

## 92302 Liquid Level Indicator

The Shand & Jurs Model 92302 Liquid Level Indicator is a reliable and affordable float actuated level gauging system. It is designed to provide reliable and virtually trouble-free service for installation not requiring accuracies better than  $\pm 1$  inch.

Shand & Jurs provides as standard, rugged aluminum, redwood, and 316 stainless steel indicator boards. Standard mounting hardware is steel (316 SS available). Graduations are in feet and inches or meters and decimeters, large black numerals make readout highly visible from a distance. Half or third travel indicator boards are offered for special installations, such as underground tanks. Outage (reverse reading), volumetric and custom marked boards available.

To simplify ordering and installation, Shand & Jurs provides complete installation kits. Complete kit includes float, brackets, clamps, anchor bar, target, sheaves, guide wire spring assembly, guide wire and liquid seal when required.

The choice of material selection for kits permits installation in a variety of environmental conditions. To provide a vapor tight installation and protect the gauge board from corrosive tank vapors, a standard liquid seal is available.

Shand & Jurs also offers limit switches to actuate high and low level alarms, provide pump control or other signaling functions.

The MCG 2420 Transmitter can easily couple to the Shand & Jurs 92302 Liquid Level Indicators. See L&J engineering's MCG 2420 Transmitter data sheet for more information.



## Features

- Low cost and simple installation
- Accurate to  $\pm 1$  inch
- Choice of standard materials to accommodate most installations
- Extremely visible numerals and graduations
- Durable and reliable construction materials on all moving parts
- Custom marking available
- Optional electronic level gauging via the MCG 2420

**Specifications:**

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**Gauging Range**

55 Feet or 16.8 Meters (Higher Available)

**Operating Temperature:**

-30°F to 160°F

**Type of Kit Class:**Class A (Aluminum)  
Class B (Nodular Iron)**Materials of Construction:**

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**Indicator Board:**

Redwood, Aluminum, or 316 SS optional

**Float:**

316 SS (304 SS or Monel Optional)

**Brackets:**

Steel (316 SS Optional)

**Anchor Bar:**

Steel (316 SS Optional)

**Float Cable:**

Stainless Steel

**Cable Clamp:**

Stainless Steel

**Target:**

Steel (316SS Optional)

**Sheave Assembly:**

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**Housing and Cover:**

Cast Aluminum or Nodular Iron (316 SS Optional)

**Sheave:**

Delrin

**Bearing:**

Teflon

**Shaft:**

Stainless Steel

**Liquid Seal (Class A Only):**

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**Housing and Cover:**

Cast Aluminum

**Sheave:**

Delrin

**Bearing:**

Teflon

**Shaft:**

Stainless Steel

**Pipe:**

Steel

**NOTE: All 316 SS Optional****Guide Wire Spring Assembly:**

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**Housing Assembly:**

Steel

**Guide Wire:**

Stainless Steel

**Spring:**

Steel

**NOTE: All 316 SS or 304 SS Optional****Liquid Seal Installation:**

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Maximum tank pressure 5 oz./sq. in.<sup>2</sup> for antifreeze or 4 oz./sq. in. for medium weight oil (0.8 Sp. Gr.)

