

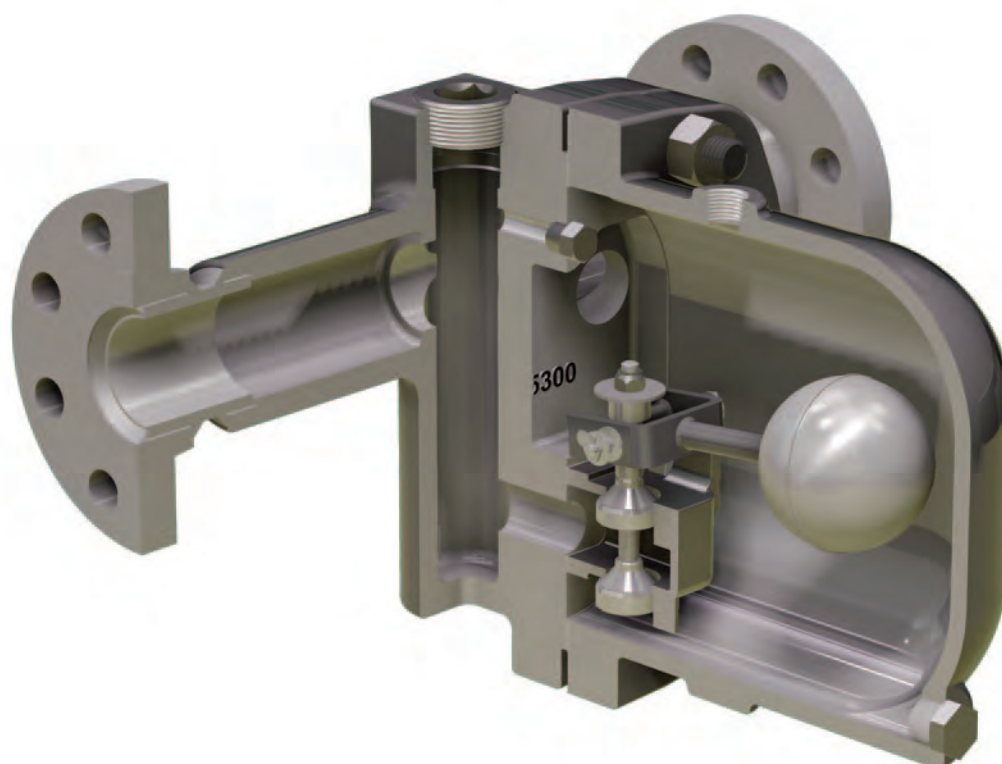
# Liquid Drainers

|                                                                                                                     | Description                                        | Material                                                               | Application                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>WLD1900</b>                     | <b>Float Type</b><br>with Parallel Pipe Connection | Cast Iron                                                              | <b>General Purpose</b><br><b>Float Type Liquid Drainer with Cast Iron, Ductile Iron or Stainless Steel</b><br>Low to moderately high volumes of liquid drainage. |
| <b>WLD1400</b><br><b>WLDS1400</b>  | <b>Float Type</b><br>with In-Line Pipe Connection  | <b>WLD1400:</b><br>Ductile Iron<br><b>WLDS1400:</b><br>Stainless Steel |                                                                                                                                                                  |
| <b>WLDE</b>                       | <b>Float Type</b><br>with Parallel Pipe Connection | <b>WLDE:</b><br>Ductile Iron<br><b>WLDES:</b><br>Cast Steel            | <b>Extremely High Capacity</b>                                                                                                                                   |
| <b>WLD600</b>                    | <b>Float Type</b><br>with In-Line Pipe Connection  | <b>WLD600:</b><br>Cast Steel<br><b>WLD601:</b><br>Stainless Steel      | <b>Cast Steel or Stainless Steel Body</b>                                                                                                                        |
| <b>WLD1800</b>                   | <b>Guided Float Type</b><br>Vertical Connection    | Stainless Steel                                                        | <b>Corrosive applications.</b><br>Pressures up to 450 PSIG.<br>Repairable and Non-Repairable versions available.                                                 |
| <b>WLD1500</b>                   | <b>Inverted Bucket Style</b>                       | Cast Iron                                                              | Low to medium capacity.                                                                                                                                          |
| <b>WLD1703S</b>                  | <b>Disc Type</b>                                   | Stainless Steel                                                        | Very compact size.                                                                                                                                               |

## Table of Contents

| Model                          | Type            | Body Material                       | PMO (PSIG)               | Sizes                     | Connection          | Page No.   |
|--------------------------------|-----------------|-------------------------------------|--------------------------|---------------------------|---------------------|------------|
| <b>WLD1900</b>                 | Float           | Cast Iron                           | <b>250</b>               | 3/4" – 2"                 | NPT                 | <b>359</b> |
| <b>WLD1400</b>                 | Float           | Ductile Iron                        | <b>300</b>               | 1/2" – 2"                 | NPT                 | <b>362</b> |
| <b>WLDE</b><br><b>WLDES</b>    | Float<br>Float  | Ductile Iron<br>Cast Steel          | <b>200</b><br><b>300</b> | 1 1/2" - 2 1/2"<br>2 1/2" | NPT<br>NPT, SW, FLG | <b>364</b> |
| <b>WLD600</b><br><b>WLD601</b> | Float<br>Float  | Carbon Steel<br>316 Stainless Steel | <b>450</b>               | 3/4" – 4"                 | NPT, SW, FLG        | <b>366</b> |
| <b>WLD1800/1800R</b>           | Guided Float    | Stainless Steel                     | <b>400</b>               | 1/2" - 3/4"               | NPT                 | <b>368</b> |
| <b>WLD1500</b>                 | Inverted Bucket | Cast Iron                           | <b>200</b>               | 3/4" - 1"                 | NPT                 | <b>370</b> |
| <b>WLD1703S</b>                | Disc            | Stainless Steel                     | <b>250</b>               | 1/2"                      | NPT                 | <b>372</b> |

Universal Style Quick-Change Liquid Drainers available; Consult factory.



Float Type Liquid Drainer

### Why use Liquid Drainers?

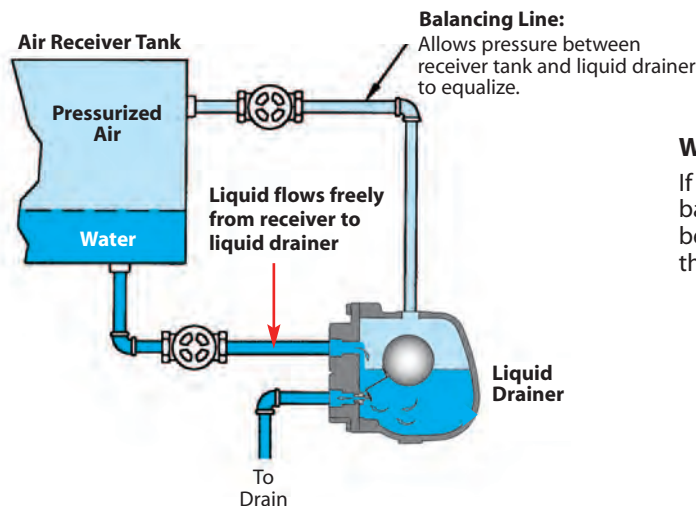
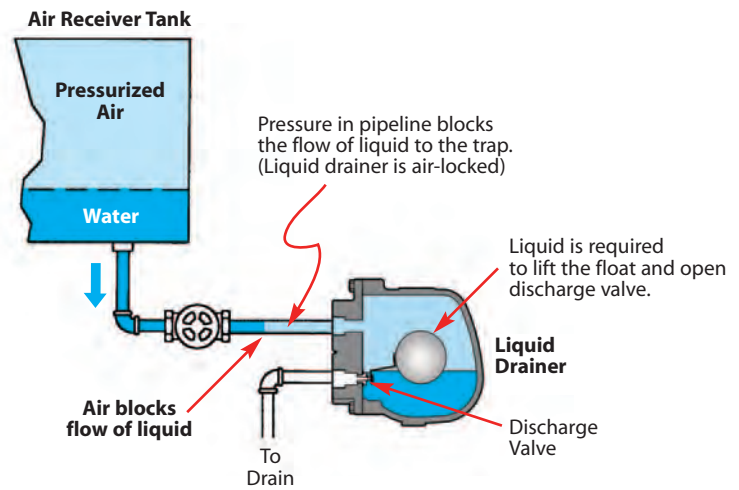
Liquid Drain Traps are primarily used to remove condensation from tanks or pipes containing air or other pressurized gases. The proper liquid drain trap should be selected based on pressure limitation, volume of liquid to be drained and material compatibility.

### When are Balancing Lines required?

If a Float Type Liquid Drain Trap is selected, it may be required to add a balancing (or equalizing) line to allow any air or gases trapped in the drainer to escape. If the balancing line is not installed, these gases can prevent proper operation by air-binding the trap. Inverted Bucket Type and Disc Type Drain Traps will self-vent, eliminating the risk of air-binding and therefore do not require balancing lines.

#### Without a Balancing Line

In applications where the volume of liquid being drained is large enough to fill the complete diameter of the pipe, the potential for air binding exists. This is occurs because Float type drain traps are normally closed, with the weight of the float keeping the valve in the closed position. Liquid must first enter the body of the trap to lift the float and open the valve. When the liquid tries to flow down the pipe, the air pressure inside the trap will continue to build and stop the flow of liquid causing the trap to air bind. A balancing line will equalize the pressure allowing the liquid to freely enter the trap and lift the float, allowing proper discharge to take place.

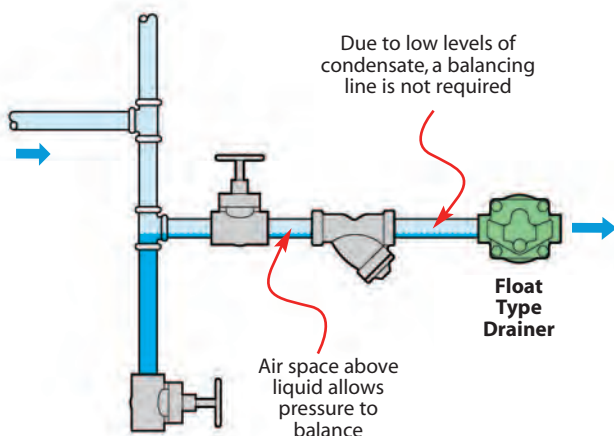


#### With a Balancing Line

If a Float Type Liquid Drainer is used on a receiver or tank, a balancing line is normally required. The balancing line must be installed above the highest liquid level point to ensure that condensate does not block the balancing line.

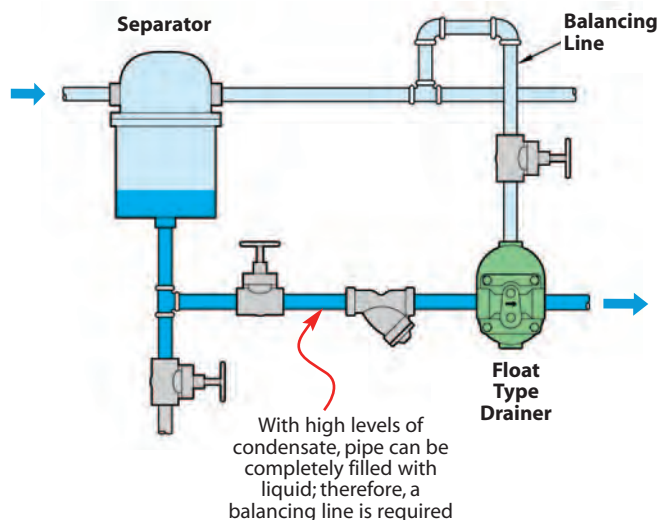
### Some Examples of Liquid Drainer Applications

**Figure 1** Draining Condensate from Air Line with a Float Type Liquid Drainer



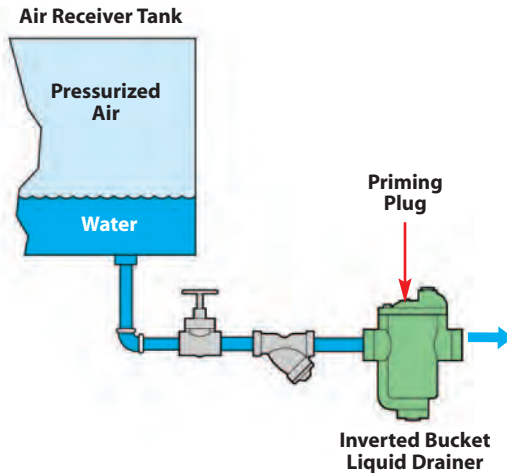
Typically, most air line applications have a low level of condensate to discharge, and the piping does not become flooded with condensate. In this type of application a Float Type Liquid Drainer can be used without the need of a balancing line. Due to the low level of liquid being drained, an air space exists above the liquid in the pipe which balances the pressure allowing liquid to flow freely.

