



1101 McKinley Street  
Anoka, MN 55303  
Phone (763) 786-6682  
Fax (763) 786-2167  
[www.polycam.com](http://www.polycam.com)



Part Name: The Camlock/HDPE Female Transition  
Part Number: 642-xxxx

### **Camlock/HDPE Transitions**

The Poly-Cam Camlock/HDPE transition is a multi-level mechanical transition fitting. The polyethylene or pipe-quality copolymer material is hydraulically compressed into a male thread transition which is screwed into the camlock fitting.

### **Design**

Relaxation of the pipe creates a seal to prevent leakage. Under pressure, the internal pressure within the pipe increases the sealing surface area on the barb. Under zero internal pressure, the compression and tensional strain created by the compression of the multi-level barbs are greater than the stress created by relaxation and/or thermal expansion and contraction. As the internal pressure increases, the connection between the pipe material and transition fitting increases.

- Sizes range from 2" to 12".
- Camlocks available in stainless steel or aluminum

### **System Performance**

The transition fitting is designed to handle the pressure rating of the HDPE pipe with a 2:1 safety factor at 73.40 degrees Fahrenheit with a minimum 50-year design life.

### **Quality Assurance**

The transition fitting shall be manufactured by Poly-Cam, Inc. Poly-Cam, Inc. shall provide quality assurance with regards to proper installation, compatibility, performance, and acceptance. The transition joint meets or exceeds the requirements of:

- ASTM 1598 and ASTM 1599
- All Fittings meet ARRA requirements.

## **Installation**

**Camlock Fitting:** Insert the male camlock coupling into the female camlock coupling. Pull the levers on the female camlock to clamp the connection into place.

**HDPE pipe end:** Install transition fitting to comply with the pipe manufacturer's recommended procedures. All field welds shall be completed per Plastic Pipe Institute's welding procedure for butt fusion.

## **Material**

### **Threaded Fitting:**

- Manufactured of Carbon Steel (A53 or A106 grade), Type 304, or Type 316 (ASTM A249 or ASTM A269) and or ERW pipe (ASTM SA-312)
- For carbon steel, the **epoxy coating** (IF 194T Red Iron Oxide) is fusion bonded to the metal. Meets NSF 61, FDA 175.300, AWWA C116-01,C213-01, UL 262 and FM 1120/1130

### **High-Density Polyethylene: HDPE pipe**

- Meets ASTM D-3350 with minimum cell classification values of 345464C (PE 3408), PE445574C (PE 4710)
- Meets ASTM F714.
- Density shall be no less than 0.955 g/cm as referenced in ASTM D1505
- Melt index no greater than 0.15 g/10 minutes when tested per ASTM D 1238
- Tensile Strength at Yield -tensile shall be 3,200 psi to less than 3,500 psi as referenced in ASTM D638
- ESCR-Environmental Stress Crack Resistance shall be over 5,000 hours with zero failures when tested per ASTM D 1693-Condition C
- All pipe meets ASTM 3035.
- All certifications will be submitted upon request.

## **Warranty**

The warranty period is one year after the date of substantial completion of installation.

## Series 642 The Camlock/HDPE Female Transition

| Nominal Size (In.) | Pressed HDPE I.D.<br><b>A</b> | Exposed HDPE I.D.<br><b>B</b> | Exposed HDPE O.D.<br><b>C</b> | Coupling Length<br><b>D</b> | Exposed HDPE Length<br><b>E</b> | Total Length<br><b>F</b> |
|--------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------------|---------------------------------|--------------------------|
| 1                  | ~0.840                        | 1.051                         | 1.315                         | ~3.000                      | 4                               | ~7.000                   |
| 1.25               | ~1.060                        | 1.34                          | 1.600                         | ~3.000                      | 4                               | ~7.000                   |
| 1.5                | ~1.280                        | 1.533                         | 1.900                         | ~4.500                      | 3.4                             | ~8.000                   |
| 2                  | ~1.640                        | 1.917                         | 2.375                         | ~6.250                      | 4                               | ~10.250                  |
| 3                  | ~2.240                        | 2.826                         | 3.500                         | ~7.125                      | 4                               | ~11.000                  |
| 4                  | ~3.230                        | 3.633                         | 4.500                         | ~8.000                      | 5                               | ~13.000                  |
| 6                  | ~4.800                        | 5.349                         | 6.625                         | ~9.000                      | 7                               | ~16.000                  |

