

IS 3989 : 2009

Indian Standard

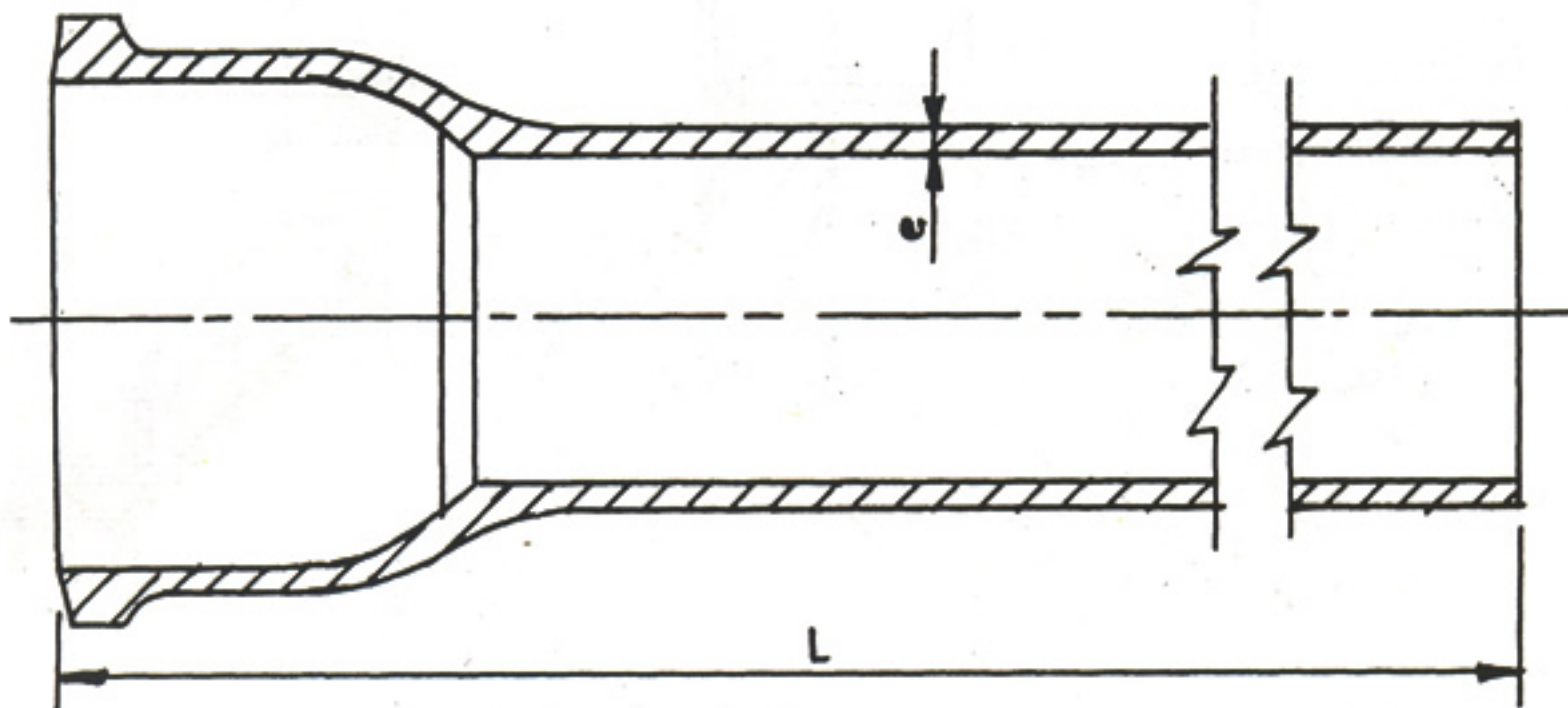
CENTRIFUGALLY CAST (SPUN) IRON SPIGOT AND
SOCKET SOIL, WASTE, VENTILATING AND
RAINWATER PIPES, FITTINGS AND
ACCESSORIES — SPECIFICATION

(Third Revision)

ICS 77.140.75; 91.140.80

Table. Approximate Mass of Socket and Spigot Pipes
(Clause 7.3)

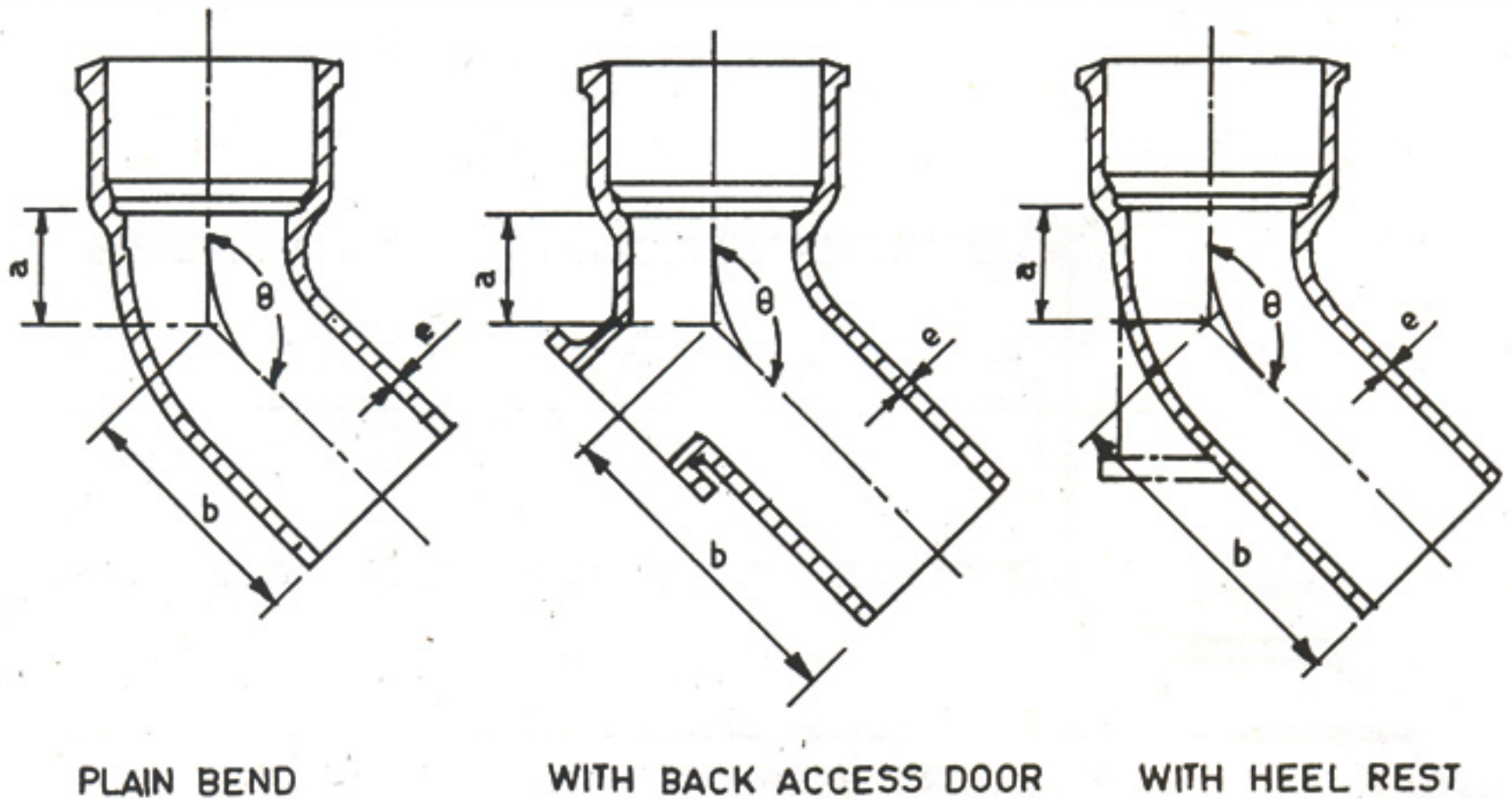
All dimensions in millimetres.



