



Single-Wall
ROUND



SPIRAL DUCT & FITTINGS



Single-Wall ROUND

SINGLE-WALL ROUND SPIRAL DUCT AND FITTINGS CONSTRUCTION STANDARDS

Positive Pressure

Gauge selection for galvanized steel (ASTM A 653), paint grip steel, type 304 and 316 stainless steel, and Eastern Polyvinyl Chloride Coated Steel (PCS).*

Fittings are spot welded and/or gorelocked through 40" diameter. All larger fittings are continuously welded except for PCS fittings. All fittings can be provided as continuously welded if required. All galvanized and PCS spiral duct 6" and larger is corrugated unless ordered without corrugations. Smaller sizes may also be corrugated. Check with the plant when ordering. All spiral duct from other materials will not be corrugated.

DUCT DIAMETER	2005 SMACNA 10" WG		1995 SMACNA 2" WG		1995 SMACNA 10" WG	
	SPIRAL DUCT	FITTINGS	SPIRAL DUCT	FITTINGS	SPIRAL DUCT	FITTINGS
3"-6"	26	26	26	26	26	26
7"-8"	26	26	26	26	26	26
9"-10"	26	26	26	26	26	26
11"-12"	26	26	26	26	26	24
13"-14"	26	26	26	26	26	24
15"-16"	26	26	24	24	24	22
17"-18"	26	26	24	24	24	22
19"-24"	26	24	24	24	24	22
25"-26"	24	22	24	24	24	22
27"-36"	24	22	24	22	22	20
37"-42"	24	22	22	20	22	20
43"-48"	22	20	22	20	20	20
49"-50"	22	20	22	20	20	20
51"-60"	22	20	20	18	18	18
61"-66"	22	18	18	16	18	16
67"-84"	20	18	18	16	18	16

DUCT DIAMETER	1985 SMACNA 2" WG		1985 SMACNA 10" WG		1975 SMACNA 10" WG	
	SPIRAL DUCT	FITTINGS	SPIRAL DUCT	FITTINGS	SPIRAL DUCT	FITTINGS
3"-8"	26	26	26	24	26	20
9"-14"	26	26	26	24	26	20
15"-26"	24	24	24	22	24	20
27"-36"	24	22	22	20	22	20
37"-50"	22	20	20	20	20	18
51"-60"	20	18	18	18	18	18
61"-84"	18	16	18	16	18	16

Gauge selection for aluminum type 3003.

Fittings are spot welded and/or gorelocked through 40" diameter. All larger fittings are continuously welded. All fittings can be provided as continuously welded if required. Brown & Shapre gauge listed in parentheses.

DUCT DIAMETER	2005 SMACNA 2" WG: POSITIVE		2005 SMACNA 2" WG: NEGATIVE	
	SPIRAL DUCT	FITTINGS	SPIRAL DUCT	FITTINGS
3"-8"	0.025" (22)	0.032" (20)	0.025" (22)	0.040" (18)
9"-14"	0.025" (22)	0.032" (20)	0.032" (20)	0.040" (18)
15"-26"	0.032" (20)	0.040" (18)	0.040" (18)	0.050" (16)
27"-36"	0.040" (18)	0.050" (16)	0.050" (16)	0.063" (14)
37"-50"	0.050" (16)	0.063" (14)	0.063" (14)	0.080" (12)
51"-60"	0.063" (14)	0.080" (12)	consult factory	0.090" (11)
61"-84"	consult factory	0.090" (11)	consult factory	consult factory

* Because of the limitations of the construction methods we can use, Eastern PCS may require additional sealing in the field.

While the use of this type of material is widespread, ESM urges engineers to always consider the use of stainless steel whenever possible for systems other than underground.

Eastern PCS is not recommended for use in high visibility exposed applications. Please refer to the Eastern PCS Product Guide for more information.



Single-Wall ROUND

SINGLE-WALL ROUND DUCT AND FITTINGS CONSTRUCTION STANDARDS

Negative Pressure

Gauge selection for galvanized steel (ASTM A 653), paint grip steel, type 304 and 316 stainless steel, and Eastern Poly Coated Steel (PCS).*

Fittings are spot welded and/or gorelocked through 40" diameter. All larger fittings are continuously welded except for PCS fittings. Check with the plant when ordering. All fittings can be provided as continuously welded if required. All galvanized and PCS spiral duct 6" and larger is corrugated unless ordered without corrugations. Smaller sizes may also be corrugated. All spiral duct from other materials will not be corrugated.

MAX. DUCT DIAM.	2005 SMACNA 2" WG				2005 SMACNA 4" WG				2005 SMACNA 6" WG			
	SPIRAL DUCT	REIN. & SPACNG	FITTINGS	REIN. & SPACNG	SPIRAL DUCT	REIN. & SPACNG	FITTINGS	REIN. & SPACNG	SPIRAL DUCT	REIN. & SPACNG	FITTINGS	REIN. & SPACNG
6"	26		26		26		26		26		26	
8"	26		26		26		26		26		26	
10"	26		26		26		26		26		24	
12"	26		26		26		24		24		24	
14"	26		24		24		22		24		22	
16"	26		24		24		22		26	A 12	22	A 12
18"	26	A 12	24	A 12	26	A 12	24	A 12	26	A 12	22	A 12
20"	26	A 12	24	A 12	26	A 12	24	A 12	26	A 12	22	A 12
22"	26	A 12	24	A 12	26	A 12	24	A 12	24	A 12	22	A 12
24"	26	A 12	24	A 12	26	A 12	24	A 12	24	A 12	22	A 12
30"	26	A 12	24	A 12	24	A 12	22	A 12	24	A 12	20	A 12
36"	26	A 12	24	A 12	24	A 12	22	A 12	22	B 12	20	B 12
42"	26	A 12	22	A 12	22	B 12	20	B 12	22	B 12	18	B 12
48"	24	A 12	22	A 12	22	B 12	20	B 12	20	B 12	18	B 12
54"	24	B 12	22	B 12	22	B 12	18	B 12	20	C 12	18	C 12
60"	24	B 12	22	B 12	22	C 12	18	C 12	20	C 12	18	C 12
66"	24	B 12	20	B 12	20	C 12	18	C 12	18	E 12	16	E 12
72"	22	B 12	20	B 12	20	D 12	18	D 12	18	E 12	16	E 12
78"	22	C 12	20	C 12	20	E 12	18	E 12	18	E 12	16	E 12
84"	22	C 12	20	C 12	20	E 12	18	E 12	18	F 12	16	F 12
90"	22	D 12	18	D 12	18	E 12	16	E 12	18	G 12	16	G 12
96"	22	E 12	18	E 12	18	E 12	16	E 12	18	G 12	16	G 12

MAX. DUCT DIAM.	2005 SMACNA 10" WG				1985 SMACNA 2" WG				RIDCS CLASS 1 2" WG			
	SPIRAL DUCT	REIN. & SPACNG	FITTINGS	REIN. & SPACNG	SPIRAL DUCT	REIN. & SPACNG	FITTINGS	REIN. & SPACNG	SPIRAL DUCT	REIN. & SPACNG	FITTINGS	REIN. & SPACNG
6"	26		26		26		24		22		22	
8"	26		24		26		24		22		22	
10"	26		24		26		24		22		22	
12"	24		22		26		24		22		22	
14"	24	A 12	22	A 12	26		24		22		22	
16"	24	A 12	22	A 12	24		22		22		22	
18"	24	A 12	22	A 12	24		22		20		20	F1 20
20"	24	A 12	22	A 12	24		22		20		20	F1 20
22"	24	A 12	20	A 12	24		22		18		20	F1 20
24"	22	A 12	20	A 12	24		20		18		20	F1 20
30"	22	A 12	18	A 12	22		20		16		18	F1 20
36"	20	B 12	18	B 12	22		20		16		16	F1 12
42"	20	B 12	18	B 12	20		18		20	F1 12	16	F1 12
48"	18	C 12	16	C 12	20		18		20	F1 12	14	F1 12
54"	18	D 12	16	D 12	18		16		20	F1 12	14	F1 12
60"	18	E 12	16	E 12	18		16		18	F1 12	12	F1 12
66"	18	E 12	16	E 10	16		14		18	F1 12	12	F1 12
72"	18	F 12	16	F 10	16		14		18	F1 12	12	F1 12
78"	16	G 12	16	G 6	16		14		18	F1 12	10	F1 12
84"	16	G 12	16	G 6	16		14		18	F1 12	10	F1 12
90"	16	G 12	16	G 6	NA		NA		18	F1 12	10	F1 12
96"	16	G 12	16	G 6	NA		NA		18	F1 12	10	F1 12

