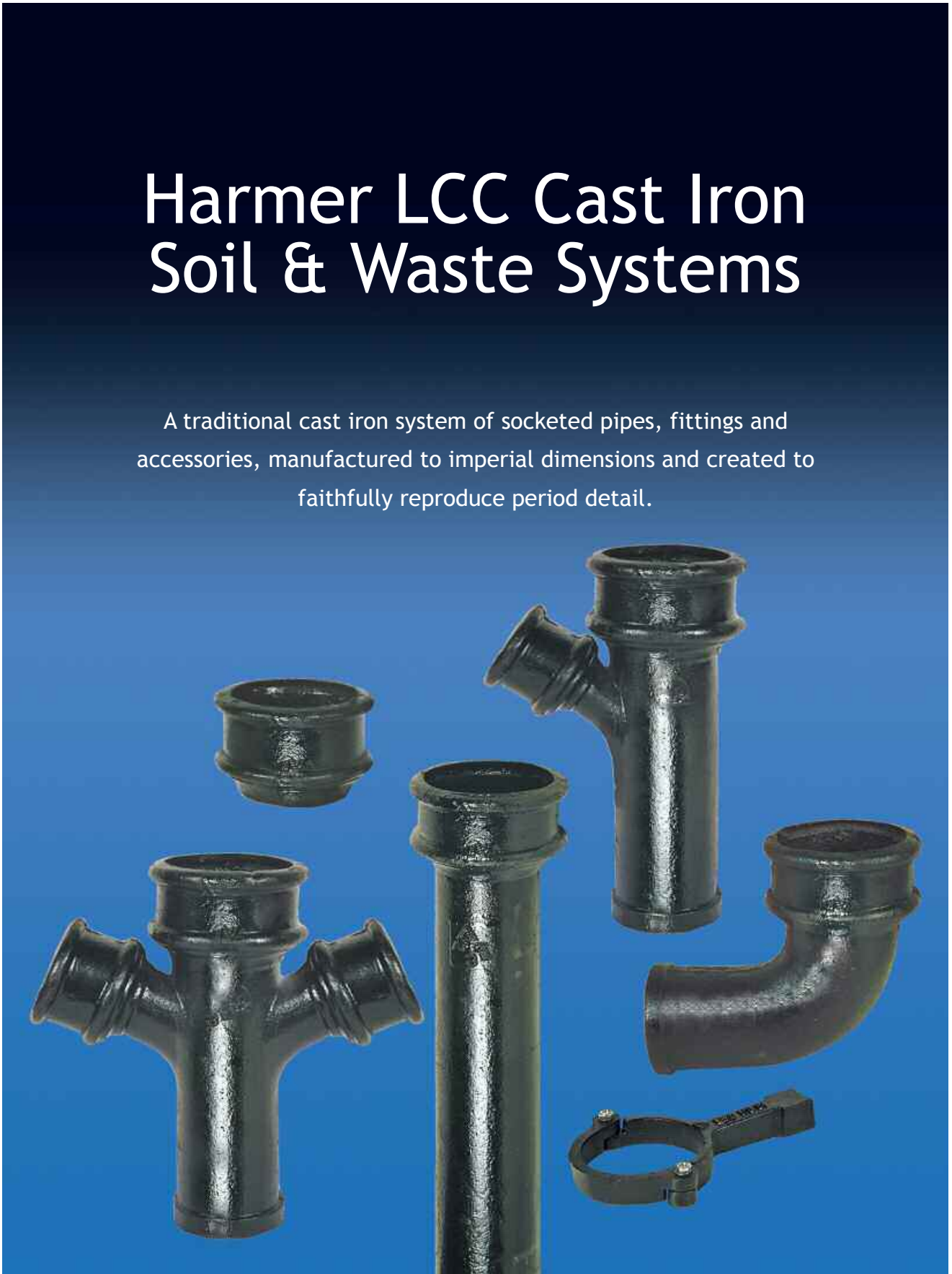


Harmer LCC Cast Iron Soil & Waste Systems

A traditional cast iron system of socketed pipes, fittings and accessories, manufactured to imperial dimensions and created to faithfully reproduce period detail.



Harmer LCC Traditional Cast Iron Soil & Waste Systems - Product Summary



Harmer - LCC Pipes



Harmer - LCC Couplings



Harmer - LCC Double Branches



Harmer - LCC Holderbats



Harmer - LCC Single Branches



Harmer - LCC Bends

Pipes and Fittings

The pipes, branches and bends illustrated above are available in various sizes and configurations, including options for access.

Other fittings include Blank Ends, Socket Reducers, Diminishing Pieces, Swan Necks, Boss Pipes, Shoes and P Traps.

Harmer LCC Traditional Cast Iron Soil & Waste Systems Product Summary

Alumasc has taken the original processes for the casting of iron, and combined them with modern manufacturing techniques to produce a product fully attuned to today's refurbishment requirements.

Features

Harmer LCC incorporates all the inherent characteristics of cast iron, plus dimensional accuracy and a consistent standard of finish for the final site installation.

An extensive range of fittings and accessories provides great flexibility in installation, while special detailing requirements can be catered for through Alumasc's fabrication and pattern making workshops.

Alumasc has also perfected the welding of cast iron, so that fittings or offsets to suit a particular situation can be specially fabricated where the alternative of making a pattern would not be economic.

Key Benefits

- Ideal for itemised replacement of existing LCC systems
- Manufactured to original imperial dimensions
- Supplied ready painted
- Comprehensive range of fittings
- Unique specials manufacture and fabrication

General Description

Finishes

Harmer LCC soil and waste pipes and fittings are factory-dipped in bitumen in accordance with BS 416. Where gloss painting is required, it is advisable to contact Alumasc Technical Services on 01744 648400.

