

# B-Cryo Series

- ▶ MOPD: 900 PSI (62 Bar)
- ▶  $C_v$  Range: 0.045 to 0.440 ( $K_v$  Range: 0.038 to 0.374)
- ▶ 9 Watts

The B-Cryo Series is a 2-way miniature Cryogenic valve designed and built for service down to -320°F (-196°C) in applications needing a  $C_v$  between 0.045 and 0.440 ( $K_v$  between 0.038 and 0.374). Depending on your temperature requirements, the B-Cryo Series can be configured for liquid nitrogen (LN2), liquid carbon dioxide (LCO2), and other extreme temperature media. PTFE coated plungers, 316 Stainless Steel guide tubes and plunger springs, encapsulated coils, and PTFE or Rulon® seat seals produce a truly robust Cryogenic valve for applications requiring high cycle life and media temperature control.

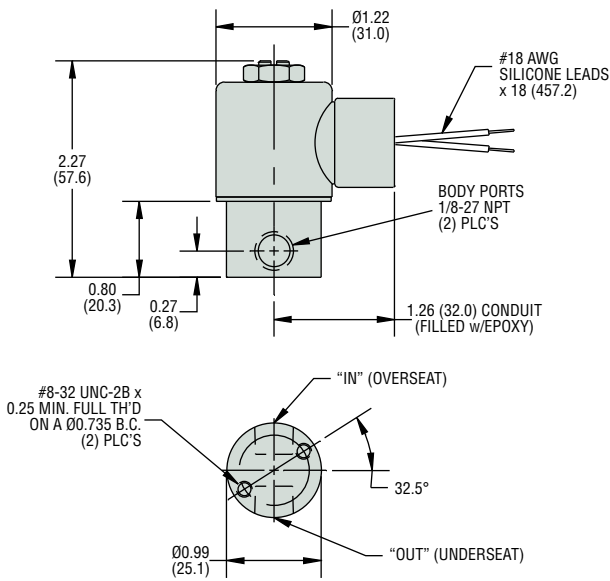


## Typical Applications

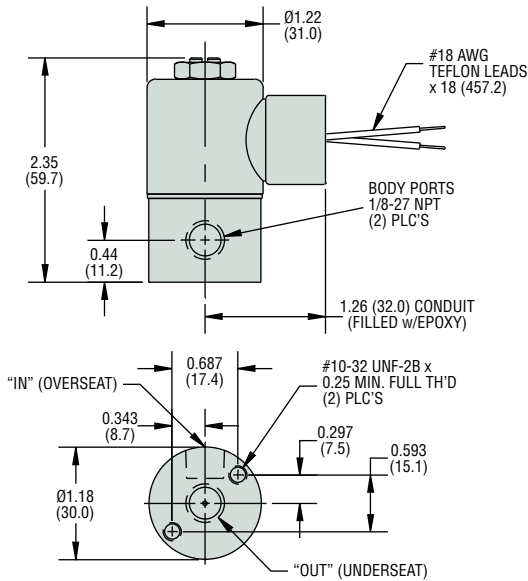
- Environmental Chambers
- Food Processing
- Laser Surgical Equipment
- Semiconductor Manufacturing

## Dimensions

### LN2-Liquid Nitrogen



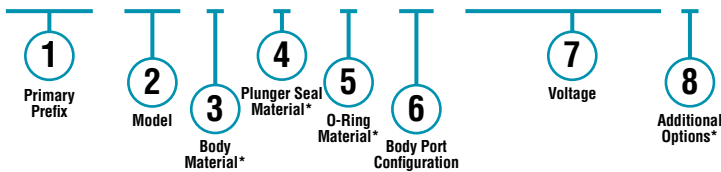
### LCO2-Liquid Carbon Dioxide



## How To Order

Use the **Bold** characters from the choices listed on the following page to construct a product code.

**B2062 - LN2 - LB - 120/50/60VAC**



\* Blank entry indicates a "Standard" selection (430F Stainless Steel, Rulon® and Variseal®, in this case).

### Example:

B2062-LN2-LB-120/50/60VAC

2-Way N.C. Liquid Nitrogen Class-H Encapsulated Coil with lead-wires, conduit filled housing solenoid valve, with 430F stainless steel body, Rulon® plunger seal, Variseal® o-ring, 1/4-18 NPT female thread, operating at 120/50/60 Volt AC.

