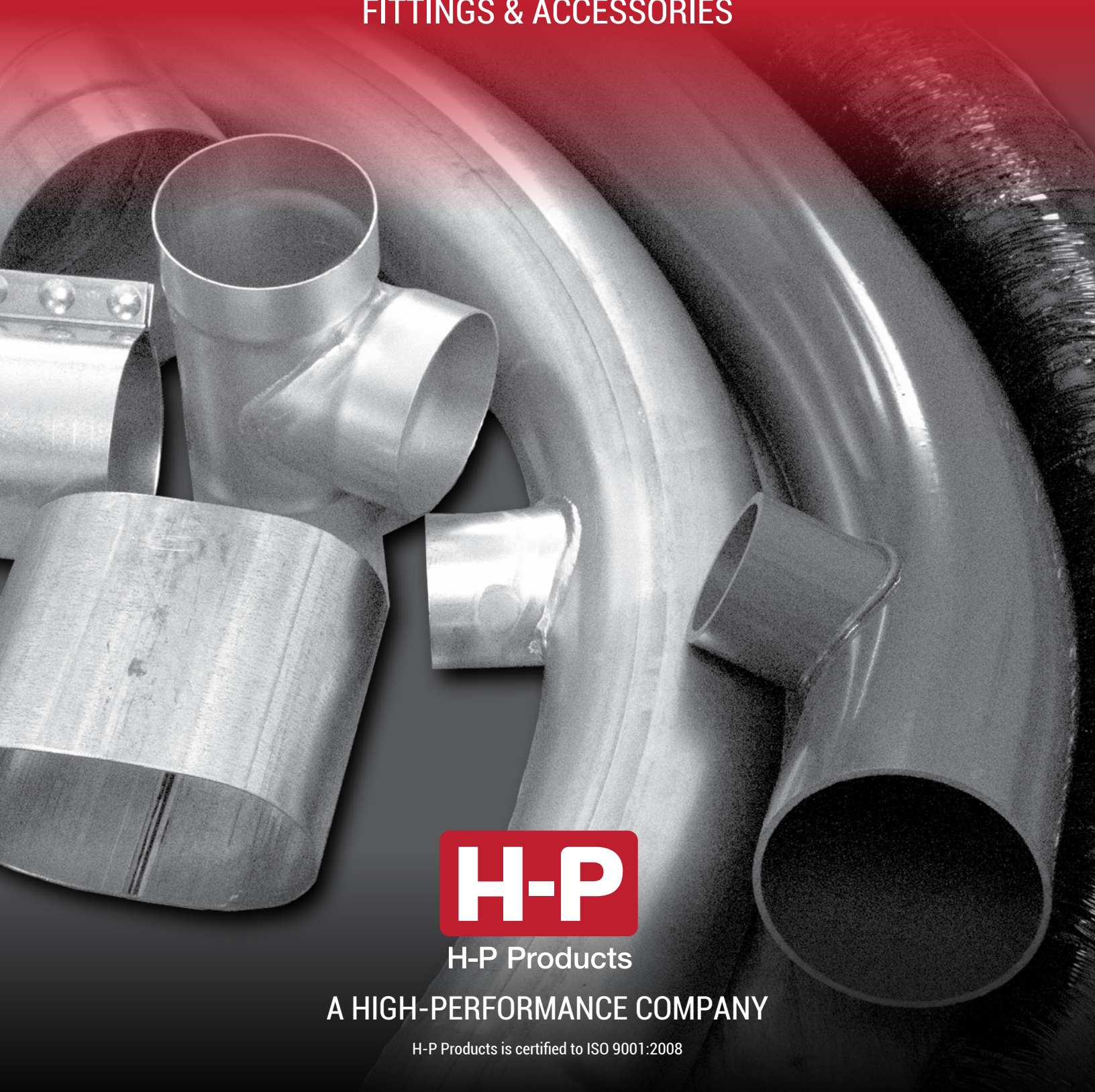


CARRIER PNEUMATIC COMPONENTS

METAL/PVC, TUBING, BENDS, COUPLINGS,
FITTINGS & ACCESSORIES



H-P

H-P Products

A HIGH-PERFORMANCE COMPANY

H-P Products is certified to ISO 9001:2008

NOTES

H-P PRODUCTS, INC. IS THE LEADING SUPPLIER OF TUBULAR COMPONENTS FOR CARRIER PNEUMATIC SYSTEMS. WE HAVE "THOUSANDS OF SOLUTIONS UNDER ONE ROOF"

TUBING

Our standard catalog items include tube sizes from 2-1/4" through 6" OD, plus 4" x 7" oval in zinc-coated (galvanized) steel. Also, these metal parts are "ID Friendly" with our PVC line of tubular parts also featured. With "Thousands of solutions under one roof", H-P Products, Inc. gives you maximum flexibility in designing a system with metal and PVC applications.

TUBE DIMENSIONS

14 Gauge = .083"
16 Gauge = .065"
18 Gauge = .049"
20 Gauge = .035"

CATALOG PART VARIATIONS

If our standard items don't meet your needs, contact us for immediate assistance at 800.860.TUBE (8823). Custom tube fabrications are available to meet your exact specifications.

SPECIAL SERVICE

Please call for additional details on this application:

TAPECOAT

For additional corrosion protection underground, we can apply a tar-backed tape to the outside of the part.

DELIVERY

Fast delivery is available on a wide selection of in-stock Tubing, Bends, Couplings, Fittings and Installation Components. We'll also make every effort to meet emergency requirements for non-stock items.

NOTE

Specifications subject to change without notice, without incurring any obligation on our part.

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KEY

OD Outside Diameter
ID Inside Diameter
ERW ... Electric Resistance
Welded
NPS Nominal Pipe Size

STANDARD TUBING

All reference dimensions are nominal

STANDARD TUBING - STRAIGHT ENDS

Zinc-Coated (Galvanized) Steel

OD	C LENGTH	NOMINAL WALL THICKNESS	GAUGE	PART #
2-1/4"	12' 6"	.035"	20	29012
3"	12' 6"	.049"	18	39012
4"	12' 6"	.065"	16	49012
4"	10'	.065"	16	49010
4-1/2"	12' 6"	.065"	16	45012
4-1/2"	10'	.065"	16	45010
6"	12' 6"	.065"	16	69012
6"	10'	.065"	16	69010
4" x 7"	10'	.065"	16	79010

Our standard stock is in 10' and 12'6" lengths, but we will cut to your specifications

STANDARD TUBING - ONE END EXPANDED*

Zinc-Coated (Galvanized) Steel

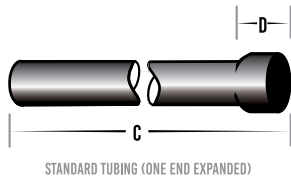
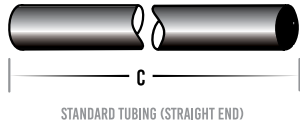
OD	C LENGTH	D EXP DEPTH	NOMINAL WALL THICKNESS	GAUGE	PART #
2-1/4"	12' 6"	1-3/4"	.035"	20	29000
3"	12' 6"	2-1/8"	.049"	18	39000
4"	12' 6"	3-3/4"	.065"	16	49000
4"	10'	3-3/4"	.065"	16	49010-1
4-1/2"	12' 6"	3-3/4"	.065"	16	45000
4-1/2"	10'	3-3/4"	.065"	16	45010-1
6"	12' 6"	4-3/4"	.065"	16	69000
6"	10'	4-3/4"	.065"	16	69010-1
4" x 7"	10'	4-3/4"	.065"	16	79010-1

Our standard stock is in 10' and 12'6" lengths, but we will cut to your specifications

*ID of Expansion = Tube OD

KEY

OD.....Outside Diameter
EXPExpansion
IDInside Diameter
CLR.....Center Line Radius
TAN.....Tangent



Catalog Part Variations Available Upon Request

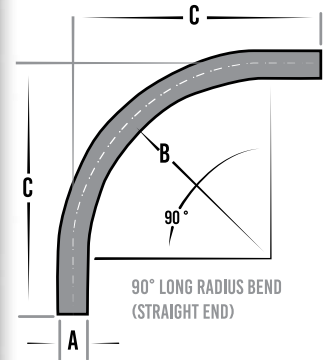
Give us a call if you can't find exactly what you need!

