Flex-Crimp™ brand of crimpers is a powerful machine capable of crimping a variety of sanitary, hydraulic, composite and industrial hoses. All Flex-Crimp models come standard with a quick change tool for quick and easy die changes. The touch screen crimp controller takes the guess work out of crimping with easy machine calculations.

The Flex-Crimp system consistently crimps to within .005" everytime. The Flex-Crimp line of products offers the most consistent crimp in the market today and comes with a one year manufacturer’s warranty.

**Precision CNC Machining**

Ace Manufacturing Co. can provide the solution to your most demanding production problems by combining today’s technology with over 100 years of manufacturing experience. We serve many industries in producing a diverse range of parts from a variety of materials, from cold rolled steel to exotic alloys. Our computer generated programs minimize turnaround time, enabling us to produce your parts on time. We operate in compliance with ISO standards to ensure that the parts we produce are to specification. Our experience and full service commitment make us a vital member of your manufacturing team.

For latest updates, visit us at acesanitary.com
Ace Manufacturing Company formed in 1969 and has evolved over the years into a precision machining facility. We are dedicated to providing High Quality Standards to our customer base and look forward to developing new business partnerships. To this end, in 2004 we started the Flex-Rite™ and Seal-Rite™ lines of hose products and hose fittings. These product lines are now part of our Ace Sanitary division. We work hard to know your business, assist you in problem solving, provide you with quality products and over 100 years of experience.

Cautionary Statement
All products are in the nature of commodities and they are sold by published specifications and not for particular purposes, uses or applications. Purchaser shall first determine their suitability for the intended purposes, uses or applications and shall either conduct its own engineering studies or tests, or retain qualified engineers, consultants or testing laboratories and consult with them before determining the proper use, suitability or propriety of the merchandise or products for the intended purposes, uses or applications.

Purchaser shall follow all instructions contained in seller’s catalogs, brochures, technical bulletins and other documents regarding the product. Purchasers or users of the products should frequently and consistently undertake inspections and protective measures with respect to the use and application of products, which should include the examination of tube and cover, conditions of the hose or tubing, and the identification, repair or replacement of sections showing cracking, blistering, separations, internal and external abrasions, leaking or slipped couplings or connections and make proper proof tests.

Limited Warranty
The merchandise or products sold or distributed by seller are warranted to its customers to be free from defects in material and workmanship at the time of shipment by us, subject to the following provisions. All warranty claims shall be made within six (6) months after seller shipped the products. Seller’s liability hereunder is limited to the purchase price of any products proving defective, or, at seller’s option, to the replacement of such products upon its authorized return to seller.

This warranty is in lieu of and excludes all other warranties, expressed, implied, statutory, or otherwise created under applicable law including, but not limited to, the warranty of merchantability and the warranty of fitness for a particular purpose. In no event shall seller or the manufacturer of the product be liable for special, incidental, or consequential damages, including loss of profits, whether or not caused by or resulting from the negligence of seller and/or the manufacturer of the product, unless specifically provided herein. In addition, this warranty shall not apply to any products or portions thereof which have been subjected to abuse, misuse, improper installation, maintenance or operation, electrical failure or abnormal conditions, and to products which have been tampered with, altered, modified, repaired, reworked by anyone not approved by seller, or used in any manner inconsistent with the provisions of the “cautionary statement” above.
Bend Radius (fluoropolymer hose and all rubber hose)
- The radius of a bent section of hose measured to the innermost surface of the curved portion (R1).
- The radius of a bent section of hose measured to the hose centerline (R2).

Minimum Bend Radius
- The smallest radius at which a hose can be used.

Force to Bend
- The amount of stress required to induce bending around a specified radius - a measure of stiffness.

Maximum Rated Working Pressure
- The maximum pressure at which the core or braid will rupture at ambient temperature.

Nominal Rated Burst Pressure
- The maximum rated pressure is multiplied by 150%.

Maximum Rated Test Pressure
- The maximum pressure hoses should be subjected to on a continuous basis.

Maximum Rated Working Pressure
- The amount of stress required to induce bending around a specified radius.

Force to Bend
- The amount of stress required to induce bending around a specified radius - a measure of stiffness.

Maximum Rated Working Pressure
- The amount of stress required to induce bending around a specified radius.

Flexibility / Bend Radius
Reprinted from RMA Hose Handbook IP-2 Fourth Edition
Flexibility and minimum bend radius are important factors in hose design and selection if it is known that the hose will be subjected to sharp curvatures in normal use. When bent at too sharp an angle, hose may kink or flatten in the cross-section. The reinforcement may also be unduly stressed or distorted and the hose life thereby shortened.

Adaptability means the hose should be able to conform to the smallest anticipated bend radius without over stress. The minimum bend radius is generally specified for each hose in this catalog. This is the radius to which the hose can be bent in service without damage or appreciably shortening its life. The radius is measured to the inside of the curvature.

Hydraulic Shock...
Due To Instantaneous Pressure Increase

Formula to determine minimum hose length given bend radius and degree of bend required:

\[ L = \frac{A}{360^\circ} \times 2\pi B \]

- \( L \) = Minimum length of hose to make bend
- \( A \) = Angle of bend
- \( B \) = Given bend radius of hose
- \( \pi \approx 3.14 \)

Example: To make a 60° bend at the hose's rated minimum bend radius of 15 cm

\[ L = \frac{60^\circ}{360^\circ} \times 2 \times 3.14 \times 15 = 16 \text{ cm} \]

Thus, the bend must be made over approximately 16 cm of hose length. The bend radius used must be equal to or greater than the rated minimum bend radius. Bending the hose to a smaller bend radius than minimum may kink the hose and the result in damage and early failure.

Definitions

Industry Recognized Terms

Seal-Rite™ radial crimp couplers are the purest unitized assemblies available today. Our external crimp design provides a 360° fixed seal at the coupler stem to hose junction point that eliminates the possibility of product wicking between the hose and coupler. Unlike internal expansion which can deform metal and yield die impressions, radial crimp technology will not interfere with the internal surface of the coupling stem. A full flow smooth bore transition is created after fabrication that excludes ledges or crevices that can collect bacteria.

Seal-Rite™ radial crimp couplers are available for attachment on Flex-Rite hoses. A wide range of end styles, sizes 1/2" through 6" are available.

Seal-Rite™ Rubber, Silicone, PVC, & Fluoropolymer Lined Hoses

Seal-Rite™ radial crimp couplers are the purest unitized assemblies available today. Our external crimp design provides a 360° fixed seal at the coupler stem to hose junction point that eliminates the possibility of product wicking between the hose and coupler. Unlike internal expansion which can deform metal and yield die impressions, radial crimp technology will not interfere with the internal surface of the coupling stem. A full flow smooth bore transition is created after fabrication that excludes ledges or crevices that can collect bacteria.

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Seal-Rite™ radial crimp couplers are available for attachment on Flex-Rite hoses. A wide range of end styles, sizes 1/2" through 6" are available.
# R-Series Rubber Hose

**RDC Discharge**

This ultra-light discharge hose provides extra flexibility and smooth handling. (Meets 3-A* 1800 standards, USDA requirements and is FDA compliant). Designed to be chemically resistant to mild caustic solutions. This discharge hose is well suited for overhead CIP wash units and capable of handling pressures up to 250 PSI.

**RBT Beverage Transfer**

A heavy-duty discharge hose with suction capability is ideal for the highly demanding service of transferring liquid products in breweries, wineries and dairies. Suction back design resists damage from kinking or flattening in high traffic areas.

**RES Premium Suction & Discharge**

This premium quality hose withstands rough handling and high temperatures and harsher chemical environments. A suction and discharge hose that is and will not impart taste or odor to products being transferred. Typical use includes: Milk, Dairy, Food and Beverage, Cosmetics, Pharmaceutical and CIP Applications. Meets 3-A* standards, USDA requirements and is FDA compliant.

**RWD Premium Washdown**

Designed for cleanup duties in dairy, creameries, breweries, food, beverage, meat and poultry processing plants. This premium quality hose is capable of handling hot water up to 300°F. A chemically resistant hose, with a wrapped cover construction designed to provide excellent resistance to cuts and abrasion while providing handling stability.

