COLOMBO

BEVERAGE CHASE SYSTEMS

INNOVATIVE RELIABLE SOLUTIONS

PRODUCT CATALOG

Innovating to create the most dependable and highest quality beverage conduit systems

www.beveragechase.com 1-800-547-2820

COLOMBO

BEVERAGE CHASE SYSTEMS

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COLOMBO BEVERAGE CHASE SYSTEMS

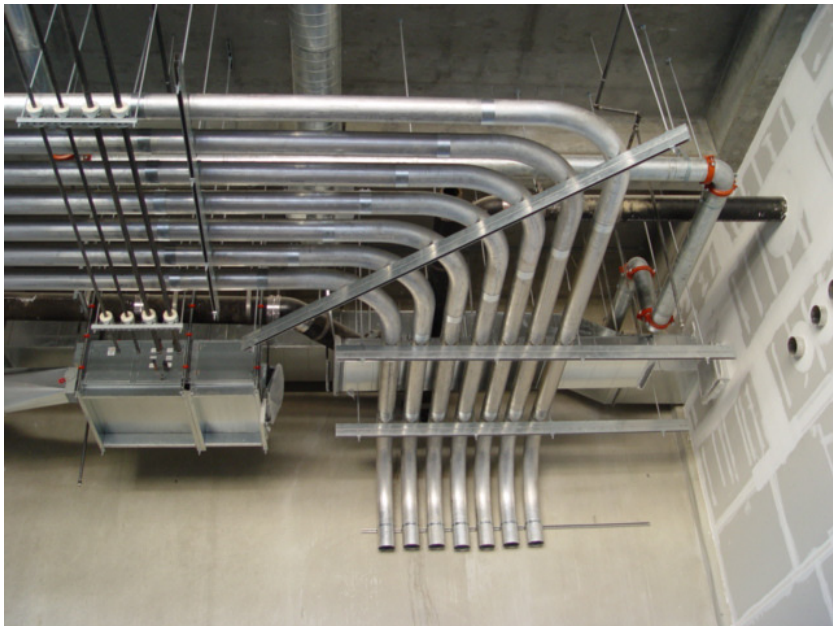
INTRODUCTION

Colombo Beverage Chase Systems is an innovative supplier of Beverage CHASE® conduit systems.

Our CHASE systems are designed to enclose distribution lines carrying food product such as beer, soda/juice, liquor, water, wine, other food product and frozen drinks, as well as coolant & CO_2 for remote distribution systems.

To implement clean, safe and effective distribution systems, many disciplines are involved, they are:

- **Food service**
  - Consultants
  - Designers
  - Architects
- **MEP Engineers**
  - Mechanical
  - Electrical
  - Plumbing
- **Contractors**
  - Mechanical
  - Electrical
  - Plumbing
  - Generals & CM's
- **Building Inspectors**
- **Fire Marshals**
- **Health Departments**



Beverage CHASE Systems are available in aluminum and galvanized steel, both plenum rated in overhead applications, and STOUTi.e.® for underground applications.

FOOD SERVICE

Consultants • Designers • Architects

System design is the key to a successful beverage dispensing system to meet the needs of the venue and its intended use. Colombo is available to assist in design of a CHASE® system to insure ease of installation and long-term maintenance.

Colombo can also assist with integrating the CHASE with other Mechanical, Electrical and Plumbing (MEP) components of the facility and assist in compliance.

MEP ENGINEERS

Remote beverage dispensing systems are easy to overlook in a building project, however they are a major component of every food service venue from fast food to full service restaurants, stadiums, arenas, casinos and airports. These systems must co-exist with all the other MEP components in the building.

Colombo is available to support you in identifying and specifying the proper CHASE® conduit that will:

- Integrate with other MEP components.
- Protect the beverage dispensing systems being installed.
- Save time and money for your clients.

INSTALLING MEP CONTRACTORS

Mechanical Electrical Plumbing

CHASE systems are a major component of every food service venue from fast food to full service restaurants, stadiums, arenas, casinos and airports. Understanding these systems and integrating them with your mechanical, electrical or plumbing project could provide added revenue and profit to your bottom line.

Colombo Beverage CHASE Systems are specifically designed to be:

- Easy to estimate
- Easy to obtain quotations
- Easy to order
- Easy to install

Colombo is available to support MEP Contractors. Beverage CHASE conduit is a revenue and profit opportunity for your company.

COMPLIANCE

Building Inspectors - Fire Marshals
Health Departments

Remote beverage dispensing systems are found in nearly every food service venue from fast food to full service restaurants, stadiums, arenas, casinos and airports.

Often overlooked is the proper protection of beverage lines that transport the food-product from central storage to the remote dispensing stations.

Fire, Health and Building Inspectors are faced with compliance. Remote beverage systems need to be clean, safe, and meet local regulations.

Colombo is available via the hotline to support your needs.

WHY CHOOSE COLOMBO?

INNOVATION

Colombo Beverage Chase Systems has the most reliable, effective, and complete line of beverage CHASE® conduit systems and products available on the market today.

- **Aboveground CHASE with our leak-proof structural join system**
  - Leak-proof
  - Significant structural integrity
  - Creates a smooth transition inside the CHASE
- **STOUTi.e.® Underground CHASE**
  - Designed to be impervious to infiltration of ground water and seepage.
  - Clean, dry underground CHASE
- When assembled, Colombo CHASE is uninterrupted and leak-proof from end to end.
- Installation Tools – To improve the speed and quality of installation.
- Slip agent dispensing device – food grade product designed to assist in pulling beverage lines.
- Colombo – Free telephone support.

It is for these reasons that architects, engineers and consultants are specifying and MEP contractors are using Colombo Beverage Chase Systems.



FEATURES & BENEFITS

Aboveground CHASE®

- Smooth interior, including joins and transitions, allows easy installation of beverage lines. Trunk lines will not fray or catch because there are no sharp edges inside.
- Leak-proof join, ***designed with support from 3M***.
- Should the beverage trunk lines rupture, the contents will be contained in the system.
- Our join's structural integrity provides an average peak load of 574.7lbs.
- Long radius bends allow for easy installation of the line bundle.

  (As opposed to standard plumbing and electrical components which make it difficult and at times impossible to install line bundles.)
- Lightweight aluminum which is easy and less costly to install.

  (As opposed to PVC which is considered hazardous in plenum spaces and prohibited by fire codes.)

STOUTi.e.® Underground CHASE

See comparison chart - page 10 & 11

- Specifically designed to be impact resistant and provide long term durability.
- Resilient and impervious to most construction conditions.
- Abrasion resistant and requires no special site preparation or trench bedding.
- Made of material with low thermal conductivity therefore ideal for stabilizing temperatures.
- Non-toxic, inert and environmentally safe.
- **Proven to withstand seismic events.**
- Not susceptible to cracks & fissures like PVC.
- **NSF Approved [NSF 14 & 61] – Used for Municipal water lines.**
- STOUTi.e. fusion-join - Provides structural integrity and a reliable underground leak proof system.
- STOUTi.e. transition coupling to aboveground CHASE provides a smooth, leak-proof transition.
- STOUTi.e. provides a smooth interior wall that allows easy installation of lines.

COLOMBO
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SUPPORT SERVICES

Colombo is continually developing innovations and advancements to our product line that focus on achieving our clients' needs more quickly, more cost efficiently and with more flexibility.

We provide:

- Design Engineering
- Layout coordination
- Pre-installation assistance
- Installation
- Custom manufacturing
- Expedited delivery – Anywhere USA or Canada

From start to finish, Colombo can help design any of your projects.

With a fully trained design and installation team supported by our CAD department, we can design and layout the most complex projects.

Colombo also supports special needs such as consideration for seismic bracing, complex elevation changes, mechanical obstructions, custom solutions, fire-stop or other issues that may arise.

If you have a special need, Colombo will put their innovative engineering to work for you.

COLOMBO BEVERAGE CHASE SYSTEMS

Beverage CHASE® Overview

Beverage CHASE Systems have multiple purposes. Typically they are:

1. To route food product distribution lines from a source storage location to a single or multiple remote dispensing stations. Most typical are soda, beer, liquor, water, juice, wine, other food products such as frozen drinks and condiments, as-well-as propellants such as CO_2.

2. To protect the distribution lines from wide temperature variations.

3. To make installation of the lines a simple task for initial installation through a building.

4. To make installation of underground lines, where required, easy.

5. To make future replacement or repair a straightforward task.

6. To make service and maintenance of the distribution system easily accessible.

7. To protect the distribution lines from a variety of adverse conditions.

COLOMBO BEVERAGE CHASE SYSTEMS

General Guidelines for Installation

Pull box locations are generally located every 270 degrees of cumulative bend or approximately 100 to 150 feet of system.

Some line runs have straight sections in excess of 150 feet, in which case longer spacing is acceptable.

In some instances where junction boxes will be used to split or splice line runs, the junction box can replace the pull box.

Many factors will determine the placement of a pull or junction box. It may be necessary to contact the project consultant, architect, and beverage service provider to finalize a design and complete a problem free system installation.

Frequently asked questions:

1. Should placement of pull or junction boxes be a consideration or can they be placed anywhere in the system?
   The boxes should be placed in areas that are accessible to allow servicing of the beverage lines after initial installation. They should be located in an area that will facilitate line pulling and line pulling equipment, such as a tugger.

2. How are prohibited pathways handled?
   The CHASE system may need to be routed around restricted areas thus extending them. Example: They are generally not allowed to travel through electrical rooms.

3. How should large bundles, multiple bundles, heavily insulated lines, or lines containing copper refrigerant lines be handled?
   Large pre-bundled lines, multiple pre-bundles, heavily insulated lines and those with copper refrigerant lines are more difficult to pull. They may require a combination of larger CHASE, more boxes and/or less bends.

4. Is there a lubricant that can be used to make the installation easier?
   Yes, lubricants that are safe to use are available. If lubricant is not used during line pulling, spacing and bend counts may need to be adjusted.

5. What lengths are beverage line bundles generally available in?
   Consult the beverage equipment dealer/manufacturer for specifics on products available. The available lengths of beverage or CO_2 lines may determine the spacing of boxes in the system if splicing is required.

6. Should consideration be given to the ambient termperature variations that the system will be exposed to?
   Yes, consult your beverage equipment dealer/manufacturer for restrictions and requirements. Portions of the lines may require insulation.

Comparison of STOUTi.e.® (HDPE) vs. Rigid schedule 40 or 60 pipe (PVC)

Until now, underground beverage conduit systems have been prone to failure. Cracks, fissures or coupling failure allow ground water contaminants to fill the conduit which then migrates into the beverage lines contaminating the products. Once the contamination occurs, the only solution is to replace not only the beverage lines but the conduit as well. Normally the old conduit will be abandoned which creates a source of contamination in food preparation areas. Contaminated and abandoned conduit becomes a health inspection issue which can be very expensive to repair. This is usually the result of having specified and selected rigid PVC pipe to make underground beverage conduit systems. Attempts to eliminate leaks have led to some expensive specifications. Special trench bedding and concrete encasements are commonly specified.

The question that most often arises when discussing beverage conduit failure is why the conduit cracks when in fact, it is the same pipe that is used for sanitary drains and they hardly ever crack or leak. There are a few reasons we don't hear of sanitary system failures. First, the systems are sealed with traps which don't allow for the release of gases into service areas. Second, if the line does develop a leak it just becomes part of the waste water and drains out. Third, sanitary and other systems carry liquids and the pipe very quickly stabilizes at the temperature of the liquid. When beverage lines are used in the same pipe, the temperature of the conduit is not always the same as the beverage lines due to line bundling and insulation. When used for cooled lines, the beverage conduit is at a much cooler temperature than the surrounding earth which causes expansion and contraction issues.

Colombo Beverage Chase Systems has developed a solution for these annoying and expensive problems. Our patented STOUTi.e. underground CHASE system is made from High Density Polyethylene (HDPE).

HDPE systems are prevalent in many municipalities. Natural gas distribution systems rely on the positive attributes of HDPE to deliver gas consistently and efficiently with extremely low failure rates. These same positive attributes have proven advantageous for Beverage CHASE Systems. Colombo Beverage Chase Systems manufactures the patented STOUTi.e. HDPE beverage CHASE specifically for underground systems.

The differences between STOUTi.e. and PVC are related to short term performance, long term performance, excavation requirements, green construction and health concerns. The chart on pages 10 & 11 clearly outlines the differences between STOUTi.e. and PVC.

	STOUTi.e. ® (HDPE)	PVC
"Green" Manufacturing and Recyclables	STOUTi.e. is produced from oil. The basic process requires heat and petroleum. The chemical elements of STOUTi.e. are carbon and hydrogen. The byproducts are cleanable and the finished product is very easily recycled at the end of its usefulness.	PVC is produced thru a polymerization process using chlorine, petroleum and other polymers. Vinyl chloride is a known human carcinogen and dioxins are released during its manufacture. Dioxins are a global health threat. Recycling is not impossible but very cost prohibitive which makes it very uncommon.
Heat Resistance and Fire Emissions	Carbon is the predominate element of STOUTi.e. making it very stable. STOUTi.e. is considered non flammable.	Fumes released by PVC are highly carcinogenic. Hazardous combustion products include: carbon monoxide (CO), smoke, hydrocarbons and hydrogen chloride. Hydrogen chloride fumes are deadly to all life.
Aging Cracking and punctures due to aging are causes of rigid conduit failure.	STOUTi.e. remains flexible through a wide range of temperatures (-180°F thru 257°F) as well as retaining its integrity through compressive situations (1600 psi). While not recommended, STOUTi.e. can withstand the pressures from construction equipment traffic. STOUTi.e. does not loose its elasticity over time which eliminates the chance for cracking.	PVC is rigid and remains so until it reaches 212° F. Compressive tests of PVC pipe show failure at less than 100 psi. PVC cannot with stand pressures from construction traffic. As PVC pipe continues to age past its manufacture date, it becomes more brittle. PVC integrity failure can cause the eventual abandonment of contaminated conduit.

	STOUTi.e. ® (HDPE)	PVC
Trench Location	Trenches for beverage conduit require some coordination and planning with other trades. Often electrical and sanitary systems are installed with beverage conduit. Crossing from one type of structure through another type is not uncommon with underground systems. An example would be a remote bar location outside the building housing the source pumps. Seasonal temperature differences between the source and distribution points can be critical. Other situations may require the conduit to pass under vehicle traffic.	
Foundation/Bedding and Back-filling	Foundation conditions do not impact STOUTi.e. so long as it is somewhat stable and can support the weight of the CHASE. Bedding and back-filling trench requirements for STOUTi.e. are simple. Native soil is sufficient for both bedding and back-filling provided it is not composed of materials larger than one inch. Normal back-filling practices are also followed. Excluding extreme instances STOUTi.e. is unaffected by settling issues.	PVC requires a stable foundation that will not allow deflection of the pipe. Contractors normally are required to create a stable foundation, sometimes requiring concrete. When using PVC for conduit work, special care must be taken when considering not just foundations but bedding and back-filling. Normal bedding is composed of sand and a pea-gravel mix and extra care must be taken when back-filling not to deflect and crack the rigid pipe. Special consideration for settling of the trench fill will also affect how PVC is installed.
Coupling/Joining of Components Coupling failure is one of the causes for conduit failure.	STOUTi.e. is joined using thermal couplers which literally melt and mold the connections making a virtual single component CHASE without any potential for ground water contamination.	PVC requires cleaners and glue to make connections. Glued connections can sometimes fail from settling in the trench or allowing ground water contamination if not glued properly. In addition, the cleaners and glues used for PVC are hazardous and require Material Safety Data Sheets to be on hand when being used.

COLOMBO BEVERAGE CHASE SYSTEMS

Configuration Overview Aboveground
Used in Plenum and Non-Plenum Spaces

- The purpose of a Beverage CHASE System is to safely route beverage lines from the source to the dispensing stations.

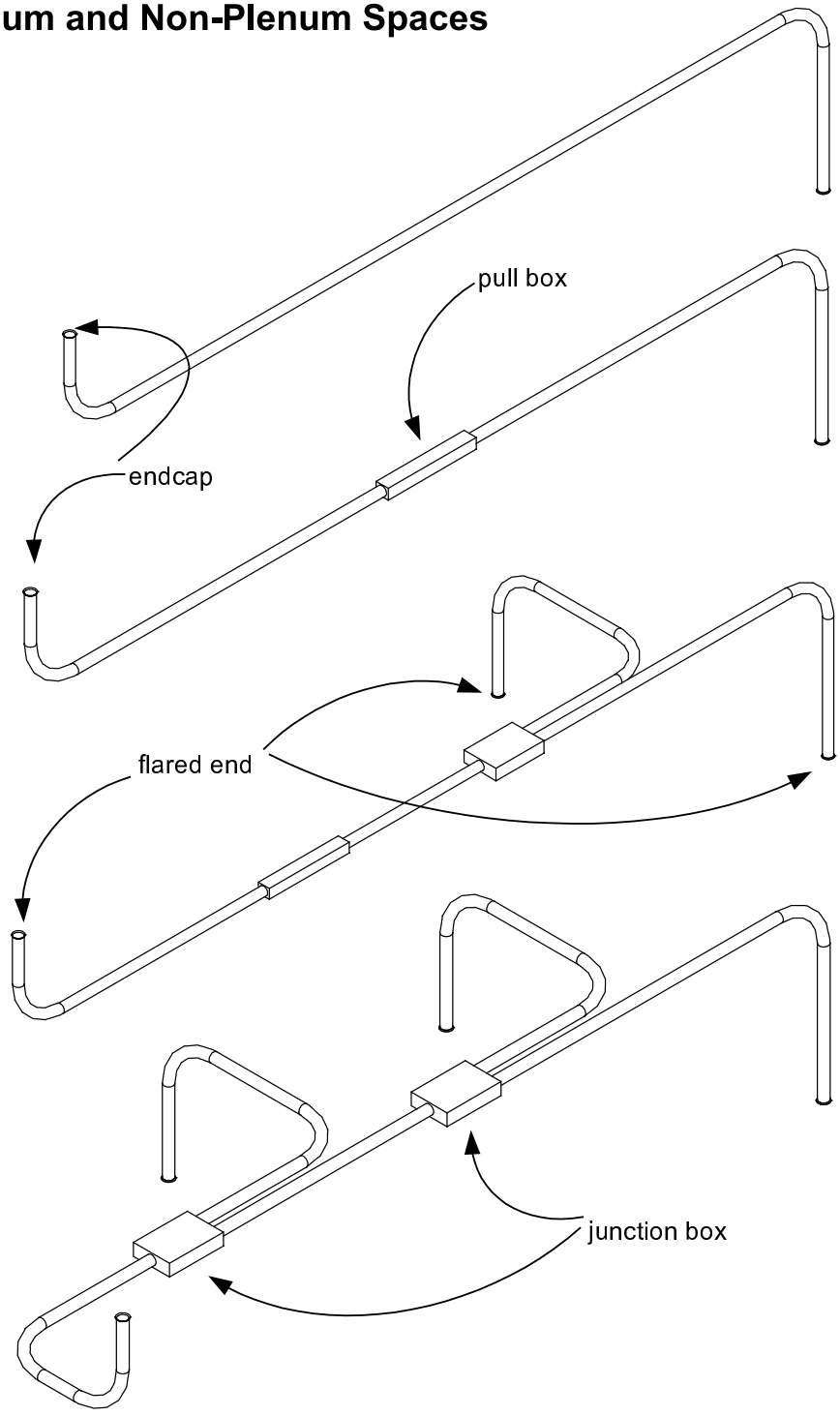
- A Beverage CHASE System can be constructed to support the distribution of soda, beer, liquor, CO_2 and other food service products.

- Colombo CHASE will help maintain product integrity.

- Configurations are only limited by beverage line flow rate restrictions (See Beverage Purveyor) and physical CHASE sizes.

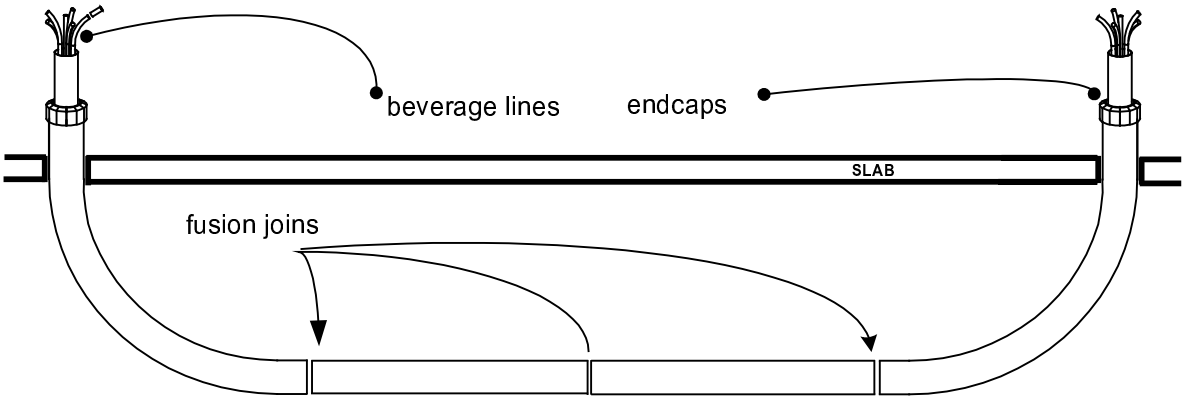
- CHASE configurations may be constructed of single or mixed sizes and types based upon need.

- Colombo is available to help design systems that will supply the correct volumes to the correct locations.



