

Insulation Sets





Insulation sets are used to limit corrosion in pipeline systems. Where dissimilar metals are present, the sets remove the possibility of the system acting as a galvanic cell and reduce the risk of galvanic corrosion of the pipework.

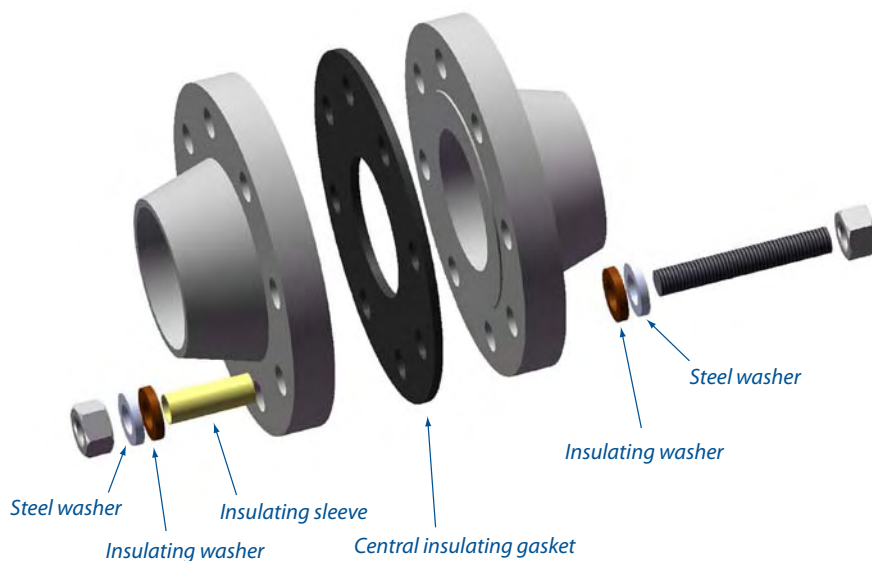
Insulation sets are also used to isolate cathodically protected piping systems where they prevent the flow of electro-static charge.

Each flange insulation set comprises one central flat or oval section gasket, one insulating and two plated steel washers per bolt. The sets are individually packed and clearly labelled with the flange rating, size, type and material combination.

	Neoprene Faced Phenolic *	KLINGERSIL C-4430	Reinforced phenolic *	Phenolic	Mylar *	Glass reinforced epoxy resin, G-10
Component	Gasket	Gasket	Insulating Washer	Insulating Sleeve	Insulating Sleeve	Gasket, washer, sleeve
Dielectric Strength (V/mm)	500	1500	200	140	4000	750-800
Compressive Strength (N/mm²)	270	-	270	-	-	450
Flexural Strength (N/mm²)	155	-	155	-	-	450
Water Absorption (%)	1.6	10.6	1.0	1.0	0.8	0.05
Maximum Operating Temperature (°C)	107	400	107	107	145	150

* Denotes standard materials

Typical Example of Insulation Set Components



Neoprene-faced phenolic resin - Type E

Applications:

- Oil and hydrocarbons where flange insulation is a requirement.
- Used on ASME Class 150 & 300 pipework

Properties:

- This insulation set comprises a full-face neoprene-coated phenolic gasket with mylar insulating sleeves and reinforced phenolic and steel washers.
- Manufactured from materials with high dielectric strength to ensure minimum electrical contact between flanges.

Typical Specifications:

Core material :	Phenolic resin
Compressive strength :	450MPa
Dielectric strength :	500VPM
Temperature range :	-200°C to +105°C
Sealing material :	Neoprene
Temperature range :	-30°C to +110°C
Availability :	Other insulating materials are available, such as KLINGERSIL C-4430 for higher temperatures, KLINGERTop-chem-2000 for fire-safe applications and KLINGERTop-chem-2003 for chemically aggressive duties





Neoprene-faced phenolic resin - Type F

Applications:

- Oil and hydrocarbons where flange insulation is a requirement.
- Used on ASME Class 150 & 300 pipework

Properties:

- This insulation set comprises an IBC (inside bolt circle) neoprene-coated phenolic gasket with mylar insulating sleeves and reinforced phenolic and steel washers.
- Manufactured from materials with high dielectric strength to ensure minimum electrical contact between flanges.

