GREEN CHOICE,
SMART CHOICE

BIBBY-STE-CROIX

Bibby is proud to support LEED® Green Buildings projects with products that have desired attributes:

- Made from 100 % recycled material
- 100 % recycled
- Low VOC emission coating

Cast Iron Soil Pipe and Fittings for Drain, Waste & Vent

Mechanical Joint Couplings
Bi -Seal Compression Gaskets

1-800-463-3480 / www.bibby-ste-croix.com

PF-04-2011

BIBBY-STE-CROIX

Cast Iron Soil Pipe and Fittings

Bibby-Ste-Croix is a Canadian manufacturer of cast iron soil pipe and fittings.

Bibby's strength through the years has been its commitment to meeting the changing requirements of new technology and building techniques. Producing new and innovative fittings that save time and material on the job has kept us leaders in the industry. We are committed to carry on this tradition!

One thing that will never change though, is our commitment to our customers. We supply a superior product. We maintain a large inventory to meet customer demands. Our service is quick and reliable.

You can count on Bibby!

Bibby-Ste-Croix supports the following organizations in the effort of maintaining a strong industry.

Canadian Institute of Plumbing and Heating

Canadian Standards Association

Mechanical Contractors Association

Canadian Foundry Association
Cast Iron Soil Pipe Division

Website: www.bibby-ste-croix.com

6200 rue Principale, Sainte-Croix, Québec G0S 2H0
Tel.: (418) 926-3262 Fax: (418) 926-2430

To contact a sales representative in your area, please visit our website.

Index

BIBBY-STE-CROIX

Cast Iron Soil Pipe and Fittings

THE BEST BUY FOR ALL APPLICATIONS – COMPARE THE PERFORMANCE.

No Fire Hazard

Cast Iron does not give off poisonous gases nor will it produce clouds of black smoke which hinder the firefighters from entering the building. This is not true of some other DWV products.

Quiet Operation

Cast iron is a dense material which absorbs sound vibrations. In addition the "BIBBY" Bi-Seal and No-Hub jointing system blocks sound which travels along the pipe. This is important in hospitals, hotels, offices and residences.

Strength

All products are made to the 3960-lb. force crush strength requirement. Wall thickness is accurately controlled for the most efficient use of iron.

Serviceability

- Cleaning of Cast Iron Plumbing systems can be undertaken with push rods or sharp cutting tools without damage to the product.
- There is no tendency for drain lines to sag between supports.
- Alterations or additions can be made easily with a minimum interruption in system usage.
- Storage and handling present no problem – sunlight, temperature extremes, or aging have no effect on cast iron.

BIBBY-STE-CROIX

Explanation of Conversion to Metric

The nominal sizes (trade sizes), are converted on the easy factor of 25 millimetres (mm) = 1 inch, thus:

1½ inch pipe is 38 mm pipe	6 inch pipe is 150 mm pipe
2 inch pipe is 50 mm pipe	8 inch pipe is 200 mm pipe
3 inch pipe is 75 mm pipe	10 inch pipe is 250 mm pipe
4 inch pipe is 100 mm pipe	12 inch pipe is 300 mm pipe
5 inch pipe is 125 mm pipe	15 inch pipe is 375 mm pipe

However, the laying lengths and construction dimensions normally used by architects and engineers are converted on the exact factor of 25.4 mm = 1 inch.

One exception – In view of the world wide use of the National Pipe Threads (NPT) system of making screwed joints all tapped openings are shown in imperial sizes, example 1½ inch NPT (NPT threaded openings will not be converted now, nor in the foreseeable future).

Note: We have designed this catalogue to support the Canadian program for metric conversion.

Our conversion as outlined above complies with the diameters as required by CSA B70.

BIBBY-STE-CROIX

Count on Cast Iron!

Today's builders choose cast iron because strength goes hand-in-hand with ease of installation. Builders of past generations chose cast iron for its strength and durability. Now compatible with state-of-the-art building techniques, cast iron has undergone changes that put it at the top of the list for contractors. No matter what the project, no matter what the specifications, BIBBY No-Hub cast iron drain, waste and vent systems give you seven clear advantages:

1. Fire Resistance

Cast iron exceeds National Building Code requirements. It may be used to penetrate fire separations without the need for costly devices, and won't produce toxic gases in a fire situation.

2. Superior Noise Suppression

Laboratory tests prove that cast iron soil pipe provides superior noise suppression characteristics.

3. Corrosion Resistance

Independent studies show that cast iron soil pipe provides strong resistance to commonly used corrosive chemicals.

4. Superior Strength

Overall, no other drainage material comes close to cast iron soil pipe for strength and ability to maintain dimensional integrity.

5. Low Thermal Expansion Rates

Cast iron pipe expands and contracts at a low rate, similar to those of building materials such as steel, concrete and masonry, eliminating the need for costly expansion joints.

6. Easy to Assemble, Install, Service

Save time and money by taking advantage of the simplicity of the No-Hub system.

7. Longevity

No other DWV product has withstood the test of time as well as cast iron.

BIBBY-STE-CROIX

Superior noise suppression

Tests recently conducted in the Domtar Acoustical Laboratory by MJM Acoustical Consultants Inc. prove it!

DWV pipes made of **Cast Iron** are quieter than PVC pipes(System 15), or ABS pipes whether the pipes are enclosed or not.

Global sound pressure level

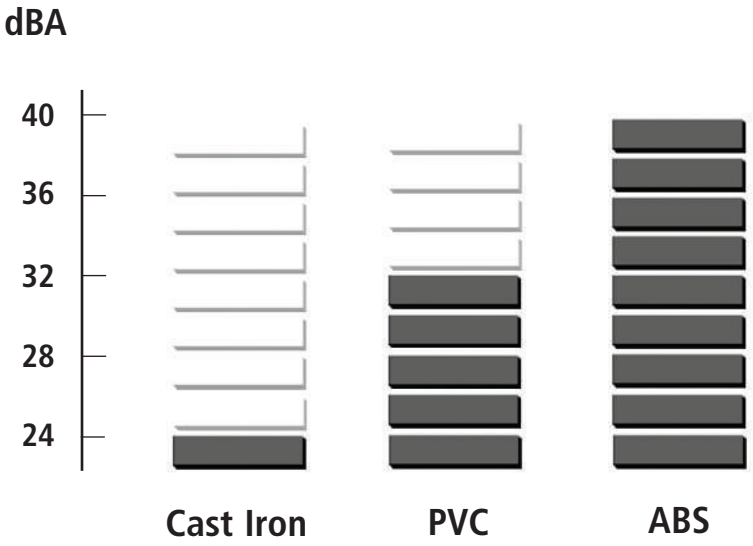


Figure : Sound pressure level(dBa, ref.20 µPa) radiated by pipe assemblies tested.

Frequency (Hz)

Test Results

Cast Iron Pipe _____ 24 dBA
PVC DWV (solid wall) _____ 32 dBA
ABS Plastic _____ 39 dBA

MJM Acoustical Consultants Inc. was retained by the **"CAST IRON SOIL PIPE ASSOCIATION"** to conduct a research project on the noise produced by a **DWV** pipe installation which can be found in most North American single or multi-dwelling homes : a water closet discharging in a 3" horizontal waste pipe connected to a 3" vertical waste stack, enclosed in a wall made with ½" gypsum board.

The pipes were installed in the experimental set-up by a certified union plumber employed by Plomberie Roland Bourbonnais.

For a complete copy, contact **CAST IRON SOIL PIPE ASSOCIATION** - 1-519-621-8141

BIBBY-STE-CROIX

Corrosion Resistance

History proves it – Cast iron pipe and fittings resist corrosion from solutions commonly found in drain, waste and vent systems. Many installations are still in use after more than a century of continuous service. Natural qualities of cast iron make it the ideal material for drain, waste and vent use – without additional linings or coatings.

A study conducted by Hanson Material Engineering (Western) Ltd. demonstrated the superiority of cast iron soil pipe. In an accelerated corrosion test, cast iron pipe was compared to another D.W.V. material. Both were exposed to chemical solutions that are specified in CSA Standards dealing with drain, waste and vent pipes.

These fluids were poured into the test system and held for 1 hour intervals for a 4 week period.

- **5% Acetic Acid**
- **0.1 IN Sulphuric Acid**
- **0.2 IN Sodium Hydroxide**
- **5% Sodium Chloride**
- **5% Kerosene**
- **5% Household Detergent**
- **5% Sodium Hypochlorite (bleach)**

Test Results

The results of this test were: There was no significant corrosion observed on the cast iron pipe over the test period. The other material however, showed definite signs of pitting corrosion on the joint area of the pipe.

Natural Corrosion Resistance

In the laboratory and through more than a century of actual use, cast iron pipe has been proven as the best material to withstand corrosion. The specifier can rely on cast iron with confidence because its natural qualities of corrosion resistance make it the best choice.

Hot Water Resistant

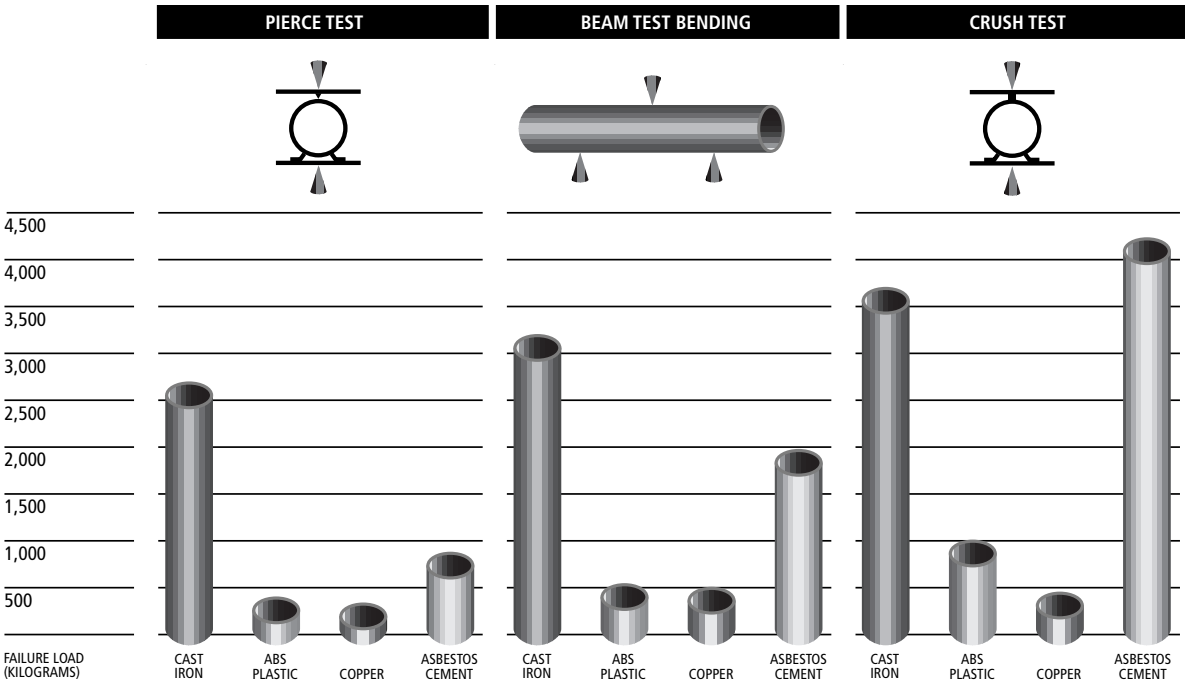
Discharge of superheated water from commercial, industrial or residential appliances will not affect cast iron pipe.

BIBBY-STE-CROIX

Superior Strength

Tests conducted by Warnock Hersey proved the superior overall strength of cast iron soil pipe over three other common types of pipe. Tests were conducted on 3-in. (75 mm) diameter pipe. Results were conclusive.

Test Results



The performance of cast iron exceeded industry requirements in all three tests. Cast iron soil pipe is superior for drain waste and vent use as it can withstand significant external soil loads while it maintains dimensional integrity and proper drain grade. Results of the pierce test prove it can withstand repeated use of power-cleaning tools – while other materials have failed.

Fire Resistance

The National Building Code of Canada closely regulates fire rated construction to ensure the safety of building occupants. It requires that the integrity of a fire separation be maintained for up to two hours during a blaze. Because cast iron pipe which penetrates fire separations will not allow the passage of flames from one compartment to another, fire retardants and cut off devices are not required. Some drain, waste and vent materials produce large quantities of deadly hydrogen cyanide or hydrogen chloride gas, even when exposed only to relatively low temperatures near a fire area. Non-combustible cast iron soil pipe will not produce toxic gases – even when directly involved in a fire.

Bibby cast iron pipe has been tested in accordance with ULC-S115-M95, ASTM E814 and UL 1479 and has obtained an F rating of 2 hrs. FH rating of 2 hrs. and T rating of 2 hrs. Bibby neoprene sheilded couplings have been tested in accordance with CAN/ULC S102.2-M88 and have FSR-0 and SDC-5. Our santoprene unsheiled couplings have been tested in accordance with CAN/ULC S102.2-M88 and have FSR-5 and SDC-45.

BIBBY-STE-CROIX

Low Thermal Expansion

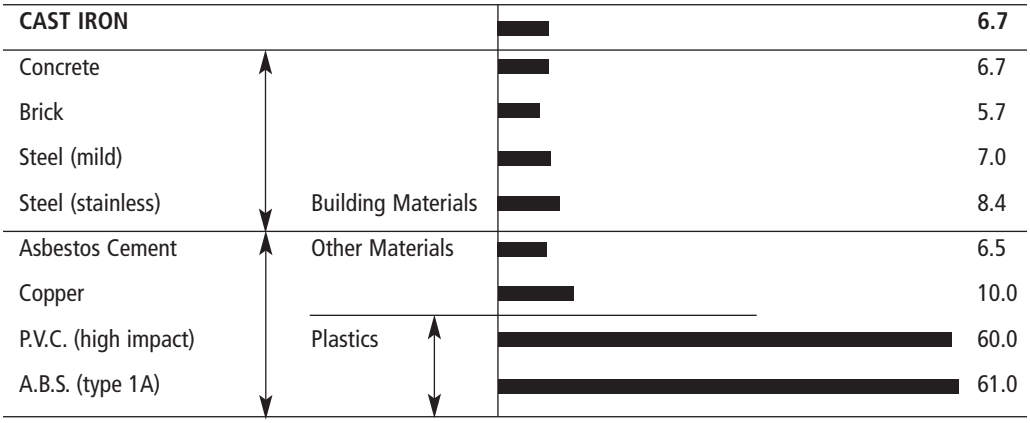
Allowance for expansion and contraction of building materials is an important consideration in Canada where construction is often undertaken in extreme temperatures. Once a building is "closed in" and reaches normal indoor temperatures, the building materials expand or contract.

It is important to provide for expansion of the D.W.V. system should the pipes selected have expansion rates which vary from the other building materials. With a cast iron D.W.V. system there is no need for costly expansion joints.

Thermal Expansion Rates for Various Materials

Materials	mm's per mm $10^6 \times$ per °C	mm per 30 Meters of pipe per 20°C	Ratio-assuming Cast Iron Equals 1.00
CAST IRON	**11.2**	**6.7**	**1.00**
Concrete	11.2	6.7	1.00
Brick	9.5	5.7	0.85
Asbestos Cement	10.8	6.5	0.96
Steel (mild)	11.7	7.0	1.04
Steel (stainless)	14.0	8.4	1.25
Copper	16.6	10.0	1.48
P.V.C. (high impact)	100.1	60.0	8.94
A.B.S. (type 1A)	101.2	61.0	9.04

Actual increase (mm) in length in 30 meters of pipe and 20°C temperature increase



BIBBY-STE-CROIX

Build It to Last: Specify Cast

For most of us, the biggest investment we will make in our lifetime is the purchase of a new house or condominium. Whether constructing a new dwelling or altering an existing living space, new homeowners in the know are asking more and more questions about the materials in their new construction.

Today's homeowner is inquisitive about options such as windows, plumbing fixtures and interior decorating themes. The value conscious homeowner is also looking beyond the frills and asks questions about the mechanical, plumbing and electrical systems too.

Homeowners realize that these hidden systems, which provide for today's living comfort, are not all the same. Insistence on different electrical outlets, heating equipments, and plumbing products are often the result of prior unsatisfactory experiences or information obtained through the media such as *60 Minutes* which focused on the failures of plastic pipe. Astute owners no longer accept any old "guts" in their new dwelling simply because someone obtained a "deal" on the material.

We suggest that you focus attention on the choices when selecting the D.W.V. system for your new home or renovation.

Requirements for a Safe and Durable Drain, Waste and Vent System

The satisfactory performance of a piping system used for drain, waste, vent and sewer plumbing requires that the material possess the following important characteristics:

- Non-combustibility of pipe and fittings
- Strength and rigidity
- Durability
- Resistance to noise transmission
- Ability to withstand traffic and trench loads
- Ability to withstand temperature extremes
- Low coefficient of expansion / contraction
- Resistance to abrasion
- Joints which resist infiltration and exfiltration
- Resistance to corrosion

BUILD IT TO LAST
SPECIFY CAST

BIBBY-STE-CROIX

Cast Iron Pipe and Fittings Installation Procedures

The installation of cast iron soil pipe and fittings should be made according to plumbing codes and engineer specifications and should be installed by licensed plumbing contractors. Care taken during installation will assist the satisfactory performance of the plumbing drainage system. Failure to follow proper installation practices, procedures, and techniques could result in system failure and property damage or personal injury.

You are urged to read all of the instructions.

Index

CUTTING METHODS

There are several methods for cutting cast iron soil pipe. These methods may be placed into basic categories, those that require external power for their operation and those methods that require only hand operation. Methods that require external power are usually used for prefabrication work or high volume cutting operations.

EXAMPLES OF THIS TYPE OF EQUIPMENT ARE:

External power methods

1) The abrasive saw (chop saw)
2) Power hack saw
3) An electrically actuated hydraulic snap cutter for 8 inch and larger pipe. An abrasive saw has been found to be most effective method of cutting cast iron soil pipe.

Hand operated methods

1) The standard steel pipe cutter using cutting wheels specifically designed to cut cast iron soil pipe.
2) The snap cutter. The snap cutter accounts for the majority of all cuts made on cast iron soil pipe in the field.

There are several types of snap cutters available. The following procedure has been found to produce consistently good cuts.

1) After marking the pipe length to be cut, position the chain cutter squarely around the pipe to assure a straight cut. The maximum number of wheels possible should be in contact with the pipe.
2) Score the pipe by applying pressure on the handle to make the cutter wheels indent the pipe.
3) Rotate the pipe a few degrees and apply quick final pressure to complete the cut. Scoring the pipe before the actual cut is the key to a clean straight cut.

CAUTION

PROPER SAFETY PROCEDURES AND PROTECTIVE EYEWARE, CLOTHING, AND EQUIPMENT SHOULD BE USED WHILE CUTTING PIPE. EQUIPMENT USING EXTERNAL POWER CAN BE DANGEROUS. THE MANUFACTURER'S OPERATING AND SAFETY INSTRUCTIONS SHOULD BE CAREFULLY REVIEWED AND FOLLOWED.

JOINING METHODS

Hubless Joints

Hubless cast iron soil pipe is joined by using the hubless coupling. Several DIFFERENT types of hubless couplings are available. The following will outline the installation procedures of hubless couplings. These couplings are manufactured using a stainless steel shield and clamp assembly and an elastomeric sealing sleeve.

These following steps should be taken to ensure a proper joint.

1) Place the gasket on the end of one pipe or fitting and the stainless steel clamp and shield assembly on the end of the other pipe or fitting.
2) Firmly seat the pipe or fitting ends against the integrally molded centre stop inside the elastomeric sealing sleeve.
3) Slide the stainless steel shield and clamp assembly into position over the gasket and tighten the bands. The bands should be tightened using a calibrated torque wrench set at 55 to 60 in.-lbs. (sizes 1-½″ through 10″) and 80 in.-lbs (sizes 12″ & 15″). For larger diameter couplings that have four bands, the inner bands should be tightened first and then the outer bands tightened. In all cases, when tightening bands they should be tightened alternately to ensure that the coupling shield is drawn up uniformly.
4) The following procedures should be used when applying torque to the assemblies.

SIZE 1-½″ THROUGH 4″ (TWO BANDS)

The stainless steel bands must be tightened alternately and firmly to 55 to 60 in.-lbs. of torque.

SIZE 5″, 6″, 8″ and 10″, (FOUR BANDS)

STEP 1: The inner bands must be tightened alternately and firmly 55 to 60 in.-lbs. of torque.

STEP 2: The outer bands must be tightened alternately and firmly 55 to 60 in.-lbs. of torque.

SIZE 12″ and 15″, (SIX BANDS)

STEP 1: The innermost bands must be tightened alternately and firmly to 80 in.-lbs. of torque.

STEP 2: The middle bands must be tightened alternately and firmly to 80 in.-lbs. of torque.

STEP 3: The outermost bands must be tightened alternately and firmly to 80 in.-lbs. of torque.

Note: When there is a temperature variation between the time of installation and testing, joint tightness must be rechecked prior to testing using a torque wrench calibrated to 55 to 60 in.lbs (size 1-1/2″ through 10″) and 80 in.-lbs (sizes 12″ & 15″).

Compression Gaskets

The compression gasket is a precision moulded one-piece gasket that is made of an elastomer. The physical characteristics of the elastomer ensures that the gasket will not decay or deteriorate from contact with the materials flowing in the pipe or chemicals in the soil or air around the pipe.

Compression Gaskets (continued)

The compression joint is made as follows:

1) Clean the hub and spigot so that they are free from dirt, mud, sand, gravel or other foreign materials. When installing pipe that has been cut, make sure the sharp edge has been removed. The sharp edge may jam against the gasket's seals making joining very difficult. The sharp edge may be removed by filing or tapping the edge with a ball-peen hammer.
2) Fold and insert the gasket into the hub. The gasket must be inserted into the hub completely. Only the flange which contains the identification information remains exposed on the outside of the hub.
3) Lubricate the joint following manufacturer's recommendations. Sizes 2" through 15" may be lubricated using a manufacturer's recommended lubricant. Some manufacturers recommend using an adhesive lubricant on large diameter pipe and fittings (5″ to 15″). It should be noted that the use of the adhesive lubricant does not take the place of proper joint restraint when required.
4) Align the pipe so that it is straight. Using the tool of your choice, push or pull the spigot through all the sealing rings of the gasket. You will feel the spigot end of the pipe bottom out in the hub. Fittings may be installed by using the tool of your choice or by driving the fitting into place with a lead maul. When using a lead maul, hit as hard as necessary, the lead will deform without harming the fitting. Using the lead maul is the fastest and easiest way to install fittings on hub and spigot soil pipe.

Gaskets Installation

Gaskets must be inserted into the pipe hub completely, only the flange which contains identification remains exposed outside the hub.

1) DOUBLE FOLDING

Squeeze the gasket together with both hands, then insert it inside the hub. As the hands are withdrawn, the gasket unfolds or "snaps" into proper placement.

2) DRIVE IN

Place the gasket into the hub as far as possible, then tap the outer lip of the gasket with a rubber mallet or flat board until it becomes seated. This method works best on 2″ or 3″ gaskets.

Lubricants

Regular lubricant is a bland-fax compound which makes joining easy. As it dries following installation the grip of the gasket becomes even tighter. For the large diameter pipe (5″ to 15″), adhesive lubricant containing a neoprene base adhesive which actually bonds the gasket on the pipe when set is recommended. This type of lubricant is particularly helpful in the large diameter when the weight of a high water column becomes great. This lubricant can be applied with an ordinary paint brush. Application directions on the can should be observed. Regular lubricants should only be applied to the spigot end of the pipe or fitting and the interior of the gasket. Adhesive lubricants should be applied to the inside of the hub and inside of the gasket and to the spigot end of the pipe or fitting.

APPLYING LUBRICANT

Coat both inner seals of the gasket with lubricant. Also apply lubricant to the outside of the spigot. Regular lubricant is generally harmless and can be applied with the fingers or a brush. With the lubricated gasket in position, insert the spigot into the gasket.

DO NOT APPLY REGULAR LUBRICANT TO THE INSIDE OF CAST IRON HUB OR OUTSIDE OF GASKET

CAUTION

WITH RESPECT TO ADHESIVE LUBRICANT EYE AND SKIN CONTACT SHOULD BE AVOIDED AND THE MANUFACTURER'S APPLICATION AND SAFETY INSTRUCTIONS SHOULD BE CAREFULLY REVIEWED AND FOLLOWED PARTICULARLY WITH RESPECT TO VENTILATION, EYE OR SKIN CONTACT OR USE NEAR HEAT, SPARK, OR FLAMES. IN CASE OF ACCIDENT FOLLOW THE HAZARDOUS WARNING AND MEDICAL TREATMENT STATEMENT ON THE CONTAINER.