Nominal Diameter	Thickness	Socket Mass	Nominal Mass in kg Including Mass of Socket for Pipes of Length (L) in Metres					
			3.000 kg	2.500 kg	2.000 kg	1.800 kg	1.500 kg	1.000 kg
DN	e	kg	(4)	(5)	(6)	(7)	(8)	(9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
50	3.5	0.79	13.4	11.3	9.2	8.4	7.1	5.0
75	3.5	1.50	20.0	16.8	13.8	12.5	10.6	7.4
100	4.0	2.00	30.0	25.5	21.0	18.8	16.0	11.2
150	5.0	3.51	56.0	47.0	38.5	34.9	29.5	21.0
200	6.0	7.00	90.0	70.9	56.7	51.0	42.5	33.0

Table Bends With and Without Access Doors
(Clause 7.3)

All dimensions in millimetres.



PLAIN BEND

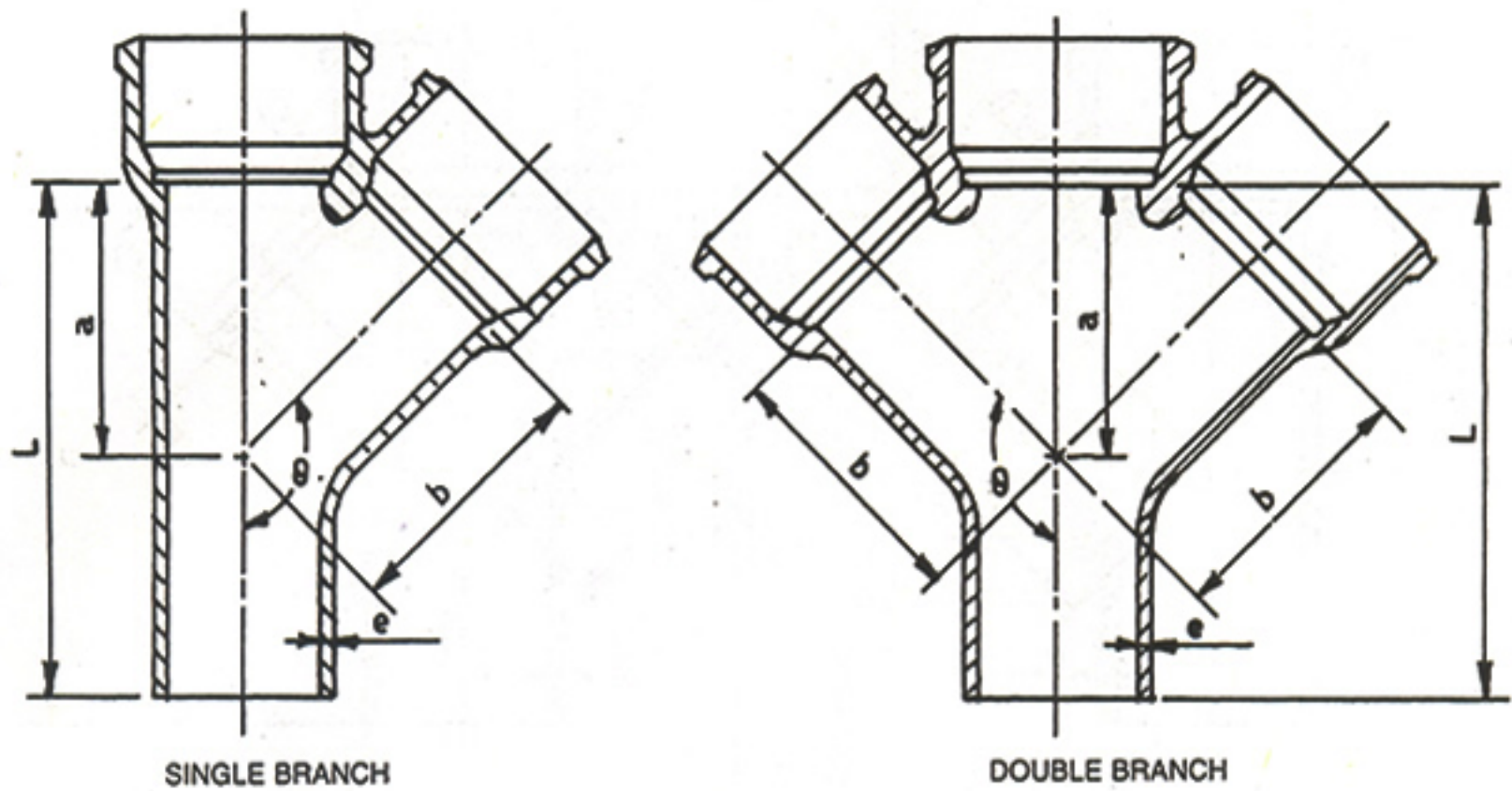
WITH BACK ACCESS DOOR

WITH HEEL REST

Angle θ	Nominal Diameter DN	Dimensions			Approximate Mass of Bend kg		
		<i>e</i>	<i>a</i>	<i>b</i>	Plain	With Door	With Heel Rest
92°	50	3.5	65	123	1.5	1.8	1.7
	75	3.5	78	140	2.4	2.8	2.7
	100	4.0	91	157	3.8	4.4	4.3
	150	5.0	117	186	7.9	8.7	8.7
	200	6.0	165	285	17.0	—	—
135°	50	3.5	41	94	1.4	1.7	1.6
	75	3.5	47	104	2.1	2.5	2.4
	100	4.0	53	114	3.3	3.9	3.8
	150	5.0	65	129	6.5	7.3	7.3
	200	6.0	80	206	15.0	—	—

Table Equal Branches With and Without Access Door
(Clause 7.3)

All dimensions in millimetres.



