

# UNDERGROUND PRECAST 2024 CATALOGUE & PRODUCT DESIGN GUIDE



Helping Build Communities from the Underground Up















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Need Help? Contact us today to request a quote or get more information about our products.

**RED DEER PLANT** Office: 403-343-8000 Toll Free: 800-859-5541

**CALGARY PLANT** Office: 403-261-3851 Toll Free: 800-859-5541



## **SALES & QUOTE REQUESTS**

#### **UNDERGROUND PRECAST**

#### **EDMONTON & NORTHERN ALBERTA**

Nathan Himschoot Senior Sales Representative 780.243.2500 nathan.himschoot@proform.ca

#### **RED DEER & CENTRAL ALBERTA**

Ron Reeves
Head Estimator, Red Deer Plant
403.343.8000 Ext.7218
proformrdestimating@proform.ca

#### **RED DEER & SOUTHERN ALBERTA**

Travis Paterson
General Manager
403.899.3493
travis.paterson@proform.ca

GENERAL PRECAST & RESIDENTIAL PRECAST

info@proform.ca or visit www.proform.ca/contact

### **LOCATIONS**

#### **HEAD OFFICE:**

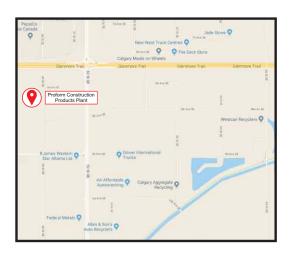
Office: 403-343-6099 | Toll Free: 800-859-5541 | 240 Burnt Park Way, Red Deer County, AB T4S 2L4



#### **RED DEER PLANT**

Proform Construction Products
Office: 403-343-8000
Toll Free: 800-859-5541

564 Laura Ave, Red Deer County, AB T4E 0A5



#### **CALGARY PLANT**

Proform Construction Products
Office: 403-261-3851

Toll Free: 800-859-5541

110, 8615 48 Street SE, Calgary, AB T2C 2P8

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#### **PROFORM HISTORY**

#### **OUR VISION:**

Helping build communities from the underground up.

#### **OUR MISSION:**

Breaking ground to project completion - we deliver a wide range of concrete products and services tailored to our customers needs. We will reinvest our profits into the company as we strive for operational excellence.





Proform's story began in 1975 with a family formed company named HEB Developers Ltd. In the late 1980's, HEB Developers Ltd became Proform Concrete Services to enable expansion into a larger variety of products and services. A precast concrete division was formed in 1990 so Proform purchased a 28-acre site southwest of Red Deer in Gasoline Alley to begin manufacturing precast products. Two expansions on the plant were required in the 90's to keep up with demand due to continued growth.







In 2011 Proform began supplying waterworks products that complimented our precast products we were already supplying such as concrete manholes, catch basins and vault structures.

In 2014, we added interior and exterior decorative concrete finishes. Some of the finishes include grind and polished, colored epoxies, stamped, exposed and stenciled.

In 2018 we continued to grow. We acquired Vic's Concrete Finishing in Red Deer and Key Concrete Products in Calgary, expanded our services to include concrete pipe and rebranded our divisions.

Early in 2019, Proform purchased Norstair Precast Step Systems. This was a natural fit since the precast steps Norstair sold were exclusively manufactured in Proform's Calgary plant. Later in the year, Proform signed a Purchase Agreement and Distribution Agreement with Emco Corporation's Western Canada Region, allowing divisions of Emco Corporation including Emco Waterworks and KANN Supply to acquire all Proform's waterworks inventory and gave the same divisions rights to stock and distribute Proform's precast manholes and catch basins at each of their locations.

Today, Proform is one of the largest slip-form concrete contractors and a market leader for custom precast steps in Alberta. The changes we have made over the years prove that we are approaching the future with our clients best interest at heart and know they will help to better service our clients.

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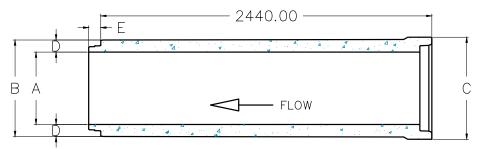
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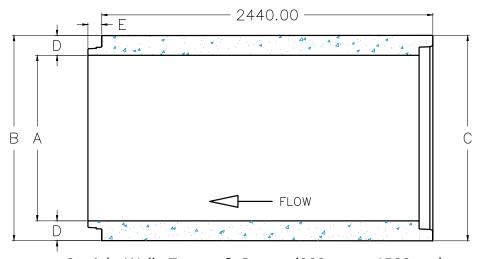
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#### HIGH SULFATE RESISTANT (TYPE HS) CEMENT - ASTM C76

	IINAL E DIA.	LENGTH	WEIGHT Per Piece	VOLUME	DIMENSIONS (mm)			m/TRUCK Super B		
(mm)	(in.)	(m)	(kg)	(kg/m)	А	В	С	D	Е	Juper B
600	24	2.44	1257	515	609	800	828	95	88	70.76
675	27	2.44	1487	609	685	889	904	101	88	58.56
750	30	2.44	1738	712	762	977	1003	107	88	51.24
900	36	2.44	2269	930	914	1155	1155	120	88	39.04
1050	42	2.44	2906	1190	1066	1333	1333	133	107	29.28
1200	48	2.44	3643	1493	1219	1511	1511	146	101	24.40
1350	54	2.44	4412	1808	1371	1689	1689	158	107	19.52
1500	60	2.44	5279	2164	1524	1866	1866	171	127	17.08



Bell & Spigot Pipe (600mm to 750mm)



Straight Wall - Tongue & Groove (900mm to 1500mm)

- Flared ends, call for pricing and availability.
- Radius (beveled) pipe (flared headwall) can be substitute as an option to a flared end. Available in most sizes, call for pricing.
- 600mm to 1500mm single offset joint design comes with self lubricating (Superseal) gasket.
- Nitrile (oil resistant) Superseal available.
- Pipe 900mm and larger includes cast in lifting device (Swift lift).
- Jacking pipe available in 900 1500 size and price on request.
- Contact us for information regarding the uses and benefits of the lined pipe for sewer application.

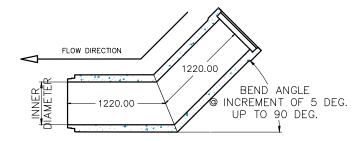
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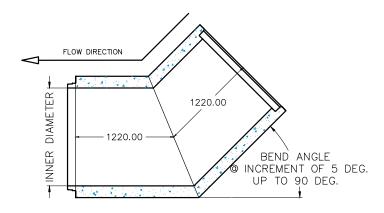


#### **ASTM C76**

DESCRIPTION Nominal Diameter (mm)	WEIGHT (kg)
600	1257
675	1487
750	1738
900	2269
1050	2906
1200	3643
1350	4412
1500	5279



Bell & Spigot Bend Pipe (600mm to 750mm)



Straight Wall - Tonque & Groove (900mm to 1500mm)

- Bends are available in angles in 5 deg. increments.
- Radius pipe may be used in place of bends in some cases; call for details.

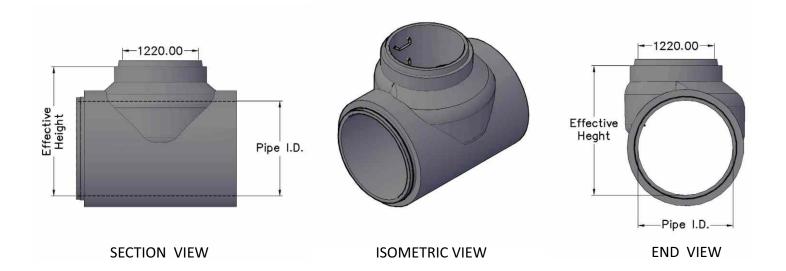
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#### **ASTM C76**

DESCRIPTION  Nominal Diameter (mm) x Length (mm)	Height (mm)	Weight (kg)
1200 x 2440	1771.25	4500
1350 x 2440	1936.35	5848
1500 x 2440	2101.45	6799



#### **FLARED HEADWALL**



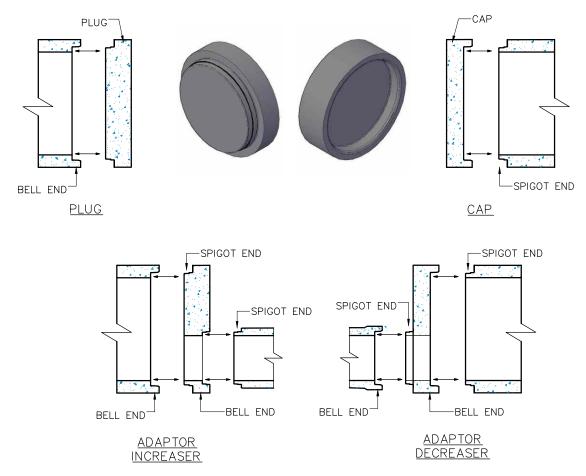
- Flared headwall can be substitute as an option to a flared end. Call for pricing and availability.
- Tee Riser may only be used for straight through manhole application; no extra pipe holes can be added into the Tee Riser.

