



**PRUDENTIAL** ENGINEERING SDN. BHD.  
Licensed Manufacturer

# SPIRAL ROUND DUCT SYSTEMS



# SPRD

# Spiral Round Duct Systems

Spiral duct is used in a variety of commercial and industrial applications for ventilation and dust or fume collection.



PRUDENTIAL Spiral Duct is fabricated from steel strips helicoidally wound and seamed with a four ply lock-seam, which gives the pipe added rigidity. The seam is outside the pipe wall leaving the inside free of obstruction for an optimized air flow.

Spiral duct is used in a variety of commercial and industrial applications for ventilation and dust or fume collection. They can be made of galvanized steel, Stainless Steel, or aluminum.

They are available in standard lengths of 2/3/4 meter or any other length on demand

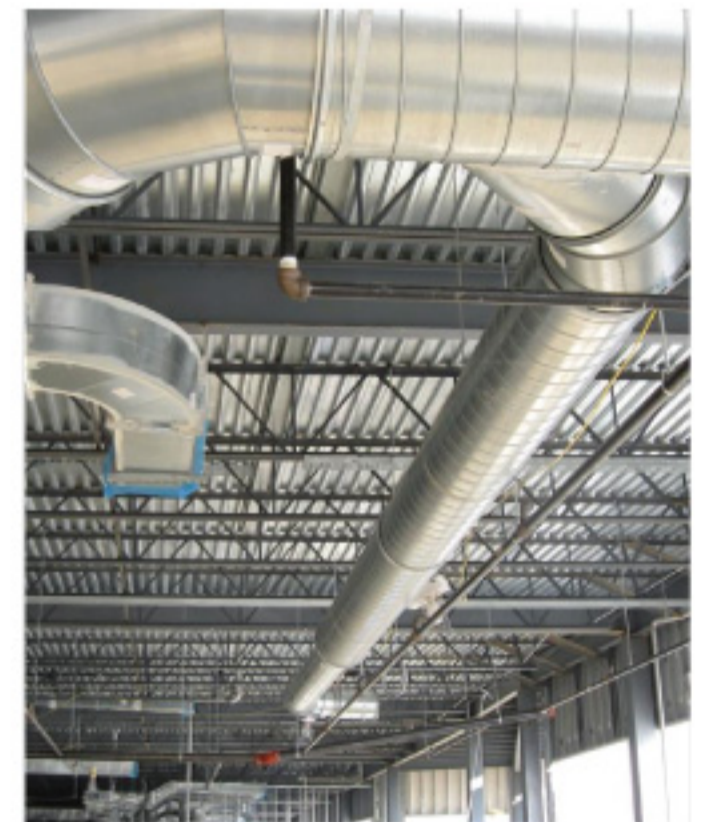


## Advantages of Spiral Duct

- Exposed Spiral duct is attractive and is frequently specified by architects because of its superior aesthetic appeal. Paintable Spiral duct can be finished to blend in with, or
- Stand out from, the indoor environment.
- Easier to install through and around structural framing
- Longer spans reduces installation operations and the number of connections and hangers requirement
- Low air leakage, optimal airflow characteristics, and less pressure drop allow smaller and more efficient air moving equipment

### Specifications

PRUDENTIAL Spiral Duct will meet or exceed the gauges listed in the SMACNA 2005 / DW 144 / IS Standards



## Machines



Spiro® Tubeformer 1602/3600 - Modular-Edition

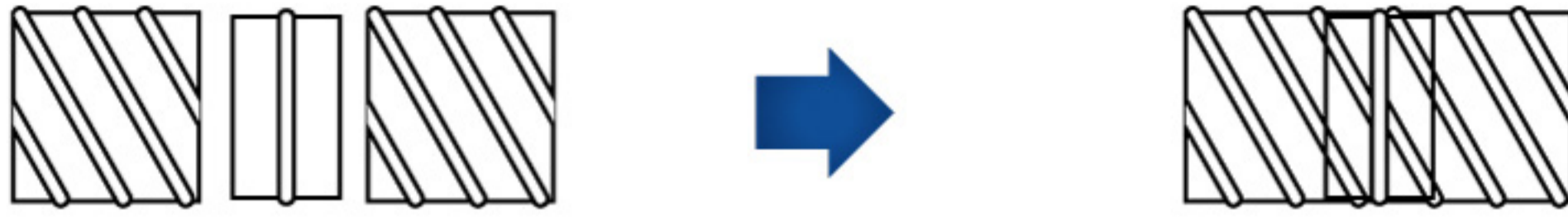


Spiro® Gorelocker Combi-T

## Spiral Round Duct Installation

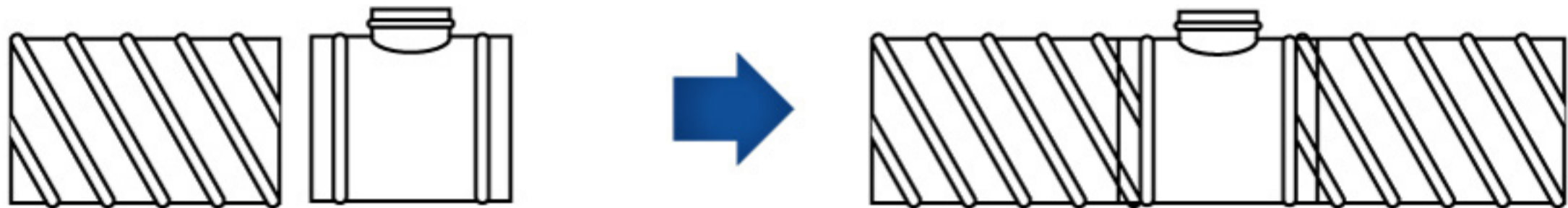
### Installation of slip joint connectors

Duct-to-joint connections are made by using a duct coupling that slips inside the duct sections.



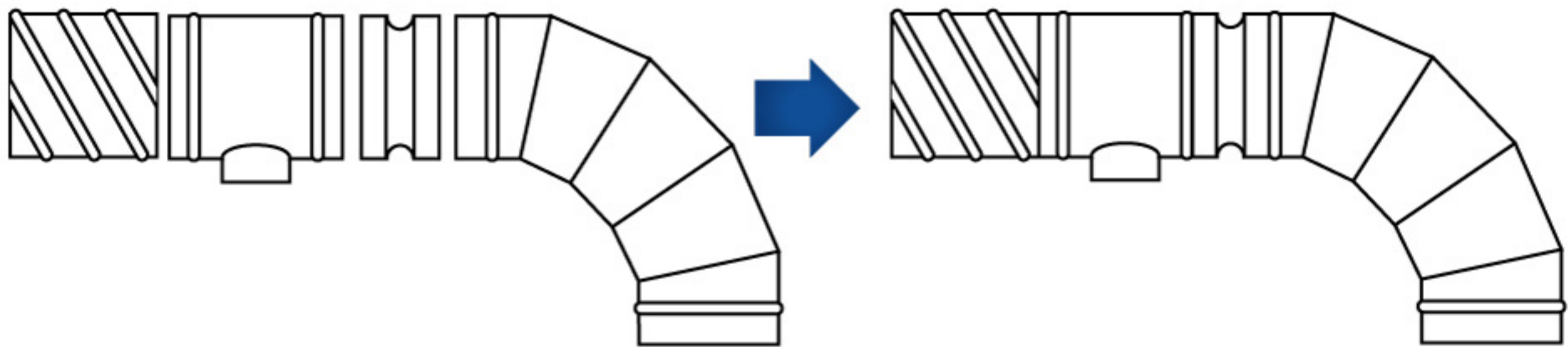
### Duct-to-fitting connections

Duct-to-fitting connections are made by slipping the fitting collar into the duct.