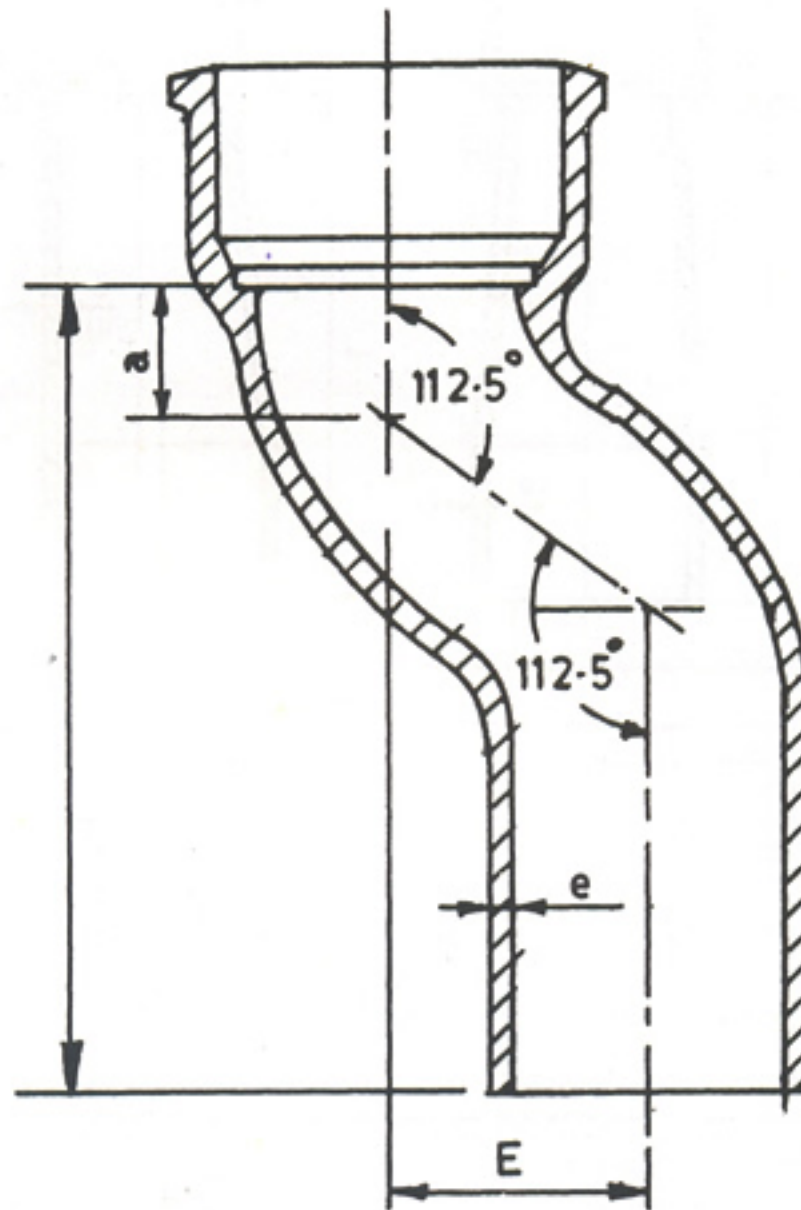
SINGLE BRANCH

DOUBLE BRANCH

Angle θ	Nominal Diameter DN	Dimensions				Approximate Mass of Single Branch		Approximate Mass of Double Branch	
		e	L	a	b	Plain kg	With Door kg	Plain kg	With Door kg
92° (Tee Jn.)	50	3.5	176	38	38	2.3	2.6	3.0	3.2
	75	3.5	207	52	52	3.6	4.0	4.6	5.0
	100	4.0	238	66	66	5.7	6.3	7.2	78.0
	150	5.0	294	93	93	1.4	12.2	14.3	15.1
	200	6.0	385	125	125	23.5	—	—	—
135° (Y Jn.)	50	3.5	192	88	88	2.5	2.8	3.4	3.7
	75	3.5	233	119	119	4.1	4.5	5.3	5.7
	100	4.0	276	152	152	6.6	7.2	8.6	9.4
	150	5.0	355	216	216	14.0	14.8	17.2	18.0
	200	6.0	460	295	300	35.0	—	—	—

Table Off Sets
(Clause 7.3)

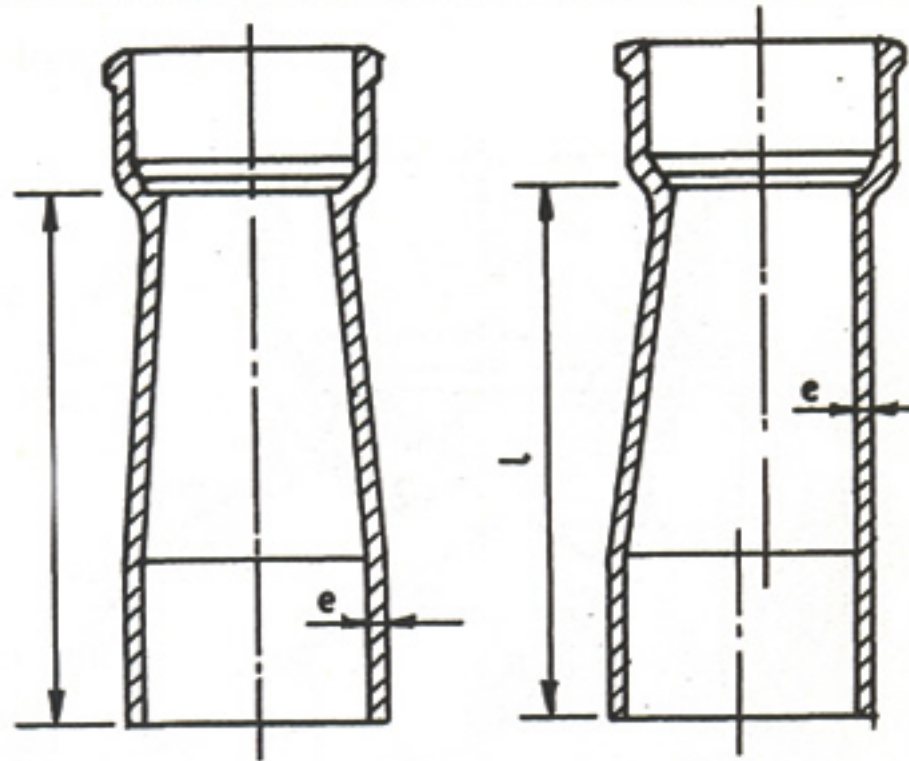
All dimensions in millimetres.



Offset <i>E</i>	Nominal Diameter <i>DN</i>	Dimensions			Approximate Mass kg
		<i>a</i>	<i>e</i>	<i>L</i>	
75	50	40	3.5	200	1.8
	75	45	3.5	225	2.7
	100	55	4.0	250	4.3
	150	75	5.0	275	8.4
115	50	40	3.5	200	1.9
	75	45	3.5	225	2.9
	100	55	4.0	250	4.5
	150	75	5.0	290	8.8
150	50	40	3.5	200	2.0
	75	45	3.5	225	3.1
	100	55	4.0	250	4.8
	150	75	5.0	300	9.5

Table Taper
(Clause 7.3)

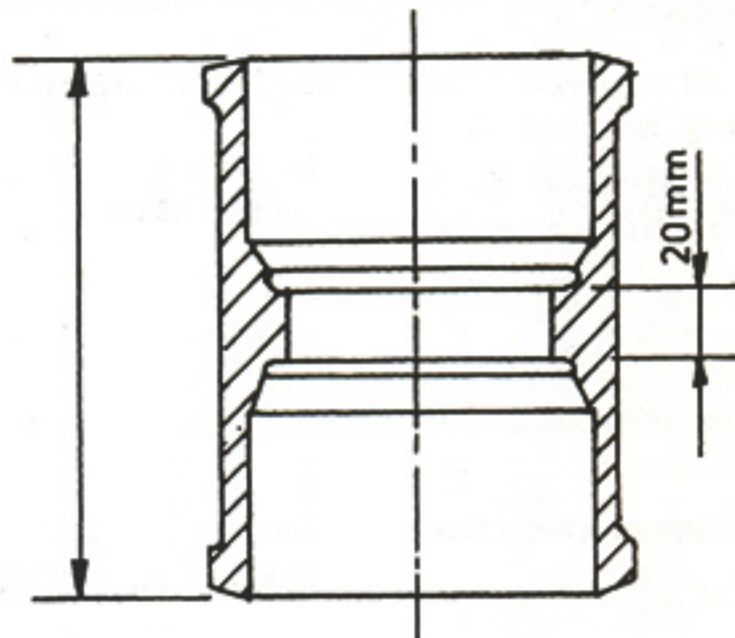
All dimensions in millimetres.