CAULKED JOINTS

Prior to the late 1950's the caulked joint was the only method of joining hub and spigot cast iron soil pipe.

1) The spigot end of the pipe or fitting is placed inside the hub of another pipe or fitting making sure that both are clean and dry.
2) Oakum is placed in the joint using a yarning iron and then packed to the proper depth by using the packing iron.
3) Molten lead is then poured into the joint. The molten lead is brought up to the top of the hub.
4) After the lead has solidified and cooled somewhat, the joint is ready to be caulked. Caulking is performed with inside and outside caulking irons. Caulking the joint sets the lead and makes a leak-free joint.

COLD CAULKING

Rope cement: Use "PC-4" or equivalent products which are available at most wholesalers.

1) Cut off enough rope cement to fill the annular space within the hub of the pipe. Wet in water and pack in the hub using caulking irons.
2) Repeat step one until desired height of caulking is achieved making sure that an optimal seal is formed.

BIBBY-STE-CROIX

How to Assemble "Bi-Seal" Joint

Code	Pipe Coupler
29160	BS 234 for 2″ (50 mm), 3″ (75 mm), 4″ (100 mm) Joints.
29170	BS 346 for 3″ (75 mm), 4″ (100 mm), 6″ (150 mm) Joints.
	Extra Locking Chains may be ordered separately.

Code	Lubricants
	Regular Formulation is non-toxic, promotes easy assembly.
20000	Regular lubricant – 1 pint.
20010	Regular lubricant – 1 gallon.
60040	Adhesive lubricant – 1 pint.
	See Manufacturer Safety Data Sheet

Steps

Assembly

Inspect and clean hub. Insert gasket into hub with hand, or use rubber mallet or wood block.

When using cut pipe, it is recommended that the spigot be filed to remove burrs. Full-length pipe needs no preparation.

Apply regular pipe lubricant to inside of gasket and to about 3″ (75 mm) of spigot end of pipe.

Fasten locking chain around spigot to provide anchor for pipe coupler.

Mate spigot with hub and attach pipe coupler as shown.

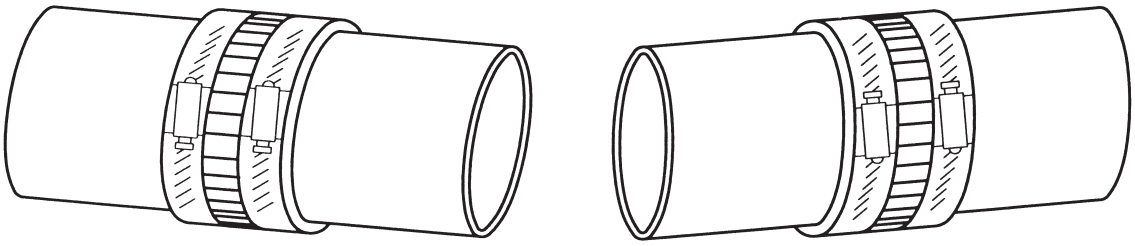
Force spigot into hub with downward stroke of pipe coupler.

Disassembly

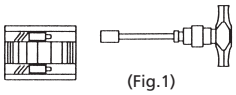
To separate pipes, attach locking chain further down spigot so that yokes of pipe coupler butt against coupler and pipes will separate.

BIBBY-STE-CROIX

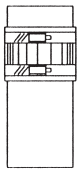
Method of Assembly
Series 2000 and Slip-on Couplings



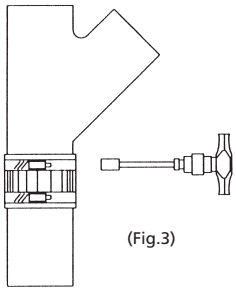
The joint consists of a specially designed elastomer sleeve which fits over the end of the pipe or fitting and is clamped to the pipe or fitting with separate stainless steel screw clamps. The 2000 Series elastomer sleeve has a corrugated stainless steel sheath, whereas in the Slip-on Series the elastomer sleeve is specially designed in respect to shape and strength to fulfill all the requirements of its intended use without the extra sheath.



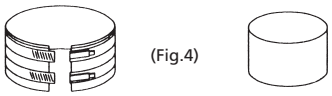
(Fig.1)



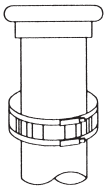
(Fig.2)



(Fig.3)



(Fig.4)



(Fig.5)

IMPORTANT – Retighten all joints when installation is completed.

Assembly

Method (1) for most installations using Slip-on or 2000 Series

(1) Spread the clamps a few notches if necessary (Fig. 1).

(2) Fit the elastomer sleeve over the end of the pipe or fitting so that the centre rib butts against the end of the pipe or fittings (Fig. 2).

(3) Fit the pipe or fitting into the elastomer sleeve. A partial turn while entering will assist assembly.

(4) Torque the screws as described on page 12 (Fig. 3).

Method (2) for confined spaces using 2000 Series

(1) Spread the clamp a few notches (Fig. 1).

(2) Fit the elastomer sleeve over the end of the pipe or fitting so that the centre rib butts against the end of the pipe or fittings (Fig. 2).

(3) Tighten the clamp slightly over the first pipe.

(4) Place the second pipe or fitting into the elastomer sleeve. A partial turn, or if cutting into an existing line, a marrying action will assist assembly.

(5) Torque the screws as described on page 12 (Fig. 3).

Method (3) for confined spaces or cutting into an existing line using 2000 Series

(1) Separate the stainless steel sub-assembly (i.e. the corrugated sheath and clamps) from the elastomer sleeve (Fig. 4).

(2) Place the stainless steel sub-assembly over the pipe or fitting in readiness for assembly later (Fig. 5).

(3) Fit the elastomer sleeve over the end of the pipe or fitting so that the centre rib butts against the end of the pipe or fitting.

(4) Roll the protruding end of the elastomer sleeve over itself until the centre rib is exposed (Fig. 5).

(5) Position the second pipe or fitting against this centre rib and unroll the elastomer sleeve over this pipe or fitting.

(6) Slide the stainless steel sub-assembly into a centred position over the elastomer and torque the screws as described on page 12 (Fig. 3).

BIBBY-STE-CROIX

Method of Assembly

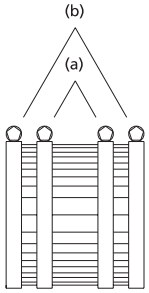
Husky® SD 4000 Heavy Duty Couplings

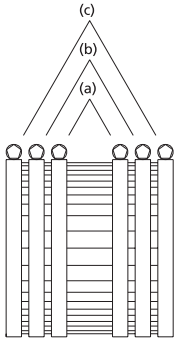
The HUSKY® SD 4000 is designed to be installed by using a properly calibrated torque wrench preset at 80 inch pounds. The special ⅜″ hex screw head will accommodate only the proper tightening tool.

Assembly

1. In order to provide a sound joint with field cut lengths of pipe, the ends should be cut square. Place the Neoprene gasket on the end of one pipe and the stainless steel clamp assembly on the end of the other pipe or fitting to be joined.
2. Firmly seat both ends of the pipe/fittings against the integrally molded shoulder in the centre of the gasket.
3. Slide the clamp assembly into position centred over the gasket. At this point, it is recommended to take the "slack" out of each sealing band by pre-tightening the clamps with the wrench to "hand tight". Final tightening is described below.
4. HUSKY® coupling sizes 1½″, 2″, 3″ and 4″ are three inches wide and have four sealing bands.
   A. First, tighten the inner bands (a) alternately and firmly to 80 inch pounds.
   B. Next, tighten the outer bands (b) alternately and firmly to 80 inch pounds.
5. HUSKY® coupling sizes 5″, 6″, 8″ and 10″ are four inches wide and have six sealing bands.**
   A. Start by tightening the innermost bands (a) alternately and firmly to 80 inch pounds.
   B. When this is completed, move outward to the next set of bands (b) and tighten alternately and firmly to 80 inch pounds.
   C. Finally, tighten the outermost bands (c) alternately and firmly to 80 inch pounds.

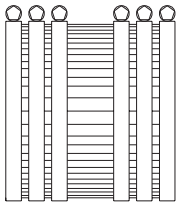
****Note:** With maximum/minimum pipe and fittings condition (when O.D. difference exceeds 0.15 inch). Follow step 1, 2 and 3 then follow torque pattern at right.





VARIABLE O.D.'S

MIN. MAX.
1 2 3 4 5 6



SIZES 5,6,8 AND 10
Torque as follows:

3,2,1	3,2,1	Then
4,5,6	4,5,6	Then
2,1	4,5,6	

INSTALLATION METHODS

Underground Installation Procedures

The physical properties of cast iron soil pipe make it the best DWV material for underground installation.

Two keys for proper installation are trench preparation and backfilling.

The trench should be wide enough to assemble the joints. Total load on the pipe includes both earth load and the truck load. Safety procedures in trenching should be observed, including provisions to avoid collapse of the trench wall.

The trench bottom should be stable enough to support the complete barrel of the pipe. If possible the barrel should rest on even and undisturbed soil. Holes should be provided at each joint for the hub or coupling to allow for continuous support of the barrel along the trench bottom. If ditch must be excavated deeper than the depth of the drainage pipe, place and tamp backfill material to provide uniform support for the pipe.

Many times in the installation of underground soil pipe it is necessary to change the direction of the line. Cast iron soil pipe will allow this through deflection in the joints. Maximum deflections should not exceed ½ inch per foot of pipe. This will allow 5 inches of deflection for a 10 foot piece of soil pipe and 2 ½ inches for 5 foot pipe. For changes in deflection greater than these deflections an appropriate fitting should be used.

Once installation is complete, the underground section is ready for testing. After testing is completed the trench can be properly backfilled.

Installers should always consider local conditions, codes, manufacturer instructions, and architect/engineer instructions in any installation.

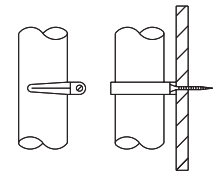
INSTALLATION METHODS

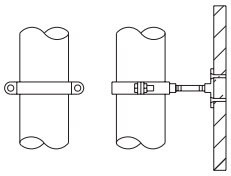
Above Ground Installation Procedures

The following procedures are general guidelines only. Specific installation instructions and techniques may be called for as result of applicable plumbing and other building codes and regulations or engineering specifications and instructions.

VERTICAL PIPING

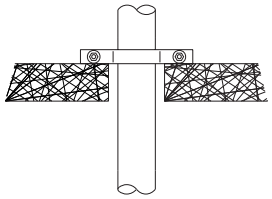
1) Secure vertical piping at intervals sufficiently close to keep the pipe in alignment and to support the weight of the pipe and its contents. Support stacks at their bases and at sufficient floor intervals to meet the requirements of local codes. Approved metal clamps or hangers shall be used for this purpose.
2) If vertical piping is to stand free of any support or if no structural element is available for support and stability during construction, secure the piping in its proper position by means of adequate stakes or braces fastened to the pipe.





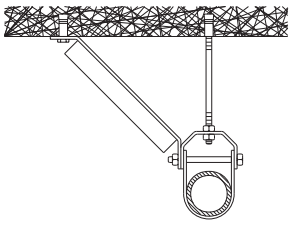
VERTICAL PIPING ATTACHMENTS / FITTINGS

1) Vertical piping shall be secured at sufficiently close intervals to keep the pipe in alignment and carry the weight of the pipe and contents. Stacks shall be supported at their bases and if over two stories in height at each floor by approved floor clamps. At vertical pipe risers, whenever possible, support the weight of the riser at the point or points above the centre of gravity of the riser. Provide lateral guides at the top and bottom of the riser, and at intermediate points not to exceed 30 -0″ on centre.



Traverse bracing

40 -0″ o.c. maximum spacing unless otherwise noted. One pipe section may act as a longitudinal bracing for the pipe section connected perpendicular to it, if the bracing is installed within 24″ of the elbow or tee of similar size.



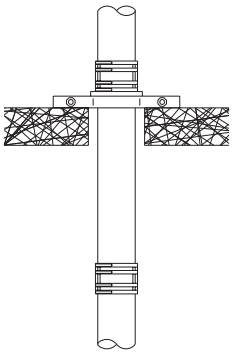
Longitudinal bracing

80 -0″ o.c. maximum spacing unless otherwise noted.

Miscellaneous

Provide large enough pipe sleeves though walls or floors to allow for anticipated differential movements.

BIBBY RISER FITTINGS



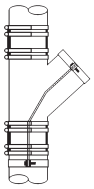
Riser Fittings Installation

1) Riser Fitting must be installed with a riser clamp attached to it. The riser clamp will hold the Riser Fitting and maintain the drain stack in place. A flexible fire suppressant caulking material should be applied between the concrete slab hole and the Riser Fitting to allow for some movement.
2) Under normal conditions, a Riser Fitting should be installed at every second floor, with an unsupported stack not exceeding 25 feet.
3) Riser clamp should be engineered in accordance with the load imposed by the unsupported length of stack above it.

BLIND PLUGS AND END CLEANOUTS

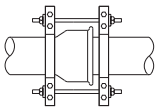
1) Blind plugs and end cleanouts should be suitably braced from blowing out due to potential significant thrust loads. This bracing must be installed so it can be removed for servicing of the blind plugs and end cleanouts.

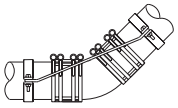
HORIZONTAL PIPING



Horizontal Piping Suspended

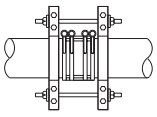
1) Support horizontal piping and fittings at sufficiently close intervals to maintain alignment and prevent sagging or grade reversal. Support each length of pipe by an approved hanger (see Bibby hanger) located not more than 18 inches from the joint.
2) Support terminal ends of all horizontal runs or branches and each change of direction or alignment with an approved hanger.
3) Closet bends installed above ground should be firmly secured.





Horizontal Piping Underground

1) To maintain proper alignment during backfilling, stabilize the pipe in proper position by partial backfilling and cradling.
2) Piping laid on grade should be adequately secured to prevent misalignment when the slab is poured.
3) Closet bends installed under slabs should be adequately secured.



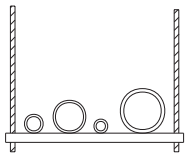
Horizontal Pipe Inside the Building

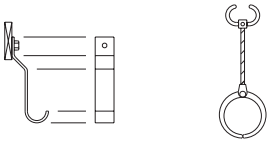
1) Installation Suggestions. According to most authorities and plumbing codes, five foot pipe should be supported at five foot intervals, ten foot lengths should be supported at ten foot intervals. Supports should be adequate to maintain alignment and prevent sagging and should be placed as near the joint as possible but not more than 18 inches from the joint.
2) Horizontal Installation of Large Diameter Pipe. Horizontal pipe and fittings five inch and larger must be suitably braced to prevent horizontal movement. This must be done at every branch opening or change of direction by use of braces, blocks, rodding, or other suitable methods to prevent movement or joint separation.

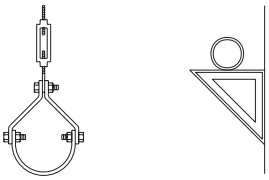
HORIZONTAL PIPING SUPPORTS / FITTINGS

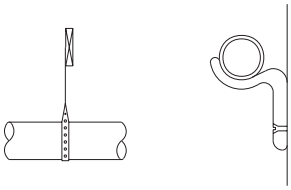
Horizontal Piping Supports

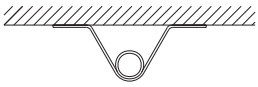
Horizontal piping shall be supported at sufficiently close intervals to prevent sagging. Trapeze hangers may be used. Pipe, where top of the pipe is 12″ or more from the supporting structure shall be braced on each side of a change of direction of 90 degrees.











Horizontal Fittings

1) Hangers should be provided as necessary to provide alignment and grade. Hangers should be provided at each branch connection. Hangers should be adequate to maintain alignment and prevent sagging and should be placed adjacent to the coupling. By placing the hanger properly, the proper grade will be maintained. Adequate provision should be made to prevent shear. Where pipe and fittings are suspended in excess of eighteen inches by means of non-rigid hangers they should be suitably braced against horizontal movement, often called sway bracing.
2) Closet bends, traps, traps arms and similar branches must be firmly secured against movement in any direction. Closet bends installed above grade level should be stabilized. Where vertical pipe closet studs are used they must be stabilized against horizontal movement.
3) When a hubless blind plug is used for a required cleanout, the complete coupling and plug must be accessible for removal and replacement.
4) The connection of closet rings, floor and shower drains and similar "slip-over" fittings and the connection of hubless pipe and fittings to soil pipe hubs may be accomplished by the use of caulked lead and oakum or compression joints.

PAINTING CAST IRON SOIL PIPE

Cast iron soil pipe and fittings that have been factory coated with a bituminous coating can be painted if desired. A primer coat of latex emulsion paint, which is readily available in retail outlets can be applied.

The latex paint prevents the bleeding of the bituminous coating. A finishing coat of enamel in an appropriate colour can then be applied to blend the cast iron soil pipe with the interior surroundings.

CAUTION

WHEN PAINTING, THE MANUFACTURERS APPLICATION AND SAFETY INSTRUCTIONS SHOULD BE CAREFULLY REVIEWED AND FOLLOWED PARTICULARLY WITH RESPECT TO VENTILATION, EYE OR SKIN CONTACT OR USE NEAR HEAT, SPARKS, OR OPEN FLAMES. IN CASE OF ACCIDENT FOLLOW THE HAZARDOUS WARNING AND TREATMENT STATEMENT ON THE CONTAINER.

TESTING AND INSPECTION

Once the roughing-in is completed on a cast iron piping project, it is important to test and inspect all piping for leaks. The installer usually is required to notify the plumbing inspector or the administrative authority having jurisdiction over plumbing work before the test is made. Concealed work should remain uncovered until the required tests are made and approved. When testing, the system should be properly restrained at all bends, changes of direction, and the end of runs.

There are various types of test procedures used for the installed cast iron soil pipe and fittings. They are water or hydrostatic, air and smoke. Proper safety procedures and protective equipment should be employed during all testing procedures.

Installers should always consider local conditions, codes, manufacturer installation instructions, and architect/engineer instructions in any installation.

Water Test

A water or hydrostatic test is the most common test used to inspect a completed cast iron soil pipe installation. This is the recommended test in most plumbing codes. The purpose of the test is to locate any leaks at the joints and correct these prior to the closing in of the piping or backfilling of the underground piping. To isolate each floor or section being tested, test plugs are inserted through test tees in the stacks. All other openings should be plugged or capped with test plugs or test caps. Prior to the beginning of the test, all bends, changes of direction and ends of runs should be properly restrained. During the test, thrust forces are exerted at these locations. Thrust is equal to the hydrostatic pressure multiplied by area. Thrust pressure, if not restrained, will result in joint movement or separation causing failure of the test.

Prior to testing, cap or plug all openings in the lower section of the section to be tested. Fill the system to be tested with water at the highest point. As water fills a vertical cylinder or a vertical pipe it creates hydrostatic pressure. The pressure increases as the height of the water in the vertical pipe increases.

Bibby recommends 10 feet of hydrostatic pressure (4.3 pounds per square inch.). Filling the system slowly should allow any air in the system to escape as the water rises in the vertical pipe. All air entrapped in the system should be expelled prior to beginning of the test. Failure to remove entrapped air may give faulty test results.

Once the stack is filled to ten feet of head, a visual inspection of the section being tested should be made to find any leaks. Where leaks are found in a hubless system in most cases hubless couplings have not been torqued as per the instructions on page 12 and 17. Proper torquing will probably correct the problem. If the leaks occur during testing of hub and spigot materials the joints should be dissembled and checked for proper installation.

Fifteen minutes is suitable time for the water test. Once the system has been successfully tested it should be drained and the next section should be prepared for testing.

Smoke Test

When a smoke test is required by engineers, architects, or plumbing codes, it is applied to all the parts of the drainage and venting system after all fixtures have been permanently connected and all traps filled with water. A thick, penetrating smoke produced by one or more smoke machines is introduced into the system through a suitable opening.

DANGER: Chemical mixtures for producing smoke may be dangerous and should not be used.

As the smoke appears at the stack opening on the roof, the opening is closed off and the introduction of smoke is continued until a pressure equal to one inch of water is built up and maintained for fifteen minutes without the addition of more smoke. Under this pressure smoke should not be visible at any point, connection or fixture. All windows in the building should be closed until the test is completed.

Air Test

Air tests are sometimes used instead of water or hydrostatic tests of completed installations. Cast iron soil pipe and fittings joined with rubber compression joints or hubless mechanical couplings are expected to have a reduction in air pressure during a 15 minute test. This drop in air pressure does not indicate a failure of the system or an indication the system will leak water. Because molecules of air are much smaller than water molecules a cast iron system is expected to have a reduction in air pressure during a 15 minute test period.

NOTE: ADHESIVE LUBRICANTS MUST BE USED ON ALL COUPLING JOINTS DURING INSTALLATION IF AN AIR TEST WILL BE PERFORMED.

Test Procedures

Prior to performing the air test all threaded openings shall be sealed with a manufacturers recommended sealant, all additional openings should be sealed using test plugs recommended for use in performing air testing.

The system shall be pressurized to 35 kPa (5.1p.s.i) utilizing a gauge graduated to not more than 3 times the test pressure. The gauge shall be monitored during a 15 minute test period. A reduction of more than 7 kPa (1 p.s.i.) during the test period indicates failure of the test. Upon completion of the test, depressurize the system and remove the test plugs.

NOTE: BIBBY DOES NOT RECOMMEND AIR TESTING.

CAUTION

MATERIAL UNDER PRESSURE CAN EXPLODE CAUSING SERIOUS PERSONAL INJURY OR DEATH. EXTREME CARE SHOULD BE EXERCISED IN CONDUCTING ANY AIR TEST. PERSONS CONDUCTING AN AIR TEST MUST EXERCISE CARE TO AVOID APPLICATION OF PRESSURE ABOVE 35 kPa (5.1 p.s.i.) TO THE SYSTEM UNDER TEST BY USING APPROPRIATE PRESSURE REGULATION AND RELIEF DEVICES. PERSONS CONDUCTING THE TEST ARE CAUTIONED TO INSPECT FOR TIGHTNESS OF ALL SYSTEM COMPONENTS PRIOR TO BEGINNING THE TEST AND AVOID ADJUSTMENT TO THE SYSTEM WHILE UNDER PRESSURE. PROPER PROTECTIVE EQUIPMENT SHOULD BE WORN BY INDIVIDUALS IN AN AREA WHERE AN AIR TEST IS BEING CONDUCTED.

BIBBY-STE-CROIX

How to Order

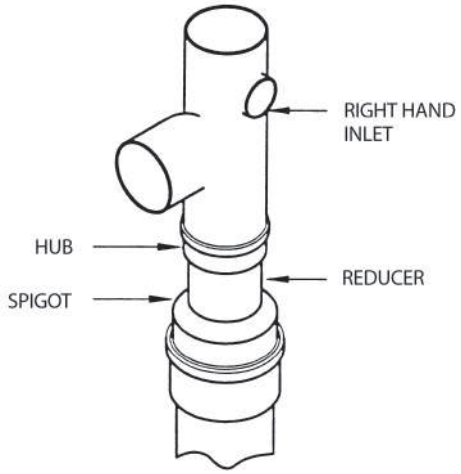
1. By specifying – Code Numbers shown in this catalogue.
2. By stating – Sizes of soil pipe, reducing or increasing fittings in the following order:
   First – Spigot
   Second – Hub on Main
   Third – Branch

(example: 4 × 4 × 2Y (100 × 100 × 50Y) indicates 4″ (100 mm) spigot, 4″ (100 mm) Hub on main and 2″ (50 mm) Branch – Short form 4 × 2Y (100 × 50Y).

Long bends are measured from end of spigot to centre line of hub.

To Determine Right or Left Hand Inlets

For all Branch Fittings – visualize the fitting in the stack and the branch toward you, the inlet on your right is R.H. and on your left is L.H.



IMPORTANT

The **"s"** before the code item indicates in stock.

The **"n"** before the code item indicates non stock. (4 to 6 weeks delivery).