STANDARD LONG RADIUS BENDS

STRAIGHT ENDS

Zinc-Coated (Galvanized) Steel

A-OD	B-CLR	C-CENTER TO END DIMENSION	TAN	GAUGE	PART #
2-1/4"	18"	21-7/8"	3-7/8"	20	29218
2-1/4"	24"	30-1/3"	6-1/8"	20	29224
2-1/4"	42"	48"	6"	20	29242
3"	24"	30"	6"	18	39224
3"	30"	36"	6"	18	39230
3"	38"	48-1/2"	10-1/2"	18	39238
3"	48"	62-3/4"	13-1/4"	18	39248
4"	36"	47-7/16"	11-7/16"	16	49236
4"	48"	61-1/4"	13-1/4"	16	49248
4"	60"	74"	12"	16	49260
4-1/2"	20"	27-7/8"	5-5/16"	16	45220
4-1/2"	24"	37-3/4"	11-1/2"	16	45224
4-1/2"	30"	43-3/4"	11-1/2"	16	45230
4-1/2"	48"	63-1/2"	13-1/4"	16	45248
4-1/2"	60"	72"	12-7/8"	16	45260
6"	30"	43-7/16"	13-7/16"	16	69230
6"	36"	48"	12"	16	69236
6"	48"	70-3/8"	22-3/8"	16	69248
6"	60"	72-7/8"	12-7/8"	16	69260
4"x 7"(FLAT BEND)	48"	70-7/16"	22-7/16"	16	70248*
4"x 7"(EDGE BEND)	48"	71-1/16"	23-1/16"	16	7E248**
4"x 7"(FLAT BEND)	60"	84"	24"	14	70260*
4"x 7"(EDGE BEND)	60"	84"	24"	14	7E260**



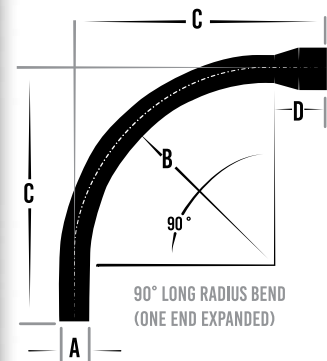
ONE END EXPANDED

(ID OF EXPANSION = TUBE OD) Zinc-Coated (Galvanized) Steel

A-OD	B-CLR	C-CENTER TO END	D-EXP DEPTH	TAN	GAUGE	PART #
2-1/4"	18"	21-7/8"	1-3/4"	3-7/8"	20	29218-1
2-1/4"	24"	30-1/8"	1-3/4"	6-1/8"	20	29224-1
2-1/4"	42"	48"	1-3/4"	6"	20	29242-1
3"	24"	30"	2-1/8"	6"	18	39224-1
3"	30"	36"	2-1/8"	6"	18	39230-1
3"	38"	48-1/2"	2-1/8"	8-1/4"	18	39238-1
3"	48"	62-3/4"	2-1/8"	13-1/4"	18	39248-1
4"	36"	47-7/16"	3-3/4"	11-7/16"	16	49236-1
4"	48"	61-1/4"	3-3/4"	13-1/4"	16	49248-1
4"	60"	74"	3-3/4"	12"	16	49260-1
4-1/2"	20"	27-7/8"	3-3/4"	5-5/16"	16	45220-1
4-1/2"	24"	37-3/4"	3-3/4"	11-1/2"	16	45224-1
4-1/2"	30"	43-3/4"	3-3/4"	11-1/2"	16	45230-1
4-1/2"	48"	63-1/2"	3-3/4"	13-1/4"	16	45248-1
4-1/2"	60"	72"	3-3/4"	12-7/8"	16	45260-1
6"	30"	43-7/16"	4-3/4"	13-7/16"	16	69230-1
6"	36"	48"	4-3/4"	12"	16	69236-1
6"	48"	70-3/8"	4-3/4"	22-3/8"	16	69248-1
6"	60"	72-7/8"	4-3/4"	12-7/8"	16	69260-1
4"x7"(FLAT BEND)	48"	70-7/16"	4-3/4"	22-7/16"	16	70248-1*
4"x7"(EDGE BEND)	48"	71-1/16"	4-3/4"	23-1/16"	16	7E248-1**

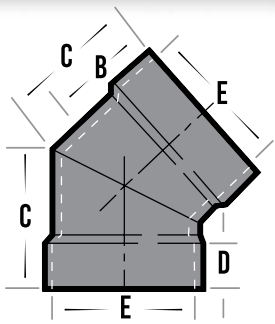
*Neutral axis through 7" dimension

**Neutral axis through 4" dimension



STANDARD FITTINGS

All reference dimensions are nominal



STANDARD 45° SEGMENTED ELBOW

STANDARD 45° SEGMENTED ELBOWS

Zinc-Coated (Galvanized) Steel

E-ID	B-CENTER TO END	C	D-EXP DEPTH	GAUGE	PART #
2-1/4"	2-1/8"	2-9/16"	1-1/4"	20	29101
3"	2-5/8"	3-1/4"	1-1/4"	16	39101
4"	2-7/8"	3-11/16"	1-1/4"	16	49101
6"	3-3/4"	5"	1-1/2"	14	69101

STANDARD 90° SEGMENTED ELBOWS

Zinc-Coated (Galvanized) Steel

E-ID	B-CENTER TO END	C	D-EXP DEPTH	GAUGE	PART #
2-1/4"	3-1/4"	4-3/8"	1-1/4"	20	29202
3"	3-7/8"	5-3/8"	1-1/4"	16	39202
4"	4-15/16"	6-15/16"	1-1/4"	16	49202*
6"	6"	9"	1-1/2"	14	69202

*Not segmented

STANDARD 90° SEGMENTED TEES

Zinc-Coated (Galvanized) Steel

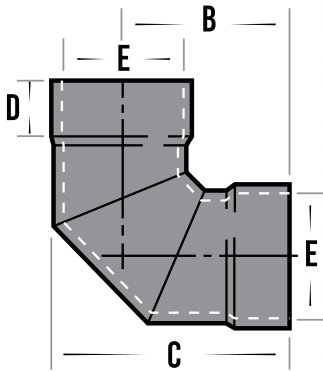
E-ID	B	C	D-EXP DEPTH	GAUGE	PART #
2-1/4"	5-3/4"	2-7/8"	1-1/4"	20	29303
3"	6-1/2"	3-1/4"	1-1/4"	18	39303
4"	7-3/4"	3-7/8"	1-1/4"	16	49303
4-1/2"	7-1/2"	5"	1-1/4"	16	45303*
6"	12"	6"	1-1/2"	16	69303
6"	12"	6"	1-1/2"	16	07-22378

