Watts Air Preparation Systems & Accessories

QUBE, General Line, QIX, Miniature, Stainless, Injection Lubricators & Accessories

Catalog 0305-2
WARNING

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<table>
<thead>
<tr>
<th>A</th>
<th>QUBE Modular FRL System</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Air Preparation Units</td>
</tr>
<tr>
<td>C</td>
<td>Miniature FRLs</td>
</tr>
<tr>
<td>D</td>
<td>Stainless Steel FRLs</td>
</tr>
<tr>
<td>E</td>
<td>Injection Lubricators</td>
</tr>
<tr>
<td>F</td>
<td>Accessories</td>
</tr>
<tr>
<td>G</td>
<td>Safety Guide, Offer of Sale</td>
</tr>
</tbody>
</table>
CAUTION

Polyurethane bowls, sight glass and sight domes on these units may be attacked by certain chemicals. Never use solvents like carbon tetrachloride, trichlorethylene, acetone, or paint thinner to clean any parts. These elements can cause crazing or failure of the plastic parts. The polyurethane resin parts are compatible with most hydrocarbon based synthetic lubricants but, before using, check with the manufacturer of the lubricant or oil for compatibility with polyurethane resin.

TO CLEAN POLYURETHANE BOWLS USE MILD SOAP AND WATER ONLY!
# Table of Contents

- **QUBE Modular FRL System** .......................................................... A4-A5

- **Filters**
  - F35 ............................................................................................................. A6-A7
  - F75 ............................................................................................................... A8-A9
  - F105 ............................................................................................................. A10-A11
  - F255 ............................................................................................................. A12-A13

- **Coalescing Filters**
  - F31 ............................................................................................................. A14-A15
  - F71 ............................................................................................................... A16-A17
  - F101 ............................................................................................................. A18-A19
  - F251 ............................................................................................................. A20-A21

- **Regulators**
  - R35 ............................................................................................................. A22-A23
  - R75 ............................................................................................................... A24-A25
  - R105 ............................................................................................................. A26-A27
  - R255 ............................................................................................................. A28-A29

- **Lubricators**
  - L35 ............................................................................................................. A30-A31
  - L75 ............................................................................................................... A32-A33
  - L105 ............................................................................................................. A34-A35
  - L255 ............................................................................................................. A36-A37

- **Integral Filter Regulators**
  - B35 ............................................................................................................. A38-A39
  - B75 ............................................................................................................... A40-A41
  - B105 ............................................................................................................. A42-A43
  - B255 ............................................................................................................. A44-A45

- **Combination Units**
  - C35 ............................................................................................................. A46-A47
  - C75 ............................................................................................................... A48-A49
  - C105 ............................................................................................................. A50-A51
  - C255 ............................................................................................................. A52-A54

- **Accessories** .......................................................................................... A55-A57

- **Soft Start Valves** ................................................................................. A58-A63

- **Pressure Switches** .............................................................................. A64-A65

- **Mounting Brackets** .............................................................................. A66
QUBE Connects you to the Most Advanced Modular Air Preparation Equipment. Designed for Total Flexibility, High Performance and Unlimited Expandability.

Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

**Integral Wall Mounting**
System eliminates the need for special brackets. Standard on all series.

**Direct Connect**
All QUBE components connect using standard machine screws and o-rings (included with units). No special inserts required.

**Dirty, wet, contaminated compressed air enters QUBE preparation equipment.**

**Shut Off Valves**

**Particulate Filters**
Deflector plate ensures maximum water removal while particulate element eliminates damaging foreign matter.

**Textured Finish**
All QUBE components are textured to provide superior powder coat adhesion and a durable surface finish.

**End Plates (not shown)**
Mountable to all components. Allow basic component removal without disconnecting pipes.

**Automatic Float Drain**
Optional automatic float drain removes condensate as required. Manual drain standard.
**Features**

*Filtered clean, regulated, non-lubricated branch line.*

**Pressure Switch**
Provides electric signal when set pressure is achieved.

**Differential Pressure Pop Up Indicator**
Standard on 71 and 101 Coalescers.

**Coalescing Filters**
High efficiency .01 micron elements remove damaging oil and water aerosols.

**Direction Plates**
Rotate connecting components 90°.

**Regulators**
Accurate high flow regulators with positive snap lock, push/pull adjusting knobs for easy operation.

**Soft Start / Quick Exhaust Valve**
Combination 3 in 1 valve.
- Solenoid Shut Off Valve
- Autopilot Soft Start Valve
- Quick Exhaust Valve

**Wraparound Sight Gauge Bowl**
All QUBE filters, lubricators, and integrals are available with the Watts Wraparound Sight Gauge Bowl. These unique polyurethane bowls provide the 360° visibility of a plastic bowl while maintaining the high strength and safety features of metal bowls. Transparent polyurethane bowls with guards, and metal bowls, are also available.

**Lubricators**
Provide consistent lubrication under variable flow conditions. Removable adjusting knob renders lubricator tamperproof (standard). QUBE lubricators are fillable under pressure (except 35 series).

**Diverter Blocks**
Provides component manifolding and branch lines.

**Branch Block**
1/8" NPT ports top and bottom.

**Pressure Gauges**

*Filtered clean, regulated, non-lubricated branch line.*

*Filtered clean, regulated air with lubricating oil.*
**F35 Filter**

**Features**
- Compact Size Allows Greater Design Flexibility
- Nearly Double the Flow Capacity of Standard Miniature Filters; Reduces Costly Pressure Drop
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Excellent Water Removal Efficiency
- Unique Deflector Plate that Creates Swirling of the Air Stream Ensuring Maximum Water and Dirt Separation
- Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
- 20 Micron Filter Element Standard, 5 Micron Available
- Transparent Polyurethane Bowl Standard
- Metal Bowl with Wraparound Sight Gauge Optional
- Manual Drain as Standard, Optional Auto Pulse Drain
- Large Bowl Capacity
- High Flow: 1/8” - 32 SCFM
  1/4” - 38 SCFM

---

**Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.**

**Ordering Information**

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>Manual Twist Drain</th>
<th>Piston Drain</th>
<th>BSPP</th>
<th>Manual Twist Drain</th>
<th>Piston Drain</th>
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<td>1/8&quot;</td>
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<td>F35G01AH</td>
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</table>

**Polylurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.**

**Engineering Change Designator**
- Will be entered at factory.

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**Bold Items Are Most Popular.**
For other models refer to ordering information below.

1 SCFM = Standard Cubic Feet Per Minute at 100 PSI Inlet, and 5 PSI Pressure Drop with 20 Micron Element.
Technical Specifications – F35

F35 Filter Kits & Accessories

Bowl Kits –
Polyurethane (A) ................................................................. BKF35A
Zinc (D) ............................................................................... BKF35D
Zinc (W) Wraparound Sight Gauge ................................... BKF35W

Drain Kits –
Manual Twist Drain .......................................................... SA600Y7-1
Piston (Max. Pressure: 175 PSIG) ........................................ PKF35
Semi-Automatic “Overnight” Drain ..................................... SA602A7
(Drains automatically under zero pressure)

Filter Element Kits –
5 Micron (All) ........................................................................ EK504VY
20 Micron (All) ........................................................................ EK504Y

Face Mounting Bracket Kit (See Page A66) ....................... SAR35Y57

Repair Kit –
Deflector, Retainer (All) ...................................................... RFK30

Specifications

Bowl Capacity ................................................................. 1.5 Ounce
Port Threads ........................................................................ 1/8, 1/4 Inch

Pressure & Temperature Ratings –
Polyurethane Bowl.............................................................. 0 to 150 PSIG (0 to 10.2 bar)
40°F to 125°F (4.4°C to 52°C)

Zinc Bowl.......................................................... 0 to 300 PSIG (0 to 20.4 bar)
40°F to 180°F (4.4°C to 82.2°C)

With Piston Drain ......................................................... 175 PSIG Max. Press. (11.9 bar)
40°F to 150°F (4.4°C to 65.6°C)

Zinc Bowl w/ Sight Gauge .................................................. 0 to 250 PSIG (0 to 17.2 bar)
40°F to 150°F (4.4°C to 65.6°C)

With Piston Drain ......................................................... 175 PSIG Max. Press. (11.9 bar)
40°F to 150°F (4.4°C to 65.6°C)

Weight –
Polyurethane Bowl......................................................... 0.7 lb. (0.3 kg) / Unit
18.9 lb. (8.6 kg) / 24-Unit Master Pack

Zinc Bowl.......................................................... 0.9 lb. (0.4 kg) / Unit
23.9 lb. (10.8 kg) / 24-Unit Master Pack

Zinc Bowl W/ Sight Gauge ................................... 0.96 lb. (0.4 kg) / Unit
25.1 lb. (11.4 kg) / 24-Unit Master Pack

Materials of Construction

Body .......................................................... Zinc
Bowls .......................................................... Polyurethane
Metal (Zinc)

Drains .......................................................... Brass

Filter Elements .......................................................... Polypropylene

Seals .......................................................... Nitrile

Inches (mm)

F35 Filter Dimensions

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<th>F</th>
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F35-AH, F35-DH

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<td>(40.5)</td>
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<td>(108.3)</td>
<td>(20.2)</td>
<td>(33.3)</td>
<td>(14.7)</td>
</tr>
</tbody>
</table>

F35-WH
## F75 Filter

### Features
- Compact Size Allows Greater Design Flexibility
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Excellent Water Removal Efficiency
- For Applications Requiring Minimum Pressure Drop
- Unique Deflector Plate that Creates Swirling of the Air Stream Ensuring Maximum Water and Dirt Separation
- Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
- 40 Micron Filter Element Standard, 5 Micron Available
- Transparent Polyurethane Bowl with Bowl Guard as Standard
- Metal Bowl with Wraparound Sight Gauge Optional
- Manual Drain as Standard, Optional Auto Float Drain
- Large Bowl Capacity
- High Flow: 1/4" - 43 SCFM
  3/8" - 1/2" - 73 SCFM

### Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

### Ordering Information

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT Manual Twist Drain</th>
<th>NPT Piston Drain</th>
<th>BSPP Manual Twist Drain</th>
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<td>F75G02BJ</td>
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<td>F75G03BJ</td>
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<td>1/2&quot;</td>
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<td>F75G04BJ</td>
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</tbody>
</table>

### Wraparound Sight Gauge Bowl
All QUBE filters, lubricators, and integrals are available with the Watts Wraparound Polyurethane Sight Gauge Bowl. These unique bowls provide the 360° visibility of a plastic bowl while maintaining the high strength and safety features of metal bowls. Polyurethane bowls with guards, and metal bowls, are also available.

### Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

**Bold Items are Most Popular.**
For other models refer to ordering information below.

§ SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, and 5 PSIG Pressure Drop with 0 Micron Element.

---

**Pneumatic Division**
Richland, Michigan
www.wattsfluidair.com
Technical Information

### F75 Filter Dimensions

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
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<th>G</th>
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<td>2.19</td>
<td>1.01</td>
<td>5.19</td>
<td>1.09</td>
<td>1.66</td>
<td>0.70</td>
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<td>(55.6)</td>
<td>(55.6)</td>
<td>(25.4)</td>
<td>(131.8)</td>
<td>(27.8)</td>
<td>(42.1)</td>
<td>(17.9)</td>
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<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<tr>
<td>F75-WJ</td>
<td>2.19</td>
<td>2.19</td>
<td>1.01</td>
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<td>(55.6)</td>
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<td>(25.4)</td>
<td>(134.9)</td>
<td>(27.8)</td>
<td>(42.1)</td>
<td>(17.9)</td>
</tr>
</tbody>
</table>

Inches (mm)

### F75 Filter Kits & Accessories

**Bowl Kits**
- Polyurethane (B) ........................................ BKF55B
- Metal (D) .................................................. BKF55D
- Metal (W) Wraparound Sight Gauge ................ BKF55W

**Drain Kits**
- Internal Auto (Max. Pressure: 175 PSIG) (B & D).... SA602MD
- Internal Auto (Max. Pressure: 175 PSIG) (W) ...... SAF105MD
- Manual Twist Drain ...................................... SA600Y7-1
- Semi-Automatic “Overnight” Drain .................... SA602A7
  (Drains automatically under zero pressure)

**Filter Element Kits**
- 5 Micron (All) ......................................... EK55G
- 40 Micron (All) ......................................... EK55J

**Face Mounting Bracket Kit** (See Page A66) ....... SAR75Y57

**Repair Kits**
- Deflector, Retainer ................................. RFK55
- Internal Float Drain ................................... RK602MD

### Specifications

**Bowl Capacity** ........................................... 3.8 Ounce

**Port Threads** .......................................... 1/4, 3/8, 1/2 Inch

**Pressure & Temperature Ratings**
- Polyurethane Bowl ................................. 0 to 150 PSIG (0 to 10.2 bar)
  40°F to 125°F (4.4°C to 52°C)

### Materials of Construction

**Body** ......................................................... Zinc

**Bowls** ....................................................... Polyurethane
- Metal (Zinc)

**Drains** ..................................................... Brass

**Filter Elements** ....................................... Polyethylene

**Seals** ...................................................... Nitrile
F105 Filter

Features
- Connects to Other QUBE Units Using Just Screws and O-rings (included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Excellent Water Removal Efficiency
- For Applications Requiring Minimum Pressure Drop
- Unique Deflector Plate that Creates Swirling of the Air Stream Ensuring Maximum Water and Dirt Separation
- Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
- 40 Micron Filter Element Standard, 5 Micron Available
- Transparent Polyurethane Bowl with Bowl Guard as Standard
- Metal Bowl with Wraparound Sight Gauge Optional
- Manual Drain as Standard, Optional Auto Float Drain
- Large Bowl Capacity
- High Flow: 1/2" - 120 SCFM<sup>1</sup> 3/4" - 160 SCFM<sup>1</sup>

Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

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<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>Manual Twist Drain</th>
<th>Automatic Float Drain</th>
<th>BSPP</th>
<th>Manual Twist Drain</th>
<th>Automatic Float Drain</th>
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</thead>
<tbody>
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<td>Polyurethane Bowl / Plastic Guard</td>
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<td>F105-06BJR</td>
<td>F105G06BJ</td>
<td>F105G06BJR</td>
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<td>Metal Bowl / Sight Gauge</td>
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<td>F105-04WJR</td>
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<td>F105G06BWR</td>
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</tbody>
</table>

Bold Items are Most Popular.
For other models refer to ordering information below.

<sup>1</sup> SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, and 5 PSIG Pressure Drop with 40 Micron Element.

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Wraparound Sight Gauge Bowl
All QUBE filters, lubricators, and integrals are available with the Watts Wraparound Polyurethane Sight Gauge Bowl. These unique bowls provide the 360° visibility of a plastic bowl while maintaining the high strength and safety features of metal bowls. Polyurethane bowls with guards, and metal bowls, are also available.

---

Ordering Information

| F | 105 | — | 04 | B | J | /** |

Port Threads
- NPT
- G BSPP

Port Size
- 04 1/2"
- 06 3/4"

Bowl
- Transparent with Plastic Bowl Guard
- Metal without Sight Gauge
- Metal with Wraparound Sight Gauge

Element
- G 5 Micron
- J 40 Micron

Options
- R Automatic Float Drain
- U* Overnight Drain (Dump Valve)

Engineering Change Designator
- Will be entered at factory.
Technical Information

F105 Filter Dimensions

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<tr>
<th>A</th>
<th>A</th>
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<th>C</th>
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<th>E</th>
<th>F</th>
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<td>135</td>
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<tr>
<td>F105-WJ</td>
<td>2.69</td>
<td>3.03</td>
<td>6.69</td>
<td>34.1</td>
<td>6.66</td>
<td>34.3</td>
<td>135</td>
</tr>
</tbody>
</table>

Inches (mm)
* 3/8 and 1/2 Inch Ports
† 3/4 Inch Ports

F105 Filter Kits & Accessories

Bowl Kits –
Polyurethane (B) ............................................................... BKF105B
Metal (D) ........................................................................... BKF105D
Metal (W) Wraparound Sight Gauge ............................... BKF105W

Drain Kits –
Manual Twist Drain ........................................................... SA600Y7-1
Internal Auto (Max. Pressure: 175 PSIG) (B & D).............. SA602MD
Internal Auto (Max. Pressure: 175 PSIG) (W) ................. SAF105MD
Semi-Automatic “Overnight” Drain .................................... SA602AW
(Drains automatically under zero pressure)

Filter Element Kits –
5 Micron (All) .................................................................... EKF100G
40 Micron (All) ................................................................. EKF100J

Face Mounting Bracket Kit (See Page A66) .................. SAR105Y57

Repair Kits –
Deflector, Retainer ......................................................... RFK100
Internal Float Drain ......................................................... RK602MD

Specifications

Bowl Capacity ................................................................... 8.5 Ounce
Port Threads ...................................................................... 1/2, 3/4 Inch

Pressure & Temperature Ratings –
Polyurethane Bowl ....................................................... 0 to 150 PSIG (0 to 10.2 bar)
40°F to 125°F (4.4°C to 52°C)

Zinc Bowl ................................................................. 0 to 300 PSIG (0 to 20.4 bar)
40°F to 180°F (4.4°C to 82.2°C)
With Automatic Float Drain ...................... 175 PSIG Max. Press. (11.9 bar)
40°F to 125°F (4.4°C to 52°C)
Zinc Bowl w/ Sight Gauge .............................. 0 to 250 PSIG (0 to 17.2 bar)
40°F to 150°F (4.4°C to 65.6°C)
With Automatic Float Drain ...................... 175 PSIG Max. Press. (11.9 bar)
40°F to 125°F (4.4°C to 52°C)

Weight –
Polyurethane Bowl .................................................................. 1.10 lb. (0.50 kg) / Unit
10.8 lb. (4.9 kg) / 8-Unit Master Pack
Zinc Bowl ................................................................. 1.54 lb. (0.70 kg) / Unit
14.3 lb. (6.5 kg) / 8-Unit Master Pack
Zinc Bowl W/ Sight Gauge .................................................. 1.74 lb. (0.79 kg) / Unit
15.9 lb. (7.2 kg) / 8-Unit Master Pack

Materials of Construction

Body ................................................................................. Aluminum
Bowls ............................................................................. Polyurethane
Metal (Zinc)
Drains ........................................................................ Brass
Filter Elements ................................................................. Polypropylene
Seals .................................................................................. Nitrile
F255 Filters – Hi-Flow

**Features**
- Port Blocks (PB) Available to Provide 1-1/2” Port Extension to 1” Ported Bodies
- Excellent Water Removal Efficiency
- Metal Bowl with Sight Gauge
- Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
- Manual Drain as Standard, Optional Internal Auto Drain
- All Hardware Necessary for Modular Connection to Other QUBE 255 Series is Included
- High Flow: 3/4” - 270 SCFM\(^1\)
  1” - 300 SCFM\(^1\)

**Ordering Information**

<table>
<thead>
<tr>
<th>Thread Type</th>
<th>Port Size</th>
<th>Bowl</th>
<th>Element</th>
<th>Engineering Change Designator</th>
</tr>
</thead>
<tbody>
<tr>
<td>— NPT Thread (For BSPP threads, use Port Block kit)</td>
<td>06 3/4” Port</td>
<td>W Aluminum Bowl with Sight Gauge</td>
<td>J 40 Micron</td>
<td>Will be entered at factory.</td>
</tr>
</tbody>
</table>

**F255 Filter Dimensions**

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4”</td>
<td>Metal Bowl / Sight Gauge / Manual Drain</td>
</tr>
<tr>
<td>1”</td>
<td>Metal Bowl / Sight Gauge / Manual Drain</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A (PB)</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.62</td>
<td>5.91</td>
<td>3.62</td>
<td>1.38</td>
</tr>
<tr>
<td>(92)</td>
<td>(150)</td>
<td>(92)</td>
<td>(35)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D†</th>
<th>E†</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.57</td>
<td>10.95</td>
<td>4.92</td>
</tr>
<tr>
<td>(243)</td>
<td>(278)</td>
<td>(125)</td>
</tr>
</tbody>
</table>

† With Manual Drain or Internal Auto Drain

Inches (mm)

Bold Items are Most Popular. For other models refer to ordering information below.