### Fitting-to-fitting connections

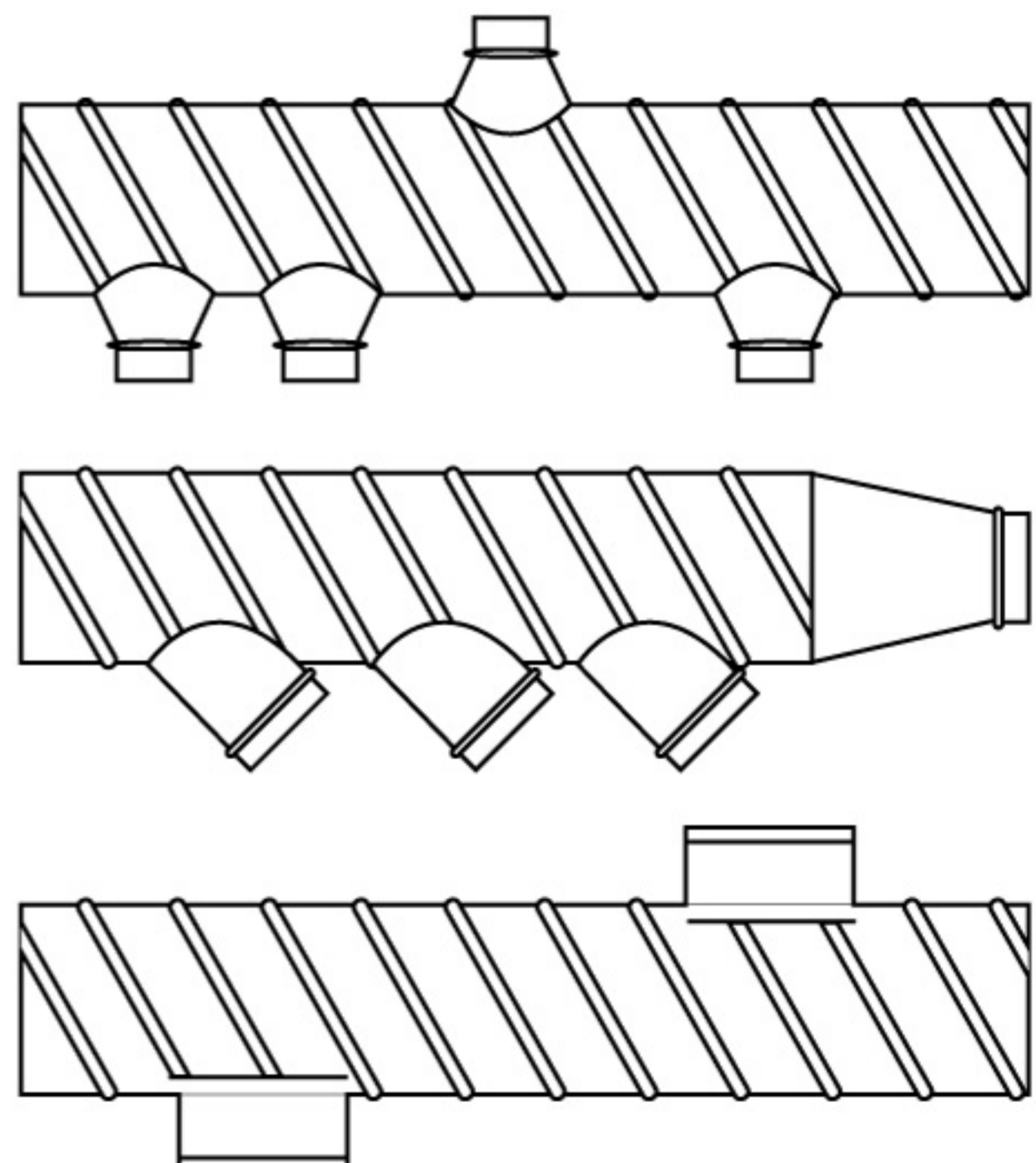
Connections can be made by using a short section of duct or by using a fitting coupling.



## Spiral Duct Branch Take Offs

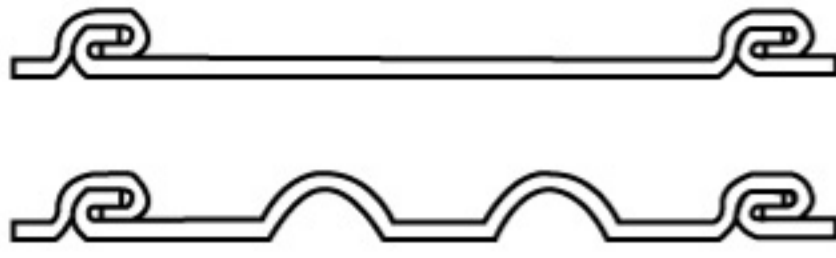
Prudential Engineering offer take off / Branch Collars of duct and fittings from our standard duct and fitting components.

Take offs / Branch collars reduce field labor and potential sources of leakage by eliminating joints between pipe and standard fittings.



# Round Duct Seams

## Spiral pipe lock seam



### Available Thickness

Galvanized : 0.60 to 1.00mm  
 Stainless Steel : 0.60 to 0.80mm  
 Aluminium : 0.80 to 1.00mm

## Spot weld



### Available Thickness

Galvanized : 0.60 to 1.20mm  
 Stainless Steel : 0.60 to 0.80mm

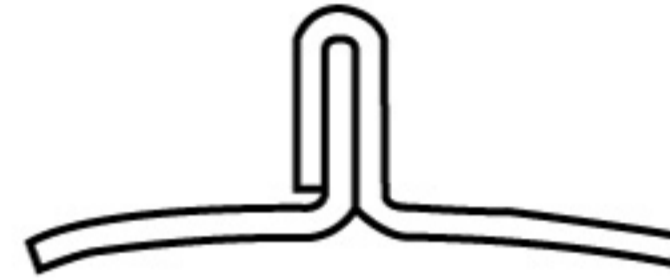
## Butt-welded seam



### Available Thickness

Galvanized : 1.00 to 3.00mm  
 Stainless Steel : 0.80 to 2.00mm  
 Mild Steel : 1.00 to 3.00mm

## Gore locked seam



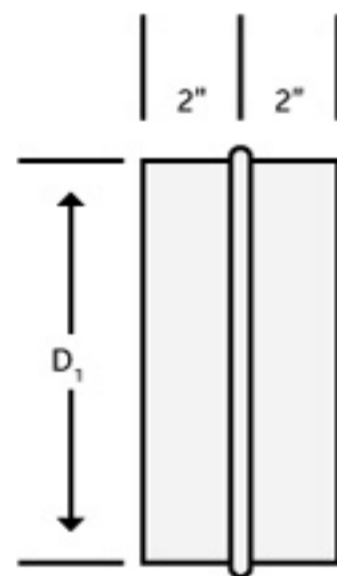
### Available Thickness

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 Stainless Steel : 0.60 to 0.80mm  
 Aluminium : 0.80 to 1.20mm