Direct Lines to Bibby-Ste-Croix Order Departments

Website: www.bibby-ste-croix.com

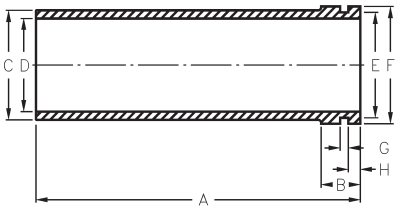
Ste-Croix: (418) 926-3262
Fax: (418) 926-2430

BIBBY-STE-CROIX

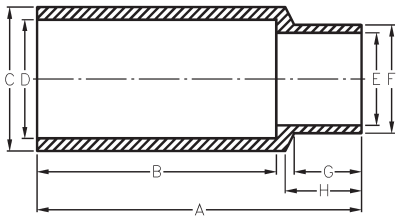
Expansion Joints

Code			Size	A	B	C	D	E	F	G	H	Weight
65420	Part A	in.	2	6 11/16	13/16	2 1/4	1 29/32	2 3/16	2 13/32	5/32	1/4	5.6 lb
		mm	50	170	21	57	49	55	61	4	6	2.5 kg
	Part B	in.	2	6 13/16	5	3	2 15/32	1 15/16	2 1/4	1 13/32	1 19/32	
		mm	50	173	127	76	63	49	57	36	41	
65430	Part A	in.	3	6 11/16	13/16	3 11/32	2 31/32	3 3/16	3 7/16	1/2	3/16	8.7 lb
		mm	75	170	21	85	75	81	87	13	5	3.9 kg
	Part B	in.	3	6 13/16	5	4 1/16	3 1/2	2 21/32	3 11/32	1 13/32	1 19/32	
		mm	75	173	127	103	89	67	85	36	41	
65440	Part A	in.	4	6 3/4	13/16	4 3/8	3 15/16	4 3/16	4 9/16	7/32	7/64	12.4 lb
		mm	100	172	21	111	100	107	116	5	3	5.63 kg
	Part B	in.	4	6 3/4	5	5 1/8	4 19/32	3 7/8	4 11/32	1 3/8	1 5/8	
		mm	100	172	127	131	117	99	110	35	41	

Part A



Part B



Note: Parts A and B can not be sold separetely.

BIBBY-STE-CROIX

Suspension Hangers

Hubless

Size in.	Pipe Weight lb./ft	Water Weight lb./ft	10′-0″ Total Weight	Hanger Load Capacity	Safety Factor
1 ½	2.7	0.76	34.6	⅜ = 598	43.2
2	3.7	1.36	50.6	⅜ = 598	29.5
3	5.0	3.06	80.6	⅜ = 598	18.5
4	7.0	5.44	124.4	⅜ = 598	12.0
5	9.5	8.49	179.9	½ = 1,108	15.4
6	11.5	12.23	237.3	½ = 1,108	11.7
8	16.0	21.75	377.5	2 × ½ = 2,216	14.7
10	25.5	33.98	594.8	2 × ½ = 2,216	9.3
12	30.0	48.93	789.3	2 × ⅝ = 3,554	11.3
15	47.0	76.45	1234.5	2 × ⅝ = 3,554	7.2

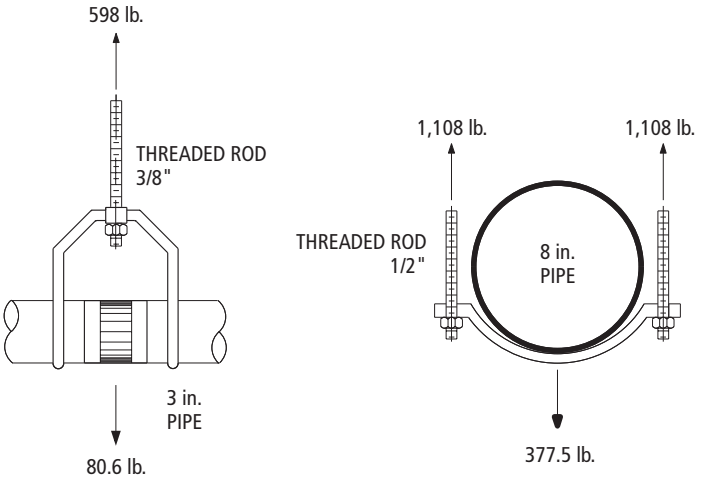
Single Hub

Size in.	Pipe Weight lb./ft	Water Weight lb./ft	10′–0″ Total Weight	Hanger Load Capacity	Safety Factor
2	4.4	1.36	57.6	⅜ = 598	26.0
3	6.8	3.06	98.6	⅜ = 598	15.2
4	8.5	5.44	139.4	⅜ = 598	10.7
5	11.5	8.49	199.9	½ = 1,108	13.9
6	13.5	12.23	257.3	½ = 1,108	10.8
8	22.5	21.75	442.5	⅝ = 1,777	10.0
10	30.0	33.98	639.8	⅝ = 1,777	7.0
12	40.0	48.93	889.3	¾ = 2,657	7.5
15	55.0	76.45	1,314.5	¾ = 2,657	5.1

Load Carrying Capacities of Threaded Hot Rolled Steel Rod Conforming to ASTM A-36

Nominal rod diameter in inches	⅜	½	⅝	¾	⅞	1
Root area of threaded square in.	0.068	0.126	0.202	0.302	0.419	0.552
Max. safe load lb. with 2.5 safety factor	598	1,108	1,777	2,657	3,687	4,857

Note: Load carrying capacities are based on an allowable design stress of 22,000 psi. plus a 2.5 safety factor giving an allowable safety stress of 8,800 psi.



Sample Calculation with 8″ Pipe

Safety factor according to ASTM A-36

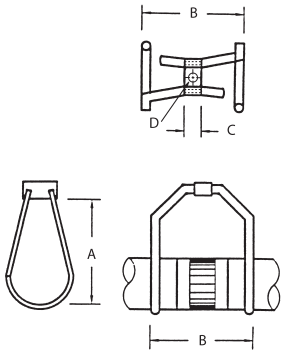
Safety factor from table

$$\frac{1{,}108 + 1{,}108}{377.5} = 5.37 \times 2.5 = 14.7$$

Safety factor based on 22,000 psi.

Steel Support Hangers

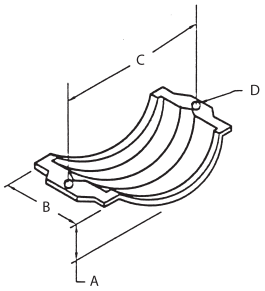
	Code		Size	A	B	C	D	Max. Charge per Support	Weight Unit
s	66020	in.	2	4 7/8	4 1/2	1	13/32	500 lb.	0.4 lb.
		mm	50	123	114	25	10	227 kg	0.18 kg
s	66030	in.	3	6	4 3/4	1	13/32	400 lb.	0.4 lb.
		mm	75	152	121	25	10	182 kg	0.18 kg
s	66040	in.	4	6 1/2	5	1	13/32	300 lb.	0.7 lb.
		mm	100	165	127	25	10	136 kg	0.32 kg
n	66050	in.	5	9	6 3/4	1 1/2	9/16	–	1 lb.
		mm	125	229	171	38	14	–	0.45 kg
s	66060	in.	6	11	6 3/4	1 1/2	9/16	500 lb.	1.1 lb.
		mm	150	279	171	38	14	227 kg	0.5 kg



Quantity per box:	2″	3″	4″	5″	6″
	100	100	50	25	25

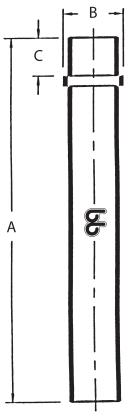
Cast Iron Support Hangers

	Code		Size	A	B	C	D	Max. Charge per Support	Weight Unit
s	66080	in.	8	2 3/4	4 3/4	10	1/2	20,000 lb.	5.1 lb.
		mm	200	70	121	254	13	9,072 kg	2.3 kg
s	66100	in.	10	3 1/2	5	12 1/8	1/2	17,000 lb.	8.0 lb.
		mm	250	89	127	308	13	7,711 kg	3.6 kg



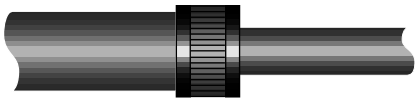
Riser Fittings

	Code		Size	A	B	C	Weight
s	65320	in.	2	20	3	1 7/16	6.6 lb.
		mm	50	508	76	37	3.0 kg
s	65330	in.	3	20	3 5/16	1 3/16	13.1 lb.
		mm	75	508	84	30	5.9 kg
s	65340	in.	4	20	4 15/16	1 7/8	19.0 lb.
		mm	100	508	125	48	8.6 kg
s	65360	in.	6	27	7	1 3/4	37.3 lb.
		mm	150	686	178	44	16.9 kg
s	65380	in.	8	27	9 1/8	2 1/2	48.0 lb.
		mm	200	686	232	64	21.8 kg
n	65400	in.	10	27	11 1/4	2 1/2	72.0 lb.
		mm	250	686	286	64	32.7 kg



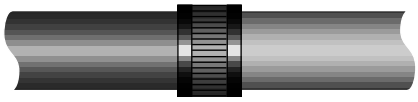
BIBBY-STE-CROIX

Reducing and Transition Couplings



Cast Iron, Plastic DWV to Cast Iron, Plastic DWV (Slip-on)

Code	Size / in.	Size / mm
22310	1 ½ × 1 ½	38 × 38
22340	2 × 1 ½	50 × 38
22410	2 × 2	50 × 50
22440	3 × 1 ½	75 × 38
22510	3 × 2	75 × 50
22530	3 × 3	75 × 75
22600	4 × 2	100 × 50
22610	4 × 3	100 × 75
22630	4 × 4	100 × 100



Cast Iron, Plastic DWV to Copper DWV (Slip-on)

Code	Size / in.	Size / mm
22300	1 ½ × 1 ¼	38 × 32
22320	1 ½ × 1 ½	38 × 38
22330	2 × 1 ¼	50 × 32
22400	2 × 1 ½	50 × 38
22420	2 × 2	50 × 50
22430	3 × 1 ¼	75 × 32
22500	3 × 1 ½	75 × 38
22520	3 × 2	75 × 50
22540	3 × 3	75 × 75
22620	4 × 3	100 × 75

BIBBY-STE-CROIX

Reducing and Transition Couplings

Cast Iron to Cast Iron (Series 2000)

Code	Size / in.	Size / mm
20110	1 ½ × 1 ½	38 × 38
20150	2 × 1 ½	50 × 38
20020	2 × 2	50 × 50
24320	3 × 2	75 × 50
20030	3 × 3	75 × 75
24420	4 × 2	100 × 50
24430	4 × 3	100 × 75
20040	4 × 4	100 × 100
20050	5 × 5	125 × 125
20060	6 × 6	150 × 150
20080	8 × 8	200 × 200
20100	10 × 10	250 × 250
20120	12 × 12	300 × 300
20130	15 × 15	375 × 375

Cast Iron to Copper DWV

Code	Size / in.	Size / mm
24130	1 ½ × 1 ¼	38 × 32
24100	1 ½ × 1 ½	38 × 38
24150	2 × 1 ¼	50 × 32
24050	2 × 1 ½	50 × 38
24020	2 × 2	50 × 50
24120	3 × 1 ½	75 × 38
24140	3 × 2	75 × 50
24030	3 × 3	75 × 75

Cast Iron to Plastic DWV

Code	Size / in.	Size / mm
20110	1 ½ × 1 ½	38 × 38
20150	2 × 1 ½	50 × 38
20020	2 × 2	50 × 50
24320	3 × 2	75 × 50
20030	3 × 3	75 × 75
24420	4 × 2	100 × 50
24430	4 × 3	100 × 75
20040	4 × 4	100 × 100

Plastic DWV to Copper DWV

Code	Size / in.	Size / mm
24130	1 ½ × 1 ¼	38 × 32
24100	1 ½ × 1 ½	38 × 38
24150	2 × 1 ¼	50 × 32
24050	2 × 1 ½	50 × 38
24020	2 × 2	50 × 50
24120	3 × 1 ½	75 × 38
24140	3 × 2	75 × 50
24030	3 × 3	75 × 75

Plastic DWV to Plastic DWV

Code	Size / in.	Size / mm
20110	1 ½ × 1 ½	38 × 38
20150	2 × 1 ½	50 × 38
20020	2 × 2	50 × 50
24320	3 × 2	75 × 50
20030	3 × 3	75 × 75
24420	4 × 2	100 × 50
24430	4 × 3	100 × 75
20040	4 × 4	100 × 100

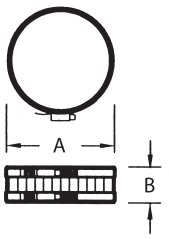
BIBBY-STE-CROIX

Couplings for Hubless

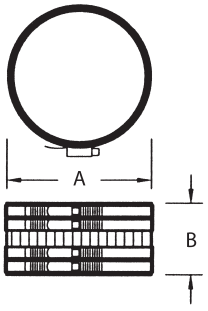
-Couplings – Series 2000 – Cast Iron to Cast Iron

	Code		Size	Qty / Box	A	B	Weight / Box
s	20110	in.	1 ½ × 1 ½	100	2 ⅛	2 3/16	24.0 lb.
		mm	38 × 38		54	56	10.9 kg
s	20020	in.	2 × 2	100	2 ¾	2 3/16	28.0 lb.
		mm	50 × 50		70	56	12.7 kg
s	20030	in.	3 × 3	100	3 ¾	2 3/16	36.0 lb.
		mm	75 × 75		95	56	16.3 kg
s	20040	in.	4 × 4	100	4 ⅝	2 3/16	45.0 lb.
		mm	100 × 100		117	56	20.4 kg
s	20050	in.	5 × 5	20	5 ¾	3 1/16	22.0 lb.
		mm	125 × 125		146	78	10.0 kg
s	20060	in.	6 × 6	25	6 9/16	3 1/16	27.5 lb.
		mm	150 × 150		167	78	12.5 kg
s	20080	in.	8 × 8	10	8 ⅝	4 1/16	15.0 lb.
		mm	200 × 200		219	103	6.8 kg
s	20100	in.	10 × 10	10	10 ¾	4 1/16	18.0 lb.
		mm	250 × 250		273	103	8.2kg
s	20120	in.	12 × 12	2	12 ¾	5 ½	6.6 lb.
		mm	300 × 300		324	140	3.0 kg
s	20130	in.	15 × 15	2	15 ¾	5 ½	8.4 lb.
		mm	375 × 375		400	140	3.8 kg

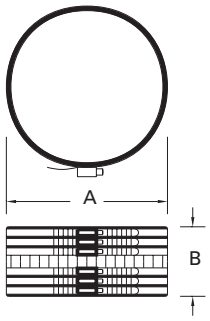
Chemical Resistance **See page 39**
Pressure Resistance **See page 37**
Method of Assembly **See page 12**



1 1/2″ – 4″



6″ – 10″



12″ - 15″

2000 SERIES DESCRIPTION: Fast installation, the Series 2000 give a better rigidity with the stainless steel shield.

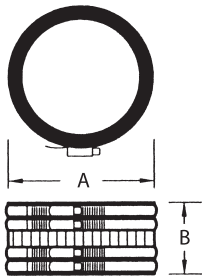
Bibby-Ste-Croix strongly recommends that its hubless cast iron pipe and fittings be joined with shielded couplings manufactured in accordance with CSA-B70 & CSA-B602. The use of any coupling not meeting the above specification will void the product warranty.

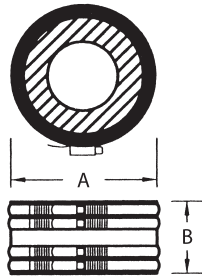
BIBBY-STE-CROIX

Couplings for Hubless

Couplings & Reducing Couplings – Series 2000 – Cast Iron to Copper DWV

	Code		Size	Qty / Box	A	B	Weight / Box
s	24100	in.	1 ½ × 1 ½	24	2 ⅛	2 ⅛	7.0 lb.
		mm	38 × 38		54	54	3.2 kg
s	24050	in.	2 × 1 ½	24	2 ½	2 3/16	9.6 lb.
		mm	50 × 38		64	56	4.4 kg
s	24020	in.	2 × 2	24	2 ½	2 3/16	7.4 lb.
		mm	50 × 50		64	56	3.4 kg
s	24120	in.	3 × 1 ½	24	3 ½	2 3/16	14.4 lb.
		mm	75 × 38		89	56	6.5 kg
s	24130	in.	1 ½ × 1 ¼	150	2 ⅛	2 ⅛	29.0 lb.
		mm	38 × 32		54	54	13.2 kg
s	24140	in.	3 × 2	24	3 ½	2 3/16	14.4 lb.
		mm	75 × 50		89	56	6.5 kg
s	24150	in.	2 × 1 ¼	100	2 ½	2 3/16	20.0 lb.
		mm	50 × 32		64	56	9.1 kg
s	24030	in.	3 × 3	24	3 ½	2 3/16	20.0 lb.
		mm	75 × 75		89	56	9.1 kg

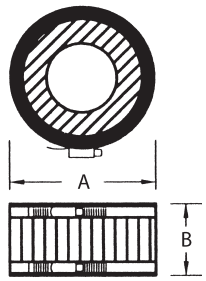




Chemical Resistance See page 39
Pressure Resistance See page 37
Method of Assembly See page 12

Reducing Couplings – Series 2000 – Cast Iron to Cast Iron

	Code		Size	Qty / Box	A	B	Weight / Box
s	20150	in.	2 × 1 ½	100	2 ¾	2 3/16	35.0 lb.
		mm	50 × 38		70	56	15.9 kg
s	24320	in.	3 × 2	100	3 ½	2 ⅛	58.0 lb.
		mm	75 × 50		89	54	26.3 kg
s	24420	in.	4 × 2	36	4 9/16	2 ⅛	10.8 lb.
		mm	100 × 50		116	54	4.9 kg
s	24430	in.	4 × 3	60	4 9/16	2 ⅛	48.0 lb.
		mm	100 × 75		116	54	21.8 kg

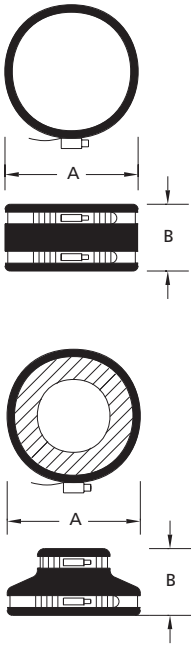


Chemical Resistance See page 39
Pressure Resistance See page 37
Method of Assembly See page 12

BIBBY-STE-CROIX

Couplings for Hubless

Couplings – Series Slip-on – Cast Iron to Cast Iron



	Code		Size	Qty / Box	A	B	Weight / Box
s	22310	in.	1 ½ × 1 ½	100	2 31/32	2 ⅛	19.0 lb.
		mm	38 × 38		52	54	8.6 kg
s	22340	in.	2 × 1 ½	100	1 31/32	2 ⅛	22.0 lb.
		mm	50 × 38		50	54	10.0 kg
s	22410	in.	2 × 2	100	2 ½	2 ⅛	22.0 lb.
		mm	50 × 50		64	54	10.0 kg
s	22440	in.	3 × 1 ½	100	1 31/32	2 ⅛	28.0 lb.
		mm	75 × 38		50	54	12.7 kg
s	22510	in.	3 × 2	100	2 ½	2 ⅛	28.0 lb.
		mm	75 × 50		64	54	12.7 kg
s	22530	in.	3 × 3	100	3 ½	2 ⅛	29.0 lb.
		mm	75 × 75		89	54	13.2 kg
s	22600	in.	4 × 2	100	2 ½	2 ⅛	36.0 lb.
		mm	100 × 50		64	54	16.3 kg
s	22610	in.	4 × 3	100	3 ½	2 ⅛	36.0 lb.
		mm	100 × 75		89	54	16.3 kg
s	22630	in.	4 × 4	100	4 ½	2 ⅛	34.0 lb.
		mm	100 × 100		114	54	15.4 kg

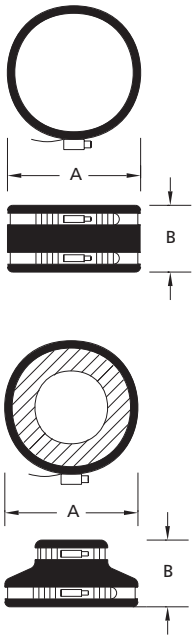
Chemical Resistance **See page 38**
Pressure Resistance **See page 37**
Method of Assembly **See page 12**

BIBBY-STE-CROIX

Couplings for Hubless

Couplings & Reducing Couplings – Series Slip-on – Cast Iron to Copper DWV

	Code		Size	Qty / Box	A	B	Weight / Box
s	22300	in.	1 ½ × 1 ¼	100	1 13/32	2 1/8	19.0 lb.
		mm	38 × 32		36	54	8.6 kg
s	22320	in.	1 ½ × 1 ½	100	1 11/16	2 1/8	19.0 lb.
		mm	38 × 38		34	54	8.6 kg
s	22330	in.	2 × 1 ¼	100	1 13/32	2 1/8	22.0 lb.
		mm	50 × 32		36	54	10.0 kg
s	22400	in.	2 × 1 ½	100	1 11/16	2 1/8	21.0 lb.
		mm	50 × 38		34	54	9.5 kg
s	22420	in.	2 × 2	100	2 5/32	2 1/8	23.0 lb.
		mm	50 × 50		55	54	10.4 kg
s	22430	in.	3 × 1 ¼	100	1 13/32	2 1/8	27.0 lb.
		mm	75 × 32		36	54	12.2 kg
s	22500	in.	3 × 1 ½	100	1 11/16	2 1/8	28.0 lb.
		mm	75 × 38		34	54	12.7 kg
s	22520	in.	3 × 2	100	2 5/32	2 1/8	29.0 lb.
		mm	75 × 50		55	54	13.2 kg
s	22540	in.	3 × 3	100	3 5/32	2 1/8	28.0 lb.
		mm	75 × 75		80	54	12.7 kg
s	22620	in.	4 × 3	100	3 5/32	2 1/8	36.0 lb.
		mm	100 × 75		80	54	16.3 kg



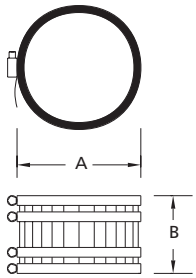
Chemical Resistance **See page 38**
Pressure Resistance **See page 37**
Method of Assembly **See page 12**

BIBBY-STE-CROIX

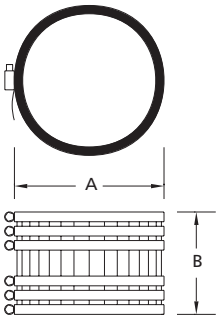
Couplings for Hubless

Couplings – Series Husky SD4000 Heavy Duty – Cast Iron to Cast Iron

	Code		Size	Qty / Box	A	B	Weight / Box
s	27010	in.	1½ × 1½	60	2¼	3	32.0 lb.
		mm	38 × 38		57	76	14.5 kg
s	27020	in.	2 × 2	75	2¾	3	45.0 lb.
		mm	50 × 50		70	76	20.4 kg
s	27030	in.	3 × 3	48	3¾	3	37.0 lb.
		mm	75 × 75		95	76	16.8 kg
s	27040	in.	4 × 4	48	4¾	3	44.0 lb.
		mm	100 × 100		121	76	20.0 kg
n	27050	in.	5 × 5	15	5¾	4	25.0 lb.
		mm	125 × 125		146	102	11.3 kg
s	27060	in.	6 × 6	15	6¾	4	28.0 lb.
		mm	150 × 150		171	102	12.7 kg
s	27080	in.	8 × 8	15	8¾	4	35.0 lb.
		mm	200 × 200		222	102	15.9 kg
s	27100	in.	10 × 10	12	10¾	4	33.0 lb.
		mm	250 × 250		273	102	15.0 kg



1 1/2" - 4"



5" - 10"

Chemical Resistance See page 39
Pressure Resistance See page 36
Method of Assembly See page 17

BIBBY-STE-CROIX

Hub & Spigot Pipe and Fittings for the Self-Locking "Bi-Seal" EPDM Gaskets

"Bi-Seal" provides a positive compression seal between hub and spigot at three separate points.

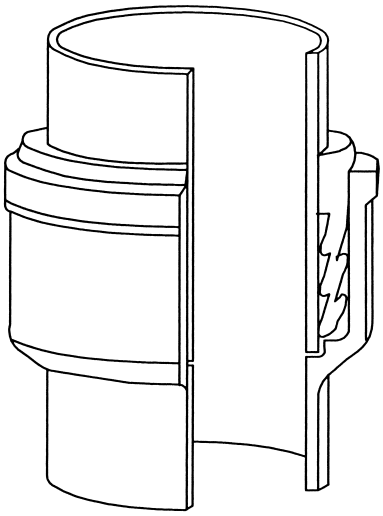
"Bi-Seal" is easy to install without complicated tools.

"Bi-Seal" will absorb marked deflection after assembly without leaking.

"Bi-Seal" will handle both residential and industrial wastes.