\(^1\) SCFM = Standard Cubic Feet Per Minute at 90 PSIG Inlet, and 5 PSIG Pressure Drop with 40 Micron Element.
Technical Information

F255 Filter Kits & Accessories

Bowl Kits –
- Metal Bowl –
  Sight Gauge / Internal Auto Drain……………….. P3NK00BSA
  Sight Gauge / Manual Drain……………….. P3NK00BSM

Drain Kit –
- Internal Auto Drain…………………………………… PS506
  Manual Drain…………………………………… PS512

Filter Elements –
- 40 Micron…………………………………… P3NK00ESG
- 5 Micron…………………………………… P3NK00ESE
- Adsorber…………………………………… P3NK00ESA

Sight Gauge Kit ………………….. P3NK00PE
Mounting Bracket Kit ………………….. P3NK00MW
Port Block Kit (1-1/2" NPT Ports) ………………….. P3NKB9BCF

Specifications

- Bowl Capacity…………………………………… 18.0 Ounces
- Sump Capacity…………………………………… 6.8 Ounces
- Pressure & Temperature Rating ………………… 0 to 250 PSIG (0 to 17 bar)
  - 32°F to 175°F (0°C to 80°C)
- Internal Auto Drain – ………………… 10 to 250 PSIG (0.7 to 17 bar)
  at 125°F (52°C) or less
- Weight –
  - 3/4 Inch…………………………………… 3.5 lb. (1.6 kg)
  - 1 Inch…………………………………… 3.5 lb. (1.6 kg)

Materials of Construction

- Body…………………………………… Aluminum
- Deflector…………………………………… Plastic
- Drain…………………………………… Plastic
- Filter Elements –
  - 40 Micron (Standard)…………………………………… Plastic
  - 5 Micron (Optional)…………………………………… Plastic
  - Adsorber (Optional)…………………………………… Activated Charcoal
- Seals…………………………………… Nitrile
- Sight Gauge ……………………………… Polyamide (Nylon)
F31 Coalescing Filter

Features
- Compact Size Allows Greater Design Flexibility
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Removes Oil and Water Aerosols, as Well as Particulate Matter Down To 0.01 Micron.
- Pleated Element for Longer Life and Lower Pressure Drop
- Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
- Activated Carbon Elements Available for Oil Vapor Removal
- Transparent Polyurethane Bowl Standard
- Metal Bowl with Wraparound Sight Gauge Optional
- Manual Drain as Standard, Optional Auto Pulse Drain
- Large Bowl Capacity
- High Flow: 1/8” & 1/4” - 20 SCFM

Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

Wraparound Sight Gauge Bowl
All QUBE filters, lubricators, and integrals are available with the Watts Wraparound Polyurethane Sight Gauge Bowl. These unique bowls provide the 360° visibility of a plastic bowl while maintaining the high strength and safety features of metal bowls. Polyurethane bowls with guards, and metal bowls, are also available.

Options
- U* Overnight Drain
- S Piston Drain
- Polyurethane Bowl

Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

Ordering Information

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>Manual Twist Drain</th>
<th>Piston Drain</th>
<th>BSP</th>
<th>Manual Twist Drain</th>
<th>Piston Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8&quot; Polyurethane Bowl</td>
<td>F31-01AH</td>
<td>F31-01AH</td>
<td>F31G01AH</td>
<td>F31G01AHS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4&quot; Polyurethane Bowl</td>
<td>F31-02AH</td>
<td>F31-02AH</td>
<td>F31G02AH</td>
<td>F31G02AHS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/8” Zinc Bowl / Sight Gauge</td>
<td>F31-01WH</td>
<td>F31-01WHS</td>
<td>F31G01WH</td>
<td>F31G01WHS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4&quot; Zinc Bowl / Sight Gauge</td>
<td>F31-02WH</td>
<td>F31-02WHS</td>
<td>F31G02WH</td>
<td>F31G02WHS</td>
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<td></td>
</tr>
</tbody>
</table>

Bold Items are Most Popular.
For other models refer to ordering information below.

* SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, and 5 PSIG Pressure Drop.
Technical Information

F31 Filter Dimensions

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>F31-AH, F31-DH</td>
<td>1.59</td>
<td>1.59</td>
<td>0.81</td>
<td>4.25</td>
<td>0.80</td>
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<td>(40.5)</td>
<td>(40.5)</td>
<td>(20.6)</td>
<td>(107.9)</td>
<td>(20.2)</td>
<td>(33.3)</td>
<td>(14.7)</td>
</tr>
<tr>
<td>F31-WH</td>
<td>1.59</td>
<td>1.59</td>
<td>0.81</td>
<td>4.27</td>
<td>0.80</td>
<td>1.31</td>
</tr>
<tr>
<td>(40.5)</td>
<td>(40.5)</td>
<td>(20.6)</td>
<td>(108.3)</td>
<td>(20.2)</td>
<td>(33.3)</td>
<td>(14.7)</td>
</tr>
</tbody>
</table>

Inches (mm)

F31 Coalescing Filter Kits & Accessories

Bowl Kits –
- Polyurethane (A) ................................................................. BKF35A
- Zinc (D) ............................................................................. BKF35D
- Zinc (W) Wraparound Sight Gauge ................................... BKF35W

Drain Kits –
- Manual Twist Drain .......................................................... SA600Y7-1
- Piston (Max. Pressure: 175 PSIG) .................................... RK5045SY
- Semi-Automatic “Overnight” Drain .................................... SA602A7
  (Drains automatically under zero pressure)

Filter Element Kits –
- Activated Carbon .............................................................. EKF31A
- Coalescing ................................................................. EKF31H

Face Mounting Bracket Kit (See Page A66) ....................... SAR355Y57

Specifications

Bowl Capacity ................................................................. 1.5 Ounce
Port Threads ................................................................. 1/4, 3/8 Inch
Pressure & Temperature Ratings –
- Polyurethane Bowl...................................................... 0 to 150 PSIG (0 to 10.2 bar)
  40°F to 125°F (4.4°C to 52°C)
- Zinc Bowl ................................................................. 0 to 300 PSIG (0 to 20.4 bar)
  40°F to 180°F (4.4°C to 82.2°C)

With Piston Drain ............................................................. 175 PSIG Max. Press. (11.9 bar)
  40°F to 150°F (4.4°C to 65.6°C)
Zinc Bowl w/ Sight Gauge ........................................... 0 to 250 PSIG (0 to 17.2 bar)
  40°F to 150°F (4.4°C to 65.6°C)
With Piston Drain ............................................................. 175 PSIG Max. Press. (11.9 bar)
  40°F to 150°F (4.4°C to 65.6°C)

Weight –
- Polyurethane Bowl ...................................................... 0.7 lb. (0.31 kg) / Unit
  7 lb. (3.18 kg) / 24-Unit Master Pack
- Zinc Bowl ................................................................. 0.9 lb. (0.41 kg) / Unit
  23.9 lb. (10.8 kg) / 24-Unit Master Pack
- Zinc Bowl W/ Sight Gauge ........................................... 0.96 lb. (0.44 kg) / Unit
  25.1 lb. (11.4 kg) / 24-Unit Master Pack

Materials of Construction

Body ................................................................. Zinc
Bowls ................................................................. Polyurethane
Metal (Zinc)
Coalescing Element .................................... Borosilicate Fiber & Polyamide Foam
Carbon Element ........................................ Acetal 30% Glass Filled Activated Carbon
Drain ................................................................. Brass
Seals ................................................................. Buna-N
F71 Coalescing Filter

Features
• Compact Size Allows Greater Design Flexibility
• Connects to Other QUBE Units Using Just Screws and O-rings (Included)
• Integral Mounting Slots Eliminate Need for Mounting Brackets
• Removes Oil and Water Aerosols, as Well as Particulate Matter Down To 0.01 Micron.
• Pleated Element for Longer Life and Lower Pressure Drop
• Integral Pop-up Style Element Service Life Indicator
• Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
• Activated Carbon Elements Available for Oil Vapor Removal
• Transparent Polyurethane Bowl with Bowl Guard as Standard
• Metal Bowl with Wraparound Sight Gauge Optional
• Manual Drain as Standard, Optional Auto Float Drain
• Large Bowl Capacity
• High Flow: 1/4", 3/8", 1/2" - 43 SCFM

Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

Wraparound Sight Gauge Bowl
All QUBE filters, lubricators, and integrals are available with the Watts Wraparound Polyurethane Sight Gauge Bowl. These unique bowls provide the 360° visibility of a plastic bowl while maintaining the high strength and safety features of metal bowls. Polyurethane bowls with guards, and metal bowls, are also available.

Ordering Information

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Manual Twist Drain</th>
<th>Piston Drain</th>
<th>Manual Twist Drain</th>
<th>Piston Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPT</td>
<td></td>
<td></td>
<td>BSP</td>
<td></td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>F71-02BJ</td>
<td>F71-02BJR</td>
<td>F71G02BJ</td>
<td>F71G02BJR</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>F71-03BJ</td>
<td>F71-03BJR</td>
<td>F71G03BJ</td>
<td>F71G03BJR</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>F71-04BJ</td>
<td>F71-04BJR</td>
<td>F71G04BJ</td>
<td>F71G04BJR</td>
</tr>
<tr>
<td>Zinc Bowl / Sight Gauge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>F71-02WJ</td>
<td>F71-02WJR</td>
<td>F71G02WJ</td>
<td>F71G02WJR</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>F71-03WJ</td>
<td>F71-03WJR</td>
<td>F71G03WJ</td>
<td>F71G03WJR</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>F71-04WJ</td>
<td>F71-04WJR</td>
<td>F71G04WJ</td>
<td>F71G04WJR</td>
</tr>
</tbody>
</table>

Bold Items are Most Popular.
For other models refer to ordering information below.

SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, and 5 PSIG Pressure Drop.
Technical Information

F71 Coalescing Filter Dimensions

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>BJ</td>
<td>2.19</td>
<td>2.06</td>
<td>1.72</td>
<td>6.91</td>
<td>1.03</td>
<td>1.66</td>
<td>0.71</td>
</tr>
<tr>
<td>DJ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F71-WJ

Bowl Kits –
- Polyurethane (B) ......................................................... BKF55B
- Metal (D) ................................................................. BKF55D
- Metal (W) Wraparound Sight Gauge ................................. BKF55W

Drain Kits –
- Manual Twist Drain .................................................. SA600Y7-1
- Internal Auto (Max. Pressure: 175 PSIG) (B & D)............. SA602MD
- Internal Auto (Max. Pressure: 175 PSIG) (W) ................. SAF105MD
- Semi-Automatic “ Overnight” Drain .......................... SA602A7
  (Drains automatically under zero pressure)

Filter Element Kits –
- Activated Carbon ...................................................... EKF71A
- Coalescing ............................................................... EKF71H

Face Mounting Bracket Kit (See Page A66) .................. SAR75Y57

Repair Kits –
- Internal Float Drain ................................................ RK602MD

Specifications

- Bowl Capacity .......................................................... 3.8 Ounce
- Port Threads ......................................................... 1/4, 3/8, 1/2 Inch
- Pressure & Temperature Ratings – Polyurethane Bowl
  0 to 150 PSIG (0 to 10.2 bar) 40°F to 125°F (4.4°C to 52°C)

Materials of Construction

- Body ................................................................. Zinc
- Bowls .............................................................. Polyurethane
- Metal (Zinc)
- Coalescing Element .......... Borosilicate Fiber & Polyamide Foam
- Carbon Element ................ Acetal 30% Glass Filled Activated Carbon
- Brass
- Seals .............................................................. Buna-N
F101 Coalescing Filter

**Features**
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Removes Oil and Water Aerosols, as Well as Particulate Matter Down To 0.01 Micron.
- Pleated Element for Longer Life and Lower Pressure Drop
- Integral Pop-up Style Element Service Life Indicator
- Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
- Activated Carbon Elements Available for Oil Vapor Removal
- Transparent Polyurethane Bowl with Bowl Guard as Standard
- Metal Bowl with Wraparound Sight Gauge Optional
- Manual Drain as Standard, Optional Auto Float Drain
- Large Bowl Capacity
- High Flow: 1/2", 3/4" - 85 SCFM¹

**Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.**

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>Manual Twist Drain</th>
<th>Automatic Float Drain</th>
<th>BSPP</th>
<th>Manual Twist Drain</th>
<th>Automatic Float Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>F101-04BJ</td>
<td>F101-04BJR</td>
<td>F101G04BJ</td>
<td>F101G04BJR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>F101-06BJ</td>
<td>F101-06BJR</td>
<td>F101G06BJ</td>
<td>F101G06BJR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Polyurethane Bowl / Plastic Guard**

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>Manual Twist Drain</th>
<th>Automatic Float Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>F101-04WJ</td>
<td>F101-04WJR</td>
<td>F101G04WJ</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>F101-06WJ</td>
<td>F101-06WJR</td>
<td>F101G06WJ</td>
</tr>
</tbody>
</table>

**Metal Bowl / Sight Gauge**

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>Manual Twist Drain</th>
<th>Automatic Float Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>F101-04WJ</td>
<td>F101-04WJR</td>
<td>F101G04WJ</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>F101-06WJ</td>
<td>F101-06WJR</td>
<td>F101G06WJ</td>
</tr>
</tbody>
</table>

Bold items are Most Popular.
For other models refer to ordering information below.

¹ SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, and 5 PSIG Pressure Drop.

**Ordering Information**

**F 101 — 04 B J /**

- **Port Threads**
  - NPT
  - BSPP
- **Port Size**
  - 04 1/2"
  - 06 3/4"
- **Bowl**
  - B Transparent with Plastic Bowl Guard
  - D Metal without Sight Gauge
  - W Metal with Wraparound Sight Gauge
- **Element**
  - A Activated Carbon
  - J .01 Micron
- **Options**
  - R Automatic Float Drain
  - U* Overnight Drain (Dump Valve)
- **Engineering Change Designator**
  - Will be entered at factory.

BOLD ITEMS ARE MOST POPULAR.
Technical Information

F101 Coalescing Filter Dimensions

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>A′</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>F′</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>F101-BJ, F101-DJ</td>
<td>2.69 (68.4)</td>
<td>3.03 (77.0)</td>
<td>2.69 (68.4)</td>
<td>2.06 (52.2)</td>
<td>8.59 (218.3)</td>
<td>1.35 (34.3)</td>
<td>2.18 (56.4)</td>
<td>2.55 (64.8)</td>
<td>0.81 (20.6)</td>
</tr>
<tr>
<td>F101-WJ</td>
<td>2.69 (68.4)</td>
<td>3.03 (77.0)</td>
<td>2.69 (68.4)</td>
<td>2.06 (52.2)</td>
<td>8.75 (222.6)</td>
<td>1.35 (34.3)</td>
<td>2.18 (56.4)</td>
<td>2.55 (64.8)</td>
<td>0.81 (20.6)</td>
</tr>
</tbody>
</table>

Inches (mm)

* 3/8 and 1/2 Inch Ports
† 3/4 Inch Ports

F101 Coalescing Filter Kits & Accessories

Bowl Kits –
- Polyurethane (B) ............................................................... BKF105B
- Metal (D) ........................................................................... BKF105D
- Metal (W) Wraparound Sight Gauge ............................... BKF105W

Drain Kits –
- Manual Twist Drain ........................................................... SA600Y7-1
- Internal Auto (Max. Pressure: 175 PSIG) (B & D) .......... SA602MD
- Internal Auto (Max. Pressure: 175 PSIG) (W) .......... SAF105MD
- Semi-Automatic “Overnight” Drain .................................. SA602A7

(Drains automatically under zero pressure)

Filter Element Kits –
- Activated Carbon .............................................................. EKF101A
- Coalescing................................................................. EKF101

Face Mounting Bracket Kit (See Page A66) ................ SAR105Y57

Repair Kits –
- Deflector, Element, Retainer ............................................. RFK100
- Internal Auto Drain .......................................................... RK602MD

Specifications

Bowl Capacity ......................................................... 8.5 Ounce
Port Threads ................................................................. 1/2, 3/4 Inch

Pressure & Temperature Ratings –
- Polyurethane Bowl ...................................................... 0 to 150 PSIG (0 to 10.2 bar) 40°F to 125°F (4.4°C to 52°C)

Materials of Construction

Body .......................................................... Zinc
Bowls .......................................................... Polyurethane
Metal (Zinc)

Coalescing Element ................................... Borosilicate Fiber & Polyamide Foam
Carbon Element ................................ Acetal 30% Glass Filled Activated Carbon
Drains ......................................................... Brass
Seals ......................................................... Buna-N
**F251 Coalescing Filters – Hi-Flow**

**Features**
- Port Blocks (PB) Available to Provide 1-1/2” Port Extension to 1” Ported Bodies
- Metal Bowl with Sight Gauge
- Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
- Manual Drain as Standard, Optional Internal Auto Drain
- Grade 6 Element Removes Oil and Water Aerosols within ISO 8573-1 Class 1 Standards. Particulate Removal Down to 0.01 Micron, with Maximum Remaining Oil Aerosol Content: 0.008 PPM@70°F.
- High Flow:
  - Dry Element*: ............................... 120 SCFM
  - Saturated Element*: .................. 100 SCFM

---

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>Metal Bowl / Sight Gauge / Manual Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4”</td>
<td>F251-06WJ</td>
<td></td>
</tr>
<tr>
<td>1”</td>
<td>F251-08WJ</td>
<td></td>
</tr>
</tbody>
</table>

Standard part numbers shown with Grade 6 Elements. For other models refer to ordering information below.