Branch is 4" ID

STANDARD WINDGATES

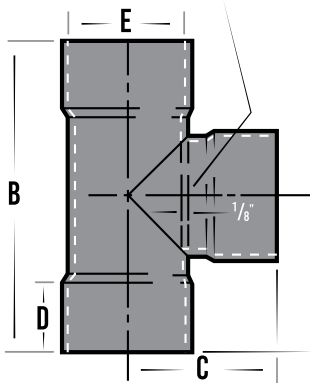
Zinc-Coated (Galvanized) Steel

E-ID	B-LENGTH	D-EXP DEPTH	GAUGE	PART #
2-1/4"	5"	1-1/4"	20	WG-290
3"	5"	1-1/4"	18	WG-390
4"	5"	1-1/4"	16	WG-490

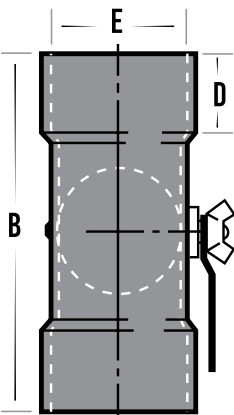


STANDARD 90° SEGMENTED ELBOW

GUIDE: 1/8 x 1/4 or 3/16 x 3/8



STANDARD 90° SEGMENTED TEE



STANDARD WINDGATE

Catalog Part Variations Available Upon Request

Give us a call if you can't find exactly what you need!

STANDARD SEGMENTED BYPASS

Zinc-Coated (Galvanized) Steel

E-ID	B	C	D-EXP DEPTH	GAUGE	PART #
2-1/4"	6-1/2"	3"	1-1/4"	20	29404
3"	7-3/4"	4-1/4"	1-1/4"	18	39404
4"	8-11/16"	5-1/2"	1-1/4"	16	49404
4-1/2"	9"	6"	1-1/4"	16	45404
6"	13-1/2"	8"	1-1/2"	16	69404

STANDARD 30° TWISTS

Zinc-Coated (Galvanized) Steel • Cross section nominal 4' x 7" 16 Gauge

E-ID	B	TWIST	PART #
4" x 7"	60"	Clockwise (Right Hand)	79111
4" x 7"	60"	Counter Clockwise (Left Hand)	79333

Expanded Ends NOT AVAILABLE

STANDARD TUBE CAPS

Zinc-Coated (Galvanized) Steel

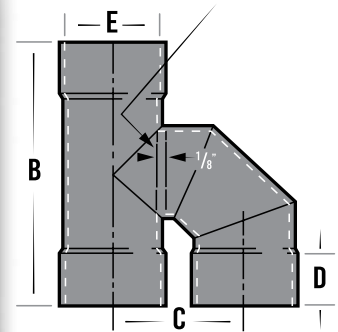
E-ID	B	TWIST	PART #
2-1/4"	1/2"	18	TC-290
3"	1/2"	18	TC-390
4"	7/16"	18	TC-490
4-1/2"	1-5/16"	18	TC-450
6"	1-5/16"	14	TC-690
4"x 7"	1"	16	2044

STANDARD TUBE HANGERS

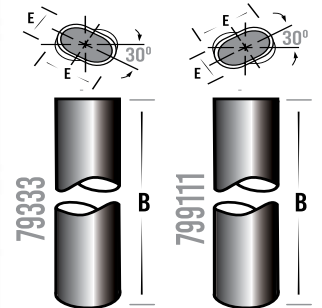
Nut & Bolt included

FOR TUBE OD SIZE	E-ID	GAUGE	PART #
2-1/4"	2-1/4"	16	TH-212
3"	3"	16	TH-300
4"	4"	16	TH-400
4-1/2"	4-1/2"	16	TH-450
6"	6"	16	TH-600

GUIDE: 1/3 x 1/4 or 3/16 x 3/8

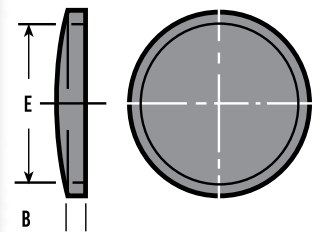


STANDARD SEGMENTED BYPASS

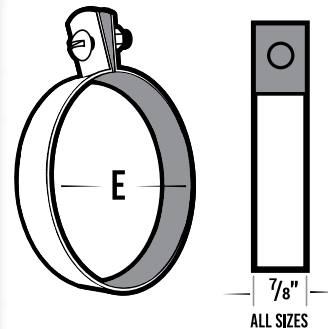


STANDARD 30° TWIST

GUIDE: 1/8 x 1/4 or 3/16 x 3/8



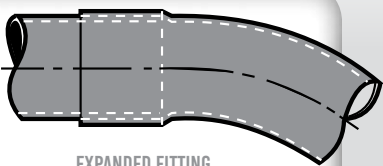
STANDARD TUBE CAP



STANDARD TUBE HANGER

METHODS OF JOINING

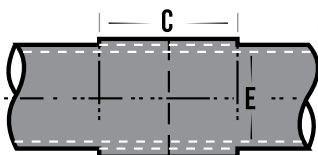
All reference dimensions are nominal



EXPANDED FITTING

EXPANDED FITTING

Zinc-Coated (Galvanized) Steel. This type of connection enables a straight section of tubing to slip inside the expanded end of the fitting. The two pieces can then be "locked" together by any one of several techniques - brazing, welding, industrial adhesive, or shrink sleeves. For use in low pressure (under 15 PSIG) systems.



SOLID SLEEVE

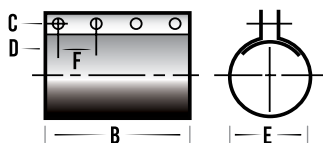
STANDARD SOLID SLEEVES

Zinc-Coated (Galvanized) Steel. Can be used for joining any two straight ends of tubing or fittings. The solid sleeve is a slip coupling that fits the OD of the joint which can then be glued, brazed, welded, or covered by a shrink sleeve. For use in low pressure (under 15 PSIG) systems.

E-ID	C-LENGTH	GAUGE	PART #
2-1/4"	3-1/2"	20	29003
3"	4"	18	39003
4"	5"	16	49003
4-1/2"	5"	16	45003
6"	6"	16	69003
4"x 7"	6"	16	79003

CLAMP SLEEVES OR COMPRESSION COUPLINGS

Zinc-Coated (Galvanized) Steel. Offers easy "tear down" function. Straight end tubing or fittings butt together within the ID of the coupling or sleeve, and the joint is mechanically locked simply by tightening the bolts which are included. For use in low pressure (under 15 PSIG) systems.



CLAMP SLEEVE

STANDARD CLAMP SLEEVES

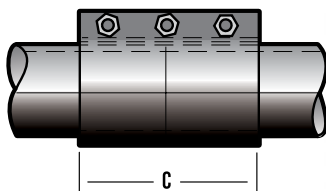
Zinc-Coated (Galvanized) Steel. Bolt holes are 9/32". Nuts and bolts are inserted in sleeve. For use in low pressure (under 15 PSIG) systems.