### General Hose

**Installation Information**

**S = SIZE**

**T = TEMPERATURE (WORKING & CLEANING)**

**A = APPLICATION**

**M = MEDIA (MATERIAL BEING TRANSFERED)**

**P = PRESSURE (WORKING & CLEANING)**

**E = END STYLE (TYPE & ALIGNMENT)**

**D = DELIVERY (SPECIAL PACKAGING)**

### Prior to Installation

Inspect hose completely for signs of obvious damage. Possible damage may include cuts to cover, kinking, broken braids and crushing. This damage can reduce hose life and pressure rating.

Do Not Use any damaged hose.

Hose should be application specific. Review materials, pressures, chemical compatibility, temperature and environment to ensure proper selection of hose.

- Restrict hose movement to a single plane (Fig. 1) to minimize resultant twisting or torque. When the bending plane is where flexing should occur, stress fatigue increases with excessive bending of hose.
- Axial or twisting movement (Fig. 2) should be eliminated. The likelihood of leakage or failure increases for hoses that are twisted (torqued) during assembly. Floating flanges or swivel-type fittings (i.e., JIC) can eliminate improper twisting.
- Avoid stretching or compressing the hose (Fig. 3) along its longitudinal axis with in-line installation.
- Failure of hose will occur when hose is bent (Fig. 4) beyond minimum bend radius. Bend radii are given for individual products and sizes. The bend radius values must be observed (measure to inside radius of fluoropolymer-lined hose and centerline for stainless steel metal hose) for hoses to be installed properly. Occasionally, vacuum and pressure ratings are based on not to exceed 2% minimum bend radius. The manufacturer should be contacted for specific hose ratings and data.

### Chemical Charts are located on our website

### Motion Calculations

**Axial Motion:** Motion that occurs when a hose is compressed along its longitudinal axis. Axial motion is only applicable in very short lengths of annular hose only. Fluoropolymer lined hose should not be subjected to axial motion.

**Offset Motion:** Motion that occurs when one end of the hose is deflected in a plane perpendicular to its longitudinal axis with the ends remaining parallel. In offset applications where motion is repeated, the offset should never exceed 20% of the minimum bend radius. To calculate the required live length to achieve a desired offset, use the following calculations:

\[
LL = \sqrt{\left(\frac{2YR + (2Y)}{12YR + (2Y)}\right)^2 + Y^2}
\]

Note: Where offset motion “Y” occurs on both sides of hose centerline, the hose live length should be based on total travel, or 2Y. The modified calculation will be:

\[
LL = \sqrt{2(YR + (2Y))^2}
\]

### Model Information

#### RDC Discharge

<table>
<thead>
<tr>
<th>MODEL</th>
<th>I.D.</th>
<th>Q.D.</th>
<th>WORKING PRESSURE</th>
<th>MIN. BEND RADIUS</th>
<th>WEIGHT PER FT.</th>
<th>VACUUM IN HG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDC150</td>
<td>1 1/2</td>
<td>2.67</td>
<td>250 PSI</td>
<td>-</td>
<td>-</td>
<td>88 lbs.</td>
</tr>
<tr>
<td>RDC200</td>
<td>2</td>
<td>2.59</td>
<td>250 PSI</td>
<td>-</td>
<td>-</td>
<td>113 lbs.</td>
</tr>
<tr>
<td>RDC250</td>
<td>2 1/2</td>
<td>3.11</td>
<td>250 PSI</td>
<td>-</td>
<td>-</td>
<td>140 lbs.</td>
</tr>
</tbody>
</table>

**Tube:** White FDA, 3-A*, Chlorobutyrene

**Reinforcement:** Spiral plied synthetic fabric 4 ply plus 1 ply 2” & over

**Recommended Cleaning:** CI, COP

#### RBT Beverage Transfer

<table>
<thead>
<tr>
<th>MODEL</th>
<th>I.D.</th>
<th>Q.D.</th>
<th>WORKING PRESSURE</th>
<th>MIN. BEND RADIUS</th>
<th>WEIGHT PER FT.</th>
<th>VACUUM IN HG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBT100</td>
<td>1</td>
<td>1.69</td>
<td>250 PSI</td>
<td>4</td>
<td>0.81 lbs.</td>
<td>20’</td>
</tr>
<tr>
<td>RBT150</td>
<td>1 1/2</td>
<td>2.23</td>
<td>250 PSI</td>
<td>5.5</td>
<td>1.20 lbs.</td>
<td>20’</td>
</tr>
<tr>
<td>RBT200</td>
<td>2</td>
<td>2.92</td>
<td>250 PSI</td>
<td>6.5</td>
<td>1.80 lbs.</td>
<td>20’</td>
</tr>
<tr>
<td>RBT300</td>
<td>3</td>
<td>4.09</td>
<td>250 PSI</td>
<td>10</td>
<td>3.57 lbs.</td>
<td>20’</td>
</tr>
</tbody>
</table>

**Tube:** White FDA, 3-A*, Chlorobutyrene

**Reinforcement:** Spiral plied synthetic fabric 4 plies 1.5” - 6 plies 2” & over

**Recommended Cleaning:** CI, COP

#### RES Premium Suction & Discharge

<table>
<thead>
<tr>
<th>MODEL</th>
<th>I.D.</th>
<th>Q.D.</th>
<th>WORKING PRESSURE</th>
<th>MIN. BEND RADIUS</th>
<th>WEIGHT PER FT.</th>
<th>VACUUM IN HG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RES50</td>
<td>1/2</td>
<td>.93</td>
<td>150 PSI</td>
<td>2.5</td>
<td>.23 lbs.</td>
<td>29’</td>
</tr>
<tr>
<td>RES75</td>
<td>3/4</td>
<td>1.18</td>
<td>150 PSI</td>
<td>3.75</td>
<td>.31 lbs.</td>
<td>29’</td>
</tr>
<tr>
<td>RES100</td>
<td>1</td>
<td>1.50</td>
<td>150 PSI</td>
<td>4</td>
<td>.39 lbs.</td>
<td>29’</td>
</tr>
<tr>
<td>RES150</td>
<td>1 1/2</td>
<td>2.95</td>
<td>150 PSI</td>
<td>5.0</td>
<td>.80 lbs.</td>
<td>29’</td>
</tr>
<tr>
<td>RES200</td>
<td>2</td>
<td>2.60</td>
<td>150 PSI</td>
<td>6.0</td>
<td>1.16 lbs.</td>
<td>29’</td>
</tr>
<tr>
<td>RES250</td>
<td>2 1/2</td>
<td>3.17</td>
<td>150 PSI</td>
<td>7.0</td>
<td>1.70 lbs.</td>
<td>29’</td>
</tr>
<tr>
<td>RES300</td>
<td>3</td>
<td>3.72</td>
<td>150 PSI</td>
<td>8.5</td>
<td>1.96 lbs.</td>
<td>29’</td>
</tr>
</tbody>
</table>

**Tube:** White FDA, 3-A*, EPDM

**Reinforcement:** Two polyester spirals with dual helix wire

**Recommended Cleaning:** CI, COP, S,S, Single Lamination

#### RWD Premium Washdown

<table>
<thead>
<tr>
<th>MODEL</th>
<th>I.D.</th>
<th>Q.D.</th>
<th>WORKING PRESSURE</th>
<th>MIN. BEND RADIUS</th>
<th>WEIGHT PER FT.</th>
<th>VACUUM IN HG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWD70</td>
<td>3/4</td>
<td>1.25</td>
<td>350 PSI</td>
<td>-</td>
<td>-</td>
<td>.41 lbs.</td>
</tr>
</tbody>
</table>

**Tube:** White FDA, 3-A*, EPDM

**Reinforcement:** Spiral plied synthetic fabric 4 ply

**Recommended Cleaning:** CI, COP, S,S

### All R-Series hose products meet/comply: USDA Class III requirements, FDA CFR Title 21 177.2600, 3-A 18-03

### Notes:

- The 3-A 62-02 standard applies only to assemblies of 3/4” diameter and larger.
- All R-Series hose products meet USDA Class III requirements, FDA CFR Title 21 177.2600, 3-A 18-03. The 3-A 62-02 standard applies only to assemblies of 3/4” diameter and larger.
- Axial or twisting movement should be eliminated. The likelihood of leakage or failure increases for hoses that are twisted (torqued) during assembly. Floating flanges or swivel-type fittings (i.e., JIC) can eliminate improper twisting.
- Failure of hose will occur when hose is bent (Fig. 4) beyond minimum bend radius. Bend radii are given for individual products and sizes. The bend radius values must be observed (measure to inside radius of fluoropolymer-lined hose and centerline for stainless steel metal hose) for hoses to be installed properly. Occasionally, vacuum and pressure ratings are based on not to exceed 2% minimum bend radius. The manufacturer should be contacted for specific hose ratings and data.