§ SCFM = Standard Cubic Feet Per Minute at 90 PSIG Inlet, and 3 PSIG Pressure Drop.

---

**F251 Coalescing Filter Dimensions**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>A (PB)</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3.62</td>
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<tr>
<td>1”</td>
<td>(92)</td>
<td>(150)</td>
<td>(92)</td>
<td>(58.5)</td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>D†</th>
<th>E†</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4”</td>
<td>9.57</td>
<td>11.90</td>
<td>4.92</td>
</tr>
<tr>
<td>1”</td>
<td>(243)</td>
<td>(302)</td>
<td>(125)</td>
</tr>
</tbody>
</table>

† With Manual Drain or Internal Auto Drain

**Ordering Information**

<table>
<thead>
<tr>
<th>F251</th>
<th>08</th>
<th>W</th>
<th>J</th>
<th>**</th>
</tr>
</thead>
</table>

**Thread Type**
- NPT Thread
  (For BSPP threads, use Port Block kit)

**Port Size**
- 06 3/4” Port
- 08 1” Port

**Bowl**
- W Aluminum Bowl with Sight Gauge

**Element**
- J Grade 6 .01 Micron Coalescing Element

**Engineering Change Designator**
- Will be entered at factory.

**Internal Automatic Drains must be purchased separately as PS506.**
Filter Element Specifications

<table>
<thead>
<tr>
<th>Grade</th>
<th>D.O.P. Coalescing Efficiency 0.3 to 0.6 Micron Particles</th>
<th>Maximum Oil Carryover¹ PPM w/w</th>
<th>Pressure Drop (PSID)² @ Rated Flow</th>
<th>Particulate Micron Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>99.97%</td>
<td>0.008</td>
<td>Media Dry: 1.0</td>
<td>2-3</td>
</tr>
<tr>
<td>10</td>
<td>95%</td>
<td>0.85</td>
<td>Media Wet With 10-20 wt. oil</td>
<td>0.5</td>
</tr>
</tbody>
</table>

¹Tested per BCAS 860900 at 40 ppm inlet.
²Add dry + wet for total pressure drop.
D.O.P. = Dioctylphthalate

F251 Coalescing Filter Kits & Accessories

Metal Bowl Kits—
- Sight Gauge / Internal Auto Drain………………………… P3NKA00BSA
- Sight Gauge / Manual Drain ……………………………… P3NKA00BSM

DPI Replacement Kit ……………………………………… PS781

Drain Kit –
- Internal Auto Drain……………………………………… PS506
- Manual Drain …………………………………………… PS512

Filter Elements –
- Grade 6 (Standard)………………………………………… P3NKA00ESC
- Grade 10 (Optional) ……………………………………… P3NKA00ES9

Sight Gauge Kit …………………………………………… P3NKA00PE

Mounting Bracket Kit ………………………………………… P3NKA00MW

Port Block Kit (1-1/2” NPT Ports) ………………………… P3NK9B9BCL

Specifications

- **Bowl Capacity** ………………………………………………… 18.0 Ounces
- **Sump Capacity** ………………………………………………… 6.8 Ounces
- **Pressure & Temperature Rating** ……………………………… 0 to 250 PSIG (0 to 17 bar)
  - Internal Auto Drain – ……………………………… 10 to 250 PSIG (0.7 to 17 bar)
  - at 125°F (52°C) or less
- **Weight** –
  - 3/4 Inch……………………………………………… 3.5 lb. (1.6 kg)
  - 1 Inch………………………………………………… 3.5 lb. (1.6 kg)

Materials of Construction

- **Body & Bowl** ………………………………………………… Aluminum
- **Deflector** …………………………………………………… Plastic
- **Drain** ……………………………………………………… Plastic
- **Filter Elements** …………………………………………… Borosilicate & Felt Glass Fibers
- **Seals** ………………………………………………………… Nitrile
- **Sight Gauge** ………………………………………………… Polyamide (Nylon)
R35 Regulator

Features

- Compact Size Allows Greater Design Flexibility
- Nearly Double the Flow Capacity of Standard Miniature Regulators; Reduces Costly Pressure Drop
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Piston Operated for High Flow and Low Pressure Drop
- Panel Mountable
- High Flow: 1/8" - 30 SCFM\(^6\)
  1/4" - 40 SCFM\(^6\)

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>BSPP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Relieving</td>
<td>Relieving</td>
</tr>
<tr>
<td>Without Gauge 0-125 PSIG Reduced Pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/8&quot;</td>
<td>R35-01C</td>
<td>R35G01C</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>R35-02C</td>
<td>R35G02C</td>
</tr>
<tr>
<td>With Gauge 0-125 PSIG Reduced Pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/8&quot;</td>
<td>R35-01CG</td>
<td>—</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>R35-02CG</td>
<td>—</td>
</tr>
</tbody>
</table>

Bold items are Most Popular.
For other models refer to ordering information below.

\(^6\) SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, 75 PSIG No Flow Secondary Setting, and 20 PSIG Pressure Drop.

R35 Regulator Dimensions

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inches</td>
<td>1.59</td>
<td>1.59</td>
<td>2.98</td>
<td>1.11</td>
<td>0.80</td>
<td>1.31</td>
<td>0.58</td>
</tr>
<tr>
<td>(mm)</td>
<td>(40.6)</td>
<td>(40.6)</td>
<td>(75.7)</td>
<td>(28.2)</td>
<td>(20.3)</td>
<td>(33.3)</td>
<td>(14.6)</td>
</tr>
</tbody>
</table>

NOTE: 1.25 Dia. (32mm) hole required for panel mounting.

Ordering Information

![R35 Regulator Dimensions](image)

Port Threads

- NPT
- G BSPP

Port Size

- 01 1/8"
- 02 1/4"

Reduced Pressure Range

- A 0-25 PSIG
- B 0-60 PSIG
- C 0-125 PSIG

Options

- G Gauge
- K Non-relieving
- P Panel Mount Nut (Plastic)
- T Tamperproof Adjustment

Engineering Change Designator

Will be entered at factory.

BOLD ITEMS ARE MOST POPULAR.
Technical Information

**WARNING**

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

**CAUTION:**

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

---

**R35 Regulator Kits & Accessories**

- **Cage Kits** –
  - A Range .......................................................... CKR35A
  - B & C Range ....................................................... CKR35BC
- **Control Knob** ................................................. R35-055P
- **Gauges** –
  1-1/2" Dia Size, 1/8" Back Connection
  - 0 to 60 PSIG (0 to 4 bar) ....................................... K4515N18060
  - 1-1/2" Dia Size, 1/8" Back Connection
  - 0 to 160 PSIG (0 to 11 bar) ..................................... K4515N18160
- **Panel Mounting Bracket Kit (Bonnet Threads) ................................ SA161X57**
- **Face Mounting Bracket Kit (See Page A66) .......................... SAR35Y57**
- **Panel Mount Nut** –
  - Plastic ............................................................... R05X51-P
  - Aluminum .......................................................... R05X51-A
- **Repair Kits** –
  - Non-Relieving Piston, Valve Assembly .................. RKR30K
  - Relieving Piston, Valve Assembly ....................... RKR30

---

**Specifications**

- **Gauge Ports (2) .................................................. 1/8 Inch**
- **Port Threads ...................................................... 1/8 & 1/4 Inch**
- **Supply Pressure ........................................... 300 PSIG Max. (20.4 bar)**
- **Temperature Rating ...................................... 40°F to 125°F (4.4°C to 52°C)**
- **Weight ......................................................... 0.82 lbs. (.37 kg) / Unit**
  - 19.8 lbs. (8.98 kg) / 24-Unit Master Pack

**Materials of Construction**

- **Adjusting Knob** .................................................. Acetal
- **Body** ............................................................... Zinc
- **Bottom Plug** .................................................... Glass-Filled Acetal
- **Cage** .............................................................. Plastic
- **Elastomers** ...................................................... Buna N
R75 Regulator

Features
- Compact Size Allows Greater Design Flexibility
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Diaphragm Operated Design with Balanced Poppet Design for Quick and Accurate Regulation
- Panel Mountable
- High Flow: 1/4" - 25 SCFM§
  3/8" - 45 SCFM§
  1/2" - 60 SCFM§

Port Size | NPT | BSPP | Relieving | Relieving
--- | --- | --- | --- | ---
Without Gauge 0-125 PSIG Reduced Pressure
1/4" | R75-02C | R75G02C
3/8" | R75-03C | R75G03C
1/2" | R75-04C | R75G04C

With Gauge 0-125 PSIG Reduced Pressure
1/4" | R75-02CG | —
3/8" | R75-03CG | —
1/2" | R75-04CG | —

R75 Regulator Dimensions

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.19</td>
<td>2.06</td>
<td>2.75</td>
<td>1.38</td>
<td>1.09</td>
<td>1.66</td>
<td>0.69</td>
</tr>
</tbody>
</table>

Inches (mm)

NOTE: 1.25 Dia. (32mm) hole required for panel mounting.

§ SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, 75 PSIG No Flow Secondary Setting, and 20 PSIG Pressure Drop.

Ordering Information

R 75 — 03 C /**

Options
- G Gauge
- K Non-relieving
- P Panel Mount Nut (Plastic)
- T Tamperproof Adjustment

Engineering Change Designator
Will be entered at factory.

Bold Items are Most Popular.
For other models refer to ordering information below.

Pneumatic Division
Richland, Michigan
www.wattsfluidair.com
Technical Information

**Flow Characteristics**

<table>
<thead>
<tr>
<th>Model</th>
<th>Ports</th>
<th>Primary Pressure</th>
<th>Rated Flow - SCFM</th>
<th>Flow - dm^3/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>R75-02C</td>
<td>1/4 Inch</td>
<td>100 PSIG (6.9 bar)</td>
<td>0 to 80 SCFM</td>
<td>0 to 30 dm^3/s</td>
</tr>
<tr>
<td>R75-03C</td>
<td>3/8 Inch</td>
<td>100 PSIG (6.9 bar)</td>
<td>0 to 90 SCFM</td>
<td>0 to 35 dm^3/s</td>
</tr>
<tr>
<td>R75-04C</td>
<td>1/2 Inch</td>
<td>100 PSIG (6.9 bar)</td>
<td>0 to 90 SCFM</td>
<td>0 to 40 dm^3/s</td>
</tr>
</tbody>
</table>

**Specifications**

- **Gauge Ports**: (2) 1/8 Inch
- **Port Threads**: 1/4, 3/8 & 1/2 Inch
- **Supply Pressure**: 300 PSIG Max. (20.4 bar)
- **Temperature Rating**: 40°F to 125°F (4.4°C to 52°C)
- **Weight**: 1.35 lbs. (.61 kg) / unit, 27 lbs. (12.24 kg) / 20-Unit Master Pack

**Materials of Construction**

- **Adjusting Knob**: Acetal
- **Body**: Zinc
- **Bottom Plug**: Glass-Filled Acetal
- **Cage**: Glass-Filled Acetal
- **Elastomers**: Buna N

**Cage Kits**

- Standard: CKR75
- Tamperproof: CKR75T
- Control Knob: R35-0545P

**Gauges**

- 1-1/2" Dial Size, 1/8" Back Connection: K4515N18060
- 1-1/2" Dial Size, 1/8" Back Connection: K4515N18160

**Panel Mounting Bracket Kit**: SA161X57

**Face Mounting Bracket Kit (See Page A66)**: SAR75Y57

**Panel Mount Nut**

- Plastic: R05X51-P
- Aluminum: R05X51-A

**Repair Kits**

- Non-Relieving Diaphragm, Valve Assembly: RKR75K
- Relieving Diaphragm, Valve Assembly: RKR75

---

⚠️ **WARNING**

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed maximum primary pressure rating.

⚠️ **CAUTION:**

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.
QUBE 105 Series Regulators
1/2 & 3/4 Inch Ports

R105 Regulator

Features
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Diaphragm Operated Design with Balanced Poppet Design for Quick and Accurate Regulation
- Panel Mountable
- High Flow: 1/2” - 150 SCFM§
  3/4” - 150 SCFM§

Port Threads
- NPT
- G BSPP

Port Size
- 04 1/2”
- 06 3/4”

Reduced Pressure Range
- A 0–25 PSIG
- B 0–60 PSIG
- C 0–125 PSIG
- D 0–250 PSIG

Options
- G Gauge
- K Non-relieving
- P Panel Mount Nut (Plastic)

Engineering Change Designator
Will be entered at factory.

Inches (mm)
* 3/8 and 1/2 inch ports
† 3/4 inch ports
NOTE: 1.75 Dia. (44mm) hole required for panel mounting.

Bold Items are Most Popular.
For other models refer to ordering information below.

§ SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, 75 PSIG No Flow Secondary Setting, and 20 PSIG Pressure Drop.

Ordering Information

R 105 04 C /**

R105 Regulator Dimensions

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>BSPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Gauge 0-125 PSIG Reduced Pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2”</td>
<td>R105-04C</td>
<td>R105G04C</td>
</tr>
<tr>
<td>3/4”</td>
<td>R105-06C</td>
<td>R105G06C</td>
</tr>
<tr>
<td>With Gauge 0-125 PSIG Reduced Pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2”</td>
<td>R105-04CG</td>
<td></td>
</tr>
<tr>
<td>3/4”</td>
<td>R105-06CG</td>
<td></td>
</tr>
</tbody>
</table>
Technical Information

**WARNING**

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

**CAUTION:**

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

**Specifications**

Gauge Ports (2) ..............................................1/4 Inch
Port Threads ..................................................1/2 & 3/4 Inch
Supply Pressure ........................................300 PSIG Max. (20.4 bar)
Temperature Rating ..............................40°F to 150°F (4.4°C to 65.5°C)
Weight ..................................................1.64 lbs. (.74 kg) / unit

**Materials of Construction**

Adjusting Knob .................................................Acetal
Body ..............................................................Aluminum
Bottom Plug ..................................................Zinc
Cage ......................................................Glass-Filled Acetal Plastic
Elastomers ..................................................Buna N

R105 Regulator Kits & Accessories

**Cage Kit** –  
Cage Assembly with Knob........................CKR105

**Control Knob** ...........................................R105-052P

**Gauges** –  
2” Dial Size, 1/4” Back Connection
0 to 60 PSIG (0 to 4 bar) ......................K4520N14060

2” Dial Size, 1/4” Back Connection
0 to 160 PSIG (0 to 11 bar) ......................K4520N14160

2” Dial Size, 1/4” Back Connection
0 to 300 PSIG (0 to 20.7 bar) ......................K4520N14300

**Panel Mounting Bracket Kit (Bonnet Threads)** ..........SAR10Y57

**Face Mounting Bracket Kit (See Page A66)** ..........SAR105Y57

**Panel Mount Nut** –  
Plastic .............................................R10X51-P
Aluminum .................................................R10X51-A

**Repair Kits** –  
Non-Relieving Diaphragm, Valve Assembly ....................RKR105K
Relieving Diaphragm, Valve Assembly .....................RKR105

Flow Characteristics  
R105-04C, R105-06C

**Flow Characteristics**

- **Secondary Pressure - bar**
- **Secondary Pressure - PSIG**
- **Rated Flow - SCFM**
- **Flow - dm³/s**

**Secondary Pressure - PSIG**
0 10 20 30 40 50 60

**Secondary Pressure - bar**
0 10 20 30 40 50 60

**Rated Flow - SCFM**
0 25 50 75 100 125 150 175

**Flow - dm³/s**
0 1 2 3 4 5 6

**1/2 & 3/4 Inch Ports**
100 PSIG (6.9 bar) Primary Pressure

**Flow Characteristics**

- **Primary Pressure**
- **Secondary Pressure**
- **Rated Flow**
- **Flow**
R255 Regulators – Hi-Flow

Features
- Port Blocks (PB) Available to Provide 1-1/2" Port Extension to 1" Ported Bodies
- Self Relieving Feature Plus Balanced Poppet Provides Quick Response and Accurate Pressure Regulation
- Solid Control Piston for Extended Life
- High Flow: 3/4" - 200 SCFM
  1" - 300 SCFM

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT Without Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot;</td>
<td>R255-06C</td>
</tr>
<tr>
<td>1&quot;</td>
<td>R255-08C</td>
</tr>
</tbody>
</table>

R255 Regulator Dimensions

<table>
<thead>
<tr>
<th>A</th>
<th>A (PB)</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.62 (92)</td>
<td>5.91 (150)</td>
<td>3.62 (92)</td>
<td>6.38 (162)</td>
<td>2.08 (53)</td>
<td>8.46 (215)</td>
</tr>
</tbody>
</table>

Inches
(mm)

**SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, 75 PSIG No Flow Secondary Setting, and 10 PSIG Pressure Drop.**

Ordering Information

R255 — 08 C/**

Thread Type
- NPT Thread (For BSPP threads, use Port Block kit)

Port Size
- 06 3/4" Port
- 08 1" Port

Pressure Range
C 0 to 125 PSI

Engineering Change Designator
Will be entered at factory.