# Single Wall Round Fittings

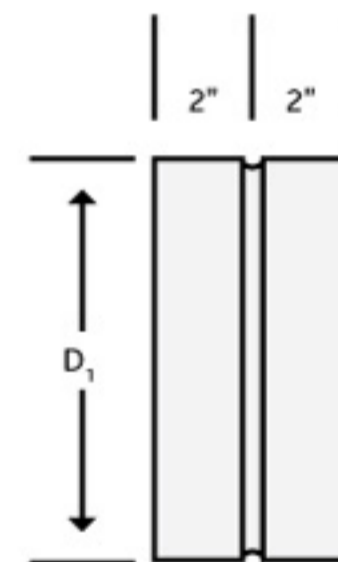
GPC

Pipe Coupling



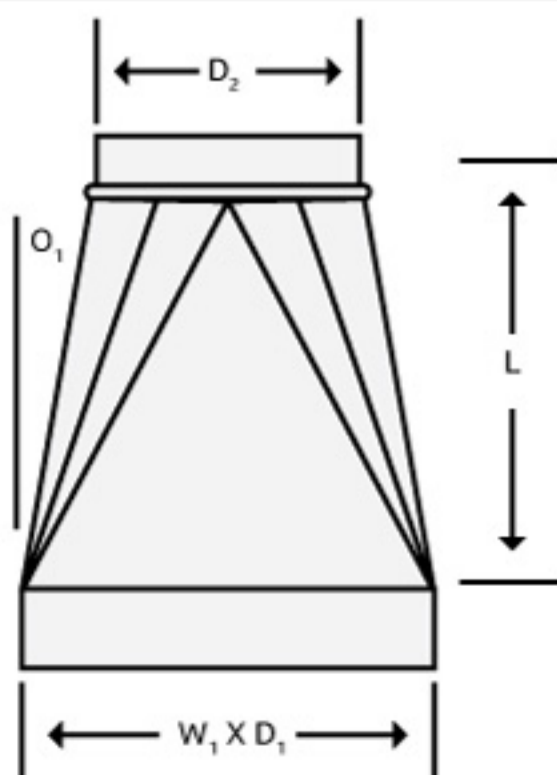
GFC

Fitting Coupling



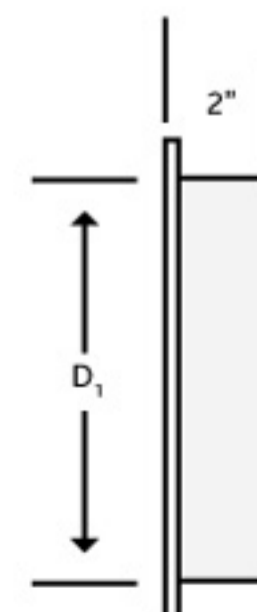
GRETR

Rectangle to Round



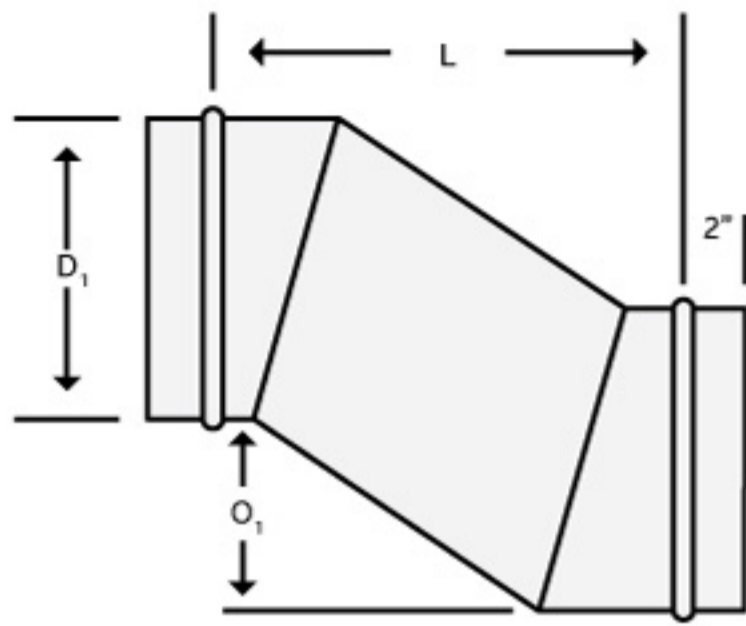
GEC

End Cap