### Motion Calculations

**Axial Motion:** Motion that occurs when a hose is compressed along its longitudinal axis. Axial motion is only applicable in very short lengths of annular hose only. Fluoropolymer lined hose should not be subjected to axial motion.

**Offset Motion:** Motion that occurs when one end of the hose is deflected in a plane perpendicular to its longitudinal axis with the ends remaining parallel. In offset applications where motion is repeated, the offset should never exceed 20% of the minimum bend radius. To calculate the required live length to achieve a desired offset, use the following calculations:

\[
LL = \sqrt{\left(\frac{2YR + (2Y)}{12YR + (2Y)}\right)^2 + Y^2}
\]

Note: Where offset motion “Y” occurs on both sides of hose centerline, the hose live length should be based on total travel, or 2Y. The modified calculation will be:

\[
LL = \sqrt{2(YR + (2Y))^2}
\]
Sizing Information

Sanitary Clamp Fitting

These actual-size drawings are provided for your convenience and ordering accuracy when specifying sanitary fittings:

- 0.984” O.D. is the same for 1/2”, 3/4” I.D. styles.
- 1.984” O.D. is the same for 1” and 1-1/2” I.D. styles.
- Varying O.D. for the 2”, 2-1/2” and 3” I.D. styles

FlexRite®

R-Series Rubber Hose

**RCT Comestible Transfer**

Excellent choice for estime ons, and personal care products as well as most dairy applications. (Meets 3-A* standards, USDA requirements and is FDA compliant). Rated for full suction and discharge use up to 150 PSI. Nitrile hose is engineered to handle high temperatures and maintain product color, taste and aroma. A dual wire helix makes the RCT extremely flexible and easy to handle.

**RCR Crush Resistant**

Consistent flow is maintained by this crush resistant hose whether kinked, twisted or run over it is designed to spring back to its original shape. (Meets 3-A* standards, USDA requirements and is FDA compliant). Excellent for high traffic areas, the RCR delivers generous flow rates for wine, beer and other sanitary liquid food slugs. Bacteria resistant construction delivers taste and odor free flow.

**RWS Wine & Spirits**

Exterior polymer blend with wide/ smooth corrugations ensures low friction and ease of movement. Light weight suction & discharge hose is designed for extra flex and wear resistance. (Meets 3-A* standards, USDA requirements and is FDA compliant). Delivers taste and odor free flow and easy clean up.

**Versatility** makes this hose our most popular choice for product transfer and CIP applications. (Meets 3-A* standards, USDA requirements and is FDA compliant). Rated for full suction and discharge use up to 150 PSI. The specially compounded tube is engineered to handle high temperatures, will not impart taste or odor and is highly resistant to common CIP solutions. A dual wire helix makes the RSD extremely flexible and easy to handle.

**RSD Suction & Discharge**

Working pressure and vacuum ratings will decrease as temperatures increase. For R-series applications that exceed 200°F contact manufacturer for suggestions.

### RSD Suction & Discharge

**MODEL** | I.D. | O.D. | WORKING PRESSURE | MIN. BEND RADIUS | WEIGHT PER FT. | VACUUM IN HG.
--- | --- | --- | --- | --- | --- | ---
RSD050*  | 1/2” | 1.0” | 150 PSI | 2.0” | .32 lbs. | 29”
RSD075*  | 3/4” | 1.25” | 150 PSI | 2.0” | .57 lbs. | 29”
RSD100  | 1” | 1.50” | 150 PSI | 3.0” | .91 lbs. | 29”
RSD150  | 1 1/2” | 2.06” | 150 PSI | 4.0” | 1.03 lbs. | 29”
RSD200  | 2” | 2.57” | 150 PSI | 4.5” | 1.32 lbs. | 29”
RSD250  | 2 1/2” | 3.12” | 150 PSI | 5.5” | 1.84 lbs. | 29”
RSD300  | 3” | 3.74” | 150 PSI | 7.0” | 2.59 lbs. | 29”
RSD400  | 4” | 4.77” | 150 PSI | 10.0” | 3.51 lbs. | 29”
RSD600  | 6” | 6.13” | 150 PSI | 22.0” | 5.42 lbs. | 29”

**REINFORCEMENT:** Spiral-plied synthetic fabric with dual wire helix. **COLORS AVAILABLE:** Black, Blue & Red Thermoplastic w/white stripe

### RCT Comestible Transfer

**MODEL** | I.D. | O.D. | WORKING PRESSURE | MIN. BEND RADIUS | WEIGHT PER FT. | VACUUM IN HG.
--- | --- | --- | --- | --- | --- | ---
RCT100  | 1” | 1.92” | 150 PSI | 3.5” | .95 lbs. | 29”
RCT150  | 1 1/2” | 2.13” | 150 PSI | 4.0” | 1.10 lbs. | 29”
RCT200  | 2” | 2.64” | 150 PSI | 4.5” | 1.45 lbs. | 29”
RCT250  | 2 1/2” | 3.19” | 150 PSI | 6.0” | 1.90 lbs. | 29”
RCT300  | 3” | 3.76” | 150 PSI | 7.0” | 2.68 lbs. | 29”
RCT400  | 4” | 4.77” | 150 PSI | 10.5” | 3.54 lbs. | 29”

**REINFORCEMENT:** Spiral-plied synthetic fabric with dual wire helix.  **COLORS AVAILABLE:** White Nitrile w/white stripe

### RCR Crush Resistant

**MODEL** | I.D. | O.D. | WORKING PRESSURE | MIN. BEND RADIUS | WEIGHT PER FT. | VACUUM IN HG.
--- | --- | --- | --- | --- | --- | ---
RCR100  | 1 1/2” | 2.11” | 250 PSI | 4.0” | .98 lbs. | 27”
RCR200  | 2” | 2.68” | 250 PSI | 7.0” | 1.38 lbs. | 27”
RCR250  | 2 1/2” | 3.21” | 250 PSI | 10.0” | 1.78 lbs. | 27”
RCR300  | 3” | 3.85” | 250 PSI | 12.0” | 2.59 lbs. | 27”
RCR400  | 4” | 4.77” | coming soon - consult factory for information

**REINFORCEMENT:** Spiral-pled synthetic fabric with nonmetallic helix. **COLORS AVAILABLE:** Red Thermoplastic w/white stripe

### RWS Wine & Spirits

**MODEL** | I.D. | O.D. | WORKING PRESSURE | MIN. BEND RADIUS | WEIGHT PER FT. | VACUUM IN HG.
--- | --- | --- | --- | --- | --- | ---
RWS150  | 1 1/2” | 2.13” | 150 PSI | 4.0” | .76 lbs. | 29”
RWS200  | 2” | 2.64” | 150 PSI | 5.0” | .97 lbs. | 29”
RWS250  | 2 1/2” | 3.19” | 150 PSI | 6.5” | 1.18 lbs. | 29”
RWS300  | 3” | 3.76” | 150 PSI | 8.0” | 1.46 lbs. | 29”
RWS400  | 4” | 4.77” | coming soon - consult factory for information

**REINFORCEMENT:** Spiral-pled synthetic fabric with nonmetallic helix. **COLORS AVAILABLE:** Red Thermoplastic w/white stripe

**TEMP. RANGE:** 25 to 225°F

**CON...
## S-Series Silicone Hose

**Pharmaceutical grade, USP Class VI silicone with full traceability to produce seamless, extruded, platinum cured tubes, manufactured in clean room environment.**

