

Convolute

High Performance Flexible Tubing - PTFE, FEP, and ETFE

EXTRUSIONS



OVERVIEW

Zeus Convolute Tubing is chemically resistant, flexible, and maintains its useful properties when exposed to extreme temperatures. Zeus Convolute Tubing is manufactured to the tolerances and dimensions of AS81914 specifications.

Zeus is capable of producing high volumes of convoluted tubing in both standard and extra flex sizes. Convoluted tubing is used as protective and flexible conduit for wires and optical fibers in critical areas of aerospace and automotive applications that demand highly flexible performance tubing. Zeus can produce convoluted tubing for other applications as well and in a wide variety of resins beyond PTFE, FEP, and ETFE, including PEEK, PFA and PVDF. Other resins may also be a possibility; contact Zeus for more details.



VALUE-ADD SERVICES:

Cuffing (PTFE)
Drilling
Fillers

Laser Marking
Slitting

Convoluted tubing has excellent flexibility and abrasion resistance.



CHEMICAL RESISTANCE



ABRASION RESISTANCE



FLAME RESISTANCE

APPLICATIONS

- Flexible conduit for wires and cabling
- Electrical component protection
- Protective conduit for fiber optics

CAPABILITIES AND SIZING

- Longitudinal slitting
- Custom sizes available
- Range of colors available
- Cut to length
- Long lengths
- Drilled holes
- Cuffing (PTFE)
- Meets or exceeds dimensional requirements of military specifications AS82914 (1,2,3,4,5, and 6)
- Available in multiple resins

KEY PROPERTIES

- Chemically resistant
- High continuous service temperature
- Flame resistant
- Abrasion resistant
- Durable
- Flexible



Convolute: PTFE

Standard and Extra Flex

INFORMATION OF NOTE

The tables below detail Zeus and AS81914 numbers, materials, and dimensions for our standard and extra flex PTFE convoluted tubing. Custom sizes and configurations, lot-to-lot testing, and free samples available upon request.

PTFE STANDARD FLEX CONVOLUTED												
Part Callout	#ID	Max. ID		Min. ID		Max. OD		Max. Wall Thickness		Conv. Per Inch ± 1	Weight (LBS) Per CFT Max.	Min. Bend Radius
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-TS-012	**01	0.188	4.775	0.181	4.597	0.320	8.128	0.023	0.584	8	2.0	0.500
ZCT-TS-018	**02	0.281	7.137	0.273	6.934	0.414	10.516	0.027	0.686	7.5	2.9	0.750
ZCT-TS-020	**03	0.312	7.925	0.303	7.696	0.450	11.430	0.027	0.686	7.5	3.6	0.875
ZCT-TS-024	**04	0.375	9.525	0.364	9.246	0.530	13.462	0.029	0.737	7	4.2	1.000
ZCT-TS-028	**05	0.437	11.100	0.425	10.795	0.590	14.986	0.029	0.737	7	4.9	1.250
ZCT-TS-032	**06	0.500	12.700	0.485	12.319	0.660	16.764	0.029	0.737	7	5.2	1.500
ZCT-TS-040	**07	0.625	15.875	0.608	15.443	0.780	19.812	0.035	0.889	7	6.9	1.750
ZCT-TS-048	**08	0.750	19.050	0.730	18.542	0.975	24.765	0.035	0.889	6	10.4	1.875
ZCT-TS-056	**09	0.875	22.225	0.850	21.590	1.100	27.940	0.035	0.889	6	11.3	2.250
ZCT-TS-064	**10	1.000	25.400	0.975	24.765	1.260	32.004	0.035	0.889	4.5	12.6	2.500
ZCT-TS-072	**11	1.125	28.575	1.105	28.067	1.390	35.306	0.035	0.889	4.5	13.8	2.750
ZCT-TS-080	**12	1.250	31.750	1.210	30.734	1.539	39.091	0.035	0.889	4	15.5	3.000
ZCT-TS-096	**13	1.500	38.100	1.440	36.576	1.850	46.990	0.040	1.016	4	21.7	3.750