E-ID	B-LENGTH	C-NO. OF HOLES	D*	F**	GAUGE	PART #
2-1/4"	4"	3	1/2"	1-1/2"	20	CS-290
3"	4"	3	1/2"	1-1/2"	20	CS-390
4"	5"	4	1/4"	1-3/8"	20	CS-490
4-1/2"	5"	4	1/4"	1-3/8"	20	CS-450
6"	5-7/8"	4	5/16"	1-11/16"	18	CS-690
4"x 7"	5-7/8"	4	5/16"	1-11/16"	16	CS-790

*Dimension D = Distance center outside hole to end ** Dimension F = Distance between center of holes

COMPRESSION COUPLINGS

Zinc-Coated (Galvanized) Steel. With black neoprene liner & stainless steel grounding strip. For use in low pressure (under 15 PSIG) systems.



COMPRESSION COUPLING

Additional sizes available upon request

FOR TUBE - OD SIZE	NO. OF BOLTS - LENGTH	C NUMBER	PART #
2-1/4"	3	6"	22503B10
3"	3	6"	30003B10
4"	3	6"	40003B10
4-1/2"	3	6"	45003B10
6"	3	6"	60003B10
6"	4	8"	60004B10

*Dimension D = Distance center outside hole to end ** Dimension F = Distance between center of holes

KEY

OD.....Outside Diameter
EXP.....Expansion
ID.....Inside Diameter
CLR.....Center Line Radius
TAN.....Tangent

METHODS OF JOINING

SHRINK SLEEVES (4" LONG)

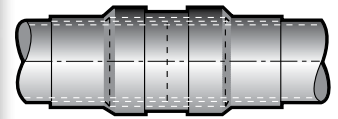
FOR TUBE OD SIZE	PART NUMBER
2-1/4"	SS-212
3"	SS-300
4"	SS-400
4-1/2"	SS-450
5"	SS-500
6" & 4"x 7"	SS-600

A heat shrinkable polyolefin band that literally shrinks and encircles the connection giving it mechanical strength and a positive seal. It can be used in conjunction with a solid sleeve or when using expanded fittings. Either way, gluing, brazing, and welding are eliminated. For use in low pressure (under 15 PSIG) systems.

PROTECTION SLEEVES (18" LONG)

FOR TUBE OD SIZE	PART NUMBER
2-1/4"	PS-212
3"	PS-300
4"	PS-400
4-1/2"	PS-450
5"	PS-500
6" & 4"x 7"	PS-600

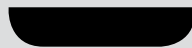
A heat shrinkable polyethylene band that literally shrinks and encircles the joint. It is primarily used for underground joint protection. For use in low pressure (under 15 PSIG) systems.



SHRINK SLEEVE/PROTECTIVE SLEEVE

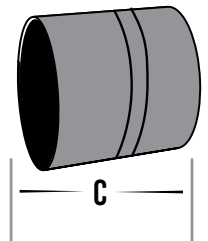
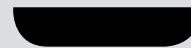
STANDARD ADAPTERS (PVC TO METAL)

SIZE	C (LENGTH)	PART #
4-1/2"	2-1/2"	PMA-450



STANDARD ADAPTERS (PVC TO ACRYLIC)

SIZE	C (LENGTH)	PART #
4-1/2"	2-1/2"	PAA-450

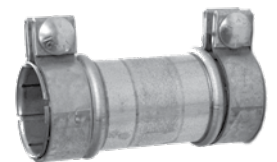


ADAPTER

INSTALOK COUPLINGS

Instalok couplings have a unique clamping design that offers un-paralleled strength and grip. Made with Grade 5 stress relieved bolts to ensure a trouble-free installation

OD	O RING	LENGTH	PART #
2-1/4"	Black	4"	CP22542B-16Z
2-1/4"	Black	6"	CP22562B-16Z
3"	Black	4"	CP30042B-16Z
3"	Black	6"	CP30062B-16Z
4"	Black	4"	CP40042B-16Z
4"	Black	6"	CP40062B-16Z



INSTALOK COUPLING

Additional sizes available upon request

STANDARD PVC TUBING

All reference dimensions are nominal

PVC TUBING

Our PVC product line offers you a choice of standard catalog items in 4-5/8" OD. And these PVC parts are "ID friendly" with our corresponding metal line of tubular components featured in this catalog. With "Thousands of solutions under one roof", H-P Products, Inc. gives you maximum flexibility in designing a system with metal and PVC applications!

OUR PVC TUBING & FITTINGS ARE:

- "ID Friendly" with metal tube
- Economical to install
- Lightweight
- Wrinkle-free bends with a uniform ID throughout
- Non-corrosive
- 110mm PVC Tubing & Bends now available
- Easy to assemble into offsets

MATERIAL SPECIFICATIONS

- 1120 Type 1, Grade 1, Gray Rigid PVC
- 4-5/8" OD Parts are 4.385" ID

STANDARD TUBING (STRAIGHT ENDS)

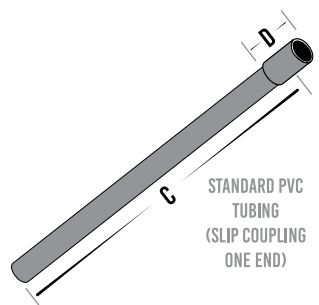
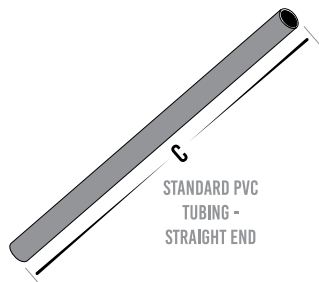
OD	C (LENGTH)	WALL THICKNESS	PART #
4-5/8"	10'	.120"	P45010
4-5/8"	12'	.120"	P45012

Our standard stock in 10' and 12' lengths, but we will cut to your specifications

STANDARD TUBING (SLIP COUPLING ONE END*)

OD	C (LENGTH)	D	WALL THICKNESS	PART #
4-5/8"	10'	5"	.120"	P45010-C
4-5/8"	12'	5"	.120"	P45012-C

Our standard stock in 10' and 12' lengths, but we will cut to your specifications
** Slip coupling extends 2-1/2" beyond tube length (C).*



Catalog Part Variations Available Upon Request

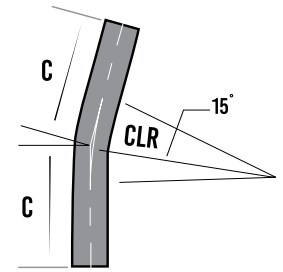
Give us a call if you can't find exactly what you need!