Typical Specifications:

Core material :	Phenolic resin
Compressive strength :	450MPa
Dielectric strength :	500VPM
Temperature range :	-200°C to +105°C
Sealing material :	Neoprene
Temperature range :	-30°C to +110°C
Availability :	Other insulating materials are available, such as KLINGERSIL C-4430 for higher temperatures, KLINGERtop-chem-2000 for fire-safe applications and KLINGERtop-chem-2003 for chemically aggressive duties

Pikotek PGE

Applications:

- Used to electrically isolate sections of pipework to restrict the likelihood of galvanic corrosion
- Used on ASME Class 150, 300 & 600 pipework

Properties:

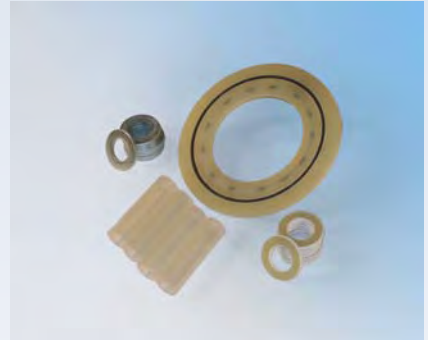
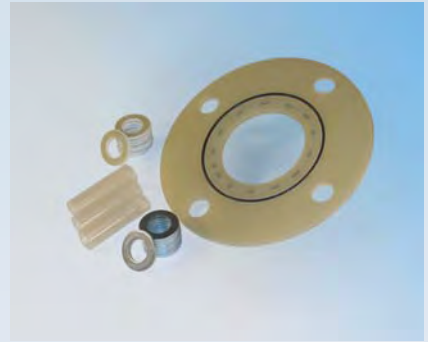
- Pikotek PGE is manufactured from high-strength glass-fibre reinforced epoxy resin with sealing elements seated in machined grooves
- Supplied with high strength insulating washers and sleeving to resist the forces present in high pressure applications.
- A range of sealing elements are available such as Viton, nitrile rubber and also spring-energised PTFE
- Excellent sealing characteristics at low bolt loads
- Also available with high-temperature core manufactured from G-11 epoxy resin.

Typical Specifications:

Core material :	G-10	G-11	
Compressive strength :	450MPa	340MPa	
Dielectric strength :	750-800VPM	500VPM	
Temperature range :	-200°C to +150°C	-200°C to +177°C	
Sealing material :	Viton	PTFE	Nitrile
Temperature range :	-15°C to +200°C	-200°C to +260°C	-40°C to +120°C

Applications:

- Available in Type E full-face and Type F inside bolt circle styles





Pikotek VCS

Applications:

- Used to electrically isolate sections of pipework to restrict the likelihood of galvanic corrosion
- Used on high pressure applications including ASME Class 900 to 2500 and also up API 15000 pipework
- Can be used on mis-matched flanges, the sealing elements are positioned to allow the gasket to be used on RTJ and raised face applications

Properties:

- Pikotek VCS is manufactured from a machined metallic core with high-strength glass-fibre reinforced epoxy resin insulating faces
- Supplied with high-strength G10 insulating washers and sleeving to resist the forces present in high pressure applications and zinc-plated carbon steel washers to spread the load across the insulating washers during installation.
- Spring-energised PTFE or Viton sealing elements are available
- Also available with high-temperature core manufactured from G-11 epoxy resin.

Typical Specifications:

Core material :	G-10	G-11
Compressive strength :	450MPa	340MPa
Dielectric strength :	750-800VPM	500VPM
Temperature range :	-200°C to +150°C	-200°C to +177°C
Sealing material :	Viton	PTFE
Temperature range :	-15°C to +200°C	-200°C to +260°C

Availability:

- Also manufactured with Inconel and duplex stainless steel cores.