Configuration Overview STOUTi.e.® Underground CHASE Used for Direct Burial

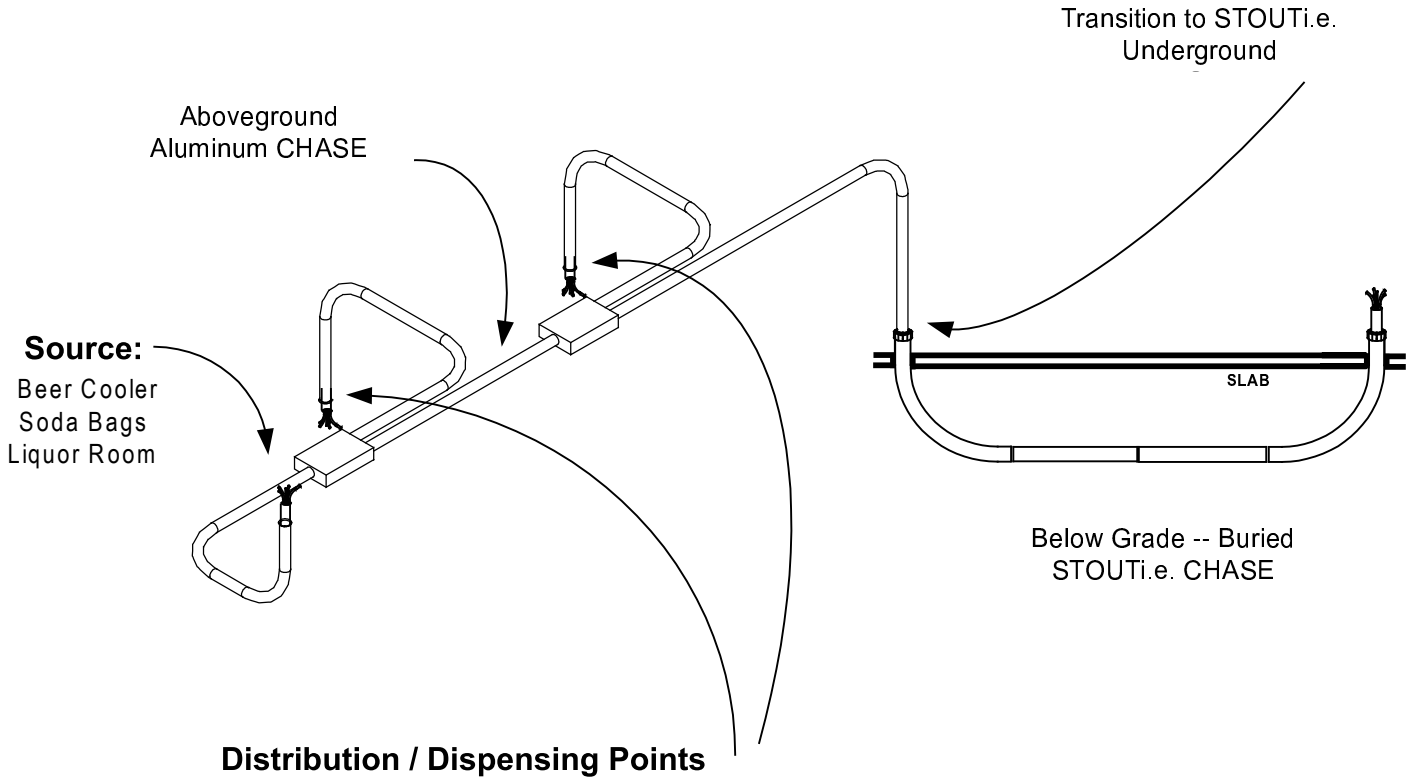
Below Grade -- Buried STOUTi.e. CHASE



STOUTi.e. underground CHASE dedicated to a single run from beverage storage area to dispensing area

COLOMBO BEVERAGE CHASE SYSTEMS

Combination Aboveground CHASE and STOUTi.e.® Underground CHASE



Aboveground CHASE with transition join to STOUTi.e.® underground CHASE for a totally leak proof system.

SECTION 3

COLOMBO BEVERAGE CHASE SYSTEMS

Aboveground CHASE®
Component & Dimensional Data

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Hot Line Support

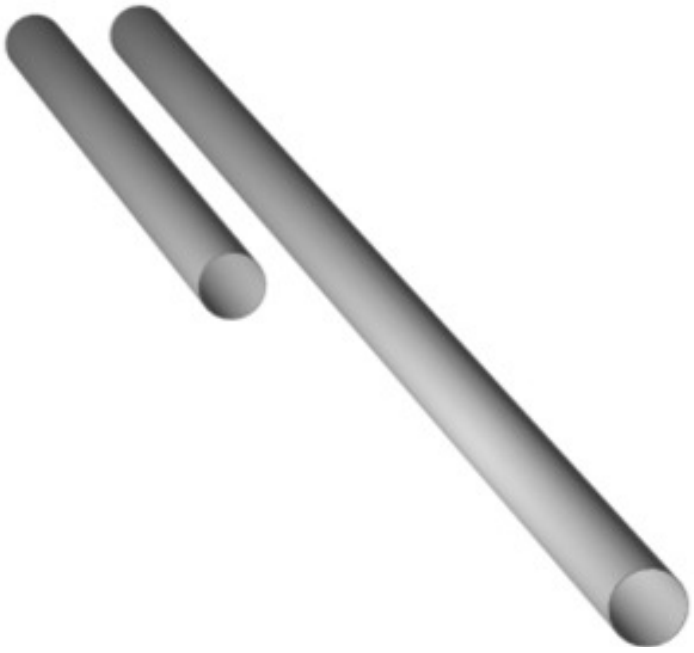
800-547-2820

Ask for:

Beverage CHASE

4”, 6”, and 8” straight CHASE®

10’ & 20’ lengths



Description

A straight section of aluminum CHASE, available in 10’ or 20’ lengths.

CHASE diameters are available in 4”, 6”, and 8” standard sizes. Other sizes are available on request.

Application

The straight part of a Beverage CHASE System to route and enclose beer, soda, liquor, and/or CO_2 dispensing lines.

Specifications

Aluminum Tube:
ASTM - B313

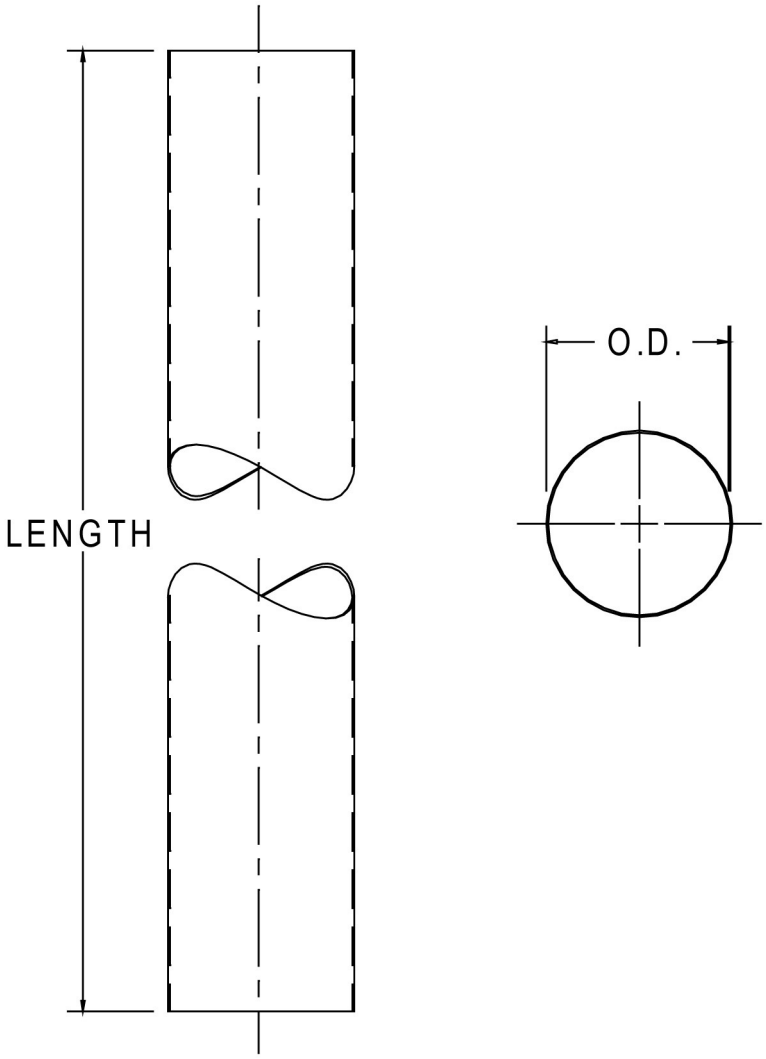
Aluminum Alloy:
3004 / H - 26

4” O. D.= .072” wall / 13 gauge nominal

6” O. D.= .060” wall / 15 gauge nominal

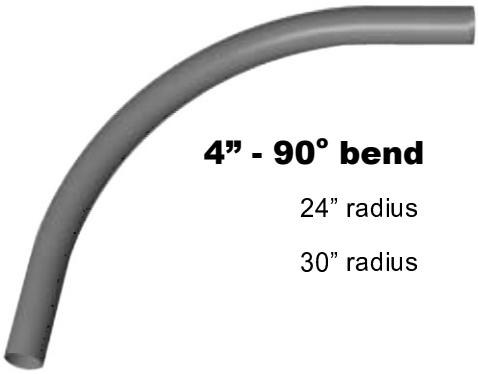
8” O. D.= .072” wall / 13 gauge nominal

Straight CHASE® Aluminum



SIZE	PART NO.	LENGTH	O.D.	WALL THICKNESS	GAUGE NOMINAL
4”	C-54110	10’	4”	.072	13
4”	C-54120	20’			
6”	C-56110	10’	6”	.060	15
6”	C-56120	20’			
8”	C-58110	10’	8”	.072	13
8”	C-58120	20’			

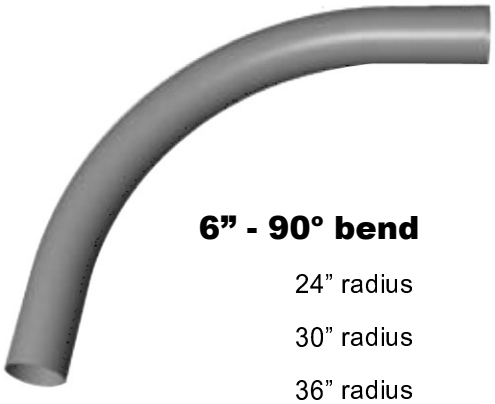
Bend, 90 degree - Aluminum



4” - 90° bend

24” radius

30” radius

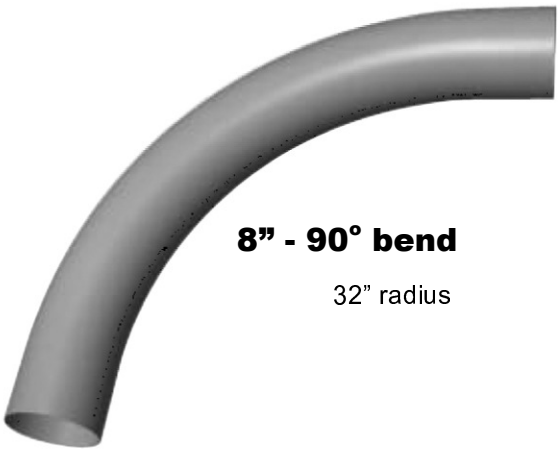


6” - 90° bend

24” radius

30” radius

36” radius



8” - 90° bend

32” radius

Description

A 90 degree, long radius bend section of aluminum CHASE®. Diameters are available in 4”, 6”, and 8”. See schedule for available radii.

Application

To change direction 90 degrees as part of a Beverage CHASE System to route and enclose beer, soda, liquor, and/or CO_2 dispensing lines.

Specifications

Aluminum Tube Bend:

ASTM - B221 or B241	4”
ASTM - B313	6” & 8”

Aluminum Alloy:

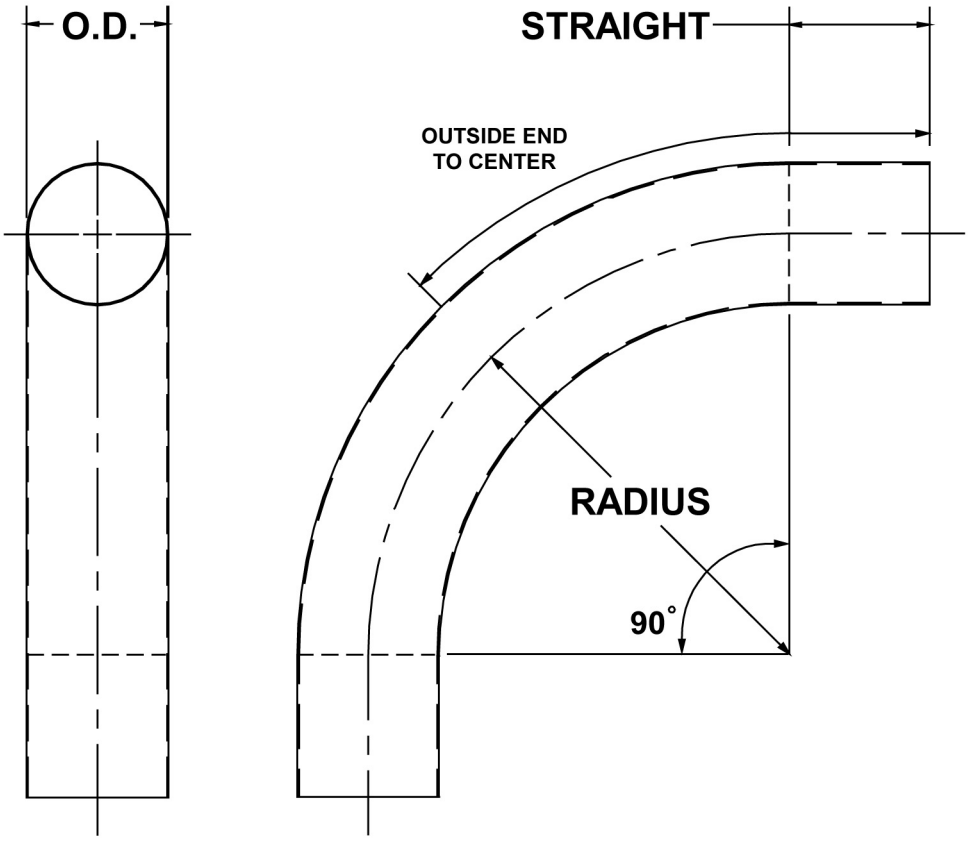
6061 or 6063 T6	4”
3004 H-26	6” & 8”

4” = .065” wall / 16 gauge nominal

6” = .080” wall / 14 gauge nominal

8” = .080” wall / 14 gauge nominal

Bend, 90 degree - Aluminum



SIZE	PART NO.	O.D.	WALL THICKNESS	GAUGE NOMINAL	STRAIGHT	RADIUS	DEGREE OF BEND	OUTSIDE END TO CENTER
4”	C-54290	4”	.065	14	12”	24”	90°	32.5”
	C-54390	4”	.065	14	12”	30”	90°	37”
	C-54490	4”	.065	14	12”	36”	90°	42”

SIZE	PART NO.	O.D.	WALL THICKNESS	GAUGE NOMINAL	STRAIGHT	RADIUS	DEGREE OF BEND	OUTSIDE END TO CENTER
6”	C-56290	6”	.080	12	12”	24”	90°	33.25”
	C-56390	6”	.080	12	12”	30”	90°	38.00”
	C-56490	6”	.080	12	12”	36”	90°	42.63”

SIZE	PART NO.	O.D.	WALL THICKNESS	GAUGE NOMINAL	STRAIGHT	RADIUS	DEGREE OF BEND	OUTSIDE END TO CENTER
8”	C-58490	8”	.080	12	12”	32”	90°	40.25”

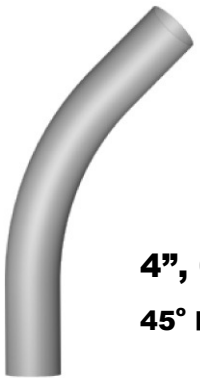
Bend, Partial - Aluminum

4”, 6”, 8”

22.5° partial bend

4”, 6”, 8”

30° partial bend



4”, 6”, 8”

45° partial bend

Description

A 45, 30, or 22.5 degree partial bend section of aluminum CHASE®. Diameters are available in 4”, 6”, and 8”. Other sizes are available on request.

Application

Used to change direction 45, 30, or 22.5 degrees or to offset direction.

Specifications

Aluminum Tube Bend:

ASTM - B221 or B241	4”
ASTM - B313	6” & 8”

Aluminum Alloy:

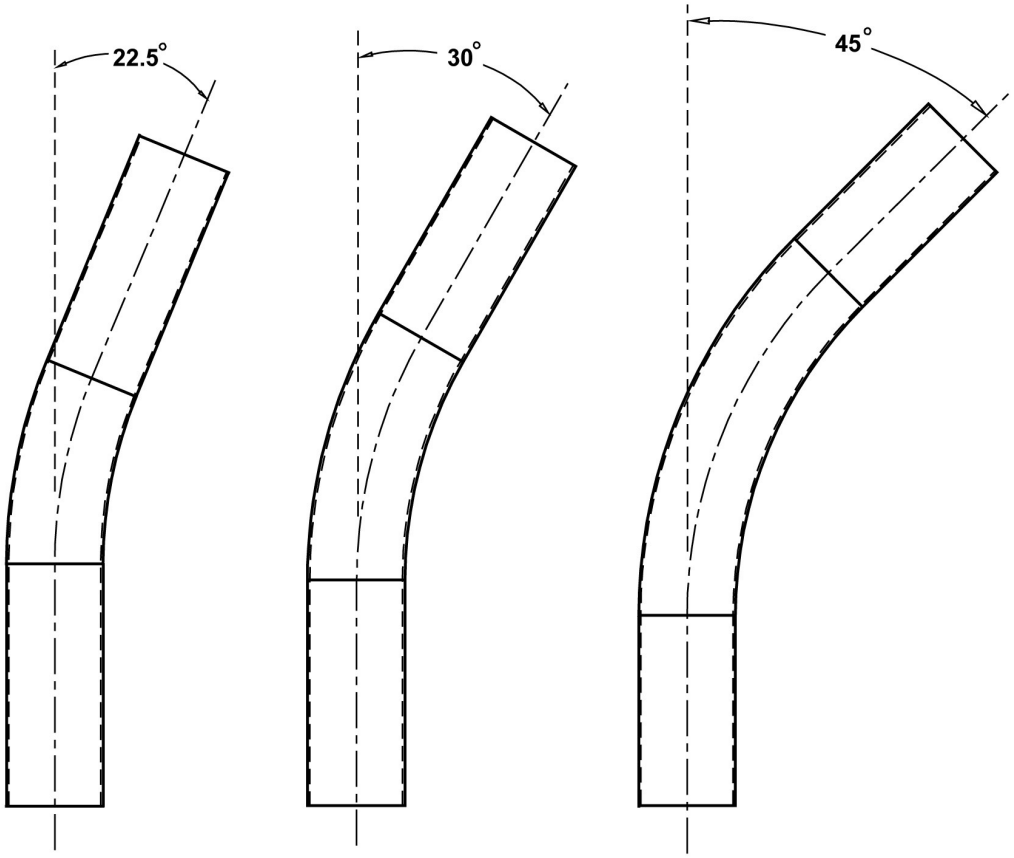
6061 or 6063 T6	4”
3004 H-26	6” & 8”

4” = .065” wall / 16 gauge nominal

6” = .080” wall / 14 gauge nominal

8” = .080” wall / 14 gauge nominal

Bend, Partial - Aluminum

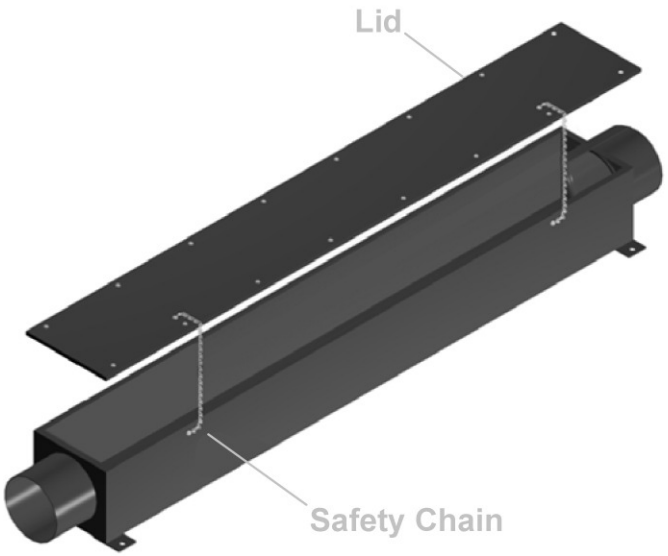


SIZE	O.D.	WALL THICKNESS	GAUGE NOMINAL	RADII	PART# AND DEGREE OF PARTIAL BEND		
4”	4”	.065	14	30	C-54345	C-54330	C-54322
					45°	30°	22.5°

SIZE	O.D.	WALL THICKNESS	GAUGE NOMINAL	RADII	PART# AND DEGREE OF PARTIAL BEND		
6”	6”	.080	12	30	C-56345	C-56330	C-56322
					45°	30°	22.5°

SIZE	O.D.	WALL THICKNESS	GAUGE NOMINAL	RADII	PART# AND DEGREE OF PARTIAL BEND		
8”	8”	.080	12	32	C-58445	C-58430	C-58422
					45°	30°	22.5°

Splice/Pull Box - Steel

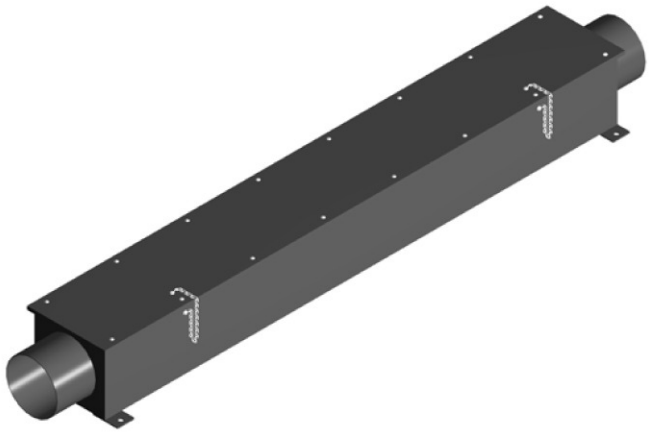


Description

Powder coated, all welded, leak-proof steel box with 2 nipples, gasketed lid and safety chains. Standard configuration 4", 6" & 8". Custom configurations are available on request.

