

# PTFE LINED PIPE FITTING



## Straight pipe with linear thickness acc. to Series 2: In bar abs

Diameter DN	At 120°C	At 230°C
≤ DN 80	0.00	0.00
DN 100 - DN 200	0.00	0.00
DN 250 - DN 400	0.00	-

## Bends with linear thickness acc. to Series 2 : In bar abs

Diameter DN	At 20°C	At 100°C	At 150°C	At 200° C
≤ DN 50	0.00	0.05	0.10	0.15
DN 80	0.00	0.05	0.15	0.20
DN 100	0.25	0.10	0.20	0.30
DN 125	0.25	0.60	0.85	1.00
DN 150	0.25	0.60	0.85	1.00
DN 200	0.40	0.75	0.90	1.00
DN 250	0.45	0.90	0.95	1.00
DN 300	0.75	0.95	1.00	1.00
DN 350	1.00	1.00	1.00	1.00
DN 400	1.00	1.00	1.00	1.00
DN 450	1.00	1.00	1.00	1.00
DN 500	1.00	1.00	1.00	1.00

## T-piece with liner thickness acc. to Series 2 : In bar abs

Diameter DN	At 20°C	At 100°C	At 150°C	At 200°C
≤ DN 50	0.00	0.00	0.00	0.00
DN 80	0.00	0.00	0.10	0.20
DN 100	0.00	0.15	0.25	0.30
DN 125	0.25	0.60	0.85	1.00
DN 150	0.25	0.60	0.85	1.00
DN 200	0.40	0.75	0.90	1.00
DN 250	0.45	0.80	0.90	1.00
DN 300	0.75	0.90	1.00	1.00
DN 350	1.00	1.00	1.00	1.00
DN 400	1.00	1.00	1.00	1.00
DN 450	1.00	1.00	1.00	1.00
DN 500	1.00	1.00	1.00	1.00

## Thickness of PTFE in cas vacuum resistant pipes

Diameter	DN 15 - DN 40	DN 50 - DN 65	DN 80	DN 100 - DN 200	DN 250	DN 300 - DN 400
Thickness of PTFE ( mm )	3.0	4.0	4.5	5.0	7.0	8.0

# PRODUCTS OVERVIEW

Machine parts, pipes, expansion joints etc. Based on Polyfluorethylene have all the advantages of the PTFE base material. These products have an excellent resistance against:

- Acids
- Caustic Soda
- Chlorides
- Sulphates
- Oxidants

Products out of PTFE have an excellent corrosion resistance, even at extreme temperatures between -190°C and +260°C

## Properties of PTFE

Density	g/cm <sup>3</sup>	2.1 - 2.3
Continuous operation temperature	°C	-190 / +260°C
Short time peak temperature	°C	+280°C
Ultimate strain	%	200 - 300
Hardness ( shore D )	Shore D	55 - 70
Notched Impact Strength	Kg / cm <sup>2</sup>	13 - 15
Pressure resistance at 0.1% deformation	Kg / cm <sup>2</sup>	580
Deformation at 50°C and 85 kg /cm <sup>2</sup> in 85 hours	%	4 - 8
Specific heat	Cal / g / °C	0.25
Elongation coefficient	10 <sup>-5</sup> / °C	8
Thermo conductivity at 20°C	W/K m	0.21
Dielectric Constant	50 / 10 <sup>6</sup> Hz	2.0 - 2.1
Arc resistant load at surface	Ω cm	>10 <sup>18</sup> / - 10 <sup>19</sup>
Tensile strength	Kg / cm <sup>2</sup>	200 - 300
Relative Humidity		>10 <sup>13</sup>
Dielectric loss factor	50 / 800 / 10 <sup>6</sup> Hz	<5.10 <sup>-4</sup>
Dielectric strength	KV / mm	20 - 40
Water absorption	%	0
Friction coefficient	PTFE - PTFE dry	0.09 - 0.19
Friction coefficient	PTFE -PTFE greased	0.04 - 0.07
Friction coefficient	PTFE - Steel dry	0.07 - 0.11
Friction coefficient	PTFE -PTFE greased	0.02 - 0.06
Weather -worn after 3 years		none

The PTFE / PFA lined piping consist out of several standard parts that are connected by flanges. Smaller pieces and pieces with a complicated shape are executed with a PFA ( injection molded ) inlay. The larger diameters are executed with a PTFE ( paste extruded ) inlay.

