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Product Catalogue

MANITOBA



Heidelberg
Materials

About Heidelberg

In North America, Heidelberg Materials is a leading supplier of cement, aggregates, ready mixed concrete, and asphalt with more than 450 locations and approximately 9,000 employees. Over the years, the company has grown and acquired strategic assets to help provide a broader spectrum of products and possibilities to the markets we serve.

Heidelberg Materials – Pipe (formerly Inland and Ocean Pipe) has roots firmly planted in the Canadian Heavy Construction Industry and provides a variety of products. This catalogue highlights some of our key products but please contact our Sales team for further questions.

- NOTES**
- Prices effective January 1, 2024
 - Applicable taxes and freight charges are extra
 - Restocking fees are 15% for returned undamaged stock items. Cancelled orders may be subject to 100% restocking charges
 - Catalogue pricing does not include variable fuel surcharge and steel surcharge (~\$14.85/tonne)
 - Listed product weights are approximate and intended for shipping purposes. Exact weights can be calculated upon request
 - Prices shown in Catalogue are intended as an estimating guide and are subject to change. Detailed quotations are available upon request

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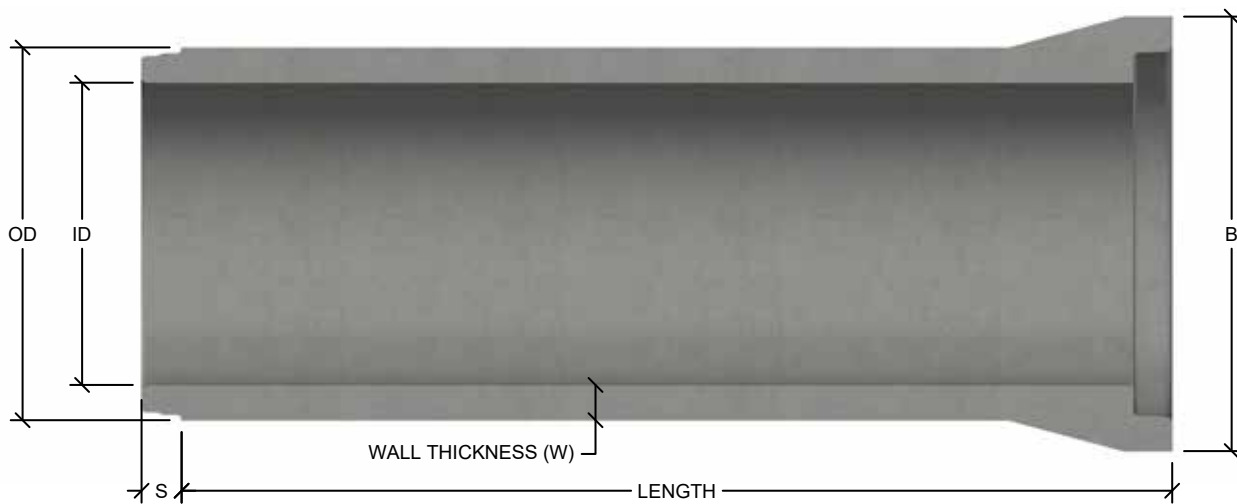


CONCRETE PIPE

BELL & SPIGOT PIPE — ASTM C76/CSA A257.2

				PRICE \$ PER METER									
NOMINAL INSIDE DIAMETER		LENGTH	WEIGHT	REINFORCED PIPE ASTM C76, CSA 257.2				GASKET	ACTUAL PIPE DIMENSIONS (mm)				
(mm)	(in)	(m)	(kg/m)	CLII (50-D)	CLIII (65-D)	CLIV (100-D)	CLV (140-D)	PRICE (\$/ea)	ID	OD	B	W	S
300	12"	2.50	220						305	445	500	70	90
375	15"	2.50	275						381	533	611	76	90
450	18"	2.50	284						457	583	700	63	95
525	21"	2.50	380						533	673	795	70	95
600	24"	2.50	461						610	762	902	76	98
750	27"	2.50	655						762	940	1060	89	98
900	30"	2.50	880						914	1116	1260	101	98

- NOTE
1. Bell & Spigot does not have lifting pins
 2. Used in "open cut" installations



CONCRETE PIPE

STRAIGHT WALL PIPE – ASTM C76/CSA A257.2

NOMINAL INSIDE DIAMETER		LENGTH	WEIGHT	LIFT PINS	PRICE \$ PER METER				GASKET PRICE	ACTUAL PIPE DIMENSIONS (mm)				
					REINFORCED PIPE ASTM C76, CSA 257.2					(\$/m)	ID	OD	W	S
					(mm)	(in)	(m)	(kg/m)						
300	12"	1.25	200	NONE						305	444	70	76	
375	15"	1.25	262	NONE						381	533	76	76	
450	18"	1.25	330	NONE						457	622	83	76	
525	21"	1.25	416	NONE						533	711	89	89	
600	24"	1.25	520	NONE						610	800	95	89	
750	27"	1.83	609	NONE						762	940	89	89	
900	30"	1.83	850	NONE						914	1118	102	89	
1050	42"	2.44	1066	2 - 4T						1067	1295	114	108	
1200	48"	2.44	1346	2 - 4T						1219	1473	127	108	
1350	54"	2.44	1639	2 - 4T						1372	1651	140	121	
1500	60"	2.50	2005	2 - 4T						1524	1829	153	127	
1650	66"	2.44	2442	2 - 4T						1676	2007	165	127	
1800	72"	2.44	3100	2 - 8T						1929	2222	197	127	
2100	84"	2.44	4175	2 - 8T						2134	2578	222	127	
2400	96"	2.44	4737	2 - 8T						2438	2934	248	127	
2700	108"	2.50	6302	2 - 8T						2743	3289	273	127	
3000	120"	2.50	6934	2 - 8T						3048	3607	279	152	

NOTES

1. Banded pricing available upon request for sizes 750mm and larger
2. 750mm & 900mm pipe available in 1.22 lengths
3. 1050mm & 1200mm available in 1.22 and 1.83 lengths

4. Used in "trenchless" application, also referred to as "tongue & groove"
5. * Contact your local Sales Representative for pricing



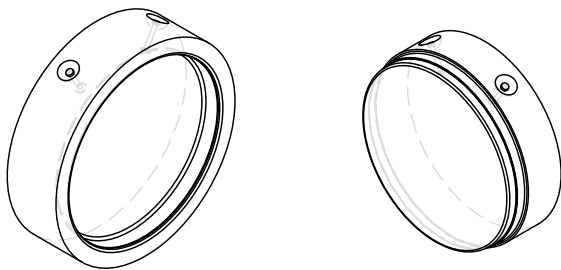
CONCRETE PIPE

PLUGS/CAPS/BENDS

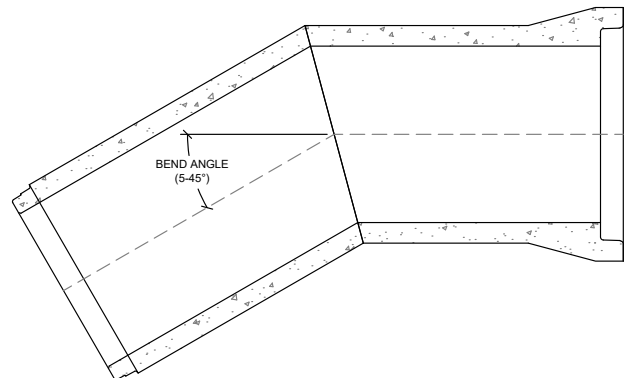
PLUGS/CAPS		
DIAMETER (mm)	WEIGHT (kg)	PRICE (\$/ea)
300	20	
375	30	
450	57	
525	68	
600	93	
750	179	
900	219	
1050	327	
1200	419	
1350	540	
1500	660	
1650	940	
1800	1120	
2100	2102	
2400	2450	

BENDS		
DIAMETER (mm)	WEIGHT (kg)	PRICE (\$/ea)
300	550	
375	689	
450	710	
525	950	
600	1153	
750	1638	
900	2200	
1050	2601	
1200	3284	
1350	3999	
1500	5415	
1650	5958	
1800	7564	
2100	*	
2400	*	

- NOTES
1. Caps fit on spigot end
 2. Plugs fit on bell end



- NOTES
1. Contact your local Sales Representative for pricing on 2100mm & 2400mm
 2. Bends are custom order
 3. Adaptors available, contact your local Sales Representative for pricing

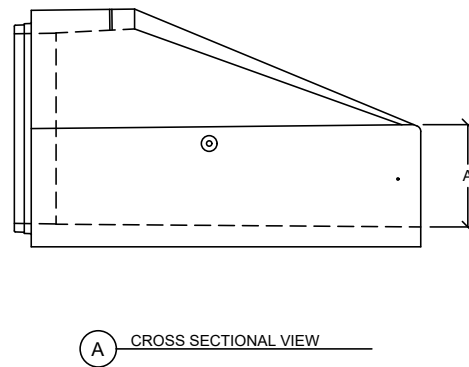
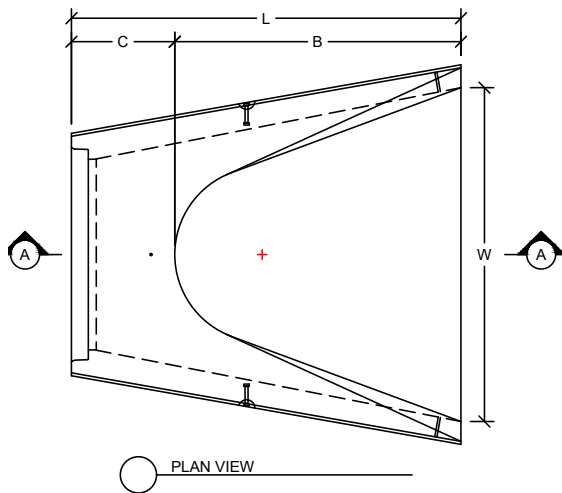


CONCRETE PIPE

FLARED ENDS

NOMINAL DIAMETER	L	W	A	B	C	WEIGHT	PRICE
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(kg)	(\$/ea)
300	1854	610	105	610	1245	570	
375	1854	762	161	686	1168	780	
450	1854	914	247	686	1168	1010	
525	1854	1067	229	889	965	1238	
600	1867	1219	265	1105	762	1465	
750	1873	1524	341	1372	502	1800	
900	2438	1829	429	1600	838	3390	
1050	2489	1981	580	1600	889	4660	
1200	2489	2134	654	1829	660	4490	
1350	2540	2286	706	1651	889	3665	
1500	2515	2490	763	1524	991	3980	

- NOTES
- 300mm to 900mm Flared Ends are synthetic fiber reinforced with strength verified to conform to ASTM C14 CL3
 - End treatments for pipe larger than 1500mm are available; call for estimates



FLARED END AVAILABLE WITH EITHER BELL OR SPIGOT JOINT



MANHOLE MATERIAL

STANDARD MANHOLE MATERIAL – ASTM C478/CSA A257.4

DIAMETER (m)	MH RISER			MONO BASE		
	TYPE	WEIGHT	PRICE	TYPE	WEIGHT	PRICE
		(kg/ea)	(\$/ea)		(kg/ea)	(\$/ea)
1200 x 0.31m	A	408		A1	n/a	
1200 x 0.46m	A	605		A1	1176	
1200 x 0.61m	A	803		A1	1374	
1200 x 0.92m	A	1210		A1	1781	
1200 x 1.22m	A	1605		A1	2176	
1200 x 1.83m	A	2408		A1	2979	

SLABTOPS (REDUCERS)		
DIAMETER	WEIGHT	PRICE
	(kg/ea)	(\$/ea)
1200mm/900mm X 0.31m	690	
1200mm/750mm X 0.31m	740	

ADJUSTING RINGS & TOP RISER			
DIAMETER	WEIGHT	TYPE	PRICE
	(kg/ea)		(\$/ea)
750mm X 50mm (2")	56	With groove	
750mm X 75mm (3")	71	With groove	
750mm X 100mm (4")	86	With groove	
750mm X 125mm (5")	100	With groove	
750mm X 150mm (6")	115	With groove	
750mm X 150mm (6") Riser	115	Tongue & groove	

NOTES 1. All 1200 product has 2 - 4T swift lift pins

MANHOLE MATERIAL

STANDARD MANHOLE ESTIMATION TABLE

DEPTH (m)	RISER COST	TOTAL COST	MANHOLE BASE	HEIGHT OF 1200mm MANHOLE RISERS (m)						REDUCER	0.15	FRAME & COVER
			1200 x 1.22 MHA1	1.83	1.22	0.92	0.61	0.46	0.31	1200/750 x 0.31	750 x 0.15	N/A
1.9			1							1	1	1
2.07			1							1	2	1
2.2			1						1	1	1	1
2.37			1					1		1	1	1
2.52			1				1			1	1	1
2.68			1				1			1	2	1
2.83			1			1				1	1	1
2.98			1			1				1	2	1
3.13			1		1					1	1	1
3.29			1		1					1	2	1
3.44			1		1				1	1	1	1
3.59			1		1			1		1	1	1
3.74			1	1						1	1	1
3.9			1	1						1	2	1
4.05			1	1					1	1	1	1
4.21			1	1				1		1	1	1
4.35			1	1			1			1	1	1
4.51			1	1			1			1	2	1
4.66			1	1		1				1	1	1
4.81			1	1		1				1	2	1
4.97			1	1	1					1	1	1
5.12			1	1	1					1	2	1
5.27			1	1	1				1	1	1	1
5.42			1	1	1			1		1	1	1
5.57			1	2						1	1	1
5.73			1	2						1	2	1
5.88			1	2					1	1	1	1

