SEALING SYSTEMS

Engineering Equipment for Sanitary Applications

Fluoropolymer Catalog

Contents

PTFE, FEP & PFA Formulations

Almost totally inert, FLUOROPOLYMER tubing can be used with virtually all industrial solvents, chemicals and corrosive materials, even at elevated temperatures. It does, however, react with fluorine, molten sodium hydroxide and molten alkali metals. FLUOROPOLYMER tubing can be steam or chemically sterilized in-line with any industrial cleaner, solvent or sterilizing method.
FLUOROPOLYMER's non-stick property allows transport of viscous, sticky materials without line clogging. It also offers outstanding aging resistance. PTFE's translucent white color will vary naturally from lot to lot, however the quality and physical properties do not change. FEP and PFA are clearer and can be heat sealed and heat bonded. Permanent color striping, etching and longer-than-listed lengths are available through minimum order. Polyethylene-jacketed, thin-wall fluoropolymer tubing, for low-cost purity, is also available through minimum order - call for details.

- Chemically inert low permeability
- Lowest coefficient of friction of any solid material
- Excellent electrical and weathering properties, non-flammable
- Made without plasticizer which can leach into critical streams
- Free of animal derived components
- Raw materials are FDA and USP Class VI compliant
- REACH and RoHS compliant
- PTFE is free of BPA, phthalates and latex
- FEP and PFA are free of conflict minerals
- Ultra-high-purity grades available for the semiconductor industry (FEP and PFA only)

Fluoropolymer Tubing - PTFE

Part No.	I.D (in.)	O.D. (in.)	Wall (in.)	Standard Length (Ft.)	Working at 70°F (PSI)	Bend Radius (in.)	LBS. Per 100 (Ft.)
300 0074	1/32	1/16	0.015	100	412	1/2	0.002
300 0151	1/32	3/32	0.030	100	390	1/2	0.006
300 0228	1/16	1/8	0.030	50, 100	290	1/2	0.009
300 0382	3/32	5/32	0.030	50, 100	220	5/8	0.011
300 0459	1/8	3/16	0.030	50, 100	180	3/4	0.014
300 0536	1/8	1/4	0.062	50, 100	290	1/2	0.034
300 0690	3/16	1/4	0.030	50, 100	130	1.0	0.020
300 0767	3/16	5/16	0.0630	50, 100	222	7/8	0.046
300 0844	1/4	5/16	0.300	50, 100	100	2¼	0.026
300 0921	1/4	3/8	0.063	25, 50, 100	180	1.0	0.057
300 0998	5/16	3/8	0.030	25, 50, 100	80	2¾	0.032
300 1152	3/8	7/16	0.030	25, 50, 100	70	4.0	0.037
300 1229	3/8	1/2	0.630	25, 50, 100	130	2¼	0.080
300 1306	7/16	1/2	0.300	25, 50, 100	60	4.0	0.043
300 1460	1/2	9/16	0.300	25, 50, 100	55	5.0	0.049
300 1537	1/2	5/8	0.630	25, 50, 100	100	3.0	0.103
300 1614	9/16	5/8	0.300	25, 50, 100	50	5½	0.054
300 1845	5/8	3/4	0.630	25, 50, 100	80	6.0	0.126

†Sold by standard coil length only.
Working pressures are calculated from burst testing using a 4:1 safety factor. Application testing is recommended.
Add length suffix to part number when ordering. Example: 100 ft. of 1/32" I.D. x 1/16" O.D., tubing is part number 300 0074-100.
NOTE: Orders for 50 ft. lengths of PTFE tubing may be filled with a maximum of two lengths of product totaling 50 ft.
Orders for 100 ft. lengths of PTFE tubing may be filled with a maximum of three lengths of product totaling 100 ft.
BOLD indicates the critical dimension for fittings application.