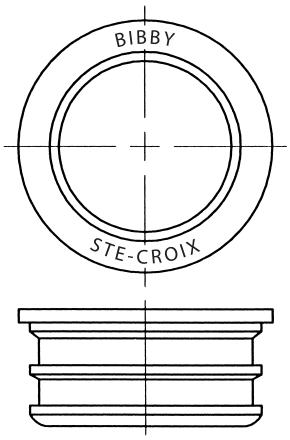
"Bi-Seal" is made to CSA B70 specifications for use with Bibby-Ste-Croix Hub and Spigot Pipe and Fittings.

S4001, Bi-Seal Gaskets for 2″ (50 mm) through 15″ (375 mm)



Bi-Seal Compression Joints – Series 4001

	Code		Size	Qty per Box	Weight / Box
s	29020	in. mm	2 50	50	10.0 lb. 4.5 kg
s	29030	in. mm	3 75	50	20.0 lb. 9.0 kg
s	29040	in. mm	4 100	50	35.0 lb. 15.9 kg
s	29050	in. mm	5 125	– –	– –
s	29060	in. mm	6 150	25	22.5 lb. 10.2 kg
s	29080	in. mm	8 200	10	15.0 lb. 6.8 kg
s	29100	in. mm	10 250	8	19.2 lb. 8.7 kg
s	29120	in. mm	12 300	6	22.2 lb. 10.1 kg
s	29150	in. mm	15 375	6	30.6 lb. 13.9 kg



BIBBY-STE-CROIX

Mechanical Joint Pressure Resistance

Husky® SD4000 Heavy Duty

		Deflection Test			Watertightness Test	
Trade Size		With No Axial Restraint Deflection	Test Pressure		With Axial Restraint Test Pressure	
Inches	mm	Degrees	psi	kPa	psi	kPa
1 ½	38	5, failure 32	15	103	22.5	155
2	50	5, failure 22	15	103	22.5	155
3	75	5, failure 22	15	103	22.5	155
4	100	5, failure 18	15	103	22.5	155
5	125	5, failure 18	15	103	22.5	155
6	150	5, failure 18	15	103	22.5	155
8	200	5, failure 6.7	15	103	22.5	155
10	250	5, failure 6.7	15	103	22.5	155

Hydrostatic Strength Test

Procedure: United States Testing Company, Inc.

Each test assembly was restrained to prevent the pipes from separating, filled with water and then pressurized to 22.5 psi (1.5 times the rated coupling working pressure) for 5 minutes.

Requirements: The coupling shall withstand 150 percent of its rated working pressure for 5 minutes without leaking.

		Rupture Test		
Trade Size		With No Axial Restraint Deflection	Test Pressure	
Inches	mm	Degrees	psi	kPa
1 ½	38	0	15	103
2	50	0	15	103
3	75	0	15	103
4	100	0	15	103
5	125	0	15	103
6	150	0	15	103
8	200	0	15	103
10	250	0	15	103

Blockage Test

Procedure: United States Testing Company, Inc.

Each test assembly was filled with water and pressurized to the rated working pressure (15 psi) for a period of not less than 8 hours, during which it was examined periodically for leaks. The pipes were tested without any restraints.

Requirements: The coupling shall withstand its rated working pressure for a minimum of 8 hours without leaking.

Note: Lab tests. Not for use in field.

BIBBY-STE-CROIX

Mechanical Joint Pressure Resistance
Series 2000 & Slip-on

		Deflection Test			Watertightness Test	
Trade Size		Deflection	Test Pressure		Test Pressure	
Inches	mm	Degrees	psi	kPa	psi	kPa
1 ¼	32	5	14.5	100	14.5	100
1 ½	38	5	14.5	100	14.5	100
2	50	5	14.5	100	14.5	100
3	75	5	14.5	100	14.5	100
4	100	5	14.5	100	14.5	100
5	125	3	10.2	70	10.2	70
6	150	3	10.2	70	10.2	70
8	200	3	10.2	70	10.2	70
10	250	1.5	5.1	35	5.1	35
12	300	1.5	5.1	35	5.1	35
15	375	1.5	5.1	35	5.1	35
		Ref: Tab. 2 B-602			Ref: Tab. 1 B-602	

The above information is compiled, from the following standard CSA B-602. It is possible that standard could be modified. It is up to reader to insure the exactness of such standard.

With No Axial Restraint

The assembled joint shall be placed in a test fixture with one pipe section held in a fixed position. The other pipe shall be deflected, in any direction, to the angle specified in table 2 and then restrained from movement.

		Rupture Test			
Trade Size		Test pressure for Type 1 and Type 2 couplings		Test pressure for Type 3 couplings	
Inches	mm	psi	kPa	psi	kPa
1 ¼	32	14.5	100	–	–
1 ½	38	14.5	100	20	138
2	50	14.5	100	20	138
3	75	14.5	100	20	138
4	100	11.6	80	20	138
5	125	7.3	50	20	138
6	150	5.1	35	18	124
8	200	5.1	35	10	69
10	250	5.1	35	6	41
12	300	5.1	35	6	41
15	375	5.1	35	6	41
		Ref: Tab. 3 B-602			

Note: Lab tests. Not for use in field.

BIBBY-STE-CROIX

Chemical Resistance of Series Slip-on Santoprene Gaskets

	Chemical Products	∞C	Santoprene
Acids & Alkalis	98% Sulfuric Acid	23	A
	10% Hydrochloric Acid	23	A
	50% Sodium Hydroxide	23	A
	10% Potassium Hydroxide	23	A
Aqueous Solutions	Water	100	A
	10% Zinc Chloride	23	A
	Sea Water	23	A
	15% Sodium Chloride	23	A
	18% Calcium Chloride/ 14% Calcium Bromide	150	A
	2.5% Detergent (Tide)	23	A
Organic Solvents	Acetic Acid	23	A
	Acrylonitrile	23	A
	Aniline	23	A
	Bromobenzene	23	B
	n-Butyl Acetate	23	A
	Cyclohexane	23	B
	Diethyl Ether	23	A
	Dimethylformamide	23	A
	1,4-Dioxane	23	A
	95% Ethanol	23	A
	Glycerol	23	A
	n-Hexane	23	A
	Methylthylketone	23	A
	Nitrobenzene	23	A
	Piperidine	23	A
	1-Propanol	23	A
	Pyridine	23	A
	Trichlorocthylene	23	A
	Turpentine	23	B
	Xylene	23	B

	Chemical Products	∞C	Santoprene
Petroeum Oils and Fuels	ASTM # 1 Oil	100	A
		125	B
	IRM 902 Oil	100	B
		125	B
	IRM 903 Oil	100	B
		125	C
	Ref. Fuel A (Isooctane)	23	A
	Ref. Fuel B (Isooctane/Toluene 70/30)	23	B
	Ref. Fuel C (Isooctane/Toluene 50/50)	23	B
Auto-motive Fluids	Auto, Trans. Fluid	125	C
	Hydraulic Brake Fluid	23	A
		100	A
	Lithium Grease	23	A
		100	A
	Power Steering Fluid	125	C
	Antifreeze, 50/50 Ethylene Glycol (Prestone/water)	125	A
Industrial Fluids	Pydraul 312 (Mosanto)	125	A
	Skydrol 500 B4 (Mosanto)	125	A
	Sunvis 706 (Sun Oil)	125	B
	Ucon CC732 (Union Carbide)	125	A
	Ucon 50HBS 100 (Union Carbide)	125	A
	Freon 11 (Dupont)	5	B

A = Minimum effect
B = Minimum to moderate
C = Severe effect

BIBBY-STE-CROIX

Chemical Resistance of Series 2000 & SD 4000 Neoprene Gaskets

Chemical Products	Neoprene	Chemical Products	Neoprene
Acetic anhydride	B	Freons 12 & 22	B
Acetone	B	Gasoline	B
Alcohols	A	Glycol	A
Aluminium chloride	A	Hydraulic oils	C
Ammonium chloride	A	Hydrogen sulphide	C
Ammonium hydroxide	B	Lubricating oils	B
Ammonium nitrate	A	Mineral oils	B
Ammonium sulphate	A	Nitric acid 10%	B
Asphalt	B	Nitrobenzene	C
Benzene	C	Phenol	C
Butane liquid (RT)	C	Phosphoric acid 85%	B
Calcium chloride	A	Potassium chloride	A
Calcium hydroxide	A	Potassium hydroxide	B
Calcium hypochlorite	C	Propane	B
Carbon tetrachloride	C	Sodium chloride	A
Castor oil	A	Sodium hydroxide 46.5 %	A
Citric acid	A	Sodium peroxide	B
Copper chloride	A	Sulphur dioxide	B
Creosote	B	Synthetic oils	C
Diesel oil	B	Toluene	C
Ethers	C	Trichlorenthylene	C
Ethyl alcohol	A	Turpentine	C
Ethyl chloride	B	Vinegar	B
Ferric chloride	A	Water (70C) 158F	A
Formaldehyde	B	Whisky	A
Formic acid	B	Zinc chloride	B

A = Minimum effect
B = Minimum to moderate
C = Severe effect

BIBBY-STE-CROIX

Chemical Resistance of Compression Joints
"Bi-Seal" EPDM Gaskets

Chemical Products	EPDM	Chemical Products	EPDM
Acetic anhydride	B	Freons 12 & 22	C
Acetone	A	Gasoline	C
Alcohols	A	Glycol	A
Aluminium chloride	A	Hydrogen sulphide	A
Ammonium chloride	A	Hydraulic oils	C
Ammonium hydroxide	A	Lubricating oils	C
Ammonium nitrate	A	Mineral oils	C
Ammonium sulphate	A	Nitric acid 10%	B
Asphalt	C	Nitrobenzene	C
Benzene	C	Phenol	C
Butane liquid (RT)	C	Phosphoric acid 85%	B
Calcium chloride	A	Potassium chloride	A
Calcium hydroxide	A	Potassium hydroxide	B
Calcium hypochlorite	B	Propane	C
Carbon tetrachloride	C	Sodium chloride	A
Castor oil	B	Sodium hydroxide 46.5 %	A
Citric acid	A	Sodium peroxide	B
Copper chloride	A	Sulphur dioxide	A
Creosote	C	Synthetic oils	C
Diesel oil	C	Toluene	C
Ethers	C	Trichlorenthylene	C
Ethyl alcohol	A	Turpentine	C
Ethyl chloride	B	Vinegar	A
Ferric chloride	A	Water (70C) 158F	A
Formaldehyde	A	Whisky	A
Formic acid	B	Zinc chloride	A

A = Minimum effect
B = Minimum to moderate
C = Severe effect

BIBBY-STE-CROIX

Intertek ETL SEMKO

BUILDING MATERIALS WITH SURFACE CHARACTERISTICS

BIBBY-STE-CROIX – Ste-Croix, Québec, Canada

Pipe Coupling – "Series 2000 Stanless Steel Coupling" and "Series Slip-On No Shield Coupling"

CLASSIFIED AS TO SURFACE BURNING CHARACTERISTICS

	Flame Spread	Smoke Developed
CAN/ULC-S102	25 or less	50 or less

Identification: Label bearing the working "Listed Pipe Coupling", the Warnock Hersey Certification Mark, and the Rating.

Licensed Manufacturers:

Tyler Couplings
1300 Tyler Road
Marsfield, MO
65700

Anaco Couplings
1001 Compton Avenue
Corona, CA
91714

BIBBY-STE-CROIX

Pressure Charts

When testing soil pipe DWV systems that may be subject to internal pressures (end thrust) the piping should be braced to withstand the separating force set out in the table below:

Pressure (psi) **End Thrust in Pounds** (lb. force)

Head	psi	1½ in.	2 in.	3 in.	4 in.	6 in.	8 in.	10 in.	12 in.	15 in.
Hydrostatic Feet		dia.	dia.	dia.	dia.	dia.	dia.	dia.	dia.	dia.
10	4.3	8	14	31	54	122	218	340	490	765
20	8.7	15	27	61	109	245	435	680	979	1,530
30	13.0	23	41	92	163	367	653	1,020	1,469	2,296
40	17.3	31	54	122	218	490	871	1,360	1,959	3,061
60	21.7	38	68	153	272	612	1,088	1,700	2,449	3,826
80	26.0	46	82	184	326	735	1,306	2,040	2,938	4,591
70	30.3	54	95	214	381	857	1,524	2,381	3,428	5,356
80	34.6	61	109	245	435	979	1,741	2,721	3,918	6,121
90	39.0	69	122	275	490	1,102	1,959	3,061	4,407	6,887
100	43.3	77	136	306	544	1,224	2,177	3,401	4,897	7,652

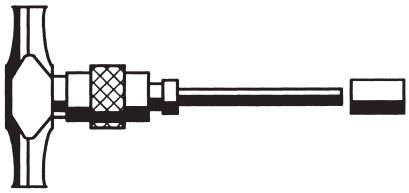
Pressure (6.9 kPa = 1 lb./sq.in.) **End Thrust in Newtons** (1 Newton = 0.225 lb. force)

Head	kPa	38 mm	50 mm	75 mm	100 mm	150 mm	200 mm	250 mm	300 mm	375 mm
Hydrostatic Meters		dia.	dia.	dia.	dia.	dia.	dia.	dia.	dia.	dia.
3	29.4	34	60	134	238	536	953	1,490	2,145	3,352
6	58.8	67	119	268	477	1,073	1,907	2,979	4,290	6,704
9	88.2	101	179	402	715	1,609	2,860	4,469	6,436	10,056
12	117.5	134	238	536	953	2,143	3,810	5,954	8,574	13,396
15	146.9	167	298	670	1,191	2,679	4,764	7,443	10,719	16,748
18	176.3	201	357	804	1,429	3,216	5,717	8,933	12,864	20,100
21	205.7	234	417	938	1,668	3,752	6,671	10,423	15,009	23,452
24	235.1	268	477	1,072	1,906	4,288	7,624	11,913	17,154	26,804
27	264.5	302	536	1,206	2,144	4,824	8,577	13,402	19,300	30,155
30	293.9	335	596	1,340	2,383	5,361	9,531	14,892	21,445	33,507

BIBBY-STE-CROIX

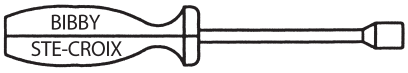
Tools

Torque Wrench



	Code		Inches	Pressure
s	**60000**	Reversible "T" torque	5/16	60.0 in. lbs
n	**60010**	Socket	5/16	
s	**60030**	Reversible "T" torque	3/8	80.0 in. lbs

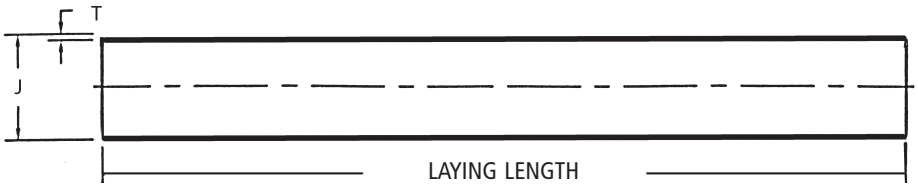
Nut Driver



	Code		Inches
s	**60020**	Nut driver	5/16

BIBBY-STE-CROIX

Hubless Pipe (M.J.)



5 Foot Lengths

Code		Size	Weight	Per Bundle Qty	Per Bundle Weight
s 12050	in.	2	18.5 lb.	72	1,332 lb.
	mm	50	8.4 kg		605 kg
s 13050	in.	3	25.0 lb.	48	1,200 lb.
	mm	75	11.4 kg		545 kg
s 14050	in.	4	35.0 lb.	30	1,050 lb.
	mm	100	15.9 kg		477 kg
s 16050	in.	6	57.5 lb.	18	1,035 lb.
	mm	150	26.1 kg		470 kg
s 18050	in.	8	80.0 lb.	10	800 lb.
	mm	200	36.3 kg		363 kg
s 10050	in.	10	127.5 lb.	8	1,020 lb.
	mm	250	57.9 kg		463 kg

8.5 Foot Lengths

Code		Size	Weight	Per Bundle Qty	Per Bundle Weight
s 12860	in.	2	31.5 lb.	72	2,268 lb.
	mm	50	14.3 kg		1029 kg
s 13860	in.	3	46.0 lb.	48	2,208 lb.
	mm	75	20.9 kg		1,002 kg
s 14860	in.	4	59.5 lb.	30	1,785 lb.
	mm	100	27.0 kg		810 kg

10 Foot Lengths

Code		Size	Weight	Per Bundle Qty	Per Bundle Weight
s 11500	in.	1 ½	27.0 lb.	88	2,376 lb.
	mm	38	12.3 kg		1,079 kg
s 12100	in.	2	37.0 lb.	72	2,664 lb.
	mm	50	16.8 kg		1,209 kg
s 13100	in.	3	50.0 lb.	48	2,400 lb.
	mm	75	22.7 kg		1,090 kg
s 14100	in.	4	70.0 lb.	30	2,100 lb.
	mm	100	31.8 kg		953 kg
s 15100	in.	5	95.0 lb.	21	1,995 lb.
	mm	125	43.1 kg		905 kg
s 16100	in.	6	115.0 lb.	18	2,070 lb.
	mm	150	52.2 kg		940 kg
s 18100	in.	8	160.0 lb.	10	1,600 lb.
	mm	200	72.6 kg		726 kg
s 10100	in.	10	255.0 lb.	8	2,040 lb.
	mm	250	115.8 kg		926 kg
s 17120	in.	12	300.0 lb.	6	1,800 lb.
	mm	300	136.2 kg		817 kg
s 17150	in.	15	525.0 lb.	2	1,050 lb.
	mm	375	238.1 kg		477 kg

Sizes of Cast Iron Soil Pipe (mm)

Size	1 ½ in. 38 mm	2 in. 50 mm	3 in. 75 mm	4 in. 100 mm	5 in. 125 mm	6 in. 150 mm	8 in. 200 mm	10 in. 250 mm	12 in. 300 mm	15 in. 375 mm
J. min.	46.0	57.0	83.0	109.0	135.0	160.0	213.0	267.0	318.0	397.0
J. max.	50.0	62.0	87.5	114.0	139.0	166.0	219.0	271.0	322.0	402.0
T. min.	3.0	3.0	3.3	3.8	3.8	3.8	4.3	5.6	5.6	7.6

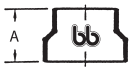
Note: Cast iron soil pipe and fittings are made to CSA B70 standard (for more specific information see the standard).

Hubless Fittings (M.J.)

Increasers / Reducers

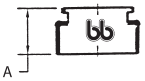
	Code		Size	A	Weight
s	60310	in.	3 × 1½	3⅝	1.4 lb.
		mm	75 × 38	92	0.6 kg
s	60320	in.	3 × 2	2 31/32	1.2 lb.
		mm	75 × 50	75	0.5 kg
s	60420	in.	4 × 2	3	1.6 lb.
		mm	100 × 50	76	0.7 kg
s	60430	in.	4 × 3	2 15/16	1.9 lb.
		mm	100 × 75	75	0.9 kg
s	60530	in.	5 × 3	4 19/32	4.0 lb.
		mm	125 × 75	117	1.8 kg
s	60540	in.	5 × 4	3⅞	3.8 lb.
		mm	125 × 100	98	1.7 kg
s	60630	in.	6 × 3	4⅝	3.0 lb.
		mm	150 × 75	117	1.4 kg
s	60640	in.	6 × 4	4	4.4 lb.
		mm	150 × 100	102	2.0 kg
s	60650	in.	6 × 5	4⅝	5.2 lb.
		mm	150 × 125	117	2.4 kg
s	60830	in.	8 × 3	4⅝	8.8 lb.
		mm	200 × 75	117	4.0 kg
s	60840	in.	8 × 4	6¼	8.2 lb.
		mm	200 × 100	159	3.7 kg
s	60860	in.	8 × 6	5	8.7 lb.
		mm	200 × 150	127	3.9 kg

	Code		Size	A	Weight
s	61040	in.	10 × 4	8¼	22.0 lb.
		mm	250 × 100	210	10.0 kg
s	61060	in.	10 × 6	7	17.0 lb.
		mm	250 × 150	178	7.7 kg
s	61080	in.	10 × 8	6⅞	16.0 lb.
		mm	250 × 200	156	7.3 kg
s	61090	in.	12 × 4	6½	23.2 lb.
		mm	300 × 100	165	10.5 kg
s	61100	in.	12 × 6	6½	24.1 lb.
		mm	300 × 150	165	10.9 kg
s	61110	in.	12 × 8	7¼	25.0 lb.
		mm	300 × 200	184	11.3 kg
s	61120	in.	12 × 10	7⅝	27.6 lb.
		mm	300 × 250	194	12.5 kg
s	61130	in.	15 × 4	7⅛	31.9 lb.
		mm	375 × 100	181	14.5 kg
s	61140	in.	15 × 6	7¼	39.3 lb.
		mm	375 × 150	184	17.8 kg
s	61150	in.	15 × 8	7⅛	34.2 lb.
		mm	375 × 200	181	15.5 kg
s	61160	in.	15 × 10	7⅝	42.9 lb.
		mm	375 × 250	194	19.5 kg
s	61170	in.	15 × 12	7⅞	42.7 lb.
		mm	375 × 300	200	19.4 kg

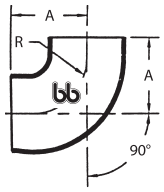


Increasers / Reducers – Tapped

	Code		Size	A	Weight
s	61810	in.	2 × 1½ NPT	2	1.0 lb.
		mm	50 × 1½ NPT	51	0.5 kg
s	61820	in.	2 × 2 NPT	2¾	1.1 lb.
		mm	50 × 2 NPT	70	0.5 kg
n	61830	in.	3 × 1¼ NPT	2½	1.8 lb.
		mm	75 × 1¼ NPT	64	0.8 kg
s	61840	in.	3 × 1½ NPT	2½	1.7 lb.
		mm	75 × 1½ NPT	64	0.8 kg
s	61850	in.	3 × 2 NPT	2½	1.8 lb.
		mm	75 × 2 NPT	64	0.8 kg
s	61870	in.	4 × 1½ NPT	2½	3.8 lb.
		mm	100 × 1½ NPT	64	1.7 kg
s	61880	in.	4 × 2 NPT	2½	3.2 lb.
		mm	100 × 2 NPT	64	1.5 kg

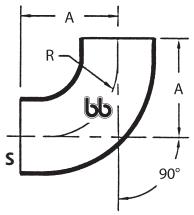


Bends – ¼ – 90° Short Turn



	Code		Size	A	R	Weight
s	31410	in.	1 ½	3	1 ¾	1.2 lb.
		mm	38	76	44	0.5 kg
s	31420	in.	2	3 ¼	2	1.5 lb.
		mm	50	83	51	0.7 kg
s	31430	in.	3	4 ⅛	3	3.2 lb.
		mm	75	105	76	1.5 kg
s	31440	in.	4	5 1⁄16	4	5.6 lb.
		mm	100	129	102	2.5 kg
s	31450	in.	5	6⅜	4 ½	11.0 lb.
		mm	125	162	114	5.0 kg
s	31460	in.	6	6⅞	5	15.2 lb.
		mm	150	175	127	6.9 kg
s	31480	in.	8	8 ⅛	6	26.7 lb.
		mm	200	206	152	12.1 kg
s	31400	in.	10	9 ⅛	7	43.0 lb.
		mm	250	232	178	19.5 kg
s	31380	in.	12	12 ¾	10	54.4 lb.
		mm	300	324	254	24.7 kg
s	31390	in.	15	14 ⅞	11 ½	108.2 lb.
		mm	375	378	292	49.1 kg

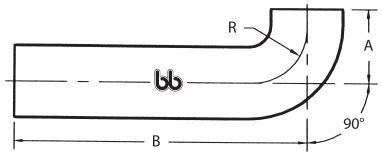
Bends – ¼ – 90° Long Pattern



	Code		Size	A	R	Weight
s	31500	in.	2	4 ½	3	2.5 lb.
		mm	50	114	76	1.1 kg
s	31510	in.	3	5	3 ½	4.8 lb.
		mm	75	127	89	2.2 kg
s	31530	in.	4	5 ½	4	5.5 lb.
		mm	100	140	102	2.5 kg

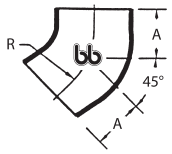
Extended Quarter Bend – ¼ – 90°

	Code		Size	A	B	R	Weight
s	33290	in.	3 × 19	3	19 ½	3	10.0 lb.
		mm	75 × 475	75	495	76	4.5 kg