PTFE EXTRA FLEX CONVOLUTED												
Part Callout	#ID	Max. ID		Min. ID		Max. OD		Max. Wall Thickness		Conv. Per Inch ± 1	Weight (LBS) Per CFT Max.	Min. Bend Radius
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-TE-012	**01	0.188	4.775	0.181	4.597	0.320	8.128	0.023	0.584	10	2.2	0.313
ZCT-TE-018	**02	0.281	7.137	0.273	6.934	0.414	10.516	0.026	0.686	9	3.8	0.438
ZCT-TE-020	**03	0.312	7.925	0.306	7.696	0.450	11.430	0.027	0.686	9	4.8	0.438
ZCT-TE-024	**04	0.375	9.525	0.364	9.246	0.530	13.462	0.029	0.737	9	5.6	0.500
ZCT-TE-028	**05	0.437	11.100	0.425	10.795	0.590	14.986	0.029	0.737	9	6.5	0.500
ZCT-TE-032	**06	0.500	12.700	0.487	12.319	0.660	16.764	0.029	0.737	9	6.9	0.750
ZCT-TE-040	**07	0.625	15.875	0.608	15.443	0.780	19.812	0.035	0.889	9	9.2	0.750
ZCT-TE-048	**08	0.750	19.050	0.730	18.542	0.975	24.765	0.035	0.889	8	13.8	0.938
ZCT-TE-056	**09	0.875	22.225	0.860	21.590	1.100	27.940	0.035	0.889	8	15.0	0.938
ZCT-TE-064	**10	1.000	25.400	0.975	24.765	1.260	32.004	0.035	0.889	7	16.8	1.125
ZCT-TE-072	**11	1.125	28.575	1.105	28.067	1.390	35.306	0.035	0.889	6	17.5	1.125
ZCT-TE-080	**12	1.250	31.750	1.210	30.734	1.539	39.091	0.035	0.889	6	19.6	1.250
ZCT-TE-096	**13	1.500	38.100	1.450	36.576	1.810	45.974	0.038	0.965	6	26	2.000



Convolute: FEP

Standard and Extra Flex

INFORMATION OF NOTE

The tables below detail Zeus and AS81914 numbers, materials, and dimensions for our standard and extra flex FEP convoluted tubing. Custom sizes and configurations, lot-to-lot testing, and free samples available upon request.

FEP STANDARD FLEX CONVOLUTED												
Part Callout	#ID	Max. ID		Min. ID		Max. OD		Max. Wall Thickness		Conv. Per Inch ± 1	Weight (LBS) Per CFT Max.	Min. Bend Radius
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-FS-012	**01	0.188	4.775	0.181	4.597	0.320	8.128	0.018	0.457	8	1.5	0.500
ZCT-FS-018	**02	0.281	7.137	0.273	6.934	0.414	10.516	0.018	0.457	8	1.7	0.750
ZCT-FS-020	**03	0.312	7.925	0.306	7.772	0.450	11.430	0.018	0.457	8	1.9	0.750
ZCT-FS-024	**04	0.375	9.525	0.364	9.246	0.510	12.954	0.018	0.457	8	2.2	0.875
ZCT-FS-028	**05	0.437	11.100	0.427	10.846	0.571	14.503	0.018	0.457	8	3.1	0.875
ZCT-FS-032	**06	0.500	12.700	0.485	12.319	0.650	16.510	0.023	0.584	7	4.0	1.250
ZCT-FS-040	**07	0.625	15.875	0.608	15.443	0.770	19.558	0.023	0.584	7	4.8	1.500
ZCT-FS-048	**08	0.750	19.050	0.730	18.542	0.930	23.622	0.023	0.584	6	6.1	1.750
ZCT-FS-056	**09	0.875	22.225	0.860	21.844	1.073	27.254	0.023	0.584	5	7.0	2.000
ZCT-FS-064	**10	1.000	25.400	0.975	24.765	1.226	31.140	0.023	0.584	5	8.5	2.370
ZCT-FS-072	**11	1.125	28.575	1.105	28.067	1.390	35.306	0.023	0.584	5	9.3	2.370
ZCT-FS-080	**12	1.250	31.750	1.210	30.734	1.539	39.091	0.023	0.584	4	10.9	2.750
ZCT-FS-096	**13	1.500	38.100	1.437	36.500	1.832	36.500	0.023	0.584	4	12.6	3.375

FEP EXTRA FLEX CONVOLUTED												
Part Callout	#ID	Max. ID		Min. ID		Max. OD		Max. Wall Thickness		Conv. Per Inch ± 1	Weight (LBS) Per CFT Max.	Min. Bend Radius
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-FE-012	**01	0.188	4.775	0.181	4.597	0.320	8.128	0.018	0.457	10	1.7	0.310
ZCT-FE-018	**02	0.281	7.137	0.273	6.934	0.414	10.516	0.018	0.457	10	2.0	0.410
ZCT-FE-020	**03	0.312	7.925	0.306	7.772	0.450	11.430	0.018	0.457	10	2.1	0.410
ZCT-FE-024	**04	0.375	9.525	0.359	9.119	0.510	12.954	0.018	0.457	10	2.5	0.500
ZCT-FE-028	**05	0.437	11.100	0.427	10.846	0.571	14.503	0.018	0.457	10	3.9	0.500
ZCT-FE-032	**06	0.500	12.700	0.480	12.192	0.650	16.510	0.023	0.584	9	4.6	0.750
ZCT-FE-040	**07	0.625	15.875	0.603	15.316	0.770	19.558	0.023	0.584	9	5.5	0.750
ZCT-FE-048	**08	0.750	19.050	0.725	18.415	0.930	23.622	0.023	0.584	8	6.9	0.930
ZCT-FE-056	**09	0.875	22.225	0.860	21.844	1.073	27.254	0.023	0.584	7	8.9	1.250
ZCT-FE-064	**10	1.000	25.400	0.970	24.638	1.226	31.140	0.023	0.584	7	9.5	1.250
ZCT-FE-072	**11	1.125	28.575	1.105	28.067	1.390	35.306	0.023	0.584	7	10.5	1.430
ZCT-FE-080	**12	1.250	31.750	1.205	30.607	1.539	39.091	0.023	0.584	6.5	11.2	1.430
ZCT-FE-096	**13	1.500	38.100	1.437	36.500	1.832	36.500	0.023	0.584	5.5	12.0	1.750



