



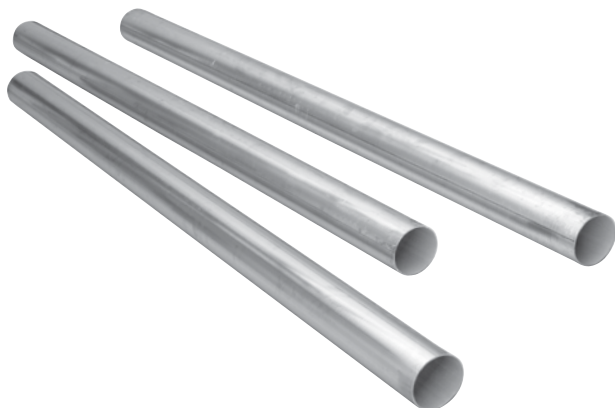
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800-255-6213

## Pipe and Tubing Straights



High quality straight lengths of pipe and tubing are available in carbon steel, aluminum, stainless steel and galvanized steel. 20'-21' lengths are standard. Powder Coated and Porcelain Lined options are also available. 1" OD through 12" OD in a variety of wall thicknesses. Standard sizes are listed below. However, many other sizes and wall thicknesses are available upon request.

Tubing Straights			Pipe Straights		
Tube Size	Outside Diameter	Standard Wall Thicknesses	Pipe Size	Outside Diameter	Standard Wall Thicknesses
1"	1"	14ga, 11ga	1"	1.315"	Sch5, Sch10, Sch40
1 1/4"	1.25"	14ga, 11ga	1 1/4"	1.66"	Sch5, Sch10, Sch40
1 1/2"	1.5"	16ga, 14ga, 11ga	1 1/2"	1.9"	Sch5, Sch10, Sch40
1 3/4"	1.75"	16ga, 14ga, 11ga	2"	2.125"	Sch5, Sch10, Sch40
2"	2"	16ga, 14ga, 11ga	2 1/2"	2.875"	Sch5, Sch10, Sch40
2 1/8"	2.125"	16ga, 14ga, 11ga	3"	3.5"	Sch5, Sch10, Sch40
2 1/4"	2.25"	16ga, 14ga, 11ga	3 1/2"	4"	Sch5, Sch10, Sch40
2 1/2"	2.5"	16ga, 14ga, 11ga	4"	4.5"	Sch5, Sch10, Sch40
2 3/4"	2.75"	16ga, 14ga, 11ga	5"	5.563"	Sch5, Sch10, Sch40
3"	3"	16ga, 14ga, 11ga	6"	6.625"	Sch5, Sch10, Sch40
3 1/4"	3.25"	11ga	8"	8.625"	Sch10, Sch40
3 1/2"	3.5"	16ga, 14ga, 11ga	10"	10.75"	Sch10, Sch40
3 3/4"	3.75"	11ga			
4"	4"	16ga, 14ga, 11ga			
4 1/4"	4.25"	11ga			
4 1/2"	4.5"	14ga, 11ga			
4 3/4"	4.75"	11ga			
5"	5"	16ga, 14ga, 11ga			
5 1/2"	5.5"	11ga			
6"	6"	16ga, 14ga, 11ga			
7"	7"	16ga, 14ga, 11ga			
8"	8"	14ga, 11ga			
10"	10"	12ga, 11ga, 10ga			
12"	12"	12ga, 11ga, 10ga			
14"	14"	12ga, 11ga, 10ga			

Not see what you're looking for? Give us a call! Let us go to work for you.



## Long and Short Radius Elbows

Pipe and tube bends of up to 180 degrees are readily available in carbon steel, aluminum, stainless steel and galvanized steel in the sizes listed below. Other centerline radii are available but not shown. Special shapes, "U" bends, offsets, and bifurcated bends available upon request, in addition to many other sizes and dimensions.



Tube Size	Pipe Size	Outside Diameter	Common Centerline Radii (CLR) Inches	Standard Tangent
1"		1"	3, 4, 6, 12	4"
	1"	1.315"	3, 5	4"
1 1/4"		1.25"	3, 7.25	4"
	1 1/4"	1.660"	3.5, 4, 6.25	4"
1 1/2"		1.5"	2.5, 6, 7.5, 9, 12, 15, 18, 24, 30, 36	4"
1 3/4"		1.75"	2.5, 8, 9, 12, 15, 24, 30, 36, 48	4"
	1 1/2"	1.9"	5, 6, 7.5, 9, 10, 12, 18, 24, 30, 36, 48	4"
2"		2"	2.5, 3, 3.5, 4, 5, 6, 8, 8.5, 9, 10, 12, 15, 18, 24, 30, 36, 48	4"
2 1/8"		2.125"	3, 5, 12, 24, 30, 36	4 1/4"
2 1/4"		2.25"	3, 9, 12, 15, 17, 24, 30, 36	4 1/2"
	2"	2.375"	6, 7.5, 10, 12, 15, 17, 24, 30, 36, 48	4"
2 1/2"		2.5"	4, 6, 9, 12, 15, 17, 24, 30, 36, 48	5"
2 3/4"		2.75"	2.75, 4, 17, 30, 36, 48	5 1/2"
	2 1/2"	2.875"	12, 12.5, 15, 17, 24, 30, 36, 60	5"
3"		3"	4, 4.5, 7.5, 9, 10, 12, 15, 18, 24, 30, 36, 48, 60	6"
3 1/4"		3.25"	17, 30, 36	6 1/2"
3 1/2"	3"	3.5"	3.5, 4.5, 6, 8.75, 12, 15, 16, 18, 24, 30, 36, 48	7" (6" pipe)
3 3/4"		3.75"	17, 24, 32, 36	7 1/2"
4"	3 1/2"	4"	4, 5, 6, 7.75, 10, 12, 16, 18, 20, 24, 30, 32, 36, 48, 60	8" (7" pipe)
4 1/4"		4.25"	16, 30, 36, 48, 60	8 1/2"
4 1/2"	4"	4.5"	6, 9, 12, 16, 18, 20, 24, 30, 32, 36, 48, 60	9" (8" pipe)
4 3/4"		4.75"	36	9 1/2"
5"		5"	5.5, 7.5, 12.5, 17, 22, 24, 30, 36, 42, 48, 60	10"
	5"	5.563"	15, 20, 24, 30, 36, 42, 48, 60, 72	10"
5 1/2"		5.5"	30, 36	11"
6"		6"	9, 15, 18, 24, 30, 36, 42, 48, 60, 72	12"
	6"	6.625"	18, 24, 30, 36, 42, 48, 60, 72	12"
8"		8"	12, 20, 32, 48, 60, 72	16"
	8"	8.625"	24, 32, 40, 42, 48, 60, 72	16"
	10"	10.75"	40, 48, 50	20"



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# Pipe and Tube Welded Fabrications

Standard pipe and tube welded fabrications are available in carbon steel, aluminum, stainless steel and galvanized steel. Other materials are also available.

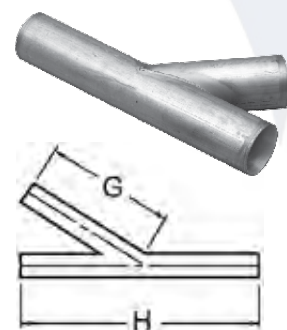
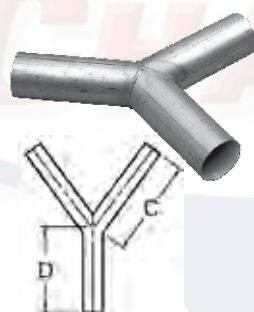
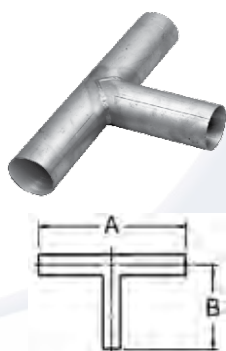
## How to Order

Sizes not listed may be available upon request. Please call. Order Tees by tube or pipe size, wall thickness and alloy. Order Laterals and Wyes by tube or pipe size, wall thickness, alloy and degree of angle.

Tees		
O.D. Size	A	B
2"	16"	8"
3"	16"	8"
4"	16"	8"
4 1/2"	18"	9"
5"	18"	9"
6"	20"	10"
8"	24"	12"

Wyes	30°		45°	
O.D. Size	C	D	C	D
2"	8"	8"	8"	8"
3"	8"	8"	8"	8"
4"	8"	8"	8"	8"
4 1/2"	10"	10"	10"	10"
5"	11"	11"	11"	11"
6"	12"	12"	12"	12"
8"	14"	14"	14"	14"

Laterals	30°		45°	
O.D. Size	G	H	G	H
2"	8"	16"	8"	16"
3"	10"	20"	8"	16"
4"	12"	24"	10"	20"
4 1/2"	12"	24"	10"	20"
5"	15"	30"	12"	24"
6"	18"	36"	15"	30"
8"	22"	40"	18"	36"



## Custom Welded Fabrications



### Custom Mitered Bend

Intricate shapes and special angles are routine for our highly skilled welders.



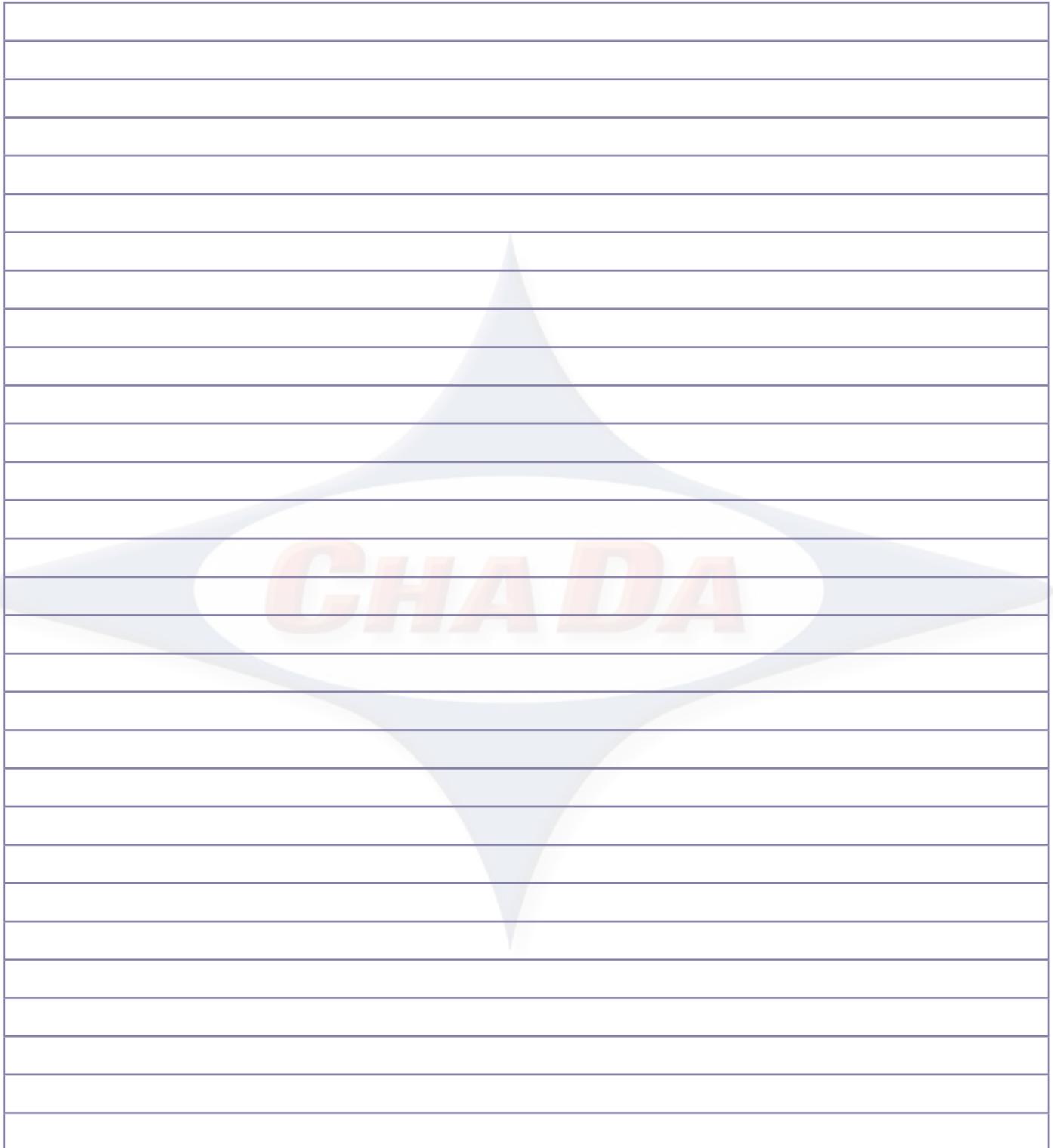
### Bifurcated Bend

Custom bends, special radii and bifurcated bends are available in unlimited varieties. Double bifurcated and triple bifurcated bends to meet your exact specifications are also available.



### Pneumatic Conveying Manifold

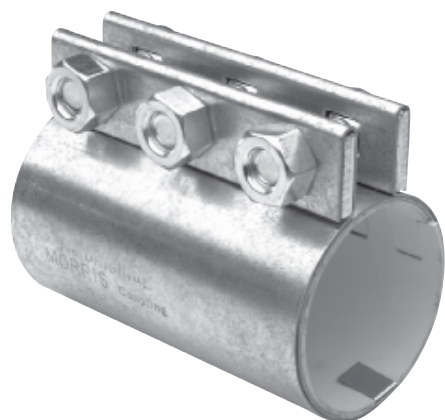
Complex custom manifolds are indicative of our expansive capabilities.





800-255-6213

## Compression Couplings for Pipe and Tubing



The Morris Compression tubing and pipe coupling is designed for permanent installation in the joining of either plain end, threaded, grooved or a combination of any of these joints. The band type construction holds the entire surface of the joint in uniform compression. Couplings are made of heavy-gauge zinc-plated steel. Prices of aluminum or stainless steel couplings quoted on request.

Gaskets furnished standard in black neoprene. FDA approved white neoprene and a variety of other materials at a slight extra charge, (please specify).

To Prevent Static Electricity Build-up in Bulk Material Conveying Systems, specify Morris Compression Couplings with grounding strips. Be sure to state if your requirements call for aluminum or stainless steel strips. Stainless steel grounding strips are standard, aluminum grounding strips or couplings without grounding strips are available at the same price.

To Eliminate Gasket Wear, or contamination of material flowing through the system lines, specify Couplings with Stainless Steel GASKET PROTECTORS.

Tubing or Nom. Pipe (IPS) Size	Tubing or Pipe O.D.	Coupling Code	Coupling Length	Bolt Count	Weight Each (lbs.)	Black Gasket Part Number	White Gasket Part Number
1/2" Pipe	0.840"	1/2-2C	2"	2	.5	08402BO	08402WO
3/4" Pipe	1.050"	3/4-2C	2"	2	.7	10502BO	10502WO
1" Tubing	1.000"	1-2C-OD	2"	2	1.6	10002BO	10002WO
1" Pipe	1.315"	1-2C	4"	2	1.6	13152BO	13152WO
1 1/4" Tubing	1.250"	1-1/4-2C-OD	4"	2	1.9	12502BO	12502WO
1 1/4" Pipe	1.660"	1-1/4-2C	4"	2	1.8	16602BO	16602WO
	1.660"	1-1/4-3C	6"	3	3.0	16603BO	16603WO
1 1/2" Tubing	1.500"	1-1/2-2C-OD	4"	2	2.0	15002BO	15002WO
	1.500"	1-1/2-3C-OD	6"	3	2.9	15003BO	15003WO
1 1/2" Pipe	1.900"	1-1/2-2C	4"	2	2.0	19002BO	19002WO
	1.900"	1-1/2-3C	6"	3	3.1	19003BO	19003WO
1 3/4" Tubing	1.750"	1-3/4-2C-OD	4"	2	2.1	17502BO	17502WO
	1.750"	1-3/4-3C-OD	6"	3	3.0	17503BO	17503WO
2" Tubing	2.000"	2-2C-OD	4"	2	2.1	20002BO	20002WO
	2.000"	2-3C-OD	6"	3	3.1	20003BO	20003WO
2" Pipe	2.375"	2-2C	4"	2	2.2	23752BO	23752WO
	2.375"	2-3C	6"	3	3.5	23753BO	23753WO
	2.375"	2-4C	8"	4	4.7	23754BO	23754WO



## Compression Couplings

Tubing or Nom. Pipe (IPS) Size	Tubing or Pipe O.D.	Coupling Code	Coupling Length	Bolt Count	Weight Each (lbs)	Black Gasket Part Number	White Gasket Part Number
2 1/8" Tubing	2.125"	2-1/8-2C-OD	4"	2	2.1	21252BO	21252WO
	2.125"	2-1/8-3C-OD	6"	3	3.2	21253BO	21253WO
2 3/16" Tubing	2.187"	2-3/16-2C-OD	4"	2	2.2	21872BO	21872WO
	2.187"	2-3/16-3C-OD	6"	3	3.3	21873BO	21873WO
2 1/4" Tubing	2.250"	2-1/4-2C-OD	4"	2	2.6	22502BO	22502WO
	2.250"	2-1/4-3C-OD	6"	3	3.4	22503BO	22503WO
2 1/2" Tubing	2.500"	2-1/2-2C-OD	4"	2	2.6	25002BO	25002WO
	2.500"	2-1/2-3C-OD	6"	3	3.4	25003BO	25003WO
2 1/2" Pipe	2.875"	2-1/2-2C	4"	2	2.4	28752BO	28752WO
	2.875"	2-1/2-3C	6"	3	3.7	28753BO	28753WO
	2.875"	2-1/2-4C	8"	4	5.0	28754BO	28754WO
2 3/4" Tubing	2.750"	2-3/4-3C-OD	6"	3	3.6	27503BO	28753WO
3" Tubing	3.000"	3-2C-OD	4"	2	3.2	30002BO	30002WO
	3.000"	3-3C-OD	6"	3	4.5	30003BO	30003WO
	3.000"	3-4C-OD	8"	4	5.9	30004BO	30004WO
3" Pipe	3.500"	3-2C	4"	2	3.4	35002BO	35002WO
	3.500"	3-3C	6"	3	5.1	35003BO	35003WO
	3.500"	3-4C	8"	4	6.6	35004BO	35004WO
3 1/4" Tubing	3.250"	3-1/4-2C-OD	4"	2	3.5	32502BO	32502WO
	3.250"	3-1/4-3C-OD	6"	3	5.0	32503BO	32503WO
	3.250"	3-1/4-4C-OD	8"	4	6.5	32504BO	32504WO
3 1/2" Tubing	3.500"	3-2C	4"	2	3.4	35002BO	35002WO
	3.500"	3-3C	6"	3	5.1	35003BO	35003WO
	3.500"	3-4C	8"	4	6.6	35004BO	35004WO
3 1/2" Pipe	4.000"	3-1/2-2C	4"	2	3.7	40002BO	40002WO
	4.000"	3-1/2-3C	6"	3	5.3	40003BO	40003WO
	4.000"	3-1/2-4C	8"	4	7.2	40004BO	40004WO
3 3/4" Tubing	3.750"	3-3/4-2C-OD	4"	2	5.6	37502BO	37502WO
	3.750"	3-3/4-3C-OD	6"	3	7.4	37503BO	37503WO
4" Tubing	4.000"	3-1/2-2C	4"	2	3.7	40002BO	40002WO
	4.000"	3-1/2-3C	6"	3	5.3	40003BO	40003WO
	4.000"	3-1/2-4C	8"	4	7.2	40004BO	40004WO
4" Pipe	4.500"	4-2C	4"	2	3.8	45002BO	45002WO
	4.500"	4-3C	6"	3	5.5	45003BO	45003WO
	4.500"	4-4C	8"	4	7.7	45004BO	45004WO
4 1/4" Tubing	4.250"	4-1/4-2C-OD	4"	2	4.2	42502BO	42502WO
	4.250"	4-1/4-3C-OD	6"	3	6.2	42503BO	42503WO



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## Compression Couplings

Tubing or Nom. Pipe (IPS) Size	Tubing or Pipe O.D.	Coupling Code	Coupling Length	Bolt Count	Weight Each (lbs)	Black Gasket Part Number	White Gasket Part Number
4 1/2" Tubing	4.500"	4-2C	4"	2	3.8	45002BO	45002WO
	4.500"	4-3C	6"	3	5.5	45003BO	45003WO
	4.500"	4-4C	8"	4	7.7	45004BO	45004WO
4 1/2" Pipe	5.000"	4-1/2-2C	4"	2	4.2	50002BO	50002WO
	5.000"	4-1/2-3C	6"	3	6.2	50003BO	50003WO
	5.000"	4-1/2-4C	8"	4	8.1	50004BO	50004WO
4 3/4" Tubing	4.750"	4-3/4-3C-OD	4"	3	6.5	47503BO	47503WO
	4.750"	4-3/4-4C-OD	6"	4	8.6	47504BO	47504WO
5" Tubing	5.000"	4-1/2-2C	4"	2	4.2	50002BO	50002WO
	5.000"	4-1/2-3C	6"	3	6.2	50003BO	50003WO
	5.000"	4-1/2-4C	8"	4	8.1	50004BO	50004WO
5" Pipe	5.563"	5-2C	4"	2	4.6	55632BO	55632WO
	5.563"	5-3C	6"	3	6.8	55633BO	55633WO
	5.563"	5-4C	8"	4	8.8	55634BO	55634WO
5 1/4" Tubing	5.250"	5-1/4-3C-OD	6"	3	6.6	52503BO	52503WO
5 1/2" Tubing	5.500"	5-1/2-3C-OD	6"	3	6.8	55003BO	55003WO
	5.500"	5-1/2-4C-OD	8"	4	9.0	55004BO	55004WO
5 3/4" Tubing	5.750"	5-3/4-3C-OD	6"	3	7.8	57503BO	57503WO
	5.750"	5-3/4-4C-OD	8"	4	9.2	57504BO	57504WO
6" Tubing	6.000"	6-2C-OD	4"	2	4.7	60002BO	60002WO
	6.000"	6-3C-OD	6"	3	7.0	60003BO	60003WO
	6.000"	6-4C-OD	8"	4	9.4	60004BO	60004WO
	6.000"	6-5C-OD	10"	5	11.8	60005BO	60005WO
6" Pipe	6.625"	6-2C	4"	2	5.3	66252BO	66252WO
	6.625"	6-3C	6"	3	7.8	66253BO	66253WO
	6.625"	6-4C	8"	4	10.4	66254BO	66254WO
	6.625"	6-5C	10"	5	14.3	66255BO	66255WO
6 1/4" Tubing	6.250"	6-1/4-3C-OD	6"	3	7.3	62503BO	62503WO
	6.250"	6-1/4-4C-OD	8"	4	10.0	62504BO	62504WO
6 1/2" Tubing	6.500"	6-1/2-3C-OD	6"	3	7.5	65003BO	65003WO
	6.500"	6-1/2-4C-OD	8"	4	10.4	65004BO	65004WO
6 3/4" Tubing	6.750"	6-3/4-3C-OD	6"	3	7.7	67503BO	67503WO
	6.750"	6-3/4-4C-OD	8"	4	10.8	67504BO	67504WO
7" Tubing	7.000"	7-3C-OD	6"	3	7.9	70003BO	70003WO
	7.000"	7-4C-OD	8"	4	10.8	70004BO	70004WO
	7.000"	7-5C-OD	10"	5	13.7	70005BO	70005WO
7 1/4" Tubing	7.250"	7-1/4-3C-OD	6"	3	8.3	72503BO	72503WO



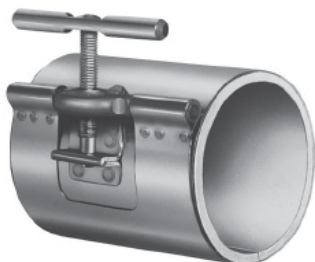
## Compression Couplings

Tubing or Nom. Pipe (IPS) Size	Tubing or Pipe O.D.	Coupling Code	Coupling Length	Bolt Count	Weight Each (lbs)	Black Gasket Part Number	White Gasket Part Number
7 1/2" Tubing	7.500"	7-1/2-3C-OD	6"	3	8.5	75003BO	75003WO
	7.500"	7-1/2-4C-OD	8"	4	11.3	75004BO	75004WO
7 3/4" Tubing	7.750"	7-3/4-3C-OD	6"	3	8.9	77503BO	77503WO
8" Tubing	8.000"	8-2C-OD	6"	2	11.0	80002BO	80002WO
	8.000"	8-3C-OD	8"	3	14.3	80003BO	80003WO
	8.000"	8-4C-OD	10"	4	18.0	80004BO	80004WO
	8.000"	8-5C-OD	12"	5	22.0	80005BO	80005WO
8" Pipe	8.625"	8-2C	6"	2	11.5	86252BO	86252WO
	8.625"	8-3C	8"	3	14.6	86253BO	86253WO
	8.625"	8-4C	10"	4	18.8	86254BO	86254WO
	8.625"	8-5C	12"	5	23.0	86255BO	86255WO
9" Tubing	9.000"	9-3C-OD	8"	3	15.9	90003BO	90003WO
	9.000"	9-4C-OD	10"	4	19.9	90004BO	90004WO
10" Tubing	10.000"	10-3C-OD	8"	3	17.5	100003BO	100003WO
	10.000"	10-4C-OD	10"	4	21.8	100004BO	100004WO
	10.000"	10-5C-OD	12"	5	26.1	100005BO	100005WO
10" Pipe	10.750"	10-3C	8"	3	16.4	107503BO	107503WO
	10.750"	10-4C	10"	4	20.3	107504BO	107504WO
	10.750"	10-5C	12"	5	25.2	107505BO	107505WO
12" Tubing	12.000"	12-3C-OD	8"	3	20.4	120003BO	120003WO
	12.000"	12-4C-OD	10"	4	25.5	120004BO	120004WO
	12.000"	12-5C-OD	12"	5	30.2	120005BO	120005WO
12" Pipe	12.750"	12-3C	8"	3	18.7	127503BO	127503WO
	12.750"	12-4C	10"	4	23.3	127504BO	127504WO
	12.750"	12-5C	12"	5	28.1	127505BO	127505WO
13" Tubing	13.000"	13-xC-OD	PLEASE CALL FOR DETAILS			13000xBO	13000xWO
14"	14.000"	14-xC-OD	PLEASE CALL FOR DETAILS			14000xBO	14000xWO
15"	15.000"	15-xC-OD	PLEASE CALL FOR DETAILS			15000xBO	15000xWO
16"	16.000"	16-xC-OD	PLEASE CALL FOR DETAILS			16000xBO	16000xWO
17"	17.000"	17-xC-OD	PLEASE CALL FOR DETAILS			17000xBO	17000xWO
18"	18.000"	18-xC-OD	PLEASE CALL FOR DETAILS			18000xBO	18000xWO
19"	19.000"	19-xC-OD	PLEASE CALL FOR DETAILS			19000xBO	19000xWO
20"	20.000"	20-xC-OD	PLEASE CALL FOR DETAILS			20000xBO	20000xWO
21"	21.000"	21-xC-OD	PLEASE CALL FOR DETAILS			21000xBO	21000xWO
22"	22.000"	22-xC-OD	PLEASE CALL FOR DETAILS			22000xBO	22000xWO
23"	23.000"	23-xC-OD	PLEASE CALL FOR DETAILS			23000xBO	23000xWO
24"	24.000"	24-xC-OD	PLEASE CALL FOR DETAILS			24000xBO	24000xWO



800-255-6213

## Quickon II Compression Couplings



Quickon II Couplings for pneumatic or vacuum conveying systems can be installed or removed with the twist of the wrist. No tools or special skills needed. The positive-locking system turns easily to seal or to compensate for normal O.D. pipe or tubing tolerances.



This in-line coupler is ideal for use where fast takedown and reassembly of lines is essential, reduced coupler weight is desirable, a line or system is frequently modified or wrap around installation is necessary.

Quickon II Single Handle			
O.D. Size	Code No.	Weight (lbs)	Part No.
1.500"	1501	.58	Q1500F1
1.660"	1661	.60	Q1660F1
1.750"	1751	.62	Q1750F1
1.900"	1901	.65	Q1900F1
2.000"	2001	.68	Q2000F1
2.125"	2121	.70	Q2125F1
2.250"	2251	.71	Q2250F1
2.375"	2371	.74	Q2375F1
2.500"	2501	.77	Q2500F1
2.750"	2751	.80	Q2750F1
2.875"	2871	.84	Q2875F1
3.000"	3001	.88	Q3000F1
3.250"	3251	.97	Q3250F1
3.500"	3501	1.06	Q3500F1
3.750"	3751	1.15	Q3750F1
4.000"	4001	1.25	Q4000F1
4.250"	4251	1.32	Q4250F1
4.500"	4501	1.40	Q4500F1
5.000"	5001	1.55	Q5000F1
5.563"	5561	1.63	Q5563F1
6.000"	6001	1.72	Q6000F1
6.250"	6251	1.78	Q6250F1
6.625"	6621	1.82	Q6625F1
8.000"	8001	2.25	Q8000F1
8.625"	8621	2.38	Q8625F1
9.000"	9001	2.45	Q9000F1
10.000"	10001	2.65	Q10000F1

Quickon II Dual Handle		
O.D. Size	Code No.	Part No.
4.000"	2-4001	Q4000F2
4.500"	2-4501	Q4500F2
5.000"	2-5001	Q5000F2
6.000"	2-6001	Q6000F2
6.625"	2-6621	Q6625F2
8.000"	2-8001	Q8000F2
8.625"	2-8621	Q8625F2
10.000"	2-10001	Q10000F2
10.750"	2-10751	Q10750F2
12.000"	2-12001	Q12000F2
12.750"	2-12751	Q12750F2

### Specifications:

All Stainless Steel construction including band, strike plate, handle screw and yoke. Gasket is abrasion resistant gum rubber and attached to band. Static conducting grounding strip included on request.

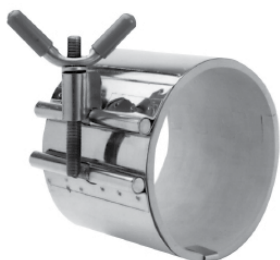
Order by O.D. size, Code No., and Gasket

Sizes not shown may be available by request.

Standard length for single handle coupling is 4".

Standard length for double handle coupling is 9 1/2".

## Gripper Compression Couplings



The Gripper Coupling was designed as a quick coupler for dry, bulk transport, tank tubing. This unique coupling just slides onto tubing or wraps around it and is tightened by hand in seconds but provides better support than rubber hose and band clamps.

Single Wingnut Coupler			
O.D. Size	Code No.	Weight (lbs)	Part No.
1.500"	1501	.58	G1500F1
1.660"	1661	.60	G1660F1
1.750"	1751	.62	G1750F1
1.900"	1901	.65	G1900F1
2.000"	2001	.68	G2000F1
2.125"	2121	.70	G2125F1
2.250"	2251	.71	G2250F1
2.375"	2371	.74	G2375F1
2.500"	2501	.77	G2500F1
2.750"	2751	.80	G2750F1
2.875"	2871	.84	G2875F1
3.000"	3001	.88	G3000F1
3.250"	3251	.97	G3250F1
3.500"	3501	1.06	G3500F1
3.750"	3751	1.15	G3750F1
4.000"	4001	1.25	G4000F1
4.250"	4251	1.32	G4250F1
4.500"	4501	1.40	G4500F1
5.000"	5001	1.55	G5000F1
5.563"	5561	1.63	G5563F1
6.000"	6001	1.72	G6000F1
6.250"	6251	1.78	G6250F1
6.625"	6621	1.82	G6625F1
8.000"	8001	2.25	G8000F1
8.625"	8621	2.38	G8625F1
9.000"	9001	2.45	G9000F1
10.000"	10001	2.65	G10000F1



The Grippers positive sealing gum gaskets allow for tube and pipe variations. And, because it's made of 100% stainless steel, it will not corrode due to harsh weather or road conditions. Silicone gaskets that comply with applicable FDA requirements are available upon request.

Double Wingnut Coupler		
O.D. Size	Code No.	Part No.
4.000"	2-4001	G4000F2
4.500"	2-4501	G4500F2
5.000"	2-5001	G5000F2
6.000"	2-6001	G6000F2
6.625"	2-6621	G6625F2
8.000"	2-8001	G8000F2
8.625"	2-8621	G8625F2
10.000"	2-10001	G10000F2
10.750"	2-10751	G10750F2
12.000"	2-12001	G12000F2
12.750"	2-12751	G12750F2

### Specifications:

All Stainless Steel construction. Gasket is abrasion resistant gum rubber.

Order by O.D. size, Code No., and Gasket

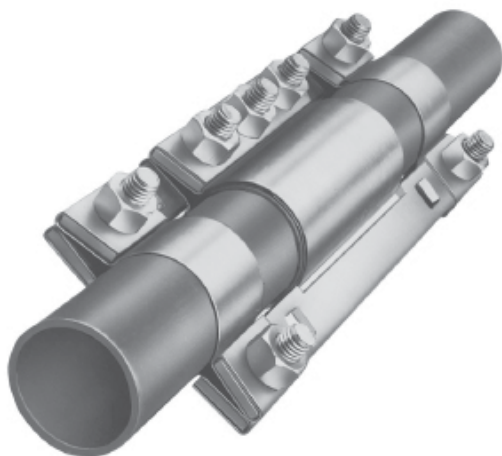
Sizes not shown may be available by request.

Standard length for single wingnut coupling is 4".  
Standard length for double wingnut coupling is 9 1/2".



800-255-6213

## Side-Band Compression Couplings



Unique design of Morris Side-Band Compression Couplings gives you vastly improved axial-force holding power to connect or repair threaded or unthreaded pipe and tubing.

Dual-locking side bands grip the pipes and allow higher operating pressures than those normally suggested for standard Morris compression couplings. Especially effective where line vibration is a problem, and on plastic pipe. You get all the positive sealing advantages of the Morris compression coupling in a coupling that can hold its own in fighting end pull.

Available for 1-1/2" through 24" nominal pipe or tubing sizes, including millimeter sizes. Static grounding strips or stainless steel gasket protectors also available.

Tubing or Pipe O.D.	Coupling Code	Weight Each (lbs.)	Black Gasket Part Number	White Gasket Part Number
1.500"	1-1/2-3C-OD-SB	7.0	15003BOSB	15003WOSB
2.000"	2-3C-OD-SB	7.3	20003BOSB	20003WOSB
2.375"	2-3C-SB	7.7	23753BOSB	23753WOSB
2.500"	2-1/2-3C-OD-SB	8.1	25003BOSB	25003WOSB
2.875"	2-1/2-3C-SB	8.7	28753BOSB	28753WOSB
3.000"	3-3C-OD-SB	9.2	30003BOSB	30003WOSB
	3-4C-OD-SB	10.1	30004BOSB	30004WOSB
3.500"	3-3C-SB	9.8	35003BOSB	35003WOSB
	3-4C-SB	10.7	35004BOSB	35004WOSB
4.000"	3-1/2-3C-SB	10.3	40003BOSB	40003WOSB
	3-1/2-4C-SB	12.9	40004BOSB	40004WOSB
4.500"	4-3C-SB	10.7	45003BOSB	45003WOSB
	4-4C-SB	13.4	45004BOSB	45004WOSB
5.000"	4-1/2-3C-SB	11.4	50003BOSB	50003WOSB
	4-1/2-4C-SB	14.1	50004BOSB	50004WOSB
5.563"	5-3C-SB	12.3	55633BOSB	55633WOSB
	5-4C-SB	15.0	55634BOSB	55634WOSB

Tubing or Pipe O.D.	Coupling Code	Weight Each	Black Gasket Part Number	White Gasket Part Number
6.000"	6-3C-OD-SB	12.5	60003BOSB	60003WOSB
	6-4C-OD-SB	15.6	60004BOSB	60004WOSB
6.625"	6-3C-SB	13.5	66253BOSB	66254WOSB
	6-4C-SB	16.9	66254BOSB	66254WOSB
8.000"	8-3C-OD-SB	24.8	80003BOSB	80003WOSB
	8-4C-OD-SB	28.5	80004BOSB	80004WOSB
8.625"	8-3C-SB	25.6	86253BOSB	86253WOSB
	8-4C-SB	29.8	86254BOSB	86254WOSB
10.000"	10-3C-OD-SB	29.2	100003BOSB	100003WOSB
	10-4C-OD-SB	33.5	100004BOSB	100004WOSB
10.750"	10-3C-SB	28.1	107503BOSB	107503WOSB
	10-4C-SB	32.0	107504BOSB	107504WOSB
12.000"	12-3C-OD-SB	32.1	120003BOSB	120003WOSB
	12-4C-OD-SB	37.0	120004BOSB	120004WOSB
12.750"	12-3C-SB	32.7	127503BOSB	127503WOSB
	12-4C-SB	37.9	127504BOSB	127504WOSB

Coupling gaskets are white or black neoprene unless other specified. Many different gasket materials are available upon request.

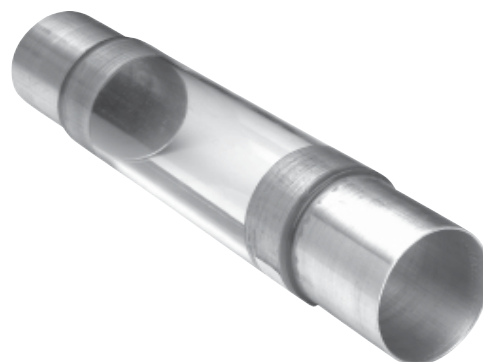
Order by O.D. size, Code No., and Gasket

Sizes not shown may be available by request.

Standard length for side-band couplings, add 8" to standard coupling length.

## Sight Glass

ChaDa Sales sight glasses allow you a clear look at the material flowing in your application. Sight glasses are constructed with tubing or pipe inserted into Cast Acrylic and offer a smooth "straight through" interior and air tight seal. Comes equipped with a permanently attached grounding strip. Pyrex is also available upon request.



Tubing Sizes with Aluminum Ends				
Part No.	Tube Thickness	Overall OD	Tube OD	Tube ID
S1500A16	16ga	1.750"	1.500"	1.375"
S2000A16	16ga	2.250"	2.000"	1.875"
S2000A11	11ga	2.250"	2.000"	1.750"
S2250A16	16ga	2.500"	2.250"	2.125"
S2500A16	16ga	2.750"	2.500"	2.375"
S2500A11	11ga	2.750"	2.500"	2.250"
S3000A16	16ga	3.250"	3.000"	2.875"
S3000A11	11ga	3.250"	3.000"	2.750"
S3500A16	16ga	3.750"	3.500"	3.375"
S3500A11	11ga	3.750"	3.500"	3.250"
S4000A16	16ga	4.250"	4.000"	3.875"
S4000A11	11ga	4.250"	4.000"	3.750"
S4500A16	16ga	4.750"	4.500"	4.375"
S4500A11	11ga	4.750"	4.500"	4.250"
S5000A14	14ga	5.250"	5.000"	4.875"
S5000A11	11ga	5.250"	5.000"	4.750"
S6000A11	11ga	6.500"	6.000"	5.750"

Material:

Aluminum Tubing & Pipe

Sight Portion

Steel Pipe

6061-T6 and 6063-T6

Cast Acrylic Resin

Schedule 40 Carbon Steel

Pipe Sizes with Sch40 Steel Ends			
Part No.	Overall OD	Tube OD	Tube ID
S2375C40	2.500"	2.375"	2.000"
S2875C40	3.000"	2.875"	2.500"
S3500C40	3.500"	3.250"	3.000"
S4000C40	4.000"	3.750"	3.500"
S4500C40	4.500"	4.250"	4.000"
S5563C40	5.563"	5.250"	5.000"
S6625C40	6.625"	6.500"	6.000"
Pipe Sizes with Sch40 Aluminum Ends			
Part No.	Overall OD	Tube OD	Tube ID
S2375A40	2.500"	2.375"	2.000"
S2875A40	3.000"	2.875"	2.500"
S3500A40	3.500"	3.250"	3.000"
S4000A40	4.000"	3.750"	3.500"
S4500A40	4.500"	4.250"	4.000"
S5563A40	5.563"	5.250"	5.000"
S6625A40	6.625"	6.500"	6.000"

Standard Overall Length = 16"

Sight Portion Length = 7"

Standard Tangent Length = 3"

Specialized lengths available by request

Many more sizes and materials, including Pyrex, available on request.

## Flanges

The flange is the second most used joining method after welding. Flanges are used when joints need dismantling. It also provides flexibility for maintenance. Flanges connect pipe with various equipment and valves. A flanged joint is composed of three separate and independent, although interrelated components; the flange, the gasket, and the bolting.



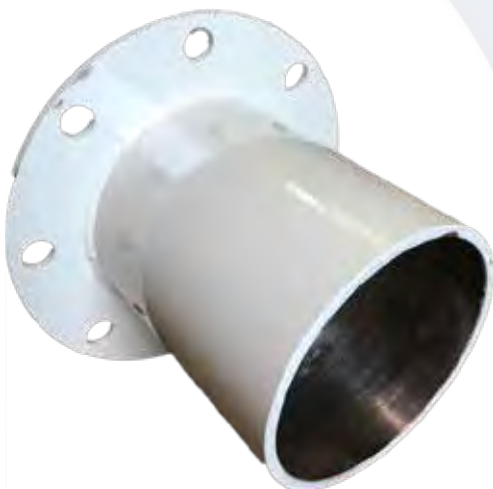
We can offer many types of flanges to meet your specific needs:

- Plate flanges
- Rolled angle flanges
- Threaded flanges
- Slip-on flanges
- Weld-neck flanges
- Lap joint flanges
- Blind flanges

Non-standard flanges are also available with provided technical drawings or samples. Flanges are available in carbon steel, aluminum and stainless steel.

## Flanged Stub Adapters

Standard flanged stub adapters are fabricated to have an 4" long pipe or tube stub, 1/4" flange and 150# drilling. Non-standard sizes are available with provided technical drawings or samples. Flanged stub adapters are available in carbon steel, aluminum and stainless steel.





## Angle Rings

ChaDa Sales can offer angle rings from 3" to 96". Our standard angle rings are available in carbon steel, stainless steel and aluminum. We also stock hot dipped galvanized angle rings in sizes 3" to 72".

If you have previously purchased stock angle rings from another source, don't worry. ChaDa Sales can quickly and accurately produce rings that meet the specs' of any ,many other manufacturers.