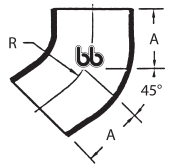
Bends – ⅛ – 45° Short Turn

Code		Size	A	R	Weight
s 31810	in.	1 ½	1 ⅞	1 ¾	0.8 lb.
	mm	38	48	44	0.4 kg
s 31820	in.	2	1 15/16	2	1.1 lb.
	mm	50	49	51	0.5 kg
s 31830	in.	3	2 ⅜	3	2.2 lb.
	mm	75	60	76	1.0 kg
s 31840	in.	4	2 27/32	4	3.5 lb.
	mm	100	72	102	1.6 kg
s 31850	in.	5	3⅞	4 ½	7.0 lb.
	mm	125	98	114	3.2 kg
s 31860	in.	6	3 15/16	5	10.1 lb.
	mm	150	100	127	4.6 kg
s 31880	in.	8	4⅝	6	15.0 lb.
	mm	200	117	152	6.8 kg
s 31800	in.	10	5	7	26.5 lb.
	mm	250	127	178	12.0 kg
s 31890	in.	12	6 27/32	10	34.2 lb.
	mm	300	174	254	15.5 kg
s 31900	in.	15	7⅝	12	68.6 lb.
	mm	375	194	305	31.1 kg

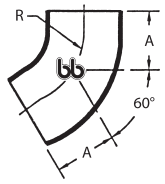


Bends – ⅛ – 45° Long Pattern

Code		Size	A	R	Weight
s 31760	in.	2	2 15/32	3	1.9 lb.
	mm	50	63	76	0.9 kg
s 31770	in.	3	2 11/16	3 ½	3.2 lb.
	mm	75	60	89	1.5 kg
s 31780	in.	4	3 ⅛	4	4.8 lb.
	mm	100	79	102	2.2 kg

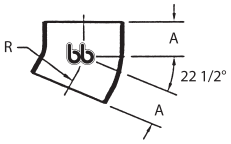


Bends – 1/8 – 60°



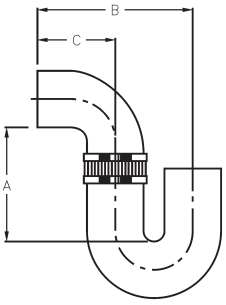
	Code		Size	A	R	Weight
s	30620	in.	2	2 1/4	2	1.2 lb.
		mm	50	57	51	0.5 kg
s	30630	in.	3	2 7/8	3	3.0 lb.
		mm	75	73	76	1.4 kg
s	30640	in.	4	3 1/4	4	4.8 lb.
		mm	100	83	102	2.2 kg
s	30660	in.	6	4 3/4	5	12.2 lb.
		mm	150	121	127	5.5 kg
s	30680	in.	8	5 9/16	6	18.5 lb.
		mm	200	141	152	8.4 kg

Bends – 1/16 – 22 1/2°



	Code		Size	A	R	Weight
s	31610	in.	1 1/2	1 17/32	2 3/4	0.7 lb.
		mm	38	39	70	0.3 kg
s	31620	in.	2	1 21/32	2	1.0 lb.
		mm	50	42	51	0.5 kg
s	31630	in.	3	1 27/32	3	1.8 lb.
		mm	75	47	76	0.8 kg
s	31640	in.	4	1 27/32	4	2.1 lb.
		mm	100	47	102	1.0 kg
n	31650	in.	5	1 15/16	4	2.1 lb.
		mm	125	49	102	1.0 kg
s	31660	in.	6	2 7/8	5	7.2 lb.
		mm	150	73	127	3.3 kg
s	31680	in.	8	3 5/8	6	18.0 lb.
		mm	200	92	152	8.2 kg

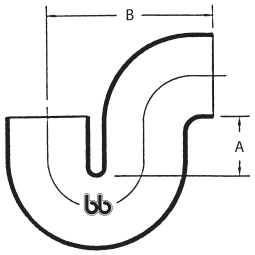
Swivel "P" Traps



	Code		Size	A	B	C	Weight
s	62110s	in.	1 1/2	4 5/32	6 11/32	3	3.1 lb.
		mm	38	106	161	76	1.4 kg
s	62120s	in.	2	4 7/32	7 3/16	3 1/4	4.2 lb.
		mm	50	107	183	83	1.9 kg

"P" Traps Shallow

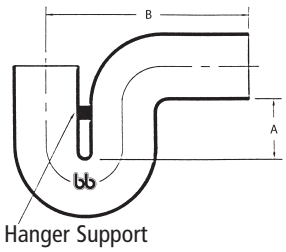
	Code		Size	A	B	Weight
s	62110	in.	1 ½	1 ⅝	6 ⅜	2.4 lb.
		mm	38	41	162	1.0 kg
s	62120	in.	2	1 ⅛	7	3.2 lb.
		mm	50	29	178	1.5 kg
s	62130	in.	3	2 ½	10 5/16	8.2 lb.
		mm	75	64	262	3.7 kg
s	62140	in.	4	1 ⅞	8 ¾	11.3 lb.
		mm	100	48	222	5.1 kg



Note: Trap primer connection 3 in. and 4 in. shown on page 66.

"P" Traps Deep Seal

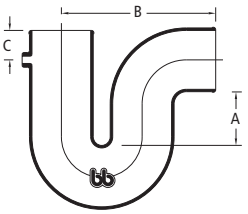
	Code		Size	A	B	Weight
s	62320	in.	2	4	9 9/32	5.7 lb.
		mm	50	102	236	2.6 kg
s	62330	in.	3	3 ¼	9	9.6 lb.
		mm	75	83	229	4.4 kg
s	62340	in.	4	3 ⅝	13 ⅞	21.1 lb.
		mm	100	92	352	9.6 kg
s	62360*	in.	6	3 ⅞	14 ½	45.0 lb.
		mm	150	98	368	20.4 kg



* Hanger support is not available.
Note: Trap primer connection 3 in. and 4 in. shown on page 66.

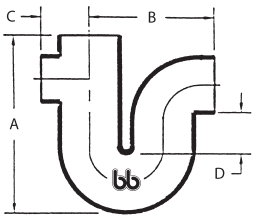
"P" Traps with ½" Primer Tap

	Code		Size	A	B	C	Weight
n	62170	in.	3	2 ½	9	2	8.9 lb.
		mm	75	64	229	51	4.0 kg
n	62180	in.	4	2 ½	10 ½	2	16.6 lb.
		mm	100	64	267	51	7.5 kg

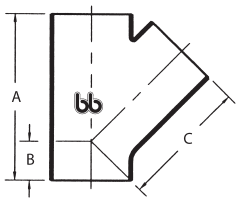


Running Traps with Single Vent

	Code		Size	A	B	C	D	Weight
s	62640	in.	4	12 5/8	10 ⅛	4	2	20.5 lb.
		mm	100	321	257	102	51	9.3 kg



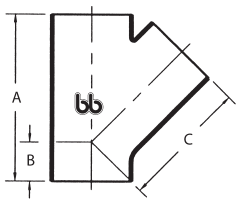
"Y"



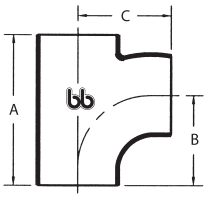
	Code		Size	A	B	C	Weight
s	40110	in.	1 ½ × 1 ½	6 1/16	1 13/16	4 ⅛	2.0 lb.
		mm	38 × 38	154	46	105	0.9 kg
s	40220	in.	2 × 2	5 ⅞	1 ½	4 ⅜	2.7 lb.
		mm	50 × 50	149	38	111	1.2 kg
s	40310	in.	3 × 1 ½	5 ½	15/16	4 ⅞	3.1 lb.
		mm	75 × 38	140	24	124	1.4 kg
s	40320	in.	3 × 2	6 ⅛	1 1/16	5 15/16	3.6 lb.
		mm	75 × 50	156	27	151	1.6 kg
s	40330	in.	3 × 3	7 9/16	1 ⅞	5 ⅝	4.8 lb.
		mm	75 × 75	192	48	143	2.2 kg
s	40410	in.	4 × 1 ½	6 ⅜	¾	6	5.3 lb.
		mm	100 × 38	162	19	152	2.4 kg
s	40420	in.	4 × 2	6 ½	1	6	4.6 lb.
		mm	100 × 50	165	25	152	2.1 kg
s	40430	in.	4 × 3	7 ¾	1 ½	6 ¼	5.8 lb.
		mm	100 × 75	197	38	159	2.6 kg
s	40440	in.	4 × 4	9 3/16	2 3/16	7 1/16	7.6 lb.
		mm	100 × 100	233	56	179	3.4 kg
n	40520	in.	5 × 2	8 1/16	15/16	7 ½	9.0 lb.
		mm	125 × 50	205	24	191	4.1 kg
s	40530	in.	5 × 3	9 11/16	1 1/16	8 ½	11.0 lb.
		mm	125 × 75	246	27	216	5.0 kg
s	40540	in.	5 × 4	11 3/16	2 7/16	8 ½	13.5 lb.
		mm	125 × 100	284	62	216	6.1 kg
s	40550	in.	5 × 5	12 ⅜	3 5/16	9	15.1 lb.
		mm	125 × 125	314	84	229	6.8 kg
s	40620	in.	6 × 2	7 ¾	⅜	7 ⅛	10.1 lb.
		mm	150 × 50	197	10	181	4.6 kg
s	40630	in.	6 × 3	9 ¼	1 ⅛	7 15/16	13.6 lb.
		mm	150 × 75	235	29	202	6.2 kg
s	40640	in.	6 × 4	10 ⅝	1 9/16	8 5/16	15.2 lb.
		mm	150 × 100	270	40	211	6.9 kg
n	40650	in.	6 × 5	12 ½	2 ½	10 ¼	19.6 lb.
		mm	150 × 125	318	64	260	8.9 kg
s	40660	in.	6 × 6	14 ⅜	3 ⅝	10 ⅞	25.4 lb.
		mm	150 × 150	365	92	276	11.5 kg

"Y" (continued)

	Code		Size	A	B	C	Weight
s	40830	in.	8 × 3	11 1/4	15/16	10 5/8	26.3 lb.
		mm	200 × 75	286	24	270	11.9 kg
s	40840	in.	8 × 4	12 3/4	1 3/16	11 1/4	32.0 lb.
		mm	200 × 100	324	46	286	14.5 kg
s	40850	in.	8 × 5	12 7/8	2 1/8	11	30.0 lb.
		mm	200 × 125	327	54	279	13.6 kg
s	40860	in.	8 × 6	15 1/2	3 1/4	12 1/4	31.4 lb.
		mm	200 × 150	394	83	311	14.2 kg
s	40880	in.	8 × 8	18 1/2	4 11/16	13 9/16	52.5 lb.
		mm	200 × 200	470	119	344	23.8 kg
s	41040	in.	10 × 4	11 1/2	1/2	11 1/2	35.2 lb.
		mm	250 × 100	292	13	292	16.0 kg
s	41060	in.	10 × 6	14 3/4	2 1/4	13 3/8	49.3 lb.
		mm	250 × 150	375	57	340	22.4 kg
s	41080	in.	10 × 8	18	3 1/2	15 1/8	67.4 lb.
		mm	250 × 200	457	89	384	30.6 kg
s	41000	in.	10 × 10	21 7/8	5 1/2	16 3/8	70.0 lb.
		mm	250 × 250	556	140	416	31.8 kg
s	41114	in.	12 × 4	18 21/32	3 5/16	15 9/16	67.5 lb.
		mm	300 × 100	474	84	395	30.6 kg
s	41116	in.	12 × 6	18 21/32	3 5/16	16 5/8	72 lb.
		mm	300 × 150	474	84	422	32.7 kg
s	41118	in.	12 × 8	23 11/32	5 1/16	17 21/32	97.0 lb.
		mm	300 × 200	593	129	448	44.0 kg
s	41119	in.	12 × 10	23 11/32	5 1/16	18 23/32	99.5 lb.
		mm	300 × 250	593	129	475	45.1 kg
s	41120	in.	12 × 12	25 1/4	5 3/8	19 3/4	90.2 lb.
		mm	300 × 300	641	137	502	40.9 kg
s	41144	in.	15 × 4	19 31/32	3 5/16	17 9/16	103.1 lb.
		mm	375 × 100	507	84	446	46.8 kg
s	41146	in.	15 × 6	19 31/32	3 5/16	18 19/32	107.0 lb.
		mm	375 × 150	507	84	472	48.5 kg
s	41147	in.	15 × 8	26 25/32	5 3/4	19 5/8	149.0 lb.
		mm	375 × 200	680	146	498	67.6 kg
s	41148	in.	15 × 10	26 25/32	5 3/4	21 21/32	150.5 lb.
		mm	375 × 250	680	146	550	68.3 kg
s	41149	in.	15 × 12	26 25/32	5 3/4	21 21/32	160.0 lb.
		mm	375 × 300	680	146	550	72.6 kg
s	41150	in.	15 × 15	30	6 3/4	23 1/4	165.0 lb.
		mm	375 × 375	762	171	591	74.8 kg



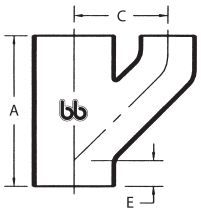
"TY" – Sanitary Tee



	Code		Size	A	B	C	Weight
s	50110	in.	1 ½ × 1 ½	5 3/32	2 5/16	3	1.6 lb.
		mm	38 × 38	129	59	76	0.7 kg
s	50210	in.	2 × 1 ½	5 ½	3 5/16	3 ½	2.0 lb.
		mm	50 × 38	140	84	89	0.9 kg
s	50220	in.	2 × 2	5 5/8	3 ¼	3 ⅛	1.9 lb.
		mm	50 × 50	143	83	79	0.9 kg
s	50310	in.	3 × 1 ½	6 ½	4 ⅜	5 ⅛	4.0 lb.
		mm	75 × 38	165	111	130	1.8 kg
s	50320	in.	3 × 2	5 9/16	3 1/16	3 ½	3.1 lb.
		mm	75 × 50	141	78	89	1.4 kg
s	50330	in.	3 × 3	7	4 ¼	4 ⅛	4.5 lb.
		mm	75 × 75	178	108	105	2.0 kg
s	50420	in.	4 × 2	5 9/16	3 ⅛	4 ⅛	4.5 lb.
		mm	100 × 50	141	79	105	2.0 kg
s	50430	in.	4 × 3	7 1/16	4 3/16	4 ⅛	5.2 lb.
		mm	100 × 75	179	106	105	2.3 kg
s	50440	in.	4 × 4	8 5/16	5 ⅛	5 ⅛	6.7 lb.
		mm	100 × 100	211	130	130	3.0 kg
n	50540	in.	5 × 4	10 ⅛	6	6	11.0 lb.
		mm	125 × 100	257	152	152	5.0 kg
s	50620	in.	6 × 2	6 11/16	3 ¾	4 15/16	9.3 lb.
		mm	150 × 50	170	95	125	4.2 kg
s	50630	in.	6 × 3	8 ½	5	5 ½	12.6 lb.
		mm	150 × 75	216	127	140	5.7 kg
s	50640	in.	6 × 4	10	5 ⅞	5 ⅞	13.0 lb.
		mm	150 × 100	254	149	149	5.9 kg
n	50650	in.	6 × 5	11 ½	6 ½	7	14.3 lb.
		mm	150 × 125	292	165	178	6.5 kg
s	50660	in.	6 × 6	12 ⅜	7 ⅛	6 ⅞	22.0 lb.
		mm	150 × 150	314	181	175	10.0 kg
s	50840	in.	8 × 4	12 9/16	6 7/16	7 ½	27.0 lb.
		mm	200 × 100	319	164	191	12.2 kg
s	50860	in.	8 × 6	14	7 ½	7 15/16	34.4 lb.
		mm	200 × 150	356	191	202	15.6 kg
s	50880	in.	8 × 8	15 ½	8 7/16	8 7/16	42.0 lb.
		mm	200× 200	394	214	214	19.1 kg
s	50200	in.	10 × 10	19 ½	11 ⅞	12	80.0 lb.
		mm	250 × 250	495	302	305	36.3 kg

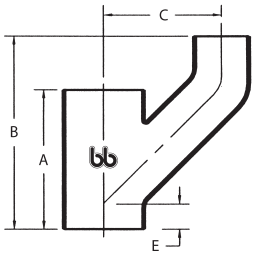
Upright "Y" with ⅛ Bend

	Code		Size	A	B	C	E	Weight
s	46990	in.	3 × 3	8 7/8	–	4 7/8	2	8.0 lb.
		mm	75 × 75	225	–	123	51	3.6 kg
s	47000	in.	4 × 3	8 7/8	–	4 7/8	2	10.3 lb.
		mm	100 × 75	225	–	123	51	4.7 kg



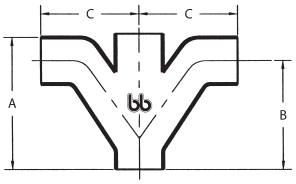
Upright "Y" with ⅛ Bend (Extended)

	Code		Size	A	B	C	E	Weight
s	47150	in.	2 × 2	7	10 1/4	5 1/2	2	5.0 lb.
		mm	50 × 50	178	260	140	51	2.3 kg
s	47220	in.	2 × 2	6	11	7 3/8	1 3/4	5.4 lb.
		mm	50 × 50	152	279	187	44	2.5 kg
s	47170	in.	3 × 2	5 7/8	7 1/2	5 1/2	1 5/16	5.0 lb.
		mm	75 × 50	149	191	140	33	2.3 kg
s	47180	in.	3 × 2	6	9	7 3/8	1 5/16	6.2 lb.
		mm	75 × 50	152	229	187	33	2.8 kg
s	47020*	in.	3 × 3	7 5/8	12	7 1/2	2	8.5 lb.
		mm	75 × 75	194	305	191	51	3.9 kg
s	47140	in.	3 × 3	7 3/4	13 3/4	9	2	11.5 lb.
		mm	75 × 75	197	349	229	51	5.2 kg
s	47040	in.	4 × 3	7 3/4	10 7/8	6 7/16	1 7/16	10.5 lb.
		mm	100 × 75	197	276	164	37	4.8 kg
s	47050*	in.	4 × 3	8 1/8	11 3/8	7 1/2	1 7/16	9.5 lb.
		mm	100 × 75	206	289	191	37	4.3 kg
s	47290	in.	4 × 3	7 13/16	13 1/2	9	1 7/16	12.0 lb.
		mm	100 × 75	198	343	229	37	5.4 kg



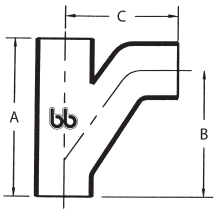
* When a 3 × 3 upright "Y" ordered, part #4702 will be supplied unless otherwise specified.
When a 4 × 3 upright "Y" ordered, part #4705 will be supplied unless otherwise specified.

Double Combination "Y" with ⅛ Bend (Double Boston)



	Code		Size	A	B	C	Weight
n	46220	in.	2 × 2	6 5/8	5 5/8	6	6.0 lb.
		mm	50 × 50	168	143	152	2.7 kg
n	46320	in.	3 × 2	6 5/8	5 1/2	6 3/4	8.3 lb.
		mm	75 × 50	168	140	171	3.8 kg
s	46330	in.	3 × 3	7 3/4	6 3/16	6 9/16	11.2 lb.
		mm	75 × 75	197	157	167	5.1 kg
s	46420	in.	4 × 2	6 5/8	5 5/8	7 5/16	9.0 lb.
		mm	100 × 50	168	143	186	4.1 kg
n	46430	in.	4 × 3	8 7/8	7 1/4	8 1/2	12.0 lb.
		mm	100 × 75	225	184	216	5.4 kg
n	46440	in.	4 × 4	11 1/2	9 1/4	10 1/4	18.5 lb.
		mm	100 × 100	292	235	260	8.4 kg

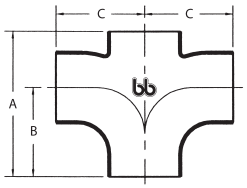
Combination "Y" with ⅛ Bend (Boston)



	Code		Size	A	B	C	Weight
s	43220	in.	2 × 2	6 5/8	5 1/4	6 1/8	4.0 lb.
		mm	50 × 50	168	133	156	1.8 kg
n	43320	in.	3 × 2	6 5/8	5 1/2	6 3/4	4.5 lb.
		mm	75 × 50	168	140	171	2.0 kg
s	43330	in.	3 × 3	7 7/8	7 5/16	8	6.0 lb.
		mm	75 × 75	200	186	203	2.7 kg
s	43420	in.	4 × 2	6 1/4	5	6 3/16	6.0 lb.
		mm	100 × 50	159	127	157	2.7 kg
s	43430	in.	4 × 3	7 3/4	6	6 15/16	7.5 lb.
		mm	100 × 75	197	152	176	3.4 kg
s	43440	in.	4 × 4	9 3/4	7 5/8	8 3/16	11.5 lb.
		mm	100 × 100	248	194	208	5.2 kg
n	43660	in.	6 × 6	14 1/16	13 5/8	14 3/8	32.0 lb.
		mm	150 × 150	357	346	365	14.5 kg

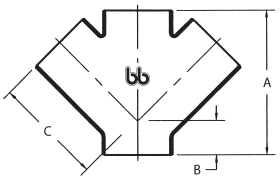
Double "TY" (Cross)

	Code		Size	A	B	C	Weight
s	56110	in.	1 ½ × 1 ½	6 ½	4 ¼	4 ¼	3.5 lb.
		mm	38 × 38	165	108	108	1.6 kg
s	56220	in.	2 × 2	5 5/16	3 ⅛	3 3/16	3.2 lb.
		mm	50 × 50	135	79	81	1.5 kg
s	56320	in.	3 × 2	5 9/16	3 1/16	3 ⅝	4.0 lb.
		mm	75 × 50	141	78	92	1.8 kg
s	56330	in.	3 × 3	7	4 ¼	4 ⅛	5.2 lb.
		mm	75 × 75	178	108	105	2.4 kg
s	56420	in.	4 × 2	6 ⅞	4 ½	5 ½	6.2 lb.
		mm	100 × 50	175	114	140	2.8 kg
s	56430	in.	4 × 3	6 ⅝	3 15/16	4 7/16	7.0 lb.
		mm	100 × 75	168	100	113	3.2 kg
s	56440	in.	4 × 4	9 ⅜	5 ¾	5 ⅝	11.8 lb.
		mm	100 × 100	238	146	143	5.4 kg
n	56460	in.	6 × 4	10 1/16	6	6 ½	14.4 lb.
		mm	150 × 100	256	152	165	6.5 kg

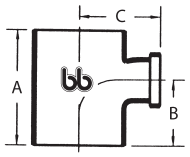


Double "Y"

	Code		Size	A	B	C	Weight
s	42220	in.	2 × 2	6	1 9/16	4 ⅜	3.6 lb.
		mm	50 × 50	152	40	111	1.6 kg
s	42320	in.	3 × 2	6 5/16	1 3/16	5	4.8 lb.
		mm	75 × 50	160	30	127	2.2 kg
s	42330	in.	3 × 3	7 11/16	1 ¾	5 ¾	6.8 lb.
		mm	75 × 75	195	44	146	3.1 kg
s	42420	in.	4 × 2	6 ⅝	1 3/16	5 ⅞	6.4 lb.
		mm	100 × 50	168	30	149	2.9 kg
s	42430	in.	4 × 3	7 ⅞	1 ½	6 ⅝	9.8 lb.
		mm	100 × 75	200	38	168	4.4 kg
s	42440	in.	4 × 4	9 9/16	2 ¼	7 ⅜	14.0 lb.
		mm	100 × 100	243	57	187	6.4 kg
n	42640	in.	6 × 4	11 ⅛	2	9 ⅜	15.4 lb.
		mm	150 × 100	283	51	238	7.0 kg

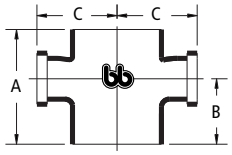


"TY" – Tapped



	Code		Size	A	B	C	Weight
n	51790	in.	1 ½ × 1 ½ NPT	5 11/16	3 ¼	2 9/16	2.4 lb.
			38 × 1 ½ NPT	144	83	65	1.1 kg
s	51800	in.	2 × 1 ¼ NPT	5 1/2	3 ¼	2 7/8	2.8 lb.
		mm	50 × 1 ¼ NPT	140	83	73	1.3 kg
s	51810	in.	2 × 1 ½ NPT	5 5/8	3 ¼	2 15/16	2.9 lb.
		mm	50 × 1 ½ NPT	143	83	75	1.3 kg
s	51820	in.	2 × 2 NPT	5 5/8	3 3/8	3 1/8	2.9 lb.
		mm	50 × 2 NPT	143	86	79	1.3 kg
s	51830	in.	3 × 1 ¼ NPT	5 5/8	3 ¼	3 3/8	3.8 lb.
		mm	75 × 1 ¼ NPT	143	83	86	1.7 kg
s	51840	in.	3 × 1 ½ NPT	5 5/8	3 ¼	3 3/8	3.8 lb.
		mm	75 × 1 ½ NPT	143	83	86	1.7 kg
s	51850	in.	3 × 2 NPT	5 5/8	3 3/8	3 11/16	4.6 lb.
		mm	75 × 2 NPT	143	86	94	2.1 kg
s	51860	in.	4 × 1 ¼ NPT	5 5/8	3 ¼	3 15/16	4.6 lb.
		mm	100 × 1 ¼ NPT	143	83	100	2.1 kg
s	51870	in.	4 × 1 ½ NPT	5 5/8	3 ¼	3 15/16	4.6 lb.
		mm	100 × 1 ½ NPT	143	83	100	2.1 kg
s	51880	in.	4 × 2 NPT	5 3/4	3 3/8	4 3/16	5.2 lb.
		mm	100 × 2 NPT	146	86	106	2.4 kg