Convolute: ETFE

Standard and Extra Flex

INFORMATION OF NOTE

The tables below detail Zeus and AS81914 numbers, materials, and dimensions for our standard and extra flex ETFE convoluted tubing. Custom sizes and configurations, lot-to-lot testing, and free samples available upon request.

ETFE STANDARD FLEX CONVOLUTED												
Part Callout	#ID	Max. ID		Min. ID		Max. OD		Max. Wall Thickness		Conv. Per Inch ± 1	Weight (LBS) Per CFT Max.	Min. Bend Radius
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-ES-012	**01	0.188	4.775	0.181	4.597	0.320	8.128	0.018	0.457	8	1.2	0.500
ZCT-ES-018	**02	0.281	7.137	0.273	6.934	0.414	10.516	0.018	0.457	8	1.4	0.750
ZCT-ES-020	**03	0.312	7.925	0.306	7.772	0.450	11.430	0.018	0.457	8	1.5	0.750
ZCT-ES-024	**04	0.375	9.525	0.364	9.246	0.510	12.954	0.018	0.457	8	1.8	0.880
ZCT-ES-028	**05	0.437	11.100	0.427	10.846	0.571	14.503	0.018	0.457	8	2.5	0.880
ZCT-ES-032	**06	0.500	12.700	0.485	12.319	0.650	16.510	0.023	0.584	7	3.2	1.250
ZCT-ES-040	**07	0.625	15.875	0.608	15.443	0.770	19.558	0.023	0.584	7	3.9	1.500
ZCT-ES-048	**08	0.750	19.050	0.730	18.542	0.930	23.622	0.023	0.584	6	4.9	1.750
ZCT-ES-056	**09	0.875	22.225	0.860	21.844	1.073	27.254	0.023	0.584	5	5.6	2.000
ZCT-ES-064	**10	1.000	25.400	0.975	24.765	1.226	31.140	0.023	0.584	5	6.8	2.370
ZCT-ES-072	**11	1.125	28.575	1.105	28.067	1.390	35.306	0.023	0.584	5	7.5	2.370
ZCT-ES-080	**12	1.250	31.750	1.210	30.734	1.539	39.091	0.023	0.584	4	8.8	2.750
ZCT-ES-096	**13	1.500	38.100	1.437	36.500	1.832	46.533	0.023	0.584	4	10.2	3.380

ETFE EXTRA FLEX CONVOLUTED												
Part Callout	#ID	Max. ID		Min. ID		Max. OD		Max. Wall Thickness		Conv. Per Inch ± 1	Weight (LBS) Per CFT Max.	Min. Bend Radius
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-EE-012	**01	0.188	4.775	0.181	4.597	0.320	8.128	0.018	0.457	10	1.4	0.310
ZCT-EE-018	**02	0.281	7.137	0.273	6.934	0.414	10.516	0.018	0.457	10	1.6	0.410
ZCT-EE-020	**03	0.312	7.925	0.306	7.772	0.450	11.430	0.018	0.457	10	1.7	0.410
ZCT-EE-024	**04	0.375	9.525	0.359	9.119	0.510	12.954	0.018	0.457	10	2.0	0.500
ZCT-EE-028	**05	0.437	11.100	0.427	10.846	0.571	14.503	0.018	0.457	10	3.1	0.500
ZCT-EE-032	**06	0.500	12.700	0.480	12.192	0.650	16.510	0.023	0.584	9	3.7	0.750
ZCT-EE-040	**07	0.625	15.875	0.603	15.316	0.770	19.558	0.023	0.584	9	4.4	0.750
ZCT-EE-048	**08	0.750	19.050	0.725	18.415	0.930	23.622	0.023	0.584	8	5.6	0.930
ZCT-EE-056	**09	0.875	22.225	0.860	21.844	1.073	27.254	0.023	0.584	7	7.1	1.250
ZCT-EE-064	**10	1.000	25.400	0.970	24.638	1.226	31.140	0.023	0.584	7	7.6	1.250
ZCT-EE-072	**11	1.125	28.575	1.105	28.067	1.390	35.306	0.023	0.584	7	8.4	1.430
ZCT-EE-080	**12	1.250	31.750	1.205	30.607	1.539	39.091	0.023	0.584	6	9.0	1.430
ZCT-EE-096	**13	1.500	38.100	1.437	36.500	1.832	46.533	0.023	0.584	5	9.6	1.750