Nominal Diameter		Dimensions		Approximate Mass kg
Spigot DN	Socket DN	<i>e</i>	<i>l</i>	
75	50	3.5	200	1.9
100	50	4.0	200	2.3
100	75	4.0	200	2.9
150	100	5.0	200	4.8

Table Collars (Double Socket)
(Clause 7.3)

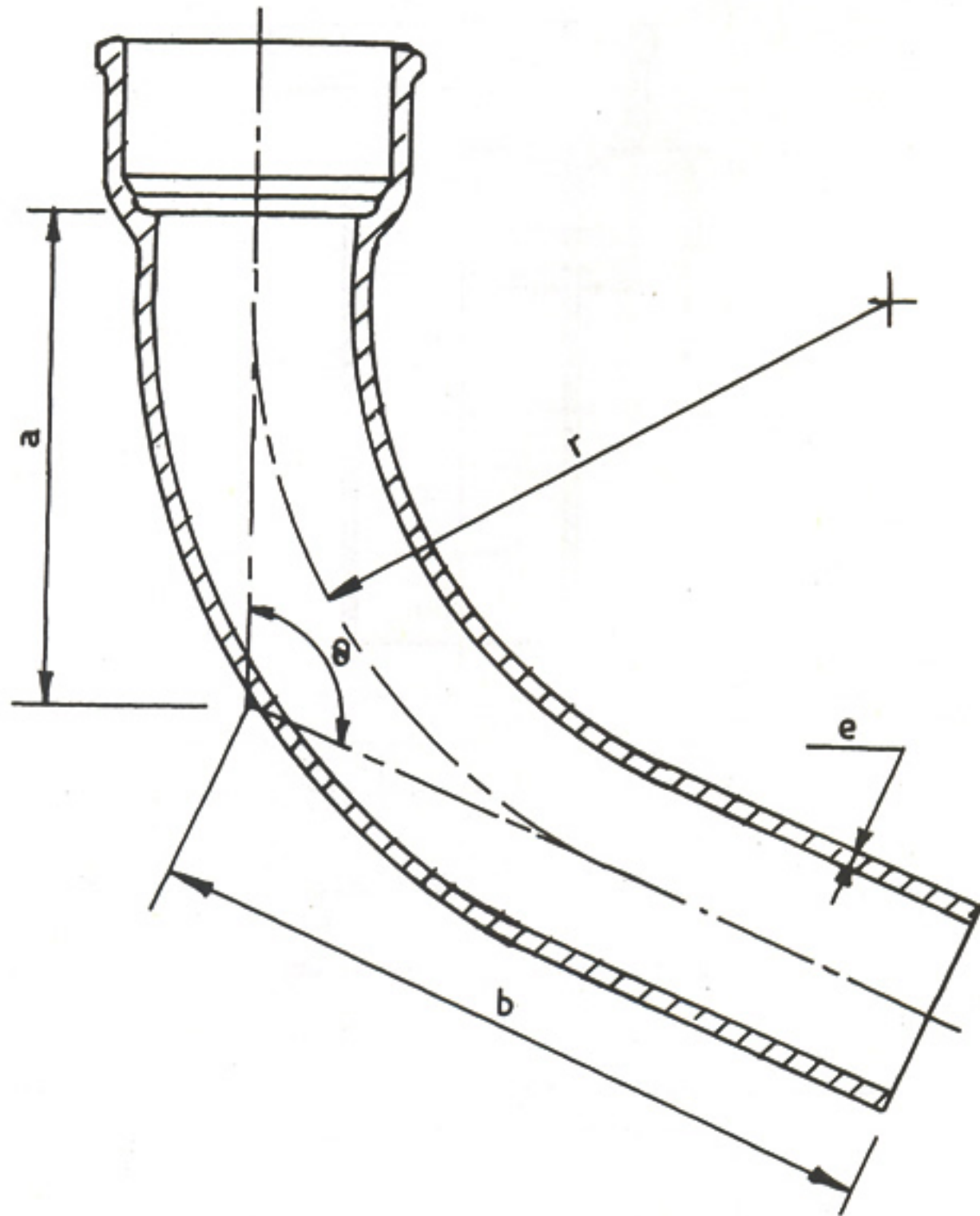
All dimensions in millimetres.



Nominal Diameter <i>DN</i>	<i>L</i>	Approximate Mass kg
50	140	1.6
75	150	2.3
100	160	3.4
150	170	6.4
200	195	11.5

Table Larger Radius Bends
(Clause 7.3)

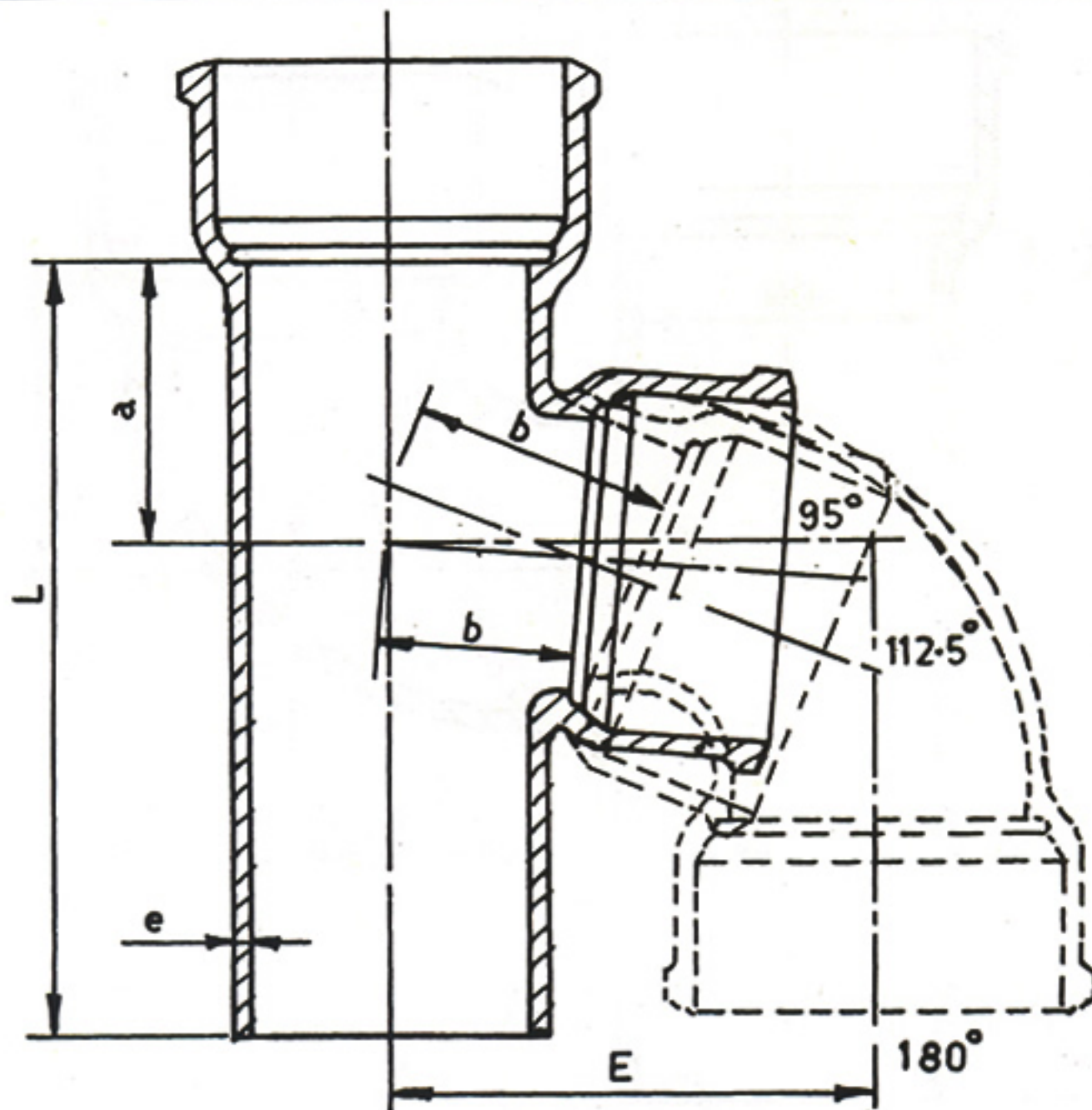
All dimensions in millimetres.