Part Prefix Table ①

Orifice		MOPD		C <sub>v</sub>	K <sub>v</sub>	① Primary Prefix		
Body		psig	bar	Body		Class 180°C (H), Encapsulated Coils		
inches	mm					Lead Wires—Filled Conduit Housing	Lead Wires—Unfilled Conduit Housing	Lead Wires—Grommet Housing
3/64	1.19	900	62	0.045	0.038	<b>B2060</b>	<b>B2020</b>	<b>B2010</b>
1/16	1.59	405	28	0.075	0.064	<b>B2061</b>	<b>B2021</b>	<b>B2011</b>
5/64	1.98	270	19	0.105	0.089	<b>B2062</b>	<b>B2022</b>	<b>B2012</b>
3/32	2.38	160	11	0.160	0.136	<b>B2063</b>	<b>B2023</b>	<b>B2013</b>
7/64	2.78	110	7.6	0.190	0.162	<b>B2064</b>	<b>B2024</b>	<b>B2014</b>
1/8	3.18	80	5.5	0.255	0.217	<b>B2065</b>	<b>B2025</b>	<b>B2015</b>
5/32	3.97	65	4.5	0.365	0.310	<b>B2066</b>	<b>B2026</b>	<b>B2016</b>
3/16	4.76	30	2.1	0.440	0.374	<b>B2067</b>	<b>B2027</b>	<b>B2017</b>

② Model

- LN2 = Liquid Nitrogen model
- LCO2 = Liquid Carbon Dioxide model

③ Body Material

LN2 Only

(blank) = 430F Stainless Steel\*

LCO2 Only

(blank) = 303 Stainless Steel\*

BB = Brass

SB = 304 Stainless Steel

SB5 = 316 Stainless Steel

④ Plunger Seal Material

LN2 Only

(blank) = Rulon®\*

LCO2 Only

(blank) = PTFE\*

MQ = Silicone (consult factory)

⑤ O-Ring Material

LN2 Only

(blank) = Variseal® (PTFE material with internal spring)\*  
TO = PTFE (consult factory)

LCO2 Only

(blank) = Variseal® (PTFE material with internal spring)\*  
TO = PTFE (consult factory)

⑥ Body Port Configuration

LN2 Only

(blank) = 1/8-27 NPT female thread\*  
LB = 1/4-18 NPT female thread  
LT = 1/8-28 BSPT female thread  
LU = 1/4-19 BSPT female thread  
BI = Bottom over-seat port, female thread  
    - max. orifice = 1/8" (3.18mm)  
BO = Bottom under-seat port, female thread  
RL = 90° porting - left hand  
RR = 90° porting - right hand

LCO2 Only

(blank) = 1/8-27 NPT, bottom under-seat port, female thread\*  
LB = 1/4-18 NPT female thread (in-line porting only)  
LT = 1/8-28 BSPT female thread  
LU = 1/4-19 BSPT female thread (in-line porting only)  
BOM = Bottom under-seat port, male thread  
    - max. orifice = 1/8" (3.18mm), brass body only  
IL = Inline porting, 180° apart

⑦ Voltage

LN2 Only

\_\_\_ VDC = DC (specify voltage)  
\_\_\_ VAC = AC Rectified (specify voltage)

LCO2 Only

\_\_\_ VDC = DC (specify voltage)  
\_\_\_ VAC = AC Rectified (specify voltage)

⑧ Additional Options

LN2 Only

(blank) = Chamfered and PTFE coated plunger\*  
(blank) = 316 Stainless Steel 1-piece guide assembly\*  
(blank) = 316 Stainless Steel spring\*

LCO2 Only

(blank) = Chamfered and PTFE coated plunger\*  
(blank) = 316 Stainless Steel 1-piece guide assembly\*  
(blank) = 316 Stainless Steel spring\*

\* Standard selection; will be used unless otherwise specified. Standard selections are not referenced in final part number.

## D-Cryo Series

- ▶ MOPD: 1000 PSI (69 Bar)
- ▶ C<sub>v</sub> Range: 0.040 to 0.770 (K<sub>v</sub> Range: 0.034 to 0.655)
- ▶ 15 Watts

The D-Cryo Series is a 2-way, high flow, miniature Cryogenic valve designed and built for service down to -320°F (-196°C). Depending on your temperature requirements, the D-Cryo Series can be configured for liquid nitrogen (LN2), liquid carbon dioxide (LCO2), and other extreme temperature media. PTFE coated plungers, 316 Stainless Steel guide tubes and plunger springs, encapsulated coils, and PTFE or Rulon® seat seals produce a truly robust Cryogenic valve for applications requiring high cycle life and media temperature control.