BOLD ITEMS ARE MOST POPULAR.
Technical Information

**R255 Regulator Kits & Accessories**

**Gauges** –
- 60 PSIG (0 to 4.1 bar) ............................................. K4520N14060
- 160 PSIG (0 to 11.0 bar) .......................................... K4520N14160
- 300 PSIG (0 to 20.7 bar) ........................................... K4520N14300

**Service Kit** –
- Relieving ............................................................... P3NKA00RR
- Non-Relieving .......................................................... P3NKA00RN

**Springs** –
- 1 to 60 PSIG Range ............................................... C10A1304
- 2 to 125 PSIG Range ............................................... C10A1308
- 5 to 250 PSIG Range ............................................... C10A1317

**Mounting Bracket Kit** ............................................. P3NKA00MW

**Port Block Kit** (1-1/2" NPT Ports) ............................ P3NKB9BCL

**Specifications**

**Gauge Ports** .......................................................... Two Ports 1/4”
(Can be used as additional High Flow 1/4 Inch Outlet Ports)

**Port Threads** .......................................................... 3/4", 1”

**Primary Pressure Rating** –
- Maximum Primary Pressure .................................. 250 PSIG (17.2 bar)

**Temperature Rating** ........................................... 32°F to 175°F (0°C to 80°C)

**Weight** –
- 3/4 Inch ............................................................... 4.2 lb. (1.9 kg)
- 1 Inch ................................................................. 4.2 lb. (1.9 kg)

**Materials of Construction**

- **Adjusting Stem** .................................................. Steel
- **Body** ................................................................. Aluminum
- **Bonnet** ............................................................... Aluminum
- **Knob** ................................................................. Plastic
- **Piston** ................................................................. Plastic
- **Poppet Assembly** ............................................... Brass
- **Seals** ................................................................. Nitrile
- **Springs: Poppet & Control** ................................. Steel

---

**WARNING**
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

---

**CAUTION:**
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.


**QUBE 35 Series Lubricators**

**L35 Series**

**1/8 & 1/4 Inch Ports**

---

**L35 Lubricator**

**Features**

- Compact Size Allows Greater Design Flexibility
- Nearly Double the Flow Capacity of Standard Miniature Filters; Reduces Costly Pressure Drop
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- For Applications Requiring Minimum Pressure Drop
- Transparent Polyurethane Bowl Standard
- Metal Bowl with Wraparound Sight Gauge Optional
- Precision Needle Valve Assures Repeatable Oil Delivery and Provides Simple Adjustment of Delivery Rate.
- Large Capacity Bowl
- High Flow: 1/8” - 23 SCFM
  1/4” - 45 SCFM

**Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.**

---

**Polyurethane Bowl Sizes and Sight Gauges**

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>BSPP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Manual Twist Drain</td>
<td>Manual Twist Drain</td>
</tr>
<tr>
<td></td>
<td>No Drain</td>
<td>No Drain</td>
</tr>
<tr>
<td>Polyurethane Bowl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/8”</td>
<td>L35-01A</td>
<td>L35G01A</td>
</tr>
<tr>
<td></td>
<td>L35-01AX9</td>
<td>L35G01AX9</td>
</tr>
<tr>
<td>1/4”</td>
<td>L35-02A</td>
<td>L35G02A</td>
</tr>
<tr>
<td></td>
<td>L35-02AX9</td>
<td>L35G02AX9</td>
</tr>
<tr>
<td>Zinc Bowl / Sight Gauge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/8”</td>
<td>L35-01W</td>
<td>L35G01W</td>
</tr>
<tr>
<td></td>
<td>L35-01WX9</td>
<td>L35G01WX9</td>
</tr>
<tr>
<td>1/4”</td>
<td>L35-02W</td>
<td>L35G02W</td>
</tr>
<tr>
<td></td>
<td>L35-02WX9</td>
<td>L35G02WX9</td>
</tr>
</tbody>
</table>

Bold Items are Most Popular.
For other models refer to ordering information below.

§ SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, and 5 PSIG Pressure Drop.

---

**Ordering Information**

<table>
<thead>
<tr>
<th>L</th>
<th>35</th>
<th>02</th>
<th>A</th>
<th>/**</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Port Threads</th>
<th>Port Size</th>
<th>Bowl</th>
<th>Options</th>
<th>Engineering Change Designator</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPT G BSPP</td>
<td>01 1/8”</td>
<td>A Transparent</td>
<td>X9 Manual Twist Drain (Increases product length by 9/16”)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>02 1/4”</td>
<td>D Metal without Sight Gauge</td>
<td>Will be entered at factory.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>W Metal with Wraparound Sight Gauge</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BOLD ITEMS ARE MOST POPULAR.
Technical Information

<table>
<thead>
<tr>
<th>L35 Lubricator Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>L35-A</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>L35-D</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>L35-W</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Inches (mm)

L35 Lubricator Kits & Accessories

- **Bowl Kits**
  - Polyurethane (A) ................................................................. BKL35A
  - Zinc (D).............................................................................. BKL35D
  - Zinc (W) Wraparound Sight Gauge ...................................BKL35W

- **Oil**
  - 1 Gal. .................................................................................. F442002
  - 12 Quart Case .................................................................... F442003
  - 4 Gallon Case ...................................................................... F442005

- **Face Mounting Bracket Kit** (See Page A66) .......... SAR35Y57

- **Repair Kit**
  - Tamper-resistant Sight Dome (All)................................. RKL100

Specifications

- **Bowl Capacity** ................................................................. 1.5 Ounce
- **Port Threads** ............................................................... 1/8, 1/4 Inch
- **Pressure & Temperature Ratings**
  - Polyurethane Bowl......................................................... 0 to 150 PSIG (0 to 10.2 bar)
    40°F to 125°F (4.4°C to 52°C)
  - Zinc Bowl ................................................................. 0 to 300 PSIG (0 to 20.4 bar)
    40°F to 150°F (4.4°C to 65.6°C)
- **Zinc Bowl w/ Sight Gauge** ........................................... 0 to 250 PSIG (0 to 17.2
    40°F to 150°F (4.4°C to 65.6°C)

Suggested Lubricant ...................................................... F442 Oil

Petroleum-based oil of 100 to 200 SUS viscosity at 100°F and an
anilne point greater than 200°F

(Do not use oils with additives, compounded oils containing solvents, graphite,
Detergents, or synthetic oils.)

Weight –
- Polyurethane Bowl........................................................... 0.7 lb. (0.3 kg) / Unit
  18.9 lb. (8.6 kg) / 24-Unit Master Pack
- Zinc Bowl ........................................................................... 0.94 lb. (0.4 kg) / Unit
  24.7 lb. (11.2 kg) / 24-Unit Master Pack
- Zinc Bowl W/ Sight Gauge ................................................ 1.00 lb. (0.5 kg) / Unit
  26.1 lb. (11.8 kg) / 24-Unit Master Pack

Materials of Construction

- **Body** .............................................................................. Zinc
- **Bowls** ......................................................................... Polyurethane
  Metal (Zinc)
- **Drains** ......................................................................... Brass
- **Seals** .............................................................................. Nitrile
**L75 Lubricator**

**Features**
- Compact Size Allows Greater Design Flexibility
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- For Applications Requiring Minimum Pressure Drop
- Transparent Polyurethane Bowl with Bowl Guard as Standard
- Metal Bowl with Wraparound Sight Gauge Optiona
- Drain Standard on Metal Bowl and Metal Bowl with Sight Gauge
- Can be Filled While Unit is Under Pressure
- Precision Needle Valve Assures Repeatable Oil Delivery and Provides Simple Adjustment of Delivery Rate.
- Large Capacity Bowl
- High Flow: 1/4" - 15 SCFM§
  3/8" - 80 SCFM§
  1/2" - 80 SCFM§

**Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.**

**Ordering Information**

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>BSPP</th>
</tr>
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<tbody>
<tr>
<td>1/4&quot;</td>
<td>L75-02B</td>
<td>L75G02B</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>L75-03B</td>
<td>L75G03B</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>L75-04B</td>
<td>L75G04B</td>
</tr>
</tbody>
</table>

Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

**Options**
- Q Buttonhead Fill Fitting
- X9 Manual Twist Drain on Plastic Bowl (Increases product length by 9/16")

**Engineering Change Designator**
Will be entered at factory.

**Bold Items are Most Popular.**
For other models refer to ordering information below.

§ SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, and 5 PSIG Pressure Drop.
Technical Information

L75 Lubricator Dimensions

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>L75-B</td>
<td>2.19 (55.6)</td>
<td>2.00 (52.1)</td>
<td>2.44 (56.3)</td>
<td>4.72 (119.8)</td>
<td>1.00 (25.4)</td>
<td>1.66 (42.1)</td>
<td>0.72 (17.9)</td>
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<tr>
<td>L75-D</td>
<td>2.19 (55.6)</td>
<td>2.00 (52.1)</td>
<td>2.44 (56.3)</td>
<td>5.15 (130.9)</td>
<td>1.00 (25.4)</td>
<td>1.66 (42.1)</td>
<td>0.70 (17.9)</td>
</tr>
<tr>
<td>L75-W</td>
<td>2.19 (55.6)</td>
<td>2.00 (52.1)</td>
<td>2.44 (56.3)</td>
<td>5.37 (136.4)</td>
<td>1.00 (25.4)</td>
<td>1.66 (42.1)</td>
<td>0.70 (17.9)</td>
</tr>
</tbody>
</table>

Inches

(mm)

L75 Lubricator Kits & Accessories

Bowl Kits –
Polyurethane (B) .................................................. BKL55B
Zinc (D) .................................................................. BKF55D
Zinc (W) Wraparound Sight Gauge ................................ BKF55W

Button Head Fill Fitting ......................................................... L606C14
(M14 male thread)

Drain Kits –
Manual Twist Drain .................................................. SA600Y7-1

Oil –
1 Gal. ........................................................................ F442002
12 Quart Case ......................................................... F442003
4 Gallon Case ......................................................... F442005

Face Mounting Bracket Kit (See Page A66) ............... SAR75Y57

Repair Kit –
Tamper-resistant Sight Dome (All) ......................... RFL100

Specifications

Bowl Capacity ....................................................... 3.8 Ounce
Port Threads ..................................................... 1/4, 3/8 & 1/2 Inch

Pressure & Temperature Ratings –
Polyurethane Bowl ........................................... 0 to 150 PSIG (0 to 10.2 bar)
40°F to 125°F (4.4°C to 52°C)

Zinc Bowl ..................................................... 0 to 300 PSIG (0 to 20.4 bar)
40°F to 150°F (4.4°C to 65.6°C)

Materials of Construction

Body ......................................................... Zinc
Bowls .................................................. Polyurethane
Metals (Zinc)
Drains ......................................................... Brass
Fill Fitting ................................................... Brass
Seals ........................................................ Nitrile

Suggested Lubricant .................................................. F442 Oil

Petroleum-based oil of 100 to 200 SUS viscosity at 100°F and an
aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS
CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR
SYNTHETIC OILS.)

Weight –
Polyurethane Bowl ........................................... 1.25 lb. (0.6 kg) / Unit
25 lb. (11.3 kg) / 20-Unit Master Pack
Zinc Bowl ..................................................... 1.50 lb. (0.7 kg) / Unit
30 lb. (13.6 kg) / 20-Unit Master Pack

Zinc Bowl w/ Sight Gauge ..................................... 1.60 lb. (0.7 kg) / Unit
3 lb. (1.5 kg) / 20-Unit Master Pack
L105 Lubricator

Features
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- For Applications Requiring Minimum Pressure Drop
- Transparent Polyurethane Bowl with Bowl Guard as Standard
- Metal Bowl with Wraparound Sight Gauge Optional
- Drain Standard on Metal Bowl and Metal Bowl with Sight Gauge
- Can be Filled While Unit is Under Pressure
- Precision Needle Valve Assures Repeatable Oil Delivery and Provides Simple Adjustment of Delivery Rate.
- Large Capacity Bowl
- High Flow: 1/2” - 110 SCFM
  3/4” - 125 SCFM

Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>BSPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2”</td>
<td>L105-04B</td>
<td>L105G04B</td>
</tr>
<tr>
<td>3/4”</td>
<td>L105-06B</td>
<td>L105G06B</td>
</tr>
<tr>
<td>Zinc Bowl / Sight Gauge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2”</td>
<td>L105-04W</td>
<td>L105G04W</td>
</tr>
<tr>
<td>3/4”</td>
<td>L105-06W</td>
<td>L105G06W</td>
</tr>
</tbody>
</table>

Bold Items are Most Popular.
For other models refer to ordering information below.

§ SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, and 5 PSIG Pressure Drop.

Ordering Information

L105 Series Lubricators 1/2 & 3/4 Inch Ports

Wraparound Sight Gauge Bowl
All QUBE filters, lubricators, and integrals are available with the Watts Wraparound Polyurethane Sight Gauge Bowl. These unique bowls provide the 360° visibility of a plastic bowl while maintaining the high strength and safety features of metal bowls. Polyurethane bowls with guards, and metal bowls, are also available.

BOLD ITEMS ARE MOST POPULAR.
Technical Specification – L105

L105 Lubricator Dimensions

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>A†</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F‡</th>
<th>F†</th>
<th>G</th>
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</thead>
<tbody>
<tr>
<td>L105-B</td>
<td>2.69</td>
<td>3.03</td>
<td>2.69</td>
<td>3.00</td>
<td>6.03</td>
<td>1.34</td>
<td>2.25</td>
<td>2.55</td>
<td>0.81</td>
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<tr>
<td></td>
<td>(68.4)</td>
<td>(77.0)</td>
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<td>(64.3)</td>
<td>(153.4)</td>
<td>(34.1)</td>
<td>(56.1)</td>
<td>(64.8)</td>
<td>(20.3)</td>
</tr>
<tr>
<td>L105-D</td>
<td>2.69</td>
<td>3.03</td>
<td>2.69</td>
<td>3.00</td>
<td>6.62</td>
<td>1.34</td>
<td>2.25</td>
<td>2.55</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>(68.4)</td>
<td>(77.0)</td>
<td>(68.4)</td>
<td>(64.3)</td>
<td>(168.2)</td>
<td>(34.1)</td>
<td>(56.1)</td>
<td>(64.8)</td>
<td>(20.3)</td>
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<tr>
<td>LF105-W</td>
<td>2.69</td>
<td>3.03</td>
<td>2.69</td>
<td>3.00</td>
<td>6.90</td>
<td>1.34</td>
<td>2.25</td>
<td>2.55</td>
<td>0.81</td>
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<td>(68.4)</td>
<td>(77.0)</td>
<td>(68.4)</td>
<td>(64.3)</td>
<td>(175.3)</td>
<td>(34.1)</td>
<td>(56.1)</td>
<td>(64.8)</td>
<td>(20.3)</td>
</tr>
</tbody>
</table>

Inches (mm)
* 3/8 and 1/2 inch ports
† 3/4 inch ports

L105 Lubricator Kits & Accessories

- Bowl Kits –
  Polyurethane (B) ............................................................... BKL105B
  Zinc (D) (with Drain) .......................................................... BKF105D
  Zinc (W) Wraparound Sight Gauge (with Drain) .............. BKF105W
- Button Head Fill Fitting (M14 Male Thread) .......... L606C14
- Drain Kits –
  Manual Twist Drain ............................................................. SA600Y7-1
- Oil –
  1 Gal. ................................................................................. F442002
  12 Quart Case ................................................................. F442003
  4 Gallon Case ................................................................. F442005
- Face Mounting Bracket Kit (See Page A66) .............. SAR105Y57
- Repair Kit –
  Tamper-resistant Sight Dome (All) ................................. RKL100

Specifications

- Bowl Capacity ................................................................. 8.5 Ounce
- Port Threads ................................................................. 1/2 & 3/4 Inch
- Pressure & Temperature Ratings –
  Polyurethane Bowl ........................................................... 0 to 150 PSIG (0 to 10.2 bar)
  40°F to 125°F (4.4°C to 52°C)
  Zinc Bowl ................................................................. 0 to 300 PSIG (0 to 20.4 bar)
  40°F to 150°F (4.4°C to 65.6°C)

Suggested Lubricant ........................................................ F442 Oil

Petroleum-based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F

(Do not use oils with additives, compounded oils containing solvents, graphite, detergents, or synthetic oils.)

Weight –

- Polyurethane Bowl ........................................................... 1.09 lb. (0.5 kg) / Unit
  10.7 lb. (4.9 kg) / 8-Unit Master Pack
- Zinc Bowl ................................................................. 1.53 lb. (0.7 kg) / Unit
  14.2 lb. (6.4 kg) / 8-Unit Master Pack
- Zinc Bowl W/ Sight Gauge ............................................ 1.71 lb. (0.8 kg) / Unit
  15.7 lb. (7.1 kg) / 8-Unit Master Pack

Materials of Construction

- Body .............................................................................. Aluminum
- Bowls ................................................................. Polyurethane
- Metal (Zinc)
- Drains ................................................................. Brass
- Fill Fitting ................................................................. Brass
- Seals ................................................................. Nitrile
**L255 Mist Lubricators – Hi-Flow**

**Features**
- Port Blocks (PB) Available to Provide 1-1/2” Port Extension to 1” Ported Bodies
- Proportional Oil Delivery Over a Wide Range of Air Flows
- Bowl Can be Filled While Air Line is Under Pressure
- Transparent Sight Dome for 360° Visibility
- All Hardware Necessary for Modular Connection to Other QUBE 255 Series is Included
- High Flow: 3/4” - 230 SCFM§
  1” - 250 SCFM§

**Distance Required To Remove All Bowls**

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT</th>
<th>Metal Bowl / Sight Gauge / Manual Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4”</td>
<td>L255-06W</td>
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</tr>
<tr>
<td>1”</td>
<td>L255-08W</td>
<td></td>
</tr>
</tbody>
</table>

**Bold Items are Most Popular.**
For other models refer to ordering information below.

§ SCFM = Standard Cubic Feet Per Minute at 90 PSIG Inlet, and 5 PSIG Pressure Drop.

**L255 Lubricator Dimensions**

<table>
<thead>
<tr>
<th>A</th>
<th>A (PB)</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.62 (92)</td>
<td>5.91 (150)</td>
<td>3.62 (92)</td>
<td>2.81 (71)</td>
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<tr>
<td>D</td>
<td>E</td>
<td>F</td>
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</tr>
<tr>
<td>9.00 (229)</td>
<td>11.81 (300)</td>
<td>4.92 (125)</td>
<td></td>
</tr>
</tbody>
</table>

**Ordering Information**

**L255** — **08** W **/**

- **Port Type**: NPT Thread (For BSPP threads, use Port Block kit)
- **Port Size**: 06 3/4” Port
- **Port Size**: 08 1” Port
- **Bowl**: W Aluminum Bowl with Sight Gauge
- **Engineering Change Designator**: Will be entered at factory.