Dimensions of Type E Insulation Sets to suit ANSI Standard Flanges

ASME B16.21 Class 150

Nominal Bore	Insulating Gasket				Insulating Washers	Insulating Sleeves	
	OD x ID	Diameter of Holes	Number of Bolt Holes	Bolt Circle Diameter	OD x ID (mm)	OD x ID (mm)	Length
1/2	89 x 16	16	4	60	29 x 16	15.0 x 13.1	32
3/4	98 x 22	16	4	70	29 x 16	15.0 x 13.1	35
1	108 x 25	16	4	79	29 x 16	15.0 x 13.1	34
1 1/4	117 x 32	16	4	89	29 x 16	15.0 x 13.1	37
1 1/2	127 x 38	16	4	98	29 x 16	15.0 x 13.1	40
2	152 x 51	19	4	121	33 x 19	17.6 x 16.1	43
2 1/2	178 x 64	19	4	140	33 x 19	17.6 x 16.1	50
3	191 x 76	19	4	152	33 x 19	17.6 x 16.1	53
4	229 x 102	19	8	191	33 x 19	17.6 x 16.1	53
5	254 x 127	22	8	216	38 x 22	21.7 x 20.5	53
6	279 x 152	22	8	241	38 x 22	21.7 x 20.5	56
8	343 x 203	22	8	298	38 x 22	21.7 x 20.5	62
10	406 x 254	25	12	362	44 x 25	23.5 x 22.5	65
12	483 x 305	25	12	432	44 x 25	23.5 x 22.5	68
14	533 x 337	29	12	476	51 x 29	27.5 x 26.0	75
16	597 x 387	29	16	540	51 x 29	27.5 x 26.0	78
18	635 x 438	32	16	578	56 x 32	30.0 x 28.5	84
20	699 x 489	32	20	635	56 x 32	30.0 x 28.5	94
24	813 x 591	35	20	749	60 x 35	33.5 x 32.1	100

ASME B16.21 Class 300

Nominal Bore	Insulating Gasket				Insulating Washers	Insulating Sleeves	
	OD x ID	Diameter of Holes	Number of Bolt Holes	Bolt Circle Diameter	OD x ID (mm)	OD x ID (mm)	Length
1/2	95 x 16	16	4	66	29 x 16	15.0 x 13.1	38
3/4	117 x 22	19	4	83	33 x 19	17.6 x 16.1	41
1	124 x 25	19	4	89	33 x 19	17.6 x 16.1	40
1 1/4	133 x 32	19	4	98	33 x 19	17.6 x 16.1	43
1 1/2	156 x 38	22	4	114	38 x 22	21.7 x 20.5	46
2	165 x 51	19	8	127	33 x 19	17.6 x 16.1	50
2 1/2	191 x 64	22	8	149	38 x 22	21.7 x 20.5	56
3	210 x 76	22	8	168	38 x 22	21.7 x 20.5	62
4	254 x 102	22	8	200	38 x 22	21.7 x 20.5	69
5	279 x 127	22	8	235	38 x 22	21.7 x 20.5	75
6	318 x 152	22	12	270	38 x 22	21.7 x 20.5	78
8	381 x 203	25	12	330	44 x 25	23.5 x 22.5	88
10	445 x 254	29	16	387	51 x 29	27.5 x 26.0	100
12	521 x 305	32	16	451	56 x 32	30.0 x 28.5	107
14	584 x 337	32	20	514	56 x 32	30.0 x 28.5	113
16	648 x 387	35	20	572	60 x 35	33.5 x 32.1	119
18	711 x 438	35	24	629	60 x 35	33.5 x 32.1	126
20	775 x 489	35	24	686	60 x 35	33.5 x 32.1	129
24	914 x 591	41	24	813	71 x 41	40.0 x 38.5	145

