | 0.1 |
| ACSPX015C <input type="checkbox"/> MX | ½"        | 20  | 1.2                 | 72                 | 42   | P015ACS             | 1   | 46                                | 0.7 | 37       | 0.5 | 20       | 0.3 | 9        | 0.1 |
| ACSPX020C <input type="checkbox"/> MX | ½"        | 30  | 1.8                 | 108                | 64   | P020ACS             | 1   | 77                                | 1.1 | 35       | 0.5 | 15       | 0.2 | 7        | 0.1 |
| ACSPX020D <input type="checkbox"/> MX | ¾"        | 30  | 1.8                 | 108                | 64   | P020ACS             | 1   | 79                                | 1.1 | 37       | 0.5 | 17       | 0.2 | 8        | 0.1 |
| ACSPX025D <input type="checkbox"/> MX | ¾"        | 60  | 3.6                 | 216                | 127  | P025ACS             | 1   | 66                                | 1.0 | 34       | 0.5 | 14       | 0.2 | 4        | 0.1 |
| ACSPX025E <input type="checkbox"/> MX | 1"        | 60  | 3.6                 | 216                | 127  | P025ACS             | 1   | 46                                | 0.7 | 24       | 0.3 | 13       | 0.2 | 4        | 0.1 |
| ACSPX030E <input type="checkbox"/> MX | 1"        | 110 | 6.6                 | 396                | 233  | P030ACS             | 1   | 57                                | 0.8 | 27       | 0.4 | 16       | 0.2 | 8        | 0.1 |
| ACSPX030G <input type="checkbox"/> MX | 1 ½"      | 110 | 6.6                 | 396                | 233  | P030ACS             | 1   | 65                                | 0.9 | 35       | 0.5 | 15       | 0.2 | 5        | 0.1 |
| ACSPX035G <input type="checkbox"/> MX | 1 ½"      | 160 | 9.6                 | 576                | 339  | P035ACS             | 1   | 26                                | 0.4 | 12       | 0.2 | 8        | 0.1 | 4        | 0.1 |
| ACSPX040H <input type="checkbox"/> MX | 2"        | 220 | 13.2                | 792                | 466  | P040ACS             | 1   | 36                                | 0.5 | 23       | 0.3 | 13       | 0.2 | 4        | 0.1 |
| ACSPX045H <input type="checkbox"/> MX | 2"        | 330 | 19.8                | 1188               | 699  | P045ACS             | 1   | 49                                | 0.7 | 34       | 0.5 | 17       | 0.2 | 6        | 0.1 |
| ACSPX045I <input type="checkbox"/> MX | 2 ½"      | 330 | 19.8                | 1188               | 699  | P045ACS             | 1   | 68                                | 1.0 | 40       | 0.6 | 20       | 0.3 | 6        | 0.1 |
| ACSPX050I <input type="checkbox"/> MX | 2 ½"      | 430 | 25.9                | 1548               | 911  | P050ACS             | 1   | 50                                | 0.7 | 30       | 0.4 | 15       | 0.2 | 5        | 0.1 |
| ACSPX055I <input type="checkbox"/> MX | 2 ½"      | 620 | 37.3                | 2232               | 1314 | P055ACS             | 1   | 61                                | 0.9 | 36       | 0.5 | 16       | 0.2 | 12       | 0.2 |
| ACSPX055J <input type="checkbox"/> MX | 3"        | 620 | 37.3                | 2232               | 1314 | P055ACS             | 1   | 50                                | 0.7 | 35       | 0.5 | 17       | 0.2 | 5        | 0.1 |

Select  for BSPP Threads / Select  for NPT Threads

When selecting a coalescing filter for pressures above 16 bar g (232 psi g), use manual drain version and fit an external automatic drain.

## Product Selection & Correction Factors

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

1. Obtain the minimum operating (inlet) pressure and maximum compressed air flow rate at the inlet of the filter.
2. Select the correction factor for minimum inlet pressure from the CFMIP table (always round down e.g. for 5.3 bar, use 5 bar correction factor)
3. Calculate the minimum filtration capacity. Minimum Filtration Capacity = Compressed Air Flow Rate x CFMIP
4. Using the minimum filtration capacity, select a filter model from the flow rate tables above (filter selected must have a flow rate equal to or greater than the minimum filtration capacity).