**Bold Items are Most Popular.**
Technical Information

L255 Lubricator Kits & Accessories

Adjustment Knob ................................................................. P04121
Bowl Kits –
   Metal Bowl – Sight Gauge / Manual Drain .................. P3NKA00BSM
Drain Kit –
   Manual Drain ............................................................... PS512
Fill Cap Kit ................................................................. P3NKA00PL
Sight Dome Kit –
   Polycarbonate ............................................................ PS740
   Nylon ........................................................................ PS740N
Sight Gauge Kit .......................................................... P3NKA00PE
Oil –
   1 Gal. ................................................................. F442002
   12 Quart Case ........................................................ F442003
   4 Gallon Case ......................................................... F442005
Pressure Fill Adapter Kit ................................................. P3NKA00PK
Service Kit ................................................................. P3NKA00RL
Mounting Bracket Kit .................................................. P3NKA00MW
Port Block Kit (1-1/2" NPT Ports) .................................. P3NKB9BCL

Specifications

Bowl Capacity ................................................................. 18.0 Ounces
Minimum Flow for Lubrication .................................. 6.6 SCFM At 100 PSIG
Pressure & Temperature Rating ...................... 0 to 250 PSIG (0 to 17.2 bar) 32°F to 175°F (0°C to 80°C)
Suggested Lubricant ....................................................... F442 Oil
   Petroleum-based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F
   (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)
Weight –
   3/4" ................................................................. 3.5 lb. (1.6 kg)
   1" ........................................................................ 3.5 lb. (1.6 kg)

Materials of Construction

Body, Bowl ................................................................. Aluminum
Drains: Manual Drain .................................................. Plastic
Injector Meter Block & Base Assembly ..................... Plastic
Seals ................................................................. Nitrile
Sight Dome .......................................................... Polycarbonate
Sight Gauge ......................................................... Polyamide (Nylon)
## B35 Integral Filter / Regulator

### Features
- Compact Size Allows Greater Design Flexibility
- Nearly Double the Flow Capacity of Standard Miniature Filters; Reduces Costly Pressure Drop
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Piston Operated Regulator for High Flow and Low Pressure Drop
- Panel Mountable
- Excellent Water Removal Efficiency
- Unique Deflector Plate that Creates Swirling of the Air Stream Ensuring Maximum Water and Dirt Separation
- Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
- 20 Micron Filter Element Standard, 5 Micron Available
- Transparent Polyurethane Bowl Standard
- Metal Bowl with Wraparound Sight Gauge Optional
- Manual Drain as Standard, Optional Auto Pulse Drain
- Large Bowl Capacity
- High Flow: 1/8" & 1/4" - 35 SCFM

### Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

### Ordering Information

**B35 Integral Filter / Regulator Dimensions**

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
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<td>B35-01AH</td>
<td>B35G01AH</td>
<td>B35-01AHS</td>
<td>B35G01AHS</td>
<td>B35-01WH</td>
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<td>1/4&quot;</td>
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<td>B35G02AH</td>
<td>B35-02AHS</td>
<td>B35G02AHS</td>
<td>B35-02WH</td>
<td>B35G02WH</td>
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### B35 Integral Filter / Regulator Dimensions

<table>
<thead>
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<th>B35-A</th>
<th>B35-D</th>
<th>B35-W</th>
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<tbody>
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<tr>
<td>(40.6)</td>
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</tr>
</tbody>
</table>

### Catalog 0305-2

B35 Series (Revised 05-28-08)

### Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

### Ordering Information

**B35 Series**

<table>
<thead>
<tr>
<th>Port Threads</th>
<th>Port Size</th>
<th>Bowl</th>
<th>Element</th>
<th>Reduced Pressure Range</th>
<th>Options</th>
<th>Engineering Change Designator</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPT</td>
<td>01 1/8&quot;</td>
<td>A</td>
<td>G</td>
<td>A 0-25 PSIG</td>
<td>G</td>
<td>Will be entered at factory.</td>
</tr>
<tr>
<td>NPT</td>
<td>02 1/4&quot;</td>
<td>A</td>
<td>G</td>
<td>B 0-60 PSIG</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>G BSPP</td>
<td></td>
<td>D</td>
<td>5 Micron</td>
<td>C 0-125 PSIG</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>G BSPP</td>
<td></td>
<td>W</td>
<td>H 20 Micron</td>
<td></td>
<td>S</td>
<td></td>
</tr>
</tbody>
</table>

**Bold Items are Most Popular.**

For other models refer to ordering information below.

1. SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, 75 PSIG No Flow Secondary Setting, and 20 PSIG Pressure Drop with 20 Micron Element.
WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

B35 Integral Filter / Regulator
Kits & Accessories

Bowl Kits –
- Polyurethane (A) ...................................................... BKF35A
- Zinc (D) ................................................................. BKF35D
- Zinc (W) Wraparound Sight Gauge ........................... BKF35W

Cage Kits –
- Push / Pull Adjusting Knob Kit (A Range) ............... CKR35A
- Push / Pull Adjusting Knob Kit (B & C Range) ........... CKR35BC

Control Knob ............................................................ R35-0545P

Drain Kits –
- Manual Twist Drain ................................................ SA600Y7-1
- Piston Drain (Maximum Pressure - 175 PSIG) .......... PKF35
- Semi-Automatic “Overnight” Drain ......................... SA602A7

Filter Element Kits –
- 5 Micron (All) ....................................................... EK504VY
- 20 Micron (All) ....................................................... EK504Y

Gauges –
- 1-1/2’’ Dial Size, 1/8’’ Back Connection
  - 0 to 60 PSIG (0 to 4 bar) ...................................... K4515N18060
  - 1-1/2’’ Dial Size, 1/8’’ Back Connection
    - 0 to 160 PSIG (0 to 11 bar) ............................. K4515N18160

Panel Mounting Bracket Kit (Bonnet Threads) ........... SA161X57

Face Mounting Bracket Kit (See Page A47) ............... SAR35Y57

Panel Mount Nut –
- Plastic ................................................................. R05X51-P
- Aluminum ............................................................ R05X51-A

Repair Kits –
- Deflector, Element Retainer (All) ......................... RKF30
- Non-Relieving Piston, Valve Assembly ................. RKR30K
- Relieving Piston, Valve Assembly ......................... RKR30

---

Specifications

Bowl Capacity ..................................................... 1.5 Ounce
Gauge Ports (2) .................................................... 1/8 Inch
Port Threads ....................................................... 1/8, 1/4 Inch

Pressure & Temperature Ratings –
- Polyurethane Bowl ................................. 0 to 150 PSIG (0 to 10.2 bar)
  - 40°F to 125°F (4.4°C to 52°C)
- Zinc Bowl .................................................. 0 to 300 PSIG (0 to 20.4 bar)
  - With Piston Drain .......... 175 PSIG Max. Press. (11.9 bar)
    - 40°F to 150°F (4.4°C to 65.6°C)
- Zinc Bowl w/ Sight Gauge ........ 0 to 250 PSIG (0 to 17.2 bar)
  - With Piston Drain .......... 175 PSIG Max. Press. (11.9 bar)
    - 40°F to 150°F (4.4°C to 65.6°C)

Weight –
- Polyurethane Bowl .................. 0.78 lb. (0.4 kg) / Unit
  - 20.8 lb. (9.4 kg) / 24-Unit Master Pack
- Zinc Bowl .......................................................... 0.98 lb. (0.4 kg) / Unit
  - 25.6 lb. (11.6 kg) / 24-Unit Master Pack
- Zinc Bowl W/ Sight Gauge .................. 1.03 lb. (0.5 kg) / Unit
  - 26.8 lb. (12.2 kg) / 24-Unit Master Pack

Materials of Construction

Body ................................................................. Zinc
Bowls ............................................................... Polyurethane
Metal (Zinc)
Cage .............................................................. Acetal Plastic
Drains ............................................................... Brass
Filter Elements .................................................. Polyethylene
Seals ............................................................... Nitrile
B75 Integral Filter / Regulator

Features
- Compact Size Allows Greater Design Flexibility
- Connects to Other QUBE Units Using Just Screws & O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Diaphragm Operated Design with Balanced Poppet Design for Quick And Accurate Regulation
- Panel Mountable
- For Applications Requiring Minimum Pressure Drop
- Excellent Water Removal Efficiency
- Unique Deflector Plate that Creates Swirling of the Air Stream Ensuring Maximum Water and Dirt Separation
- Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
- 40 Micron Filter Element Standard, 5 Micron Available
- Transparent Polyurethane Bowl with Bowl Guard as Standard
- Metal Bowl with Wraparound Sight Gauge Optional
- Manual Drain as Standard, Optional Auto Float Drain
- Large Bowl Capacity
- High Flow: 1/4" - 40 SCFM
  3/8" - 60 SCFM
  1/2" - 80 SCFM

B75 Integral Filter / Regulator

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Manual Drain</th>
<th>Automatic Float Drain</th>
<th>Manual Drain</th>
<th>Automatic Float Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurethane Bowl / Plastic Guard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>B75-02BJC</td>
<td>B75G02BJC</td>
<td>B75G02BJCR</td>
<td>B75-02BJCR</td>
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<td>3/8&quot;</td>
<td>B75-03BJC</td>
<td>B75G03BJC</td>
<td>B75G03BJCR</td>
<td>B75-03BJCR</td>
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<tr>
<td>1/2&quot;</td>
<td>B75-04BJC</td>
<td>B75G04BJC</td>
<td>B75G04BJCR</td>
<td>B75-04BJCR</td>
</tr>
<tr>
<td>Zinc Bowl / Sight Gauge</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>B75-02WJC</td>
<td>B75G02WJC</td>
<td>B75G02WJCR</td>
<td>B75-02WJCR</td>
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<td>3/8&quot;</td>
<td>B75-03WJC</td>
<td>B75G03WJC</td>
<td>B75G03WJCR</td>
<td>B75-03WJCR</td>
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<tr>
<td>1/2&quot;</td>
<td>B75-04WJC</td>
<td>B75G04WJC</td>
<td>B75G04WJCR</td>
<td>B75-04WJCR</td>
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Bold Items are Most Popular.
For other models refer to ordering information below.

Ordering Information

<table>
<thead>
<tr>
<th>Port Threads</th>
<th>Port Size</th>
<th>Bowl</th>
<th>Element</th>
<th>Reduced Pressure Range</th>
<th>Options</th>
<th>Engineering Change Designator</th>
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</thead>
<tbody>
<tr>
<td>NPT G BSPP</td>
<td>02 1/4&quot;</td>
<td>B Transparent with Plastic Bowl Guard</td>
<td>G 5 Micron</td>
<td>A 0-25 PSIG</td>
<td>G Gauge</td>
<td>Will be entered at factory.</td>
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<tr>
<td></td>
<td>03 3/8&quot;</td>
<td>D Metal without Sight Gauge</td>
<td>J 40 Micron</td>
<td>B 0-60 PSIG</td>
<td>K Non-relieving</td>
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<tr>
<td></td>
<td>04 1/2&quot;</td>
<td>W Metal with Wraparound Sight Gauge</td>
<td></td>
<td>C 0-125 PSIG</td>
<td>P Panel Mount Nut</td>
<td></td>
</tr>
</tbody>
</table>

BOLD ITEMS ARE MOST POPULAR.
Technical Information

**B75 Integral Filter / Regulator Kits & Accessories**

**Bowl Kits**
- Polyurethane (B).................................BKF55B
- Zinc (D)........................................BKFK55D
- Zinc (W) Wraparound Sight Gauge ..........BKFK55W

**Cage Kits**
- Glass-Filled Acetal Plastic .............CKR75
- Tamperproof .......................................CKR75T

**Control Knob**
- R35-0545P

**Drain Kits**
- Manual Twist Drain ..................................SA600Y7-1
- Internal Auto (Max. Pressure: 175 PSIG) (B & D).............SA602MD
- Internal Auto (Max. Pressure: 175 PSIG) (W).............SAF105MD
- Semi-Automatic “Overnight” Drain ..........SA602A7
  (Drains automatically under zero pressure)

**Filter Element Kits**
- 5 Micron (All).................................EK55G
- 40 Micron (All)....................................EK55J

**Gauges**
- 1-1/2” Dial Size, 1/8” Back Connection
  - 0 to 60 PSIG (0 to 4 bar) ..................K4515N18060
  - 1-1/2” Dial Size, 1/8” Back Connection
  - 0 to 160 PSIG (0 to 11 bar) ..............K4515N18160

**Panel Mounting Bracket Kit** ..............SA161X57

**Face Mounting Bracket Kit (See Page A49)** ...........SAR75Y57

**Panel Mount Nut**
- Plastic...........................................R05X51-P
- Aluminum.........................................R05X51-A

**Repair Kits**
- Automatic Float Drain (Maximum Pressure - 175 PSIG) ....RK602MD
- Deflector, Element Retainer (All) ...............RKF55
- Non-Relieving Diaphragm, Valve Assembly ..........RKR75K
- Relieving Diaphragm, Valve Assembly ...............RKR75

---

**Specifications**

- **Bowl Capacity** .........................3.8 Ounce
- **Gauge Ports (2)** ....................1/8 Inch
- **Port Threads** ............................1/4, 3/8 & 1/2 Inch

**Pressure & Temperature Ratings**

- **Polyurethane Bowl**
  - 0 to 150 PSIG (0 to 10.2 bar)
  - 40°F to 125°F (4.4°C to 52°C)
- **Zinc Bowl**
  - 0 to 300 PSIG (0 to 20.4 bar)
  - 40°F to 150°F (4.4°C to 65.6°C)
  - With Automatic Float Drain ..........175 PSIG Max. Press. (11.9 bar)
    - 40°F to 125°F (4.4°C to 52°C)
- **Zinc Bowl w/ Sight Gauge**
  - 0 to 250 PSIG (0 to 17.2 bar)
  - 40°F to 150°F (4.4°C to 65.6°C)
  - With Automatic Float Drain ..........175 PSIG Max. Press. (11.9 bar)
    - 40°F to 125°F (4.4°C to 52°C)

**Weight**

- **Polyurethane Bowl** .....................1.50 lb. (0.7 kg) / Unit
  - 18 lb. (8.2 kg) / 12-Unit Master Pack
- **Zinc Bowl**
  - 1.75 lb. (0.8 kg) / Unit
  - 21 lb. (9.5 kg) / 12-Unit Master Pack
- **Zinc Bowl W/ Sight Gauge**
  - 1.85 lb. (0.8 kg) / Unit
  - 22 lb. (10 kg) / 12-Unit Master Pack

**Materials of Construction**

- **Body** .......................Zinc
- **Bowls** ........................................Polyurethane
- **Metal (Zinc)**
- **Cage** ........................................Glass-Filled Acetal Plastic
- **Drains** ........................................Brass
- **Filter Elements** ..........................Polyethylene
- **Seals** ........................................Nitrile
B105 Integral Filter / Regulator

Features
- Connects to Other QUBE Units Using Just Screws & O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Diaphragm Operated Design with Balanced Poppet Design for Quick And Accurate Regulation
- Panel Mountable
- For Applications Requiring Minimum Pressure Drop
- Excellent Water Removal Efficiency
- Unique Deflector Plate that Creates Swirling of the Air Stream Ensuring Maximum Water and Dirt Separation
- Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
- 40 Micron Filter Element Standard, 5 Micron Available
- Transparent Polyurethane Bowl with Bowl Guard as Standard
- Metal Bowl with Wraparound Sight Gauge Optional
- Manual Drain as Standard, Optional Auto Float Drain
- Large Bowl Capacity
- High Flow: 1/2" - 150 SCFM\(^{\text{§}}\)
- 3/4" - 150 SCFM\(^{\text{§}}\)

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Manual Twist Drain</th>
<th>Automatic Float Drain</th>
<th>Manual Twist Drain</th>
<th>Automatic Float Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>B105-04BJC</td>
<td>B105-04BJCR</td>
<td>B105G04BJC</td>
<td>B105G04BJCR</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>B105-06BJC</td>
<td>B105-06BJCR</td>
<td>B105G06BJC</td>
<td>B105G06BJCR</td>
</tr>
</tbody>
</table>

Zinc Bowl / Sight Gauge
- 1/2" | B105-04WJC | B105-04WJCR |
- 3/4" | B105-06WJC | B105-06WJCR |

Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

<table>
<thead>
<tr>
<th>Port Threads</th>
<th>Port Size</th>
<th>Bowl</th>
<th>Element</th>
<th>Reduced Pressure Range</th>
<th>Options</th>
<th>Engineering Change Designator</th>
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</thead>
<tbody>
<tr>
<td>NPT</td>
<td>1/2&quot;</td>
<td>B</td>
<td>Transparent with Plastic Bowl Guard</td>
<td>A 0-25 PSIG</td>
<td>G Gauge</td>
<td>Will be entered at factory.</td>
</tr>
<tr>
<td>G BSPP</td>
<td>3/4&quot;</td>
<td>D</td>
<td>Metal without Sight Gauge</td>
<td>B 0-60 PSIG</td>
<td>K Non-relieving</td>
<td>*B &amp; D Bowls only</td>
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<td></td>
<td></td>
<td>W</td>
<td>Metal with Wraparound Sight Gauge</td>
<td>C 0-125 PSIG</td>
<td>P Panel Mount Nut</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>D 0-250 PSIG</td>
<td>R Automatic Float Drain</td>
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<td></td>
<td>U* Overnight Drain (Dump Valve)</td>
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</table>

Inches (mm) for panel mounting.

