PE-X Lined Fittings

These specifications cover materials, manufacturing, testing, inspection and packaging standards for standard and custom made Pex-lined fittings.
PE-X lined steel fittings consist of a steel flanged fitting lined with thick black Pex coating which extends over the full face of the flanges. This type of fitting is used as a standard fitting (tee, elbow, reducer, etc.). Non-standard items can also be supplied, subject to approval by Golan's technical department.

Manufacturing materials

All materials used are traceable to origin and records are maintained for a minimum of three years. When specified, material and/or test certificates is supplied.

PE-X lining

Pex lining is made from resin conforming to the requirements of materials as defined in ASTM specification D1998-04.
The lining is made from virgin resin, meeting the requirements of ASTM D1998-04.
When tested in accordance with ASTM D638, the minimum tensile strength is 23 N/mm2 and the minimum elongation is 300%.

Fittings

Fabricated fittings are manufactured from the materials stated above.
Cast fittings are manufactured from the following:

- Ductile iron – ASTM A395, BS2789 grade 420/12 or DIN 1693 Part 1 GGG40.
- Cast steel – ASTM A216 WCB or equivalent.
- Flanges and welding – neck collars are forged steel
- to ASTM A105 N.

Slip on welding collars are steel plate to BS1501-161-430A, DIN 17100 grades RSt 37-2 or NF A 35-501 grade E24, EN 10025 or equivalent.

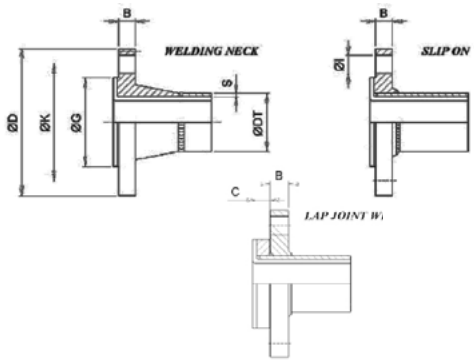
Fabrication standards

Qualification of welding procedures, welders and welding operators are in accordance with section IX of the ASME Boiler and Pressure Vessel Code or BS 4870: Part 1 and BS 4871: Part 1, DIN 8560 or EN-288-3.
All welds are visually examined and assessed in accordance with ASME B31.3 or relevant code.

Dimensional standards

- Flanged cast steel fittings are in accordance with ANSI B16.5 Class 150.
- Flanged ductile Iron fittings are in accordance with ANSI B16.42 Class 150.
- Fabricated fittings are in accordance with the dimensions shown in the following tables.
- Pipe diameters and wall thicknesses are in accordance with the dimensions in the following tables.
- Flanges for pipe and fittings are in accordance with ANSI B16.5 Class 150.
- Flanges are slip on welding, socket welding or welding neck types.
- Loose backing flanges are suitable for use with welding collars.
- All relevant dimensions and tolerances are in accordance with ANSI B16.5 Class 150.
- Threaded bolt holes are not permitted except for reducing flanges. Threaded bolt holes in reducing flanges are UNC unless specified otherwise.
- Welding collars for use with loose backing flanges are slip on welding, socket welding or welding neck type.
- The diameters and thicknesses are given in the following dimension table.
- The dimension table lists the outside diameters.

- The outside diameter of the instrument Tee bodies are the same as the lined space. The lining on the faces of flanges have uniform thickness, not less than 80% of the actual wall thickness.
- The Pexgol lining thickness in the following table is the standard. Higher thicknesses are available on request.



Dimension Table

Nom	DT	D	G	I	B	C	S	Pex Lining .thickness
Size	mm	mm	mm	n x i	mm	mm	mm	mm
1"	33,5	108	50,8	4X15,7	14,2	12	3,38	3,0
1 ¼"	42,2	117,3	63,5	4X15,7	15,7	12	3,56	3,0
1 ½"	48,3	127	73,2	4X19,1	17,5	12	3,68	3,0
2"	60,5	152,4	91,9	4X19,1	19,1	14	3,91	3,5
2 ½"	73,2	177,85	104,6	4X19,1	22,4	14	5,16	3,5
3"	88,9	190,5	127,0	4X19,1	23,9	16	5,49	4,0
3 ½"	101,6	215,9	139,7	8X19,1	23,9	16	5,74	4,0
4"	114,3	228,6	157,2	8X22,4	23,9	16	6,02	4,5
5"	141,3	254	185,7	8X22,4	23,9	18	6,55	4,5
6"	168,4	279,4	215,9	8X22,4	25,4	18	7,11	6,0
8"	219,2	342,9	269,7	8X22,4	28,4	20	8,18	6,0
10"	273,1	406,4	323,9	12X25,4	30,2	22	9,27	6,0
12"	323,9	482,6	381,0	12X25,4	31,8	22	9,53	7,0
14"	355,6	533,4	412,8	12X25,4	35,1	25	9,53	7,0
16"	406,4	596,9	469,9	12X28,4	36,6	25	9,53	7,0
18"	457,2	635	533,4	16X31,8	39,6	25	9,53	7,0
20"	508	698,5	584,2	20X31,8	42,9	25	9,53	7,0
24"	609,6	812,8	269,2	20X35,1	47,8	25	9,53	7,0

Construction of flanged fittings

Completed fittings are one piece construction. Flanges are fixed. The preparation and assembly of welded branch connections are in accordance with BS 2633 or ASME B31.3.