Standards

Harmer LCC waste pipes and fittings comply with the requirements of BS 416: Discharge, ventilating pipes and fittings, sand cast or spun in cast iron, Part 1, 1990. Harmer LCC systems also comply with the relevant sections of the Building Regulations throughout the United Kingdom.

Installation

BS 8000: Workmanship on building sites, Part 13, Code of practice for above ground drainage and sanitary appliances, 1989 is applicable.

Suitability

Cast iron should not be used for conveying acid wastes or laid unprotected in any soil conditions where corrosion could occur.

On-site Storage

To avoid accidental damage to collars or pipe ends, pipes should be stored horizontally, blocked up clear of the ground and preferably under cover.

Imperial Dimensions

All products are made to the original imperial dimensions. This ensures a compatible interchange between old and new pipes and fittings and makes it more likely that, where an existing installation is being repaired or replaced, the original fixing holes can be re-used.

Pipe Fixing and Support

Holderbats for plugging and screwing to walls are available. Bobbins should be used to pack out the holderbat to give a 32mm painting gap for pipes up to 75mm (3") diameter, and 38mm for the 88mm (3 1/2") and 100mm (4") diameter pipes. For fixing centres reference should be made to BS 8000: Maximum distance between sanitary pipe supports, Table 1.

Pipe Joints

Pipe joints should be made using a caulking of 6mm diameter yarn, now available only in glass fibre instead of the traditional tarred yarn, with a minimum 38mm thickness of lead wool, well compacted.

Testing

The Building Regulations 1991, Requirement H1, Approved Document paragraph 1.7(a) requires that all the pipes, fittings and joints should be capable of withstanding an air or smoke test of at least 38mm gauge, for 3 minutes.



Harmer LCC Pipes

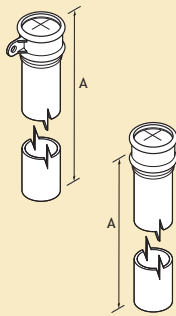
Pipe Diameters, Lengths and Weights: Manufacturing Dimensions

		100	88	76	63	50	
<p>Single Socket</p> <p>Double Socket (1830mm pipe length only)</p>	Pipe diameter	100	88	76	63	50	
	A Internal diameter	100	85	76	60	50	
	B External diameter	114	100	88	76	63	
	C Thickness	6	6	6	6	6	
	D Diameter over spigot bead	104	111	98	85	69	
	Socket						
	E Internal diameter	127	114	100	88	73	
	F External diameter	136	130	117	104	88	
	G Thickness	6	6	6	6	6	
	H Internal depth	76	76	69	69	63	
	I External diameter over spigot bead	133	146	139	114	100	
	J Caulking clearance	6	6	6	6	6	
	Ears						
	K Length of flange overall	212	193	177	161	146	
L Centre to centre of holes	180	161	146	130	114		
Pipe length and weight							
1830 (6') overall length of pipe	1830	1830	1830	1830	1830		
Effective length of pipe	1725	1725	1730	1730	1737		
Weight of 6' pipe without ears	21.7 kg	19.0 kg	16.7 kg	14.0 kg	11.0 kg		
Weight of 6' pipe with ears	22.2 kg	19.5 kg	17.2 kg	14.5 kg	12.0 kg		
1219 (4') overall length of pipe	1219	1219	1219	1219	1219		
Effective length of pipe	1125	1125	1130	1130	1137		
Weight of 6' pipe without ears	14.5 kg	12.7 kg	11.2 kg	9.5 kg	8 kg		
Weight of 6' pipe with ears	14.8 kg	13 kg	11.5 kg	10 kg	8.5 kg		
914 (3') overall length of pipe	914	914	914	914	914		
Effective length of pipe	725	725	730	730	737		
Weight of 6' pipe without ears	10.8 kg	9.5 kg	8.3 kg	7 kg	5.7 kg		
Weight of 6' pipe with ears	11.3 kg	10 kg	8.8 kg	7.5 kg	6.2 kg		
610 (2') overall length of pipe	610	610	610	610	610		
Effective length of pipe	525	525	530	530	537		
Weight of 6' pipe without ears	7.3 kg	6.8 kg	5.5 kg	4.7 kg	4 kg		
Weight of 6' pipe with ears	7.8 kg	6.8 kg	6 kg	5.2 kg	4.5 kg		
Double socket pipe, 1830 (6') overall pipe length only							
Effective length of pipe	1650	1650	1663	1663	1669		
Weight of 6' pipe without ears	23.7 kg	20.5 kg	18.2 kg	15.3 kg	12.5 kg		
Weight of 6' pipe with ears	24.2 kg	21 kg	18.7 kg	15.8 kg	13 kg		
Note: Double socket pipes are subject to availability							

Note: All dimensions are given in millimetres. An imperial to metric conversion table is given on page 165.

Harmer LCC Pipes

Pipes - With and Without Ears

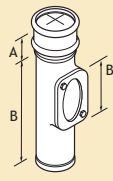


Pipe Size	A	Product Code
50 dia	610mm	L20/2FT
50 dia	914mm	L20/3FT
50 dia	1219mm	L20/4FT
50 dia	1830mm	L20/6FT
63 dia	610mm	L25/2FT
63 dia	914mm	L25/3FT
63 dia	1219mm	L25/4FT
63 dia	1830mm	L25/6FT
75 dia	610mm	L30/2FT
75 dia	914mm	L30/3FT
75 dia	1219mm	L30/4FT
75 dia	1830mm	L30/6FT
87 dia	610mm	L35/2FT
87 dia	914mm	L35/3FT
87 dia	1219mm	L35/4FT
87 dia	1830mm	L35/6FT
100 dia	610mm	L40/2FT
100 dia	914mm	L40/3FT
100 dia	1219mm	L40/4FT
100 dia	1830mm	L40/6FT

Notes:

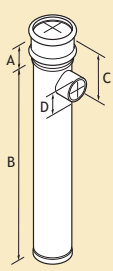
1. Pipes without Ears. If pipes without ears are required, add suffix NE to the order code.
2. Double Collared Pipes. If double collared pipes are required with ears, add suffix DCE to the order code. Add suffix DC if no ears required. Only available in 6ft lengths.
3. Pipe nails are available to order.
4. When specifying loose couplings, slip couplings and access pipes with ears, quote the full product code suffixed with /E.