A,B,C,D,E,F,G = Angle ring reinforcements per SMACNA 2005 HVAC DCS Table 3-2

F1 = F1 reinforcement per SMACNA RIDCS, Chapter 12

* Refer to note on the bottom of page 2.

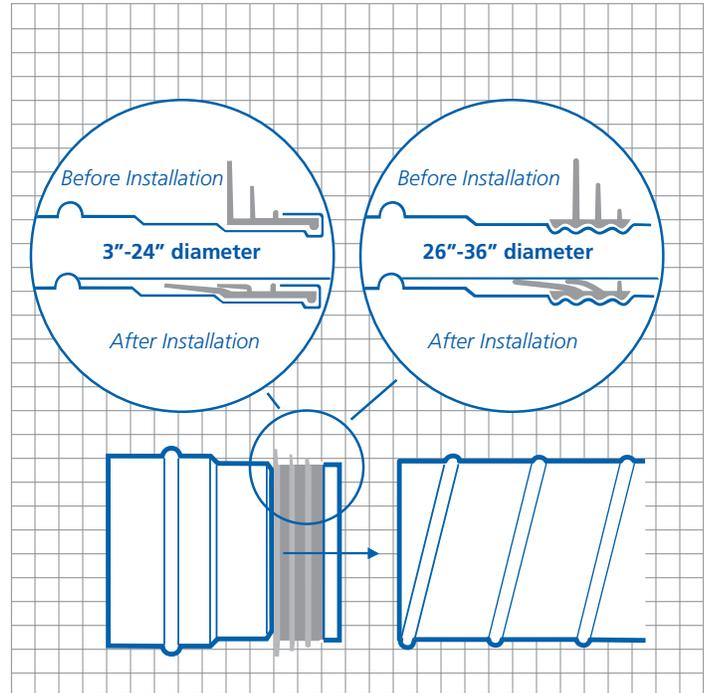


EASTERN TIGHT™

EASTERN TIGHT Fittings will save you money by reducing installation time by eliminating joint sealing. They feature a triple-lipped EPDM rubber gasket, held in place with a 180° hemmed edge, that provides a reliable, airtight seal. EASTERN TIGHT Fittings are suitable for use for temperatures ranging from -20° F to 212° F. When tested in accordance with ASTM E84, EASTERN TIGHT Fittings have flame-spread and smoke-developed ratings of 0/0.

Full-bodied fittings, couplings, reducers, elbows, and taps are available with EASTERN TIGHT in even and odd sizes from 3" through 10" in diameter, and even sizes up to 36" in diameter. Fittings are secured to the duct with self-tapping screws uniformly located around the circumference per SMACNA standards.

EASTERN TIGHT Fittings are available in single-wall construction, fabricated from galvanized or paint grip. EASTERN TIGHT Fittings have been independently tested and can be used to meet SMACNA Class 3 leakage standards for -2" WG to +10" WG.



EASTERN TIGHT ROUND SPIRAL DUCT AND FITTINGS CONSTRUCTION STANDARDS

Gauge selection for galvanized steel (ASTM A653) or paint grip.

Fittings are assembled with stitch welds, spot welds, or standing seams and are sealed. All galvanized spiral duct 6" and larger is corrugated unless ordered without corrugation. Smaller sizes may also be corrugated. Check with the plant when ordering. All spiral duct from other materials will be smooth.

DUCT DIAMETER	2005 SMACNA 10" WG POSITIVE		2005 SMACNA 2" WG NEGATIVE	
	SPIRAL DUCT	FITTINGS	SPIRAL DUCT	FITTINGS
3"-6"	26	26	26	26
7"-18"	26	26	26	26
9"-10"	26	26	26	26
11"-12"	26	26	26	26
13"-14"	26	26	26	24
15"-16"	26	26	26	24
17"-18"	26	26	26R	24R
19"-20"	26	24	26R	24R
21"-22"	26	24	26R	24R
23"-24"	26	24	26R	24R
25"-30"	24	22	26R	24R
31"-36"	24	22	26R	24R

R = Reinforcement ring at 12' maximum spacing. Individual fittings may not have reinforcement.

EASTERN TIGHT Fittings have been tested in our standard gauges for -2" to +10" WG and have been used to meet SMACNA Class 3 leakage standards.

EASTERN TIGHT Fittings and Couplings are covered by one or more of the following U.S. Patents: D437,034; D435,090; D430,482; D427,673; D427,668; D427,667; D553,238; D551,336; 7287407; D518,885; D517,679; D516,698; D516,697. Other patents pending.

For more information, refer to Eastern Sheet Metal's EASTERN TIGHT Product Guide.



Single-Wall Round CONSTRUCTION



SPIRAL DUCT LOCK SEAM (RL—1)

	Available Gauges
GALVANIZED	28-14
STAINLESS STEEL	26-18
ALUMINUM	22-14*
PAINT GRIP	26-16
POLYVINYL CHLORIDE COATED	26-18
PERFORATED	22

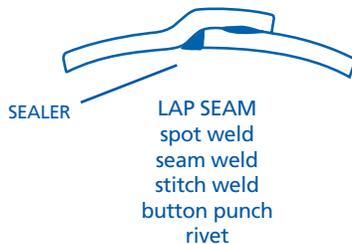
*(Brown & Sharp thickness = 0.025" - 0.090")



SPIRAL DUCT CORRUGATED (RL—1)

	Available Gauges
GALVANIZED	26-18
STAINLESS STEEL	26-18
ALUMINUM	22-18*
PAINT GRIP	26-18
POLYVINYL CHLORIDE COATED	26-18

*(Brown & Sharp thickness = 0.025" - 0.090")



BUTT-WELDED SEAM

	Available Gauges
GALVANIZED	20-10
STAINLESS STEEL	22-10
ALUMINUM	16-1/4"*
PAINT GRIP	20-16
HOT ROLLED	16-1/4"

*(Brown & Sharp thickness = 0.05" - 0.25")



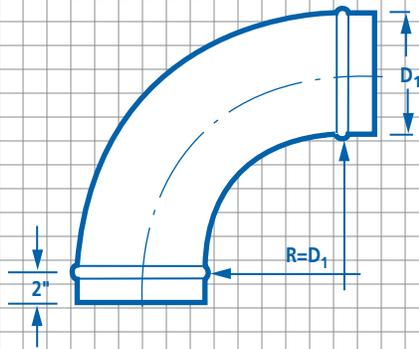
GORELOCKED SEAM

	Available Gauges
GALVANIZED	26-18
STAINLESS STEEL	26-22
ALUMINUM	22-16
PAINT GRIP	26-18
POLYVINYL CHLORIDE COATED	26-18

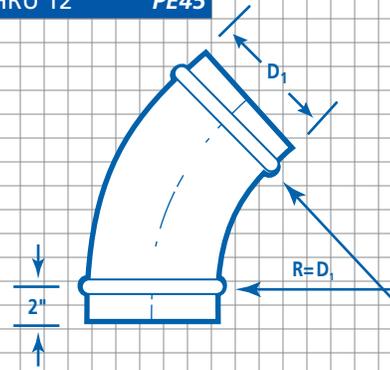
*(Brown & Sharp thickness = 0.025" - 0.050")