Attachment of flanges and collars

Attachment of flanges and collars are done by both back fillet and bore welds.
Transition from the bore to the flanged face must incorporate a radius to prevent undue stressing of the liner.

Fabrication dimensional tolerances

Tolerances for flanges and fittings is in accordance with the relevant standards.
Fabricated pipework are in accordance with the following tolerances:

- Squareness of flanges – Square to the axis of the pipe or fitting to within 0.05 mm per 25 mm measured across the face.
- Flange faces – Faces should not be uneven or concave. Convexity from the bore to the periphery must not exceed 0.4 mm per 25 mm width of face.
- Flange drilling – PCD +/- 1.5 mm. c/c of bolt holes +/- 0.8mm. Eccentricity between PCD and RFD up to 2-½" +/- 0.8 mm, 3" and greater +/- 1.5 mm.
- Bolt holes – Bolt holes are off center and equally spaced about the center line to an accuracy of 1.5 mm.
- Linear and angular dimensions – Linear dimensions +/- 1.5 mm; angular dimensions +/- 0.25 degrees.

Internal finish of housings

The interior surfaces and flange faces are clean and free of sharp corners, burrs, rust, scale, weld spatter or other protusions that could adversely affect the lining

Lining

The method of lining and the fit of the lining ensures that the lining is capable of withstanding the temperature, pressure and vacuum ratings of the system.
All interference fit linings in straight pipes are normalized prior to flaring.
Completed linings show no evidence of pinholes, porosity, cracks or bad workmanship. Sealing surfaces are free of surface defects that could impair sealing effectiveness. Scratches, dents, nicks or tool marks on the sealing face are not deeper than 0.15 mm.
Any of these defect types less than 0.15mm but extendingacross the face cause the product to be rejected.
Blind flanges have linings firmly attached linings.

Production testing

For each batch, at least one representative sample of each nominal size of fittings is selected; tests are carried out to determine mechanical properties and SG.
Where samples do not comply with the requirements stated in this specification, each tube in the batch must have samples cut from each end and the samples are subjected to the same tests.
Any sample not meeting the specified requirements leads to rejection of the whole tube.
The outside diameter and wall thickness are measured.
Tubes not complying with the standard are rejected. with at least 50mm of adjacent material.
When specified, each liner tube is subjected to a flattening test. Each length of tube is passed through a pre-set gap between two powered rollers. The gap is set at 50% of the outside diameter of the tube. The tube is rotated about the longitudinal axis through 90° and then passed back through the roller gap.
The tube is examined for cracks. A crack, if found, is cut out along with at least 50 mm of adjacent material.

Hydrostatic pressure test

Hydrostatic pressure test is carried out at 16 bar water in air. Any evidence of leakage are cause for rejection.

Electrostatic test

Electrostatic testing is carried out at a minimum voltage of 20,000V. The full surface of every lining is tested. Any pinholes are cause for rejection.

Final Examination

Each item is examined visually. Following satisfactory completion, the outside edge of the flange is stamped with a letter “I” to indicate compliance.

External finish

The outside surface of all pipe and fittings are finished as follows.
Shot blast SA 2-½ and coated with one coat zinc phosphate, zinc epoxy or zinc silicate primer. After painting, blocked bolt holes and vents are cleared.
Marking and identification: The following information is marked permanently on each fitting by casting into the body or by hard stamping the flange edge in letters at least 6 mm high:

- Manufacturer’s marking
- Lining material

Packaging

All flanges are fitted with protective covers. These covers are removed just prior to installation.
Fittings are fitted with medium density fiberboard blanks or alternatively snap-on proprietary plastic blanks could be used.

Performance

All lined fittings meet the temperature, pressure, and vacuum ratings stated in the Lined Fittings manual.

Service limitations

For positive and negative pressure limitations versus temperature, see table next page.
Service temperature limits, subject to compatibility with the fluid being handled are:

PE-X: -50° to +115°C

When lined fittings are exposed to very low temperatures (below -50°C) consideration must be given as to the suitability of the material used for the housings. See section below for further information.

Notes:

- Lined pipes and fittings made with PE-X inner coating can be manufactured in diameters from 2” and up to 24”.
- Lined pipes and fittings made with Teflon inner coating can be manufactured in diameters from 1” and up to 24”.
- For lined pipes or fittings in lower/higher diameters please consult with Golan.

