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Part Name: Gas Transition with Male NPT Thread

Part Number: 810-xxxx

### Threaded Transitions

The Poly-Cam Threaded Transition is a multi-level mechanical transition fitting. The polyethylene or pipe-quality copolymer material are hydraulically compressed into the transition 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. A stainless-steel insert is installed to reinforce the connection between the polyethylene pipe and fitting. This design meets ASTM D 2513 Category 1. The fitting is **not** designed as service riser or anodeless riser application for natural gas services.

- Sizes range from .5 to 12" NPT.
- All National Pipe Threads are made to ANSI/ASME B1.20-1983 R 1992.

### 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 D2513 Category 1.
- All Fittings meet ARRA requirements.

## **Installation**

**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.

**Threaded Fitting:** When installing the transition fitting:

- Always use pipe joint sealant or Teflon tape.
- Always use strap wrenches.
- **Do not use a pipe wrench.**
- **Always use 2 wrenches when connecting.**
- **Over tightening may cause ovality or damage.**
- **Always pressure test for leaks before backfilling.**
- Backfill and compact carefully around transition and service line to prevent ground shifts which could damage the valve and/or transition fitting.

## **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

- Incorporated with the fitting is HDPE PE2406/2708 (PE234373E and PE234375E), PE 3408/3608(cell class 345464C), PE4710 (PE445574C), or pipe quality copolymer material.
- All pipe meets ASTM 3035 and ASTM 2513.

**Stainless Steel insert:** The insert is manufactured out 304 stainless steel tubing (ASTM A249 or ASTM A269) or ERW pipe (ASTM SA-312).

## **Warranty**

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

# Series 810 Gas Transition with Male NPT Thread

## SDR 11

Nominal Size (In.)	Coupling O.D. <b>A</b>	Pressed SDR11 PE Pipe I.D. <b>B</b>	Exposed SDR11 PE Pipe I.D. <b>C</b>	Exposed PE Pipe O.D. <b>D</b>	Coupling Length <b>E</b>	Exposed PE Pipe Length <b>F</b>	Overall Length <b>G</b>	Thread Length <b>H</b>
0.5	1	~0.50	0.667	0.840	1.8	7.2	6	0.78
0.75	1.25	~0.66	0.839	1.050	1.9	7.05	6	0.8
1	1.315	~0.71	1.051	1.315	2	6	6	0.98
1.25	1.66	~0.93	1.34	1.660	2.6	5.4	6	1.01
1.5	1.9	~1.15	1.533	1.900	2.65	5.35	6	1.03
2	2.360 C.S. 2.375 S.S.	~1.44	1.917	2.375	3	5	8	1.06
2.5	2.875	~1.79	2.312	2.875	3.75	4.25	8	1.57
3	3.5	~2.22	2.826	3.500	4	4	8	1.63
4	4.490 C.S. 4.500 S.S.	~3.03	3.633	4.500	4.5	7.5	8	1.73
5	5.532	~3.8	4.49	5.563	5	8	12	1.84
6	6.625	~4.6	5.349	6.625	5.5	7.5	12	1.95
8	8.625	~6.1	6.963	8.625	6	9	13	2.15
10	10.75	~7.7	8.679	10.750	7	9	15	2.36
12	12.75	~9.3	10.293	12.750	9.4	8.6	16	2.56