**Figure 2** Draining Condensate from a Separator on a Large Air Main



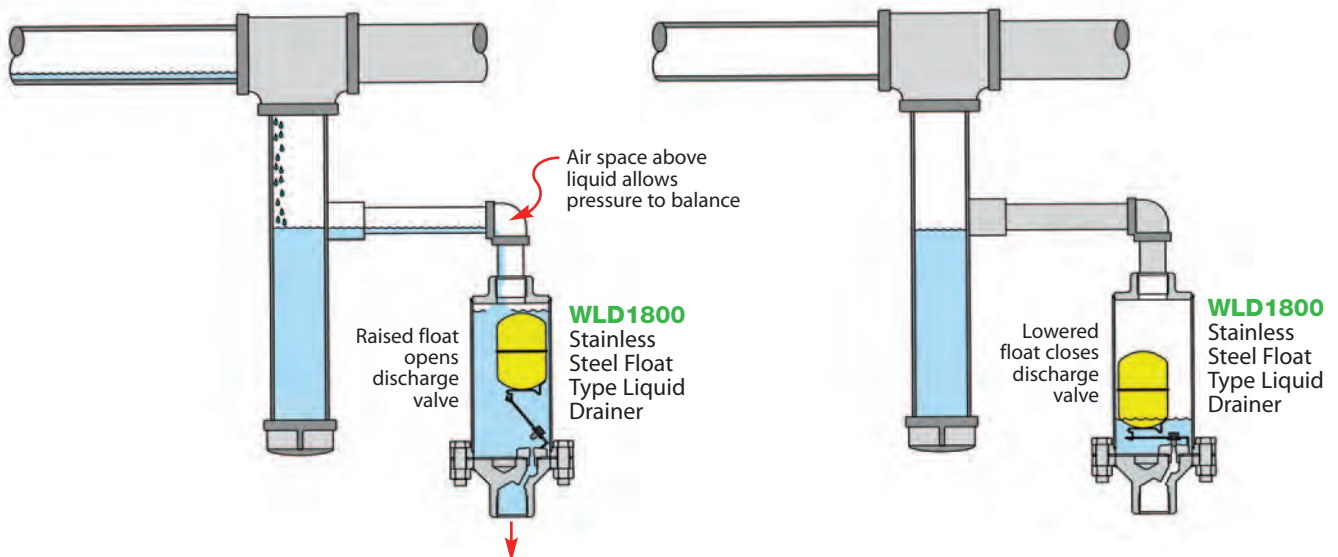
When large loads of condensate are required to be discharged, make sure a properly sized liquid drain trap is used. On large load applications, a balancing line is required, because non-condensable gases can be easily trapped in the drain trap due to fluctuating condensate levels.

**Figure 3 Draining Condensate from a Receiver with an Inverted Bucket Style Liquid Drainer**



In an application where an Inverted Bucket Liquid Drainer is used, a balancing line may not be required. This style of drainer has a small internal bleed hole on the bucket float which allows a small amount of air to be vented. For the Inverted Bucket Liquid Drain Trap to operate, it must be primed with liquid prior to operation.

**Figure 4 Draining Condensate from Drip Leg with a Guided Float Type Liquid Drainer**  
All Stainless Steel



#### Guided Float Type Liquid Drainers

The Guided Float Type Liquid Drainers are available in either repairable or non-repairable configurations. All Stainless Steel body and internal components are suitable for corrosive applications. In low-flow drip applications, a balancing line is normally not required.

|                                |                                     |
|--------------------------------|-------------------------------------|
| Model                          | <b>WLD1900</b>                      |
| Sizes                          | <b>3/4", 1", 1 1/4", 1 1/2", 2"</b> |
| Connections                    | <b>NPT</b>                          |
| Body Material                  | <b>Cast Iron</b>                    |
| PMO Max. Operating Pressure    | <b>250 PSIG</b>                     |
| TMO Max. Operating Temperature | <b>450°F</b>                        |
| PMA Max. Allowable Pressure    | <b>250 PSIG up to 450°F</b>         |
| TMA Max. Allowable Temperature | <b>450°F @ 250 PSIG</b>             |



**WLD1900**  
3/4" & 1"



**WLD1900**  
2"

### Typical Applications

The **WLD1900 Series** is used in applications where immediate and continuous discharge of liquid is required. Typically used in process applications for draining condensate from air or other gases.

### How It Works

The WLD1900 Series liquid drainers contain a float-operated valve. When liquid enters the drainer, the float rises opening the valve which allows liquid to be drained.

### Features

- All stainless steel internals
- Hardened valve seat for longer service life
- Cast Iron body
- In-line repairable

### Sample Specification

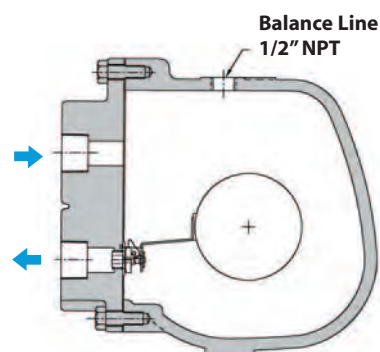
The liquid drain trap shall be float operated with a cast iron body, all stainless steel internals and a hardened valve seat. The unit shall be in-line repairable and equipped with a FNPT threaded connection for the use of a balance line.

### Installation

The installation should include isolation valves to facilitate maintenance and an in-line strainer. The trap must be level and upright for the float mechanism to operate. Trap must be adequately sized and properly located in the system. Installation may require an equalizing or balancing line connected from top of drainer body to the above piping, for proper drainage.

### Maintenance

All working components can be replaced with the drain trap remaining in the pipeline. Repair kits include float, valve seat & disc, and gaskets. For full maintenance details see Installation and Maintenance Manual.



### MATERIALS

|              |                             |
|--------------|-----------------------------|
| Body         | Cast Iron                   |
| Cover        | Cast Iron                   |
| Gasket       | Garlock 3400                |
| Cover Screws | Stainless Steel, Gr 5       |
| Float        | Stainless Steel, AISI 304   |
| Internals    | Stainless Steel, 300 Series |
| Valve Seat   | Stainless Steel, 17-4 PH    |
| Valve Disc   | Stainless Steel, AISI 420F  |



# Liquid Drainers

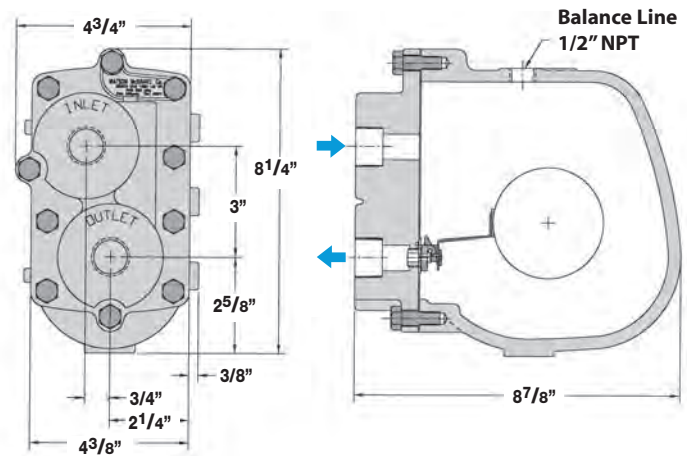
## Float Type Liquid Drainer

# WLD1900 Series

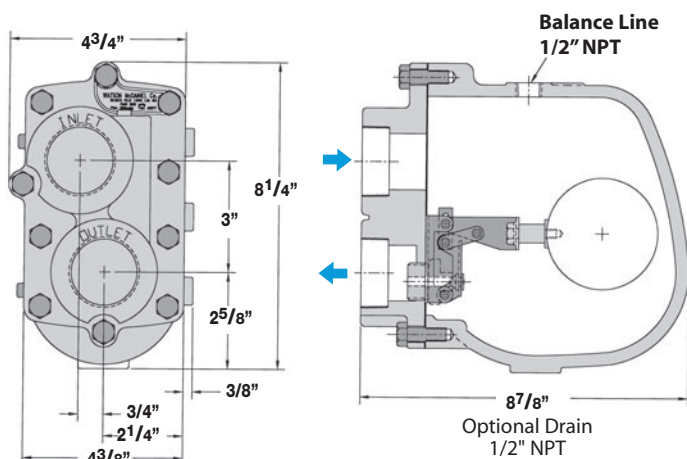
## Float Type

### DIMENSIONS – inches/pounds

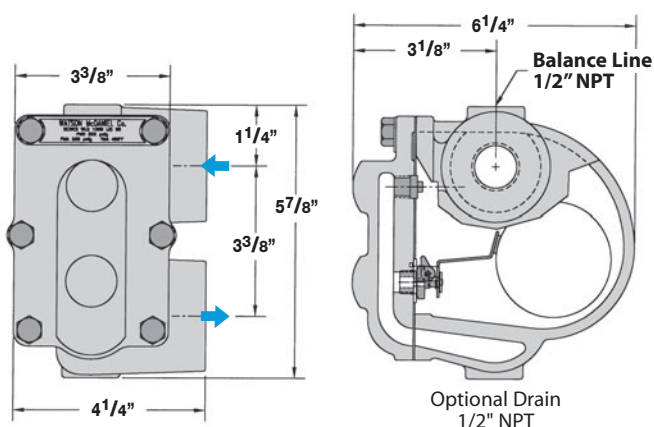
| Drawing | Model       | Size   | PMO (PSIG) | Weight (lbs) |
|---------|-------------|--------|------------|--------------|
| A       | WLD1913-015 | 3/4"   | 15         | 9            |
| A       | WLD1914-015 | 1"     | 15         | 9            |
| A       | WLD1915-015 | 1 1/4" | 15         | 9            |
| C       | WLD1916-015 | 1 1/2" | 15         | 21           |
| D       | WLD1917-015 | 2"     | 15         | 53           |
| A       | WLD1913-030 | 3/4"   | 30         | 9            |
| A       | WLD1914-030 | 1"     | 30         | 9            |
| A       | WLD1915-030 | 1 1/4" | 30         | 9            |
| C       | WLD1916-030 | 1 1/2" | 30         | 21           |
| D       | WLD1917-030 | 2"     | 30         | 53           |
| A       | WLD1913-090 | 3/4"   | 90         | 9            |
| A       | WLD1914-090 | 1"     | 90         | 9            |
| C       | WLD1915-090 | 1 1/4" | 90         | 21           |
| C       | WLD1916-090 | 1 1/2" | 90         | 21           |
| D       | WLD1917-090 | 2"     | 90         | 53           |
| A       | WLD1913-150 | 3/4"   | 150        | 9            |
| A       | WLD1914-150 | 1"     | 150        | 9            |
| C       | WLD1915-150 | 1 1/4" | 150        | 21           |
| C       | WLD1916-150 | 1 1/2" | 150        | 21           |
| D       | WLD1917-150 | 2"     | 150        | 53           |
| B       | WLD1913-200 | 3/4"   | 200        | 20           |
| B       | WLD1914-200 | 1"     | 200        | 20           |
| C       | WLD1915-200 | 1 1/4" | 200        | 21           |
| C       | WLD1916-200 | 1 1/2" | 200        | 21           |
| D       | WLD1917-200 | 2"     | 200        | 53           |
| B       | WLD1913-250 | 3/4"   | 250        | 20           |
| B       | WLD1914-250 | 1"     | 250        | 20           |
| C       | WLD1915-250 | 1 1/4" | 250        | 21           |
| C       | WLD1916-250 | 1 1/2" | 250        | 21           |
| D       | WLD1917-250 | 2"     | 250        | 53           |