STANDARD PVC LONG RADIUS BENDS

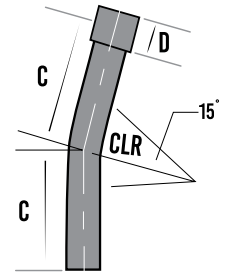
15° LONG RADIUS BENDS

OD	CLR	C (CENTER TO END DIMENSION)	D	WALL THICKNESS	PART #
4-5/8"	20"	6.5"	-	.120"	P451520
4-5/8"	20"	6.5"	5"	.120"	P451520-C*

* Slip Coupling one end. Extends 2.5" beyond tube length (C).
* NOMINAL STANDARD TANGENT IS 4"



15° LONG RADIUS BEND
(STRAIGHT END)

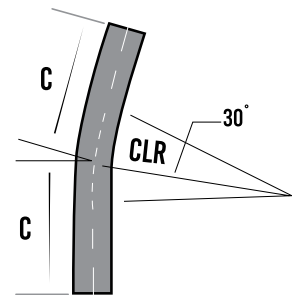


15° LONG RADIUS BEND
(ONE END EXPANDED)

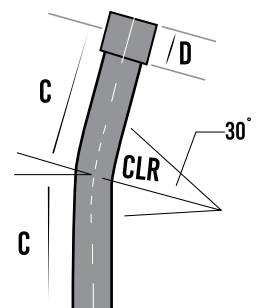
30° LONG RADIUS BENDS

OD	CLR	C (CENTER TO END DIMENSION)	D	WALL THICKNESS	PART #
4-5/8"	20"	9.25"	-	.120"	P453020
4-5/8"	20"	9.25"	5"	.120"	P453020-C*

* Slip Coupling one end. Extends 2.5" beyond tube length (C).
* NOMINAL STANDARD TANGENT IS 4"



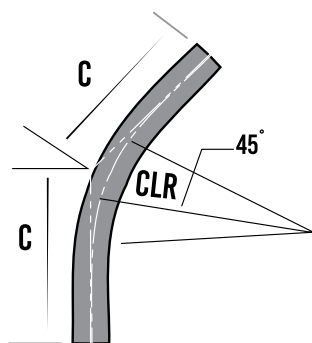
30° LONG RADIUS BEND
(STRAIGHT END)



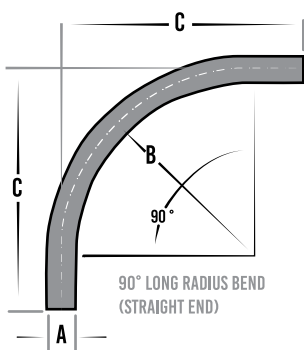
30° LONG RADIUS BEND
(ONE END EXPANDED)

STANDARD PVC LONG RADIUS BENDS

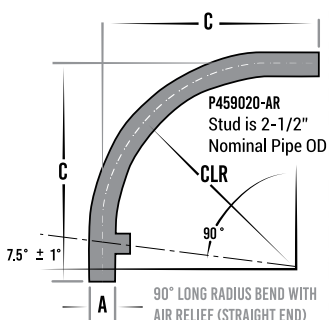
All reference dimensions are nominal



45° LONG RADIUS BEND
(STRAIGHT END)



90° LONG RADIUS BEND
(STRAIGHT END)



90° LONG RADIUS BEND WITH
AIR RELIEF (STRAIGHT END)

45° LONG RADIUS BENDS

OD	CLR	C (CENTER TO END DIMENSION)	D	WALL THICKNESS	PART #
4-5/8"	20"	12.25"	-	.120"	P454520
4-5/8"	20"	12.25"	5"	.120"	P454520-C*

* Slip Coupling one end. Extends 2.5" beyond tube length (C).
* NOMINAL STANDARD TANGENT IS 4"

90° LONG RADIUS BENDS

OD	CLR	C (CENTER TO END DIMENSION)	D	WALL THICKNESS	PART #
4-5/8"	20"	24"	-	.120"	P459020
4-5/8"	20"	24"	5"	.120"	P459020-C*

* Slip Coupling one end. Extends 2.5" beyond tube length (C).
* NOMINAL STANDARD TANGENT IS 4"

90° LONG RADIUS BENDS WITH AIR RELIEF

OD	CLR	C (CENTER TO END DIMENSION)	D	WALL THICKNESS	PART #
4-5/8"	20"	24"	-	.120"	P459020-AR

* NOMINAL STANDARD TANGENT IS 4"

KEY

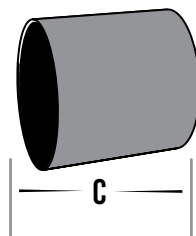
OD.....Outside Diameter
IDInside Diameter
CLR.....Center Line Radius

METHODS OF JOINING PVC

STANDARD PVC COUPLINGS

SIZE	C (LENGTH)	WALL THICKNESS	PART#	DESCRIPTION
4.5"	5"	.120"	P45003	COUPLING

Standard PVC Tubing



STANDARD PVC COUPLING

STANDARD PVC ADHESIVE

DESCRIPTION	PART NUMBER
1/4 pint can, PVC adhesive	P2862

STANDARD ADAPTERS (PVC TO METAL)

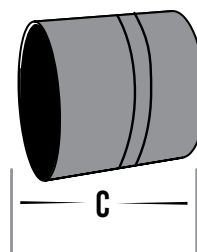
SIZE	C (LENGTH)	PART #
4.5"	2.5"	PMA-450

Standard PVC Tubing x 4.5" OD Metal Tubing

STANDARD ADAPTERS (PVC TO ACRYLIC)

SIZE	C (LENGTH)	PART #
4.5"	2.5"	PAA-450

Standard PVC Tubing x 4.75" OD Acrylic Tubing

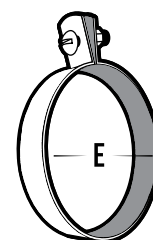


ADAPTER

STANDARD METAL HANGERS

E (ID)	PART #
4.5"	TH-450

*Zinc-coated (Galvanized)
16 Gauge Steel*



STANDARD METAL HANGER

OFFSET CHART - PVC 4.5" OD TUBE SYSTEMS

All reference dimensions are nominal

90° / 20" CLR / 4" TAN

A	B	C
4'	4'	0"
4' - 5-1/4"	4'	5-1/4"

45° / 20" CLR / 4" TAN

A	B	C
1' - 5-3/8"	3' - 5-15/16"	0"
1' - 9-1/16"	3' - 9-5/8"	5-1/4"
1' - 10"	3' - 10-9/16"	6-9/16"
1' - 11"	3' - 11-9/16"	7-15/16"
2'	4' - 9/16"	9-3/8"
2' - 1"	4' - 1-9/16"	10-13/16"
2' - 2"	4' - 2-9/16"	12-7/16"
2' - 3"	4' - 3-9/16"	13-5/8"
2' - 4"	4' - 4-9/16"	15"
2' - 5"	4' - 5-9/16"	16-7/16"
2' - 6"	4' - 6-9/16"	17-7/8"
2' - 7"	4' - 7-9/16"	19-1/4"
2' - 8"	4' - 8-9/16"	20-11/16"
2' - 9"	4' - 9-9/16"	22-1/8"
2' - 10"	4' - 10-9/16"	23-1/2"
2' - 11"	4' - 11-9/16"	24-15/16"
3'	5' - 9/16"	26-3/8"

30° / 20" CLR / 4" TAN

A	B	C
9-3/8"	2' - 10-15/16"	0"
1'	3' - 3-1/2"	5-1/4"
1' - 1"	3' - 5-1/4"	7-1/4"
1' - 2"	3' - 6-15/16"	9-1/4"
1' - 3"	3' - 8-11/16"	11-1/4"
1' - 4"	3' - 10-7/16"	13-1/4"
1' - 5"	4' - 3/16"	15-1/4"
1' - 6"	4' - 1-7/8"	17-1/4"
1' - 7"	4' - 3-5/8"	19-1/4"
1' - 8"	4' - 5-3/8"	21-1/4"
1' - 9"	4' - 7-1/16"	23-1/4"
1' - 10"	4' - 8-13/16"	25-1/4"
1' - 11"	4' - 10-9/16"	27-1/4"
2'	5' - 9/16"	29-1/4"
2' - 1"	5' - 2"	31-1/4"
2' - 2"	5' - 3-3/4"	33-1/4"
2' - 3"	5' - 5-1/2"	35-1/4"

