Specifications
46 Series Valve (Lifting Solenoid)

Operating Data
Fluids: Air or Inert Gas
Lubrication: Not Required. But if used, select a medium aniline point oil (between 180°F to 210°F).

Safe Operating
Temperature Range: 0º to 120ºF (-18º to 50ºC)
Pressure Range: Vacuum to 120 PSI
Coils: General Purpose Class A, Continuous duty.
Coil Leads: #22 AWG x 18”, Other lengths available
Solenoid: Single Operator Only (Double Solenoid is not available)

Flows (Cv - Up to)
Average of All Ports

<table>
<thead>
<tr>
<th>Inline (Cv)</th>
<th>1.8w</th>
<th>2.4w</th>
<th>5.4w</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.20</td>
<td>0.20</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Higher flow rates available - Consult Factory

Special Applications
The balanced poppet design facilitates using the same valve for many functions. A valve may be used for pressure and/or vacuum or plugged for 3 Way operation.
MAC 46 Series with Lifting Solenoid

De-Energized

Inlet

Cyl. B

Exhaust

Cyl. A.

Energized

Inlet

Cyl. B

Exhaust

Cyl. A.
## How to Order 46L Series (Lifting Solenoid)

### 46LA - X X X - DXXX-XXX

- **Body Type**
  - **Inline**
    - A 4 Port Body with Side Ports
    - C 4 Port Body with Bottom Ports
      (Available in #10-32 UNF and M5 Only)
    - D* Bottom O-Ring Mount-All Ports
    - F Bottom O-Ring Mount-Cylinder Ports Only (Side Inlet & Exhaust)

- **Port Size**
  - 0 Base Mount Body
  - A 1/8" NPTF
  - B #10 - 32 UNF
  - C 1/8" BSPPL
  - D M5 (Metric)
  - E 1/8" BSPTR
  - G* Use with O-Ring Mount Body Option "D"

- **Configuration**
  - 0 Base Mount Body
  - 1 Inline Body
  - 2 Inline Body With Flow Controls

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**Base Mount**
- L Base Mount Body
- M Base Mount Body with Gage Port

Note: Base Mount Body used with circuit bars
How to Order 46L Series
Lifting Solenoid Assembly

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Lead Wire Length</th>
<th>Manual Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA 24 VDC (5.4W)</td>
<td>0 No Lead Wire</td>
<td>0 No Operator</td>
</tr>
<tr>
<td>DC 12 VDC (7.5W)</td>
<td>A 18&quot;</td>
<td>1 Non-Locking</td>
</tr>
<tr>
<td>DE* 12 VDC (12.7W)</td>
<td>B 24&quot;</td>
<td>Manual Operator</td>
</tr>
<tr>
<td>DJ 28 VDC (5.2W)</td>
<td>C 36&quot;</td>
<td></td>
</tr>
<tr>
<td>DL 64 VDC (6W)</td>
<td>D 48&quot;</td>
<td></td>
</tr>
<tr>
<td>DN 6 VDC (6W)</td>
<td>E 72&quot;</td>
<td></td>
</tr>
<tr>
<td>DR 90 VDC (6.6W)</td>
<td>F 96&quot;</td>
<td></td>
</tr>
<tr>
<td>DT 75 VDC (5.6W)</td>
<td>J External Plug-In</td>
<td></td>
</tr>
<tr>
<td>EB 220 VDC (4.2W)</td>
<td>P Plug-In</td>
<td></td>
</tr>
<tr>
<td>EE 12 VDC (4.2W)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM 120 VDC (6.2W)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ET 24 VDC (3.0W)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FA 12 VDC (1.8W)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FF 24 VDC (2.4W)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FL 18 VDC (2.4W)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GE 6 VDC (9.0W)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GG 9 VDC (9.0W)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Use "J" with J, K, T, & P Connectors
Use "P" with FM & FN Connectors