Single-Wall Round **ELBOWS**

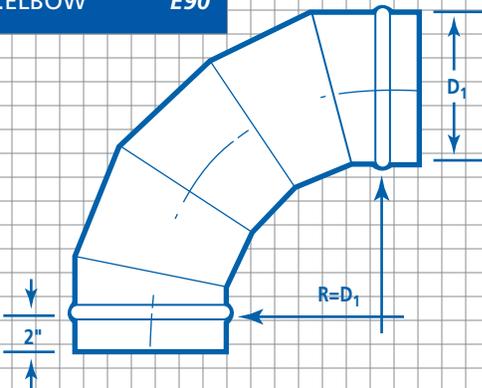
90° PRESSED ELBOW
3" DIA. THRU 12" **PE90**



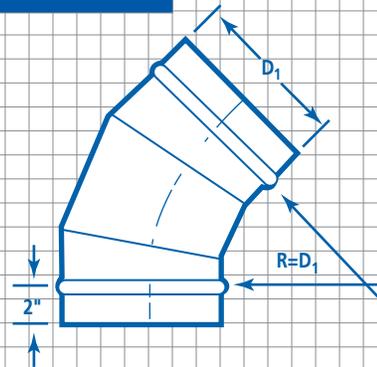
45° PRESSED ELBOW
3" DIA. THRU 12" **PE45**



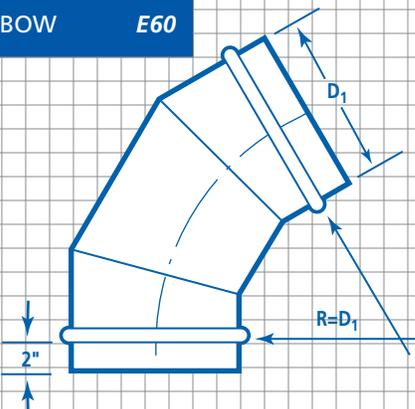
90° 5-PC. ELBOW **E90**



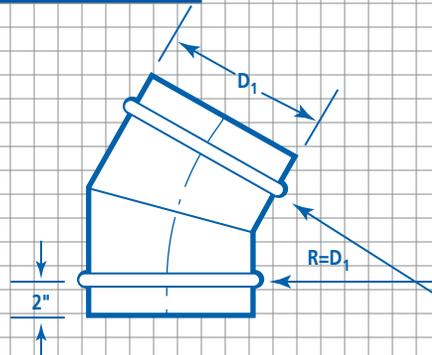
45° 3-PC. ELBOW **E45**



60° 3-PC. ELBOW **E60**

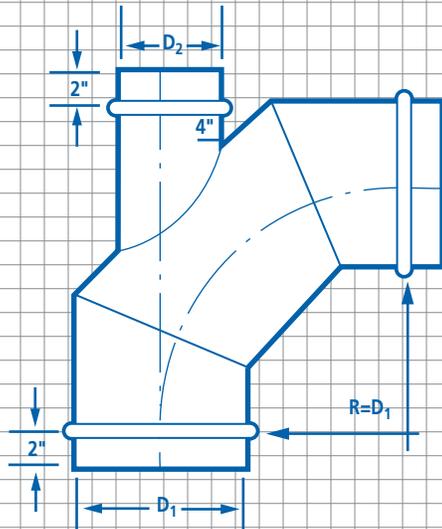


22½° AND 30° 2-PC. ELBOW
E22/E30



Single-Wall Round **ELBOWS**

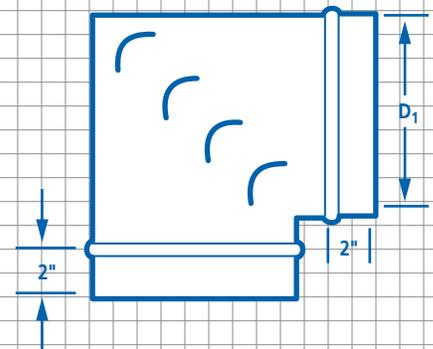
90° 3-PC. ELBOW WITH
HEEL TAP **E90L**



90° 2-PC. ELBOW
E290/EV290

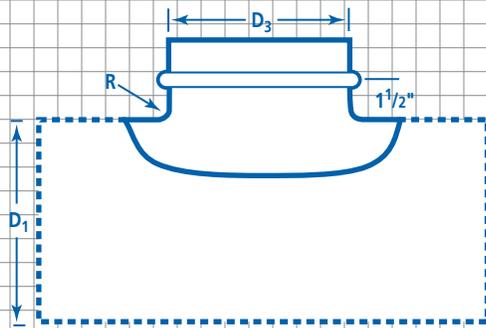
With or without vanes.

D ₁	No. of Vanes
3-7	1
8-10	3
10-60	5
> 60	max spacing = 12"

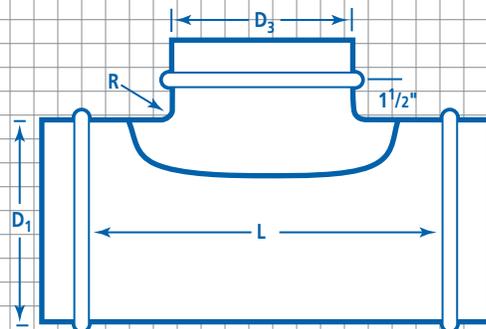


Single-Wall Round PRESSED TEES

FIELD INSTALLED PRESSED
TAP *PFT*



PRESSED TEE *PT*



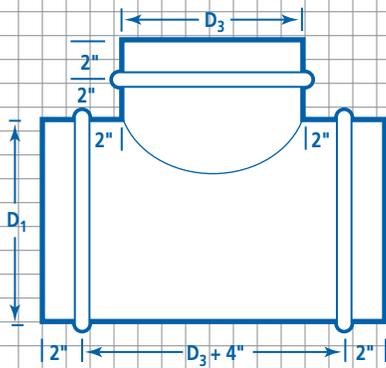
D_3/D_1	R	L (PT)
4"/4"	.394"	14"
4"/6"	.394"	14"
4"/8"	.394"	14"
4"/10"	.394"	14"
4"/12"	.394"	14"
6"/6"	.787"	16"
6"/8"	.787"	16"
6"/10"	.787"	16"
6"/12"	.787"	16"
6"/14"	.787"	16"
6"/16"	.787"	16"
6"/18"	.787"	16"
8"/8"	.787"	18"
8"/10"	.787"	18"
8"/12"	.787"	18"
8"/14"	.787"	18"
8"/16"	.787"	18"
8"/18"	.787"	18"
8"/20"	.787"	18"
8"/22"	.787"	18"
8"/24"	1.0"	20"
10"/10"	1.0"	20"
10"/12"	1.0"	20"
10"/14"	1.0"	20"
10"/16"	1.0"	20"
10"/18"	1.0"	20"
10"/20"	1.0"	20"
10"/22"	1.0"	20"
10"/24"	1.0"	20"
12"/12"	1.0"	22"
12"/14"	1.0"	22"
12"/16"	1.0"	22"
12"/18"	1.0"	22"
12"/20"	1.0"	22"
12"/22"	1.0"	22"
12"/24"	1.0"	22"