- NOTE
1. Manhole base cost is set at \$1885
 2. Depth is difference between rim elevation and the lowest pipe invert elevation
 3. Total cost does not include frame & cover and gaskets

MANHOLE MATERIAL

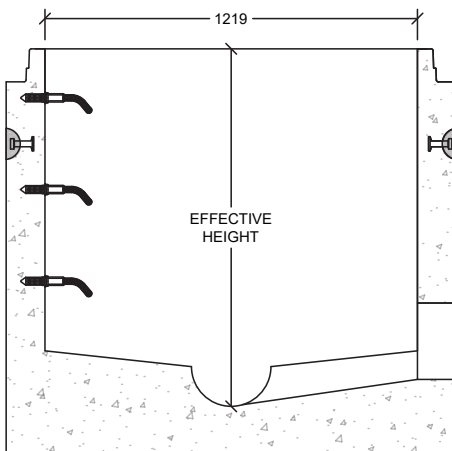
PREBENCH MANHOLES – ASTM C478/CSA A257.4

PREBENCH
MATERIAL

LARGEST NOMINAL PIPE DIAMETER	EFFECTIVE HEIGHT	PRODUCT DESCRIPTION	WEIGHT	PRICE
(mm)	(mm)		(kg/ea)	(\$/ea)
150	670	1200mm x 150mm Prebench	4916	
200	690	1200mm x 200mm Prebench	4916	
250	720	1200mm x 250mm Prebench	4916	
300	745	1200mm x 300mm Prebench	5203	
375	780	1200mm x 375mm Prebench	5203	
450	820	1200mm x 450mm Prebench	7330	
525	860	1200mm x 525mm Prebench	7330	
600	900	1200mm x 600mm Prebench	7496	

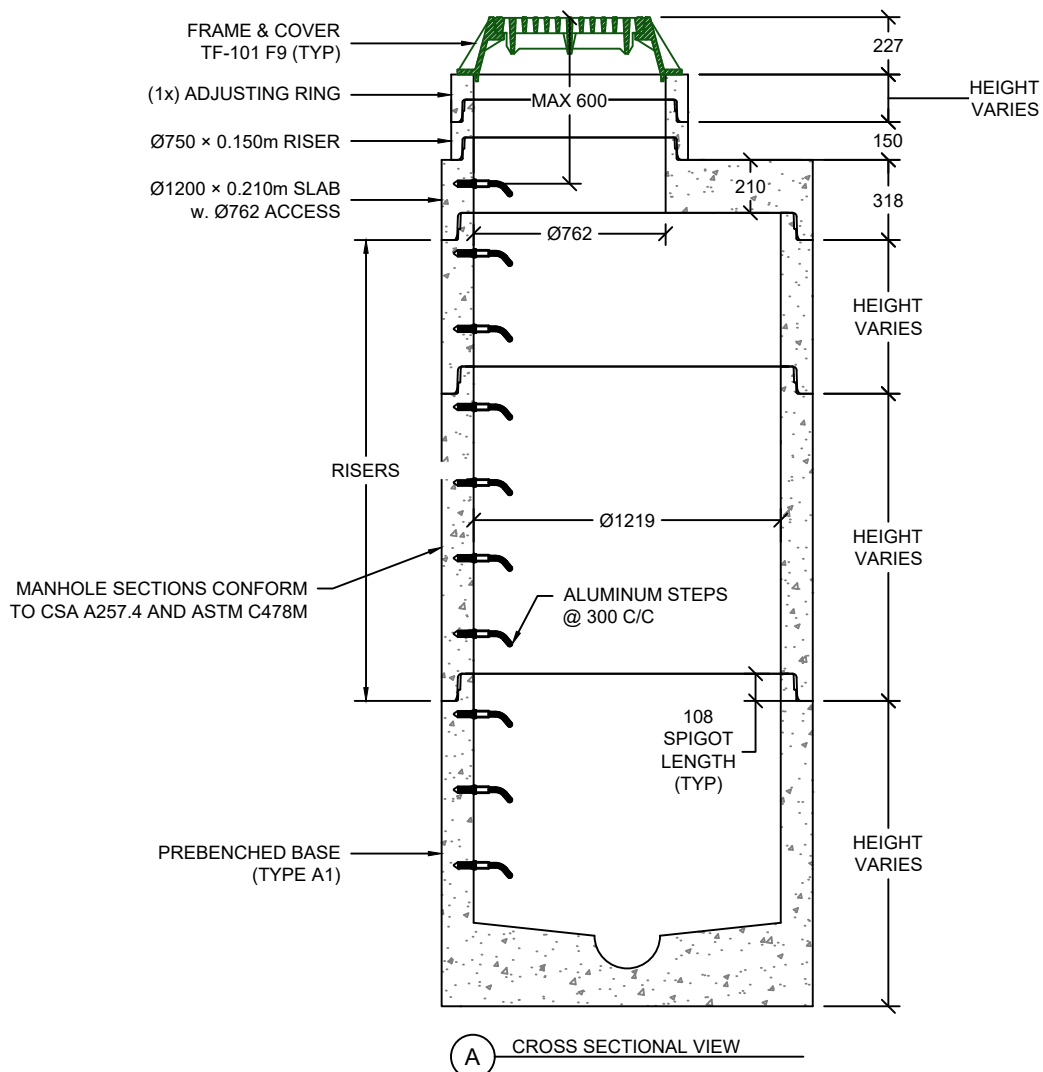
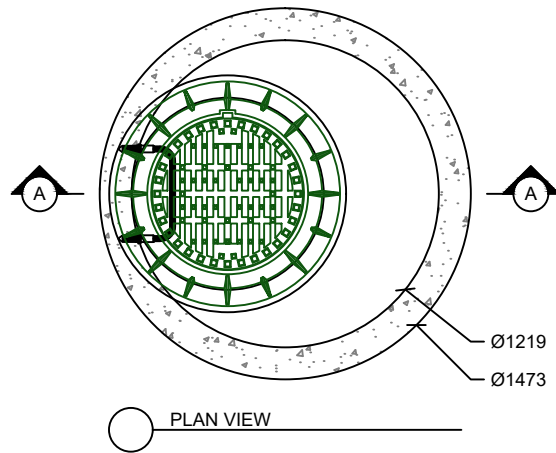
PRODUCT DESCRIPTION	PRICE
150mm KWIK Seal Boot	
200mm KWIK Seal Boot	
250mm KWIK Seal Boot	
300mm KWIK Seal Boot	
375mm KWIK Seal Boot	
450mm KWIK Seal Boot	

NOTE 1. Prebench bases are custom order



MANHOLE MATERIAL

STANDARD TYPE A MANHOLE

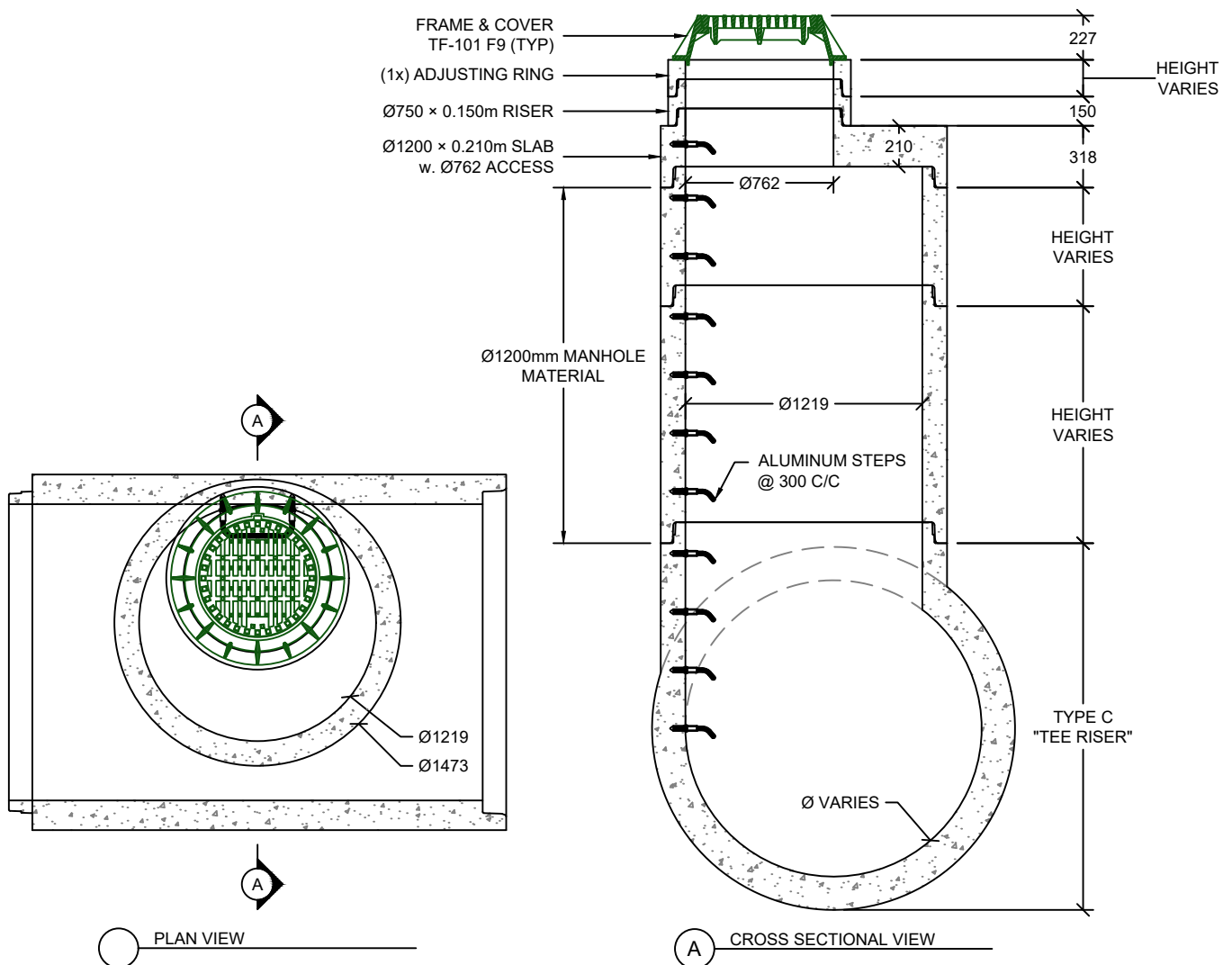


MANHOLE MATERIAL

TYPE C PIPE MANHOLES

DIAMETER (mm)	TYPE	WEIGHT (kg/ea)	PRICE (\$/ea)
1050 x 2.44	C	3001	*
1200 x 2.44	C	3600	*
1500 x 2.5	C	5400	*
1800 x 2.44	C	7700	*
2100 x 2.44	C	10187	*
2400 x 2.44	C	12000	*
2700 x 2.5	C	16500	*
3000 x 2.5	C	19000	*

NOTE 1. Contact your local Sales Representative for pricing



LARGE DIAMETER MANHOLES

ASTM C478/CSA A257.4

DESCRIPTION & DIMENSIONS	VOLUME (L/barrel)	WEIGHT (kg)	SWIFT LIFT PINS	PRICE
1500mm DIAMETER MATERIAL				
1500mm x 2.5m Riser	4560	5617	(3x) 4T	
1500mm x 2.0m Riser	3648	4493	(3x) 4T	
1500mm x 1.8m Riser	3283	4044	(3x) 4T	
1500mm x 1.5m Riser	2736	3370	(3x) 4T	
1500mm x 1.2m Riser	2189	2677	(3x) 4T	
1500mm x 0.6m Riser	1094	1348	(3x) 4T	
1500mm Slab Top (1200mm Opening)	-	1380	(3x) 4T	
1500mm Slab Base	-	1685	(3x) 4T	
1800mm DIAMETER MATERIAL				
1800mm x 2.44m Riser	6304	7676	(3x) 8T	
1800mm x 1.83m Riser	4729	6140	(3x) 8T	
1800mm x 1.22m Riser	3153	5527	(3x) 8T	
1800mm x 0.92m Riser	2377	4605	(3x) 8T	
1800mm x 0.61m Riser	1576	3684	(3x) 8T	
1800mm x 0.46m Riser	1188	1843	(3x) 8T	
1800mm Slab Top (1200mm Opening)	-	2270	(3x) 8T	
1800mm Slab Base	-	2405	(3x) 8T	
2100mm DIAMETER MATERIAL				
2100mm x 2.44m M.H. Riser	8585	8910	(3x) 8T	
2100mm x 1.83m M.H. Riser	6438	6682	(3x) 8T	
2100mm x 1.22m M.H. Riser	4292	4455	(3x) 8T	
2100mm x 0.92m M.H. Riser	3236	3359	(3x) 8T	
2100mm x 0.61m M.H. Riser	2145	2227	(3x) 8T	
2100mm x 0.46m M.H. Riser	1618	1619	(3x) 8T	
2100mm Slab Top (1200mm Opening)	-	3365	(3x) 8T	
2100mm Base	-	3225	(3x) 8T	