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DESCRIPTION Nominal Diameter (mm)	CAPS WEIGHT (kg)	PLUGS WEIGHT (kg)
600	225	275
675	265	331
750	323	412
900	427	547
1050	575	784
1200	742	985
1350	935	1247
1500	1160	1630



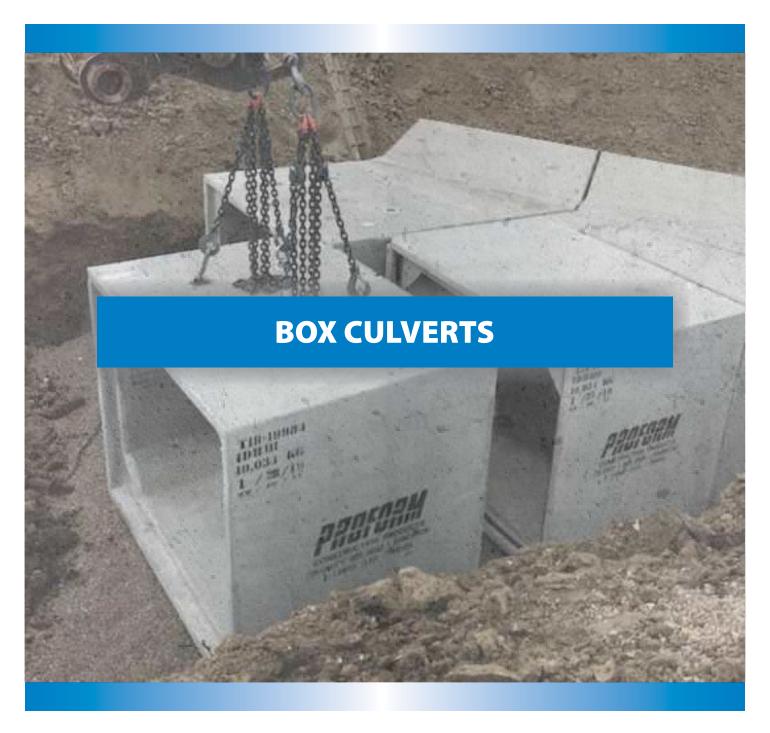
- Plugs fit into bell ends
- Caps fit onto spigot ends
- Adaptors can be fabricated to fit a variety of pipe sizes and types. Call for details

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#### **CONCRETE BOX SECTIONS**

	Box Sizes	Maximum	Wall	Haunch	Base/Slabtop	Weights
	Span X Rise	Length	Thickness		Thickness	kg/m
8" Haunch	1220 X 610	2440	203	203	203	2,350
	1220 X 913	2440	203	203	203	2,640.
	1828 X 913	2440	118	305	178	3,060
	1828 X 1220	2440	178	305	178	3,320
	2438 X 1220	2440	203	305	203	4,360
12″ h	2438 X 1830	2440	203	305	203	4,950
BC Form 12" Haunch	2438 X 2438	2440/1525	203	305	203	5,540
BC F Ha	3050 X 2438	2440/1525	254	305	254	7,680
	3050 X 3050	2000/1525	254	305	254	8,410
	3660 X 3050	2000/1525	305	305	305	11,050
	3660 X 3660	2000/1525	305	305	305	11930,

**Application:** Sanitary & Storm Retention Systems, Pedestrian/Animal Underpass, Utility Trays, Highway Culverts, Storm Sewer.



Tapered End



**PVC Lined Box Culverts Bend** 

#### **Notes:**

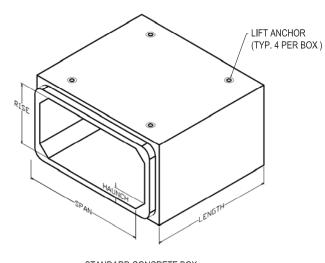
- Design for CL-800 loading
- Cast-in Hatches also available
- For vertical and horizontal application
- Manhole access openings available
- Increments between 5° 50° bends
- End Plugs
- Trash Grates available

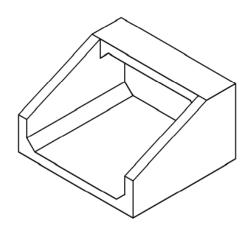
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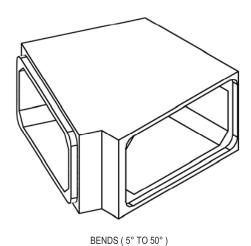
#### **BOX CULVERTS - ACCESSORIES**

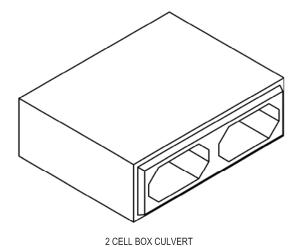




STANDARD CONCRETE BOX

TAPER BOX SECTION





(Price on Request)

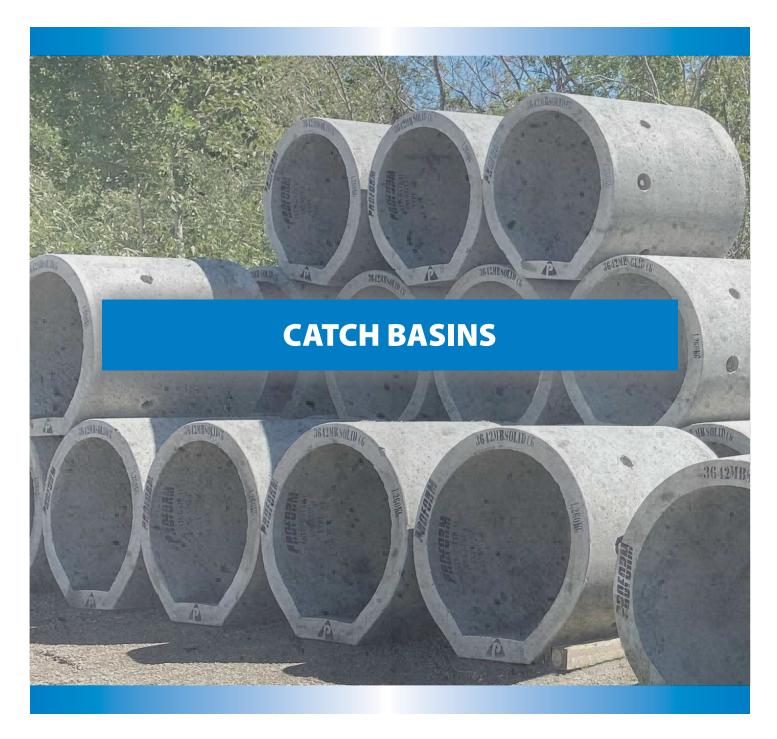


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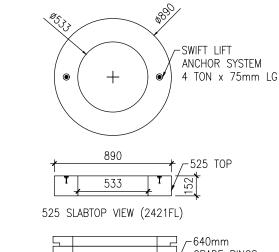


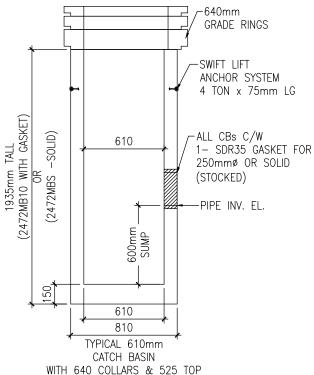
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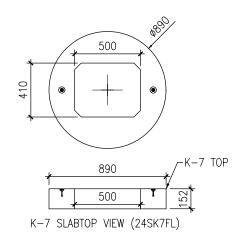
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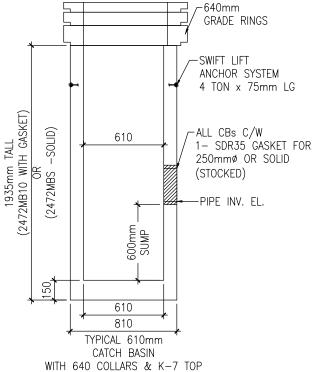
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HEAD OFFICE Office: 403-343-6099 | TF: 800-859-5541 240 Burnt Park Way, Red Deer County, AB **CATCHBASINS** 600mmØ Materials