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Electrical Connectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA 24 VDC (5.4W)</td>
<td>BA Grommet (Flying Leads)</td>
</tr>
<tr>
<td>DC 12 VDC (7.5W)</td>
<td>BK Grommet with diode (Flying Leads)</td>
</tr>
<tr>
<td>DE* 12 VDC (12.7W)</td>
<td>BM Plug-in (with leads)</td>
</tr>
<tr>
<td>DJ 28 VDC (5.2W)</td>
<td>BN Plug-in with diode (with leads)</td>
</tr>
<tr>
<td>DL 64 VDC (6W)</td>
<td>CA Conduit 1/2&quot;</td>
</tr>
<tr>
<td>DN 6 VDC (6W)</td>
<td>CM Metal conduit 1/2&quot;</td>
</tr>
<tr>
<td>DR 90 VDC (6.6W)</td>
<td>CN Metal conduit with ground 1/2&quot;</td>
</tr>
<tr>
<td>DT 75 VDC (5.6W)</td>
<td>FM Plug-in (For ECD Bar)</td>
</tr>
<tr>
<td>EB 220 VDC (4.2W)</td>
<td>FN Plug-in with diode (for ECD Bar)</td>
</tr>
<tr>
<td>EE 12 VDC (4.2W)</td>
<td>JB Rectangular plug-in</td>
</tr>
<tr>
<td>EM 120 VDC (6.2W)</td>
<td>JD Rectangular plug-on with light</td>
</tr>
<tr>
<td>ET 24 VDC (3.0W)</td>
<td>JM Rectangular male only</td>
</tr>
<tr>
<td>FA 12 VDC (1.8W)</td>
<td>KA Mini plug-in</td>
</tr>
<tr>
<td>FC 10 VDC (2.2W)</td>
<td>KB Mini plug-in with diode</td>
</tr>
<tr>
<td>FF 24 VDC (2.4W)</td>
<td>KD Mini plug-in with light</td>
</tr>
<tr>
<td>FL 18 VDC (2.4W)</td>
<td>KE Mini plug-in with light &amp; diode</td>
</tr>
<tr>
<td>GE 6 VDC (9.0W)</td>
<td>KG Mini plug-in with LED light &amp; diode</td>
</tr>
<tr>
<td>GG 9 VDC (9.0W)</td>
<td>KJ Mini plug-in male only</td>
</tr>
<tr>
<td>TA Dual tabs (.110) with receptacles</td>
<td>KK Mini plug-in male only with diode</td>
</tr>
<tr>
<td>TB Dual tabs with diode &amp; receptacles</td>
<td>TA Dual tabs (.110) plain</td>
</tr>
<tr>
<td>TD Dual tabs with light &amp; receptacles</td>
<td>TK Dual tabs with diode (no receptacles)</td>
</tr>
<tr>
<td>TE Dual tabs with light, diode &amp; receptacles</td>
<td>TM Dual tabs with light (no receptacles)</td>
</tr>
<tr>
<td>TJ Dual tabs (.110) plain</td>
<td>TN Dual tabs with light &amp; diode (no receptacles)</td>
</tr>
<tr>
<td>PA Pico</td>
<td></td>
</tr>
</tbody>
</table>

* MOD CLSF
How to Order 46L Series
EBM Circuit Bar (Non Plug-In)

EBM46LA - XX X X X - XX - 9

Valves, Cover Plates Assembled to Manifold
Number of Stations

Spacing
00 20.0mm Spacing
01 26.0mm Spacing

Configuration
A Side Cylinder Ports (30mm)
B Bottom Cylinder Ports (30mm)
C Bottom Cylinder Ports with Regulator (45mm)
D Side Cylinder Ports with Flow Controls (45mm)
E Bottom Cylinder Ports with Flow Controls (45mm)
F Bottom Cylinder Ports with Flow Controls and Regulator (56mm)
G Side Cylinder Ports with Regulator (45mm)

Style
A Standard Bar

Port Size
A 1/8” NPTF
B 1/8” BSPP
C 1/8” BSPT
D 5/32 Pressed-In Tube Receptacles with NPTF Through Ports
E 5/32 Pressed-In Tube Receptacles with BSPP Through Ports
F 5/32 Pressed-In Tube Receptacles with BSPT Through Ports
G 6mm Pressed-In Tube Receptacles with NPTF Through Ports
H 6mm Pressed-In Tube Receptacles with BSPP Through Ports
J 6mm Pressed-In Tube Receptacles with BSPT Through Ports

Note: Regulator must be ordered separately
Dimensions (XXmm) indicate Bar Profile

Replacement Parts and Accessories
M-46015 Valve Blanking Plate
How to Order 46L Series
ECD Circuit Bar (Plug-In)

ECD46LA - XX X X X - XX XX - 9

Valves, Cover Plates Assembled to Manifold
Number of Stations

Spacing
00 20.0mm Spacing

Configuration
A Side Cylinder Ports (40mm)
B Bottom Cylinder Ports (40mm)
C Bottom Cylinder Ports with Regulator (40mm)
D Side Cylinder Ports with Flow Controls (45mm)
E Bottom Cylinder Ports with Flow Controls (45mm)
F Bottom Cylinder Ports with Flow Controls and Regulator (56mm)

Note: Regulator must be ordered separately
Dimensions (XXmm) indicate Bar Profile

Style
A Standard Bar

Port Size
A 1/8” NPTF
B 1/8” BSPPL
C 1/8” BSPTR
D 5/32 Pressed-In Tube Receptacles with NPTF Through Ports
E 5/32 Pressed-In Tube Receptacles with BSPPL Through Ports
F 5/32 Pressed-In Tube Receptacles with BSPTR Through Ports

Base Electrical
A0 Standard (No Light)
C0 Terminal Strip (No Light)