NOTE 1. 1350 & 1650 large diameter manholes available upon request

LARGE DIAMETER MANHOLES

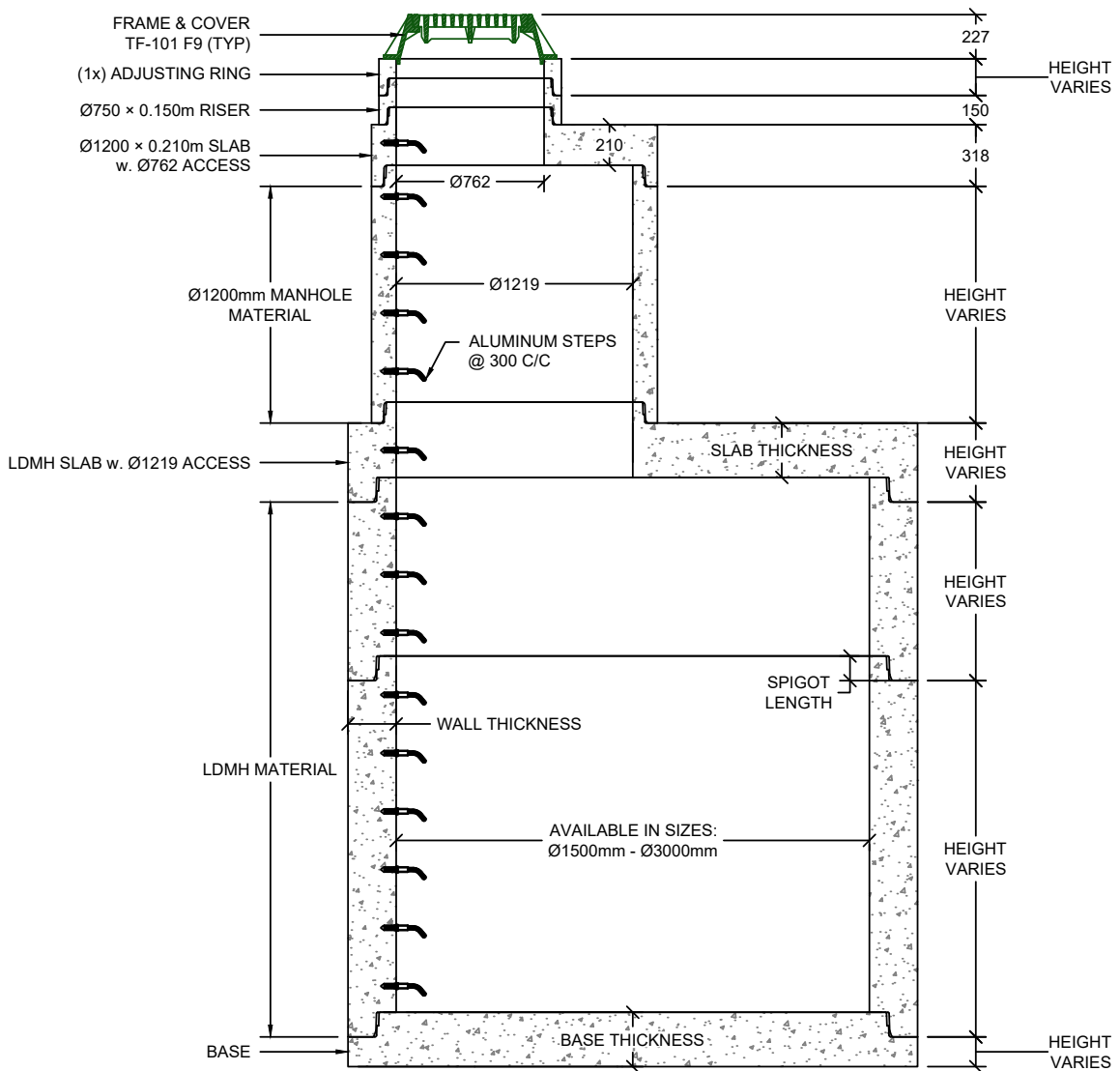
ASTM C478/CSA A257.4

DESCRIPTION & DIMENSIONS	VOLUME (L/barrel)	WEIGHT (kg)	SWIFT LIFT PINS	PRICE
2400mm DIAMETER MATERIAL				
2400mm x 2.44m Riser	11390	12101	(3x) 8T	
2400mm x 1.83m Riser	8543	9076	(3x) 8T	
2400mm x 1.22m Riser	5602	5779	(3x) 8T	
2400mm x 0.92m Riser	4224	4165	(3x) 8T	
2400mm x 0.61m Riser	2801	2762	(3x) 8T	
2400mm x 0.46m Riser	2112	2085	(3x) 8T	
2400mm Slab Top (1200mm Opening)	-	4580	(3x) 8T	
2400mm Slab Base	-	3225	(3x) 8T	
2700mm DIAMETER MATERIAL				
2700mm x 2.5m Riser	14773	15758	(3x) 8T	
2700mm x 2.0m Riser	11819	12606	(3x) 8T	
2700mm x 1.8m Riser	10637	11346	(3x) 8T	
2700mm x 1.5m Riser	8864	9455	(3x) 8T	
2700mm x 1.2m Riser	7091	7564	(3x) 8T	
2700mm x 0.6m Riser	3546	3782	(3x) 8T	
2700mm Slab Top (1200mm Opening)	-	6030	(3x) 8T	
2700mm Slab Base	-	5270	(3x) 8T	
3000mm DIAMETER MATERIAL				
3000mm x 2.5m Riser	18241	17797	(3x) 8T	
3000mm x 2.0m Riser	14593	14238	(3x) 8T	
3000mm x 1.8m Riser	13134	12814	(3x) 8T	
3000mm x 1.5m Riser	10945	10678	(3x) 8T	
3000mm x 1.2m Riser	8756	8543	(3x) 8T	
3000mm x 0.6m Riser	4378	4271	(3x) 8T	
3000mm Slab Top (1200mm Opening)	-	7380	(3x) 8T	
3000mm Slab Base	-	6480	(3x) 8T	

LARGE DIAMETER MANHOLES

ASTM C478/CSA A257.4

DIAMETER	WALL THICKNESS	SPIGOT LENGTH	SLABTOP THICKNESS	BASE THICKNESS
(mm)	(mm)	(mm)	(mm)	(mm)
1500	172	121	305	228
1800	197	127	255	228
2100	203	127	270	228
2400	248	127	280	228
2700	273	149	305	280
3000	279	152	305	280



CATCH BASIN MATERIAL

DIMENSIONS	DESCRIPTION	SUMP (mm)	WEIGHT (kg/ea)	PRICE PER UNIT (\$/ea)
750mm X 1.83m	Catch Basin	600	1235	
750mm X 1.22m	Catch Basin	600	879	
750mm X 0.92m	Catch Basin	75	704	
750mm X 0.61m	Catch Basin	75	524	
750mm X 0.46m	Catch Basin	0	436	
750mm X 0.31m	Catch Basin	0	349	
750mm/600mm X 0.20m	RTS Flat Reducer	-	245	
900mm X 1.83m	Catch Basin	600	1701	
900mm X 1.22m	Catch Basin	600	1214	
900mm X 0.92m	Catch Basin	75	975	
900mm X 0.61m	Catch Basin	75	728	
900mm X 0.46m	Catch Basin	0	608	
900mm X 0.31m	Catch Basin	0	488	
900mm/750mm X 0.15m	RTR Flat Reducer	-	200	
900mm/600mm X 0.20m	RTS Flat Reducer	-	305	

NOTES 1. Hood & Pin price is NOT included

2. Kent seal pricing is NOT included

750mm & 900mm RISERS

750mm RISERS			900mm RISERS		
DESCRIPTION	WEIGHT (kg/ea)	PRICE PER UNIT (\$/ea)	DESCRIPTION	WEIGHT (kg/ea)	PRICE PER UNIT (\$/ea)
750mm X 1.83m RISER	1067	1,121	900mm X 1.83m RISER	1460	
750mm X 1.22m RISER	711	827	900mm X 1.22m RISER	973	
750mm X 0.92m RISER	536	643	900mm X 0.92m RISER	734	
750mm X 0.61m RISER	356	491	900mm X 0.61m RISER	487	
750mm X 0.46m RISER	268	380	900mm X 0.46m RISER	367	
750mm X 0.31m RISER	181	305	900mm X 0.31m RISER	247	
750mm X 0.15m TOP RISER	87	197	900mm X 0.15m RISER	120	

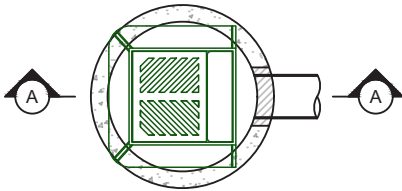
ADJUSTING RING PRICES

DIMENSIONS (mm)	WEIGHT (kg/ea)	TYPE	PRICE PER UNIT (\$/ea)
750mm X 50mm (2")	56	With groove	
750mm X 75mm (3")	71	With groove	
750mm X 100mm (4")	86	With groove	
750mm X 125mm (5")	100	With groove	
750mm X 150mm (6")	115	With groove	

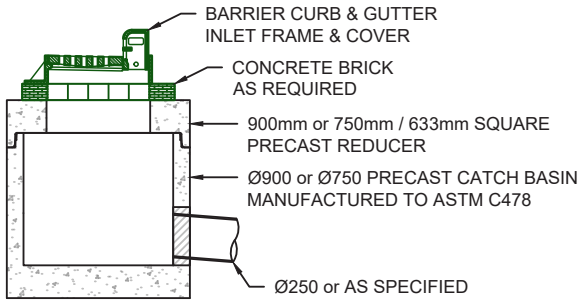
NOTES 1. 750mm product includes 2 handling holes

2. 900mm product include (2x) 4T lift pins

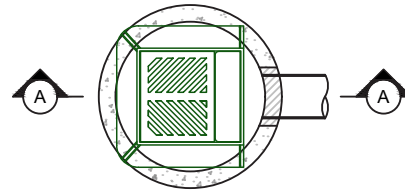
CATCH BASIN MATERIAL



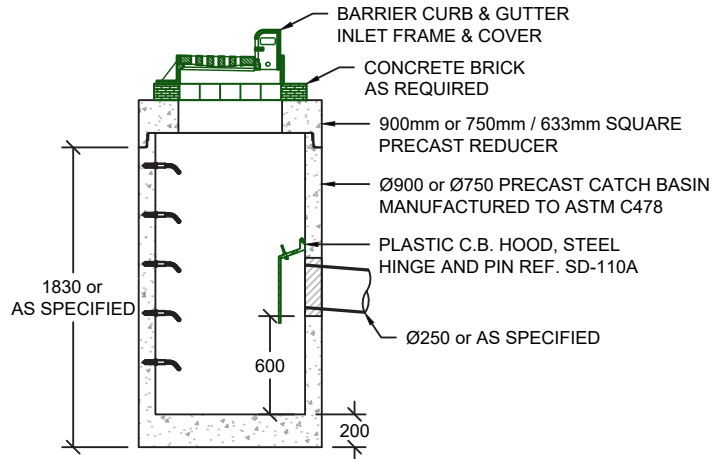
PLAN VIEW



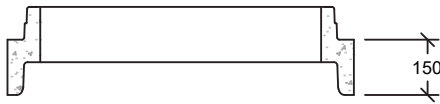
CROSS SECTIONAL VIEW
CATCH BASIN w. CURB &
GUTTER INLET (SD - 023)



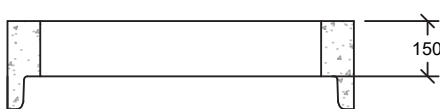
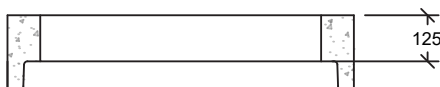
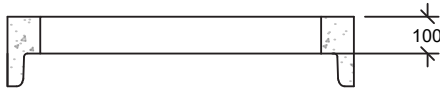
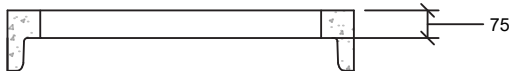
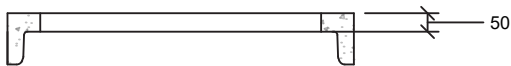
PLAN VIEW



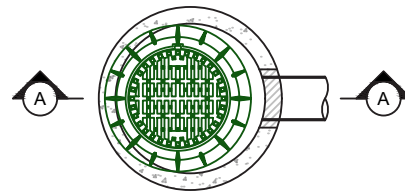
CROSS SECTIONAL VIEW
CATCH BASIN w. CURB &
GUTTER INLET (SD - 024)



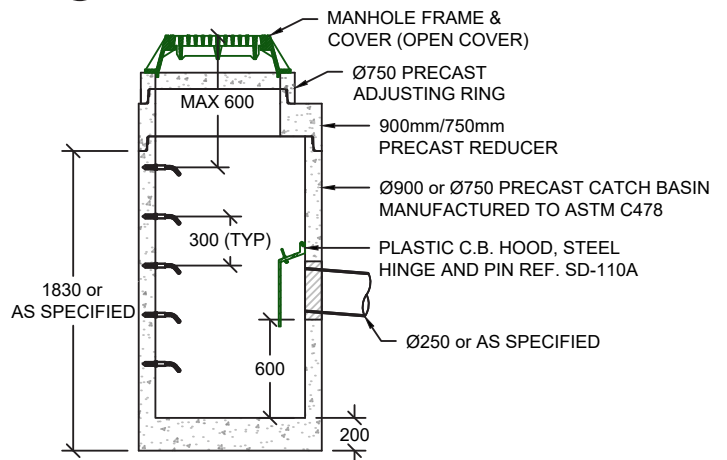
750mm x 0.150m RISER



750mm ADJUSTING RINGS w. GROOVES



PLAN VIEW



CROSS SECTIONAL VIEW
CATCH BASIN w. MANHOLE
COVER (SD - 025)