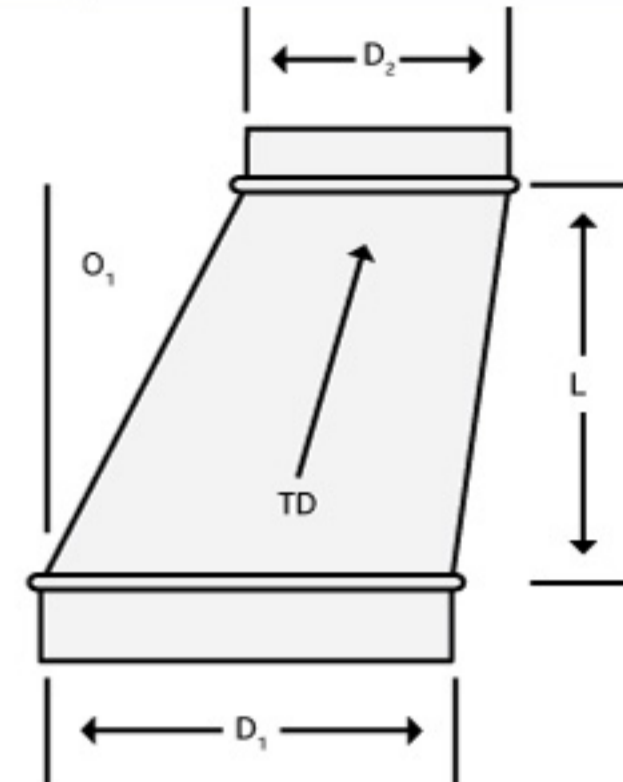


# Single Wall Round Fittings

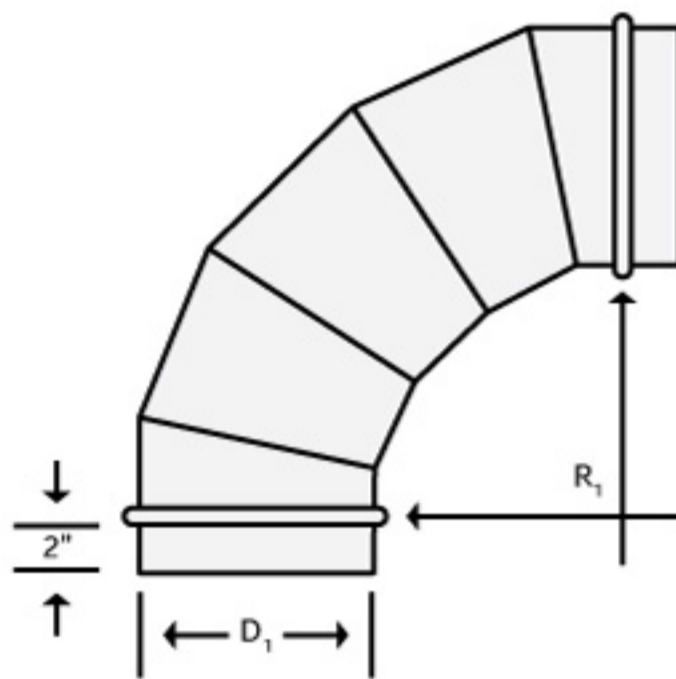
**GSET** Offset



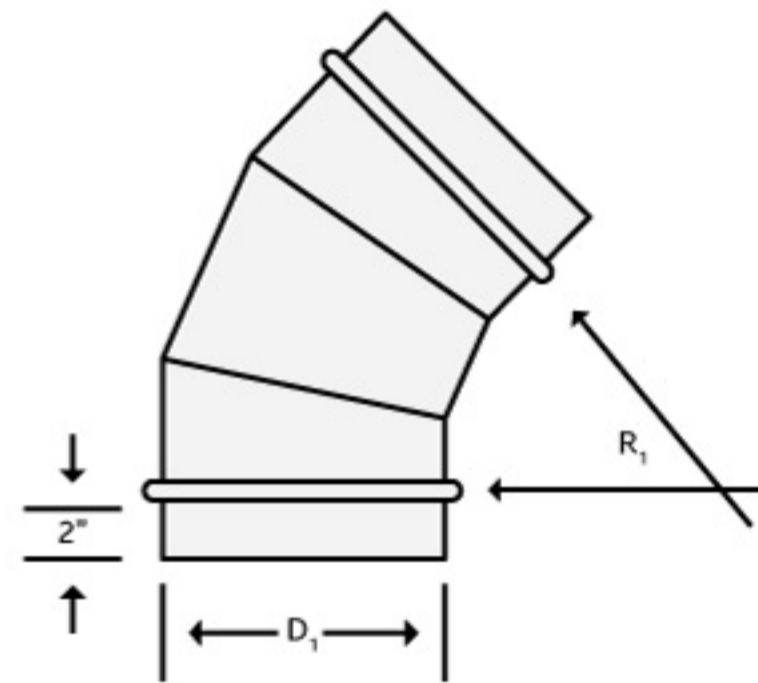
**GRTR** Round to Round



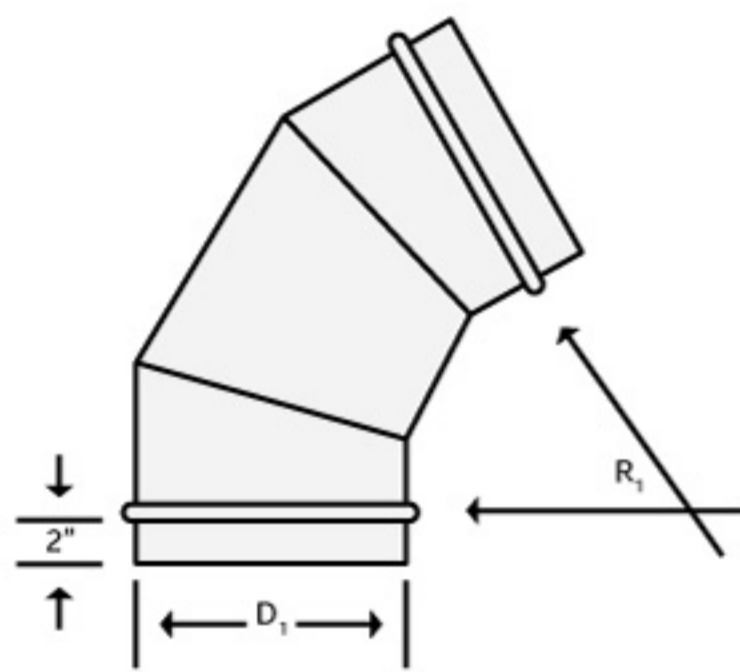
**GE90** 90° 4 / 5-PC Elbow



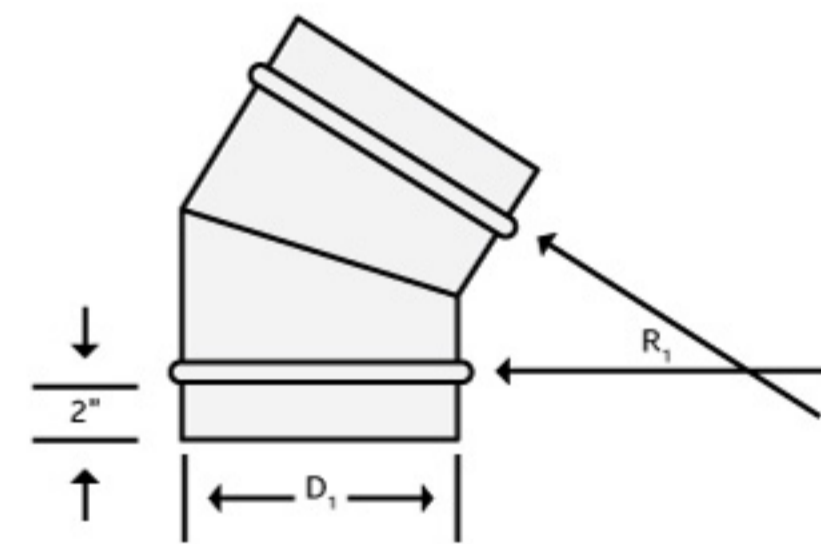