Application

Used as the pull and splice location in a Beverage CHASE® System. Use is directly related to length and number of bends in the system.



Specifications

Splice/Pull Box - Steel

14 gauge steel

All welded contruction

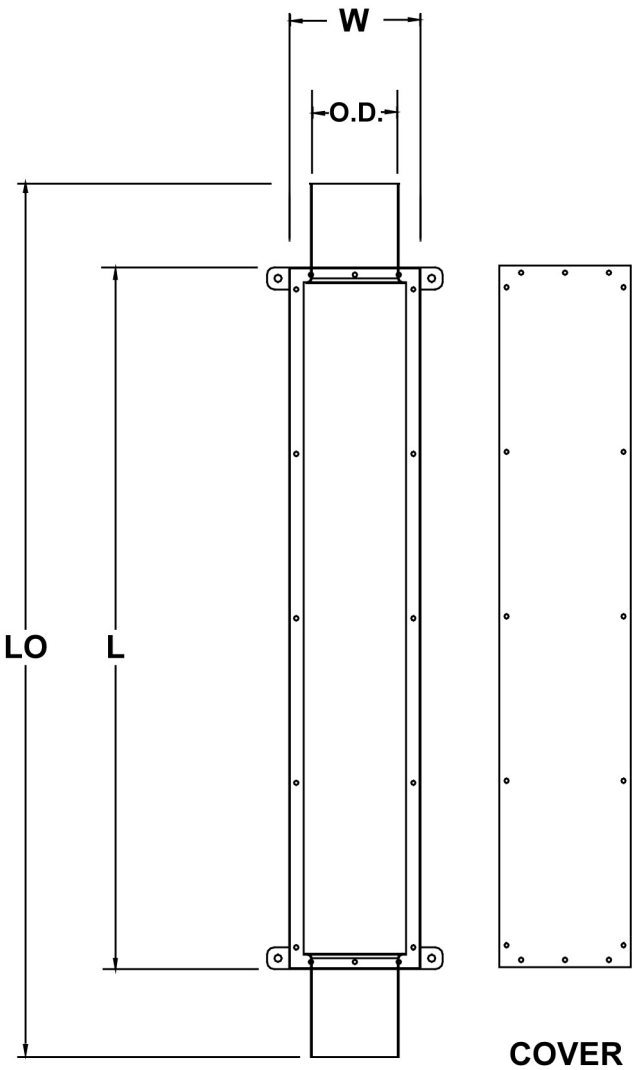
Powder coated

Liquid tight - gasketed cover w/safety chains

4", 6", 8" O.D. nipples

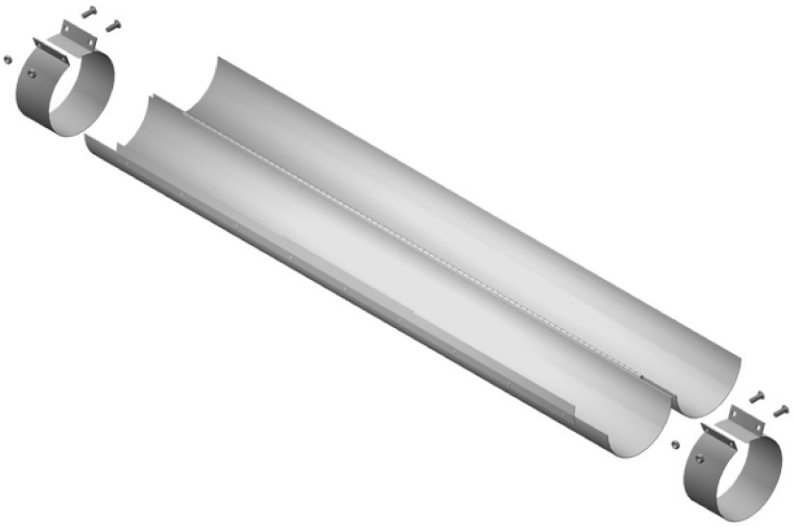
Box Length = 60"

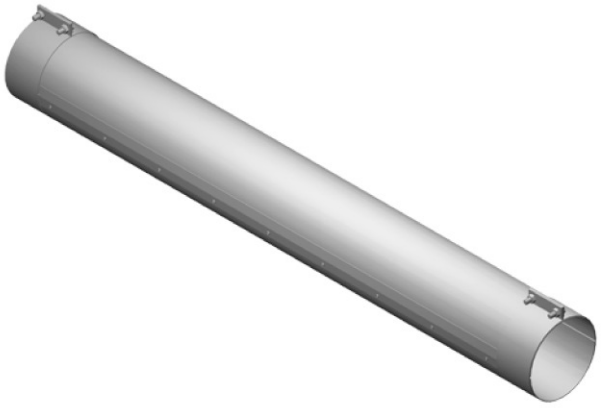
Splice/Pull Box - Steel



SIZE	PART NO.	O.D.	L	LO	C	W	H	WEIGHT
4”	C-84741	4”	60”	70”	2.25	6-1/4”	5-1/2”	40lb.
6”	C-86761	6”	60”	70”	3.25	7-1/2”	7-1/2”	48lb.
8”	C-88781	8”	60”	70”	4.25	9-1/2”	9”	63lb.

Pull Sleeve - Aluminum





Description

A 4' section of aluminum CHASE® hinged with an alignment tab. Used with 2 joins less bonding adhesive. This component is an alternate to the leak-proof, all-welded pull box, and NOT intended to meet the leak-proof specifications. Standard configuration 4", 6" & 8". Custom configurations are available on request.

Application

The pull sleeve provides an opening for a pull location in a Beverage CHASE System. Use is directly related to length and number of bends in the system.

SLEEVE CLAMPS OVER CHASE.

Specifications

Aluminum Tube:
ASTM - B313

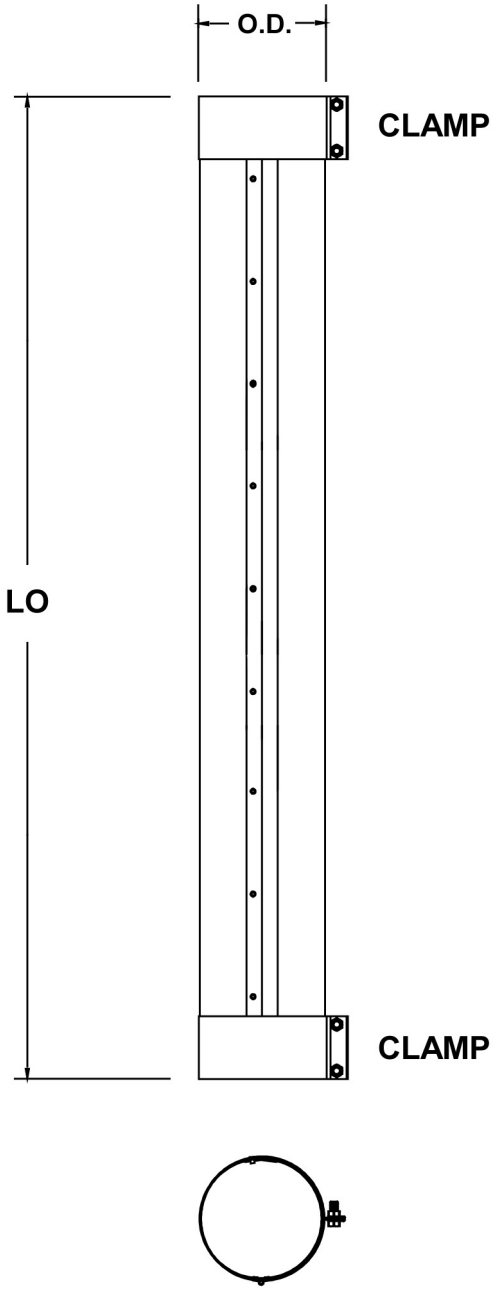
Aluminum Alloy:
3004 / H - 26

4" O. D.= .072" Wall / 13 gauge nominal

6" O. D.= .060" Wall / 15 gauge nominal

8" O. D.= .072" Wall / 13 gauge nominal

Pull Sleeve - Aluminum

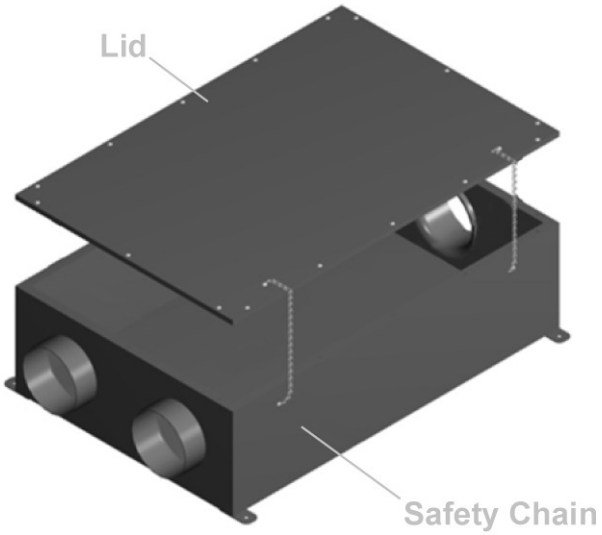


SIZE	PART NO.	O.D.	LO	WALL THICKNESS	GAUGE
4”	C-84744	4”	48”	.072”	13
6”	C-86766	6”	48”	.060”	15
8”	C-88788	8”	48”	.072”	13

Rough Opening Required: 42”

SLEEVE CLAMPS OVER CHASE.

Junction Box - Steel



Description

Powder coated, all welded, leak-proof steel box with multiple nipples, gasketed lid and safety chains. Standard configuration shown. 1 in 2 out parallel. Custom configurations available upon request.

Application

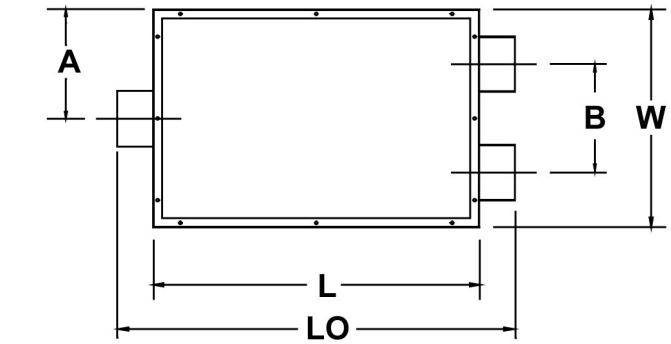
Junction boxes are used as a pullbox and junction point for multiple CHASE® and beverage line runs.

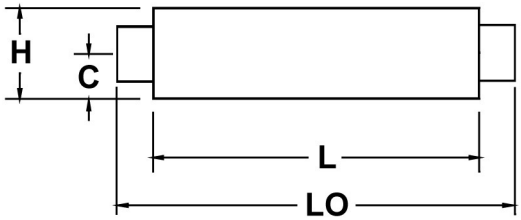
Specifications

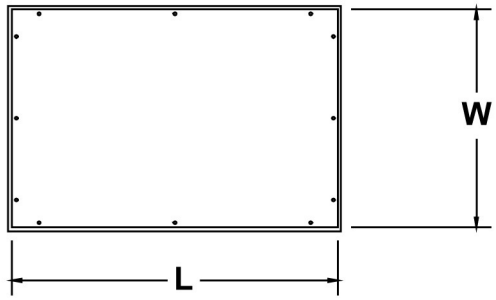
Junction Box - Steel

- 14 gauge steel
- All welded contruction
- Powder coated
- Liquid tight - gasketed cover w/safety chains
- 4”, 6”, 8” O.D. nipples
- Box = 10” x 24” x 36”

Junction Box - Steel



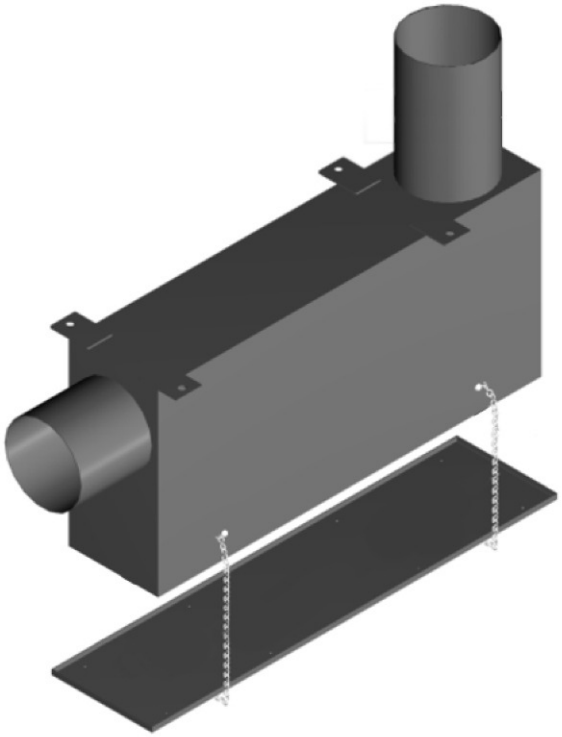


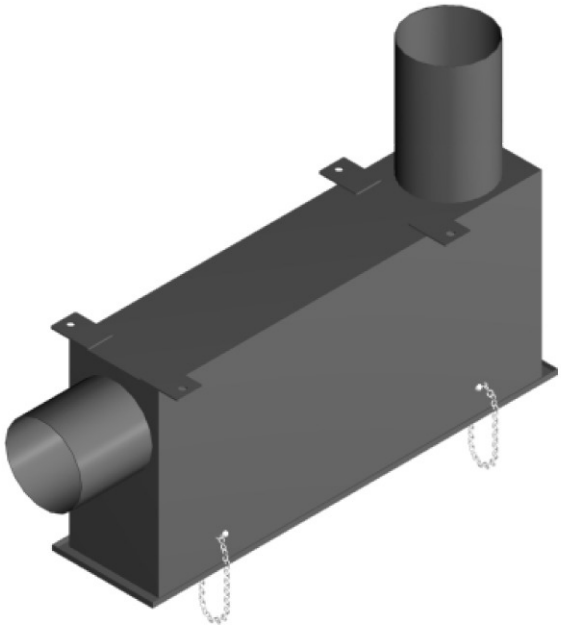


COVER

SIZE	PART NO.	O.D.	L	W	H	A	B	C	LO	WEIGHT
4”	C-84742	4”	36”	24”	10”	12”	6-1/4”	5”	46”	75lb.
6”	C-86762	6”	36”	24”	10”	12”	8-1/2”	5”	46”	75lb.
8”	C-88782	8”	36”	24”	10”	12”	10”	5”	46”	75lb.

Shallow Ceiling 90 degree Pull Box - Steel





Description

Powder coated, all welded leak-proof steel box with multiple nipples, gasketed lid and safety chains. Designed to replace a bend.

Shallow pull boxes are available to accommodate 4", 6", and 8" CHASE® diameters. Custom configurations are available on request.

Application

Used in place of a large radius bend when ceiling space is limited or restricted. This pull box may also be used to splice beverage lines as required.

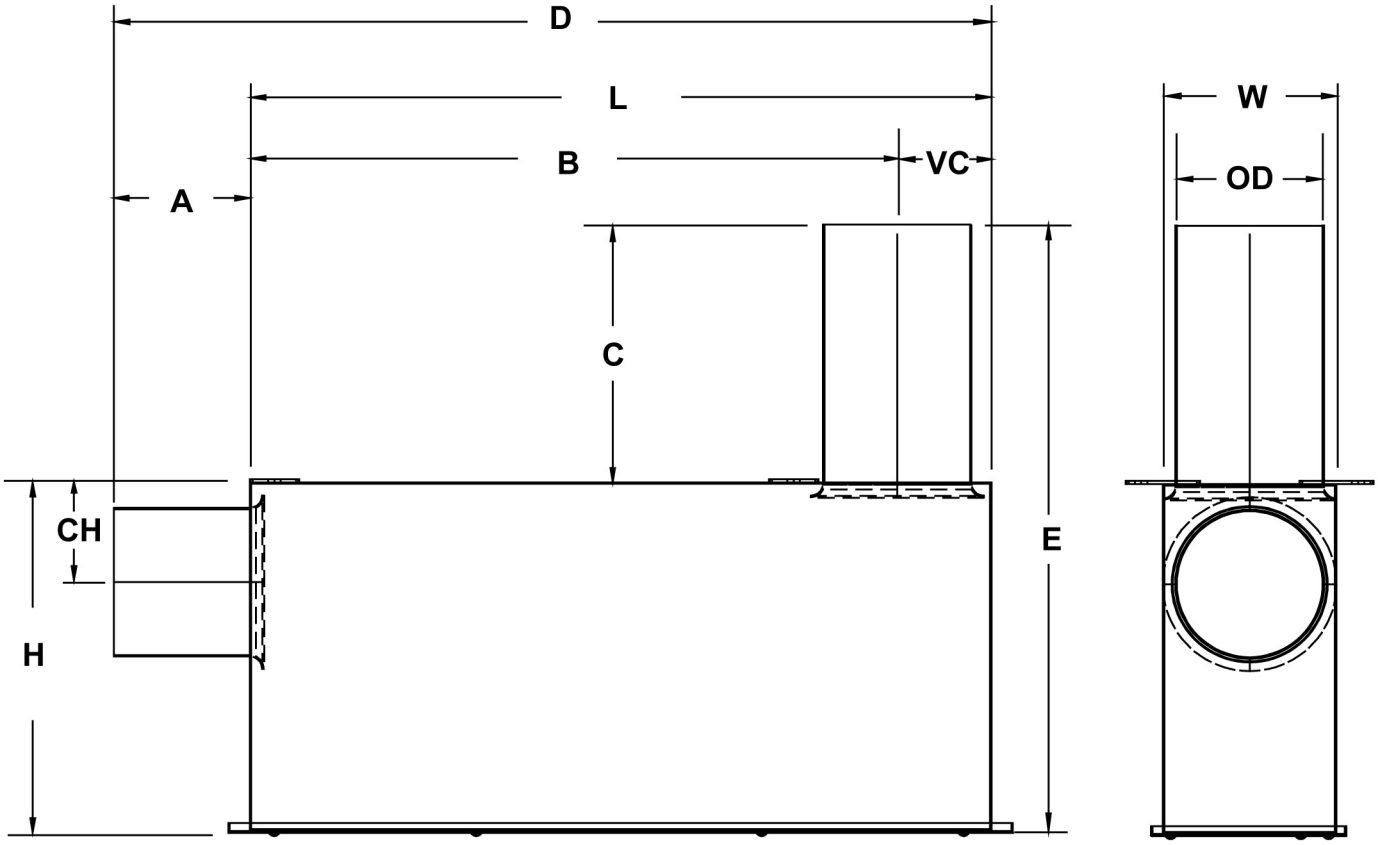
Specifications

Shallow Pull Box - Steel

- 14 gauge steel
- All welded contruction
- Powder coated
- Liquid tight - gasketed cover w/safety chains
- 4", 6", 8" O.D. nipples
- Box Length = 30"

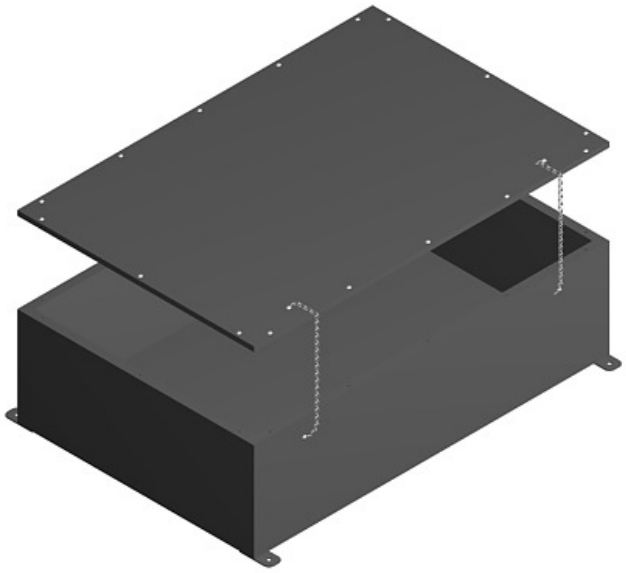
COLOMBO BEVERAGE CHASE SYSTEMS

Shallow Ceiling 90 degree
Pull Box - Steel



SIZE	PART NO.	O.D.	L	W	H	A	B	C	D	E	CH	VC
4”	C-84745	4”	30”	7”	14”	5”	27”	14”	35”	28”	4”	3”
6”	C-86765	6”	30”	7”	14”	5”	26”	14”	35”	28”	5”	4”
8”	C-88785	8”	30”	9”	18”	5”	25”	14”	35”	32”	6”	5”

Field Build Box - Steel



Description

Powder coated, all welded, non leak-proof steel box with lid and safety chains.

Application

For use with galvanized steel nipples to field build junction pull boxes.