CATCH BASINS

BOX SECTIONS

ASTM C1433

BOX SECTIONS

DESCRIPTION & DIMENSIONS	VOL (L/BOX)	WEIGHT (kg)	SWIFT LIFT PINS	COVER RANGE 1	COVER RANGE 2	COVER RANGE 3
				1.0m - 3.5m (HORIZONTAL INSTALL)	3.5m - 6.0m (HORIZONTAL INSTALL)	6.0m - 9.0m (HORIZONTAL INSTALL & MANHOLES)
1829mm x 914mm (6'x3') - Call for Pricing						
2.5m Box Length	4021	7291	(4x) 4T			
2.0m Box Length	3217	5833	(4x) 4T			
1.8m Box Length	2895	5250	(4x) 4T			
1.5m Box Length	2413	4375	(4x) 4T			
1.2m Box Length	1930	3500	(4x) 4T			
0.6m Box Length	965	1750	(4x) 4T			
BASE / SLAB TOP	-	1585 / 1625	(4x) 4T			
1829mm X 1219mm (6'X4') - Call for Pricing						
2.5m Box Length	5415	7970	(4x) 4T			
2.0m Box Length	4332	6376	(4x) 4T			
1.8m Box Length	3899	5738	(4x) 4T			
1.5m Box Length	3249	4782	(4x) 4T			
1.2m Box Length	2599	3826	(4x) 4T			
0.6m Box Length	1300	1913	(4x) 4T			
BASE / SLAB TOP	-	1985 / 1640	(4x) 4T			
2439mm X900mm (8'X3') - Call for Pricing						
2.5m Box Length	5367	10054	(4x) 8T			
2.0m Box Length	4294	8043	(4x) 8T			
1.8m Box Length	3864	7239	(4x) 8T			
1.5m Box Length	3220	6032	(4x) 8T			
1.2m Box Length	2576	4826	(4x) 8T			
0.6m Box Length	1288	2413	(4x) 8T			
BASE / SLAB TOP	-	2560 / 2820	(4x) 8T			
2439mm X 1219mm (8'X4') - Call for Pricing						
2.5m Box Length	7227	10828	(4x) 8T			
2.0m Box Length	5781	8662	(4x) 8T			
1.8m Box Length	5203	7796	(4x) 8T			
1.5m Box Length	4336	6497	(4x) 8T			
1.2m Box Length	3469	5197	(4x) 8T			
0.6m Box Length	1734	2599	(4x) 8T			
BASE / SLAB TOP	-	3190 / 2915	(4x) 8T			

- NOTES
- Boxes are designed to CSA S6 but manufactured to ASTM 1433
 - Cover ranges indicate height between the top of the box and the ground surface (rim elevation)
 - Box material is all custom, call for availability

BOX SECTIONS

ASTM C1433

DESCRIPTION & DIMENSIONS	VOL (L/BOX)	WEIGHT (kg)	SWIFT LIFT PINS	COVER RANGE 1	COVER RANGE 2	COVER RANGE 3
				1.0m - 3.5m (HORIZONTAL INSTALL)	3.5m - 6.0m (HORIZONTAL INSTALL)	6.0m - 9.0m (HORIZONTAL INSTALL & MANHOLES)
2439mm x 1524mm (8'x5') - Call for Pricing						
2.5m Box Length	9087	11601	(4x) 8T			
2.0m Box Length	7269	9281	(4x) 8T			
1.8m Box Length	6542	8353	(4x) 8T			
1.5m Box Length	5452	6961	(4x) 8T			
1.2m Box Length	4362	5569	(4x) 8T			
0.6m Box Length	2181	2784	(4x) 8T			
BASE / SLAB TOP	-	4235 / 4780	(4x) 8T			
2439mm X 1829mm (8'X6') - Call for Pricing						
2.5m Box Length	10946	12375	(4x) 8T			
2.0m Box Length	8757	9900	(4x) 8T			
1.8m Box Length	7881	8910	(4x) 8T			
1.5m Box Length	6568	7425	(4x) 8T			
1.2m Box Length	5254	5940	(4x) 8T			
0.6m Box Length	2627	2940	(4x) 8T			
BASE / SLAB TOP	-	4450 / 4250	(4x) 8T			
2439mm X 2439mm (8'X8') - Call for Pricing						
2.5m Box Length	14666	13923	(4x) 8T			
2.0m Box Length	11733	11139	(4x) 8T			
1.8m Box Length	10559	10025	(4x) 8T			
1.5m Box Length	8799	8354	(4x) 8T			
1.2m Box Length	7040	6683	(4x) 8T			
0.6m Box Length	3520	3342	(4x) 8T			
BASE / SLAB TOP	-	5710 / 5280	(4x) 8T			
3049mm X 1524mm (10'X5') - Call for Pricing						
2.5m Box Length	11294	16939	(4x) 8T			
2.0m Box Length	9035	13551	(4x) 8T			
1.8m Box Length	8132	12196	(4x) 8T			
1.5m Box Length	6776	10163	(4x) 8T			
1.2m Box Length	5421	8131	(4x) 8T			
0.6m Box Length	2711	4065	(4x) 8T			
BASE / SLAB TOP	-	5935 / 5690	(4x) 8T			

- NOTES
1. Boxes are designed to CSA S6 but manufactured to ASTM 1433
 2. Cover ranges indicate height between the top of the box and the ground surface (rim elevation)
 3. Box material is all custom, call for availability

BOX SECTIONS

ASTM C1433

DESCRIPTION & DIMENSIONS	VOL (L/BOX)	WEIGHT (kg)	SWIFT LIFT PINS	COVER RANGE 1	COVER RANGE 2	COVER RANGE 3
				1.0m - 3.5m (HORIZONTAL INSTALL)	3.5m - 6.0m (HORIZONTAL INSTALL)	6.0m - 9.0m (HORIZONTAL INSTALL & MANHOLES)
3049mm x 2439mm (10'x8') - Call for Pricing						
2.5m Box Length	18269	19844	(4x) 8T			
2.0m Box Length	14615	15875	(4x) 8T			
1.8m Box Length	13153	14288	(4x) 8T			
1.5m Box Length	10961	11906	(4x) 8T			
1.2m Box Length	8769	9525	(4x) 8T			
0.6m Box Length	4384	4763	(4x) 8T			
BASE / SLAB TOP	-	8650	(4x) 8T			
3658mm x 3049mm (12' x 10') - Call for Pricing						
2.0m Box Length	21934	23247	(4x) 8T			
1.8m Box Length	19741	20922	(4x) 8T			
1.5m Box Length	16451	17435	(4x) 8T			
1.2m Box Length	13161	13948	(4x) 8T			
0.6m Box Length	6580	6974	(4x) 8T			
BASE / SLAB TOP	-		(4x) 8T			
BASE / SLAB TOP	-	14820 / 15145	(4x) 8T			
3658mm x 3658mm (12' x 12') - Call for Pricing						
1.8m Box Length	23751	22594	(4x) 8T			
1.5m Box Length	19792	18828	(4x) 8T			
1.2m Box Length	15834	15063	(4x) 8T			
0.6m Box Length	7917	7531	(4x) 8T			
BASE / SLAB TOP	-	17355 / 17745	(4x) 8T			

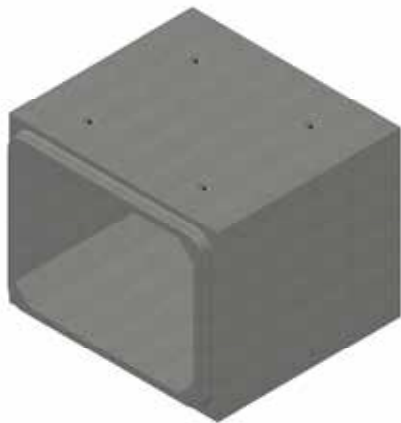
- NOTES
1. Box culverts conform to ASTM 1433 and box manholes to CSA A23.4
 2. Cover ranges indicate height between the top of the box and the ground surface (rim elevation)
 3. Box material is all custom, contact your local Sales Representative for pricing and lead times



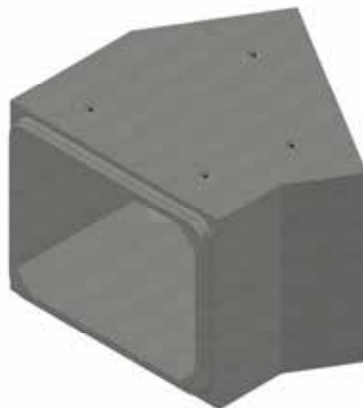
BOX SECTIONS

ASTM C1433

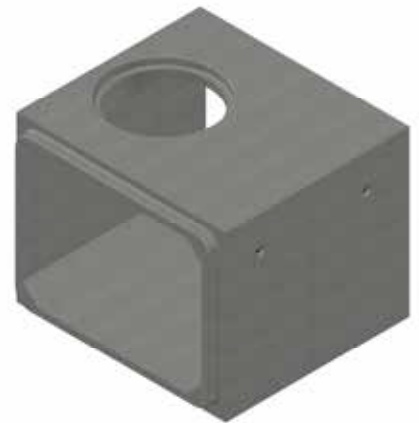
ACTUAL INSIDE DIMENSIONS SPAN X RISE	OUTSIDE DIMENSIONS	WALL THICKNESS (mm)	SLAB TOP THICKNESS (mm)	BASE THICKNESS (mm)	SPIGOT LENGTH (mm)	JOINT TYPE
1829mm x 914mm	2184mm x 1270mm	178	254	254	127	Single Offset
1829mm x 1219mm	2184mm x 1575mm	178	254	254	127	Single Offset
2439mm x 914mm	2845mm x 1321mm	203	305	305	127	Single Offset
2439mm x 1219mm	2845mm x 1626mm	203	305	305	127	Single Offset
2439mm x 1524mm	2845mm x 1930mm	203	305	305	108	Tongue & Groove
2439mm x 1829mm	2845mm x 2235mm	203	305	305	127	Single Offset
2439mm x 2439mm	2845mm x 2845mm	203	305	305	127	Single Offset
3049mm x 1524mm	3556mm x 2032mm	254	355	355	108	Tongue & Groove
3049mm x 2439mm	3556mm x 2946mm	254	355	355	127	Single Offset
3658mm x 3049mm	4267mm x 3658mm	305	406	406	127	Single Offset
3658mm x 3658mm	4267mm x 4267mm	305	406	406	127	Single Offset



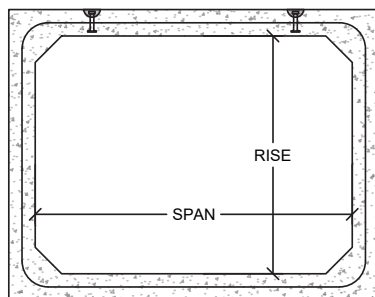
Box Culvert



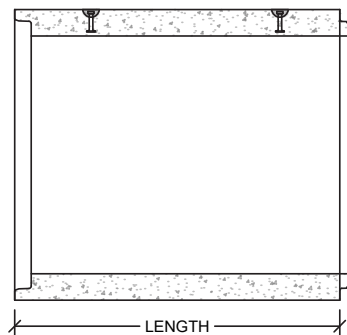
Box Bend



Box Culvert with Manhole opening



○ FRONT VIEW



○ SIDE VIEW

MISCELLANEOUS

DESCRIPTION	WEIGHT (kg/ea)	PRICE PER UNIT (\$/ea)
25mm WIDE x 4.45m LONG Butyl Sealant, 6 pieces/carton (For joints 1200mm and down)	1	
38mm WIDE x 3.31m LONG Butyl Sealant, 4 pieces/carton (For joints 1350mm and up)	1	
Straps (Straight & Bent)	2	
Anchors	1	
8 Ton Clutch	3	
4 Ton Clutch	3	
Aluminum Ladder Rungs	1	
Catch Basin Hood (plastic) c/w pin	1	
Sulfate Resistant Cement (bag)	40	

GASKET PRICING		BUTYL SEALANT	
DIAMETER	PRICE PER GASKET	SIZE AND LENGTH PER JOINT	COST PER JOINT
(mm)	(\$/ea)		\$/ea
300		25mm x 1.31m	
375		25mm x 1.55m	
450		25mm x 1.83m	
525		25mm x 2.13m	
600		25mm x 2.44m	
750		25mm x 2.96m	
900		25mm x 3.48m	
1050		25mm x 4.00m	
1200		25mm x 4.45m	
1350		38mm x 5.12m	
1500		38mm x 5.61m	
1650		38mm x 6.10m	
1800		38mm x 6.40m	
2100		38mm x 7.38m	
2400		38mm x 8.41m	
2700		38mm x 9.45m	
3000		38mm x 11.35m	

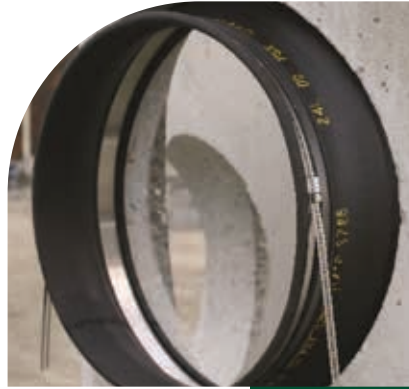
NOTE * Call your local Sales Representative for pricing

Gasket & Connections Information

At Heidelberg Materials, we provide pipe gaskets and a variety of manhole boot connectors alongside our concrete products to ensure a water-tight seal. For tailored solutions that best meet the unique requirements of your project, we invite you to connect with your local Sales Representative. They will be pleased to assist you in determining the optimal products for your specific needs.

PSX: Direct Drive

PSX: Direct Drive is a high-performance watertight pipe to manhole connector. It is the premier manhole connector in the industry for providing watertight connections to manholes and other sanitary and storm sewer structures.



Kwik Seal

Kwik Seal is a precisely sized compression connector (pipe to manhole connector) made to fit in a cored or cast opening.



RFS Gasket

The RFS pre-lubricated pipe and manhole gasket is an encapsulated all rubber gasket that is filled with an internal lubricant.