### ASSEMBLY PART NUMBER

<table>
<thead>
<tr>
<th>MODEL</th>
<th>I.D. O.D.</th>
<th>WORKING PRESSURE</th>
<th>MIN. BEND RADIUS</th>
<th>VACUUM IN HG.</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMW50</td>
<td>½&quot; 0.82&quot;</td>
<td>200 PSI 145 PSI</td>
<td>3.8&quot; 3.0&quot;</td>
<td>29&quot; 24&quot;</td>
<td></td>
</tr>
<tr>
<td>SMW75</td>
<td>¾&quot; 1.11&quot;</td>
<td>205 PSI 150 PSI</td>
<td>5.0&quot; 3.8&quot;</td>
<td>20&quot; 24&quot;</td>
<td></td>
</tr>
<tr>
<td>SMW100</td>
<td>1&quot; 1.36&quot;</td>
<td>175 PSI 125 PSI</td>
<td>7.0&quot; 3.8&quot;</td>
<td>28&quot; 24&quot;</td>
<td></td>
</tr>
<tr>
<td>SMW150</td>
<td>1½&quot; 1.86&quot;</td>
<td>175 PSI 125 PSI</td>
<td>9.0&quot; 3.8&quot;</td>
<td>29&quot; 24&quot;</td>
<td></td>
</tr>
<tr>
<td>SMW200</td>
<td>2&quot; 2.36&quot;</td>
<td>150 PSI 100 PSI</td>
<td>11.0&quot; 3.8&quot;</td>
<td>29&quot; 24&quot;</td>
<td></td>
</tr>
<tr>
<td>SMW250</td>
<td>2½&quot; 2.86&quot;</td>
<td>110 PSI 75 PSI</td>
<td>12.0&quot; 3.8&quot;</td>
<td>29&quot; 15&quot;</td>
<td></td>
</tr>
<tr>
<td>SMDW00</td>
<td>3&quot; 3.36&quot;</td>
<td>110 PSI 75 PSI</td>
<td>15.0&quot; 3.8&quot;</td>
<td>29&quot; 12&quot;</td>
<td></td>
</tr>
<tr>
<td>SMDW00</td>
<td>4&quot; 4.36&quot;</td>
<td>90 PSI 50 PSI</td>
<td>18.0&quot; 3.8&quot;</td>
<td>29&quot; 12&quot;</td>
<td></td>
</tr>
</tbody>
</table>

**TUBE:** FOA-3A, USP Class VI silicone - Platinum cured.

**RECOMMENDATION:** Custom polyester braid with stainless steel wire helix.

**RECOMMENDED CLEANING:** CIP, SIP, Autoclave.

### OTHER HOSE

<table>
<thead>
<tr>
<th>MODEL</th>
<th>I.D. O.D.</th>
<th>WORKING PRESSURE</th>
<th>MIN. BEND RADIUS</th>
<th>VACUUM IN HG.</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSD025</td>
<td>½&quot; 0.52&quot;</td>
<td>135 PSI 100 PSI</td>
<td>1.5&quot; - 2&quot;</td>
<td>- 50&quot;</td>
<td></td>
</tr>
<tr>
<td>SSD037</td>
<td>¾&quot; 0.66&quot;</td>
<td>100 PSI 75 PSI</td>
<td>2.0&quot; - 2&quot;</td>
<td>- 50&quot;</td>
<td></td>
</tr>
<tr>
<td>SSD050</td>
<td>1&quot; 0.80&quot;</td>
<td>80 PSI 50 PSI</td>
<td>2.0&quot; - 2&quot;</td>
<td>- 50&quot;</td>
<td></td>
</tr>
<tr>
<td>SSD062</td>
<td>1½&quot; 0.97&quot;</td>
<td>60 PSI 40 PSI</td>
<td>2.5&quot; - 2&quot;</td>
<td>- 50&quot;</td>
<td></td>
</tr>
<tr>
<td>SSD075</td>
<td>2&quot; 1.10&quot;</td>
<td>50 PSI 30 PSI</td>
<td>3.0&quot; - 2&quot;</td>
<td>- 50&quot;</td>
<td></td>
</tr>
<tr>
<td>SSD100</td>
<td>2½&quot; 1.36&quot;</td>
<td>45 PSI 25 PSI</td>
<td>3.5&quot; - 2&quot;</td>
<td>- 50&quot;</td>
<td></td>
</tr>
</tbody>
</table>

**TUBE:** FOA-3A, USP Class VI silicone - Platinum cured.

**RECOMMENDATION:** Single ply, polyester braid.

**RECOMMENDED CLEANING:** CIP, SIP, Autoclave.

**COVER:** White translucent.

**TEMP. RANGE:** -10° to 375° F.

### WARRANTY

Products are warranted for a period of 180 days from the date of delivery to purchaser to be free from defects within the warranty period that claim is being made, pursuant hereto, together and substantiating purchase liability of the Warrantor hereunder excludes consequential damage to persons or property of all types and is subjected to the following:

- **One year on assemblies up to 60" long.
- **Two years on assemblies over 60" long.**

**Overall length tolerances for assemblies are:**

- **±1/4" on assemblies to 24".
- **±1/2" on assemblies 25" to 60".
- **±1% on assemblies over 60".**

**Please send request for quotes and purchase orders to:**

sales@acesanitary.com

**CONSULT FACTORY FOR ADDITIONAL CHOICES**

---

**PRODUCTS MANUFACTURED USING STANDARD POLYESTER OR NOMEX BRAID. AVAILABILITY OF CERTAIN HOSE MATERIALS MAY VARY BY LOCATION. CONTACT MANUFACTURER FOR SUGGESTIONS.**

---

**NOTE:** All I.D. sizes are based on 70° F (ambient temperature). Working pressure and vacuum ratings will decrease as temperatures increase. For “S” series applications that exceed 250°F contact manufacturer for suggestions.
**I-Series Industrial Hose**

**IWD**

Washdown

**ISH**

Steam

A rugged, abrasive and blister resistant hose for cleaning pumps, valves, tubing and equipment suitable for steam. Stands up to the harshest of environments with a specially formulated tube and cover that will not harden or crack during normal service. The steel wire reinforcement provides for safe use with steam pressures up to 250 PSI at 430°F.

**Seal-Rite**

Hose Support

**Seal-Rite**

Fitting Bumper

**Steam Hose Safty Facts**

Working with steam can be very hazardous. Safety precautions should be observed when handling to minimize or eliminate personal injury or property damage.

**Selection and use of steam hoses**

- Make sure steam hose is identified as a steam hose. It should be identified, stating working pressure and temperature rating.
- Make sure working pressure and temperature is not exceeded.
- Do not allow hose to remain under pressure when not in use.
- Avoid excess bending or flexing of hose near the coupling. Straight line operation is preferred. If bends are necessary as part of operation, spring guards may help.

**Maintenance Procedures**

- Periodic inspection of hose should include looking for cover blisters and leaks.
- Check for kinked areas that could damage hose.
- Drain hose after each use to avoid tube damage before hose is put back in operation, to avoid ‘pop coming’ of the tube.
- Do not store hose over hooks.
- Steam hose lying on metal racks or installed around steel piping will dry out the hose, causing tube and cover cracking.

**Steam Hose Chart**

**SuperSteam**

Hot Water

**H-Series**

High Temperature

**H-Series**

High Pressure

**H-Series**

High Temp.

**H-Series**

Hi-Flex Wire Reinforced

This highly flexible hose is extremely easy to handle. Reinforced with stainless steel wire ensures a balance between strength and lightness. Designed for bulk transfer, high-pressure, and vacuum process applications. (Meets 3A*, USDA, FDA and USP Class VI standards). Short lengths are ideal for proportioning and load cells.

**Traceability Solution...**

- Silicon or Silicon-colored hoses.
- Permanent Attached, No Product Contact
- Completely Sealed, Easy to Read Text
- Autoclavable, CIP & SIP Compatible
- Label Contains Part Number, Date & Serial No.
- Quick Turn-around with Customized Text Available

**Reusable Sanitary Fitting**

**Field Attachable**

Easy to assemble 3 pc reusable fittings with full traceability designed specifically for most Flex-Rite S & P-Series hose. Lightweight, versatile, works with most hose types and wall thickness. Patent Pending and 3-A Approved.

- Suitable for use with Biotech, High Purity Water, Pharmaceutical, Food & Beverage, Personal Care, Electronics and Potable Water.