Pressure/Temperature Rating

	Pressure			
Temperature	ANSI # 150		ANSI # 300	
	PSI	BAR	PSI	BAR
20°C	250	17,2	450	31,0
50°C	244	17	425	29,3
100°C	235	16	390	26,9

The pressure ratings for ANSI 150# and PN16 dimensioned fittings are based on ratings in ANSI B 16.5.
The pressure ratings for ANSI 300# dimensioned fittings are based on the rating in ANSI B 16.5 300#, down rated to compensate for the decrease in mechanical properties at elevated temperatures of the lining materials.

Vacuum/Temperature Rating

Liner	Temperature	Diameter										
		25	40	50	80	100	150	200	250	300	350	400
PE-X	20°C	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full
	50°C	Full	Full	Full	Full	Full	Full	Full	-	-	-	-
	80°C	Full	Full	Full	Full	Full	-	-	-	-	-	-

System design and supports

Pipe systems must be adequately supported to avoid excessive deflection of flanged joints, and supports should be installed close to flanges. The requirement for adequate support is critical in areas of high levels of concentration of valves and fittings.
Butterfly valves are usually designed for straight metallic or thermoplastic systems, with the diameter of the vane being defined as a function of the inner diameter of the pipe system under consideration.
The inner diameter of lined steel pipe is considerably smaller than the actual steel pipe. Inner diameters of thermoplastic pipes tend to be considerably smaller due to their heavy wall thickness. Consequently, some interference between the inner liner of a lined pipe and the valve vane might be experienced.
The designer should consider this possibility early in the selection process for pipe systems and valves, and if required, incorporate adequate conical spacers between the flanges of plastic fittings and the valve.

Installation and maintenance instructions for lined fittings

- Lined products must not be welded, brazed or torch cut to prevent damaging the lining.
- Handle the material with due care and attention, avoiding all mechanical shocks.
- All flanges are covered to protect them from damage during shipment, storage and handling onsite. If covers are removed for inspection purposes prior to installation, replace them immediately after inspection of each item is completed.
- When joining a Pexgol pipe and lined fittings together, the use of gaskets between the sealing faces is usually not necessary.
- Under normal conditions, remove covers only immediately prior to installation. As gaskets are often not required, utmost attention is required to avoid scratching or otherwise damaging the lining on flange faces.
- In case of leakage, inspect the sealing faces of each component for grooves or chips. Grooves or nicks not deeper than approximately 15% of the flare thickness can be removed with a fine-grade abrasive paper.

Lined Fittings

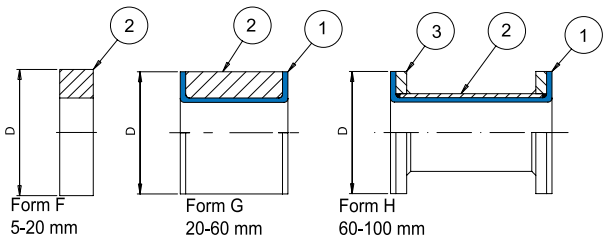
Materials:

- Lining Pex ASTM D1998-04
- St 37.0 - DIN 1629
- Body St 37.0 - DIN 1629

Standard Version: two fixed flanges:
Available on request:

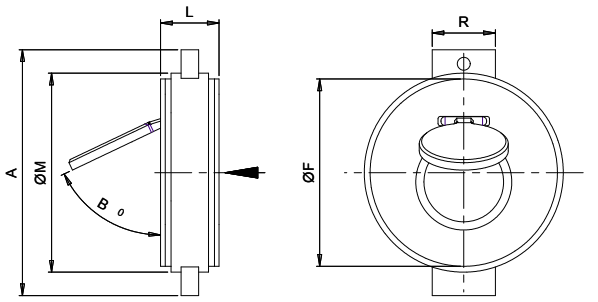
- One or two loose flanges
- ANSI B16.5 Class 300 flanges
- Stainless steel body and flanges 304/316
- Different lengths (L)

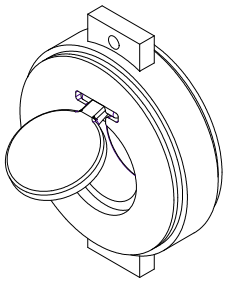
Solid and Lined Spacers

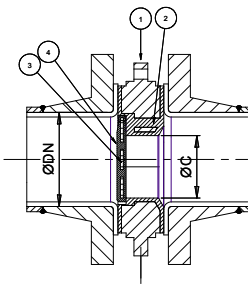


ANSI B16.5 Class 150#

Lined Swing Check Valve



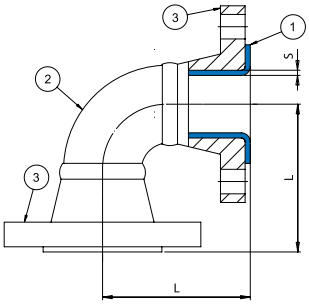




R	B	M	A	C	L	DN
50	43	26	140	100	62	65
80	46	45	170	135	65	85
100	52	65	208	170	65	55
150	56	104	270	220	65	70
200	60	145	320	275	65	90
250	68	185	400	335	65	70
300	78	230	470	405	65	95
350	78	252	510	445	65	95
400	102	300	575	510	65	95