For more information on Press-Seal products, visit their website:



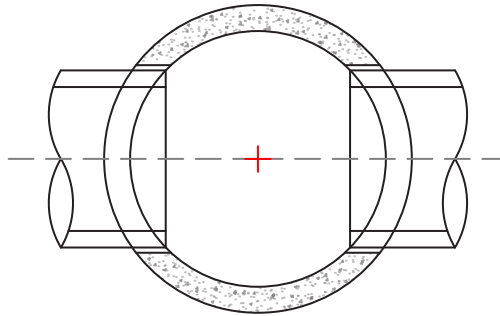
MANHOLE SIZING

MANHOLE SIZE	MAX PIPE SIZE FOR STRAIGHT THROUGH INSTALLATION	MAX PIPE SIZE FOR RIGHT ANGLE INSTALLATION	MAX PIPE SIZE FOR 120° ANGLE INSTALLATION
Ø1200	Ø600	Ø375	Ø525
Ø1350	Ø750	Ø450	Ø675
Ø1500	Ø750	Ø525	Ø750
Ø1650	Ø900	Ø600	Ø900
Ø1800	Ø1050	Ø675	Ø900
Ø2100	Ø1200	Ø900	Ø1200
Ø2400	Ø1350	Ø1050	Ø1350
Ø2700	Ø1500	Ø1200	Ø1650
Ø3000	Ø1650	Ø1350	Ø1800

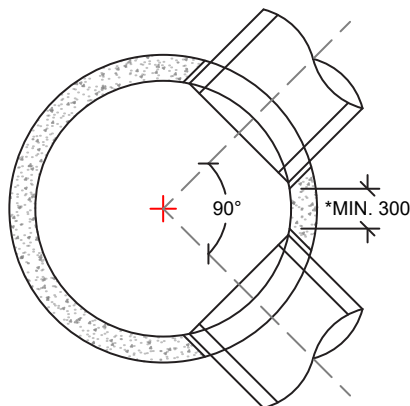
NOTES 1. Manhole sizing to be used as a guideline

2. Exemptions can be made, contact Heidelberg Materials

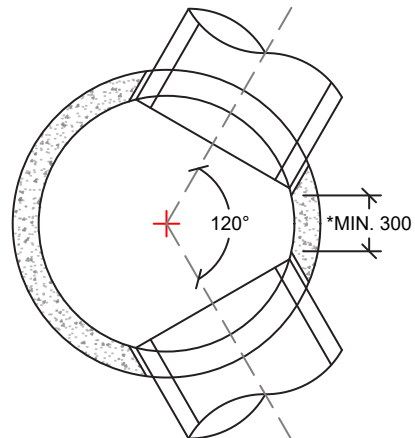
STRAIGHT THROUGH INSTALLATION



RIGHT ANGLE INSTALLATION



120° ANGLE INSTALLATION



QUALITY PROGRAM

Heidelberg Materials Northwest Pipe is certified to produce precast circular concrete pipe, circular manholes, catch basins and box sections under the Canadian Precast Concrete Quality Assurance (CPCQA) Certification Program.

The purpose of the CPCQA is to provide assurance to owners, specifiers, and contractors that participating CPCA certified plants are capable of producing precast products in accordance with recognized national standards and other best practices. The program audits a plant’s quality management system, personnel, equipment, and finished products to ensure they conform to the required standards. The program requires manufacturers to supply products only from a production facility that has been prequalified to produce a range of products that have passed CPCQA’s rigorous certification process. This range of products is updated in real time, and can be seen by anyone concerned on the CPCQA website. The program involves no additional cost to anyone except the CPCQA certified manufacturers who pay all certification fees. Overall, this certification program ensures that only established producers who have earned a reputation for their superior workmanship and systems are supplying products to the public. The program helps to ensure that the job will get done right the first time – saving time, money, and headaches for everyone.

In addition to the CPCQA plant certifications, our Calgary plant is certified under:

- CSA Standard W186 “Welding of Reinforcing Bars in Reinforced Concrete Construction” in DIVISION – 2, Tack Welding of rebar (CWB certificate)
- CSA A23.4 Group D, Category D1



For more information about the CPCQA program please visit:

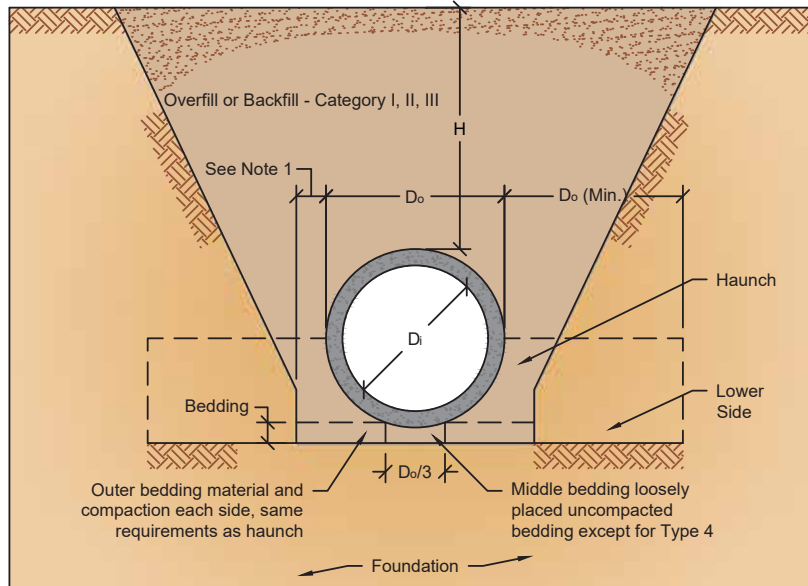


To identify if products are produced in a CPCQA certified plant, look for the following stamp.



STANDARD INSTALLATION

STANDARD TRENCH INSTALLATION



Note 1: Clearance between pipe and trench wall shall be adequate to enable specific compaction, but not less than $D_o/6$

To learn more about Standard Installations, check out the American Concrete Pipe Association (ACPA) website:



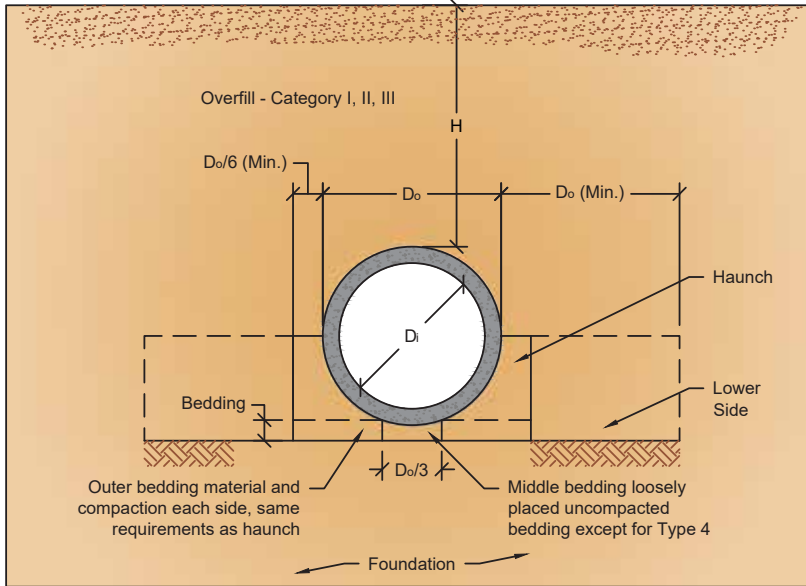
SOIL AND MINIMUM COMPACTION REQUIREMENTS			
Installation Type	Bedding Thickness	Haunch and Outer Bedding	Lower Side
Type 1	$D_o/24$ minimum; not less than 75 mm. If rock foundation, use $D_o/12$ minimum; not less than 150 mm.	95% Category I	Undisturbed natural soil with firmness equivalent to the following placed soils: 90% Category I, 95% Category II, or 100% Category III, or embankment to the same requirements
Type 2	$D_o/24$ minimum; not less than 75 mm. If rock foundation, use $D_o/12$ minimum; not less than 150 mm.	90% Category I or 95% Category II	Undisturbed natural soil with firmness equivalent to the following placed soils: 85% Category I, 90% Category II, or 95% Category III, or embankment to the same requirements
Type 3	$D_o/24$ minimum; not less than 75 mm. If rock foundation, use $D_o/12$ minimum; not less than 150 mm.	85% Category I, 90% Category II, or 95% Category III	Undisturbed natural soil with firmness equivalent to the following placed soils: 85% Category I, 90% Category II, or 95% Category III, or embankment to the same requirements
Type 4	No bedding required, except if rock foundation, use $D_o/12$ minimum; not less than 150 mm.	No compaction required, except if Category III, use 85% Category III	No compaction required, except if Category III, use 85% Category III

Notes:

- 1) Compaction and soil symbols (that is, 95% Category I), refer to a soil material category with a minimum standard proctor density. See ASTM C1479M Table 3 for equivalent modified proctor values and soil types.
- 2) Type 1 installations require greater soil stiffness from the surrounding soils than the Type 2, 3, and 4 installations. Proper field verification of soil properties and compaction levels must be performed to ensure compliance with the design requirements. See ASTM C1479M Appendix X2 for more information and guidance.
- 3) For Type 1 installation, crushed rock is not an appropriate material for bedding under the pipe. An uncompacted, non-crushed material must be used under the middle third of the pipe outside diameter. While crushed rock meeting the requirements of this specification may self compact vertically, it will not flow laterally to provide support for the haunches of the pipe. To achieve a 90 to 95% compaction with crushed rock, work material under the haunch and compact it to achieve the specified density. Otherwise, the specified installation is not achieved.
- 4) When the trench width specified must be exceeded, the owner shall be notified.
- 5) The trench width shall be wider than shown if required for adequate space to attain the specified compaction in the haunch and bedding zones.
- 6) Embankment loading shall be used when trench walls consist of embankment unless a geotechnical analysis is made and the soil in the trench walls is compacted to a higher level than the soil in the backfill zone.
- 7) Required bedding thickness is the thickness of the bedding prior to placement of the pipe.
- 8) "Dumped" material without additional compactive effort will not provide the design haunch support required for Type 1 and 2 installations and it should be checked for Type 3 installations.

STANDARD INSTALLATION

STANDARD EMBANKMENT INSTALLATION



To learn more about Standard Installations, check out the American Concrete Pipe Association (ACPA) website:



SOIL AND MINIMUM COMPACTION REQUIREMENTS			
Installation Type	Bedding Thickness	Haunch and Outer Bedding	Lower Side
Type 1	$D_o/24$ minimum; not less than 75 mm. If rock foundation, use $D_o/12$ minimum; not less than 150 in.	95% Category I	90% Category I, 95% Category II, or 100% Category III
Type 2	$D_o/24$ minimum; not less than 75 mm. If rock foundation, use $D_o/12$ minimum; not less than 150 mm.	90% Category I or 95% Category II	85% Category I, 90% Category II, or 95% Category III
Type 3	$D_o/24$ minimum; not less than 75 mm. If rock foundation, use $D_o/12$ minimum; not less than 150 mm.	85% Category I, 90% Category II, or 95% Category III	85% Category I, 90% Category II, or 95% Category III
Type 4	No bedding required, except if rock foundation, use $D_o/12$ minimum; not less than 150 mm.	No compaction required, except if Category III, use 85% Category III	No compaction required, except if Category III, use 85% Category III

Notes:

- 1) Compaction and soil symbols (that is, 95% Category I), refer to a soil material category with a minimum standard proctor density. See ASTM C1479M Table 3 for equivalent modified proctor values and soil types.
- 2) Type 1 installations require greater soil stiffness from the surrounding soils than the Type 2, 3, and 4 installations. Proper field verification of soil properties and compaction levels must be performed to ensure compliance with the design requirements. See ASTM C1479M Appendix X2 for more information and guidance.
- 3) For Type 1 installation, crushed rock is not an appropriate material for bedding under the pipe. An uncompacted, non-crushed material must be used under the middle third of the pipe outside diameter. While crushed rock meeting the requirements of this specification may self compact vertically, it will not flow laterally to provide support for the haunches of the pipe. To achieve a 90 to 95% compaction with crushed rock, work material under the haunch and compact it to achieve the specified density. Otherwise, the specified installation is not achieved.
- 4) Soil in the outer bedding, haunch, and lower side zones, except within $D_o/3$ from the pipe springline, shall be compacted to at least the same compaction as the majority of soil in the overfill zone.
- 5) Required bedding thickness is the thickness of the bedding prior to placement of the pipe.
- 6) A subtrench is defined as a trench with its top below finished grade by more than 0.1H or, for roadways, its top is at an elevation lower than 0.3 m below the bottom of the pavement base material.
The minimum width of a subtrench shall be $1.33 D_o$ or wider, if required for adequate space to attain the specified compaction in the haunch and bedding zones. For subtrenches, except within $D_o/3$ from the springline, any portion of the lower side zone in the subtrench wall shall be at least as firm as an equivalent soil placed to the compaction requirements specified for the lower side zone and as firm as the majority of soil in the overfill zone, or it shall be removed and replaced with soil compacted to the specified level.
- 7) "Dumped" material without additional compactive effort will not provided the design haunch support required for Type 1 and 2 installations and it should be checked for Type 3 installations.