Fluoropolymer Tubing - FEP

Part No.	I.D (in.)	O.D. (in.)	Wall (in.)	Standard Length (Ft.)	Working at 70°F (PSI)	Bend Radius (in.)	LBS. Per 100 (Ft.)
310 0090	1/16	1/8	0.030	50, 100	445	1/2	0.009
310 0167	1/16	3/16	0.062	50, 100	612	1/2	0.023
310 0244	3/32	5/32	0.030	50, 100	357	1/2	0.011
310 0321	1/8	3/16	0.030	50, 100	296	3/4	0.014
310 0398	1/8	1/4	0.062	50, 100	460	1.0	0.034
310 0552	3/16	1/4	0.030	50, 100	223	1½	0.020
310 0629	3/16	5/16	0.062	50, 100	368	1½	0.046
310 0706	1/4	5/16	0.030	50, 100	178	1¾	0.026
310 0783	1/4	3/8	0.062	25, 50, 100	307	1.0	0.057
310 0860	5/16	3/8	0.030	25, 50, 100	148	2½	0.031
310 1014	3/8	7/16	0.030	50, 100	127	3½	0.037
310 1091	3/8	1/2	0.062	25, 50, 100	230	2.0	0.080
310 1168	7/16	1/2	0.030	25, 50, 100	111	6.0	0.043
310 1322	1/2	9/16	0.030	25, 50, 100	89	12.0	0.048
310 1399	1/2	5/8	0.062	25, 50, 100	184	3.0	0.103
310 1707	5/8	3/4	0.062	25, 50, 100	153	6.0	0.126
310 1784*	1⅛	3/4	0.030	25	74	8.0	0.065
310 1938*	3/4	0.830	0.040	10 Straight	74	8.0	0.065
310 2015	3/4	7/8	0.062	5, 10 Straight	132	12	0.149
310 2169	7/8	1.0	0.062	5, 10 Straight	115	22	0.172
310 2246*	1.0	1.100	0.050	5, 10 Straight	75	26	0.154
310 2323	1.0	1⅛	0.062	5, 10 Straight	75	24	0.194
310 2477*	1¼	1⅜	0.062	5, 10 Straight	70	30	0.240
310 2631*	1½	1⅝	0.062	5 Straight	64	36	0.286

Limited stock item, lead times and minimums may apply- call for details.
†Sold by standard coil length only.
Working pressures are calculated from burst testing using a 3:1 safety factor. Application testing is recommended.
Add length suffix to part number when ordering. Example: 50 ft. of 1/16" I.D. x 1/8" O.D., tubing is part number 300 0090-50.
All FEP and PFA lengths are supplied in single-section packages.
BOLD indicates the critical dimension for fittings application.

Fluoropolymer Tubing - PFA

Part No.	I.D (in.)	O.D. (in.)	Wall (in.)	Standard Length (Ft.)	Working at 70°F (PSI)	Bend Radius (in.)	LBS. Per 100 (Ft.)
320 0176	1/16	1/8	0.030	50, 100	449	1/2	0.009
320 0330	3/32	5/32	0.030	50, 100	360	1/2	0.011
320 0407	1/8	3/16	0.030	50, 100	299	3/4	0.014
320 0484	1/8	1/4	0.062	50, 100	464	1/2	0.034
320 0561	3/16	1/4	0.030	50, 100	225	1.0	0.020
320 0715	1/4	5/16	0.030	50, 100	179	1¾	0.026
320 0792	1/4	3/8	0.062	25, 50, 100	310	1.0	0.057
320 0869	5/16	3/8	0.030	50, 100	150	2½	0.031
320 1100	3/8	1/2	0.062	25, 50, 100	310	1.0	0.080
320 1331	1/2	9/16	0.030	25, 100	75	12.0	0.048
320 1408	1/2	5/8	0.062	25, 50, 100	186	3.0	0.103
320 1716	5/8	3/4	0.062	25, 50, 100	155	6.0	0.126

†Sold by standard coil length only.
Working pressures are calculated from burst testing using a 3:1 safety factor. Application testing is recommended.
Add length suffix to part number when ordering. Example: 25 ft. of 5/8" I.D. x 3/4" O.D., tubing is part number 320 1716-25.
All FEP and PFA lengths are supplied in single-section packages.
BOLD indicates the critical dimension for fittings application.