**GE45** 45° 3-Piece Elbow



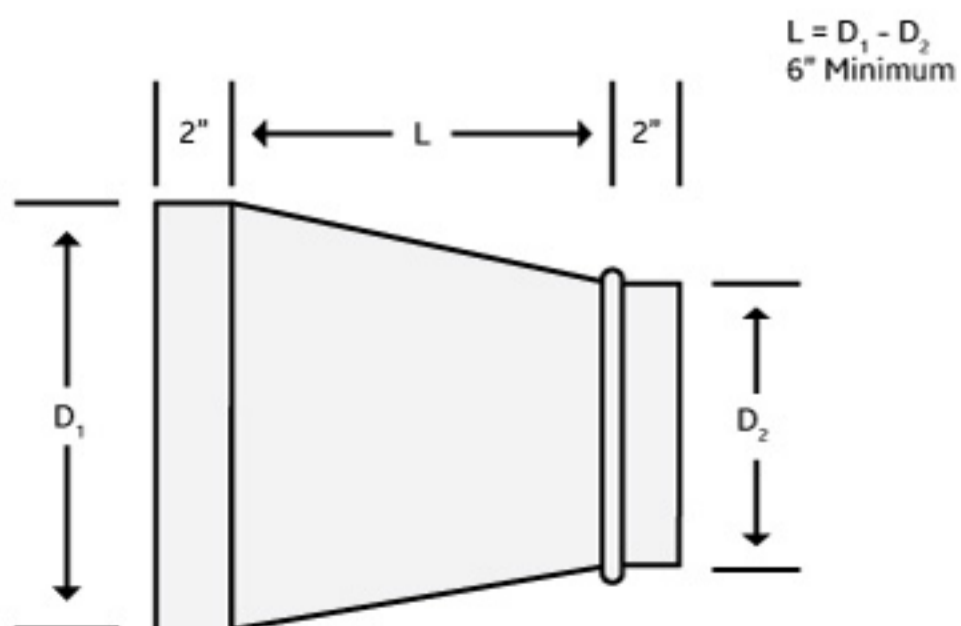
**GE60** 60° 3-PC Elbow



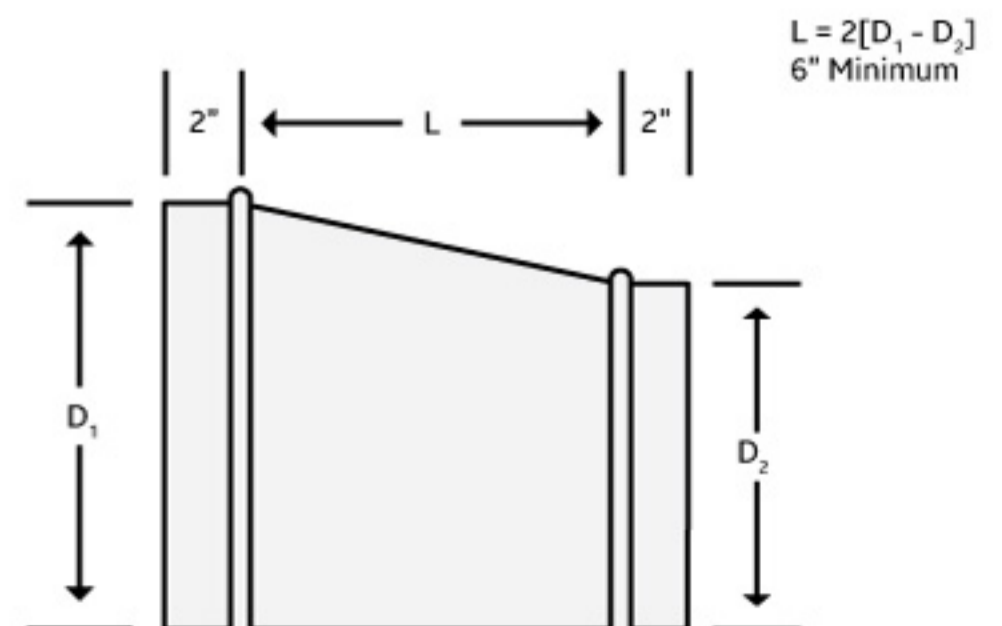
**GE15/E30** 15° & 30° 2-Piece Elbow



**GRDC** Concentric Reducer

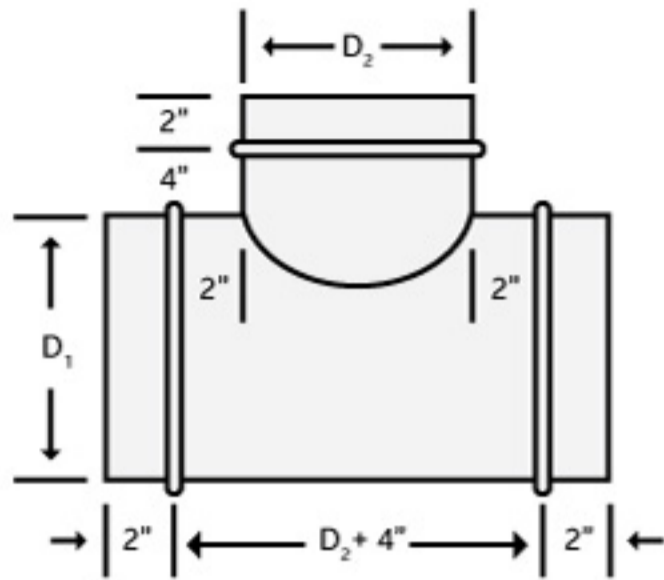


**GRDE** Eccentric Reducer

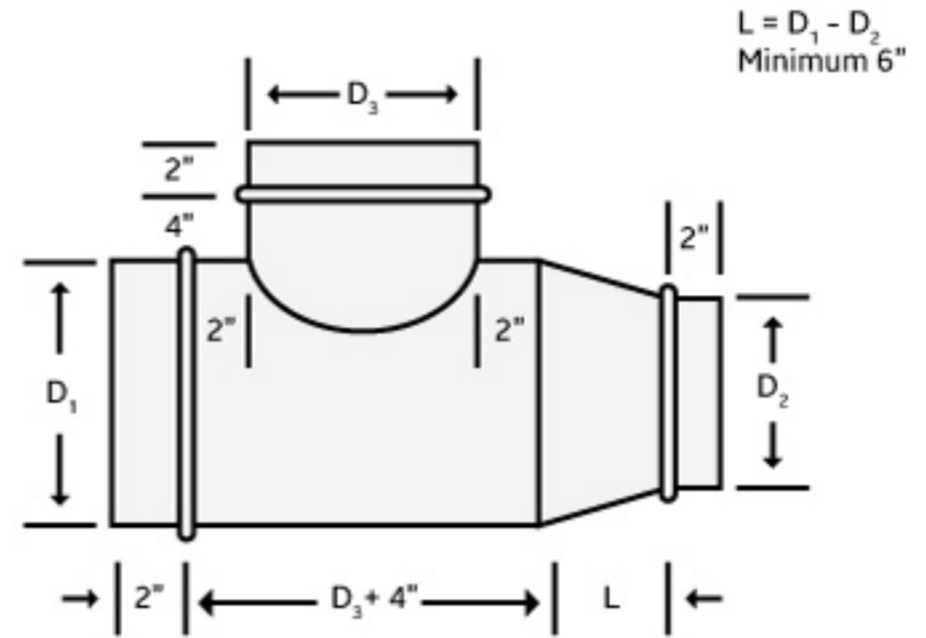