PIPE FILL HEIGHT TABLES

PIPE DIAMETER (mm)	WALL	MAXIMUM DEPTH (m) TO PIPE INVERT FOR: STANDARD INSTALLATION TYPE				PIPE CLASS	PIPE DIAMETER (mm)	WALL	MAXIMUM DEPTH (m) TO PIPE INVERT FOR: STANDARD INSTALLATION TYPE			
		1	2	3	4				1	2	3	4
300	C WALL	5.6	3.8	3.0	1.6	II	1050	B WALL	6.6	4.8	3.8	2.8
		7.2	5.0	4.0	2.4	III			8.4	6.0	4.8	3.6
		11.0	7.8	6.0	4.0	IV			12.4	9.0	7.2	5.4
		15.4	10.8	8.6	5.6	V			17.2	12.2	9.8	7.2
375	C WALL	5.7	4.1	3.1	1.9	II	1200	B WALL	6.5	4.7	3.9	2.9
		7.5	5.3	4.1	2.7	III			8.3	6.1	4.9	3.7
		11.5	8.1	6.3	4.3	IV			12.5	8.9	7.3	5.5
		15.9	11.3	8.9	5.9	V			17.1	12.3	9.9	7.3
450	B WALL	6.3	4.3	3.3	2.1	II	1350	B WALL	6.7	4.9	3.9	2.9
		8.1	5.7	4.5	2.9	III			8.5	6.1	5.1	3.9
		12.3	8.7	6.9	4.7	IV			12.5	9.1	7.3	5.5
		17.1	12.1	9.5	6.5	V			17.3	12.5	9.9	7.5
	C WALL	5.9	4.1	3.1	1.9	II	1500	C WALL	6.7	4.9	4.1	3.1
		7.7	5.3	4.1	2.7	III			8.5	6.3	5.1	3.9
		11.7	8.1	6.5	4.3	IV			12.5	9.1	7.3	5.7
		16.3	11.3	8.9	6.1	V			16.9	12.3	9.9	7.5
525	B WALL	6.2	4.4	3.4	2.2	II	1650	B WALL	6.8	5.0	4.2	3.2
		8.2	5.6	4.6	3.0	III			8.6	6.4	5.2	4.0
		12.4	8.6	7.0	4.8	IV			12.6	9.2	7.6	5.8
		17.4	12.0	9.6	6.6	V			17.2	12.6	10.2	7.8
	C WALL	6.0	4.2	3.2	2.0	II	1800	C WALL	6.8	5.2	4.2	3.2
		7.8	5.4	4.4	2.8	III			8.6	6.4	5.2	4.2
		11.8	8.2	6.6	4.4	IV			12.6	9.2	7.6	5.8
		16.4	11.4	9.2	6.2	V			17.0	12.4	10.0	7.8
600	B WALL	6.3	4.5	3.5	2.3	II	1950	C WALL	7.0	5.2	4.4	3.4
		8.3	5.7	4.7	3.1	III			8.6	6.6	5.4	4.4
		12.5	8.7	7.1	4.9	IV			12.6	9.4	7.6	6.0
		17.3	12.1	9.7	6.7	V			17.2	12.6	10.2	8.0
	C WALL	6.1	4.3	3.3	2.1	II	2100	C WALL	7.0	5.4	4.6	3.6
		7.9	5.5	4.5	3.1	III			8.8	6.8	5.6	4.4
		11.9	8.3	6.7	4.7	IV			12.8	9.6	7.8	6.2
		16.5	11.5	9.3	6.5	V			17.2	12.8	10.4	8.2
675	C WALL	6.2	4.4	3.4	2.4	II	2400	C WALL	7.3	5.7	4.7	3.7
		8.0	5.6	4.4	3.2	III			8.9	6.9	5.7	4.7
		12.0	8.4	6.8	4.8	IV			12.9	9.9	8.1	6.5
		16.6	11.6	9.4	6.6	V			17.3	13.1	10.7	8.3
750	B WALL	6.5	4.5	3.7	2.5	II	2700	C WALL	7.4	5.8	5.0	4.0
		8.3	5.9	4.7	3.3	III			9.2	7.2	6.0	4.8
		12.5	8.9	7.1	5.1	IV			13.0	10.0	8.2	6.6
		17.3	12.1	9.7	6.9	V			17.4	13.2	10.8	8.6
900	B WALL	6.4	4.6	3.6	2.6	II	3000	B WALL	7.7	6.1	5.1	4.1
		8.2	5.8	4.8	3.4	III			9.3	7.5	6.3	5.1
		12.4	8.8	7.0	5.2	IV			13.3	10.3	8.5	6.9
		17.0	12.2	9.8	7.0	V			17.7	13.7	11.1	8.9

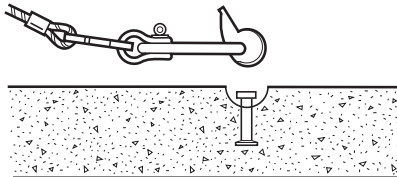
PIPE FILL HEIGHT TABLE

- NOTES
1. This Fill Height Table has been developed using the indirect design method.
 2. Pipe invert maximum depth values are intended as an estimating guide only. This table is not intended to replace engineered designs or to be used with unusual loading or soil conditions.
 3. Calculations are derived based on following parameters:
 - Soil density of 2100 kg/m³
 - Truck live load as per the CHBDC CSA S6; CL-625 TRUCK
 - Traffic direction across pipe
 - Positive projection embankment conditions
 - Pipes are completely full with fluid
 - Bedding types are defined by ASTM C1479
 4. Minimum of 1m soil fill above crown of pipe to surface (RIM elevation).
 5. Type 2 standard Installation is a common practice for pipe installation.
 6. Under certain conditions shallow cover installations may require a higher class of pipe.
 7. All class pipes conform to CSA A257.2 & ASTM C76.
 8. For depths greater than those shown for Class V, a direct design (SIDD) pipe should be used.

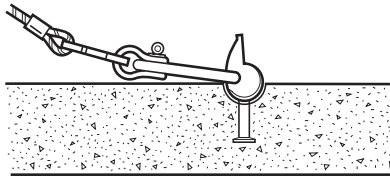


SWIFT LIFT PIN PROCEDURE

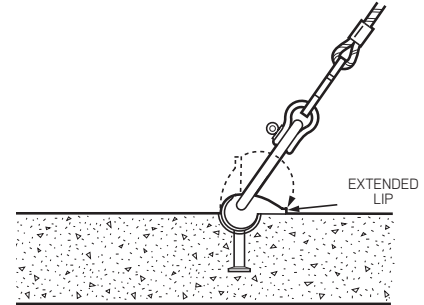
How to Guide



To install the P50 SL Universal Lifting Eye, hold the unit upside down with the T-shaped slot of the body directly over the head of the Swift Lift Anchor.



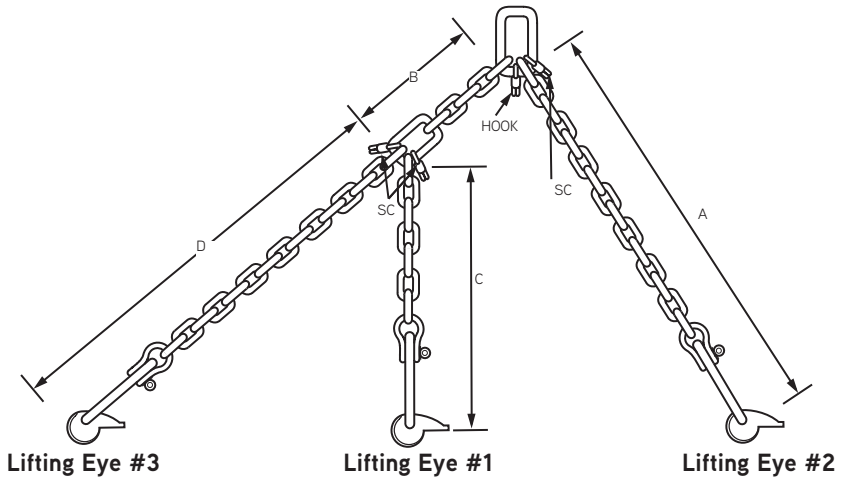
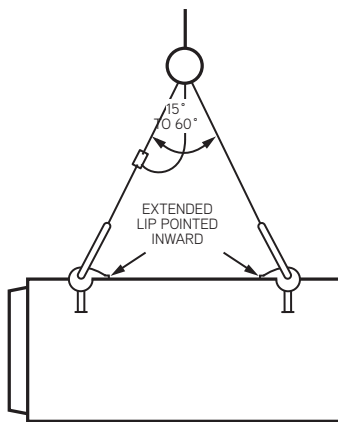
Lower the body of the lifting eye until the T-shaped slot engages the head of the anchor



Rotate the body until the extended lip rests on the concrete surface.

Correction Method for Lifting and Placing Pipe

Note: Load must be applied simultaneous to all Swift Lift anchors in order to safely lift product.



A three-legged chain sling with three P50 SL Universal Lifting Eyes and three shortening clutches (SC) for altering the chain lengths: so constructed that as required, a symmetrical or asymmetrical lifting sling can be made.

Pipe Lengths		A	B	C	D
From	To				
60" (1.5M)	96" (2.5M)	57" (144cm)	16" (40cm)	41" (104cm)	76" (194cm)
96" (2.5M)	138" (3.5M)	75" (190cm)	24" (60cm)	51" (130cm)	110" (280cm)

To learn more about Swift Lift Pin procedures, check out the Dayton Superior Precast Handbook



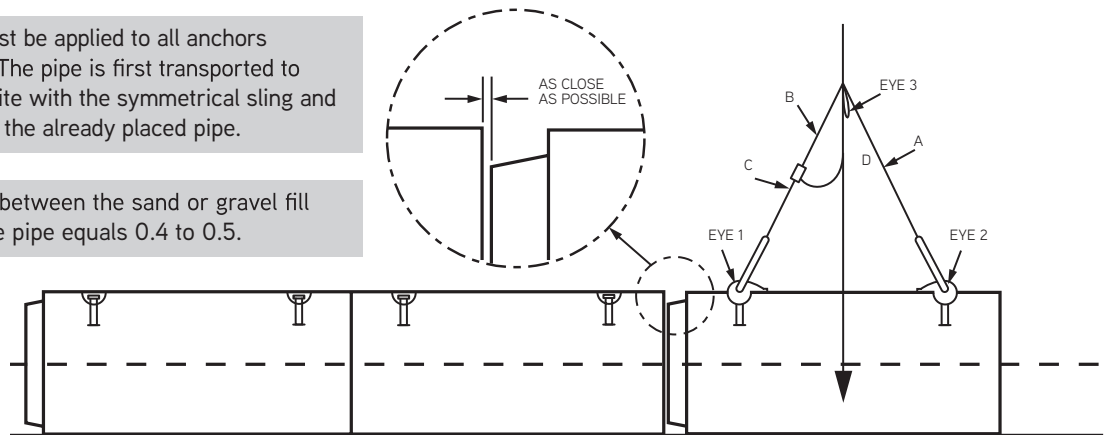
SWIFT LIFT PIN PROCEDURE

How to Use SL Universal Lifting Eye for Setting Concrete Pipe

Note: As with lifting any concrete element, special care should be taken by the driver of the placement vehicle to ensure that the impact or dynamic loads are reduced to a minimum. Impact of dynamic loads can greatly overload the anchors and cause failure.

Note: Load must be applied to all anchors simultaneously. The pipe is first transported to the installation site with the symmetrical sling and lowered close to the already placed pipe.

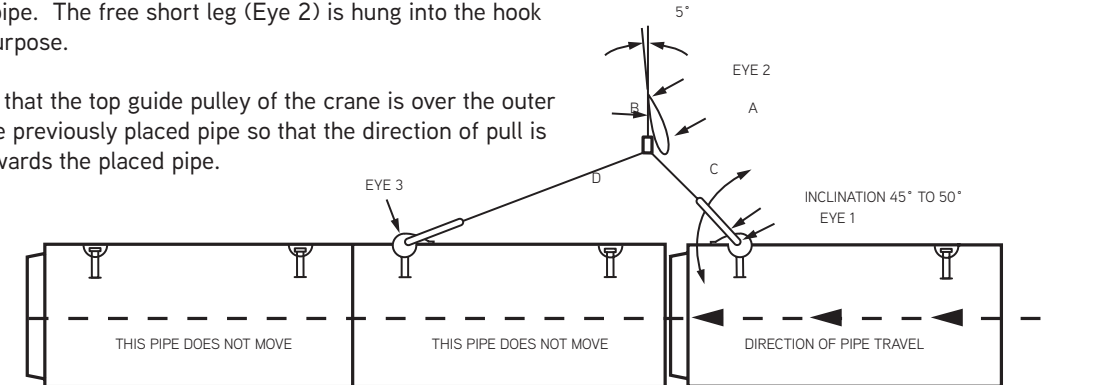
Note: Friction between the sand or gravel fill and the concrete pipe equals 0.4 to 0.5.



Correct Method for Pulling Pipe Together

To pull the pipe into position, the long leg of the lift sling is coupled to the previously placed pipe. The free short leg (Eye 2) is hung into the hook provided for this purpose.

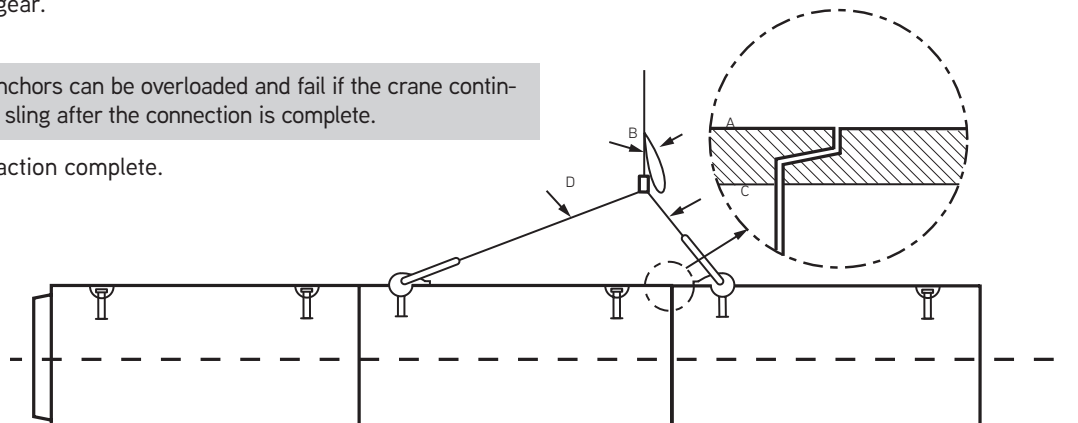
It must be ensured that the top guide pulley of the crane is over the outer lifting anchor of the previously placed pipe so that the direction of pull is slightly inclined towards the placed pipe.