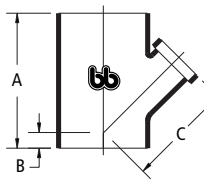
Double "TY" – Tapped (Cross)



	Code		Size	A	B	C	Weight
s	57800	in.	2 × 1 ¼ NPT	5 3/4	3	2 3/8	4.3 lb.
		mm	50 × 1 ¼ NPT	146	76	60	2.0 kg
s	57810	in.	2 × 1 ½ NPT	5 3/4	3	2 3/8	4.6 lb.
		mm	50 × 1 ½ NPT	146	76	60	2.1 kg
s	57820	in.	2 × 2 NPT	5 3/4	3	2 3/8	4.1 lb.
		mm	50 × 2 NPT	146	76	60	1.9 kg
s	57830	in.	3 × 1 ¼ NPT	5 5/8	3 1/8	2 7/8	4.0 lb.
		mm	75 × 1 ¼ NPT	143	79	73	1.8 kg
s	57840	in.	3 × 1 ½ NPT	5 5/8	3 1/8	2 7/8	4.0 lb.
		mm	75 × 1 ½ NPT	143	79	73	1.8 kg
s	57850	in.	3 × 2 NPT	5 5/8	3 1/8	2 7/8	4.0 lb.
		mm	75 × 2 NPT	143	79	73	1.8 kg
n	57860	in.	4 × 1 ¼ NPT	6	3 5/16	3 1/4	5.9 lb.
		mm	100 × 1 ¼ NPT	152	84	83	2.7 kg
n	57870	in.	4 × 1 ½ NPT	6	3 5/16	3 1/4	6.1 lb.
		mm	100 × 1 ½ NPT	152	84	83	2.8 kg
n	57880	in.	4 × 2 NPT	6	3 5/16	3 1/4	6.8 lb.
		mm	100 × 2 NPT	152	84	83	3.1 kg

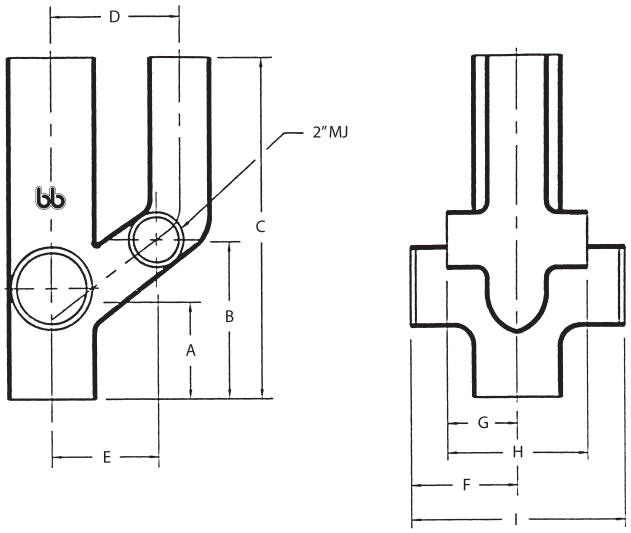
"Y" – Tapped

	Code		Size	A	B	C	Weight
s	41800	in.	2 × 1 ¼ NPT	6 5/8	1 5/8	3 3/4	2.8 lb.
		mm	50 × 1 ¼ NPT	168	41	95	1.3 kg
s	41810	in.	2 × 1 ½ NPT	6 5/8	1 5/8	3 3/4	3.2 lb.
		mm	50 × 1 ½ NPT	168	41	95	1.5 kg
s	41820	in.	2 × 2 NPT	6 5/8	1 5/8	4 5/8	4.0 lb.
		mm	50 × 2 NPT	168	41	117	1.8 kg
s	41830	in.	3 × 1 ¼ NPT	6 5/8	1 3/8	4 3/8	3.8 lb.
		mm	75 × 1 ¼ NPT	168	35	111	1.7 kg
s	41840	in.	3 × 1 ½ NPT	6 5/8	1 3/8	4 3/8	4.1 lb.
		mm	75 × 1 ½ NPT	168	35	111	1.9 kg
s	41850	in.	3 × 2 NPT	6 5/8	1 1/8	5 3/8	4.5 lb.
		mm	75 × 2 NPT	168	29	137	2.0 kg
s	41860	in.	4 × 1 ¼ NPT	6 5/8	7/8	5	5.5 lb.
		mm	100 × 1 ¼ NPT	168	22	127	2.5 kg
s	41870	in.	4 × 1 ½ NPT	6 5/8	7/8	5	5.3 lb.
		mm	100 × 1 ½ NPT	168	22	127	2.4 kg
s	41880	in.	4 × 2 NPT	6 5/8	1 1/8	5 3/4	6.4 lb.
		mm	100 × 2 NPT	168	29	146	2.9 kg



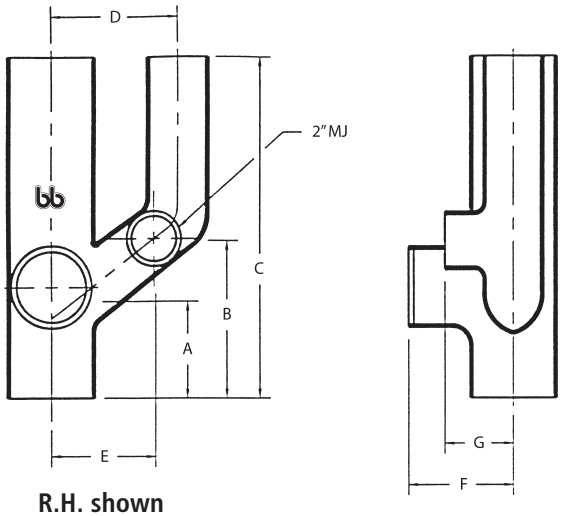
Double Apartment Fittings (Cross)

	Code		Size	A	B	C	D	E	F	G	H	I	Weight
s	55330	in.	3 × 3	4 3/8	7 3/8	22	7 1/2	4 7/8	4 1/4	3	6	8 1/2	23.8 lb.
		mm	75 × 75	111	187	559	191	124	108	76	152	216	10.8 kg
s	55340	in.	4 × 3	4 3/8	7 3/8	22	7 1/2	4 7/8	4 3/4	3	6	9 1/2	26.5 lb.
		mm	100 × 75	111	187	559	191	124	121	76	152	241	12.0 kg



Single Apartment Fittings (Tee)

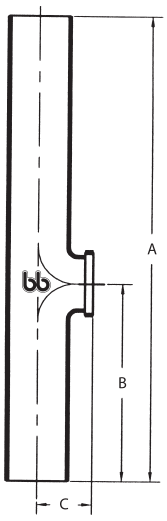
	Code			Size	A	B	C	D	E	F	G	Weight
s	55320	in.	Right	3 × 3	4 3/8	7 3/8	22	7 1/2	4 7/8	4 1/4	3	21.6 lb.
		mm		75 × 75	111	187	559	191	124	108	76	9.8 kg
s	55310	in.	Left	3 × 3	4 3/8	7 3/8	22	7 1/2	4 7/8	4 1/4	3	21.2 lb.
		mm		75 × 75	111	187	559	191	124	108	76	9.6 kg
s	55360	in.	Right	4 × 3	4 3/8	7 3/8	22	7 1/2	4 7/8	4 3/4	3	25.1 lb.
		mm		100 × 75	111	187	559	191	124	121	76	11.4 kg
s	55350	in.	Left	4 × 3	4 3/8	7 3/8	22	7 1/2	4 7/8	4 3/4	3	26.1 lb.
		mm		100 × 75	111	187	559	191	124	121	76	11.8 kg



R.H. shown

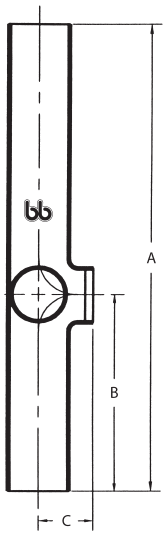
Extended "TY" 26˝ Tapped (Reversible)

	Code		Size	A	B	C	Weight
s	52000	in.	3 × 1 ¼ NPT	26	11	3 1/16	16.5 lb.
		mm	75 × 1 ¼ NPT	660	279	78	7.5 kg
s	52010	in.	3 × 1 ½ NPT	26	11	3 1/16	17.0 lb.
		mm	75 × 1 ½ NPT	660	279	78	7.7 kg

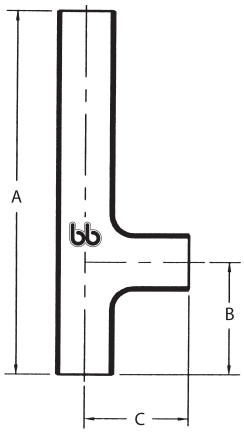


Extended Double "TY" 90° Tapped (Reversible)

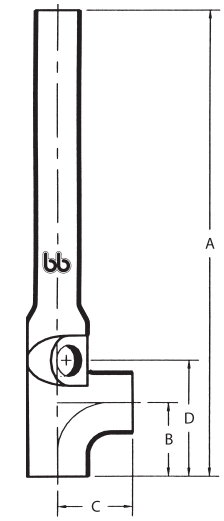
	Code		Size	A	B	C	Weight
s	52020	in.	3 × 1 ¼ NPT	26	11	3	17.6 lb.
		mm	75 × 1 ¼ NPT	660	279	76	8.0 kg
s	52030	in.	3 × 1 ½ NPT	26	11	3	16.5 lb.
		mm	75 × 1 ½ NPT	660	279	76	7.5 kg



Extended "TY"

	Code		Size	A	B	C	Weight
	n 50190	in.	2 × 2	26	11	5⅝	10.0 lb.
		mm	50 × 50	660	279	143	4.5 kg

"TY" Reducing – 45° Tapped

	Code		Size	A	B	C	D	E	Weight
	s 52150**	in.	3 × 2 × 3 x 1½ NPT	26	4⅛	4⅛	6½	2⅜	13.8 lb.
		mm	75 × 50 × 75 x 1½ NPT	660	105	105	165	60	6.8 kg
	s 52170*	in.	3 × 2 × 3 x 1½ NPT	26	4⅛	4⅛	6½	2⅜	13.8 lb.
		mm	75 × 50 × 75 x 1½ NPT	660	105	105	165	60	6.8 kg

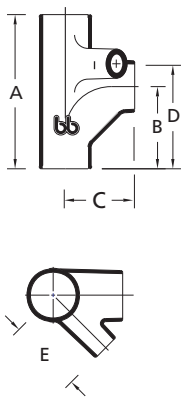
* R.H.
** L.H. (L.H. is shown).

"TY" Short w / MJ 1½" – 45° (Ontario)

	Code		Size	A	B	C	D	E	Weight
s	51940**	in.	3 × 3 × 1½	10 1/4	5 3/8	4 9/16	6 13/16	4 7/8	8.5 lb.
		mm	75 × 75 × 38	260	137	116	173	124	3.9 kg
s	51950*	in.	3 × 3 × 1½	10 1/4	5 3/8	4 9/16	6 13/16	4 7/8	8.5 lb.
		mm	75 × 75 × 38	260	137	116	173	124	3.9 kg

NOTE: Also Available with NPT – 45° – Tapped Connection

n	52100**	in.	3 × 3 × 1½	10	4 1/8	4 7/8	6 7/8	2 1/4	8.2 lb.
		mm	75 × 75 × 1½	254	105	124	175	57	3.7 kg
n	52110*	in.	3 × 3 × 1½	10	4 1/8	4 7/8	6 7/8	2 1/4	8.2 lb.
		mm	75 × 75 × 1½	254	105	124	175	57	3.7 kg



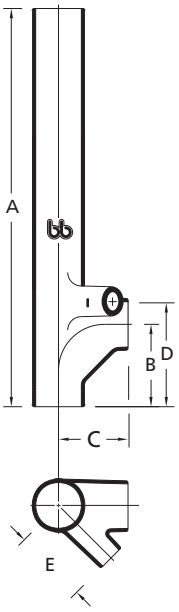
* R.H.
** L.H. (L.H. is shown)

"TY" Long w / MJ 1½" – 45° (Ontario)

	Code		Size	A	B	C	D	E	Weight
s	51920**	in.	3 × 3 × 1½	26	5 3/8	4 9/16	6 13/16	4 7/8	15.2 lb.
		mm	75 × 75 × 38	660	137	116	173	124	6.9 kg
s	51930*	in.	3 × 3 × 1½	26	5 3/8	4 9/16	6 13/16	4 7/8	15.2 lb.
		mm	75 × 75 × 38	660	137	116	173	124	6.9 kg

NOTE: Also Available with NPT – 45° – Tapped Connection

s	52040**	in.	3 × 3 × 1½	26	4 1/8	4 1/8	5 1/2	2 1/2	16.5 lb.
		mm	75 × 75 × 1½	660	105	105	140	64	7.5 kg
s	52050*	in.	3 × 3 × 1½	26	4 1/8	4 1/8	5 1/2	2 1/2	16.8 lb.
		mm	75 × 75 × 1½	660	105	105	140	64	7.5 kg



* R.H.
** L.H. (L.H. is shown)

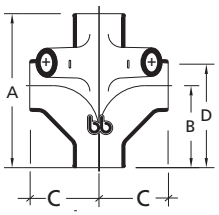
Double waste "TY" MJ Short Pattern (Toronto)

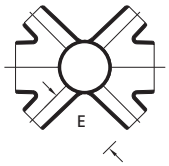
	Code		Size	A	B	C	D	E	Weight
n	52460*	in.	3 × 3 × 2	10 1/4	5 3/8	5 3/8	6 7/8	5	21.0 lb.
		mm	75 × 75 × 50	260	137	137	175	127	9.5 kg
n	52470**	in.	3 × 3 × 2	10 1/4	5 3/8	5 3/8	6 7/8	5	15.5 lb.
		mm	75 × 75 × 50	260	137	137	175	127	7.0 kg

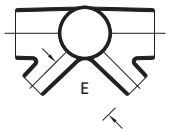
NOTE: Also Available with NPT – 45° – Tapped Connection

n	52420*	in.	3 × 3 × 1 1/2	10 1/4	5 7/16	5 1/4	6 1/2	4	17.0 lb.
		mm	75 × 75 × 1 1/2	260	138	133	165	102	7.7 kg
n	52440**	in.	3 × 3 × 1 1/2	10 1/4	5 7/16	5 1/4	6 1/2	4	17.0 lb.
		mm	75 × 75 × 1 1/2	260	138	133	165	102	7.7 kg
n	52430*	in.	3 × 3 × 2	10 1/4	5 7/16	5 1/4	6 1/2	4	17.0 lb.
		mm	75 × 75 × 2	260	138	133	165	102	7.7 kg
n	52450**	in.	3 × 3 × 2	10 1/4	5 7/16	5 1/4	6 1/2	4	17.0 lb.
		mm	75 × 75 × 2	260	138	133	165	102	7.7 kg

* Have four inlets
** Have two inlets







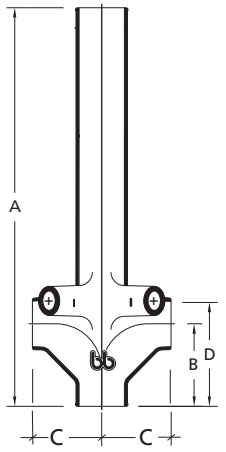
Double waste "TY" MJ Long Pattern (Toronto)

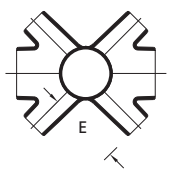
	Code		Size	A	B	C	D	E	Weight
s	52750*	in.	3 × 3 × 2	24	5 3/8	5 3/8	6 7/8	5	27.4 lb.
		mm	75 × 75 × 50	610	137	137	175	127	12.4 kg
s	52760**	in.	3 × 3 × 2	24	5 3/8	5 3/8	6 7/8	5	21.9 lb.
		mm	75 × 75 × 50	610	137	137	175	127	9.9 kg

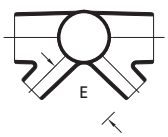
NOTE: Also Available with NPT – 45° – Tapped Connection

s	52710*	in.	3 × 3 × 1 1/2	24	5 7/16	5 1/4	6 1/2	4	25.3 lb.
		mm	75 × 75 × 1 1/2	610	138	133	165	102	11.5 kg
s	52720**	in.	3 × 3 × 1 1/2	24	5 7/16	5 1/4	6 1/2	4	25.3 lb.
		mm	75 × 75 × 1 1/2	610	138	133	165	102	11.5 kg
s	52730*	in.	3 × 3 × 2	24	5 7/16	5 1/4	6 1/2	4	25.3 lb.
		mm	75 × 75 × 2	610	138	133	165	102	11.5 kg
s	52740**	in.	3 × 3 × 2	24	5 7/16	5 1/4	6 1/2	4	25.3 lb.
		mm	75 × 75 × 2	610	138	133	165	102	11.5 kg

* Have four inlets
** Have two inlets





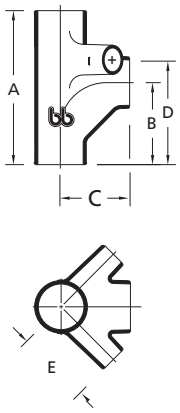


Single waste "TY" MJ Short Pattern (Toronto)

	Code		Size	A	B	C	D	E	Weight
n	52370	in.	3 × 3 × 2	10 1/4	5 3/8	5 3/8	6 7/8	5	17.9 lb.
		mm	75 × 75 × 50	260	137	137	175	127	8.1 kg

NOTE: Also Available with NPT – 45° – Tapped Connection

n	52400	in.	3 × 3 × 1 1/2	10 1/4	5 3/8	5 3/8	6 1/2	3 11/16	12.0 lb.
		mm	75 × 75 × 1 1/2	260	137	137	165	94	5.4 kg
n	52410	in.	3 × 3 × 2	10 1/4	5 3/8	5 3/8	6 1/2	3 11/16	12.0 lb
		mm	75 × 75 × 2	260	137	137	165	94	5.4 kg

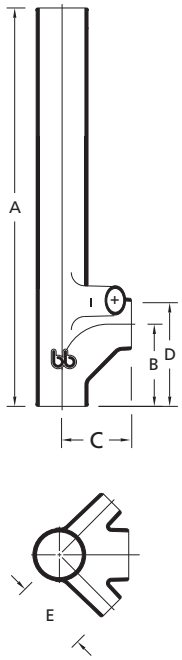


Single waste"TY" MJ Long Pattern (Toronto)

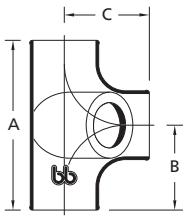
	Code		Size	A	B	C	D	E	Weight
s	52550	in.	3 × 3 × 2	24	5 3/8	5 3/8	6 7/8	5	23.4 lb.
		mm	75 × 75 × 50	610	137	137	175	127	10.6 kg

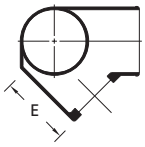
NOTE: Also Available with NPT – 45° – Tapped Connection

s	52510	in.	3 × 3 × 1 1/2	24	5 7/16	5 1/4	6 1/2	3 11/16	19.8 lb.
		mm	75 × 75 × 1 1/2	610	138	133	165	94	9.0 kg
s	52520	in.	3 × 3 × 2	24	5 7/16	5 1/4	6 1/2	3 11/16	19.8 lb.
		mm	75 × 75 × 2	610	138	133	165	94	9.0 kg



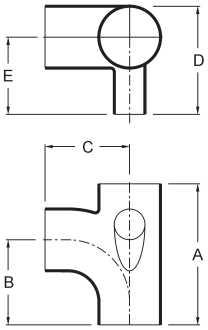
"TY" (Tee) with NPT – 45° Tapped connection (Reversible)





	Code			Size	A	B	C	E	Weight
n	53320	in.	single	3 × 3 × 1 ½	8	4	3 ⅜	3 ½	6.4 lb.
		mm	Tap	75 × 75 × 1 ½	203	102	86	89	2.9 kg
n	53200	in.	single	3 × 3 × 2	8	4	3 ⅜	3 ½	5.8 lb.
		mm	Tap	75 × 75 × 2	203	102	86	89	2.6 kg

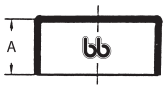
Sanitary Tee – with 2" 90° Side Opening Above Center



	Code		Size	A	B	C	D	E	Weight
n	52200	in.	3 LH	8 ½	5	5	6	4 ½	6.3 lb.
		mm		216	127	127	152	114	2.9 kg
s	52210	in.	3 RH	8 ½	5	5	6	4 ½	6.3 lb.
		mm		216	127	127	152	114	2.9 kg
s	52230	in.	4 LH	9 ⅛	5 ½	5 ½	6 ½	6	9.5 lb.
		mm		232	140	140	165	152	4.3 kg
s	52240	in.	4 RH	9 ⅛	5 ½	5 ½	6 ½	6	9.5 lb.
		mm		232	140	140	165	152	4.3 kg

Plugs – Hubless (MJ)

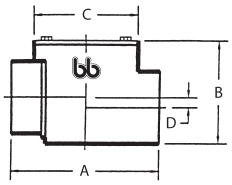
	Code		Size	A	Weight
s	63010	in.	1½	1½	0.5 lb.
		mm	38	38	0.2 kg
s	63020*	in.	2	2	1.0 lb.
		mm	50	51	0.5 kg
s	63030*	in.	3	2	1.5 lb.
		mm	75	51	0.7 kg
s	63040*	in.	4	2	2.5 lb.
		mm	100	51	1.1 kg
n	63050*	in.	5	3	4.5 lb.
		mm	125	76	2.0 kg
s	63060*	in.	6	3	5.8 lb.
		mm	150	76	2.6 kg
s	63080*	in.	8	3	17.5 lb.
		mm	200	76	7.9 kg
s	63100*	in.	10	3¾	18.5 lb.
		mm	250	95	8.4 kg
s	62990*	in.	12	3⅞	24.7 lb.
		mm	300	98	11.2 kg
s	63000*	in.	15	4¼	42.0 lb.
		mm	375	108	19.1 kg



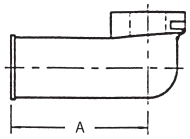
* Can be used for hub & spigot pipe & fittings.