Specifications

Build Box - Steel

- 16 gauge wall
- 18 gauge lid
- All welded construction
- E-coated (dipped & baked)
- Cover w/safety chains

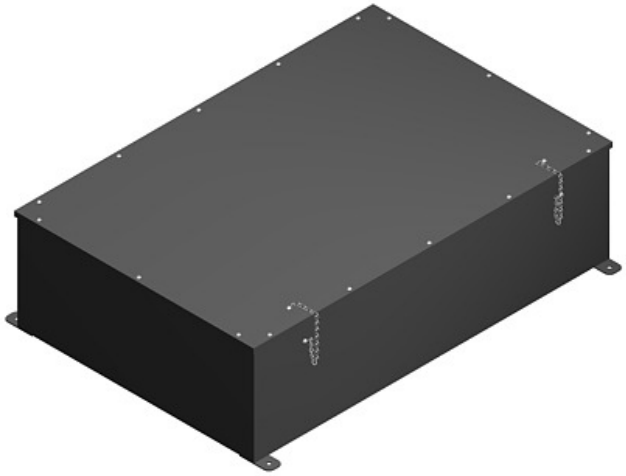
Standard Sizes

24” x 24” x 10”

24” x 36” x 10”

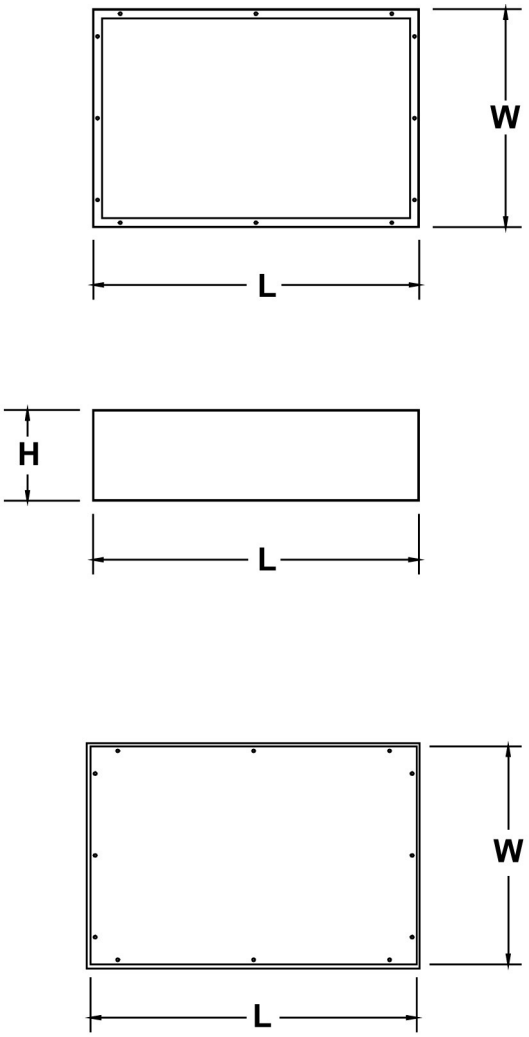
36” x 36” x 10”

45” x 45” x 10”



*See pg 35 for Field Build Box Nipple *sold seperately**

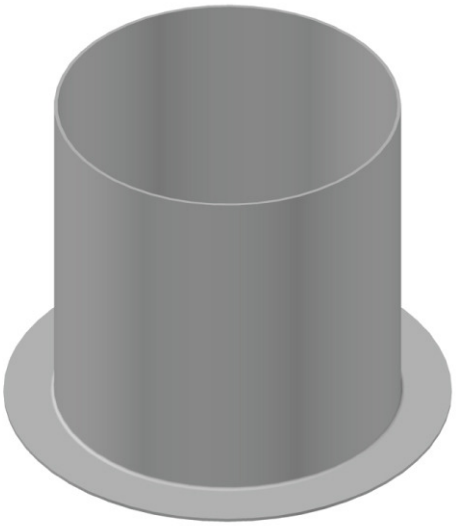
Field Build Box - Steel



COVER

PART NO.	L	W	H
C-86724	24”	24”	10”
C-86730	24”	36”	10”
C-86736	36”	36”	10”
C-86745	45”	45”	10”

Nipple (Field Build Box)
Galvanized Steel



Description

Galvanized steel flattened flare.

Application

Use for creating field built junction pull boxes using bolts.

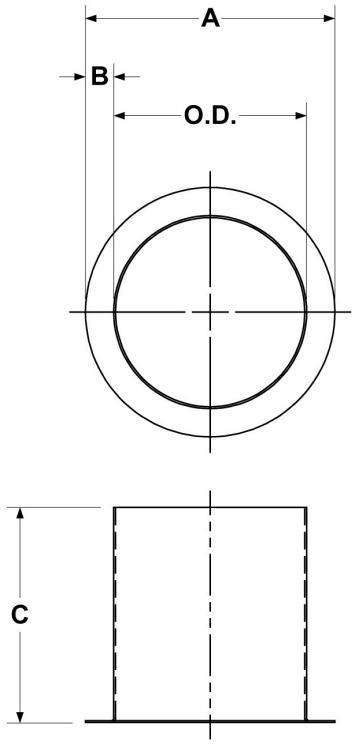
Specifications

Flattened Flare - Galvanized Steel

- 16 gauge
- 2”, 2-1/4”, 4”, 6”, 8”

COLOMBO BEVERAGE CHASE SYSTEMS

Nipple - Galvanized Steel



SIZE	PART NO.	O.D.	WALL THICKNESS	GAUGE NOMINAL	A	B	C
2”	C-52122	2”	.065	16	3.75”	0.88”	3.50”
2-1/4”	C-52132	2-1/4”	.065	16	4.00”	0.88”	3.50”

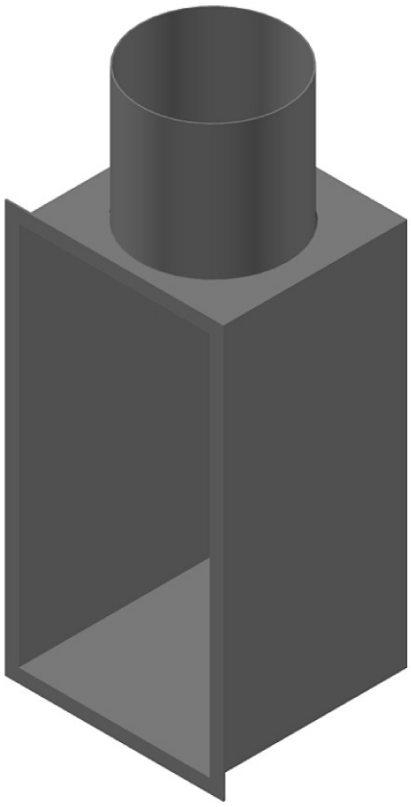
FOR CO_2 APPLICATIONS. SEE SECTION pg. 69

SIZE	PART NO.	O.D.	WALL THICKNESS	GAUGE NOMINAL	A	B	C
4”	C-84142	4”	.065	16	5.75”	0.88”	6.00”
	C-84143						14.00”

SIZE	PART NO.	O.D.	WALL THICKNESS	GAUGE NOMINAL	A	B	C
6”	C-84162	6”	.065	16	7.75”	0.88”	6.00”
	C-84163						14.00”

SIZE	PART NO.	O.D.	WALL THICKNESS	GAUGE NOMINAL	A	B	C
8”	C-84182	8”	.065	16	9.75”	0.88”	6.00”
	C-84183						14.00”

Termination Box - Steel



Description

Powder coated, all welded steel box with one nipple.

Termination boxes are available to accommodate 4”, 6”, and 8” CHASE® diameters in standard sizes. Other sizes and configurations are available on request.

Application

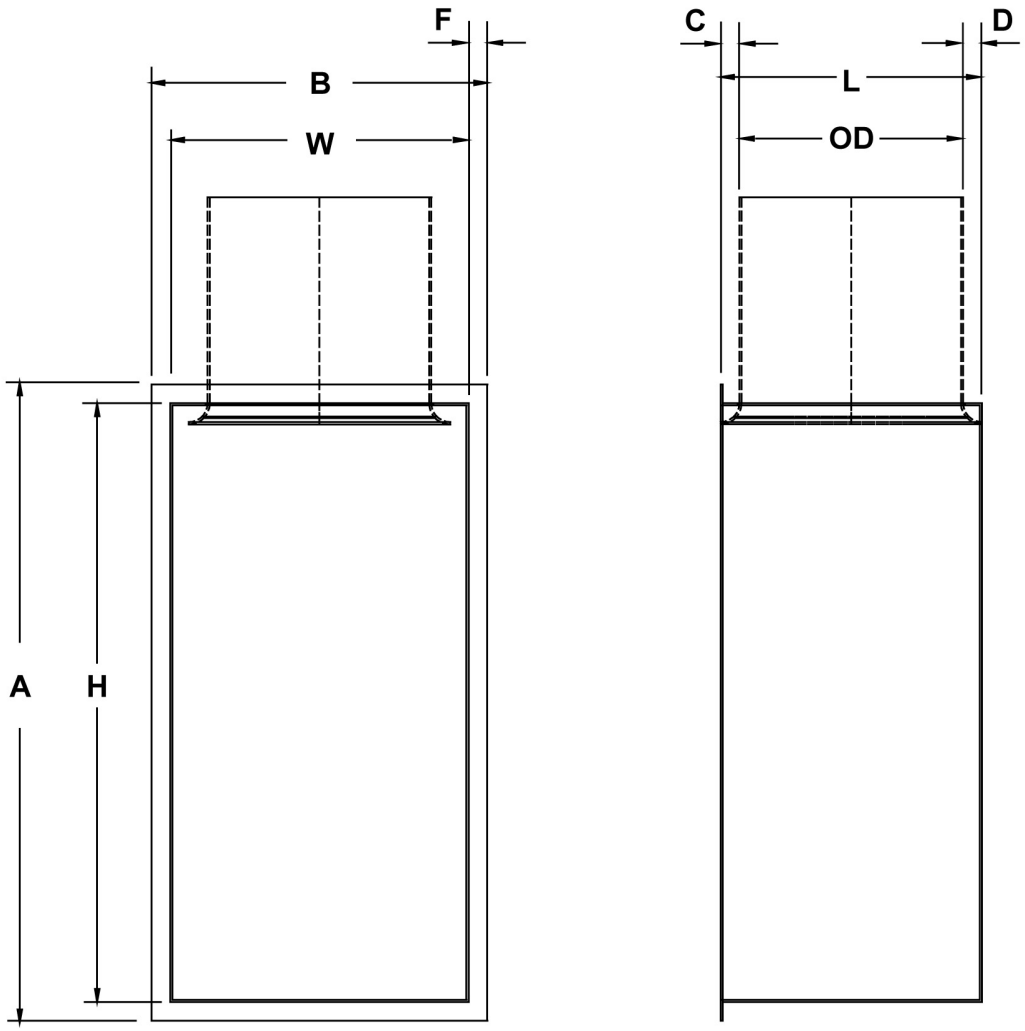
A termination box provides a finished in-wall termination in a wall CHASE under a bar or counter.

Specifications

Termination Box - Steel

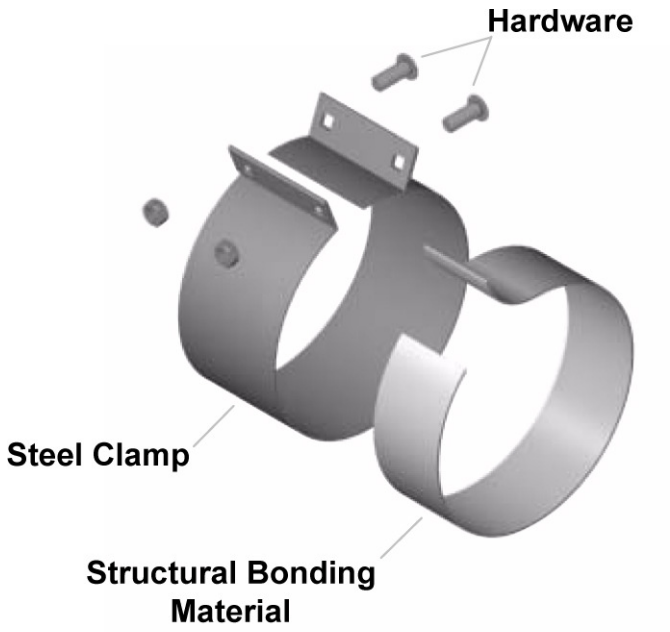
- 14 gauge cold, rolled steel
- All welded construction
- Powder coated
- 4”, 6”, 8” O.D. nipples

Termination Box - Steel



SIZE	PART NO.	O.D.	L	W	H	A	B	C	D	F
4”	C-84743	4”	5-5/8”	6-1/4”	12-1/4”	13-1/4”	7”	1”	5/8”	1/2”
6”	C-86763	6”	7-1/2”	7”	14”	15”	8”	1”	5/8”	1/2”
8”	C-88783	8”	9-5/8”	9”	14”	15”	10”	1”	5/8”	1/2”

Leak-Proof Stuctural Join



Available in 4", 6" & 8"

U.S. Patent NO. 7,025,388

Description

The Colombo leak-proof structural join is a sealing and structural component of a system.

The join is designed to be leak proof and provide structural integrity to the overall system configuration.

Application

The leak-proof structural join is used to connect or join all components of a Beverage CHASE® System configuration.

Specifications

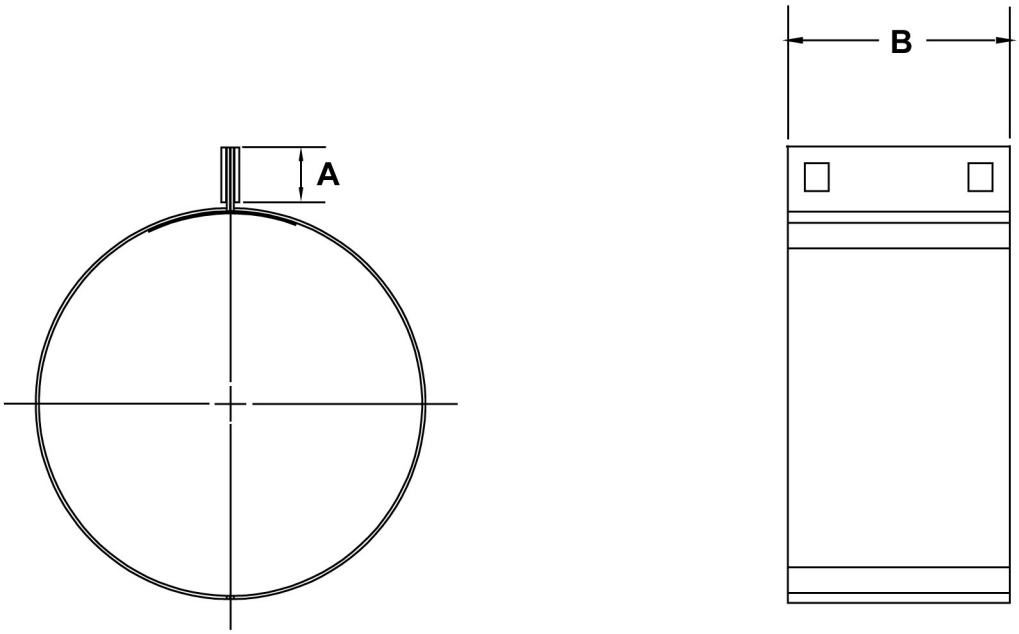
Colombo leak proof/structural join: (pat.7,025,388)

Leak proof: Water/Pressure tested to 40psi
Structural: Dynamic Test to Peak Load
Average Peak Load: 574.7 lbs

Structural Bonding Material
Peel Adhesion : 18 lb / inch ASTM D - 3330
Normal Tensile : 110 lb / sq. inch , ASTM D - 897
Static Shear : 1,250 grams / 1/2 sq. inch @ 72 F per 10,000 minutes, ASTM D - 3654
Dynamic Shear : 80 lb / sq. inch @ room temp, ASTM D-1002

Clamp & Hardware
Bolted with tongue, 20 gauge, galvanized steel,
2 bolt, nuts zinc coated

Leak-Proof Stuctural Join



SIZE	PART NO.	O.D.	GAUGE	A	B
4”	C-84040	4”	20	1”	2-1/2”
6”	C-86060	6”	20	1”	3”
8”	C-88080	8”	20	1”	4”

Flared CHASE® End

Description

A galvanized steel flared CHASE end.

Application

Used at the end of a Beverage CHASE to finish the CHASE and allow smooth installation of beverage lines.

Specifications

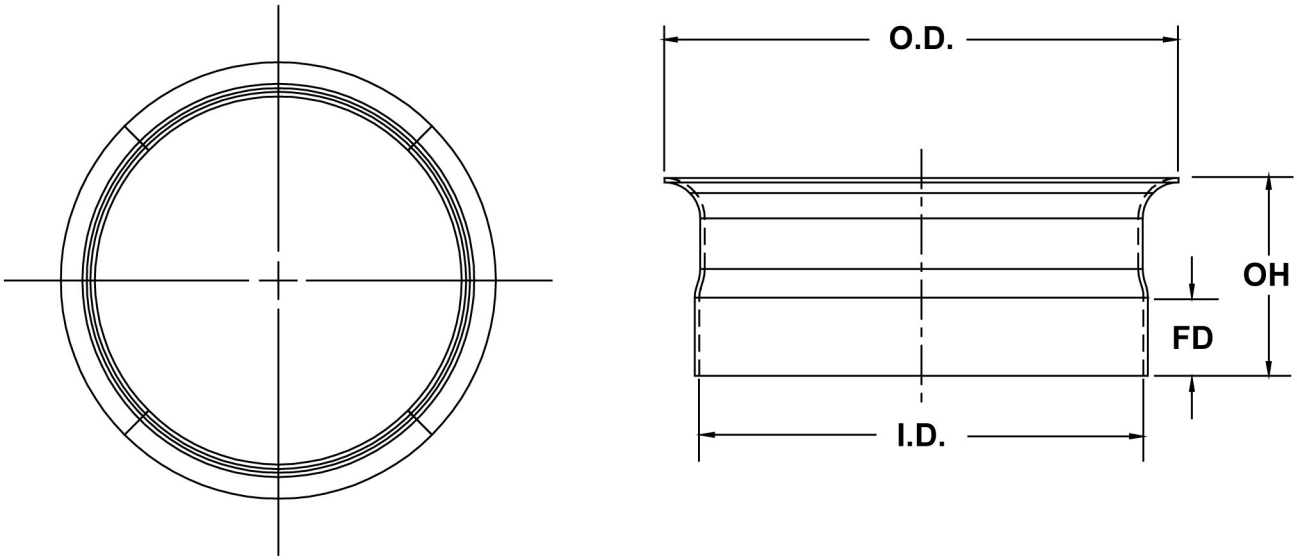
Galvanized Steel:
= ASTM - A787
Zinc Coating:
= G - 60 per ASTM - A526
Steel Grade:
= 1006 / 1008 AKDQ

4” O. D.= .065” Wall / 16 gauge nominal

6” O. D.= .065” Wall / 16 gauge nominal

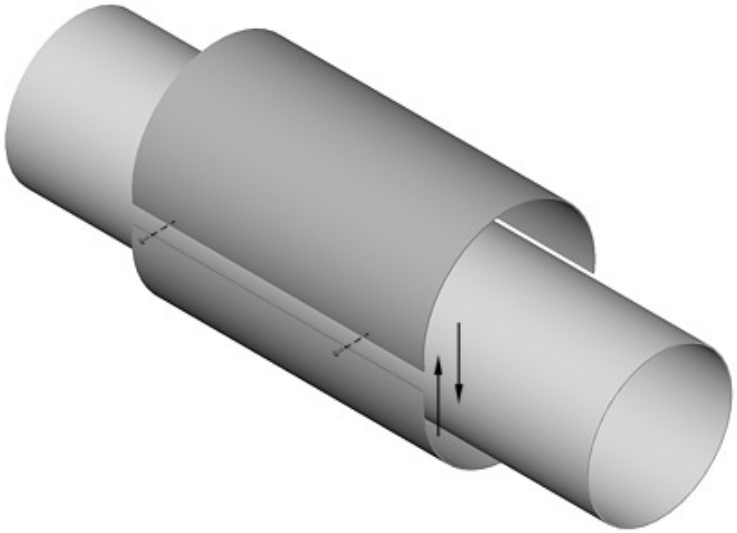
8” O. D.= .065” Wall / 16 gauge nominal

Flared CHASE® End



SIZE	PART NO.	I.D.	WALL THICKNESS	GAUGE NOMINAL	OH	O.D.	FD
4”	C-84140	4”	.065”	16	2-1/4”	4-7/8”	3/4”
6”	C-86160	6”	.065”	16	3”	6-7/8”	1-1/8”
8”	C-88180	8”	.065”	15	3-3/8”	9”	1-1/8”

Fire Sleeve Shell



Description

16 gauge steel.

Application

Use for sleeving fire walls. Designed to allow installation after CHASE® has been installed. Secure with self tapping screws.

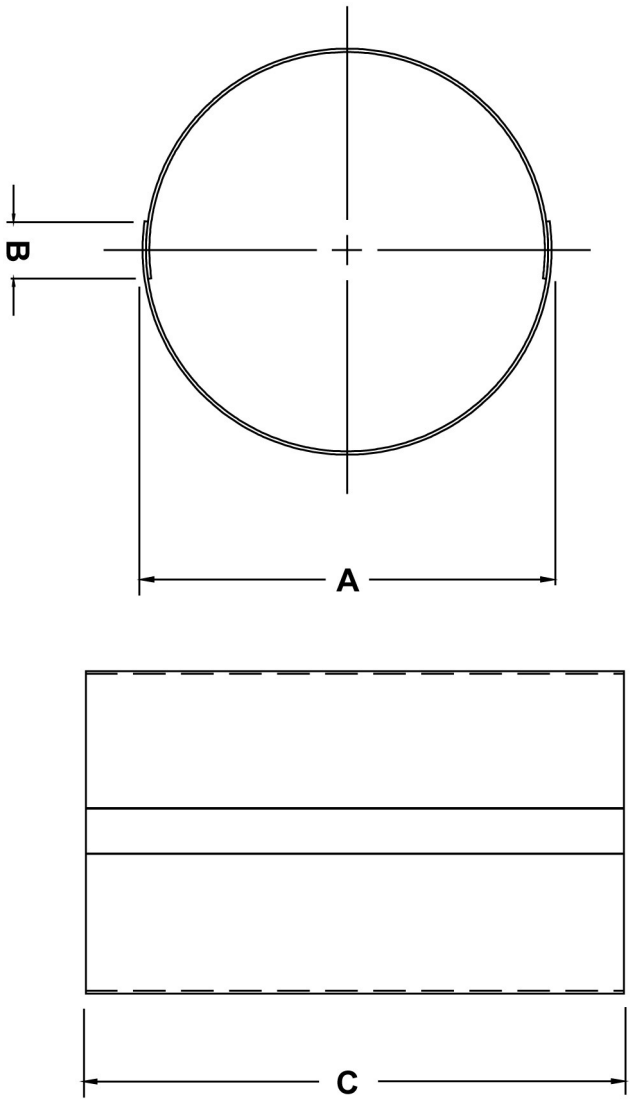
Specifications

5” O. D.= .065” Wall / 16 gauge nominal

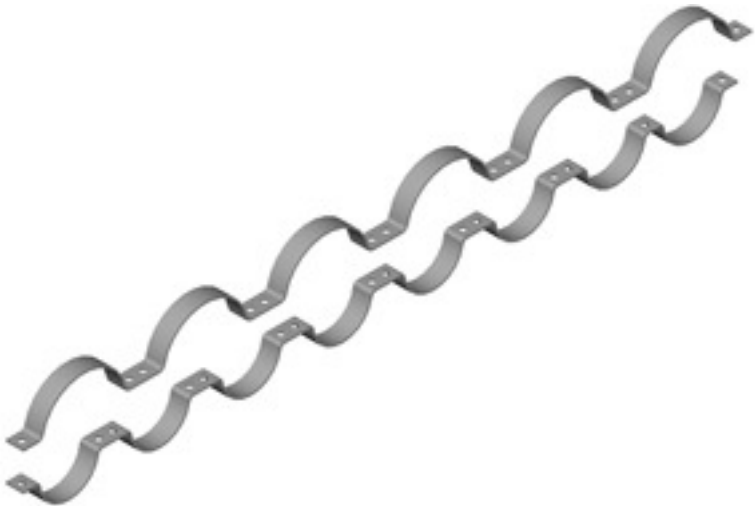
7” O. D.= .065” Wall / 16 gauge nominal

9” O. D.= .065” Wall / 16 gauge nominal

Fire Sleeve Shell



SIZE	PART NO.	A	B	C
4”	C-84146	5”	1”	12”
6”	C-84166	7”	1”	12”
8”	C-84186	9”	1”	12”



Description

Galvanized Steel Row Clamp

Application

Used to secure CHASE® in position.