We can match any:

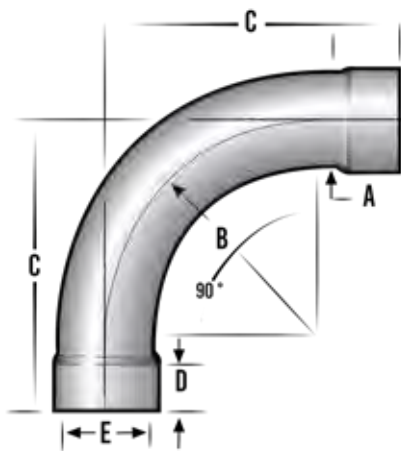
- Material size
- Diameter
- Bolt hole punch pattern



# Industrial Vacuum Components

## Standard Radius Vacuum Elbows

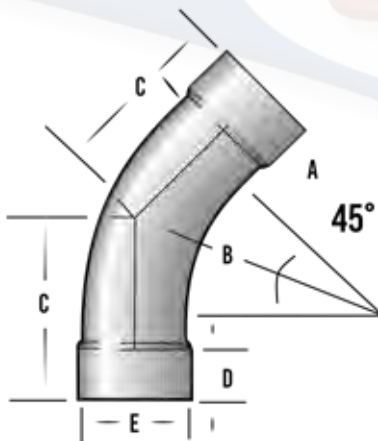
Standard Radius 90° Elbows



90° STANDARD RADIUS ELBOW

Part No.	A - O.D. or E - I.D. (bell)	B (CLR)	C	D	Gauge
MSR-2190	2 1/8"	5"	7"	1 1/4"	16
MSR-2590	2 1/2"	6"	8"	1 1/4"	16
MSR-3090	3"	7 1/2"	9 1/2"	1 1/4"	16
MSR-3590	3 1/2"	8 3/4"	10 3/4"	1 1/4"	16
MSR-4090	4"	10"	12"	1 1/4"	16
MSR-5090	5"	12 1/2"	15 1/8"	1 1/2"	14
MSR-6090	6"	15"	18 1/4"	1 1/2"	14
MSR-8090	8"	20"	24 1/4"	----	14
MSR-9090***	10"	32"	47"	----	12
MSR-9290***	12"	36"	42 1/4"	----	12
MSR-9490***	14"	36"	43 1/4"	----	12

Standard Radius 45° Elbows



45° STANDARD RADIUS ELBOW

Part No.	A - O.D. or E - I.D. (bell)	B (CLR)	C	D	Gauge
MSR-2145	2 1/8"	5"	4 5/16"	1 1/4"	16
MSR-2545	2 1/2"	6"	4 1/2"	1 1/4"	16
MSR-3045	3"	7 1/2"	5 1/8"	1 1/4"	16
MSR-3545	3 1/2"	8 3/4"	5 5/8"	1 1/4"	16
MSR-4045	4"	10"	6 1/8"	1 1/4"	16
MSR-5045	5"	12 1/2"	7 13/16"	1 1/2"	14
MSR-6045	6"	15"	9 15/32"	1 1/2"	14
MSR-8045	8"	20"	12 17/32"	----	14
MSR-9045***	10"	32"	28 1/4"	----	12
MSR-9245***	12"	36"	21 5/32"	----	12
MSR-9445***	14"	36"	22 5/32"	----	12

\*\*\*Segmented (3 - piece miter)

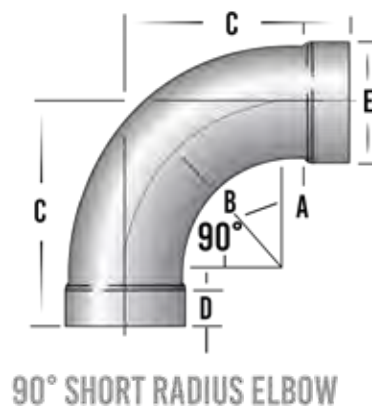
- 30° and 60° Elbows Available
- 11 Gauge Elbows Available (straight ends only)
- Expanded Ends Standard through 6"
- Expanded One End Available
- Straight Ends Available For All Sizes On Request

When ordering, please specify type of material:  
Aluminum, Carbon Steel, Galvanized or Stainless Steel.

## Short Radius Vacuum Elbows

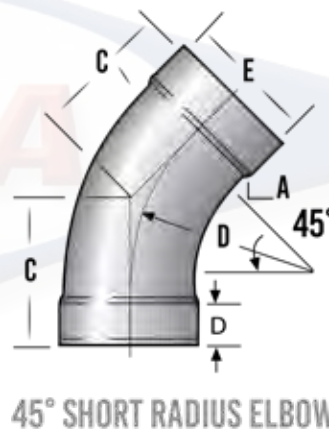
### Short Radius 90° Elbows

Part No.	A - O.D. or E - I.D. (bell)	B (CLR)	C	D	Gauge
MSH-2190	2 1/8"	3 1/2"	5 1/2"	1 1/4"	16
MSH-2590	2 1/2"	4"	6"	1 1/4"	16
MSH-3090	3"	4 1/2"	6 1/2"	1 1/4"	16
MSH-3590	3 1/2"	5"	7"	1 1/4"	16
MSH-4090	4"	6"	8"	1 1/4"	16
MSH-5090	5"	7 1/2"	10 1/8"	1 1/2"	14
MSH-6090	6"	9"	12 1/4"	1 1/2"	14
MSH-8090	8"	12"	16 1/4"	----	14



### Short Radius 45° Elbows

Part No.	A - O.D. or E - I.D. (bell)	B (CLR)	C	D	Gauge
MSH-2145	2 1/8"	3 1/2"	3 7/16"	1 1/4"	16
MSH-2545	2 1/2"	4"	3 21/32"	1 1/4"	16
MSH-3045	3"	4 1/2"	3 7/8"	1 1/4"	16
MSH-3545	3 1/2"	5"	4 1/16"	1 1/4"	16
MSH-4045	4"	6"	4 1/2"	1 1/4"	16
MSH-5045	5"	7 1/2"	5 23/32"	1 1/2"	14
MSH-6045	6"	9"	6 31/32"	1 1/2"	14
MSH-8045	8"	12"	9 7/32"	----	14



- 30° and 60° Elbows Available
- 11 Gauge Elbows Available (straight ends only)
- Expanded Ends Standard through 6"
- Expanded One End Available
- Straight Ends Available For All Sizes On Request

When ordering, please specify type of material:  
Aluminum, Carbon Steel, Galvanized or Stainless Steel.



800-255-6213

## Standard 90° TY's

OD = Outside Diameter

D = Expansion Depth 1-3/8" through 4" OD, 1-5/8" for 5" and 6" OD

A = Outside Diameter (OD) = E Inside Diameter (ID)

F = Outside Diameter (OD) = G Inside Diameter (ID)

L = Expansion Depth 1-3/8" through 4" OD, 1-5/8" for 5" and 6" OD

All reference dimensions are nominal.

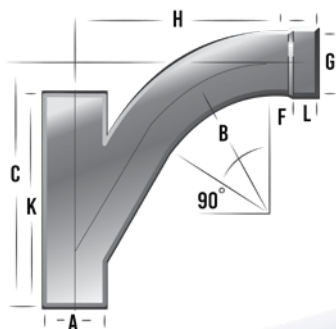
• 2 1/8" through 14" OD

• Wall Thickness: 16, 14, 12, (11 Gauge Available in Straight Ends Only)

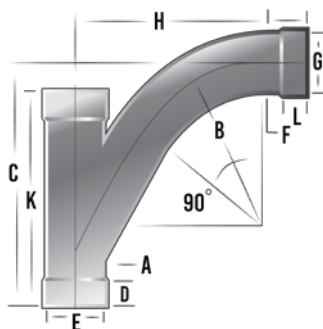
• Straight and Expanded combinations available

• Straight ends available on all sizes by request

When ordering, please specify material: Aluminum, Carbon Steel, Galvanized or Stainless Steel.



90° TY  
(one end expanded)



90° TY  
(three ends expanded)

Part No.	Size	Gauge	A - O.D.	B	C	F - O.D.	H	K
MTY-2121	2 1/8"	16	2 1/8"	5"	9 3/32"	2 1/8"	4 11/16"	9 1/2"
MTY-2521	2 1/2" x 2 1/8"	16	2 1/2"	5"	9 9/32"	2 1/8"	4 7/8"	10"
MTY-2525	2 1/2"	16	2 1/2"	6"	10 5/32"	2 1/2"	5 3/16"	10"
MTY-3021	3" x 2 1/8"	16	3"	5"	9 17/32"	2 1/8"	5 1/8"	10 1/2"
MTY-3025	3" x 2 1/2"	16	3"	6"	10 13/32"	2 1/2"	5 7/16"	10 1/2"
MTY-3030	3"	16	3"	7 1/2"	11 19/32"	3"	5 29/32"	10 1/2"
MTY-3521	3 1/2" x 2 1/8"	16	3 1/2"	5"	9 25/32"	2 1/8"	5 3/8"	11"
MTY-3525	3 1/2" x 2 1/2"	16	3 1/2"	6"	10 21/32"	2 1/2"	5 11/16"	11"
MTY-3530	3 1/2" x 3"	16	3 1/2"	7 1/2"	11 27/32"	3"	6 5/32"	13"
MTY-3535	3 1/2"	16	3 1/2"	8 3/4"	12 31/32"	3 1/2"	6 9/16"	13"
MTY-4021	4" x 2 1/8"	16	4"	5"	10 1/32"	2 1/8"	5 5/8"	12"
MTY-4025	4" x 2 1/2"	16	4"	6"	10 29/32"	2 1/2"	5 15/16"	12"
MTY-4030	4" x 3"	16	4"	7 1/2"	12 3/32"	3"	6 13/32"	12"
MTY-4035	4" x 3 1/2"	16	4"	8 3/4"	13 7/32"	3 1/2"	6 13/16"	14"
MTY-4040	4"	16	4"	10"	14 11/32"	4"	7 1/4"	14"
MTY-5021	5" x 2 1/8"	14	5"	5"	10 17/32"	2 1/8"	6 1/8"	13"
MTY-5025	5" x 2 1/2"	14	5"	6"	11 13/32"	2 1/2"	6 7/16"	13"
MTY-5030	5" x 3"	14	5"	7 1/2"	12 19/32"	3"	6 29/32"	15 1/2"
MTY-5035	5" x 3 1/2"	14	5"	8 3/4"	13 23/32"	3 1/2"	7 5/16"	15 1/2"
MTY-5040	5" x 4"	14	5"	10"	14 27/32"	4"	7 3/4"	15 1/2"
MTY-5050	5"	14	5"	12 1/2"	17 9/16"	5"	9"	18 1/2"
MTY-6021	6" x 2 1/8"	14	6"	5"	11 1/32"	2 1/8"	6 5/8"	15"
MTY-6025	6" x 2 1/2"	14	6"	6"	11 29/32"	2 1/2"	6 15/16"	15"
MTY-6030	6" x 3"	14	6"	7 1/2"	13 3/32"	3"	7 13/32"	15"
MTY-6035	6" x 3 1/2"	14	6"	8 3/4"	14 7/32"	3 1/2"	7 13/16"	17"
MTY-6040	6" x 4"	14	6"	10"	15 11/32"	4"	8 1/4"	17"
MTY-6050	6" x 5"	14	6"	12 1/2"	18 1/16"	5"	9 1/2"	21"
MTY-6060	6"	14	6"	15"	20 25/32"	6"	10 25/32"	21"

D = Expansion Depth 1-3/8" through 4" OD, 1-5/8" for 5" and 6" OD

L = Expansion Depth 1-3/8" through 4" OD, 1-5/8" for 5" and 6" OD

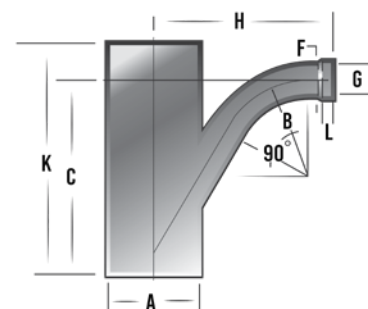
## Standard 90° TY's continued

When ordering, please specify material: Aluminum, Carbon Steel, Galvanized or Stainless Steel.

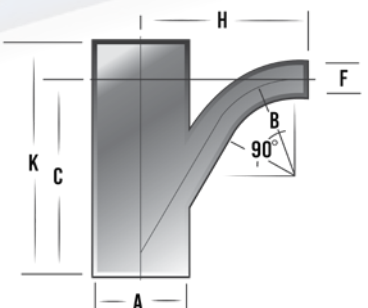
Part No.	Size	Gauge	A - O.D.	B	C	F - O.D.	H	K
MTY-8021	8" x 2 1/8"	14	8"	5"	12 3/32"	2 1/8"	11 3/4"	18"
MTY-8025	8" x 2 1/2"	14	8"	6"	13 1/4"	2 1/2"	12 25/32"	18"
MTY-8030	8" x 3"	14	8"	7 1/2"	14 7/8"	3"	14 9/32"	18"
MTY-8035	8" x 3 1/2"	14	8"	8 3/4"	16 3/8"	3 1/2"	15 19/32"	21"
MTY-8040	8" x 4"	14	8"	10"	17 7/8"	4"	16 29/32"	21"
MTY-8050	8" x 5"	14	8"	12 1/2"	20 7/8"	5"	20 1/8"	24"
MTY-8060	8" x 6"	14	8"	15"	23 7/8"	6"	23 11/32"	24"
MTY-8080	8"	14	8"	20"	29 7/8"	8"	29 17/32"	29"
MTY-9021	10" x 2 1/8"	12	10"	5"	13 3/32"	2 1/8"	12 3/4"	21"
MTY-9025	10" x 2 1/2"	12	10"	6"	14 1/4"	2 1/2"	13 25/32"	21"
MTY-9030	10" x 3"	12	10"	7 1/2"	15 7/8"	3"	15 9/32"	21"
MTY-9035	10" x 3 1/2"	12	10"	8 3/4"	17 3/8"	3 1/2"	16 17/32"	24"
MTY-9040	10" x 4"	12	10"	10"	18 7/8"	4"	17 29/32"	24"
MTY-9050	10" x 5"	12	10"	12 1/2"	21 7/8"	5"	21 1/8"	24"
MTY-9060	10" x 6"	12	10"	15"	24 7/8"	6"	24 11/32"	28"
MTY-9080	10" x 8"	12	10"	20"	30 7/8"	8"	30 17/32"	32"
MTY-9090	10"	12	10"	32"	40 3/8"	10"	42 25/32"	36"
MTY-9221	12" x 2 1/8"	12	12"	5"	14 3/32"	2 1/8"	13 3/4"	24"
MTY-9225	12" x 2 1/2"	12	12"	6"	15 1/4"	2 1/2"	14 25/32"	24"
MTY-9230	12" x 3"	12	12"	7 1/2"	16 7/8"	3"	16 9/32"	24"
MTY-9235	12" x 3 1/2"	12	12"	8 3/4"	18 3/8"	3 1/2"	17 19/32"	27"
MTY-9240	12" x 4"	12	12"	10"	19 7/8"	4"	18 29/32"	27"
MTY-9250	12" x 5"	12	12"	12 1/2"	22 7/8"	5"	22 1/8"	27"
MTY-9260	12" x 6"	12	12"	15"	25 7/8"	6"	25 11/32"	31"
MTY-9280	12" x 8"***	12	12"	20"	31 7/8"	8"	31 17/32"	35"
MTY-9290	12" x 10"***	12	12"	32"	41 3/8"	10"	43 25/32"	39"
MTY-9292	12" x 12"***	12	12"	36"	46 7/8"	12"	49 1/8"	43"
MTY-9480	14" x 8"	12	14"	20"	32 7/8"	8"	32 17/32"	38"
MTY-9490	14" x 10"	12	14"	32"	42 3/8"	10"	44 25/32"	42"
MTY-9492	14" x 12"***	12	14"	36"	47 7/8"	12"	50 1/8"	46"
MTY-9494	14"***	12	14"	36"	51 3/8"	14"	50 3/4"	52"

\*\*\*Segmented

L = Expansion Depth 1-3/8" through 4" OD, 1-5/8" for 5" and 6" OD



90° TY  
(one end expanded)



90° TY  
(straight ends)



800-255-6213

## Standard 45° YL's

OD = Outside Diameter

D = Expansion Depth 1-3/8" through 4" OD, 1-5/8" for 5" and 6" OD

A = Outside Diameter (OD) = E Inside Diameter (ID)

F = Outside Diameter (OD) = G Inside Diameter (ID)

L = Expansion Depth 1-3/8" through 4" OD, 1-5/8" for 5" and 6" OD

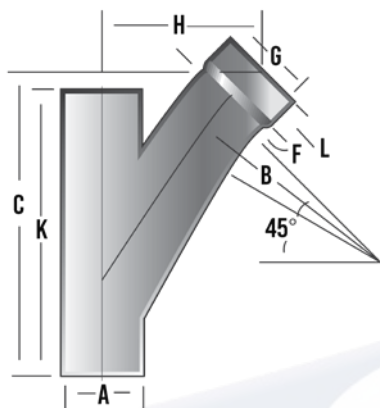
All reference dimensions are nominal.

• 2 1/8" through 14" OD

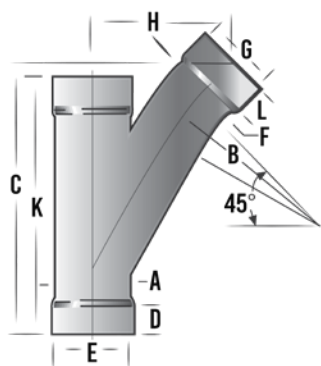
• Wall Thickness: 16, 14, 12, (11 Gauge Available in Straight Ends Only)

• Straight and Expanded combinations available

• Straight ends available on all sizes by request



45° YL  
(one end expanded)



45° YL  
(three ends expanded)

When ordering, please specify material: Aluminum, Carbon Steel, Galvanized or Stainless Steel.

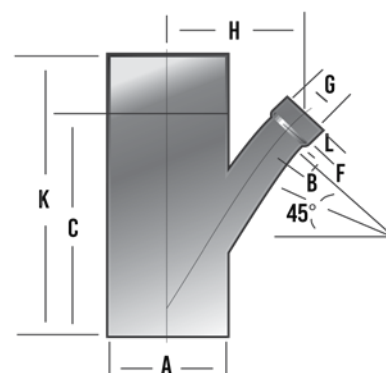
Part No.	Size	Gauge	A - O.D.	B	C	F - O.D.	H	K
YL-2151	2 1/8"	16	2 1/8"	5"	9 3/32"	2 1/8"	4 11/16"	9 1/2"
YL-2551	2 1/2" x 2 1/8"	16	2 1/2"	5"	9 9/32"	2 1/8"	4 7/8"	10"
YL-2561	2 1/2"	16	2 1/2"	6"	10 5/32"	2 1/2"	5 3/16"	10"
YL-3051	3" x 2 1/8"	16	3"	5"	9 17/32"	2 1/8"	5 1/8"	10 1/2"
YL-3061	3" x 2 1/2"	16	3"	6"	10 13/32"	2 1/2"	5 7/16"	10 1/2"
YL-3071	3"	16	3"	7 1/2"	11 19/32"	3"	5 29/32"	10 1/2"
YL-3551	3 1/2" x 2 1/8"	16	3 1/2"	5"	9 25/32"	2 1/8"	5 3/8"	11"
YL-3561	3 1/2" x 2 1/2"	16	3 1/2"	6"	10 21/32"	2 1/2"	5 11/16"	11"
YL-3571	3 1/2" x 3"	16	3 1/2"	7 1/2"	11 27/32"	3"	6 5/32"	13"
YL-3581	3 1/2"	16	3 1/2"	8 3/4"	12 31/32"	3 1/2"	6 9/16"	13"
YL-4051	4" x 2 1/8"	16	4"	5"	10 1/32"	2 1/8"	5 5/8"	12"
YL-4061	4" x 2 1/2"	16	4"	6"	10 29/32"	2 1/2"	5 15/16"	12"
YL-4071	4" x 3"	16	4"	7 1/2"	12 3/32"	3"	6 13/32"	12"
YL-4081	4" x 3 1/2"	16	4"	8 3/4"	13 7/32"	3 1/2"	6 13/16"	14"
YL-4091	4"	16	4"	10"	14 11/32"	4"	7 1/4"	14"
YL-5051	5" x 2 1/8"	14	5"	5"	10 17/32"	2 1/8"	6 1/8"	13"
YL-5061	5" x 2 1/2"	14	5"	6"	11 13/32"	2 1/2"	6 7/16"	13"
YL-5071	5" x 3"	14	5"	7 1/2"	12 19/32"	3"	6 29/32"	15 1/2"
YL-5081	5" x 3 1/2"	14	5"	8 3/4"	13 23/32"	3 1/2"	7 5/16"	15 1/2"
YL-5091	5" x 4"	14	5"	10"	14 27/32"	4"	7 3/4"	15 1/2"
YL-5151	5"	14	5"	12 1/2"	17 9/16"	5"	9"	18 1/2"
YL-6051	6" x 2 1/8"	14	6"	5"	11 1/32"	2 1/8"	6 5/8"	15"
YL-6061	6" x 2 1/2"	14	6"	6"	11 29/32"	2 1/2"	6 15/16"	15"
YL-6071	6" x 3"	14	6"	7 1/2"	13 3/32"	3"	7 13/32"	15"
YL-6081	6" x 3 1/2"	14	6"	8 3/4"	14 7/32"	3 1/2"	7 13/16"	17"
YL-6091	6" x 4"	14	6"	10"	15 11/32"	4"	8 1/4"	17"
YL-6141	6" x 5"	14	6"	12 1/2"	18 1/16"	5"	9 1/2"	21"
YL-6151	6"	14	6"	15"	20 25/32"	6"	10 25/32"	21"

## Standard 45° YL's continued

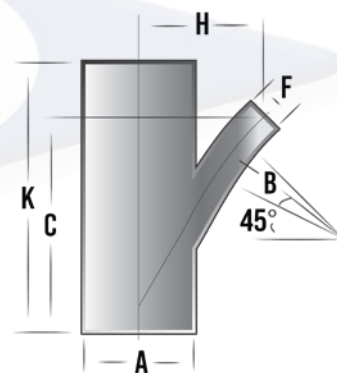
When ordering, please specify material: Aluminum, Carbon Steel, Galvanized or Stainless Steel.

Part No.	Size	Gauge	A - O.D.	B	C	F - O.D.	H	K
YL-8051	8" x 2 1/8"	14	8"	5"	12 1/32"	2 1/8"	7 5/8"	18"
YL-8061	8" x 2 1/2"	14	8"	6"	12 29/32"	2 1/2"	7 15/16"	18"
YL-8071	8" x 3"	14	8"	7 1/2"	14 3/32"	3"	8 13/32"	18"
YL-8081	8" x 3 1/2"	14	8"	8 3/4"	15 7/32"	3 1/2"	8 13/16"	21"
YL-8091	8" x 4"	14	8"	10"	16 11/32"	4"	9 1/4"	21"
YL-8141	8" x 5"	14	8"	12 1/2"	19 1/16"	5"	10 1/2"	24"
YL-8151	8" x 6"	14	8"	15"	21 25/32"	6"	11 25/32"	24"
YL-8161	8"	14	8"	20"	27"	8"	14 5/32"	29"
YL-10051	10" x 2 1/8"	12	10"	5"	13 1/32"	2 1/8"	8 5/8"	21"
YL-10061	10" x 2 1/2"	12	10"	6"	13 29/32"	2 1/2"	8 15/16"	21"
YL-10071	10" x 3"	12	10"	7 1/2"	15 3/32"	3"	9 13/32"	21"
YL-10081	10" x 3 1/2"	12	10"	8 3/4"	16 7/32"	3 1/2"	9 13/16"	24"
YL-10091	10" x 4"	12	10"	10"	17 11/32"	4"	10 1/4"	24"
YL-10141	10" x 5"	12	10"	12 1/2"	20 1/16"	5"	11 1/2"	24"
YL-10151	10" x 6"	12	10"	15"	22 3/4"	6"	12 25/32"	28"
YL-10161	10" x 8"	12	10"	20"	28"	8"	15 5/32"	32"
YL-10171	10"	12	10"	32"	34 11/16"	10"	18 5/8"	36"
YL-12051	12" x 2 1/8"	12	12"	5"	14 1/32"	2 1/8"	9 5/8"	24"
YL-12061	12" x 2 1/2"	12	12"	6"	14 29/32"	2 1/2"	9 31/32"	24"
YL-12071	12" x 3"	12	12"	7 1/2"	16 3/32"	3"	10 13/32"	24"
YL-12081	12" x 3 1/2"	12	12"	8 3/4"	17 7/32"	3 1/2"	10 13/16"	27"
YL-12091	12" x 4"	12	12"	10"	18 11/32"	4"	11 1/4"	27"
YL-12141	12" x 5"	12	12"	12 1/2"	21 1/16"	5"	12 1/2"	27"
YL-12151	12" x 6"	12	12"	15"	23 3/4"	6"	13 25/32"	31"
YL-12161	12" x 8"	12	12"	20"	29"	8"	16 5/32"	35"
YL-12171	12" x 10"	12	12"	32"	35 11/16"	10"	19 5/8"	39"
YL-12181	12"***	12	12"	36"	40 3/4"	12"	21 27/32"	43"
YL-14161	14" x 8"	12	14"	20"	30"	8"	17 5/32"	38"
YL-14171	14" x 10"	12	14"	32"	36 11/32"	10"	20 5/8"	42"
YL-14181	14" x 12"***	12	14"	36"	41 3/4"	12"	22 27/32"	46"
YL-14191	14"***	12	14"	36"	45 15/16"	14"	24 13/32"	52"

\*\*\*Segmented



45° YL  
(one end expanded)



45° YL  
(straight ends)



800-255-6213

## Standard Double Y's

OD = Outside Diameter

D = Expansion Depth 1-3/8" through 4" OD, 1-5/8" for 5" and 6" OD

A = Outside Diameter (OD) = E Inside Diameter (ID)

F = Outside Diameter (OD) = G Inside Diameter (ID)

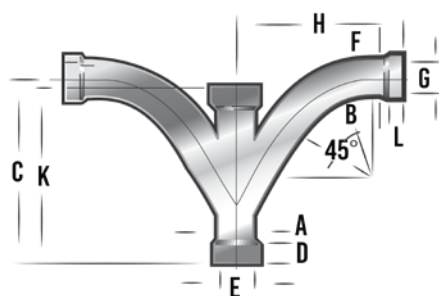
L = Expansion Depth 1-3/8" through 4" OD, 1-5/8" for 5" and 6" OD

All reference dimensions are nominal.

• 2 1/8" through 6" OD

• Wall Thickness: 16, 14, 12, (11 Gauge Available in Straight Ends Only)

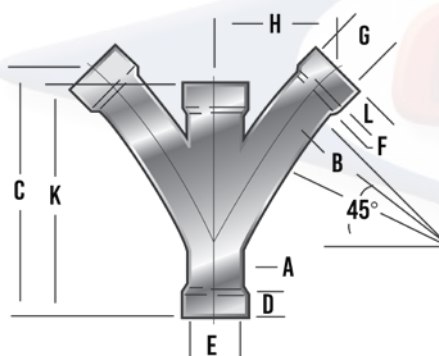
• Materials: Carbon, Stainless, Aluminum, Galvanized Steel



Standard Double 90° TY

## Standard Double 90° TY's

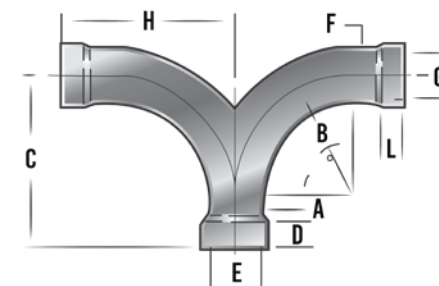
Part No.	Size	Gauge	A - O.D.	B	C	F - O.D.	H	K
DTY-215	2 1/8"	16	2 1/8"	5"	9 5/32"	2 1/8"	8 13/16"	9 1/2"
DTY-256	2 1/2"	16	2 1/2"	6"	10 1/2"	2 1/2"	10 1/32"	10"
DTY-307	3"	16	3"	7 1/2"	12 3/8"	3"	11 25/32"	11 1/2"
DTY-358	3 1/2"	16	3 1/2"	8 3/4"	14 1/8"	3 1/2"	13 11/32"	13"
DTY-409	4"	16	4"	10"	15 7/8"	4"	14 29/32"	14"
DTY-515	5"	14	5"	12 1/2"	19 3/8"	5"	18 5/8"	18 1/2"
DTY-615	6"	14	6"	15"	22 7/8"	6"	22 11/32"	21"



Standard Double 45° YL

## Standard Double 45° YL's

Part No.	Size	Gauge	A - O.D.	B	C	F - O.D.	H	K
DYL-2151	2 1/8"	16	2 1/8"	5"	9 3/32"	2 1/8"	4 11/16"	9 1/2"
DYL-2561	2 1/2"	16	2 1/2"	6"	10 5/32"	2 1/2"	5 3/16"	10"
DYL-3071	3"	16	3"	7 1/2"	11 19/32"	3"	5 29/32"	11 1/2"
DYL-3581	3 1/2"	16	3 1/2"	8 3/4"	12 31/32"	3 1/2"	6 9/16"	13"
DYL-4091	4"	16	4"	10"	14 11/32"	4"	7 1/4"	14"
DYL-5151	5"	14	5"	12 1/2"	17 9/16"	5"	9"	18 1/2"
DYL-6151	6"	14	6"	15"	20 25/32"	6"	10 15/32"	21"



Standard Double 90° Y

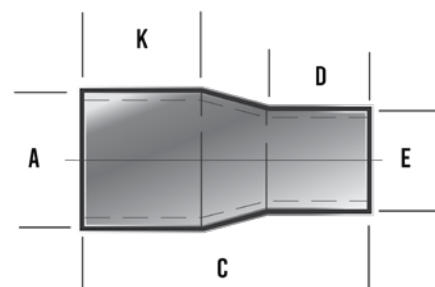
## Standard Double 90° Y's

Part No.	Size	Gauge	A - O.D.	B	C	F - O.D.	H
DY-215	2 1/8"	16	2 1/8"	5"	7"	2 1/8"	7"
DY-256	2 1/2"	16	2 1/2"	6"	8"	2 1/2"	8"
DY-307	3"	16	3"	7 1/2"	9 1/2"	3"	9 1/2"
DY-358	3 1/2"	16	3 1/2"	8 3/4"	10 3/4"	3 1/2"	10 3/4"
DY-409	4"	16	4"	10"	12"	4"	12"
DY-515	5"	14	5"	12 1/2"	15 1/8"	5"	15 1/8"
DY-615	6"	14	6"	15"	18 1/4"	6"	18 1/4"

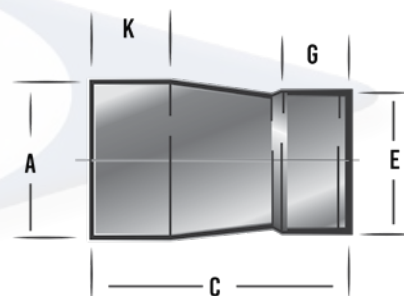
## Standard Reducing Couplings

- 2-1/8" through 14" OD
- Wall Thickness: 16, 14, 12, (11 Gauge Available in Straight Ends Only)
- Materials: Carbon, Stainless, Aluminum, Galvanized Steel
- Straight ends available on all sizes by request
- All reference dimensions are nominal

Part No.	Size	Gauge	A - OD	C	D	E (ID)	F (OD)	G	K
MRC-2120	2 1/8" x 2"	16	2 1/8"	4"	1 25/32"	2"	-	1 3/8"	2"
MRC-2521	2 1/2" x 2 1/8"	16	2 1/2"	4 1/2"	1 3/4"	2 1/8"	-	1 3/8"	1 1/2"
MRC-3021	3" x 2 1/8"	16	3"	8 3/4"	2 1/4"	2 1/8"	-	1 3/8"	2"
MRC-3025	3" x 2 1/2"	16	3"	5"	2"	2 1/2"	-	1 3/8"	1 1/2"
MRC-3521	3 1/2" x 2 1/8"	16	3 1/2"	11"	2 1/4"	2 1/8"	-	1 3/8"	2"
MRC-3525	3 1/2" x 2 1/2"	16	3 1/2"	9 1/4"	2 7/8"	2 1/2"	-	1 3/8"	2 7/8"
MRC-3530	3 1/2" x 3"	16	3 1/2"	5 1/2"	2 1/8"	3"	-	1 3/8"	2 1/8"
MRC-4021	4" x 2 1/8"	16	4"	13 1/2"	1 5/8"	2 1/8"	-	1 3/8"	2"
MRC-4025	4" x 2 1/2"	16	4"	10 1/2"	2 1/4"	2 1/2"	-	1 3/8"	2"
MRC-4030	4" x 3"	16	4"	9 1/4"	2 1/4"	3"	-	1 3/8"	2"
MRC-4035	4" x 3 1/2"	16	4"	6"	2"	3 1/2"	-	1 3/8"	1 1/2"
MRC-5021	5" x 2 1/8"	14	5"	19 1/4"	2 1/4"	2 1/8"	-	1 3/8"	2 3/4"
MRC-5025	5" x 2 1/2"	14	5"	17 1/2"	2 1/4"	2 1/2"	-	1 3/8"	2 3/4"
MRC-5030	5" x 3"	14	5"	15"	2 1/4"	3"	-	1 3/8"	2 3/4"
MRC-5035	5" x 3 1/2"	14	5"	12 1/2"	2 1/4"	3 1/2"	-	1 3/8"	2 3/4"
MRC-5040	5" x 4"	14	5"	8"	2 1/4"	4"	-	1 3/8"	1 3/4"
MRC-6021	6" x 2 1/8"	14	6"	24 3/4"	2 1/4"	2 1/8"	-	1 3/8"	3 1/4"
MRC-6025	6" x 2 1/2"	14	6"	23"	2 1/4"	2 1/2"	-	1 3/8"	3 1/4"
MRC-6030	6" x 3"	14	6"	20 1/2"	2 1/4"	3"	-	1 3/8"	3 1/4"
MRC-6035	6" x 3 1/2"	14	6"	18"	2 1/4"	3 1/2"	-	1 3/8"	3 1/4"
MRC-6040	6" x 4"	14	6"	15 3/4"	2 1/4"	4"	-	1 3/8"	3 1/4"
MRC-6050	6" x 5"	14 14	6"	10"	2 5/8"	5"	-	1 3/8"	1 3/4"
MRC-8040	8" x 4"	14	8"	26 1/4"	2"	4"	-	1 3/8"	4 1/4"
MRC-8050	8" x 5"	14	8"	21 7/8"	2 5/8"	5"	-	1 5/8"	4 1/4"
MRC-8060	8" x 6"	14	8"	16 1/2"	3 1/4"	6"	-	1 5/8"	3 5/8"
MRC-9060	10" x 6"	12	10"	28 1/2"	3 1/4"	6"	-	1 5/8"	5 1/4"
MRC-9080	10" x 8"	12	10"	18 1/4"	2 1/2"	-	8"	N/A	5 1/4"
MRC-9280	12" x 8"	12	12"	29 1/4"	2 1/2"	-	8"	N/A	6 1/4"
MRC-9290	12" x 10"	12	12"	19 3/4"	3 1/4"	-	10"	N/A	6"
MRC-9490	14" x 10"	12	14"	30"	3"	-	10"	N/A	7 1/4"
MRC-9492	14" x 12"	12	14"	20"	4"	-	12"	N/A	7 1/4"



Standard Reducing Coupling  
(Straight End)



Standard Reducing Coupling  
(Expanded End)

### Additional sizes available.

Please give us a call or  
email us at:

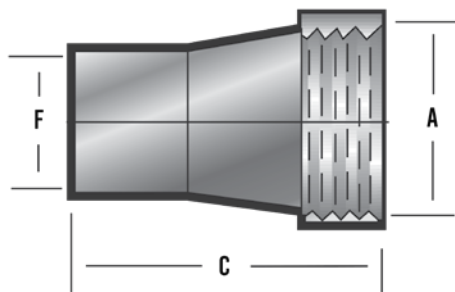
chada@chadasales.com



800-255-6213

## Standard Adapters

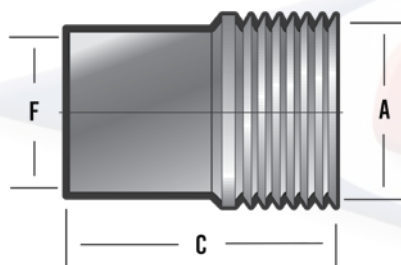
### Female Adapter - Straight



Female Adapter

Part No.	Size	Gauge	A (FNPT)	C	F (OD)
MFA-2020	2" to 2"	16	2"	6"	2"
MFA-2021	2" to 2 1/8"	16	2"	6"	2 1/8"
MFA-2525	2 1/2" to 2 1/2"	16	2 1/2"	6"	2 1/2"
MFA-3030	3" to 3"	16	3"	6"	3"
MFA-3535	3 1/2" to 3 1/2"	16	3 1/2"	6"	3 1/2"
MFA-4040	4" to 4"	16	4"	6 1/2"	4"
MFA-5050	5" to 5"	14	5"	6 3/4"	5"
MFA-6060	6" to 6"	14	6"	7"	6"
MFA-8080	8" to 8"	14	8"	9"	8"
MFA-9090	10" to 10"	12	10"	11"	10"
MFA-9292	12" to 12"	12	12"	13"	12"

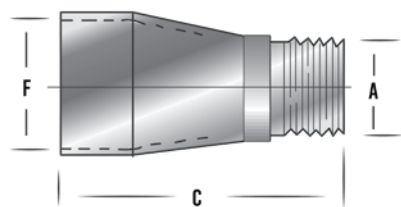
### Male Adapter - Straight



Male Adapter

Part No.	Size	Gauge	A (FNPT)	C	F (OD)
MMA-2020	2" to 2"	16	2"	6"	2"
MMA-2021	2" to 2 1/8"	16	2"	6"	2 1/8"
MMA-2525	2 1/2" to 2 1/2"	16	2 1/2"	6"	2 1/2"
MMA-3030	3" to 3"	16	3"	6"	3"
MMA-3535	3 1/2" to 3 1/2"	16	3 1/2"	6"	3 1/2"
MMA-4040	4" to 4"	16	4"	6"	4"
MMA-5050	5" to 5"	14	5"	6 1/2"	5"
MMA-6060	6" to 6"	14	6"	7"	6"
MMA-8080	8" to 8"	14	8"	8"	8"
MMA-9090	10" to 10"	12	10"	8 1/2"	10"
MMA-9292	12" to 12"	12	12"	9"	12"

### 2 1/8" Reducing Male Adapter



Male Adapter

Part No.	Size	A-MNPT	C	D	F (ID)	F (OD)
MMR-2112	2 1/8" x 1 1/4"	1 1/4"	5 3/4"	-	-	2 1/8"
MMR-2115	2 1/8" x 1 1/2"	1 1/2"	5 3/4"	-	-	2 1/8"
MMR-2112-EX	2 1/8" x 1 1/4"	1 1/4"	5 3/4"	1 1/4"*	2 1/8"	-
MMR-2115-EX	2 1/8" x 1 1/2"	1 1/2"	5 3/4"	1 1/4"*	2 1/8"	-

\*Expansion Depth

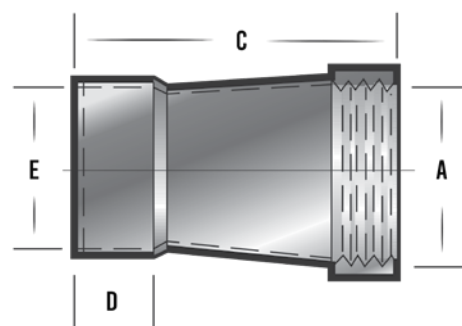
When ordering, specify type of material where applicable: Aluminum, Carbon Steel, Galvanized or Stainless Steel

11 Gauge Adapters available. Please call for details.

## Standard Adapters

### Female Adapter - Expanded

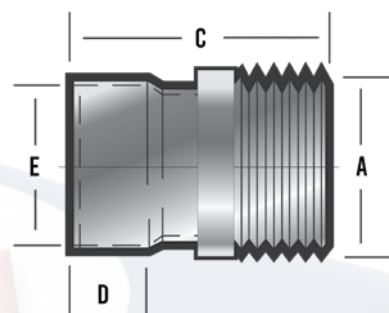
Part No.	Size	Gauge	A-MNPT	C	D	E (ID)
MFE-2020	2" to 2"	16	2"	6"	1 1/8"	2"
MFE-2021	2" to 2 1/8"	16	2"	6"	1 3/8"	2 1/8"
MFE-2525	2 1/2" to 2 1/2"	16	2 1/2"	6"	1 3/8"	2 1/2"
MFE-3030	3" to 3"	16	3"	6"	1 3/8"	3"
MFE-3535	3 1/2" to 3 1/2"	16	3 1/2"	6"	1 3/8"	3 1/2"
MFE-4040	4" to 4"	16	4"	6 1/2"	1 3/8"	4"
MFE-5050	5" to 5"	14	5"	6 3/4"	1 5/8"	5"
MFE-6060	6" to 6"	14	6"	7"	1 5/8"	6"



Female Adapter Expanded

### Male Adapter - Expanded

Part No.	Size	Gauge	A-MNPT	C	D	E (ID)
MME-2020	2" to 2"	16	2"	6"	1 1/8"	2"
MME-2021	2" to 2 1/8"	16	2"	6"	1 3/8"	2 1/8"
MME-2525	2 1/2" to 2 1/2"	16	2 1/2"	6"	1 3/8"	2 1/2"
MME-3030	3" to 3"	16	3"	6"	1 3/8"	3"
MME-3535	3 1/2" to 3 1/2"	16	3 1/2"	6"	1 3/8"	3 1/2"
MME-4040	4" to 4"	16	4"	6 1/2"	1 3/8"	4"
MME-5050	5" to 5"	14	5"	6 3/4"	1 5/8"	5"
MME-6060	6" to 6"	14	6"	7"	1 5/8"	6"

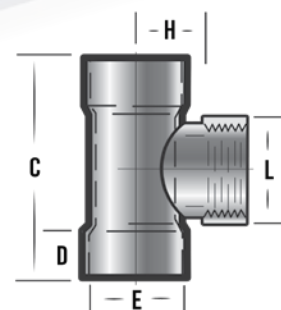


Male Adapter Expanded

### Adapter Tee

Part No.	Size	C	D	E (ID)	H	L-FNPT
MAT-2120*	2 1/8" to 2"	4 13/16"	1 3/8"	2 1/8"	1 9/16"	2"
MAT-2520	2 1/2" to 2"	6 1/2"	1 3/8"	2 1/2"	2 1/8"	2"
MAT-3020	3" to 2"	6 1/2"	1 3/8"	3"	2 3/4"	2"
MAT-3520	3 1/2" to 2"	6 7/8"	1 3/8"	3 1/2"	3 7/16"	2"
MAT-4020	4" to 2"	6 7/8"	1 3/8"	4"	3 7/16"	2"

\*Available only in Cast Gray Iron, Zinc, Nickel Plated or Cast Aluminum

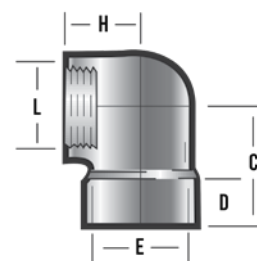


Adapter Tee

### 90° Adapter Elbow

Part No.	Size	C	D	E (ID)	H	L-FNPT
MAL-2120*	2 1/8" to 2"	2 9/16"	1 3/8"	2 1/8"	1 9/16"	2"

\*Available only in Cast Gray Iron, Zinc, Nickel Plated or Cast Aluminum



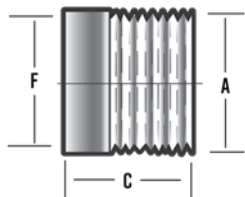
90° Adapter Elbow



800-255-6213

## Standard Adapters

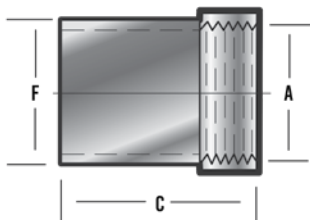
• Materials: Aluminum, Carbon Steel, Galvanized Steel & Stainless Steel



Male Adapter Nipple

### Male Adapter Nipple

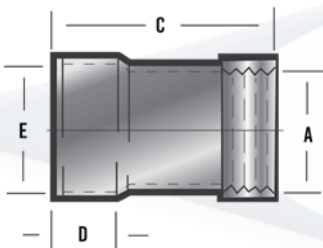
Part No.	Size	A-MNPT	C	E (ID)
MAN-2120	2 1/8"	2"	2"	2 1/8"



Female Reducing Adapter

### Female Reducing Adapter

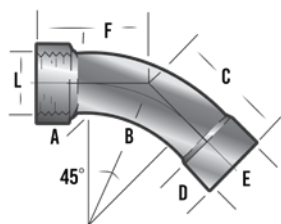
Part No.	Size	Gauge	A-FNPT	C	F (OD)
MFA-2520	2" to 2 1/2"	16	2"	4 1/4"	2 1/2"



Female Reducing Adapter Expanded

### Female Reducing Adapter Expanded

Part No.	Size	Gauge	A-FNPT	C	D	E (ID)
MFA-2520-EX	2" to 2 1/2"	16	2"	4 1/4"	1 3/8"	2 1/2"



45° Female Adapter Elbow

### 45° Female Adapter Elbow

Part No.	Size	A (OD)	Gauge	B	C	D	E (ID)	L-FNPT
MEF-2120	2 1/8" to 2"	2 1/8"	16	5"	4 1/16"	1 3/8"	2 1/8"	2"
MEF-2520	2 1/2" to 2"	2 1/2"	16	6"	4 1/2"	1 3/8"	2 1/2"	2"
MEF-2525	2 1/2" to 2 1/2"	2 1/2"	16	6"	4 1/2"	1 3/8"	2 1/2"	2 1/2"

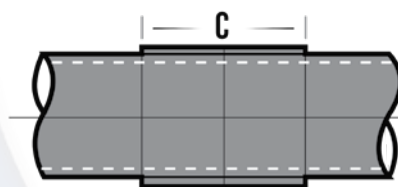
## Methods of Joining

### Slip Couplings

Part No.	Size	Gauge	C	ID
MSC-2000	2"	16	3"	2"
MSC-2100	2 1/8"	16	3"	2 1/8"
MSC-2500	2 1/2"	16	3 1/2"	2 1/2"
MSC-3000	3"	16	4"	3"
MSC-3500	3 1/2"	16	4 1/2"	3 1/2"
MSC-4000	4"	16	5"	4"
MSC-5000	5"	14	6"	5"
MSC-6000	6"	14	7"	6"
MSC-8000	8"	14	8"	8"
MSC-9000	10"	14	10"	10"
MSC-9200	12"	12	12"	12"
MSC-9400	14"	12	14"	14"

Can be used for joining any two straight ends of tubing or fittings. The slip coupling is a solid sleeve that fits the OD of the joint which can then be glued, brazed, welded, or covered by shrink sleeves.