# Single Wall Round Fittings

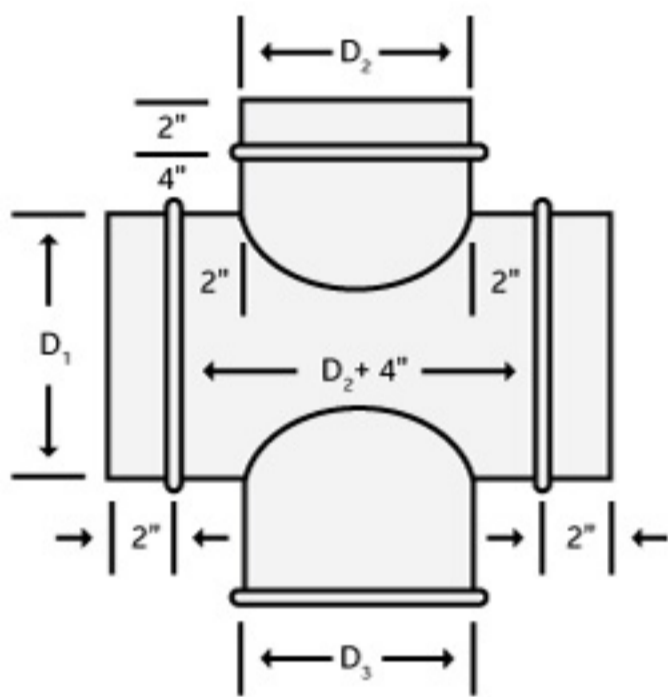
T Tee



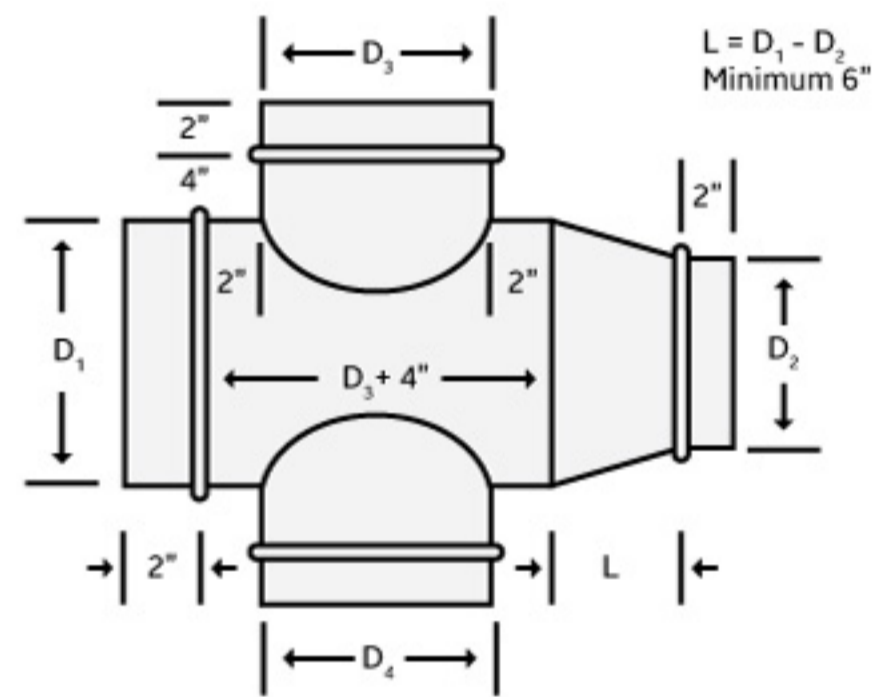
RTR Reducing Tee



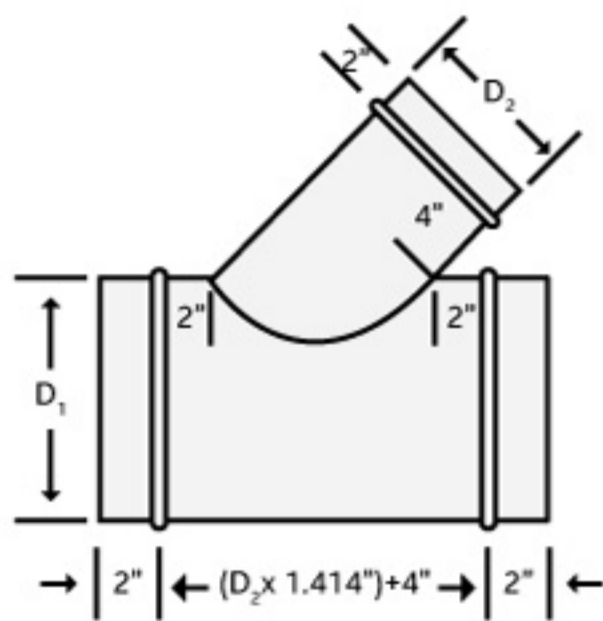
TPCTX Tee Cross



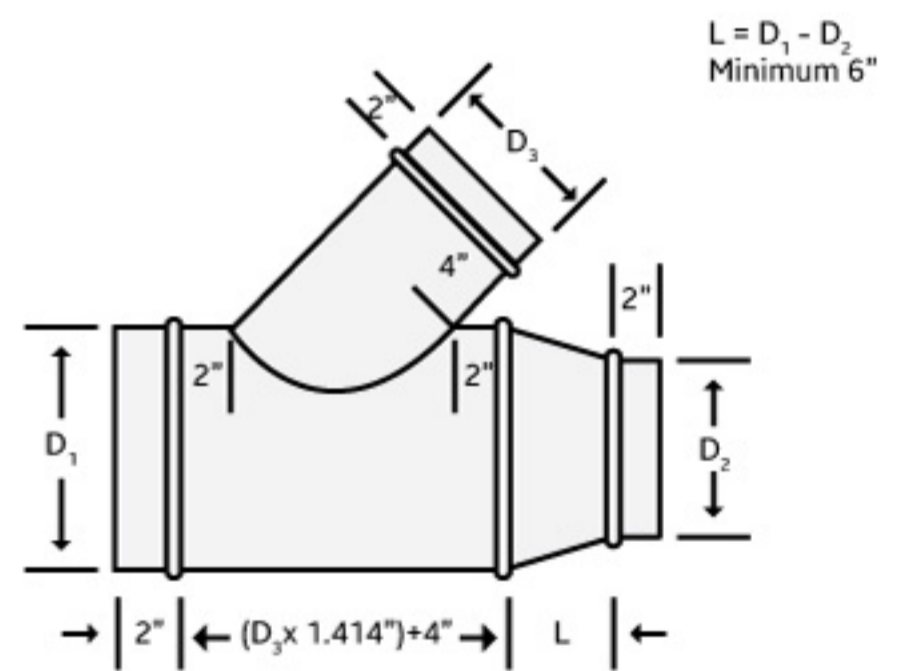
TPRTRX Reducing Tee Cross



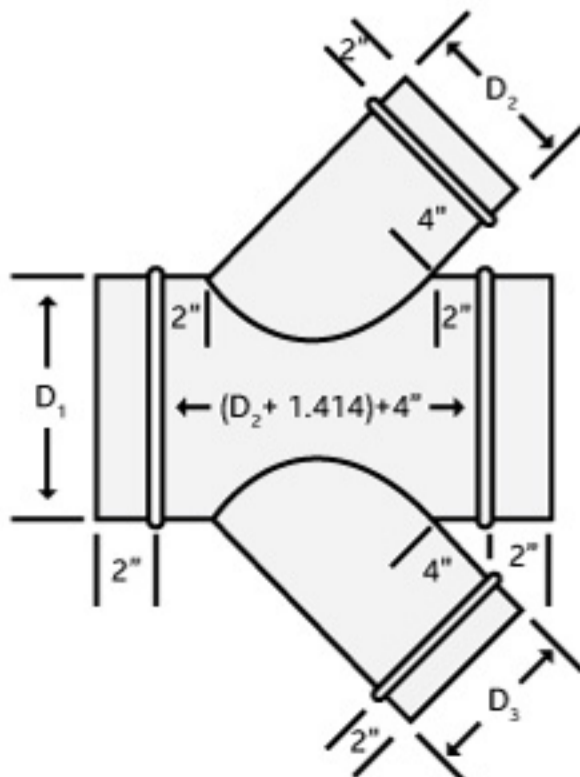