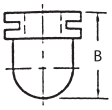
Back Water Valves – Hubless (MJ)

	Code		Size	A	B	C	D	Weight	Cover Only	Flapper Only
s	65030	in.	3	8	5½	5⅝	⅝	9.9 lb	64650	65060
		mm	75	203	140	143	16	4.5 kg		
s	65040	in.	4	9	6⅜	6½	⅝	14.8 lb.	65200	65070
		mm	100	229	162	165	16	6.7 kg		
s	65110	in.	6	14½	8¾	9	⅝	35.0 lb.	65220	65080
		mm	150	368	222	229	16	15.9 kg		



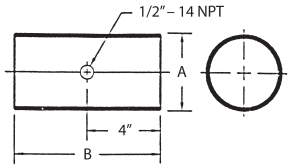
Urinal Fittings





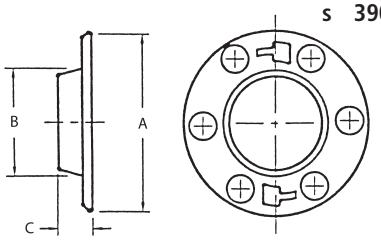
	Code		Size	A	B	Weight
n	65210	in.	2 × 1½ NPT	3¾	2¼	2.8 lb.
		mm	50 × 1½ NPT	95	57	1.3 kg
s	65230	in.	2 × 2 NPT	3¾	2¼	2.8 lb.
		mm	50 × 2 NPT	95	57	1.3 kg

Trap Seal Primer Connection



	Code		Size	A	B	Weight
s	62390	in.	3	3⅜	8	4.0 lb.
		mm	75	86	203	1.8 kg
s	62400	in.	4	4⅜	8	5.4 lb.
		mm	100	111	203	2.4 kg

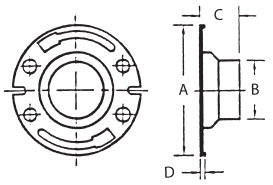
Flange (for Closet Bend) – Caulking



	Code		Size	A	B	C	Weight
s	39000	in.	4	7¼	5	1 7/16	2.5 lb.
		mm	100	184	127	37	1.1 kg

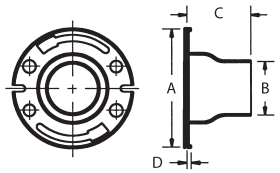
Floor Flange – Brass

	Code		Size	A	B	C	D	Weight
s	35090	in.	4 × 3 × 2 1/8	7 1/4	3 3/8	2 1/8	11/16	2.0 lb.
		mm	100 × 75 × 53	184	86	54	17	0.9 kg



Closet Flange (Slot & Notch)

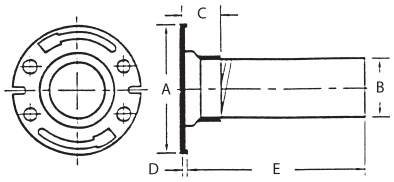
	Code		Size	A	B	C	D	Weight
s	35140	in.	4 × 3 × 3 1/2	6 1/8	3 5/16	3 1/2	3/8	4.0 lb.
		mm	100 × 75 × 88	156	84	89	10	1.8 kg



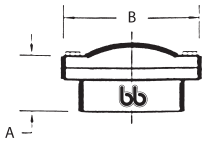
Extended Floor Flanges (With Test Plug)

	Code		Size	A	B	C	D	E	Weight
s	35120	in.	4 × 3 × 13	7 3/8	3 3/8	2 1/4	3/8	13	9.5 lb.
		mm	100 × 75 × 325	187	86	57	10	330	4.3 kg
n	35130	in.	4 × 4 × 12	7 3/8	4 3/8	1 3/4	3/8	12	8.7 lb.
		mm	100 × 100 × 300	187	111	44	10	305	3.9 kg

Note: Test plug is to be cut out as it serves as a gasket.

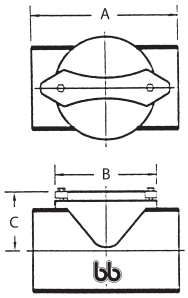


Malcolm – End Cleanouts Bolted Cover – Anthes Style Hubless (MJ)



	Code		Size	A	B	Weight	Cover Only
s	64320	in.	2	4 1/4	4 3/8	3.8 lb.	69200
		mm	50	108	111	1.7 kg	
s	64330	in.	3	2 1/2	5 5/16	2.6 lb.	64530
		mm	75	64	135	1.2 kg	
s	64340	in.	4	2 5/16	6	3.5 lb.	64550
		mm	100	59	152	1.6 kg	
s	64360	in.	6	2 15/16	8 3/16	7.7 lb.	64560
		mm	150	75	208	3.5 kg	
s	64380	in.	8	3 1/4	9 13/16	11.7 lb.	64580
		mm	200	83	249	5.3 kg	
s	64390	in.	10	3 5/16	12	15.7 lb.	64700
		mm	250	84	305	7.1 kg	

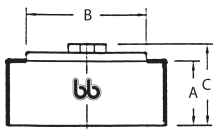
Barrett Line Cleanouts Bolted Cover Hubless (MJ)



	Code		Size	A	B	C	Weight	Cover Only
s	64220	in.	2	6 3/4	4 1/8	2 1/4	3.5 lb.	69200
		mm	50	171	105	57	1.6 kg	
s	64230	in.	3	7	4 7/16	2 3/4	6.2 lb.	64550
		mm	75	178	113	70	2.8 kg	
s	64240	in.	4	8	5 9/16	3 3/16	8.8 lb.	64650
		mm	100	203	141	81	4.0 kg	
s	64260	in.	6	11 1/2	7 1/2	4 1/2	28.2 lb.	64660
		mm	150	292	191	114	12.8 kg	

Iron Body Cleanouts Brass Plug (MJ)

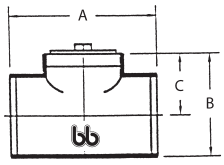
	Code R	Code C		Size	A	B	C	Weight	Cover Only R	Cover Only C
s	63900	63820	in.	2	2 1/2	2 1/4	3 1/4	1.3 lb.	63120	n/a
			mm	50	64	57	83	0.6 kg		
s	63910	63830	in.	3	2 3/4	2 3/4	3 3/8	2.3 lb.	63130	n/a
			mm	75	70	70	86	1.0 kg		
s	63920	63840	in.	4	2 1/2	4	3 1/4	3.6 lb.	63140	n/a
			mm	100	64	102	83	1.6 kg		
s	63930	63860	in.	6	3	4	3 1/2	6.7 lb.	63160	n/a
			mm	150	76	102	89	3.0 kg		
s	63940	n/a	in.	8	3 1/4	6 3/8	4	12.4 lb.	63160	n/a
			mm	200	83	162	102	5.6 kg		
s	63950	n/a	in.	10	3 5/8	7 1/8	4 3/4	18.5 lb.	63160	n/a
			mm	250	92	181	121	8.4 kg		



R = Raised Head
C = Countersunk

Line Cleanouts c/w Brass Plug Hubless (MJ)

	Code		Size	A	B	C	Weight	Cover Only
s	63960	in.	1 1/2	5	2 5/8	1 3/4	3.0 lb.	66280
		mm	38	127	67	44	1.4 kg	
s	63970	in.	2	6 7/16	3 3/8	2 1/4	3.4 lb.	66220
		mm	50	164	86	57	1.5 kg	
s	63980	in.	3	7 3/4	4 1/2	2 3/4	4.5 lb.	66230
		mm	75	197	114	70	2.0 kg	
s	63990	in.	4	7 3/4	5	2 7/8	7.3 lb.	66240
		mm	100	197	127	73	3.3 kg	
s	63800	in.	6	12 1/2	8 1/2	5	26.7 lb.	66210
		mm	150	318	216	127	12.1 kg	

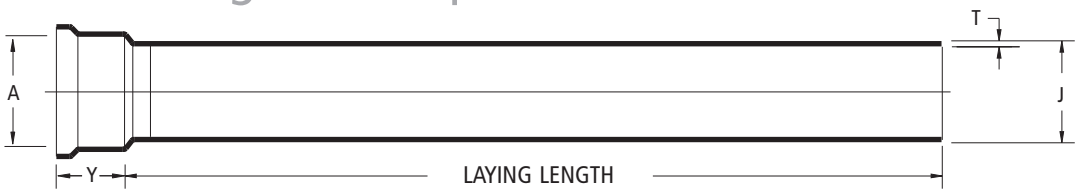


BIBBY-STE-CROIX

Notes:

BIBBY-STE-CROIX

Single Hub Pipe



5 Foot Lengths

Code		Size	Weight	Per Bundle Qty	Per Bundle Weight
n 19250	in.	2	22.0 lb.	72	1,584 lb.
	mm	50	10.0 kg		718 kg
n 19350	in.	3	36.0 lb.	48	1,728 lb.
	mm	75	16.3 kg		784 kg
n 19450	in.	4	45.0 lb.	30	1,350 lb.
	mm	100	20.4 kg		612 kg
n 19550	in.	5	65.0 lb.	21	1,365 lb.
	mm	125	29.5 kg		619 kg
n 19650	in.	6	75.0 lb.	18	1,350 lb.
	mm	150	34.0 kg		612 kg
n 19850	in.	8	120.0 lb.	10	1,200 lb.
	mm	200	54.4 kg		544 kg
n 19050	in.	10	190.0 lb.	8	1,520 lb.
	mm	200	86.2 kg		689 kg
n 19920	in.	12	230.0 lb.	6	1,380 lb.
	mm	300	104.3 kg		626 kg
n 19950	in.	15	320.0 lb.	2	640 lb.
	mm	375	145.1 kg		290 kg

10 Foot Lengths

Code		Size	Weight	Per Bundle Qty	Per Bundle Weight
s 19300	in.	3	68.0 lb.	48	3,264 lb.
	mm	75	30.8 kg		1,481 kg
s 19400	in.	4	85.0 lb.	30	2,550 lb.
	mm	100	38.6 kg		1,157 kg
s 19500	in.	5	120.0 lb.	21	2,520 lb.
	mm	125	54.4 kg		1,143 kg
s 19600	in.	6	130.0 lb.	18	2,340 lb.
	mm	150	59.0 kg		1,061 kg
s 19800	in.	8	225.0 lb.	10	2,250 lb.
	mm	200	102.0 kg		1,021 kg
s 19000	in.	10	300.0 lb.	8	2,400 lb.
	mm	250	136.1 kg		1,089 kg
s 19930	in.	12	400.0 lb.	6	2,400 lb.
	mm	300	181.4 kg		1,089 kg
s 19960	in.	15	550.0 lb.	2	1,100 lb.
	mm	375	249.5 kg		499 kg

Dimensions of Cast Iron Soil Pipe (mm)

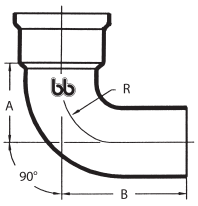
Size	2 in. 50 mm	3 in. 75 mm	4 in. 100 mm	5 in. 125 mm	6 in. 150 mm	8 in. 200 mm	10 in. 250 mm	12 in. 300 mm	15 in. 375 mm
Y. min.	57.0	57.0	57.0	63.0	63.0	70.0	70.0	76.0	82.0
T. min.	3.0	3.3	3.8	3.8	3.8	4.3	5.6	5.6	7.6
J. max.	62.7	91.2	117.0	142.0	167.0	221.0	275.0	326.0	407.0
A. min.	72.6	105.0	131.5	152.0	180.0	239.0	292.0	349.0	431.0
A. max.	79.0	108.0	134.0	158.0	184.0	243.0	297.0	353.0	435.0

Note: Cast iron soil pipe and fittings are made to CSA B70 standard (for more specific information see the standard).

BIBBY-STE-CROIX

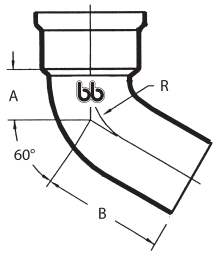
Single Hub Fittings

Bends – ¼ – 90°



	Code		Size	A	B	R	Weight
s	39420	in.	2	2 7/8	5 1/2	2 1/2	5.8 lb.
		mm	50	73	140	64	2.6 kg
s	39430	in.	3	3 1/4	6 3/16	3	8.5 lb.
		mm	75	83	157	76	3.9 kg
s	39440	in.	4	4 1/2	8	4	12.8 lb.
		mm	100	114	203	102	5.8 kg
n	39450	in.	5	5 9/16	8 3/8	4 7/8	20.1 lb.
		mm	125	141	213	124	9.1 kg
s	39460	in.	6	5 3/4	9	4 3/8	25.3 lb.
		mm	150	146	229	111	11.5 kg
s	39480	in.	8	6 1/4	12	5 1/2	50.9 lb.
		mm	200	159	305	140	23.1 kg
s	39500	in.	10	8 5/16	12 5/8	6 5/8	98.1 lb.
		mm	250	211	321	168	44.5 kg
s	39520	in.	12	7 5/8	14 3/4	6 5/16	104.0 lb.
		mm	300	194	375	160	47.2 kg
n	39550	in.	15	9 7/16	18 5/8	8 5/8	186.0 lb.
		mm	375	240	473	219	84.4 kg

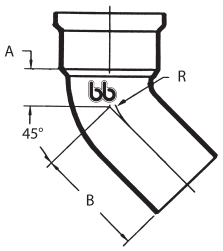
Bends – ⅙ – 60°



	Code		Size	A	B	R	Weight
n	39630	in.	3	1 7/8	5 7/16	3	6.2 lb.
		mm	75	48	138	76	2.8 kg
n	39640	in.	4	3 1/4	6 1/4	4	12.2 lb.
		mm	100	83	159	102	5.5 kg
n	39660	in.	6	4 1/4	7	5	21.0 lb.
		mm	150	108	178	127	9.5 kg
n	39680	in.	8	5 1/8	7 5/8	7 1/2	33.5 lb.
		mm	200	130	194	191	15.2 kg

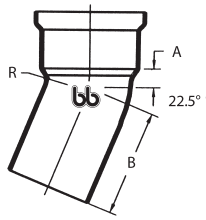
Bends – ⅛ – 45°

	Code		Size	A	B	R	Weight
s	39820	in.	2	1¾	3⅞	2	4.2 lb.
		mm	50	44	98	51	1.9 kg
s	39830	in.	3	2⅛	5⅞	3½	7.5 lb.
		mm	75	54	149	89	3.4 kg
s	39840	in.	4	3	5	4	11.0 lb.
		mm	100	76	127	102	5.0 kg
n	39850	in.	5	2¼	6	4¾	15.0 lb.
		mm	125	57	152	121	6.8 kg
s	39860	in.	6	1⅞	6⅜	5	15.5 lb.
		mm	150	48	162	127	7.0 kg
s	39880	in.	8	4	8⅛	7	41.8 lb.
		mm	200	102	206	178	19.0 kg
s	39900	in.	10	5	7¼	7½	50.5 lb.
		mm	250	127	184	191	22.9 kg
s	39920	in.	12	5	9¼	10	76.5 lb.
		mm	300	127	235	254	34.7 kg
n	39950	in.	15	6¾	11	9	142 lb.
		mm	375	171	279	229	64.4 kg

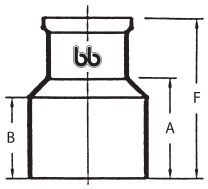


Bends – 1/16 – 22½°

	Code		Size	A	B	R	Weight
n	39130	in.	3	2	4 5/16	3½	6.9 lb.
		mm	75	51	110	89	3.1 kg
n	39160	in.	6	1½	4⅛	5	16.0 lb.
		mm	150	38	105	127	7.3 kg

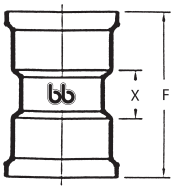


Reducers



	Code		Size	A	B	F	Weight
n	68610	in.	3 × 2	4 1/16	3 9/16	6 1/2	4.3 lb.
		mm	75 × 50	103	90	165	2.0 kg
s	68620	in.	4 × 2	3 3/16	2 9/16	5 7/16	5.0 lb.
		mm	100 × 50	81	65	138	2.3 kg
n	68630	in.	4 × 3	4 3/8	3 1/4	7	7.0 lb.
		mm	100 × 75	111	83	178	3.2 kg
s	68680	in.	6 × 4	5 7/16	4 1/4	8 5/8	10.2 lb.
		mm	150 × 100	138	108	219	4.6 kg
s	68700	in.	8 × 4	4 5/8	3 3/8	7 3/16	15.8 lb.
		mm	200 × 100	117	86	183	7.2 kg
s	68710	in.	8 × 6	5 3/4	4 1/2	8 3/4	20.0 lb.
		mm	200 × 150	146	114	222	9.1 kg
s	68740	in.	10 × 8	6 5/8	5 1/4	9 7/8	33.2 lb.
		mm	250 × 200	168	133	251	15.1 kg
s	68750	in.	12 × 4	7 3/16	5 9/16	10 1/16	39.7 lb.
		mm	300 × 100	183	141	256	18.0 kg
s	68760	in.	12 × 6	6 1/2	4 7/8	9 3/8	38.0 lb.
		mm	300 × 150	165	124	238	17.2 kg
s	68780	in.	12 × 8	6 1/4	5 5/16	10 3/16	48.0 lb.
		mm	300 × 200	159	135	259	21.8 kg
s	68800	in.	12 × 10	6 1/16	5 1/4	10	47.0 lb.
		mm	300 × 250	154	133	254	21.3 kg
s	68840	in.	15 × 4	8 1/8	5 7/8	11 1/4	55.0 lb.
		mm	375 × 100	206	149	286	24.9 kg
n	68900	in.	15 × 10	7 5/16	5 3/4	11 1/4	64.0 lb.
		mm	375 × 250	186	146	286	29.0 kg
n	68910	in.	15 × 12	7 1/2	5	11 1/4	65.0 lb.
		mm	375 × 300	191	127	286	29.5 kg

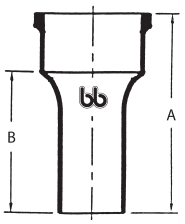
Double – Hub



	Code		Size	F	X	Weight
n	68030	in.	3	6 3/16	1 7/16	5.5 lb.
		mm	75	157	37	2.5 kg

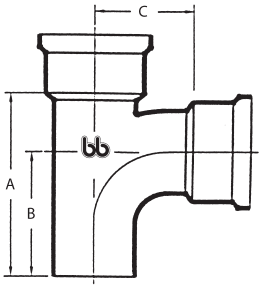
Roof Increasers – Flat

	Code		Size	A	B	Weight
n	68300	in.	4 × 6	11 1/8	8	14.0 lb.
		mm	100 × 150	283	203	6.4 kg
n	68330	in.	6 × 8	10 1/8	7 1/4	22.0 lb.
		mm	150 × 200	257	184	10.0 kg

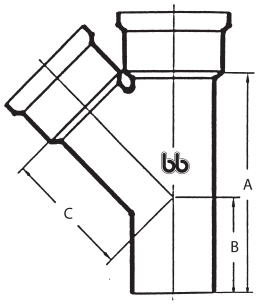


"TY" (Sanitary)

	Code		Size	A	B	C	Weight
s	59220	in.	2 × 2	6 5/8	6 3/8	3	7.5 lb.
		mm	50 × 50	168	162	76	3.4 kg
s	59320	in.	3 × 2	8 1/2	6 9/16	3 1/16	10.5 lb.
		mm	75 × 50	216	167	78	4.8 kg
s	59330	in.	3 × 3	9 3/4	7 3/8	3 7/16	12.3 lb.
		mm	75 × 75	248	187	87	5.6 kg
s	59440	in.	4 × 4	9 1/8	7 7/8	3 3/4	19.3 lb.
		mm	100 × 100	232	200	95	8.8 kg
s	59630	in.	6 × 3	10 1/16	8 1/4	4 5/8	27.0 lb.
		mm	150 × 75	256	210	117	12.2 kg
s	59640	in.	6 × 4	12 1/16	9	5 1/8	29.8 lb.
		mm	150 × 100	306	229	130	13.5 kg
s	59660	in.	6 × 6	14	10 3/8	5 1/2	37.0 lb.
		mm	150 × 150	356	264	140	16.8 kg



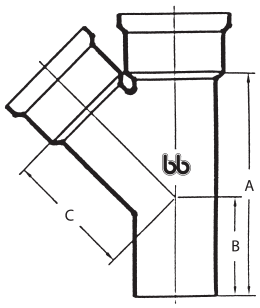
"Y"



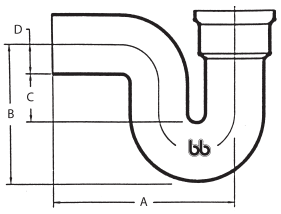
	Code		Size	A	B	C	Weight
s	49220	in.	2 × 2	8 1/8	4 1/16	3 3/4	7.9 lb.
		mm	50 × 50	206	103	95	3.6 kg
s	49320	in.	3 × 2	9 1/4	4 1/2	5	12.8 lb.
		mm	75 × 50	235	114	127	5.8 kg
s	49330	in.	3 × 3	10 7/8	4 5/8	5 5/8	15.0 lb.
		mm	75 × 75	276	117	143	6.8 kg
s	49420	in.	4 × 2	10 7/16	4 3/16	5 5/8	11.9 lb.
		mm	100 × 50	265	106	143	5.4 kg
s	49430	in.	4 × 3	11	4 3/16	6 3/4	16.1 lb.
		mm	100 × 75	279	106	171	7.3 kg
s	49440	in.	4 × 4	12 3/4	4 1/2	7	21.0 lb.
		mm	100 × 100	324	114	178	9.5 kg
n	49540	in.	5 × 4	11 5/8	3 9/16	8 1/8	25.5 lb.
		mm	125 × 100	295	90	206	11.6 kg
n	49550	in.	5 × 5	11 9/16	3 3/8	8 7/8	29.0 lb.
		mm	125 × 125	294	86	225	13.2 kg
s	49630	in.	6 × 3	11 1/2	5 1/8	7 5/16	28.0 lb.
		mm	150 × 75	292	130	186	12.7 kg
s	49640	in.	6 × 4	10 3/4	5 1/16	7 5/8	31.0 lb.
		mm	150 × 100	273	129	194	14.1 kg
s	49660	in.	6 × 6	14 7/8	5 7/8	9 9/16	39.5 lb.
		mm	150 ×150	378	149	243	17.9 kg
s	49830	in.	8 × 3	12 3/8	3 1/2	10 1/4	51.0 lb.
		mm	200 × 75	314	89	260	23.1 kg
s	49840	in.	8 × 4	13 1/4	3 7/8	11	56.0 lb.
		mm	200 ×100	337	98	279	25.4 kg
s	49860	in.	8 × 6	15 3/8	5 1/4	11 3/8	60.7 lb.
		mm	200 × 150	391	133	289	27.5 kg

"Y" (continued)

	Code		Size	A	B	C	Weight
s	49880	in.	8 × 8	20 1/8	7 1/2	12 5/8	86.0 lb.
		mm	200 × 200	511	191	321	39.0 kg
s	49800	in.	10 × 4	13 3/4	3 1/2	11 1/2	74.0 lb.
		mm	250 × 100	349	89	292	33.6 kg
s	49810	in.	10 × 6	15 1/4	4 9/16	13	73.0 lb.
		mm	250 × 150	387	116	330	33.1 kg
s	49870	in.	10 × 10	19 1/2	8	14 3/4	117.0 lb.
		mm	250 × 250	495	203	375	53.1 kg
s	49890	in.	12 × 4	14 1/4	4	12 1/2	92.0 lb.
		mm	300 × 100	362	102	318	41.7 kg
s	49900	in.	12 × 6	16 1/2	4 1/2	14	118.0 lb.
		mm	300 × 150	419	114	356	53.5 kg
s	49910	in.	12 × 8	19 3/4	6 1/8	15 1/2	142.0 lb.
		mm	300 × 200	502	156	394	64.4 kg
s	49920	in.	12 × 10	21 7/8	8 1/8	15 7/8	181.0 lb.
		mm	300 × 250	556	206	403	82.1 kg
s	49930	in.	12 × 12	24 3/4	9 1/4	17 1/4	176.0 lb.
		mm	300 × 300	629	235	438	79.8 kg
s	49940	in.	15 × 4	16 3/8	3 1/4	16 7/8	133.0 lb.
		mm	375 × 100	416	83	429	60.3 kg
s	49950	in.	15 × 6	19 3/8	6	18 5/8	159.0 lb.
		mm	375 × 150	492	152	473	72.1 kg
s	49960	in.	15 × 8	21	3 3/4	18 3/4	190.0 lb.
		mm	375 × 200	533	95	476	86.2 kg
s	49970	in.	15 × 10	23	8 1/4	22	207.0 lb.
		mm	375 × 250	584	210	559	94.0 kg
s	49980	in.	15 × 12	24 1/2	8 1/4	22 1/2	260.0 lb.
		mm	375 × 300	622	210	572	117.9 kg
s	49990	in.	15 × 15	25 3/4	9 1/2	22 7/8	303.0 lb.
		mm	375 × 375	654	241	581	137.4 kg



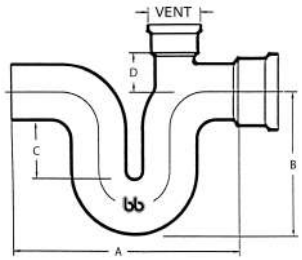
"P" Traps Deep Seal



	Code		Size	A	B	C	D	Weight
s	62230	in.	3	12	8	4 5/16	1 5/8	17.0 lb.
		mm	75	305	203	110	41	7.7 kg
s	62240	in.	4	13 3/4	10 7/8	3 3/4	2 3/16	21.3 lb.
		mm	100	349	276	95	56	9.7 kg
n	62260	in.	6	17 1/2	12 1/2	3 1/8	3 1/4	45.0 lb.
		mm	150	445	318	79	83	20.4 kg

Note: Trap primer connection 3 in. and 4 in. shown on page 66.