Angle θ	Nominal Diameter <i>DN</i>	Dimensions				Approximate Mass kg
		<i>e</i>	<i>a</i>	<i>b</i>	<i>r</i>	
135°	75	3.5	159	260	325	6.6
	100	4.0	159	273	325	7.8
	150	5.0	159	298	325	12.0

Table Equal and Unequal Inverted Branches Socket Type
(Clause 7.3)

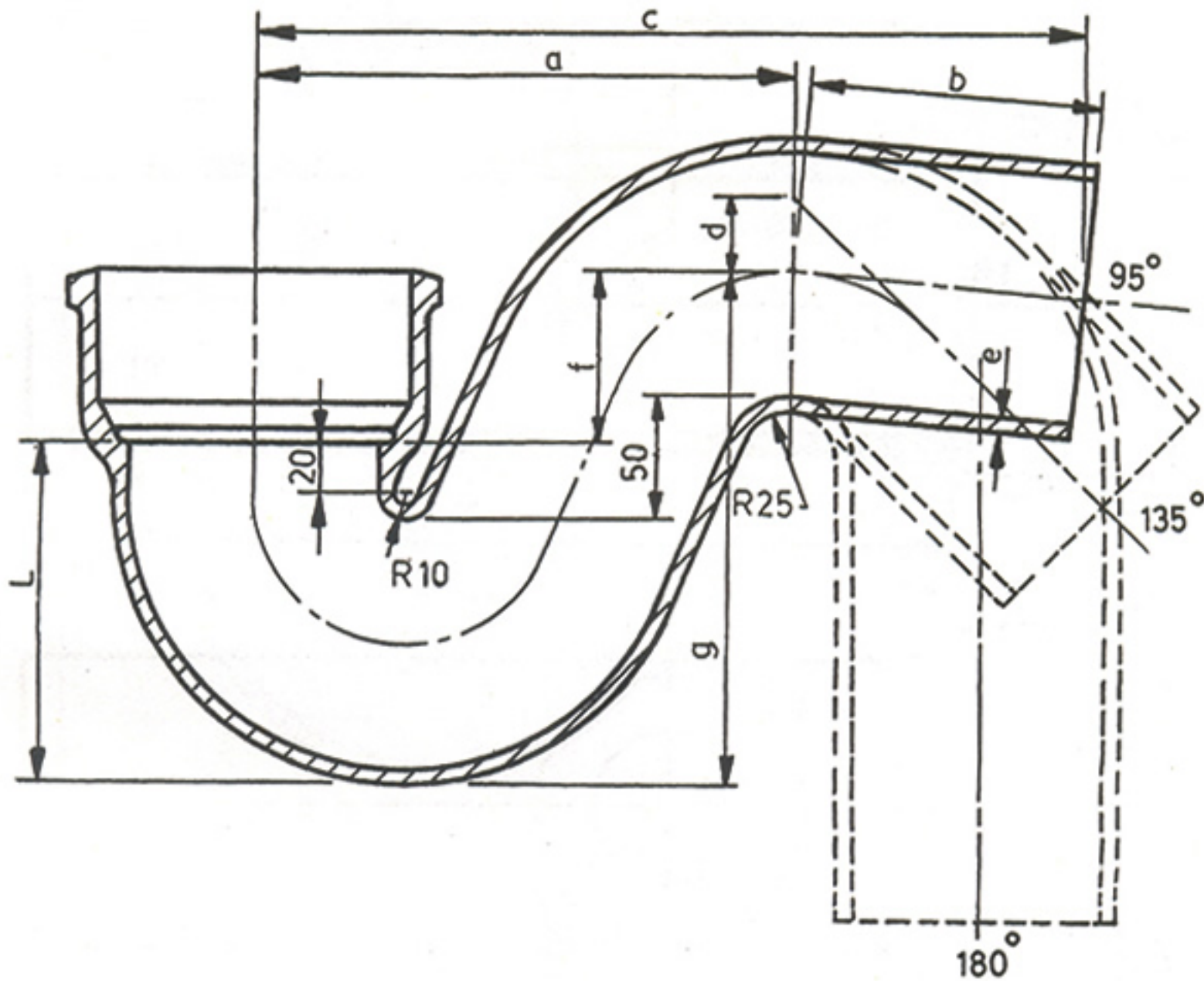
All dimensions in millimetres.



Angle θ	Nominal Diameter		Dimensions					Approximate Mass kg
	Body DN	Branches d_n	e	b	E	L	e	
95°	50	50	70	38	—	192	3.5	2.4
	100	100	98	66	—	276	4.0	6.0
	100	50	70	63	—	210	4.0	4.4
180°	50	50	70	60	113	192	3.5	2.8
	100	100	98	102	167	276	4.0	6.5
	100	50	70	90	140	210	4.0	5.0

Table Traps
(Clause 7.3)

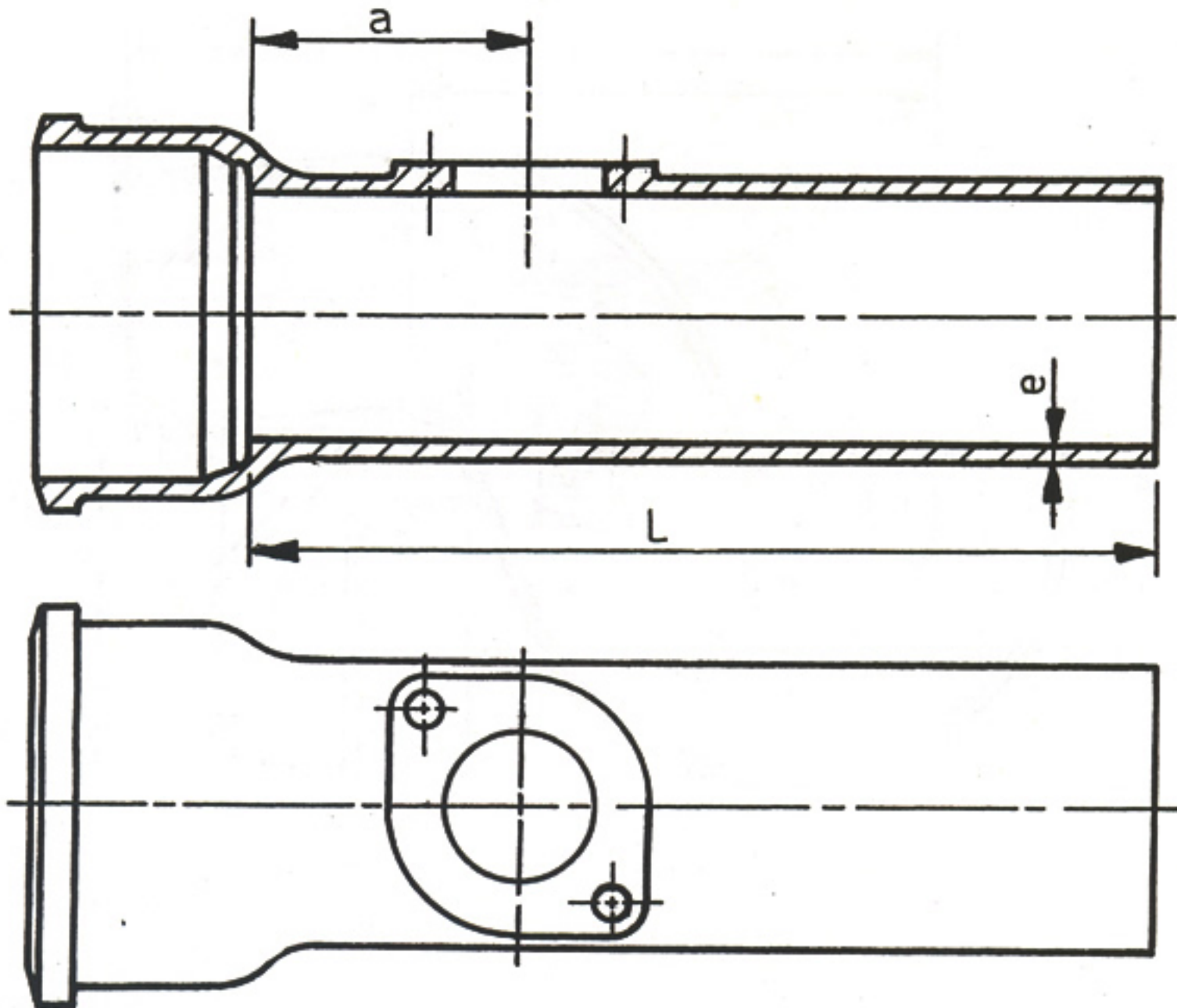
All dimensions in millimetres.