Fluoropolymer Tubing - PTFE

Part No.	I.D (mm)	O.D. (mm)	Wall (mm)	Standard Length (Ft.)	Working at 70°F (PSI)	Bend Radius (mm)	LBS. Per 100 (Ft.)
301 0175	2.0	4.0	1.0	50, 100	290	13	0.020
301 0350	4.0	6.0	1.0	50, 100	180	25	0.034
301 0525	6.0	8.0	1.0	50, 100	130	51	0.048
301 0700	8.0	10.0	1.0	25, 50, 100	100	64	0.061
301 0875	10.0	12.0	1.0	50, 100	80	76	0.075
301 1050*	12.0	14.0	1.0	50, 100	60	89	0.089

*Limited stock item, lead times and minimums may apply- call for details.
†Sold by standard coil length only.
Working pressures are calculated from burst testing using a 4:1 safety factor. Application testing is recommended.
Add length suffix to part number when ordering. Example: 50 ft. of 2mm I.D. x 4mm O.D., tubing is part number 301 0175-50.
NOTE: Orders for 50 ft. lengths of PTFE tubing may be filled with a maximum of two lengths of product totaling 50 ft.
Orders for 100 ft. lengths of PTFE tubing may be filled with a maximum of three lengths of product totaling 100 ft.
BOLD indicates the critical dimension for fittings application.

Fluoropolymer Tubing - FEP

Part No.	I.D (mm)	O.D. (mm)	Wall (mm)	Standard Length (Ft.)	Working at 70°F (PSI)	Bend Radius (mm)	LBS. Per 100 (Ft.)
311 0177	2.0	4.0	1.0	50, 100	464	38	0.013
311 0352	4.0	6.0	1.0	50, 100	309	44	0.023
311 0527	6.0	8.0	1.0	50, 100	232	64	0.032
311 0702	8.0	10.0	1.0	25, 50, 100	186	70	0.041
311 0877	10.0	12.0	1.0	50, 100	155	102	0.049
311 1052	12.0	14.0	1.0	50, 100	119	305	0.059

†Sold by standard coil length only.
Working pressures are calculated from burst testing using a 3:1 safety factor. Application testing is recommended.
Add length suffix to part number when ordering. Example: 50 ft. of 2mm I.D. x 4mm O.D., tubing is part number 311 0177-50.
All FEP and PFA lengths are supplied in single-section packages.
BOLD indicates the critical dimension for fittings application.

Fluoropolymer Tubing - PFA

Part No.	I.D (mm)	O.D. (mm)	Wall (mm)	Standard Length (Ft.)	Working at 70°F (PSI)	Bend Radius (mm)	LBS. Per 100 (Ft.)
321 0354	4.0	6.0	1.0	50, 100	312	44	0.023
321 0529	6.0	8.0	1.0	50, 100	234	64	0.032
321 0704	8.0	10.0	1.0	25, 50, 100	187	70	0.041
321 0879	10.0	12.0	1.0	50, 100	156	102	0.049

†Sold by standard coil length only.
Working pressures are calculated from burst testing using a 3:1 safety factor. Application testing is recommended.
Add length suffix to part number when ordering. Example: 100 ft. of 6mm I.D. x 8mm O.D., tubing is part number 321 0529-100.
All FEP and PFA lengths are supplied in single-section packages.
BOLD indicates the critical dimension for fittings application.

PTFE Tubing | ITFT

PTFE Tubing for Corrosive Fluid Transfer Applications

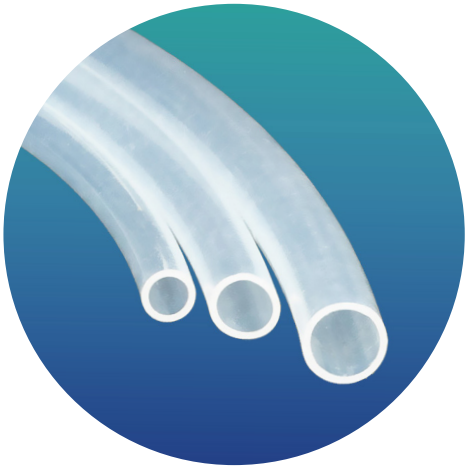
COMPLIANCE & CERTIFICATIONS:

Fluoropolymer Tubing - PFA

- PTFE tubing is designed for corrosive fluid transfer applications like solvents, acids, and alkalis.
- High burst pressure resistance enables it for the SIP process.
- Available with SS 316 L TC fittings for better grip and leak-proof fluid transfer applications.
- Manufactured in an ISO 9001 compliant facility.
- The inner layer has a very low coefficient of friction to ensure smooth flow.
- Compliant with all regulatory certification requirements.
- FDA 21 CFR 177. 1550
- Extractable Study (PQRI guideline)
- Nitrosamine Free Declaration
- ISO 10993-4 Hemocomatibility
- ISO 10993-11 Pyrogen test
- USP <87> in Vitro
- USP <88> In Vivo
- Phthalene Free
- TSE/BSE Free
- ROHS Compliant