- 600 CB COMES STOCKED WITH 1 10" (250mm) SDR GASKET OR SOLID FOR OTHER SIZES OR ADDITIONAL GASKET PLEASE CALL FOR ADDITIONAL PRICE 600 CB MATERIAL DO NOT COME WITH STEPS & ALL MATERIALS COMES WITH 4
- TON LIFT PINS FOR HANDLING
  600 BARREL EXTENSIONS ARE NOT AVAILABLE

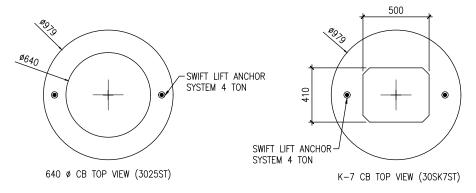
Kwikseal for SDR 35 Gasket

Adaptor for Ultra Rib

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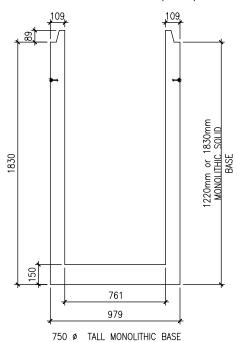
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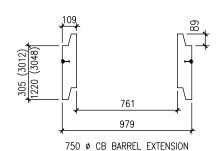
640 Ø CB TOP SECTION VIEW (3025ST)

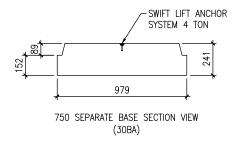


SECTION VIEW (3048MBNS OR 3072MBNS)

241 1 500 1 500

K-7 CB TOP SECTION VIEW (30SK7ST)







OUTLET 100 SUMP

- ALL MATERIALS COMES WITH 4 TON LIFT PINS FOR HANDLING
- 750 MATERIALS IS NON-STOCKED ITEMS: CALL FOR AVAILABILITY

Kwikseal for SDR 35 Gasket

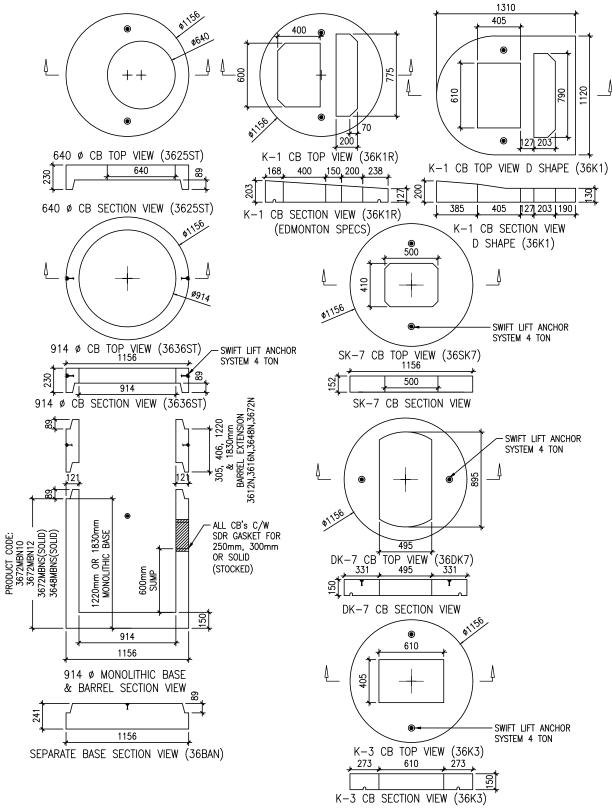
Adaptor for Ultra Rib

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**HEAD OFFICE** Office: 403-343-6099 Toll Free: 800-859-5541 **PROFILE**CONSTRUCTION PRODUCTS

CATCHBASINS - NORTH 900mmØ Materials

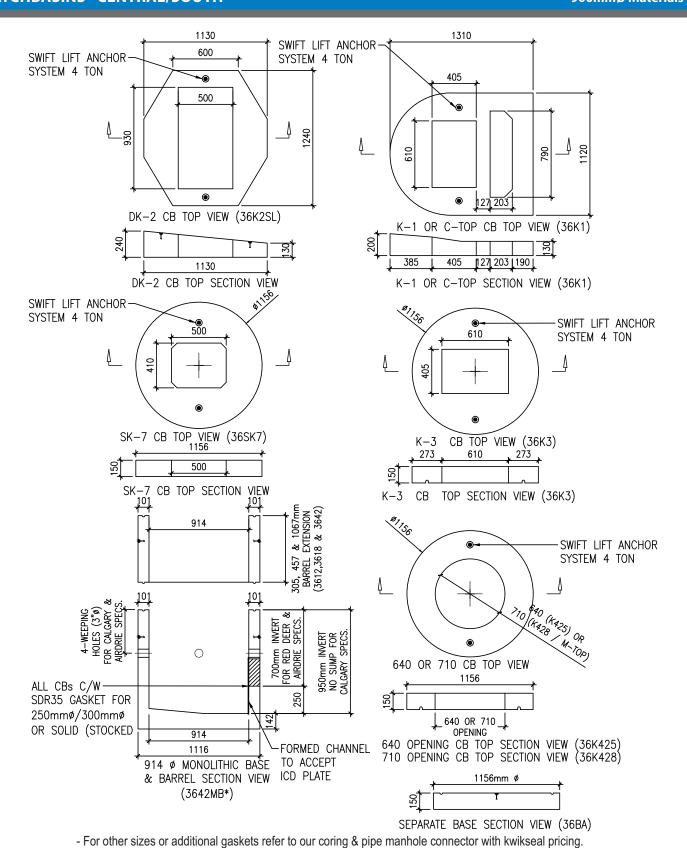


- For other sizes or additional gaskets refer to our coring & pipe manhole connector with kwikseal pricing.

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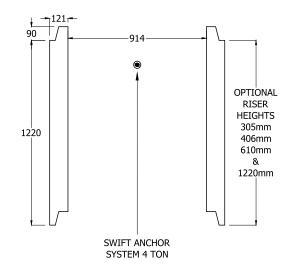


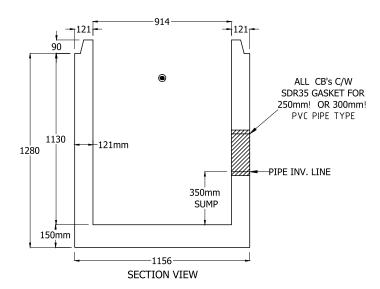


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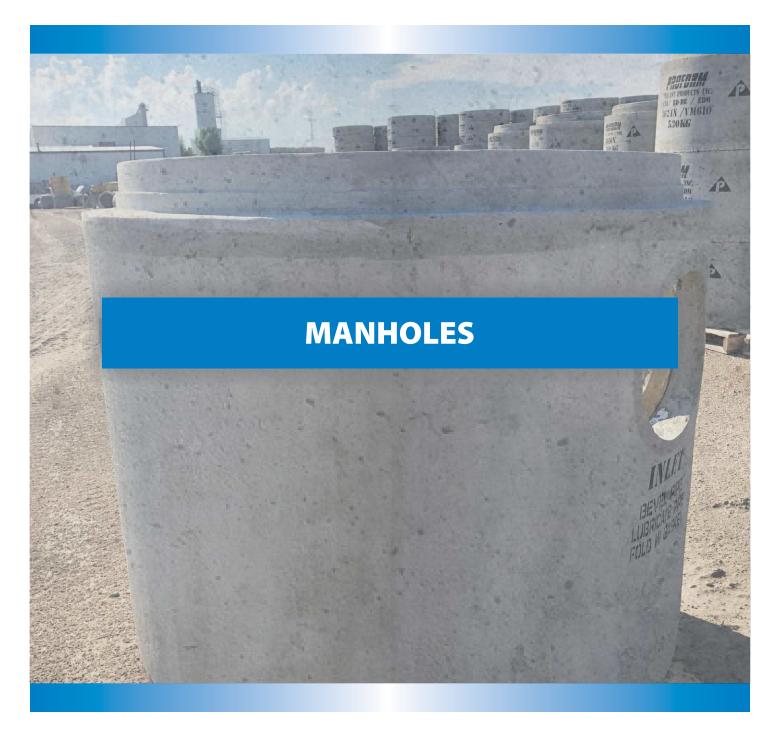