Specifications

11 gauge galvanized steel

Singles are sold as pairs

Strips available

10478 - 4” - 15 pos./ 8’ - 6-1/4” ctr. strip

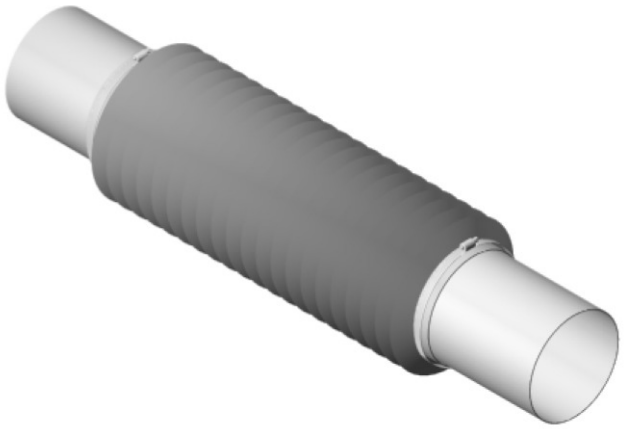
10479 - 6” - 9 pos./ 8’ - 8-1/2” ctr. strip

C-88001 - 4” - single (pair)

C-86001 - 6” - single (pair)

C-84001 - 8” - single (pair)

Expansion Joint - Aluminum



Description

Custom leak proof expansion fitting, made to order. Diameters are available in 4”, 6”, and 8”.

Application

Fitting to be inserted into a Beverage CHASE® System to allow for movement between two structures where expansion joints/fittings are required.

Specifications

Aluminum Tube:
ASTM - B313

Aluminum Alloy:
3004 / H - 26

4” O. D.= .072” Wall / 13 gauge nominal

6” O. D.= .058” Wall / 15 gauge nominal

8” O. D.= .058” Wall / 15 gauge nominal

Endcap

Description

Flexible rubber end cap with hose clamp.

Application

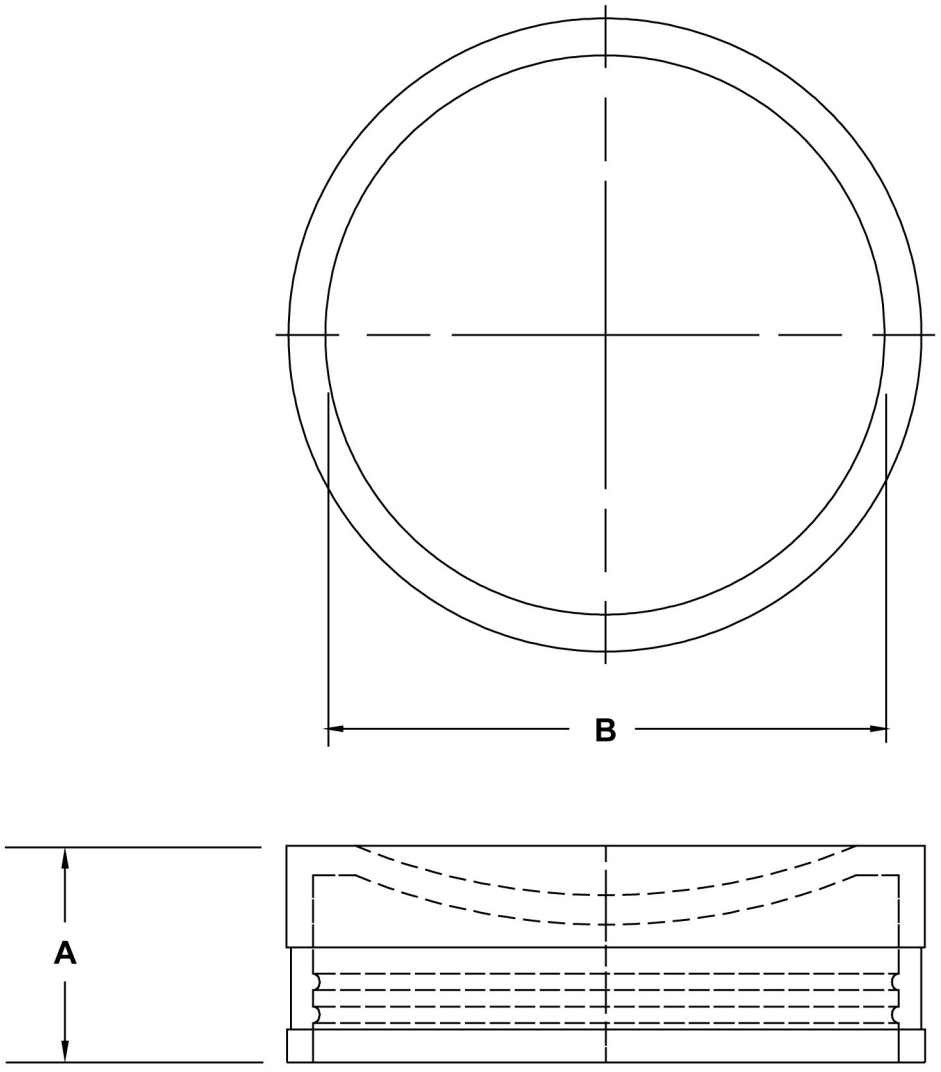
Used to close off the end of an above ground Beverage CHASE® System. The cap is pushed onto beverage lines through a hole cut into the cap. The cap can then be sealed with sealant, caulk or any other means acceptable to local health codes.

Specifications

Material: Flexible PVC

ASTM D5926

Endcap



SIZE	PART NO.	A	B
4”	C-84141	1-1/4”	4-1/4”
6”	C-86161	1-3/4”	6-1/4”
8”	C-88181	2-1/2”	8-5/8”

Aboveground CHASE - 4”

	COLOMBO PART#	DESCRIPTION	QUANTITY
CHASE	C-54110	CHASE, Aluminum, 4” X 10’	
	C-54120	CHASE, Aluminum, 4” X 20’	
Bends	C-54290	CHASE, Bend, 4”, Aluminum, FULL, 90deg., 24” radius	
	C-54390	CHASE, Bend, 4”, Aluminum, FULL, 90deg., 30” radius	
	C-54345	CHASE, Bend, 4”, Aluminum, PARTIAL, 45deg.	
	C-54330	CHASE, Bend, 4”, Aluminum, PARTIAL, 30deg.	
	C-54322	CHASE, Bend, 4”, Aluminum, PARTIAL, 22.5deg.	
Boxes	C-84741	4” Box, Splice/Pull, 6-1/4” x 60” x 5-1/2”, standard, 2 - 4” Nipples	
	C-84744	4” Pull Sleeve, 4” x 48”	
	C-84742	4” Box, Junction, 24” x 36” x 10”, standard, 3 - 4” Nipples	
	C-84743	4” Box, Termination, 6-1/4” x 5-5/8” x 12-1/4”, standard, 1 - 4” Nipple	
	C-84745	4” Box, Shallow Ceiling, 5” x 30” x 14”, standard	
	C-86724	Build Box (Field) 24” x 24” x 10” with 24” x 24” lid	
	C-86730	Build Box (Field) 24” x 36” x 10” with 24” x 36” lid	
	C-86736	Build Box (Field) 36” x 36” x 10” with 36” x 36” lid	
	C-86745	Build Box (Field) 45” x 45” x 10” with 45” x 45” lid	
	C-84142	Nipple (Field Build) 4” x 6”L Galvanized	
	C-84143	Nipple (Field Build) 4” x 14”L Galvanized	
Joins & Misc.	C-84040	4” Colombo Leak-Proof / Structural Join (Patented)	
	C-84140	4” Flared CHASE-End	
	C-84141	4” CHASE End-Cap	
	C-84146	4” Fire Sleeve Shell	
	C-84045	4” Expansion Joint	
Hangers	C-84001	4” row clamp hanger double rod	
	10478	4” strip 15 row clamp hanger (8 ft, 6.25” C to C)	
Install Equip.	C-80040	Installation Equipment Package, 4” Alignment and Cutting	

Terms: VISA, MASTERCARD, AMEX, C.O.D. Approved Credit: Net 30 days. (Allow 3 business days for Credit Approval)

For Quotation: Fax to: 248-546-7567 e-mail: chase@beveragechase.com

COLOMBO BEVERAGE CHASE SYSTEMS

Aboveground CHASE - 6”

	COLOMBO PART#	DESCRIPTION	QUANTITY
CHASE	C-56110	CHASE, Aluminum, 6” X 10’	
	C-56120	CHASE, Aluminum, 6” X 20’	
Bends	C-56290	CHASE, Bend, 6”, Aluminum, FULL, 90deg., 24” radius	
	C-56390	CHASE, Bend, 6”, Aluminum, FULL, 90deg., 30” radius	
	C-56490	CHASE, Bend, 6”, Aluminum, FULL, 90deg., 36” radius	
	C-56345	CHASE, Bend, 6”, Aluminum, FULL, PARTIAL, 45deg.	
	C-56330	CHASE, Bend, 6”, Aluminum, FULL, PARTIAL, 30deg.	
	C-56322	CHASE, Bend, 6”, Aluminum, FULL, PARTIAL, 22.5deg.	
Boxes	C-86761	6” Box, Splice/Pull, 7” x 7” x 60”, standard, 2 - 6” Nipples	
	C-86766	6” Pull Sleeve, 6” x 48”	
	C-86762	6” Box, Junction, 24” x 36” x 10”, standard, 3 - 6” Nipples	
	C-86763	6” Box, Termination, 7” x 7-1/2” x 14”, standard, 1 - 6” Nipple	
	C-86765	6” Box, Shallow Ceiling, 7” x 30” x 14”, standard	
	C-86724	Build Box (Field) 24” x 24” x 10” with 24” x 24” lid	
	C-86730	Build Box (Field) 24” x 36” x 10” with 24” x 36” lid	
	C-86736	Build Box (Field) 36” x 36” x 10” with 36” x 36” lid	
	C-86745	Build Box (Field) 45” x 45” x 10” with 45” x 45” lid	
	C-84162	Nipple (Field Build) 6” x 6”L Galvanized	
	C-84163	Nipple (Field Build) 6” x 14”L Galvanized	
Joins & Misc	C-86060	6” Colombo Leak-Proof / Structural Join (Patented)	
	C-86160	6” Flared CHASE-End	
	C-86161	6” CHASE End-Cap	
	C-84166	6” Fire Sleeve Shell	
	C-86065	6” Expansion Joint	
Hangers	C-86001	6” row clamp hanger double rod	
	10479	6” strip 9 row clamp hanger (8 ft, 8.5” C to C)	
Install Equip.	C-80060	Installation Equipment Package, 6” Alignment and Cutting	

Terms: VISA, MASTERCARD, AMEX, C.O.D. Approved Credit: Net 30 days. (Allow 3 business days for Credit Approval)

For Quotation: Fax to: 248-546-7567 e-mail: chase@beveragechase.com

Aboveground CHASE - 8”

	COLOMBO PART#	DESCRIPTION	QUANTITY
CHASE	C-58110	CHASE, Aluminum, 8” X 10’	
	C-58120	CHASE, Aluminum, 8” X 20’	
Bends	C-58490	CHASE, Bend, 8”, Aluminum, FULL, 90deg., 32” radius	
	C-58445	CHASE, Bend, 8”, Aluminum, FULL, PARTIAL, 45deg.	
	C-58430	CHASE, Bend, 8”, Aluminum, FULL, PARTIAL, 30deg.	
	C-58422	CHASE, Bend, 8”, Aluminum, FULL, PARTIAL, 22.5deg.	
Boxes	C-88781	8” Box, Splice/Pull, 9-1/2” x 9” x 60”, standard, 2 - 8” Nipples	
	C-88785	8” Pull Sleeve, 8” x 48”	
	C-88782	8” Box, Junction, 24” x 36” x 10”, standard, 3 - 8” Nipples	
	C-88783	8” Box, Termination, 9” x 9-5/8” x 14”, standard, 1 - 8” Nipple	
	C-88785	8” Box, Shallow Ceiling, 9” x 30” x 18”, standard	
	C-86724	Build Box (Field) 24” x 24” x 10” with 24” x 24” lid	
	C-86730	Build Box (Field) 24” x 36” x 10” with 24” x 36” lid	
	C-86736	Build Box (Field) 36” x 36” x 10” with 36” x 36” lid	
	C-86745	Build Box (Field) 45” x 45” x 10” with 45” x 45” lid	
	C-84182	Nipple (Field Build) 8” x 6”L Galvanized	
	C-84183	Nipple (Field Build) 8” x 14”L Galvanized	
Joins & Misc.	C-88080	8” Colombo Leak-Proof / Structural Join (Patented)	
	C-88180	8” Flared CHASE-End	
	C-88181	8” CHASE End-Cap	
	C-84188	8” Fire Sleeve Shell	
	C-88085	8” Expansion Joint	
Hangers	C-88001	8” row clamp hanger double rod	
Install Equip.	C-80080	Installation Equipment Package, 8” Alignment and Cutting	

Terms: VISA, MASTERCARD, AMEX, C.O.D. Approved Credit: Net 30 days. (Allow 3 business days for Credit Approval)

For Quotation: Fax to: 248-546-7567 e-mail: chase@beveragechase.com

Feedback

Feed-back is part of the process that helps us design and build better products and provide better services.

We appreciate any comments that will help us improve.

You may contact us any time by phone, fax or e-mail.

We hope the products, these instructions and the phone support we provide have made the installation of the Colombo Beverage CHASE System both successful and profitable.

We look forward to working with you.

COLOMBO
BEVERAGE CHASE SYSTEMS

STOUTi.e.® Underground CHASE®
Component & Dimensional Data

COLOMBO
BEVERAGE CHASE
SYSTEMS

COLOMBO

Hot Line Support

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Ask for:

Beverage CHASE

4”, 6”, and 8” straight CHASE

10’ & 20’ lengths

Description

A straight section of STOUTi.e. underground CHASE available in standard 10’ or 20’ lengths, in diameters of 4”, 6”, and 8”.

Application

Used when direct burial is required as part of an underground Beverage CHASE System configuration.

The STOUTi.e. Beverage CHASE System is used to route and enclose beer, soda, liquor and/or CO_2 dispensing lines underground.

Specifications

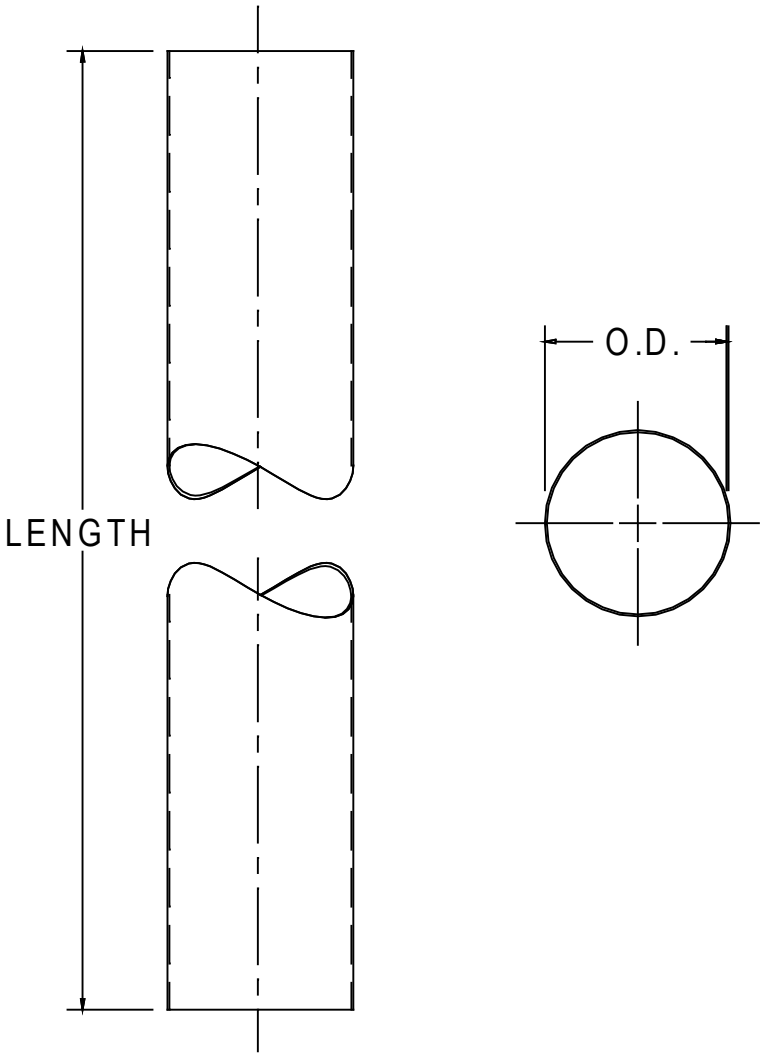
STOUTi.e. Beverage CHASE:

AWWA - C906
ASTM F714
NSF - 61 & 14 (upon request)

	OD	ID	WALL
4”	4.5”	4.05”	0.21”
6”	6.63”	5.96”	0.32”
8”	8.63”	7.75”	0.41”

U.S. Patent NO. 6,719,018

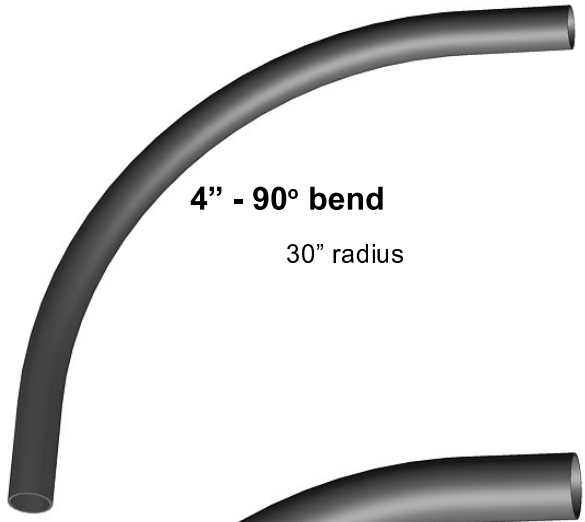
STOUTi.e.® Underground CHASE® - Straight



SIZE	PART NO.	LENGTH	O.D.	GAUGE NOMINAL
4”	C-44110	10’	4”	SDR-21
4”	C-44120	20’		
6”	C-46110	10’	6”	SDR-21
6”	C-46120	20’		
8”	C-48110	10’	8”	SDR-21
8”	C-48120	20’		

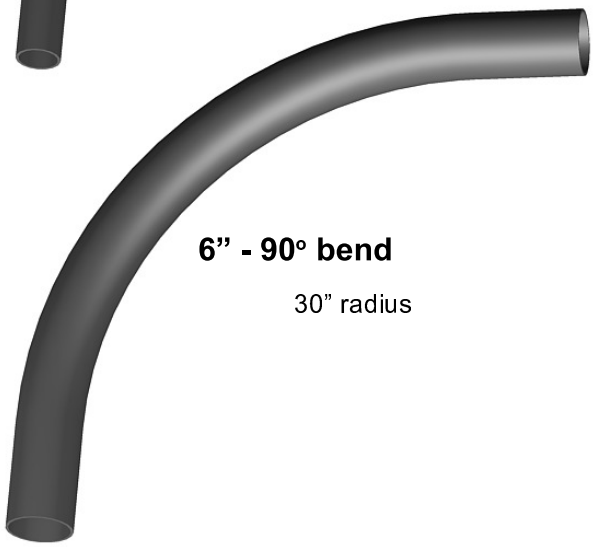
U.S. Patent NO. 6,719,018

STOUTi.e.® Underground CHASE® - Bend, 90 degree



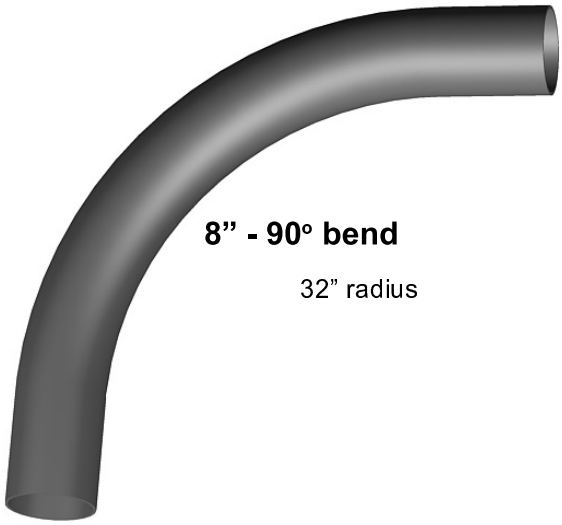
4” - 90° bend

30” radius



6” - 90° bend

30” radius



8” - 90° bend

32” radius

U.S. Patent NO. 6,719,018

Description

A 90-degree bend section of STOUTi.e. CHASE available in diameters of 4”, 6”, and 8”.