B105 Integral Filter / Regulator Dimensions

<table>
<thead>
<tr>
<th>B105-B, B105-D</th>
<th>A*</th>
<th>A†</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F*</th>
<th>F†</th>
<th>G</th>
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<td>3.03</td>
<td>2.69</td>
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<td>2.27</td>
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<td></td>
<td>(68.2)</td>
<td>(77.0)</td>
<td>(68.2)</td>
<td>(92.8)</td>
<td>(169)</td>
<td>(34.1)</td>
<td>(57.5)</td>
<td>(64.8)</td>
<td>(17.9)</td>
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<td>B105-W</td>
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<td>3.03</td>
<td>2.69</td>
<td>3.66</td>
<td>6.78</td>
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<td>2.27</td>
<td>2.55</td>
<td>0.70</td>
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<td>(68.2)</td>
<td>(77.0)</td>
<td>(68.2)</td>
<td>(92.8)</td>
<td>(172.2)</td>
<td>(34.1)</td>
<td>(57.5)</td>
<td>(64.8)</td>
<td>(17.9)</td>
</tr>
</tbody>
</table>

BOLD ITEMS ARE MOST POPULAR.

B105 Series
1/2 & 3/4 Inch Ports

A42
Pneumatic Division
Richland, Michigan
www.wattsfluidair.com
Technical Information

⚠️ WARNING
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

B105 Integral Filter / Regulator

Kits & Accessories

- Bowl Kits –
  - Polyurethane (B) .......................................................... BKF105B
  - Zinc (D) ................................................................. BKF105D
  - Zinc (W) Wraparound Sight Gauge .......................... BKF105W

- Cage Kit –
  - Spring Cage Assembly with Knob .......................... CKR105

- Control Knob .......................................................... R105-0542P

- Drain Kits –
  - Manual Twist Drain ........................................ SA600Y7-1
  - Internal Auto (Max. Pressure: 175 PSIG) (B & D) ... SA602MD
  - Internal Auto (Max. Pressure: 175 PSIG) (W) ........... SA105MD
  - Semi-Automatic “Overnight” Drain ...................... SA602A7
    (Drains automatically under zero pressure)

- Filter Element Kits –
  - 5 Micron (All) ..................................................... EK100G
  - 40 Micron (All) .................................................... EK100J

- Gauges –
  - 2" Dial Size, 1/4" Back Connection
    - 0 to 60 PSIG (0 to 4 bar) ................................ K4520N14060
    - 2" Dial Size, 1/4" Back Connection
    - 0 to 160 PSIG (0 to 11 bar) ........................... K4520N14160
    - 2" Dial Size, 1/4" Back Connection
    - 0 to 300 PSIG (0 to 11 bar) ........................... K4520N14300

- Panel Mounting Bracket Kit (Bonnet Threads) .......... SAR10Y57

- Face Mounting Bracket Kit (See Page A51) ........... SAR105Y57

- Panel Mount Nut –
  - Plastic .......................................................... R10X51-P
  - Aluminum ...................................................... R10X51-A

- Repair Kits –
  - Auto Float Drain (Maximum Pressure - 175 PSIG) .... RK602MD
  - Deflector, Element Retainer (All) ......................... RKF100
  - Non-Relieving Diaphragm, Valve Assembly ......... RK105K
  - Relieving Diaphragm, Valve Assembly ............. RK106

Specifications

- Bowl Capacity ....................................................... 8.5 Ounce
- Gauge Ports (2) .................................................. 1/4 Inch
- Port Threads .................................................... 1/2 & 3/4 Inch

Pressure & Temperature Ratings –

- Polyurethane Bowl ..................................... 0 to 150 PSIG (0 to 10.2 bar)
  - 40°F to 125°F (4.4°C to 52°C)
- Zinc Bowl .................................................. 0 to 300 PSIG (0 to 20.4 bar)
  - 40°F to 150°F (4.4°C to 65.6°C)
- With Automatic Float Drain ......................... 175 PSIG Max. Press. (11.9 bar)
  - 40°F to 125°F (4.4°C to 52°C)
- Zinc Bowl w/ Sight Gauge .......................... 0 to 250 PSIG (0 to 17.2 bar)
  - 40°F to 150°F (4.4°C to 65.6°C)
- With Automatic Float Drain ......................... 175 PSIG Max. Press. (11.9 bar)
  - 40°F to 125°F (4.4°C to 52°C)

Weight –

- Polyurethane Bowl .................................. 2.21 lb. (1.0 kg) / Unit
  - 19.7 lb. (8.9 kg) / 8-Unit Master Pack
- Zinc Bowl .................................................. 2.66 lb. (1.2 kg) / Unit
  - 23.3 lb. (10.6 kg) / 8-Unit Master Pack
- Zinc Bowl W/ Sight Gauge ......................... 2.86 lb. (1.3 kg) / Unit
  - 24.9 lb. (11.3 kg) / 8-Unit Master Pack

Materials of Construction

- Body .......................................................... Aluminum
- Bowls ......................................................... Polyurethane
- Metal (Zinc)
- Cage ......................................................... Glass Filled Acetal
- Drains ......................................................... Brass
- Filter Elements ............................................. Polyethylene
- Knob ......................................................... Plastic
- Seals ......................................................... Nitrile
B255 Integral Filter / Regulator – Hi-Flow

Features
- Port Blocks (PB) Available to Provide 1-1/2" Port Extension to 1" Ported Bodies
- Excellent Water Removal Efficiency
- Metal Bowl with Sight Gauge
- Large Filter Element Surface Guarantees Low Pressure Drop and Increased Element Life
- Manual Drain as Standard, Optional Auto Drain
- Self Relieving Feature Plus Balanced Poppet Provides Quick Response and Accurate Pressure Regulation
- Solid Control Piston for Extended Life
- High Flow: 3/4" - 270 SCFM§
  1" - 270 SCFM§

**Bold Items are Most Popular.**
For other models refer to ordering information below.

<table>
<thead>
<tr>
<th>Port Size</th>
<th>NPT Metal Bowl / Sight Gauge / Manual Drain</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot;</td>
<td>B255-06WJC</td>
</tr>
<tr>
<td>1&quot;</td>
<td>B255-08WJC</td>
</tr>
</tbody>
</table>

SCFM = Standard Cubic Feet Per Minute at 90 PSIG Inlet, and 10 PSIG Pressure Drop with 40 Micron Element.

**Ordering Information**

```
B255 — 08 W J C /**
```

**Thread Type**
- NPT Thread (For BSPP Threads, use Port Block kit)

**Port Size**
- 06 3/4" Port
- 08 1" Port

**Bowl**
- W Aluminum Bowl with Sight Gauge

**Element**
- J 40 Micron

**Pressure Range**
- C 0 to 125 PSI

**Engineering Change Designator**
- Will be entered at factory.

Internal automatic drains must be purchased separately as PS506.

**Bold Items are Most Popular.**
**Technical Specifications – B255**

**QUBE 255 Series**

**Integral Filter / Regulator**

---

### Technical Information

#### Relief and Flow Characteristics

<table>
<thead>
<tr>
<th>Pressure Drop - bar</th>
<th>Flow - dm^3/s</th>
<th>Flow - SCFM</th>
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</thead>
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### B255 Integral Filter / Regulator

**Kits & Accessories**

**Bowl Kits:**
- Metal Bowl – Sight Gauge / Internal Auto Drain: P3NKA00BSA
- Sight Gauge / Manual Drain: P3NKA00BSM

**Drain Kit:**
- Internal Auto Drain: PS506
- Manual Drain: PS512

**Filter Element Kits:**
- 40 Micron: P3NKA00ESG
- 5 Micron: P3NKA00ESE
- Adsorber: P3NKA00ESA

**Gauges:**
- 60 PSIG (0 to 4.1 bar): K4520N14060
- 160 PSIG (0 to 11.0 bar): K4520N14160
- 300 PSIG (0 to 20.7 bar): K4520N14300

**Service Kit:**
- Relieving: P3NKA00RR
- Non-Releasing: P3NKA00RN

**Sight Gauge Kit:**
- P3NKA00PE

**Springs:**
- 1 to 60 PSIG Range: C10A1304
- 2 to 125 PSIG Range: C10A1308
- 3 to 250 PSIG Range: C10A1317

**Mounting Bracket Kit:**
- P3NKA00MW

**Port Block Kit (1-1/2” NPT Ports):**
- P3NKB9BCL

---

### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Values</th>
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<tbody>
<tr>
<td>Bowl Capacity</td>
<td>18.0 Ounces</td>
</tr>
<tr>
<td>Port Threads</td>
<td>3/4&quot;, 1&quot;</td>
</tr>
<tr>
<td>Pressure &amp; Temperature Rating</td>
<td>0 to 250 PSIG (0 to 17 bar) 32°F to 175°F (0°C to 80°C)</td>
</tr>
<tr>
<td>Internal Auto Drain</td>
<td>10 to 250 PSIG (0.7 to 17 bar) at 125°F (52°C) or less</td>
</tr>
<tr>
<td>Sump Capacity</td>
<td>6.8 Ounces</td>
</tr>
<tr>
<td>Weight (1-1/2&quot; NPT Ports)</td>
<td>5.3 lb. (2.4 kg)</td>
</tr>
<tr>
<td>Weight (1&quot; NPT Ports)</td>
<td>5.3 lb. (2.4 kg)</td>
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</table>

### Materials of Construction

- **Adjusting Stem:** Steel
- **Body, Bonnet, Bowl:** Aluminum
- **Drain:** Plastic
- **Filter Elements:**
  - 40 Micron (Standard): Plastic
  - 5 Micron (Optional): Plastic
  - Adsorber (Optional): Activated Charcoal
- **Knob:** Plastic
- **Piston:** Plastic
- **Seals:** Nitrile
- **Sight Gauge:** Polyamide (Nylon)
- **Springs – Poppet & Control:** Steel
C35 Combination Units

Two Unit Combo

• 20 Micron Filter Element
• Manual Twist Drain
• Relieving Regulator
• 125 PSI (8.6 bar)
• Gauge Included

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Model Numbers</th>
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<tbody>
<tr>
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<td>C35-01BLAHCA</td>
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<td>1/4&quot;</td>
<td>C35-02BLAHCA</td>
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For other models refer to ordering information on next page.

Three Unit Combo

• 20 Micron Filter Element
• Manual Twist Drain
• Relieving Regulator
• 125 PSI (8.6 bar)
• Gauge Included

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Model Numbers</th>
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<tr>
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<td>C35-02FRLAHCA</td>
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For other models refer to ordering information on next page.
Ordering Information

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<th>Port Threads</th>
<th>Port Size</th>
<th>Combo Type</th>
<th>Filter Bowl</th>
<th>Element</th>
<th>Lubricator Bowl</th>
<th>Drains</th>
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</thead>
<tbody>
<tr>
<td>35</td>
<td>NPT</td>
<td>BL 2-Unit</td>
<td>A Transparent</td>
<td>D Metal without Sight Gauge</td>
<td>G 5 Micron</td>
<td>A Transparent</td>
<td>S Piston Drain</td>
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<tr>
<td></td>
<td>G BSPP</td>
<td>FRL 3-Unit</td>
<td>W Metal with Wraparound Sight Gauge</td>
<td>H 20 Micron</td>
<td></td>
<td>D Metal without Sight Gauge</td>
<td>X9 Manual</td>
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</table>

BOLD ITEMS ARE MOST POPULAR.

**WARNING**

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

**CAUTION:**

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

C35 Combination Units
Kits & Accessories
Mounting Bracket Kit (2 Required) ................................SAR35Y57
See individual component sections for other kits and accessories.

Bracket Installation

![Bracket Installation Diagram]

QUBE C35 Series
Combination Units

Catalog 0305-2
Model Number Index – C35

Pneumatic Division
Richland, Michigan
www.wattsfluidair.com
### C75 Combination Units

#### Two Unit Combo

- 40 Micron Filter Element
- Manual Twist Drain
- Relieving Regulator
- 125 PSI (8.6 bar)
- Gauge Included

<table>
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<td>C75-02BLBJCB</td>
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<td>C75-03BLBJCB</td>
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<td>1/2&quot;</td>
<td>C75-04BLBJCB</td>
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For other models refer to ordering information on next page.

#### Three Unit Combo

- 40 Micron Filter Element
- Manual Twist Drain
- Relieving Regulator
- 125 PSI (8.6 bar)
- Gauge Included

<table>
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<tr>
<th>Port Size</th>
<th>Model Numbers</th>
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<td>1/4&quot;</td>
<td>C75-02FRLBJCB</td>
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<tr>
<td>3/8&quot;</td>
<td>C75-03FRLBJCB</td>
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<tr>
<td>1/2&quot;</td>
<td>C75-04FRLBJCB</td>
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For other models refer to ordering information on next page.

### C75-BL - B & D Bowls

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<th>Model</th>
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<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td>C75</td>
<td>4.19</td>
<td>7.97</td>
<td>5.19</td>
<td>3.44</td>
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<td></td>
<td>(106.4)</td>
<td>(202.4)</td>
<td>(131.8)</td>
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### C75-BL - W Bowls

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<th>C</th>
<th>D</th>
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<td>C75</td>
<td>4.19</td>
<td>8.23</td>
<td>5.44</td>
<td>3.44</td>
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<tr>
<td></td>
<td>(106.4)</td>
<td>(208.9)</td>
<td>(138.2)</td>
<td>(87.3)</td>
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Inches (mm)
Pneumatic Division
Richland, Michigan
www.wattsfluidair.com

A9

Series
75

Port Threads
NPT
G BSPP

Port Size
02 1/4"
03 3/8"
04 1/2"

Combo Type
BL 2-Unit
FRL 3-Unit

Filter Bowl
B Transparent with Plastic Bowl Guard
D Metal without Sight Gauge
W Metal with Wraparound Sight Gauge

Element
G 5 Micron
J 40 Micron

Lubricator Bowl
B Transparent with Plastic Bowl Guard
D Metal without Sight Gauge
W Metal with Wraparound Sight Gauge

Reduced Pressure Range
A 0-25 PSIG
B 0-60 PSIG
C 0-125 PSIG

Drains
R Automatic Float Drain
X9 Manual Twist Drain on Plastic Bowl (Lubricator)

Ordering Information

BOLD ITEMS ARE MOST POPULAR.

⚠️ WARNING
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.

⚠️ CAUTION:
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

C75 Combination Units
Kits & Accessories

Mounting Bracket Kit (2 Required) ...................... SAR75Y57
See individual component sections for other kits and accessories.

Bracket Installation
C105 Combination Units

Two Unit Combo

- 40 Micron Filter Element
- Manual Twist Drain
- Relieving Regulator
- 125 PSI (8.6 bar)
- Gauge Included

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Model Numbers</th>
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<tbody>
<tr>
<td>1/2&quot;</td>
<td>C105-04BLBJCB</td>
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<tr>
<td>3/4&quot;</td>
<td>C105-06BLBJCB</td>
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For other models refer to ordering information on next page.

Three Unit Combo

- 40 Micron Filter Element
- Manual Twist Drain
- Relieving Regulator
- 125 PSI (8.6 bar)
- Gauge Included

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Model Numbers</th>
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<tbody>
<tr>
<td>1/2&quot;</td>
<td>C105-04FRLBJCB</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>C105-06FRLBJCB</td>
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For other models refer to ordering information on next page.
**Ordering Information**

<table>
<thead>
<tr>
<th>Series</th>
<th>Port Threads</th>
<th>Port Size</th>
<th>Combo Type</th>
<th>Filter Bowl</th>
<th>Element</th>
<th>Lubricator Bowl</th>
<th>Drains</th>
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</thead>
<tbody>
<tr>
<td>105</td>
<td>NPT</td>
<td>BL 04 1/2&quot;</td>
<td>BL 2-Unit</td>
<td>B Transparent with Plastic Bowl Guard</td>
<td>G 5 Micron</td>
<td>B Transparent with Plastic Bowl Guard</td>
<td>R Automatic Float Drain</td>
</tr>
<tr>
<td></td>
<td>G BSPP</td>
<td>06 3/4&quot;</td>
<td>FRL 3-Unit</td>
<td>D Metal without Sight Gauge</td>
<td>J 40 Micron</td>
<td>D Metal without Sight Gauge</td>
<td>X9 Manual Twist Drain on Plastic Bowl (Lubricator)</td>
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</tbody>
</table>

**Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.**

**Always Set Regulator Pressure**

**WARNING**

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed maximum primary pressure rating.

**Polyurethane Bowls and Sight Gauges Offer Improved Chemical Compatibility.**

**Bracket Installation**

See individual component sections for other kits and accessories.
C255 Combination Units

Two-Unit Combo

- Gauge Included
- Manual Twist Drain
- Relieving Regulator
- 40 Micron Filter Element
- 125 PSI (8.6 bar)

<table>
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<th>Series</th>
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<tbody>
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<td>C255-08BLWJCW</td>
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For other models, refer to Ordering Information on next page.

Three Unit Combo

- Gauge Included
- Manual Twist Drain
- Relieving Regulator
- 40 Micron Filter Element
- 125 PSI (8.6 bar)

<table>
<thead>
<tr>
<th>Series</th>
<th>Port</th>
<th>Model Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>C255</td>
<td>3/4&quot;</td>
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</tr>
<tr>
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<td>1&quot;</td>
<td>C255-08FRLWJCW</td>
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</tbody>
</table>

For other models, refer to Ordering Information on next page.
Ordering Information

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For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.
C255 Combination Accessories

(See individual component sections for other kits and accessories.)

Mounting Brackets
P3NKA00MW

For 1-1/2" BSPP Port Block with E02 Fitting Application, use Mounting Bracket Kit P3NKA0BMW

Replacement Body Covers
P3NKA00PM

Each Kit contains two covers. All units are shipped with body covers.

For modular combinations, one side has a groove and the mating side is flat. Use the o-ring seal provided in the groove. For some modular combinations, both surfaces may have grooves. In those applications, use o-ring in one groove and square seal provided in the other.