Single-Wall Round STRAIGHT TEES

TEE

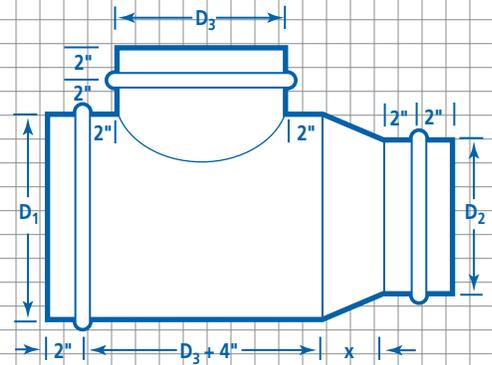
T



REDUCING TEE

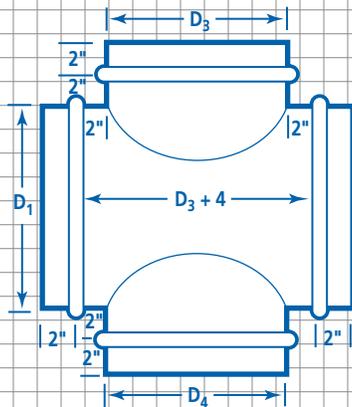
TR

$X = D_1 - D_2$
4" Minimum



TEE CROSS

TX

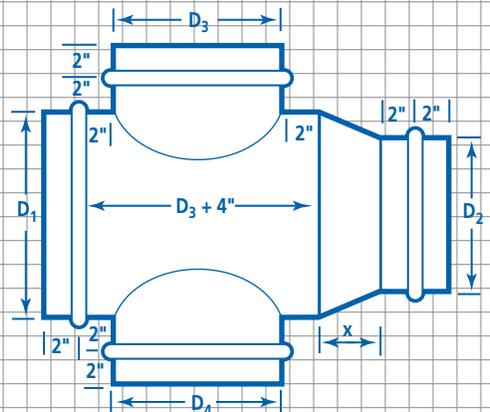


$D_3 \geq D_4$

REDUCING TEE CROSS

TRX

$X = D_1 - D_2$
4" Minimum

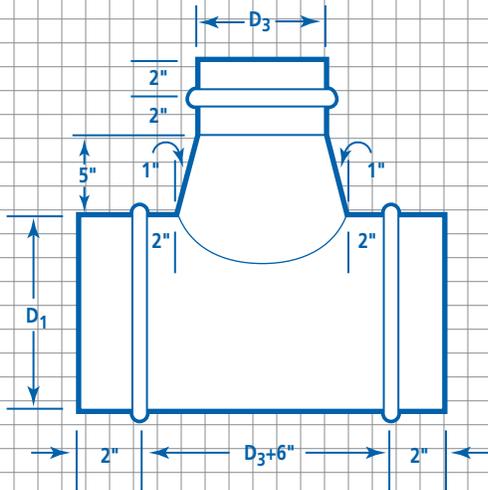


$D_3 \geq D_4$



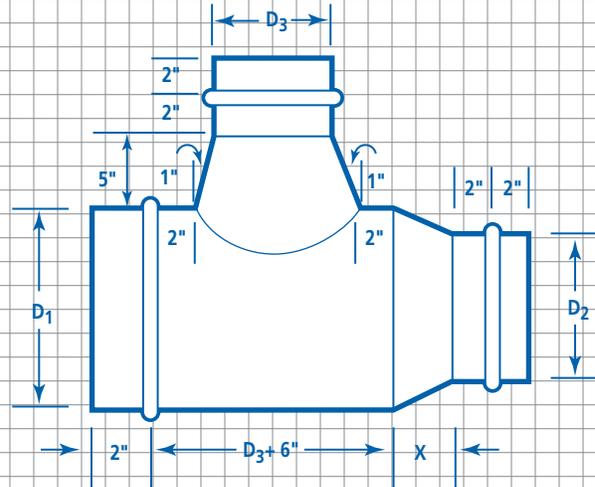
Single-Wall Round CONICAL TEES