Catalog Number	DN In.	L (mm)
Pex-SPC-15025	1"	55
Pex-SPC-15032	1 1/4"	68
Pex-SPC-15038	1 1/2"	75
Pex-SPC-15050	2"	95
Pex-SPC-15062	2 1/2"	108
Pex-SPC-15080	3"	130
Pex-SPC-150100	4"	162
Pex-SPC-150125	5"	190
Pex-SPC-150150	6"	218
Pex-SPC-150200	8"	273
Pex-SPC-150250	10"	336
Pex-SPC-150300	12"	406
Pex-SPC-150350	14"	447
Pex-SPC-150400	16"	511
Pex-SPC-150450	18"	546
Pex-SPC-150500	20"	603
Pex-SPC-150600	24"	714

Lined Elbows



Lined Elbows 90°
ANSI B16.5 - Class 150#

Catalog Number	DN (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LE90-15025	1"	89	3	3,1
Pex-LE90-15032	1 ¼"	95	3	4
Pex-LE90-15038	1 ½"	102	3	4,5
Pex-LE90-15050	2"	114	3,5	6,5
Pex-LE90-15063	2 ½"	127	3,5	9
Pex-LE90-15080	3"	140	4	12
Pex-LE90-150100	4"	165	4	19
Pex-LE90-150125	5"	190	4	22
Pex-LE90-150150	6"	203	6	34
Pex-LE90-150200	8"	229	6	57
Pex-LE90-150250	10"	279	6	82
Pex-LE90-150300	12"	305	7	115
Pex-LE90-150350	14"	546	7	150
Pex-LE90-150400	16"	610	7	192
Pex-LE90-150450	18"	673	7	225
Pex-LE90-150500	20"	737	7	280
Pex-LE90-150600	24"	864	7	395

Lined Elbows 45°
ANSI B16.5 - Class 150#

Catalog Number	DN (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LE45-15025	1"	45	3	3
Pex-LE45-15032	1 ¼"	51	3	4
Pex-LE45-15038	1 ½"	57	3	6
Pex-LE45-15050	2"	64	3,5	9
Pex-LE45-15063	2 ½"	76	3,5	13
Pex-LE45-15080	3"	76	4	15
Pex-LE45-150100	4"	102	4	20
Pex-LE45-150125	5"	114	4	26
Pex-LE45-150150	6"	127	6	33
Pex-LE45-150200	8"	140	6	54
Pex-LE45-150250	10"	165	6	75
Pex-LE45-150300	12"	190	7	110
Pex-LE45-150350	14"	190	7	117
Pex-LE45-150400	16"	203	7	145
Pex-LE45-150450	18"	216	7	165
Pex-LE45-150500	20"	241	7	210
Pex-LE45-150600	24"	279	7	290

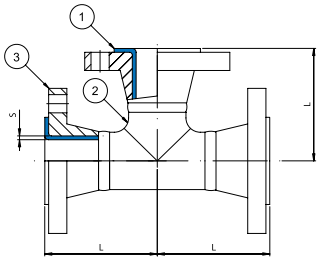
Lined Elbows 60°
ANSI B16.5 - Class 150#

Catalog Number	DN (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LE60-15025	1"	45	3	2,7
Pex-LE60-15032	1 ¼"	51	3	3,6
Pex-LE60-15038	1 ½"	57	3	5,4
Pex-LE60-15050	2"	64	3,5	8,1
Pex-LE60-15063	2 ½"	76	3,5	11,7
Pex-LE60-15080	3"	76	4	13,5
Pex-LE60-150100	4"	102	4	18
Pex-LE60-150125	5"	114	4	20,5
Pex-LE60-150150	6"	127	6	26,1
Pex-LE60-150200	8"	140	6	42,7
Pex-LE60-150250	10"	165	6	59,3
Pex-LE60-150300	12"	190	7	86,9
Pex-LE60-150350	14"	190	7	92,4
Pex-LE60-150400	16"	203	7	114,6
Pex-LE60-150450	18"	216	7	130,4
Pex-LE60-150500	20"	241	7	165,9
Pex-LE60-150600	24"	279	7	229,1

