

The symbols shown in Table 1 indicate the recommended combination of ends for pipes and fittings. Additional notes may be added to a symbol to denote the nominal sizes, deflection angle of bends, and similar information.

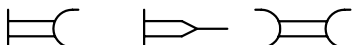
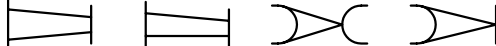
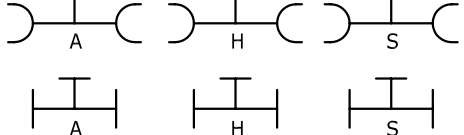
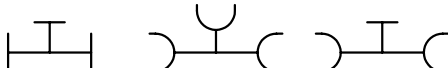
Description	Reference	Symbol
Socket	-	
Bends	Humes 1041 Figure 2 Humes 1042 Figure 3 Humes 1057 Figure 10	
Connectors	Humes 1043 Figure 4	
Risers - Hydrant	Humes 1046 Figure 5	
Reducers / Tapers	Humes 1047 & 1048 Figure 6 Humes 1058 & 1059 Figure 11	
Tees - Air valve, Hydrant and scour	Humes 1050 Figure 7	
Tees	Humes 1051 & 1052 Figure 8 Humes 1053 & 1054 Figure 9 Humes 1060 & 1061 Figure 12	

Table 1 - SYMBOLS FOR PIPES AND FITTINGS

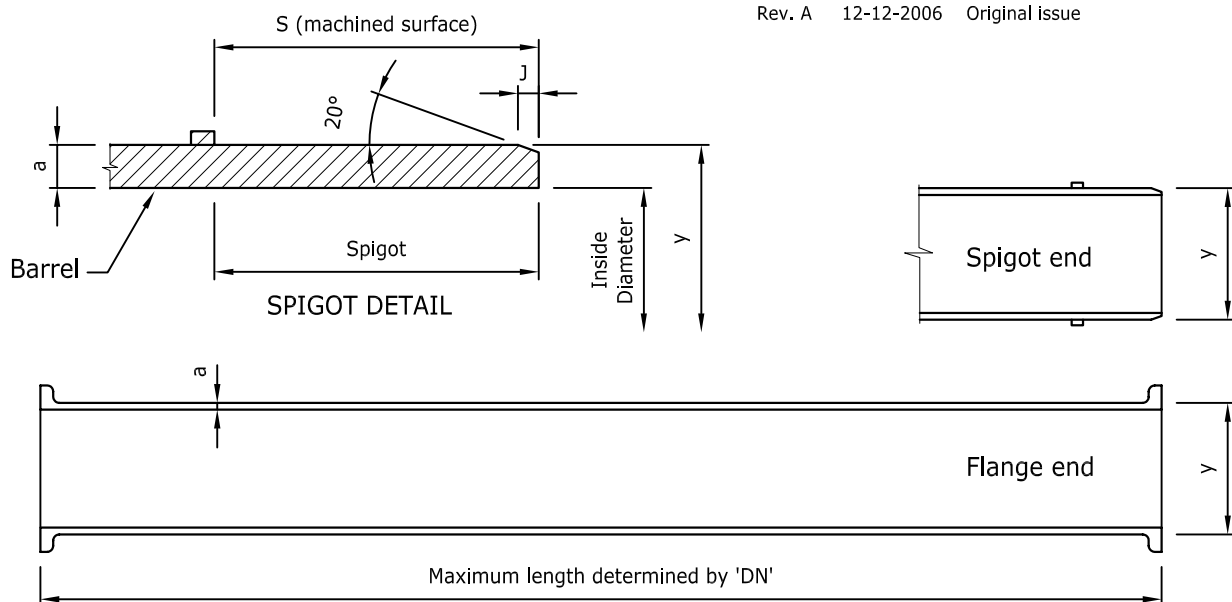


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SYMBOLS FOR PIPES AND FITTINGS