CONICAL TEE *CT*

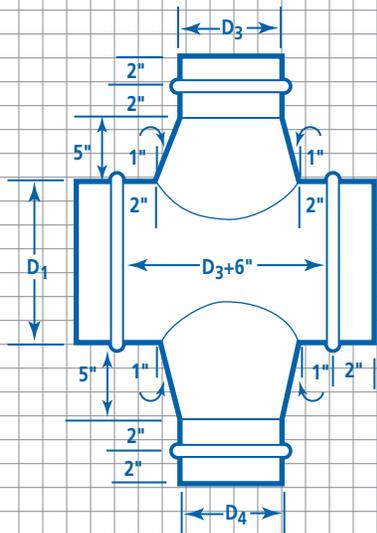


REDUCING CONICAL TEE *CTR*

$X = D_1 - D_2$
4" Minimum



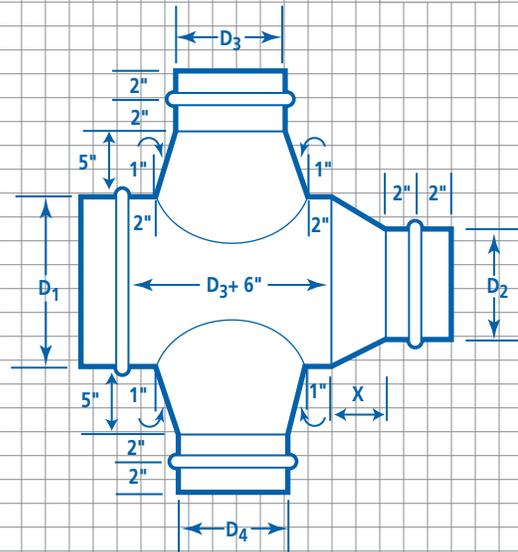
CONICAL CROSS *CTX*



$D_3 \geq D_4$

REDUCING CONICAL CROSS *CTRX*

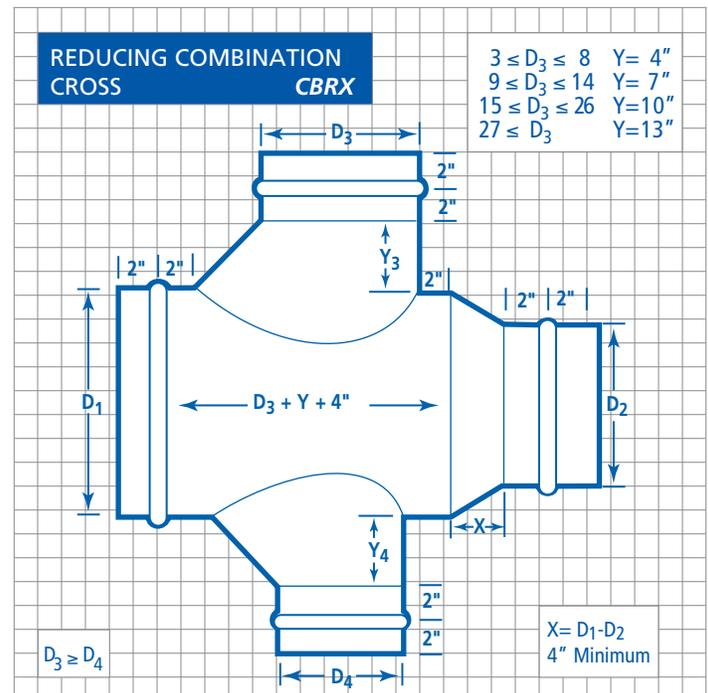
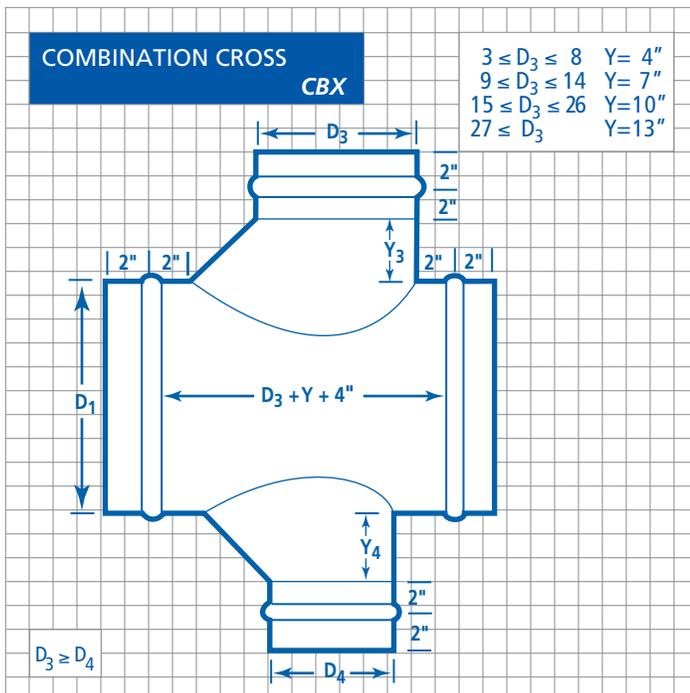
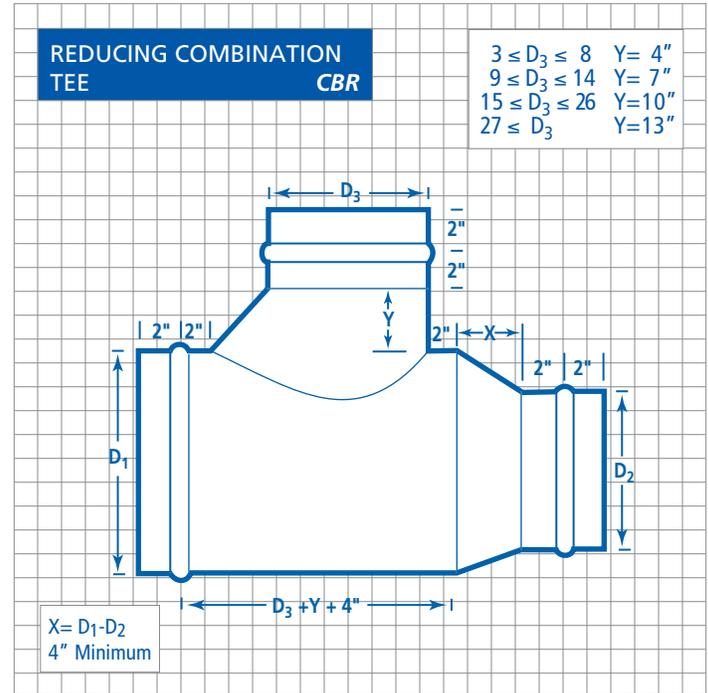
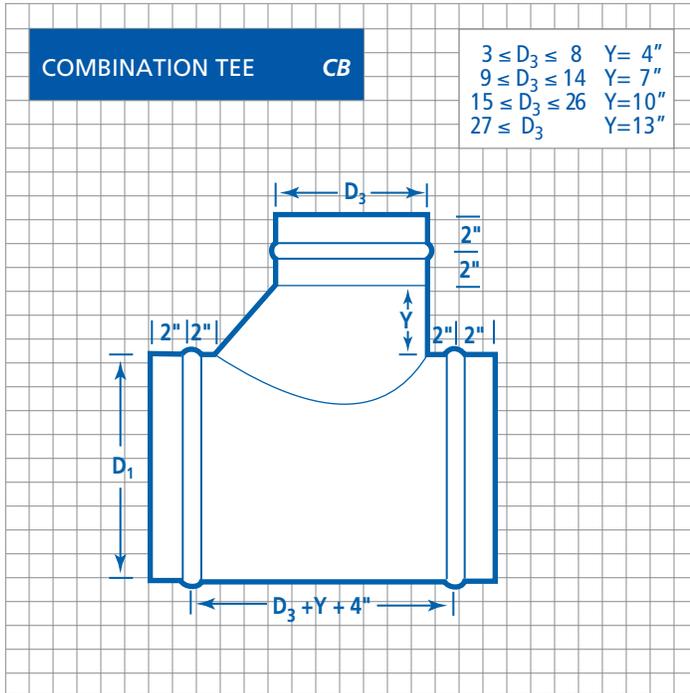
$X = D_1 - D_2$
4" Minimum