Angle θ	Nominal Diameter <i>DN</i>	Dimensions								Approximate Mass kg
		<i>e</i>	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>L</i>	<i>f</i>	<i>g</i>	
95°	50	3.5	137	99	236	—	86	47	133	2.1
	75	3.5	170	105	275	—	110	55	165	4.3
	100	4.0	214	116	330	—	135	71	206	7.0
	150	5.0	285	140	425	—	186	98	284	10.5
180°	50	3.5	137	125	189	—	86	47	133	2.1
	75	3.5	170	159	231	—	110	55	165	4.3
	100	4.0	214	184	291	—	135	71	206	7.0
	150	5.0	285	239	387	—	186	98	284	10.5

Table Straight Inspection Piece
(Clause 7.3)

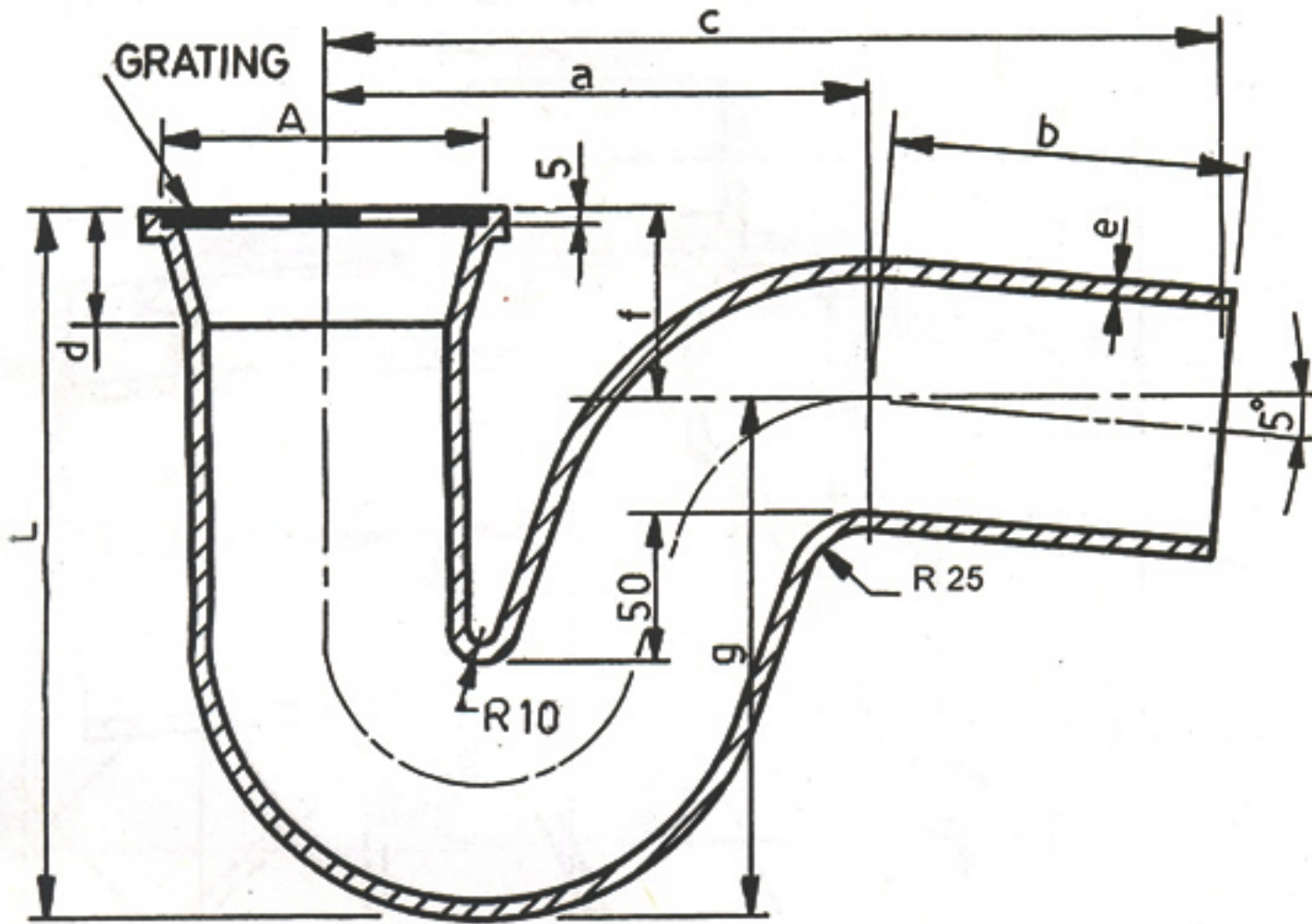
All dimensions in millimetres.



Nominal Diameter <i>DN</i>	Dimensions			Approximate Mass kg
	<i>a</i>	<i>e</i>	<i>L</i>	
50	70	3.5	238	2.8
75	80	3.5	272	4.0
100	100	4.0	292	6.4
150	135	5.0	338	13.0
200	170	6.0	390	21.0