- 2-1/8" through 14" OD
- Wall Thickness: 16, 14, 12 Gauge
- Materials: Aluminum, Carbon Steel, Galvanized Steel, Stainless Steel

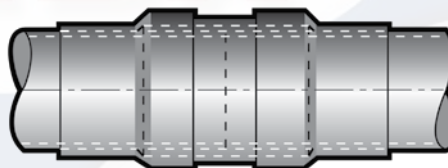


Slip Coupling

### Shrink Sleeves

Part No.	Fits Tube OD Size	Sleeve Length
MSS-2100	2 1/8"	4"
MMS-3000	2 1/2"	4 1/2"
MSS-3500	3 1/2"	4 1/2"
MSS-4000	4"	4"
MSS-4500	4 1/2"	4 1/2"
MSS-5000	5"	4 1/2"
MSS-6000	6"	4 1/2"
MSS-8000	8"	9"
MSS-10000	10"	9"
MSS-12000	12"	9"

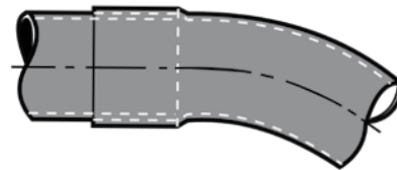
A heat shrinkable polyolefin band that literally shrinks and encircles the connection giving it mechanical strength and a positive seal. It can be used in conjunction with a slip coupling or when using expanded fittings. Gluing, brazing and welding operations are eliminated.



Shrink Sleeve

### Expanded Fittings

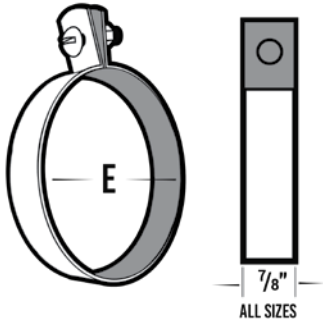
This type of connection enables a straight section of tubing to slip inside the expanded end of the fitting. The two pieces can then be "locked" together by any one of several techniques - brazing, welding, industrial adhesive or shrink sleeves. Not available in 11 gauge material. Joining methods are for use in low pressure (under 15 PSIG) systems.



Expanded Fitting

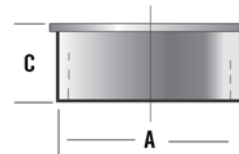
## Methods of Joining

When ordering, specify type of material where applicable: Aluminum, Carbon Steel, Galvanized Steel, Stainless Steel



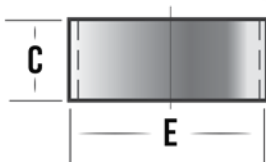
**Tube Hangers**

Part No.	Size	Gauge	E (ID)
MBH-2100	2 1/8"	16	2 1/8"
MBH-2500	2 1/2"	16	2 1/2"
MBH-3000	3"	16	3"
MBH-3500	3 1/2"	16	3 1/2"
MBH-4000	4"	16	4"
MBH-5000	5"	16	5"
MBH-6000	6"	16	6"
MBH-8000	8"	16	8"
MBH-10000	10"	16	10"
MBH-12000	12"	16	12"
MBH-14000	14"	16	14"



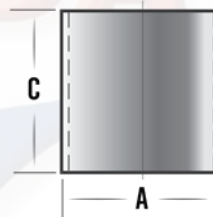
**Tube Plugs**

Part No.	Size	Gauge	A (OD)/(ID)	C
MTP-2100	2 1/8"	16	2 1/8" OD	1 3/8"
MTP-2500	2 1/2"	16	2 1/2" OD	1 3/8"
MTP-3000	3"	16	3" OD	1 3/8"
MTP-3500	3 1/2"	16	3 1/2" OD	1 3/8"
MTP-4000	4"	16	4" OD	1 3/8"
MTP-5000	5"	14	5" OD	1 5/8"
MTP-6000	6"	14	6" OD	1 5/8"
MTP-8000	8"	14	8" ID	1 3/4"
MTP-1000	10"	12	10" ID	2"
MTP-1200	12"	12	12" ID	2"
MTP-1400	14"	12	14" ID	2"



**Slip Welding Rings**

Part No.	Size	C	E (ID)	Gauge
MWR-2100	8"	3"	8"	14
MWR-2500	10"	3"	10"	12
MWR-3000	12"	3"	12"	12
MWR-4000	14"	3"	14"	12



**Tube Nipples**

Part No.	Size	Gauge	A (OD)	C
MTN-2100	2 1/8"	16	2 1/8"	2 1/2"
MTN-2500	2 1/2"	16	2 1/2"	2 1/2"
MTN-3000	3"	16	3"	2 1/2"
MTN-3500	3 1/2"	16	3 1/2"	2 1/2"
MTN-4000	4"	16	4"	2 1/2"
MTN-5000	5"	16	5"	3"
MTN-6000	6"	14	6"	3"
MTN-8000	8"	14	8"	4"
MTN-10000	10"	14	10"	5"
MTN-12000	12"	14	12"	6"
MTN-14000	14"	12	14"	7"

## Inlet Valves

Heavy duty inlet valves provide for a quick connection of the male hose coupling to the vacuum cleaning system. These parts are designed for insertion into a 2" FNPT threaded fitting adapting to a 2-1/8" tube size. Valves have self-closing covers and are available in galvanized and stainless steel, as well as nickel plated models. Escutcheon plates allow for a more attractive wall installation.

The same body is used for all three valves, only the bore varies. MIV-150 and MIV-200 use a slight taper for hose adapter retention. MIV-200-CLIP and MIV-180 utilize a clip on the valve lid for retention instead. Hose adapters are constructed of heavy-duty galvanized steel.



**Inlet Valve**  
(For use with open tubing or when a flush mounting is not required)



**Inlet Valve with Escutcheon**  
(For a flush mounted installation)

### Inlet Valves

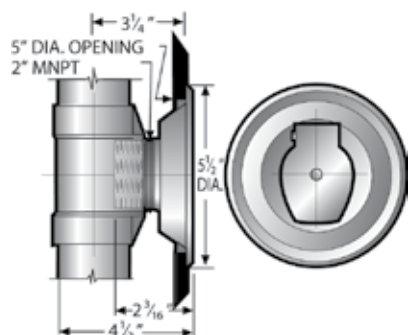
Part No.	Bore	MNPT Size
MIV-2015	1.5"	2.0"
MIV-2018	1.8"	2.0"
MIV-2020	2.0"	2.0"
MIV-2020-CLIP	2.0"	2.0"

### Escutcheon Plates

Part No.	Type
10253	Zinc
23939	Stainless
25079	Nickel

### Inlet Valve Accessories for Installation and Operation

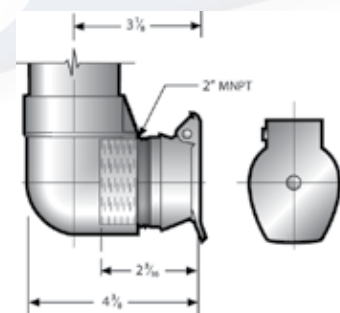
Hose Adapter Part No.	Hose Size	Inlet Valve Part No.	Wrench Part No.
MHA-150	1 1/2" ID	MIV-150	VW-150
MHA-180	1 1/2" ID	MIV-180	VW-180
MHA-200	2" ID	MIV-200	VW-180
MHA-200-RING	2" ID	MIV-200-CLIP	VW-180



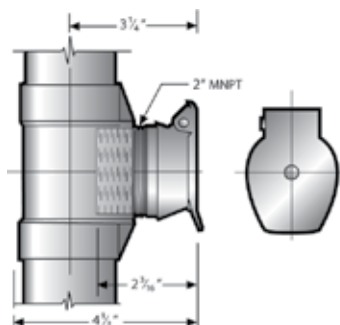
Valve with escutcheon and tee fitting. Can also be used with 90° adapter elbow



Inlet Valve with escutcheon being tightened into place with installation wrench



Valve shown in 90° adapter elbow  
(Part No. AE-211)



Valve shown in tube fitting (Part No. AT-212)



800-255-6213

## Cam and Groove Couplings

Cam and Groove Couplings provide for quick connecting and disconnecting by means of the camming action. This camming action allows pipe and hose connections to be made without the need of hand tools or difficult threaded connections. Cam and groove couplings are made up of two parts, male (adapter/plug) and female (coupler/socket) that work together. The male adapter is simply inserted into the female coupler until contact is made with the gasket.

All Cam and Groove Couplings are available in either Aluminum, Brass, Stainless Steel, Ductile Iron or Carbon Steel. Many other sizes available, please call for availability.

"A" Adapter  
Adapter x Female NPT Thread



Line Size	Part No.
1 1/2"	15-A
2"	20-A
2 1/2"	25-A
3"	30-A
4"	40-A
5"	50-A
6"	60-A
8"	80-A

Line Size	Part No.
1 1/2"	15-B
2"	20-B
2 1/2"	25-B
3"	30-B
4"	40-B
5"	50-B
6"	60-B
8"	80-B

"B" Coupler  
Coupler x Male NPT Thread



"C" Coupler  
Coupler x Hose Shank



Line Size	Part No.
1 1/2"	15-C
2"	20-C
2 1/2"	25-C
3"	30-C
4"	40-C
5"	50-C
6"	60-C
8"	80-C

Line Size	Part No.
1 1/2"	15-D
2"	20-D
2 1/2"	25-D
3"	30-D
4"	40-D
5"	50-D
6"	60-D
8"	80-D

"D" Coupler  
Coupler x Female NPT Thread



\*Larger sizes available for some parts. Please call for details.

"E" Adapter  
Adapter x Hose Shank



Line Size	Part No.
1 1/2"	15-E
2"	20-E
2 1/2"	25-E
3"	30-E
4"	40-E
5"	50-E
6"	60-E
8"	80-E

Line Size	Part No.
1 1/2"	15-F
2"	20-F
2 1/2"	25-F
3"	30-F
4"	40-F
5"	50-F
6"	60-F
8"	80-F

"F" Adapter  
Adapter x Male NPT Thread



"W" Adapter  
Dust Plug



Line Size	Part No.
1 1/2"	15-W
2"	20-W
2 1/2"	25-W
3"	30-W
4"	40-W
5"	50-W
6"	60-W
8"	80-W

Line Size	Part No.
1 1/2"	15-V
2"	20-V
2 1/2"	25-V
3"	30-V
4"	40-V
5"	50-V
6"	60-V
8"	80-V

"V" Coupler  
Dust Cap



Security Chains  
For Dust Caps & Dust Plugs



Length	Brass Part Number	Stainless Steel Part Number
6"	C-51	S-56
8"	Call	S-51
12"	C-52	S-52
48"	Call	Call

\*Please specify hooks or rings  
when ordering

Coupler Size	Brass Part Number
1/2 & 3/4	HB10
1"	HB11
1 1/4	HB12
1 1/2	HB15
2 & 2 1/2	HB20/25
3, 4 & 5	HB30/40/50
6, 8, 10 & 12	HB60/80
10 & 12	HB100

Standard Cam Assembly



\*Larger sizes available for some parts. Please call for details.



800-255-6213

## Special Cam and Groove Couplings

### Reducing Cam & Groove

"A" Reducer  
Adapter x Female  
NPT Thread



"B" Reducer  
Coupler x Male  
NPT Thread



"C" Reducer  
Coupler x Hose  
Shank



"D" Reducer  
Coupler x Female  
NPT Thread



"E" Reducer  
Adapter x Hose  
Shank



"F" Reducer  
Adapter x Male  
NPT Thread



"CXA" Short Reducer  
Coupler x Adapter



"CXA" Long Reducer  
Coupler x Adapter



"SA" Spool Adapter  
Adapter x Adapter



"CXC" Coupling  
Coupler x Coupler



### Weld Fittings

"AWB" Adapter  
Adapter x Butt Weld



"AWS" Adapter  
Adapter x Socket



"DWB" Coupler  
Coupler x Butt Weld



"DWS" Coupler  
Coupler x Socket Weld



Many other combinations available. If you don't see what you're looking for please email or call us!

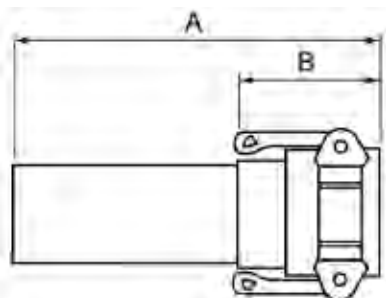
## Quickie Line Adapters



Quickie Line Adapters are assembled as cam and groove fittings with tubing or pipe stubs pre-connected. With the use of a Morris Compression Coupling, this creates a quick and easy connection with your current application. No welding or threading necessary! Quickies are available in most pipe and tube sizes and are available with Aluminum and #304 Stainless Steel stubs and your choice of alloy for the cam and groove fittings. Call or email us for a quote! Please specify wall thickness of matching tube when quoting or ordering.

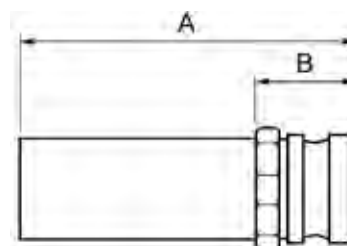
### Female Coupler

Part Number	Size	A	B
15-DD	1 1/2"	10 3/8"	2 3/4"
20-DD	2"	10 1/2"	3 1/8"
25-DD	3"	10 27/64"	3 1/2"
30-DD	4"	10 7/8"	3 9/16"
35-DD	3 1/2"	10 7/8"	3 9/16"
40-DD	4"	10 9/16"	4"
45-DD	4 1/2"	10 9/16"	4"
50-DD	5"	11 1/4"	4"
60-DD	6"	11 5/8"	4 3/8"



### Male Adapter

Part Number	Size	A	B
15-AA	1 1/2"	9 7/8"	2 1/4"
20-AA	2"	10 7/8"	3 3/8"
25-AA	3"	10 13/16"	3 13/16"
30-AA	4"	11 13/16"	3 15/16"
35-AA	3 1/2"	11 13/16"	3 15/16"
40-AA	4"	11 3/4"	4 1/2"
45-AA	4 1/2"	11 3/4"	4 1/2"
50-AA	5"	11 11/16"	4 7/16"
60-AA	6"	12"	4 3/4"



ChaDa Sales proudly represents:



Industries that benefit from Impact-Free, Heat-Free Pneumatic Conveying with SMART ELBOW® Deflection Elbows:

- Plastics
- Concrete
- Food
- Mining
- Pulp & Paper
- Power
- Wastewater
- Chemical

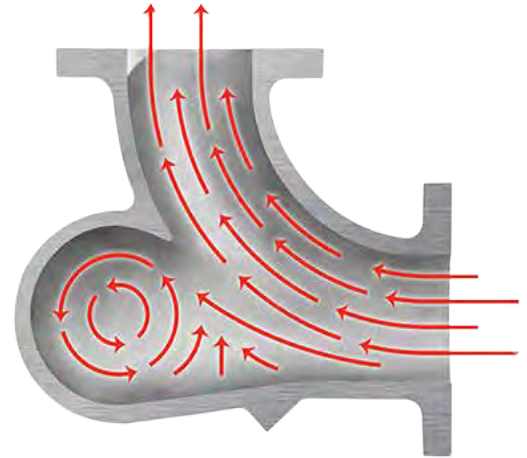
SMART ELBOW® Deflection Elbows Prevent Material from Impacting the Elbow Wall, Preventing Abrasive Elbow Wear and Material Breakage, Fines, Melting, Plugging and Build-Up.

Available in cast iron, carbon steel, aluminum, stainless steel and special alloys in 90 and 45 degrees with flanged and socket-weld ends.



## Smart Elbow® By HammerTek

Unlike conventional “impact” elbows and “plugged-tee” elbows that rely on material impact to change direction HammerTek’s Smart Elbow® design employs a spherical chamber that protrudes partially beyond the desired 90° or 45° pathway, causing a ball of material suspended in air to rotate. Since the ball of material rotates in the same direction as the airstream that powers it, incoming material is cushioned by the ball’s rotation, and is gently deflected around the bend. By preventing impact with the elbow wall, HammerTek’s Smart Elbow® deflection elbow virtually eliminates costly elbow wear, material degradation, melting and plugging.



Which of the top 4 elbow problems do you need to solve?

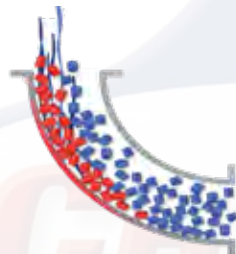


**Problem:**

Wear and failure when conveying abrasives such as sand, glass, alumina or mineral filled plastic pellets incur never-ending costs of replacement elbows, labor and downtime.

**Cause:**

Abrasives hit the outside radius of conventional impact elbows at high speed, continually wearing through the elbow wall.



**Problem:**

Formation of streamers, angel hair and snake skins when conveying pelletized resins and compounds causes downstream quality problems.

**Cause:**

Pellets skidding against the outside radius of conventional elbows create friction and heat, melting pellet surfaces, forming streamers.



**Problem:**

Breakage and dusting of fragile materials such as pet food, coffee beans or grains, decrease product quality, consistency and salability while increasing waste.

**Cause:**

Friable materials hit the outside radius of conventional impact elbows at high speed, degrading the material and generating fines.



**Problem:**

Plugging and build-up when conveying sugar, rubber pellets, hot melt adhesives, clay and other pressure and heat-sensitive materials prone to build-up.

**Cause:**

Materials skidding against the outside radius of conventional elbows create friction and heat, causing product build-up.

### SOLUTION:

**Smart Elbow® Deflection Elbow from HammerTek® ends problems by eliminating impact and frictional heat.**



800-255-6213

## Smart Elbow Alloy Characteristics

Aluminum (CI)	90-100 BHN	
<p>Available in pipe schedule 10/40 sizes and tube sizes with socket weld or flange end configurations. Lightweight and strong with good wearing properties as compared to the low tensile.</p> <p>Example of products conveyed: PVC pellets, plastic, resins, nylon and plastic pellets, flour, sugar, tea, etc. Qualify dry foods.</p>		
Cast Iron (CI)	174-228 BHN	Max Temp 600°F
<p>Available in pipe schedule 10/40 and schedule 80 sizes and tube sizes with flanged end configurations only. Strong and low cost. Used for medium abrasive type materials up to approximately 5 on the Mohs scale.</p> <p>Example of products conveyed: Bituminous coal-50 mesh, shelled corn, grain, charcoal, hog fuel, alfalfa seeds, malt (dry ground), oats, wood chips, epoxy powders, condensate, soybeans, etc.</p>		
Hammerlast™ Series 400 (H4)	380-420 BHN	Max Temp 600°F
<p>Available in pipe schedule 10/40 and schedule 80 sizes and tube sizes with flanged end configurations only. Conveys materials up to 5.5/6.0 on the Mohs scale. This alloy also has excellent wear resistant properties.</p> <p>Example of products conveyed: Bottom ash, sand, lime, pulverized coal, diatomaceous earth, feldspar-1/2", flue dust, crushed limestone, mica, oyster shells, fly ash, slate dust, core sand, bank sand, trap rock-1/2", pebble lime, bank run gravel, copper, crushed ore, hard brick, wet cement, bauxite, etc.</p>		
Hammerloy™ (HL)	500-555 BHN	Max temp: *see below
<p>Available in pipe schedule 10/40 and schedule 80 sizes and tube sizes with flanged end configurations only. Conveys materials up to 8.0/9.0 on the Mohs scale. This alloy is used for extremely heavy situations and/or replaces HammerLast Series 400 when light material loading and high velocity exists. Has also replaced ceramic lined carbon steel in fly ash situations.</p> <p>*Maximum working temperature is as follows: Constant 200-250°F; Intermittent 400°F</p> <p>Example of products conveyed: Fly ash, silica sand, zirconia, coke breeze, alumina, emery, etc.</p>		



## Characteristics continued...

Hard Ductile Iron (DH)	240-300 BHN	Max Temp: 500°F
<p>Available in tube sizes with socket-weld end configurations only. Hard Ductile Iron is a reliable substitute for aluminum and not as brittle as cast iron. Allows line flex (elongation=3%) and is more wear resistant than regular ductile iron, aluminum, cast iron, or carbon steel.</p> <p>Example of products conveyed: Similar to products conveyed by aluminum, stainless steel, carbon steel, and cast iron. Can be used to convey glass-filled plastic pellets. Used when tube size is specified.</p>		

Carbon Steel (SC)	175-190 BHN	Max Temp 800°F
<p>Available in pipe schedule 10/40 sizes and tube sizes with socket-weld and flange end configurations. Call for availability of pipe schedule 80 sizes. Used in industries as absolute specified alloy. Operates well with temperature differential. Often, carbon steel is inappropriately specified when other, more economical alloys will out-perform it. Elongation: 24%.</p> <p>Example of products conveyed: Used as a specified alloy in the petroleum and mining industries due to its capability to withstand sudden changes from hot to cold</p>		

Stainless Steel 304 (S4)	130-150 BHN	Max Temp 1100-1400°F
Stainless Steel 316 (S6)	130-150 BHN	Max Temp 1100-1400°F
<p>Available in pipe schedule 10/40 sizes and tube sizes with socket-weld and flange end configurations. Call for availability of pipe schedule 80 sizes. Uses for smooth bore operations and clean industries. Will accept high heat factors. Aluminum may be a substitute when stainless steel is indiscriminately specified. Type 316 is more resistant to harsh chemicals and has a larger amount of chromium and nickel than type 304.</p> <p>Examples of products conveyed: Plastics, plastic pellets, pharmaceuticals, clean products, finished food products, products with chemical properties that are corrosive to other standard alloys, etc.</p> <p>Composition: Carbon, Manganese, Silicon, Phosphorus, Sulphur, Chromium, Nickel, Molybdenum</p>		

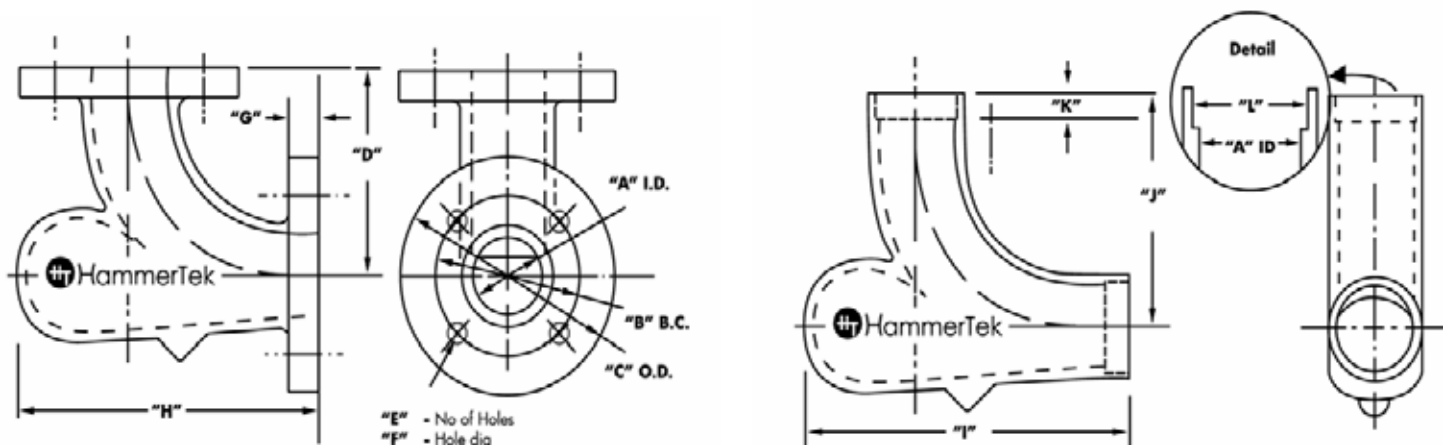
### Special Notes:

- Brinell Hardness (BHN) numbers are usually a varied range.
- The Brinell Hardness and Mohs scale are guidelines for basic conveying operations only. EXAMPLE: Fly ash is approximately 7.0 on the Mohs scale. Under normal circumstances, we would recommend Hammerlast Series 400; however, suppose that the system is extremely light loaded with high velocity. Then the alloy recommended would be Hammerloy.



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## Smart Elbow® deflection elbow - 90° 11 Gauge Tube Dimensions

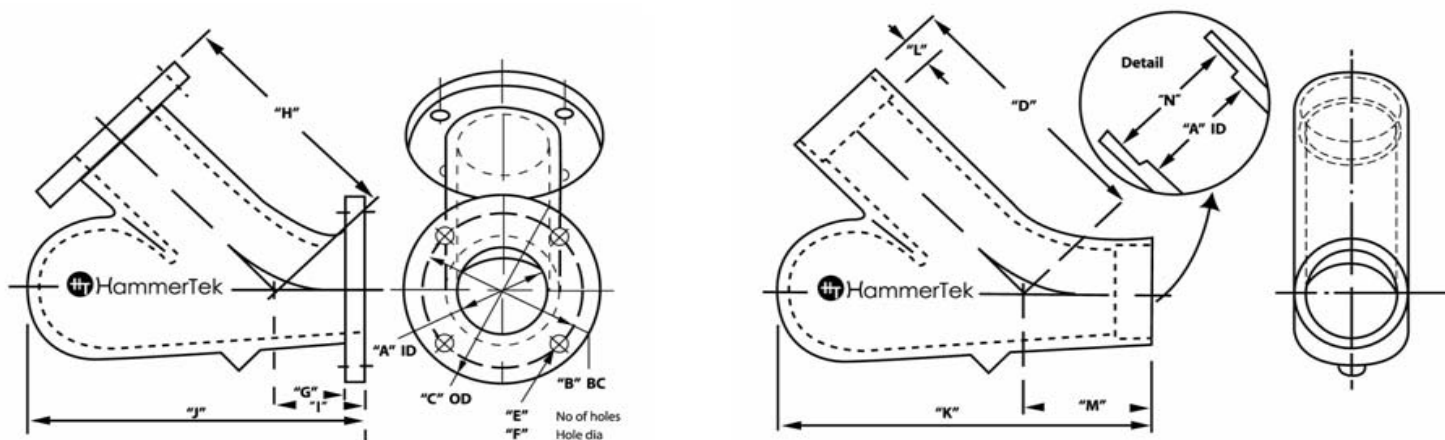


Tube Size	1.5"	1.75"	2"	2.25"	2.5"	3"	3.5"	4"	4.5"	5"	6"	8"
A	1.25	1.5	1.75	2.00	2.25	2.75	3.26	3.75	4.25	4.75	5.75	7.75
B	N/A	N/A	4.75	N/A	5.50	6.00	6.00	7.00	7.50	8.50	9.50	11.75
C	N/A	N/A	6.00	N/A	7.00	7.50	7.50	8.50	9.00	10.00	11.00	13.50
D	N/A	N/A	7.00	N/A	7.00	7.75	7.50	8.50	8.94	10.25	11.50	14.25
E	N/A	N/A	4.00	N/A	4.00	4.00	4.00	8.00	8.00	8.00	8.00	8.00
F	N/A	N/A	0.75	N/A	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88
G	N/A	N/A	0.63	N/A	0.69	0.75	0.75	0.94	1.00	0.94	1.00	1.13
H	N/A	N/A	9.00	N/A	10.13	11.13	12.25	13.91	14.88	18.06	21.13	27.63
I	9.50	9.50	11.00	11.68	12.13	13.13	15.13	18.22	18.00	22.88	26.63	33.63
J	7.50	7.50	8.50	8.06	9.00	9.75	10.50	12.81	12.06	15.06	17.00	20.25
K	2.50	2.50	2.63	2.63	2.69	2.75	3.00	4.00	4.25	4.50	5.50	7.00
L	1.50	1.75	2.00	2.25	2.50	3.00	3.50	4.00	4.50	5.00	6.00	8.00

Chamfering available to match 14, 16 or 18 gauge tubing



## Smart Elbow® deflection elbow - 45° 11 Gauge Tube Dimensions



Tube Size	2"	2.5"	3"	3.5"	4"	4.5"	5"	6"	8"
A	1.75	2.25	2.75	3.25	3.75	4.25	4.75	5.75	7.75
B	4.75	5.50	6.00	6.00	7.00	7.5	8.50	9.50	11.75
C	6.00	7.00	7.50	7.50	8.50	9.00	10.00	11.00	13.50
D	9.44	10.13	11.38	12.50	15.69	16.38	18.81	22.25	26.00
E	4.00	4.00	4.00	4.00	8.00	8.00	8.00	8.00	8.00
F	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88
G	0.63	0.69	0.75	0.75	0.94	1.00	0.94	1.00	1.13
H	7.44	8.13	9.38	8.56	11.38	13.25	14.00	16.75	20.00
I	3.06	3.25	3.63	4.06	3.88	4.75	4.81	5.31	7.00
J	9.00	10.13	11.19	12.62	13.91	15.88	18.50	21.50	28.38
K	2.63	2.69	2.75	3.00	4.00	4.25	4.50	5.50	7.00
L	2.00	2.50	3.00	3.50	4.00	4.50	5.00	6.00	8.00
M	5.06	5.25	5.63	7.00	8.19	7.88	9.63	10.81	14.00
N	2.00	2.50	3.00	3.50	4.00	4.50	5.00	6.00	8.00

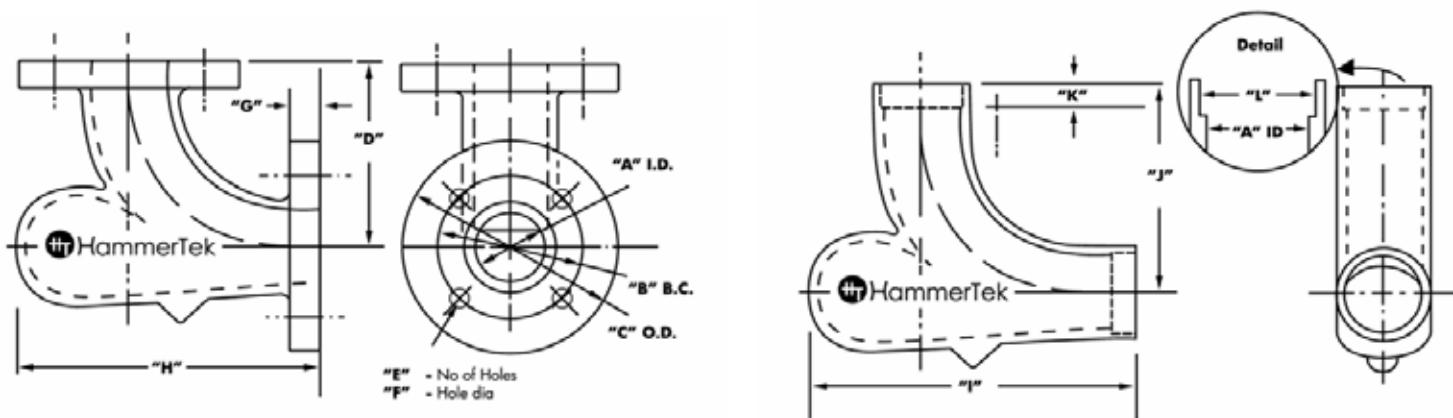
Chamfering available to match 14, 16 or 18 gauge tubing





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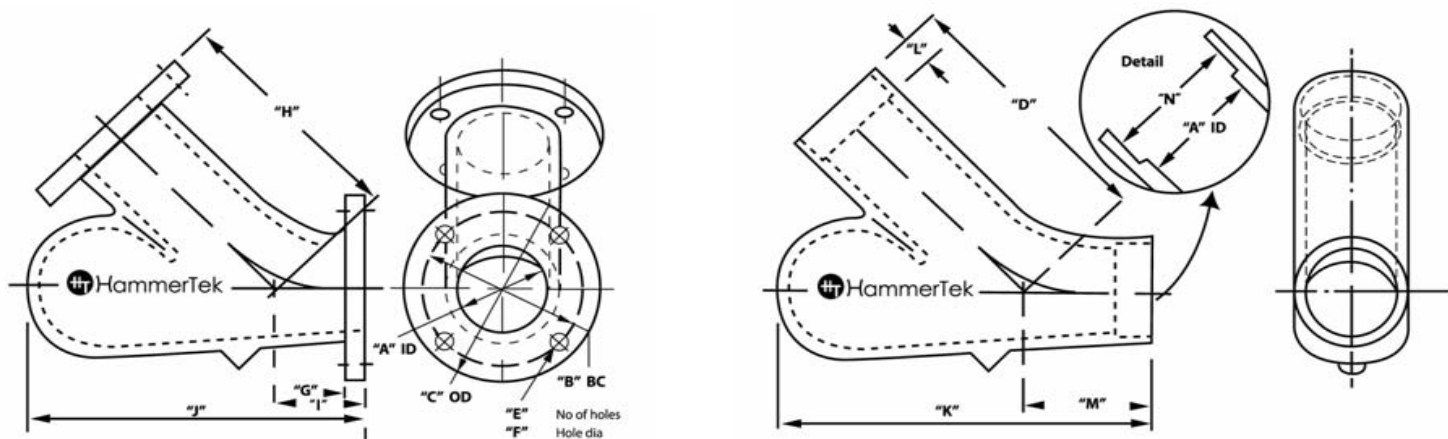
## Smart Elbow® deflection elbow - 90° Schedule 10/40 Pipe Dimensions



Pipe Size	1.25"	1.5"	2"	2.5"	3"	3.5"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"
A	1.38	1.68	2.19	2.64	3.25	3.75	4.25	5.361	5.34	8.31	10.38	12.38	13.50	15.50	17.50	19.50
B	3.50	3.88	4.75	5.50	6.00	7.00	7.50	8.50	9.50	11.75	14.25	17.00	18.75	21.25	22.75	25.00
C	4.62	5.00	6.00	7.00	7.50	8.50	9.00	10.00	11.00	13.50	16.00	19.00	21.00	23.50	25.00	27.50
D	5.43	5.00	6.06	7.00	7.50	8.50	8.94	10.25	11.50	14.13	16.50	19.00	21.50	23.81	25.50	55.69
E	4.00	4.00	4.00	4.00	8.00	8.00	8.00	8.00	8.00	8.00	12.00	12.00	12.00	16.00	16.00	20.00
F	0.63	0.63	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	1.00	1.00	1.13	1.13	1.25	1.25
G	0.63	0.68	0.75	0.88	0.94	0.94	1.00	1.00	1.00	1.13	1.25	1.25	1.38	1.50	1.62	1.69
H	7.32	7.75	9.50	10.44	12.31	13.94	14.88	18.50	21.25	26.75	31.81	39.75	45.38	51.43	54.25	75.00
I	8.62	9.06	10.75	11.94	13.62	15.75	16.63	20.25	23.50	29.25	34.81	43.25	49.38	55.93	59.00	N/A
J	6.75	6.25	7.31	8.31	8.81	10.31	10.69	12.00	13.75	16.63	19.50	22.50	25.50	28.31	30.25	N/A
K	1.88	1.94	2.00	2.18	2.25	2.75	2.75	2.75	3.25	3.63	4.25	4.75	5.38	6.00	6.50	N/A
L	1.66	1.91	2.38	2.88	3.50	4.00	4.50	5.56	6.63	8.63	10.75	12.75	14.00	16.00	18.00	N/A



## Smart Elbow® deflection elbow - 45° Schedule 10/40 Dimensions



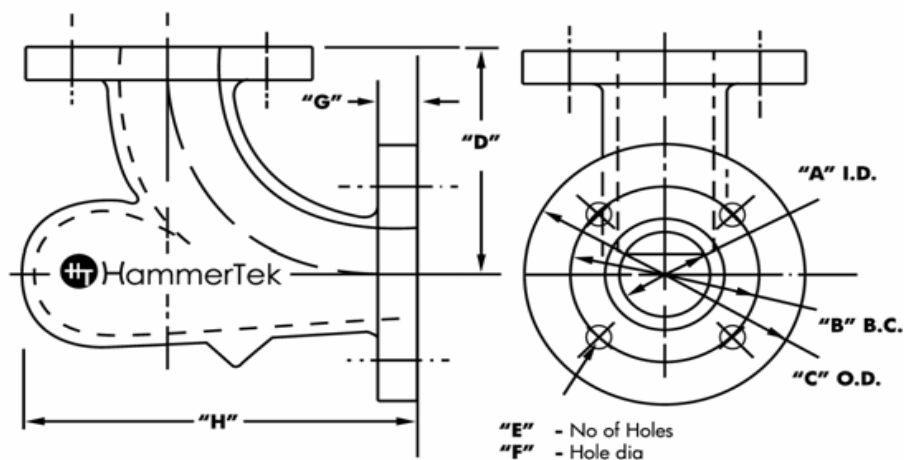
Pipe Size	1.5"	2"	2.5"	3"	3.5"	4"	5"	6"	8"	10"	12"	14"	16"
A	1.68	2.19	2.64	3.25	3.75	4.25	5.31	5.34	8.31	10.38	12.38	13.50	15.50
B	3.88	4.75	5.50	6.00	7.00	7.50	8.50	9.50	11.75	14.25	17.00	18.75	21.25
C	5.00	6.00	7.00	7.50	8.50	9.00	10.00	11.00	13.50	16.00	19.00	21.00	23.50
D	7.31	9.00	9.56	10.75	13.18	14.56	15.50	19.06	23.75	28.00	32.63	37.75	43.75
E	4.00	4.00	4.00	4.00	8.00	8.00	8.00	8.00	8.00	12.00	12.00	12.00	16.00
F	0.63	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	1.00	1.00	1.13	1.13
G	0.68	0.75	0.88	0.94	0.94	1.00	1.00	1.00	1.13	1.25	1.25	1.38	1.50
H	6.06	7.75	8.13	9.44	11.38	12.81	13.75	16.81	21.25	25.00	29.13	33.75	39.25
I	2.56	3.38	3.31	4.00	3.88	4.68	5.25	5.75	6.50	8.03	9.13	9.81	10.75
J	7.75	9.38	10.44	12.56	13.94	15.88	19.25	21.00	28.75	35.44	41.43	46.81	53.06
K	8.81	10.62	11.94	13.87	15.75	17.63	21.00	23.25	31.25	38.44	44.93	50.81	57.56
L	1.94	2.00	2.18	2.25	2.75	2.75	2.75	3.25	3.63	4.25	4.74	5.38	6.00
M	3.81	4.63	4.62	5.31	5.69	6.56	7.00	8.00	9.00	11.03	12.63	13.81	15.25
N	1.91	2.38	2.88	3.50	4.00	4.50	5.56	6.63	8.63	10.75	12.75	14.00	16.00





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## Smart Elbow® deflection elbow - 90° Schedule 80 Pipe Dimensions

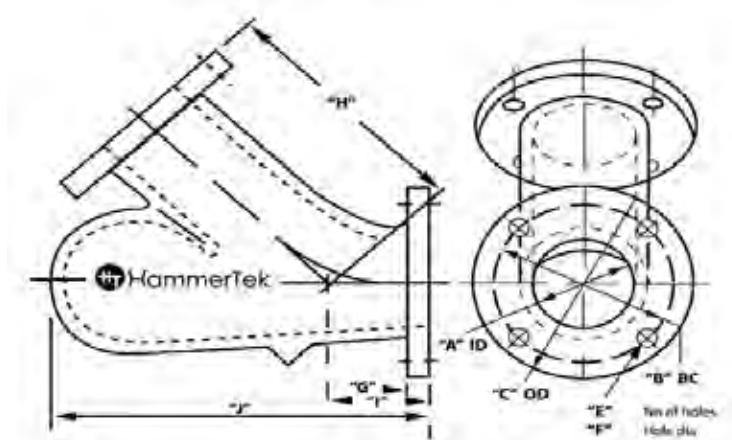


Pipe Size	1"	1.25"	1.5"	2"	2.5"	3"	3.5"	4"	5"	6"	8"	10"	12"	14"
A (All)	0.94	1.28	1.50	1.94	2.32	2.90	3.36	3.83	4.81	5.76	7.63	9.56	11.37	12.50
B 150# FL	3.12	3.50	3.88	4.75	5.50	6.00	7.00	7.50	8.50	9.50	11.75	14.25	17.00	18.75
B 300# FL	3.50	3.88	4.50	5.00	5.88	6.63	7.25	7.88	9.25	10.63	13.00	15.25	17.75	20.25
C 150# FL	4.50	4.62	5.00	6.00	7.00	7.50	8.50	9.00	10.00	11.00	13.50	16.00	19.00	21.00
C 300# FL	4.88	5.25	6.13	6.50	7.50	8.25	9.00	10.00	11.00	12.50	15.00	17.50	20.50	23.00
D* (All)	5.12	5.56	5.13	6.19	7.00	7.63	8.63	9.06	10.38	11.63	14.25	16.62	19.12	21.62
E 150# FL	4.00	4.00	4.00	4.00	4.00	4.00	8.00	8.00	8.00	8.00	8.00	12.00	12.00	12.00
E 300# FL	4.00	4.00	4.00	8.00	8.00	8.00	8.00	8.00	8.00	12.00	12.00	16.00	16.00	20.00
F 150# FL	0.62	0.62	0.63	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	1.00	1.00	1.25
F 300# FL	0.75	0.75	0.88	0.75	0.88	0.88	0.88	0.88	0.88	0.88	1.00	1.12	1.25	1.25
G 150# FL	0.68	0.75	0.82	0.88	1.00	1.06	1.06	1.13	1.13	1.13	1.25	1.38	1.38	1.50
G 300# FL	0.75	0.82	0.82	0.88	1.00	1.13	1.19	1.25	1.38	1.44	1.63	2.00	2.12	2.25
H* (All)	6.38	7.50	7.88	9.63	10.56	12.43	14.06	15.00	18.63	21.33	26.88	31.94	39.88	45.62
Raised Face Dia. (All)	2.00	2.5	2.88	3.63	4.13	5.00	5.50	6.19	7.31	8.50	10.63	12.75	15.00	16.25

\* Add 1/16" for 150# and 300# raised-face.