Spacing
Configuration
A Side Cylinder Ports (40mm)
B Bottom Cylinder Ports (40mm)
C Bottom Cylinder Ports with Regulator (40mm)
D Side Cylinder Ports with Flow Controls (45mm)
E Bottom Cylinder Ports with Flow Controls (45mm)
F Bottom Cylinder Ports with Flow Controls and Regulator (56mm)

Note: Regulator must be ordered separately
Dimensions (XXmm) indicate Bar Profile

Style
A Standard Bar

Port Size
A 1/8” NPTF
B 1/8” BSPPL
C 1/8” BSPTR
D 5/32 Pressed-In Tube Receptacles with NPTF Through Ports
E 5/32 Pressed-In Tube Receptacles with BSPPL Through Ports
F 5/32 Pressed-In Tube Receptacles with BSPTR Through Ports

Base Electrical
A0 Standard (No Light)
C0 Terminal Strip (No Light)

Replacement Parts and Accessories
63299 Wire Connector Protector
M-46015 Valve Blanking Plate
How to Order
46 Series Regulator

PR46A - X X X X - X

<table>
<thead>
<tr>
<th>Style</th>
<th>Type Adjustment</th>
<th>Gages</th>
<th>Pressure Range</th>
<th>Assembled</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>Regulator Only</td>
<td>A</td>
<td>A</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Slotted Stem</td>
<td>A</td>
<td>0 to 120 PSI</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Adjusting Knob</td>
<td>B</td>
<td>0 to 80 PSI</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Slotted Stem w/ Locknut</td>
<td>C</td>
<td>0 to 30 PSI</td>
<td></td>
</tr>
</tbody>
</table>

01/02
46L INLINE VALVE
1/4" - 18 N.P.T.F TAP TO GAGE
TYP. (2) BOTH ENDS

\( \otimes 5.25 \text{ THRU} \)
TYP. (2)

SHOWN WITH 1/8" N.P.T.F.
TYP. (2) PER STATION

EBM46LA-00AAA-XX

*26mm SPACING AVAILABLE FOR RECTANGULAR CONNECTORS

*SHOWN W/ #1 OPERATOR
EBM46LA-00BAA-XX

* 26mm SPACING AVAILABLE FOR RECTANGULAR CONNECTORS
* SHOWN W/ #1 OPERATOR
EBM46LA-00GAA-XX

*SHOWN WITH PR46A-0BAA

*26mm SPACING AVAILABLE FOR RECTANGULAR CONNECTORS

*SHOWN W/ #1 OPERATOR

1/4" - 18 N.P.T.F. TAP TO GAGE TYP. (2) BOTH ENDS

SHOWN WITH 1/8" N.P.T.F. TYP. (2) PER STATION

*SHOWN WITH PR46A-0BAA

*26mm SPACING AVAILABLE FOR RECTANGULAR CONNECTORS

*SHOWN W/ #1 OPERATOR
EBM46LA-00FAA-XX

*SHOWN WITH PR46A-0BAA

*26mm SPACING AVAILABLE FOR RECTANGULAR CONNECTORS

*SHOWN W/ #1 OPERATOR
EBM46LA-00EAA-XX

*26mm SPACING AVAILABLE FOR RECTANGULAR CONNECTORS

*SHOWN W/ #1 OPERATOR
EBM46LA-00DAA-XX

1/4" - 18 N.P.T.F. TAP TO GAGE
TYP. (2) BOTH ENDS

*26mm SPACING AVAILABLE FOR RECTANGULAR CONNECTORS

*SHOWN W/ #1 OPERATOR
ECD46LA-00AAA-A0XX

*SHOWN W/ #1 OPERATOR
1" - 11 1/2 N.P.S.M. TAP
8.5 FULL THREAD DEPTH
TYP. BOTH ENDS

1/4" - 18 N.P.T.F. TAP TO GAGE
TYP. (2) BOTH ENDS

SHOWN WITH 1/8" N.P.T.F.
TYP. (2) PER STATION

ECD46LA-00BAA-A0XX
*SHOWN W/ #1 OPERATOR
ECD46LA-00CAA-A0XX

*SHOWN WITH PR46A-0BAA

*SHOWN W/ #1 OPERATOR
ECD46LA-00DAA-A0XX

*SHOWN W/ #1 OPERATOR
ECD46LA-00EAA-A0XX

*SHOWN W/ #1 OPERATOR
TYP. BOTH ENDS
8.5 FULL THREAD DEPTH 
TYP. BOTH ENDS
1/4" - 18 N.P.T.F. TAP TO GAGE 
TYP. (2) BOTH ENDS

1" - 11 1/2 N.P.S.M. TAP 
8.5 FULL THREAD DEPTH 
TYP. BOTH ENDS

SHOWN WITH 1/8" N.P.T.F. 
TYP. (2) PER STATION

ECD46LA-00FAA-A0XX

*SHOWN WITH PR46A-0BAA

*SHOWN W/ #1 OPERATOR