Access Pipes



Pipe Size	A	B	C	Product Code
50 dia	63	234	63	L20/AP
63 dia	69	245	76	L25/AP
75 dia	69	266	88	L30/AP
87 dia	76	273	95	L35/AP
100 dia	76	285	100	L40/AP

Boss Pipes




Pipe Size	A	B	C	Inlet Pipe Size (D)	Product Code
75 dia	76	381	139	38	L30/BP/150
87 dia	76	381	139	38	L35/BP/150
100 dia	76	381	139	31	L40/BP/125
100 dia	76	381	139	38	L40/BP/150
100 dia	76	381	139	50	L40/BP/200


Note: All dimensions are given in millimetres. An imperial to metric conversion table is given on page 165.

Harmer LCC Fittings

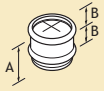
Screw To Wall Cast Iron Holderbats

	Pipe Size	Product Code
	50 dia	L20/HB/ST
	63 dia	L25/HB/ST
	75 dia	L30/HB/ST
	88 dia	L35/HB/ST
	100 dia	L40/HB/ST
Note: Cast iron bobbins are available spacing from 13mm to 50mm in 6mm increments.		


Built-in Holderbats

	Pipe Size	Product Code
	50 dia	L20/HB/BI
	63 dia	L25/HB/BI
	75 dia	L30/HB/BI
	88 dia	L35/HB/BI
	100 dia	L40/HB/BI
Note: Cast bins are available spacing from 13mm to 50mm in 6mm increments.		

Loose Couplings

	Pipe Size	A	B	Product Code
	50 dia	45	95	L20/SOC
	63 dia	45	95	L25/SOC
	75 dia	38	90	L30/SOC
	87 dia	38	86	L35/SOC
	100 dia	35	80	L40/SOC

Slip Couplings

	Pipe Size	A	Product Code
	50 dia	95	L20/SOC/S
	63 dia	95	L25/SOC/S
	75 dia	89	L30/SOC/S
	87 dia	95	L35/SOC/S
	100 dia	79	L40/SOC/S


Note: When specifying fittings with ears, quote the full product code suffixed with /E.

Harmer LCC Fittings

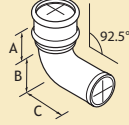
Blank End

	Pipe Size	A	Product Code
	75 dia	76	L30/BE
	87 dia	76	L35/BE
	100 dia	70	L40/BE

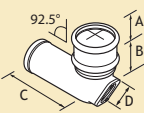
Socket Reducer

	Pipe Size	A	B	Product Code
	75 dia	51	76	L30/SR/20
	87 dia	76	76	L40/SR/20
	100 dia	51	70	L40/SR/30

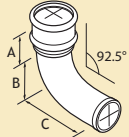
92.5° Bends

	Pipe Size	A	B	C	Product Code
	50 dia	152	139	88	L20/B/92
	63 dia	165	155	95	L25/B/92
	75 dia	174	161	104	L30/B/92
	87 dia	187	177	111	L35/B/92
	100 dia	193	180	117	L40/B/92

92.5° Bends with heel access

	Pipe Size	A	B	C	D	Product Code
	50 dia	152	139	88	63	L20/B/92
	63 dia	165	155	95	76	L25/B/92
	75 dia	174	161	104	88	L30/B/92
	87 dia	187	177	111	95	L35/B/92
	100 dia	193	180	117	100	L40/B/92

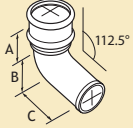
92.5° Long Radius Bends

	Pipe Size	A	B	C	Product Code
	100 dia	298	304	222	L40/BLR

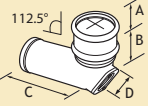
Note: If bends with ears are required, add LE to the order code for left hand side and RE for right hand side bend.

Harmer LCC Fittings

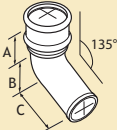
112.5° Bends

	Pipe Size	A	B	C	Product Code
	50 dia	152	139	88	L20/B/112
63 dia	165	155	95	L25/B/112	
75 dia	174	161	104	L30/B/112	
87 dia	184	177	111	L35/B/112	
100 dia	193	180	120	L40/B/112	

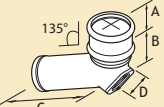
112.5° Bends with heel access

	Pipe Size	A	B	C	D	Product Code
	50 dia	152	139	88	63	L20/B/112H
63 dia	165	155	95	66	L25/B/112H	
75 dia	174	161	104	73	L30/B/112H	
87 dia	184	177	111	95	L35/B/112H	
100 dia	193	180	120	100	L40/B/112H	

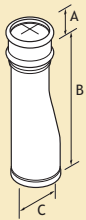
135° Bends

	Pipe Size	A	B	C	Product Code
	50 dia	127	142	88	L20/B/135
63 dia	136	158	95	L25/B/135	
75 dia	142	161	104	L30/B/135	
87 dia	171	161	111	L35/B/135	
100 dia	177	165	120	L40/B/135	

135° Bends with heel access

	Pipe Size	A	B	C	D	Product Code
	50 dia	127	142	88	63	L20/B/135H
63 dia	136	158	95	66	L25/B/135H	
75 dia	142	161	104	73	L30/B/135H	
87 dia	171	161	111	95	L35/B/135H	
100 dia	177	165	120	100	L40/B/135H	

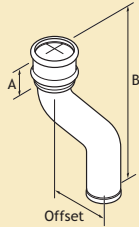
Diminishing Pieces

	Pipe Size	A	B	C	Product Code
	75 dia	69	304	50	L25/B/92AR
100 dia	76	304	50	L25/B/92AL	
100 dia	76	304	75	L35/B/92AL	

Note: If bends with ears are required, add LE to the order code for left hand side and RE for right hand side bend.