## Smart Elbow® deflection elbow - 45° Schedule 80 Pipe Dimensions



Pipe Size	1.5"	2"	2.5"	3"	3.5"	4"	5"	6"	8"
A (All)	1.50	1.94	2.32	2.90	3.36	3.83	4.81	5.76	7.63
B 150# FL	3.88	4.75	5.50	6.00	7.00	7.50	8.50	9.50	11.75
B 300# FL	4.50	5.00	5.88	6.63	7.25	7.88	9.25	10.63	13.00
C 150# FL	5.00	6.00	7.00	7.50	8.50	9.00	10.00	11.00	13.50
C 300# FL	6.13	6.50	7.50	8.25	9.00	10.00	11.00	12.50	15.00
E 150# FL	4.00	4.00	4.00	4.00	8.00	8.00	8.00	8.00	8.00
E 300# FL	4.00	8.00	8.00	8.00	8.00	8.00	8.00	12.00	12.00
F 150# FL	0.63	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88
F 300# FL	0.88	0.75	0.88	0.88	0.88	0.88	0.88	0.88	1.00
G 150# FL	0.82	0.88	1.00	1.06	1.06	1.13	1.13	1.13	1.25
G 300# FL	0.82	0.88	1.00	1.25	1.19	1.25	1.38	1.44	1.63
H* (All)	6.19	7.88	8.25	9.56	11.50	12.94	13.88	16.94	21.38
i* (All)	2.69	3.50	3.43	4.13	4.00	4.81	5.38	5.88	6.63
J* (All)	7.88	9.50	10.56	12.69	14.06	16.00	19.38	21.13	28.88
Raised Face Dia. (All)	2.88	3.63	4.13	5.00	5.50	6.19	7.31	8.50	10.63

\* Add 1/16" for 150# and 300# raised-face.





800-255-6213



Application Data for HammerTek Smart Elbows  
Pneumatic Conveying - Dry Materials

Please fill out and return to ChaDa Sales  
Email: chada@chadasales.com

Company Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Country: \_\_\_\_\_  
Contact Name: \_\_\_\_\_ Title: \_\_\_\_\_  
Phone: \_\_\_\_\_ Ext: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

SYSTEM INFORMATION:

Material: \_\_\_\_\_ If plastics: Glass-filled \_\_\_\_\_ % Mineral-filled \_\_\_\_\_ %  
Operating Temp: \_\_\_\_\_ EF Lbs./cu.ft.: \_\_\_\_\_ Particle Size: \_\_\_\_\_ Moisture: \_\_\_\_\_ %  
Hygroscopic? \_\_\_\_\_ Other Characteristics: \_\_\_\_\_  
Is this a truck unload system? \_\_\_\_\_ Distance from pick-up to first elbow: \_\_\_\_\_ ft.

DILUTE PHASE Pressure or Vacuum (Circle One) \_\_\_\_\_ Production Rate \_\_\_\_\_ TPH # / min.  
Operating Pressure: \_\_\_\_\_ PSIG (Pressure Sys.) \_\_\_\_\_ "Hg (Vacuum)  
Air Volume: \_\_\_\_\_ SCFM \_\_\_\_\_ ACFM  
Velocities: \_\_\_\_\_ FPM (Pick up / acceleration) \_\_\_\_\_ FPM (Terminal)  
Method of feed (RV, eductor, screw, wild flow, etc.): \_\_\_\_\_

DENSE PHASE Operating Pressure: \_\_\_\_\_ PSIG Size of Pressure Vessel: \_\_\_\_\_ cu. ft.  
Cycle Time: \_\_\_\_\_ Min. On \_\_\_\_\_ Min. Off \_\_\_\_\_ Is air flow continuous? Yes No  
Does System Have Line Air Boosters? Yes No Is the System a Plug Flow/Pulse Flow

CONVEYING LINE INFORMATION

Pipe Alloy: \_\_\_\_\_ Pipe Size: \_\_\_\_\_ Schedule: \_\_\_\_\_  
Tube Size OD: \_\_\_\_\_ Gauge: \_\_\_\_\_ Elbow Alloy: \_\_\_\_\_  
If retrofit, type and alloy currently used: \_\_\_\_\_  
Longevity of current elbow: \_\_\_\_\_ Other Comments: \_\_\_\_\_  
# of elbows in the system: \_\_\_\_\_ 90E \_\_\_\_\_ 45E Other degree elbows: \_\_\_\_\_ # Diverter Valves: \_\_\_\_\_  
# vertical runs: \_\_\_\_\_ # horizontal runs: \_\_\_\_\_ (45E Smart Elbows not recommended in vertical plane)  
Total line length: \_\_\_\_\_ ft. Vertical length: \_\_\_\_\_ ft. Horizontal Length: \_\_\_\_\_ ft.  
Type of elbow connection: Flange Socket-weld No-Weld Special Compression Couplings (Circle One)

Free Trial\*: Yes No  
One-Year One-Time Free Replacement Warranty\*: Yes No



Application Data for HammerTek Smart Elbows  
Slurry Conveying / Transfer Systems

Please fill out and return to ChaDa Sales  
Email: chada@chadasales.com

Company Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Country: \_\_\_\_\_  
Contact Name: \_\_\_\_\_ Title: \_\_\_\_\_  
Phone: \_\_\_\_\_ Ext: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

SLURRY SYSTEMS:

Liquid: \_\_\_\_\_ Type Solids: \_\_\_\_\_ % Solids by Weight \_\_\_\_\_ %  
Particle Size of Solids: \_\_\_\_\_ Other Chemicals in Slurry: \_\_\_\_\_  
Specific Gravity of Solids: \_\_\_\_\_ Flow Rate: \_\_\_\_\_ GPM Velocity: \_\_\_\_\_ FPS  
Operating Pressure: \_\_\_\_\_ PSIG Slurry Temp: \_\_\_\_\_ EF  
Other characteristics on the existing system (such as choking, hammer effect, wear) and any special notes  
that may be applicable: \_\_\_\_\_

LIQUID/CONDENSATE

Type: Liquid Condensate (Circle One) Flow Rate: \_\_\_\_\_ GPM #/Min  
Velocity: \_\_\_\_\_ FPS Temperature: \_\_\_\_\_ EF Operating Pressure: \_\_\_\_\_ PSIG  
Other comments pertinent to the system: \_\_\_\_\_

STEAM SERVICE

Operating Pressure: \_\_\_\_\_ PSIG Flow Rate: \_\_\_\_\_ #/Min  
Temperature: \_\_\_\_\_ EF Velocity: \_\_\_\_\_ FPS  
Other comments pertinent to the system: \_\_\_\_\_

PIPING INFORMATION

Pipe Alloy: \_\_\_\_\_ Pipe Size: \_\_\_\_\_ Schedule: \_\_\_\_\_ Elbow Alloy: \_\_\_\_\_  
Longevity of current alloy: \_\_\_\_\_ Other Comments: \_\_\_\_\_  
# of elbows in the system: \_\_\_\_\_ 90E \_\_\_\_\_ 45E Other degree elbows: \_\_\_\_\_  
Total line length: \_\_\_\_\_ ft. Vertical length: \_\_\_\_\_ ft. Horizontal Length: \_\_\_\_\_ ft.  
Type of ANSI flange: 125# 150# 300# Other: \_\_\_\_\_

Free Trial\*: Yes No

One-Year One-Time Free Replacement Warranty\*: Yes No



800-255-6213

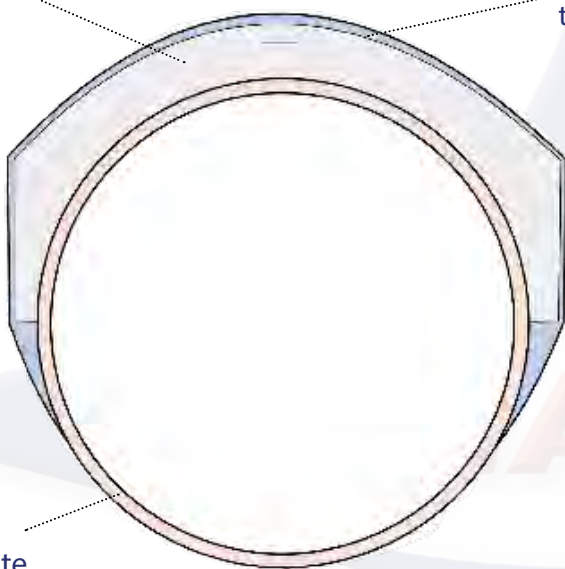
## Cast-Back® Elbow

Designed and manufactured to withstand the impact of large particle pneumatic conveying, the patented Cast-Back® elbow offers superior product protection. The elbow has a 3/4" thick interlocking back tile, which also offers additional 1/4" thick side protection.

### Cross-Section of Cast-Back® Elbow

Ceramic Tile

Reinforcement  
to Hold Tiles



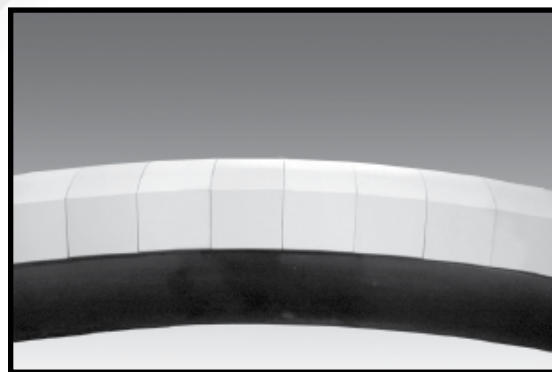
Interior  
Substrate

- Highly Abrasion Resistant
- Impact Resistant
- Easily replaces existing elbows
- Does not change line flow
- Available in any degree & most standard CLR's
- Available in CS, SS, Alum, and Galvanized
- Available in Pipe or Tube

Available in plain ends, flanged ends, grooved ends, or other specified ends. Special orders are welcome.

Available in 2", 3", 4", & 5" pipe sizes

Available in 3" & 4" tube sizes



\*tiles shown here without exterior reinforcement

## Ceram-Back® Elbow

Designed to eliminate unwanted costs such as maintenance, loss of material, and down time, the Ceram-Back® elbow replaces the conventional elbow and is manufactured to remain in a system much longer - thus, reducing costs and raising production.

The Ceram-Back® elbow has a jacket across the back of the core elbow which is approximately 1/2" of ceramic compound. This compound has a Mohs hardness of 9+, second only to diamond, which has a Mohs hardness of 10. The ceramic jacket and core elbow is then wrapped with an exterior material to maintain hoop strength. Once the core elbow has worn through, the abrasion is then transferred to the ceramic outer jacket. The metal core also acts as a static conductor.

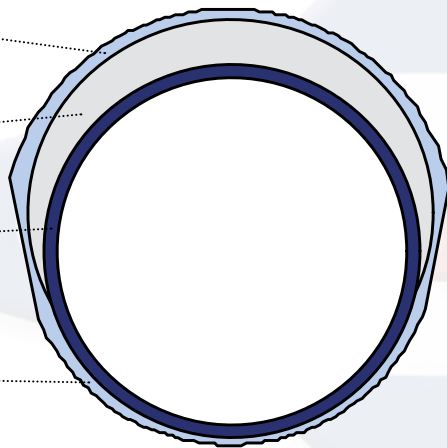
### Cross-Section of Ceram-Back® Elbow

Outside Radius  
of Elbow

Ceramic  
Compound

Interior  
Substrate

Reinforcement  
to Maintain  
Hoop Strength



- Abrasion Resistant
- Easily replaces existing elbows
- Does not change line flow
- Available in any degree & CLR
- Available in CS, SS, Alum, and Galvanized
- Available in Pipe or Tube

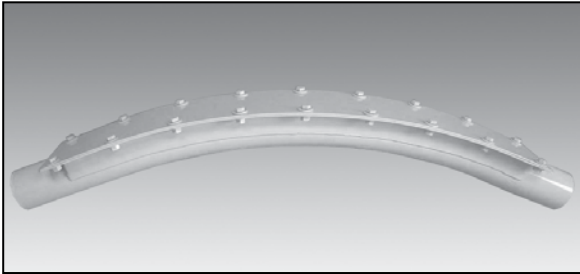
Available in plain ends, flanged ends, grooved ends, or other specified ends. Special orders are welcome.





800-255-6213

## Replaceable-Back Elbow



Cross Section of Elbow

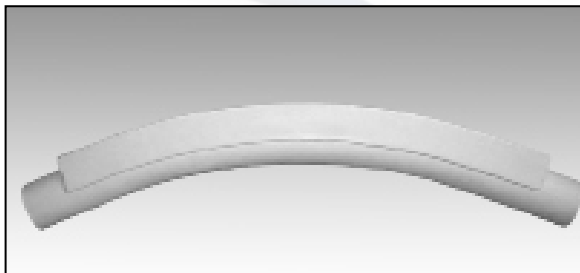
The Replaceable-Back Elbow is constructed from a pipe or tube elbow. The sides are made from 10GA material welded to the bend. The back of the elbow is also 10GA material, but 10GA AR plate and 1/4" steel is also available. The back plate can be replaced as needed. Extra back plates are available at the time of purchase. Available in both Carbon Steel and Stainless Steel construction.

This elbow is an excellent choice for lower abrasion applications.

It is not recommended for food applications, due to the open voids that can collect material.

Available in plain ends, flanged ends, grooved ends, or other specified ends. Special orders are welcome.

## Mortar-Filled (Cement Back) Elbow



Cross Section of Elbow

This elbow has a cavity back filled with hard concrete. The metal exterior can be constructed out of various thicknesses of materials. A standard or custom mix concrete can be used. For high heat applications, refractory can be used instead of cement.

This elbow is available in every size, degree, and bendable centerline radius.

These can be constructed from both Carbon Steel and Stainless Steel.

Typical applications include Abrasive Dust, Coal Fines, Fly Ash & Portland Cement

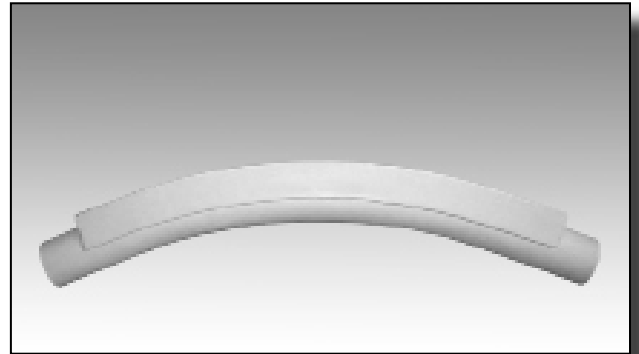
Available in plain ends, flanged ends, grooved ends, or other specified ends. Special orders are welcome.

## Hollow-Back Elbow

Our Hollow-Back elbow is designed to capture abrasive product in the fabricated back cavity. The abrasive material then rides against itself. We fabricate the Hollow-Back by using a tube or pipe elbow, thus eliminating the need for transitions. Typical construction is 10Ga material. Thicker metal and AR plate is available.

Available in both Carbon Steel and Stainless Steel construction.

This elbow is an excellent choice for higher abrasion applications with material that packs. It is not recommended for food applications, due to the open voids that can collect material. Typical Applications include Sand and Powdered Coal.



Available in plain ends, flanged ends, grooved ends, or other specified ends. Special orders are welcome.

## Porcelain Lined Elbows and Tubing

Porcelain lining is used due to its resistance to corrosive attack, atmospheric pollution, extreme weather conditions, and abrasion. In these extreme environments, standard steel tube, pipe, and elbows can have a limited service life.

Porcelain enamel is a glassy compound that is adhered to the inside diameter of tube or pipe. This compound is applied as a liquid slurry to the interior of carbon or stainless steel. When baked, the result is a glassy interior surface that is rated at 6 to 7 on the Moh's scale of hardness; diamonds are the hardest at a rating of 10. The surface will easily resist scratching from a steel blade.

Porcelain lining is available in single or double coat, and the thickness of the coating is checked before shipment. Single coating is .004-.007" thick, and double coating is .008-.012" thick. Tube or pipe up to 10' in length can be porcelain lined.

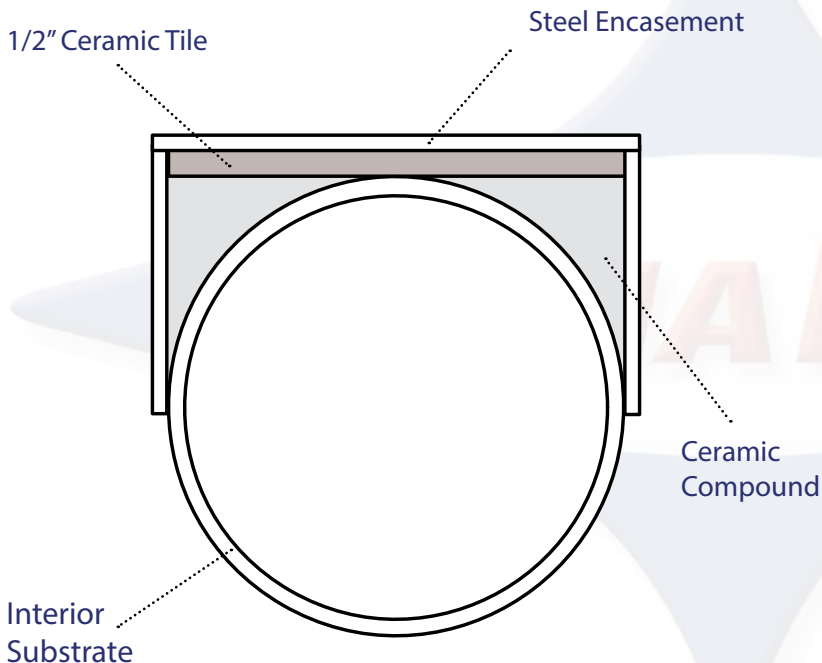


ChaDa Sales has an answer for all of your difficult applications. Please give us a call to discuss!

## Ceramic Flat-Back Elbows

Designed and manufactured for extremely abrasive applications. The key to our Cast Ceramic "Flat-Back" elbow is that it uses a pipe or tube for the inner core substrate. Using a pipe or tube core lessens the wear caused by the outlet transition, which is no longer needed (going from square back to round).

### Cross-Section of Flat-Back® Elbow



Available in plain ends, flanged ends, grooved ends, or other specified ends. Special orders are welcome.



\*Flat-Back without cover showing cast tiles

- Highly Abrasion Resistant
- Impact Resistant
- Easily replaces existing elbows
- Does not change line flow
- Available in any degree & CLR
- Available in CS and SS
- Available in Pipe or Tube



\*after completion showing flow direction

## Ceramic Fittings

### Ceramic Coating

ChaDa Sales has the ability to coat whatever parts you may need. This includes laterals, TY's, wyes, bifurcated bends, cyclones, tube adapters, blow-thru adapters, diverter valve transitions, wear plates, or your specific part. Plain ends, flanges, threaded, and custom ends are available.



### Ceramic Lining

We can ceramic coat - or tile line - the inside of cyclones, chutes, bins, target boxes, and certain types of valves.



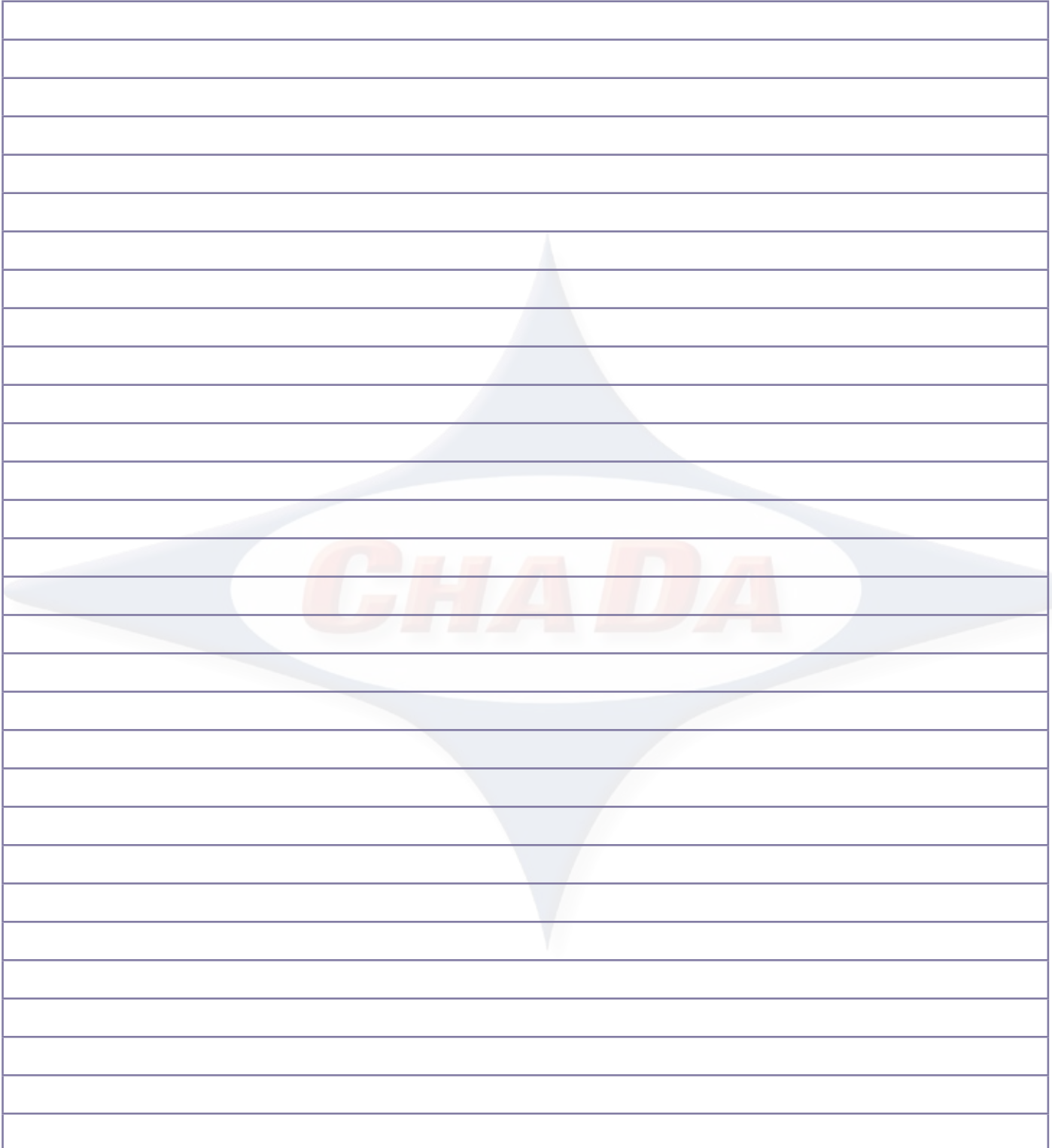
### Ceramic Coated Dead End Tee

This specialty Tee acts like a short radius elbow. The material fills up the closed end then protects itself from abrasion using the application material. This elbow is ceramic coated for extra protection and is extremely effective against severe abrasion.



**800-255-6213**

## Notes:





# QF<sup>®</sup>
















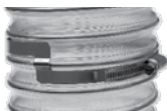

## Quick-Fit<sup>®</sup> Ducting Catalog

Made in  
the USA





800-255-6213

<p>QF Pipe</p>  <p>PART: 3200</p> <p>Page 56</p>	<p>Adjustable Nipple</p>  <p>PART: 3202</p> <p>Page 56</p>	<p>O-Ring</p>  <p>PART: 3262</p> <p>Page 56</p>	<p>Clamps</p>  <p>PART: 3260</p> <p>Page 57</p>	<p>Flanged Pipe</p>  <p>PART: 3201</p> <p>Page 58</p>	<p>16ga &amp; 18ga Pipe</p>  <p>PART NO. 3200-XX16 PART NO. 3200-XX18</p> <p>Page 60</p>	<p>16ga Nipple Assembly &amp; 18ga Nipple</p>  <p>PART NO. 3202-XX18</p> <p>Page 60</p>
<p>Angle Flange Adapter</p>  <p>PART: 3250</p> <p>Page 58</p>	<p>Angle Flange &amp; Flange Gasket</p>  <p>PARTS: 3261 &amp; 3263</p> <p>Page 59</p>	<p>Elbows</p>  <p>PART: 3210</p> <p>Page 61-62</p>	<p>Long Radius Elbows</p>  <p>PART: 3210 LR</p> <p>Page 13-14</p>	<p>Flanged Elbows</p>  <p>PART: 3211</p> <p>Page 63-64</p>	<p>Tubed Elbows</p>  <p>PART: 3214</p> <p>Page 65</p>	<p>16ga Elbows</p>  <p>PART: 3212</p> <p>Page 66</p>
<p>Branch</p>  <p>PART: 3220</p> <p>Page 67</p>	<p>Y-Branch</p>  <p>PART: 3221</p> <p>Page 67</p>	<p>Double Branch</p>  <p>PART: 3226</p> <p>Page 68</p>	<p>T-Branch</p>  <p>PART: 3227</p> <p>Page 68</p>	<p>In-Cut</p>  <p>PART: 3223</p> <p>Page 69</p>	<p>Tap-In</p>  <p>PART: 3224</p> <p>Page 69</p>	
<p>Hose Adapter</p>  <p>PART: 3282</p> <p>Page 70</p>	<p>Machine Adapter</p> <p>Expanded</p>  <p>Raw</p>  <p>PART: 3249</p> <p>Page 70</p>	<p>Reducer</p>  <p>PART: 3222</p> <p>Page 71</p>	<p>Transition Rectangular to Round</p>  <p>PART: 3225</p> <p>Page 71</p>	<p>End Cap and End Cap w/ bird screen</p>  <p>PART: 3151 PART: 3152</p> <p>Page 72</p>		
<p>Blast Gate Manual</p>  <p>PART: 3240</p> <p>Page 73</p>	<p>Blast Gate NFMES Manual</p>  <p>PART: 3241</p> <p>Page 73</p>	<p>SD Auto Blast Gate</p>  <p>PART: 3242</p> <p>Page 74</p>	<p>Blast Gate NFES Automatic</p>  <p>PART: 3245</p> <p>Page 74</p>			
<p>Black Rubber Hose</p>  <p>PART: 3280-XXXX-000000</p> <p>Page 75</p>	<p>Clear Rubber Hose</p>  <p>PART: 3280-XXXX-700000</p> <p>Page 75</p>	<p>Hose Clamp</p>  <p>PART: 3285</p> <p>Page 75</p>	<p>Bridge Hose Clamp</p>  <p>PART: 3288</p> <p>Page 75</p>	<p>Static Dissipative Urethane Hose</p>  <p>PART: 3279</p> <p>Page 75</p>	<p>Rigid Flex Steel Hose</p>  <p>PART: 3281</p> <p>Page 76</p>	<p>Ultra Flex Steel Hose</p>  <p>PART: 3283</p> <p>Page 76</p>

QF Ducting cuts  
installation and down-  
time by more than 45%



<p>Canopy Hood</p>  <p>PART: 3270</p> <p>Page 77</p>	<p>Barrel Hood</p>  <p>PART: 3271</p> <p>Page 77</p>	<p>Router Hood</p>  <p>PART: 3231 with Magnet</p> <p>PART: 3232</p> <p>Page 77</p>	<p>Bell Mouth Hood</p>  <p>PART: 3251</p> <p>Page 78</p>	<p>Radial Armsaw Hood</p>  <p>PART: 3229</p> <p>Page 78</p>	<p>Suction Hood</p>  <p>PART: 3230</p> <p>Page 78</p>	<p>Custom Manifold</p>  <p>Page 78</p>
<p>Manual Diverter Valve</p>  <p>PART: 3235</p> <p>Page 79</p>	<p>Automatic Diverter Valve</p>  <p>PART: 3236</p> <p>Page 79</p>	<p>SD Diverter Valve</p>  <p>PART NO. 3233 (Manual) PART NO. 3234 (Auto)</p> <p>Page 80</p>	<div>  <p>Made in the USA</p> </div>			
<p>Grippler Hanger</p>  <p>PART: 3266</p> <p>Page 87</p>	<p>Pipe Hanger &amp; Pipe Hanger HJ</p>  <p>PART: 3265 PART: 3265HJ</p> <p>Page 87</p>	<p>Clamp Hanger</p>  <p>PART NO. 3265QF</p> <p>Page 88</p>	<p>Strut Hanger</p>  <p>PART NO. 3265</p> <p>Page 88</p>	<p>Wall Flashing</p>  <p>PART NO. 3238</p> <p>Page 89</p>	<p>Roof Flashing</p>  <p>PART NO. 3237</p> <p>Page 89</p>	<p>Roof Skirt</p>  <p>PART NO. 3239</p> <p>Page 89</p>
<p>No-Loss Stackhead</p>  <p>PART: 3204</p> <p>Page 81</p>	<p>Jet Cap</p>  <p>Page 81</p>	<p>Silencer</p>  <p>PART: 3106</p> <p>Page 82</p>	<p>In Line Back Draft Damper</p>  <p>PART: 3219</p> <p>Page 82</p>	<p>Vibration Isolator</p>  <p>PART: 3206</p> <p>Page 83</p>	<p>Butterfly Valve</p>  <p>PART: 3208</p> <p>Page 84</p>	<p>Bleed in Valve</p>  <p>PART: 3207</p> <p>Page 84</p>
<p>Ball Joint</p>  <p>PART: 3209</p> <p>Page 84</p>	<p>Floor Sweep</p>  <p>PART: 3248</p> <p>Page 85</p>	<p>Suction Nozzle Assembly</p>  <p>PART: 3272-0400</p> <p>Page 82</p>	<p>Viewing Spool</p>  <p>PART: 3205</p> <p>Page 85</p>	<p>Sliding Access Panel</p>  <p>PART: 3103</p> <p>Page 83</p>		
<p>In-line Spark Trap</p>  <p>PART: 3255</p> <p>Page 85</p>	<p>Leak-Free Epoxy Caulking</p>  <p>Page 86</p>	<p>Leak-Free Gasket</p>  <p>PART: 3190</p> <p>Page 86</p>	<p>Leak-Free O-ring</p>  <p>PART: 3191</p> <p>Page 86</p>	<p>Oil Mist Recycler</p>  <p>PART: 3192</p> <p>Page 86</p>		



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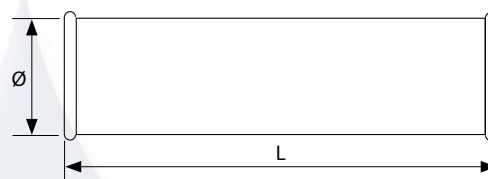
## QF Duct Pipe

Ø in	Part No.	Ends	Gauge Galv	Gauge SS	Length in	Weight Galv
3	3200-0300	QF	22	22	59.25	4.00
4	3200-0400		22	22	59.25	5.35
5	3200-0500		22	22	59.25	6.65
6	3200-0600		22	22	59.25	7.93
7	3200-0700		22	22	59.06	11.70
8	3200-0800		22	22	59.06	13.25
9	3200-0900		22	22	59.06	14.92
10	3200-1000		22	22	58.75	16.60
11	3200-1100		22	22	58.75	18.10
12	3200-1200		22	22	58.75	19.75
13	3200-1300		20	20	58.75	21.40
14	3200-1400		20	20	58.75	27.30
15	3200-1500		20	20	58.75	29.25
16	3200-1600		20	20	58.75	31.15
17	3200-1700		20	20	58.75	33.09
18	3200-1800		20	20	58.75	34.00
19	3200-1900		20	20	58.75	36.00
20	3200-2000		20	20	58.75	38.00
21	3200-2100		20	20	58.75	40.00
22	3200-2200		20	20	58.75	42.00
23	3200-2300		20	20	58.75	44.00
24	3200-2400		20	20	58.75	45.82



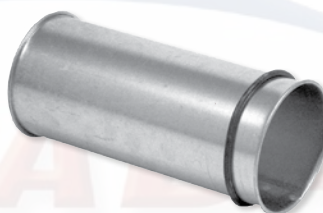
PART NO. 3200

- Laser welded seam and QF rolled ends.



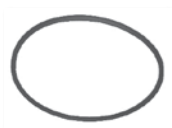
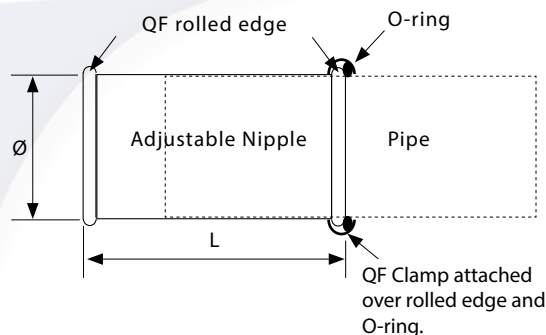
## QF Adjustable Nipple with O-Ring

Ø in	Part No.	Ends	Length L	Gauge Galv	Gauge SS	Weight Galv
3	3202-0300	QF	11 1/4"	22	22	0.80
4	3202-0400		11 1/4"	22	22	1.05
5	3202-0500		11 1/4"	22	22	1.30
6	3202-0600		11 1/4"	22	22	1.60
7	3202-0700		11 1/8"	22	22	2.40
8	3202-0800		11"	22	22	2.70
9	3202-0900		11"	22	22	3.05
10	3202-1000		10 7/8"	22	22	3.40
11	3202-1100		10 5/8"	22	22	3.80
12	3202-1200		10 5/8"	22	22	4.20
13	3202-1300		10 5/8"	20	20	4.70
14	3202-1400		10 5/8"	20	20	5.85
15	3202-1500		10 5/8"	20	20	6.25
16	3202-1600		10 5/8"	20	20	6.65
17	3202-1700		10 5/8"	20	20	7.05
18	3202-1800		10 5/8"	20	20	7.45
19	3202-1900		10 5/8"	20	20	7.90
20	3202-2000		10 5/8"	20	20	8.10
21	3202-2100		10 5/8"	20	20	8.50
22	3202-2200		10 5/8"	20	20	8.80
23	3202-2300		10 5/8"	20	20	9.10
24	3202-2400		10 5/8"	20	20	9.70

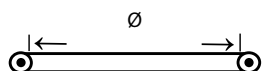


PART NO. 3202

- Used to provide variable length adjustment of QF System. Black O-ring included standard.
- Specify Red O-ring (high temp rating) if needed (additional cost).
- Laser welded.



PART NO. 3262



- Replacement O-ring for use with Adjustable Nipples.
- Specify Black for standard.
- Specify Red for high temp material. Higher quantities may require 7 - 10 working days lead time.

## Quick-Fit™ Clamp with Pin

Ø in	QF Clamps with Nitrile		Weight Galv
	Galvanized Part No.	#304 Stainless Steel Part No.	
3	3260-0300	3260-0300-SS	0.26
4	3260-0300	3260-0300-SS	0.28
5	3260-0300	3260-0300-SS	0.31
6	3260-0300	3260-0300-SS	0.33
7	3260-0300	3260-0300-SS	0.54
8	3260-0300	3260-0300-SS	0.59
9	3260-0300	3260-0300-SS	0.63
10	3260-0300	3260-0300-SS	0.68
11	3260-0300	3260-0300-SS	0.70
12	3260-0300	3260-0300-SS	1.32
13	3260-0300	3260-0300-SS	1.38
14	3260-0300	3260-0300-SS	1.48
15	3260-0300	3260-0300-SS	1.53
16	3260-0300	3260-0300-SS	1.60
17	3260-0300	3260-0300-SS	1.67
18	3260-0300	3260-0300-SS	1.77
19	3260-0300	3260-0300-SS	1.85
20	3260-0300	3260-0300-SS	1.92
21	3260-0300	3260-0300-SS	1.98
22	3260-0300	3260-0300-SS	2.04
23	3260-0300	3260-0300-SS	2.10
24	3260-0300	3260-0300-SS	2.20



- QF Clamps come standard from factory with Nitrile seals. Silicone or ePTFE seals are optional. Please specify your gasket choice when ordering. Clamps also may be ordered optionally without seals.
- Galvanized clamp supplied with galvanized bridge pin. SS clamp supplied with SS bridge pin.
- 3" to 6" QF Clamps: Small bridge pin with 3/8" wide seal from factory.
- 7" to 11" QF Clamps: Large bridge pin with 1/2" wide seal from factory.
- 12" to 24" QF Clamps: Large bridge pin with 5/8" wide seal from factory.
- Nitrile and Silicone seals stocked in rolls of 50'.

### Additional Bridge Pins

Galv 3260-0150-100000 | SS 3260-0150-200000  
Galv 3260-0200-100000 | SS 3260-0200-200000

### Additional Seals

Ø in	Nitrile Part No. & Price	Silicone Part No. & Price	ePTFE Part No. & Price
3 - 6	3260-0375-SP3000	3260-0375-HT3000	3260-0000-SG3000
7 - 11	3260-0500-SP4000	3260-0500-HT4000	3260-0000-SG4000
12 - 24	3260-0650-SP5000	3260-0650-HT5000	3260-0000-SG.650

## What is the best seal for my application?

Nitrile seals are inserted into QF Clamps as standard. Rated for max. intermittent service temperatures of 194° and continuous 158° F, there is no additional charge for nitrile so it is the most economical choice.

Silicone seals are an economically priced option for operating temperatures above 158° F. Rated for max. service temperature of 400° F, silicone has an extremely broad temperature range capability as it is also very good in low temperatures, remaining flexible at -60° F. Additionally, silicone offers superb resistance to weather aging and ozone.

ePTFE seals are not degraded by any common chemicals (0 - 14 pH range) FOR INDUSTRIAL USE ONLY. Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations. Max. temperature rating of 600° F.