15° / 20" CLR / 4" TAN

A	B	C
3-7/16"	2' - 2-1/16"	0"
4-13/16"	2' - 7-1/8"	5-1/4"
5"	2' - 7-15/16"	6-1/16"
6"	2' - 11-5/8"	9-15/16"
7"	3' - 3-3/8"	13-3/4"
8"	3' - 7-1/8"	17-5/8"
9"	3' - 10-7/8"	21-1/2"
10"	4' - 2-9/16"	25-3/8"
11"	4' - 6-5/16"	29-1/4"
12"	4' - 10-1/16"	33-1/8"
1' - 1"	5' - 1-13/16"	37"
1' - 2"	5' - 5-1/2"	40-13/16"
1' - 3"	5' - 9-1/4"	44-11/16"
1' - 4"	6' - 1"	48-9/16"
1' - 5"	6' - 4-11/16"	52-7/16"
1' - 6"	6' - 8-7/16"	56-1/4"
1' - 7"	7' - 3/16"	60-1/8"

PVC TUBE
SYSTEM

KEY

OD = Outside Diameter
TAN = Tangent
CLR = Center Line Radius
A = Vertical or Horizontal offset
B = Min. distance needed for offset
C = Length of straight between bends

Catalog Part Variations Available Upon Request

Give us a call if you can't find exactly what you need!

FREQUENTLY REQUESTED SPECIALS

CARRIER BENDS- GALVANIZED

OD	DESCRIPTION	CLR	BEND	PART #
4"	1-End Expanded	36"	45°	49136-1
4"	1-End Expanded	48"	45°	28505
4"	1-End Expanded	48"	30°	33209
4"	1-End Expanded	48"	22.5°	33208
4-1/2"	1-End Expanded	20"	45°	07-18668
4-1/2"	1-End Expanded	20"	30°	37782-1
4-1/2"	1-End Expanded	20"	22.5°	07-20690
6"	1-End Expanded	48"	45°	69148-1
4"	Straight Ends	36"	30°	50971
4"	Straight Ends	36"	15°	50972
4"	Straight Ends	48"	22.5°	45219
4-1/2"	Straight Ends	20"	45°	33943
4-1/2"	Straight Ends	20"	30°	37782
4-1/2"	Straight Ends	20"	15°	37613
6"	Straight Ends	48"	45°	69148
6"	Straight Ends	48"	30°	32756
6"	Straight Ends	48"	22.5°	32396

CARRIER BENDS (TAPE COATED)- GALVANIZED

OD	DESCRIPTION	CLR	BEND	PART #
4"	1-End Expanded	36"	90°	49236-1-T
4"	1-End Expanded	48"	90°	49248-1-T
4-1/2"	1-End Expanded	20"	90°	45220-1-T
4-1/2"	1-End Expanded	20"	45°	07-18668-T
4-1/2"	1-End Expanded	20"	30°	37782-1-T
4-1/2"	1-End Expanded	20"	22.5°	07-20690-T
4-1/2"	1-End Expanded	20"	15°	37613-1-T
6"	1-End Expanded	36"	90°	69236-1-T
6"	1-End Expanded	48"	90°	69248-1-T
6"	1-End Expanded	48"	45°	69148-1-T
4"	Straight Ends	36"	90°	49236-T
4"	Straight Ends	48"	90°	49248-T
4-1/2"	Straight Ends	20"	90°	45220-T
4-1/2"	Straight Ends	20"	45°	33943-T
4-1/2"	Straight Ends	20"	30°	37782-T
4-1/2"	Straight Ends	20"	15°	37613-T
6"	Straight Ends	36"	90°	69236-T
6"	Straight Ends	48"	90°	69248-T

FREQUENTLY REQUESTED SPECIALS

All reference dimensions are nominal

CARRIER BENDS (AIR RELIEF) - GALVANIZED

OD	DESCRIPTION	CLR	BEND	PART #
4"	1-End Expanded-slotted	48"	90°	51471
4-1/2"	1-End Expanded-port	20"	90°	07-18220
6"	1-End Expanded-slotted	36"	90°	29755
6"	1-End Expanded-slotted	48"	90°	51461
4"	Straight Ends-port	36"	90°	53112
4"	Straight Ends-slotted	48"	90°	07-14036
4-1/2"	Straight Ends-port	20"	90°	34483
6"	Straight Ends-slotted	48"	90°	43370*
6"	Straight Ends-slotted	48"	90°	07-14042**

* Slots located at 30° ** Slots located at 45°

CTC OFFSET BENDS - GALVANIZED

OD	DESCRIPTION	CLR	CENTER TO CENTER	PART #
4"	Straight Ends	48"	7-1/4"	25843
4"	Straight Ends	48"	4-1/8"	26135
4-1/2"	Straight Ends	20"	9"	25531

CTC OFFSETS (TAPE COATED) - GALVANIZED

OD	DESCRIPTION	CLR	CENTER TO CENTER	PART #
4.5"	Straight Ends	20"	9"	25531-T

CARRIER BENDS (AIR RELIEF) - GALVANIZED

OD	DESCRIPTION	LENGTH	PART #
4"	1-End Expanded	10'	49010-1-T
4"	1-End Expanded	12'6"	49000-T
4.5"	1-End Expanded	10'	45010-1-T
4.5"	1-End Expanded	12'6"	45000-T
6"	1-End Expanded	10'	69010-1-T
6"	1-End Expanded	12'6"	69000-T
4"	Straight Ends	10'	49010-T
4"	Straight Ends	12'6"	49012-T
4.5"	Straight Ends	10'	45010-T
4.5"	Straight Ends	12'6"	45012-T
6"	Straight Ends	10'	69010-T
6"	Straight Ends	12'6"	69012-T

Catalog Part Variations Available Upon Request

Give us a call if you can't find exactly what you need!