Lined Elbows 30°
ANSI B16.5 - Class 150#

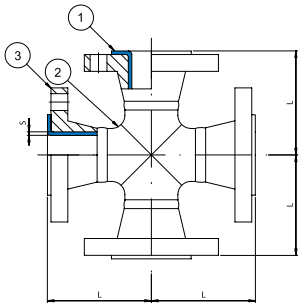
Catalog Number	DN (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LE30-15025	1"	45	3	2,7
Pex-LE30-15032	1 ¼"	51	3	3,6
Pex-LE30-15038	1 ½"	57	3	5,4
Pex-LE30-15050	2"	64	3,5	8,1
Pex-LE30-15063	2 ½"	76	3,5	11,7
Pex-LE30-15080	3"	76	4	13,5
Pex-LE30-150100	4"	102	4	16
Pex-LE30-150125	5"	114	4	20,8
Pex-LE30-150150	6"	127	6	26,4
Pex-LE30-150200	8"	140	6	43,2
Pex-LE30-150250	10"	165	6	56,3
Pex-LE30-150300	12"	190	7	82,5
Pex-LE30-150350	14"	190	7	87,8
Pex-LE30-150400	16"	203	7	108,8
Pex-LE30-150450	18"	216	7	123,8
Pex-LE30-150500	20"	241	7	157,5
Pex-LE30-150600	24"	279	7	217,5

Lined Equal Tee
ANSI B16.5 - Class 150#



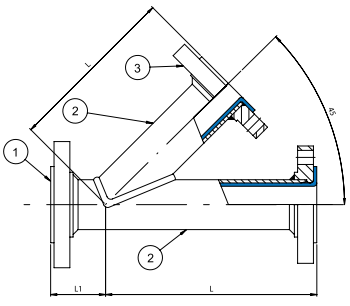
Catalog Number	DN (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LET-15025	1"	89	3,0	3,5
Pex-LET-15032	1 1/4"	95	3,0	4,6
Pex-LET-15038	1 1/2"	102	3,0	6,5
Pex-LET-15050	2"	114	3,5	10,0
Pex-LET-15063	2 1/2"	127	3,5	13,7
Pex-LET-15080	3"	140	4,0	21,0
Pex-LET-150100	4"	165	4,5	36,0
Pex-LET-150125	5"	190	4,5	43,0
Pex-LET-150150	6"	203	6,0	49,0
Pex-LET-150200	8"	229	6,0	75,0
Pex-LET-150250	10"	279	6,0	113,0
Pex-LET-150300	12"	305	7,0	153,0
Pex-LET-150350	14"	356	7,0	197,0
Pex-LET-150400	16"	381	7,0	263,0
Pex-LET-150450	18"	419	7,0	303,0
LET-150500	20"	457	7,0	330,0
LET-150600	24"	559	7,0	397,0

Lined Equal Cross
ANSI B16.5 - Class 150#



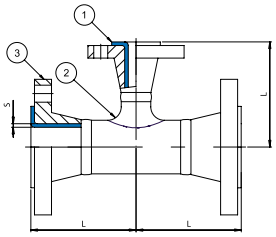
Catalog Number	DN (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LC-15025	1"	89	3,0	5,5
Pex-LC-15032	1 1/4"	95	3,0	6,5
Pex-LC-15038	1 1/2"	102	3,0	8,2
Pex-LC-15050	2"	114	3,5	13,6
Pex-LC-15063	2 1/2"	127	3,5	16,5
Pex-LC-15080	3"	140	4,0	23,6
Pex-LC-150100	4"	165	4,5	33,0
Pex-LC-150125	5"	190	4,5	43,0
Pex-LC-150150	6"	203	6,0	52,3
Pex-LC-150200	8"	229	6,0	86,3
Pex-LC-150250	10"	279	6,0	124,0
Pex-LC-150300	12"	305	7,0	169,0
Pex-LC-150350	14"	356	7,0	300,0
Pex-LC-150400	16"	381	7,0	372,0
Pex-LC-150450	18"	419	7,0	427,0
Pex-LC-150500	20"	457	7,0	547,0
Pex-LC-150600	24"	559	7,0	713,0

Lined Lateral Tee
ANSI B16.5 - Class 150#



Catalog Number	DN (inches)	L (mm)	L1 (mm)	Pex lining thickness	Weiht (kg)
Pex-LLT-15025	1"	146	45	3,0	4,0 7,0
Pex-LLT-15038	1 1/2"	178	51	3,0	9,0
Pex-LLT-15050	2"	203	64	3,5	19,5
Pex-LLT-15080	3"	254	76	4,0	36,0
Pex-LLT-150100	4"	305	76	4,5	53,0
Pex-LLT-150150	6"	368	89	6,0	80,0
Pex-LLT-150200	8"	445	115	6,0	13,0

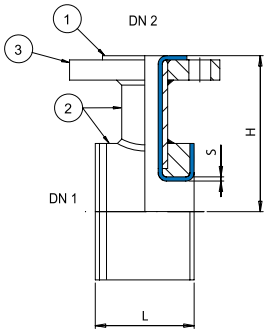
Lined Reducing Tee
ANSI B16.5 - Class 150#



