**Innovator® Cable**

**928-CA Innovator® CableFlex™**
**970-CA Innovator® Cable**
**971-CA Half Kit**
For most tubs up to 16” deep; 21” cable

**938-CA Innovator® CableFlex™**
**980-CA Innovator® Cable**
**981-CA Half Kit**
For most tubs up to 24” deep; 34” cable

**948-CA Innovator® CableFlex™**
**990-CA Innovator® Cable**
**991-CA Half Kit**
For most tubs up to 36” deep; 48” cable

**SPECIFICATIONS**

**FEATURES:**
- Fully repairable from inside the tub.
- Fully-testable cable bath waste; test plug included
- Installs in minutes, like the Innovator®.
- ADA Handle and theft-resistant device options available.
- Self-centering; self-aligning.
- Positive mechanical stop stays open in deep water.
- Flexible stopper; no stubbed toes.

**APPROVALS:**
- Non-corrugated, flexible PVC tubing.
- Manufactured in compliance with ASME A112.18.2-2005/ CSA B125.2-05.
- IAPMO approved
- CSA approved

**PATENTS (INNOVATOR®):**
- U.S. Pat. Numbers 5,890,241; 6,637,050; 6,675,406; 7,127,752; and Patents Pending
- Canadian Patent Number 2,437,448
- Mexican Patent Numbers PA/a/2003007344 and patents pending.

**PATENTS (Flexible Waste Pipe Assembly):**
- U.S. Patents Pending
- Mexican Patent Number PA/a/2005011301

**THREAD SIZE:**
- 1½” – 11½ NPSM (Coarse Thread)
- 1.865” Major Diameter (outside thread diameter)
- 11.5 threads per inch

**PIPING/FITTINGS:**
- 928/938/948 available in PVC only
- 970/980/990 and 971/981/991 available in ABS and PVC

For More Information Contact:
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*Designs and dimensions of product are subject to change without notice.*

Innov-CA SPEC 1.2
NEW! Innovator® Testable Cable

**Innovator® Cable Flex™ • Innovator® Cable**

**970/980/990-CA**

- 970: SCHABS-11.75.....Schedule 40 Pipe, ABS, 1.5" x 11.75"
- 970: SCHPVC-11.75.....Schedule 40 Pipe, PVC, 1.5" x 11.75"
- 980: SCHABS-20.25.....Schedule 40 Pipe, ABS, 1.5" x 20.25"
- 980: SCHPVC-20.25.....Schedule 40 Pipe, PVC, 1.5" x 20.25"
- 990: SCHABS-32.00.....Schedule 40 Pipe, ABS, 1.5" x 32.00"
- 990: SCHPVC-32.00.....Schedule 40 Pipe, PVC, 1.5" x 32.00"

**928/938/948-CA**

(Same as 970/980/990 except Part #14 is flexible tubing.)

- 928-CA (Tubs up to 16” deep):
  - Flexible PVC Tubing: 1.5" x 11.75"
  - 21" Cable (#18)
- 938-CA (Tubs up to 24” deep):
  - Flexible PVC Tubing: 1.5" x 20.25"
  - 34" Cable (#18)
- 948-CA (Tubs up to 36” deep):
  - Flexible PVC Tubing: 1.5" x 32.0"
  - 48" Cable (#18)

**Innovator® Cable Half Kits:**

**971/981/991-CA**

Parts #1 thru #13 and #17 thru #27

**Optional Features:**

- #27  92874-__* ADA Handle
- #28  01076 ......Theft-Resistant Device

**Repair Kit #92900**

Parts #4 thru #10 and #17

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<th>ITEM</th>
<th>PART#</th>
<th>DESCRIPTION</th>
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<td>15</td>
<td>14011</td>
<td>1-1/2’ Schedule 40 Sanitary Tee, ABS</td>
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<tr>
<td>16</td>
<td>970:</td>
<td>SCHABS-4.625.....Schedule 40 Pipe, ABS, 1.5&quot; x 4.625&quot;</td>
<td>970:</td>
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<tr>
<td>17</td>
<td>990:</td>
<td>SCHABS-11.75.....Schedule 40 Pipe, ABS, 1.5&quot; x 11.75&quot;</td>
<td>990:</td>
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<tr>
<td>18</td>
<td>20151</td>
<td>Cable Core</td>
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<td>19</td>
<td>20145</td>
<td>Cable Drive Shaft</td>
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<td>20</td>
<td>10694</td>
<td>Overflow Elbow Gasket Half Height</td>
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<tr>
<td>21</td>
<td>11029</td>
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<tr>
<td>22</td>
<td>20147</td>
<td>Cable Core Guide</td>
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<td>23</td>
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<td>Stopper Adjusting Screw</td>
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<td>20146</td>
<td>Cable Retainer</td>
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<td>1-1/2” Schedule 40 Cable Drain Elbow, ABS</td>
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<td>10696</td>
<td>Drain Elbow Gasket</td>
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<tr>
<td>27</td>
<td>92874</td>
<td>Cable Stopper Assembly – includes the following:</td>
<td>01076</td>
</tr>
<tr>
<td>28</td>
<td>11016</td>
<td>1-1/2” Schedule 40 Cable Drain Elbow, ABS</td>
<td>14016</td>
</tr>
</tbody>
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Please indicate desired finish.
Step 1: Cut the 1½” Schedule 40 (or Flexible PVC) overflow pipe and drain pipe (Items 14 and 16) to the desired lengths to fit the tub.

