

Mallard Model 3500 (rigid-union, Figure 1) and Model 3510 (union-union, Figure 2) Gauge Valves are recommended for use with Mallard Model 3520 / 3540 Glass Liquid Level Gauges and are compatible with all armored flat-glass liquid level gauges. Consistent with Mallard's reputation, the Model 3500 is designed and built to the highest standards.

Features:

- **Safety Shut-off** - Equipped with a stainless steel ball check located upstream of the seat, which instantaneously shuts off flow of medium in case of gauge glass breakage.

- **Union Gauge Connection** - Allows top & bottom connected gauges to be rotated to any angle for convenient visibility. Enables gauge removal without removing the gauge valves - a significant time saver.
- **Offset Pattern** - Gauge and drain connections are offset 0.75" from the vessel connection centerline, enabling the glass liquid level gauge to be cleaned in place.
- **NACE Option** - Materials of construction which comply with NACE MR-01-75 specifications are available upon request.



Figure 1. Model 3500 Rigid-Union Gauge Valve



Figure 1. Model 3510 Union-Union Gauge Valve

Specifications:

Gauge Connections

1/2" or 3/4" FNPT (Rigid or Union)

Vessel Connection

1/2" or 3/4" MNPT (Union only)

Vent/Drain Connection

| Gauge Conn. | Vent/Drain Connection | |
|-------------|-----------------------|----------|
| | 3500 | 3510 |
| 1/2" NPT | 1/2" NPT | 1/2" NPT |
| 3/4" NPT | 3/4" NPT | 1/2" NPT |

Handwheel

Standard Pitch Threads

Seating Surface

Integral to valve body

Construction Materials

Body: Carbon Steel
 Stem: 416 SST (Standard)
 316 SST (NACE Option)
 Ball Check: 302 SST
 Handwheel: Cast Iron

Approximate Weight

5.5 Lbs.



DIMENSIONS

Top-Bottom Connections

To obtain maximum gauge length permissible for a **given vessel center-to-center** dimension:

$$\left(\begin{array}{c} \text{Valve} \\ \text{Center-to-Center} \\ \text{Dimension} \end{array} \right) - \left(\begin{array}{c} \text{Dimension} \\ \text{"A"} \end{array} \right)$$

To determine **overall length of nipples** needed to make up a gauge set for a **given vessel center-to-center** dimension:

$$\left(\begin{array}{c} \text{Valve} \\ \text{Center-to-Center} \\ \text{Dimension} \end{array} \right) - \left(\begin{array}{c} \text{Overall} \\ \text{Length} \end{array} + \begin{array}{c} \text{Dimension} \\ \text{"B"} \end{array} \right)$$

Overall nipple length can be divided between nipples to suit the application. Minimum length required for each nipple is 1 1/8" for 1/2" NPT nipple and 1 3/8" for 3/4" NPT nipple.

Side-Side Connections

To obtain vessel center-to-center dimension for a **given gauge length** with valves offset toward the gauge center:

$$\left(\begin{array}{c} \text{Overall} \\ \text{Length} \end{array} \right) - \left(\begin{array}{c} \text{Dimension} \\ \text{"C"} \end{array} \right)$$

To obtain vessel center-to-center dimension for a **given gauge length** with valves offset away from the gauge center:

$$\left(\begin{array}{c} \text{Overall} \\ \text{Length} \end{array} \right) + \left(\begin{array}{c} \text{Dimension} \\ \text{"C"} \end{array} \right)$$

| Dim. | Process Conn. | Model | |
|------|---------------|--------|--------|
| | | 3500 | 3510 |
| "A" | 1/2" NPT | 2 7/8" | 6 1/8" |
| | 3/4" NPT | 3 1/8" | 6 3/8" |
| "B" | 1/2" NPT | 5/8" | 3 7/8" |
| | 3/4" NPT | 7/8" | 4 1/8" |
| "C" | 1/2" NPT | 1 1/2" | |
| | 3/4" NPT | 1 7/8" | |

Model Number Information

Sample Model Number: **3500 - 1**

| | | |
|----------------------------------|-------------------|-------------|
| GAUGE-VESSEL CONN. STYLE | | CODE |
| Rigid-Union | | 00 |
| Union-Union | | 10 |
| CONNECTION SIZE | | CODE |
| Gauge Connection | Vessel Connection | |
| 1/2" FNPT | 1/2" MNPT | 1 |
| 1/2" FNPT | 3/4" MNPT | 2 |
| 3/4" FNPT | 1/2" MNPT | 3 |
| 3/4" FNPT | 3/4" MNPT | 4 |
| MATERIALS OF CONSTRUCTION | | CODE |
| Carbon Steel – Standard Service | | |
| Carbon Steel – NACE MR-01-75 | | N |

While this information is presented in good faith and believed to be accurate, Mallard Control Company does not guarantee results based upon such information. Mallard Control Company reserves the right to change the design or specifications of these products without notice.

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