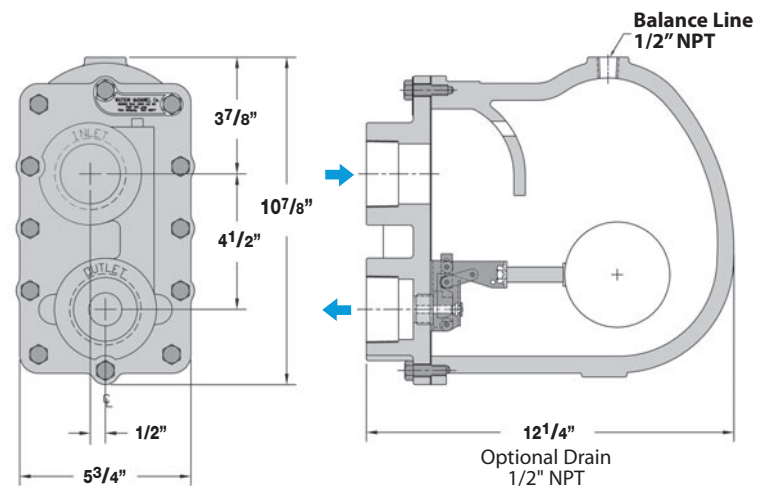
Drawing - B



Drawing - C



Drawing - A



Drawing - D

### How to Size / Order

Determine the capacity (lbs/hr) required at the specified differential pressure. Locate differential pressure on capacity chart; move down column to capacity required. Make sure to select the correct model based on the maximum inlet pressure.

Example:

Required to drain 3,000 lbs/hr at a differential pressure of 5 PSI. The maximum inlet pressure is 30 PSIG.

Select Model: **WLD1916-030**, 1½", capacity up to 4,710 lbs/hr based on 5 PSI differential pressure.

Capacity in lbs/hr is based on differential pressure across the drainer. Select a model with an equal or higher PMO (max. operating pressure) than the maximum inlet pressure to the drainer. If the pressure to the drainer exceeds the PMO, the drainer may not open. If discharging to atmosphere, the differential pressure is equal to the inlet pressure.

### CAPACITIES – Cold Water (lbs/hr)

| Model       | Size | PMO* (PSIG) | Orifice Size | Differential Pressure (PSI) |      |      |      |       |      |       |       |       |       |       |       |       |       |       |       |       |
|-------------|------|-------------|--------------|-----------------------------|------|------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             |      |             |              | 1                           | 2    | 5    | 10   | 15    | 20   | 30    | 40    | 60    | 90    | 100   | 125   | 150   | 175   | 200   | 225   | 250   |
| WLD1913-015 | ¾"   | 15          | .250"        | 910                         | 1260 | 1940 | 2690 | 3260  |      |       |       |       |       |       |       |       |       |       |       |       |
| WLD1914-015 | 1"   | 15          | .250"        | 910                         | 1260 | 1940 | 2690 | 3260  |      |       |       |       |       |       |       |       |       |       |       |       |
| WLD1915-015 | 1¼"  | 15          | .312"        | 1130                        | 1570 | 2420 | 3360 | 4070  |      |       |       |       |       |       |       |       |       |       |       |       |
| WLD1916-015 | 1½"  | 15          | .500"        | 2400                        | 3330 | 5140 | 7140 | 8650  |      |       |       |       |       |       |       |       |       |       |       |       |
| WLD1917-015 | 2"   | 15          | .625"        | 3000                        | 4170 | 6430 | 8920 | 10810 |      |       |       |       |       |       |       |       |       |       |       |       |
| WLD1913-030 | ¾"   | 30          | .228"        | 830                         | 1150 | 1770 | 2450 | 2970  | 3410 | 4130  |       |       |       |       |       |       |       |       |       |       |
| WLD1914-030 | 1"   | 30          | .228"        | 830                         | 1150 | 1770 | 2450 | 2970  | 3410 | 4130  |       |       |       |       |       |       |       |       |       |       |
| WLD1915-030 | 1¼"  | 30          | .228"        | 830                         | 1150 | 1770 | 2450 | 2970  | 3410 | 4130  |       |       |       |       |       |       |       |       |       |       |
| WLD1916-030 | 1½"  | 30          | .390"        | 2200                        | 3060 | 4710 | 6540 | 7930  | 9080 | 11000 |       |       |       |       |       |       |       |       |       |       |
| WLD1917-030 | 2"   | 30          | .500"        | 2400                        | 3330 | 5140 | 7140 | 8650  | 9910 | 12000 |       |       |       |       |       |       |       |       |       |       |
| WLD1913-090 | ¾"   | 90          | .166"        | 260                         | 360  | 550  | 770  | 930   | 1060 | 1290  | 1480  | 1790  | 2170  |       |       |       |       |       |       |       |
| WLD1914-090 | 1"   | 90          | .166"        | 260                         | 360  | 550  | 770  | 930   | 1060 | 1290  | 1480  | 1790  | 2170  |       |       |       |       |       |       |       |
| WLD1915-090 | 1¼"  | 90          | .312"        | 1130                        | 1570 | 2420 | 3360 | 4070  | 4660 | 5650  | 6470  | 7830  | 9500  |       |       |       |       |       |       |       |
| WLD1916-090 | 1½"  | 90          | .312"        | 1130                        | 1570 | 2420 | 3360 | 4070  | 4660 | 5650  | 6470  | 7830  | 9500  |       |       |       |       |       |       |       |
| WLD1917-090 | 2"   | 90          | .422"        | 1350                        | 1870 | 2890 | 4010 | 4860  | 5570 | 6740  | 7730  | 9360  | 11350 |       |       |       |       |       |       |       |
| WLD1913-150 | ¾"   | 150         | .128"        | 150                         | 210  | 330  | 450  | 550   | 630  | 760   | 870   | 1050  | 1280  | 1340  | 1490  | 1590  |       |       |       |       |
| WLD1914-150 | 1"   | 150         | .128"        | 150                         | 210  | 330  | 450  | 550   | 630  | 760   | 870   | 1050  | 1280  | 1340  | 1490  | 1590  |       |       |       |       |
| WLD1915-150 | 1¼"  | 150         | .250"        | 910                         | 1260 | 1940 | 2690 | 3260  | 3740 | 4530  | 5190  | 6280  | 7620  | 8000  | 8890  | 9800  |       |       |       |       |
| WLD1916-150 | 1½"  | 150         | .250"        | 910                         | 1260 | 1940 | 2690 | 3260  | 3740 | 4530  | 5190  | 6280  | 7620  | 8000  | 8890  | 9800  |       |       |       |       |
| WLD1917-150 | 2"   | 150         | .332"        | 1200                        | 1670 | 2580 | 3580 | 4330  | 4960 | 6010  | 6890  | 8340  | 10100 | 10620 | 11810 | 12500 |       |       |       |       |
| WLD1913-200 | ¾"   | 200         | .166"        | 260                         | 360  | 550  | 770  | 930   | 1060 | 1290  | 1480  | 1790  | 2170  | 2280  | 2530  | 2760  | 2970  | 3150  |       |       |
| WLD1914-200 | 1"   | 200         | .166"        | 260                         | 360  | 550  | 770  | 930   | 1060 | 1290  | 1480  | 1790  | 2170  | 2280  | 2530  | 2760  | 2970  | 3150  |       |       |
| WLD1915-200 | 1¼"  | 200         | .250"        | 910                         | 1260 | 1940 | 2690 | 3260  | 3740 | 4530  | 5190  | 6280  | 7620  | 8000  | 8890  | 9690  | 10420 | 11100 |       |       |
| WLD1916-200 | 1½"  | 200         | .250"        | 910                         | 1260 | 1940 | 2690 | 3260  | 3740 | 4530  | 5190  | 6280  | 7620  | 8000  | 8890  | 9690  | 10420 | 11100 |       |       |
| WLD1917-200 | 2"   | 200         | .281"        | 1960                        | 2720 | 4200 | 5830 | 7060  | 8090 | 9800  | 11230 | 13600 | 16500 | 17320 | 19250 | 20980 | 22570 | 23800 |       |       |
| WLD1913-250 | ¾"   | 250         | .128"        | 150                         | 210  | 330  | 450  | 550   | 630  | 760   | 870   | 1050  | 1280  | 1340  | 1490  | 1630  | 1750  | 1860  | 1970  | 2070  |
| WLD1914-250 | 1"   | 250         | .128"        | 150                         | 210  | 330  | 450  | 550   | 630  | 760   | 870   | 1050  | 1280  | 1340  | 1490  | 1630  | 1750  | 1860  | 1970  | 2070  |
| WLD1915-250 | 1¼"  | 250         | .203"        | 600                         | 830  | 1280 | 1770 | 2150  | 2460 | 2980  | 3420  | 4140  | 5020  | 5270  | 5860  | 6390  | 6870  | 7320  | 7740  | 8140  |
| WLD1916-250 | 1½"  | 250         | .203"        | 600                         | 830  | 1280 | 1770 | 2150  | 2460 | 2980  | 3420  | 4140  | 5020  | 5270  | 5860  | 6390  | 6870  | 7320  | 7740  | 8140  |
| WLD1917-250 | 2"   | 250         | .250"        | 910                         | 1260 | 1940 | 2690 | 3260  | 3740 | 4530  | 5190  | 6280  | 7620  | 8000  | 8890  | 9690  | 10420 | 11100 | 11740 | 12340 |

\*PMO based on a liquid with a specific gravity of 1.0. Consult factory for the PMO of a liquid specific gravity less than 1.0.



| Model                          | WLD1400                    | WLDS1400                 |
|--------------------------------|----------------------------|--------------------------|
| Sizes                          | 1/2" - 2"                  | 1/2" - 1"                |
| Connections                    | NPT,<br>150# FLG (1" - 2") | NPT, SW<br>150#/300# FLG |
| Body Material                  | Ductile Iron               | 316 Stainless Steel      |
| PMO Max. Operating Pressure    | 300 PSIG                   | 225 PSIG                 |
| TMO Max. Operating Temperature | 450°F                      |                          |
| PMA Max. Allowable Pressure    | 300 PSIG up to 450°F       |                          |
| TMA Max. Allowable Temperature | 450°F @ 300 PSIG           |                          |

**WLD140:** 1/2" & 3/4" available in NPT only.

**WLDS1400:** Available in 1/2" - 1" only;  
 Capacities same as 1/2" - 3/4" WLD1400.



### Typical Applications

The **WLD1400 & WLDS1400 Series** is used on air and gas applications as drip traps on piping runs as well as drainage for systems and various process vessels that have moderate condensate loads.

### How It Works

The **WLD1400 & WLDS1400 Series** liquid drainers contain a float-operated valve. When liquid enters the drainer, the float rises opening the valve which allows liquid to be drained.