Step 2: Using standard solvent cement procedures, assemble the bath drain pipe and fittings (Items 13-16, and 19). DO NOT LET SOLVENT CEMENT FLOW INSIDE THE OVERFLOW OR DRAIN ELBOWS PAST THE SOCKET! Any excess glue will prevent the bath waste from operating.

Step 3: Place the thick foam gasket (Item 12) onto the overflow elbow (Item 13). The testing membrane will still be attached. Thick-walled tubs will require the thin gasket (Item 11).

Step 4: Insert the overflow elbow and foam gasket assembly through the tub overflow hole from the back of the tub (Figure 1).

Step 5: Screw on the overflow elbow (OE) nut (Item 3) from inside of the tub (Figure 2). HAND TIGHTEN ONLY until the nut is snug and the gasket is only slightly compressed against the back of the tub. You must get a minimum of 1½ turns when installing the nut. If there are not enough threads sticking through the tub to get the nut installed, remove the thick gasket (Item 12) and replace it with the thin gasket (Item 11).

Step 6: Secure the drain elbow (Item 19) and drain flange gasket (Item 20) under the tub by screwing in the strainer body (Item 21) through the tub drain hole from inside the tub (Figures 3 and 4). If desired, a putty or sealant may be used between the flange of the strainer body and the tub. CAUTION: Do not use linseed oil based putty products. Use only thread compounds specifically intended either for ABS or PVC assembly.

If the bath waste will not be pressure tested, skip to step 8.

Step 7: Screw the strainer test plug (Item 26) into the strainer body (Item 21) and test the system (Figure 5).

Step 8: After the pressure testing is complete, remove the test plug (Item 26). Cut away and discard the orange test membrane from the overflow elbow (Figure 6). Use caution not to damage internal parts on the inside of the overflow elbow.

Continued next page.
Step 9: Select the faceplate (Item 5, 6, or 7) that leaves the desired gap between the tub wall and the edge of the faceplate (Item 2). (See included adapter selection instruction sheet.) Place adapter onto the drive shaft (Item 8) (Figure 7). If you have selected an adapter that is too short, the spacer tabs on the inside of the faceplate will rub on the OE nut (Item 3), and the adapter screw hole will not line up with the faceplate screw hole.

Once the desired faceplate adapter is determined, secure the faceplate adapter to the drive shaft using the screw provided (Item 4) (Figure 8).

Secure the faceplate (Item 2) to the faceplate adapter (Figure 9) using either the faceplate screw (Item 1) (Figure 10). (Leave the plastic sleeve on threads to help align the screw.)

or the optional ADA handle.

Tighten the faceplate screw until it is flush with the faceplate and snug (or if using the handle, until it is snug). DO NOT OVERTIGHTEN.

Step 10: Rotate the faceplate CLOCKWISE to the fully-closed position. Install the core guide (Item 22) into the strainer body using a screwdriver or 7/16” socket (Figure 11). (See core guide instruction card included with kit.) The core guide should be screwed in until it is snug against the bottom of the drain elbow. Insert the stopper (Item 24) into the core guide (Item 22) (Figure 12).

Step 11: Test the cable unit for proper operation. In the fully-closed position, with the faceplate (Item 2) rotated clockwise, the stopper (Item 25) should rest and seal on the strainer body flange. In the fully-open position, with the faceplate (Item 2) rotated counterclockwise past the click, the stopper should open to a height of ½” - ¾” above the strainer body flange. The plastic cable core should move freely inside the core guide (Item 22) when the faceplate is turned. Adjustments to the open height can be made using the stopper adjustment screw (Item 24).

If installing the Theft-Resistant Option:

Step 1: Remove stopper seal.

Step 2: Slide Theft-Resistant device into stopper slot.

Step 3: Replace stopper seal.

Step 4: Insert stopper shaft into strainer body, pushing it in until the hook on the Theft-Resistant device snaps into place under the strainer body.