## CFMIP - Correction Factor Minimum Inlet Pressure

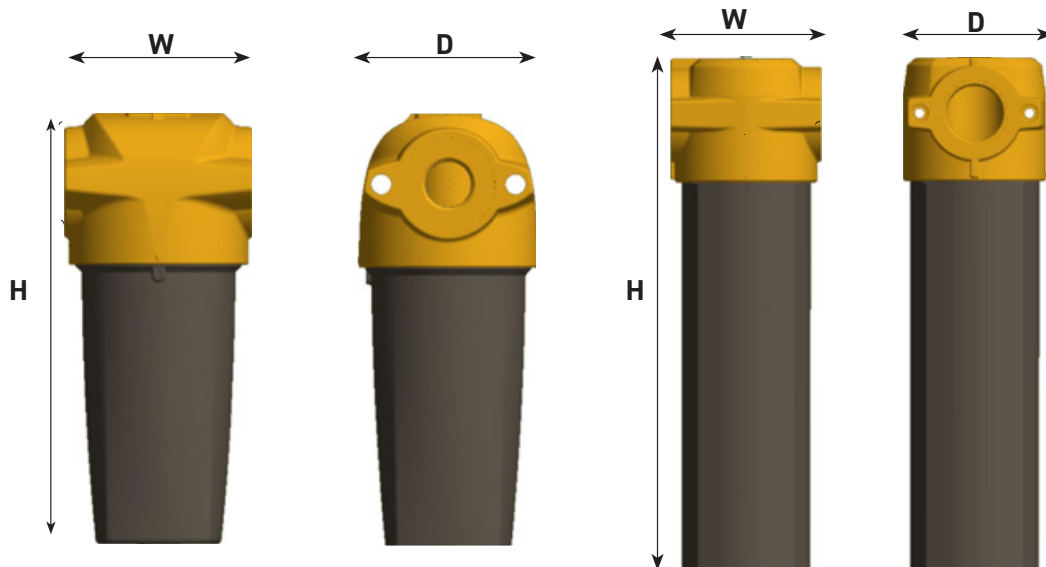
| Minimum Inlet Pressure   | bar g | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|--------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                          | psi g | 15   | 29   | 44   | 58   | 73   | 87   | 100  | 116  | 131  | 145  | 160  | 174  | 189  | 203  | 218  | 232  | 248  | 263  | 277  | 290  |
| <b>Correction Factor</b> |       | 2.65 | 1.87 | 1.53 | 1.32 | 1.18 | 1.08 | 1.00 | 0.94 | 0.88 | 0.84 | 0.80 | 0.76 | 0.73 | 0.71 | 0.68 | 0.66 | 0.64 | 0.62 | 0.61 | 0.59 |

### Filtration Tested In Accordance With

|  |  |
|--|--|
| <b>Filtration Grade</b>                        | <b>ACS</b>   |
| <b>Filter Type</b>                             | Oil Vapour Reduction                                     |
| <b>Test Methods Used</b>                       | ISO8573-5  |
| <b>ISO8573-5 Inlet Challenge Concentration</b> | 0.018 mg of oil vapour per cubic metre of compressed air |

### Weight & Dimensions

| Model | Height (H) |       | Width (W) |      | Depth (D) |      | Weight |       |
|-------|------------|-------|-----------|------|-----------|------|--------|-------|
|       | mm         | ins   | mm        | ins  | mm        | ins  | kg     | lbs   |
| 010   | 180        | 7.09  | 76        | 2.99 | 65        | 2.56 | 0.81   | 1.78  |
| 015   | 238        | 9.37  | 89        | 3.50 | 84        | 3.31 | 1.41   | 3.10  |
| 020   | 238        | 9.37  | 89        | 3.50 | 84        | 3.31 | 1.41   | 3.10  |
| 025   | 277        | 10.91 | 120       | 4.72 | 115       | 4.53 | 2.66   | 5.86  |
| 030   | 367        | 14.45 | 120       | 4.72 | 115       | 4.53 | 3.01   | 6.63  |
| 035   | 440        | 17.32 | 164       | 6.46 | 157       | 6.18 | 6.87   | 15.14 |
| 040   | 532        | 20.94 | 164       | 6.46 | 157       | 6.18 | 7.18   | 15.82 |
| 045   | 532        | 20.94 | 164       | 6.46 | 157       | 6.18 | 7.18   | 15.82 |
| 050   | 654        | 25.75 | 192       | 7.56 | 183       | 7.20 | 10.18  | 22.43 |
| 055   | 844        | 33.23 | 192       | 7.56 | 183       | 7.20 | 15.78  | 34.78 |



### Quality Assurance / IP Rating / Pressure Vessel Approvals

|   |   |
|---|---|
| <b>Development / Manufacture</b>                              | ISO 9001 / ISO 14001  |
| <b>Ingress Protection Rating</b>                              | Not Applicable  |
| <b>EU</b>   | Pressure vessel approved for fluid group 2 in accordance with the Pressure Equipment Directive 2014/68/EU |
| <b>USA</b>  | Approval to ASME VIII Div. 1 not required   |
| <b>AUS</b>  | Approval to AS1210 not required   |
| <b>RUSSIA</b>   | TR (formerly GOST-R)  |
| For use with Compressed Air, N <sub>2</sub> & CO <sub>2</sub> |   |

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Tel: +48 (0)22 573 24 00

### CH – Switzerland, Etoy

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Tel: +34 902 330 001

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### EMEA Product Information Centre

Free phone: 00 800 27 27 5374

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### US Product Information Centre

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