Running Traps with Single Hub Vent

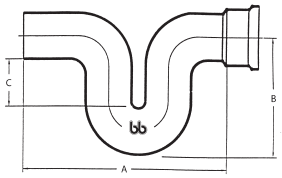


	Code		Size	A	B	C	D	Vent	Weight
n	62420	in.	2	10	4 3/4	1 1/2	1 1/16	2*	10.0 lb.
		mm	50	254	121	38	27	50*	4.5 kg
s	62430	in.	3	13 3/4	8 5/16	3 1/2	2	3*	21.8 lb.
		mm	75	349	211	89	51	75*	9.9 kg
s	62440	in.	4	17 9/16	9 7/8	3 1/2	3 1/4	4*	38.0 lb.
		mm	100	446	251	89	83	100*	17.2 kg
s	62460	in.	6	21 7/8	12 1/8	2 3/4	4 1/8	4*	58 lb.
		mm	150	556	308	70	105	100*	26.3 kg
n	62480	in.	8	29 1/4	15 7/8	3 3/8	5 1/4	6*	145.0 lb.
		mm	200	743	403	86	133	150*	65.8 kg
n	62500	in.	10	34	19 5/8	4 1/16	6	6*	187.0 lb.
		mm	250	864	498	103	152	150*	84.8 kg
n	62520	in.	12	41 1/4	20 1/8	4 1/8	7 1/4	8*	332.0 lb.
		mm	300	1,048	511	105	184	200*	150.6 kg
n	62550	in.	15	46 1/2	21 1/4	3 1/2	7 3/4	8*	605.0 lb.
		mm	375	1,181	540	89	197	200*	274.4 kg

Note: Trap primer connection 3 in. and 4 in. shown on page 66.
* Hub vent dimensions are nominal pipe connection.

Running Traps

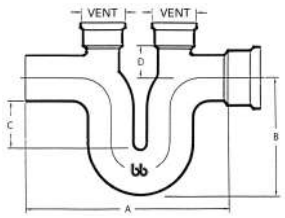
	Code		Size	A	B	C	Weight
n	62730	in.	3	13 7/8	6 3/8	1 1/2	15.0 lb.
		mm	75	352	162	38	6.8 kg
n	62740	in.	4	17 1/8	7 3/8	1 5/8	25.3 lb.
		mm	100	435	187	41	11.5 kg



Note: Trap primer connection 3 in. and 4 in. shown on page 66.

Running Traps with Double Hub Vent

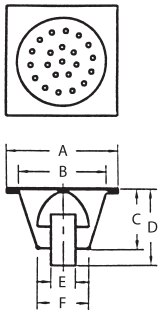
	Code		Size	A	B	C	D	Vent	Weight
n	62970	in.	3	15 7/16	9 7/8	5	2	3*	29.0 lb.
		mm	75	392	251	127	51	75*	13.2 kg
n	62980	in.	4	16 1/4	10 5/16	4	3 5/16	4*	41.0 lb.
		mm	100	413	262	102	84	100*	18.6 kg
n	62860	in.	6	22 7/8	10 5/8	3 3/16	3 7/8	4*	70.0 lb.
		mm	150	581	270	81	98	100*	31.8 kg



Note: Trap primer connection 3 in. and 4 in. shown on page 66.
* Hub vent dimensions are nominal pipe connection.

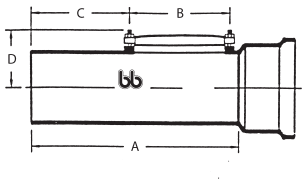
Bell Traps

	Code		Size	A	B	C	D	E	F	Weight
n	65740	in.	6 × 6	6	4 13/16	3 1/4	4 3/16	2 9/32	2 3/4	7.1 lb.
		mm	150 × 150	152	122	83	106	58	70	3.2 kg



HUB & SPIGOT

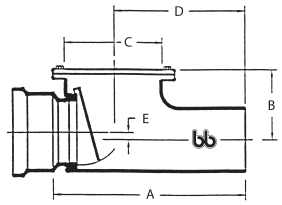
Barrett Cleanouts – Hub & Spigot



	Code		Size	A	B	C	D	Weight	Cover Only
s	69230	in.	3	12 7/8	7 3/8	5 1/4	2 13/16	16.1 lb.	69210
		mm	75	327	187	133	71	7.3 kg	
s	69240	in.	4	13	5 15/16	6 1/16	3 1/4	24.9 lb.	64650
		mm	100	330	151	154	83	11.3 kg	
s	69260	in.	6	15 13/16	7 13/16	6 3/4	4 9/16	34.0 lb.	64660
		mm	150	402	198	171	116	15.4 kg	
s	69280	in.	8	19 1/8	8 1/8	8 5/8	7 7/16	82.2 lb.	692C0
		mm	200	486	206	219	189	37.3 kg	
s	69300	in.	10	21 1/8	10 1/4	8 5/8	8 1/4	127.0 lb.	692D0
		mm	250	537	260	219	210	57.6 kg	
s	69310	in.	12	23 5/8	11 3/8	8	10 1/4	160.9 lb.	692E0
		mm	300	600	289	203	260	73.0 kg	

Back Water Valves – Hub & Spigot

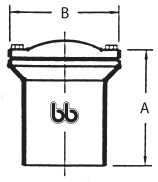
	Code		Size	A	B	C	D	E	Weight	Cover Only	Flapper Only
s	69040	in.	4	10 1/4	4 3/16	5 3/4	7 3/4	9/16	26.9 lb.	65200	65070
		mm	100	260	106	146	197	14	12.2 kg		
s	69060	in.	6	13 7/8	6	6 1/4	9 3/16	1 7/8	37.9 lb.	65220	65080
		mm	150	352	152	159	233	48	17.2 kg		
s	69080	in.	8	18 7/8	7 1/4	7 13/16	12 15/16	7/16	89.1 lb.	692C0	65090
		mm	200	479	184	198	329	11	40.4 kg		
s	69100	in.	10	20 3/4	8 5/16	13 1/8	13 1/2	13/16	162.9 lb.	692D0	65100
		mm	250	527	211	333	343	21	73.9 kg		
s	69120	in.	12	23 5/8	10 3/16	10 11/16	13 1/2	1 13/16	185.0 lb.	692E0	65120
		mm	300	600	259	271	343	46	83.9 kg		



Recommended for: Branch of the building drain where there is possibility of back-flow of sewage from heavy rainfall or flood, also for isolating flood conditions in branch or trunk-line street sewers.

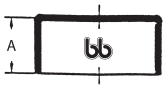
Malcolm – Anthes Cleanouts – Hub & Spigot

	Code		Size	A	B	Weight	Cover Only
s	64320	in.	2	4 1/4	4 3/8	3.8 lb.	69200
		mm	50	108	111	1.7 kg	
s	69340	in.	4	6 1/4	6 1/16	6.0 lb.	692i0
		mm	100	159	154	2.7 kg	
s	69360	in.	6	4 7/8	8 3/8	9.9 lb.	64560
		mm	150	124	213	4.5 kg	



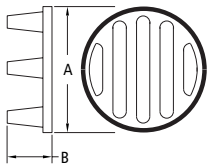
Plugs – Hub & Spigot

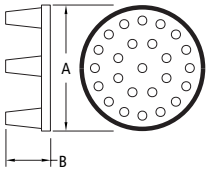
	Code		Size	A	Weight
s	63020*	in.	2	2	1.0 lb.
		mm	50	51	0.5 kg
s	63030*	in.	3	2	1.5 lb.
		mm	75	51	0.7kg
s	63040*	in.	4	2	2.5 lb.
		mm	100	51	1.1 kg
n	63050*	in.	5	3	4.5 lb.
		mm	125	76	2.0 kg
s	63060*	in.	6	3	5.8 lb.
		mm	150	76	2.6 kg
s	63080*	in.	8	3	17.5 lb.
		mm	200	76	7.9 kg
s	63100*	in.	10	3 3/4	18.5 lb.
		mm	250	95	8.4 kg
s	62990*	in.	12	3 7/8	24.7 lb.
		mm	300	98	11.2 kg
s	63000*	in.	15	4 1/4	40.6 lb.
		mm	375	108	18.4 kg



* Compatible with pipes and fittings Hubless (MJ).

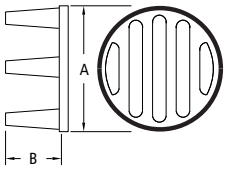
Grates with Inside Legs (MJ)

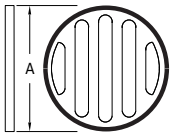




Code		Size	A	B	Weight
s 65780	in.	3	3 3/4	3/4	0.5 lb.
	mm	75	95	19	0.2 kg
s 65790	in.	4	4 3/4	3/4	0.6 lb.
	mm	100	121	19	0.3 kg

Grates (Hub & Spigot)



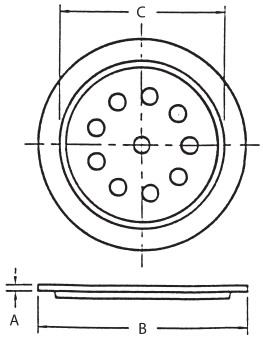


Code			Size	A	B	Weight P	Weight L
P	L						
n/a	n 65920	in.	2	2 7/8	2 1/2	0.5 lb.	1.1 lb.
		mm	50	73	64	0.2 kg	0.5 kg
n/a	s 65930	in.	3	3 13/16	2 1/2	1.0 lb.	1.0 lb.
		mm	75	97	64	0.5 kg	0.5 kg
n 68440	n 65940	in.	4	4 7/8	2 1/2	1.0 lb.	1.5 lb.
		mm	100	124	64	0.5 kg	0.7 kg
n 68460	n 65960	in.	6	7	2 1/2	4.0 lb.	3.6 lb.
		mm	150	178	64	1.8 kg	1.6 kg

Plain = P Grates with Legs = L

Catchbasin Ring and Cover

	Code Solid	Code Perf.	Code Ring		Size	A	B	C	Weight Cover	Weight Ring
s	67360	67260	67460	in.	6	11/16	8	5 11/16	2.3 lb.	3.3 lb.
				mm	150	17	203	144	1.0 kg	1.5 kg
s	67380	67280	67480	in.	8	11/16	10	7 5/8	3.5 lb.	5.0 lb.
				mm	200	17	254	194	1.6 kg	2.3 kg
s	67400	67300	67500	in.	10	3/4	12 3/16	9 5/8	5.9 lb.	8.0 lb.
				mm	250	19	310	244	2.7 kg	3.6 kg
s	67420	67320	67520	in.	12	13/16	14 1/2	11 5/8	9.6 lb.	9.3 lb.
				mm	300	21	368	295	4.4 kg	4.2 kg



BIBBY-STE-CROIX

Terms and Conditions of Sale of the Products Sold by Bibby-Ste-Croix, division of Canada Pipe Company Ltd.

1. Entire Agreement Bibby-Ste-Croix (the Seller), a Division of Canada Pipe Company Ltd, agrees to sell the goods covered herein (the Goods) to Buyer on the following terms and conditions of sale (the Terms and Conditions) which supersede any other or inconsistent terms of Buyer. This contract constitutes the entire agreement between parties with respect to the Goods, and this Agreement may not be modified, amended or waived in any way except in writing signed by an authorized representative of Seller. No representation, promise or term not set forth herein has been nor may be relied upon by Buyer. All references by Seller to Buyer's specifications and similar requirements are only to describe the products and work covered hereby and no warranties or other terms therein shall have any force or effect.

2. Quotations Where this form is used by Seller to place a bid, the quotation stated herein is for prompt acceptance and is subject to change and/or withdrawal without notice. Prompt acceptance of all quotations and adherence to delivery schedules are material terms of the bid and any subsequent agreement. In cases where freight allowance is included in the quotation, Buyer is liable for any rate increase and/or additional expense over the calculated allowance resulting from compliance with Buyer's shipping instructions.

3. Acceptance This order shall not be binding upon Seller until accepted by an authorized representative of Seller at its home office. Acceptance of orders, whether verbal or written, is based on the express condition that Buyer agrees to all of these Terms and Conditions. Acceptance of delivery by Buyer will constitute Buyer's assent to these Terms and Conditions in their entirety.

4. Delivery All prices are F.O.B. Seller's plant, unless otherwise specified by Seller. All shipping dates are approximate, and any time period indicated for a shipment shall not commence until receipt at Seller's plant of complete manufacturing, shipping and credit information. Acceptance of shipment by designated shipper, allocation of Goods to Buyer at premises other than Seller's, delivery to Buyer's representative or designee, or mailing of an invoice to Buyer, whichever first occurs, shall constitute tender of delivery. Upon tender of delivery, title shall pass to Buyer, subject of Seller's right of stoppage in transit and to any interest of Seller reserved to secure Buyer's payment or performance, irrespective of any freight allowance or prepayment of freight. Goods held subject to Buyer's instructions, Goods for which Buyer has failed to supply shipping instructions, or in any case where Seller, in its sole discretion, determines any part of the Goods should be held for Buyer's account, Seller may invoice the Goods and Buyer agrees to make payment at the maturity of the invoice rendered. Goods invoiced and held at any location for whatever reason shall be at Buyer's risk and Seller may charge for (but is not obligated to carry) insurance, storage and other expenses incident to such delay at its prevailing rates. Partial deliveries shall be accepted by Buyer and paid for at contract prices and terms. When Buyer has declared or manifested an intention not to accept delivery, no tender shall be necessary but Seller may, at its option, give notice in writing to Buyer that Seller is ready and willing to deliver and such notice shall constitute a valid tender of delivery. In no event shall Buyer be entitled to make any deduction from any payment due hereunder by reason of loss or damage in transit. Upon the written request of Buyer, Seller, at its sole discretion, may agree as a service to Buyer to process Buyer's claim against the carrier for any loss or damage in transit, provided that such claim is received by Seller within five (5) days of the receipt of Goods. Any such claims must be accompanied by a delivery receipt, signed by carrier's agent at time of delivery, on which receipt the loss or damage has been noted. In the absence of directions, Goods will be shipped by the method and via carrier Seller believes dependable. Delivery by truck will be made to nearest points reasonably accessible by truck as determined by the driver. Buyer will furnish and pay for necessary labor to unload and store Goods. Buyer shall note loss or damage on truck shipments upon delivery ticket returned to Seller, or such claims shall be waived, Buyer must report any shortages within three days of receipt of the initial shipment.

5. Terms of Payment Terms to Buyers whose credit has been approved in writing by Seller are 2% 15 month following, net 30 month following, after date of invoice, unless otherwise agreed in writing by Seller. Seller shall have the right to make partial shipments therefore shall be due according to usual terms of payment. If, at any time or for any reason, Seller shall have cause to question Buyer's ability to perform, Seller may demand such assurances of Buyer's performance as Seller shall deem necessary in its discretion, including payment in advance for all shipments. If Buyer fails within 10 days of Seller's demand to provide Seller such assurance, Seller shall be entitled to cancel any order then outstanding, receive reimbursement for its reasonable and proper cancellation charges and may proceed to collect, without limitation, any sums due and owing, its reasonable cancellation charges and all damage resulting from Buyer's default. In the event of bankruptcy or insolvency of Buyer, or in the event of any proceeding brought against Buyer, voluntarily or involuntarily, under bankruptcy or any insolvency laws, Seller shall be entitled to cancel any order than outstanding at any time and shall receive reimbursement for its reasonable and proper cancellation charges. If Buyer fails to make payment for the Goods when due, Buyer's account shall be deemed delinquent and Buyer shall be liable to Seller for a service charge of eighteen percent (18%) per annum or the maximum allowed by law, whichever is greater, on any unpaid amount. Buyer shall be liable to Seller for all costs and expenses of collection, including court costs and reasonable attorney's fees.

6. Cancellation, Changes and Returns This order is not subject to cancellation, change or return unless agreed to in writing by an authorized representative of Seller. At Seller's option, Buyer may be charged for any costs incurred by Seller prior to or as a result of such cancellation, change or return. In the event of any change, Seller shall be entitled to revise its prices and delivery dates to reflect such change. When Seller's agreement is obtained, Seller will accept returned material for credit if, in its sole discretion, it finds such material to be standard stock and in good condition. Such credit shall be the invoice price less 35% on acceptable goods, and less all shipping and handling charges. In all other cases, the credit in Seller's sole discretion shall be the scrap value of the Goods, less shipping and handling charges.

7. Delay in or prevention of performance Seller shall not be liable for any expense, loss or damage resulting from delay in delivery or prevention of performance caused by fires, floods, acts of God, strikes, labor disputes, labor shortages, lack of or inability to obtain materials, fuels, supplies or equipment, riots, accidents, transportation delays, acts or failures to act of any government or of Buyer, or any other cause whatsoever, provided that such cause is beyond the reasonable control of Seller, and Seller shall have such additional time for performance as may reasonably be necessary under the circumstances and may adjust the price to reflect increases caused by such delay. Acceptance by Buyer of any Goods shall constitute a waiver by Buyer of any claim for damages on account of

any delay in delivery such Goods. If delivery is delayed or interrupted for any such cause, Seller may store the Goods at Buyer's expense and risk, and Seller may charge Buyer therefore a reasonable storage rate . If Seller is delayed in proceeding with production or otherwise because it is awaiting Buyer's approval or acceptance of designs, drawings, prints, engineering or technical data, or is awaiting Buyer's approval or acceptance of the Goods, Seller shall be entitled to an adjustment in price commensurate with any increase in Seller's cost of production and any other losses and expenses incurred by Seller attributable to such delays.

8. Deferred delivery Any deferred delivery request by Buyer shall be subject to Seller's written approval . If such approval is given, Seller shall have the right to charge Buyer for the completed portion of the order and to warehouse all completed Goods at Buyer's expense and risk of loss. Seller also reserves the right, at its option, as to any uncompleted portion of the order to cancel said uncompleted portion in accordance with Paragrah 6 above, or to revise its prices and delivery schedules on the portion not completed to reflect its increased costs and expenses attributable to the delay.

9. Warranty and limitation of liabilities and Buyer's remedies Seller warrants that the Goods delivered hereunder shall be of the kind described in the within agreement and free from defects in material and workmanship under conditions of normal use. Seller reserves the right to make any modifications required by production conditions to the information set forth in Seller's catalogues and advertising literature. Seller shall not be liable or responsible, however, for (A) any defects attributed to normal wear and tear, erosion or corrosion or improper storage, use or maintenance, or (B) defects in any portion or part of the Goods manufactured by others. If (B) above is applicable, Seller will, as an accommodation to Buyer, assign to Buyer any warranties given to it by any such other manufacturers. Any claim by Buyer with reference to the Goods for any cause shall be deemed waived by Buyer unless submitted to Seller in writing within ten (10) days from the date Buyer discovered, or should have discovered, any claimed breach. Buyer shall give Seller an opportunity to investigate.

Provided that Seller is furnished prompt notice by Buyer of any defect and an opportunity to inspect the alleged defect as provided herein, Seller shall, at its option and in its sole discretion either (i) repair the defective or non-conforming Goods, (ii) replace the nonconforming Goods, or part thereof, which are sent to Seller by Buyer within sixty days after receipt of the Goods at Buyer's plant or storage facilities, or (iii) if Seller is unable or chooses not to repair or replace, return the purchase price that has been paid and cancel any obligation to pay unpaid portions of the purchase price of nonconforming Goods. In no event shall any obligation to pay or refund exceed the purchase price actually paid. Repair and/or replacement as provided above shall be at Seller's plant and shipped FOB Plant unless otherwise agreed to by Seller. Transportation charges for the return of the Goods or part thereof to Seller shall be prepaid by Buyer, unless otherwise agreed to in writing by Seller. Seller shall, in no event, be responsible for any labor, removal or installation charges that may result from the above-described repair and/or replacement of any Goods. The foregoing warranty does not cover failure of any part or parts manufactured by others, the failure of any part or parts from external forces, including but not limited to earthquake, installation, vandalism, vehicular or other impact, application of excessive torque to the operating mechanism or frost heave. The exclusive remedy of Buyer and the sole liability of Seller, for any loss, damage, injury or expense of any kind arising from the manufacture, delivery, sale, installation, use or shipment of the Goods and whether based on contract, warranty, tort or any other basis of recovery whatsoever, shall be, at the election of Seller, the remedies described above. The foregoing is intended as a complete allocation of the risks between the parties and Buyer understands that it will not be able to recover consequential damages even though it may suffer such damages in substantial amounts. Because this Agreement and the price paid reflect such allocation, this limitation will not have failed of its essential purpose even if it operates to bar recovery for such consequential damages.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS OR IMPLIED BY LAW. THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE) OR STRICT LIABILITY, SHALL SELLER BE LIABLE FOR ANY PUNITIVE, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFIT, LOSS OF USE OF THE GOODS OR OTHER PROPERTY EQUIPMENT, DAMAGE TO OTHER PROPERTY, COST OF CAPITAL, COST OF SUBSTITUTE GOODS, DOWNTIME, OR THE CLAIMS OF BUYER'S CUSTOMERS FOR ANY OF THE AFORESAID DAMAGES. SELLER SHALL NOT BE LIABLE FOR AND BUYER AGREES TO INDEMNIFY SELLER FOR ALL PERSONAL INJURY, PROPERTY DAMAGE OR OTHER LIABILITY RESULTING IN WHOLE OR IN PART FROM THE NEGLIGENCE OF BUYER.

In any contract by Buyer for resale of the Goods Buyer shall effectively disclaim, as against Seller, any implied warranty or merchantability and all liability for property damage or personal injury resulting from the handling, possession or use of the Goods, and shall exclude, as against Seller, any liability for special or consequential damages.

10. Patents If any claim is made against Buyer based on a claim that any of the Goods constitute an infringement of any Letter Patent, Buyer shall notify Seller immediately. Seller shall have the right, with Buyer's assistance, if required, but at Seller's expense, to conduct settlement negotiations of any litigation. If any of the Goods are held to infringe any Letter Patent, and their use is enjoined or, if as a result of a settlement, Seller deems their continued use unadvisable and provided that Buyer has given Seller the immediate notice provided for above and has used the Goods only in accordance with the provisions of this order and shall not have altered or changed them in any material way, Seller shall, at its option and expense, procure for Buyer the right to continue using the Goods, modify the Goods so that they become non-infringing, replace the Goods with non-infringing Goods of substantially equal quality, or replace the Goods and refund the purchase price, less reasonable depreciation. The foregoing states Seller's entire liability for patent infringement.

11. Controlling Law The interpretation, execution, application, validity and effect of this contract and also all right and obligations arising from it are governed by the laws in force in the Province of Quebec, and in Canada. **The parties expressly recognise that all claim or judicial proceedings, arising from this contract for any reason, will be exercised before the court of Quebec, to the exclusion of any other court which may have jurisdiction on such dispute according to the prescriptions of law.**

12. Arbitration and dispute resolution At the Seller's option, all dispute, contestation or claim between the Seller and the Buyer in relation with the transaction provided in these presents, including but without limiting, all claim based on allegation of fault, may be irrevocably submitted to the arbitration proceedings according to section 2638 and following of the Quebec civil code and section 940 and following of the Quebec code of civil procedure. Defence based on prescription or any similar grounds will be applicable, in the said arbitration proceedings. For this purpose, the beginning of an arbitration proceeding following these presents shall be deemed a beginning of an action. The arbitrators will be chosen according to section 941 of the Quebec Code of civil procedure.

13. Waiver No delay or failure by Seller to exercise any right or remedy under these Terms and Conditions shall be construed to be a waiver thereof. Waiver by Seller of any breach shall be limited to the specific breach so waived and shall not be construed as a waiver of any subsequent breach.

14. Assignment Buyer may not assign this order or any rights hereunder without the prior written consent of Seller. This Agreement and the Terms and Conditions contained herein, are enforceable, however, against the successors and assigns of Buyer.

15. Taxes Seller's prices do not include sales, use, excise or other similar taxes. Consequently, in addition to the price specified herein, the amount of any present or future such tax shall be paid by Buyer, or in lieu thereof, Buyer shall provide Seller with all tax-exemption certificates required by the taxing authorities, at the time of sale.

16. Cumulative Nature of Remedies All remedies of Seller set forth herein shall be cumulative and shall be in addition to any other remedies available to Seller, whether at law, equity or otherwise.

GO GREENNOW

Advantages of Bibby-Ste-Croix Cast Iron

- Non-Combustible
- Superior Noise Suppression
- Corrosion Resistance
- Strong & Durable
- Low Thermal Expansion Rates
- Easy to Assemble, Install, Service
- Longevity
- Environmentally Friendly
- Building Code Acceptance
- Canadian Made
- Excellent customer sevice

Bibby-Ste-Croix, the only Canadian manufacturer with a complete line of cast iron soil pipe and fitting product.

1-800-463-3480 / www.bibby-ste-croix.com
Bibby-Ste-Croix, 6200 Principale, Sainte-Croix, Québec G0S 2H0
Tel: (418) 926-3262 Fax: (418) 926-2430