<table>
<thead>
<tr>
<th>Port Block Kits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot;</td>
</tr>
<tr>
<td>NPT</td>
</tr>
<tr>
<td>BSPP</td>
</tr>
</tbody>
</table>

Modular Combinations:
| NPT | P3NKB96CL | P3NKB98CL | P3NKB9BCL |
| BSPP | P3NKB16CL | P3NKB18CL | P3NKB1BCL |

Port Block Kits allow units to be installed or removed as modular components. Each Kit includes all the necessary pieces to make two port connections.
**SV Shut-off Valve**

**Features**
- Threaded Ports Allows Use In-line or with Other QUBE Modular FRL Components
- Accepts Customer Supplied Standard Single Padlock or Safety Lock for Multiple Lockout
- Conforms to OSHA Standard 29 CFR Part 10
- 3-Port, 2-Position Shutoff Valve Relieves Downstream Pressure when Closed
- SV Valves Can be Locked in the Closed Position Only
- Maximum Pressure: 300 PSIG

<table>
<thead>
<tr>
<th>Port Size</th>
<th>SV35 Part Number</th>
<th>SV75 Part Number</th>
<th>SV105 Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8</td>
<td>SV35-01</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1/4</td>
<td>SV35-02</td>
<td>SV75-02</td>
<td>—</td>
</tr>
<tr>
<td>3/8</td>
<td>—</td>
<td>SV75-03</td>
<td>—</td>
</tr>
<tr>
<td>1/2</td>
<td>—</td>
<td>SV75-04</td>
<td>SV105-04</td>
</tr>
<tr>
<td>3/4</td>
<td>—</td>
<td>—</td>
<td>SV105-06</td>
</tr>
</tbody>
</table>

Kit Includes: (2) Machine Screws & (2) O-rings for mounting.

**End Plates**

**Features**
- Design Allows Removal or Installation of Basic Components without Direct Pipe Connections to the Components
- Each Series has End Plates One Port Size Larger than the Basic Units

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Type 0731 Screws</th>
<th>Contains</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>PK3500-**</td>
<td>0 1 0 0</td>
<td>O-Rings</td>
<td>Shut-Off</td>
</tr>
<tr>
<td>PK3510-**</td>
<td>1 1 2 1</td>
<td>Filter or Lubricator</td>
<td>R, B, FRL, BL with Shut-off</td>
</tr>
<tr>
<td>PK3520-**</td>
<td>1 — 2 1</td>
<td>R, B, FRL, BL</td>
<td>with Shut-off</td>
</tr>
<tr>
<td>PK3530-**</td>
<td>2 — 4 2</td>
<td>R, B, FRL, BL</td>
<td></td>
</tr>
<tr>
<td>PK7500-**</td>
<td>0 1 0 0</td>
<td>Shutoff</td>
<td></td>
</tr>
<tr>
<td>PK7510-**</td>
<td>1 1 2 1</td>
<td>Filter or Lubricator</td>
<td>R, B, FRL, BL with Shut-off</td>
</tr>
<tr>
<td>PK7520-**</td>
<td>1 — 2 1</td>
<td>R, B, FRL, BL</td>
<td>with Shut-off</td>
</tr>
<tr>
<td>PK7530-**</td>
<td>2 — 4 2</td>
<td>R, B, FRL, BL</td>
<td></td>
</tr>
<tr>
<td>PK1050-**</td>
<td>0 1 0 0</td>
<td>Shutoff</td>
<td></td>
</tr>
<tr>
<td>PK1051-**</td>
<td>1 1 2 1</td>
<td>Filter or Lubricator</td>
<td>R, B, FRL, BL with Shut-off</td>
</tr>
<tr>
<td>PK1052-**</td>
<td>1 — 2 1</td>
<td>R, B, FRL, BL</td>
<td>with Shut-off</td>
</tr>
<tr>
<td>PK1053-**</td>
<td>2 — 4 2</td>
<td>R, B, FRL, BL</td>
<td></td>
</tr>
</tbody>
</table>

**Series**

<table>
<thead>
<tr>
<th>Series</th>
<th>Type 0731</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>0731</td>
<td>1.59 (40.5)</td>
<td>1.59 (40.5)</td>
<td>0.90 (22.9)</td>
<td>0.17 (4.4)</td>
<td>—</td>
</tr>
<tr>
<td>35</td>
<td>0732</td>
<td>1.59 (40.5)</td>
<td>1.59 (40.5)</td>
<td>0.90 (22.9)</td>
<td>—</td>
<td>#8-32UNC-2B</td>
</tr>
<tr>
<td>75</td>
<td>0731</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>0.70 (17.9)</td>
<td>0.22 (5.6)</td>
<td>—</td>
</tr>
<tr>
<td>75</td>
<td>0732</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>0.70 (17.9)</td>
<td>—</td>
<td>#10-32UNF-2B</td>
</tr>
<tr>
<td>105</td>
<td>0731</td>
<td>2.69 (68.3)</td>
<td>2.69 (68.3)</td>
<td>1.00 (25.4)</td>
<td>0.27 (6.8)</td>
<td>—</td>
</tr>
<tr>
<td>105</td>
<td>0732</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>1.00 (25.4)</td>
<td>—</td>
<td>1/4-20UNC-2B</td>
</tr>
</tbody>
</table>

**Inches (mm)**

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Pneumatic Division
Richland, Michigan
www.wattsfluidair.com
### 105 Series Porting Blocks

**Features**

- Designed to fit within any 105 Series combination, providing two 3/8” branch ports

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Type 0733</th>
<th>Type 0734</th>
<th>Screws</th>
<th>Contains</th>
</tr>
</thead>
<tbody>
<tr>
<td>PK1054</td>
<td>1</td>
<td>—</td>
<td>2 (Long)</td>
<td>1 Between Filter &amp; Reg.; Reg. &amp; Lub.; End Plate &amp; Filter; Lub. &amp; End Plate</td>
</tr>
<tr>
<td>PK1055</td>
<td>—</td>
<td>1</td>
<td>4 (Short)</td>
<td>2 Between Filter &amp; Coalescer; Filter &amp; Lubricator</td>
</tr>
</tbody>
</table>

### 35 & 75 Series Branch Blocks

**Features**

- Blocks function as end plates with 1/8” NPT branch lines available top and bottom
- Also used in conjunction with direction plates and regulators to provide outlets for gauges

<table>
<thead>
<tr>
<th>Part Number</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB35-1-1</td>
<td>1.61 (40.9)</td>
<td>1.61 (40.9)</td>
<td>0.90 (22.9)</td>
<td></td>
</tr>
<tr>
<td>BB35-2-1</td>
<td>1.61 (40.9)</td>
<td>1.61 (40.9)</td>
<td>0.90 (22.9)</td>
<td></td>
</tr>
<tr>
<td>BB75-2-1</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>0.94 (23.9)</td>
<td></td>
</tr>
<tr>
<td>BB75-3-1</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>0.94 (23.9)</td>
<td></td>
</tr>
<tr>
<td>BB75-3-2</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>0.94 (23.9)</td>
<td></td>
</tr>
</tbody>
</table>
Direction Plates

Features

• Designed to Allow 90° Rotation of QUBE Components Allowing Manifolding of Units and Resulting in Great Space and Cost Savings
• Also Used to Mount Units from Different Series to One Another

Application

<table>
<thead>
<tr>
<th>Part Number</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>DP35</td>
<td>0.20 (5.1)</td>
<td>1.59 (40.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DP75</td>
<td>0.30 (7.6)</td>
<td>2.00 (50.8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DP105</td>
<td>0.34 (8.6)</td>
<td>2.69 (68.3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Diverter Blocks

Features

• Designed to Mount in a Variety of Configurations with the Capability of having Branch Line Components Mounted Directly, Giving Multiple Air Lines with Minimal Pressure Drop
• Use Untapped Blocks within Components, Either at the Beginning or End of System

Application

<table>
<thead>
<tr>
<th>Part Number</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>DK3510-3-2</td>
<td>1.93 (49)</td>
<td>1.69 (42.9)</td>
<td>1.69 (42.9)</td>
<td>3/8&quot; NPT</td>
<td>1/4&quot; NPT</td>
</tr>
<tr>
<td>DK3510</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>N/A</td>
<td>1/4&quot; NPT</td>
</tr>
<tr>
<td>DK7510-3-2</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>3/8&quot; NPT</td>
<td>1/4&quot; NPT</td>
</tr>
<tr>
<td>DK7510-3-3</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>2.00 (50.8)</td>
<td>3/8&quot; NPT</td>
<td>3/8&quot; NPT</td>
</tr>
<tr>
<td>DK1051-6-4</td>
<td>2.75 (69.9)</td>
<td>2.69 (68.3)</td>
<td>2.69 (68.3)</td>
<td>3/4&quot; NPT</td>
<td>1/2&quot; NPT</td>
</tr>
</tbody>
</table>
SC75 & SC105 Series Solenoid Soft Start / Quick Dump Valves

Features

- Connects to Other QUBE Units Using Just Screws and O-Rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Combines Soft Start and Quick Dump Valve in the Same Body
- Unit is Installed Downstream of Lubricator (If Used)
- Large Flow Capacities up to 4.2 Cv
- Inline or Modular Mounting
- Soft Start Flow Easily Adjusted

Operation

When the valve is installed into the pneumatic system, and pilot operator receives no signal, the air is blocked at Port 1. When a pilot signal is received at pilot operator, the valve shifts, closing the connection between Ports 2 and 3. At the same time, air flow begins between Ports 1 and a slow rate controlled by the needle valve, located on the top of the valve. When the downstream pressure reaches approximately 60% of the supply pressure, the main valve spool opens allowing full flow through the valve into the system. If pilot signal or system pressure is lost, the valve returns to its initial state, venting the downstream pressure through Port 3.

| SC75-03M  | 3/8" | 4.1  |
| SC75-04M  | 1/2" | 4.2  |
| SC75-03Z  | 3/8" | 4.1  |
| SC75-04Z  | 1/2" | 4.2  |
| SC75-03K  | 3/8" | 4.1  |
| SC75-04K  | 1/2" | 4.2  |

*Exhaust Flow

Ordering Information / Dimensions

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Port (NPT)</th>
<th>Flow* Cv</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC75-03M</td>
<td>3/8&quot;</td>
<td>4.1</td>
</tr>
<tr>
<td>SC75-04M</td>
<td>1/2&quot;</td>
<td>4.2</td>
</tr>
<tr>
<td>SC75-03Z</td>
<td>3/8&quot;</td>
<td>4.1</td>
</tr>
<tr>
<td>SC75-04Z</td>
<td>1/2&quot;</td>
<td>4.2</td>
</tr>
<tr>
<td>SC75-03K</td>
<td>3/8&quot;</td>
<td>4.1</td>
</tr>
<tr>
<td>SC75-04K</td>
<td>1/2&quot;</td>
<td>4.2</td>
</tr>
</tbody>
</table>

*Exhaust Flow

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Port (NPT)</th>
<th>Flow* Cv</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC105-04M</td>
<td>1/2&quot;</td>
<td>5.3</td>
</tr>
<tr>
<td>SC105-06M</td>
<td>3/4&quot;</td>
<td>5.7</td>
</tr>
<tr>
<td>SC105-04Z</td>
<td>1/2&quot;</td>
<td>5.3</td>
</tr>
<tr>
<td>SC105-06Z</td>
<td>3/4&quot;</td>
<td>5.7</td>
</tr>
<tr>
<td>SC105-04K</td>
<td>1/2&quot;</td>
<td>5.3</td>
</tr>
<tr>
<td>SC105-06K</td>
<td>3/4&quot;</td>
<td>5.7</td>
</tr>
</tbody>
</table>

*Exhaust Flow

CAUTION
Do not use synthetic, reconstituted, or oils with an alcohol content or detergent additive.

CAUTION
Do not restrict the inlet of valves having an internal pilot supply. Pressure supply piping must be the same size as the inlet port or larger to insure that the pilot valve receives sufficient pressure supply during high flow conditions.
QUBE Modular FRL System
Solenoid Soft Start / Quick Dump Valves

Technical Information

QUBE SC75 & SC105 Series Kits & Accessories

Coil Kits –
24VDC / 48VAC Coil .................................................... 2EV103
12VDC / 24VAC Coil ................................................... 2EV102
120 VAC Coil ............................................................. 2EV105

Seal Repair Kits –
SC75 Series ............................................................ RKSC75
SC105 Series .......................................................... RKSC105

Exhaust Mufflers
SC75 (1/2" Exhaust) ................................................... M60-04
SC105 (3/4" Exhaust) .................................................. M60-06

Specifications

Exhaust Ports –
SC75 ........................................................................ 1/2 Inch NPT
SC105 ....................................................................... 3/4 Inch NPT

Gauge Ports –
SC75 (2) ................................................................ 1/8 Inch NPT
SC105 (2) ................................................................ 1/4 Inch NPT

Inlet & Outlet Port Threads –
3/8 Inch NPTF ........................................................... SC75
1/2 Inch NPTF ......................................................... SC105
(BSPP and BSPT port threads are available through the use of Modular Port Block Kits)

Pressure & Temperature Ratings –
Solenoid ........................................................................ 60 to 145 PSIG (4.1 to 10.0 bar)
32°F to 140°F (0°C to 60°C)

Weight –
SC75 ......................................................................... 3.25 lb. (1.47 kg)
SC105 ....................................................................... 5.5 lb. (2.49 kg)

Materials of Construction

Body ................................................................. Zinc
Bottom Plug ............................................................ Brass
Seals ................................................................. Nitrile
Springs .............................................................. Stainless Steel
Internal Components ........................................... Brass / Aluminum
Top Cover .......................................................... Aluminum
S75 & S105 Solenoid Quick Dump Valves

Features
- Connects to Other QUBE Units Using Just Screws & O-Rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Shuts Off Incoming Pressure While Rapidly Exhausting Downstream Pressure
- Unit is Installed Downstream of Lubricator (If Used)
- Large Exhaust Flow Capacities Up to 5.7 Cv
- Solenoid Operation
- Non-locking Manual Override
- Inline or Modular Mounting

Operation
The solenoid quick dump valves are high flow, normally closed, 3-Port, 2-Position directional control valves. Upon energizing the solenoid, inlet air is applied to the top of the piston. The piston pushes against the spring and opens the main valve providing full flow air to the downstream. When the solenoid is de-energized, the main valve closes allowing downstream air to exhaust rapidly through the bottom plug. The bottom plug is tapped so that exhaust may be piped away or fitted with a muffler.

CAUTION
Do not restrict the inlet of valves having an internal pilot supply. Pressure supply piping must be the same size as the inlet port or larger to insure that the pilot valve receives sufficient pressure supply during high flow conditions.

Ordering Information / Dimensions

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Port (NPT)</th>
<th>Flow* Cv</th>
</tr>
</thead>
<tbody>
<tr>
<td>24VDC / 48VAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S75-03M</td>
<td>3/8&quot;</td>
<td>4.1</td>
</tr>
<tr>
<td>S75-04M</td>
<td>1/2&quot;</td>
<td>4.2</td>
</tr>
<tr>
<td>12VDC / 24VAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S75-03Z</td>
<td>3/8&quot;</td>
<td>4.1</td>
</tr>
<tr>
<td>S75-04Z</td>
<td>1/2&quot;</td>
<td>4.2</td>
</tr>
<tr>
<td>120VAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S75-03K</td>
<td>3/8&quot;</td>
<td>4.1</td>
</tr>
<tr>
<td>S75-04K</td>
<td>1/2&quot;</td>
<td>4.2</td>
</tr>
</tbody>
</table>

*Exhaust Flow

Model | A | B | C | D | E | F | G | H |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SC75</td>
<td>2.19 (56)</td>
<td>5.43 (138)</td>
<td>2.06 (52)</td>
<td>1.50 (38)</td>
<td>1.66 (42)</td>
<td>.72 (18)</td>
<td>2.56 (65)</td>
<td>1.91 (48)</td>
</tr>
</tbody>
</table>

Inches (mm)

Model | A | B | C | D | E | F | G | H |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SC105</td>
<td>3.03 (77)</td>
<td>6.03 (153)</td>
<td>2.75 (70)</td>
<td>1.84 (47)</td>
<td>2.53 (64)</td>
<td>.84 (21)</td>
<td>2.56 (65)</td>
<td>1.90 (48)</td>
</tr>
</tbody>
</table>

Inches (mm)

CAUTION
Do not use synthetic, reconstituted, or oils with an alcohol content or detergent additive.
QUBE S75 & S105 Series Kits & Accessories

QUBE Modular FRL System
Solenoid Quick Dump Valves

Technical Information

**QUBE S75 & S105 Series Kits & Accessories**

**Coil Kits**
- 24VDC / 48VAC Coil ........................................... 2EV103
- 12VDC / 24VAC Coil ........................................... 2EV102
- 120 VAC Coil ...................................................... 2EV105

**Seal Repair Kits**
- S75 Series ......................................................... RKS75
- S105 Series ......................................................... RKS105

**Exhaust Mufflers**
- S75 (1/2” Exhaust) ............................................ M60-04
- S105 (3/4” Exhaust) ............................................ M60-06

**Specifications**

**Exhaust Ports**
- S75 ................................................................. 1/2 Inch
- S105 ............................................................... 3/4 Inch

**Gauge Ports** (Downstream pressure)
- S75 (2) ............................................................. 1/8 Inch
- S105 (2) ............................................................ 1/4 Inch

**Maximum Pressure** ........................................... 145 PSIG (9.9 bar)

**Minimum Operating Pressure** .......................... 30 PSIG (2.1 bar)

**Temperature Ratings** ....................................... 40°F to 120°F (4°C to 9°C)

**Weight**
- S75 ............................................................... 3.25 lb. (1.47 kg)
- S105 ............................................................... 5.50 lb. (2.49 kg)

**Materials of Construction**

**Body** .............................................................. Zinc

**Bottom Plug** .................................................... Brass

**Internal Components** ......................................... Brass

**Seals** .............................................................. Nitrile

**Springs** .......................................................... Stainless Steel

**Top Cover** ........................................................ Aluminum
SSA75 & SSA105 Auto Pilot Soft Start Valve

Features
- Connects to Other QUBE Units Using Just Screws & O-Rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Smooth Start-up of Pneumatic System
- Unit is Installed Downstream of Lubricator (If Used)
- Air Pilot Operation
- Large Flow Capacities Up to 5.5 Cv
- Inline or Modular Mounting

Operation
When pressure is supplied to the inlet port, gradual filling of the downstream system occurs through the adjustable needle valve. The piston opens the main valve when the downstream side of the valve reaches approximately 60% of the supply pressure. The ramp up time to reach the switch over pressure is adjustable via the needle valve in the cover.

The Auto pilot soft start valve is not intended to be used as a shut off valve and should always be placed after a shut off valve.

CAUTION
Do not restrict the inlet of valves having an internal pilot supply. Pressure supply piping must be the same size as the inlet port or larger to insure that the pilot valve receives sufficient pressure supply during high flow conditions.