Catalog Number	DN (inches)	DN2 (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LRT-15032-19	1 ¼"	1 ¼"	95	x	5,3
Pex-LRT-15032-25				3,0	5,5
Pex-LRT-15062-19	2 ½"	2 ½"	127	x	5,3
Pex-LRT-15062-25				3,0	5,5
Pex-LRT-150100-25	5"	1"	190	4,5 / 3	19,0
Pex-LRT-150100-38		1 ½"			19,8
Pex-LRT-150100-50		2"			21,5
Pex-LRT-150100-80		3"			23,5
Pex-LRT-15038-19	1 ½"	¾"	102	x	5,3
Pex-LRT-15038-25		1"		3,0	5,5
Pex-LRT-15050-25	2"	1"	114	3,0	7,9
Pex-LRT-15050-38		1 ½"			9,4
Pex-LRT-15080-25	3"	1"	140	4,0 / 3	13,8
Pex-LRT-15080-38		1 ½"			14,0
Pex-LRT-15080-50		2"			15,0
Pex-LRT-150100-25	4"	1"	165	4,5 / 3	19,0
Pex-LRT-150100-38		1 ½"			19,8
Pex-LRT-150100-50		2"			21,5
Pex-LRT-150100-80		3"			23,5
Pex-LRT-150150-25	6"	1"	203	4,5 / 3	28,2
Pex-LRT-150150-38		1 ½"			30,7
Pex-LRT-150150-50		2"			32,0
Pex-LRT-150150-80		3"			35,2
Pex-LRT-150150-100		4"			37,0
Pex-LRT-150200-25	8"	1"	229	6,0 / 3	42,5
Pex-LRT-150200-38		1 ½"			45,6
Pex-LRT-150200-50		2"			47,0
Pex-LRT-150200-80		3"			54,0
Pex-LRT-150200-100		4"			57,0
Pex-LRT-150200-150		6"		6,0	63,0
Pex-LRT-150250-25	10"	1"	280	6,0 / 3	64,6
Pex-LRT-150250-38		1 ½"			66,3
Pex-LRT-150250-50		2"			68,3
Pex-LRT-150250-80		3"			75,3
Pex-LRT-150250-100		4"			79,3
Pex-LRT-150250-150		6"		6,0	83,0
Pex-LRT-150250-200		8"			94,0
Pex-LRT-150300-25	12"	1"	305	6,0 / 3	127,0
Pex-LRT-150300-38		1 ½"			133,0
Pex-LRT-150300-50		2"			136,0
Pex-LRT-150300-80		3"			146,0
Pex-LRT-150300-100		4"			152,0
Pex-LRT-150300-150		6"		6,0	165,0
Pex-LRT-150300-200		8"			219,0
Pex-LRT-150300-250		10"		7,0	223,0

Catalog Number	DN (inches)	DN2 (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LRT-150350-25	14"	1"	356	6,0/3	169,0
Pex-LRT-150350-38		1 ½"			173,0
Pex-LRT-150350-38		2"			175,0
Pex-LRT-150350-50		3"			186,0
Pex-LRT-150350-80		4"			191,0
Pex-LRT-150350-100		6"		6,0	204,0
Pex-LRT-150350-150		8"			293,0
Pex-LRT-150350-200		10"		7,0	299,0
Pex-LRT-150350-300		12"			307,0
Pex-LRT-150400-25	16"	1"	305	6,0 / 3	227,0
Pex-LRT-150400-38		1 ½"			231,0
Pex-LRT-150400-50		2"			233,0
Pex-LRT-150400-80		3"			244,0
Pex-LRT-150400-100		4"			250,0
Pex-LRT-150400-150		6"		6,0	263,0
Pex-LRT-150400-200		8"			291,0
Pex-LRT-150400-250		10"		7,0	355,0
Pex-LRT-150400-300		12"			359,0
Pex-LRT-150400-350		14"			373,0
Pex-LRT-150450-25	18"	1"	419	6,0 / 3	303,0
Pex-LRT-150450-38		1 ½"			307,0
Pex-LRT-150450-50		2"			309,0
Pex-LRT-150450-80		3"			319,0
Pex-LRT-150450-100		4"			323,0
Pex-LRT-150450-150		6"		6,0	338,0
Pex-LRT-150450-200		8"			372,0
Pex-LRT-150450-250		10"		7,0	443,0
Pex-LRT-150450-300		12"			455,0
Pex-LRT-150450-350		14"			465,0
Pex-LRT-150450-400		16"			473,0
Pex-LRT-150500-25	20"	1"	457	6,0 / 3	279,0
Pex-LRT-150500-38		1 ½"			283,0
Pex-LRT-150500-50		2"			286,0
Pex-LRT-150500-80		3"			294,0
Pex-LRT-150500-100		4"			299,0
Pex-LRT-150500-150		6"		6,0	313,0
Pex-LRT-150500-200		8"			343,0
Pex-LRT-150500-250		10"		7,0	413,0
Pex-LRT-150500-300		12"			421,0
Pex-LRT-150500-350		14"			429,0
Pex-LRT-150500-400		16"			439,0
Pex-LRT-150500-450		18"			447,0
Pex-LRT-150600-25	24"	1"	500	6,0 / 3	363,0
Pex-LRT-150600-38		1 ½"			367,0
Pex-LRT-150600-500		2"			370,0
Pex-LRT-150600-80		3"			377,0
Pex-LRT-150600-100		4"			383,0
Pex-LRT-150600-150		6"		6,0	396,0
Pex-LRT-150600-200		8"			427,0
Pex-LRT-150600-250		10"		7,0	533,0
Pex-LRT-150600-300		12"			543,0
Pex-LRT-150600-350		14"			553,0
Pex-LRT-150600-400		16"			567,0
Pex-LRT-150600-450		18"			577,0
Pex-LRT-150600-500		20"			589,0