### Features

- All stainless steel internals
- Hardened valve seat for longer service life
- Ductile Iron or Stainless Steel body
- In-line repairable

### Options

- Drain connection - WLD1400: 1"-2"; WLDS1400: all sizes
- WLDS1400 only - Left, Right, or Vertical (downward) flow direction

### MATERIALS

|                       |                             |
|-----------------------|-----------------------------|
| Body & Cover WLD1400  | Ductile Iron                |
| Body & Cover WLDS1400 | CF8M Stainless Steel        |
| Gasket                | Garlock 3400                |
| Cover Screws          | Stainless Steel, Gr 5       |
| Float                 | Stainless Steel, AISI 304   |
| Internals             | Stainless Steel, 300 Series |
| Valve Seat            | Stainless Steel, 17-4 PH    |
| Valve Disc            | Stainless Steel, AISI 420F  |

### Sample Specification

The liquid drain trap shall be float operated with a ductile iron or stainless steel body, all stainless steel internals and a hardened valve seat. The unit shall be in-line repairable and equipped with a FNPT threaded connection for the use of a balance line.

### Installation

The installation should include isolation valves to facilitate maintenance and an in-line strainer. The trap must be level and upright for the float mechanism to operate. Trap must be adequately sized and properly located in the system. Installation may require an equalizing or balancing line connected from top of drainer body to the above piping, for proper drainage.

### Maintenance

All working components can be replaced with the drain trap remaining in the pipeline. Repair kits include float, valve seat & disc, and gaskets. For full maintenance details see Installation and Maintenance Manual.

# Liquid Drainers

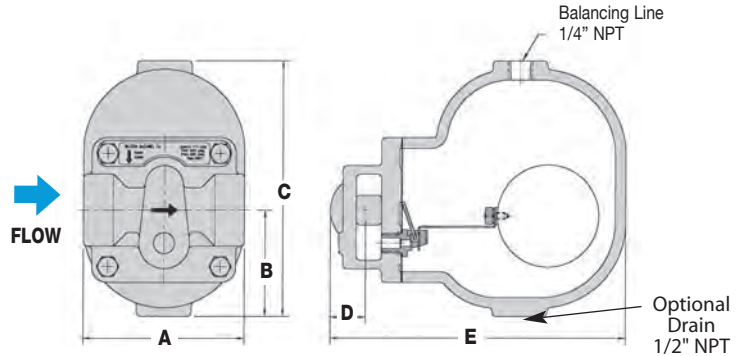
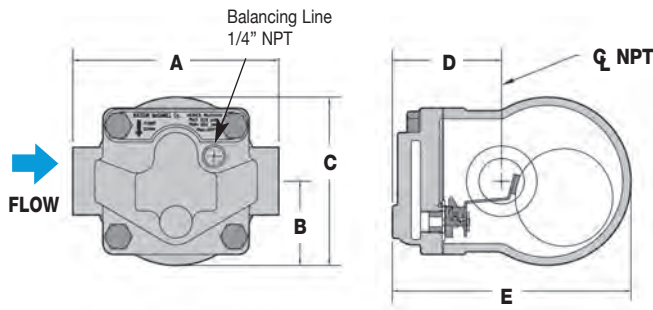
## Float Type Liquid Drainer

# WLD1400/WLDS1400 Series

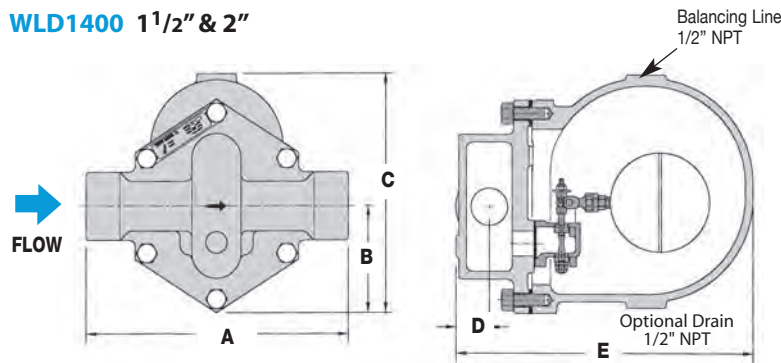
## Float Type

WLD1400 1/2" & 3/4" • WLDS1400 1/2", 3/4" & 1"

WLD1400 1"



WLD1400 1 1/2" & 2"



| DIMENSIONS & WEIGHTS — inches/pounds |      |     |     |     |     |        |
|--------------------------------------|------|-----|-----|-----|-----|--------|
| Size                                 | A    | B   | C   | D   | E   | Weight |
| 1/2", 3/4"                           | 4.8  | 1.9 | 3.9 | 2.5 | 5.5 | 6      |
| 1"                                   | 4.8  | 3.1 | 7.5 | 1.1 | 8.8 | 16     |
| 1 1/2"                               | 10.6 | 4.3 | 9.6 | 1.4 | 12  | 40     |
| 2"                                   | 11.9 | 4.3 | 9.6 | 1.4 | 12  | 40     |

Note: For flanged dimensions, refer to FTT and FTTS Steam Trap pages.

### How to Size / Order

Determine the capacity (lbs/hr) required at the specified differential pressure. Locate differential pressure on capacity chart; move down column to capacity required. Make sure to select the correct model based on the maximum inlet pressure.

Example:

Required to drain 3,500 lbs/hr at a differential pressure of 2 PSI. The maximum inlet pressure is 15 PSIG.

Select Model: **WLD1416-N-065**, 1 1/2", capacity up to 4,300 lbs/hr based on 2 PSI differential pressure. PMO = 65 PSI

Capacity in lbs/hr is based on differential pressure across the drainer. Select a model with an equal or higher PMO (max. operating pressure) than the maximum inlet pressure to the drainer. If the pressure to the drainer exceeds the PMO, the drainer may not open. If discharging to atmosphere, the differential pressure is equal to the inlet pressure.

| CAPACITIES – Cold Water (lbs/hr) |        |             |              |                             |       |       |       |       |       |       |       |       | For WLD1400 & WLDS1400 |       |       |       |       |       |      |  |
|----------------------------------|--------|-------------|--------------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------------------------|-------|-------|-------|-------|-------|------|--|
| Model Code                       | Size   | PMO* (PSIG) | Orifice Size | Differential Pressure (PSI) |       |       |       |       |       |       |       |       |                        |       |       |       |       |       |      |  |
|                                  |        |             |              | 1                           | 2     | 5     | 10    | 15    | 20    | 30    | 50    | 65    | 75                     | 100   | 125   | 145   | 200   | 225   | 300  |  |
| WLD1412-N-065                    | 1/2"   | 65          | .157"        | 250                         | 340   | 530   | 730   | 880   | 1010  | 1230  | 1560  | 1770  |                        |       |       |       |       |       |      |  |
| WLD1413-N-065                    | 3/4"   | 65          | .157"        | 250                         | 340   | 530   | 730   | 880   | 1010  | 1230  | 1560  | 1770  |                        |       |       |       |       |       |      |  |
| WLD1414-N-065                    | 1"     | 65          | .273"        | 980                         | 1360  | 2090  | 2910  | 3520  | 4040  | 4890  | 6220  | 7050  |                        |       |       |       |       |       |      |  |
| WLD1416-N-065                    | 1 1/2" | 65          | .690"        | 3125                        | 4300  | 6600  | 9350  | 11225 | 13250 | 16350 | 20950 | 23500 |                        |       |       |       |       |       |      |  |
| WLD1417-N-065                    | 2"     | 65          | 1.12"        | 10600                       | 14900 | 23300 | 31500 | 38150 | 44750 | 53600 | 69200 | 76375 |                        |       |       |       |       |       |      |  |
| WLD1412-N-145                    | 1/2"   | 145         | .100"        | 110                         | 150   | 230   | 320   | 380   | 440   | 530   | 680   | 770   | 940                    | 1050  | 1130  | 1200  |       |       |      |  |
| WLD1413-N-145                    | 3/4"   | 145         | .100"        | 110                         | 150   | 230   | 320   | 380   | 440   | 530   | 680   | 770   | 940                    | 1050  | 1130  | 1200  |       |       |      |  |
| WLD1414-N-145                    | 1"     | 145         | .202"        | 490                         | 670   | 1040  | 1440  | 1750  | 2000  | 2430  | 3090  | 3500  | 4290                   | 4760  | 5110  | 5350  |       |       |      |  |
| WLD1416-N-145                    | 1 1/2" | 145         | .590"        | 1575                        | 2175  | 3400  | 4650  | 5525  | 6325  | 7750  | 9925  | 11000 | 12300                  | 13975 | 15300 | 16500 |       |       |      |  |
| WLD1417-N-145                    | 2"     | 145         | .806"        | 3875                        | 5450  | 8575  | 11500 | 12350 | 13200 | 20950 | 27175 | 31050 | 34150                  | 38500 | 42225 | 45950 |       |       |      |  |
| WLD1412-N-225                    | 1/2"   | 225         | .079"        | 60                          | 80    | 130   | 180   | 220   | 250   | 300   | 380   | 430   | 530                    | 590   | 630   | 690   | 740   | 780   |      |  |
| WLD1413-N-225                    | 3/4"   | 225         | .079"        | 60                          | 80    | 130   | 180   | 220   | 250   | 300   | 380   | 430   | 530                    | 590   | 630   | 690   | 740   | 780   |      |  |
| WLD1414-N-225                    | 1"     | 225         | .184"        | 320                         | 450   | 690   | 960   | 1160  | 1330  | 1610  | 2050  | 2330  | 2850                   | 3170  | 3400  | 3710  | 3960  | 4100  |      |  |
| WLD1416-N-250                    | 1 1/2" | 250         | .530"        | 1000                        | 1375  | 2150  | 3050  | 3600  | 4100  | 5025  | 6400  | 7300  | 8050                   | 8900  | 9750  | 10550 | 12450 | 13150 |      |  |
| WLD1417-N-250                    | 2"     | 250         | .650"        | 1900                        | 2675  | 4250  | 5850  | 7000  | 8225  | 10050 | 12950 | 15125 | 16700                  | 18300 | 20200 | 22100 | 25850 | 27100 |      |  |
| WLD1414-N-300                    | 1"     | 300         | .153"        | 230                         | 320   | 500   | 690   | 840   | 960   | 1170  | 1480  | 1680  | 2060                   | 2290  | 2460  | 2680  | 2860  | 3020  | 3460 |  |

Note: 1/2" - 1" WLDS1400 capacities same as 1/2" - 3/4" WLD1400 capacities.

\* PMO based on a liquid with a specific gravity of 1.0. Consult factory for the PMO of a liquid with specific gravity less than 1.0.

LIQUID  
DRAINERS

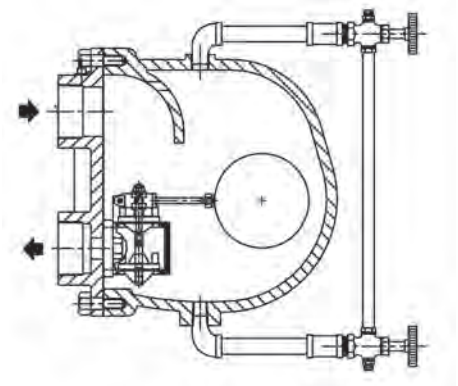
# Liquid Drainers

## Float Type Liquid Drainer

# WLDE/WLDES Series

## Float Type

| Model                          | WLDE                 | WLDES                |
|--------------------------------|----------------------|----------------------|
| Sizes                          | 1 1/2", 2", 2 1/2"   | 2 1/2"               |
| Connections                    | NPT                  | NPT, SW, Flanged     |
| Body Material                  | Ductile Iron         | Cast Steel           |
| PMO Max. Operating Pressure    | 200 PSIG             | 300 PSIG             |
| TMO Max. Operating Temperature | 450°F                | 450°F                |
| PMA Max. Allowable Pressure    | 300 PSIG up to 450°F | 300 PSIG up to 750°F |
| TMA Max. Allowable Temperature | 450°F @ 300 PSIG     | 750°F @ 300 PSIG     |



Note: WLDE and WLDES available with optional sight glass; Consult factory.