FLT 45° Lateral



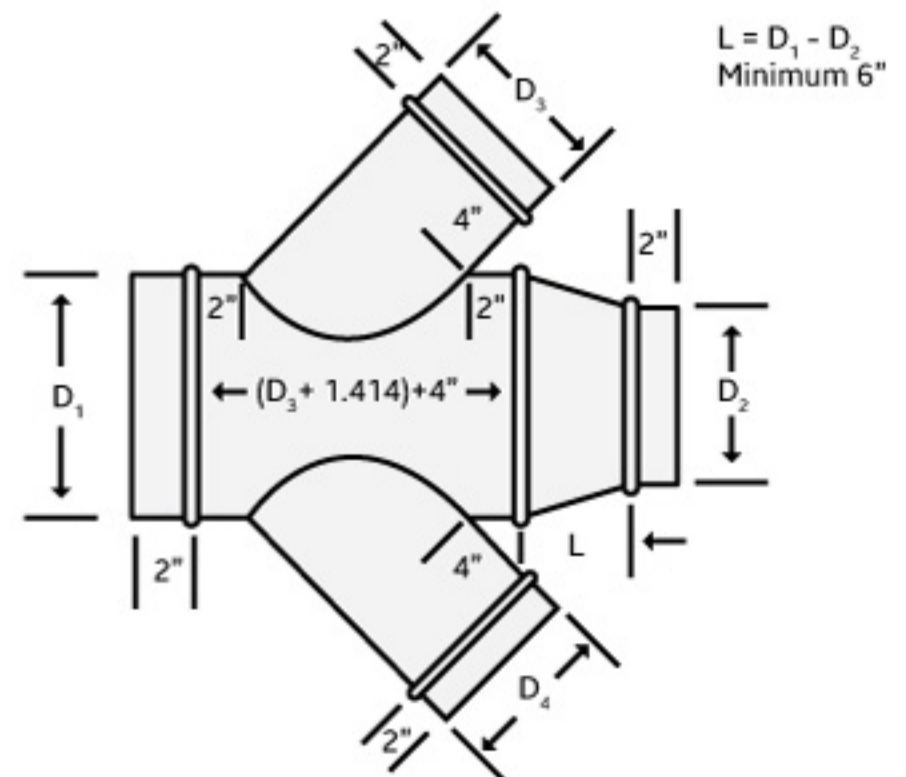
FRLT 45° Reducing Lateral



FLT 45° Lateral Cross



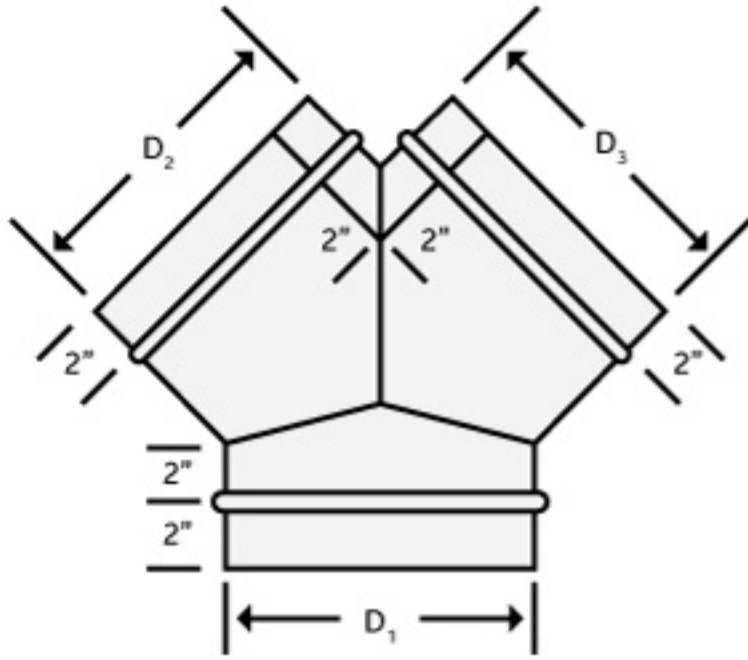
FRLX 45° Reducing Lateral Cross



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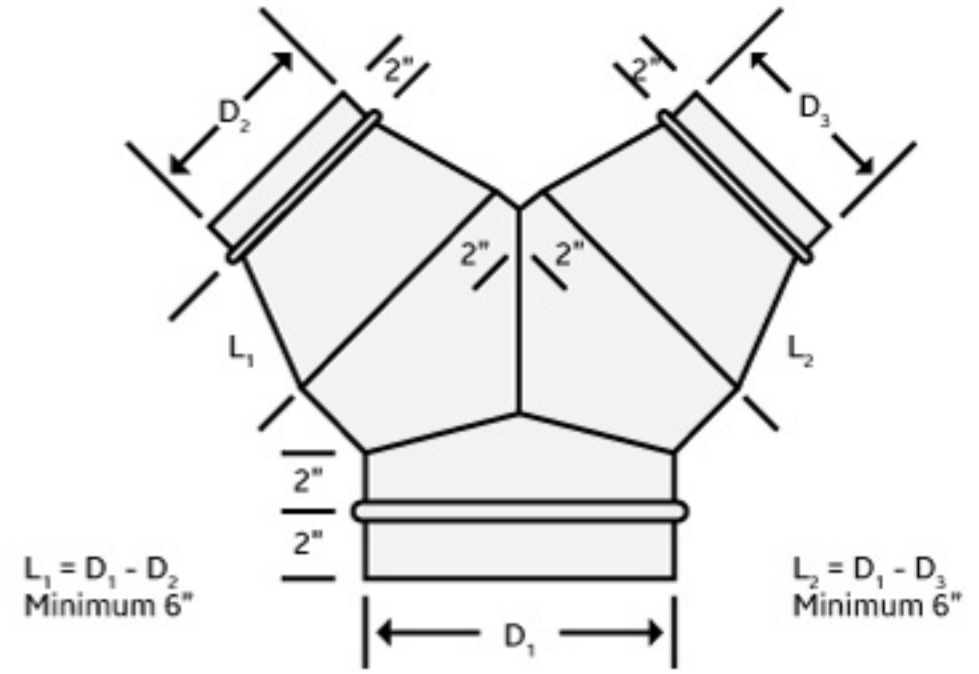
Y45