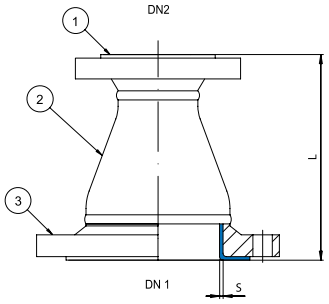
Lined Instrument Tee
ANSI B16.5 Class 150#



Catalog Number	DN (inches)	DN2 (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LIT-15025-25	1"	1"	50	4,0	2,2
Pex-LIT-15038-25	1 ½"	1"		4,0	2,8
Pex-LIT-15038-38		1 ½"	75		4,4
Pex-LIT-15050-25	2"	1"	50	4,0	3,6
Pex-LIT-15050-38		1 ½"	75		6,2
Pex-LIT-15050-50		2"	90		8,1
Pex-LIT-15062-25	2 ½"	1"	50	4,0	3,9
Pex-LIT-15062-38		1 ½"	75		7,2
Pex-LIT-15062-50		2"	90		9,8
Pex-LIT-15080-25	3"	1"	50	4,0	4,7
Pex-LIT-15080-38		1 ½"	75		8,3
Pex-LIT-15080-50		2"	90		12,6
Pex-LIT-150100-25	4"	1"	50	4,0	5,9
Pex-LIT-150100-38		1 ½"	75		8,9
Pex-LIT-150100-50		2"	90		16,0
Pex-LIT-150100-80		3"	130		24,5
Pex-LIT-150150-25	6"	1"	50	4,0	8,2
Pex-LIT-150150-38		1 ½"	75		14,7
Pex-LIT-150150-50		2"	90		21,8
Pex-LIT-150150-80		3"	130		30,1
Pex-LIT-150200-25	8"	1"	50	4,0	10,5
Pex-LIT-150200-38		1 ½"	75		17,8
Pex-LIT-150200-50		2"	90		23,3
Pex-LIT-150200-80		3"	130		33,3
Pex-LIT-150100-25	10"	1"	50	4,0	13,7
Pex-LIT-150100-38		1 ½"	75		23,3
Pex-LIT-150100-50		2"	90		26,0
Pex-LIT-150100-80		3"	160		36,7
Pex-LIT-150100-25	12"	1"	50	4,0	43,0
Pex-LIT-150100-38		1 ½"	75		55,5
Pex-LIT-150100-50		2"	90		62,0
Pex-LIT-150100-80		3"	160		69,0
Pex-LIT-150100-25	14"	1"	50	4,0	53,1
Pex-LIT-150100-38		1 ½"	75		66,5
Pex-LIT-150100-50		2"	90		73,7
Pex-LIT-150100-80		3"	160		103,0
Pex-LIT-150100-25	16"	1"	90	4,0	59,0
Pex-LIT-150100-38		1 ½"	110		74,0
Pex-LIT-150100-50		2"	120		83,0
Pex-LIT-150100-80		3"	160		116,7

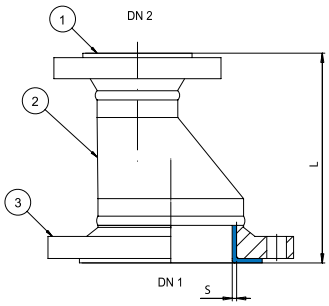
Catalog Number	DN (inches)	DN2 (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LIT-150100-25	18"	1"	90	4,0	68,5
Pex-LIT-150100-38		1 ½"	110		90,5
Pex-LIT-150100-50		2"	120		93,7
Pex-LIT-150100-80		3"	160		129,7
Pex-LIT-150100-19	20"		90	4,0	X
Pex-LIT-150100-25		1"			72,0
Pex-LIT-150100-38		1 ½"	110		89,7
Pex-LIT-150100-50		2"	120		100,0
Pex-LIT-150100-80		3"	160		137,0
Pex-LIT-150100-25	24"	1"	90	4,0	79,1
Pex-LIT-150100-38		1 ½"	110		94,5
Pex-LIT-150100-50		2"	120		107,5
Pex-LIT-150100-80		3"	160		150,0