FREQUENTLY REQUESTED SPECIALS

PVC (GRAY)

OD	ID	DESCRIPTION	CLR	BEND	PART #
4.625"	4.375"	Air Relief Bend-Straight End	20"	90°	32450
<i>2.875" OD air relief located on the OUTSIDE radius of the bend</i>					

OD	ID	DESCRIPTION	CLR	BEND	PART #
4.625"	4.375"	Air Relief Bend	20"	90°	30372
<i>2.875" OD air relief located on the INSIDE radius of the bend</i>					

BUTYRATE (CLEAR)

LENGTH	OD	ID	DESCRIPTION	CLR	BEND	PART #
84"	4.75"	4.375"	Long			23382-07
120"	4.75"	4.375"	Long			23382-10
180"	4.75"	4.375"	Long			23382-15
4-1/2"	4.75"	4.375"	Bend-Straight Ends	24"	90°	29529
			Coupling			29528
			Glue for Coupling			2084-QT

PVC (110MM)

LENGTH	OD	ID	DESCRIPTION	CLR	BEND	PART #
13'	4.331"	4.149"	Gray - Straight			36250
13'	4.331"	4.149"	White - Straight			32420
13'	4.331"	4.149"	White - Straight (10pc. bundle)			32793
	4.331"	4.149"	Gray	26"	90°	36253
	4.331"	4.149"	White	26"	90°	32423
			Gray - Slip Coupling Sleeve			36252
			White - Slip Coupling Sleeve			32422

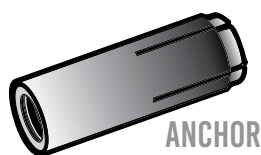
INSTALLATION ACCESSORIES

DESCRIPTION	PART #
Plastic Tube Hanging Strap - 1" wide x 100' roll (PVC Only)	30302-01
Edge protector for Plastic Tube Hanging Strap (30302-01)	30303-01
Beam Clamp for PVC & Steel Tube	BC-037T
Hex Bolt (3/8" x 1-1/4")	HCS-0381
Hex Bolt (5/16" - 18 x 1/2")	47723
Hex Lock Nut (5/16" - 18)	47724
Vinyl Duct Tape - Black (2"w x 150' roll)	33311
Vinyl Duct Tape - Gray (2"w x 150' roll) Light Duty	33312
Vinyl Duct Tape - Gray (2"w x 180' roll) Heavy Duty	48755
Protection Sleeve - High Recovery (4" x 4-1/2")	21-012354-000F
<i>Recommended when compression couplings or cast clamps are used to connect tube below grade</i>	

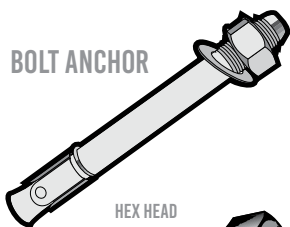
INSTALLATION COMPONENTS

H-P Products, Inc. gives you everything you need to get your system up and running, all in one complete installation package. If you're searching for a particular installation component, we'll be glad to help you find whatever you're looking for. Our "one-stop shopping" will help you lower your inventory costs and spend less time looking for parts. And, when it's time for installation, you'll have all the components you need on-the-spot.

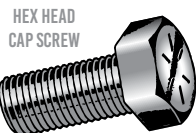
DESCRIPTION	SIZE	MATERIAL	PKGD.	PART #
Anchor, Hilti®	3/8" x 1-9/16" (Length)	Zinc	50 pc.	ANC-0380
Bolt Anchor	3/8" x 3-3/4" (Overall Length)	Zinc	100 pc.	ANC-0381
Includes Washer and Hex Nut 1-1/8" Thread Length Features: Comprehensive performance testing in concrete, lightweight concrete, and grout-filled block base materials. Can be installed in a bottomless hole. Anchor size is same as hole size for easy installation. Hilti® Kwik Bolt II Stud Anchor System.				
Hex Head Cap Screw	3/8" x 1-1/4" (Length) "More Length When You Need It"	Zinc	50 pc.	HCS-0381
Hex Nut	3/8"	Zinc	50 pc.	HXN-0380
Flat Washer	3/8"	Zinc	50 pc.	FW-0380
Split Lock Washer	3/8"	Zinc	50 pc.	LKW-0380
Threaded Rod	3/8" x 6' (Length)	Zinc	each	ATR-100
Eye Nut, Maximum Allowable Load is 610 lbs. "Works Great With MetFlo™ Tube Hangers"	3/8" Tapped Hole	Malleable Iron - Plain.	each	EN-0380
Coupler Nut	3/8" x 1-3/4" (Length)	Zinc	each	CN-0380
Beam Clamp with Zinc Set Screw and Lock Nut. Maximum Allowable Load, in top or bottom position, is 550 lbs.	3/8" Tapped Hole	Malleable Iron - Galv.	each	BC-037T
Beam Clamp with Set Screw and Lock Nut. Maximum Allowable Load, in top position, is 500 lbs.; in bottom position, 250 lbs. "The Cost-Effective Solution When You Don't Need Our Heavy-Duty Beam Clamp (BC-037T)"	3/8" Tapped Hole	Malleable Iron - Plain	each	BC-100



ANCHOR



BOLT ANCHOR



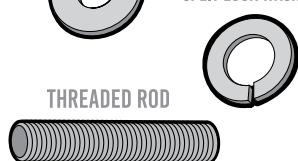
HEX HEAD
CAP SCREW



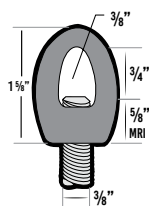
FLAT WASHER



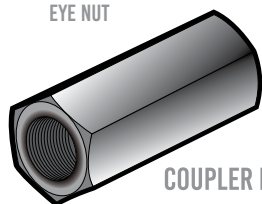
SPLIT LOCK WASHER



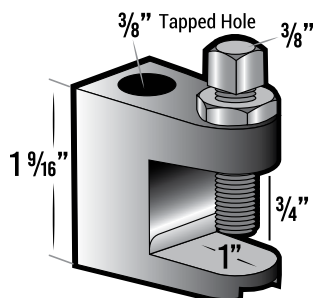
THREADED ROD



EYE NUT



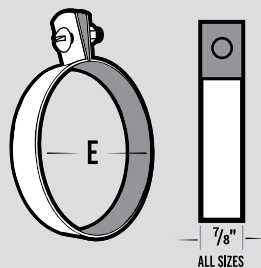
COUPLER NUT



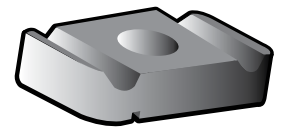
BEAM CLAMP

INSTALLATION COMPONENTS - CONTINUED

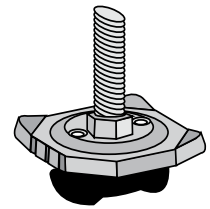
DESCRIPTION	SIZE	MATERIAL	PKGD.	PART #
Channel Nut, without spring	3/8"	Zinc	each	CHN-0380
Saddlenut Assembly <i>"Replaces Square Washer Plate and a Channel Nut Combination"</i>		Zinc	25	SN-0380
Slotted Strut, 14 Gauge	13/16"(D) x 1-5/8", 10' Length	Zinc	each	UN-100
Slotted Strut, 14 Gauge <i>"An Economical Alternative When You Don't Require Our Heavy-Duty Strut (UN-202)"</i>	1-5/8"(D) x 1-5/8", 10' Length	Zinc	each	UN-201
Slotted Strut, 12 Gauge	1-5/8"(D) x 1-5/8", 10' Length	Zinc	each	UN-202
90o Strut Bracket	2 x 2, 9/16" Holes	Zinc	each	BRKT-0900
90o Strut Bracket	2 x 1, 9/16" Holes	Zinc	each	BRKT-0901
45o Strut Bracket	9/16" Holes	Zinc	each	BRKT-0450
Square Washer Plate	7/16" Hole for 3/8" Bolt Size	Zinc	100 pc.	SQW-0380
Tube Hanger, includes Bolt and Nut	For 1-1/2" OD Tube	Zinc	each	TH-150
Tube Hanger, includes Bolt and Nut	For 2" OD Tube	Zinc	each	TH-200
Tube Hanger, includes Bolt and Nut	For 2-1/8" and 2-1/4" OD Tube	Zinc	each	TH-212
Tube Hanger, includes Bolt and Nut	For 2-1/2" OD Tube	Zinc	each	TH-250
Tube Hanger, includes Bolt and Nut	For 3" OD Tube	Zinc	each	TH-300
Tube Hanger, includes Bolt and Nut	For 3-1/2" OD Tube	Zinc	each	TH-350
Tube Hanger, includes Bolt and Nut	For 4-1/2" OD Tube	Zinc	each	TH-450
Tube Hanger, includes Bolt and Nut	For 4" to 4.5" Tube	Plastic	each	PTH-400
Tube Hanger, includes Bolt and Nut	For 5" OD Tube	Zinc	each	TH-500
Tube Hanger, includes Bolt and Nut	For 6" OD Tube	Zinc	each	TH-600
Tube Hanger, includes Bolt and Nut	For 8" OD Tube	Zinc	each	TH-800
Tube Hanger, includes Bolt and Nut	For 10" OD Tube	Zinc	each	TH-1000
Tube Hanger, includes Bolt and Nut	For 12" OD Tube	Zinc	each	TH-1200
Tube Hanger, includes Bolt and Nut	For 14" OD Tube	Zinc	each	TH-1400