The standard dimensions are DN 15 to DN 500 for DIN EN pipes and 1/2" to 20" for ANSI pipes.

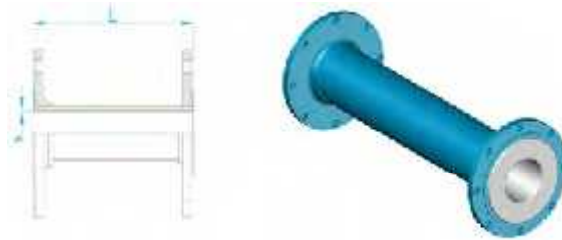
Upon request we can supply larger dimensions or special shaped pipe parts.

### **PTFE LINED PIPE SPOOL**

One fixed ( F ) and one loose ( L ) flange.

**EN 1092 - 1 PN 10, PN 16**

**ANSI 150lbs, 300lbs**



**DN 15 -  
DN 500**

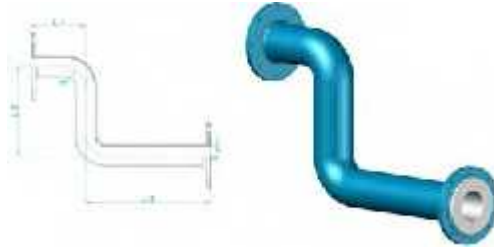
Standard length depending on the diameter and maximal 6000 mm.

### **PTFE LINED BENDED PIPE SPOOL**

One fixed ( F ) and one loose ( L ) flange.

**EN 1092 - 1 PN 10, PN 16**

**ANSI 150 lbs, 300 lbs**



**DN 25 -  
DN 100**

The bended pipe spools are only available in a limited number of diameters and dimensions.

### **PTFE LINED BENDS 30°**

Both flanges are fixed ( F ).

**EN 1092 - 1 PN 10, PN 16**

**ANSI 150 lbs, 300 lbs**



**DN 15 -  
DN 500**

### **PTFE LINED BENDS 45°**

Both flanges are fixed ( F ).

**EN 1092 - 1 PN 10, PN 16**

**ANSI 150 lbs, 300 lbs**



**DN 15 -  
DN 500**

# STANDARD RANGE

## PTFE LINED BENDS 60°

Both flanges are fixed ( F ).

EN 1092 - 1 PN 10, PN 16

ANSI 150 lbs, 300 lbs



DN 15 -  
DN 500

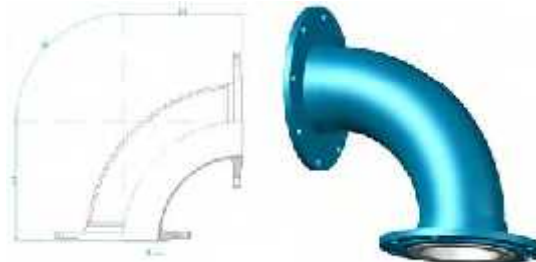
## PTFE LINED BENDS 90°

Both flanges are fixed ( F ).

EN 1092 - 1 PN 10, PN 16

ANSI 150 lbs, 300 lbs

Form 1



DN 15 -  
DN 100

## PTFE LINED BENDS 90°

Both flanges are fixed ( F ).

EN 1092 - 1 PN 10, PN 16

ANSI 150 lbs, 300 lbs

Form 2



DN 15 -  
DN 100

## PTFE LINED EQUAL TEE

All flanges are fixed ( F ).

EN 1092 - 1 PN 10, PN 16

ANSI 150 lbs, 300 lbs

PTFE lined



DN 125 -  
DN 100

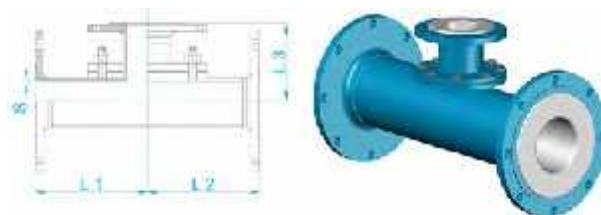
## PTFE LINED REDUCED TEE

All flanges are fixed ( F ).

