

EXPANSION JOINTS



FEP - FLUOROPLASTIC 2-Ply Expansion Joints

- Dual Containment
- ZERO Leakage
- Low Spring Rates
- Floating Flange
- Temperature up to 400 °F
- Pressure up to 50 psi
- Sizes from 14" to 96" with Fractional Diameter Capabilities
- Up to 10 Convolutions
- 3 or 4-Ply Also Available
- Custom Sizes & Face-to-Face Dimensions Available
- Flow Liners & Control Units Available
- Internal Rings for Full Vacuum Service
- Safety Shields Strongly Recommended
- Consult UIP for Pressure/Temperature Reduction



Leading the Way in Innovative Technologies

Manufacturing capabilities up to 96"

For smaller diameters (1"-12") specify UIP PTFE SOLID EXPANSION JOINTS

Extreme Service Applications • ISO 9001:2015

CALL TODAY: (800) 257-2467

1350 S. Dixie Highway East Pompano Beach, FL 33060
sales@uipintl.com | www.uipintl.com
Houston Warehouse: 6002 Griggs Road Houston, TX 77023

FEP - FLUOROPLASTIC

2-Ply Expansion Joints

14" FEP Joint Specifications

Number of Convolutions	Length (in.)	Axial Movement (+/- in.)	Axial Spring Rate (lb./ 1/8in.)	Std. Full Vacuum Temp (F)
2	3.38	0.63	227	120
3	4.47	0.97	160	CF
4	5.59	1.28	127	CF
5	6.72	1.59	101	CF
6	7.84	1.91	88	CF
7	8.97	2.25	72	CF
8	10.09	2.56	66	CF
9	11.19	2.88	60	CF
10	12.31	3.19	54	CF



16" FEP Joint Specifications

Number of Convolutions	Length (in.)	Axial Movement (+/- in.)	Axial Spring Rate (lb./ 1/8in.)	Std. Full Vacuum Temp (F)
2	3.69	0.69	240	100
3	4.91	1.06	168	CF
4	6.13	1.41	135	CF
5	7.34	1.75	106	CF
6	8.56	2.09	93	CF
7	9.81	2.44	78	CF
8	11.03	2.81	71	CF
9	12.25	3.16	64	CF
10	13.47	3.50	56	CF

18" FEP Joint Specifications

Number of Convolutions	Length (in.)	Axial Movement (+/- in.)	Axial Spring Rate (lb./ 1/8in.)	Std. Full Vacuum Temp (F)
2	4.00	0.75	252	100
3	5.34	1.16	173	CF
4	6.69	1.53	140	CF
5	8.03	1.91	108	CF
6	9.34	2.28	95	CF
7	10.69	2.69	79	CF
8	12.03	3.06	74	CF
9	13.38	3.44	66	CF
10	14.72	3.81	60	CF

CALL TODAY: (800) 257-2467

sales@uipintl.com | www.uipintl.com

20" FEP Joint Specifications

Number of Convolutions	Length (in.)	Axial Movement (+/- in.)	Axial Spring Rate (lb./ 1/8in.)	Std. Full Vacuum Temp (F)
2	4.16	0.78	258	100
3	5.53	1.19	178	CF
4	6.94	1.59	141	CF
5	8.31	1.97	110	CF
6	9.69	2.38	96	CF
7	11.09	2.78	81	CF
8	12.47	3.16	74	CF
9	13.88	3.56	68	CF
10	15.25	3.97	61	CF

24" FEP Joint Specifications

Number of Convolutions	Length (in.)	Axial Movement (+/- in.)	Axial Spring Rate (lb./ 1/8in.)	Std. Full Vacuum Temp (F)
2	4.66	0.88	266	100
3	6.22	1.34	181	CF
4	7.78	1.78	145	CF
5	9.31	2.22	112	CF
6	10.88	2.66	100	CF
7	12.22	3.09	88	CF
8	14.00	3.56	80	CF
9	15.53	4.00	72	CF
10	17.09	4.44	65	CF

28" FEP Joint Specifications

Number of Convolutions	Length (in.)	Axial Movement (+/- in.)	Axial Spring Rate (lb./ 1/8in.)	Std. Full Vacuum Temp (F)
2	5.12	1.00	267	CF
3	6.89	1.50	182	CF
4	8.54	2.00	146	CF
5	10.31	2.44	113	CF
6	12.00	2.95	100	CF
7	13.74	3.43	89	CF
8	15.43	3.94	81	CF
9	17.20	4.45	73	CF
10	18.86	4.88	66	CF

CALL TODAY: (800) 257-2467

sales@uipintl.com | www.uipintl.com

FEP - FLUOROPLASTIC

2-Ply Expansion Joints

30" FEP Joint Specifications

Number of Convolutions	Length (in.)	Axial Movement (+/- in.)	Axial Spring Rate (lb./ 1/8in.)	Std. Full Vacuum Temp (F)
2	5.63	1.06	268	CF
3	7.53	1.63	182	CF
4	9.41	2.16	146	CF
5	11.31	2.69	113	CF
6	13.19	3.22	100	CF
7	15.06	3.75	89	CF
8	16.94	4.28	81	CF
9	18.84	4.81	73	CF
10	20.75	5.34	66	CF



32" FEP Joint Specifications

Number of Convolutions	Length (in.)	Axial Movement (+/- in.)	Axial Spring Rate (lb./ 1/8in.)	Std. Full Vacuum Temp (F)
2	5.63	1.06	268	CF
3	7.53	1.63	182	CF
4	9.41	2.16	146	CF
5	11.31	2.69	113	CF
6	13.19	3.22	100	CF
7	15.06	3.75	89	CF
8	16.94	4.28	81	CF
9	18.84	4.81	73	CF
10	20.75	5.34	66	CF

36" FEP Joint Specifications

Number of Convolutions	Length (in.)	Axial Movement (+/- in.)	Axial Spring Rate (lb./ 1/8in.)	Std. Full Vacuum Temp (F)
2	6.31	1.25	270	CF
3	8.44	1.84	182	CF
4	10.53	2.41	146	CF
5	12.63	2.84	113	CF
6	14.75	3.63	100	CF
7	16.88	4.25	90	CF
8	18.94	4.81	82	CF
9	21.06	5.44	74	CF
10	23.13	6.19	67	CF

CALL TODAY: (800) 257-2467

sales@uipintl.com | www.uipintl.com

TECHNICAL DATA

The coefficient of thermal expansion describes how the size of an object changes with a change in temperature. All materials used in the transfer of fluid (pipes and fittings) expand and contract a known amount per degree of temperature change. This expansion rate is typically expressed as in/in/°F. The table below gives the thermal coefficient of expansion for some common piping materials.

Pipe Material	Thermal Coefficient of Expansion (in/in/°F)
Aluminum	13.6
Fiberglass	13.0
Hastelloy C	6.8
PTFE-lined Carbon Steel	6.8
PVC 1020	30.0
300 Series Stainless Steel	10.4
Impregnated Graphite	2.4

The expansion or contraction of a rigid pipe section that is restrained at both ends will generate a force equal to that required to compress the pipe from its expanded length back to its original length. These forces can be very high and can lead to buckling of the piping, compressive failure of the piping, or damage to other equipment.

CALL TODAY: (800) 257-2467

sales@uipintl.com | www.uipintl.com