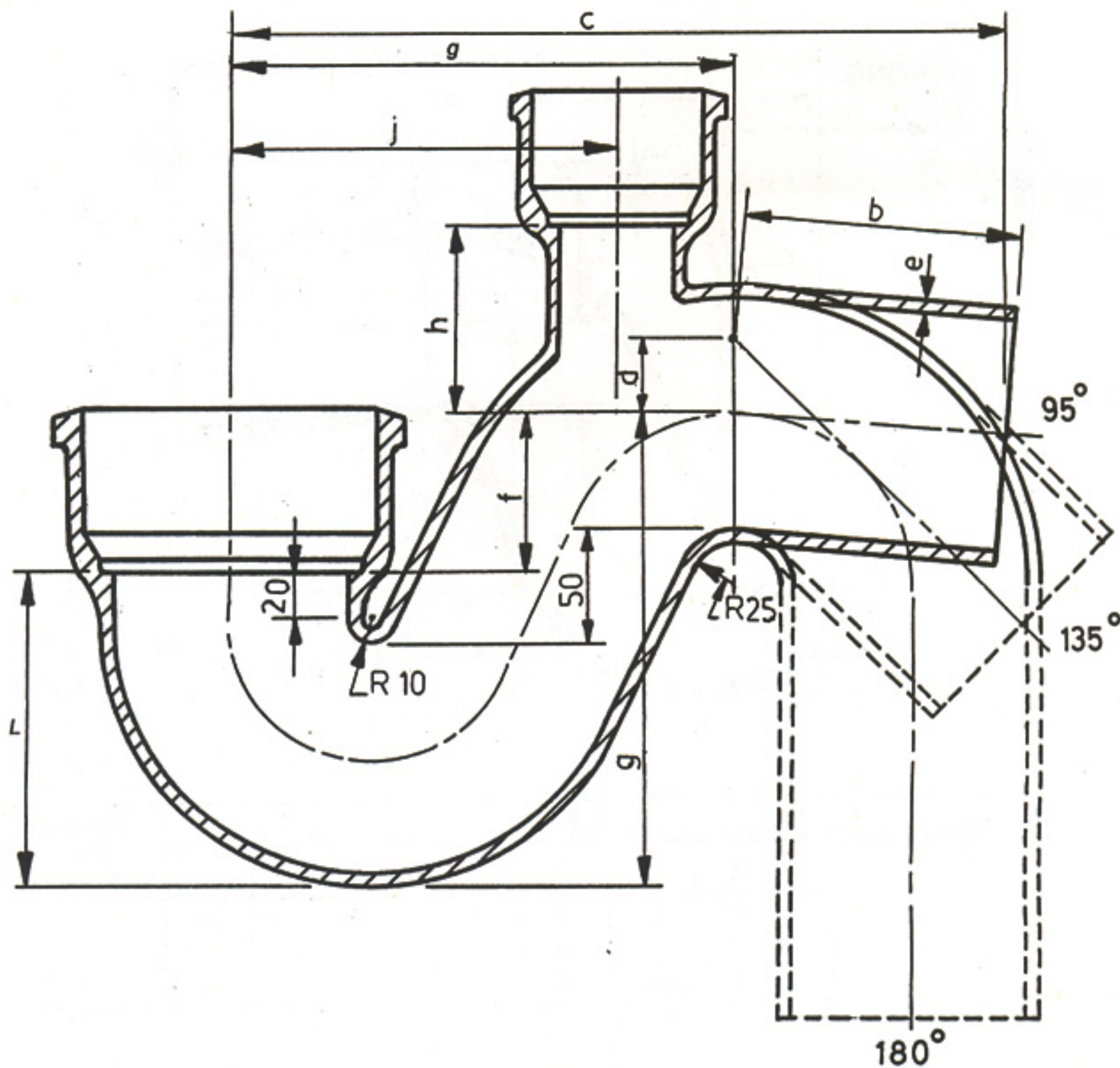
Table Floor Trap
(Clause 7.3)

All dimensions in millimetres.



Nominal Diameter <i>DN</i>	Dimensions									Approximate Mass kg
	<i>A</i>	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>L</i>	
75	100	170	105	275	40	3.5	60	165	225	4.8
100	200	214	116	330	60	4.0	90	206	296	7.5

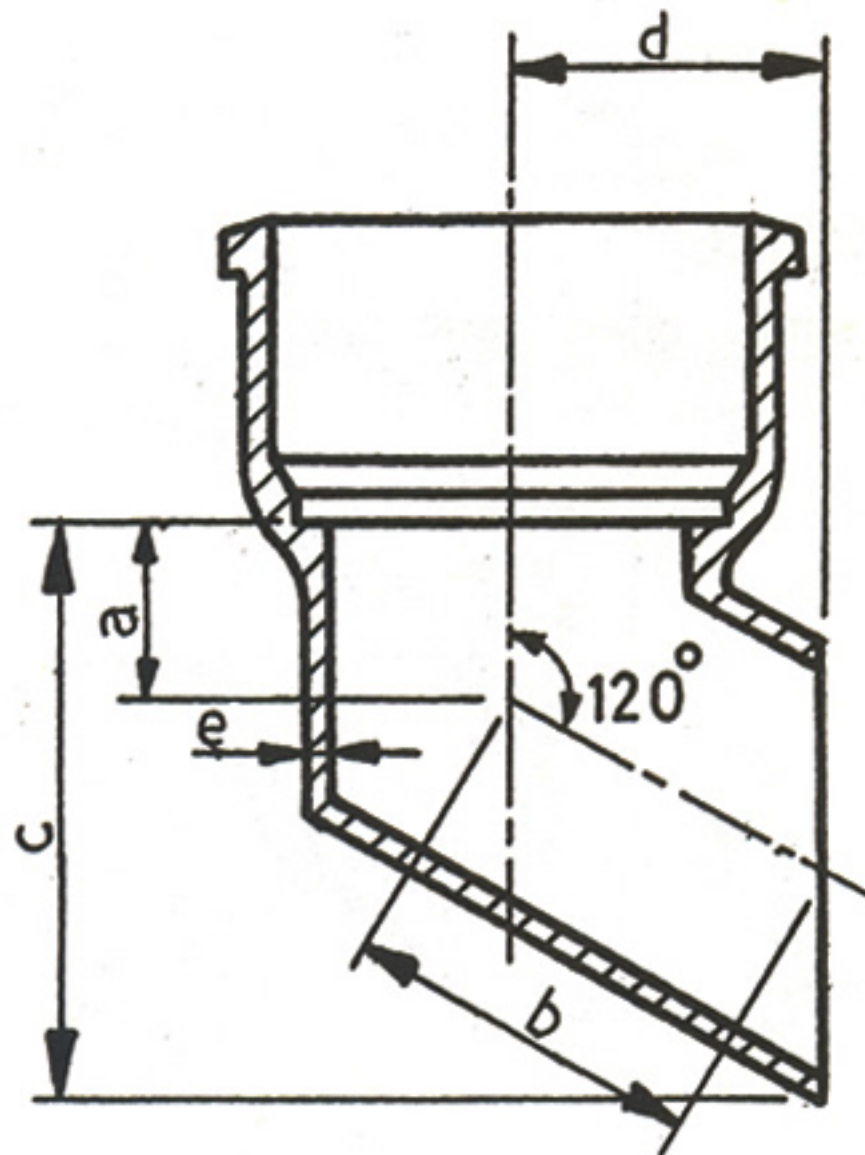
Table Traps With Vent
(Clause 7.3)
All dimensions in millimetres.