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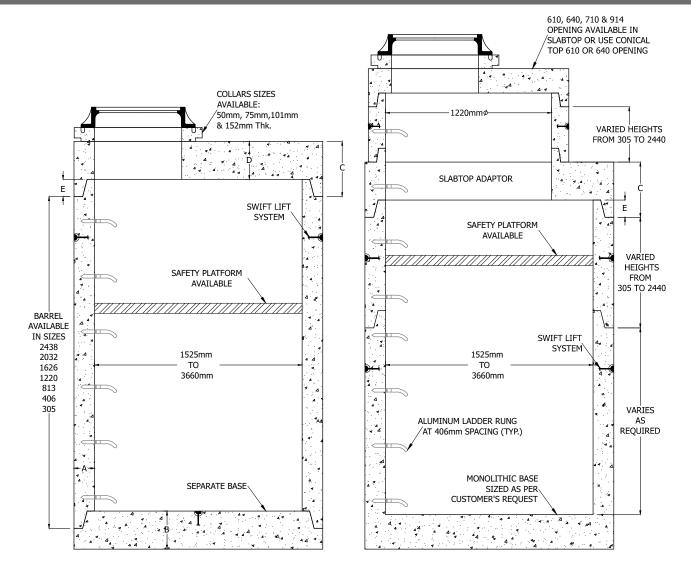


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HEAD OFFICE Office: 403-343-6099 | TF: 800-859-5541 240 Burnt Park Way, Red Deer County, AB MANHOLES Large Diameter



- Bituminous Joint Sealant is required for the joints.
- All large diameter barrels are not stock items. Custom heights are available on request.
- All barrels according to ASTM C478 / CSA A257.4
- Monolithic Prebenched bases available in 1525 Ø, 1830 Ø, 2135 Ø & 2440 Ø.
- If gaskets are required in manhole, call for pricing.

	WALL	BASE	SLAPTOP	SLAPTOP	SPIGOT	WEIGHT	VOLUME	COILS
SIZE	THICKNESS	THICKNESS	EFF. HGT.	EFF. HGT.	HEIGHT	KG/M	L/M	PER
	Α	В	С	D	E			JOINT
1525	152	280	407	280	127	2020	1820	2
1830	178	280	407	280	127	2700	2620	2
2135	203	280	407	280	127	3580	3580	2
2440	229	360	470	280	190	4620	4665	3
3050	279	280	432	280	152	7010	7482	3
3660	305	375	457	305	152	9120	10520	3

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# HIGH SULFATE RESISTANT (TYPE HS) CEMENT 1500, 1800, 2100 & 2400



Large Diameter Prebench bases for Concrete Pipe or SDR Pipe, Sanitite, Pipe



Sanitite



Monolithic Prebench Base c/w A-lok gaskets (sanitary application)



Epoxy Coated manholes available

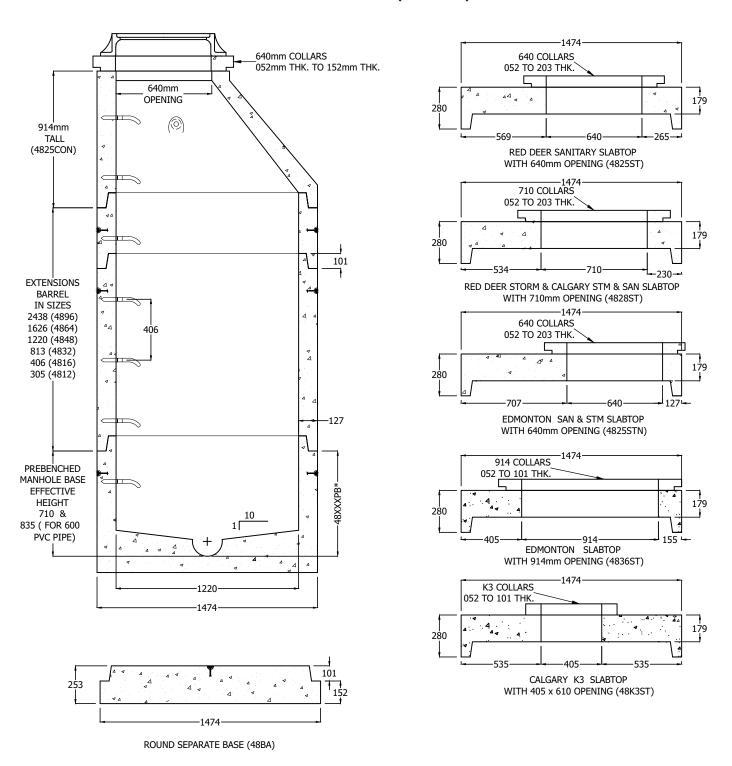
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MANHOLES 1220 Configuration

### HIGH SULFATE RESISTANT (TYPE HS) CEMENT



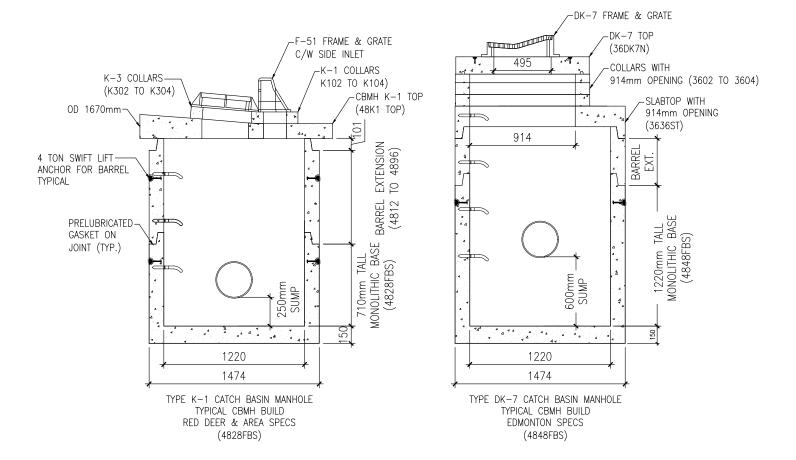
Note: Also available is 700mm and 1220mm Tall Monolithic Base with flat bottom for CBMH.

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#### **CATCH BASIN MANHOLE**



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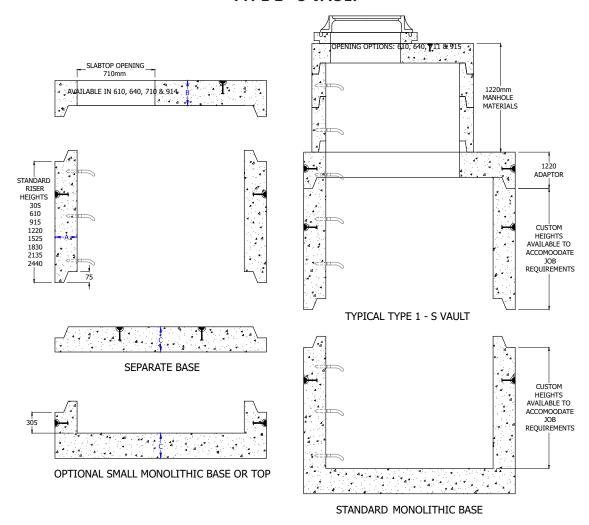


<sup>- 4828</sup>FBS -250 SUMP, 4848FBS - 600 SUMP COMES STOCKED WITH 1 - 10" (250mm) OR 1 - 12" (300mm) SDR GASKET, FOR OTHER SIZES OR ADDITIONAL GASKET

PLEASE CALL FOR ADDITIONAL PRICE.

- 48K1, 48K2, 48K3, 48K425, 48K428, 48SK7 TOPS FOR RED DEER C/W 1670 O.D.

**TYPE 1 - S VAULT** 



- Slabtop can be formed with 610, 640,710 or 915mm Ø Opening or a 1220 spigot for 1220 material or access hatches.
- All Vaults c/w ladder rung and swift lift lifting pin.
- All barrels & Vaults according to ASTM C478 / CSA A257.4
- Weir Walls can be manufactured in any vaults, price on request.
- Access Hatches available price on request.
- If gasket is required, call for pricing.