HUMES 1039



Nominal size (DN)	Nominal wall thickness (t) mm	Minimum wall thickness (a) mm	Mean outside diameter (y) mm (to be machined for spigot end)	Spigot Length (S) mm	Spigot Chamfer (J) mm
80	-	-	96 +1, -2	89	10 ± 2
100	7.0	6.0	122 +1, -2	102	10 ± 2
150	8.0	6.0	177 +1, -2	102	10 ± 2
200	8.0	7.0	232 +1, -2	115	10 ± 2
225	9.0	7.0	259 +1, -2	115	10 ± 2
250	9.0	8.0	286 +1, -2	115	10 ± 2
300	10.0	8.0	345 +1, -2	115	10 ± 2
375	10.0	9.0	426 ± 2	140	16 ± 2
450	11.0	10.0	507 ± 2	140	16 ± 2
500	12.0	10.0	560 ± 2	140	16 ± 2
525	-	-	587 ± 2	140	16 ± 2
600	13.0	11.0	667 ± 2	140	16 ± 2
675	-	-	747 ± 2	165	16 ± 2
750	15.0	13.0	826 ± 2	170	20 ± 2

FIGURE 1 - DIMENSIONS AND TOLERANCES FOR FLANGED PIPE

NOTES:

- 1 Minimum wall thickness shall comply with AS/NZS 2280:2004 - Clauses 1.6.2. & 1.6.3
- 2 The standard classifications are shown. Other classifications are allowed.
- 3 Pipes cut beyond limits of tolerance may require machining or dressing for satisfactory jointing.
- 4 20° is a nominal value.

Dimensions as per

AS/NZS 2280:2004 - Appendix H

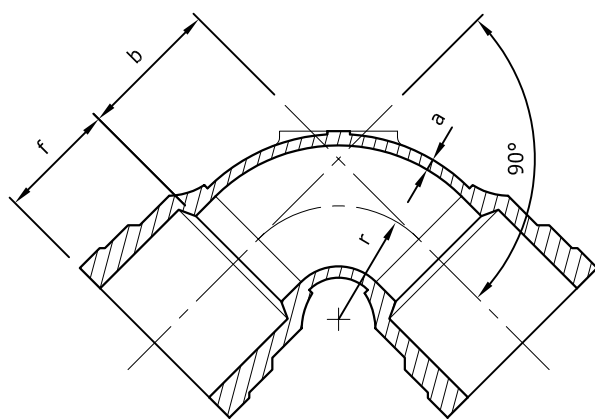


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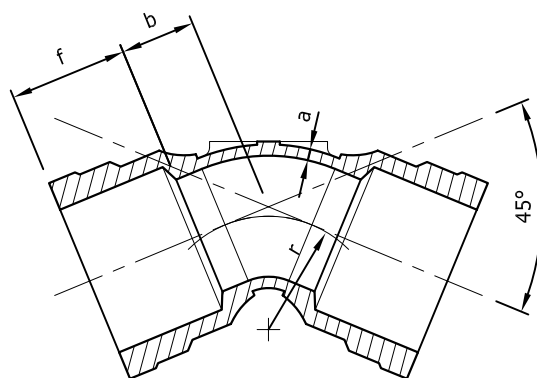
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DIMENSIONS & TOLERANCES FOR FLANGED PIPE