## Flanged Duct Pipe, 3" - 24"

Ø in	Part No.	Ends	Gauge Galv	Gauge SS	Length in	Weight Galv
3	3201-03LW	FLANGE	22	22	59	5.40
4	3201-04LW		22	22		7.05
5	3201-05LW		22	22		9.05
6	3201-06LW		22	22		10.73
7	3201-07LW		22	22		15.70
8	3201-08LW		22	22		17.75
9	3201-09LW		22	22		19.92
10	3201-10LW		22	22		23.10
11	3201-11LW		22	22		25.10
12	3201-12LW		22	22		27.75
13	3201-13LW		20	20		29.90
14	3201-14LW		20	20		36.80
15	3201-15LW		20	20		44.25
16	3201-16LW		20	20		47.15
17	3201-17LW		20	20		49.59
18	3201-18LW		20	20		51.00
20	3201-20LW		20	20		57.00
22	3201-22LW		20	20		63.50
24	3201-24LW		20	20		68.82

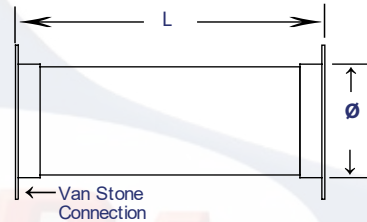


PART NO. 3201

- Use this duct for sizes over 24" diameter and / or when flanged connections are required.
- Longitudinal seam is solid welded (laser weld sizes 3" to 24" diameter, plasma weld on sizes 26" to 40").
- Angle flange attached by vanstone lip.
- Length is Nordfab pipe standard: 59".
- Pipe larger than 24" diameter is constructed of highly durable 16 gauge material.

## Flanged Duct Pipe, 26" - 40"

Ø in	Part No.	Ends	Gauge Galv	Gauge SS	Length in	Weight Galv
26	3201-2616	FLANGE	16	16	59	98.56
28	3201-2816					118.00
30	3201-3016					137.05
32	3201-3216					145.94
34	3201-3416					154.83
36	3201-3616					162.76
38	3201-3816					173.47
40	3201-4016					182.81

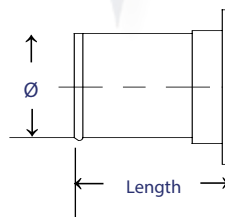


## QF Angle Flange Adapter

Ø in	Part No.	Approx. Length in	Gauge	Weight Galv
3	3250-0300	5	22	1.40
4	3250-0400	3.5	22	1.70
5	3250-0500	3.5	22	2.15
6	3250-0600	3.5	22	2.55
7	3250-0700	3.5	22	3.10
8	3250-0800	3.5	22	3.15
9	3250-0900	3.5	22	3.25
10	3250-1000	3.5	22	5.00
11	3250-1100	3.5	22	5.60
12	3250-1200	3.5	22	6.15
13	3250-1300	5	20	7.02
14	3250-1400	5	20	7.70
15	3250-1500	5	20	9.25
16	3250-1600	5	20	11.05
17	3250-1700	5	20	12.90
18	3250-1800	5	20	15.20
20	3250-2000	5	20	19.15
22	3250-2200	5	20	26.05
24	3250-2400	5	20	30.00



PART NO. 3250



- Angle Flange standard.
- Flat Flange: Specify hole pattern. (Cost same as Angle Flange).
- Specify angle (ANGFL) or flat flange (FFL).
- If no hole pattern drawing provided, flat flange will be blank.

\*Published lengths are nominal and may vary slightly.

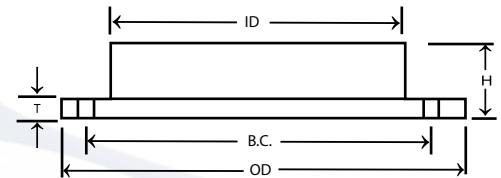
## Angle Flange

Ø in	Part No.	ID in	OD in	H in	T in	B.C.	No. of Bolts	Ø of Bolt Holes	Weight
3	3261-0300	3.06	5.06	1	.125	4.31	6	9/32	0.70
4	3261-0400	4.06	6.06	1	.125	5.31	6	9/32	0.85
5	3261-0500	5.06	7.06	1	.125	6.31	6	9/32	1.18
6	3261-0600	6.09	8.59	1.25	.125	7.31	6	9/32	1.38
7	3261-0700	7.13	9.63	1.25	.125	8.50	6	3/8	1.73
8	3261-0800	8.13	10.63	1.25	.125	9.56	6	3/8	1.90
9	3261-0900	9.13	11.63	1.25	.125	10.63	6	7/16	2.55
10	3261-1000	10.13	12.63	1.25	.125	11.81	6	7/16	3.05
11	3261-1100	11.13	13.63	1.25	.125	12.75	6	7/16	3.25
12	3261-1200	12.13	15.13	1.5	.125	14.00	8	7/16	3.88
13	3261-1300	13.13	16.13	1.5	.125	15.00	8	7/16	4.25
14	3261-1400	14.13	17.13	1.5	.125	16.00	8	7/16	4.75
15	3261-1500	15.13	18.13	1.5	.125	17.00	8	7/16	7.25
16	3261-1600	16.13	19.13	1.5	.1875	18.00	8	7/16	8.00
17	3261-1700	17.13	20.13	1.5	.1875	19.00	8	7/16	8.25
18	3261-1800	18.13	21.13	1.5	.1875	20.00	8	7/16	8.50
19	3261-1900	19.13	22.13	1.5	.1875	20.75	12	7/16	8.75
20	3261-2000	20.13	23.13	1.5	.1875	21.75	12	7/16	9.50
21	3261-2100	21.13	24.13	1.5	.1875	22.75	12	7/16	10.25
22	3261-2200	22.13	25.13	1.5	.1875	23.75	12	7/16	10.75
23	3261-2300	23.13	26.13	1.5	.1875	24.88	12	7/16	11.25
24	3261-2400	24.13	27.13	1.5	.1875	25.88	12	7/16	11.50
25	3261-2500	25.13	28.13	1.5	.1875	26.88	16	7/16	12.00
26	3261-2600	26.13	30.13	2	.1875	28.38	16	7/16	16.75
27	3261-2700	27.13	31.13	2	.1875	29.38	16	7/16	17.38
28	3261-2800	28.13	32.13	2	.1875	30.38	16	7/16	18.00
29	3261-2900	29.13	33.13	2	.1875	31.38	16	7/16	18.75
30	3261-3000	30.13	34.13	2	.1875	32.38	16	7/16	19.50
31	3261-3100	31.13	35.13	2	.1875	33.38	16	7/16	20.38
32	3261-3200	32.13	36.13	2	.1875	34.38	16	7/16	20.75
33	3261-3300	33.13	37.13	2	.1875	35.38	16	7/16	21.25
34	3261-3400	34.13	38.13	2	.1875	36.38	16	7/16	22.00
35	3261-3500	35.13	39.13	2	.1875	37.38	16	7/16	22.50
36	3261-3600	36.13	40.13	2	.1875	38.38	16	7/16	23.00
37	3261-3700	37.13	41.13	2	.1875	39.38	24	7/16	23.75
38	3261-3800	38.13	42.13	2	.1875	40.38	24	7/16	24.50
39	3261-3900	39.13	43.13	2	.1875	41.38	24	7/16	25.00
40	3261-4000	40.13	44.13	2	.1875	42.38	24	7/16	25.75



PART NO. 3261

- Galvanized or Stainless Steel. (Specify if SS.)



$$OD = ID + 2(W)$$

## Angle Flange Gasket



PART NO. 3263

- Black nitrile standard.  
60 durometer. Temp range -20°F to 170°F.
- Red silicone optional.  
50 durometer. Temp range -65°F to 450°F.
- Nitrile material is conductive.
- One gasket per joint.



800-255-6213



- Laser welded seam and rolled ends.

PART NO. 3200-XX18



- Laser welded seam and rolled ends.

PART NO. 3200-XX16

### QF Pipe 18ga

304SS Not Available

Ø in	Part No.	Gauge Galv	Length	Weight Galv
4	3200-0418-100000	18	59.25"	8.56
5	3200-0518-100000		59.25"	10.64
6	3200-0618-100000		59.25"	12.69
7	3200-0718-100000		59.0625"	18.72
8	3200-0818-100000		59.0625"	21.20
9	3200-0918-100000		59.0625"	23.87
10	3200-1018-100000		58.75"	26.56
11	3200-1118-100000		58.75"	28.96
12	3200-1218-100000		58.75"	31.60
13	3200-1318-100000		58.75"	28.46
14	3200-1418-100000		58.75"	36.31
15	3200-1518-100000		58.75"	38.90
16	3200-1618-100000		58.75"	41.43
17	3200-1718-100000		58.75"	44.01
18	3200-1818-100000		58.75"	45.22
20	3200-2018-100000		58.75"	50.54
22	3200-2218-100000		58.75"	55.86
24	3200-2418-100000		58.75"	60.94

### QF Pipe 16ga

304SS Not Available

Ø in	Part No.	Gauge Galv	Length	Weight Galv
8	3200-0816-100000	16	59.0625"	26.50
9	3200-0916-100000		59.0625"	29.84
10	3200-1016-100000		58.75"	33.20
12	3200-1216-100000		58.75"	39.50
14	3200-1416-100000		58.75"	45.51
16	3200-1616-100000		58.75"	51.93
18	3200-1816-100000		58.75"	56.68
20	3200-2016-100000		58.75"	63.35
22	3200-2216-100000		58.75"	70.01
24	3200-2416-100000		58.75"	76.38



- Used to provide variable length adjustment of QF System.  
Black O-ring included.
- Specify Red O-ring if needed (additional cost).
- Laser welded.

PART NO. 3202-XX18



- Assembly includes cut pipe, clamp, and adjustable nipple with black O-ring.
- Specify Red O-ring if needed (additional cost).

PART NO. 3201-XXHG

### QF Adjustable Nipple 18ga

304SS Not Available

Ø in	Part No.	Gauge Galv	Length	Weight Galv
4	3202-0418-100000	18	11 3/8"	1.68
5	3202-0518-100000		11 3/8"	2.08
6	3202-0618-100000		11 3/8"	2.56
7	3202-0718-100000		11 1/8"	3.84
8	3202-0818-100000		11 1/8"	4.32
9	3202-0918-100000		11 1/8"	4.88
10	3202-1018-100000		11 1/8"	5.44
11	3202-1118-100000		10 7/8"	6.08
12	3202-1218-100000		10 7/8"	6.72
13	3202-1318-100000		10 7/8"	6.25
14	3202-1418-100000		10 7/8"	7.78
15	3202-1518-100000		10 7/8"	8.31
16	3202-1618-100000		10 7/8"	8.84
17	3202-1718-100000		10 7/8"	9.38
18	3202-1818-100000		10 7/8"	9.91
20	3202-2018-100000		10 7/8"	10.77
22	3202-2218-100000		10 7/8"	11.70
24	3202-2418-100000		10 7/8"	12.90

### QF Nipple Assembly 16ga

304SS Not Available

Ø in	Part No.	Gauge Galv	Length	Weight Galv
8	3201-08HG-100000	16	60"	53
9	3201-09HG-100000			55
10	3201-10HG-100000			56
12	3201-12HG-100000			60
14	3201-14HG-100000			68
16	3201-16HG-100000			72
18	3201-18HG-100000			78
20	3201-20HG-100000			84
22	3201-22HG-100000			90
24	3201-24HG-100000			98

## QF Elbows

Ø in	Part No.	Ends	CLR	Style		Gauge		Tangents in		Weight Galv
				Galv	SS	Galv	SS	Galv	SS	
				90 Degree						
3	3210-0390	QF	1.0*	P	T	24	14	2.00	2.00	0.90
4	3210-0490		1.0*	P	T	24	14	1.32	2.00	1.00
5	3210-0590		1.0*	P	T	24	14	1.32	2.00	1.20
6	3210-0690		1.0*	P	T	24	14	1.32	2.00	1.50
7	3210-0790		1.0*	P	S	24	22	1.32	2.00	2.20
8	3210-0890		1.5	S	S	22	22	2.00	2.00	6.10
9	3210-0990		1.5	S	S	22	22	2.00	2.00	7.60
10	3210-1090		1.5	S	S	22	22	2.00	2.00	9.00
11	3210-1190		1.5	S	S	22	22	2.00	2.00	10.50
12	3210-1290		1.5	S	S	22	22	2.00	2.00	12.40
13	3210-1390		1.5	S	S	20	20	2.00	2.00	14.26
14	3210-1490		1.5	S	S	20	20	2.00	2.00	19.00
15	3210-1590		1.5	S	S	20	20	2.00	2.00	21.25
16	3210-1690		1.5	S	S	20	20	2.00	2.00	24.00
17	3210-1790		1.5	S	S	20	20	2.00	2.00	27.50
18	3210-1890		1.5	S	S	20	20	2.00	2.00	30.90
20	3210-2090		1.5	S	S	20	20	2.00	2.00	35.97
22	3210-2290		1.5	S	S	20	20	2.00	2.00	43.06
24	3210-2490		1.5	S	S	20	20	2.00	2.00	55.50
60 Degree										
3	3210-0360	QF	1.0*	P	T	24	14	2.00	2.00	0.65
4	3210-0460		1.0*	P	T	24	14	1.32	2.00	0.80
5	3210-0560		1.0*	P	T	24	14	1.32	2.00	1.15
6	3210-0660		1.0*	P	T	24	14	1.32	2.00	1.35
7	3210-0760		1.0*	P	S	24	22	1.32	2.00	1.65
8	3210-0860		1.5	S	S	22	22	2.00	2.00	4.40
9	3210-0960		1.5	S	S	22	22	2.00	2.00	5.50
10	3210-1060		1.5	S	S	22	22	2.00	2.00	6.70
11	3210-1160		1.5	S	S	22	22	2.00	2.00	7.50
12	3210-1260		1.5	S	S	22	22	2.00	2.00	8.96
13	3210-1360		1.5	S	S	20	20	2.00	2.00	12.25
14	3210-1460		1.5	S	S	20	20	2.00	2.00	13.70
15	3210-1560		1.5	S	S	20	20	2.00	2.00	16.00
16	3210-1660		1.5	S	S	20	20	2.00	2.00	18.83
17	3210-1760		1.5	S	S	20	20	2.00	2.00	19.20
18	3210-1860		1.5	S	S	20	20	2.00	2.00	20.81
20	3210-2060		1.5	S	S	20	20	2.00	2.00	25.35
22	3210-2260		1.5	S	S	20	20	2.00	2.00	30.28
24	3210-2460		1.5	S	S	20	20	2.00	2.00	42.50

Notes: \* 1.0 Galv and 1.5 SS

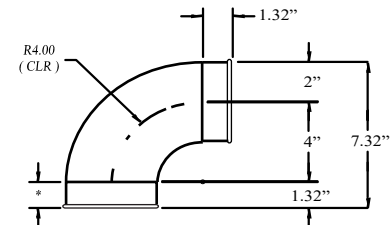
T= Tubed style. CLR= Center Line radius.

P= Press formed halves stitch welded together.

S= Segmented elbows.

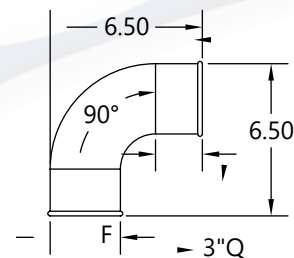
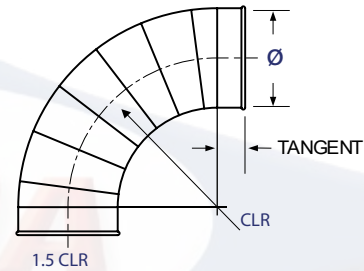


PART NO. 3210



Example shown: 4" 90° Elbow 1.0 CLR = 4"

Note: Overall height calculation only works with 90° elbows.



3"90° ELBOW(1.0 CLR)



Elbows in galvanized sizes  
3" - 7" are press-formed.



Elbows in sizes  
8" - 24" are segmented.



800-255-6213

## QF Elbow Long Radius

Ø in	Part No.	Ends	CLR	Style		Gauge		Tangents in		Weight Galv
				Galv	SS	Galv	SS	Galv	SS	
45 Degree										
3	3210-0345	QF	1.5*	P	T	24	14	2.00	2.00	0.90
4	3210-0445		1.5*	P	T	24	14	1.32	2.00	1.05
5	3210-0545		1.5*	P	T	24	14	1.32	2.00	1.60
6	3210-0645		1.5*	P	T	24	14	1.32	2.00	2.20
7	3210-0745		1.5*	P	S	24	22	1.32	2.00	2.90
8	3210-0845		2.5	S	S	22	22	2.00	2.00	7.65
9	3210-0945		2.5	S	S	22	22	2.00	2.00	10.87
10	3210-1045		2.5	S	S	22	22	2.00	2.00	13.38
11	3210-1145		2.5	S	S	22	22	2.00	2.00	16.25
12	3210-1245		2.5	S	S	22	22	2.00	2.00	22.00
13	3210-1345		2.5	S	S	20	20	2.00	2.00	25.00
14	3210-1445		2.5	S	S	20	20	2.00	2.00	29.04
15	3210-1545		2.5	S	S	20	20	2.00	2.00	32.10
16	3210-1645		2.5	S	S	20	20	2.00	2.00	36.80
17	3210-1745		2.5	S	S	20	20	2.00	2.00	41.00
18	3210-1845		2.5	S	S	20	20	2.00	2.00	45.93
20	3210-2045		2.5	S	S	20	20	2.00	2.00	58.00
22	3210-2245		2.5	S	S	20	20	2.00	2.00	67.52
24	3210-2445		2.5	S	S	20	20	2.00	2.00	75.74
30 Degree										
3	3210-0330	QF	1.5*	P	T	24	14	2.00	2.00	0.80
4	3210-0430		1.5*	P	T	24	14	1.32	2.00	0.96
5	3210-0530		1.5*	P	T	24	14	1.32	2.00	1.40
6	3210-0630		1.5*	P	T	24	14	1.32	2.00	1.80
7	3210-0730		1.5*	P	S	24	22	1.32	2.00	2.60
8	3210-0830		2.5	S	S	22	22	2.00	2.00	5.56
9	3210-0930		2.5	S	S	22	22	2.00	2.00	7.79
10	3210-1030		2.5	S	S	22	22	2.00	2.00	9.45
11	3210-1130		2.5	S	S	22	22	2.00	2.00	11.40
12	3210-1230		2.5	S	S	22	22	2.00	2.00	13.08
13	3210-1330		2.5	S	S	20	20	2.00	2.00	16.30
14	3210-1430		2.5	S	S	20	20	2.00	2.00	20.92
15	3210-1530		2.5	S	S	20	20	2.00	2.00	23.10
16	3210-1630		2.5	S	S	20	20	2.00	2.00	25.58
17	3210-1730		2.5	S	S	20	20	2.00	2.00	28.10
18	3210-1830		2.5	S	S	20	20	2.00	2.00	31.86
20	3210-2030		2.5	S	S	20	20	2.00	2.00	38.94
22	3210-2230		2.5	S	S	20	20	2.00	2.00	46.68
24	3210-2430		2.5	S	S	20	20	2.00	2.00	60.43

Notes: \* 1.5 Galv and 2.5 SS

T= Tubed style. CLR= Center Line radius.

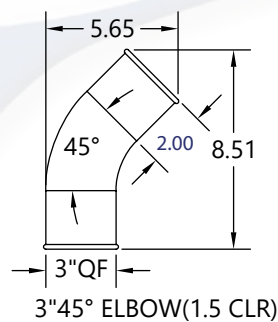
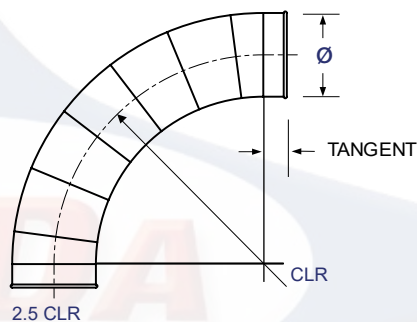
P= Press formed halves stitch welded together.

S= Segmented elbows.



PART NO. 3210

- Galvanized or stainless steel.  
(Specify if stainless steel.)
- Elbows in heavier gauges can be supplied in solid welded construction at an additional cost.
- Specify LR when ordering.



## QF Elbow Flanged

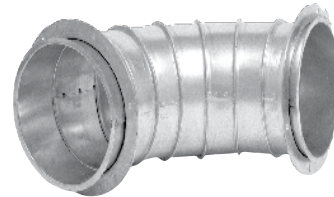
Ø in	Part No.	CLR		STYLE		Gauge		Tangents in	Weight Galv
		Galv	SS	Galv	SS	Galv	SS		
90 Degree									
3	3211-0390	1.0	1.5	P	T	24	14	2	1.75
4	3211-0490	1.0	1.5	P	T	24	14	2	2.25
5	3211-0590	1.0	1.5	P	T	24	14	2	2.80
6	3211-0690	1.0	1.5	P	T	24	14	2	3.85
7	3211-0790	1.0	1.5	P	S	24	22	2	4.90
8	3211-0890	1.5	1.5	S	S	22	22	2	7.66
9	3211-0990	1.5	1.5	S	S	22	22	2	8.45
10	3211-1090	1.5	1.5	S	S	22	22	2	15.47
11	3211-1190	1.5	1.5	S	S	22	22	2	17.60
12	3211-1290	1.5	1.5	S	S	22	22	2	19.33
13	3211-1390	1.5	1.5	S	S	20	20	2	22.40
14	3211-1490	1.5	1.5	S	S	20	20	2	25.39
15	3211-1590	1.5	1.5	S	S	20	20	2	27.90
16	3211-1690	1.5	1.5	S	S	20	20	4	30.51
17	3211-1790	1.5	1.5	S	S	20	20	4	32.30
18	3211-1890	1.5	1.5	S	S	20	20	4	34.67
20	3211-2090	1.5	1.5	S	S	20	20	4	41.99
22	3211-2290	1.5	1.5	S	S	20	20	4	46.90
24	3211-2490	1.5	1.5	S	S	20	20	4	70.96
26	3211-2690	1.5	1.5	S	S	18	18	4	89.12
28	3211-2890	1.5	1.5	S	S	18	18	4	99.19
30	3211-3090	1.5	1.5	S	S	18	18	4	110.26
32	3211-3290	1.5	1.5	S	S	18	18	4	121.38
34	3211-3490	1.5	1.5	S	S	16	16	4	133.52
36	3211-3690	1.5	1.5	S	S	16	16	4	149.04
38	3211-3890	1.5	1.5	S	S	16	16	4	162.31
40	3211-4090	1.5	1.5	S	S	16	16	4	176.20
60 Degree									
3	3211-0360	1.0	1.5	P	T	24	14	2	1.60
4	3211-0460	1.0	1.5	P	T	24	14	2	2.00
5	3211-0560	1.0	1.5	P	T	24	14	2	2.75
6	3211-0660	1.0	1.5	P	T	24	14	2	3.65
7	3211-0760	1.0	1.5	P	S	24	22	2	4.80
8	3211-0860	1.5	1.5	S	S	22	22	2	6.87
9	3211-0960	1.5	1.5	S	S	22	22	2	9.48
10	3211-1060	1.5	1.5	S	S	22	22	2	12.98
11	3211-1160	1.5	1.5	S	S	22	22	2	15.49
12	3211-1260	1.5	1.5	S	S	22	22	2	18.67
13	3211-1360	1.5	1.5	S	S	20	20	2	21.44
14	3211-1460	1.5	1.5	S	S	20	20	2	24.92
15	3211-1560	1.5	1.5	S	S	20	20	2	27.80
16	3211-1660	1.5	1.5	S	S	20	20	4	30.25
17	3211-1760	1.5	1.5	S	S	20	20	4	33.69
18	3211-1860	1.5	1.5	S	S	20	20	4	36.86
20	3211-2060	1.5	1.5	S	S	20	20	4	40.52
22	3211-2260	1.5	1.5	S	S	20	20	4	45.95
24	3211-2460	1.5	1.5	S	S	20	20	4	58.95
26	3211-2660	1.5	1.5	S	S	18	18	4	75.08
28	3211-2860	1.5	1.5	S	S	18	18	4	82.97
30	3211-3060	1.5	1.5	S	S	18	18	4	91.71
32	3211-3260	1.5	1.5	S	S	18	18	4	100.23
34	3211-3460	1.5	1.5	S	S	16	16	4	132.18
36	3211-3660	1.5	1.5	S	S	16	16	4	122.29
38	3211-3860	1.5	1.5	S	S	16	16	4	132.58
40	3211-4060	1.5	1.5	S	S	16	16	4	142.99

Notes: \* 1.0 Galv and 1.5 SS

T= Tubed style. CLR= Center Line radius.

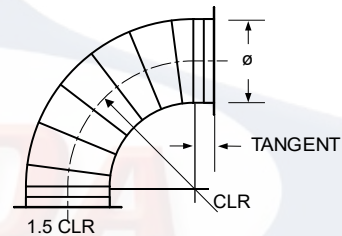
P= Press formed halves stitch welded together.

S= Segmented elbows.



PART NO. 3211

- Flange attached by vanstone lip. Flanges on both ends.
- Also available in Long Radius.





800-255-6213

## QF Elbow Flanged

Ø in	Part No.	CLR		Style		Gauge		Tangents in	Weight Galv
		Galv	SS	Galv	SS	Galv	SS		
45 Degree									
3	3211-0345	1.0	1.5	P	T	24	14	2	1.75
4	3211-0445	1.0	1.5	P	T	24	14	2	2.25
5	3211-0545	1.0	1.5	P	T	24	14	2	2.80
6	3211-0645	1.0	1.5	P	T	24	14	2	3.85
7	3211-0745	1.0	1.5	P	S	24	22	2	4.90
8	3211-0845	1.5	1.5	S	S	22	22	2	7.66
9	3211-0945	1.5	1.5	S	S	22	22	2	8.45
10	3211-1045	1.5	1.5	S	S	22	22	2	15.47
11	3211-1145	1.5	1.5	S	S	22	22	2	17.60
12	3211-1245	1.5	1.5	S	S	22	22	2	19.33
13	3211-1345	1.5	1.5	S	S	20	20	2	22.40
14	3211-1445	1.5	1.5	S	S	20	20	2	25.39
15	3211-1545	1.5	1.5	S	S	20	20	2	27.90
16	3211-1645	1.5	1.5	S	S	20	20	4	30.51
17	3211-1745	1.5	1.5	S	S	20	20	4	32.30
18	3211-1845	1.5	1.5	S	S	20	20	4	34.67
20	3211-2045	1.5	1.5	S	S	20	20	4	41.99
22	3211-2245	1.5	1.5	S	S	20	20	4	46.90
24	3211-2445	1.5	1.5	S	S	20	20	4	70.96
26	3211-2645	1.5	1.5	S	S	18	18	4	89.12
28	3211-2845	1.5	1.5	S	S	18	18	4	99.19
30	3211-3045	1.5	1.5	S	S	18	18	4	110.26
32	3211-3245	1.5	1.5	S	S	18	18	4	121.38
34	3211-3445	1.5	1.5	S	S	16	16	4	133.52
36	3211-3645	1.5	1.5	S	S	16	16	4	149.04
38	3211-3845	1.5	1.5	S	S	16	16	4	162.31
40	3211-4045	1.5	1.5	S	S	16	16	4	176.20
30 Degree									
3	3211-0330	1.0	1.5	P	T	24	14	2	1.60
4	3211-0430	1.0	1.5	P	T	24	14	2	2.00
5	3211-0530	1.0	1.5	P	T	24	14	2	2.75
6	3211-0630	1.0	1.5	P	T	24	14	2	3.65
7	3211-0730	1.0	1.5	P	S	24	22	2	4.80
8	3211-0830	1.5	1.5	S	S	22	22	2	6.87
9	3211-0930	1.5	1.5	S	S	22	22	2	9.48
10	3211-1030	1.5	1.5	S	S	22	22	2	12.98
11	3211-1130	1.5	1.5	S	S	22	22	2	15.49
12	3211-1230	1.5	1.5	S	S	22	22	2	18.67
13	3211-1330	1.5	1.5	S	S	20	20	2	21.44
14	3211-1430	1.5	1.5	S	S	20	20	2	24.92
15	3211-1530	1.5	1.5	S	S	20	20	2	27.80
16	3211-1630	1.5	1.5	S	S	20	20	4	30.25
17	3211-1730	1.5	1.5	S	S	20	20	4	33.69
18	3211-1830	1.5	1.5	S	S	20	20	4	36.86
20	3211-2030	1.5	1.5	S	S	20	20	4	40.52
22	3211-2230	1.5	1.5	S	S	20	20	4	45.95
24	3211-2430	1.5	1.5	S	S	20	20	4	58.95
26	3211-2630	1.5	1.5	S	S	18	18	4	75.08
28	3211-2830	1.5	1.5	S	S	18	18	4	82.97
30	3211-3030	1.5	1.5	S	S	18	18	4	91.71
32	3211-3230	1.5	1.5	S	S	18	18	4	100.23
34	3211-3430	1.5	1.5	S	S	16	16	4	132.18
36	3211-3630	1.5	1.5	S	S	16	16	4	122.29
38	3211-3830	1.5	1.5	S	S	16	16	4	132.58
40	3211-4030	1.5	1.5	S	S	16	16	4	142.99

Notes: \* 1.0 Galv and 1.5 SS

T= Tubed style. CLR= Center Line radius.

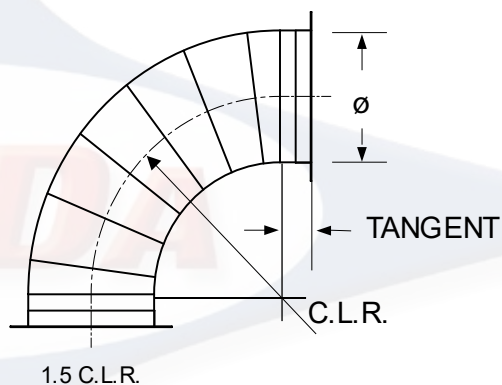
P= Press formed halves stitch welded together.

S= Segmented elbows.



PART NO. 3211

- Flange attached by Van Stone lip. Flanges on both ends.
- Also available in Long Radius.

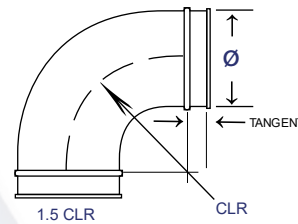


## QF Elbow Tubed

Ø in	Part No.	Ends	CLR	Gauge		Tangents in	Weight Galv
				Galv	SS		
90 Degree							
3	3214-0390	QF	1.5	16	14	2	3.50
4	3214-0490			16	14		5.00
5	3214-0590			14	14		7.40
6	3214-0690			14	14		10.25
8	3214-0890			14	14		15.00
60 Degree							
3	3214-0360	QF	1.5	16	14	2	2.31
4	3214-0460			16	14		3.33
5	3214-0560			14	14		4.95
6	3214-0660			14	14		6.67
8	3214-0860			14	14		9.98
45 Degree							
3	3214-0345	QF	1.5	16	14	2	1.75
4	3214-0445			16	14		2.50
5	3214-0545			14	14		3.75
6	3214-0645			14	14		5.00
8	3214-0845			14	14		7.50
30 Degree							
3	3214-0330	QF	1.5	16	14	2	1.15
4	3214-0430			16	14		1.65
5	3214-0530			14	14		2.48
6	3214-0630			14	14		3.33
8	3214-0830			14	14		4.95



PART NO. 3214



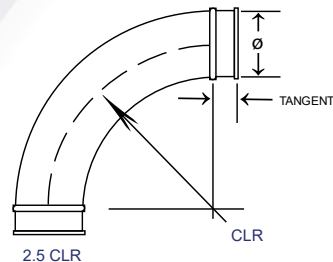
- Galvanized or stainless steel. (Specify if Stainless Steel.)
- Tubed elbows are air flow directional (collar on outside of tube for outlet and collar on inside of tube for inlet). Please specify direction if ordering ends other than QF.

## QF Elbow Tubed Long Radius

Ø	Part No.	Ends	CLR	Gauge		Tangents in	Weight Galv
				Galv	SS		
90 Degree							
3	3214-0390LR	QF	2.5	16	14	2	5.00
4	3214-0490LR			16	14		7.00
5	3214-0590LR			14	14		11.25
6	3214-0690LR			14	14		14.75
8	3214-0890LR			14	14		25.00
60 Degree							
3	3214-0360LR	QF	2.5	16	14	2	3.33
4	3214-0460LR			16	14		4.62
5	3214-0560LR			14	14		7.26
6	3214-0660LR			14	14		8.91
8	3214-0860LR			14	14		16.50
45 Degree							
3	3214-0345LR	QF	2.5	16	14	2	2.50
4	3214-0445LR			16	14		3.65
5	3214-0545LR			14	14		5.50
6	3214-0645LR			14	14		6.75
8	3214-0845LR			14	14		12.50
30 Degree							
3	3214-0330LR	QF	2.5	16	14	2	1.65
4	3214-0430LR			16	14		2.31
5	3214-0530LR			14	14		3.63
6	3214-0630LR			14	14		4.46
8	3214-0830LR			14	14		8.25



PART NO. 3214



- Galvanized or stainless steel. (Specify if Stainless Steel.)
- Tubed elbows are air flow directional (collar on outside of tube for outlet and collar on inside of tube for inlet). Please specify direction if ordering ends other than QF.

This tube is airflow directional (collar on outside of tube for outlet and collar on inside of tube for inlet). Please specify direction if ordering ends other than QF.

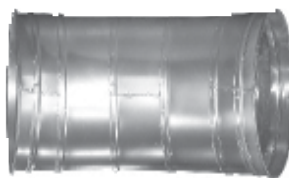
• Items may take longer than standard lead times.



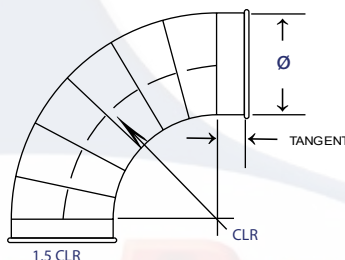
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## QF Elbow 16ga

Ø in	Part No.	Ends	CLR	Tangents in	Gauge	Weight Galv
90 Degree						
7	3212-0790	QF	1.5	2.0	16	9.42
8	3212-0890					13.64
9	3212-0990					16.64
10	3212-1090					21.54
11	3212-1190					27.65
12	3212-1290					33.76
13	3212-1390					40.07
14	3212-1490					46.38
15	3212-1590					52.61
16	3212-1690					58.83
17	3212-1790					66.14
18	3212-1890					73.44
20	3212-2090					85.40
22	3212-2290					107.98
60 Degree						
7	3212-0760	QF	1.5	2.0	16	8.65
8	3212-0860					11.90
9	3212-0960					14.21
10	3212-1060					17.29
11	3212-1160					20.65
12	3212-1260					24.00
13	3212-1360					28.68
14	3212-1460					33.35
15	3212-1560					37.09
16	3212-1660					40.83
17	3212-1760					45.85
18	3212-1860					50.87
20	3212-2060					62.19
22	3212-2260					74.56
45 Degree						
7	3212-0745	QF	1.5	2.0	16	7.82
8	3212-0845					9.56
9	3212-0945					11.30
10	3212-1045					13.97
11	3212-1145					16.92
12	3212-1245					20.40
13	3212-1345					23.85
14	3212-1445					27.60
15	3212-1545					30.56
16	3212-1645					34.10
17	3212-1745					39.80
18	3212-1845					44.36
20	3212-2045					52.60
22	3212-2245					59.10
30 Degree						
7	3212-0730	QF	1.5	2.0	16	5.18
8	3212-0830					6.79
9	3212-0930					8.40
10	3212-1030					9.77
11	3212-1130					11.44
12	3212-1230					13.10
13	3212-1330					16.09
14	3212-1430					19.07
15	3212-1530					22.94
16	3212-1630					25.86
17	3212-1730					29.40
18	3212-1830					33.31
20	3212-2030					42.15
22	3212-2230					51.09



PART NO. 3212



90° QF 16 Gauge 1.5CLR  
60° QF 16 Gauge 1.5CLR  
45° QF 16 Gauge 1.5CLR

- 16ga Elbows are constructed of gores lapped over one another and spot welded.
- This is a directional elbow and supplied with an arrow to indicate the direction of flow. Please specify direction if ordering ends other than QF.
- Other CLR's available upon request.
- Interior buffing available upon request for additional 10% cost.

Specify Galvanized or SS304:  
- Galvanized is 16 gauge with 16 gauge collars.  
- SS is 16ga with 20ga collars.

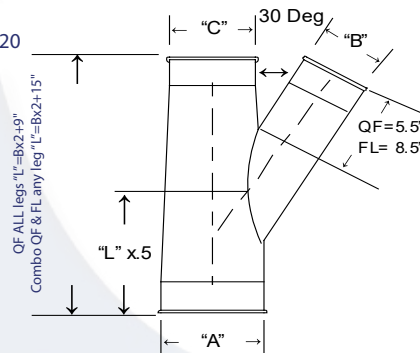
CLR: Standard is 1.5  
2.5 CLR 16ga Elbows available at no extra cost

## QF Branch

Ø in	Part No.	Ends	Gauge		Weight (Galv)
			Galv	SS	
3	3220-03XX	QF	22	22	2.32
4	3220-04XX	QF	22	22	3.00
5	3220-05XX	QF	22	22	3.75
6	3220-06XX	QF	22	22	4.25
7	3220-07XX	QF	22	22	5.00
8	3220-08XX	QF	22	22	6.00
9	3220-09XX	QF	22	22	7.25
10	3220-10XX	QF	22	22	8.50
11	3220-11XX	QF	22	22	9.25
12	3220-12XX	QF	22	22	10.75
13	3220-13XX	QF	20	20	11.40
14	3220-14XX	QF	20	20	13.50
15	3220-15XX	QF	20	20	15.60
16	3220-16XX	QF	20	20	17.56
17	3220-17XX	QF	20	20	19.00
18	3220-18XX	QF	20	20	21.00
20	3220-20XX	QF	20	20	30.00
22	3220-22XX	QF	20	20	39.50
24	3220-24XX	QF	20	20	53.50
26	3220-26XX	FLANGE	18	18	74.00
28	3220-28XX	FLANGE	18	18	98.00
30	3220-30XX	FLANGE	18	18	117.05
32	3220-32XX	FLANGE	18	18	125.94
34	3220-34XX	FLANGE	18	18	134.83
36	3220-36XX	FLANGE	18	18	142.78
38	3220-38XX	FLANGE	18	18	153.47
40	3220-40XX	FLANGE	18	18	162.81



PART NO. 3220



On sizes above 24", A is flanged. Add the cost of flange if B and / or C require flanges.

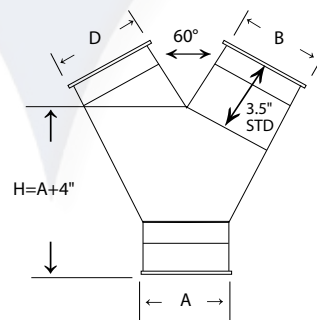
- All branches priced by large end.
- Standard 30° Optional 45°.
- When ordering specify A, B, C.
- $A - B \geq B - C$
- Use formula above to deter-

## QF Y-Branch (Traditional Pant Leg Design)

Ø in	Part No.	Ends	Gauge		Weight Galv
			Galv	SS	
3	3221-03XX	QF	22	22	1.50
4	3221-04XX	QF	22	22	1.75
5	3221-05XX	QF	22	22	2.00
6	3221-06XX	QF	22	22	2.75
7	3221-07XX	QF	22	22	3.25
8	3221-08XX	QF	22	22	4.50
9	3221-09XX	QF	22	22	5.25
10	3221-10XX	QF	22	22	6.75
11	3221-11XX	QF	22	22	8.00
12	3221-12XX	QF	22	22	10.25
13	3221-13XX	QF	20	20	12.50
14	3221-14XX	QF	20	20	14.00
15	3221-15XX	QF	20	20	15.75
16	3221-16XX	QF	20	20	17.00
17	3221-17XX	QF	20	20	18.50
18	3221-18XX	QF	20	20	20.00
20	3221-20XX	QF	20	20	24.50
22	3221-22XX	QF	20	20	29.00
24	3221-24XX	QF	20	20	36.00
26	3221-26XX	FLANGE	18	18	69.00
28	3221-28XX	FLANGE	18	18	93.00
30	3221-30XX	FLANGE	18	18	112.05
32	3221-32XX	FLANGE	18	18	120.94
34	3221-34XX	FLANGE	18	18	129.83
36	3221-36XX	FLANGE	18	18	137.78
38	3221-38XX	FLANGE	18	18	148.47
40	3221-40XX	FLANGE	18	18	157.81



PART NO. 3221



On sizes above 24", A is flanged. Add the cost of flange if B and / or D require flanges.

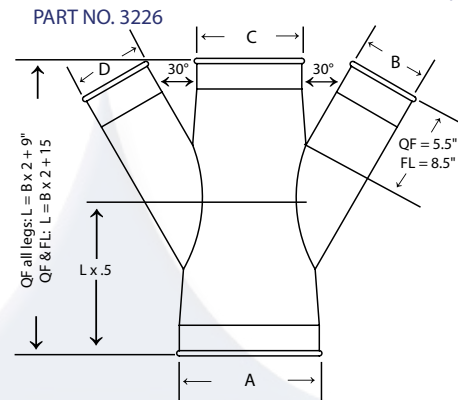
- All branches priced by large end.
- Standard 60° Optional 90°.
- When ordering specify A, B, D.
- Both B & D each must be at least 50% of A. With B or D being at least 80% of the opposite leg.
- Flange Leg: Length = 4.5"  
Height =  $A + 4$ "



800-255-6213

## QF Double Branch

Ø in	Part No.	Ends	Gauge		Weight (Galv)
			Galv	SS	
3	3226-03XX	QF	22	22	2.62
4	3226-04XX	QF	22	22	3.50
5	3226-05XX	QF	22	22	4.35
6	3226-06XX	QF	22	22	5.00
7	3226-07XX	QF	22	22	6.00
8	3226-08XX	QF	22	22	7.25
9	3226-09XX	QF	22	22	8.50
10	3226-10XX	QF	22	22	10.00
11	3226-11XX	QF	22	22	10.75
12	3226-12XX	QF	22	22	12.25
13	3226-13XX	QF	20	20	13.15
14	3226-14XX	QF	20	20	14.95
15	3226-15XX	QF	20	20	17.35
16	3226-16XX	QF	20	20	19.56
17	3226-17XX	QF	20	20	21.00
18	3226-18XX	QF	20	20	26.00
20	3226-20XX	QF	20	20	35.00
22	3226-22XX	QF	20	20	49.50
24	3226-24XX	QF	20	20	68.40
26	3226-26XX	FLANGE	18	18	104.00
28	3226-28XX	FLANGE	18	18	128.00
30	3226-30XX	FLANGE	18	18	153.00
32	3226-32XX	FLANGE	18	18	164.94
34	3226-34XX	FLANGE	18	18	179.83
36	3226-36XX	FLANGE	18	18	187.78
38	3226-38XX	FLANGE	18	18	203.49
40	3226-40XX	FLANGE	18	18	222.81



On sizes above 24", A is flanged. Add the cost of flange if B, C, and / or D require flanges.