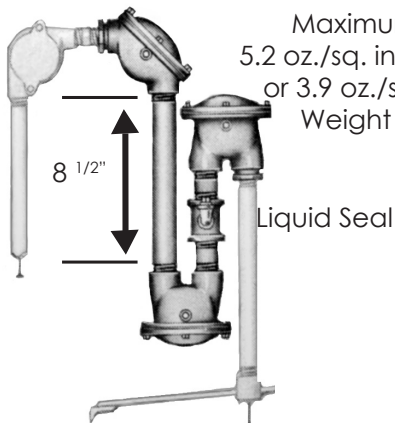
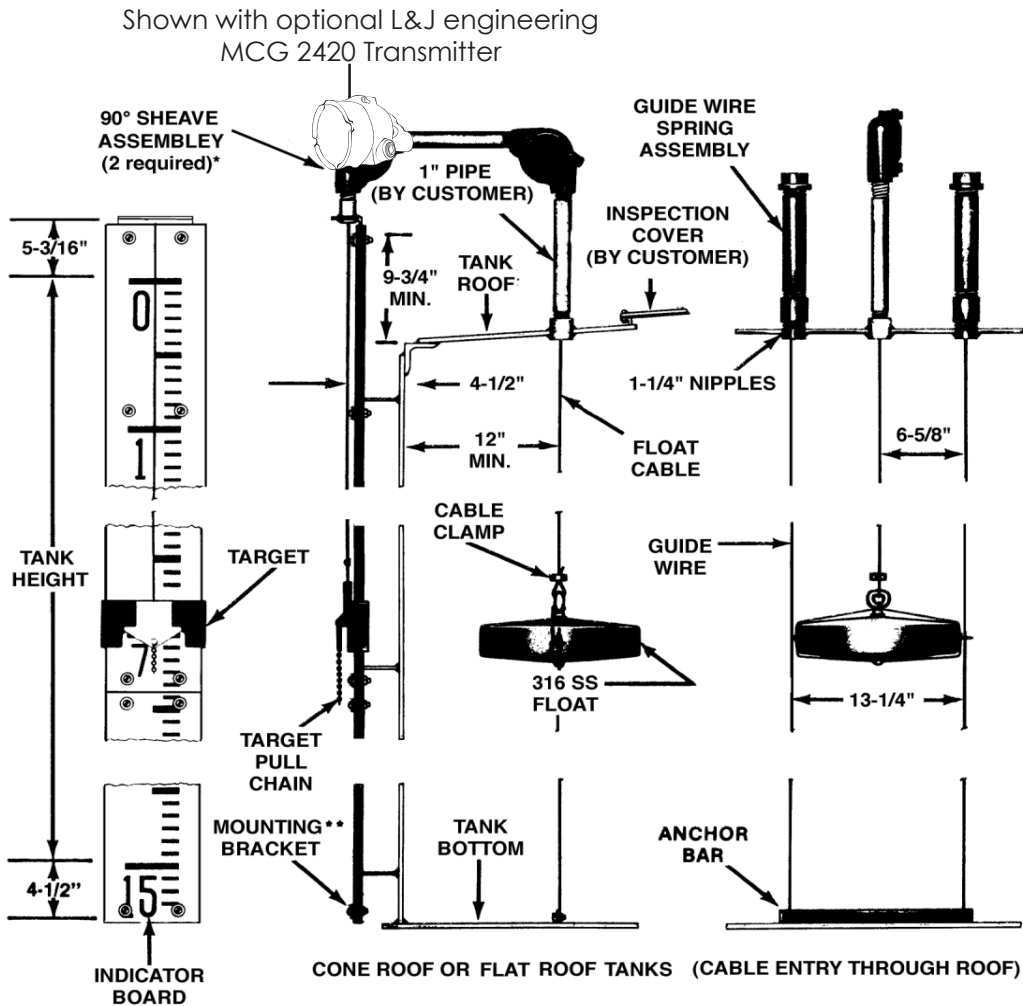
For higher tank pressures, refer to Liquid Seal Model 93603.

Additional options available. Consult Factory

# 92302 Liquid Level Indicator



## Dimensions:



Maximum Tank Pressure  
5.2 oz./sq. in.<sup>2</sup> for Ethyleneglycol  
or 3.9 oz./sq. in.<sup>2</sup> for Medium  
Weight Oil (0.8 SP. GR)

### NOTES:

1. Specify Kit No. 1 (Class A or B) for redwood (without liquid seal).
2. Specify Kit No. 2 (Class A or B) for aluminum (without liquid seal).
3. Specify Kit No. 3 (Class A only) for redwood with liquid seal.\*\*\*
4. Specify Kit No. 4 (Class A only) for aluminum with liquid seal.\*\*\*

\* 1 Required for Kit 3 & 4

\*\* 2 Brackets supplied per tank height

\*\*\*Liquid seal body available in PVC consult factory

All designs subject to change. Certified dimensions and specifications available upon request.