Harmer LCC Fittings

112.5° Swan Necks

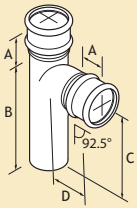


Pipe Size	A	B	Offset	Product Code
50 dia	63	241	75	L20/OF/03
50 dia	63	257	112	L20/OF/04
50 dia	63	273	150	L20/OF/06
50 dia	63	304	237	L20/OF/09
50 dia	63	336	300	L20/OF/12
50 dia	63	361	375	L20/OF/15
50 dia	63	400	475	L20/OF/18
50 dia	63	431	554	L20/OF/21
50 dia	63	463	600	L20/OF/24
63 dia	69	257	75	L25/OF/03
63 dia	69	273	112	L25/OF/04
63 dia	69	288	150	L25/OF/06
63 dia	69	320	237	L25/OF/09
63 dia	69	352	300	L25/OF/12
63 dia	69	384	375	L25/OF/15
63 dia	69	415	475	L25/OF/18
63 dia	69	447	554	L25/OF/21
63 dia	69	479	600	L25/OF/24
75 dia	69	266	75	L30/OF/03
75 dia	69	282	112	L30/OF/04
75 dia	69	298	150	L30/OF/06
75 dia	69	330	237	L30/OF/09
75 dia	69	361	300	L30/OF/12
75 dia	69	393	375	L30/OF/15
75 dia	69	425	475	L30/OF/18
75 dia	69	457	554	L30/OF/21
75 dia	69	488	600	L30/OF/24
87 dia	76	282	75	L35/OF/03
87 dia	76	298	112	L35/OF/04
87 dia	76	314	150	L35/OF/06
87 dia	76	346	237	L35/OF/09
87 dia	76	377	300	L35/OF/12
87 dia	76	409	375	L35/OF/15
87 dia	76	441	475	L35/OF/18
87 dia	76	473	554	L35/OF/21
87 dia	76	504	600	L35/OF/24
100 dia	76	288	75	L40/OF/03
100 dia	76	307	112	L40/OF/04
100 dia	76	323	150	L40/OF/06
100 dia	76	355	237	L40/OF/09
100 dia	76	387	300	L40/OF/12
100 dia	76	419	375	L40/OF/15
100 dia	76	450	475	L40/OF/18
100 dia	76	482	554	L40/OF/21
100 dia	76	514	600	L40/OF/24

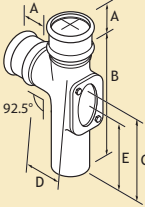
Note: If swan necks with ears are required, add LE to the order code for left hand side and RE for right hand side bend.

Harmer LCC Fittings

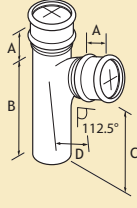
92.5° Equal Single Branches

	Pipe Size	A	B	C	D	Product Code
	50 dia	63	234	177	88	L20/BR/9
63 dia	69	260	196	95	L25/BR/9	
75 dia	69	285	212	111	L30/BR/9	
87 dia	76	304	225	117	L35/BR/9	
100 dia	76	330	214	130	L40/BR/9	

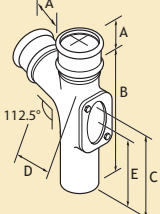
92.5° Equal Single Branches with access

	Pipe Size	A	B	C	D	E	Product Code
	50 dia	63	234	177	88	146	L20/BRA/9
63 dia	69	260	196	95	161	L25/BRA/9	
75 dia	69	285	212	111	177	L30/BRA/9	
87 dia	76	304	225	117	190	L35/BRA/9	
100 dia	76	330	214	130	206	L40/BRA/9	

112.5° Equal Single Branches

	Pipe Size	A	B	C	D	Product Code
	50 dia	63	234	155	79	L20/BR/11
63 dia	69	260	174	85	L25/BR/11	
75 dia	69	285	184	100	L30/BR/11	
87 dia	76	304	120	107	L35/BR/11	
100 dia	76	330	184	146	L40/BR/11	

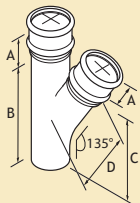
112.5° Equal Single Branches with access

	Pipe Size	A	B	C	D	E	Product Code
	50 dia	63	234	155	88	146	L20/BRA/9
63 dia	69	260	174	95	161	L25/BRA/9	
75 dia	69	285	184	111	177	L30/BRA/9	
87 dia	76	304	120	117	190	L35/BRA/9	
100 dia	76	330	184	130	206	L40/BRA/9	

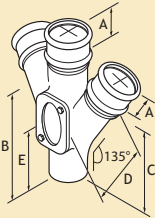
Note: When specifying fittings with ears, quote the full product code suffixed with /E.

Harmer LCC Fittings

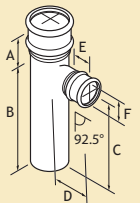
135° Equal Single Branches

	Pipe Size	A	B	C	D	Product Code
	50 dia	63	234	120	114	L20/BR/13
63 dia	69	260	130	130	L25/BR/13	
75 dia	69	285	133	152	L30/BR/13	
87 dia	76	304	146	158	L35/BR/13	
100 dia	76	330	146	184	L40/BR/13	

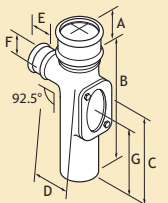
135° Equal Single Branches with Access

	Pipe Size	A	B	C	D	E	Product Code
	50 dia	63	234	120	114	146	L20/BRA/9
63 dia	69	260	130	130	161	L25/BRA/9	
75 dia	69	285	133	152	177	L30/BRA/9	
87 dia	76	304	146	158	190	L35/BRA/9	
100 dia	76	330	146	184	206	L40/BRA/9	

