

The LCL Take-Apart series is a desuperheating (Liquid Injection) valve used in conjunction with hot gas bypass to prevent excessive suction line superheat. LCL valves can be used for interstage cooling in compound systems.

### Features

- Stainless steel power element eliminates corrosion and prevents valve failure
- Take-Apart construction for easy field service

### Options

- Interchangeable, replaceable cages for versatility
- External superheat adjustment
- Interchangeable body flanges
- Interchangeable power assemblies



### Specifications

- Maximum working pressure: 450 psig

### Nomenclature example: LCLE 2 B 5 FT 3/8 x 1/2 ODF S/T

| LCL   | E  | 2   | B                | 5 FT                                    | 3/8 x 1/2  | ODF  | S/T   |
|---|--|---|------------------|---|--|--|---|
| Valve Series<br>De-Superheating<br>Liquid Injection<br>Take-Apart | Equalizer<br>E=External<br>(Omit for Internal) | Capacity<br>Nominal NOTE: This is not system capacity<br><br>(Contact Application Engineering for sizing) | Refrigerant Code | Capillary Tube Length<br><br>5 FT (std) | Inlet x Outlet Connection Sizes<br><br>(see table below) | Connection Type<br><br>SAE = flare<br>ODF=solder | Configuration<br><br>ANG = 90° angle<br>S/T = straight-thru |

### LCL (LA) Charge Codes

| Saturated Suction | Refrigerant          |        |                      |        |                      |        |
|-------------------|----------------------|--------|----------------------|--------|----------------------|--------|
|                   | R-134A               |        | R-22                 |        | R-404A/R-507         |        |
|                   | Required Suction Gas |        | Required Suction Gas |        | Required Suction Gas |        |
| TEMP.             | 45°F                 | 65°F   | 45°F                 | 65°F   | 45°F                 | 65°F   |
| 40°F              | --                   | B (GL) | --                   | A (CL) | --                   | --     |
| 30°F              | B (GL)               | B (GL) | --                   | A (CL) | --                   | A (CL) |
| 20°F              | B (GL)               | C (UL) | A (CL)               | B (GL) | --                   | A (CL) |
| 10°F              | B (GL)               | C (UL) | B (GL)               | B (GL) | A (CL)               | B (GL) |
| 0°F               | C (UL)               | C (UL) | B (GL)               | B (GL) | A (CL)               | B (GL) |
| -10°F             | C (UL)               | C (UL) | B (GL)               | C (UL) | B (GL)               | B (GL) |
| -20°F             | C (UL)               | C (UL) | B (GL)               | C (UL) | B (GL)               | C (UL) |
| -30°F             | C (UL)               | C (UL) | C (UL)               | C (UL) | B (GL)               | C (UL) |
| -40°F             | C (UL)               | C (UL) | C (UL)               | C (UL) | B (GL)               | C (UL) |

( ) Denotes LA Series valve charge code.

### Ordering Information

| Description | Equalizer Type      | PCN By Charge           |        |        | Connections              |
|-------------|---------------------|-------------------------|--------|--------|--------------------------|
|             |                     | Select From Table Below |        |        |                          |
|             |                     | A                       | B      | C      |                          |
| LCL 1       | Internal            | 022018                  | 022017 | --     | Same as<br>TCL &<br>TCLE |
| LCL 2       |                     | 022005                  | 021996 | 045527 |                          |
| LCL 3       |                     | 055093                  | 021987 | --     |                          |
| LCL 6       |                     | 047759                  | --     | --     |                          |
| LCLE 1      | 1/4"SAE<br>External | 055096                  | --     | --     |                          |
| LCLE 2      |                     | 022003                  | 021997 | --     |                          |
| LCLE 3      |                     | 021991                  | 021985 | --     |                          |
| LCLE 4      |                     | --                      | 061054 | 055097 |                          |

NOTE: Add charge suffix symbol "A", "B", or "C" based on the following table.  
Example: LCLE4-A

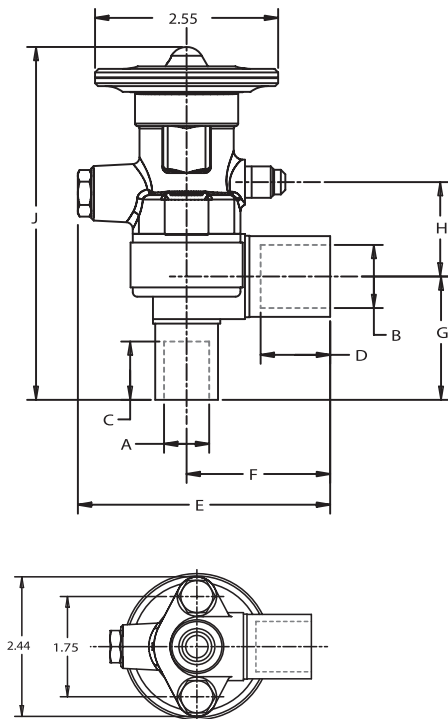
### Replacement Valve Guide

| If have:   | Replace with: |
|------------|---------------|
| LA(E)S 1/2 | LCL 1         |
| LA(E)S 1   | LCL 2         |
| LA(E)S 2   | LCL 3         |
| LA(E)S 3   | LCL 4         |
| LA(E)S 5   | LCL 6         |
| LCL 5      | LCL 6         |
| LCLE 5     | LCLE 6        |
| LCL 8      | LCL 9         |
| LCLE 8     | LCLE 9        |

