

ASIA DUCTILE IRON FITTINGS

BSEN 969 For Gas Pipelines

SPECIFICATION

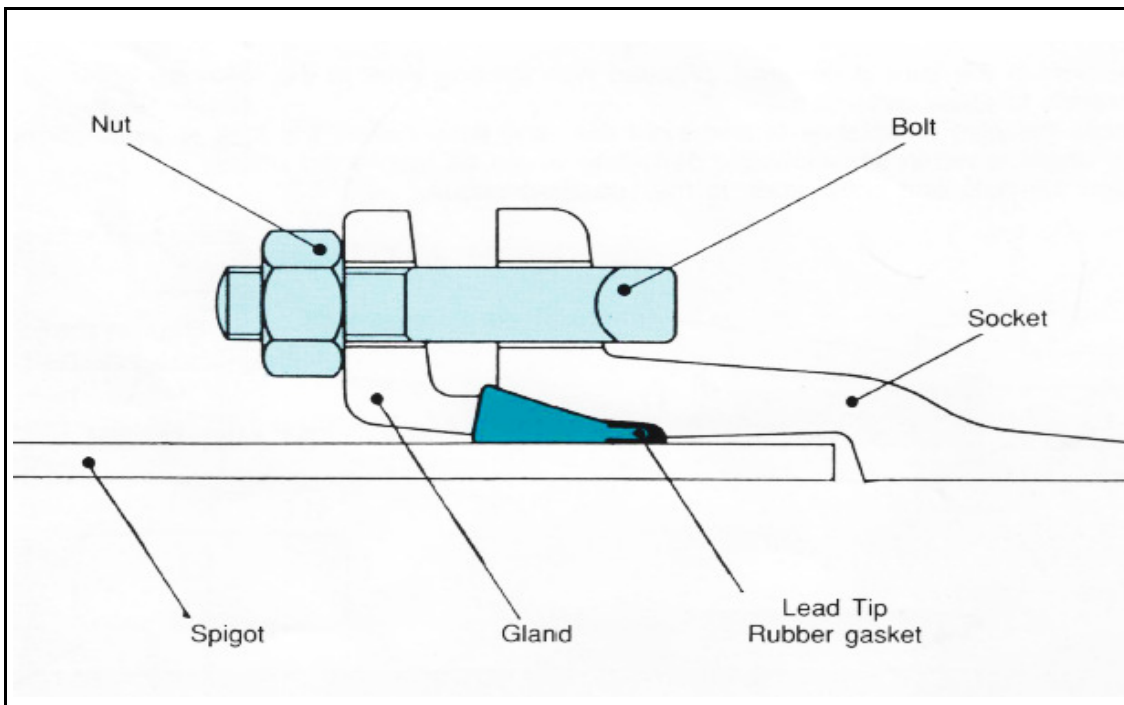
Mechanical Properties

Tensile Strength	Min. 420 N/mm ²
Elongation	Min. 5%
Proof Stress	Min. 300 N/mm ²
Hardness	Max. 250 HB

Work Hydrostatic Test Pressure

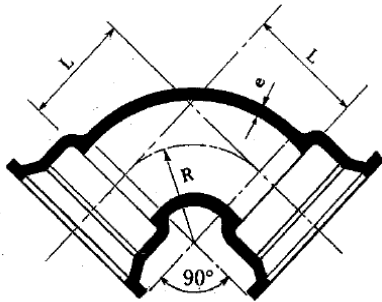
DN 100 to DN 300	25 Bar
DN 450 to DN 600	16 Bar

Structure of Mechanical Joint



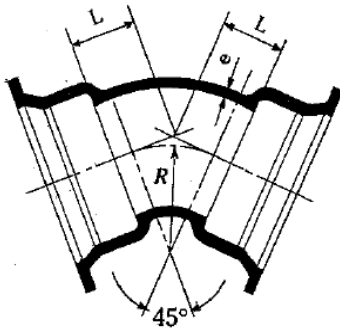
BOLTED GLAND BEND (90°, 45°, 22.5°, 11.25°)