Part No.	I.D (inch)	I.D (mm)	O.D. (inch)	O.D. (mm)	WT (mm)	Part No.	I.D (inch)	I.D (mm)	O.D. (inch)	O.D. (mm)	WT (mm)
ITFT-0063-0126	0.063	1.60	0.126	3.20	0.80	ITFT-0236-0315	0.236	6.00	0.315	8.00	1.00
ITFT-0079-0157	0.079	2.00	0.157	4.00	1.00	ITFT-0250-0374	0.250	6.35	0.374	9.50	1.55
ITFT-0118-0197	0.118	3.00	0.197	5.00	1.00	ITFT-0252-0374	0.252	6.40	0.374	9.50	1.55
ITFT-0126-0252	0.126	3.20	0.252	6.40	1.60	ITFT-0276-0354	0.276	7.00	0.354	9.00	1.00
ITFT-0157-0252	0.157	4.00	0.252	6.40	1.20	ITFT-0311-0374	0.311	7.90	0.374	9.50	0.80
ITFT-0189-0236	0.189	4.00	0.236	6.00	1.00	ITFT-0315-0394	0.315	8.00	0.394	10.00	1.00
ITFT-0189-0252	0.189	4.80	0.252	6.40	0.80	ITFT-0374-0500	0.374	9.50	0.500	12.70	1.60
ITFT-0197-0311	0.197	4.80	0.311	7.90	1.55	ITFT-0394-0472	0.394	10.00	0.472	12.00	1.00
ITFT-0197-0276	0.197	5.00	0.276	7.00	1.00	ITFT-0472-0551	0.472	12.00	0.551	14.00	1.00
ITFT-0217-0295	0.217	5.50	0.295	7.50	1.00						

†Sold by standard coil length only.
Working pressures are calculated from burst testing using a 3:1 safety factor. Application testing is recommended.
Add length suffix to part number when ordering. Example: 100 ft. of 6mm I.D. x 8mm O.D., tubing is part number 321 0529-100.
All FEP and PFA lengths are supplied in single-section packages.
BOLD indicates the critical dimension for fittings application.



FEP (Fluorinated Ethylene Propylene)/ Fluoropolymer Tube

Fluorinated Ethylene Propylene (FEP) tubing is designed for highly corrosive fluid transfer in Pharmaceutical industry. Imafep is specially formulated to have excellent compatibility with all major pharmaceutical applications.

COMPLIANCE & CERTIFICATIONS:

Fluoropolymer Tubing - PFA

- Double polybag packeged in clean room of class 10000 facility.
- Good flexibility compared to PTFE tubing.
- Transparency facilitates fluid flow visibility.
- Excellent acid and alkali resistance.
- ultra-smooth bore surface to eliminate particle entrapment.
- Custom dimension and length size available.
- Steam sterilization Compatible.
- Thermally resistant up to 205 °C
- FDA 21 CFR 177.1550
- Extractable Study
- Nitrosamine Free Declaration
- ISO 10993-11
- ROHS Compliant
- USP CLASS VI
- BPA Free
- Phthalate Free

Part No.	I.D (inch)	I.D (mm)	O.D. (inch)	O.D. (mm)	WT (mm)	Part No.	I.D (inch)	I.D (mm)	O.D. (inch)	O.D. (mm)	WT (mm)
IFPT-0063-0126	0.063	1.60	0.126	3.2	0.80	IFPT-0236-0315	0.236	6.00	0.315	8.00	1.00
IFPT-0079-0157	0.079	2.00	0.157	4	1.00	IFPT-0250-0374	0.250	6.35	0.374	9.50	1.55
IFPT-0118-0197	0.118	3.00	0.197	5	1.00	IFPT-0252-0374	0.252	6.40	0.374	9.50	1.55
IFPT-0126-0252	0.126	3.20	0.252	6.4	1.60	IFPT-0276-0354	0.276	7.00	0.354	9.00	1.00
IFPT-0157-0252	0.157	4.00	0.252	6.4	1.20	IFPT-0311-0374	0.311	7.90	0.374	9.50	0.80
IFPT-0157-0236	0.157	4.00	0.236	6	1.00	IFPT-0315-0394	0.315	8.00	0.394	10.00	1.00
IFPT-0189-0252	0.189	4.80	0.252	6.4	0.80	IFPT-0374-0500	0.374	9.50	0.500	12.70	1.60
IFPT-0189-0311	0.189	4.80	0.311	7.9	1.55	IFPT-0394-0472	0.394	10.00	0.472	12.00	1.00
IFPT-0197-0276	0.197	5.00	0.276	7	1.00	IFPT-0472-0551	0.472	12.00	0.551	14.00	1.00
IFPT-0217-0295	0.217	5.50	0.295	7.50	1.00						