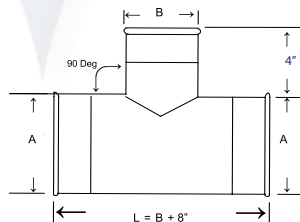
- All branches priced by large end.
- When ordering, specify A,B,C,D.
- $(A - B) \geq (B - C)$  and  $(B) \geq (D)$
- Reducer at "B" or "D" may be required. Use formula above to determine.
- Standard 30° Optional 45°

## QF T-Branch

Ø in	Part No.	Ends	Gauge		Weight (Galv)
			Galv	SS	
3	3227-03XX	QF	22	22	1.50
4	3227-04XX	QF	22	22	2.00
5	3227-05XX	QF	22	22	2.75
6	3227-06XX	QF	22	22	3.25
7	3227-07XX	QF	22	22	4.00
8	3227-08XX	QF	22	22	4.75
9	3227-09XX	QF	22	22	5.50
10	3227-10XX	QF	22	22	6.00
11	3227-11XX	QF	22	22	7.50
12	3227-12XX	QF	22	22	8.75
13	3227-13XX	QF	20	20	10.25
14	3227-14XX	QF	20	20	12.00
15	3227-15XX	QF	20	20	13.25
16	3227-16XX	QF	20	20	14.00
17	3227-17XX	QF	20	20	16.00
18	3227-18XX	QF	20	20	18.25
20	3227-20XX	QF	20	20	20.50
22	3227-22XX	QF	20	20	24.75
24	3227-24XX	QF	20	20	28.95
26	3227-26XX	FLANGE	18	18	40.28
28	3227-28XX	FLANGE	18	18	45.01
30	3227-30XX	FLANGE	18	18	58.53
32	3227-32XX	FLANGE	18	18	62.97
34	3227-34XX	FLANGE	18	18	66.42
36	3227-36XX	FLANGE	18	18	70.30
38	3227-38XX	FLANGE	18	18	75.74
40	3227-40XX	FLANGE	18	18	80.41



PART NO. 3227



On sizes above 24", A1 and A2 are flanged. Add the cost of flange if B requires a flange.

- All branches priced by large end.
- When ordering, specify A,B.
- A1 to A2 must be the same dimension; however, B must be equal to or smaller than the A dimension.

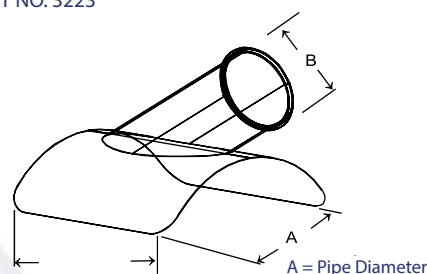
## QF In-Cut

Ø in	Part No.	Ends	Gauge		Weight (Galv)
			Galv	SS	
3	3223-XX03	QF	22	22	1.25
4	3223-XX04	QF	22	22	1.48
5	3223-XX05	QF	22	22	2.15
6	3223-XX06	QF	22	22	2.84
7	3223-XX07	QF	22	22	3.53
8	3223-XX08	QF	22	22	4.48
9	3223-XX09	QF	22	22	5.38
10	3223-XX10	QF	22	22	6.47
11	3223-XX11	QF	22	22	7.62
12	3223-XX12	QF	22	22	8.77
13	3223-XX13	QF	20	20	11.23
14	3223-XX14	QF	20	20	13.68
15	3223-XX15	QF	20	20	15.79
16	3223-XX16	QF	20	20	17.20
17	3223-XX17	QF	20	20	19.26
18	3223-XX18	QF	20	20	21.29
20	3223-XX20	QF	20	20	25.58
22	3223-XX22	QF	20	20	30.47
24	3223-XX24	QF	20	20	35.36
26	3223-XX26	FLANGE	18	18	40.28
28	3223-XX28	FLANGE	18	18	45.01
30	3223-XX30	FLANGE	18	18	56.53
32	3223-XX32	FLANGE	18	18	62.97
34	3223-XX34	FLANGE	18	18	67.42
36	3223-XX36	FLANGE	18	18	71.38
38	3223-XX38	FLANGE	18	18	76.74
40	3223-XX40	FLANGE	18	18	81.41

\*XX = A dimension, Number = B dimension. Gauge based on "A"



PART NO. 3223



Saddle length and width = 3" all directions from Branch Tube (B).

- Priced by B diameter.
- Specify A and B diameter and end treatment. Standard end is QF.
- Standard 30° Optional 45°.
- In-cut used to cut into existing lines to begin QF system.

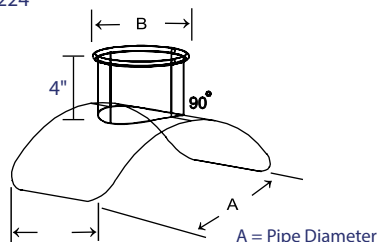
## QF Tap In

Ø in	Part No.	Ends	Gauge		Weight (Galv)
			Galv	SS	
3	3224-XX03	QF	22	22	0.45
4	3224-XX04	QF	22	22	0.62
5	3224-XX05	QF	22	22	0.84
6	3224-XX06	QF	22	22	1.12
7	3224-XX07	QF	22	22	1.35
8	3224-XX08	QF	22	22	1.63
9	3224-XX09	QF	22	22	1.94
10	3224-XX10	QF	22	22	2.26
11	3224-XX11	QF	22	22	2.47
12	3224-XX12	QF	22	22	2.92
13	3224-XX13	QF	20	20	3.30
14	3224-XX14	QF	20	20	4.41
15	3224-XX15	QF	20	20	5.10
16	3224-XX16	QF	20	20	5.60
17	3224-XX17	QF	20	20	6.10
18	3224-XX18	QF	20	20	6.74
20	3224-XX20	QF	20	20	7.68
22	3224-XX22	QF	20	20	8.94
24	3224-XX24	QF	20	20	11.25
26	3224-XX26	FLANGE	18	18	35.28
28	3224-XX28	FLANGE	18	18	40.00
30	3224-XX30	FLANGE	18	18	51.53
32	3224-XX32	FLANGE	18	18	57.97
34	3224-XX34	FLANGE	18	18	62.42
36	3224-XX36	FLANGE	18	18	66.38
38	3224-XX38	FLANGE	18	18	71.74
40	3224-XX40	FLANGE	18	18	79.41

\*XX = A dimension, Number = B dimension. Gauge based on "A"



PART NO. 3224



Saddle length and width = 2" all directions from Branch Tube (B).

- Priced by B diameter.
- Specify A and B diameter and end treatment. Standard end is QF.
- Tap In is used to cut into existing lines to begin QF system.



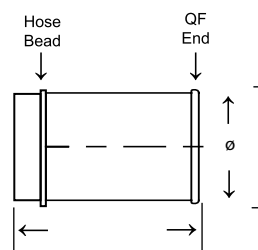
800-255-6213

## QF Hose Adapter

Ø in	Part No.	Approx. Length	Gauge	Weight Galv
3	3282-0300	5.5	22	0.60
4	3282-0400	4	22	0.75
5	3282-0500	4	22	0.95
6	3282-0600	4	22	1.10
7	3282-0700	4	22	1.35
8	3282-0800	4	22	1.50
9	3282-0900	4	22	1.75
10	3282-1000	4	22	1.95
11	3282-1100	4	22	2.10
12	3282-1200	4	22	2.30
13	3282-1300	5.5	20	2.45
14	3282-1400	5.5	20	2.70
15	3282-1500	5.5	20	3.05
16	3282-1600	5.5	20	3.20
17	3282-1700	5.5	20	3.32
18	3282-1800	5.5	20	3.45
20	3282-2000	5.5	20	3.90
22	3282-2200	5.5	20	4.30
24	3282-2400	5.5	20	5.60



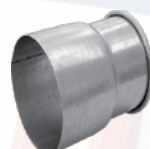
PART NO. 3282



- Used to connect to rubber hose.
- Will not work with metal flex hose.

## QF Machine Adapter

Ø in	Part No.	Raw End ID in	Raw End OD in	Gauge	Approx. Length in	Maximum Open Dim. ID in	Weight Galv
3	3249-0300	3.00	3.07	22	5.5	3.18	0.60
4	3249-0400	3.82	3.89	22	4	4.30	0.75
5	3249-0500	4.84	4.91	22	4	5.30	0.95
6	3249-0600	5.86	5.93	22	4	6.30	1.10
7	3249-0700	6.87	6.94	22	4	7.30	1.35
8	3249-0800	7.86	7.93	22	4	8.30	1.50
9	3249-0900	8.85	8.92	22	4	9.30	1.75
10	3249-1000	9.86	9.93	22	4	10.30	1.95
11	3249-1100	10.85	10.92	22	4	11.30	2.10
12	3249-1200	11.92	11.99	22	4	12.30	2.30
13	3249-1300	12.92	13.00	20	5.5	13.30	2.45
14	3249-1400	13.91	13.99	20	5.5	14.30	2.70
15	3249-1500	14.91	14.99	20	5.5	15.30	3.05
16	3249-1600	15.92	16.00	20	5.5	16.30	3.20
17	3249-1700	16.92	17.00	20	5.5	17.30	3.32
18	3249-1800	17.91	17.99	20	5.5	18.30	3.45
20	3249-2000	19.92	20.00	20	5.5	20.30	3.90
22	3249-2200	21.93	22.01	20	5.5	22.30	4.30
24	3249-2400	23.90	23.98	20	5.5	24.30	5.60

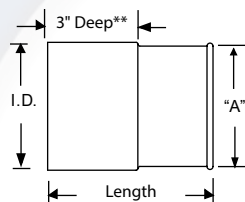


Expanded

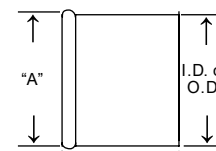


Standard

PART NO. 3249



Expanded



Standard

- Standard end styles are QF to NOFIT.
- If Expanded, specify desired ID or OD of non QF end.
- Specify if different end style required. Options are: flanged (ANGFL or FFL) and raw (RAWID or RAWOD).
- Must be within maximum opened dimension (.3"), or will be priced as reducer.

Adapters can only be expanded up to .3" above the nominal diameter size (A dimension). Expansions larger than .3" should be ordered as a reducer.

## QF Reducer

Ø in	PART NO.	Ends	Gauge		Weight Galv
			Galv	SS	
3	3222-03XX	QF	22	22	1.00
4	3222-04XX	QF	22	22	1.25
5	3222-05XX	QF	22	22	1.50
6	3222-06XX	QF	22	22	1.75
7	3222-07XX	QF	22	22	2.00
8	3222-08XX	QF	22	22	2.25
9	3222-09XX	QF	22	22	2.50
10	3222-10XX	QF	22	22	3.00
11	3222-11XX	QF	22	22	3.50
12	3222-12XX	QF	22	22	3.75
13	3222-13XX	QF	22	22	4.00
14	3222-14XX	QF	22	22	4.50
15	3222-15XX	QF	22	22	6.00
16	3222-16XX	QF	20	20	7.00
17	3222-17XX	QF	20	20	10.25
18	3222-18XX	QF	20	20	21.00
20	3222-20XX	QF	20	20	30.00
22	3222-22XX	QF	20	20	39.50
24	3222-24XX	QF	20	20	53.50
26	3222-26XX	FLANGE	18	18	74.00
28	3222-28XX	FLANGE	18	18	98.00
30	3222-30XX	FLANGE	18	18	117.05
32	3222-32XX	FLANGE	18	18	125.94
34	3222-34XX	FLANGE	18	18	134.83
36	3222-36XX	FLANGE	18	18	142.78
38	3222-38XX	FLANGE	18	18	153.47
40	3222-40XX	FLANGE	18	18	162.81



PART NO. 3222

• Priced by large end A.

• When ordering specify A,B.

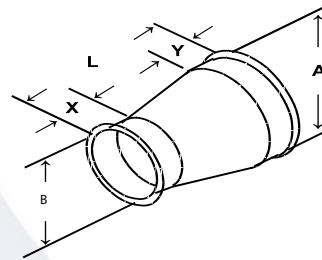
• Specify reducer end style.

X & Y are standard 2" long nominal.

QF length (L)= A-B+6", 7" min.

FL length (L)= A-B+8", 9" min.

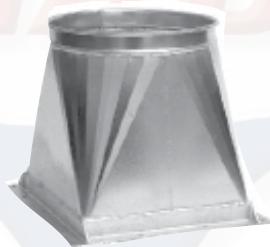
• B end can be as small as 1".



On sizes above 24", A is flanged. Add the cost of Angle Flange if B requires a flange.

## QF Transition Rectangular to Round\*

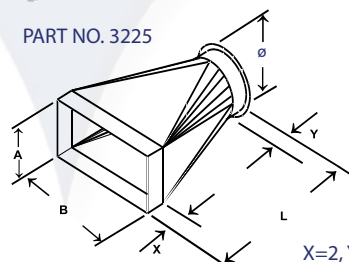
Ø in	SQ to SQ Size	Part No.	Ends	Weight Galv
3	7	3225-03XX	QF	1.65
4	13	3225-04XX	QF	2.85
5	20	3225-05XX	QF	4.05
6	28	3225-06XX	QF	5.55
7	38	3225-07XX	QF	7.35
8	50	3225-08XX	QF	9.45
9	64	3225-09XX	QF	11.60
10	79	3225-10XX	QF	14.00
11	95	3225-11XX	QF	17.10
12	113	3225-12XX	QF	21.00
13	133	3225-13XX	QF	25.00
14	154	3225-14XX	QF	29.80
15	177	3225-15XX	QF	36.95
16	201	3225-16XX	QF	45.00
17	227	3225-17XX	QF	53.05
18	255	3225-18XX	QF	61.10
20	314	3225-20XX	QF	70.90
22	380	3225-22XX	QF	82.00
24	452	3225-24XX	QF	94.40
26	531	3225-26XX	FLANGE	112.40
28	616	3225-28XX	FLANGE	132.00
30	707	3225-30XX	FLANGE	154.40
32	804	3225-32XX	FLANGE	176.20
34	908	3225-34XX	FLANGE	200.60
36	1018	3225-36XX	FLANGE	224.50
38	1134	3225-38XX	FLANGE	248.20
40	1257	3225-40XX	FLANGE	272.40



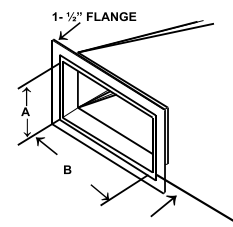
PART NO. 3225

• Priced by largest area of opening - either round end (D) or the Area of Diameter closest to the squared area of the rectangular end (A x B = SQ).

\* Pricing based on a sheet metal flange (SMFL), raw, or hemmed end; Angle Flange or Flat Flange cost not included in price. See Angle Flange pricing on pg. 9 (use Round equiva-



STYLE #1



STYLE #2

\*NOTE: Minimum L = B x .75. If less, square to square transition will be provided. 7" minimum L allowable for Sq to Rd and 4" L minimum allowable for Sq to Sq.



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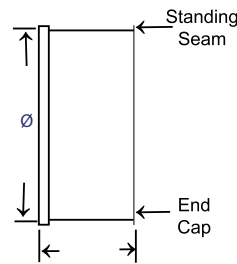
## QF End Cap

Ø in	Part No.	Ends	Gauge		Weight Galv
			Galv	SS	
3	3151-0300	QF	18	18	0.30
4	3151-0400		22	22	0.37
5	3151-0500		22	22	0.50
6	3151-0600		22	22	0.72
7	3151-0700		22	22	0.92
8	3151-0800		22	22	1.10
9	3151-0900		22	22	1.40
10	3151-1000		22	22	1.65
11	3151-1100		22	22	1.85
12	3151-1200		22	22	2.05
13	3151-1300		20	20	2.45
14	3151-1400		20	20	3.10
15	3151-1500		20	20	3.55
16	3151-1600		20	20	4.00
17	3151-1700		20	20	4.45
18	3151-1800		20	20	4.90
20	3151-2000		20	20	5.45
22	3151-2200		20	20	6.30
24	3151-2400		20	20	7.90



PART NO. 3151

- End Caps enable users to close off taps for future use.
- End Caps larger than 24" will be a flat plate and angle ring. Call for pricing.



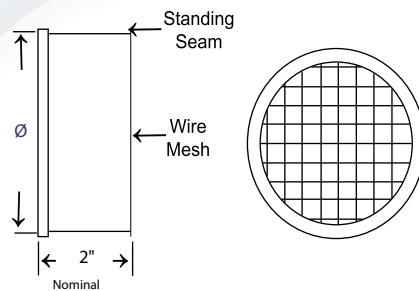
## QF End Cap with Birdscreen

Ø in	Part No.	Ends	Gauge		Weight Galv
			Galv	SS	
3	3152-0300	QF	18	18	0.25
4	3152-0400		22	22	0.30
5	3152-0500		22	22	0.35
6	3152-0600		22	22	0.52
7	3152-0700		22	22	0.60
8	3152-0800		22	22	0.70
9	3152-0900		22	22	0.80
10	3152-1000		22	22	0.90
11	3152-1100		22	22	0.95
12	3152-1200		22	22	1.00
13	3152-1300		20	20	1.15
14	3152-1400		20	20	1.25
15	3152-1500		20	20	1.36
16	3152-1600		20	20	1.48
17	3152-1700		20	20	1.60
18	3152-1800		20	20	1.75
20	3152-2000		20	20	1.90
22	3152-2200		20	20	2.10
24	3152-2400		20	20	2.85



PART NO. 3152

- End Cap with birdscreen 1/2" wire mesh.
- End Caps larger than 24" will have expanded metal. Call for pricing.



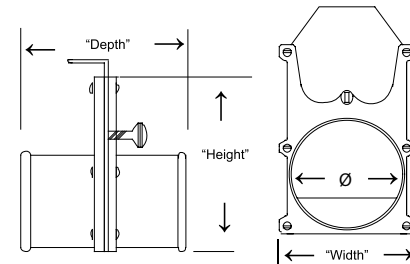
## QF Blast Gate Manual

Ø in	Part No.	Ends	Galv Width	Galv Height	Galv Depth	SS Width	SS Height	SS Depth	Weight Galv
3	3240-0300	QF	4.25	7.00	5.25	5.00	6.00	5.25	1.50
4	3240-0400	QF	5.25	7.00	5.50	6.00	7.50	5.25	2.25
5	3240-0500	QF	6.12	6.25	5.75	7.00	10.50	5.00	3.00
6	3240-0600	QF	7.00	10.00	5.75	8.00	11.00	5.00	3.75
7	3240-0700	QF	8.00	11.12	5.38	9.00	12.00	5.00	4.50
8	3240-0800	QF	9.37	12.00	5.50	10.00	13.50	5.00	5.50
9	3240-0900	QF	11.00	13.25	5.50	11.00	15.00	5.00	7.00
10	3240-1000	QF	11.37	14.37	5.50	12.00	17.00	5.00	7.50
11 Ø	3240-1100	QF	11.37	14.37	5.50	13.00	19.00	5.00	9.50
12	3240-1200	QF	13.50	16.25	5.25	14.00	20.50	5.00	13.00
14	3240-1400	QF	15.75	17.87	5.25	16.00	23.25	5.00	16.00
16 Ø	3240-1600	QF	18.00	28.50	11.25	CALL	CALL	CALL	21.20
18 Ø	3240-1800	QF	20.80	32.75	11.25	CALL	CALL	CALL	25.00
20 Ø	3240-2000	QF	22.25	34.00	11.25	CALL	CALL	CALL	30.00
22 Ø	3240-2200	QF	24.25	33.50	11.25	CALL	CALL	CALL	34.00
24 Ø	3240-2400	QF	26.25	33.50	11.25	CALL	CALL	CALL	38.00
26 Ø	3240-2600	FLANGE	29.25	47.50	CALL	CALL	CALL	CALL	62.00
28 Ø	3240-2800	FLANGE	30.25	47.50	CALL	CALL	CALL	CALL	72.00
30 Ø	3240-3000	FLANGE	33.25	55.75	CALL	CALL	CALL	CALL	97.00

Ø SS Blast Gates have a production time of 7 days minimum.



PART NO. 3240



- Manually operated, cast aluminum body with galvanized blade and standard QF connection, unless otherwise specified.
- SS model is 100% SS.

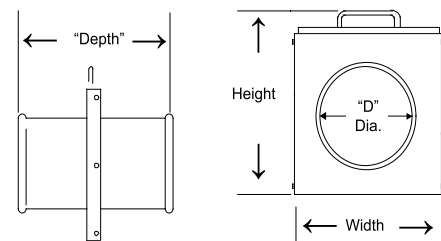
## QF Blast Gate NFMES

Ø in	Part No.	Ends	Galv Width	Galv Height	Galv Depth	Weight Galv
3	3241-0300	QF	5.25	7.00	5.375	N/A
4	3241-0400		6.12	6.25	5.375	2.70
5	3241-0500		7.00	10.00	5	3.30
6	3241-0600		8.00	11.12	5	5.90
7	3241-0700		9.37	12.00	5	6.00
8	3241-0800		11.00	13.25	5	6.75
9	3241-0900		11.37	14.37	5	7.50
10	3241-1000		13.50	16.25	5	9.12
12	3241-1200		15.75	17.87	5	13.00
14	3241-1400		18.00	28.50	5	18.25
16 Ø	3241-1600		18.00	28.50	5	21.50

Ø SS Blast Gates have a production time of 7 days minimum.



PART NO. 3241



- Manually operated, energy saving blast gates. These compact and easy to operate gates are constructed of galvanized metal or 304SS with a special sealing device that reduces air loss and friction in operation.
- Other sizes available upon request.



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## QF Blast Gate NFES Automatic

Ø in	Part No.	Ends	A in	B in	C in	D in	Weight Galv
3	3245-0300	QF	16.00	6.38	5.50	5.50	9.83
4	3245-0400		16.00	6.30	5.50	5.11	9.90
5	3245-0500		17.50	7.50	5.25	6.00	11.90
6	3245-0600		20.50	8.66	5.25	7.00	15.15
7	3245-0700		22.00	9.44	5.25	7.25	18.85
8	3245-0800		25.50	10.25	5.25	8.25	27.50
9	3245-0900		33.00	17.36	9.00	14.17	37.50
10	3245-1000		33.00	17.36	9.00	14.17	37.50
12	3245-1200		38.50	20.00	9.00	15.50	44.00
14	3245-1400		41.00	23.30	12.00	16.00	50.00
16 Ø	3245-1600		45.00	23.30	12.00	17.12	63.00
18 Ø	3245-1800		48.50	25.25	12.00	18.00	74.00
20 Ø	3245-2000		52.50	27.20	12.00	19.00	83.00
22 Ø	3245-2200		57.50	29.50	12.00	20.27	104.00

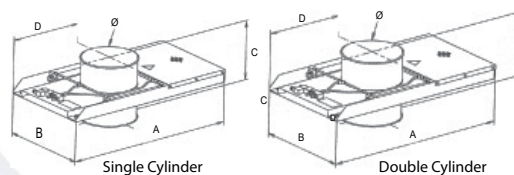


PART NO. 3245

- Automatic energy saving blast gates operated by compressed air cylinders. Cylinders are controlled by electrically-connected solenoid to machines or remote switch. Gates are constructed of galvanized metal or SS (optional) and a special sealing device that reduces air loss and friction in operation. Available in sizes 4" dia. - 22" dia., 120V control circuit and 75psi minimum air pressure.
- Optional 24V DC or AC control circuit available.
- APPLICATION: Gates are used as energy saving devices for industrial dust extraction where continuous extraction is not always needed and where manual control needs to be eliminated.
- Single cylinder: 3" to 8". Double cylinder 9" to 22".
- All auto blast gates have cylinders with galvanized or SS body and steel rod. Solenoid has plastic housing.

◇ SS Blast Gates have a production time of **7 business days** minimum.

All cylinders are magnetic.



## Reed Switch Assembly 1.06

Part No.

3245-0000-RSW106

**Optional** position (open/closed) sensing switch with indicator light.

Assembly includes two switches, one indicating open position and one indicating closed position.

Applies to both styles of automatic Blast Gate.



Cylinder with reed switches attached shown above

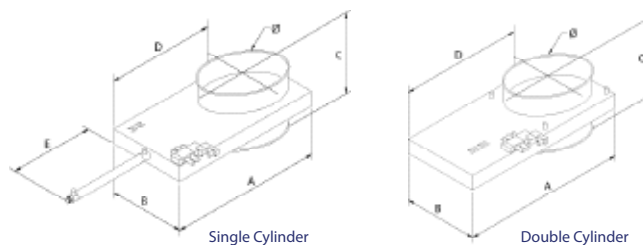
## QF SD Automatic Blast Gate

Ø in	Part No.	Ends	A in	B in	C in	D in	E in	Weight Galv
3	3242-0300	QF	8.11	4.25	5.25	6.30	8.50	9.83
4	3242-0400		10.31	5.30	5.50	7.81	8.50	9.90
5	3242-0500		12.80	6.00	5.75	9.88	9.50	11.90
6	3242-0600		14.47	7.12	5.75	11.28	11.50	15.15
7	3242-0700		16.25	8.00	5.38	12.44	11.50	18.85
8	3242-0800		18.75	9.30	5.50	14.38	13.50	27.50
9	3242-0900		20.63	10.63	5.50	15.88	13.50	37.50
10	3242-1000		22.63	11.65	5.50	17.25	13.50	37.50
12	3242-1200		30.00	16.00	5.25	23.25	N/A	44.00
14	3242-1400		33.04	18.38	5.25	25.29	N/A	50.00
16 Ø	3242-1600		38.52	20.38	11.25	29.65	N/A	63.00
18 Ø	3242-1800		46.69	22.38	11.25	37.04	N/A	74.00
20 Ø	3242-2000		48.69	24.38	11.25	38.04	N/A	83.00
22 Ø	3242-2200		50.69	26.38	11.25	39.04	N/A	104.00
24 Ø	3242-2400		55.50	31.28	11.25	42.40	N/A	125.00



PART NO. 3242

- Operated by compressed air cylinders, controlled by electrically connected solenoid.
- 120V Control Circuit and 75psi minimum air pressure.
- Optional 24V DC or AC control circuits available.
- Single cylinder: 3" to 10".
- Double cylinder 12" to 24".



◇ Items may take longer than standard lead times.

## Rubber Hose, Clear

Ø	Part No.
2"	3280-0200-600000
2.5"	3280-0250-600000
80mm	3280-0315-600000
4"	3280-0400-600000
5"	3280-0500-600000
5.5"	3280-0550-600000
6"	3280-0600-600000
7"	3280-0700-600000
8"	3280-0800-600000
9"	3280-0900-600000
10"	3280-1000-600000
12"	3280-1200-600000
14"	3280-1400-600000
16"	3280-1600-600000



PART NO. 3280

- Clear polyurethane flexible rubber hose reinforced with a bronze coated spring steel wire helix, manufactured with FDA acceptable materials.
- Order hose clamps separately.
- 2" - 12" is sold in 5' increments up to 50' maximum.
- 14" - 16" sold in 5' increments up to 25' maximum.
- Use #3282 Hose Adapter with this hose.

## Rubber Hose, Black

Ø	Part No.
1"	3280-0100-000000
1.5"	3280-1500-000000
2"	3280-0200-000000
2.5"	3280-2500-000000
80mm	3280-0315-000000
3.5"	3280-3500-000000
4"	3280-0400-000000
5"	3280-0500-000000
6"	3280-0600-000000
7"	3280-0700-000000
8"	3280-0800-000000
9"	3280-0900-000000
10"	3280-1000-000000
12"	3280-1200-000000
14"	3280-1400-000000
16"	3280-1600-000000
18"	3280-1800-000000
20"	3280-2000-000000
24"	3280-2400-000000



PART NO. 3280

- Black thermoplastic flexible rubber hose reinforced with spring steel wire helix.
- Order hose clamps separately.
- 1" - 12" is sold in 5' increments up to 50' maximum.
- 14" - 24" sold in 5' increments up to 25' maximum.
- Use #3282 Hose Adapter with this hose.

## Hose Clamp

Ø in	Part No.	Weight
2	3285-0200	0.05
3	3285-0300	0.06
4	3285-0400	0.07
5	3285-0500	0.08
6	3285-0600	0.09
7	3285-0700	0.10
8	3285-0800	0.14
9	3285-0900	0.15
10	3285-1000	0.17
12	3285-1200	0.20
14	3285-1400	0.25
16	3285-1600	0.30
18	3285-1800	0.40
20	3285-2000	0.45
22	3285-2200	0.50
24	3285-2400	0.60



PART NO. 3285

- Stainless Steel Only

## Static Dissipative Urethane Hose, Clear

Ø	Part No.
80mm	3279-0315
4"	3279-0400
5"	3279-0500
6"	3279-0600
8"	3279-0800
10"	3279-1000
12"	3279-1200



PART NO. 3279

- Medium weight clear static dissipative polyurethane hose reinforced with bronze coated spring steel wire helix, manufactured with FDA acceptable materials.
- Great abrasion resistance & high tear strength as well as superior chemical resistance, excellent flexibility, and tolerance for applications with wide temperature ranges.
- Order hose clamps separately.

## Bridge Clamp for Hose

Ø in	Part No.	Weight
2	3288-0200	0.05
2.5	3288-0250	0.06
3	3288-0300	0.07
4	3288-0400	0.09
5	3288-0500	0.10
6	3288-0600	0.14
7	3288-0700	0.15
8	3288-0800	0.17
10	3288-1000	0.25
12	3288-1200	0.30



PART NO. 3288

- Conforms to hose's wire helix for more secure fit.



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## Rigid Flex Steel Hose ◇

Ø in	Part No.	Weight
1.5	3281-1500	1.00
2	3281-0200	1.30
2.5	3281-2500	1.60
3	3281-0300	2.00
4	3281-0400	2.60
5	3281-0500	3.00
6	3281-0600	3.60
7	3281-0700	4.00
8	3281-0800	4.60
9	3281-0900	5.30
10	3281-1000	5.90
12	3281-1200	7.00
14	3281-1400	8.10



PART NO. 3281

## Ultra Flex Steel Hose

Ø in	Part No.	Weight Galv
3	3283-0300	2.15
4	3283-0400	2.65
5	3283-0500	3.05
6	3283-0600	3.55
7	3283-0700	4.15
8	3283-0800	4.55



PART NO. 3283

◇ Items may take longer than standard lead times.

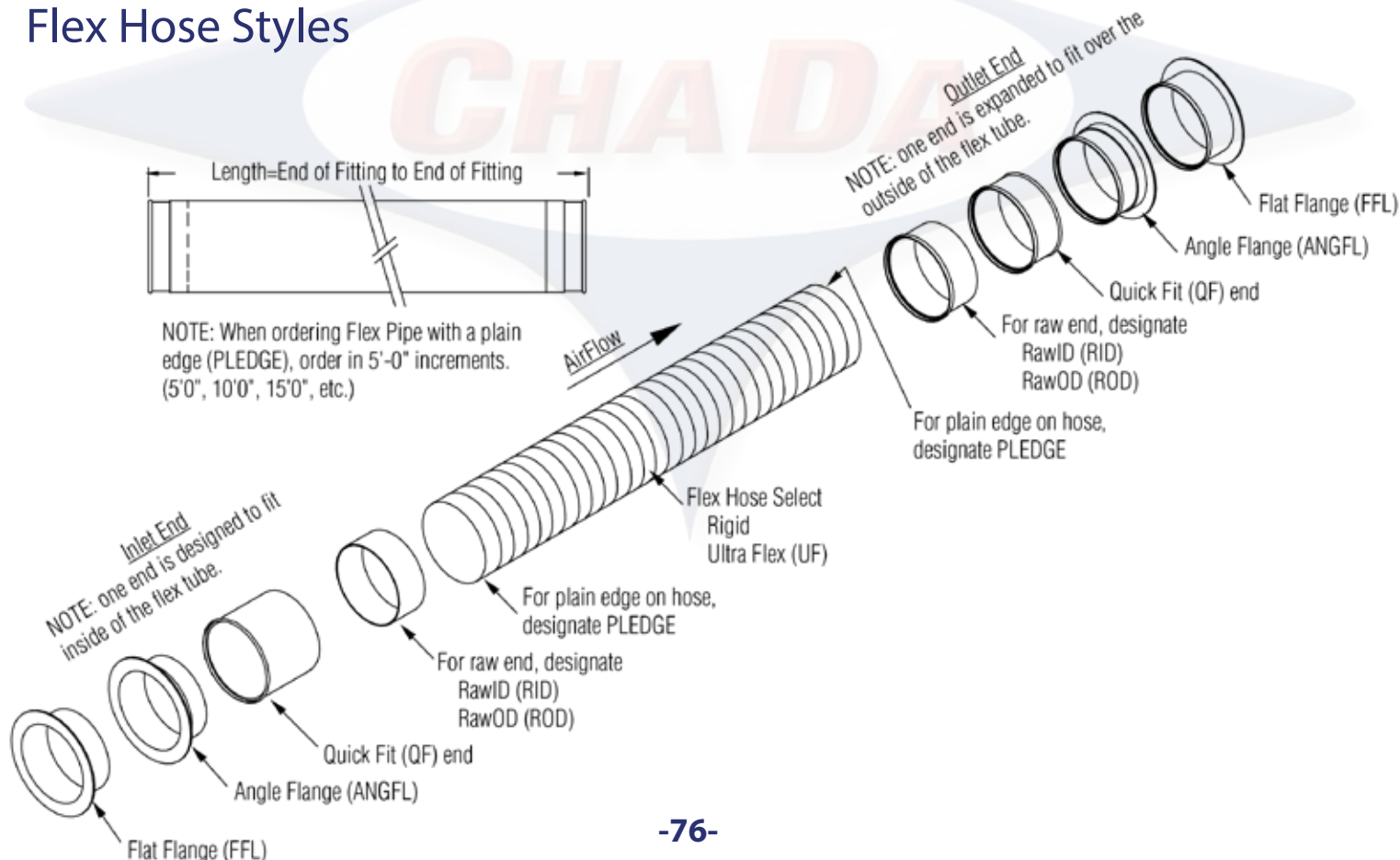
- Flexible rigid steel hose for higher temperature or abrasive material.
- Available in Galvanized or Stainless Steel.
- 1.5" - 6" is sold in 5' increments up to a 25' maximum length.
- 7" - 14" hoses are sold in 5' increments only. If lengths longer than 5' are needed, Nordfab can supply 5' hose assemblies with Quick-Fit ends to easily connect additional assemblies.
- Comes with raw ends standard.
- QF or Angle Flange ends can be attached (additional charge).

- Special flex steel hose.
- Available in Galvanized or Stainless Steel.
- 3" - 6" is sold in 5' increments up to a 25' maximum length.
- 7" - 8" hoses are sold in 5' increments only. If lengths longer than 5' are needed, Nordfab can supply 5' hose assemblies with Quick-Fit ends to easily connect additional assemblies.
- Comes with plain ends standard.
- QF or Angle Flange ends can be attached (additional charge).

\* Do **NOT** use #3285 SS Hose Clamps with these hoses (3281 & 3283).

Alternate ends are available for these hoses upon request at additional cost of \$10.00 per end plus the cost of a machine adapter. If flange required, see pg. 9.

## Flex Hose Styles

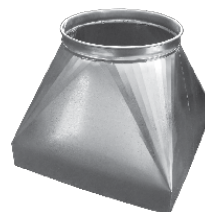


## QF Canopy Hood

Ø in	Part No.	A in	B in	L in	X	Y	Ends	Weight Galv
16	3270-1818	18	18	15.5	4	2	QF	9.00
16	3270-2424	24	24	20	4	2		16.00
18	3270-3636	36	36	29	4	2		36.00
18	3270-4848	48	48	38	4	2		64.00

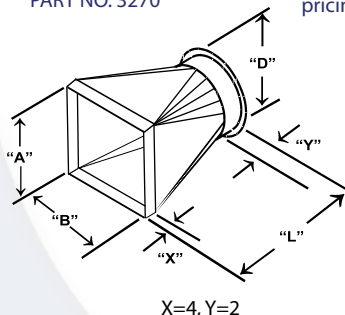
**Hood Design Basis:**  
150 fpm capture velocity  
2 ft. distance from source

\*NOTE: Minimum L = .75 (B). If less, square to square transition will be provided. 7" minimum L allowable for Sq to Rd and 4" L minimum allowable for Sq to Sq.



PART NO. 3270

- 20 gauge material
- Specify opening size: 18" square, 24" square, 36" square, or 48" square. Hemmed end standard.
- Other sizes upon request. Maximum size 72"x48".
- If flange needed, please see transition pricing.

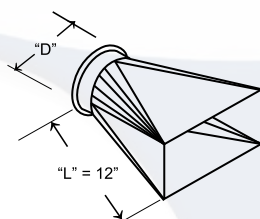


## QF Router Hood

Ø in	Part No.	Ends	Weight Galv
3	3231-0300	QF	2.40
4	3231-0400		2.85
5	3231-0500		3.00
6	3231-0600		3.20
7	3231-0700		3.50
8	3231-0800		4.00
9	3231-0900		6.20
10	3231-1000		8.50



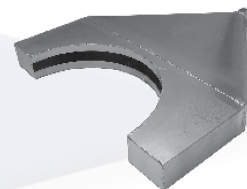
PART NO. 3231



## QF Barrel Hood

Ø in	Part No.	Ends	Weight Galv
4	3271-0400	QF	14.50
6	3271-0600		14.50
8	3271-0800		14.50

- 20ga material
- Designed to fit 55 gallon drums.



PART NO. 3271

## QF Router Hood with Magnet

Ø in	Part No.	Ends	Weight Galv
3	3232-0300	QF	3.40
4	3232-0400		4.60
5	3232-0500		5.50
6	3232-0600		6.40
7	3232-0700		7.25
8	3232-0800		8.50
9	3232-0900		12.40
10	3232-1000		17.00



PART NO. 3232

- Standard opening 6" x 12".
- Magnet itself is not available in SS.



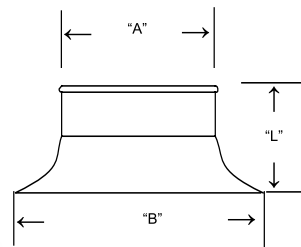
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## QF Bell Mouth Hood

Ø (A) in	Ø (B) in	Part No.	Length (L) in	Weight Galv
3	8	3251-0300	4.5	0.90
4	9	3251-0400	4.5	1.05
5	10	3251-0500	4.5	1.15
6	12	3251-0600	5.0	1.85
7	13	3251-0700	5.0	1.95
8	14	3251-0800	5.0	2.10
9	15	3251-0900	5.0	2.25
10	16	3251-1000	5.0	3.00
11	19	3251-1100	6.0	3.70
12	20	3251-1200	6.0	4.10
13	21	3251-1300	6.0	4.50
14	22	3251-1400	6.0	5.75
15	23	3251-1500	6.0	6.25
16	26	3251-1600	7.0	7.50
17	27	3251-1700	7.0	8.25
18	28	3251-1800	7.0	9.50
20	30	3251-2000	7.0	10.75
22	34	3251-2200	8.0	12.25
24	36	3251-2400	8.0	14.50



PART NO. 3251



- A flared end hood
- Increases capture ratio of air, dust, smoke etc.
- Increases laminar air flow
- 20 gauge

◇ SS Bell Mouth Hoods have a lead time of 4-5 business days minimum.

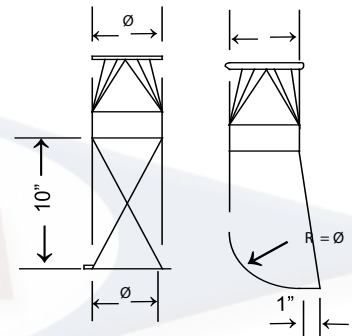
## QF Radial Arm Saw Hood

Ø	Part No.	Ends	Weight Galv
4	3229-0400	QF	3.50
5	3229-0500		3.90
6	3229-0600		4.20



PART NO. 3229

- Used to collect dust from "Radial Arm Saws"
- Body 18 gauge, transition 22 gauge
- Available in SS



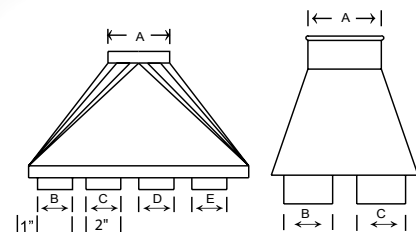
## QF Suction Hood

Part No.	Ends	No. of Pickups	Weight Galv
3230-XX02	QF	2	6.50
3230-XX03		3	9.00
3230-XX04		4	13.40
3230-XX05		5	22.80
3230-XX06		6	47.60

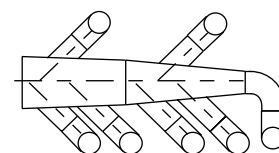


PART NO. 3230

- Specify round or rectangular.



Custom manifolds are available.  
Contact our sales office for your particular needs.