Angle θ	Diameter		Dimensions										Approximate Mass kg
	Body DN	Vent dn	a	b	c	d	e	L	f	h	j	g	
95°	100	50	214	116	330	—	4.0	135	71	80	165	206	7.8
180°	100	50	214	184	291	—	4.0	135	71	80	165	206	7.8

Table Shoe Bends
(Clause 7.3)

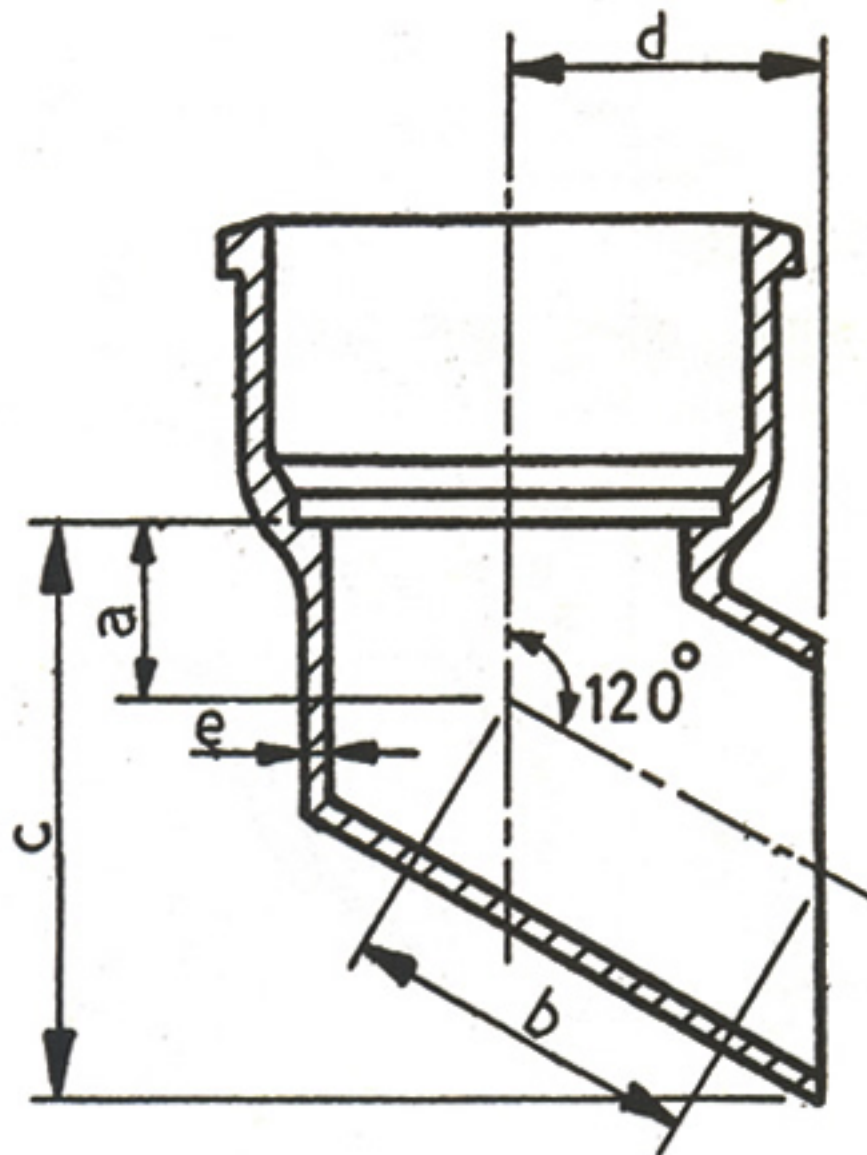
All dimensions in millimetres.



Nominal Diameter <i>DN</i>	Dimensions					Approximate Mass kg
	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	
50	36	66	100	54	3.5	1.4
75	38	75	117	64	3.5	2.0
100	52	92	161	80	4.0	2.8
150	55	123	200	105	5.0	4.5

Table Shoe Bends
(Clause 7.3)

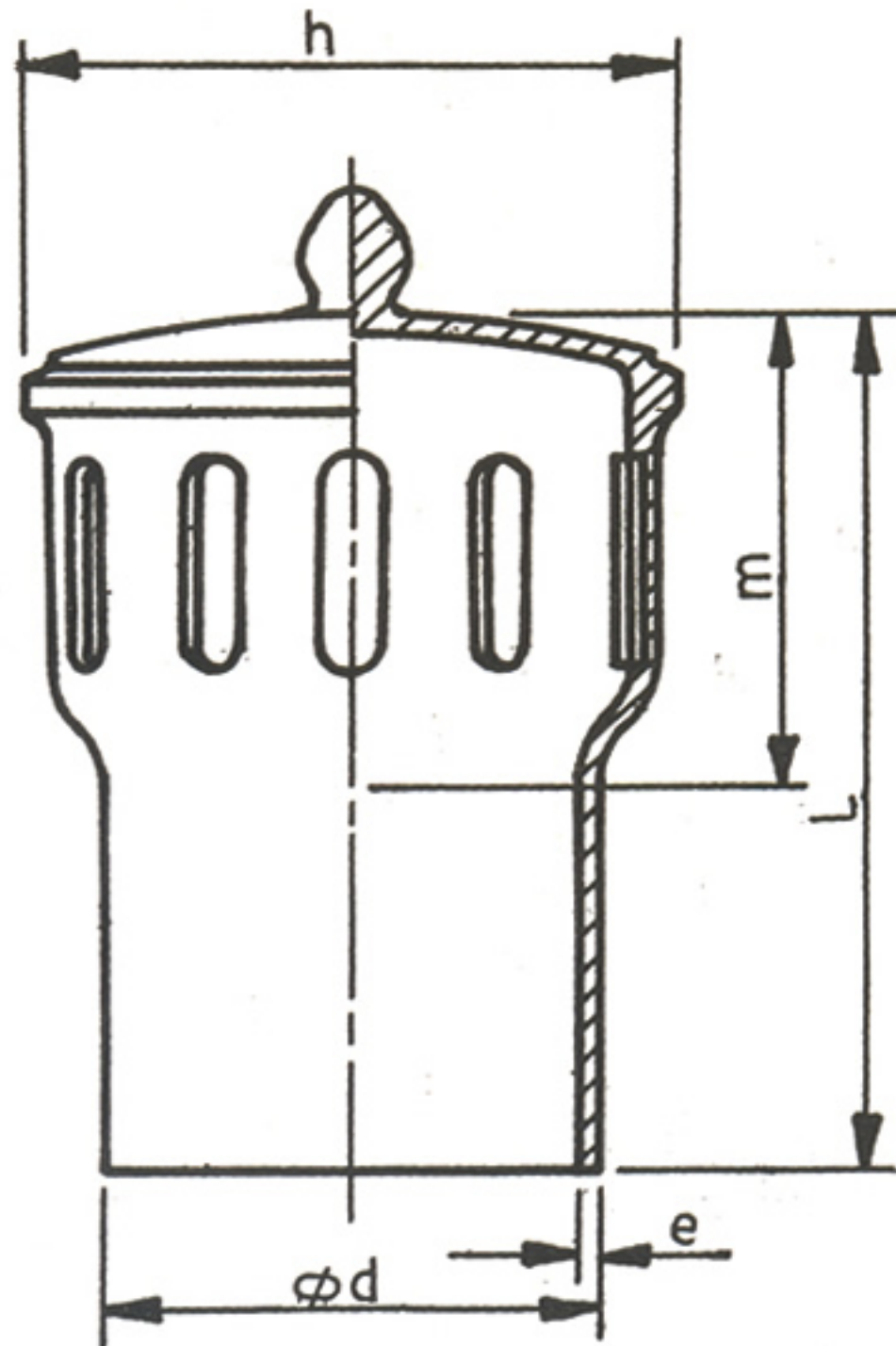
All dimensions in millimetres.



Nominal Diameter <i>DN</i>	Dimensions					Approximate Mass kg
	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	
50	36	66	100	54	3.5	1.4
75	38	75	117	64	3.5	2.0
100	52	92	161	80	4.0	2.8
150	55	123	200	105	5.0	4.5

Table Cowl
(Clause 7.3)

All dimensions in millimetres.



Nominal Diameter <i>DN</i>	Dimensions					Approximate Mass kg
	<i>e</i>	<i>m</i>	<i>d</i>	<i>L</i>	<i>h</i>	
50	3.5	90	57	160	90	1.0
75	3.5	95	82	175	115	1.5
100	4.0	110	109	200	145	2.7
150	5.0	110	161	210	195	5.8