†Sold by standard coil length only.
Working pressures are calculated from burst testing using a 3:1 safety factor. Application testing is recommended.
Add length suffix to part number when ordering. Example: 100 ft. of 6mm I.D. x 8mm O.D., tubing is part number 321 0529-100.
All FEP and PFA lengths are supplied in single-section packages.
BOLD indicates the critical dimension for fittings application.

Coiled FEP Tubing

Almost totally inert, COILTEF can be used with all industrial solvents, chemicals and corrosive materials, even at elevated temperatures.
It does, however, react with fluorine, molten sodium hydroxide and molten alkali metals. Fluoropolymer's non-stick property allows transport of viscous, sticky material without line clogging.
It also offers outstanding aging resistance. COILTEF is manufactured through a fabrication process which heat sets the coils. The coils should remain stable up to 200°F.
At higher temperatures the coils will begin to relax and lose their set.
If the application involves elevated temperatures, in-house testing is recommended COILTEF may be steam or chemically sterilized in-line with any industrial cleaner, solvent or sterilizing method. Care should be taken with steam sterilization to prevent coil relaxation. Testing is recommended.
COILTEF can be manufactured from 0.085" to 1/2" tubing I.D.
The coil diameter can be produced from 3/4" O.D. to 4" O.D.
PFA-formulated COILTEF is available by special order.

- Made of chemically inert clear FEP
- Manufactured from FDA compliant materials
- Heat set into a retractable coil excellent insulation
- Offer all the chemical and electrical insulation properties of standard FEP fluoropolymer tubing
- Allows flexibility to otherwise semi-rigid fluoropolymer tubing

Part No.	I.D (in.)	O.D. (in.)	O.D of Coil (in.)	MAXIMUM AVAILABLE EXPANDED LENGTH NOT INCLUDING TAILS (in.)
360 0072*	1/6	3/16	1⅛	12, 24, 48
360 0149*	1/8	1/4	1½	12, 24, 48, 72
360 0226*	3/16	5/16	2¼	12
360 0303*	1/4	3/8	2⅜	12, 24, 48, 72
360 0457*	3/8	1/2	4.0	24, 48

*Non-stock item lead times and minimums apply- call for details.
Add length suffix to part number when ordering. Example: 12" of 1/16" I.D. x 3/16" O.D. tubing is part number 360 0072-12.
The retracted length is approximately 1/4 of the maximum expanded length excluding tails.
Wall thickness for all standard sizes is 1/16. Tail length (item C) is 6" for all listed sizes.

Convoluted PTFE Tubing

CONTEF's helical construction aids in self cleaning when flushed with standard cleaning fluids. The cuffs (straight ends) are made to accept standard barbed fittings. Hose assemblies made to your specifications are available. PTFE's color will vary naturally from lot to lot, but the quality and physical properties do not change. FEP CONTEF for longer continuous lengths is available through custom order.

- Translucent PTFE tubing offers excellent chemical and electrical properties
- Available from stock with or without a stainless steel wire encircling the O.D.
- Wire coil provides increased pressure capability and aids in electrical grounding
- Easily flexed - spiral construction allows far greater flexibility than straight wall tubing
- Spiral construction also allows for easier cleaning
- Made from FDA compliant materials