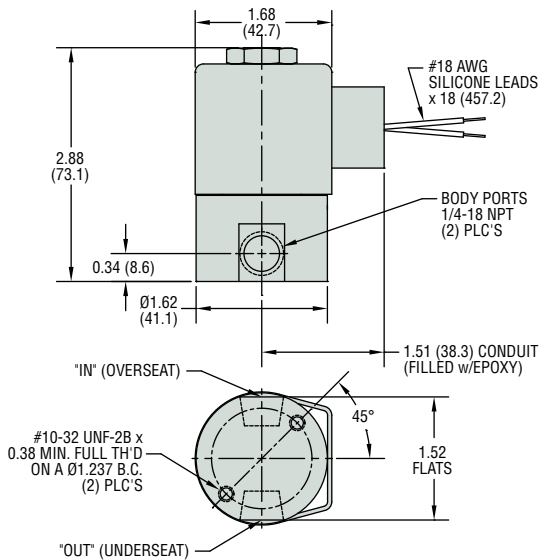


### Typical Applications

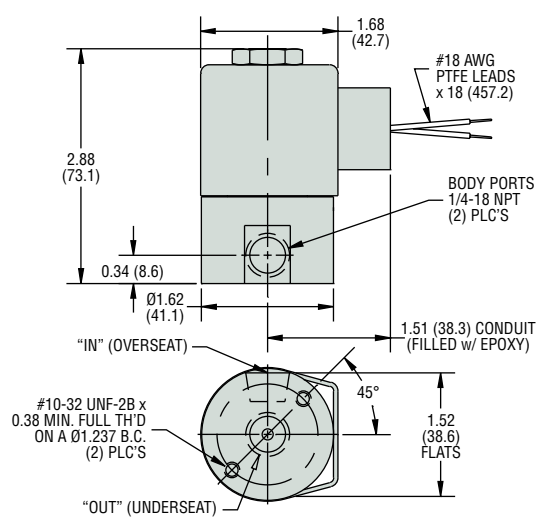
- Environmental Chambers
- Food Processing
- Laser Surgical Equipment
- Semiconductor Manufacturing

### Dimensions

#### LN2-Liquid Nitrogen



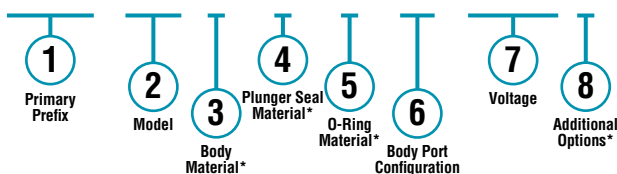
#### LCO2-Liquid Carbon Dioxide



### How To Order

Use the **Bold** characters from the choices listed on the following page to construct a product code.

#### D2062 - LN2 - LT - 12VDC



\* Blank entry indicates a "Standard" selection (303 Stainless Steel, Rulon® and Variseal®, in this case).

#### Example:

D2062-LN2-LT-12VDC

2-Way N.C. Liquid Nitrogen Class-H Encapsulated Coil with lead-wires, conduit filled housing solenoid valve, with 303 stainless steel body, Rulon® plunger seal, Variseal® o-ring, 1/8-28 BSPT female thread, operating at 12 DC with rectified coil.

Part Prefix Table ①

						① Primary Prefix		
Orifice		MOPD		C <sub>v</sub>	K <sub>v</sub>	Class 180°C (H), Encapsulated Coils		
Body		psig	bar	Body		Lead Wires—Filled	Lead Wires—Unfilled	Lead Wires—
inches	mm					Conduit Housing	Conduit Housing	Grommet Housing
3/64	1.19	1000	69	0.040	0.034	D2061	D2021	D2011
1/16	1.59	1000	69	0.070	0.060	D2062	D2022	D2012
3/32	2.38	640	44	0.165	0.140	D2063	D2023	D2013
1/8	3.18	375	26	0.305	0.259	D2064	D2024	D2014
5/32	3.97	185	13	0.365	0.310	D2065	D2025	D2015
3/16	4.76	130	9	0.470	0.400	D2066	D2026	D2016
1/4	6.35	40	3	0.770	0.655	D2067	D2027	D2017

② Model

- LN2 = Liquid Nitrogen model
- LCO2 = Liquid Carbon Dioxide model

③ Body Material

LN2 Only

(blank) = 303 Stainless Steel\*

LCO2 Only

(blank) = 303 Stainless Steel\*  
BB = Brass

④ Plunger Seal Material

LN2 Only

(blank) = Rulon®\*

LCO2 Only

(blank) = PTFE\*  
MQ = Silicone (consult factory)

⑤ O-Ring Material

LN2 Only

(blank) = Variseal® (PTFE material with internal spring)\*

LCO2 Only

(blank) = Fluorosilicone\*  
TO = PTFE

⑥ Body Port Configuration

LN2 Only

(blank) = 1/4-18 NPT female thread\*  
LC = 1/8-27 NPT female thread  
LT = 1/8-28 BSPT female thread  
LU = 1/4-19 BSPT female thread  
BI = Bottom over-seat port, female thread  
BO = Bottom under-seat port, female thread

LCO2 Only

(blank) = 1/4-18 NPT, bottom under-seat port, female thread\*  
LC = 1/8-27 NPT female thread  
LT = 1/8-28 BSPT female thread  
LU = 1/4-19 BSPT female thread  
IL = Inline porting, 180° apart

⑦ Voltage

LN2 Only

\_\_\_ VDC = DC (specify voltage)  
\_\_\_ VAC = AC Rectified (specify voltage)

LCO2 Only

\_\_\_ VDC = DC (specify voltage)  
\_\_\_ VAC = AC Rectified (specify voltage)

⑧ Additional Options

LN2 Only

(blank) = Chamfered and PTFE coated plunger\*  
(blank) = 316 Stainless Steel 1-piece guide assembly\*  
(blank) = 316 Stainless Steel spring\*

LCO2 Only

(blank) = Chamfered and PTFE coated plunger\*  
(blank) = 316 Stainless Steel 1-piece guide assembly\*  
(blank) = 316 Stainless Steel spring\*

\* Standard selection; will be used unless otherwise specified. Standard selections are not referenced in final part number.