EN 1092 - 1 PN 10, PN 16

ANSI 150 lbs, 300 lbs

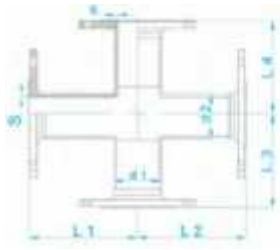
PTFE lined



DN 125 -  
DN 100

**PFA LINED EQUAL CROSS**

All flanges are fixed ( F ).  
 EN 1092 -1 PN 10, PN 16  
 ANSI 150 lbs, 300 lbs

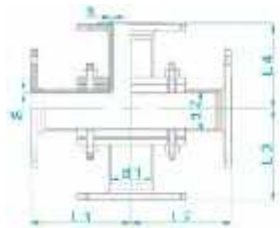


**DN 15 -  
 DN 100**

**PFA lined**

**PTFE LINED EQUAL CROSS**

All flanges are fixed ( F ).  
 EN 1092 -1 PN 10, PN 16  
 ANSI 150 lbs, 300 lbs

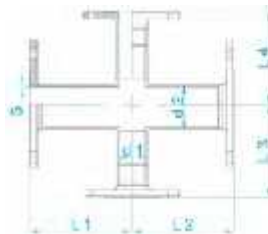


**DN 125 -  
 DN 500**

**PTFE lined**

**PFA LINED REDUCED CROSS**

All flanges are fixed ( F ).  
 EN 1092 -1 PN 10, PN 16  
 ANSI 150 lbs, 300 lbs

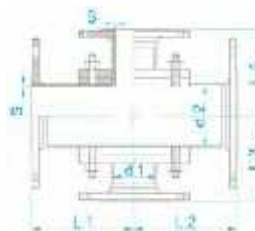


**DN 15 -  
 DN 100**

**PFA lined**

**PTFE LINED REDUCED CROSS**

All flanges are fixed ( F ).  
 EN 1092 -1 PN 10, PN 16  
 ANSI 150 lbs, 300 lbs



**DN 125 -  
 DN 500**

**PTFE lined**

# STANDARD RANGE

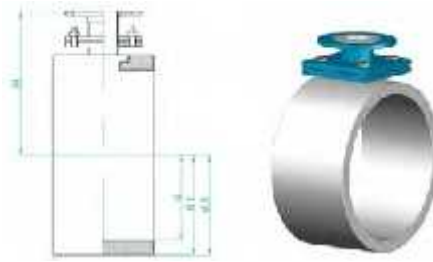
## PTFE LINED INSTRUMENT TEE

To be clamped between flanges.

EN 1092 -1 PN 10, PN 16

ANSI 150lbs, 300lbs

PTFE lined Style 3



DN 125 -  
DN 500

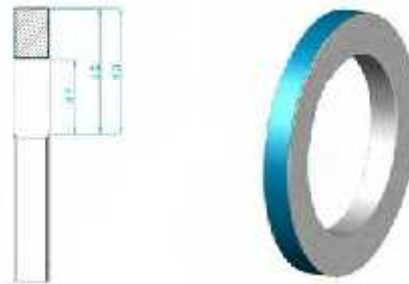
## PTFE LINED SPACER

To be clamped between flanges.

EN 1092 -1 PN 10, PN 16

ANSI 150lbs, 300lbs

PTFE lined Style 2



DN 15 -  
DN 400

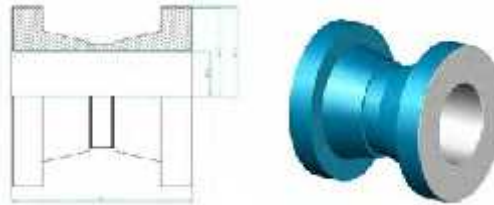
## PTFE LINED REDUCED SPACER

To be clamped between flanges.

EN 1092 -1 PN 10, PN 16

ANSI 150lbs, 300lbs

PTFE lined Style 3



DN 15 -  
DN 400