BOLTED GLAND 90° BENDS, CLASS K 12



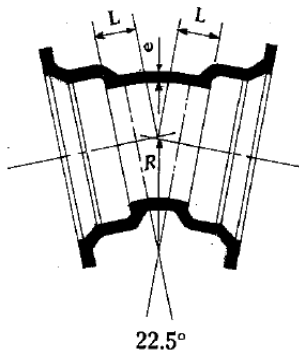
Size DN	e	L	R Approx.	Mass
mm	mm	mm	mm	kg
100	7.2	120	95	14.4
150	7.8	170	145	24.0
200	8.4	220	195	37.0
300	9.6	320	290	75.5
450	11.4	470	435	168.0
600	13.2	620	580	280.0

BOLTED GLAND 45° BENDS, CLASS K 12



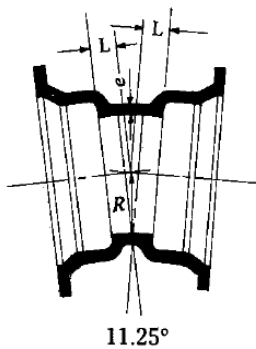
Size DN	e	L	R Approx.	Mass
mm	mm	mm	mm	kg
100	7.2	65	100	13.1
150	7.8	85	145	21.0
200	8.4	110	200	30.5
300	9.6	155	305	61.0
450	11.4	220	450	128.0
600	13.2	285	595	198.0

BOLTED GLAND 22.5° BENDS, CLASS K 12



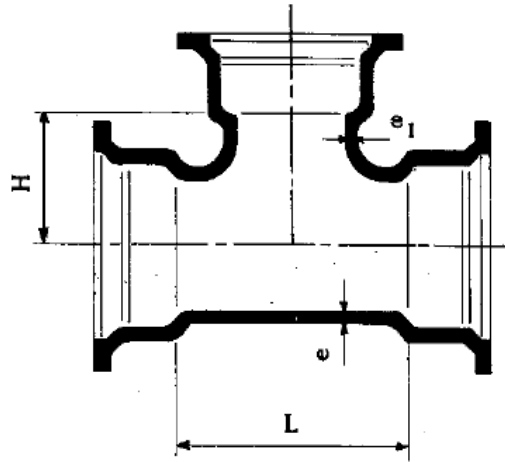
Size DN	e	L	R Approx.	Mass
mm	mm	mm	mm	kg
100	7.2	45	110	12.5
150	7.8	55	155	19.3
200	8.4	65	195	27.5
300	9.6	90	305	53.0
450	11.4	120	435	107.0
600	13.2	155	590	154.0

BOLTED GLAND 11.25° BENDS, CLASS K 12



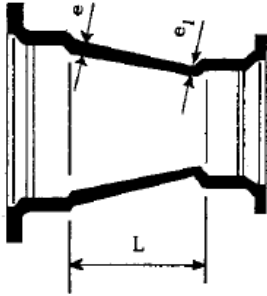
Size DN	e	L	R Approx.	Mass
mm	mm	mm	mm	kg
100	7.2	35	120	12.1
150	7.8	40	155	18.5
200	8.4	45	195	26.0
300	9.6	60	315	49.0
450	11.4	75	420	96.5
600	13.2	95	580	133.0