### Typical Applications

The **WLDE/WLDES Series** high-capacity condensate drainers meet the flow requirements that are typically found in heavy industrial process applications for air and other gases.

### How It Works

The WLDE/WLDES Series liquid drainers contain a float-operated valve. When liquid enters the drainer, the float rises opening the valve which allows liquid to be drained.

### Features

- Ductile Iron or Cast Steel body and cover
- All stainless steel internals for long service life
- High capacity liquid removal
- Rugged construction design for heavy industrial use
- In-line repairable

### Sample Specification

The liquid drain trap shall be float operated with a ductile iron or cast steel body and all stainless steel internals. The unit shall be in-line repairable and equipped with a FNPT threaded connection for the use of a balance line.

### Installation

The installation should include isolation valves to facilitate maintenance and an in-line strainer. The trap must be level and upright for the float mechanism to operate. Trap must be adequately sized and properly located in the system. Installation may require an equalizing or balancing line connected from top of drainer body to the above piping, for proper drainage.

### Maintenance

All working components can be replaced with the drain trap remaining in the pipeline. Repair kits include float, valve seat & disc and gaskets. For full maintenance details see Installation and Maintenance Manual.

### MATERIALS

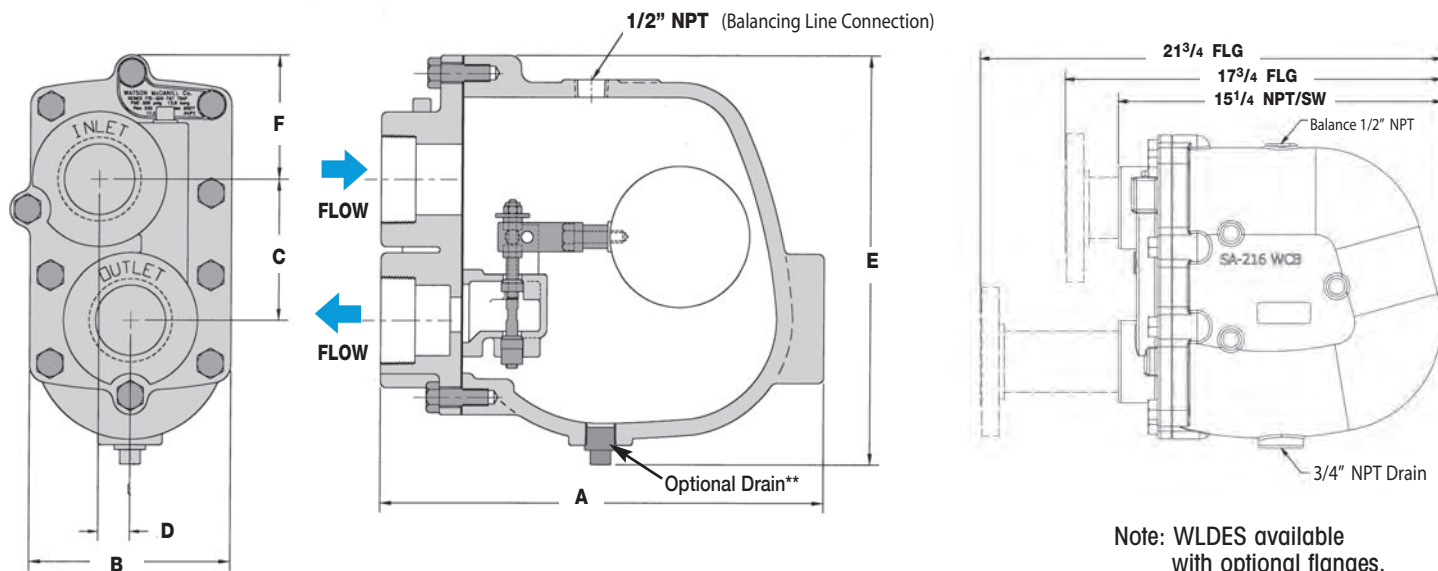
|                             |                                                         |
|-----------------------------|---------------------------------------------------------|
| Body & Cover                | <b>WLDE</b> - Ductile Iron<br><b>WLDES</b> - Cast Steel |
| Cover Screw                 | Carbon Steel, Gr 5                                      |
| Cover Gasket                | Garlock                                                 |
| Valve Discs                 | Stainless Steel, AISI 303                               |
| Main Valve Assembly Housing | Stainless Steel, AISI 304                               |
| Valve Assembly Gasket       | Garlock                                                 |
| Ball Float                  | Stainless Steel, AISI 304                               |
| All other components        | Stainless Steel                                         |

# Liquid Drainers

## Float Type Liquid Drainer

# WLDE/WLDES Series

## Float Type



Note: WLDES available with optional flanges.

\*\*Optional Drain:  
 1 1/2" WLDE-200: 3/8" NPT  
 2" WLDE-20, 200: 3/8" NPT  
 2" WLDE-50: 3/4" NPT  
 2 1/2" WLDE-50, 125, 200: 3/4" NPT  
 2 1/2" WLDES: 3/4" NPT

| DIMENSIONS & WEIGHTS – inches |            |           |        |          |        |        |         |         |              |
|-------------------------------|------------|-----------|--------|----------|--------|--------|---------|---------|--------------|
| Model                         | PMO (PSIG) | Pipe Size | A      | B        | C      | D      | E       | F       | Weight (lbs) |
| WLDE                          | 200        | 1 1/2"    | 9 1/8  | 4 5/16   | 3      | 1 1/16 | 8 13/16 | 2 1/8   | 24           |
| WLDE                          | 20         | 2"        | 12 1/8 | 5 1 1/16 | 4 1/2  | 1/2    | 1 11/8  | 3 15/16 | 61           |
| WLDE                          | 200        | 2"        |        |          |        |        |         |         |              |
| WLDE                          | 50         | 2"        | 16     | 8 7/16   | 7 5/16 | 1 7/16 | 15 1/8  | 3 1/8   | 150          |
| WLDE                          | 50         | 2 1/2"    |        |          |        |        |         |         |              |
| WLDE                          | 125        | 2 1/2"    | 15 1/2 | 8 7/16   | 7 5/16 | 1 7/16 | 15 1/8  | 3 1/8   | 150          |
| WLDE                          | 200        | 2 1/2"    |        |          |        |        |         |         |              |
| WLDES                         | 300*       | 2 1/2"    |        |          |        |        |         |         |              |

\* Note: All WLDES models have same dimensions.

### How to Size / Order

Determine the capacity (lbs/hr) required at the specified differential pressure. Locate differential pressure on capacity chart; move down column to capacity required. Make sure to select the correct model based on the maximum inlet pressure.

Example:

Required to drain 80,000 lbs/hr at a differential pressure of 5 PSI. The maximum inlet pressure is 100 PSIG.

Select Model: **WLDE-125-18-N**, 2 1/2", capacity up to 87,294 lbs/hr based on 5 PSI differential pressure. PMO = 125 PSI

Capacity in lbs/hr is based on differential pressure across the drainer. Select a model with an equal or higher PMO (max. operating pressure) than the maximum inlet pressure to the drainer. If the pressure to the drainer exceeds the PMO, the drainer may not open. If discharging to atmosphere, the differential pressure is equal to the inlet pressure.

| CAPACITIES – Cold Water (lbs/hr) |               |               |                             |       |       |       |              |        |        |        |        |        |        |        |        |        |
|----------------------------------|---------------|---------------|-----------------------------|-------|-------|-------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Model Code / PMO* (PSIG)         | Pipe Size     | Orifice Size  | Differential Pressure (PSI) |       |       |       |              |        |        |        |        |        |        |        |        |        |
|                                  |               |               | 1/4                         | 1/2   | 1     | 2     | 5            | 10     | 20     | 40     | 50     | 75     | 100    | 125    | 200    | 300    |
| WLDE-20-17-N                     | 2"            | .937"         | 3929                        | 5556  | 7858  | 11113 | 17571        | 24849  | 35141  |        |        |        |        |        |        |        |
| WLDE-50-17-N                     | 2"            | 2.125"        | 12248                       | 18153 | 25312 | 37751 | 62218        | 90068  | 123365 | 161302 | 176522 |        |        |        |        |        |
| WLDE-50-18-N                     | 2 1/2"        | 2.125"        | 19520                       | 27605 | 39039 | 55209 | 87294        | 123452 | 174588 | 246904 | 276047 |        |        |        |        |        |
| <b>WLDE-125-18-N</b>             | <b>2 1/2"</b> | <b>2.125"</b> | 19520                       | 27605 | 39039 | 55209 | <b>87294</b> | 123452 | 174588 | 246904 | 276047 | 338088 | 390390 | 436469 |        |        |
| WLDE-200-16-N                    | 1 1/2"        | .375"         | 1051                        | 1486  | 2102  | 2973  | 4700         | 6647   | 9401   | 13295  | 14864  | 18205  | 21021  | 23502  | 29728  |        |
| WLDE-200-17-N                    | 2"            | .75"          | 3403                        | 4813  | 6807  | 9626  | 15220        | 21525  | 30441  | 43050  | 48131  | 58949  | 68068  | 76102  | 96263  |        |
| WLDE-200-18-N                    | 2 1/2"        | 1.5"          | 11100                       | 15713 | 22200 | 31427 | 49690        | 70273  | 99381  | 140546 | 157135 | 192450 | 222200 | 248452 | 314269 |        |
| WLDES-50-18-N                    | 2 1/2"        | 2.125"        | 19520                       | 27605 | 39039 | 55209 | 87294        | 123452 | 174588 | 246904 | 276047 |        |        |        |        |        |
| WLDES-125-18-N                   | 2 1/2"        | 2.125"        | 19520                       | 27605 | 39039 | 55209 | 87294        | 123452 | 174588 | 246904 | 276047 | 338088 | 390390 | 436469 |        |        |
| WLDES-200-18-N                   | 2 1/2"        | 1.5"          | 11100                       | 15713 | 22200 | 31427 | 49690        | 70273  | 99381  | 140546 | 157135 | 192450 | 222200 | 248452 | 314269 |        |
| WLDES-300-18-N                   | 2 1/2"        | 1.5"          | 11100                       | 15713 | 22200 | 31427 | 49690        | 70273  | 99381  | 140546 | 157135 | 192450 | 222200 | 248452 | 314269 | 427024 |

\* PMO based on a liquid with a specific gravity of 1.0. Consult factory for the PMO of a liquid with specific gravity less than 1.0.



# Liquid Drainers

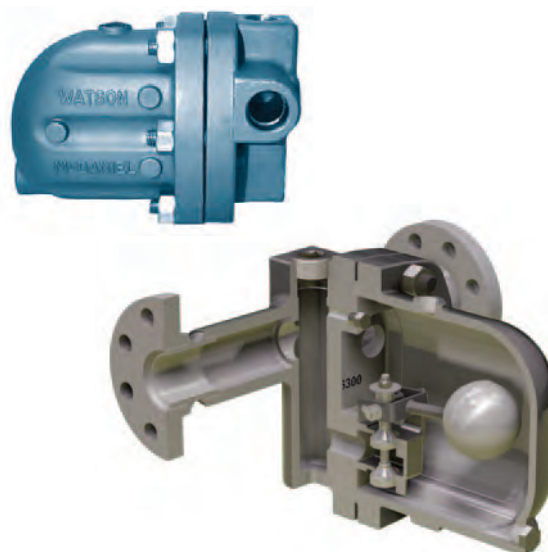
## Float Type Liquid Drainer

**WLD600** • Carbon Steel  
**WLD601** • 316 SS

|                                |                              |
|--------------------------------|------------------------------|
| Model                          | WLD600 & WLD601              |
| Sizes                          | 3/4", 1", 1 1/2", 2", 3", 4" |
| Connections                    | NPT, SW, Flanged             |
| Body Material <b>WLD600</b>    | Carbon Steel                 |
| Body Material <b>WLD601</b>    | 316 Stainless Steel          |
| PMO Max. Operating Pressure    | 450 PSIG                     |
| TMO Max. Operating Temperature | 750°F                        |
| PMA Max. Allowable Pressure    | * 990 PSIG @ 100°F           |
| TMA Max. Allowable Temperature | * 750°F @ 670 PSIG           |

\* 3/4"- 2" only.