## 92302 Ordering Guide

### Model Number Selection

The model number will have a base number 92302 followed by 6 digit numbers. These digits will represent 3 sets of option tables.

**92302 - AB - CD - EF**

No Kit (EF) = 00

### Ordering Information

Specify:

1. Model 92302 Liquid Level Indicator
2. Type of Tank
3. Type of Kit Class
4. Type of Board Materials
5. Type of Graduation
6. Tank Height

\* When placing order, please specify exact tank height as well as correct option numbers.  
MODEL JB3704-1 Limit Switch must be ordered separately.



### Table AB - Board Material and Calibration

| Option AB | Description  |
|-----------|--|
| 08        | Wood Board - Foot/Inch Calibration                   |
| 09        | Wood Board - Metric/Decimeter Calibration            |
| 18        | Aluminum Board - Foot/Inch Calibration               |
| 19        | Aluminum Board - Metric/Decimeter Calibration        |
| 28        | Stainless Steel Board - Foot/Inch Calibration        |
| 29        | Stainless Steel Board - Metric/Decimeter Calibration |

### Table CD - Tank Height (Boards with Mounting Hardware)

| Option CD | Feet/Inches - Wood-Table I, Option 08     | Option CD | Metric - Wood-Table I, Option 09     |
|-----------|---|-----------|--------------------------------------|
| 03        | 5'0" - 7'3"                               | 51        | 1.50 - 2.21 Meters                   |
| 11        | 7'4" - 15'3"                              | 52        | 2.22 - 4.65 Meters                   |
| 19        | 15'4" - 23'3"                             | 53        | 4.66 - 7.09 Meters                   |
| 27        | 23'4" - 31'3"                             | 54        | 7.10 - 9.53 Meters                   |
| 35        | 31'4" - 39'3"                             | 55        | 9.54 - 11.96 Meters                  |
| 43        | 39'4" - 47'3"                             | 56        | 11.97 - 14.40 Meters                 |
| 50        | 47'4" - 55'3"                             | 57        | 14.41 - 16.84 Meters                 |
| Option CD | Feet/Inches - Aluminum-Table I, Option 18 | Option CD | Metric - Aluminum-Table I, Option 19 |
| 03        | 5'0" - 7'3"                               | 51        | 1.50 - 2.21 Meters                   |
| 11        | 7'4" - 15'3"                              | 52        | 2.22 - 4.65 Meters                   |
| 19        | 15'4" - 23'3"                             | 53        | 4.66 - 7.09 Meters                   |
| 27        | 23'4" - 31'3"                             | 54        | 7.10 - 9.53 Meters                   |
| 35        | 31'4" - 39'3"                             | 55        | 9.54 - 11.96 Meters                  |
| 43        | 39'4" - 47'3"                             | 56        | 11.97 - 14.40 Meters                 |
| 50        | 47'4" - 55'3"                             | 57        | 14.41 - 16.84 Meters                 |
| 70        | 55'4" - 63'3"                             | 58        | 16.85 - 19.28 Meters                 |
| 71        | 63'4" - 71'3"                             | 59        | 19.29 - 21.72 Meters                 |
|           |   | 60        | 21.73 - 24.16 Meters                 |
|           |   | 61        | 24.17 - 26.60 Meters                 |