BOLTED GLAND TEE, CLASS K 14



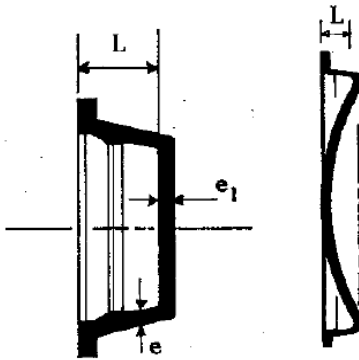
Size		e	e1	L	H	Mass
Body DN	Branch dn					
mm	mm	mm	mm	mm	mm	kg
100	100	8.4	8.4	210	125	21.5
150	100	9.1	8.4	210	150	29.5
150	150	9.1	9.1	270	155	34.0
200	100	9.8	8.4	215	180	38.5
200	150	9.8	9.1	270	180	44.0
200	200	9.8	9.8	330	180	50.5
300	100	11.2	8.4	220	235	63.5
300	150	11.2	9.1	335	235	75.5
300	200	11.2	9.8	335	235	79.0
300	300	11.2	11.2	450	240	99.5
450	300	13.3	11.2	635	325	191.0
450	450	13.3	13.3	635	320	209.0
600	450	15.4	13.3	820	400	321.0
600	600	15.4	15.4	820	410	332.0

BOLTED GLAND CONCENTRIC TAPERS, CLASS K 12



Size		e	e1	L	Mass
Large end DN	Small end dn				
mm	mm	mm	mm	mm	kg
150	100	7.8	7.2	150	16.8
200	100	8.4	7.2	250	24.5
200	150	8.4	7.8	150	24.5
300	150	9.6	7.8	350	45.5
300	200	9.6	8.4	250	45.0
450	300	11.4	9.6	360	93.5
600	300	13.2	9.6	660	153.0
600	450	13.2	11.4	360	142.0

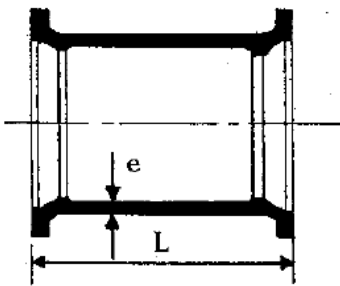
BOLTED GLAND CAPS, CLASS K 12



Size DN	e	e1	L	Mass
mm	mm	mm	mm	kg
100	7.2	18	90	7.0
150	7.8	18	90	11.3
200	8.4	18	103	16.1
300	9.6	23	115	38.0
450	11.4	26	135	83.5
600	13.2	29.5	120	117.0
in	mm	mm	mm	kg
4	7.2	18	90	7.7
6	7.8	18	90	12.5
8	8.4	18	103	17.8
12	9.6	23	115	42.0
18	11.4	26	135	90.0
24	13.2	29.5	120	128.0

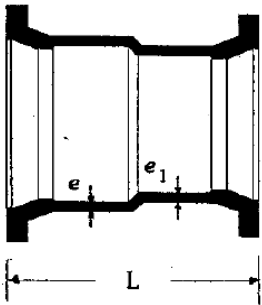
BOLTED GLAND COLLARS, CLASS K 12

Collars are available with boss if required - standard size boss is 50mm diameter



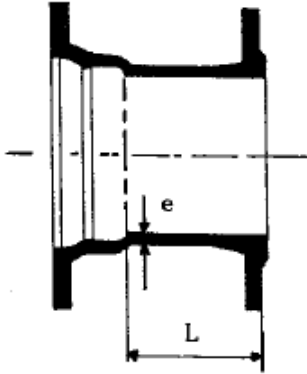
Size DN	e	L	Mass PN 16 flanges
mm	mm	mm	kg
100	7.2	230	12.9
150	7.8	260	19.7
200	8.4	290	27.5
300	9.6	360	48.0
450	11.4	410	91.0
600	13.2	450	130.0

BOLTED GLAND CHANGE COLLAR, CLASS K 12



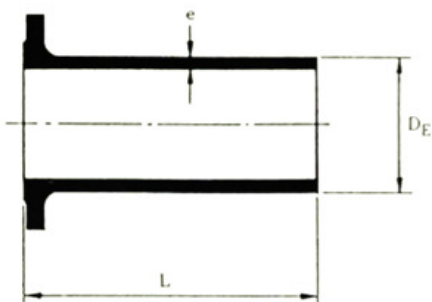
Sizes		e1	e	L	Mass
DN	dn				
mm	Ins	mm	mm	mm	kg
100	4	7.2	7.2	230	13.0
150	6	7.8	7.8	260	7.0
200	8	8.4	8.4	290	28.0
300	12	9.6	9.6	360	46.0
450	18	11.4	11.4	410	92.0
600	24	13.2	13.2	450	132.0