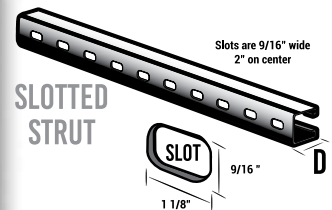
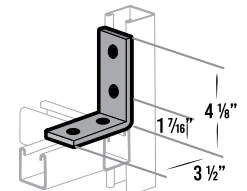
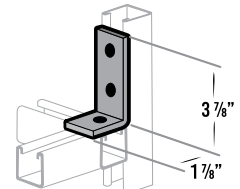
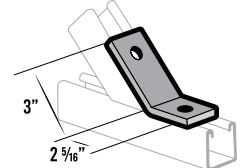
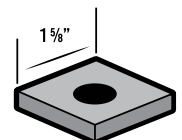
STANDARD TUBE HANGER



CHANNEL NUT



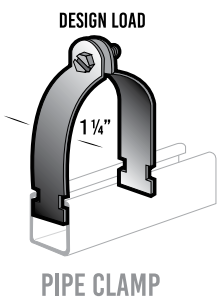
SADDLE NUT ASSEMBLY

SLOTTED
STRUT90° STRUT BRACKET
2 HOLES X 2 HOLES90° STRUT BRACKET
2 HOLES X 1 HOLES45° STRUT BRACKET
1 HOLES X 1 HOLESSQUARE WASHER
PLATE

KEY

OD.....Outside Diameter
Zinc.....Galvanized
Carbon Steel

INSTALLATION COMPONENTS - CONTINUED



DESCRIPTION	SIZE	MATERIAL	PKGD.	PART #
Pipe Clamp, includes Slotted Hex Head Screw and Nut, Design Load 800 lbs.	For 1-1/2" Pipe Size	Zinc	4 pc.	PCL-150
Pipe Clamp, includes Slotted Hex Head Screw and Nut, Design Load 800 lbs.	For 2" Pipe Size	Zinc	4 pc.	PCL-200
Pipe Clamp, includes Slotted Hex Head Screw and Nut, Design Load 800 lbs.	For 2-1/2" Pipe Size	Zinc	4 pc.	PCL-250
Pipe Clamp, includes Slotted Hex Head Screw and Nut, Design Load 800 lbs.	For 3" Pipe Size	Zinc	4 pc.	TCL-350*
Pipe Clamp, includes Slotted Hex Head Screw and Nut, Design Load 1000 lbs.	For 3-1/2" Pipe Size	Zinc	4 pc.	TCL-400*
Pipe Clamp, includes Slotted Hex Head Screw and Nut, Design Load 1000 lbs.	For 4" Pipe Size	Zinc	4 pc.	TCL-450*
Pipe Clamp, includes Slotted Hex Head Screw and Nut, Design Load 1000 lbs.	For 5" Pipe Size	Zinc	4 pc.	PCL-500
Pipe Clamp, includes Slotted Hex Head Screw and Nut, Design Load 1000 lbs.	For 6" Pipe Size	Zinc	4 pc.	PCL-600
Pipe Clamp, includes Slotted Hex Head Screw and Nut, Design Load 1000 lbs.	For 8" Pipe Size	Zinc	4 pc.	PCL-800**
* Tube Clamp also fits this pipe size.				
** 2 piece package				
Tube Clamp, includes Slotted Hex Head Screw and Nut, Design Load 600 lbs.	For 1-1/2" OD Tube	Zinc	4 pc.	TCL-150
Tube Clamp, includes Slotted Hex Head Screw and Nut, Design Load 800 lbs.	For 2" OD Tube	Zinc	4 pc.	TCL-200
Tube Clamp, includes Slotted Hex Head Screw and Nut, Design Load 800 lbs.	For 2-1/8" OD Tube	Zinc	4 pc.	TCL-212
Tube Clamp, includes Slotted Hex Head Screw and Nut, Design Load 800 lbs.	For 2-1/2" OD Tube	Zinc	4 pc.	TCL-250
Tube Clamp, includes Slotted Hex Head Screw and Nut, Design Load 800 lbs.	For 3" OD Tube	Zinc	4 pc.	TCL-300
Tube Clamp, includes Slotted Hex Head Screw and Nut, Design Load 800 lbs.	For 3-1/2" OD Tube	Zinc	4 pc.	TCL-350
Tube Clamp, includes Slotted Hex Head Screw and Nut, Design Load 1000 lbs.	For 4" OD Tube	Zinc	4 pc.	TCL-400
Tube Clamp, includes Slotted Hex Head Screw and Nut, Design Load 1000 lbs.	For 4-1/2" OD Tube	Zinc	4 pc.	TCL-450
Tube Clamp, includes Slotted Hex Head Screw and Nut, Design Load 1000 lbs.	For 5" OD Tube	Zinc	4 pc.	TCL-500
Tube Clamp, includes Slotted Hex Head Screw and Nut, Design Load 1000 lbs.	For 6" OD Tube	Zinc	4 pc.	TCL-600
Tube Clamp, includes Slotted Hex Head Screw and Nut, Design Load 1000 lbs.	For 8" OD Tube	Zinc	4 pc.	TCL-800**

NOTE

Tube Clamps are now available in 50 packs! To order, simply add -50 to the end of the Part #

INSTALLATION COMPONENTS - CONTINUED

DESCRIPTION	SIZE	MATERIAL	PKGD.	PART #
Tape Coat	3" x 75'	-	roll	11237

Primer	Pint	-	PT	15825
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Metal Sealant	Quart Can	-	each	2084-QT
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An aluminum-colored, medium viscosity, synthetic rubber sealant with excellent adhesion to many metal, glass, wood and other surfaces.

Features: Adheres to metal, wood and glass. Seals metal to glass in windows and doors. Resists weather, water, oil and gasoline. Solids wt. approx. 46%, Flash Point (closed cup) 0° F, heavy liquid consistency, aluminum color (dry), brush or flow application. Drying time is 24 hours (1/8" dia. bead), service temp. range of -30° to 200° F. 3M Scotch-Seal™ 2084 Metal Sealant repackaged by H-P Products.

NOTES

All reference dimensions are nominal

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

[illegible]



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