Application

To change direction 90 degrees as part of a STOUTi.e. Beverage CHASE System to route and enclose beer, soda, liquor, and/or CO_2 dispensing lines.

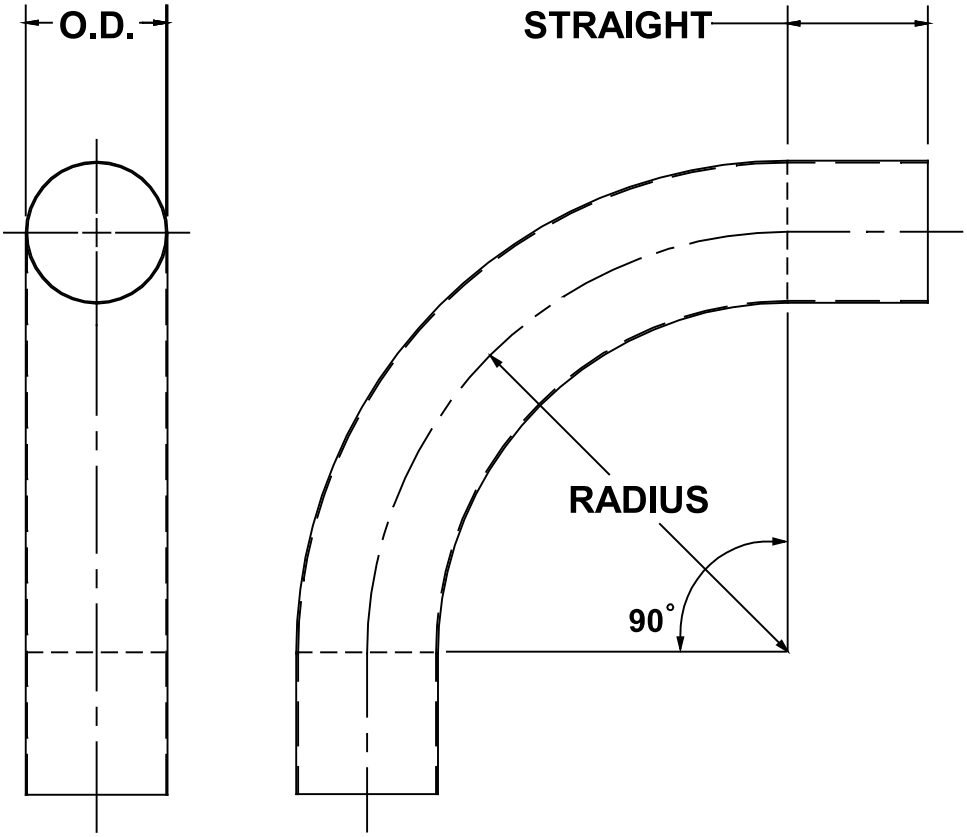
Specifications

STOUTi.e. Beverage CHASE:

AWWA - C906
ASTM - F714
NSF - 61 & 14 (upon request)

	OD	ID	WALL
4”	4.5”	4.05”	0.21”
6”	6.63”	5.96”	0.32”
8”	8.63”	7.75”	0.41”

STOUTi.e.® Underground CHASE® - Bend, 90 degree



SIZE	PART NO.	GAUGE NOMINAL	STRAIGHT	RADIUS
4”	C-44390	SDR-21	4”	32”

SIZE	PART NO.	GAUGE NOMINAL	STRAIGHT	RADIUS
6”	C-46390	SDR-21	6”	32”

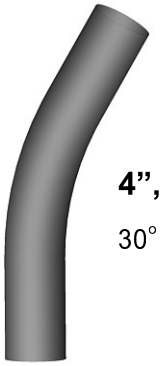
SIZE	PART NO.	GAUGE NOMINAL	STRAIGHT	RADIUS
8”	C-48390	SDR-21	8”	32”

U.S. Patent NO. 6,719,018

STOUTi.e.® Underground CHASE® - Bend, Partial

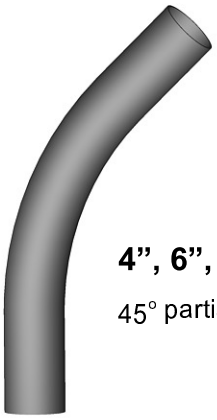
4", 6", 8"

22.5° partial bend



4", 6", 8"

30° partial bend



4", 6", 8"

45° partial bend

U.S. Patent NO. 6,719,018

Description

A partial bend section of STOUTi.e. CHASE available in diameters of 4", 6", and 8".

Application

Used to change direction 45, 30, or 22.5 degrees or to offset direction.

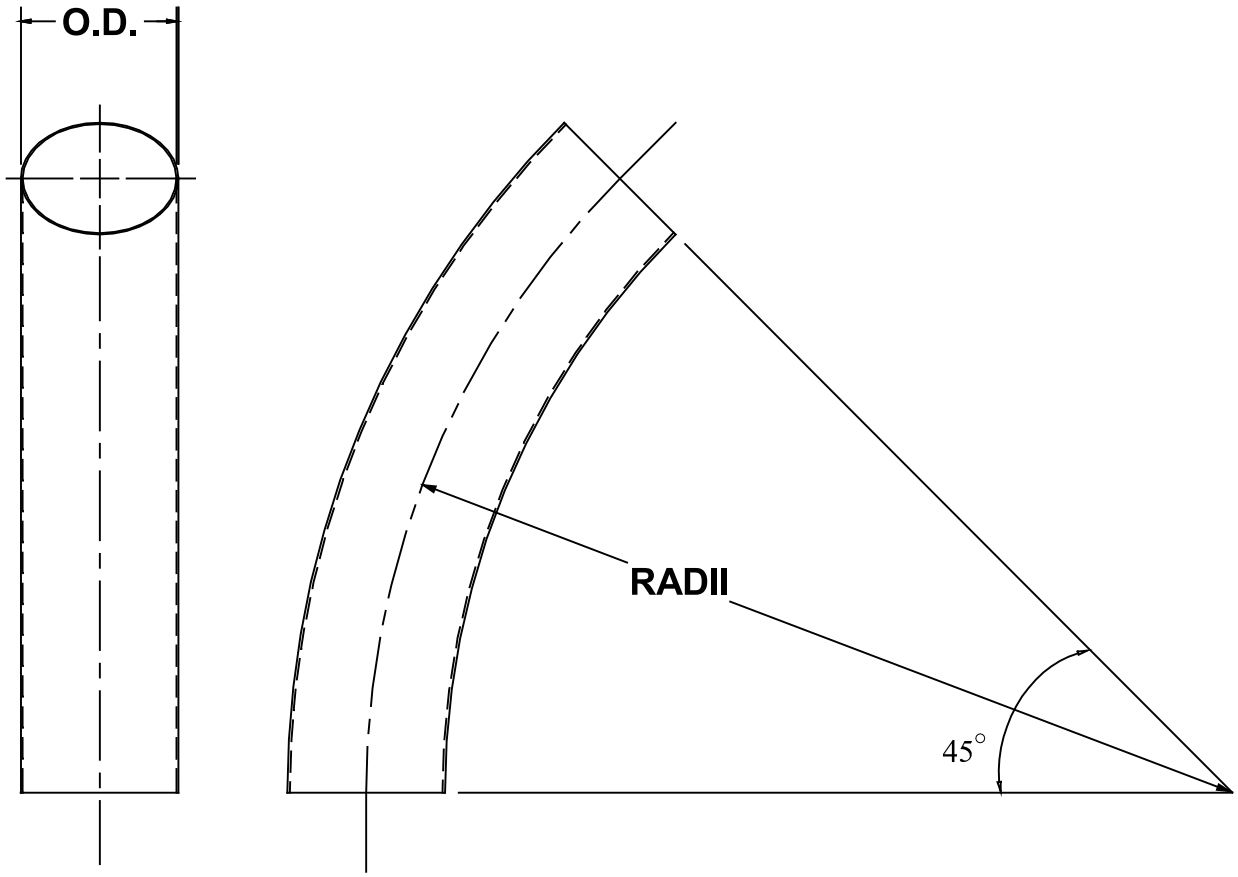
Specifications

STOUTi.e. Beverage CHASE:

AWWA - C906
ASTM F-714
NSF - 61 & 14
(upon request)

	OD	ID	WALL
4"	4.5"	4.05"	0.21"
6"	6.63"	5.96"	0.32"
8"	8.63"	7.75"	0.41"

STOUTi.e.® Underground CHASE® - Bend, Partial



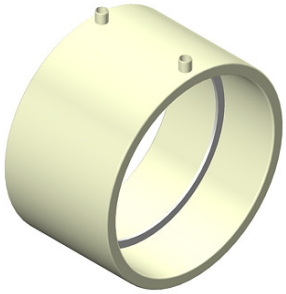
SIZE	WALL THICKNESS	GAUGE NOMINAL	PART# AND DEGREE OF PARTIAL BEND		
4”	.21	SDR-21	C-44345	C-44330	C-44322
			45°	30°	22.5°

SIZE	WALL THICKNESS	GAUGE NOMINAL	PART# AND DEGREE OF PARTIAL BEND		
6”	.32	SDR-21	C-46345	C-46330	C-46322
			45°	30°	22.5°

SIZE	WALL THICKNESS	GAUGE NOMINAL	PART# AND DEGREE OF PARTIAL BEND		
8”	.41	SDR-21	C-48345	C-48330	C-48322
			45°	30°	22.5°

U.S. Patent NO. 6,719,018

STOUTi.e.® Underground CHASE® - Fusion Join

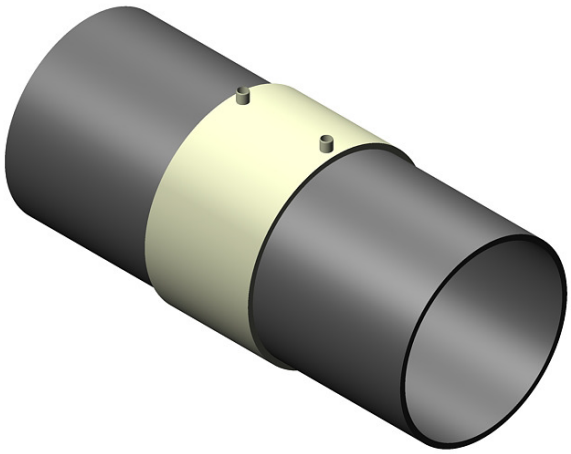


Description

A leak-proof fusion join for STOUTi.e. Beverage CHASE. Join's are available in 4", 6", and 8" diameters.

Application

The leak-proof fusion join is used to connect or join all direct buried components of a STOUTi.e. Beverage CHASE System.



Specifications

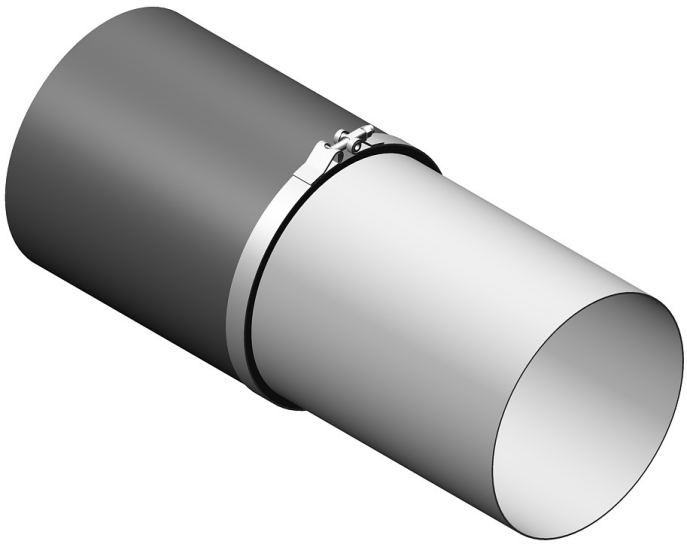
STOUTi.e. Beverage CHASE:

	4"	6"	8"
OD	6.625"	8.625"	9.75"
ID	4.6"	6.7"	8.7"

The join is air and water tight and as strong as the conduit's working strength.

U.S. Patent NO. 6,719,018

STOUTi.e.® Underground CHASE® - Transition Coupling



Description

An aluminum CHASE to STOUTi.e. CHASE transition coupling.

Transition couplings are available in 4”, 6” and 8” diameters.

Application

This STOUTi.e. CHASE component is used to transition from underground direct burial to aboveground aluminum CHASE.

Specifications

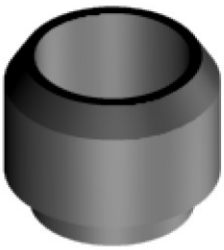
Transition Coupling:

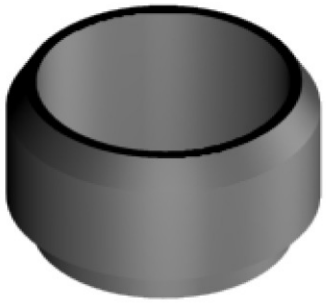
STOUTi.e.® to Aluminum CHASE®

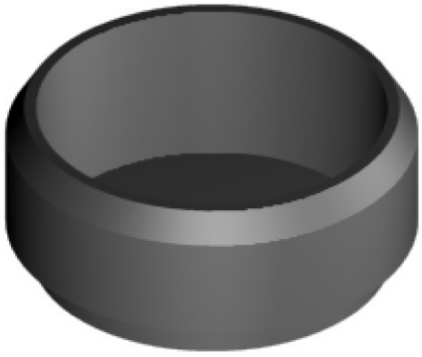
See Specifications for STOUTi.e.® and Aluminum Tube.

U.S. Patent NO. 6,719,018

STOUTi.e.® Underground CHASE® - Endcap







Description

A polyethylene endcap for a STOUTi.e. underground Beverage CHASE System.

Application

The STOUTi.e. endcap is used at the end of a Beverage CHASE to assure the end is sealed.

The beverage lines are pulled through a hole cut into the cap. The cap can then be filled with silicone sealant, caulk or other means acceptable to local health codes.

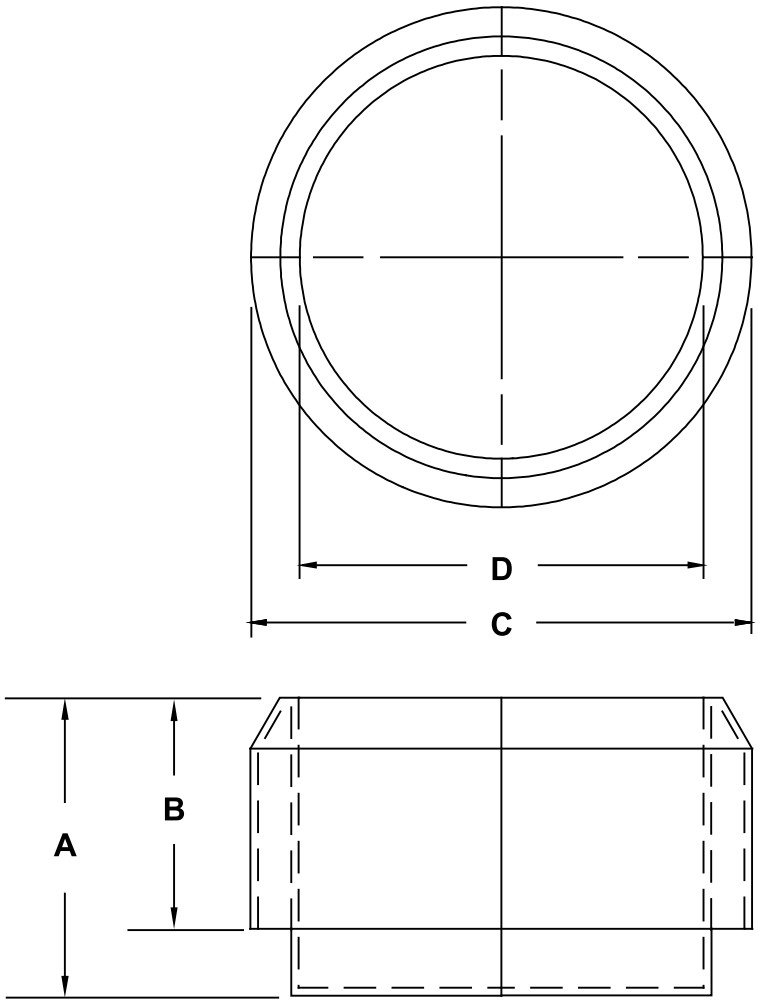
Specifications

Material: Low Density Polyethylene

	OD
4”	4.5”
6”	6.25”
8”	8.625”

U.S. Patent NO. 6,719,018

STOUTi.e.® Underground CHASE® - Endcap



SIZE	PART NO.	A	B	C	D
4”	C-44940	3-5/8”	2-5/8”	4-3/4”	3-1/8”
6”	C-46960	4”	2-7/8”	7”	5-1/8”
8”	C-48980	4”	2-7/8”	9”	7-1/4”

U.S. Patent NO. 6,719,018

Purchase or Rent
STOUTi.e.® Underground CHASE® Installation Tools

Cutting Guide

Insertion Tool

Fusion Machine

COLOMBO BEVERAGE CHASE SYSTEMS

STOUTi.e. CHASE - 4”

	COLOMBO PART#	DESCRIPTION	QUANTITY
4 Inch	C-44110	CHASE, STOUTi.e., 4” x 10’	
	C-44120	CHASE, STOUTi.e., 4” x 20’	
	C-44390	CHASE, STOUTi.e., Bend, 4”, FULL 90deg.	
	C-44345	CHASE, STOUTi.e., Bend, 4”, PARTIAL, 45deg.	
	C-44330	CHASE, STOUTi.e., Bend, 4”, PARTIAL, 30deg.	
	C-44322	CHASE, STOUTi.e., Bend, 4”, PARTIAL, 22.5deg.	
	C-44640	CHASE, STOUTi.e., JOIN, 4”	
	C-44940	CHASE, STOUTi.e., End-Cap, 4”	
	C-44649	CHASE, STOUTi.e., Transition to Aluminum CHASE, 4”	

TOOLS	C-40040	STOUTi.e., Fusion Machine	
	C-49999-D	STOUTi.e., Equipment Pkg. 4” Insertion and Cutting	

FUSION Machine is COMMON to 4”, 6”, and 8” STOUTi.e.®

Terms: VISA, MASTERCARD, AMEX, C.O.D.
Approved Credit: Net 30 days. (Allow 3 business days for Credit Approval)

For Quotation: Fax to: 248-546-7567
e-mail: chase@beveragechase.com

STOUTi.e. CHASE - 6”

	COLOMBO PART#	DESCRIPTION	QUANTITY
6 Inch	C-46110	CHASE, STOUTi.e., 6” x 10’	
	C-46120	CHASE, STOUTi.e., 6” x 20’	
	C-46390	CHASE, STOUTi.e., Bend, 6”, FULL 90deg.	
	C-46345	CHASE, STOUTi.e., Bend, 6”, PARTIAL, 45deg.	
	C-46330	CHASE, STOUTi.e., Bend, 6”, PARTIAL, 30deg.	
	C-46322	CHASE, STOUTi.e., Bend, 6”, PARTIAL, 22.5deg.	
	C-46660	CHASE, STOUTi.e., JOIN, 6”	
	C-46960	CHASE, STOUTi.e., End-Cap, 6”	
	C-46669	CHASE, STOUTi.e., Transition to Aluminum CHASE, 6”	

TOOLS	C-49999	STOUTi.e., Fusion Machine	
	C-40060	STOUTi.e., Equipment Pkg. 6” Insertion and Cutting	

FUSION Machine is COMMON to 4”, 6”, and 8” STOUTi.e.®

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Approved Credit: Net 30 days. (Allow 3 business days for Credit Approval)

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e-mail: chase@beveragechase.com

COLOMBO BEVERAGE CHASE SYSTEMS

STOUTi.e. CHASE - 8”

	COLOMBO PART#	DESCRIPTION	QUANTITY
8 Inch	C-48110	CHASE, STOUTi.e., 8” x 10’	
	C-48120	CHASE, STOUTi.e., 8” x 20’	
	C-48390	CHASE, STOUTi.e., Bend, 8”, FULL 90deg.	
	C-48345	CHASE, STOUTi.e., Bend, 8”, PARTIAL, 45deg.	
	C-48330	CHASE, STOUTi.e., Bend, 8”, PARTIAL, 30deg.	
	C-48322	CHASE, STOUTi.e., Bend, 8”, PARTIAL, 22.5deg.	
	C-48680	CHASE, STOUTi.e., JOIN, 8”	
	C-48980	CHASE, STOUTi.e., End-Cap, 8”	
	C-48689	CHASE, STOUTi.e., Transition to Aluminum CHASE, 8”	

TOOLS	C-49999	STOUTi.e., Fusion Machine	
	C-40080	STOUTi.e., Equipment Pkg. 8” Insertion and Cutting	

FUSION Machine is COMMON to: 4”, 6”, and 8” STOUTi.e.®

Terms: VISA, MASTERCARD, AMEX, C.O.D.
Approved Credit: Net 30 days. (Allow 3 business days for Credit Approval)

For Quotation: Fax to: 248-546-7567
e-mail: chase@beveragechase.com

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CO_2 CHASE® Systems
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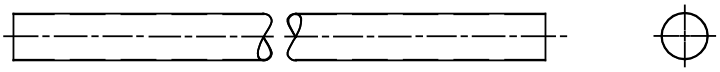
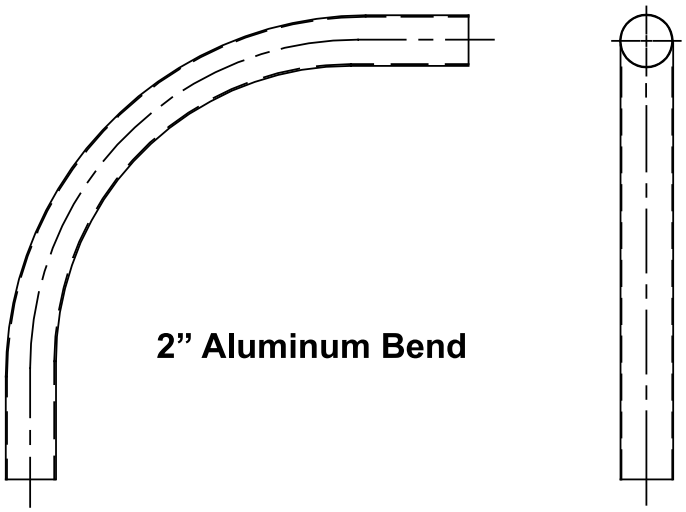
Ask for:

Beverage CHASE

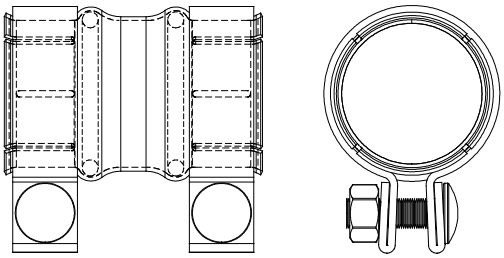
CHASE® CO_2 - 2" Aluminum



2" Aluminum Straight



2" Aluminum Bend



2" Compression Coupling

Description

A straight section of aluminum CHASE, available in 10' or 20' lengths.