FLANGED AND BOLTED GLAND SOCKET PIECES, CLASS K 12



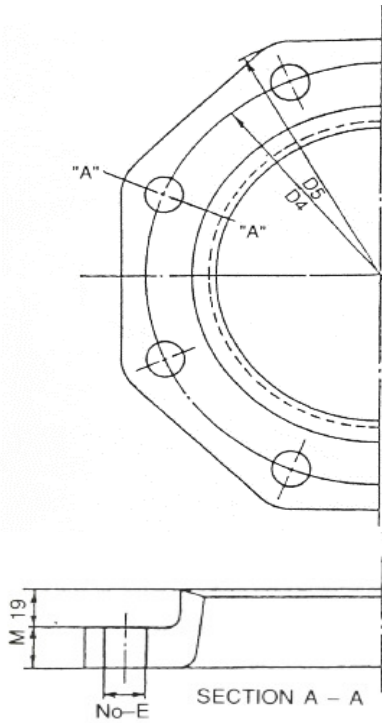
Size DN	e	L	Mass PN 16 flanges
mm	mm	mm	kg
100	7.2	130	11.3
150	7.8	135	17.3
200	8.4	140	24.0
300	9.6	150	44.0
450	11.4	165	88.0
600	13.2	180	143.0

FLANGE SPIGOT PIECES, CLASS K 12



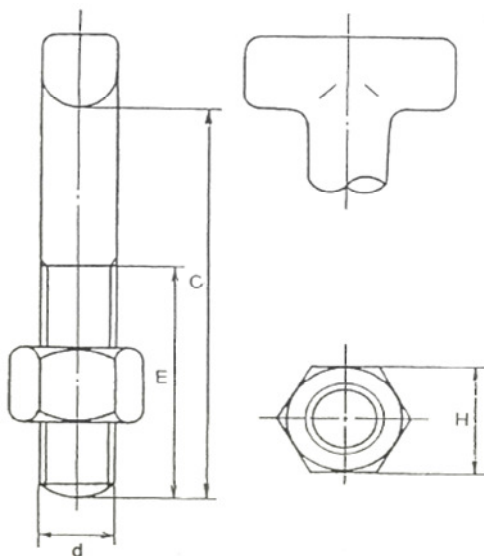
Size DN	DE	e	L	Mass PN 16 flanges
mm	mm	mm	mm	kg
100	118	7.2	360	9.7
150	170	7.8	380	15.6
200	222	8.4	400	22.5
300	326	9.6	440	42.0
450	480	11.4	500	86.0
600	635	13.2	560	159.0

DUCTILE IRON GLAND



Size D	DIMENSION		NO OF BOLT	WEIGHT kg
	D4 (mm)	E (mm)		
100mm	200	23	3	2.3
150mm	260	23	4	3.4
200mm	310	23	5	4.6
300mm	425	23	8	12.5
450mm	580	23	12	16.6
600mm	744	23	16	24.0
4"	200	23	3	2.4
6"	260	23	4	3.5
8"	314	23	5	4.8
10"	367	23	6	9.0
12"	422	23	8	12.7
18"	590	23	12	16.8
24"	755	23	16	24.5

DUCTILE IRON T-HEAD BOLTS AND NUTS



Size D	DIMENSIONS			NO OF BOLT
	SIZE d	C (mm)	E (mm)	
100mm	M20	90	60	3
150mm	M20	90	60	4
200mm	M20	90	60	5
300mm	M20	100	65	8
450mm	M20	115	65	12
600mm	M20	115	65	16