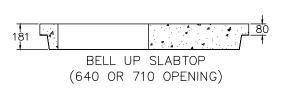
TYPE 1 S VAULT (INSIDE AREA)	WALL THICKNESS A	LID THICKNESS B	BASE THICKNESS C	SLABTOP 710 OPENING (KG)	SLABTOP 1220 ADAPTOR (KG)	RISER PER KG/VM
1220x1220	203	203	203	1220	705	2800
1525x1525	203	230	230	2100	1515	3400
1830x1830	203	230	230	2800	2215	4000
1830x2440	203	254	230	3840	3255	4500
2135x2135	203	230	230	3600	3015	4600
2440x2440	203	254	230	4900	4315	5200
2440x3050	254	254	230	6400	5815	7300
2745x2745	254	254	230	6500	5915	7300
3050x3050	305	305	305	9800	9215	9800
3660x3660	305	305	305	13000	12415	11400

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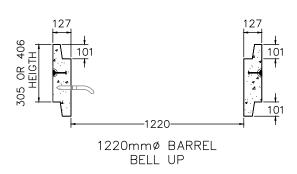
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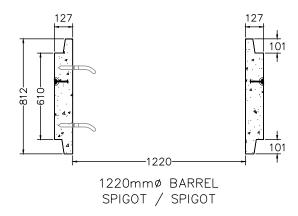
#### **BELL UP SLABTOP, BELL UP & SPIGOT-SPIGOT BARREL**











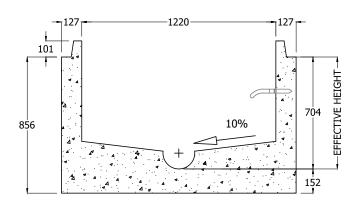


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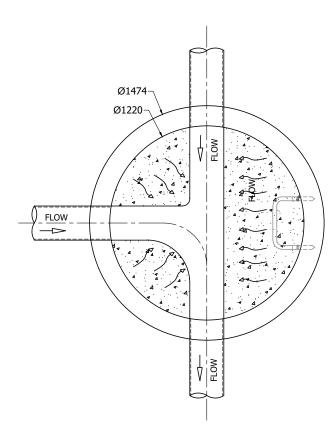
PREBENCH 1220mmØ Materials



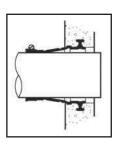
STANDARD 1220 PREBENCH



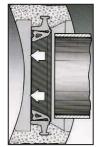
Optional compression gaskets (A-lok or Econoseal)



- Optional Effective Heights of 565 or 425 are availabe
- Any increment to fit height can be manufactured with a stub-out.
- Prebenches can be manufactured to accommodate, CSP, HDPE or steel pipe. Price on request.



Cast -A-Seal



Compression Gaskets (Econoseal, A lok)







1220 Monolithic Prebench with precise hole for Ultra-Rib pipe.

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#### HIGH SULFATE RESISTANT (TYPE HS) CEMENT - WATERTIGHT



Custom prebench bases.



Inside view of taller prebench.



Taller prebench bases for high water table applications.



HDPE cast into barrel - watertight.



Insulated with cast in pipe.

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### **GASKET OPTIONS: CAST-IN CONNECTORS**

GASKET	USE	SIZES
Econoseal Compression Gasket This is a simple cast-in manhole connector that offers the contractor and engineer easy installation and excellent sealing of pipes entering manholes.	Cast into our 1220 Prebench Bases  Econoseal Gasket	Range 100 - 750mm or 4" to 30"
Cast - A - Seal 603 This is a mid-range cast-in, flexible watertight pipe-to-structure connector for PVC pipe.	Cast into our 1220 Prebench Bases  Cast-A-Seal	Range 203 - 457mm or 8" to 18"
A-LOK X-CEL or Premium Compression Gasket  Accomodate pipe types: Sanitite PVC (SDR) Concrete Pipe  This is flexible pipe-to-manhole connector was designed to produce a guaranteed watertight seal between a pipe and a concrete structure.  Note: Nitrile gaskets on request.	Cast into our flatwall vault structures 203 - 254 - 305mm or 8" - 10" - 12" wall thickness.	Range 152 - 2590mm or 6" to 102" O.D. pipe cast into our curve MH Barrels 1500 to 3660.

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#### HIGH SULFATE RESISTANT (TYPE HS) CEMENT

A.LOK STM Cross Section / Pipe Size OD's



93 Series 8.50" - 29.00"

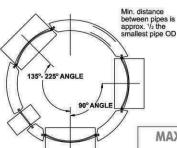


94 Series 30.00" - 59.50"



95 Series 60.00" - 87.50"

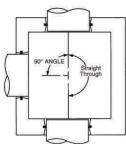
Larger Sizes Available Upon Special Request



MAX. PIPE SIZE OD's

MAX. PIPE SIZE OD's

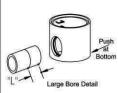
Manhole Diameter	135° - 225° Pipe Angle	90° Pipe Angle
42"	26.5"	22.0"
48"	31.5"	25.0"
60"	42.0"	32.0"
72"	52.5"	38.0"
84"	59.5"	44.0"
96"	73.5"	50.0"
108"	76.0"	56.0"
120"	87.5"	62.0"



MAX.	PIPE SIZI	OD's
BOX	STRUCTU	JRES
		000

Inside Wall Dimension	Straight Through	90° Pipe Angle	
2'	19.50"	17.50"	
3'	32.00"	30.00"	
4'	44.00"	42.00"	
5'	56.00"	54.00"	
6'	67.00"	65.00"	
7'	80.50"	78.50"	
8'	91.25"	89.25"	
9'	103.25"	101.25"	

#### INSTALLATION INSTRUCTIONS



Confirm that the pipe surface is smooth, clean and free of foreign materials, chips, gouges and form seams due to manufacturing or handling. Slightly bevel any sharp or blunt edges caused by the cutting of the pipe.

#### STEP 2:

Lubricate the connector and the entire section of the pipe that will be inserted into the connector. The chart below lists A-LOK's minimum

PIPE SIZE	MIN. LUBRICATION LENGTH "L"
4" - 15"	12"
16" - 18"	18"
21" & Larger	24"

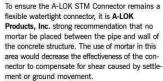
#### STEP 3:

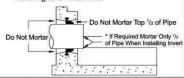
Center the pipe and connector square to each other and insert the pipe into the connector using a bar or back hoe depending on the size. Once the pipe is coupled with the connector, deflect the structure or pipe to achieve the proper angle.

#### NOTE:

To find approximate subgrade, measure from the outside base of the structure to the junction of the connector and flat spot. Then add the wall thickness of the pipe plus 1/4 inch.

#### WARNING





#### **PRODUCT SPECIFICATIONS**

A flexible pipe to manhole connector shall be used whenever a pipe penetrates into a precast concrete manhole or structure used in a stormwater drainage system.

The connector shall be the A.LOK. STM CONNECTOR as manufactured by A.LOK PRODUCTS, INC., Tullytown, PA, or approved equal.

The design of the connector shall provide a flexible, watertight seal between the pipe and concrete structure. The connector shall assure that a seal is made between:

(1) The connector and the structure wall by casting the connector integrally with the structure wall during the manufacturing process in a manner that it will not pull out during pipe coupling. The connector shall also be capable of being cast into a round structure by curving the connector in a manner that allows it to remain centrally located within the structure wall and perpendicular to the pipe. This configuration will result in no loss of seal or deflection of pipe entering a concrete structure.

(2) The seal between the connector and the pipe shall be made by the compression of the connector between the outside circumference of the pipe and the interior hole opening of the structure. The connector shall be the only component to affect the seal between the pipe and structure.

The connector shall be made from materials that conform to the physical and chemical requirements outlined in Section 4, "Materials and Manufacture" of ASTM C-1478 "Standard Specification for Storm Drain Resilient Connectors Between Reinforced Concrete Storm Sewer Structures, Pipes, and Laterals," and the overall design will meet or exceed Section 7, "Test Methods and Requirements" of ASTM C-1478.

The connector shall be sized specifically for the type of pipe being used and shall be installed in accordance with the recommendations of the manufacturer.



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CAUTION:

When installing pipe

must be properly

stubs for future pipeline installation, all stubs

restrained to prevent any

movement by means other than the A-LOK STM Connector.

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#### **GASKET OPTIONS: WITH CORING**

### **GASKET**

#### Kwik Seal

This is a precisely sized compression connector, pipe to manhole, made to fit in a cored or cast opening.



#### **USE**

Core and Press in Seal. Spray Adhesive Range 100 - 375mm or 4" to 15" on optional entrance area



#### **SIZES**

#### **Direct Drive Boot**

Direct Drive is a high-performance watertight pipe to manhole connector.