**Internal Finish:** 15 RA or better, Electroplating standard. **Material:** Type 316L Stainless Steel Insert with Delrin nut and sleeve. **Options:** Custom Size Variations, Styles, Colors Available. **Note:** Stop up Stains Available

*Compliant with standards for Replacement Part Certification KN0187*
A steel wire is helically wound through the carcass which provides extra reinforcement for all suitable applications and is compliant with 3A, USDA, USP Class VI & FDA standards.

ALL P-Series hose products meet/comply: USDA, NSF requirements, FDA CFR Title 21 177.2600, 3-A 20-00 & FDA, 3-A*, PVC & FDA, 3-A*, PVC & FDA, USP Class VI & FDA standards.

FDA PVC transparent tubing is a clear extrusion that is compliant with 3A, USDA, USP Class VI & FDA standards.

This silicone covered, PTFE lined hose with exterior convolutions and a smooth, undulating bore provides exceptional flexibility. Exceptional for High Purty use in pharmaceutical, Biotech and Foodstuffs industries. This hose will not impart odor or product being transferred and provides clear viewing of the product inside, even on low or very low flow steam transfer applications.

WARNING: Working pressure ratings for all Flex-Rite™ brand hoses are based on 70°F (ambient temperature). Working pressure and vacuum ratings will decrease as temperatures increase. For “T” series applications that exceed 250°F contact manufacturer for suggestions.
**All “T-Series” hose meet USP Class VI & FDA Criteria** - ALL lines are extra thick to provide better flex life and less permeation. Anti-static tube option available.

**TR Series EPDM Rubber Covered Smooth Bore**

A steel wire is helically wound through the steam transfer applications.

**TSC Series Silicone Covered Smooth Bore**

This silicone covered, PTFE lined hose with exterior convolutions and a smooth, undulating bore provides extreme flexibility Exceptional for High Purity use in Pharmaceutical, Biotech and Foodstuffs industries. This hose will not impart taste or odor to products being transferred and provides cleaning ease both inside and outside. TSC is specifically suited for use in oil or low velocity steam transfer applications.

**TCS Series Silicone Covered Smooth Bore**

WARNING: Working pressure ratings for all Flex-Rite™ brand hoses are based on 70°F (ambient temperature). Working pressure and vacuum ratings will decrease as temperatures increase. For “T” series applications that exceed 250°F contact manufacturer for suggestions.

---

**PCT Clear Non-reinforced Tubing**

FDA PVC transparent tubing is a clear extrusion that is compliant with 3A, USDA, USP Class VI & FDA standards.

**PBT Braid Reinforced Tubing**

A flexible clear tubing with multiple polyester braids provides dependable reinforcement for all suitable applications and is compliant with 3A, USDA, USP Class VI & FDA standards.

**PWT Wire Reinforced Tubing**

A heavy-duty hose with steel wire helix rod reinforcement, suitable for milk handling and food processing. It is compliant with 3A, USDA, USP Class VI & FDA standards and provides high suction even in higher temperatures.

**PBW Suction / Transfer Hose**

This hose combines polyester braids with steel wire of the PBT & PWT hoses to provide the benefits of both. It is compliant with 3A, USDA, USP Class VI & FDA standards.

**PHH Suction / Transport Hose**

A clear hose, reinforced with white helix rod is compliant with 3A, USDA and FDA standards. It provides extremely low temperature flexibility, ideal for use in milk hauling.

**PHC Suction / Transfer Hose**

A clear hose, reinforced with clear helix rod is compliant with 3A, USDA and FDA Standards. Suited for in-plant environments, its low temperature flexibility is perfect for all liquid dairy or dry product transfers.

---

**MODEL I.D. O.D. PRESSURE MIN. BEND VACUUM**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>I.D.</th>
<th>O.D.</th>
<th>PRESSURE</th>
<th>MIN. BEND</th>
<th>VACUUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRS025</td>
<td>1/4&quot;</td>
<td>3.94</td>
<td>100 PSI</td>
<td>11.00&quot;</td>
<td>1.55 lbs.</td>
</tr>
<tr>
<td>TRS037</td>
<td>1/4&quot;</td>
<td>3.34</td>
<td>100 PSI</td>
<td>11.00&quot;</td>
<td>1.55 lbs.</td>
</tr>
<tr>
<td>TRS050</td>
<td>1/2&quot;</td>
<td>6.00</td>
<td>100 PSI</td>
<td>11.00&quot;</td>
<td>1.55 lbs.</td>
</tr>
<tr>
<td>TRS075</td>
<td>3/4&quot;</td>
<td>7.50</td>
<td>100 PSI</td>
<td>11.00&quot;</td>
<td>1.55 lbs.</td>
</tr>
</tbody>
</table>

---

**COVER:**

- TSC: Fluoropolymer Lined Tube
- PHC: Power Hybrid Rubber
- PHH: Polyurethane
- PBT: Polybutylene
- TSC: Silicone
- PWT: Polyethylene
- PVC: Polyvinyl Chloride
- EPDM: Ethylene Propylene Diene Monomer Rubber

---

**TEMP. RANGE:**

- TSC: -40 to +150°F
- PHC: -40 to +150°F
- PBT: -40 to +150°F
- PVC: -40 to +150°F

---

**P-Series PVC Hose**

**MODEL I.D. O.D. PRESSURE MIN. BEND VACUUM**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>I.D.</th>
<th>O.D.</th>
<th>PRESSURE</th>
<th>MIN. BEND</th>
<th>VACUUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>PST025</td>
<td>1/4&quot;</td>
<td>3.50</td>
<td>100 PSI</td>
<td>11.00&quot;</td>
<td>1.55 lbs.</td>
</tr>
<tr>
<td>PST037</td>
<td>1/4&quot;</td>
<td>3.34</td>
<td>100 PSI</td>
<td>11.00&quot;</td>
<td>1.55 lbs.</td>
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<tr>
<td>PST050</td>
<td>1/2&quot;</td>
<td>6.00</td>
<td>100 PSI</td>
<td>11.00&quot;</td>
<td>1.55 lbs.</td>
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<tr>
<td>PST075</td>
<td>3/4&quot;</td>
<td>7.50</td>
<td>100 PSI</td>
<td>11.00&quot;</td>
<td>1.55 lbs.</td>
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</tbody>
</table>

---

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- PBT: Polybutylene
- TSC: Silicone
- PWT: Polyethylene
- PVC: Polyvinyl Chloride
- EPDM: Ethylene Propylene Diene Monomer Rubber

---

**TEMP. RANGE:**

- TSC: -40 to +150°F
- PHC: -40 to +150°F
- PBT: -40 to +150°F
- PVC: -40 to +150°F

---

**WARNING:** Working pressure ratings for all Flex-Rite™ brand hoses are based on 70°F (ambient temperature). Working pressure and vacuum ratings will decrease as temperatures increase. For “P” series applications that exceed 250°F contact manufacturer for suggestions.

---

**MODEL I.D. O.D. PRESSURE MIN. BEND VACUUM**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>I.D.</th>
<th>O.D.</th>
<th>PRESSURE</th>
<th>MIN. BEND</th>
<th>VACUUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRS025</td>
<td>1/4&quot;</td>
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</tr>
<tr>
<td>TRS050</td>
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<td>6.00</td>
<td>100 PSI</td>
<td>11.00&quot;</td>
<td>1.55 lbs.</td>
</tr>
<tr>
<td>TRS075</td>
<td>3/4&quot;</td>
<td>7.50</td>
<td>100 PSI</td>
<td>11.00&quot;</td>
<td>1.55 lbs.</td>
</tr>
</tbody>
</table>

---

**COVER:**

- TSC: Fluoropolymer Lined Tube
- PHC: Power Hybrid Rubber
- PHH: Polyurethane
- PBT: Polybutylene
- TSC: Silicone
- PWT: Polyethylene
- PVC: Polyvinyl Chloride
- EPDM: Ethylene Propylene Diene Monomer Rubber

---

**TEMP. RANGE:**

- TSC: -40 to +150°F
- PHC: -40 to +150°F
- PBT: -40 to +150°F
- PVC: -40 to +150°F

---

**warning:** Working pressure ratings for all Flex-Rite™ brand hoses are based on 70°F (ambient temperature). Working pressure and vacuum ratings will decrease as temperatures increase. For “P” series applications that exceed 250°F contact manufacturer for suggestions.
I-Series Industrial Hose

**IWD**

Washdown

Designed for cleanup duties in dairies, creameries, breweries, food, beverage, meat and poultry processing plants. This is an economical, high-quality hose capable of handling hot water up to 200°F. The spiral construction provides for excellent handling and flexibility. Abrasion resistant, non-marking cover maintains its sanitary appearance.