$D_3 \geq D_4$



Single-Wall Round COMBINATION TEES

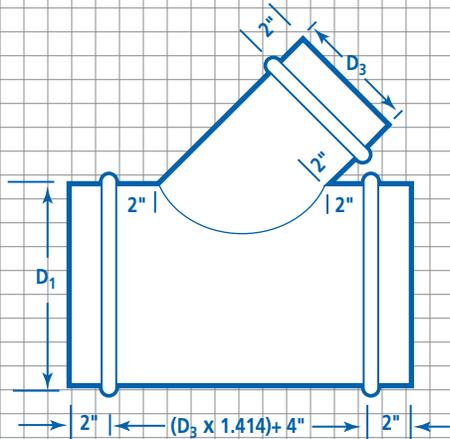




Single-Wall Round STRAIGHT LATERALS

LATERAL 45°

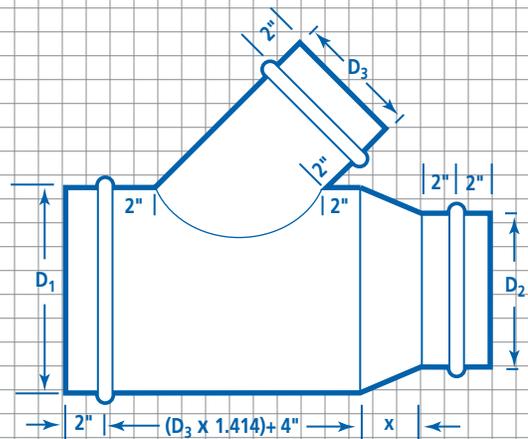
L



REDUCING LATERAL 45°

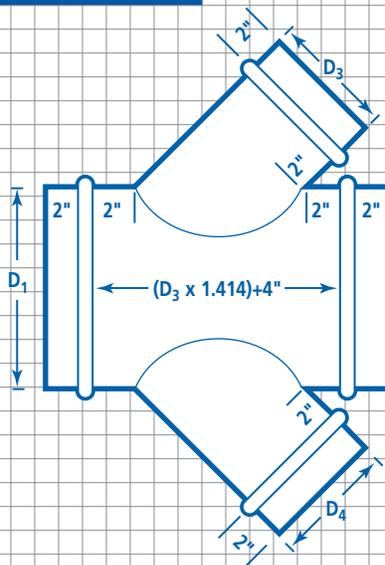
LR

$X = [D_1 - D_2]$
4" Minimum



LATERAL CROSS 45°

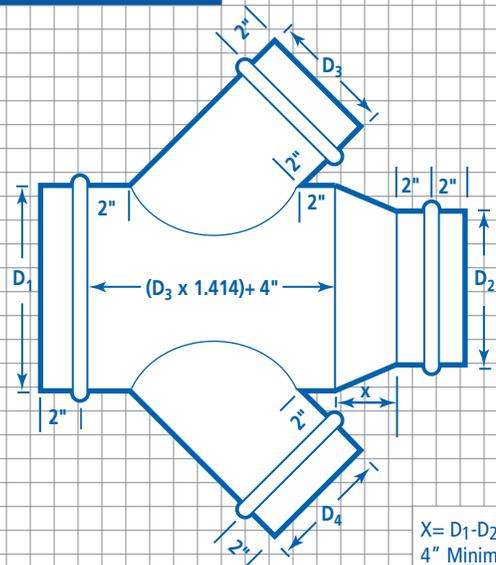
LX



$D_3 \geq D_4$

REDUCING 45° LATERAL
CROSS

LRX



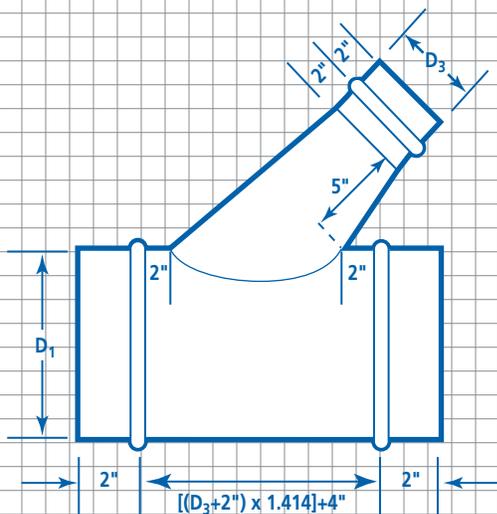
$D_3 \geq D_4$

$X = D_1 - D_2$
4" Minimum



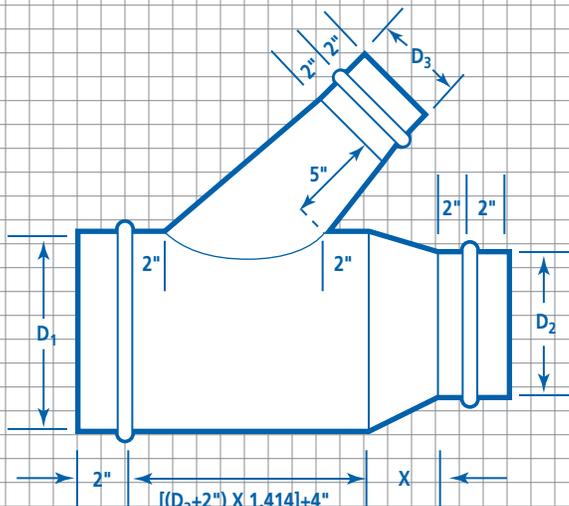
Single-Wall Round CONICAL LATERALS

CONICAL LATERAL 45° **CL**

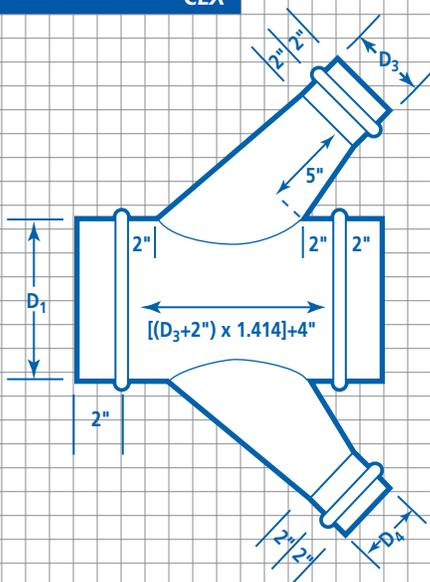


REDUCING CONICAL LATERAL **CLR**

X = D₁-D₂
4" Minimum



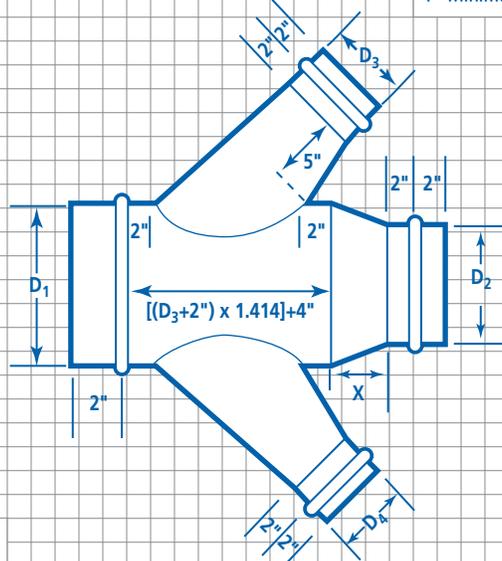
CONICAL LATERAL 45° CROSS **CLX**



D₃ ≥ D₄

REDUCING CONICAL 45° LATERAL CROSS **CLR X**

X = D₁-D₂
4" Minimum

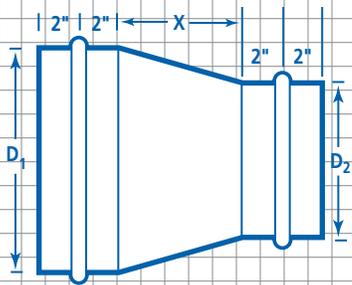


D₃ ≥ D₄

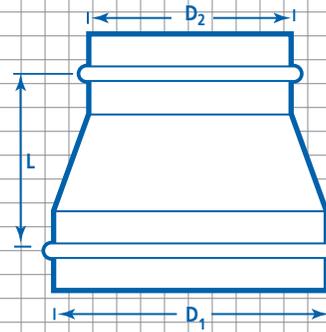
Single-Wall Round REDUCERS

CONCENTRIC REDUCER *RD*

$X = D_1 - D_2$
4" Minimum



PRESSED REDUCER *PRD*

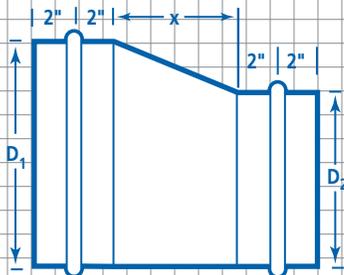


D ₁ /D ₂	L
4"/3"	1 1/8"
5"/3"	2 3/4"
5"/4"	1 1/8"
6"/4"	3 1/8"
6"/5"	2 1/4"
7"/5"	3 5/8"
7"/6"	2 3/4"
8"/5"	4 1/2"
8"/6"	3 5/8"
8"/7"	2 3/4"
9"/6"	4 1/2"
9"/7"	3 3/8"
9"/8"	2 3/4"
10"/6"	5 3/8"
10"/7"	4 1/2"
10"/8"	3 3/8"
10"/9"	2 3/4"
12"/8"	5 3/8"
12"/9"	4 1/2"
12"/10"	3 5/8"

Protected by US Patent 6,548,760

ECCENTRIC REDUCER *RDE*

$X = 2 [D_1 - D_2]$
4" Minimum





Single-Wall Round MISCELLANEOUS

DAMPER	D		D₁
<p>Dampers come standard with:</p> <ul style="list-style-type: none"> • 3/8" locking handle • Nylon bushings • Insulation stand off 			3" 4" 5" 6" 7" 8" 9" 10" 12" 14" 16" 18" 20" 22" 24"

PIPE COUPLINGS	PCP	
-----------------------	------------	--

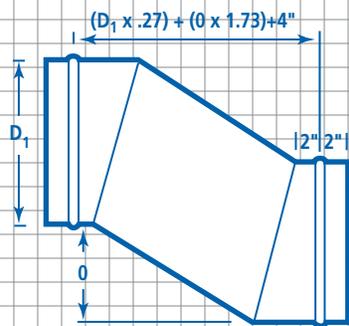
FITTING COUPLINGS	FCP	
--------------------------	------------	--