Custom Manifold

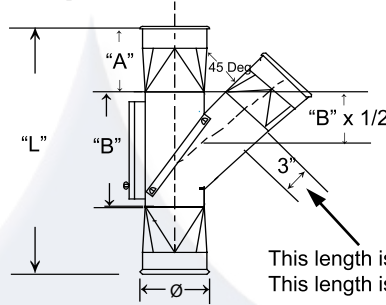
### QF Manual Diverter Valve ◇

Ø in	Part No.	Ends	B in	A in	L in	Housing Gauge	Weight (Galv)
3	3235-0345	QF	14	6	26	3/16	15.00
4	3235-0445		14	6	26	3/16	20.00
5	3235-0545		15.25	6	27.25	3/16	30.00
6	3235-0645		16	6	28	3/16	44.00
7	3235-0745		16	6	28	3/16	60.00
8	3235-0845		17	6	29	3/16	66.50
9	3235-0945		18	8	34	3/16	85.40
10	3235-1045		20	8	36	3/16	100.00
11	3235-1145		20	8	36	3/16	115.00
12	3235-1245		24	8	40	3/16	130.00
13	3235-1345		24	8	40	3/16	146.50
14	3235-1445		28	8	44	3/16	170.00
15	3235-1545		28	8	44	3/16	190.00
16	3235-1645		32	8	48	3/16	220.00
17	3235-1745		32	8	48	3/16	337.00
18	3235-1845		36	8	52	3/16	392.00
20	3235-2045		40	10	60	3/16	447.00
22	3235-2245		41.25	10	61.25	3/16	522.50
24	3235-2445		48	10	68	3/16	625.10

◇ Diverter Valves have a lead time of 7 days minimum



PART NO. 3235



Manual

- High efficiency, economical method of diverting flow of material or air.
- Constructed of heavy 3/16" thick and painted metal with welded seams.
- Supplied with heavy duty flange bearings and rubber seal in door.
- Manual Open and Close.
- 45° angle only.
- Other sizes available upon request.
- Available in black metal painted (standard) or stainless steel (optional).
- Reverse flow available upon request.

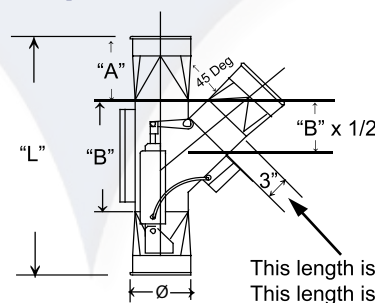
### QF Automatic Diverter Valve ◇

Ø in	Part No.	Ends	B in	A in	L in	Housing Gauge	Weight (Galv)
3	3236-0345	QF	14	6	26	3/16	22.50
4	3236-0445		14	6	26	3/16	27.00
5	3236-0545		15.25	6	27.25	3/16	37.50
6	3236-0645		16	6	28	3/16	51.00
7	3236-0745		16	6	28	3/16	67.50
8	3236-0845		17	6	29	3/16	74.00
9	3236-0945		18	8	34	3/16	92.90
10	3236-1045		20	8	36	3/16	107.50
11	3236-1145		20	8	36	3/16	140.00
12	3236-1245		24	8	40	3/16	154.00
13	3236-1345		24	8	40	3/16	177.50
14	3236-1445		28	8	44	3/16	198.50
15	3236-1545		28	8	44	3/16	227.40
16	3236-1645		32	8	48	3/16	260.00
17	3236-1745		32	8	48	3/16	345.00
18	3236-1845		36	8	52	3/16	400.00
20	3236-2045		40	10	60	3/16	455.00
22	3236-2245		41.25	10	61.25	3/16	530.00
24	3236-2445		48	10	68	3/16	635.00

◇ Diverter Valves have a lead time of 7 days minimum



PART NO. 3236



Automatic

All cylinders are magnetic

- High efficiency, economical method of diverting flow of material or air.
- Constructed of heavy 3/16" thick and painted metal with welded seams. Supplied with heavy duty flange bearings and rubber seal in door.
- Power Open and Close.
- Minimum 75psi.
- 45° angle only.
- Other sizes available upon request.
- Available in black metal painted (standard) or stainless steel (optional).
- SS diverters have SS cylinder with steel rod.
- Reverse flow available upon request.

### Reed Switch Assembly 2.50

Part No.
3203-0000-RSW250



Cylinder with reed switches attached shown at left

- **Optional** position (open/closed) sensing switch with indicator light.
- Assembly includes two switches, one indicating open position and one indicating closed position.
- Applies to both styles of automatic Diverter Valves.



PART NO. 3233 (Manual)

PART NO. 3234 (Auto)

- High efficiency, economical method of diverting flow of material or air.
- Constructed of heavy 14ga thick galvanized or stainless steel, with bolted seams.  
Supplied with heavy duty flange bearings and rubber seal in door.
- 45° angle only.
- Available in galvanized (standard) or stainless steel (optional).
- Operated by compressed air cylinders, controlled by electrically connected solenoid.  
120v control circuit and 75psi minimum air pressure. Optional 24v DC or AC control circuits available. (Auto Only)
- Diverters have galvanized or SS cylinder with steel rod.

#### QF SD Manual Diverter Valve ◇

Ø in	Part No.	Weight Galv
3	3233-0300	10.00
4	3233-0400	10.00
5	3233-0500	10.00
6	3233-0600	22.00
7	3233-0700	22.00
8	3233-0800	37.00
9	3233-0900	37.00
10	3233-1000	55.00
11	3233-1100	55.00
12	3233-1200	73.00
13	3233-1300	73.00

#### SD Auto Diverter Valve ◇

Ø in	Part No.	Weight Galv
3	3234-0300	15.00
4	3234-0400	15.00
5	3234-0500	15.00
6	3234-0600	27.00
7	3234-0700	27.00
8	3234-0800	42.00
9	3234-0900	42.00
10	3234-1000	60.00
11	3234-1100	60.00
12	3234-1200	78.00
13	3234-1300	78.00

All cylinders are magnetic

◇ Diverter Valves have a lead time of 7 days minimum

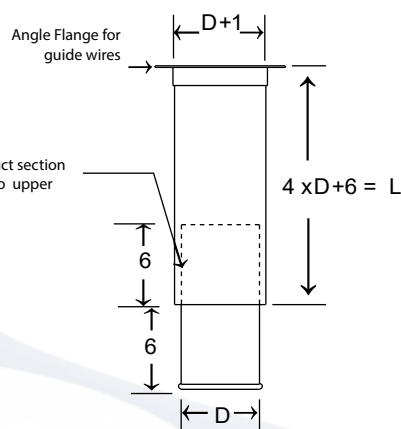
## QF No-Loss Stackhead

Ø in	Part No.	Ends	Gauge	Weight Galv
3	3204-0300	QF	22	4.00
4	3204-0400	QF	22	6.50
5	3204-0500	QF	22	8.00
6	3204-0600	QF	22	10.00
7	3204-0700	QF	22	14.00
8	3204-0800	QF	22	23.08
9	3204-0900	QF	22	32.00
10	3204-1000	QF	22	36.00
11	3204-1100	QF	22	39.00
12	3204-1200	QF	22	42.00
13	3204-1300	QF	20	45.00
14	3204-1400	QF	20	50.00
15	3204-1500	QF	20	56.00
16	3204-1600	QF	20	60.00
17	3204-1700	QF	20	64.00
18	3204-1800	QF	20	69.75
20	3204-2000	QF	20	79.16
22	3204-2200	QF	20	84.00
24	3204-2400	QF	20	98.56
26	3204-2600	FLANGE	20	118.00
28	3204-2800	FLANGE	20	132.05
30	3204-3000	FLANGE	18	143.90
32	3204-3200	FLANGE	18	152.83
34	3204-3400	FLANGE	18	160.76
36	3204-3600	FLANGE	18	170.81
38	3204-3800	FLANGE	18	179.81
40	3204-4000	FLANGE	18	193.25



PART NO. 3204

Short QF duct section bracketed to upper stack



- Used when exhausting from fans or stacks through roof.
- Eliminates back pressure on fan while providing weather protection.
- Flange for guide wire attachment.

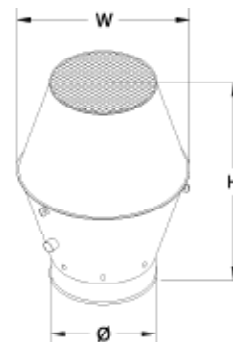
## QF Jet Cap

Ø in	Part No.	Ends	W in	H in	Gauge	Weight
6	3258-0600	QF	10.12	14.40	22	14.00
8	3258-0800	QF	13.25	18.40	22	33.00
10	3258-1000	QF	16.50	22.40	22	51.00
12	3258-1200	QF	20.00	27.00	22	59.00
13	3258-1300	QF	21.50	30.00	20	63.00
14	3258-1400	QF	23.12	32.80	20	70.00
15	3258-1500	QF	24.50	34.00	20	79.00
16	3258-1600	QF	26.50	36.40	20	84.00
17	3258-1700	QF	27.70	38.00	20	90.00
18	3258-1800	QF	29.50	40.00	20	98.00
20	3258-2000	QF	32.50	44.40	18	111.00
22	3258-2200	QF	35.40	47.50	18	118.00
24	3258-2400	QF	38.60	51.50	18	138.00
26	3258-2600	FLANGE	42.20	55.00	18	166.00
28	3258-2800	FLANGE	45.20	59.00	18	185.00
30	3258-3000	FLANGE	48.20	63.00	18	202.00
32	3258-3200	FLANGE	51.20	67.00	18	214.00
34	3258-3400	FLANGE	54.60	71.00	18	226.00
36	3258-3600	FLANGE	58.20	74.70	18	240.00
38	3258-3800	FLANGE	61.20	79.00	18	252.00
40	3258-4000	FLANGE	64.20	83.00	18	271.00



PART NO. 3258

- Prevents rain from entering ducting.
- Inner funnel piece allows rain to drain out of ductwork even when system is not running.
- Has three angle brackets for guide wire attachment.
- Installs in seconds with standard QF Clamp.

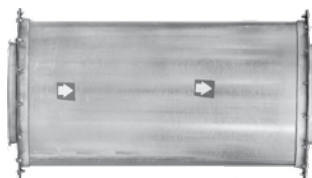




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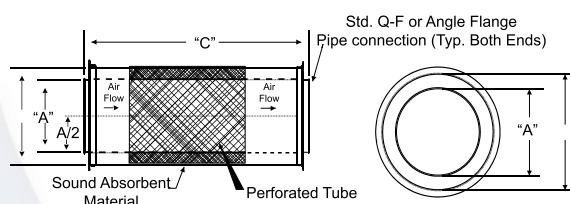
## QF Silencer

A in	OD	Part No.	Ends	Length (C) in	Gauge Housing	Weight Galv
3	12	3106-0300	QF	28	20	10.00
4	12	3106-0400	QF	28	20	21.00
5	13	3106-0500	QF	28	20	35.00
6	14	3106-0600	QF	30	20	43.00
7	15	3106-0700	QF	30	20	54.00
8	16	3106-0800	QF	35	20	65.00
9	17	3106-0900	QF	40	20	76.00
10	18	3106-1000	QF	48	20	89.00
12	20	3106-1200	QF	54	20	104.00
14	22	3106-1400	QF	60	20	122.00
16	24	3106-1600	QF	64	20	176.00
18	26	3106-1800	QF	68	20	225.00
20	28	3106-2000	QF	72	20	265.00
22	30	3106-2200	QF	76	20	310.00
24	32	3106-2400	QF	80	20	406.00
26	34	3106-2600	FLANGE	80	20	546.00
28	36	3106-2800	FLANGE	80	20	600.00
30	38	3106-3000	FLANGE	80	18	678.00
32	40	3106-3200	FLANGE	80	18	700.00
34	42	3106-3400	FLANGE	80	18	770.00
36	44	3106-3600	FLANGE	80	18	897.00
38	46	3106-3800	FLANGE	80	18	974.00
40	48	3106-4000	FLANGE	80	18	1118.00



PART NO. 3106

- Reduces sound levels from fans and equipment. Due to varying applications, no decibel testing has been performed on this product.



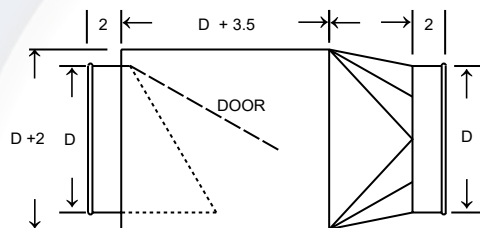
## QF In Line Back Draft Damper

Ø in	Part No.	Ends	Length in	Length B in	Gauge	Weight Galv
3	3219-0300	QF	17.5	7	18	2.25
4	3219-0400	QF	18.5	7	18	3.00
5	3219-0500	QF	19.5	7	18	3.50
6	3219-0600	QF	20.5	7	18	4.00
7	3219-0700	QF	21.5	7	18	4.50
8	3219-0800	QF	22.5	7	18	5.00
9	3219-0900	QF	23.5	7	18	10.00
10	3219-1000	QF	24.5	7	18	20.00
11	3219-1100	QF	25.5	7	18	25.00
12	3219-1200	QF	26.5	7	18	30.00
13	3219-1300	QF	32.5	12	18	36.00
14	3219-1400	QF	33.5	12	18	42.00
15	3219-1500	QF	34.5	12	18	49.00
16	3219-1600	QF	43.5	20	18	59.00
17	3219-1700	QF	44.5	20	18	63.00
18	3219-1800	QF	45.5	20	18	72.00
20	3219-2000	QF	47.5	20	16	78.00
22	3219-2200	QF	49.5	20	16	85.00
24	3219-2400	QF	51.5	20	16	90.00
26	3219-2600	FLANGE	57.5	24	16	100.00
28	3219-2800	FLANGE	59.5	24	16	110.00
30	3219-3000	FLANGE	61.5	24	16	115.00
32	3219-3200	FLANGE	63.5	24	16	120.00
34	3219-3400	FLANGE	65.5	24	16	130.00



PART NO. 3219

- Used to reduce backward air flow in the line.
- Designed for use in a horizontal line. Specify if vertical operation is required.
- Not an explosion isolation device.



## QF Suction Nozzle Assembly

Ø in	Part No.	Ends	Weight (Galv)
4	3272-0400	QF	5.60



PART NO. 3272

- Affix to end of hose for suction cleaning.
- 4" hose connection.

## QF Vibration Isolator

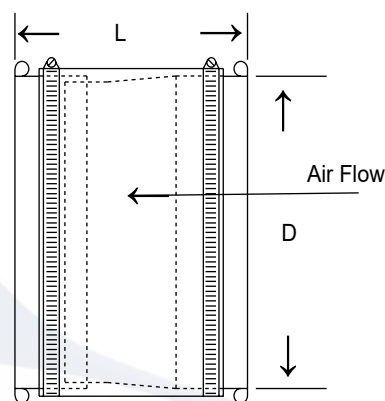
Ø in	Part No.	Ends	Length (L) in	Gauge	Weight Galv
3	3206-0300	QF	6.5	22	1.50
4	3206-0400	QF	6.5	22	2.00
5	3206-0500	QF	6.5	22	2.30
6	3206-0600	QF	6.5	22	2.90
7	3206-0700	QF	6.5	22	3.45
8	3206-0800	QF	6.5	22	3.80
9	3206-0900	QF	6.5	22	4.20
10	3206-1000	QF	6.5	22	4.80
11	3206-1100	QF	6.5	22	5.10
12	3206-1200	QF	6.5	22	5.60
13	3206-1300	QF	6.5	20	6.00
14	3206-1400	QF	6.5	20	7.60
15	3206-1500	QF	6.5	20	7.10
16	3206-1600	QF	6.5	20	8.60
17	3206-1700	QF	6.5	20	9.35
18	3206-1800	QF	6.5	20	10.15
20	3206-2000	QF	6.5	20	12.40
22	3206-2200	QF	6.5	20	14.90
24	3206-2400	QF	7	20	17.60
26	3206-2600	FLANGE	10	18	49.28
28	3206-2800	FLANGE	10	18	59.00
30	3206-3000	FLANGE	10	18	63.43
32	3206-3200	FLANGE	10	18	71.90
34	3206-3400	FLANGE	10	18	79.40
36	3206-3600	FLANGE	10	18	88.50
38	3206-3800	FLANGE	10	18	76.20
40	3206-4000	FLANGE	10	18	110.40

◊ Items may take longer than standard lead times.



PART NO. 3206

- Reduces vibration from the fan to the ducting system.



## QF Sliding Access Panel

Ø in	Pipe Length/ Slide Length	Access Hole	Part No.
6	59.25 inches/18 Inches	7 x 14	3103-0600-100000
7	59.06 inches/18 Inches	7 x 14	3103-0700-100000
8	59.06 inches/18 Inches	7 x 14	3103-0800-100000
9	58.75 inches/18 Inches	7 x 14	3103-0900-100000
10	58.75 inches/18 Inches	7 x 14	3103-1000-100000
11	58.75 inches/18 Inches	7 x 14	3103-1100-100000
12	58.75 inches/18 Inches	7 x 14	3103-1200-100000
13	58.75 inches/18 Inches	7 x 14	3103-1300-100000
14	58.75 inches/18 Inches	7 x 14	3103-1400-100000
15	58.75 inches/18 Inches	7 x 14	3103-1500-100000
16	58.75 inches/18 Inches	7 x 14	3103-1600-100000
17	58.75 inches/18 Inches	7 x 14	3103-1700-100000
18	58.75 inches/18 Inches	7 x 14	3103-1800-100000
20	58.75 inches/18 Inches	7 x 14	3103-2000-100000
22	58.75 inches/18 Inches	7 x 14	3103-2200-100000
24	58.75 inches/18 Inches	7 x 14	3103-2400-100000



PART NO. 3103

- Allows access without removal of pipe.
- Product length equals nominal pipe length.
- 6"-24" units have 7" x 14" access hole.
- Cannot be made shorter than 36".



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## QF Butterfly Valve

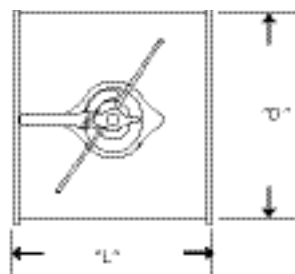
Ø in	Part No.	Ends	Length (L) in	Gauge	Weight Galv
3	3208-0300	QF	8	22	1.50
4	3208-0400		8	22	1.65
5	3208-0500		8	22	2.00
6	3208-0600		8	22	2.40
7	3208-0700		8	22	3.20
8	3208-0800		13	22	4.10
9	3208-0900		13	22	4.85
10	3208-1000		13	22	5.45
11	3208-1100		13	20	7.00
12	3208-1200		13	20	8.40
13	3208-1300		17	20	9.75
14	3208-1400		17	20	11.85
15	3208-1500		17	20	12.70
16	3208-1600		17	20	14.20
17	3208-1700		23	20	16.10
18	3208-1800		23	20	18.00
20	3208-2000		23	20	27.75
22	3208-2200		23	20	32.40
24	3208-2400		23	20	37.90



PART NO. 3208

• A standard locking quadrant handle enables users to regulate air volumes in clean air applications.

• For use only in clean air applications.



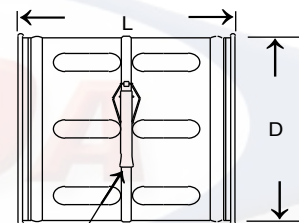
## QF Bleed-in Valve

Ø in	Part No.	Ends	Length (L) in	No. of Slots	Gauge	Weight Galv
3	3207-0300	QF	11	4	22	3.75
4	3207-0400		11	4	22	4.00
5	3207-0500		11	6	22	4.25
6	3207-0600		11	6	22	4.50
7	3207-0700		11	8	22	4.75
8	3207-0800		11	8	22	5.00
9	3207-0900		11	10	22	5.25
10	3207-1000		11	10	22	5.50
11	3207-1100		11	10	22	5.75
12	3207-1200		11	12	22	6.25
13	3207-1300		11	12	20	6.75
14	3207-1400		11	14	20	7.50
15	3207-1500		11	14	20	8.25
16	3207-1600		11	16	20	10.00
17	3207-1700		11	16	20	11.75
18	3207-1800		11	18	20	13.50
20	3207-2000		11	20	20	15.00
22	3207-2200		11	22	20	18.00
24	3207-2400		11	24	20	22.00



PART NO. 3207

• Used to adjust airflow to balance system by introducing ambient air.



To Adjust, Loosen Clamp and Turn Outer Sleeve To Get Proper Air-flow Re-Clamp When Finished

## QF Ball Joint

Ø in	Part No.	Ends	Length (L) in	Gauge	Weight Galv
4	3209-0400	QF	9.50	20	2.10
6	3209-0600		11.75	20	3.85
8	3209-0800		14.00	18	5.00
10	3209-1000		14.25	18	8.95
12	3209-1200		15.25	16	9.25
14*	3209-1400		17.50	14	15.70

\* 14" diameter - up to 6 weeks lead time

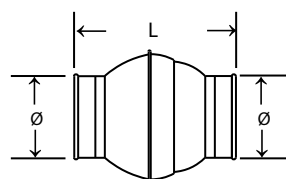


PART NO. 3209

• Allows up to 22° of movement off-center.

• Odd sizes available upon request, with possibility of up to 6 weeks lead time.

• Not available in SS.



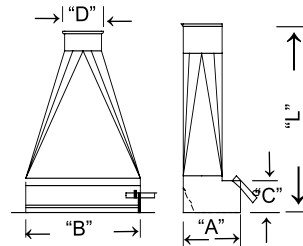
## QF Floor Sweep

Ø in	Part No.	Ends	A INCH	B INCH	C INCH	L INCH	Weight (Galv)
3	3248-0300	QF	6	12	3.5	18	5.80
4	3248-0400						6.90
5	3248-0500						7.30
6	3248-0600						7.55
7	3248-0700						7.75
8	3248-0800						8.25
9	3248-0900						9.50
10	3248-1000						11.75
11	3248-1100						13.20
12	3248-1200						15.70



PART NO. 3248

- Quick and effective floor cleaning.
- Galvanized or SS (optional) sheet metal with sturdy closing door.



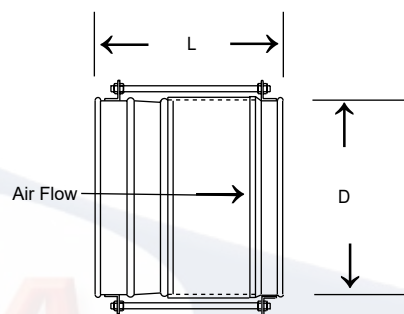
## QF Viewing Spool

Ø in	Part No.	Ends	Length (L)	Gauge	Weight (Galv)
3	3205-0300	QF	12.5	22	2.50
4	3205-0400		12.5	22	3.00
5	3205-0500		12.5	22	3.50
6	3205-0600		12.5	22	4.10
7	3205-0700		12.5	22	4.60
8	3205-0800		12.5	22	5.00
9	3205-0900		12.5	22	5.45
10	3205-1000		12.5	22	6.25
11	3205-1100		12.5	22	7.10
12	3205-1200		12.5	22	8.20
14	3205-1400	QF	12.5	20	11.25
15	3205-1500		12.5	20	14.10
16	3205-1600		12.5	20	18.25
18	3205-1800		12.5	20	22.60



PART NO. 3205

- A section of acrylic glass with QF ends to view material flow.

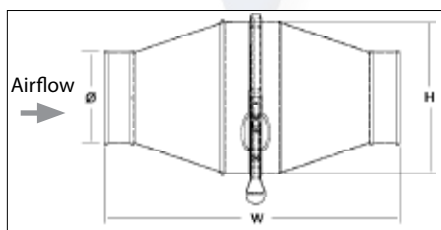


## QF In-line Spark Trap

Ø in	Part No.	H in	W in	Weight (Galv QF) lbs
4	3255-0400	7	18	6
5	3255-0500	9	20	7
6	3255-0600	10	20	8
7	3255-0700	12	22	11
8	3255-0800	13	22	13
9	3255-0900	15	24	15
10	3255-1000	16	24	16
12	3255-1200	18	26	21
14	3255-1400	22	28	26
16	3255-1600	25	30	33
18	3255-1800	28	32	47
20	3255-2000	31	34	58
22	3255-2200	35	38	72
24	3255-2400	38	40	87



PART NO. 3255



NOTE: Does not replace spark detection or explosion isolation devices.  
Complementary device to existing detection and suppression equipment.

- Greatly reduces the possibility of fire in cyclones / collectors by decreasing the number of sparks which could reach these through the air handling system. This is accomplished by disrupting the laminar airflow to cause sparks to cool and extinguish before they can enter the dust collector / cyclone.
- No moving parts and no power required for operation.
- Velocity: 1500-5000 fpm
- Duct distance recommended: At least ten diameter from dust collector / cyclone and the source (example: 8" duct line, recommended distance is min. 80")
- Horizontal installation only



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## OIL MIST SYSTEM

Nordfab's Oil Mist system consists of three parts: Epoxy Caulking, Gaskets and O-rings

A leak-free duct system is largely dependent on the skill and care of the installer, so Nordfab cannot guarantee a 100% leak free system. However, if users consult the technical data (to ensure that our gasket and sealing materials will stand up to the materials being conveyed) and take care in the installation process, this system has proven that it can be 'Leak Free'.

### Leak-Free Epoxy Caulking



- Epoxy caulking.
  - Good to excellent resistance to most
- LEAK-FREE EPOXY CAULKING IS AVAILABLE ON ALL NON-LASER WELDED PARTS. 25% UPCHARGE**

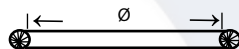
Classification: 1. ASTM D-1056-68.....SBE43  
2. ASTM D-1056-85, 91, 98.....2B3

### Leak-Free O-Ring

Ø in	Part No.	Weight
3	3191-0300	0.01
4	3191-0400	0.01
5	3191-0500	0.02
6	3191-0600	0.03
7	3191-0700	0.04
8	3191-0800	0.08
9	3191-0900	0.09
10	3191-1000	0.10
11	3191-1100	0.16
12	3191-1200	0.17
13	3191-1300	0.20
14	3191-1400	0.23
15	3191-1500	0.24
16	3191-1600	0.26
18	3191-1800	0.28
20	3191-2000	0.29
22	3191-2200	0.31
24	3191-2400	0.33



PART NO. 3191



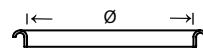
### Leak-free Molded Gasket

Ø in	Part No.	Weight
3	3190-0300	0.02
4	3190-0400	0.03
5	3190-0500	0.03
6	3190-0600	0.04
7	3190-0700	0.08
8	3190-0800	0.09
9	3190-0900	0.10
10	3190-1000	0.11
11	3190-1100	0.15
12	3190-1200	0.17
13	3190-1300	0.20
14	3190-1400	0.23
15	3190-1500	0.25
16	3190-1600	0.26
18	3190-1800	0.28
20	3190-2000	0.29
22	3190-2200	0.31
24	3190-2400	0.33

Classification: 1. ASTM D-2000 M2BG510 A24 B34 EO14  
EO34 EF11 EF21



PART NO. 3190



- General purpose oil resistant polymer.
- Performs well in many oil, water and hydraulic fluid applications.
- Should not be used with solvents such as acetone, MEK, ozone, chlorinated hydrocarbons, and nitro hydrocarbons.
- Temp range: -30° F to +225° F.
- No additional sizes available.

- Performs well with many oils and chemicals.
- Temp range: -30° F to +225° F.
- Can't be damaged by flexing and twisting.
- This O-Ring works in conjunction with Nordfab's standard O-ring. IT DOES NOT REPLACE IT

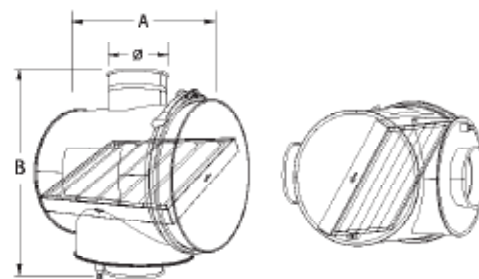
### QF Oil Mist Recycler

Ø in	Part No.	Gauge	A in	B in	Baffle Size in	Weight Galv
3	3192-0300	22	14	18	10 x 14	11.10
4	3192-0400	22	14	18	10 x 14	11.25
5	3192-0500	22	14	18	10 x 14	11.45
6	3192-0600	22	14	18	10 x 14	11.60
7	3192-0700	22	20	24	16 x 20	22.70
8	3192-0800	22	20	24	16 x 20	22.85
9	3192-0900	22	20	24	16 x 20	23.10
10	3192-1000	22	20	24	16 x 20	23.30
12	3192-1200	22	20	28	20 x 20	32.85



PART NO. 3192

- Installs in vertical or horizontal applications.
- Extracts oil to minimize amount of oil flowing through entire system.
- Consists of recycler unit, molded gasket, clamp and end cap.
- 5' clear hose and hose clamp provided for drain tap.



## QF Gripple Hanger

Size Weight	Part No.	Weight Galv
Up to 22lbs	3266-1500-022LBS	0.05
Up to 100lbs	3266-1500-100LBS	0.10
Up to 200lbs	3266-1500-200LBS	0.75
Up to 495lbs	3266-1500-495LBS	1.10
Up to 715lbs	3266-1500-715LBS	1.20



PART NO. 3266

- Comes in length of 15 feet
- Most common hanging method

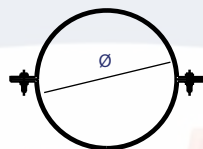
## QF Pipe Hanger

Ø in	Part No.	Weight Galv
3	3265-0300	0.40
4	3265-0400	0.45
5	3265-0500	0.50
6	3265-0600	0.60
7	3265-0700	0.65
8	3265-0800	0.75
9	3265-0900	0.85
10	3265-1000	0.95
11	3265-1100	1.00
12	3265-1200	1.10
13	3265-1300	1.20
14	3265-1400	1.15
15	3265-1500	1.30
16	3265-1600	1.35
17	3265-1700	1.40
18	3265-1800	1.50
20	3265-2000	1.80
22	3265-2200	6.00
24	3265-2400	6.00
26	3265-2600	6.00
28	3265-2800	6.00
30	3265-3000	7.50
32	3265-3200	8.00
34	3265-3400	8.00
36	3265-3600	8.80
38	3265-3800	10.00
40	3265-4000	10.00



PART NO. 3265

- 3"-24" made from galvanized steel 14 gauge, SS is 16 gauge
- Over 24" made from 3/16" flat bar steel
- Clearance hole 5/16"
- Bolts are supplied with hanger



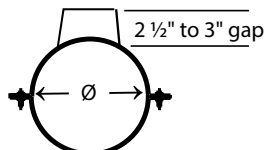
## QF Pipe Hanger HJ

Ø in	Part No.	Weight Galv
3	3265-0300-1HJ	0.45
4	3265-0400-1HJ	0.55
5	3265-0500-1HJ	0.65
6	3265-0600-1HJ	0.75
7	3265-0700-1HJ	0.85
8	3265-0800-1HJ	0.95
9	3265-0900-1HJ	1.05
10	3265-1000-1HJ	1.15
11	3265-1100-1HJ	1.30
12	3265-1200-1HJ	1.45
13	3265-1300-1HJ	1.60
14	3265-1400-1HJ	1.75
15	3265-1500-1HJ	1.90
16	3265-1600-1HJ	2.20
17	3265-1700-1HJ	2.50
18	3265-1800-1HJ	2.85
20	3265-2000-1HJ	3.40
22	3265-2200-1HJ	4.10
24	3265-2400-1HJ	5.00



PART NO. 3265HJ

- 3"-24" made from galvanized steel 14 gauge, SS is 16 gauge
- Clearance hole 7/16"
- Bolts are supplied with hanger



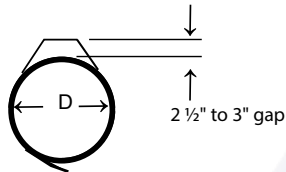
### QF Clamp Hanger

Ø in	Part No.
3	3265-0300-1QF000
4	3265-0400-1QF000
5	3265-0500-1QF000
6	3265-0600-1QF000
7	3265-0700-1QF000
8	3265-0800-1QF000
9	3265-0900-1QF000
10	3265-1000-1QF000
11	3265-1100-1QF000
12	3265-1200-1QF000
13	3265-1300-1QF000
14	3265-1400-1QF000
15	3265-1500-1QF000
16	3265-1600-1QF000
17	3265-1700-1QF000
18	3265-1800-1QF000
20	3265-2000-1QF000
22	3265-2200-1QF000
24	3265-2400-1QF000



PART NO. 3265

- Tested by MET Laboratories to hold, without failure, up to 170lbs for 9" hanger and up to 850lbs for 20".



### QF Strut Hanger

Size	Part No.
3	3265-0300-1MH000
4	3265-0400-1MH000
5	3265-0500-1MH000
6	3265-0600-1MH000
7	3265-0700-1MH000
8	3265-0800-1MH000
9	3265-0900-1MH000
10	3265-1000-1MH000
11	3265-1100-1MH000
12	3265-1200-1MH000
13	3265-1300-1MH000
14	3265-1400-1MH000
15	3265-1500-1MH000
16	3265-1600-1MH000
17	3265-1700-1MH000
18	3265-1800-1MH000
20	3265-2000-1MH000
22	3265-2200-1MH000
24	3265-2400-1MH000



PART NO. 3265

- Tested by MET Laboratories to hold up to 170lbs for 9" and up to 850lbs for 20" without failure.
- For strut channel mounting (strut not included).
- Nut and bolt included.

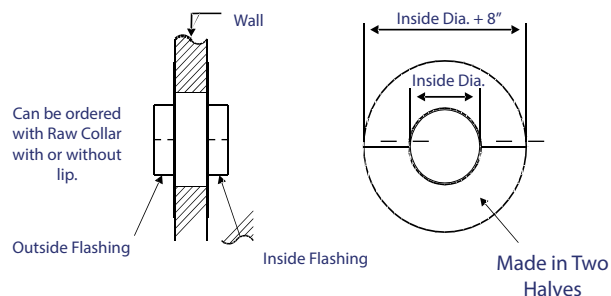
## QF Wall Flashing

Ø in	Part No.	Gauge
4	3238-0400-100000	20
5	3238-0500-100000	20
6	3238-0600-100000	20
7	3238-0700-100000	20
8	3238-0800-100000	20
9	3238-0900-100000	20
10	3238-1000-100000	20
12	3238-1200-100000	20
14	3238-1400-100000	20
16	3238-1600-100000	20
18	3238-1800-100000	20
20	3238-2000-100000	20
22	3238-2200-100000	20
24	3238-2400-100000	20

Wall Flashing



PART NO. 3238

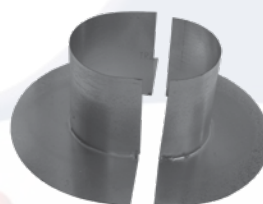


- Provides cover for wall penetration.
- Ordering one Flashing provides you with both 1 inside and 1 outside flashing (4 halves).

## QF Roof Flashing

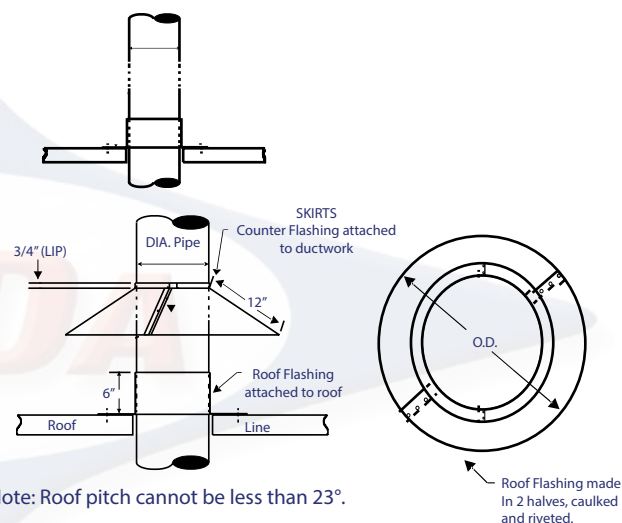
Ø in	Part No.	Gauge
4	3237-0400-100000	20
5	3237-0500-100000	20
6	3237-0600-100000	20
7	3237-0700-100000	20
8	3237-0800-100000	20
9	3237-0900-100000	20
10	3237-1000-100000	20
12	3237-1200-100000	20
14	3237-1400-100000	20
16	3237-1600-100000	20
18	3237-1800-100000	20
20	3237-2000-100000	20
22	3237-2200-100000	20
24	3237-2400-100000	20

Roof Flashing



PART NO. 3237

- Provides cover for roof penetration.



Note: Roof pitch cannot be less than 23°.

## QF Roof Skirt

Ø in	Part No.	Gauge
4	3239-0400-100000	20
5	3239-0500-100000	20
6	3239-0600-100000	20
7	3239-0700-100000	20
8	3239-0800-100000	20
9	3239-0900-100000	20
10	3239-1000-100000	20
12	3239-1200-100000	20
14	3239-1400-100000	20
16	3239-1600-100000	20
18	3239-1800-100000	20
20	3239-2000-100000	20
22	3239-2200-100000	20
24	3239-2400-100000	20

Roof Skirt



PART NO. 3239

- Provides weather protection for roof penetration.

Note: Roof pitch cannot be less than 23°.

## Fuji Electric Ring Compressor Blowers

ChaDa Sales offers a wide range of Regenerative Blowers, High Pressure Blowers, Turbo Style Blowers, Coolant Pumps, Air Knife Systems and Vacuum systems. Regenerative Blowers and High Pressure Blowers are used in applications that require powerful, high-performance blowers such as wastewater treatment plants and aquaculture applications. Air knife systems are often seen in Food Processing plants, while pneumatic vacuum systems play a vital role in a variety of applications, including medical and financial facilities. Fuji Electric's complete lineup of Ring Compressors & Blowers meet our customer's need for quality, reliable products for any project.



**VFZ Series**

The VFZ Series are single-stage ring compressors with a maximum pressure of 139 in. H<sub>2</sub>O, a maximum vacuum of 110 in. H<sub>2</sub>O and a maximum capacity of 570 SCFM. Motors are direct drive from 1 HP to 15 HP. Voltages are available in 115 single phase, 230 single phase, 230/460 3-phase dependent upon motor size. All units are provided with threaded flanges.



**VFB175 Series**

The VFB175 Series is a single-stage ring compressors with a maximum pressure of 72 in. H<sub>2</sub>O, a maximum vacuum of 65 in. H<sub>2</sub>O and a maximum capacity of 105 CFM. The motor is a direct drive 1.75 HP single phase motor for use at either 115 or 230 VAC. All units are provided with threaded flanges and pilot duty thermal protection.



**VFC Series**

The VFC Series are single-stage ring compressors with a maximum pressure of 139 in. H<sub>2</sub>O, a maximum vacuum of 110 in. H<sub>2</sub>O and a maximum capacity of 570 SCFM. Motors are direct drive from 1/10 to 20 HP. Voltages are available in 115 single phase, 230 single phase, 230/460 3-phase dependent upon motor size. All units are provided with threaded flanges.



**VFD Series**

The VFD Series are single or two stage ring compressors with a maximum pressure of 237 in. H<sub>2</sub>O, a maximum vacuum of 156 in. H<sub>2</sub>O, and a maximum capacity of 812 SCFM. Motors are direct drive from .87 to 30 HP. Voltages are available in 115 single phase, 230 single phase, 230/460 3-phase dependent upon motor size. All units are provided with threaded flanges.



**VFB Series  
Single Stage**

The Fuji Electric model VFB2000 is a single-stage ring compressor with a maximum pressure of 90 in. H<sub>2</sub>O, a maximum vacuum of 110 in. H<sub>2</sub>O and a maximum capacity of 757 SCFM. The Motor is a direct drive 20 HP 230/460 3-phase. All units are provided with threaded flanges.



**VFT Series Turbo**

The VFT Series are turbo style blowers with a maximum pressure of 69 in. H<sub>2</sub>O and a maximum capacity of 3531 SCFM. Blowers are complete with belt driven TEFC motors from 7.5 to 30HP. All blowers are provided with cast aluminum housings and aluminum closed impellers. Motors are suitable for 230/460 3-phase voltage. Units are provided with mounting base and belt guard.



### VFC/VFZ/VFB Series

Product Model	H.P.	Voltage	Phase	Frequency
VFC063P-1T	1/20	115	1	50/60
VFC080P-1T	1/10	115	1	50/60
VFC080P-5T	1/10	115/230	1	50/60
VFC080A-2T	1/10	200-230	3	50/60
VFC080A-4W	1/10	460	3	50/60
VFC100P-5T	1/6	115/230	1	50/60
VFC100A-7W	1/6	230/460	3	50/60
VFC200P-5T	1/3	115/230	1	50/60
VFC200A-7W	1/3	230/460	3	50/60
VFC300P-5T	1/2	115/230	1	50/60
VFC300A-7W	1/2	230/460	3	50/60
VFC300A-5W	1/2	575	3	50/60
VFC400P-5T	1	115/230	1	50/60
VFZ401A-7W	1.4	230/460	3	50/60
VFZ401A-5W	1.4	575	3	50/60
VFB175P-5T	1.75	115/230	1	50/60
VFC508P-2T	2.5	230	1	50/60
VFZ501A-7W	2.9	230/460	3	50/60
VFZ501A-5W	2.9	575	3	50/60
VFZ601A-7W	6.3	230/460	3	50/60
VFZ601A-5W	6.3	575	3	50/60
VFZ701A-7W	6.7	230/460	3	50/60
VFZ701A-5W	6.7	575	3	50/60
VFZ801A-7W	10.7	230/460	3	50/60
VFZ801A-5W	10.7	575	3	50/60
VFZ901A-7W	14.7	230/460	3	50/60
VFZ901A-5W	14.7	575	3	50/60
VFB2000-7W	20	230/460	3	50/60

### VFD Series

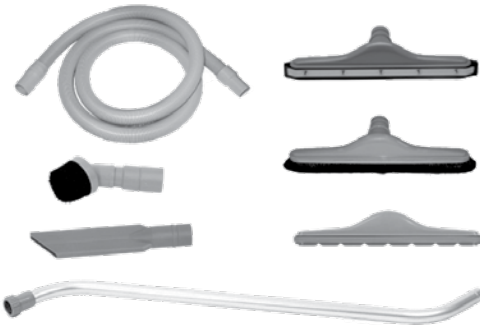
Product Model	H.P.	Voltage	Phase	Frequency
VFD2S	1.0	115V	1	60Hz
VFD2-L	0.87	230V	3	60Hz
VFD3-L	0.87	460V	3	60Hz
VFD3-H	0.75	230V	3	60Hz
VFD41-S	0.75	460V	3	60Hz
VFD41-L	2.2	230V	1	60Hz
VFD41-H	2.2	460V	3	60Hz
VFD42-L	2.2	230V	3	60Hz
VFD42-H	2.6	460V	3	60Hz
VFD4-L	2.6	230V	3	60Hz
VFD4-H	3.0	460V	3	60Hz
VFD5-L	3.0	230V	3	60Hz
VFD5-H	4.0	460V	3	60Hz
VFD5D-H	4.0	460V	3	60Hz
VFD6-L	6.5	230V	3	60Hz
VFD6-H	4.8	460V	3	60Hz
SD6-1	Separate Drive - No Motor			
SD7-1	Separate Drive - No Motor			
SD8-1	Separate Drive - No Motor			
SD9-1	Separate Drive - No Motor			
RD6 460	1.2	460V	3	360Hz
RD6-230	1.2	230V	3	360Hz

For an extensive list of accessories or if you have questions, don't hesitate to call or email us!