Ordering Information / Dimensions

SSA75 Series

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Port (NPT)</th>
<th>Flow* Cv</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSA75-03</td>
<td>3/8”</td>
<td>3.4</td>
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<tr>
<td>SSA75-04</td>
<td>1/2”</td>
<td>3.8</td>
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SSA105 Series

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<th>Model Number</th>
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<th>Flow* Cv</th>
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<td>1/2”</td>
<td>6.8</td>
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<tr>
<td>SSA105-06</td>
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Model A B C D E F

SSA75

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<th>B (inches)</th>
<th>C (inches)</th>
<th>D (inches)</th>
<th>E (inches)</th>
<th>F (inches)</th>
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<td>SSA75</td>
<td>2.19 (56)</td>
<td>4.72 (120)</td>
<td>2.06 (52)</td>
<td>1.50 (38)</td>
<td>1.66 (42)</td>
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SSA105

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<tr>
<th>Model</th>
<th>A (inches)</th>
<th>B (inches)</th>
<th>C (inches)</th>
<th>D (inches)</th>
<th>E (inches)</th>
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<tbody>
<tr>
<td>SSA105</td>
<td>3.03 (77)</td>
<td>5.25 (133)</td>
<td>2.75 (70)</td>
<td>1.50 (387)</td>
<td>2.53 (64)</td>
<td>.84 (21)</td>
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Technical Information

QUBE SSA75 & SSA105 Series Kits & Accessories

Repair Kits –
SSA75 Series ................................................................. RKSS75
SSA105 Series ................................................................. RKSS105

Specifications
Gauge Ports (Downstream Pressure)
SSA75 (2) ............................................................................. 1/8 Inch
SSA105 (2) ............................................................................. 1/4 Inch

Maximum Pressure ................................................. 300 PSIG (20.7 bar)
Minimum Operating Pressure ................................. 30 PSIG (2.1 bar)
Temperature Ratings ................................................. 40°F to 120°F (4°C to 49°C)
Opens to Full Flow ...................................................... 60% Supply Pressure

Weight –
SSA75 ........................................................................ 2.75 lb. (1.25 kg)
SSA105 ........................................................................ 4.50 lb. (2.04 kg)

Materials of Construction

Body .............................................................................. Zinc
Bottom Plug –
SSA75 .......................................................................... Brass
SSA105 .......................................................................... Zinc

Internal Components ................................................. Brass
Seals ............................................................................. Nitrile
Springs .......................................................................... Stainless Steel
Top Cover ................................................................. Aluminum

QUBE Modular FRL System
Auto Pilot Soft Start Valves

Flow Characteristics

Soft Start Adjustment

Catalog 0305-2
Technical Specifications – SSA75 & SSA105
Pneumatic Division
Richland, Michigan
www.wattsfluidair.com
Operation
The pressure switch monitors the air pressure in your pneumatic system. When the pressure in your system either drops below or exceeds the set point pressure, an electrical output is given.

Using a 0.125" (3mm) hex wrench, turn the adjusting screw (A) clockwise to increase the pressure set point and counterclockwise to decrease the pressure setting. One complete revolution of the adjusting screw covers the complete adjustment range of 30 to 150 PSIG (2 to 10 bar).

Specifications
- Electrical: 5 AMP, 12/24VDC, 125/250VAC
- Maximum Inlet Pressure: 300 PSIG (20 bar)
- Mechanical Life: $10^6$ at standard operating conditions
- Electrical Connection: DIN 43650HCM
- Electrical Protection: IP65
- Repeatability: ±2% at 70°F (20°C) Ambient
- Temperature Range: -40°F to 180°F (-40°C to 80°C)
- Weight: 0.13 lb. (0.06 Kg)

Materials of Construction
- Diaphragm: Nitrile
- Housing: Anodized Aluminum

Definitions and Terminology
Repeatability — Accuracy is the maximum allowable set point deviation of a single pressure or temperature switch under one given set of environmental and operational conditions.

Single Pole Double Throw (SPDT) Switching element — A SPDT switching element has one normally open, one normally closed and one common terminal. Three terminals mean that the switch can be wired with the circuit either normally open (NO), or normally closed (NC), or both.

Dead Band — The dead band, sometimes referred to as “differential” or “hysterisis”, is the change in pressure between actuation and deactuation set points.
Operation

The pressure switch monitors the air pressure in your pneumatic system. When the pressure in your system either drops below or exceeds the set point pressure, an electrical output is given.

Remove screw (A) from the top of the switch. Using a 0.125” (3mm) hex wrench, turn the adjusting screw (B) clockwise to increase the pressure set point and counterclockwise to decrease the pressure setting, replace screw (A). Adjustment range of 25 to 100 PSIG (1.7 to 7.5 bar).

Definitions and Terminology

Repeatability — Accuracy is the maximum allowable set point deviation of a single pressure or temperature switch under one given set of environmental and operational conditions.

Single Pole Double Throw (SPDT) Switching element
— A SPDT switching element has one normally open, one normally closed and one common terminal. Three terminals mean that the switch can be wired with the circuit either normally open (NO), or normally closed (NC), or both.

Dead Band — The dead band, sometimes referred to as “differential” or “hysteresis”, is the change in pressure between actuation and deactuation set points.

Kits and Accessories

Bushing 1/4” to 3/8” .................................................. 209P-6-4
Bushing 1/4” to 1/2” .................................................. 209P-8-4

Specifications

Electrical .................................................. 5 AMP, 12/24VDC, 125/250VAC
Maximum Inlet Pressure .................................. 300 PSIG (20 bar)
Mechanical Life ........................................ 2x10⁶ at 75 PSIG (5 bar)
Electrical Connection .................................. 18” Flying Leads
Electrical Protection .................................. IP65
Repeatability .......................................... ±2% at 70°F (20°C) Ambient
Temperature Range .................................. -40°F to 180°F (-40°C to 80°C)
Weight ................................................. 0.23 lb. (0.11 Kg)

Materials of Construction

Diaphragm ................................................. Nitrile
Housing ................................................ Brass
QUBE Modular FRL System
Mounting Brackets

QUBE Series End / Wall Mount Brackets

QUBE FRL components have integral mounting slots that usually eliminate the need for mounting brackets. However, some applications may require the use of mounting brackets:

- Assemblies incorporating components from multiple series.
- Applications where the FRL needs to be spaced away from the machine.

Bracket Installation

QUBE Series Panel Mount Brackets

These brackets are designed to mount regulators and integral filter / regulators using panel mount threads on spring cage.

Part Number: SA161X57  (Comes complete with R05X51-P Plastic Panel Nut)  
Part Number: SAR10Y57  (Comes complete with R10X51-P Plastic Panel Nut)
Safety Guide For Selecting And Using Pneumatic Division Products And Related Accessories

⚠️ WARNING:

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF PNEUMATIC DIVISION PRODUCTS, ASSEMBLIES OR RELATED ITEMS ("PRODUCTS") CAN CAUSE DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE. POSSIBLE CONSEQUENCES OF FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS INCLUDE BUT ARE NOT LIMITED TO:

- Unintended or mistimed cycling or motion of machine members or failure to cycle
- Work pieces or component parts being thrown off at high speeds.
- Failure of a device to function properly for example, failure to clamp or unclamp an associated item or device.
- Explosion
- Suddenly moving or falling objects.
- Release of toxic or otherwise injurious liquids or gasses.

Before selecting or using any of these Products, it is important that you read and follow the instructions below.

1. GENERAL INSTRUCTIONS

1.1. Scope: This safety guide is designed to cover general guidelines on the installation, use, and maintenance of Pneumatic Division Valves, FRLs (Filters pressure Regulators and Lubricators), Vacuum products and related accessory components.

1.2. Fail-Safe: Valves, FRLs, Vacuum products and their related components can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of associated valves, FRLs or Vacuum products will not endanger persons or property.


1.4. Distribution: Provide a copy of this safety guide to each person that is responsible for selection, installation, or use of Valves, FRLs or vacuum products. Do not select, or use Watts valves, FRLs or vacuum products without thoroughly reading and understanding this safety guide as well as the specific Watts publications for the products considered or selected.

1.5. User Responsibility: Due to the wide variety of operating conditions and applications for valves, FRLs, and vacuum products Watts and its distributors do not represent or warrant that any particular valve, FRL or vacuum product is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the appropriate valve, FRL, Vacuum component, or accessory.
- Assuring that all user’s performance, endurance, maintenance, safety, and warning requirements are met and that the application presents no health or safety hazards.
- Complying with all existing warning labels and / or providing all appropriate health and safety warnings on the equipment on which the valves, FRLs or Vacuum products are used; and,
- Assuring compliance with all applicable government and industry standards.

1.6. Safety Devices: Safety devices should not be removed, or defeated.

1.7. Warning Labels: Warning labels should not be removed, painted over or otherwise obscured.

1.8. Additional Questions: Call the appropriate Watts technical service department if you have any questions or require any additional information. See the Watts publication for the product being considered or used, or call 269-629-5000, or go to www.wattsfluidair.com, for telephone numbers of the appropriate technical service department.

2. PRODUCT SELECTION INSTRUCTIONS

2.1. Flow Rate: The flow rate requirements of a system are frequently the primary consideration when designing any pneumatic system. System components need to be able to provide adequate flow and pressure for the desired application.

2.2. Pressure Rating: Never exceed the rated pressure of a product. Consult product labeling, Pneumatic Division catalogs or the instruction sheets supplied for maximum pressure ratings.

2.3. Temperature Rating: Never exceed the temperature rating of a product. Excessive heat can shorten the life expectancy of a product and result in complete product failure.

2.4. Environment: Many environmental conditions can affect the integrity and suitability of a product for a given application. Pneumatic Division products are designed for use in general purpose industrial applications. If these products are to be used in unusual circumstances such as direct sunlight and/or corrosive or caustic environments, such use can shorten the useful life and lead to premature failure of a product.

2.5. Lubrication and Compressor Carryover: Some modern synthetic oils can and will attack nitrile seals. If there is any possibility of synthetic oils or greases migrating into the pneumatic components check for compatibility with the seal materials used. Consult the factory or product literature for materials of construction.

2.6. Polycarbonate Bowls and Sight Glasses: To avoid potential polycarbonate bowl failures:

- Do not locate polycarbonate bowls or sight glasses in areas where they could be subject to direct sunlight, impact blow, or temperatures outside of the rated range.
- Do not expose or clean polycarbonate bowls with detergents, chlorinated hydro-carbons, keytones, esters or certain alcohols.
- Do not use polycarbonate bowls or sight glasses in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.
2.7. Chemical Compatibility: For more information on plastic component chemical compatibility see Pneumatic Division technical bulletins Tec-3, Tec-4, and Tec-5.

2.8. Product Rupture: Product rupture can cause death, serious personal injury, and property damage.
- Do not connect pressure regulators or other Pneumatic Division products to bottled gas cylinders.
- Do not exceed the maximum primary pressure rating of any pressure regulator or any system component.
- Consult product labeling or product literature for pressure rating limitations.

3. PRODUCT ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1. Component Inspection: Prior to assembly or installation a careful examination of the valves, FRLs or vacuum products must be performed. All components must be checked for correct style, size, and catalog number. DO NOT use any component that displays any signs of nonconformance.

3.2. Installation Instructions: Watts published Installation Instructions must be followed for installation of Watts valves, FRLs and vacuum components. These instructions are provided with every Watts valve or FRL sold, or by calling 269-629-5000, or at www.wattsfluidair.com.

3.3. Air Supply: The air supply or control medium supplied to Valves, FRLs and Vacuum components must be moisture-free if ambient temperature can drop below freezing.

4. VALVE AND FRL MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1. Maintenance: Even with proper selection and installation, valve, FRL and vacuum products service life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a component failure, and experience with any known failures in the application or in similar applications should determine the frequency of inspections and the servicing or replacement of Pneumatic Division products so that products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.10.

4.2. Installation and Service Instructions: Before attempting to service or replace any worn or damaged parts consult the appropriate Service Bulletin for the valve or FRL in question for the appropriate practices to service the unit in question. These Service and Installation Instructions are provided with every Watts valve and FRL sold, or are available by calling 269-629-5000, or by accessing the Watts web site at www.wattsfluidair.com.

4.3. Lockout / Tagout Procedures: Be sure to follow all required lockout and tagout procedures when servicing equipment. For more information see: OSHA Standard ~ 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy ~ (Lockout / Tagout)

4.4. Visual Inspection: Any of the following conditions requires immediate system shut down and replacement of worn or damaged components:
- Air leakage: Look and listen to see if there are any signs of visual damage to any of the components in the system. Leakage is an indication of worn or damaged components.
- Damaged or degraded components: Look to see if there are any visible signs of wear or component degradation.
- Kinked, crushed, or damaged hoses: Kinked hoses can result in restricted air flow and lead to unpredictable system behavior.
- Any observed improper system or component function: Immediately shut down the system and correct malfunction.
- Excessive dirt build-up: Dirt and clutter can mask potentially hazardous situations.

Caution: Leak detection solutions should be rinsed off after use.

4.5. Routine Maintenance Issues:
- Remove excessive dirt, grime and clutter from work areas.
- Make sure all required guards and shields are in place.

4.6. Functional Test: Before initiating automatic operation, operate the system manually to make sure all required functions operate properly and safely.

4.7. Service or Replacement Intervals: It is the user’s responsibility to establish appropriate service intervals. Valves, FRLs and vacuum products contain components that age, harden, wear, and otherwise deteriorate over time. Environmental conditions can significantly accelerate this process. Valves, FRLs and vacuum components need to be serviced or replaced on routine intervals. Service intervals need to be established based on:
- Previous performance experiences.
- Government and / or industrial standards.
- When failures could result in unacceptable down time, equipment damage or personal injury risk.

4.8. Servicing or Replacing of any Worn or Damaged Parts: To avoid unpredictable system behavior that can cause death, personal injury and property damage:
- Follow all government, state and local safety and servicing practices prior to service including but not limited to all OSHA Lockout Tagout procedures (OSHA Standard ~ 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy ~ (Lockout / Tagout).
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to system and Pneumatic Division products before installation, service, or conversion.
- Installation, servicing, and / or conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversions air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or if the product does not operate properly, do not put product or system into use.
- Warnings and specifications on the product should not be covered or painted over. If masking is not possible, contact your local representative for replacement labels.

4.9. Putting Serviced System Back into Operation: Follow the guidelines above and all relevant Installation and Maintenance Instructions supplied with the valve FRL or vacuum component to insure proper function of the system.
The items described in this document and other documents or descriptions provided by Parker Hannifin Corporation, its subsidiaries and its authorized distributors, are hereby offered for sale at prices to be established by Parker Hannifin Corporation, its subsidiaries and its authorized distributors. The terms and conditions of the sale and its acceptance ("Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any such item, when communicated to Parker Hannifin Corporation, its subsidiaries or an authorized distributor (“Seller”) verbally or in writing, shall constitute acceptance of this offer.

1. Terms and Conditions of Sale: All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of Seller’s products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer’s acceptance of any offer to sell is limited to these terms and conditions. Any terms or conditions in addition to, or inconsistent with those stated herein, proposed by Buyer in any acceptance of an offer by Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the contract between Buyer and Seller unless expressly accepted in writing by Seller. Seller’s acceptance of any offer to purchase by Buyer is expressly conditional upon Buyer’s assent to all the terms and conditions stated herein, including any terms in addition to, or inconsistent with those contained in Buyer’s offer. Acceptance of Seller’s products shall in all events constitute such assent.

2. Payment: Payment shall be made by Buyer net 30 days from the date of delivery of the items purchased hereunder. Amounts not timely paid shall bear interest at the maximum rate permitted by law for each month or portion thereof that the Buyer is late in making payment. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice thereof within 30 days after Buyer’s receipt of the shipment.

3. Delivery: Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller’s plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller’s delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

4. Warranty: Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of 18 months from date of shipment from Parker Hannifin Corporation. THIS WARRANTY COMPRIS A SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER, SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED. NOTWITHSTANDING THE FOREGOING, THERE ARE NO WARRANTIES WHATSOEVER ON ITEMS BUILT OR ACQUIRED WHOLLY OR PARTIALLY, TO BUYER’S DESIGN OR SPECIFICATIONS.

5. Limitation of Remedy: SELLER’S LIABILITY ARISING FROM OR IN ANY WAY CONNECTED WITH THE ITEMS SOLD OR THIS CONTRACT SHALL BE LIMITED EXCLUSIVELY TO REPAIR, REPLACEMENT OF THE ITEMS SOLD OR REFUND OF THE PURCHASE PRICE PAID BY BUYER, AT SELLER’S SOLE OPTION. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOSS PROFITS ARISING FROM OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR ITEMS SOLD HEREUNDER, WHETHER ALLEGED TO ARISE FROM BREACH OF CONTRACT, EXPRESS OR IMPLIED WARRANTY, OR IN TORT, INCLUDING WITHOUT LIMITATION, NEGLIGENCE, failure to warn or strict liability.

6. Changes, Reschedules and Cancellations: Buyer may request to modify the designs or specifications for the items sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification or cancellation shall be at Seller’s discretion, and shall be upon such terms and conditions as Seller may require.

7. Special Tooling: A tooling charge may be imposed for any special tooling ordered without limitations, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. Such special tooling shall be and remain Seller’s property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has been specially converted or adapted for reuse or purchase by Buyer is expressly so converted or adapted for use or purchase by Buyer is expressly so

8. Buyer’s Property: Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer, or any other items which become Buyer’s property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller’s possession or control.

9. Taxes: Unless otherwise indicated on the face hereof, all prices and charges are exclusive of taxes, sales, use, property, occupational and other taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are taxable.

10. Indemnity For Infringement of Intellectual Property Rights: Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against all claims of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets (hereinafter “Intellectual Property Rights”), Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes the Intellectual Property Rights of a third party. Seller’s obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer or on items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller’s sole and exclusive liability and Buyer’s sole and exclusive remedy for infringement of Intellectual Property Rights.

If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgments resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

11. Force Majeure: Seller does not assume the risk of and shall not be liable for delay or failure to perform any of Seller’s obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government, war, piracy, fire, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller’s control.

12. Entire Agreement/Governing Law: The terms and conditions set forth herein, together with any amendments, modifications and any other agreements expressly or otherwise accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain thereto. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.