PRESSED END CAP	PEC	
------------------------	------------	--

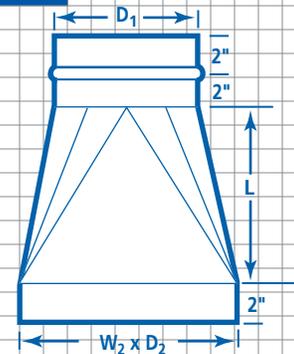
END CAP	EC	
----------------	-----------	--

30° OFFSET

OFF

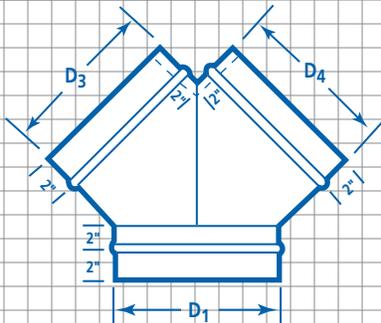


RECTANGLE TO ROUND RSQ

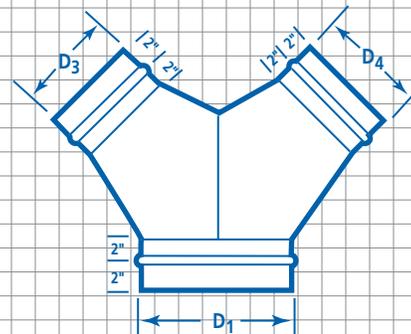


Y BRANCH

Y



REDUCING Y BRANCH YR

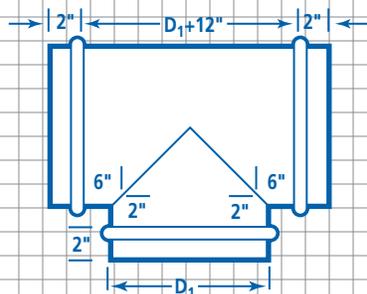


BULL HEAD TEE

BHT/BHTV

With or without vanes.

D1	No. of Vanes
3-7	1
8-10	3
10-60	5
> 60	max spacing = 12"

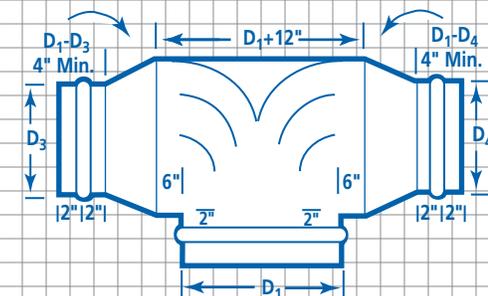


REDUCING BULL HEAD TEE

BHTR/BHTRV

With or without vanes.

D1	No. of Vanes
3-7	1
8-10	3
10-60	5
> 60	max spacing = 12"

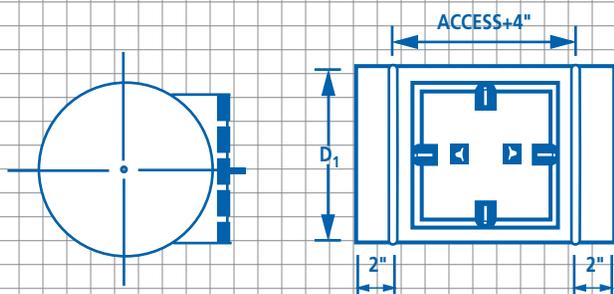




Single-Wall Round MISCELLANEOUS

RECTANGULAR ACCESS SECTION *RTA*

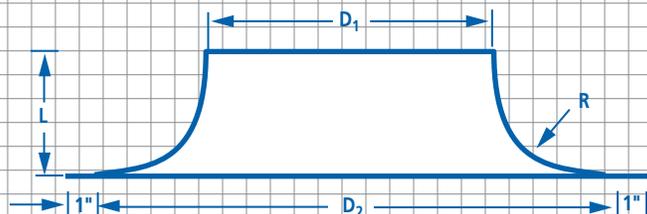
Also available as shop-installed SRTA or field-installed accessory FRTA.



D ₁	ACCESS SIZE
8" to 12"	8" x 8"
13" to 17"	12" x 12"
18" and OVER	18" x 18"

Negative and positive pressure.

SPUN BELL MOUTH *SB*



STANDARD BELL MOUTH

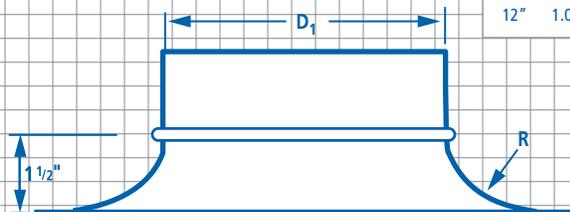
D ₁	D ₂	L	R
13"	19"	4"	3"
14"	21"	4"	3"
15"	24"	5"	4"
16"	26"	5"	4"
17"	25"	5"	4"
18"	26"	5"	4"
19"	27"	5"	4"
20"	28"	5"	4"
21"	29"	5"	4"
22"	32"	6"	5"
23"	33"	6"	5"
24"	34"	6"	5"
26"	38"	7"	6"
28"	40"	7"	6"
30"	42"	7"	6"
32"	46"	8"	7"
34"	48"	8"	7"
36"	50"	8"	7"
38"	52"	8"	7"
40"	56"	9"	8"
42"	58"	9"	8"
44"	60"	9"	8"
46"	62"	9"	8"
48"	64"	9"	8"

SHORT RADIUS BELL MOUTH

D ₁	D ₂	L
13"	15"	3½"
14"	16"	3½"
15"	17"	3½"
16"	18"	3½"
17"	19"	3½"
18"	20"	3½"
19"	21"	3½"
20"	22"	3½"
21"	23"	3½"
22"	24"	3½"
23"	25"	3½"
24"	26"	3½"
26"	28"	3½"
28"	30"	3½"
30"	32"	3½"
32"	34"	3½"
34"	36"	3½"
36"	38"	3½"
38"	40"	3½"
40"	42"	3½"
42"	44"	3½"
44"	46"	3½"
46"	48"	3½"
48"	50"	3½"
50"	52"	3½"
52"	54"	3½"
54"	56"	3½"
56"	58"	3½"
56"	60"	3½"
60"	62"	3½"

PRESSED BELL MOUTH GALVANIZED ONLY *PB*

D ₁	R
4"	.394"
5"	.472"
6"	.787"
7"	1.0"
8"	1.0"
9"	1.0"
10"	1.0"
12"	1.0"

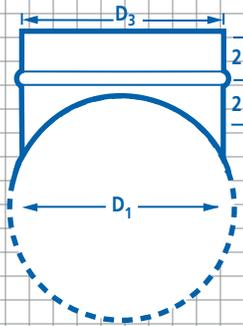




Single-Wall Round ACCESSORIES

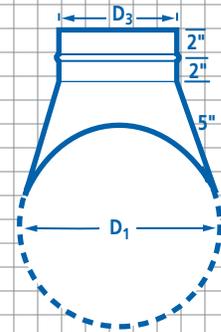
SHOP INSTALLED/ FIELD INSTALLED

SHOP/FIELD INSTALLED TAP *ST/FT*



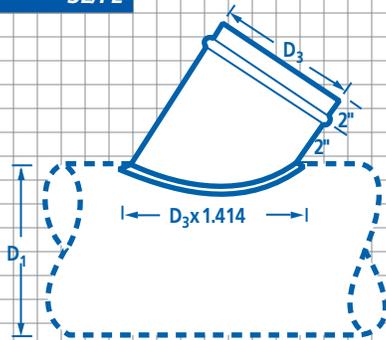
Standard flange is 1/2".
2" flange is also available.