A 90 degree, long radius bend section. CHASE diameters are available in 24" radius.

Compression coupling.

Application

Used to route CO_2 lines between a bulk source and beverage system components.

Specifications

Aluminum tube.

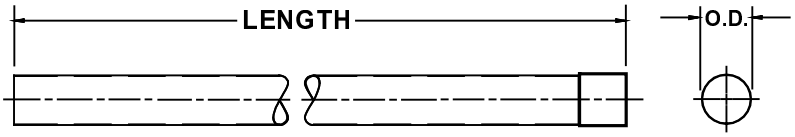
2" = .050" wall / 16 gauge nominal

Galvanized coupling

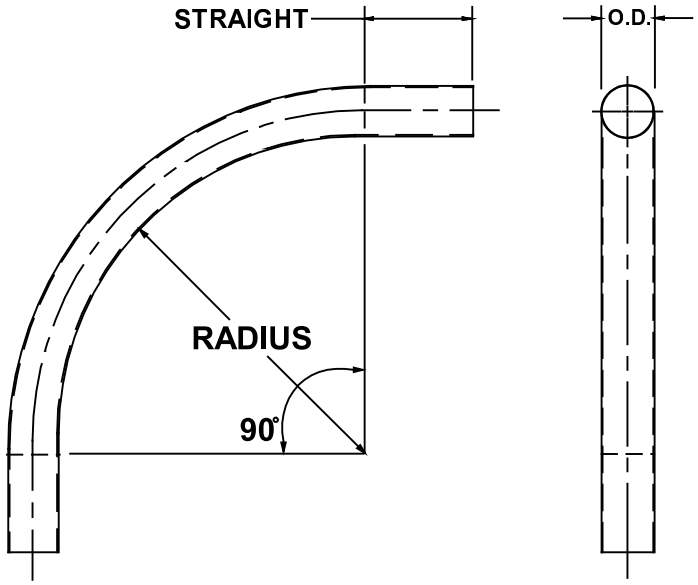
2" = 16 gauge nominal

CHASE® CO_2 - 2" Galvanized Steel

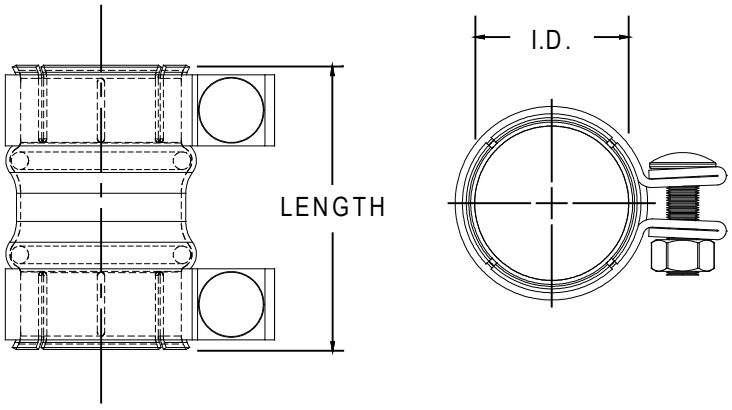
COLOMBO BEVERAGE CHASE SYSTEMS



SIZE	PART NO.	LENGTH	O.D.	WALL THICKNESS
2"	C-52110	10	2"	050"
				GAUGE NOMINAL
2"	C-52120	20		16

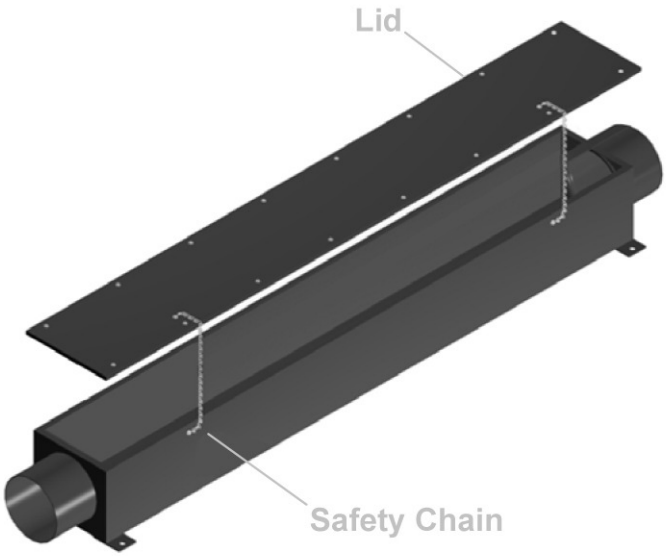


SIZE	PART NO.	O.D.	WALL THICKNESS	GAUGE NOMINAL
2"	C-52290	2"	.050"	16
			RADIUS	DEGREE OF BEND
			24"	90°



SIZE	PART NO.	O.D.	GAUGE NOMINAL	A
2"	C-82020	2"	16	4"

CHASE® CO_2 - 2" Splice/Pull Box



Description

Splice/pull box, powder coated, all welded, leak-proof steel box with 2 nipples, gasketed lid and safety chains.

Application

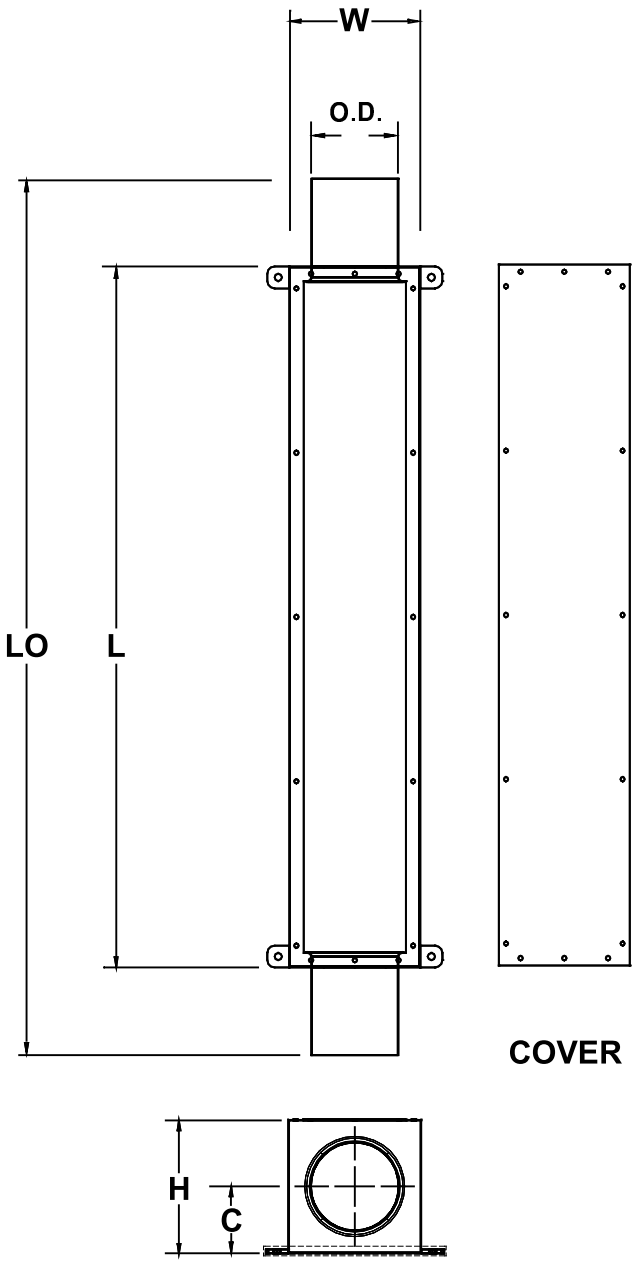
Used as the pull and splice location in a Beverage CHASE dedicated CO_2 system. Use is directly related to length and number of bends in the system.

Specifications

Splice/Pull Box - Steel

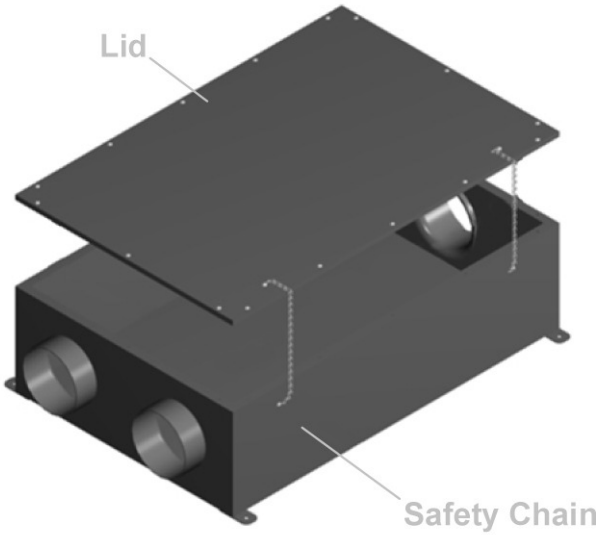
- 14 gauge steel
- All welded contruction
- Powder coated
- Liquid tight - gasketed cover w/safety chains
- 2) 2" Nipples

CHASE® CO_2 - 2" Splice/Pull Box



SIZE	PART NO.	O.D.	L	LO	C	W	H	WEIGHT
2"	C-82721	2"	24"	30"	2.25	4-1/2"	4-1/2"	40lb.

CHASE® CO_2 - 2" Junction Box



Description

Junction Box, powder coated, all welded, leak-proof steel box with 3 nipples, gasketed lid and safety chains.

Application

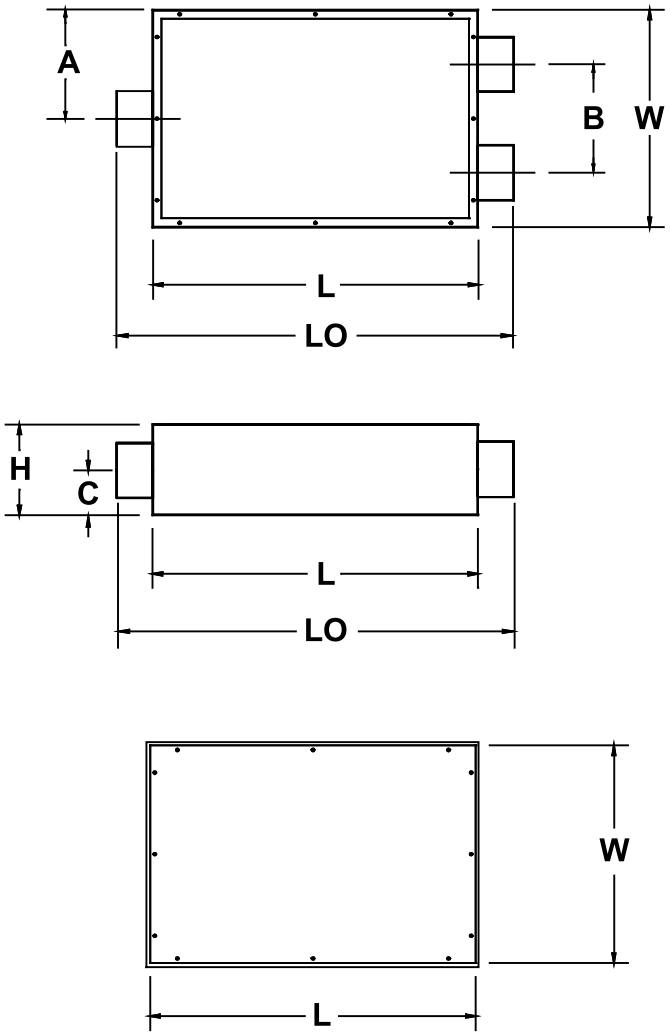
Used as the pull and splice location in a Beverage CHASE® dedicated CO_2 system. Use is directly related to length and number of bends in the system.

Specifications

Splice/Pull Box - Steel

- 14 gauge steel
- All welded contruction
- Powder coated
- Liquid tight - gasketed cover w/safety chains
- 3) 2" Nipples

CHASE® CO_2 - Junction Box



COVER

SIZE	PART NO.	O.D.	L	W	H	A	B	C	LO	WEIGHT
2”	C-82722	2-1/4”	24”	9”	4-1/2”	4”	4-1/2”	2-1/4”	30”	50lb.

CO_2 CHASE - 2" Aluminum

	COLOMBO PART#	DESCRIPTION	QUANTITY
CO_2 ALUMINUM	C-52110	CHASE, Alum., 2" x 10'	
	C-52120	CHASE, Alum., 2" x 20'	
	C-52290	CHASE, Bend, 2", Alum., FULL, 90deg., 24" rad.	
	C-82721	2" Box, Pull/Splice, CO-2, 4.5 x 24 x 4.5 - 2, 2" Nipples	
	C-82722	2" Box, Junction, CO-2, 9 x 24 x 4.5 - 3, 2" Nipples	
	C-82020	2", 3 Compression Coupling	
	C-52122	Nipple 2" x 3.5"L Galvanized	

Terms: VISA, MASTERCARD, AMEX, C.O.D.
Approved Credit: Net 30 days. (Allow 3 business days for Credit Approval)

For Quotation: Fax to: 248-546-7567
e-mail: chase@beveragechase.com

Feedback

Feed-back is part of the process that helps us design and build better products and provide better services.

We appreciate any comments that will help us improve.

You may contact us any time by phone, fax or e-mail.

We hope the products, these instructions and the phone support we provide have made the installation of the Colombo Beverage CHASE System both successful and profitable.

We look forward to working with you.

COLOMBO
BEVERAGE CHASE
SYSTEMS

Specifications

page no.

Specifications for Beverage CHASE® Systems are provided on the following pages.

They are organized as follows:

SECTION 15105 - BEVERAGE CHASE

PART 1 - GENERAL REQUIREMENTS

1.1 SUMMARY

A. This section includes Beverage CHASE Systems that are used for the installation of beverage trunk line within a building. These systems typically connect central storage facilities to the point of use or dispensers. Materials and equipment specified in this section includes proper tube and bends, leak proof joins, end sealers, for aboveground, as well as other miscellaneous items for aboveground installation such as splice/pull and junction boxes.

Beverage CHASE System(s) are designed to provide an easy to install CHASE (right of way) for beer, liquor, soda beverage lines and/or CO_2 lines. Beverage lines transfer beverages and CO_2 from storage facilities to the immediate use locations (i.e. bar, service bar, serving counter, etc.).

These systems provide assured protection of the surrounding environment in the event of a line rupture or condensation. The beverage chase will also provide protection against rodents/vermin, mechanical damage and environmental conditions.

B. This Section does not apply to the actual beverage trunk lines that contain beer, wine, liquor, soda, water, ethyl glycol delivery systems, or CO_2 lines. The purpose of the chase is to contain these trunk lines for beverage distribution and keep them dry and safe. These trunk line components are installed inside the chase by the beverage purveyor or installer.

C. Related Sections: The following sections contain requirements that relate to this Section:
1. Division 7 Section “Joint Sealers,” for materials and methods for sealing pipe penetrations through basement and foundation walls, and fire and smoke barriers.
2. Division 15 Section “Basic Mechanical Materials and Methods,” for materials and methods for fire barrier penetrations and wall penetrations.
3. Division 15 Section “Basic Piping Material and Methods,” for materials and methods for strainers and mechanical sleeve seals.

D. This project requires:

1. Aboveground CHASE in O.D. size(s): ___ 4” ___6” ___8”

1.2 DEFINITIONS

A. Chase is the tubing or conduit through which beverage trunk lines are installed.

B. Tube and bend sizes used in this Specification are: Outside Diameter, “O.D.”.

C. Leak proof: means the system can be tested and will not leak air with 5 lbs. psi pressure test, before installing the beverage trunk line into the chase.

D. Join: means connecting two individual tubes, bends or other system components. The finished product will have no rough or sharp inside edges, must be strong enough to remain leak proof AFTER the stresses imposed with the installation of the beverage trunk line.

1.2 SUBMITTALS

A. Product data required for each beverage line chase system and special components is as follows:
1. Product data descriptive information.
2. Product dimensional information.
3. Installation instructions.
4. Description of available tools to assist and or speed installation.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: a qualified mechanical contractor or beverage chase supplier or qualified beverage equipment or foodservice dealer shall install the beverage chase.

B. Regulatory Requirements: Comply with the requirements of the following codes:
1. 2000 BOCA Basic National Mechanical Code.
2. 2000 International Mechanical Code
3. 2000 Uniform Mechanical Code
4. ASTM B313
5. ASTM B221 or B241
6. ASTM F714
7. AWWA-C901
8. AWWA-C-906
9. NSF-61 & 64
10. ANSI H26
11. ANSI H35.1

PART 2 - PRODUCTS AND MATERIALS

2.1 MANUFACTURERS

A. Manufacturer: Subject to compliance with code requirements, provide beverage chase system products in aluminum for aboveground from:

COLOMBO Sales & Engineering, Inc.
2321 Wolcott Street
Ferndale, MI 48220

2.2 ABOVE GROUND BEVERAGE CHASE:

A. Aluminum.

1. Tube and bends: Corrosion resistant aluminum ASTM-B313, ANSI-H26 and ANSI-H35.
2. Must be assembled with smooth interior wall.
3. Segmented elbows or short radius plumbing elbows WILL NOT BE PERMITTED.
4. Long Sweep Bend radius with minimum 24", CLR for 4" and 6" CHASE and minimum 32" for 8" CHASE are permissible in manufactured 90, 45, 30 and 22.5 degree bend.
5. Fittings: Each join shall be assembled using a bolted coupling providing a smooth round interior join, free of burrs and sharp edges. The join must be leak proof, and be of sufficient strength to allow pulling of beverage trunk line and remain leak proof after installation of trunk line. Join must withstand a minimum of 500 lbs. pull in a simple pluck test.

1.2 SPECIAL ITEMS FOR ABOVEGROUND CHASE SYSTEMS.

A. Splice/Pull Boxes and Junction Boxes.

1. Powder coated welded steel construction with bottom access panel.
   a. Access panel to be chained or hinged to box for easy removal and replacement.
   b. Access Panel to be constructed with return and gasket to achieve a leak-proof seal.
   c. Input and output nipples to be fully welded to box to provide a leak-proof system.
   d. Nipples to be flared on inside of box to prevent tearing of beverage line insulation or cover material during installation of trunk line.
   e. Nipples to be of sufficient length to attach leak proof join.

2. Custom Boxes: contractor to specify the number of input and output nipples, locations and dimensions.

B. Splice/Pull Sleeves.

1. Provide same type material as chase system.
2. Provide leak proof gasket and sealing method.

C. Expansion joint to install between buildings:

1. Must have 2-inch maximum travel.
2. Must be leak proof.

D. Provide tube flare for each end of every chase run.

PART 3 - EXECUTION

3.1 PREPARATION FOR ABOVEGROUND CHASE SYSTEM, TUBE, BEND AND JOIN CONSTRUCTION

A. Connect tube and bends with joins in accordance with the procedures specified by the manufacturer's installation manual.

B. Debur chase and fitting ends prior to making joins.

C. Assure straight cut edges where cutting of tube is necessary.

D. Assure tube or bend is properly rounded to assure smooth interior wall when joined.

E. Use partial bends to simplify and speed installation.

3.2 INSTALLATION OF CHASE SYSTEMS, TUBE, BENDS AND CONNECTING JOINT

A. Locations: Drawings and plans indicate the general pathway and endpoints of the systems. So far as practical, install chase as indicated. Minimize the number of bends and offset bends.

B. Fire Barrier Penetrations: Where aboveground chase passes though fire-rated walls, partitions, ceilings, and floors maintain the fire-rated integrity. Refer to Division 15 Section "Basic Mechanical Materials and Methods" for special sealers and materials.

C. Use 90 degree or partial bends for all changes in direction. Assure assembly of proper leak proof joins on all bends and straight tube.

D. Install horizontal chase as close to the deck as possible allowing for coordination with other mechanical components. Install vertical tubing tight to columns or walls.

E. System shall be assembled and installed in accordance with the manufacturer's installation guide, applicable local codes or other authority having jurisdiction.

F. Install chase, where permitted, in direct straight runs using diagonal runs as allowed by the architect to maintain the shortest distance from point distribution to point of use for all beverage chase.

Install at right angles or parallel to building walls only if direct runs are not permitted by the architect/owner. In this instance minimize the number of bends and offsets.

G. Install wall mounted beverage chase with a minimum of 12-inch clearance from the floor. Consult beverage equipment supplier for minimum height for the equipment being used.

H. Install flared-ends on the terminations of all aboveground runs to avoid damaging the beverage trunk line when installed.

I. Install leak proof expansion system between buildings as required.

J. Provide junction boxes as necessary within the system mounted in a vertical or horizontal position.

K. Provide splice/pull box as necessary as required by the beverage equipment installer. Typical installations require a pull box every 75 feet or cumulative bends of 270 degrees.

3.3 HANGERS AND SUPPORTS

A. General: Hanger, support, and anchor components and installation procedures as suggested by manufacturer. Conform to the table below for maximum spacing of supports.