**ISH**

Steam

A rugged, abrasive and blister resistant hose for cleaning pumps, valves, tubing and equipment suitable for steam. Stands up to the harshest of environments with a specially formulated tube and cover that will not harden or crack during normal service. The steel wire reinforcement provides for safe use with steam pressures up to 250 PSI at 430°F.

**Seal-Rite™**

- **Hose Support**
  - The Seal-Rite hose support provides additional protection for your transfer hoses. In environments where abnormal cover wear can occur you can stop and extend the life of your hose. The two halfs easily attach with two recessed locking screws. The lightweight design, wide outer edges and an even wider collar provides stability which eliminates kinking. Our supports are ideal for use in receiving bays to eliminate damming or pooling water.

- **Fitting Bumper**
  - The Seal-Rite fitting bumper provides additional protection for your fittings and fittings. The bumper provides the fitting without absorbing the occasional mishap. For available sizes, please contact the factory.

Steam Hose Safy Facts

Working with steam can be very hazardous. Safety precautions should be observed when handling to minimize or eliminate personal injury or property damage.

**Selection and use of steam hoses**

- Make sure steam hose is identified as a steam hose. It should be identified, stating working pressure and temperature rating.
- Make sure working pressure and temperature is not exceeded.
- Do not allow hose to remain under pressure when not in use.
- Avoid excess bending or flexing of hose near the coupling. Straight line operation is preferred. If bends are necessary as part of operation, spring guards may help.

**Maintenance Procedures**

- Periodic inspection of hose should include looking for cover blisters and lumps.
- Check for kinked areas that could damage hose.
- Drain hose after each use to avoid tube damage before hose is put back in operation, to avoid ‘pop coming’ of the tube.
- Do not store hose over hooks.
- Steam hose lying on metal racks or installed around steel piping will dry out the hose, causing tube and cover cracking.

Steam Hose Chart

Represented is water when subjected to heat and pressure. Use only hose specifically designed for each application.

\[
\text{Steam Hose Chart}
\]

S-Series Silicone Hose

**SHF**

Hi-FLEX Wire Reinforced

This highly flexible hose is extremely easy to handle. Reinforced with stainless steel wire ensures a balance between strength and lightness. Designed for bulk transfer, high-pressure, and vacuum process applications. (Meets 3A*, USDA, FDA and USP Class VI standards). Short lengths are ideal for proportioning and load cells.

**Traceability Solution...**

- For Silicone or Silicons con controlled hose.
- **Permanently Attached**, No Product Contact
- Completely Sealed, Easy to Read Text
- Autovalable, CIP & SIP Compatible
- Label Contains Part Number, Date & Serial No.
- Quick Turn-around with Customized Text Available

**Reusable Sanitary Fitting**

Field Attachable

Easy to assemble 3 pc reusable fittings with full traceability designed specifically for most Flex-Rite S & P Series hose. Lightweight, versatile, works with most hose types and wall thickness. Patent Filling and 3-A Approved.

**SML**

Molded Labels

Available Colors

**Internal Finish:** 15 RA or better, Electroplating standard. **Material:** Type 316L Stainless Steel Insert with Delrin nut and sleeve Options: Custom Size Variations, Styles, Colors Available. **Note:** Snap up Stays Available

*Compliant with standards for Replacement Part Certification K407.
**S-Series Silicone Hose**

- **SMW Multi-ply Wire Reinforced**
  - A flexible, stainless steel wire-reinforced silicone hose. Specially designed for bulk pressure applications. (Meets 3A*, USDA, FDA and USP Class VI standards). Additionally, this hose is manufactured in a Class 100 clean room and contains medical-grade platinum-cured silicone throughout.

- **SMD Multi-ply Discharge**
  - A 4-ply fabric reinforced hose designed for higher pressure applications. The inner diameter is a continuous extruded bore to ensure maximum flexibility and purity. Available in standard polyester. (Meets 3A*, USDA, FDA and USP Class VI standards).

- **SSD Single Braid Discharge**
  - A braid reinforced silicone hose, processed with pharmaceutical grade elastomer, designed for mid-range pressures. Manufactured using standard polyester or Nomex braid. (Meets 3A*, USDA, FDA and USP Class VI standards). Resist weathering & temperature extremes.

- **SDB Double Braided Discharge**
  - This high-pressure, silicone, double braided, non-metallic hose can be autoclaved, irradiated or sterilized by ethylene oxide gas. Designed to resist weathering and temperature extremes. (Meets 3A*, USDA, FDA and USP Class VI standards).

---

**Pharmaceutical grade, USP Class VI silicone with full traceability to produce seamless, extruded, platinum cured tubes, manufactured in clean room environment.**

---

**ASSEMBLY PART NUMBER (Example)**

<table>
<thead>
<tr>
<th>Hose</th>
<th>I.D. Size</th>
<th>Style / Size 1st End</th>
<th>Style / Size 2nd End</th>
<th>Assembly Length (inches)</th>
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</thead>
<tbody>
<tr>
<td>RSD</td>
<td>050</td>
<td>TC 050</td>
<td>TC 050</td>
<td>288</td>
</tr>
</tbody>
</table>

**Hose I.D. Size End Style**

- **RDC 025 = 1/4”**
  - **TC = Sanitary Clamp (stepup available)**

- **RBT 037 = 3/8”**
  - **TE = Butt Weld - Tube**

- **RES 050 = 1/2”**
  - **BS = Bevel Seat - Plain w/nut**

- **RWD 062 = 5/8”**
  - **BM = Bevel Seat - Threaded**

- **RSD 075 = 3/4”**
  - **IF = I-Line - Female**

- **RCT 100 = 1”**
  - **IM = I-Line - Male**

- **RCR 150 = 1 1/2”**
  - **JM = John Perry - Threaded**

- **RWS 200 = 2”**
  - **JF = John Perry - Plain w/nut**

- **SMW 250 = 2 1/2”**
  - **CM = Q-Line**

- **SMD 300 = 3”**
  - **CF = Cam - Female**

- **SSD 400 = 4”**
  - **CM = Cam - Male**

- **SDB 600 = 6”**
  - **MT = Male - NPT Pipe Thread**

- **SHF 600 = 6”**
  - **FT = Female - NPT Pipe Thread**

- **TRS**
  - **AF = Flange End**

- **TSB**
  - **SF = SMS - Plain w/nut**

- **TCB**
  - **SM = SMS - Threaded**

- **TCP**
  - **DF = DIN - Plain w/nut**

- **TSC**
  - **DN = DIN - Threaded**

- **PCT**
  - **TA = Compression Tube End**

**WARRANTY:**

Products are warranted for a period of 180 days from the date of delivery to purchaser to be free from defects of material and manufacture when used in a normal manner, and excludes all implied warranties, including hose and tubing, and other components. Purchaser should make written claim to the warrantor within the warranty period that claim is being made, pursuant hereto, together and substantiating purchase documentation, warrantor shall have reasonable opportunity to inspect all assembly components.

**CONSULT FACTORY FOR ADDITIONAL CHOICES**

**END STYLE**

- Overall length tolerances for assemblies are:
  - 1/4” on assemblies to 24”
  - 1/2” on assemblies 25” to 60”
  - 1% on assemblies over 60”

---

**RECOMMENDED CLEANING:**

- Double ply, polyester or nomex braid

---

**CONTRIBUTORY:**

- This S-Series hose products meet/comply: USDA, USP Class VI requirements, FDA CFR Title 21 177.2600, 3-A 18-03, (stepup available)

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**TEMPERATURE:**

- CIP, SIP, Autoclave recommended cleaning

---

**REINFORCEMENT:**

- Four ply, polyester braid

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**TUBE:**

- FDA, 3-A, USP Class VI silicone - Platinum cured (clear)
Sanitary Clamp Fitting

These actual-size drawings are provided for your convenience and ordering accuracy when specifying sanitary fittings:
- 0.984” O.D. is the same for 1/2”, 3/4” I.D. styles.
- 1.984” O.D. is the same for 1” and 1-1/2” I.D. styles.
- Varying O.D. for the 2”, 2-1/2” and 3” I.D. styles.