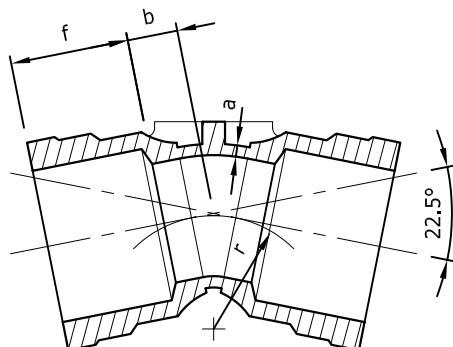
HUMES 1040



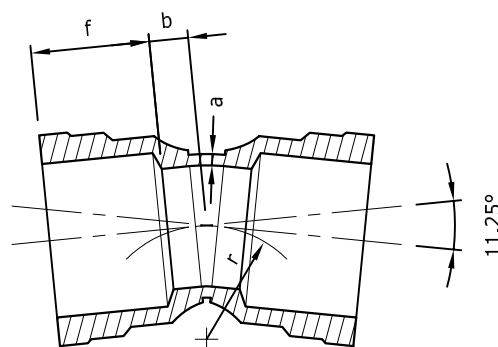
(a) 90° BEND



(b) 45° BEND



(c) 22 ½° BEND



(d) 11 ¼° BEND

Nominal size (DN)	PN 35 (a) mm	(r) mm	(b) mm			
			Angle of bend - degrees			
			90	45	22 ½	11 ¼
100	8	152	165	80	45	30
150	9	190	205	95	55	35

FIGURE 2 - BENDS (SOCKET/SOCKET - SIZES DN100 & DN150)

NOTES:

- 1 Minimum wall thickness for other pressure classifications shall comply with AS/NZS 2280:2004 - Clause 1.6.3.
- 2 For details of dimension 'f' and socket profile, refer to manufacturer.

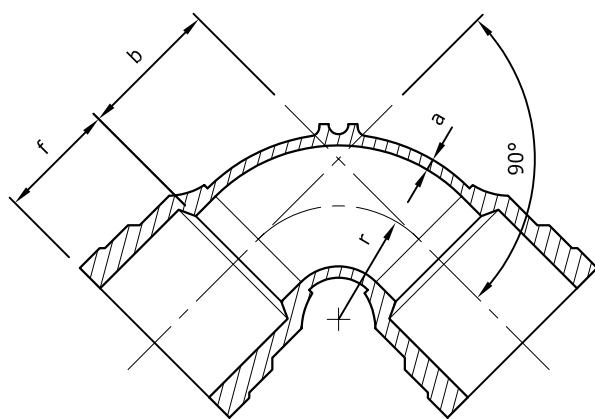
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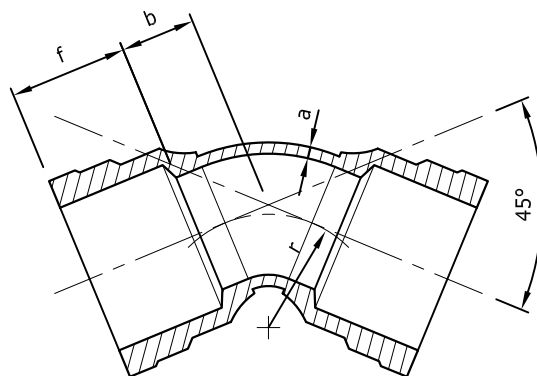
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BENDS
SOCKET / SOCKET
DN100 & DN150

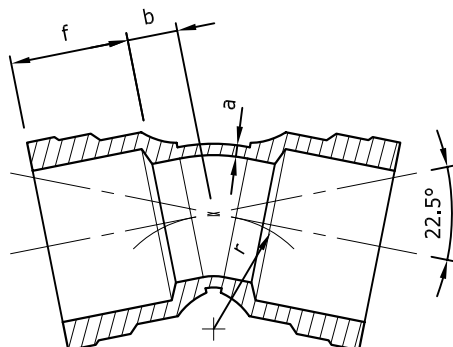
HUMES 1041



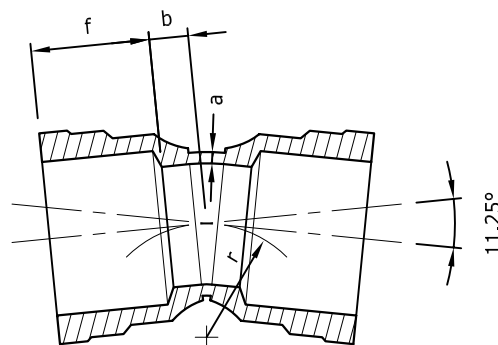
(a) 90° BEND



(b) 45° BEND



(c) 22 ½° BEND



(d) 11 ¼° BEND

Nominal size (DN)	PN 35 (a) mm	(r) mm	(b) mm			
			Angle of bend - degrees			
			90	45	22 ½	11 ¼
200	10	203	220	100	55	35
225	10	229	250	115	65	45
250	10	254	275	125	70	45
300	11	305	325	145	80	50
375	12	381	405	185	100	65
450	13	457	480	215	115	70
500	14	508	535	235	125	75
600	15	610	635	280	145	85
750	18	765	795	345	180	105