Core, insert boot and tighten PSX Direct Drive Boot with torque wrench.



Range 42.5 - 900mm or 1.7" to 36" O.D.



Note: Nitrile gaskets available in PSX Direct Boots 1.7 to 19.20 O.D.

#### **Water Stop**

Connectors easily install to the outside diameter of corrugated or smooth wall pipe. Designed for use with new or existing round or flat wall structures to seal cold joint pipe penetrations.



#### **Grout -In-Connector**

For use when grouting into existing concrete structure giving you a flexible water tight seal to pipe.

When grouting to existing structure (grout to structure) we recommend Sikadur 32 Hi-Mod Adhesive. Brush on to existing structure for watertight seal from grout to structure.

For step-by-step brochure on install, please contact your location sales representative.

Range 150 - 2550mm or 6" to 102" O.D. pipe

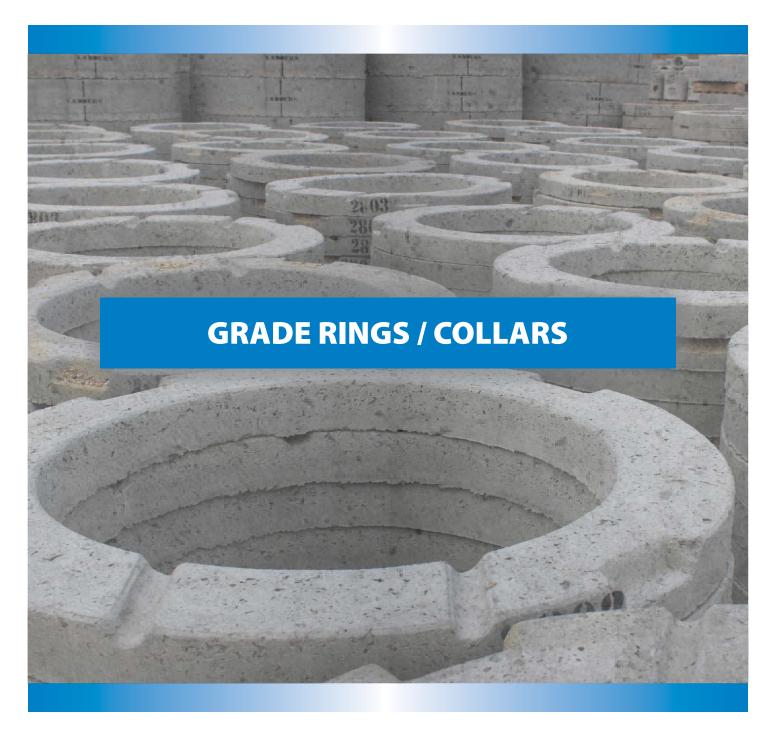


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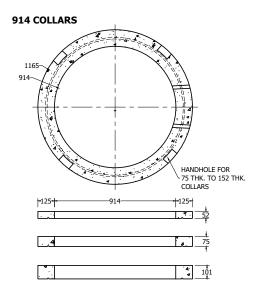
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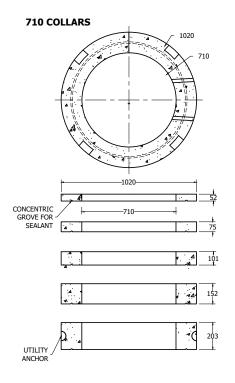
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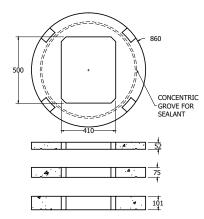
HEAD OFFICE Office: 403-343-6099 | TF: 800-859-5541 240 Burnt Park Way, Red Deer County, AB

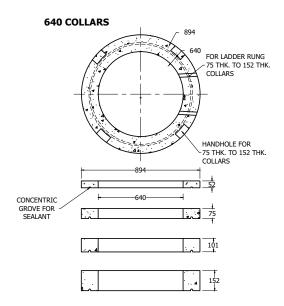
#### **GRADE RINGS / COLLARS - ROUND**





#### **SK7 ROUND COLLARS**





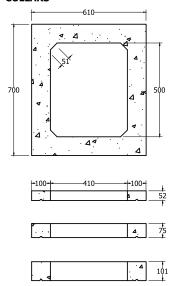
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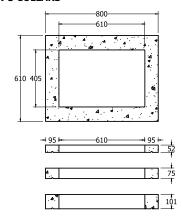


### **GRADE RINGS / COLLARS - SQUARE**

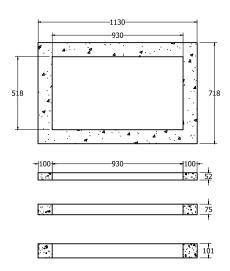
#### **SK-7 COLLARS**



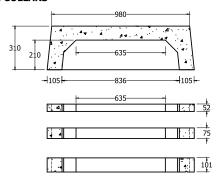
#### K-3 COLLARS



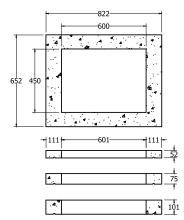
#### **K-2 COLLARS**



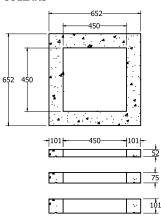
#### K-1 COLLARS



#### TF - 70 COLLARS



#### E-TOP COLLARS



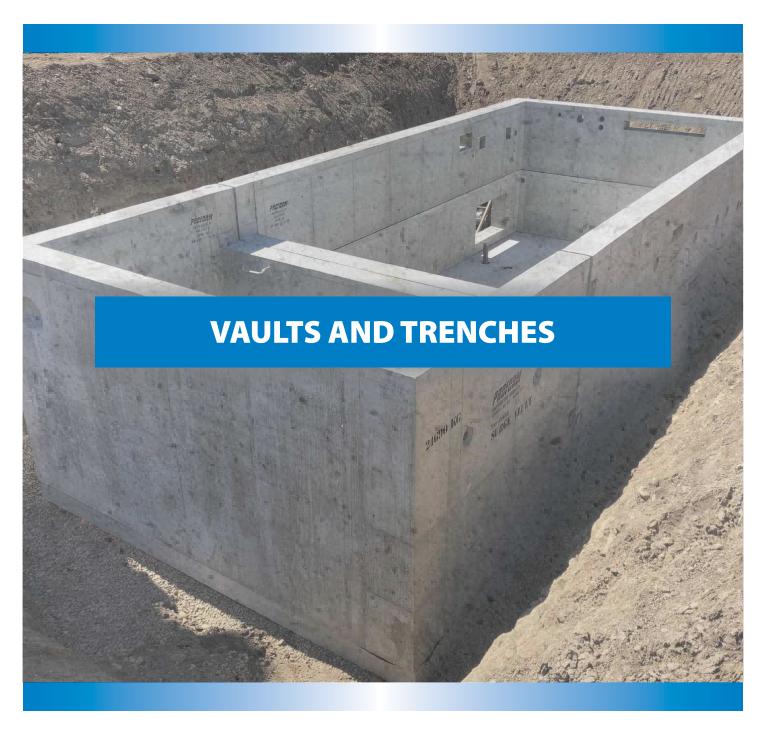
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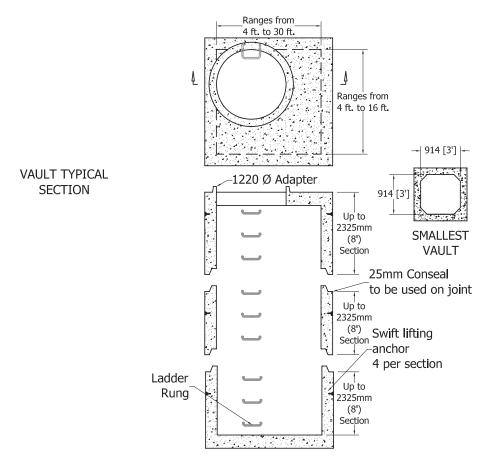
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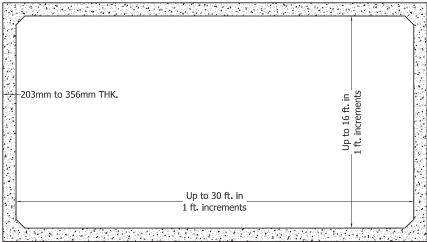
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#### \* YOU DESIGN & SPECIFY, WE BUILT IT \*