Lined Concentric Reducer
ANSI B16.5 - Class 150#



Catalog Number	DN (inches)	DN2 (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LCR-15032-25	1 ¼"	1"	114	3,0	3,0
Pex-LCR-15038-19	1 ½"	¾"	114	X 3,0	3,1
Pex-LCR-15038-25		1"			3,3
Pex-LCR-15050-25	2"	1"	127	3,0	4,1
Pex-LCR-15050-38		1 ½"			4,8
Pex-LCR-15062-25	2 ½"	1"	140	3,0	5,8
Pex-LCR-15062-50		2"			6,9
Pex-LCR-15080-25	3"	1"	152	4,0 / 3	6,7
Pex-LCR-15080-38		1 ½"			6,2
Pex-LCR-15080-50		2"			6,9
Pex-LCR-150100-25	4"	1"	178	4,0 / 3	9,9
Pex-LCR-150100-38		1 ½"			9,3
Pex-LCR-150100-50		2"			9,8
Pex-LCR-150100-80		3"			12,4
Pex-LCR-150125-80	5"	3"	203	4,5 / 3,5	12,7
Pex-LCR-150125-100		4"			15,0
Pex-LCR-150150-25	6"	1"	229	4,5 / 3,0	18,9
Pex-LCR-150150-50		2"			19,9
Pex-LCR-150150-80		3"		5,0 / 4,0	17,4
Pex-LCR-150150-100		4"			18,3
Pex-LCR-150200-100	8"	4"	279	6,0	22,0
Pex-LCR-150200-150		6"			25,3
Pex-LCR-150250-100	10"	4"	305	6,0	33,0
Pex-LCR-150250-150		6"			37,5
Pex-LCR-150250-200		8"			44,7
Pex-LCR-150300-150	12"	6"	356	7,0	45,9
Pex-LCR-150300-200		8"			47,8
Pex-LCR-150300-250		10"			52,5
Pex-LCR-150350-200	14"	8"	406	7,0	69,0
Pex-LCR-150350-250		10"			73,5
Pex-LCR-150350-300		12"			80,0
Pex-LCR-150400-250	16"	10"	457	7,0	98,0
Pex-LCR-150400-300		12"			105,0
Pex-LCR-150400-350		14"			115,0
Pex-LCR-150450-300	18"	12"	483	7,0	135,0
Pex-LCR-150450-350		14"			148,0
Pex-LCR-150450-400		16"			157,0
Pex-LCR-150500-300	20"	12"	508	7,0	185,0
Pex-LCR-150500-350		14"			198,0
Pex-LCR-150500-400		16"			210,0
Pex-LCR-150500-450		18"			218,0
Pex-LCR-150600-400	24"	16"	610	7,0	272,0
Pex-LCR-150600-450		18"			282,0
Pex-LCR-150600-500		20"			291,0

Lined Eccentric Reducer
ANSI B16.5 - Class 150#



Catalog Number	DN (inches)	DN2 (inches)	L (mm)	Pex lining thickness	Weight (kg)
Pex-LECR-15038-25	1 ½"	1"	114	3,0	3,0
Pex-LECR-15050-25	2"	1"	127	3,0	4,0
Pex-LECR-15050-38		1 ½"			4,3
Pex-LECR-15080-25	3"	1"	152	4,0 / 3	6,7
Pex-LECR-15080-38		1 ½"			6,2
Pex-LECR-15080-50		2"			6,9
Pex-LECR-150100-38	4"	1 ½"	178	4,5 / 3,5	9,3
Pex-LECR-150100-50		2"			9,8
Pex-LECR-150100-80		3"			12,4
Pex-LECR-150150-50	6"	2"	229	5,0 / 4,0	15,6
Pex-LECR-150150-80		3"			17,0
Pex-LECR-150150-100		4"			18,7
Pex-LECR-150200-100	8"	4"	279	6,0	22,0
Pex-LECR-150200-150		6"			28,0
Pex-LECR-150250-100	10"	4"	305	6,0	33,0
Pex-LECR-150250-150		6"			37,5
Pex-LECR-150250-200		8"			44,7
Pex-LECR-150300-150	12"	6"	356	7,0	45,9
Pex-LECR-150300-200		8"			47,8
Pex-LECR-150300-250		10"			52,5
Pex-LECR-150350-200	14"	8"	406	7,0	69,0
Pex-LECR-150350-250		10"			73,5
Pex-LECR-150350-300		12"			80,0
Pex-LECR-150400-250	16"	10"	457	7,0	98,0
Pex-LECR-150400-300		12"			105,0
Pex-LECR-150400-350		14"			115,0
Pex-LECR-150450-300	18"	12"	483	7,0	135,0
Pex-LECR-150450-350		14"			148,0
Pex-LECR-150450-400		16"			157,0
Pex- LECR-150500-300	20"	12"	508	7,0	185,0
Pex- LECR-150500-350		14"			198,0
Pex- LECR-150500-400		16"			210,0
Pex- LECR-150500-450		18"			218,0
Pex- LECR-150600-500	24"	20"	610	7,0	291,0