Sheet Material

Dimensions of Type F Insulation Sets to suit ANSI Standard Flanges

ASME B16.21 Class 150

Nominal Bore	Insulating Gasket	Number of Bolts	Insulating Washers	Insulating Sleeves	
	OD x ID (mm)		OD x ID (mm)	OD x ID (mm)	Length (mm)
1/2	43 x 16	4	29 x 16	15.0 x 13.1	32
3/4	52 x 22	4	29 x 16	15.0 x 13.1	35
1	62 x 25	4	29 x 16	15.0 x 13.1	34
1 1/4	71 x 32	4	29 x 16	15.0 x 13.1	37
1 1/2	81 x 38	4	29 x 16	15.0 x 13.1	40
2	100 x 51	4	33 x 19	17.6 x 16.1	43
2 1/2	119 x 64	4	33 x 19	17.6 x 16.1	50
3	132 x 76	4	33 x 19	17.6 x 16.1	53
4	170 x 102	8	33 x 19	17.6 x 16.1	53
5	192 x 127	8	38 x 22	21.7 x 20.5	53
6	217 x 152	8	38 x 22	21.7 x 20.5	56
8	275 x 203	8	38 x 22	21.7 x 20.5	62
10	335 x 254	12	44 x 25	23.5 x 22.5	65
12	405 x 305	12	44 x 25	23.5 x 22.5	68
14	446 x 337	12	51 x 29	27.5 x 26.0	75
16	510 x 387	16	51 x 29	27.5 x 26.0	78
18	545 x 438	16	56 x 32	30.0 x 28.5	84
20	602 x 489	20	56 x 32	30.0 x 28.5	94
24	713 x 591	20	60 x 35	33.5 x 32.1	100

ASME B16.21 Class 300

Nominal Bore	Insulating Gasket	Number of Bolt Holes	Insulating Washers	Insulating Sleeves	
	OD x ID (mm)		OD x ID (mm)	OD x ID (mm)	Length (mm)
1/2	49 x 16	4	29 x 16	15.0 x 13.1	38
3/4	62 x 22	4	33 x 19	17.6 x 16.1	41
1	68 x 25	4	33 x 19	17.6 x 16.1	40
1 1/4	78 x 32	4	33 x 19	17.6 x 16.1	43
1 1/2	90 x 38	4	38 x 22	21.7 x 20.5	46
2	106 x 51	8	33 x 19	17.6 x 16.1	50
2 1/2	125 x 64	8	38 x 22	21.7 x 20.5	56
3	144 x 76	8	38 x 22	21.7 x 20.5	62
4	176 x 102	8	38 x 22	21.7 x 20.5	69
5	211 x 127	8	38 x 22	21.7 x 20.5	75
6	246 x 152	12	38 x 22	21.7 x 20.5	78
8	303 x 203	12	44 x 25	23.5 x 22.5	88
10	357 x 254	16	51 x 29	27.5 x 26.0	100
12	418 x 305	16	56 x 32	30.0 x 28.5	107
14	481 x 337	20	56 x 32	30.0 x 28.5	113
16	535 x 387	20	60 x 35	33.5 x 32.1	119
18	592 x 438	24	60 x 35	33.5 x 32.1	126
20	649 x 489	24	60 x 35	33.5 x 32.1	129
24	770 x 591	24	71 x 41	40.0 x 38.5	145

Dimensions of Type E Insulation Sets to suit DIN Standard Flanges

PN10

Nominal Bore	Insulating Gasket				Insulating Washers	Insulating Sleeves	
	OD x ID (mm)	Diameter of Holes (mm)	Number of Bolt Holes	Bolt Circle Diameter (mm)		OD x ID (mm)	Length (mm)
15	95 x 17	14	4	65	29 x 16	13.2 x 12.2	41
20	105 x 22	14	4	75	29 x 16	13.2 x 12.2	45
25	115 x 28	14	4	85	29 x 16	13.2 x 12.2	45
32	140 x 37	18	4	100	33 x 19	17.2 x 16.2	45
40	150 x 43	18	4	110	33 x 19	17.2 x 16.2	45
50	165 x 55	18	4	125	33 x 19	17.2 x 16.2	49
65	185 x 70	18	8	145	33 x 19	17.2 x 16.2	49
80	200 x 83	18	8	160	33 x 19	17.2 x 16.2	53
100	220 x 107	18	8	180	33 x 19	17.2 x 16.2	53
125	250 x 131	18	8	210	33 x 19	17.2 x 16.2	57
150	285 x 159	22	8	240	38 x 22	21.2 x 20.2	57
200	340 x 208	22	8	295	38 x 22	21.2 x 20.2	61
250	395 x 260	22	12	350	38 x 22	21.2 x 20.2	65
300	445 x 310	22	12	400	38 x 22	21.2 x 20.2	65
350	505 x 341	22	16	460	38 x 22	21.2 x 20.2	65
400	565 x 392	26	16	515	51 x 29	25.2 x 24.2	65
450	615 x 443	26	20	565	51 x 29	25.2 x 24.2	69
500	670 x 494	26	20	620	51 x 29	25.2 x 24.2	69
600	780 x 596	30	20	725	56 x 32	28.2 x 27.2	69