R-Series Rubber Hose

Versatility makes this hose our most popular choice for product transfer and CIP applications. (Meets 3-A* standards, USDA requirements and is FDA compliant). Rated for full suction and discharge use up to 150 PSI. The specially compounded tube is engineered to handle high temperatures, will not impart taste or odor and is highly resistant to common CIP solutions. A dual wire helix makes the RSD extremely flexible and easy to handle.

RCT Comestible Transfer

Excellent choice for exotic oils, and personal care products as well as most dairy applications. (Meets 3-A* standards, USDA requirements and is FDA compliant). Rated for full transfer use up to 150 PSI. While hose is engineered to handle high temperatures and maintain product color, taste and aroma. A dual wire helix makes the RCT extremely flexible and easy to handle.

RCR Crush Resistant

Consistent flow is maintained by this crush resistant hose whether kinked, twisted or run over it. It is designed to spring back to its original shape. (Meets 3-A* standards, USDA requirements and is FDA compliant). Excellent for high traffic areas, the RCR delivers generous flow rates for wine, beer and other sanitary liquid food stuffs. Bacteria resistant construction delivers taste and odor free flow.

RWS Wine & Spirits

Exterior polymer blend with wide/smooth corrugations ensures low friction and ease of movement. Lightweight suction & discharge hose is designed for extra flex and wear resistance. (Meets 3-A* standards, USDA requirements and is FDA compliant). Delivers taste and odor free flow and easy clean up.
Beverage Transfer

This ultra-light discharge hose provides extra flexibility and smooth handling. (Meets 3-A* 1800 standards; USDA requirements and is FDA compliant). Designed to be chemically resistant to mild caustic solutions. This discharge hose is well suited for overhead 
CIP wash units and capable of handling pressures up to 250 PSI.

RBT Beverage Transfer

A heavy-duty discharge hose with suction capability is ideal for the highly demanding service of transferring liquid products in breweries, wineries and dairies. Source back design resists damage from kinking or flattening in high traffic areas.

Res Premium Suction & Discharge

This premium quality hose withstands rough handling and high temperatures and harsher chemical environments. A suction and discharge hose that is and will not impart taste or odor to products being transferred. Typical use includes: Milk, Dairy, Food and Beverage, Cosmetics, Pharmaceutical and CIP Applications . Meets 3-A* standards, USDA requirements and is FDA compliant.

RWD Premium Washdown

Designed for cleanup duties in dairies, creameries, breweries, food, beverage, meat and poultry processing plants. This premium quality hose is capable of handling hot water up to 350°F. A chemically resistant hose, with a wrapped cover construction designed to provide excellent resistance to cuts and abrasion while providing handling stability.

### R-Series Rubber Hose

<table>
<thead>
<tr>
<th>Model</th>
<th>I.D.</th>
<th>O.D.</th>
<th>Working Pressure</th>
<th>Min. Bend Radius</th>
<th>Weight Per Ft</th>
<th>Vacuum in Hg</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDC150</td>
<td>1½</td>
<td>2.07</td>
<td>250 PSI</td>
<td>-</td>
<td>88 lbs</td>
<td>-</td>
</tr>
<tr>
<td>RDC200</td>
<td>2</td>
<td>2.59</td>
<td>250 PSI</td>
<td>-</td>
<td>113 lbs</td>
<td>-</td>
</tr>
<tr>
<td>RDC250</td>
<td>2½</td>
<td>3.11</td>
<td>250 PSI</td>
<td>-</td>
<td>140 lbs</td>
<td>-</td>
</tr>
</tbody>
</table>

**T•B: White FDA, 3-A*, Chlorobutyl**
**REINFORCEMENT: Spiral-ply synthetic fabric 4 ply**
**RECOMMENDED CLEANING: CIP, CPD**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>I.D.</th>
<th>O.D.</th>
<th>Working Pressure</th>
<th>Min. Bend Radius</th>
<th>Weight Per Ft</th>
<th>Vacuum in Hg</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBT100</td>
<td>1</td>
<td>1.69</td>
<td>250 PSI</td>
<td>4.0</td>
<td>81 lbs</td>
<td>20°</td>
</tr>
<tr>
<td>RBT150</td>
<td>1½</td>
<td>2.23</td>
<td>250 PSI</td>
<td>5.5</td>
<td>120 lbs</td>
<td>20°</td>
</tr>
<tr>
<td>RBT200</td>
<td>2</td>
<td>2.92</td>
<td>250 PSI</td>
<td>6.5</td>
<td>180 lbs</td>
<td>20°</td>
</tr>
<tr>
<td>RBT300</td>
<td>3</td>
<td>4.09</td>
<td>250 PSI</td>
<td>15.0</td>
<td>357 lbs</td>
<td>20°</td>
</tr>
</tbody>
</table>

**T•B: White FDA, 3-A*, Chlorobutyl**
**REINFORCEMENT: Spiral-ply synthetic fabric 6 ply 4 plus 1 ply 2 & over**
**RECOMMENDED CLEANING: CIP, CPD, SST, Acidic**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>I.D.</th>
<th>O.D.</th>
<th>Working Pressure</th>
<th>Min. Bend Radius</th>
<th>Weight Per Ft</th>
<th>Vacuum in Hg</th>
</tr>
</thead>
<tbody>
<tr>
<td>RES075</td>
<td>¾</td>
<td>1.18</td>
<td>150 PSI</td>
<td>3.75</td>
<td>.31 lbs</td>
<td>29°</td>
</tr>
<tr>
<td>RES100</td>
<td>1</td>
<td>1.50</td>
<td>150 PSI</td>
<td>4.0</td>
<td>.39 lbs</td>
<td>29°</td>
</tr>
<tr>
<td>RES150</td>
<td>1½</td>
<td>2.05</td>
<td>150 PSI</td>
<td>5.0</td>
<td>.80 lbs</td>
<td>29°</td>
</tr>
<tr>
<td>RES200</td>
<td>2</td>
<td>2.60</td>
<td>150 PSI</td>
<td>6.0</td>
<td>1.16 lbs</td>
<td>29°</td>
</tr>
<tr>
<td>RES250</td>
<td>2½</td>
<td>3.17</td>
<td>150 PSI</td>
<td>7.0</td>
<td>1.70 lbs</td>
<td>29°</td>
</tr>
<tr>
<td>RES300</td>
<td>3</td>
<td>3.72</td>
<td>150 PSI</td>
<td>8.5</td>
<td>1.96 lbs</td>
<td>29°</td>
</tr>
</tbody>
</table>

**T•B: White FDA, 3-A*, EPDM**
**REINFORCEMENT: Two ply polyester spiral with dual helix wire**
**RECOMMENDED CLEANING: CIP, SST, Acidic**

### General Hose

**STAMPED**

**Chemical Charts are located on our website**

Prior to Installation

Inspect hose completely for signs of obvious damage. Possible damage may include cuts to cover, kinking, broken braids and crushing. This damage can reduce hose life and pressure rating.

Do Not Use any damaged hose.

Hose should be application specific. Review materials, pressures, chemical compatibility, temperature and environment to ensure proper selection of hose.

- Restrict hose movement to a single plane (Fig. 1) to minimize resultant twisting or torque. Within the bending plane is where flexing should occur. Stress fatigue increases with excessive bending of hose.
- Axial or twisting movement (Fig. 2) should be eliminated. The likelihood of leakage or failure increases for hoses that are twisted (torqued) during assembly. Floating flanges or swivel-type fittings (i.e., JIC) can eliminate improper twisting.
- Avoid stretching or compressing the hose (Fig. 3) along its longitudinal axis with in-line installation.
- Failure of hose will occur when hose is bent (Fig. 4) beyond minimum bend radius. Bend radii are given for individual products and sizes. The bend radius values must be observed (measure to inside radius of fluoropolymer-lined hose and centerline for stainless steel metal hose) for hoses to be installed properly. Occasionally, vacuum and pressure ratings are based on not to exceed 2% minimum bend radius. The manufacturer should be contacted for specific hose ratings and data.