**Table CD - Tank Height (Boards with Mounting Hardware) Cont.**

| Option CD | Feet/Inches - SS Table I, Option 28 | Option CD | Metric - SS Table I, Option 29 |
|-----------|-------------------------------------|-----------|--------------------------------|
| 03        | 5'0" - 7'3"                         | 51        | 1.50 - 2.21 Meters             |
| 11        | 7'4" - 15'3"                        | 52        | 2.22 - 4.65 Meters             |
| 19        | 15'4" - 23'3"                       | 53        | 4.66 - 7.09 Meters             |
| 27        | 23'4" - 31'3"                       | 54        | 7.10 - 9.53 Meters             |
| 35        | 31'4" - 39'3"                       | 55        | 9.54 - 11.96 Meters            |
| 43        | 39'4" - 47'3"                       | 56        | 11.97 - 14.40 Meters           |
| 50        | 47'4" - 55'3"                       | 57        | 14.41 - 16.84 Meters           |
| 70        | 55'4" - 63'3"                       | 58        | 16.85 - 19.28 Meters           |
| 71        | 63'4" - 71'3"                       | 59        | 19.29 - 21.72 Meters           |
|           |                                     | 60        | 21.73 - 24.16 Meters           |
|           |                                     | 61        | 24.17 - 26.60 Meters           |

\* Brackets for all kits Carbon Steel. Consult Factory for Stainless Steel.

### Table EF - Accessory Kits

#### Kit No. 1 - Cone Roof Tank (Wood Gauge Board)

| Description                | Number Required | 1A Cast Aluminum Sheave Housing | 1B Nod. Iron Sheave Housing |
|----------------------------|-----------------|---------------------------------|-----------------------------|
| Sheave Assembly 1" - 90°   | 2               | JB3561-1 (CA)                   | JB3561-2 (NI)               |
| Float-316 Stainless Steel  | 1               | JB3010-21                       | JB3010-21                   |
| Anchor Bar                 | 1               | JA3540-3                        | JA3540-3                    |
| Guide Wire Spring Assembly | 2               | JB3486-11                       | JB3486-11                   |
| Cable Clamp                | 1               | 090142                          | 090142                      |
| Target                     | 1               | 9230-11360                      | 9230-11360                  |
| Bracket                    | *               | 509-836                         | 509-836                     |

\* Number of brackets is determined by tank height.

#### Kit No. 2 - Cone Roof Tank (Metal Gauge Board)

| Description                | Number Required | 2A Cast Aluminum Sheave Housing | 2B Nod. Iron Sheave Housing |
|----------------------------|-----------------|---------------------------------|-----------------------------|
| Sheave Assembly 1" - 90°   | 2               | JB3561-1 (CA)                   | JB3561-2 (NI)               |
| Float-316 Stainless Steel  | 1               | JB3010-21                       | JB3010-21                   |
| Anchor Bar                 | 1               | JA3540-3                        | JA3540-3                    |
| Guide Wire Spring Assembly | 2               | JB3486-11                       | JB3486-11                   |
| Cable Clamp                | 1               | 090142                          | 090142                      |
| Target                     | 1               | 9230-11360                      | 9230-11360                  |
| Bracket                    | *               | 509-826                         | 509-826                     |
| Intermediate Support       | *               | 9399-18000                      | 9399-18000                  |

\* Number of brackets is determined by tank height.

#### Kit No. 3 & 4 - Cone Roof Tank with Liquid Seal (For Maximum Tank Pressure of 4.35 oz/sq.in.)

| Description                | Number Required | Kit 3A Wood Board | Kit 4A Metal Board |
|----------------------------|-----------------|-------------------|--------------------|
| Sheave Assembly 1" - 90°   | 1               | JB3561-1 (CA)     | JB3561-1 (CA)      |
| Float-316 Stainless Steel  | 1               | JB3010-21         | JB3010-21          |
| Anchor Bar                 | 1               | JA3540-3          | JA3540-3           |
| Guide Wire Spring Assembly | 2               | JB3486-11         | JB3486-11          |
| Cable Clamp                | 1               | 090142            | 090142             |
| Target                     | 1               | 9230-11360        | 9230-11360         |
| Bracket                    | *               | 509-836           | 509-826            |
| Intermediate Support       | *               | -----             | 9399-18000         |
| Liquid Seal                | 1               | JC3602-3          | JC3602-3           |

\* Number of brackets is determined by tank height.