B. Attachments: Install the following:
1. Galvanized steel hangers, individual or multiple hanger clamps for horizontal runs.
2. A minimum of two- (2) hanger rods should be used for each support; each rod shall be galvanized and pre-threaded.
3. Install hangers for horizontal or vertical beverage chase systems at minimum of ten- (10) foot intervals using at minimum 3/8" galvanized steel rod.
4. Hangers shall be provided within twelve- (12) inches of each junction or splice/pull box or pull sleeve, and at an exposed end.
5. Provide a minimum of two wall-mounts for wall drops longer than 10 feet.
6. Support beverage chase at both ends of each long radius bend.
7. Hanger rods shall be secured to the building structure by beam clamps, concrete expansion inserts or wood anchors as required.
8. Refer to manufacturer's installation instructions for addition installation information.

C. Stress Bracing
1. Install stress bracing per manufacturers, beverage equipment installer recommendations, and local code for seismic conditions.

3.4 TUBE AND JOIN CONSTRUCTION

A. All joins shall have a smooth inside wall were tube and bends are joined together.

B. All joins shall be a mechanical bolted system providing a leak proof system.

C. All joins shall have sufficient structural integrity to endure trunk-line installation. (A minimum strength of 500 lbs. pull in a simple pluck test.)

D. All tube and bends shall be free of inside weld flash.

3.5 ELECTRICAL BONDING AND GROUNDING

A. Do not use Beverage CHASE Systems as a grounding electrode.

3.6 FIELD QUALITY CONTROL

A. Inspections

1. Do not enclose, cover, or install trunk line into the beverage chase system until it has been inspected and approved by the owner and beverage purveyor representative.
2. During the installation, notify the owner's representative, at least 24 hours prior to inspection. Perform tests specified below in the presence of the owner and beverage purveyor representative.
   a. Pre-installation: Review installation plan.
   b. Rough in Inspection: Inspect chase system before concealed or closed-in after system is roughed-in, and prior to installing beverage distribution equipment.
   c. Final Inspection: An inspection by the owner and beverage purveyor representative to observe the tests specified.
   d. Re-inspections: Whenever the chase system fails to pass the test or inspection, make the required corrections, and arrange for re-inspection by the owner and beverage purveyor representative.
   e. Reports: Prepare inspection reports, signed by the owner and beverage purveyor representative.

B. Beverage chase system test: The chase system may be tested in accordance with the procedures of the manufacturer, or in the absence of a published procedure, as follows:
1. Test for leaks and defects in all new beverage chase systems and parts of existing systems, which have been altered, extended or repaired. If testing is performed in segments, submit a separate report for each test, complete with a diagram of the portion of the system tested.
2. Leave uncovered and unconcealed all new, altered, extended, or replaced beverage chase until it has been tested and approved. Expose all such work for testing that has been covered or concealed before it is tested and approved.
3. The beverage chase system may be tested by tightly closing each end of the system and apply five- (5) lbs. of air pressure. Inspect each joint by spraying with soapy water solution to detect leaks. (If it leaks air, it will leak water.)
4. Repair all leaks and defects using necessary materials and retest system or portion thereof until satisfactory results are obtained.
5. Reports: Prepare inspection reports and turn over to the architect upon completion of the project.

3.7 ADJUSTING AND CLEANING

A. Clean the interior of the chase system of any construction debris prior to installing trunk line. Remove dirt, filings and debris as work progresses.

3.8 PROTECTION

A. Protect chase system during remainder of construction period, to avoid clogging with dirt and debris, and to prevent damage from traffic and other construction work.

B. Cover the ends of uncompleted conduit-chase at end of day or whenever work stops.

END OF SECTION 15105

SECTION 15105 - BEVERAGE CHASE

PART 1 - GENERAL REQUIREMENTS

1.1 SUMMARY

A. This section includes Beverage CHASE Systems that are used for the installation of beverage trunk lines within a building. These systems typically connect central storage facilities to the point of use or dispensers. Materials and equipment specified in this section includes proper tube and bends, leak proof joins, end sealers, for underground direct burial/under slab applications.

Beverage CHASE System(s) are designed to provide an easy to install chase (right of way) for beer, liquor, soda beverage lines and/or CO_2 lines. Beverage lines transfer beverages and CO_2 from storage facilities to the immediate use locations (i.e. bar, service bar, serving counter, etc.).

These systems provide assured protection of the surrounding environment in the event of a line rupture or condensation. The beverage chase will also provide protection against rodents/vermin, mechanical damage and environmental conditions.

B. This Section does not apply to the actual beverage trunk lines that contain beer, wine, liquor, soda, water, ethyl glycol delivery systems, or CO_2 lines. The purpose of the chase is to contain these trunk lines for beverage distribution and keep them dry and safe from vermin. These trunk line components are installed inside the chase by the beverage purveyor or installer.

C. Related Sections: The following sections contain requirements that relate to this Section:
1. Division 2 Section “Earthwork,” for trenching and back-filling materials and methods for underground installations.
2. Division 7 Section “Joint Sealers,” for materials and methods for sealing pipe penetrations through basement and foundation walls, and fire and smoke barriers.
3. Division 15 Section “Basic Mechanical Materials and Methods,” for materials and methods for fire barrier penetrations and wall penetrations.
4. Division 15 Section “Basic Piping Material and Methods,” for materials and methods for strainers and mechanical sleeve seals.

D. This project requires:

1. STOUTi.e. Underground CHASE in O.D. size(s) ___6” ___8”

1.2 DEFINITIONS

A. CHASE is the tubing or conduit through which beverage trunk lines are installed.

B. Tube and Bend sizes used in this Specification are: Outside Diameter, "O.D.".

C. Leak proof: means the system has been tested and will not leak air with 5 lb. psi pressure test, before installing the beverage trunk line into the CHASE®.

D. Join: means connecting two individual tubes or bends. The finished product will have no rough or sharp inside edges, must be strong enough to remain leak proof AFTER the stresses imposed with the installation of the beverage trunk line.

1.3 SUBMITTALS

A. Product data required for each beverage line chase system and special components is as follows:
1. Product data descriptive information.
2. Product dimensional information.
3. Installation instructions.
4. Description of available tools to assist and or speed installation.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: a qualified mechanical contractor or beverage CHASE supplier or qualified beverage equipment or foodservice dealer shall install the beverage CHASE.

B. Regulatory Requirements: Comply with the requirements of the following codes:
1. 2000 BOCA Basic National Mechanical Code.
2. 2000 International Mechanical Code
3. 2000 Uniform Mechanical Code
4. ASTM B313
5. ASTM B221 or B241
6. ASTM F714
7. AWWA-C901
8. AWWA-C-906
9. NSF-61 & 64
10. ANSI H26
11. ANSI H35.1

PART 2 - PRODUCTS AND MATERIALS

2.1 MANUFACTURERS

A. Manufacturer: Subject to compliance with code requirements, provide Beverage CHASE System products in STOUTi.e. Underground CHASE from:

COLOMBO Sales & Engineering, Inc.
2321 Wolcott Street
Ferndale, MI 48220

2.2 UNDERGROUND BEVERAGE CHASE.

A. STOUTi.e.® Underground CHASE

1. Tube and bends: STOUTi.e. Underground CHASE ASTM F714 with smooth interior.
2. Must be assembled with smooth interior.
3. Segmented elbows or short radius elbows WILL NOT BE PERMITTED.
4. Long Sweep Bend radius with minimum 24", CLR for 6" CHASE and minimum 32" for 8" CHASE are permissible in manufactured 90, and 45 degree bends.
5. Fittings: Fusion joints to provide smooth interior wall and a leak proof underground direct buried system.
6. STOUTi.e. endcaps for sealing all termination points.

PART 2 - EXECUTION

3.1 PREPARATION OF FOUNDATION FOR INSTALLATION OF UNDERGROUND CHASE SYSTEM

A. Grade trench bottoms with 6 to 12 inches of sand to provide a smooth, firm, and stable foundation, free from rock, throughout the length of the STOUTi.e. CHASE and bends.

B. Provide clean sand backfill to a minimum of 6 to 12 inches and as further described in Division 2 Section "Earthwork."

3.2 INSTALLATION OF CHASE SYSTEMS, TUBE, BENDS AND CONNECTING JOINT

A. Locations: Drawings and plans indicate the general pathway and endpoints of the systems. So far as practical, install chase as indicated. Minimize the number of bends and offset bends.

B. Use long-radius 90 degree or partial bends for all changes in direction. Assure assembly of proper fused leak proof joins on all bends and straight tube.

C. System shall be assembled and installed in accordance with the manufacturer's installation guide, applicable local codes or other authority having jurisdiction.

D. Install chase, where permitted, in direct straight runs using diagonal runs as allowed by the architect to maintain the shortest distance from point distribution to point of use for all beverage chase.

Install at right angles or parallel to building walls only if direct runs are not permitted by the architect/owner. In this instance minimize the number of bends and offsets.

E. Underground/direct buried beverage chase system terminations shall be stubbed up a minimum of six- 6 inches above the finished floor or as shown on the drawings. Install proper STOUTi.e.® End-caps to all exposed ends.

3.3 TUBE AND JOIN CONSTRUCTION

A. All joins shall have a smooth inside wall were tube and bends are joined together.

B. All joins shall be fused providing a leak proof system.

C. All joins shall have sufficient structural integrity to endure trunk-line installation.

3.4 FIELD QUALITY CONTROL

A. Inspections

1. Do not enclose, cover, or install trunk line into the beverage chase system until it has been inspected and approved by the owner and beverage purveyor representative.
2. During the installation, notify the owner's representative, at least 24 hours prior to inspection. Perform tests specified below in the presence of the owner and beverage purveyor representative.
   a. Pre-installation: Review installation plan.
   b. Rough in Inspection: Inspect chase system before concealed or closed-in after system is roughed-in, and prior to installing beverage distribution equipment.
   c. Final Inspection: An inspection by the owner and beverage purveyor representative to observe the tests specified.
   d. Re-inspections: Whenever the chase system fails to pass the test or inspection, make the required corrections, and arrange for re-inspection by the owner and beverage purveyor representative.
   e. Reports: Prepare inspection reports, signed by the owner and beverage purveyor representative.

B. Beverage CHASE System test: The chase system may be tested in accordance with the procedures of the manufacturer, or in the absence of a published procedure, as follows:
1. Test for leaks and defects in all new beverage chase systems and parts of existing systems, which have been altered, extended or repaired. If testing is performed in segments, submit a separate report for each test, complete with a diagram of the portion of the system tested.
2. Leave uncovered and unconcealed all new, altered, extended, or replaced beverage chase until it has been tested and approved. Expose all such work for testing that has been covered or concealed before it is tested and approved.
3. The beverage chase system may be tested by tightly closing each end of the system and apply five- (5) lbs. of air pressure. Inspect each joint by spraying with soapy water solution to detect leaks. (If it leaks air, it will leak water.)
4. Repair all leaks and defects using necessary materials and retest system or portion thereof until satisfactory results are obtained.
5. Reports: Prepare inspection reports and turn over to the architect upon completion of the project.

3.5 ADJUSTING AND CLEANING

A. Clean the interior of the chase system of any construction debris prior to installing trunk line. Remove dirt, filings and debris as work progresses.

3.6 PROTECTION

A. Protect chase system during remainder of construction period, to avoid clogging with dirt and debris, and to prevent damage from traffic and other construction work.

B. Cover the ends of uncompleted conduit-chase at end of day or whenever work stops.

END OF SECTION 15105

COLOMBO BEVERAGE CHASE SYSTEMS

PROJECTS and ARTICLES

page no.

A representative sample of Colombo Beverage CHASE® System installations is provided on the following pages.

They are organized as follows:

Please contact us if there are questions.

COLOMBO
BEVERAGE CHASE
SYSTEMS

- **CASINOS**
  - Blue Chip Casino
  - Barona Casino
  - Hard Rock Casino
  - MotorCity Casino
  - Casino Morongo
  - Black Oak Casino
  - Harrah's Chester Racetrack & Casino
  - MGM Grand Casino
  - Greektown Casino & Hotel

- **STADIUMS/ARENAS**
  - Palace of Auburn Hills
  - Ford Field
  - Fresno SaveMart Center
  - Dayton Arena
  - University of Virginia John Paul Jones Arena
  - America West Arena
  - University of Southern California Galen Center

• RESTAURANTS

- Hockeytown Café
- Charlie Palmer Steakhouse
- Gallagher's
- Hard Rock Café
- TGIFriday's
- PF Chang's
- Pink Taco
- 5 Guys Restaurant
- LaTasca Restaurant
- Maggiano's Little Italy
- Phillip's Seafood
- Jak's Bistro
- Gustav's
- Atlantic Smoking Lounge
- A & W
- Fletcher's
- Maui Taco
- Damon's
- Outpost Café
- Yardhouse
- Max's Restaurant
- Claim Jumper
- Shenandoah Country Club
- Corona's
- Ruby Tuesday
- Cheeseburger Cheeseburger
- Sora
- Pasta Bravo
- Earl of Sandwich
- Villa Pizza
- La Petite Bistro
- ESPN Zone

COLOMBO BEVERAGE CHASE SYSTEMS

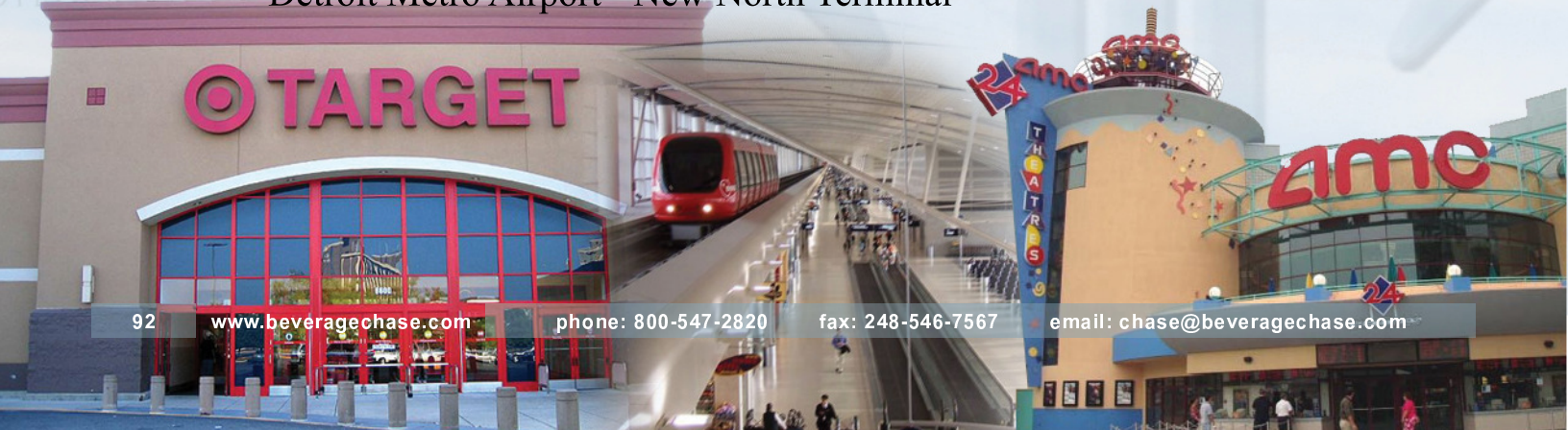
- **THEATRES**
  - AMC Theatres
  - Guthrie Theatre
  - Century Theatre

- **CORPORATE CAFETERIAS**
  - Wells Fargo Cafeteria
  - Greenpoint Mortgage Cafeteria

- **HOTELS**
  - Marriot Tuscan
  - Adam's Mark Hotel
  - Marriot Waterfront
  - Westin Hotel (DTW)
  - Royal Park Hotel

- **RETAIL**
  - Target

- **AIRPORT RESTAURANTS**
  - Minneapolis/St. Paul Airport - Quizno's
  - Detroit Metropolitan Airport MacNamara Terminal - Fuddrucker's, Victory Lane, Martini Lounge, Chili's
  - Boise Airport - Varsity Bar & Grill, Blue Ribbon Bistro
  - JFK Airport - AA Bistro
  - Memphis Airport - Sun Studio
  - Tulsa Airport - Cherry Street Café
  - Detroit Metro Airport - New North Terminal



Product Application

Installing a Suitable Beverage Chase Saves Time and Money

On many construction projects the plans call for "beverage conduit" or "beverage chase." It is not uncommon for contractors to pick a material that appears to meet the need while not really knowing the correct materials to install. Unknowingly, they will install a chase or conduit from point A to point B using inappropriate materials and that ultimately results in significant added cost.

The beverage industry has a set of requirements that are not widely known. At times even architects and food service consultants believe they have properly described the need in the plans and specifications, but fail to provide sufficient information to get the job installed correctly the first time. Unfortunately little information has been available until now.

For example, an improper installation at an airport concourse restaurant where the wrong materials were used ultimately resulted in a significant cost to the contractor. Figure I shows the heavy iron pipe installed with short radius elbows, which made pulling the beverage lines impossible. Because the chase had to be completely reworked, the restaurant was not able to open for several weeks after the scheduled opening at a significant cost to the proprietor.

The beverage industry absolutely requires chase that provides long radius sweeping bends, ideally a 30-inch or 36-inch radius bend is suitable for most applications. Beverage chases also must have joints that are smooth inside, with no sharp edges or bumps. The reason for that is that installers must be able to easily pull a trunk line through the chase that delivers the cold draft beer or soda to the faucet. These trunk lines sometimes have copper glycol coolant lines incorporated into them to keep beer cold from the keg to the faucet. While flexible, the trunk line is extremely difficult, and at times impossible to pull through an improperly constructed chase with short radius elbows.

While flexible, the trunk line is extremely difficult, and at times impossible to pull through an improperly constructed chase with short radius elbows.

Having the correct beverage chase materials available simplifies the entire task. Above ground applications of beverage chase should ideally be installed using 4-inch, 6-inch or 8-inch chase for liquor, soda or beer as appropriate. Long sweep bends in 90, 45, 30 and 22.5 degree need to be a minimum of 24-inch, and ideally 30-inch or 36-inch radius. The system must incorporate a leak-proof joint.

All parties involved will save time and money by indentifying procuring a packaged system that has all of the correct parts and pieces, rather than shopping each individual component that may or may not be compatible. Having a system that fits together and is easy to install is the key to reducing the contractor's overall labor cost. Further, a system this is augmented with a set of installation tools

Continued on next page

Figure 1 - The heavy pipe and short radius elbows shown in this photo had to be removed and replaced with material for a beverage chase at considerable cost.

Figure 2 - The Ford Field project incorporates the latest BeverageCHASE™ Systems technology components that are available in a wide variety of sizes and degrees of bends to accommodate most needs. Custom bends are also available.

Reprinted from *Plumbing Engineer* - February 2002

Installing a Suitable Beverage Chase

Continued from page 28

designed to simplify and speed the install is another significant advantage that adds to the "reduced costs" column for the contractor.

Figure 2 shows a recent installation at the new Ford Field / Lions Stadium in Detroit, Mich. This photo shows properly installed chase with leak proof-joins that also add structural integrity. Each joint is smooth inside, leak=proof and provides significant structural integrity. (Average pull to separation test conducted by 3M Corporation: 575 pounds in a simple pluck test on these joints.)

Firms involved in the installation of the example Ford Field Project are COLOMBO Sales & Engineering of Ferndale, Mich., provider of the BeverageCHASE™ System, and inventor of the COLOMBO Leak-Proof / StructuralJOIN™ (patent pending), Also involved in the installation team of plumbers from Metro Industrial Pipe, a Detroit-based firm subcontracting to COLOMBO

COLOMBO

BEVERAGE CHASE SYSTEMS

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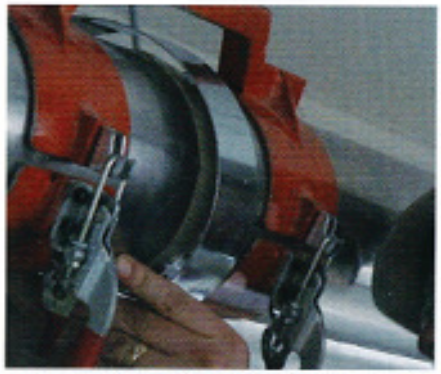
Innovative Improvement for the Beverage Industry



Ford Field incorporates the latest Beverage CHASE® Systems technology. Components are available in a wide variety of sizes and degree of bend. Custom bends are also available.

COLOMBO BeverageCHASE Systems at Ford Field allowed fast and efficient installation of Perlick Beer System and Pepsi trunk lines by Custom Beverage installers.

Subcontracted to Stafford Smith Food Service, COLOMBO assisted in the design process with Architect Paul Tonti of SHG, and managed the installation of the BeverageCHASE with its associate Metro Industrial Pipe.

COLOMBO BeverageCHASE Systems set a new standard in support of the beverage and foodservice industries. These products allow architects and foodservice consultants to correctly specify beverage chase; allow general and mechanical contractors an easy means to order and install the 'correct systems'; and provide beverage equipment purveyors and installer's speedier and more efficient installations.

The BeverageCHASE, Leak-Proof / StructuralJOIN (pat pend), only provides a system that is leak proof, it lends structural integrity to the system. This structural integrity of the COLOMBO JOIN allowed installation of 200 and 300 foot CHASE ways at Ford Field having multiple bends without the use of pull boxes or junction boxes. Only two (2) pull boxes were used in the installation of over 7,500 feet of CHASE and nearly 400 bends.

In addition to the aboveground system, innovative undergro systems are also available. The new COLOMBO STOUTi.(Underground CHASE (pat pend), for transport of foodstuffs will not cr or fissure thus avoiding the absorption of groundwater or seepage f under a bar or kitchen to spoil beverage lines.

The COLOMBO Team is proud to have been a part of the Ford F Project. Please visit our website for more information www.beveragechase.com.

COLOMBO Tools speed the in lation process at Ford Field. ' tools are easy to use", said Mayberry, "Great Tools helpec install a quality system", said M Kucsulain, "The tools made the go faster overall" added M Tracey, superintendent for M Pipe, all members of Plumbers Ur Local 98

COLOMBO

BEVERAGE CHASE SYSTEMS

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Colombo Beverage Chase Systems, a division of Colombo Sales & Engineering, Inc.