#### Motion Calculations

**Axial Motion:** Motion that occurs when a hose is compressed along its longitudinal axis. Axial motion is only applicable in very short lengths of annular hose only. Fluoropolymer lined hose should not be subjected to axial motion.

**Offset Motion:** Motion that occurs when one end of the hose is deflected in a plane perpendicular to its longitudinal axis with the ends remaining parallel. In offset applications where motion is repeated, the offset should never exceed 25% of the minimum bend radius. To calculate the required live length to achieve a desired offset, use the following calculations:

- **LL** = \( \sqrt{OAL \times Y} \)
- **LL** = Hose live length, inches
- **R** = Min. Bend Radius, inches
- **Y** = Offset, inches
- **OAL** = LL + Fitting Length + (2x nominal hose diameter)

**Note:** Where offset motion “Y” occurs on both sides of hose centerline, the hose live length should be based on total travel, or 2Y. The modified calculation will be:

\[ LL = \sqrt{2OAL \times Y} \]
Bend Radius (fluoropolymer hose and all rubber hose)
• The radius of a bent section of hose measured to the innermost surface of the curved portion (R1).

Bend Radius (metal hose)
• The radius of a bent section of hose measured to the hose centerline (R2).

Minimum Bend Radius
• The smallest radius at which a hose can be used.

Force to Bend
• The amount of stress required to induce bending around a specified radius - a measure of stiffness.

Maximum Rated Working Pressure
• The maximum pressure hoses should be subjected to on a continuous basis.

Maximum Rated Working Pressure
• The amount of stress required to induce bending around a specified radius.

Force to Bend
• The smallest radius at which a hose can be used.

Bend Radius (metal hose)
• The radius of a bent section of hose measured to the hose centerline (R2).

Minimum Bend Radius
• The smallest radius at which a hose can be used.

Force to Bend
• The amount of stress required to induce bending around a specified radius - a measure of stiffness.

Maximum Rated Working Pressure
• The maximum pressure hoses should be subjected to on a continuous basis.

Maximum Rated Working Pressure
• The amount of stress required to induce bending around a specified radius.

Force to Bend
• The smallest radius at which a hose can be used.

Bend Radius (metal hose)
• The radius of a bent section of hose measured to the hose centerline (R2).

Minimum Bend Radius
• The smallest radius at which a hose can be used.

Force to Bend
• The amount of stress required to induce bending around a specified radius - a measure of stiffness.

Maximum Rated Working Pressure
• The maximum pressure hoses should be subjected to on a continuous basis.

Maximum Rated Working Pressure
• The amount of stress required to induce bending around a specified radius.

Force to Bend
• The smallest radius at which a hose can be used.

Flexibility / Bend Radius
Reprinted from RMA Hose Handbook IP-2 Fourth Edition

Flexibility and bend radius are important factors in hose design and selection if it is known that the hose will be subjected to sharp curves in normal use. When bent at too sharp an angle, hose may kink or flatten in the cross-section. The reinforcement may also be unduly stressed or distorted and the hose life thereby shortened.

Adaptability means the hose should be able to conform to the smallest anticipated bend radius without over stress. The minimum bend radius is generally specified for each hose in this catalog. This is the radius to which the hose can be bent in service without damage or appreciably shortening its life. The radius is measured to the inside of the curvature.

Hydraulic Shock...
Due To Instantaneous Pressure Increase

Formula to determine minimum hose length given bend radius and degree of bend required:

\[ L = \frac{A \times 2 \pi B}{360°} \]

Example: To make a 60° bend at the hose’s rated minimum bend radius of 15 cm

\[ L = \frac{60 \times 2 \pi 	imes 15}{360°} \approx 5.26 \text{ cm} \]

Thus, the bend must be made over approximately 16 cm of hose length. The bend radius used must be equal to or greater than the rated minimum bend radius. Blending the hose to a smaller bend radius than minimum may kink the hose and the result in damage and early failure.

Seal-Rite™ radial crimp couplers are the purest unitized assemblies available today. Our external crimp design provides a 360° fixed seal at the coupler stem to hose junction point that eliminates the possibility of product wicking between the hose and coupler. Unlike internal expansion which can deform metal and yield die impressions, radial crimp technology will not interfere with the internal surface of the coupling stem. A full flow smooth bore transition is created after fabrication that excludes ledges or crevices that can collect bacteria.

TwistLOC® components become a single unit that resist separation under severe applications. Internal surface finishes exceed 15 Ra. Each coupling stem is manufactured from 316L grade stainless steel and stamped with a material traceability number which is our commitment to quality. Seal-Rite radial crimped couplers are available for attachment on Flex-Rite hoses. A wide range of end styles, sizes 1/2" through 6" are available.
Ace Manufacturing Company formed in 1969 and has evolved over the years into a precision machining facility. We are dedicated to providing High Quality Standards to our customer base and look forward to developing new business partnerships. To this end, in 2004 we started the Flex-Rite™ and Seal-Rite™ lines of hose products and hose fittings. These product lines are now part of our Ace Sanitary division. We work hard to know your business, assist you in problem solving, provide you with quality products and over 100 years of experience.

Cautionary Statement

All products are in the nature of commodities and they are sold by published specifications and not for particular purposes, uses or applications. Purchaser shall first determine their suitability for the intended purposes, uses or applications and shall either conduct its own engineering studies or tests, or retain qualified engineers, consultants or testing laboratories and consult with them before determining the proper use, suitability or propriety of the merchandise or products for the intended purposes, uses or applications.

Purchaser shall follow all instructions contained in seller's catalogs, brochures, technical bulletins and other documents regarding the product. Purchasers or users of the products should frequently and consistently undertake inspections and protective measures with respect to the use and application of products, which should include the examination of tube and cover, conditions of the hose or tubing, and the identification, repair or replacement of sections showing cracking, blistering, separations, internal and external abrasions, leaking or slipped couplings or connections and make proper proof tests.

Limited Warranty

The merchandise or products sold or distributed by seller are warranted to its customers to be free from defects in material and workmanship at the time of shipment by us, subject to the following provisions. All warranty claims shall be made within six (6) months after seller shipped the products. Seller’s liability hereunder is limited to the purchase price of any products proving defective, or, at seller’s option, to the replacement of such products upon its authorized return to seller.

This warranty is in lieu of and excludes all other warranties, expressed, implied, statutory, or otherwise created under applicable law including, but not limited to, the warranty of merchantability and the warranty of fitness for a particular purpose. In no event shall seller or the manufacturer of the product be liable for special, incidental, or consequential damages, including loss of profits, whether or not caused by or resulting from the negligence of seller and/or the manufacturer of the product, unless specifically provided herein. In addition, this warranty shall not apply to any products or portions thereof which have been subjected to abuse, misuse, improper installation, maintenance or operation, electrical failure or abnormal conditions, and to products which have been tampered with, altered, modified, repaired, reworked by anyone not approved by seller, or used in any manner inconsistent with the provisions of the "cautionary statement" above.
Flex-Crimp™ brand of crimper is a powerful machine capable of crimping a variety of sanitary, hydraulic, composite and industrial hoses. All Flex-Crimp models come standard with a quick change tool for quick and easy die changes. The touch screen crimp controller takes the guess work out of crimping with easy machine calculations.

The Flex-Crimp system consistently crimps to within .005" everytime. The Flex-Crimp line of products offers the most consistent crimp in the market today and comes with a one year manufacturer’s warranty.

**Precision CNC Machining**

Ace Manufacturing Co. can provide the solution to your most demanding production problems by combining today’s technology with over 100 years of manufacturing experience. We serve many industries in producing a diverse range of parts from a variety of materials, from cold rolled steel to exotic alloys. Our computer generated programs minimize turnaround time, enabling us to produce your parts on time. We operate in compliance with ISO standards to ensure that the parts we produce are to specification. Our experience and full service commitment make us a vital member of your manufacturing team.

**Sanitary Hose & Fittings**

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