The **Straight Sided Insert (SI)** is a **threadless** check valve designed to be inserted into any cavity where a check valve is needed and threads are not desired. Consult the factory if your application requires tolerancing for a press fit installation. The SI valve can also be used as a low pressure relief valve or vacuum breaker by using the desired spring settings.

<table>
<thead>
<tr>
<th>Nom. Pipe Size</th>
<th>Size Code</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>Orifice Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>D</td>
<td>0.656</td>
<td>0.56</td>
<td>0.16</td>
<td>0.718</td>
<td>0.53</td>
<td>0.01</td>
<td>0.031</td>
<td>0.348</td>
</tr>
<tr>
<td>3/4</td>
<td>F</td>
<td>0.780</td>
<td>0.59</td>
<td>0.16</td>
<td>0.900</td>
<td>0.61</td>
<td>0.00</td>
<td>0.063</td>
<td>0.464</td>
</tr>
<tr>
<td>1</td>
<td>H</td>
<td>1.000</td>
<td>0.69</td>
<td>0.19</td>
<td>1.125</td>
<td>0.78</td>
<td>0.11</td>
<td>0.063</td>
<td>0.593</td>
</tr>
<tr>
<td>1-1/4</td>
<td>I</td>
<td>1.312</td>
<td>0.81</td>
<td>0.19</td>
<td>1.500</td>
<td>0.85</td>
<td>0.09</td>
<td>0.063</td>
<td>0.890</td>
</tr>
<tr>
<td>1-1/2</td>
<td>J</td>
<td>1.625</td>
<td>0.88</td>
<td>0.25</td>
<td>1.781</td>
<td>1.01</td>
<td>0.15</td>
<td>0.063</td>
<td>1.135</td>
</tr>
<tr>
<td>2</td>
<td>K</td>
<td>1.875</td>
<td>0.88</td>
<td>0.25</td>
<td>2.187</td>
<td>1.19</td>
<td>0.70</td>
<td>0.063</td>
<td>1.385</td>
</tr>
</tbody>
</table>

1. Maximum nominal dimension for a fully open valve with no spring.

<table>
<thead>
<tr>
<th>Body Material</th>
<th>Availability</th>
<th>Non-Shock Pressure-Temp. Rating @ 100°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>316 Stainless Steel (SS)</td>
<td>Standard</td>
<td>Consult factory for P-T rating above @ 100°F</td>
</tr>
<tr>
<td>Carbon Steel (CS)</td>
<td></td>
<td>3000 PSIG</td>
</tr>
<tr>
<td>Brass (BR)</td>
<td>Semi-standard</td>
<td>(1500 PSIG for o-ring seats)</td>
</tr>
<tr>
<td>Alloy 20 (A2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alloy C-276 (HC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MONEL® 400 or Alloy R40S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alloy B (HB)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium (Ti)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. See page 56 for material grade information.
CHECK-ALL VALVE® MFG. CO.
Phone: 515-224-2301  Fax: 515-224-2326

HOW TO ORDER
CHECK-ALL STYLE SI

Listed above are the most common material selections. Please contact the factory for additional options.

1. .500 PSI is the only standard cracking pressure for spring materials other than Stainless Steel. .125 PSI springs are not recommended for installations with flow vertical down.

2. Seat materials other than "metal-to-metal" have a maximum pressure rating of 1500 PSI. "Metal-to-Metal" and PTFE seats are not resilient. See page 52 for allowable leakage rates.

3. EP seats not recommended for use with Carbon Steel valves.

Note: Many other cracking pressures are available. All spring tolerances +/- 15%.

SPRING CRACKING PRESSURES (PSI)
Must use decimal as a character unless selecting NO SPRING. Specify Exact Setting

SPRING RANGES
EXAMPLE
.000 to .999 = .500
1.00 to 9.99 = 1.50
10.0 to 85.0 = 15.0
NO SPRING = NOSPRG

STANDARD CRACKING PRESSURES

1.25
.500
1.50
3.50
(Sizes D-J Only)

SPECIAL OPTIONS
T = FEP ENCAPSULATED SPRING
Contact the factory for more options

See p. 3 for temperature rating

SPRING MATERIAL
ALLOY C-276 = HC
INCONEL® X750 OR ALLOY X750 = IX
MONEL® 400 = MO
17-7PH SS = PH
316 SS = SS
TITANIUM = TI
See p. 4 for temperature rating

SEAT MATERIAL
AFLAS® = AS
BUNA-N = BN
EPDM = EP
KALREZ® = KZ
"METAL-TO-METAL" = MT
NEOPRENE = NE
PTFE = TF
VITON™ = VT
See p. 3 for temperature rating

SEAT MATERIAL

ALLOY 20 = A2
BRASS = BR
CARBON STEEL = CS
ALLOY B = HB
ALLOY C-276 = HC
MONEL® 400 OR ALLOY R405 = MO
316 SS = SS
TITANIUM = TI
See p. 3 for temperature rating

BODY MATERIAL
ALLOY 20 = A2
BRASS = BR
CARBON STEEL = CS
ALLOY B = HB
ALLOY C-276 = HC
MONEL® 400 OR ALLOY R405 = MO
316 SS = SS
TITANIUM = TI
See p. 3 for temperature rating

WATER FLOW RATE - GPM

PRESSURE DROP - PSI

Note: All flow curves and Cv values presume the valves are fully open with 1/2 PSI cracking pressure springs. Consult the factory for more information.

STYLE SI

Cv VALUES & VALVE WEIGHTS

Cv  SIZE  ALL MATERIALS
2.4  1/2     0.6 oz.
4.2  3/4     1.0 oz.
6.6  1       1.7 oz.
11.0 1-1/4   3.3 oz.
17.4 1-1/2   5.3 oz.
32.0 2       8.2 oz.

See page 51 for Flow Formulae.
Valve weights are approximate.

www.checkall.com  sales@checkall.com  ISO 9001 CERTIFIED  MADE IN USA  2019

Page information references listed on this cut sheet are available in the printed catalog as well as the digital catalog, which is available at www.checkall.com.

Trademarks Used
MONEL® - Special Metals Family of Companies
INCONEL® - Special Metals Family of Companies
TRI-CLAMP® - Alfa Laval Inc.
KALREZ® - E.I. du Pont de Nemours and Company
VITON™ - The Chemours Company FC LLC
AFLAS® - AGC, Inc.