Without moving the jib, the pipe is now pulled into position using the precision hoisting gear.

Warning: The anchors can be overloaded and fail if the crane continues to pull on the sling after the connection is complete.

Stop — release — action complete.



STORM WATER TREATMENT

At Heidelberg Materials, we offer storm water treatment solutions that effectively capture total suspended solids, sediments, oils, greases, trash and debris. Please feel free to reach out to your local Sales Representative for more information.

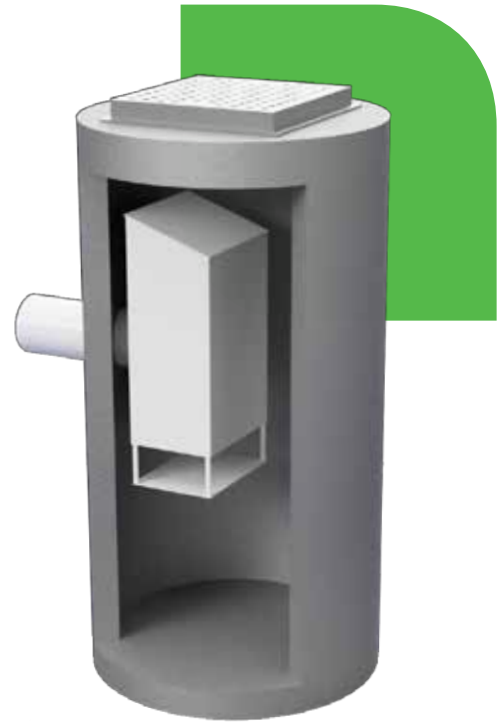
HydroDome

HydroDome efficiently removes oil, trash, and TSS (suspended solids and their associated metals, nutrients, bacteria), from stormwater runoff

HydroDome can be used as a stand-alone treatment solution; as part of a treatment train; or as a pretreatment device for infiltration, underground storage, and bioretention.

Features:

- Lower Cost than most separators
- Siphon creates additional storage in the system
- Captures oil spills, TSS and trash
- Does not scour TSS (NJCAT, 2020, ETV Canada (2021))
- Captures floatables and does not scour (99.7% retainage of oil/floatables, ETV Canada, 2021)
- Easy to maintain



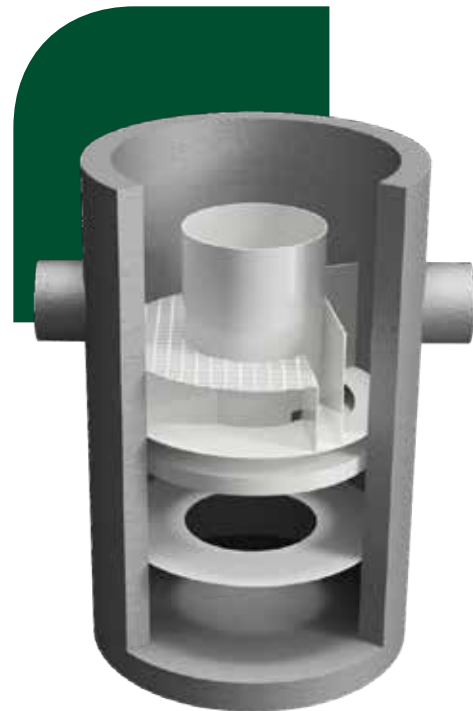
HydroStorm

HydroStorm is a hydrodynamic separator with an internal high flow bypass designed to remove pollutants from stormwater runoff. It efficiently removes oil, trash, and TSS (suspended solids and their associated metals, nutrients, bacteria), from stormwater runoff

HydroStorm is used as a standalone treatment solution for urban retrofit and redevelopment applications; as part of a treatment train for new developments; and as a pretreatment device for infiltration, underground storage, and bio-retention.

Features:

- Internal high flow bypass prevents scour at high flows
- Designed to accommodate multiple inlet pipes
- Captures oil spills, TSS and trash
- Lower cost compared to other competitors
- Reduced sump depths to minimize excavation
- Can be used as a inlet, bend, or junction structure
- Low Headloss ($K= 1.04$) to minimize impact to drainage system
- Minimum elevation drop from inlet to outlet

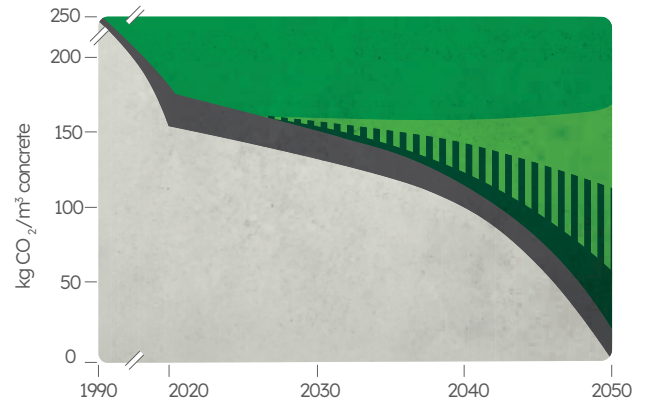
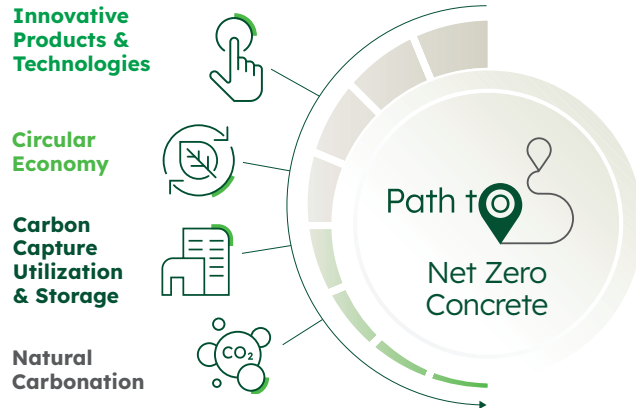


SUSTAINABILITY

Leading the way to net zero concrete

At Heidelberg Materials, we aim to be the industry leader on the path to net zero concrete. Our CO₂ reduction targets are grounded in science and underpinned by a clear roadmap. We are committed to achieving net zero concrete by 2050 using a multidimensional approach, focusing on four key strategies: Innovative Products & Technologies, Circular Economy, Carbon Capture Utilization & Storage and Natural Carbonation.

A multidimensional approach



Heidelberg Materials recognizes that there is no silver bullet to achieving net zero concrete. Our multidimensional approach—which includes innovative products & technologies, circular economy, CCUS, and natural carbonation—is an effective strategy in making net zero concrete a reality.

Innovative products & technologies

Portland-Limestone Cement (PLC)



EcoCem®PLC is a portland-limestone cement (GUL/Type IL) produced using ordinary clinker ground with limestone. Compared to General Use (GU) or ordinary portland cement (OPC), EcoCem®PLC provides up to a 10% reduction in CO₂ intensity without sacrificing performance. The GWP will vary by cement plant.

Global Warming Potential EcoCem®PLC **801** (kg of CO₂-eq./tonne of cement)



EcoCem®PLUS was developed by Heidelberg Materials in Edmonton, Alberta to reduce the carbon footprint of cement and concrete. EcoCem®PLUS (GULb) is a blended portland-limestone cement capable of reducing carbon intensity by over 20% while providing equal or better performance. EcoCem®PLUS is produced at the cement plant by inter-grinding clinker, Type F fly ash and limestone.

Global Warming Potential EcoCem®PLUS **632** (kg of CO₂-eq./tonne of cement)



Alternative fuels

Low carbon alternative fuels are predominantly comprised of materials that are typically sent to landfills like construction and demolition debris, wood, biosolids and others. This offsets the use of carbon-intense fuels like coal and petroleum coke in the cement production process. The timeline below details the progression of alternative fuel use in several of our plants:

Past...	present...	and into the future
<p>1995: Our Evansville, Pennsylvania and Delta, British Columbia cement plants began using select diverted landfill materials as fuel in the cement kiln.</p> <p>2005: Delta scales up Alternative fuels and Mason City, Iowa begins using Seed Corn.</p> <p>2015: Scaling up Alternative fuels at Delta.</p>	<p>Our plants continue to move away from coal; many have now switched to natural gas while others derive between 20% and 30% of their thermal energy from alternative-based fuels.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Replacing up to 50% of fossil fuels with alternative fuels</p> </div> <div style="text-align: center;"> <p>Diverts materials from the landfill & avoids GHGs</p> </div> <div style="text-align: center;"> <p>Used as fuel</p> </div> </div> <p>Our Edmonton, Alberta cement plant recently received funding through Emissions Reduction Alberta to install systems and infrastructure to replace 50% of its fossil fuels with Alternative and Low Carbon Fuels (ALCF).</p> <p>ALCF contain biogenic content and can be used as fuel in place of coal and natural gas to heat the kiln. This not only diverts waste from landfills reducing the production of methane gas, but it significantly lowers the carbon footprint of our cements.</p>



Circular economy

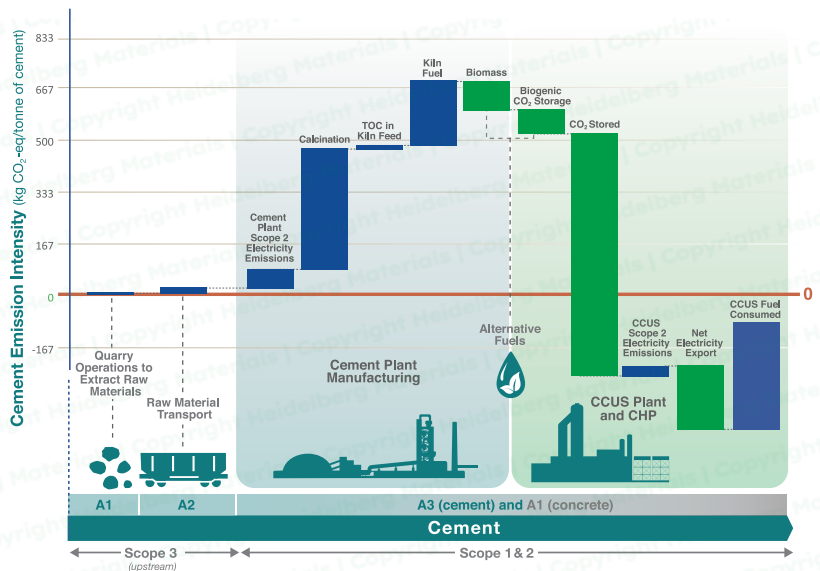
Beyond being a sustainable, resilient, and versatile building product, concrete is also 100% recyclable at end of life, in addition to its ability to incorporate and entrap other material constituents that may otherwise be considered waste. The added benefits of using byproducts in our value chain to further support the circular economy allows us to manufacture building products with recycled materials for your projects. A large part of our investments and research efforts are directed towards achieving this goal, exploring solutions that include the use of materials historically destined for landfills, such as granulated blast furnace slag, landfilled ash, contaminated clays, as well as demolition concrete and excavation spoils.



CCUS

We recognize that cement is responsible for 5-7% of global emissions, and that cement contributes a significant portion of the carbon footprint of concrete. Therefore, Heidelberg Materials is focused on developing carbon capture technologies that enable CO₂ reductions on a large scale, capturing CO₂ in its purest form for downstream use or permanent/safe storage.

Heidelberg Materials is developing North America's first full-scale carbon capture, utilization and storage (CCUS) solution for the cement industry at its Edmonton plant, with the goal of capturing up to one million tonnes of carbon dioxide (CO₂) annually. Captured emissions would be transported via pipeline and permanently sequestered by a third party.



This graphic is a representation of the multi-dimensional approach we use to reduce carbon. Copyright © 2022 Heidelberg Materials. All rights reserved.

1) Definitions.

- a) "Products" means concrete pipe, manholes and associated products.
- b) "Purchaser" means the individual or company placing an order to purchase Products.

2) Purchase of Products.

- a) The Quotation and these Terms and Conditions shall together constitute the purchase agreement ("Agreement"). The Agreement is the only agreement between the parties and supersedes all other agreements, representations, correspondence, undertakings or communications between the parties regarding the purchase of Products.

3) Quotation.

- a) Quotation quantities are approximate only, unit prices govern in all cases.
- b) Unit pricing contained in Quotation is contingent on the order of the entire quantity contained in Quotation.
- c) Material quoted is an estimate based on information provided by Purchaser at time of quotation. If revised plans or drawings are submitted after winning bid, job repricing may be required.
- d) Contractor to review all items to ensure completeness. Seller is not responsible for missed items.
- e) Any additional items or change in quantity will need to be requested by Seller.
- f) Non-inventory or custom/special items are subject to approval of shop drawings, which may result in price changes.
- g) Frames, covers, hatches and other internal/external hardware to be supplied by others unless specifically quoted herein.
- h) Lifting clutches are not included in quote unless specifically quoted herein.
- i) Production and delivery schedule will be determined upon receipt of purchase order.
- j) Quotation does not include Federal or Provincial taxes.
- k) Seller reserves the right to reprice in the event of partial orders.

4) Quotation Validity.

- a) Unless otherwise agreed to by the parties in writing, the prices in the Quotation are valid for 14 days from the date of the Quotation. Seller may, in its sole discretion, increase the price of, or decline to deliver, the Products identified in this Quotation after such date.
- b) Acceptance of the Quotation by the Purchaser does not obligate the Seller until Purchaser's credit has been approved by our Credit Department.