FIGURE 3 - BENDS (SOCKET/SOCKET - SIZES DN200 TO DN750)

NOTES:

- 1 Minimum wall thickness for other pressure classifications shall comply with AS/NZS 2280:2004 - Clause 1.6.3.
- 2 For details of dimension 'f' and socket profile, refer to manufacturer.

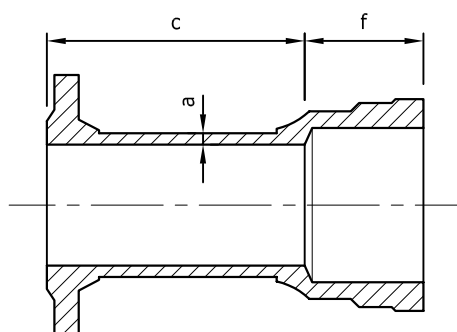
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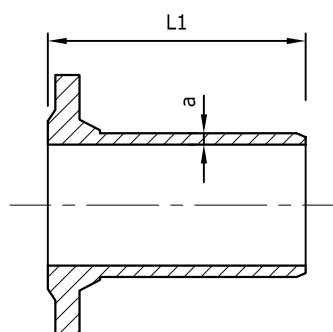
BENDS
SOCKET / SOCKET
DN200 TO DN750

HUMES 1042



(a) FLANGE SOCKET

Symbol:



(b) FLANGE SPIGOT

Symbol:

Nominal size (DN)	PN 35 (a) mm	(c) mm	(L1) mm
100	8	110	205
150	9	135	205
200	10	135	230
225	10	155	230
250	10	155	230
300	11	170	255
375	12	190	280
450	13	200	280
500	14	215	305
525	14	—	305
600	15	230	330
675	16	—	350
750	18	250	370

FIGURE 4 - CONNECTORS (FLANGE/SOCKET & FLANGE/SPIGOT)

NOTES:

- 1 Minimum wall thickness for other pressure classifications shall comply with AS/NZS 2280:2004 - Clause 1.6.3.
- 2 For details of spigots, see Figure 1.
- 3 For details of flanges, see AS 4087.
- 4 For details of dimension f and socket profile, refer to manufacturer.

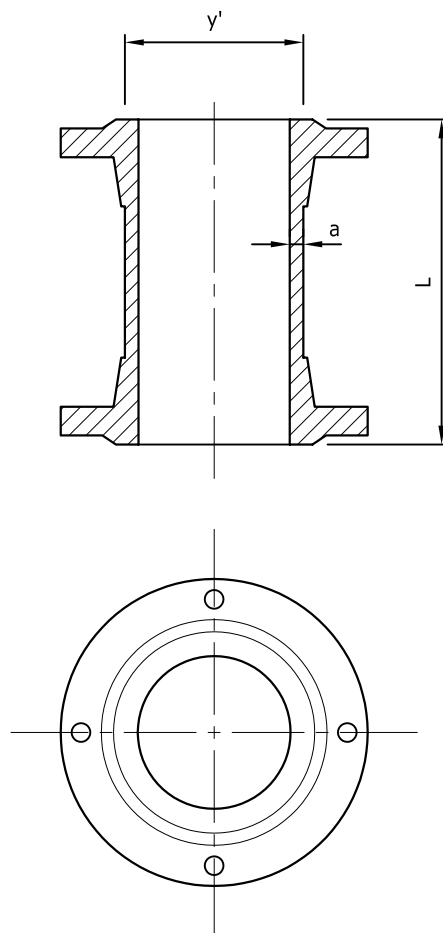
Symbols:



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**CONNECTORS
FLANGE/SOCKET
& FLANGE/SPIGOT**

HUMES 1043



Nominal size (DN)	PN 35 (a) mm	(y') mm	Available Lengths (L) mm
90	-	-	150, 225, 300 450, 600

FIGURE 5 - RISERS - HYDRANT

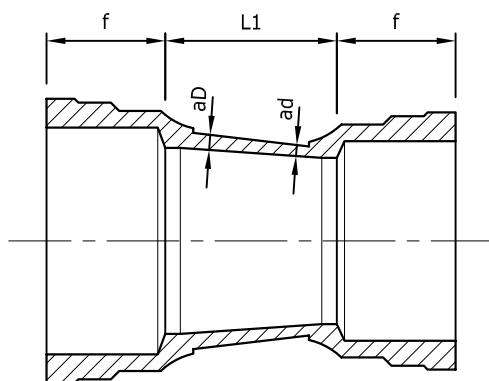
Symbols: II



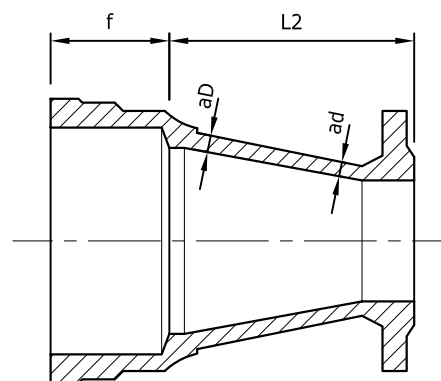
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**RISERS
HYDRANT**

HUMES 1046



(a) SOCKET / SOCKET Symbol:



(b) SOCKET / FLANGE Symbol:

Nominal Size mm (DN)	mm (dn)	PN 35 (ad) mm	PN 35 (ad) mm	(L1) mm	(L2) mm
100	80	8	8	105	125
150	80	9	8	230	250
150	100	9	8	170	190
200	100	10	8	295	315
200	150	10	9	170	200
225	100	10	8	365	385
225	150	10	9	235	270
225	200	10	10	110	155
250	100	10	8	425	445
250	150	10	9	300	330
250	200	10	10	175	215
250	225	10	10	115	160
300	100	11	8	555	575
300	150	11	9	425	460
300	200	11	10	300	345
300	225	11	10	240	290
300	250	11	10	180	225
375	200	12	10	495	540
375	225	12	10	435	485
375	250	12	10	375	420
375	300	12	11	245	305

FIGURE 6 (Part 1) - REDUCER (SOCKET/SOCKET & SOCKET/FLANGE)

NOTES:

- 1 Minimum wall thickness for other pressure classifications shall comply with AS/NZS 2280:2004 - Clause 1.6.3.
- 2 For details of flanges, see AS 4087.
- 3 For details of dimension 'f' and socket profile, refer to manufacturer.
- 4 Flanges may be placed at either end of socket/flange reducers.

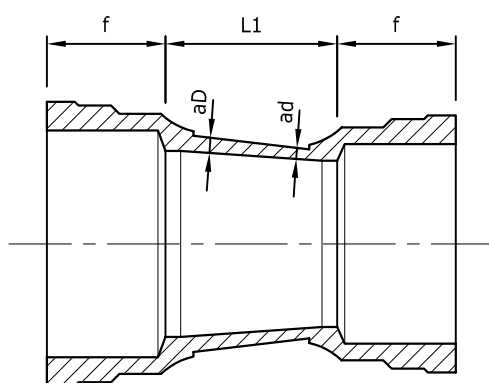
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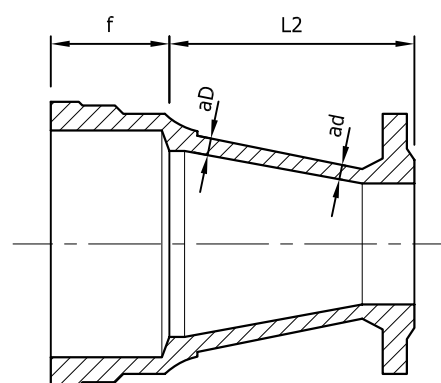
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REDUCERS (PART 1 OF 2) SOCKET/SOCKET & SOCKET/FLANGE