Y Branch



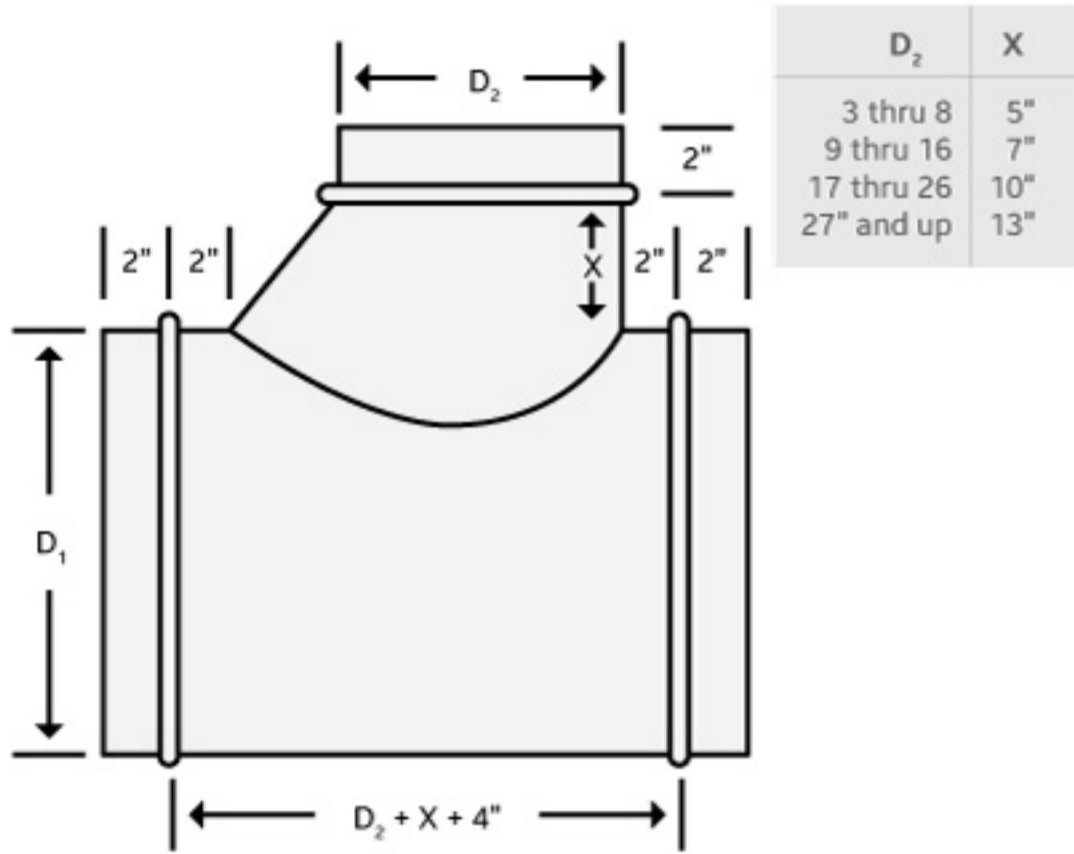
YR45

Reducing Y Branch



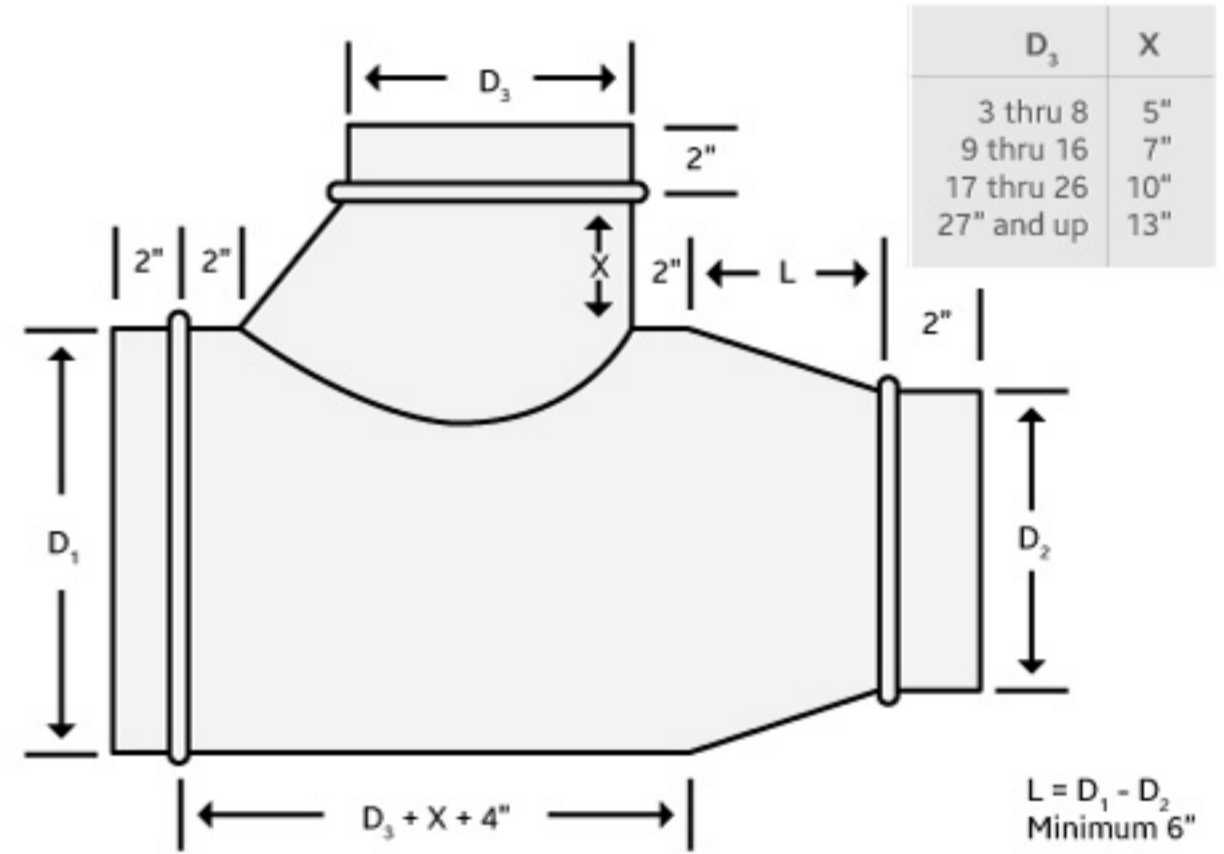
ST

Shoe Tee



STR

Reducing Shoe Tee



## Approximate Weight of Spiral Duct

Diameter	Kgs/ RMT (For the Galvazined Iron steel)				
	0.5mm	0.6mm	0.8mm	1.0mm	1.2mm
100	1.42	1.70			
125	1.77	2.13	2.83	3.54	
150	2.13	2.55	3.40	4.25	
180	2.55	3.06	4.08	5.10	
200	2.83	3.40	4.54	5.67	
225	3.19	3.83	5.10	6.38	
250	3.54	4.25	5.67	7.09	
300	4.25	5.10	6.80	8.50	
315	4.46	5.36	7.14	8.93	
350		5.95	7.94	9.92	
400		6.80	9.07	11.34	13.61
450		7.65	10.20	12.76	15.31
500		8.50	11.34	14.17	17.01
550		9.35	12.47	15.59	18.71
560		9.52	12.70	15.87	19.05
630			14.29	17.86	21.43
650			14.74	18.43	22.11
700			15.87	19.84	23.81
750			17.01	21.26	25.51
800			18.14	22.68	27.21
850			19.28	24.09	28.91
900			20.41	25.51	30.61
1000			22.68	28.35	34.02
1050				29.76	35.72
1100				31.18	37.42
1120				31.75	38.10
1150				32.60	39.12
1200				34.02	40.82
1250				35.43	42.52
1300				36.85	44.22
1400				39.68	47.62



Our customers depend on us for quality product and reliable delivery, a responsibility we take very seriously. Prudent Aire maintains stringent quality in every aspect of its manufacturing process.

We believe in delivering Cost effective Solutions to our customers be it Contractors, Architects and End users.

Please call us and find out why our commitment to excellence, both in product and customer service, sets the standard in the industry.

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