PN16

Nominal Bore	Insulating Gasket				Insulating Washers	Insulating Sleeves	
	OD x ID (mm)	Diameter of Holes (mm)	Number of Bolt Holes	Bolt Circle Diameter (mm)		OD x ID (mm)	Length (mm)
15	95 x 17	14	4	65	29 x 16	13.2 x 12.2	41
20	105 x 22	14	4	75	29 x 16	13.2 x 12.2	45
25	115 x 28	14	4	85	29 x 16	13.2 x 12.2	45
32	140 x 37	18	4	100	33 x 19	17.2 x 16.2	45
40	150 x 43	18	4	110	33 x 19	17.2 x 16.2	45
50	165 x 55	18	4	125	33 x 19	17.2 x 16.2	49
65	185 x 70	18	8	145	33 x 19	17.2 x 16.2	49
80	200 x 83	18	8	160	33 x 19	17.2 x 16.2	53
100	220 x 107	18	8	180	33 x 19	17.2 x 16.2	53
125	250 x 131	18	8	210	33 x 19	17.2 x 16.2	57
150	285 x 159	22	8	240	38 x 22	21.2 x 20.2	57
200	340 x 208	22	12	295	38 x 22	21.2 x 20.2	61
250	405 x 260	26	12	355	51 x 29	25.2 x 24.2	65
300	460 x 310	26	12	410	51 x 29	25.2 x 24.2	69
350	520 x 340	26	16	470	51 x 29	25.2 x 24.2	73
400	580 x 390	30	16	525	56 x 32	28.2 x 27.2	77
450	640 x 441	30	20	585	56 x 32	28.2 x 27.2	81
500	715 x 492	33	20	650	60 x 35	31.2 x 30.2	81
600	840 x 592	36	20	770	67 x 38	34.2 x 33.2	85

Sheet Material

Dimensions of Type E Insulation Sets to suit DIN Standard Flanges

PN25

Nominal Bore	Insulating Gasket				Insulating Washer	Insulating Sleeves	
	OD x ID	Diameter of Holes	Number of Bolt Holes	Bolt Circle Diameter	OD x ID (mm)	OD x ID (mm)	Length
15	95 x 17	14	4	65	29 x 16	13.2 x 12.2	45
20	105 x 22	14	4	75	29 x 16	13.2 x 12.2	49
25	115 x 28	14	4	85	29 x 16	13.2 x 12.2	49
32	140 x 37	18	4	100	33 x 19	17.2 x 16.2	49
40	150 x 43	18	4	110	33 x 19	17.2 x 16.2	49
50	165 x 55	18	4	125	33 x 19	17.2 x 16.2	53
65	185 x 70	18	8	145	33 x 19	17.2 x 16.2	57
80	200 x 83	18	8	160	33 x 19	17.2 x 16.2	61
100	235 x 107	22	8	190	38 x 22	21.2 x 20.2	61
125	270 x 131	26	8	220	51 x 29	25.2 x 24.2	65
150	300 x 159	26	8	250	51 x 29	25.2 x 24.2	69
200	360 x 207	26	12	310	51 x 29	25.2 x 24.2	73
250	425 x 259	30	12	370	56 x 32	28.2 x 27.2	77
300	485 x 308	30	16	430	56 x 32	28.2 x 27.2	81
350	555 x 340	33	16	490	60 x 35	31.2 x 30.2	89
400	620 x 389	36	16	550	67 x 38	34.2 x 33.2	93
450	670 x 439	36	20	600	67 x 38	34.2 x 33.2	97
500	730 x 488	36	20	660	67 x 38	34.2 x 33.2	101
600	845 x 588	39	20	770	71 x 41	37.2 x 36.2	105