Box Ranges from 914 x 914 (3'x 3') to 4877 x 9144 (16'x 30') Type 50 Cement



LARGEST VAULT



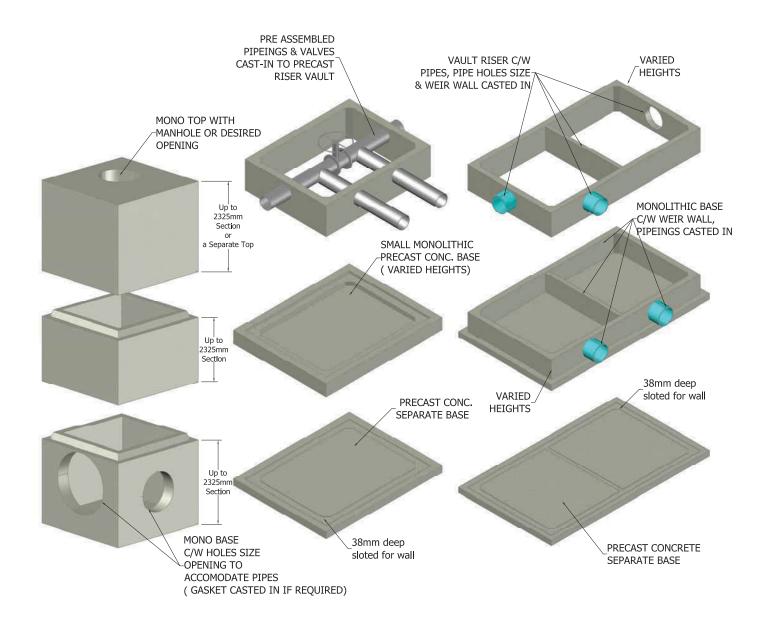
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#### **ENGINEERED CUSTOM VAULTS/HOLDING TANKS**

#### HIGH SULFATE RESISTANT (TYPE HS) CEMENT



Valve Chamber



Combination air valves.



Our largest Precast Structure to date is  $29 \times 10$  inside to accommodate  $2 - 10 \times 8$  Box Culverts c/w 2 weir walls.



Valve Chamber



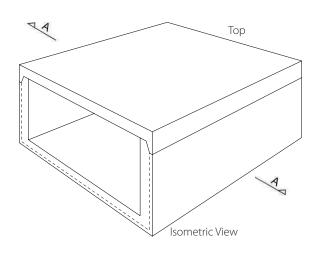
PRV Chambers

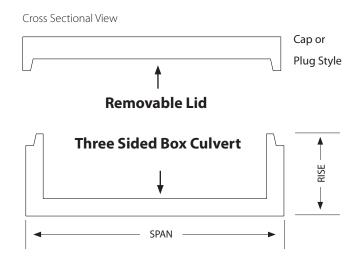
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#### \* YOU DESIGN & SPECIFY, WE BUILT IT \*







#### **Three Sided Boxes/ Utility Trays**

#### **Applications:**

Lid is installed after the boxes. For installing utilities, power cables or other contents.

- \* ANY SIZE AVAILABLE \*
- \* CUSTOM SIZES AVAILABLE ON REQUEST \*
- Any span from 600 to 3600
- Any Rise from 300 to 900
- Any Length up to 10m

#### **Removable Lids:**

Any length to match contractor requirements.

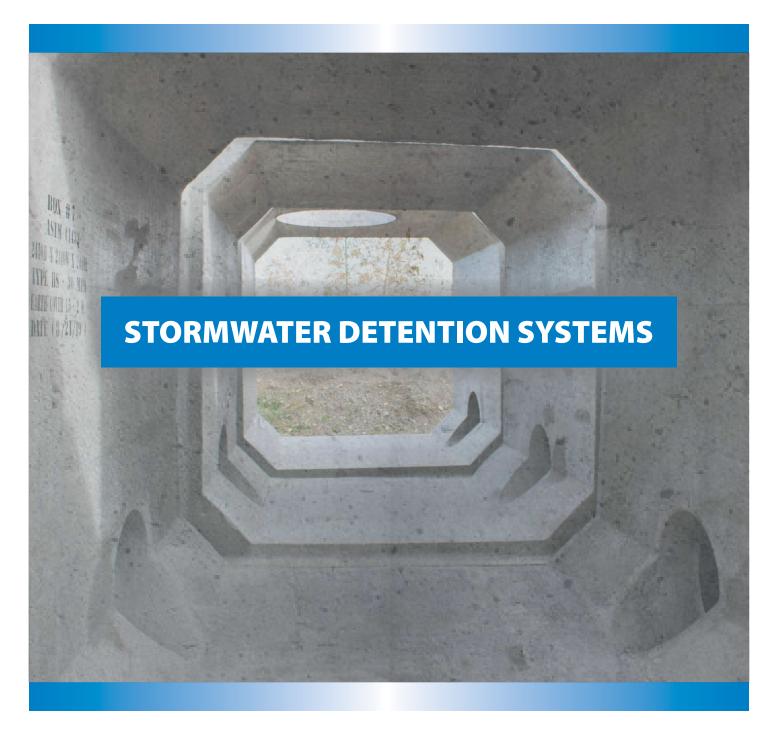


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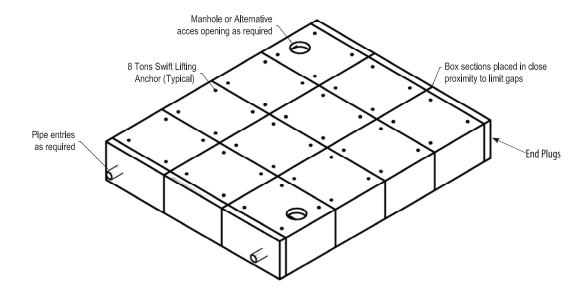
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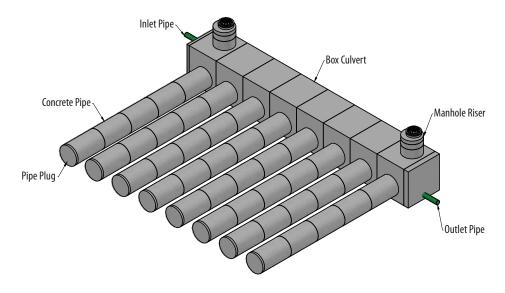
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#### **BOX CULVERTS - STORAGE SOLUTIONS**

#### **BOX CULVERT UNDERGROUND STORMWATER STORAGE**



# TYPICAL BOX CULVERT / PIPE COMBINATION FOR UNDERGROUND STORMWATER / STORAGE SOLUTIONS



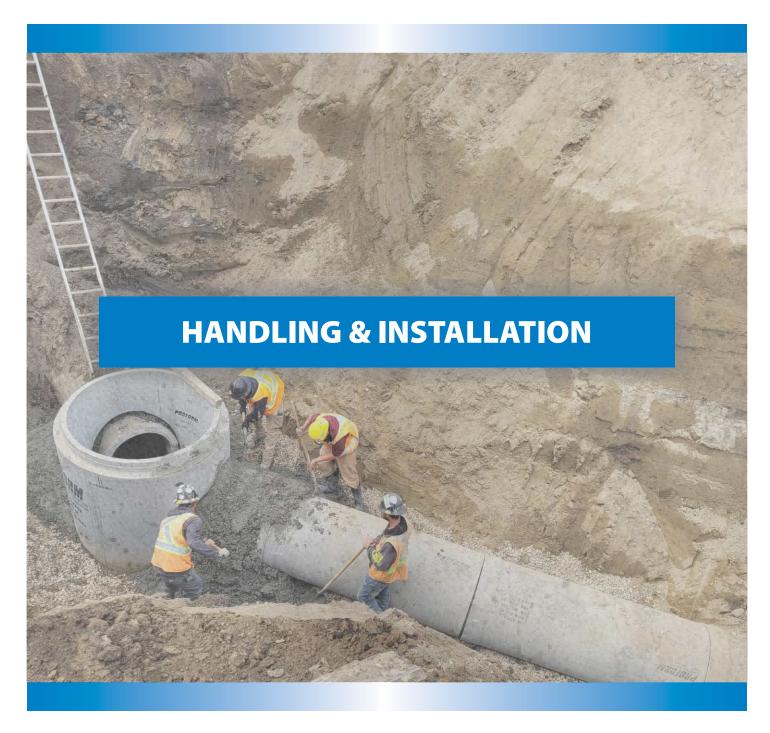
Configuration of this model is customizable to specifications of job requirements.