**Note:** For dimensions and capacities of 3" & 4" liquid drain traps, refer to model FT600 in the Steam Trap section.



### Typical Applications

The **WLD600/WLD601 Series** are used in applications where immediate and continuous discharge of large amounts of liquid is required. Typically used in heavy industrial process applications for draining condensate from air or other gases.

### How It Works

The WLD600/WLD601 Series liquid drainers contain a float-operated valve. When liquid enters the drainer, the float rises opening the valve which allows liquid to be drained.

### Features

- All stainless steel internals for long service life
- Body & cover available in Carbon Steel or 316 SS
- Rugged construction designed for heavy industrial applications
- In-line repairable

### Sample Specification

The liquid drain trap shall be float operated with a cast steel body (or stainless steel body for WLD601) and all stainless steel internals. The unit shall be in-line repairable and equipped with a FNPT threaded connection for the use of a balance line.

### Installation

The installation should include isolation valves to facilitate maintenance and an in-line strainer. The trap must be level and upright for the float mechanism to operate. Trap must be adequately sized and properly located in the system. Installation may require an equalizing or balancing line connected from top of drainer body to the above piping, for proper drainage.

### Maintenance

All working components can be replaced with the drain trap remaining in the pipeline. Repair kits include float, valve seat & disc and gaskets. For full maintenance details see Installation and Maintenance Manual.

### Options

**316 SS Body & Cover:** use Model WLD601.

### MATERIALS

|                        |                                    |
|------------------------|------------------------------------|
| Body & Cover WLD600    | Cast Steel, ASTM A-216 WCB         |
| Body & Cover WLD601    | Cast 316 SS                        |
| Cover Studs            | Steel, SA 193, Gr B7               |
| Cover Nuts             | Steel, SA 194, Gr 2H               |
| Cover Gasket           | Stainless Steel Reinforced Grafoil |
| Valve Assembly         | Stainless Steel, AISI 431          |
| Gasket, Valve Assembly | Stainless Steel Reinforced Grafoil |
| Pivot Assembly         | Stainless Steel, 17-4 PH           |
| Mounting Screws        | Stainless Steel Hex Head, 18-8     |
| Float                  | Stainless Steel, ASTM 240 TY 304   |

### How to Size / Order

Determine the capacity (lbs/hr) required at the specified differential pressure. Locate differential pressure on capacity chart; move down column to capacity required. Make sure to select the correct model based on the maximum inlet pressure.

#### Example:

Required to drain 2,000 lbs/hr at a differential pressure of 300 PSI. The maximum inlet pressure is 325 PSIG.

Select Model: **WLD600-450-14-N**, 1" NPT, capacity up to 2,250 lbs/hr based on 300 PSI differential pressure

Connections: (N=NPT, SW=Socket Weld, F150=150# FLG, F300=300# FLG, F600=600# FLG)

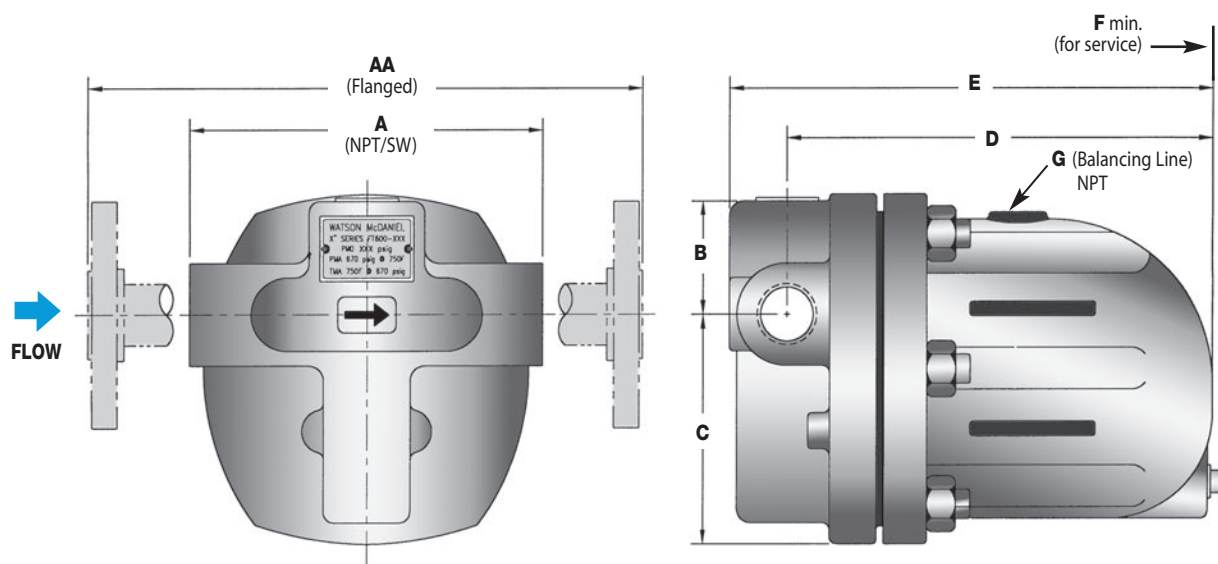
Example Models: **WLD600-450-14-SW** = 1" Socket Weld  
**WLD600-450-14-F600** = 1" 600# FLG



# Liquid Drainers

## Float Type Liquid Drainer

**WLD600** • Carbon Steel  
**WLD601** • 316 SS



**DIMENSIONS & WEIGHTS** – inches/pounds

| Size   | A        | AA      | B      | C      | D       | E        | F       | G * | Weight (lbs) |     |
|--------|----------|---------|--------|--------|---------|----------|---------|-----|--------------|-----|
|        |          |         |        |        |         |          |         |     | NPT/SW       | FLG |
| 3/4"   | 6 1/8    | 10 1/8  | 2 1/8  | 3 7/16 | 7 7/16  | 8 7/16   | 5 13/16 | 3/8 | 25           | 31  |
| 1"     | 6 1/2    | 10 7/16 | 2 1/2  | 5 1/2  | 8 7/16  | 9 1/2    | 6 5/16  | 3/8 | 31           | 36  |
| 1 1/2" | 9 13/16  | 14      | 3 7/16 | 9      | 10 7/16 | 11 15/16 | 7 13/16 | 1/2 | 82           | 91  |
| 2"     | 11 13/16 | 16      | 3 1/8  | 7 7/16 | 11 1/8  | 13 5/16  | 6 13/16 | 1/2 | 93           | 107 |

\* Balancing Port available with 1/2" flanged connection. Specify on order.

Capacity in lbs/hr is based on differential pressure across the drainer. Select a model with an equal or higher PMO (max. operating pressure) than the maximum inlet pressure to the drainer. If the pressure to the drainer exceeds the PMO, the drainer may not open. If discharging to atmosphere, the differential pressure is equal to the inlet pressure.

**CAPACITIES** – Cold Water (lbs/hr)

For WLD600 & WLD601

| Model Code<br>PMO* (PSIG) | Pipe<br>Size | Orifice<br>Size | Differential Pressure (PSI) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
|---------------------------|--------------|-----------------|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
|                           |              |                 | 2                           | 5     | 10    | 20    | 30    | 40    | 65    | 70    | 80    | 100   | 145   | 200   | 300   | 350   | 450   |  |
| WLD600-65-13-N            | 3/4"         | .156            | 340                         | 520   | 730   | 1010  | 1220  | 1440  | 1770  |       |       |       |       |       |       |       |       |  |
| WLD600-65-14-N            | 1"           | .276            | 1390                        | 2140  | 2970  | 4130  | 5000  | 5730  | 7210  |       |       |       |       |       |       |       |       |  |
| WLD600-65-16-N            | 1 1/2"       | .689            | 4160                        | 6430  | 8920  | 12380 | 15000 | 17190 | 21630 |       |       |       |       |       |       |       |       |  |
| WLD600-65-17-N            | 2"           | 1.122           | 14730                       | 22720 | 31540 | 43790 | 53060 | 60790 | 76500 |       |       |       |       |       |       |       |       |  |
| WLD600-145-13-N           | 3/4"         | .126            | 210                         | 320   | 450   | 620   | 760   | 870   | 1090  | 1130  | 1200  | 1340  | 1590  |       |       |       |       |  |
| WLD600-145-14-N           | 1"           | .205            | 690                         | 1070  | 1490  | 2060  | 2500  | 2870  | 3610  | 3740  | 3980  | 4420  | 5270  |       |       |       |       |  |
| WLD600-145-16-N           | 1 1/2"       | .591            | 2360                        | 3630  | 5050  | 7010  | 8490  | 9730  | 12240 | 12670 | 13500 | 15000 | 17890 |       |       |       |       |  |
| WLD600-145-17-N           | 2"           | .807            | 5840                        | 9010  | 12510 | 17370 | 21040 | 24110 | 30340 | 31420 | 33470 | 37200 | 44360 |       |       |       |       |  |
| WLD600-200-13-N           | 3/4"         | .106            | 170                         | 260   | 360   | 500   | 600   | 690   | 870   | 900   | 960   | 1060  | 1270  | 1480  |       |       |       |  |
| WLD600-200-14-N           | 1"           | .185            | 450                         | 690   | 960   | 1330  | 1620  | 1850  | 2330  | 2410  | 2570  | 2860  | 3410  | 3970  |       |       |       |  |
| WLD600-200-16-N           | 1 1/2"       | .531            | 1650                        | 2550  | 3540  | 4910  | 5950  | 6820  | 8580  | 8890  | 9470  | 10520 | 12540 | 14610 |       |       |       |  |
| WLD600-200-17-N           | 2"           | .657            | 2890                        | 4460  | 6190  | 8590  | 10410 | 11930 | 15010 | 15540 | 16560 | 18400 | 21940 | 25540 |       |       |       |  |
| WLD600-300-13-N           | 3/4"         | .079            | 80                          | 130   | 180   | 250   | 300   | 340   | 430   | 450   | 480   | 530   | 630   | 730   | 890   |       |       |  |
| WLD600-300-14-N           | 1"           | .156            | 340                         | 520   | 730   | 1010  | 1220  | 1400  | 1770  | 1830  | 1950  | 2160  | 2580  | 3010  | 3640  |       |       |  |
| WLD600-300-16-N           | 1 1/2"       | .531            | 1650                        | 2550  | 3540  | 4910  | 5950  | 6820  | 8580  | 8890  | 9470  | 10520 | 12540 | 14610 | 17700 |       |       |  |
| WLD600-300-17-N           | 2"           | .657            | 2890                        | 4460  | 6190  | 8590  | 10410 | 11930 | 15010 | 15540 | 16560 | 18400 | 21940 | 25540 | 30950 |       |       |  |
| WLD600-450-13-N           | 3/4"         | .063            | 50                          | 70    | 100   | 140   | 160   | 190   | 240   | 250   | 260   | 290   | 350   | 400   | 490   | 530   | 590   |  |
| WLD600-450-14-N           | 1"           | .126            | 210                         | 320   | 450   | 620   | 760   | 870   | 1090  | 1130  | 1200  | 1340  | 1590  | 1860  | 2250  | 2420  | 2720  |  |
| WLD600-450-16-N           | 1 1/2"       | .531            | 1650                        | 2550  | 3540  | 4910  | 5950  | 6820  | 8580  | 8890  | 9470  | 10520 | 12540 | 14610 | 17700 | 19040 | 21440 |  |
| WLD600-450-17-N           | 2"           | .657            | 2890                        | 4460  | 6190  | 8590  | 10410 | 11930 | 15010 | 15540 | 16560 | 18400 | 21940 | 25540 | 30950 | 33290 | 37490 |  |

\* PMO based on a liquid with a specific gravity of 1.0. Consult factory for the PMO of a liquid with specific gravity less than 1.0.