PN40

Nominal Bore	Insulating Gasket				Insulating Washer	Insulating Sleeves	
	OD x ID	Diameter of Holes	Number of Bolt Holes	Bolt Circle Diameter	OD x ID (mm)	OD x ID (mm)	Length
15	95 x 17	14	4	65	29 x 16	13.2 x 12.2	45
20	105 x 22	14	4	75	29 x 16	13.2 x 12.2	49
25	115 x 28	14	4	85	29 x 16	13.2 x 12.2	49
32	140 x 37	18	4	100	33 x 19	17.2 x 16.2	49
40	150 x 43	18	4	110	33 x 19	17.2 x 16.2	49
50	165 x 55	18	4	125	33 x 19	17.2 x 16.2	53
65	185 x 70	18	8	145	33 x 19	17.2 x 16.2	57
80	200 x 83	18	8	160	33 x 19	17.2 x 16.2	61
100	235 x 107	22	8	190	38 x 22	21.2 x 20.2	61
125	270 x 131	26	8	220	51 x 29	25.2 x 24.2	65
150	300 x 159	26	8	250	51 x 29	25.2 x 24.2	69
200	375 x 207	30	12	320	56 x 32	28.2 x 27.2	81
250	450 x 259	33	12	385	60 x 35	31.2 x 30.2	89
300	515 x 308	33	16	450	60 x 35	31.2 x 30.2	97
350	580 x 338	36	16	510	67 x 38	34.2 x 33.2	105
400	660 x 384	39	16	585	71 x 41	37.2 x 36.2	103
450	685 x 432	39	20	610	71 x 41	37.2 x 36.2	113
500	755 x 480	42	20	670	71 x 41	40.2 x 39.2	117
600	890 x 578	48	20	795	83 x 48	46.2 x 45.2	133

Dimensions of Type F Insulation Sets to suit DIN Standard Flanges

PN10

Nominal Bore	Insulating Gasket	Number of Bolts	Insulating Washers	Insulating Sleeves	
	OD x ID (mm)		OD x ID (mm)	OD x ID (mm)	Length (mm)
15	50 x 17	4	29 x 16	13.2 x 12.2	41
20	60 x 22	4	29 x 16	13.2 x 12.2	45
25	70 x 28	4	29 x 16	13.2 x 12.2	45
32	80 x 37	4	33 x 19	17.2 x 16.2	45
40	90 x 43	4	33 x 19	17.2 x 16.2	45
50	105 x 55	4	33 x 19	17.2 x 16.2	49
65	125 x 70	8	33 x 19	17.2 x 16.2	49
80	140 x 83	8	33 x 19	17.2 x 16.2	53
100	160 x 107	8	33 x 19	17.2 x 16.2	53
125	190 x 131	8	33 x 19	17.2 x 16.2	57
150	216 x 159	8	38 x 22	21.2 x 20.2	57
200	271 x 208	8	38 x 22	21.2 x 20.2	61
250	326 x 260	12	38 x 22	21.2 x 20.2	65
300	376 x 310	12	38 x 22	21.2 x 20.2	65
350	436 x 341	16	38 x 22	21.2 x 20.2	65
400	487 x 392	16	51 x 29	25.2 x 24.2	65
450	537 x 443	20	51 x 29	25.2 x 24.2	69
500	592 x 494	20	51 x 29	25.2 x 24.2	69
600	693 x 596	20	56 x 32	28.2 x 27.2	69