92.5° Unequal Single Branches

	Pipe Size	A	B	C	D	E	F	Product Code
	63 dia	69	260	196	95	63	50	L25/BRU/95
75 dia	69	260	196	100	63	50	L30/BRU/95	
75 dia	69	273	206	104	69	63	L30/BRU/96	
87 dia	76	266	206	107	63	50	L35/BRU/95	
87 dia	76	285	209	111	69	63	L35/BRU/96	
87 dia	76	292	215	117	69	75	L35/BRU/97	
100 dia	76	279	219	114	63	50	L40/BRU/95	
100 dia	76	285	209	117	69	63	L40/BRU/96	
100 dia	76	292	215	123	69	75	L40/BRU/97	
100 dia	76	304	209	123	76	88	L40/BRU/98	

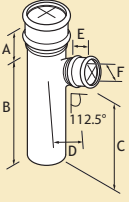
92.5° Unequal Single Branches with Access

	Pipe Size	A	B	C	D	E	F	G	Product Code
	63 dia	69	260	196	95	63	50	165	L25/BRU/95
75 dia	69	260	196	100	63	50	165	L30/BRU/95	
75 dia	69	273	206	104	69	63	170	L30/BRU/96	
87 dia	76	266	206	107	63	50	165	L35/BRU/95	
87 dia	76	285	209	111	69	63	176	L35/BRU/96	
87 dia	76	292	215	117	69	75	187	L35/BRU/97	
100 dia	76	279	219	114	63	50	177	L40/BRU/95	
100 dia	76	285	209	117	69	63	180	L40/BRU/96	
100 dia	76	292	215	123	69	75	182	L40/BRU/97	
100 dia	76	304	209	123	76	88	178	L40/BRU/98	

Note: When specifying fittings with ears, quote the full product code suffixed with /E.

Harmer LCC Fittings

112.5° Unequal Single Branches

	Pipe Size	A	B	C	D	E	F	Product Code
	63 dia	69	276	187	104	63	50	L25/BRU/115
	75 dia	69	260	174	92	63	50	L30/BRU/115
	75 dia	69	276	187	104	69	63	L30/BRU/116
	87 dia	76	263	180	98	63	50	L35/BRU/115
	87 dia	76	288	184	111	69	76	L35/BRU/117
	100 dia	76	279	190	104	63	50	L35/BRU/115
	100 dia	76	288	184	114	69	76	L40/BRU/117
	100 dia	76	304	193	111	76	88	L40/BRU/118

112.5° Unequal Single Branches with Access

	Pipe Size	A	B	C	D	E	F	G	Product Code
	63 dia	69	276	187	104	63	50	165	L25/BRUA/115
	75 dia	69	260	174	92	63	50	165	L30/BRUA/115
	75 dia	69	276	187	104	69	63	165	L30/BRUA/116
	87 dia	76	263	180	98	63	50	165	L35/BRUA/115
	87 dia	76	288	184	111	69	75	184	L35/BRUA/117
	100 dia	76	279	190	104	63	50	174	L35/BRUA/115
	100 dia	76	288	184	114	69	75	180	L40/BRUA/117
	100 dia	76	304	193	111	76	88	177	L40/BRUA/118

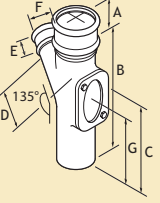
135° Unequal Single Branches

	Pipe Size	A	B	C	D	E	F	Product Code
	63 dia	69	260	130	133	63	50	L25/BRU/135
	75 dia	69	260	130	133	63	50	L30/BRU/135
	75 dia	69	280	130	133	69	63	L30/BRU/136
	87 dia	76	266	133	146	63	50	L35/BRU/135
	87 dia	76	292	133	161	69	75	L35/BRU/137
	100 dia	76	279	139	152	63	50	L35/BRU/135
	100 dia	76	292	127	171	69	75	L40/BRU/137
	100 dia	76	304	127	177	76	88	L40/BRU/138

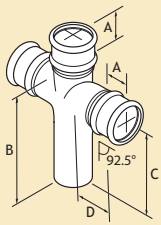
Note: When specifying fittings with ears, quote the full product code suffixed with /E.

Harmer LCC Fittings

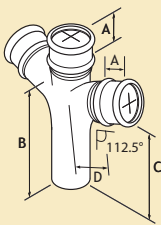
135° Unequal Single Branches with Access

	Pipe Size	A	B	C	D	E	F	G	Product Code
	63 dia	69	260	130	133	63	50	165	L25/BRUA/135
	75 dia	69	260	130	133	63	50	165	L30/BRUA/135
	75 dia	69	280	130	133	69	63	165	L30/BRUA/136
	87 dia	76	266	133	146	63	50	165	L35/BRUA/135
	87 dia	76	292	133	161	69	75	184	L35/BRUA/137
	100 dia	76	279	139	152	63	50	174	L35/BRUA/135
	100 dia	76	292	127	171	69	75	180	L40/BRUA/137
	100 dia	76	304	127	177	76	88	177	L40/BRUA/138

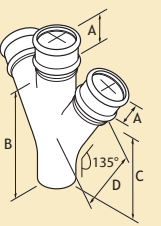
92.5° Equal Double Branches

	Pipe Size	A	B	C	D	Product Code
	50 dia	63	234	177	88	L20/BRD/9
	63 dia	69	260	196	95	L25/BRD/9
	75 dia	69	285	212	111	L30/BRD/9
	87 dia	76	304	225	117	L35/BRD/9
	100 dia	76	330	241	130	L40/BRD/9

112.5° Equal Double Branches

	Pipe Size	A	B	C	D	Product Code
	50 dia	63	234	155	79	L20/BRD/11
	63 dia	69	260	174	85	L25/BRD/11
	75 dia	69	285	184	98	L30/BRD/11
	87 dia	76	304	193	111	L35/BRD/11
	100 dia	76	330	209	120	L40/BRD/11

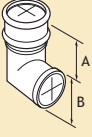
135° Equal Double Branches

	Pipe Size	A	B	C	D	Product Code
	50 dia	63	234	120	114	L20/BRD/13
	63 dia	69	260	130	130	L25/BRD/13
	75 dia	69	285	136	149	L30/BRD/13
	87 dia	76	304	146	158	L35/BRD/13
	100 dia	76	330	146	184	L40/BRD/13

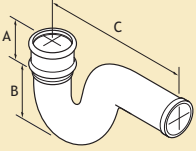
Note: When specifying fittings with ears, quote the full product code suffixed with /E.