# Liquid Drainers

## Guided Float Type Liquid Drainer

# WLD1800/1800R Series

## Guided Float Type

|                                |                                                             |
|--------------------------------|-------------------------------------------------------------|
| Model                          | <b>WLD1800</b> Non-repairable<br><b>WLD1800R</b> Repairable |
| Sizes                          | <b>1/2", 3/4"</b>                                           |
| Connections                    | <b>NPT</b>                                                  |
| Body Material                  | <b>Stainless Steel</b>                                      |
| PMO Max. Operating Pressure    | <b>400 PSIG</b>                                             |
| TMO Max. Operating Temperature | <b>500°F</b>                                                |
| PMA Max. Allowable Pressure    | <b>400 PSIG @ 500°F</b>                                     |
| TMA Max. Allowable Temperature | <b>500°F @ 400 PSIG</b>                                     |



**WLD1800**  
(Non-Repairable)



**WLD1800R**  
(Repairable)

### Typical Applications

The **WLD1800/1800R Series** are used on industrial air and gas applications for drainage of liquid from systems.

### How It Works

The WLD1800 Series liquid drainers contain a float-operated valve. When liquid enters the drainer, the float rises opening the valve which allows liquid to be drained.

### Features

- **Stainless steel body**
- **All stainless steel internals for longer service life**
- **Guided float ensures proper valve seating on every cycle**
- **Repairable unit available (WLD1800R)**

### Sample Specification

The liquid drain trap shall have a guided-float operation with a tamper-proof seal-welded stainless steel body and all stainless steel internals. The unit shall be available with an in-line repairable version. All units to be equipped with FNPT threaded end connections.

### Installation

The installation should include an in-line strainer. The trap must be level and upright for the float mechanism to operate. Trap must be adequately sized and properly located in the system.

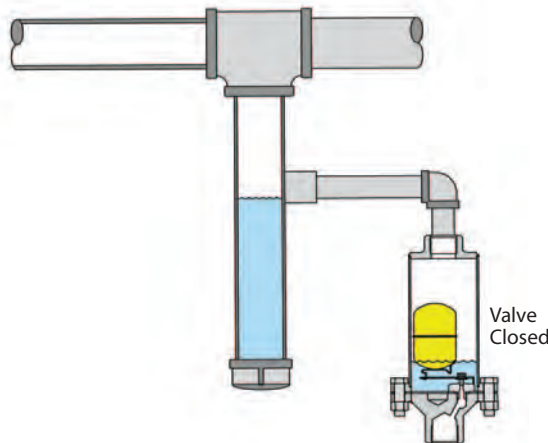
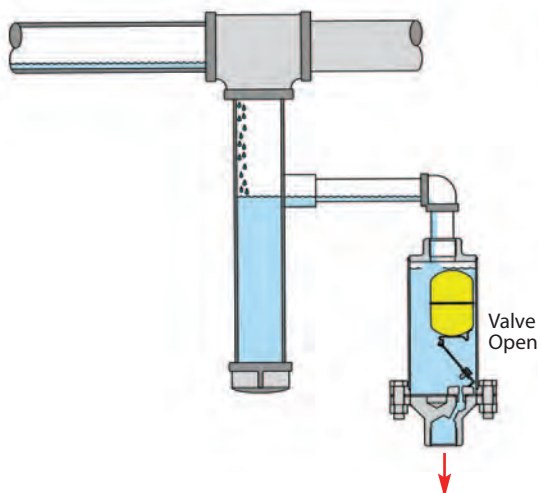
### Maintenance

The WLD1800 is non-repairable. The WLD1800R is fully repairable and all working components can be replaced. Repair kits include float, lever & seat assembly, and gaskets. For full maintenance details see Installation and Maintenance Manual.

### MATERIALS

|                           |                           |
|---------------------------|---------------------------|
| Body                      | Stainless Steel, AISI 304 |
| Inlet & Outlet Fittings   | Stainless Steel, AISI 304 |
| Float Assembly            | Stainless Steel, AISI 304 |
| Valve & Lever Assembly    | Stainless Steel, AISI 303 |
| Seat                      | Hardened Stainless Steel  |
| *Gasket (Repairable only) | Grafoil                   |
| Washer, Seat              | 302 Stainless Steel       |
| *Bolt, Hex, HD            | Stainless Steel, AISI 316 |
| *Nut, Jam                 | Stainless Steel, 18-8     |

\* WLD1800R repairable models only.



# Liquid Drainers

## Guided Float Type Liquid Drainer

# WLD1800/1800R Series

## Guided Float Type

### WLD1800 - Non-Repairable

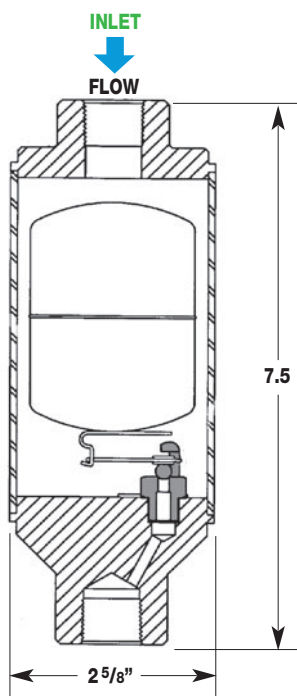
Weight: 4 lbs

| Connection<br>Inlet x Outlet | Model<br>Code | PMO<br>PSI | Orifice<br>Size |
|------------------------------|---------------|------------|-----------------|
| 3/4" x 1/2"                  | WLD1811-N     | 400        | .078"           |
| 3/4" x 3/4"                  | WLD1812-N     | 400        | .078"           |
| 1/2" x 1/2"                  | WLD1813-N     | 400        | .078"           |
| 3/4" x 1/2"                  | WLD1821-N     | 255        | .101"           |
| 3/4" x 3/4"                  | WLD1822-N     | 255        | .101"           |
| 1/2" x 1/2"                  | WLD1823-N     | 255        | .101"           |
| 3/4" x 1/2"                  | WLD1831-N     | 175        | .125"           |
| 3/4" x 3/4"                  | WLD1832-N     | 175        | .125"           |
| 1/2" x 1/2"                  | WLD1833-N     | 175        | .125"           |

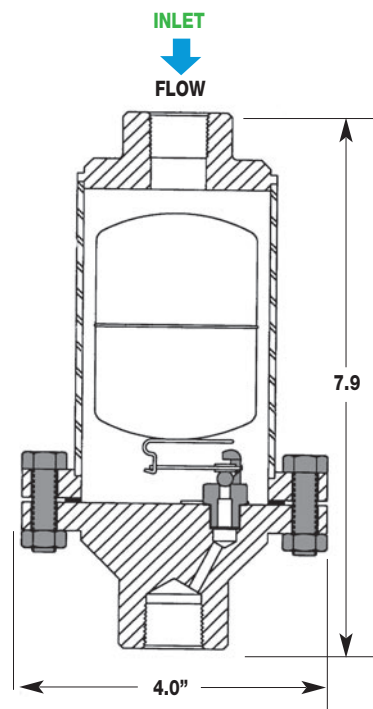
### WLD1800R - Repairable

Weight: 5 lbs

| Connection<br>Inlet x Outlet | Full Model<br>Code | PMO<br>PSI | Orifice<br>Size |
|------------------------------|--------------------|------------|-----------------|
| 3/4" x 1/2"                  | WLD1811R-N         | 400        | .078"           |
| 3/4" x 3/4"                  | WLD1812R-N         | 400        | .078"           |
| 1/2" x 1/2"                  | WLD1813R-N         | 400        | .078"           |
| 3/4" x 1/2"                  | WLD1821R-N         | 255        | .101"           |
| 3/4" x 3/4"                  | WLD1822R-N         | 255        | .101"           |
| 1/2" x 1/2"                  | WLD1823R-N         | 255        | .101"           |
| 3/4" x 1/2"                  | WLD1831R-N         | 175        | .125"           |
| 3/4" x 3/4"                  | WLD1832R-N         | 175        | .125"           |
| 1/2" x 1/2"                  | WLD1833R-N         | 175        | .125"           |



**WLD1800**  
(Non-Repairable)



**WLD1800R**  
(Repairable)

### How to Size / Order

Determine the capacity (lbs/hr) required at the specified differential pressure. Locate differential pressure on capacity chart; move down column to capacity required. Make sure to select the correct model based on the maximum inlet pressure.

Example: Required to drain 1,000 lbs/hr at a differential pressure of 200 PSI. The maximum inlet pressure is 250 PSIG.

Select Model: **WLD1822-N** 3/4" x 3/4" (non-repairable) or **WLD1822R-N** 3/4" x 3/4" (repairable); capacity up to 1,200 lbs/hr based on 200 PSI differential pressure.

### CAPACITIES – Cold Water (lbs/hr)

|         | PMO*<br>(PSIG) | Orifice<br>Size | Differential Pressure (PSI) |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |
|---------|----------------|-----------------|-----------------------------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| Series  |                |                 | 1                           | 2   | 5   | 10  | 15  | 20  | 30  | 50   | 100  | 150  | 175  | 200  | 250  | 275  | 300  | 350  | 400  |
| WLD1810 | 400            | .078"           | 60                          | 80  | 120 | 130 | 180 | 260 | 315 | 400  | 570  | 700  | 750  | 800  | 900  | 940  | 1050 | 1050 | 1120 |
| WLD1820 | 255            | .101"           | 90                          | 120 | 175 | 195 | 275 | 385 | 470 | 610  | 860  | 1050 | 1125 | 1200 | 1350 | 1425 |      |      |      |
| WLD1830 | 175            | .125"           | 160                         | 230 | 325 | 365 | 510 | 730 | 790 | 1150 | 1630 | 2000 | 2150 |      |      |      |      |      |      |

\* PMO based on a liquid with a specific gravity of 1.0. Consult factory for the PMO of a liquid with specific gravity less than 1.0.

### CAPACITY CORRECTION FACTORS

| Specific Gravity  | 1 | .98 | .96 | .94 | .92  | .90  | .88  | .86  | .84  | .82  | .80  | .75  | .70  | .65  | .60  | .55  | .50  |
|-------------------|---|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Correction Factor | 1 | .99 | .98 | .97 | .959 | .949 | .938 | .927 | .917 | .906 | .894 | .866 | .837 | .806 | .775 | .742 | .707 |

Note: To obtain capacity with a liquid other than water, multiply water capacity by correction factor.

LIQUID  
DRAINERS

# Liquid Drainers

## Inverted Bucket Type Liquid Drainer

# WLD1500 Series

## Inverted Bucket Type

|                                |                                                      |
|--------------------------------|------------------------------------------------------|
| Model                          | WLD1501, WLD1502, WLD1504, WLD1521, WLD1522, WLD1524 |
| Sizes                          | 3/4", 1"                                             |
| Connections                    | NPT                                                  |
| Body Material                  | Cast Iron                                            |
| PMO Max. Operating Pressure    | 200 PSIG                                             |
| TMO Max. Operating Temperature | 450°F                                                |
| PMA Max. Allowable Pressure    | 250 PSIG up to 450°F                                 |
| TMA Max. Allowable Temperature | 450°F @ 250 PSIG                                     |



**WLD1521/1522/1524**  
with Strainer

### Typical Applications

The **WLD1500 Series** Inverted Bucket Liquid Drain Traps are recommended for the removal of liquids from compressed air systems. A scrubber wire is used to keep bleed hole on top of inverted bucket from clogging due to oil that may be present in the water being drained. Oil mixed with water is typically found on compressed air systems.