SHOP/FIELD INSTALLED CONICAL TAP *STC/FTC*



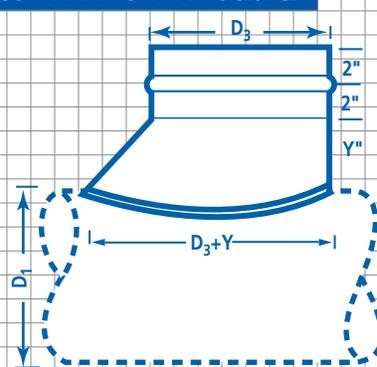
Standard flange is 1/2".
2" flange is also available.

SHOP/FIELD INSTALLED LATERAL TAP *SL/FL*



Standard flange is 1/2".
2" flange is also available.

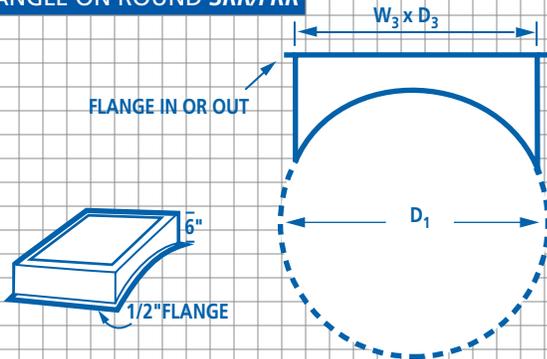
SHOP/FIELD INSTALLED COMBINATION TAP *SCB/FCB*



$3 \leq D_3 \leq 8$ Y= 4"
 $9 \leq D_3 \leq 14$ Y= 7"
 $15 \leq D_3 \leq 26$ Y=10"
 $27 \leq D_3$ Y=13"

Standard flange is 1/2".
2" flange is also available.

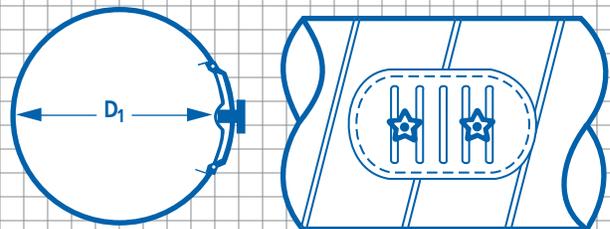
SHOP/FIELD INSTALLED RECTANGLE ON ROUND *SRR/FRR*



FLANGE IN OR OUT

6"
1/2" FLANGE

FIELD INSTALLED STANDARD DOOR *FA*





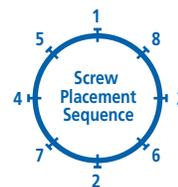
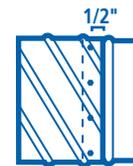
Single-Wall Round INSTALLATION

SINGLE-WALL SLIP JOINT

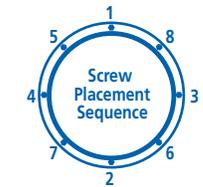
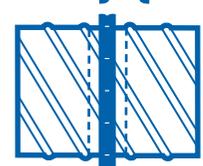
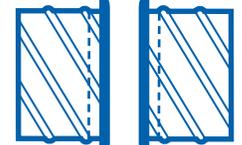
Eastern Sheet Metal fittings are sized to slip into, and should be used with, Eastern Sheet Metal spiral duct. A tight fit is necessary to minimize friction loss and to promote proper sealing. Care should be taken during handling and installation to avoid dents and distortions that can cause improper fit or difficult installation.

1. Bring the bottom of the fitting collar into the spiral duct at a slight angle.
2. Carefully work the rest of the collar into the spiral duct until approximately one inch of the collar remains exposed between the end of the spiral duct and the stop bead of the fitting collar. Do not use a screwdriver or knife to help make the connection. Apply pressure with the heel of your hand or with your fist to help slip the fitting into the duct.
3. Apply duct sealer to this exposed area. Skip this step if installing EASTERN TIGHT fittings.
4. Push the fitting into the spiral duct until the stop bead meets the edge of the spiral duct.
5. Fasten the fitting into the spiral duct with screws per the chart at right. The screws should be evenly spaced around the perimeter of the connection, approximately 1/2" back from the stop bead. Placement of the screws should be opposite of each other as demonstrated in the diagram.

Installation of
Slip Joint Connector



Installation of
Eastern Flange Connector



EASTERN FLANGE

Eastern Flanges come factory-mounted on fittings and spiral duct. Eastern Flanges are standard for all duct over 61" in diameter, but are available on smaller sizes. Stainless steel Eastern Flanges are only available for round diameters of 16" and longer.

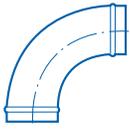
1. Place closed cell neoprene gasket on the face of one of the mating flanges.
2. Push the flanges together keeping the edges of the flanges aligned.
3. Clamp the flanges to help hold them in place.
4. Screw the flanges together with self-tapping screws per the chart at right. The screws should be evenly spaced around the perimeter of the connection. Placement of the screws should be opposite of each other as demonstrated in the diagram.

Protected by the following U.S. Patents: 7,287,407; D518,885; D517,679; D516,698; D516,697.

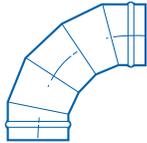
DUCT DIAMETER	#OF SCREWS	
	SLIP FIT	EASTERN FLANGE
4" -9"	3	NA
10"	3	4
11" -16"	3	6
17" -21"	4	8
22" -26"	5	10
27" -30"	6	12
32" -36"	7	14
38" -42"	8	16
44" -46"	9	18
48" -52"	10	20
54" -56"	11	22
58" -60"	12	24
62" -66"	NA	26
68" -72"	NA	28
74" -76"	NA	30
78" -84"	NA	32



Single-Wall ROUND



PE90



E90



E60



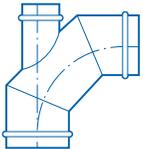
PE45



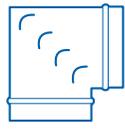
E45



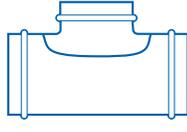
E22/E30



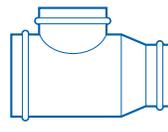
E90L



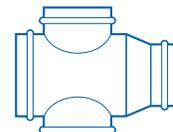
E290/EV290



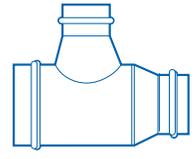
PT



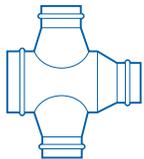
TR



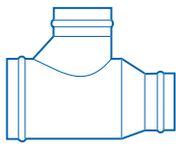
TRX



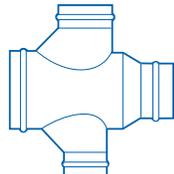
CTR



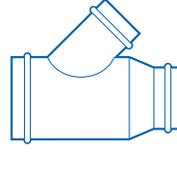
CTRX



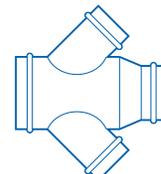
CBR



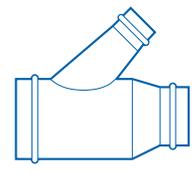
CBRX



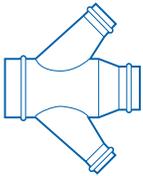
LR



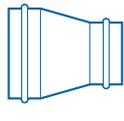
LRX



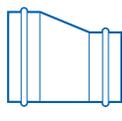
CLR



CLRX



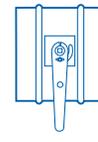
RD



RDE



PRD



D



PCP



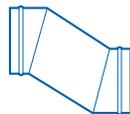
FCP



PEC



EC



OFF



RSQ



Y



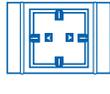
YR



BHTR/BHTRV



RTA



PB



SB



ST/FT



STC/FTC



SL/FL



SCB/FCB



SRR/FRR



FA



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