Harmer LCC Fittings

Shoes

	Pipe Size	A	B	Product Code
	50 dia	63	127	L20/SH
	63 dia	69	149	L25/SH
	75 dia	69	177	L30/SH
	87 dia	76	200	L35/SH
	100 dia	76	228	L40/SH

P Traps

	Pipe Size	A	B	C	Product Code
	50 dia	76	136	343	L40/PT

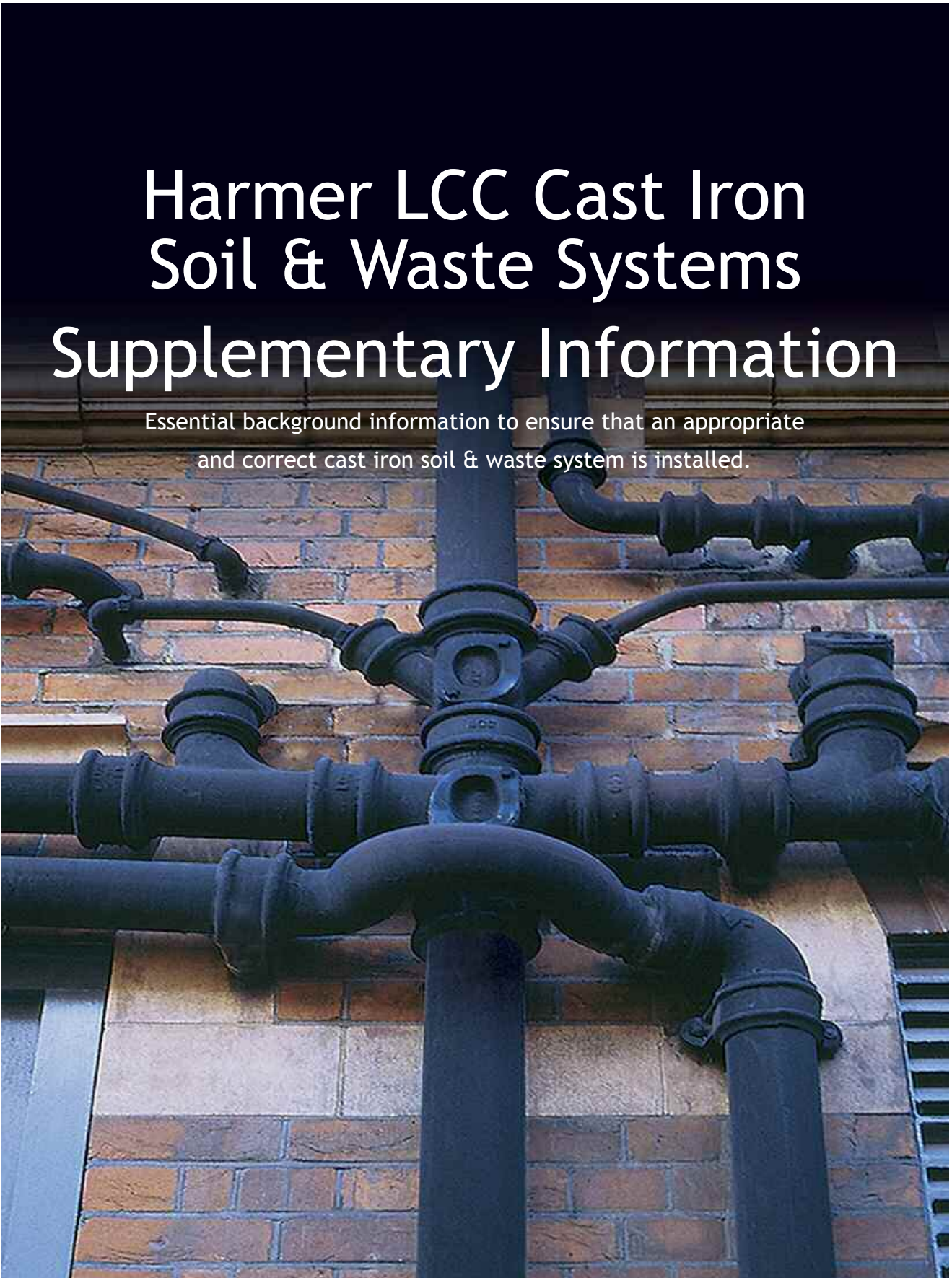
Pipe Fixings

	Type	Size	Notes	Product Code
	3" Pipe Nail	M8 x 75mm	Bright zinc plated mild steel	NAIL30
	4" Pipe Nail	M8 x 100mm	Bright zinc plated mild steel	NAIL40
	3" Coach Screw	M8 x 75mm	Hardened steel zinc plated	COACH30
	4" Coach Screw	M8 x 100mm	Hardened steel zinc plated	COACH40
	Coach Screw Cap	M8 dia	Black plastic	COACHCAP
	Marine Sealant	310ml Cartridge	Geocel black silicone rubber	MS991563
Caulking Foam 13mm	M13 dia x 10 metre	Polyethylene backer rod	BF991413	

Note: When specifying fittings with ears, quote the full product code suffixed with /E.

Harmer LCC Cast Iron Soil & Waste Systems Supplementary Information

Essential background information to ensure that an appropriate and correct cast iron soil & waste system is installed.