### How It Works

When there is condensate in the system, the inverted bucket inside the liquid drain trap rests on the bottom due to its weight; with the valve in the open position. This allows liquid entering the trap to be discharged through the seat orifice located at the top. When air enters the trap, the bucket floats to the surface and closes off the discharge valve, containing the air in the system. Eventually, air is bled off through a small hole in the top of the bucket and the bucket sinks; repeating the cycle.

### Features

- Hardened stainless steel valves and seat
- Only two moving parts
- Scrubber wire in air vent of bucket
- Discharge orifice at top of trap reduces potential for clogging
- In-line repairable

### Sample Specification

Drain trap shall be an inverted bucket trap design with cast iron body, all stainless steel internals, hardened valve & seat, plus a scrubber wire. The unit shall be in-line repairable.

### Installation

Installation should include isolation valves for maintenance purposes. Trap must be installed in upright position to function properly. It may be necessary to prime the bucket trap by filling it with water through the priming port prior to startup.

### Maintenance

Close isolation valves prior to any maintenance. All working components can be replaced with the drain trap remaining in the pipeline. Repair kits include lever & seat assembly, strainer screen and gaskets. For full maintenance details see Installation and Maintenance Manual.

| MATERIALS             |                                |
|-----------------------|--------------------------------|
| Body & Cover          | Cast Iron, ASTM A-278 Class 30 |
| Nuts & Bolts          | High-Tensile Steel             |
| Gasket                | Non-Asbestos Fiber             |
| Bucket                | Stainless Steel                |
| Scrubber              | Stainless Steel                |
| Lever & Seat Assembly | Stainless Steel                |
| Valve & Seat          | Hardened Stainless Steel       |
| Integral Strainer*    | Stainless Steel                |

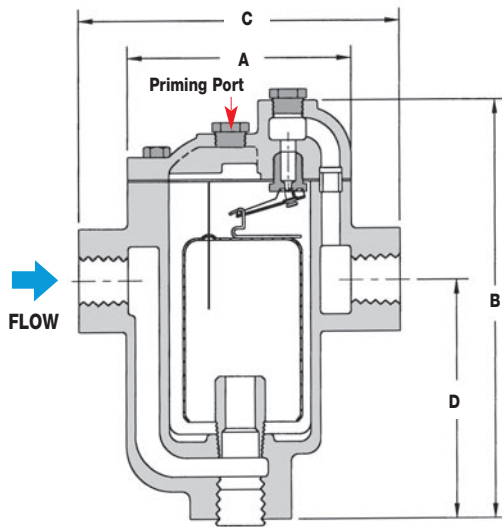
\* WLD1521, WLD1522 & WLD1524 models only.

# Liquid Drainers

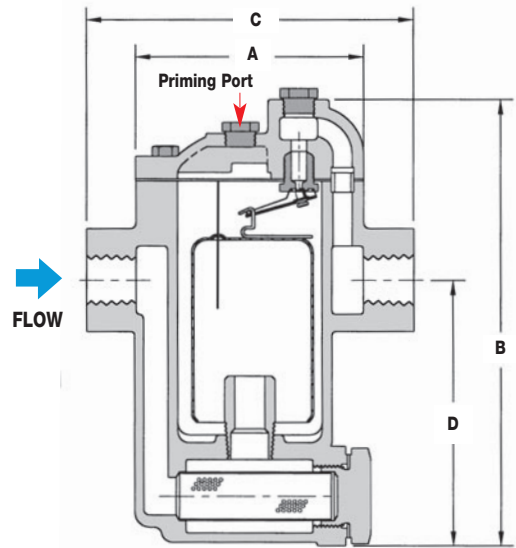
## Inverted Bucket Type Liquid Drainer

# WLD1500 Series

## Inverted Bucket Type



**WLD1501/1502/1504**



**WLD1521/1522/1524**  
with Strainer

| DIMENSIONS & WEIGHTS – inches / pounds |      |                                 |                                  |                                 |                                 |        |
|----------------------------------------|------|---------------------------------|----------------------------------|---------------------------------|---------------------------------|--------|
| Model                                  | Size | A                               | B                                | C                               | D                               | Weight |
| WLD1501-13-N                           | 3/4" | 3 <sup>13</sup> / <sub>16</sub> | 5 <sup>7</sup> / <sub>16</sub>   | 5                               | 2 <sup>13</sup> / <sub>16</sub> | 5      |
| WLD1502-13-N                           | 3/4" | 3 <sup>13</sup> / <sub>16</sub> | 6 <sup>15</sup> / <sub>16</sub>  | 5                               | 4 <sup>5</sup> / <sub>16</sub>  | 6      |
| WLD1504-14-N                           | 1"   | 7                               | 11 <sup>13</sup> / <sub>16</sub> | 7 <sup>13</sup> / <sub>16</sub> | 7                               | 27     |
| WLD1521-13-N                           | 3/4" | 3 <sup>13</sup> / <sub>16</sub> | 6 <sup>1</sup> / <sub>8</sub>    | 5                               | 3 <sup>7</sup> / <sub>16</sub>  | 5.5    |
| WLD1522-13-N                           | 3/4" | 3 <sup>13</sup> / <sub>16</sub> | 7 <sup>1</sup> / <sub>8</sub>    | 5                               | 4 <sup>7</sup> / <sub>16</sub>  | 6      |
| WLD1524-14-N                           | 1"   | 7                               | 12 <sup>7</sup> / <sub>16</sub>  | 7 <sup>13</sup> / <sub>16</sub> | 7 <sup>7</sup> / <sub>16</sub>  | 30     |

### How to Size / Order

Determine the capacity (lbs/hr) required at the specified differential pressure. Locate differential pressure on capacity chart; move down column to capacity required. Make sure to select the correct model based on the maximum inlet pressure.

#### Example:

Required to drain 200 lbs/hr at a differential pressure of 5 PSI. The maximum inlet pressure is 30 PSIG.

Select Model: **WLD1521-13-N**, 3/4" NPT, with strainer, capacity up to 220 lbs/hr based on 5 PSI differential pressure.

Capacity in lbs/hr is based on differential pressure across the drainer. Select a model with an equal or higher PMO (max. operating pressure) than the maximum inlet pressure to the drainer. If the pressure to the drainer exceeds the PMO, the drainer may not open. If discharging to atmosphere, the differential pressure is equal to the inlet pressure.

| CAPACITIES – Cold Water (lbs/hr) |             |      |                             |     |      |      |      |      |      |      |      |      |      |
|----------------------------------|-------------|------|-----------------------------|-----|------|------|------|------|------|------|------|------|------|
| Model Code                       | PMO* (PSIG) | Size | Differential Pressure (PSI) |     |      |      |      |      |      |      |      |      |      |
|                                  |             |      | 2                           | 5   | 10   | 25   | 50   | 80   | 100  | 125  | 150  | 180  | 200  |
| WLD1501-13-N                     | 150         | 3/4" | 145                         | 220 | 325  | 510  | 720  | 900  | 1010 | 1130 | 1215 |      |      |
| WLD1521-13-N                     | 150         | 3/4" | 145                         | 220 | 325  | 510  | 720  | 900  | 1010 | 1130 | 1215 |      |      |
| WLD1502-13-N                     | 200         | 3/4" | 170                         | 260 | 380  | 595  | 835  | 1045 | 1175 | 1315 | 1410 | 1550 | 1645 |
| WLD1522-13-N                     | 200         | 3/4" | 170                         | 260 | 380  | 595  | 835  | 1045 | 1175 | 1315 | 1410 | 1550 | 1645 |
| WLD1504-14-N                     | 200         | 1"   | 500                         | 760 | 1105 | 1740 | 2460 | 3065 | 3450 | 3865 | 4140 | 4555 | 4835 |
| WLD1524-14-N                     | 200         | 1"   | 500                         | 760 | 1105 | 1740 | 2460 | 3065 | 3450 | 3865 | 4140 | 4555 | 4835 |

\* PMO based on a liquid with a specific gravity of 1.0. Consult factory for the PMO of a liquid with specific gravity less than 1.0.



# Liquid Drainers

## Disc Type Liquid Drainer

# WLD1703S Series

## Disc Type

|                                |                      |
|--------------------------------|----------------------|
| Model                          | WLD1703S             |
| Sizes                          | 1/2"                 |
| Connections                    | NPT                  |
| Body Material                  | Stainless Steel      |
| Options                        | Blowdown Valve       |
| PMO Max. Operating Pressure    | 250 PSIG             |
| TMO Max. Operating Temperature | 750°F                |
| PMA Max. Allowable Pressure    | 915 PSIG up to 250°F |
| TMA Max. Allowable Temperature | 610°F @ 750 PSIG     |

### Typical Applications

The **WLD1703S** is used on air and gas applications as drip traps on system mains and other piping runs. These drain traps are ideal for outdoor applications where units are subject to freezing.

### How It Works

The disc type liquid drain trap has a cyclic on/off operation with a disc that is pushed open when condensate is present and pulled closed when air or gas tries to escape.

### Features

- Rugged, stainless steel body and hardened seat
- Handles a wide range of pressures up to 250 PSIG
- Works in any position (horizontal preferable)
- Integral strainer with blowdown option
- Three-holed balanced discharge
- Freeze-proof in vertical flow-down position

### Sample Specification

Drain Trap shall be a Disc Type with an all stainless steel construction. Body shall have a built-in strainer with optional blowdown valve. Integral seat design and disc to be hardened for long service life. Unit shall be capable of installation in any orientation and self-draining when mounted vertically with flow direction downwards.

### Installation

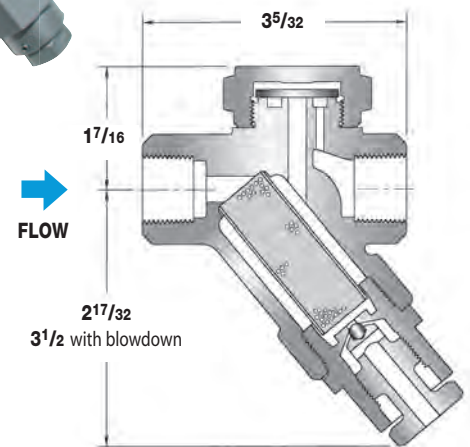
Drain Trap can be installed in any position; however, horizontal is preferred. Installation should include isolation valves for maintenance purposes.



**WLD1703SB**  
with Strainer  
& Blowdown  
Valve

**WLD1703S**  
with Strainer

**WLD1703SB**  
with Strainer &  
Blowdown  
Valve



Units: inches

### Maintenance

Dirt is the most common cause of premature failure. The strainer may require periodic cleaning. For full maintenance details see Installation and Maintenance Manual.

### Options

Blowdown valve allows strainer to be cleaned without removal.

### MATERIALS

|                 |                            |
|-----------------|----------------------------|
| Body            | Stainless Steel, AISI 420F |
| Disc            | Stainless Steel, AISI 420  |
| Cap             | Stainless Steel, AISI 416  |
| Strainer Screen | Stainless Steel, AISI 304  |
| Blowdown Valve* | Stainless Steel, AISI 303  |

\* WLD1703SB model only.

### CAPACITIES – Cold Water (lbs/hr)

| Model Code     | Description         | Pipe Size | 2  | 5   | 10  | 25  | 50  | 80  | 100 | 125 | 150 | 180 | 200 | 250 |
|----------------|---------------------|-----------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| WLD1703S-12-N  | Strainer            | 1/2"      |    |     |     |     |     |     |     |     |     |     |     |     |
| WLD1703SB-12-N | Strainer & Blowdown |           | 90 | 130 | 190 | 300 | 425 | 530 | 600 | 670 | 715 | 790 | 835 | 955 |

Note: 1) Maximum back pressure not to exceed 80% of inlet pressure.

2) To determine gallons per minute of flow, divide values in chart by 500. Example: 600 lbs/hr = 600 ÷ 500 = 1.2 GPM