## Kit No. 5 & 6 - Cone Roof Tank with PVC Liquid Seal, Sheave & Unguided Float (For Maximum Tank Pressure of 4.35 oz/sq.in.)

| Description                  | Number Required | Kit 5A<br>Wood Board | Kit 6A<br>Metal Board |
|------------------------------|-----------------|----------------------|-----------------------|
| PVC Sheave Assembly 1" - 90° | 1               | LA276-533            | LA276-533             |
| Raft Float - PVC             | 1               | LB290-800            | LB290-800             |
| TFE Cable Clamp              | 1               | LA270-1007           | LA270-1007            |
| Target                       | 1               | 9230-11360           | 9230-11360            |
| Bracket                      | *               | 509-836              | 509-826               |
| Intermediate Support         | *               | -----                | 9399-18000            |
| PVC Liquid Seal              | 1               | LB277-543            | LB277-543             |
| 1/16" Teflon Coated Cable    | As Required     | 117-8                | 117-8                 |

\* Number of brackets is determined by tank height.

## Kit No. 8 - Cone Roof Tank (Metal Gauge Board) - For use with MCG 2420

| Description                | Number Required | 8A Cast Aluminum<br>Sheave Housing |
|----------------------------|-----------------|------------------------------------|
| Sheave Assembly 1" - 90°   | 1               | JB3561-1 (CA)                      |
| Float-316 Stainless Steel  | 1               | JB3010-21                          |
| Anchor Bar                 | 1               | JA3540-3                           |
| Guide Wire Spring Assembly | 2               | JB3486-11                          |
| Cable Clamp                | 1               | 90142                              |
| Target                     | 1               | 9230-11360                         |
| Bracket                    | *               | 509-826                            |
| Intermediate Support       | *               | 9399-18000                         |
| Tape                       | 1               | 575-738                            |

\* Number of brackets is determined by tank height.

## Special Accessory Kit Substitutions

### A. Floats

| Description  | Part Number   |
|--|---------------|
| 304 Stainless Steel Float (11 3/4" DIA)            | JB3010-7      |
| Monel Float (11 3/4" DIA)                          | JB3010-4      |
| 304 Stainless Steel Foamglass Float<br>(9"x12"x3") | JC3000-1      |
| 316 Stainless Steel 4.25 LBS                       | JB3010-21-4LB |
| Teflon Coated Float                                | LA290-674     |
| * 304 Stainless Steel (11 3/4" DIA)                | JB3010-8      |

\* For asphalt service only.

### C. Anchor Bar - 13-1/4"

| Description             | Part Number |
|-------------------------|-------------|
| All 316 Stainless Steel | JA3540-4    |

### B. Sheave Assemblies - 1" NPT Connections \*

| Description                            | Part Number |
|--|-------------|
| **All 316 Stainless Steel              | JB3561-4    |
| Aluminum Housing / 316 S.S. Wheels     | JB3561-5    |
| Nodular Iron Housing / 316 S.S. Wheels | JB3561-6    |

\*All stainless steel wheels are tape/cable compatible.

\*\* Adder is for Sheave Assemblies only. Consult Factory for 316 SS parts included in Liquid Seal

### D. Guide Wire Spring Assemblies (2 per unit required)

| Description             | Part Number |
|-------------------------|-------------|
| All 316 Stainless Steel | 93486-18    |
| All 304 Stainless Steel | 93486-12    |

\*NOTE: For special systems requirements, consult factory.

### Limit Switch for Liquid Level Indicator

| Model Number | Description           |                          |
|--------------|-----------------------|--------------------------|
| JB3704-1*    | For Metal Gauge Board | See Product Sheet JB3704 |
| JB3704-2**   | For Wood Gauge Board  | See Product Sheet JB3704 |

\*Replaces Model 93704-1.

\*\*Replaces Model 93704-2