Contef Without Wire

Part No.	A I.D (in.)	B Nom. (in.)	C Nom. (in.)	D Nom. (in.)	F Nom. (in.)	Max Length (Ft.)	Working at 70°F (PSI)	Burst at 70°F (PSI)	Bend Radius (in.)
350 0070	1/4	3/4	0.015	0.320	0.181	125	45	180	1/2
350 0147	5/16	1.0	0.020	0.414	0.273	125	48	192	3/4
350 0224	3/8	1.0	0.020	0.450	0.303	125	40	160	1¾
350 0301	1/2	1.0	0.020	0.590	0.425	100	30	120	1¼
350 0378	5/8	1-1¼	0.023	0.660	0.485	75	30	120	1½
350 0455	3/4	1-1½	0.025	0.780	0.608	75	25	100	1¾
350 0532	1.0	2.0	0.030	1.100	0.849	50	22	90	2.230
350 0609	1.0-1¼	2-1/2	0.035	1.560	1.150	40	21	85	2¾
350 0686	1.0-1½	2-1/2	0.040	1.910	1.410	40	20	80	3.0
350 0763	2.0	2-1/2	0.043	2.450	1.955	40	16	65	4¼

†E' dimension to be specified at time of order. All lengths will be supplied with B' dimension cuffs.
All pressures are calculated and not based on actual testing.
BOLD indicates the critical dimension for fittings application.

Contef With Wire

Part No.	A I.D (in.)	B Nom. (in.)	C Nom. (in.)	D Nom. (in.)	F Nom. (in.)	Max Length (Ft.)	Working at 70°F (PSI)	Burst at 70°F (PSI)	Bend Radius (in.)
352 0076	1/4	3/4	0.015	0.320	0.181	12	58	234	1/2
352 0153	5/16	1.0	0.020	0.414	0.273	12	62	250	3/4
352 0230	3/8	1.0	0.020	0.450	0.303	12	52	208	1¾
352 0307	1/2	1.0	0.020	0.590	0.425	20	39	156	1¼
352 0461	3/4	1-1½	0.023	0.780	0.608	20	32	130	1¾
352 0538	1.0	2.0	0.030	1.100	0.849	20	29	117	2¼

†E' dimension to be specified at time of order. All lengths will be supplied with B' dimension cuffs.
All pressures are calculated and not based on actual testing.
BOLD indicates the critical dimension for fittings application.

Corrugated FEP Tubing

Optimal flow is achieved and turbu lence minimized by passing fluids through CORRTEF is the direction of the corrugation angles (as illustrated). CORRTEF is heat sealable, and the cuffs (straight ends) are made to accept standard barbed fittings. The end may be flared or expanded to permit shrink-tight connections. CORRTEF is manufactured in an industrial atmosphere and should be properly sterilized for clean-flow applications.
For optimal cleaning of CORRTEF, the tube should be stretched to its maximum length and held vertically (direction on flow: down).
Due to the annular corrugations, it may not be possible to remove all traces of particulate from CORRTEF, even under optimal cleaning conditions. Overbraiding with Kevlar will permit a minimum increase of six times the listed pressures. Kevlar overbraiding is available for sizes up to 7/8" I.D. - call for details. Vacuum Service at 72°F: 29.9 in./Hg.
Bend Diameter at 72°F: 1/2 of tubing I.D.

- Made from FEP fluoropolymer tubing
- Corrugations allow a nearly zero bend radius - easily flexed
- Can be extended or compressed without affective the tube's I.D.
- Made without plasticizers which can leach into critical streams
- Made from FDA compliant materials
- Has all the chemical and electrical properties of straight-walled FEP tubing
- May be overbraided with Kevlar® for higher pressures

Contef With Wire

Part No.	A I.D (in.)	B Nom. (in.)	C Nom. (in.)	D Nom. (in.)	Working at 70°F (PSI)	Burst at 70°F (PSI)
340 0075	1/4	3/4	0.015	3/8	62	248
340 0152	3/8	1.0	0.020	5/8	50	200
340 0229	1/2	1.0	0.025	3/4	42	168
340 0306	5/8	1.0	0.025	15/16	37	148
340 0383	3/4	1-1½	0.030	1-1⅛	30	120
340 0460	7/8	1-1½	0.030	1-1/4	25	100
340 0537	1.0	2.0	0.035	1-1/16	20	80
340 0691	1-1½	2.0	0.035	1-13/16	15	60
340 0768	2.0	2.0	0.040	2-5/8	12	48

† Specify E' dimension at order time. Maximum overall available length:12 ft. (including cuffs).
*Workable I.D. length of the cuff (straight ends). All lengths will be supplied with B' dimension cuffs.
All pressures are calculated and not based on actual testing.
BOLD indicates the critical dimension for fittings application.

SEALING SYSTEMS

Engineering Equipment for Sanitary Applications

SS2025.02.FDAT