PN16

Nominal Bore	Insulating Gasket	Number of Bolt Holes	Insulating Washer	Insulating Sleeves	
	OD x ID (mm)		OD x ID (mm)	OD x ID (mm)	Length (mm)
15	50 x 17	4	29 x 16	13.2 x 12.2	41
20	60 x 22	4	29 x 16	13.2 x 12.2	45
25	70 x 28	4	29 x 16	13.2 x 12.2	45
32	80 x 37	4	33 x 19	17.2 x 16.2	45
40	90 x 43	4	33 x 19	17.2 x 16.2	45
50	105 x 55	4	33 x 19	17.2 x 16.2	49
65	125 x 70	8	33 x 19	17.2 x 16.2	49
80	140 x 83	8	33 x 19	17.2 x 16.2	53
100	160 x 107	8	33 x 19	17.2 x 16.2	53
125	190 x 131	8	33 x 19	17.2 x 16.2	57
150	216 x 159	8	38 x 22	21.2 x 20.2	57
200	271 x 208	12	38 x 22	21.2 x 20.2	61
250	327 x 260	12	51 x 29	25.2 x 24.2	65
300	382 x 310	12	51 x 29	25.2 x 24.2	69
350	442 x 340	16	51 x 29	25.2 x 24.2	73
400	493 x 390	16	56 x 32	28.2 x 27.2	77
450	553 x 441	20	56 x 32	28.2 x 27.2	81
500	615 x 492	20	60 x 35	31.2 x 30.2	81
600	732 x 592	20	67 x 38	34.2 x 33.2	85

Dimensions of Type F Insulation Sets to suit DIN Standard Flanges

PN25

Nominal Bore	Insulating Gasket	Number of Bolts	Insulating Washers	Insulating Sleeves	
	OD x ID (mm)		OD x ID (mm)	OD x ID (mm)	Length (mm)
15	50 x 17	4	29 x 16	13.2 x 12.2	45
20	60 x 22	4	29 x 16	13.2 x 12.2	49
25	70 x 28	4	29 x 16	13.2 x 12.2	49
32	80 x 37	4	33 x 19	17.2 x 16.2	49
40	90 x 43	4	33 x 19	17.2 x 16.2	49
50	105 x 55	4	33 x 19	17.2 x 16.2	53
65	125 x 70	8	33 x 19	17.2 x 16.2	57
80	140 x 83	8	33 x 19	17.2 x 16.2	61
100	166 x 107	8	38 x 22	21.2 x 20.2	61
125	192 x 131	8	51 x 29	25.2 x 24.2	65
150	222 x 159	8	51 x 29	25.2 x 24.2	69
200	282 x 207	12	51 x 29	25.2 x 24.2	73
250	338 x 259	12	56 x 32	28.2 x 27.2	77
300	388 x 308	16	56 x 32	28.2 x 27.2	81
350	455 x 340	16	60 x 35	31.2 x 30.2	89
400	512 x 389	16	67 x 38	34.2 x 33.2	93
450	563 x 439	20	67 x 38	34.2 x 33.2	97
500	622 x 488	20	67 x 38	34.2 x 33.2	101
600	729 x 588	20	71 x 41	37.2 x 36.2	105

PN40

Nominal Bore	Insulating Gasket	Number of Bolt Holes	Insulating Washers	Insulating Sleeves	
	OD x ID (mm)		OD x ID (mm)	OD x ID (mm)	Length (mm)
15	50 x 17	4	29 x 16	13.2 x 12.2	45
20	60 x 22	4	29 x 16	13.2 x 12.2	49
25	70 x 28	4	29 x 16	13.2 x 12.2	49
32	80 x 37	4	33 x 19	17.2 x 16.2	49
40	90 x 43	4	33 x 19	17.2 x 16.2	49
50	105 x 55	4	33 x 19	17.2 x 16.2	53
65	125 x 70	8	33 x 19	17.2 x 16.2	57
80	140 x 83	8	33 x 19	17.2 x 16.2	61
100	166 x 107	8	38 x 22	21.2 x 20.2	61
125	192 x 131	8	51 x 29	25.2 x 24.2	65
150	222 x 159	8	51 x 29	25.2 x 24.2	69
200	288 x 207	12	56 x 32	28.2 x 27.2	81
250	350 x 259	12	60 x 35	31.2 x 30.2	89
300	415 x 308	16	60 x 35	31.2 x 30.2	97
350	472 x 338	16	67 x 38	34.2 x 33.2	105
400	544 x 384	16	71 x 41	37.2 x 36.2	103
450	570 x 432	20	71 x 41	37.2 x 36.2	113
500	626 x 480	20	71 x 41	40.2 x 39.2	117
600	745 x 578	20	83 x 48	46.2 x 45.2	133