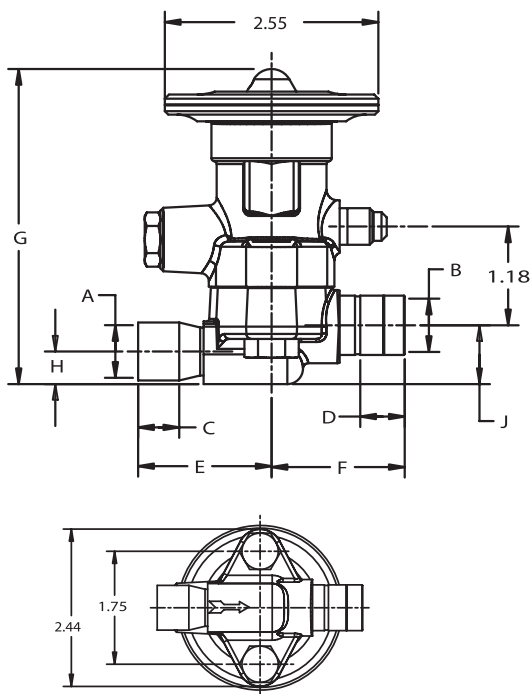
Note: Valve sizes LCL5, LCL8, LCLE5 and LCLE8 are OBSOLETE.

## Dimensional Data

### Angle



### Straight-Thru



## LCL(E) Dimensional Data (in)

### LCL Angle

| Connection Size |         | A    | B    | C    | D    | E    | F    | G    | H    | J    |
|-----------------|---------|------|------|------|------|------|------|------|------|------|
| Inlet           | Outlet  |      |      | MIN. | MIN. |      |      |      |      |      |
| 3/8 SAE         | 1/2 SAE |      |      |      |      | 3.06 | 1.50 | 1.13 | 1.20 | 4.14 |
| 3/8 SAE         | 5/8 SAE |      |      |      |      | 3.19 | 1.63 | 1.13 | 1.20 | 4.14 |
| 1/2 SAE         | 5/8 SAE |      |      |      |      | 3.19 | 1.63 | 1.38 | 1.20 | 4.39 |
| 1/4 ODF         | 3/8 ODF | 0.25 | 0.38 | 0.31 | 0.31 | 2.91 | 1.34 | 0.94 | 1.20 | 3.95 |
| 3/8 ODF         | 1/2 ODF | 0.38 | 0.50 | 0.31 | 0.38 | 3.03 | 1.47 | 1.06 | 1.20 | 4.11 |
| 3/8 ODF         | 5/8 ODF | 0.38 | 0.63 | 0.31 | 0.50 | 3.16 | 1.59 | 1.06 | 1.20 | 4.11 |
| 1/2 ODF         | 5/8 ODF | 0.50 | 0.63 | 0.38 | 0.50 | 3.16 | 1.59 | 1.90 | 1.20 | 4.20 |
| 5/8 ODF         | 7/8 ODF | 0.63 | 0.88 | 0.50 | 0.75 | 3.56 | 2.00 | 1.69 | 1.20 | 4.83 |

### LCL Straight Thru

|         |           |      |      |      |      |      |      |      |      |      |
|---------|-----------|------|------|------|------|------|------|------|------|------|
| 3/8 SAE | 1/2 SAE   |      |      |      |      | 1.78 | 1.98 | 3.70 | 0.38 | 0.69 |
| 3/8 SAE | 5/8 SAE   |      |      |      |      | 1.78 | 2.16 | 3.70 | 0.38 | 0.69 |
| 1/2 SAE | 1/2 SAE   |      |      |      |      | 1.97 | 1.56 | 3.70 | 0.38 | 0.69 |
| 3/8 ODF | 1/2 ODF   | 0.38 | 0.50 | 0.31 | 0.38 | 1.41 | 1.58 | 3.69 | 0.38 | 0.69 |
| 3/8 ODF | 5/8 ODF   | 0.38 | 0.63 | 0.31 | 0.50 | 1.41 | 1.63 | 3.69 | 0.36 | 0.67 |
| 1/2 ODF | 1/2 ODF   | 0.50 | 0.50 | 0.38 | 0.38 | 1.41 | 1.56 | 3.70 | 0.38 | 0.69 |
| 1/2 ODF | 5/8 ODF   | 0.50 | 0.63 | 0.38 | 0.50 | 1.59 | 1.63 | 3.69 | 0.36 | 0.67 |
| 5/8 ODF | 5/8 ODF   | 0.63 | 0.63 | 0.50 | 0.50 | 1.59 | 1.63 | 3.70 | 0.38 | 0.69 |
| 5/8 ODF | 7/8 ODF   | 0.63 | 0.88 | 0.50 | 0.75 | 1.59 | 1.94 | 3.70 | 0.38 | 0.69 |
| 5/8 ODF | 1-1/8 ODF | 0.88 | 1.13 | 0.50 | 0.91 | 1.59 | 2.38 | 3.70 | 0.38 | 0.69 |
| 7/8 ODF | 1-1/8 ODF | 0.88 | 1.13 | 0.75 | 0.91 | 1.94 | 2.38 | 3.81 | 0.38 | 0.69 |

Allow 2-1/8" above valve for removal of power assembly.

## Remote Bulb Dimensions

| Capillary Tubing Length (Ft) | Standard Remote Bulb |         |
|------------------------------|----------------------|---------|
|                              | Diameter             | Length  |
| 5                            | 5/8                  | 3-1/16  |
| 10                           |                      | 3-9/16  |
| 15 or 20                     |                      | 4-13/16 |