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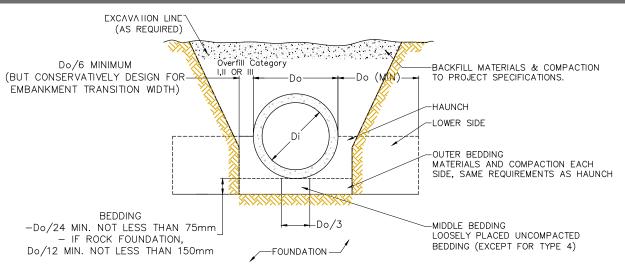
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#### STANDARD TRENCH INSTALLATION BEDDINGS



Standard Trench Installation Soil Type and Minimum Requirements				
INSTALLATION TYPE	BEDDING THICKNESS	HAUNCH OUTER BEDDING	LOWER SIDE	
TYPE 1	Do / 24 minimum not less than 75mm. If rock foundation, use Do / 12 minimum not less than 150mm	95% CATEGORY I	90% CATEGORY I, 95% CATEGORY II or 100% CATEGORY III	
TYPE 2	Do / 24 minimum not less than 75mm. If rock foundation, use Do / 12 minimum not less than 150mm	95% CATEGORY I or 95% CATEGORY II	85% CATEGORY I, 90% CATEGORY II or 95% CATEGORY III	
TYPE 3	Do / 24 minimum not less than 75mm. If rock foundation, use Do / 12 minimum not less than 150mm	85% CATEGORY I	85% CATEGORY I, 90% CATEGORY II or 95% CATEGORY III	
TYPE 4	Do / 24 minimum not less than 75mm. If rock foundation, use Do / 12 minimum not less than 150mm	No compaction required, except if CATEGORY III, USE 85% CATEGORY III	No compaction required, except if CATEGORY III, USE 85% CATEGORY III	



The Canadian Concrete Pipe & Precast Association is a locally available resource that, in addition to Proform, is able to provide comments or guidance on concrete pipe design for your projects. For more information, please visit www.ccpa.ca.

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#### **CLUTCH & PINS**

PIPE	TON	LIFT PINS			
600 - 750 PIPE	2.5T	2 LP			
900 - 1500 PIPE	4T	2 LP			
1800 PIPE	8T	2 LP			
FLARED ENDS					
300 FE TO 1200 FE BELL / SPIGOTS	4T	2 LP			
1350 FE TO 1800 FE BELL / SPIGOTS	4T	4 LP			
BENDS					
600 - 1050 BEND	4T	4 LP			
1220 - 1800 BEND	8T	4 LP			
ALL BOX CULVERT	8T	4 LP			
TEE RISER					
1200 - 1500 T RISER	4T	4 LP			
1800 T RISER	8T	4 LP			
VAULT					
1220 X 1220 - 1525 X 1525 VAULT PER SECTION	4T	4 LP			
1830 X 1830 VAULT PER SECTION & LARGER	8T	4 LP			
MANHOLE BARREL RISER					
600 ID BARREL TO 1200 ID BARREL	4T	2 LP			
1525 ID BARREL TO 1830 ID BARREL	4T	3 LP			
2135 ID BARREL TO 2440 ID BARREL	8T	3 LP			
3050 ID BARREL & 3660 ID BARREL	8T	4 LP			
MANHOLE SEPARATE BASE					
600 ID SEP. BASE TO 1220 ID SEP. BASE	4T	1 LP			
1500 ID SEP. BASE TO 1830 ID SEP. BASE	4T	3 LP			
2135 ID SEP. BASE & LARGER	8T	3 LP			
MANHOLE SLABTOP					
600 ID TOP TO 900 ID TOP	4T	2 LP			
1220 ID TOP (4825CON,CBMHK1,4825ST,4828ST)	4T	2 LP			
1220 ID TOP (ALL CBMH EXCEPT K1 , 4836ST)	4T	2 LP			
1500 ID TOP & 1800 ID TOP	4T	3 LP			
2135 ID TOP TO 3660	8T	3 LP			
MANHOLE MONOBASE					
600 ID MB TO 1200 ID MB	4T	2 LP			
1500 ID MB TO 1830 ID MB	4T	3 LP			
All trenches have 4 anchors on Lid & Box					

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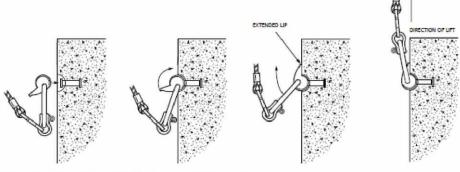
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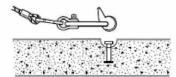


#### **SWIFT LIFT PROCEDURES - HOW TO GUIDE**

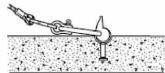
#### Lifting Eye Installation



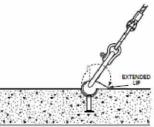
#### How to Use the SL Universal Lifting Eye



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.



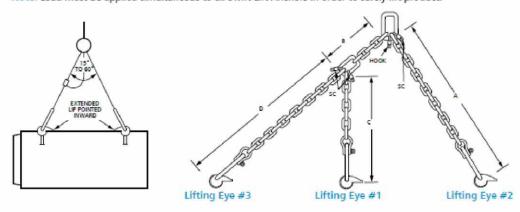
Lower the body of the lifting eye until the T-shaped slot engages the head of the anchor



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

#### Correct 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 L	engths	_		c	D
From	To	Α	В		
60"	96"	57"	16"	41"	76"
(1.5M)	(2.5M)	(144cm)	(40cm)	(104cm)	(194cm)
96"	138 <sup>a</sup>	75"	24°	51"	110 <sup>2</sup>
(2.5M)	(3.5M)	(190cm)	(60cm)	(130cm)	(280cm)

- Swift Lift anchors are available in pipe sizes 1050mm and Larger.
- Pipe 1050mmØ to 1350mmØ use the 4 ton lifting eye and pipe 1500mmØ and Larger use 8 ton lifting eye.
- Manholes/CBs 600mm Ø to 1800mm Ø use 4 ton lifting eye and 2135mm and larger diameter use the 8 ton lifting eye.
- For more information, please vist www.daytonsuperior.com

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IIUI UIIII CONSTRUCTION PRODUCTS

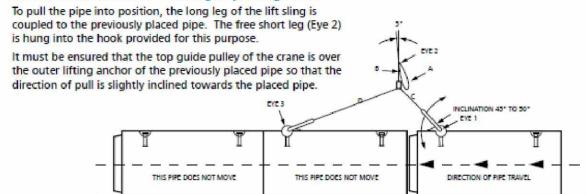
#### How to Use SL Universal Lifting Eye for Setting Concrete Pipe

**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.

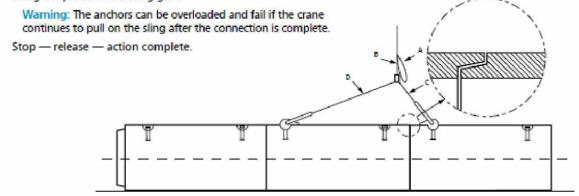
Note: Load must be applied to all anchors simultaneously. The pipe is first transported to the installation site with the symmetrical sling and lowered close to the already placed pipe.

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

#### Correct Method for Pulling Pipe Together



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



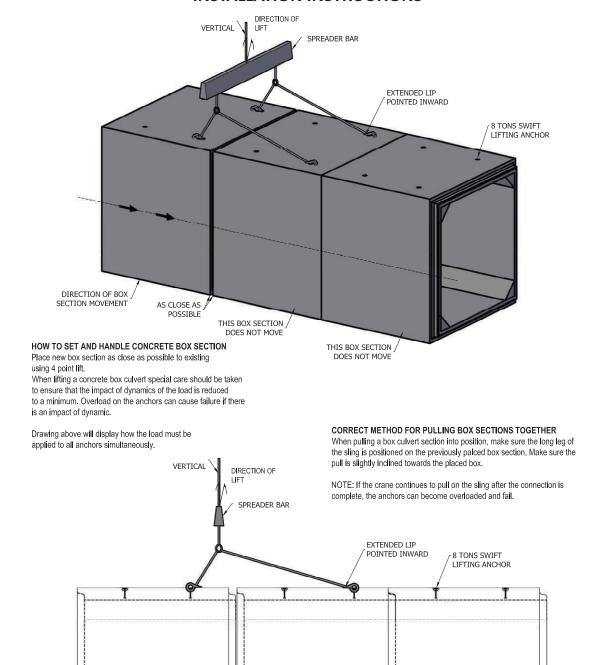
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