HUMES 1047



(a) SOCKET / SOCKET Symbol:



(b) SOCKET / FLANGE Symbol:

Nominal Size mm (DN)	mm (dn)	PN 35 (aD) mm	PN 35 (ad) mm	(L1) mm	(L2) mm
450	250	13	10	565	610
450	300	13	11	435	495
450	375	13	12	250	310
500	250	14	10	690	740
500	300	14	11	565	620
500	375	14	12	380	440
500	400	14	13	190	255
600	300	15	11	820	875
600	375	15	12	635	690
600	450	15	13	440	510
600	500	15	14	315	400
600	525	15	14	—	340
750	375	18	12	1020	1080
750	450	18	13	830	895
750	500	18	14	700	785
750	525	18	14	—	725
750	600	18	15	445	540
750	675	18	16	—	330

FIGURE 6 (Part 2) - REDUCER (SOCKET/SOCKET & SOCKET/FLANGE)

NOTES:

- 1 Minimum wall thickness for other pressure classifications shall comply with AS/NZS 2280:2004 - Clause 1.6.3.
- 2 For details of flanges, see AS 4087.
- 3 For details of dimension 'f' and socket profile, refer to manufacturer.
- 4 Flanges may be placed at either end of socket/flange reducers.

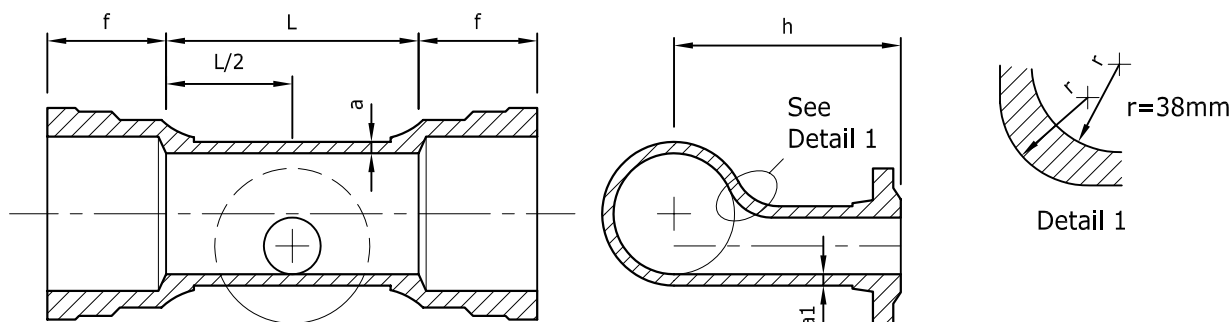
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REDUCERS (PART 2 OF 2)
SOCKET/SOCKET
& SOCKET/FLANGE

HUMES 1048



(a) FLANGE SOCKET

Symbol:

Nominal Size mm (DN)	mm (dn)	PN 35 (a) mm	PN 35 (a1) mm	(h) mm	(L) mm
150	80	9	8	225	210
200	80	10	8	250	210
225	100	10	8	265	240
250	100	10	8	280	240
300	100	11	8	310	240
375	150	12	9	375	310
450	150	13	9	415	310
500	150	14	9	440	310
600	150	15	9	495	310
750	200	18	10	575	370

FIGURE 7 - TEE SCOUR (SOCKET/SOCKET/FLANGE)

NOTES:

- 1 Minimum wall thickness for other pressure classifications shall comply with AS/NZS 2280:2004 - Clause 1.6.3.
- 2 For details of flanges, see AS 4087.
- 3 For details of dimension 'f' and socket profile, refer to manufacturer.
- 4 Sockets can be replaced by flanges.

Symbol:



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**TEE SCOUR
SOCKET/SOCKET/FLANGE**

HUMES 1050