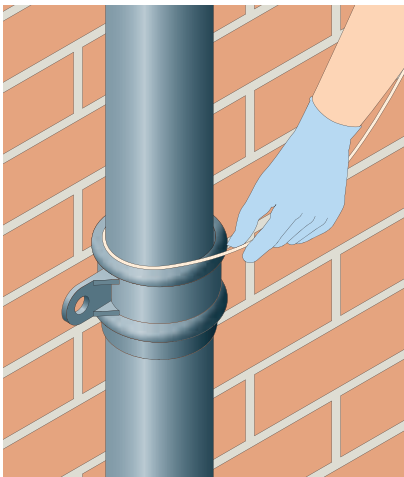


Harmer LCC - Installation

Harmer LCC Traditional Cast Iron Soil & Waste Drainage system has an extensive range of fittings and accessories to provide great flexibility in installation.

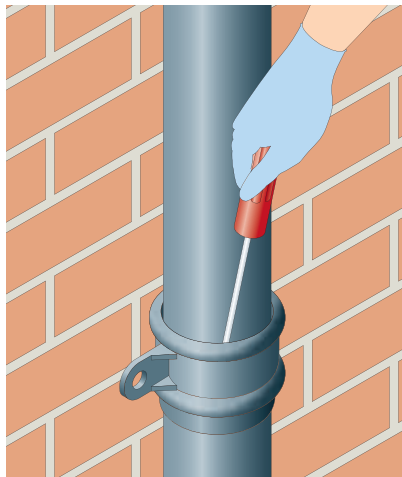
The LCC system can be installed using the traditional lead caulking method with the use of a naked flame. Alternatively, Harmer recommends a cold caulking method as described below.

Cold Jointing Method for Harmer LCC Pipes

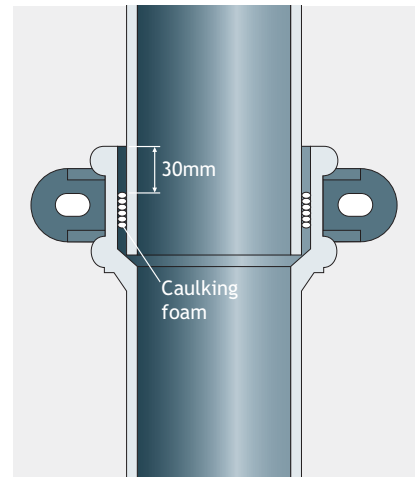


1. Centre the pipe spigot within the socket and insert the caulking foam.

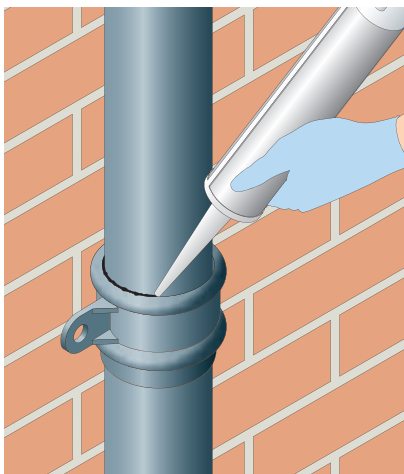
Note: Each joint of a 4" pipe will require approximately 4 metres of caulking foam and a quarter of a tube of black silicone sealant. Estimate usage for smaller or larger diameters on a pro rata basis.



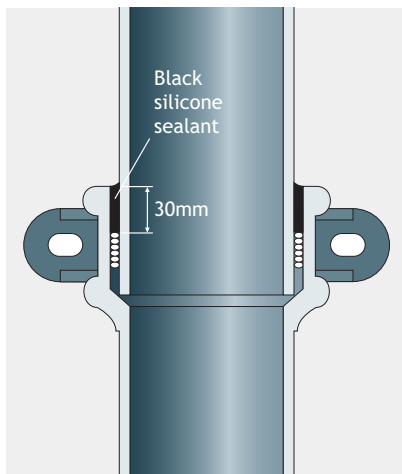
2. Caulk the foam into the socket up to 30mm from the top using a screwdriver. This will centralise the pipes and provide a backing for the sealant.



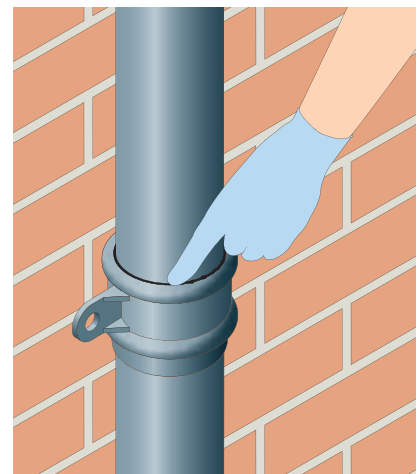
2a. A profile image showing the installed caulking foam in the socket, leaving a 30mm space for the silicone sealant.



3. Fill the top 30mm with black silicone sealant.



3a. A profile image showing the silicone sealant filling the 30mm gap to the top of the socket.



4. When filled, smooth off level with the top of the socket to provide a sealed and neat appearance. No further painting is required if the pipes are black.

Fixing Methods for Harmer LCC Pipes

For eared soil pipes: Use 100mm large head pipe nails, coach screws or other proprietary fixing.

For unearred soil pipes: Use drive-in spikes - alternatively, use holderbats or earbands for a more decorative effect.

All of these types of fixings are available from stock. (See the Price List, sundry items, page 124)

NBS Specification

A typical NBS Specification for Harmer LCC Traditional soil and waste pipes is provided below. A full range of NBS specifications are available via Alumasc's online NBS Specification Builder at www.harmerdrainage.co.uk. For project specific specification advice, contact Alumasc Technical Services.

NBSPlus

R11 Above Ground Foul Drainage Systems

GENERAL

- Gravity Foul Drainage System.
- Sanitary and waste pipework, ventilating pipework.