5) Cartage Rates and Additional Surcharges.

- a) Cartage rates are based on a minimum truck load of 27,000 kilograms and do not apply during periods of road restrictions/bans. Delivery charges for truckloads of less than 27,000 kilograms shall be calculated at an hourly rate and shall include loading, traveling, and unloading time.
- b) Cartage is quoted as an approximate and may change due to size of load, the delivery location and/or other special delivery requests by the Purchaser.
- c) A surcharge will be added for a delivery requiring a wide load permit and/or pilot vehicles.
- d) A surcharge of \$100/hour will be added if the Purchaser has not unloaded the truck within one hour of the truck's arrival at the destination specified.
- e) A surcharge will be added if the Purchaser does not unload a delivery in its entirety at the destination specified.
- f) Fuel surcharges may be added to each delivery depending on fuel prices. Fuel surcharge amount will be determined solely by Seller and based on fuel prices on the Kalibrate website (charting.kalibrate.com) on the day of delivery.

- g) Dunnage charged at \$75 per truck load if dunnage requested by the customer.
- h) \$25 deposit on all pallets used for grade rings and prebenchs. Deposit money to be refunded if pallets are returned in reusable condition as determined solely by the Seller.

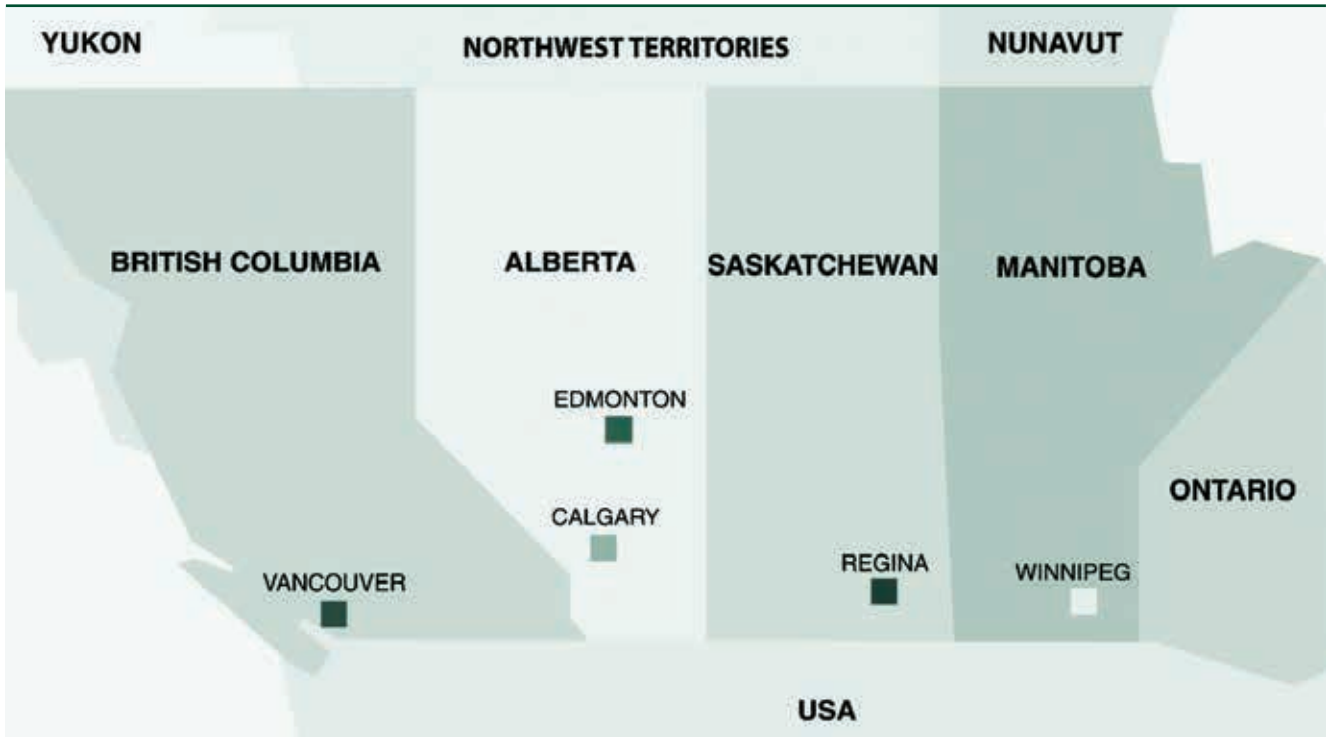
6) Delivery Conditions.

- a) Purchaser shall schedule all deliveries directly with the Seller. Purchaser shall provide a minimum of 24 hours' notice. More notice may be required due to truck availability during peak times.
- b) Delivered prices are for delivery to the destination specified by the Purchaser (FOB Jobsite).
- c) Purchaser is responsible to provide Seller with safe and reasonable access for Seller's delivery truck to deliver Products. Seller reserves the right to stop deliveries until Purchaser provides such access.
- d) In the event Seller requires access over curbs, sidewalks, driveways or other property, Seller shall not be responsible for any loss, cost or damage in connection therewith. Purchaser waives all claims against Seller and shall indemnify and save the Seller harmless and against any and all losses, damages, expenses, liabilities, claims, suits and demands of whatever nature (including legal fees on a solicitor and client basis) suffered or incurred by Seller and resulting from such access.
- e) Purchaser shall be responsible to provide suitable access roads to destination specified and will be responsible for all unloading and all equipment needed for such unloading.

7) Payment Terms.

- a) Full payment is due on the 25th day of the month following the Purchaser pick-up or delivery of Products.
- b) Prices exclude applicable taxes, fees, duties and surcharges. Purchaser is solely responsible for the payment of such amounts.
- c) Unless otherwise stated, prices are in Canadian Dollars.
- d) Purchaser shall pay all fees, expenses and disbursements (including legal fees on a solicitor and his own client basis) incurred by Seller in connection with collecting any overdue accounts.
- e) Seller reserves the right at any time to require the Purchaser to post adequate security, and to discontinue the supply of Products in the absence of such security, in its sole discretion.
- f) All purchases by Purchaser pursuant to this Quotation require payment in advance unless Seller has entered into a written credit agreement with Purchaser. In the event Purchaser makes payment with a cheque, and such cheque, upon presentation, is not promptly negotiated by Purchaser's bank, Purchaser shall immediately make payment using a certified cheque. Purchaser shall also pay a service charge of \$25.00 for any cheque that is not negotiated by Purchaser's bank promptly upon presentation. Purchaser shall pay Seller interest on all amounts not paid when due at a rate of 2.0% per month (24% per annum). Invoice shall be deemed correct unless Purchaser notifies Seller in writing of any errors within 30 days from the date of such invoice. Purchaser's payments shall be applied first against any outstanding interest charges, next against any service charges and then to the outstanding principle in the invoice.
- g) If Purchaser defaults or if Seller considers Purchaser's financial responsibility impaired or unsatisfactory, Seller shall be entitled to suspend or terminate, in whole or in part, any order or agreement until all outstanding payments are made and/or acceptable assurances or security is provided by Purchaser.
- h) All Products approved for fabrication must be taken no later than 12 months from fabrication. Products NOT taken prior to the due date shall be subject to per diem storage charges.

- 8) Availability of Products.** The quantities of the Products stated in this Quotation are for the sole purpose of identifying the estimated total quantities and price of the Products expected to be delivered by Seller to Purchaser and are not intended to constitute a commitment by Purchaser to purchase, or Seller to deliver, the stated quantities of the Products (or another quantity or Products sufficient to meet Purchaser's requirements) to Purchaser. Although Seller will make reasonable efforts to deliver Products in accordance with Purchaser's schedule, Seller's ability to actually deliver the amount of the Products stated in Seller's invoices to Purchaser is subject to the availability of the Products (which availability might be limited for reasons both within and outside of Seller's control, including, without limitation, those set forth in Section 9).
- 9) Force Majeure.** Seller shall not be considered in default in the performance of its obligations hereunder if such performance is prevented or delayed because of an act of God, lack of availability of raw materials or Products, equipment or facility failures, war, blockade, embargo, hostilities, revolution, civil commotion, strike or lockout, labor dispute, epidemic, fire, wind, earthquake or flood, severe weather, traffic delays, delays of third parties or because of any law, order, proclamation, regulation or ordinance of any government, or for any other cause, whether similar or dissimilar to those enumerated, beyond the reasonable control of Seller. If Seller's performance is prevented or delayed Seller shall have the right to prorate among its various customers such Products as it may be able to manufacture and deliver.
- 10) Products Specifications and Warranty.** Products shall conform to their respective ASTM and/or CSA specifications as declared in the manufacturer's certificate of compliance, submittal documents or shop drawings. The seller does not warrant compliance with any other codes and/or specifications that are not explicitly declared. Seller expressly warrants the title to the Products and, except as provided in this section, Seller makes no representation or warranty whatsoever with respect to the Products, express or implied (whether written, oral, statutory or arising by previous course of dealing or usage of trade) including merchantability and fitness for a particular purpose, and Seller hereby disclaims all such other representations and warranties to the maximum extent permitted by applicable law.
- 11) Indemnity.** The Purchaser shall indemnify, hold harmless and defend Seller, its employees, contractors, and representatives from and against any and all losses, damages, expenses, liabilities, claims, suits and demands of whatever nature (including legal fees and expenses on a solicitor and client basis) suffered or incurred by Seller and resulting from any and all claims, suits or demands made against Seller by any other person arising out of or in connection with Purchaser's resale of the Products purchased from Seller, unless and to the extent attributable to any negligence or breach of this Agreement by Seller of the terms and conditions herein.
- 12) Limitation of Liability.** Notwithstanding any other provisions of this Agreement, Seller shall not be liable to the Purchaser whether due to breach of contract, negligence, warranty, strict liability or otherwise, for any special, indirect or consequential damages, or for any loss of profits, loss of revenue or loss of anticipated business suffered or incurred by the Purchaser. Seller's liability to a Purchaser in relation to this Agreement, whether due to breach of contract, negligence, warranty, strict liability or otherwise, is strictly limited to the replacement of the Products or a refund of the purchase price for the order of Products in question. Seller having no control over the use of the Products will not guarantee finished work, nor shall Seller be responsible for the condition of the Products after delivery to Purchaser.
- 13) Limitation of Actions.** Purchaser is responsible for inspection of the Products upon delivery. Notwithstanding any other provisions in this Agreement, no suit or claim based on any cause of action whatsoever arising out of or in any way connected with this Agreement or the Products may be brought by the Purchaser, or any party claiming through the Purchaser, more than 60 days after receipt of the Products. Claims for loss or damage in transit must be reported to Seller within 24 hours of delivery of Product to the destination specified and must be supported by customer's notation on truck delivery receipt and/or bill of lading.
- 14) Use of Products.** Purchaser's use of the Products is at its own risk and the Purchaser shall indemnify and save Seller harmless from any and all losses, damages, expenses, liabilities, claims, suits and demands of whatever nature (including legal fees and expenses on a solicitor and client basis) suffered or incurred by Seller arising out of, or relating to the Purchaser's control, use, possession, transportation or ownership of the Products.
- 15) Title and Risk of Loss.** Title and risk of loss to the Products shall pass to Purchaser on Purchaser's pick-up at Seller's premises. Title and risk of loss to Products delivered shall pass to Purchaser on delivery at the destination specified.
- 16) Waiver.** No waiver of any provision of the Agreement shall be binding unless given in writing and signed by an authorized officer of the party to be bound thereby.
- 17) Governing Law.** This Agreement shall be interpreted under and governed by the laws of the Province where the Products are delivered and the federal laws of Canada applicable therein
- 18) Arbitration.** If any dispute arises between the parties pursuant to this Agreement such dispute shall be resolved by a sole arbitrator pursuant to the provisions of the Arbitration Act of the Province where the Products is delivered.
- 19) Builder's Lien.** For the purposes of the Builder's Lien Act Products not herein quoted but delivered or supplied to the same project shall be considered part of the same contract until last date of delivery or supply notwithstanding separate purchase orders.
- 20) Product Return.** Purchaser may return any standard Product to Seller's premises provided:
- such Product is in good and resalable condition.
 - Purchaser pays Seller a restocking fee of 15% of the price of the Product. Restocking fee may be increased based on condition of the returned product.
 - Product is returned to Seller on or before six months from the date of the original pick-up from Seller's premises or delivery to the destination specified.
 - Custom and non-standard Products including but not limited to manhole and catch basin barrels with custom holes, radius pipe, pipe larger than 1200mm, custom slab tops, bends, wyes, tees and specialty cast in components will not be refunded.
 - Custom or non-standard Products returned will not receive credit and be subject to a disposal fee of \$55.00 per tonne charged by Seller to Purchaser.
 - Custom and non-standard Products remaining on completed orders will be invoiced to the Purchaser and can either be picked-up by Purchaser (FOB Seller's Plant) or will be subject to a disposal fee of \$55.00 per tonne.
 - Any surcharges charged will not be refunded on returned items.



BRITISH COLUMBIA

9265 Oak Street
 Vancouver, BC V6P 4B8
Main Line 604-269-6700

SOUTHERN ALBERTA

7336 112th Avenue NW
 Calgary, AB T3R 1R8
Main Line 403-279-5531

NORTHERN ALBERTA

SALES OFFICE
 16503 - 121A Avenue
 Edmonton, AB T5V 1J1

PIPE YARD

13325 - 170 Street
 Edmonton, AB T5V 1M3
Main Line 780-448-1351

SASKATCHEWAN

Hwy #1E
 Regina, SK S4P 3A1
Main Line 204-334-4300

MANITOBA

2520 Ferrier Street
 Winnipeg, MB R2V 4P6
Main Line 204-334-4300