SYSTEM PERFORMANCE

- Design Standard: To BS EN 12056-1:2000, BS EN 12056-2:2000 and National Annexes NA-NG.
- Collection and Distribution of Foul Water: Complete, and without leakage or noise nuisance.
- Design Parameters: Self-cleansing, and without blockage, crossflow, backfall, leakage, odours or noise nuisance. Pipework pressure fluctuations: $\pm 38\text{mm}$ (max). Trap water seal: 25mm (min).

PRODUCTS (TYPICAL SPECIFICATION)

HARMER LCC TRADITIONAL CAST IRON

335 HARMER LCC PIPES

Gutters and fittings to: BS 8530 (formerly BS 2997)
Manufacturer: Alumasc Exterior Building Products Ltd
White House Works, Bold Road, Sutton, St Helens, Merseyside WA9 4JG.
Tel: 01744 648400, Fax: 01744 648401, Email: info@alumasc-exteriors.co.uk

Reference: Harmer LCC cast iron soil and waste system
Size: 76mm (3") diameter
Colour: Black Gloss
Joint Type: Spigot and Socket
Fixing: Fixed to the wall at approximately 1.83m centres through the ears integral to the pipe or via separate galvanised steel holderbats. It is recommended that the fixings be round or dome head galvanised plugged screws with washers.
Accessories: Bends, Branches, Access Pipes, Swan Necks, Plinth Offsets.



Create Alumasc Rainwater System NBS specifications by selecting the required product range, profile, size and finish by visiting:

www.harmerdrainage.co.uk

Imperial/Metric Conversion Chart

in	mm	in	mm	in	ft in	mm
		6	152.4	12	1 0	304.8
1/8	3.2	6 1/8	155.6	12 1/8	1 0 1/8	308.0
1/4	6.4	6 1/4	158.8	12 1/4	1 0 1/4	311.2
3/8	9.5	6 3/8	161.9	12 3/8	1 0 3/8	314.3
1/2	12.7	6 1/2	165.1	12 1/2	1 0 1/2	317.5
5/8	15.9	6 5/8	168.3	12 5/8	1 0 5/8	320.7
3/4	19.1	6 3/4	171.5	12 3/4	1 0 3/4	323.9
7/8	22.2	6 7/8	174.6	12 7/8	1 0 7/8	327.0
1	25.4	7	177.8	13	1 0	330.2
1 1/8	28.6	7 1/8	181.0	13 1/8	1 1 1/8	333.4
1 1/4	31.8	7 1/4	184.2	13 1/4	1 1 1/4	336.6
1 3/8	34.9	7 3/8	187.3	13 3/8	1 1 3/8	339.7
1 1/2	38.1	7 1/2	190.5	13 1/2	1 1 1/2	342.9
1 5/8	41.3	7 5/8	193.7	13 5/8	1 1 5/8	346.1
1 3/4	44.5	7 3/4	196.9	13 3/4	1 1 3/4	349.3
1 7/8	47.6	7 7/8	200.0	13 7/8	1 1 7/8	352.4
2	50.8	8	203.2	14	1 0	355.6
2 1/8	54.0	8 1/8	206.4	14 1/8	1 2 1/8	358.8
2 1/4	57.2	8 1/4	209.6	14 1/4	1 2 1/4	362.0
2 3/8	60.3	8 3/8	212.7	14 3/8	1 2 3/8	365.1
2 1/2	63.5	8 1/2	215.9	14 1/2	1 2 1/2	368.3
2 5/8	66.7	8 5/8	219.1	14 5/8	1 2 5/8	371.5
2 3/4	69.9	8 3/4	222.3	14 3/4	1 2 3/4	374.7
2 7/8	73.0	8 7/8	225.4	14 7/8	1 2 7/8	377.8
3	76.2	9	228.6	15	1 0	381.0
3 1/8	79.4	9 1/8	231.8	15 1/8	1 3 1/8	384.2
3 1/4	82.6	9 1/4	235.0	15 1/4	1 3 1/4	387.4
3 3/8	85.7	9 3/8	238.1	15 3/8	1 3 3/8	390.5
3 1/2	88.9	9 1/2	241.3	15 1/2	1 3 1/2	393.7
3 5/8	92.1	9 5/8	244.5	15 5/8	1 3 5/8	396.9
3 3/4	95.3	9 3/4	247.7	15 3/4	1 3 3/4	400.1
3 7/8	98.4	9 7/8	250.8	15 7/8	1 3 7/8	403.2
4	101.6	10	254.0	16	1 0	406.4
4 1/8	104.8	10 1/8	257.2	16 1/8	1 4 1/8	409.6
4 1/4	108.0	10 1/4	260.4	16 1/4	1 4 1/4	412.8
4 3/8	111.1	10 3/8	263.5	16 3/8	1 4 3/8	415.9
4 1/2	114.3	10 1/2	266.7	16 1/2	1 4 1/2	419.1
4 5/8	117.5	10 5/8	269.9	16 5/8	1 4 5/8	423.3
4 3/4	120.7	10 3/4	273.1	16 3/4	1 4 3/4	425.5
4 7/8	123.8	10 7/8	276.2	16 7/8	1 4 7/8	428.6
5	127.0	11	279.4	17	1 0	431.8
5 1/8	130.2	11 1/8	282.6	17 1/8	1 5 1/8	435.0
5 1/4	133.4	11 1/4	285.8	17 1/4	1 5 1/4	438.2
5 3/8	136.5	11 3/8	288.9	17 3/8	1 5 3/8	441.3
5 1/2	139.7	11 1/2	292.1	17 1/2	1 5 1/2	444.5
5 5/8	142.9	11 5/8	295.3	17 5/8	1 5 5/8	448.7
5 3/4	146.1	11 3/4	298.5	17 3/4	1 5 3/4	450.9
5 7/8	149.2	11 7/8	301.6	17 7/8	1 5 7/8	454.0