800-255-6213

## Commercial Vacuum Cleaning Tools

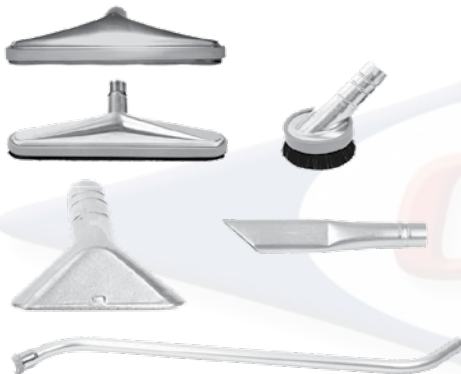


### 1 1/2" Plastic Commercial Wet/Dry Accessory Kit (AK1 & AK15)

Hose & tool accessory kit for commercial wet/dry pick-up.  
Available for Type 1 (AK1) and Type 2 (AK15) tools.

Includes:

- 1.5" x 10' DPZ Hose w/Standard Cuffs each end
- 54" One Piece, Double Bend Aluminum Wand w/ABS Coupling
- 3" Dust Brush w/Poly Bristles
- 14" Floor Brush w/Nylon Bristles
- 14" Squeegee Floor Tool w/Neoprene Blades
- 14" Scallop face Carpet Tool
- 1.5" x 11" Crevice Tool



### 1 1/2" Metal Industrial Wet/Dry Accessory Kit (INDKIT-1 & INDKIT-2)

Tool accessory kit for industrial wet/dry pick-up. Available for Type 1 (INDKIT-1) and Type 2 (INDKIT-2) tools.

Includes:

- 54" Aluminum Wand
- 14" Aluminum Floor Brush
- 14" Aluminum Squeegee Floor Tool
- 3" Aluminum Dust Brush
- 6" Aluminum Utility Tool
- 11" Aluminum Crevice Tool



### Woodworking Accessory Kit (WOODKIT)

Tool accessory kit for woodworking dust pick-up.

Includes:

- 1.25" x 20" Plastic Straight Wand (2)
- 1.25" x 10" Plastic Curved Wand
- 9" Crevice Tool
- 3" Dust Brush
- 5" Upholstery Tool
- 14" Floor Tool
- 45° Cuff



To find the correct vacuum cleaner attachment to serve your purpose, first consider the following attributes:

1) Application:

What type of surface will you be cleaning? Carpet? Bare Floors? Walls? Ceilings? Upholstery? Will there be liquid or oil cleanup involved? Do you need extensions for extra reach or overhead capability?

2) Compatibility:

What type of equipment are you connecting to? In what manner does the vacuum cleaner attachment need to attach to the wand (handle)? What size does the vacuum cleaner attachment need to be to fit the equipment?

3) Materials:

Plastic vacuum cleaner tools and attachments are typically less expensive and lighter in weight than the metal tools, and are virtually unbreakable under normal conditions. For your application, metal tools may be required or preferred. Tools with horsehair will provide the gentlest surface cleaning, whereas nylon will typically last longer.

**Available Vacuum Tool Attachments:**

- Crevice Tools & Bulk Pickup Tubes (Plastic or Metal)
- Dusting Brushes (Plastic or Metal)
- Carpet Cleaning Tools (Plastic or Metal)
- Floor Brush Tools (Plastic or Metal)
- Brushless Bare Floor Tools (Plastic or Metal)
- Squeegees (Plastic or Metal for Liquid Pick-Up)
- Wands (One Piece, Two Piece, or Telescopic)
- Extensions (Single Bend or Straight for Overhead Cleaning)
- Upholstery Tools
- Utility Tools
- Overhead Pipe, Stair, Wall, Cleaning Tools
- Shop Vac Type
- Paddle Tools

**Vacuum Cleaner Hose Applications:**

Abrasion Resistance  
Light Weight  
Asbestos Removal  
Material Handling, Dry  
Carpet Cleaning Equipment  
Oil Resistance  
Full or Self Service Car Wash  
Portable Power Tools

Chemical Resistance  
Smooth Interior  
Clear  
Static Conductive  
Ducting  
Temperature, High or Low  
Dust Collection  
Vacuum



800-255-6213

## Gaylord Vacuum Wands

Unloading powders or pellets made easy with our line of Gaylord Vacuum Wands. Seven models available in aluminum (standard), carbon steel, stainless steel and plastic (shock-free). Available in diameters ranging from 1-1/2" to 4" and lengths 48" to 54". Basic, Standard, Deluxe and Dissipator series of Gaylord Wands offer the user a variety of options including air adjusting, "stay" clip, handle and filtering screens.



### Basic Model - Aluminum Construction

Includes six air register holes and stand off loop at bottom.

Standard Length			Extended Length		
Diameter	Part No.	Length	Diameter	Part No.	Length
1 1/2"	GBA-15U	48"	1 1/2"	GBA-15UL	54"
2"	GBA-20U	48"	2"	GBA-20UL	54"
2 1/2"	GBA-25U	48"	2 1/2"	GBA-25UL	54"
3"	GBA-30U	48"	3"	GBA-30UL	54"
4"	GBA-40U	48"	4"	GBA-40UL	54"



### Standard Model - Aluminum Construction

Includes adjustable air register ring and stand off loop at bottom.

Standard Length			Extended Length		
Diameter	Part No.	Length	Diameter	Part No.	Length
1 1/2"	GSA-15U	48"	1 1/2"	GSA-15UL	54"
2"	GSA-20U	48"	2"	GSA-20UL	54"
2 1/2"	GSA-25U	48"	2 1/2"	GSA-25UL	54"
3"	GSA-30U	48"	3"	GSA-30UL	54"
4"	GSA-40U	48"	4"	GSA-40UL	54"



### Deluxe Model - Aluminum Construction

Includes adjustable air register ring, stand off loop, operator handle

Standard Length			Extended Length		
Diameter	Part No.	Length	Diameter	Part No.	Length
1 1/2"	GBA-15U	48"	1 1/2"	GBA-15UL	54"
2"	GBA-20U	48"	2"	GBA-20UL	54"
2 1/2"	GBA-25U	48"	2 1/2"	GBA-25UL	54"
3"	GBA-30U	48"	3"	GBA-30UL	54"
4"	GBA-40U	48"	4"	GBA-40UL	54"

## Corrugated Shaker Boots

For maximum flex life, choose an original design sleeve with more corrugations for improved wear.

Our accordion style corrugated boots are designed to be in conjunction with gyratory and vibratory equipment. They are molded in a variety of high quality compounds to suit your specific application requirements.

### Available Compounds

- Black Natural
- White Natural - Food Grade
- Natural rubber has excellent abrasion resistance and tear strength
- Black Neoprene
- White Neoprene - Food Grade
- Neoprene is highly resistant to fats, oils, weather & ozone
- Red Silicone
- Translucent Silicone - Food Grade
- Silicone does well in applications with higher temperatures, weather, oxidation & ozone.
- Black EPDM
- White EPDM



### Style "A" boots

10-3/4" long. They are molded in 4", 6", 8" & 10" diameters. They are designed to stretch-fit oversingle beaded rings, engaging a 1/4" bead for quick installation. Fits Rotex-style screeners.

### Style "B" boots

12" long. They are molded in 6" & 8" diameters. They are designed to fit over a straight pipe or flange. They are most often attached with hose clamps. This style is commonly used on circular vibratory separators.



800-255-6213

# Bin Level Control

## Original Roto-Bin-Dicator®

### VERSATILE ENOUGH TO BECOME YOUR GLOBAL STANDARD



The Roto-Bin-Dicator is the most universal of all level sensing technologies and is the most popular level switch used in dry bulk materials. The RotoBin-Dicator is a rotating paddle type, bulk material level sensor offered with a wide variety of paddle options for unequaled application versatility. It is easy to install and requires no special tools or calibration.

### FEATURES AND BENEFITS:

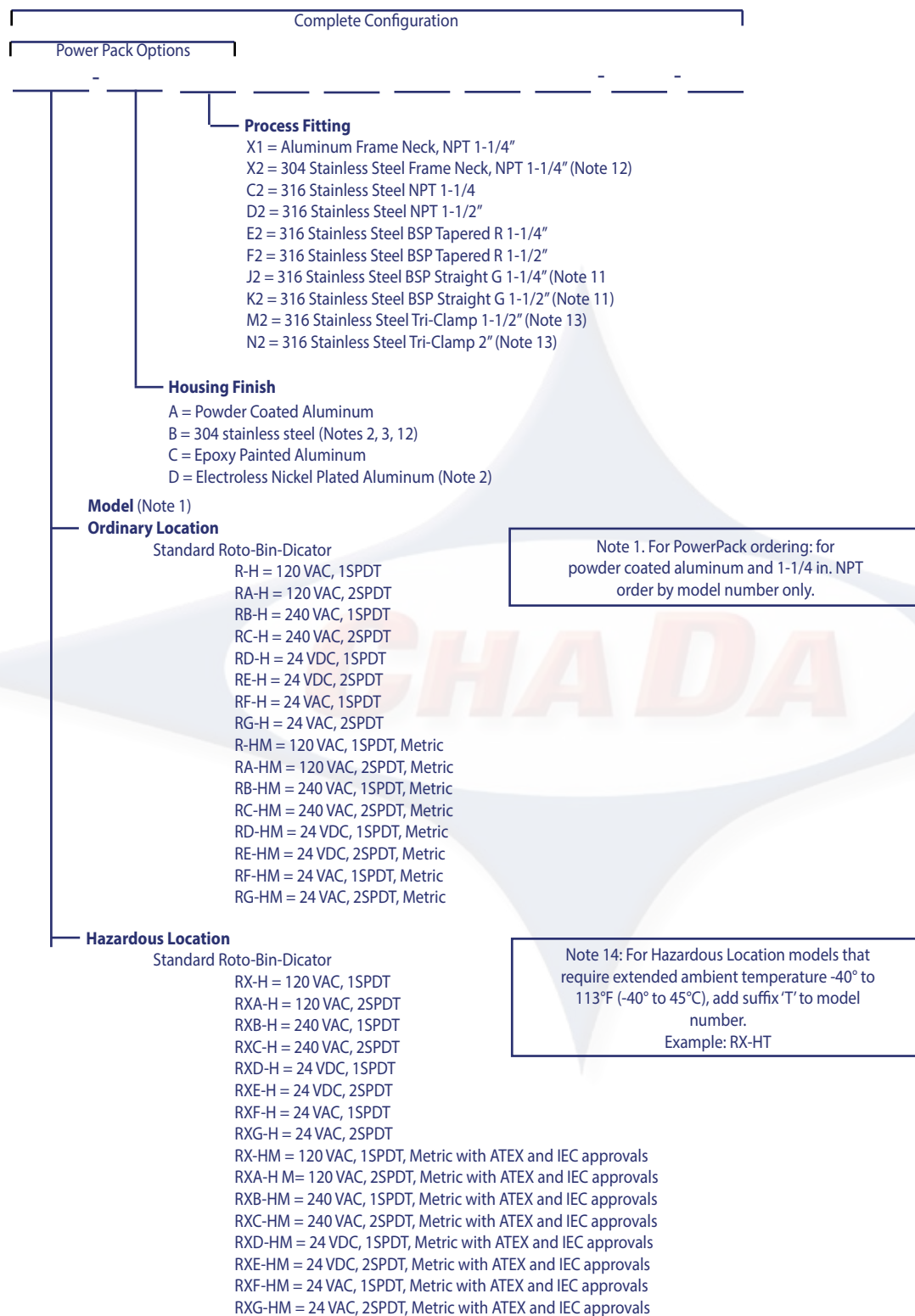
- A simple, mechanical mechanism means no calibration is required for quick installation
- Long-lasting, sealed motor keeps maintenance and replacement costs low
- Extensive Paddle Options to adapt to a variety of applications
- Frame designed to enable connection flexibility
  - Imperial or Metric conduit entry options
  - Process Fitting can be made to fit any connection

### Original Roto-Bin-Dicator® Specifications

Power Requirements	24/120/240 VAC; 50/60 Hz, 24 VDC
Power Consumption	5 watts
Motor	1 RPM
Fail-Safe Circuitry	Low level fail safe
Switch Rating	General Purpose: SPDT 20A @ 125/250/480 VAC. Pilot Duty: 345 VA, 115 VAC; 690 VA, 230 VAC
Process Temperature	-20° to 302° F (-29° to 150° C) Standard Up to 500° F (Up to 260° C) with Extension 3 and Lag
Drive Shaft Assembly	Precision machined shaft with two shielded ball bearings
Shaft Seal	Teflon®/Viton® Lipseal rated 1/2 micron @ 30 psi (2.1 kg/cm2) @ 400° F (204° C)
Housing and Cover	Type 4X/IP66 polyester coated aluminum casting
Mounting Plate	8" outside diameter with 1 1/4" NPT pipe threaded coupling; standard polyester coated mildsteel; optional 304 stainless steel; H-19 Half Coupling; H-192 Full Coupling
Conduit Entry	3/4" NPT or M20 x 1.5
Rigid Shaft and Paddle	Metal parts of all designs are 316 stainless steel
Flex Shaft	Available in neoprene, 155° F (68° C) or silicone, 400° F (204° C) coatings
Shipping Weight	Aluminum housing 10 lbs (4.5 kg) Stainless steel housing 16 lbs (7.3 kg)



## Roto-Bin-Dicator® Ordering Configuration - Part One









800-255-6213

## Roto-Bin-Dicator® PRO

### ACTIVELY PROTECTING VALUABLE INVENTORY

The Roto-Bin-Dicator® PRO is a paddlewheel type level device that outperforms others in its class. This simple device monitors the level of dry bulk material and indicates when there has been a change. The fail-safe PRO model is unique in that it comes standard with functional diagnostics that detect a unit fault even when the paddle is buried in material; unlike other paddlewheel devices.

The PRO provides added reliability by employing redundant methods of detection. These methods monitor shaft rotation as well as motor behavior, making it more reliable with regards to not missing a reading or creating a false positive.

#### FEATURES AND BENEFITS:

- Diagnostics – While the paddle is in or out of material self-checks are performed to detect unit faults which are differentiated and alerted through LED flash codes
- High/Low Level Failsafe – user selectable
- Motor Pause – optional setting, motor function will pause after a prolonged period of time where no change in material state is detected, saving power and extending the life of the unit
- Time Delay – delay the activation and deactivation of the alarm relay
- Sensitivity Adjustments - motor torque can be adjusted +/- 30% to match materials of varying bulk densities
- Test FOB – check the functionality of the unit without removing the cover and while the paddle is in or out of material
- Universal Input Power provides flexibility to match power availability
- Fault Option - optional setting, critical faults trigger an alarm, eliminates need to jumper relays to obtain genuine fail-safe operation
- Unique Frame Design to enable connection flexibility
  - Imperial or Metric conduit thread options
  - Process Fitting can be made to fit any connection
  - Extension and lag configurations available for added shaft length or high temperature applications

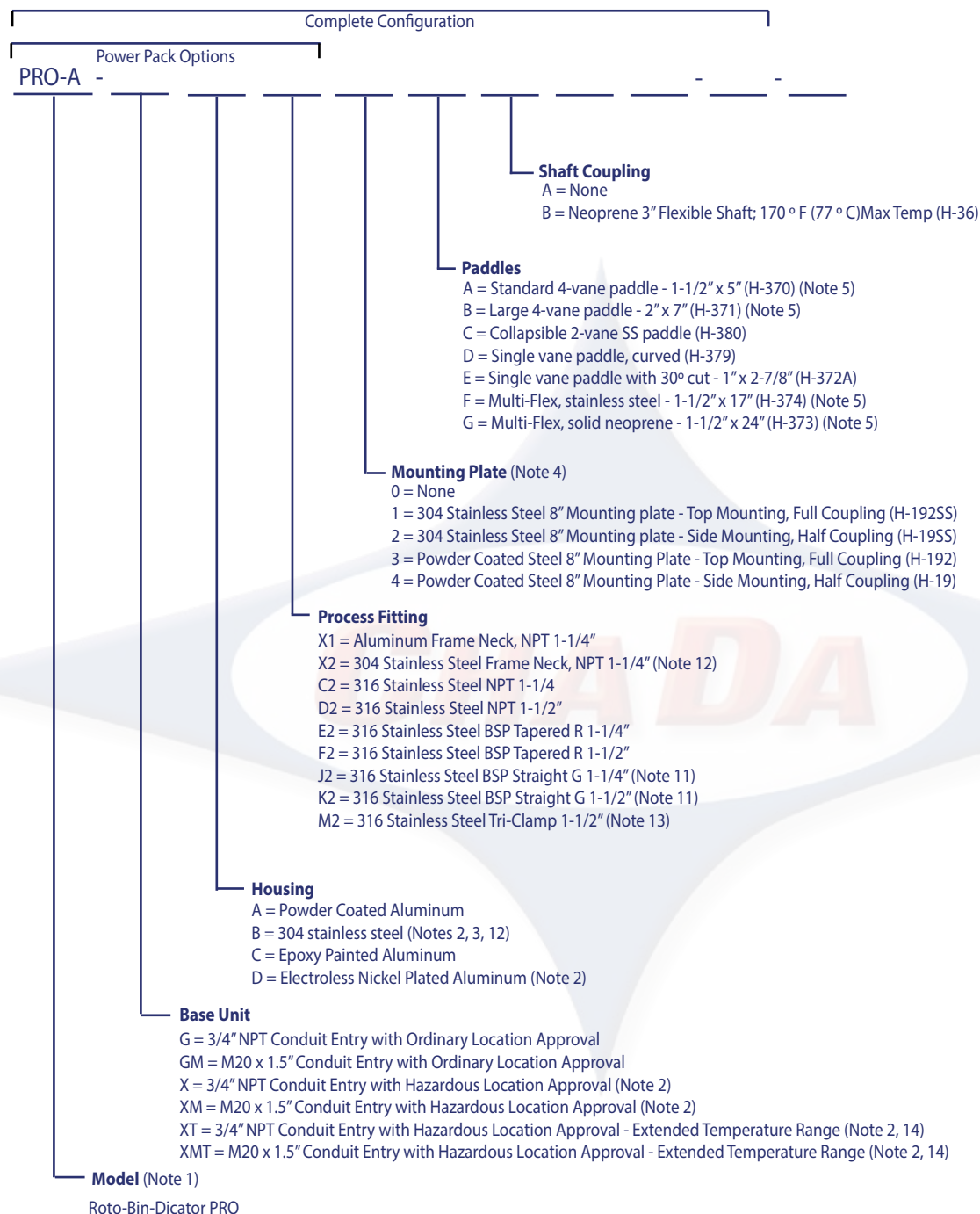
#### DETECT & DIFFERENTIATE FAULTS

##### Functional Diagnostics

Supply Voltage Fault	The power supply voltage is too low.
Motor Not Connected	The motor has become disconnected from the power supply
Electronics Temperature Range	The electronic boards have gone outside the accepted temperature range.
Motor Failure	Low level fail safe
Gear Train Failure	Internal rotation mechanics are bound.
Electronics Fault	Communication error between the LED (top) and power supply (bottom) electronic boards.



## Roto-Bin-Dicator® Pro Ordering Configuration - Part One







## Roto-Bin-Dicator® Pro Specifications

### Functional

Operating Power	Universal, 120-240 VAC, 50/60 Hz or 24-48 VDC
Power Consumption	3 watts (1.8 watts in Pause Mode)
Ambient Temperature	Ordinary Location: -40° to 158° F (-40° to 70° C) Hazardous Location: -4° to 140° F (-20° to 60° C) Hazardous Location, Extended: -40° to 140° F (-40° to 60° C)
Process Temperature	-20° to 302° F (-29° to 150° C) Standard Up to 500° F (Up to 260° C) with Extension 3 and Lag
Outputs	Main Relay: 8A DPDT @ 240 VAC or 30 VDC (resistive) Auxiliary Relay: 0.46A SPDT @ 150 VAC or 30 VDC

### Performance

Time Delay	Field Selectable; up to 25 seconds.
Fail Safe	Field Selectable; high/low level
Sensitivity	Minimum 3.4 lbs/ft <sup>3</sup> (54 kg/m <sup>3</sup> ); Field Adjustable; Paddle Dependent
Diagnostics	LED Indicators with blink codes; see IOM for code interpretation

### Physical

Enclosure Material	Aluminum, Epoxy Coated Aluminum, Stainless Steel or Electroless Nickel Plated Aluminum
Dual Conduit Entry	3/4" NPT or M20 x 1.5
Mounting Plate Material	Mild Steel or 304 Stainless Steel
Rigid Shaft and Paddle	Metal parts of all designs are 316 stainless steel
Flex Shaft	Available in neoprene, 155° F (68° C) or silicone, 400° F (204° C) coatings
Shipping Weight	Aluminum housing 10 lbs (4.5 kg) Stainless steel housing 16 lbs (7.3 kg)



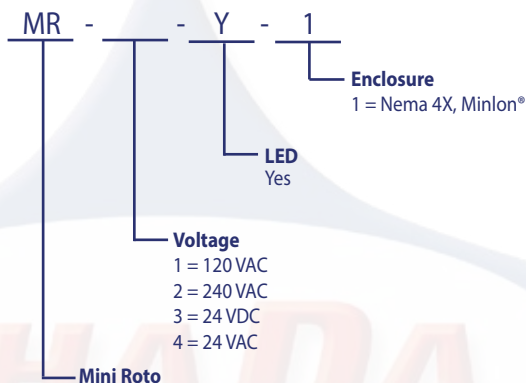
800-255-6213

## Mini Roto-Bin-Dicator®



The Roto-Bin-Dicator® is the most universal of all level sensing technologies and is the most popular level switch used in dry bulk materials. The Roto-Bin-Dicator® is a rotating paddle type, bulk material level sensor offered with a wide variety of paddle options for unequaled application versatility. It is easy to install and requires no special tools or calibration. The impact resistant injection molded Mini Roto has been designed for use in small bins and hoppers where mounting space is at a premium. This compact and rugged level sensor includes adjustable sensitivity allowing it to be used in materials with densities between 5 lbs/ft<sup>3</sup> and 65 lbs/ft<sup>3</sup>.

### How to Order Mini Roto-Bin-Dicator®



#### Features and Benefits

##### Simple Mechanical Mechanism

- No calibration required

##### Wide Variety of Paddle Options

- Unequaled application versatility

##### Mount in Any Orientation

- High, intermediate, or low level indication
- Bulk densities from 5 lb/ft<sup>3</sup> to 65 lb/ft<sup>3</sup>

#### Accessories

LMR110006	2 Vane (3"x12") PVC Paddle
LMR110007	PVC Extension & Guard Assembly
LMR110008	304 SS Extension & Guard Assembly
LMR120003	Insertable paddle, Nylon®
LMR120006	4 Vane Paddle, Nylon®
LMR120024	4 Vane Paddle, Ryton®
LMR120025	4 Vane Paddle, Food Grade
LMR120026	Insertable Paddle, Ryton®
LMR120027	Insertable Paddle, Food Grade
LMR130025	Mounting Plate, Nylon®
LMR130026	Mounting Plate Gasket

## Roto-Bin-Dicator® Replacement Parts

### Mounting Plates

Includes H-20 Mounting Gasket

Part Number	Model	Description
LAR110130	H-19	Mild Steel (Side of Bin)
LAR110140	H-19SS	304 Stainless Steel (Side of Bin)
LAR110180	H-192	Mild Steel (Top of Bin)
LAR110190	H-192SS	304 Stainless Steel (Top of Bin)

### Shaft Couplings

Part Number	Model	Description
LAR110270	H-36	Neoprene 3 in. Flexible Shaft; 170° F (77° C) Max Temp
LAR120640	H-38	Stainless Steel, 3 in.
LAR110275	H-36S	Molded Silicone 3 in. Flexible Shaft; 400° F (204° C) Max Temp

### Paddles

All are stainless steel except model H-373.

Part Number	Model	Description
LAR110310	H-370	4-Vane; 1 1/2" x 5" Diameter with Pins
LAR110360	H-371	4-Vane; 2" x 7" Diameter with Pins
LAR110430	H-373	Multiflex; Solid Neoprene 1 1/2" x 24" with Pins
LAR110450	H-374	Multiflex; Stainless Steel 1 1/2" x 17" with Pins
LAR111037	H-379	1-Vane; Insertable with Pins
LAR111040	H-372A	1-Vane; 1" x 2 7/8" with 45° Cut
LAR111200	H-380	2-Vane Collapsible, Stainless Steel

NOTE: Consult the manufacturing facility on applications where the housing ambient temperature is above 200° F (93° C).

### Shaft Extensions

Part Number	Description
LUB040500	316 Stainless Steel, 1/8 in. pipe

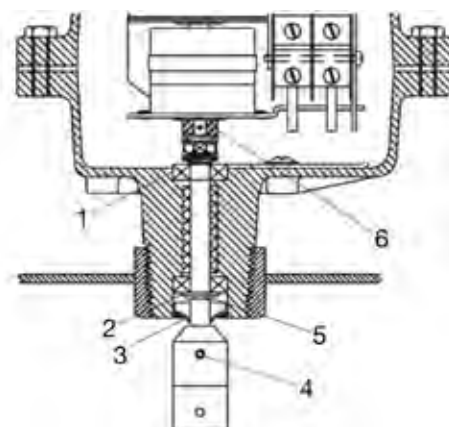
### Shaft Guards

Part Number	Description
LUB040510	316 Stainless Steel, 1-1/4" NPT

### Lower Housing Assembly

**\*\*NOT FOR EXPLOSION PROOF UNITS\*\***: Bindicator® does not recommend the customer replacing the H-21 Clutch Assembly. Instead, replace the lower housing assembly, which includes all of the parts listed below.

Detail Number	Part Number	Description	QTY Required
1	LAR130330	H-12 Bearing	2
2	LAR131250	Spring Washer	2
3	LAR131230	H-32 Teflon® Lip Seal	1
4	LUA031190	5954 Roll Pin	1
5	LUC033190	Retaining O-Ring	1
6	LAR111012	H-21 Clutch Assembly	1





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## Roto-Bin-Dicator® Replacement Parts Continued

### Heavy Duty Roto-Bin-Dicator Parts

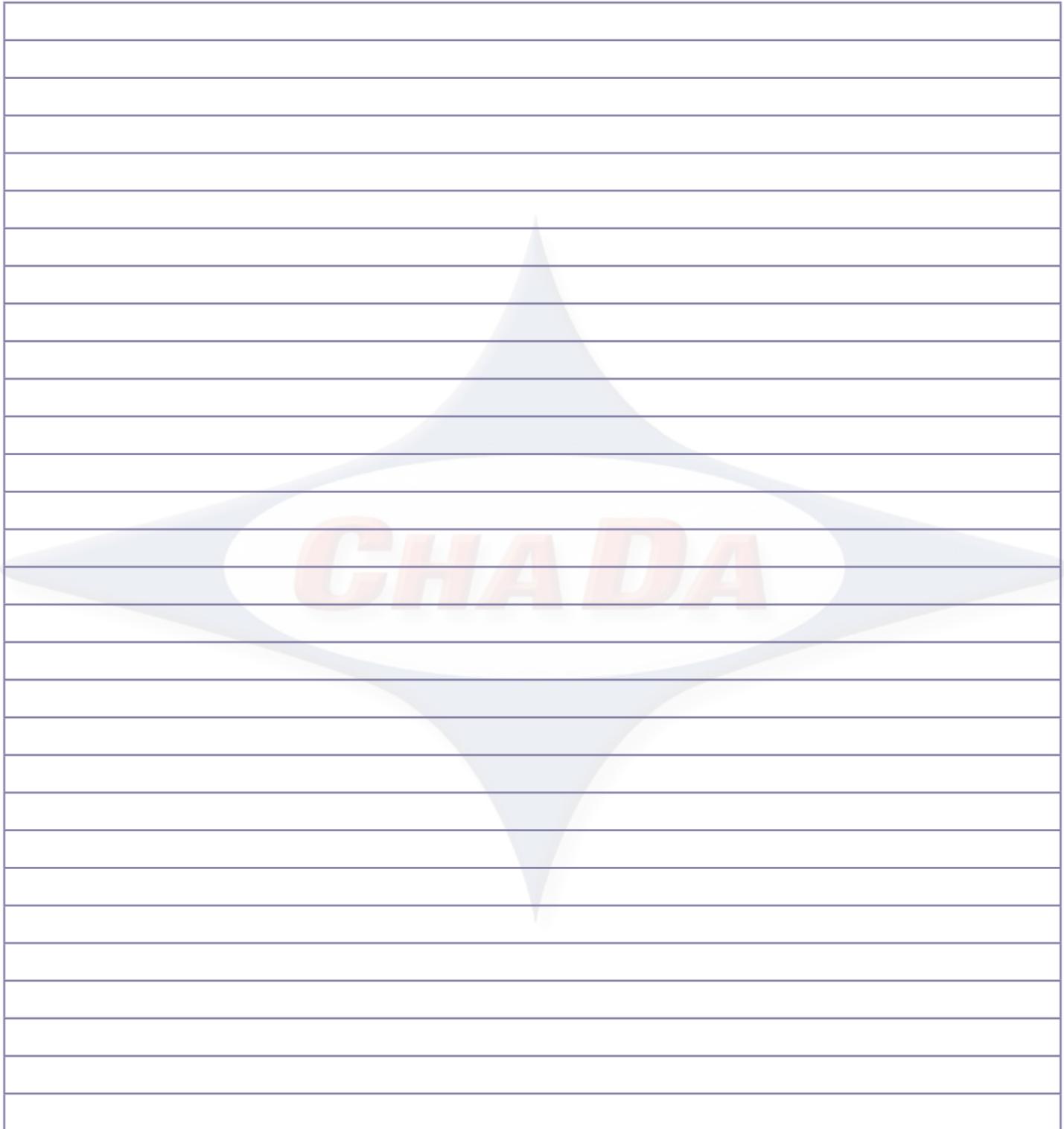
Part Number	Model	Description
LAR110070	A-H-9A-K-HD	Heavy Duty Roto-Bin-Dicator® Motor Replacement Kit: 120 VAC, 4 W, 1 rpm, 50/60Hz; Includes bracket and washer (see Note 1)
LAR110100	A-H-9D-K-HD	Heavy Duty Roto-Bin-Dicator® Motor Replacement Kit: 240 VAC, 4 W, 1 rpm, 50/60 Hz; Includes bracket and washer (see Note 2)
LAR110940	A-RX-1	Lower Frame Assembly (General Purpose): Aluminum, Gasket, Clutch/Drive Shaft, Bearings, Seal, and Stub Shaft
LAR110945		Lower Frame Assembly (General Purpose): Stainless Steel, Gasket, Clutch/Drive Shaft, Bearings, Seal, and Stub Shaft
LAR111002	RX 1/RX 2	Housing Assembly (Explosionproof): Aluminum, Clutch/Drive Shaft, Bearings, Shaft Seal, and Stub Shaft; Cover Included
LAR111024		Standard Motor Replacement Kit: 24 VAC, 4W, 1 rpm, 50/60 Hz
LAR111025	H-10C	Micro Switch, SP/DT with Barrier
LAR111026	H-10E	Double Micro Switch, SP/DT with Barrier, Nut, and Screw
LAR120050	H-3	Switch Bracket
LAR120070		Housing Cover (General Purpose): Stainless Steel
LAR120470	H-23	Barrier, Terminal Block
LAR121960	RX-2	Housing Cover (General Purpose): Aluminum
LAR130300	H-11	Terminal Block
LAR111193		24 VDC to 24 VAC Inverter Board
LAR150170		Refurbished Stainless Steel RSSP1G

NOTE 1. Replaces the Standard 120 VAC Motor Replacement Kit (Part Number LAR110030, Model A-H-9A-K).

NOTE 2. Replaces the Standard 240 VAC Motor Replacement Kit (Part Number LAR110060, Model A-H-9D-K).

### Common Roto-Bin-Dicator Parts

Part Number	Model	Description
LAR120480	H-24	Motor Support Bracket; Not used with Fail-Safe or Fail-Safe-Plus Roto-Bin-Dicator® Models
LAR121930	H-35	Stub Shaft with Pins
LAR122142		316 Stainless Steel Tag
LAR131230		Lip Seal, RBD
LAR131394		Aluminum Tag
LAR131413		Lip Seal, 90psi
LUA031190	5954	Pin for Paddle (1/8" x 3/4")
LUBK43300		Fiber Gaskets, Pack of 5
LUBK43303		Food Grade Gaskets, Pack of 5
LUBK43304		Fiber Gasket, Metric, Pack of 5
LUBK43307		Food Grade Gasket, Metric, Pack of 5
LUBK43314		G-Thread Fitting Gasket, Pack of 5





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## VRF® II Series Capacitance Probe

### SURPASSING SENSITIVITY FOR THE TOUGHEST APPLICATIONS

The VRF® II Series uses radio frequency to detect the presence or absence of material in a vessel. It compensates for the load of the probe and vessel environment to automatically determine the optimal operating frequency for the greatest sensitivity and stability.

### FEATURES AND BENEFITS

- Universal Input Power provides flexibility in location of the unit
- The VRF II can automatically calibrate itself when the probe senses large decrease in the impedance with EZ-CAL II
- Adjustable Time Delay allows the user to determine time between sensing material and the alarm state. Advanced units can permit delays when it detects the presence and absence of material or a combination.
- Sensitivity Settings can be selected to fit specific applications and material requirements.
- Probes have been designed with Pro-Guard® that has the ability to ignore the effects of coatings that can adhere to the probe
- Move electronics up to 100 ft (30 m) away with the Remote Option
- Standard and Advanced offering enables the user to choose the option that best suits the application.
- Frame designed to enable connection flexibility
  - Imperial or Metric conduit entry option
  - Process Fitting can be made to fit any connection

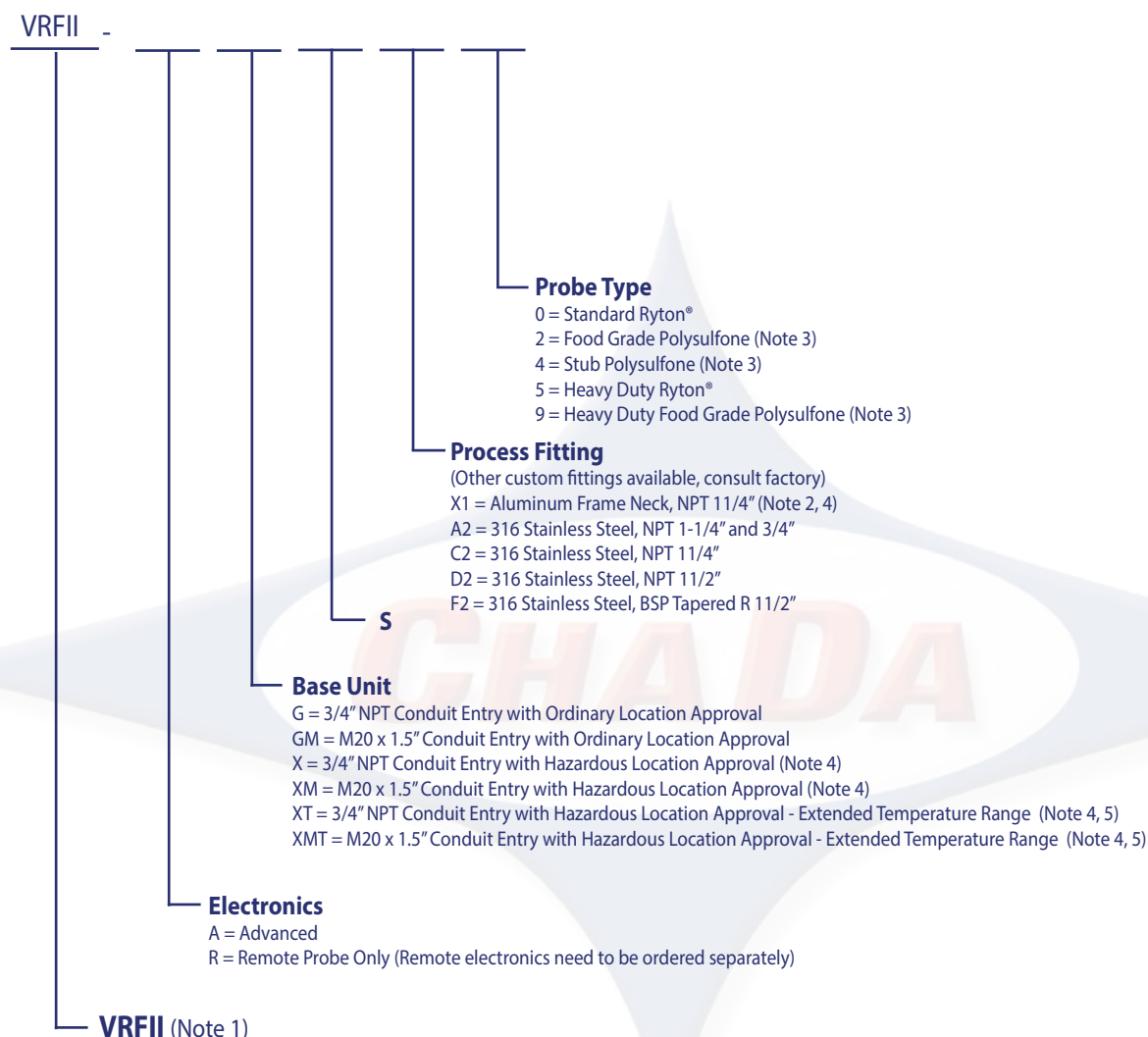
Shown with X1 Process Fitting  
Imperial Conduit Entry

### Standard vs. Advanced Units

Standard	Advanced
4 Sensitivity Settings (min 1.5 pF)	7 Sensitivity Settings (min 0.5 pF)
Time Delay up to 6 seconds	Time Delay up to 150 seconds
Manual, Push Button for Test and Calibration	Test and Calibration with FOB
Universal Power	Universal Power
	Indicator Lights
	Auxiliary Relay



## VRF® II Standard Unit Ordering Configuration



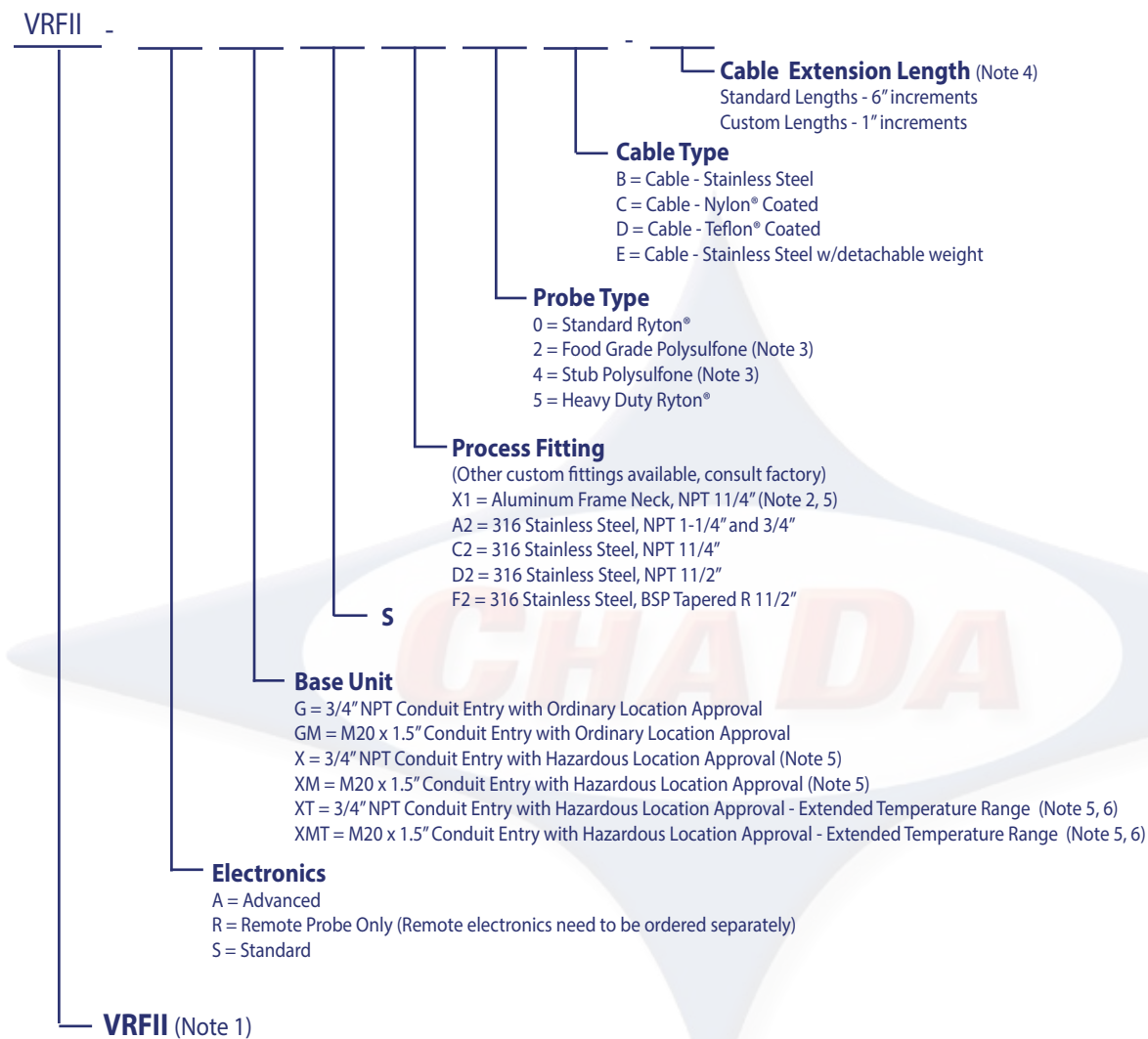
### Notes:

1. Units have powder coated aluminum Housing Finish.
2. X1 Process Fitting includes a 3/4" NPT 316 stainless steel bin connector.
3. EPDM food grade gasket is standard.
4. Process Fitting X1 cannot be used with Hazardous Location Approval.
5. Extended ambient temperature range is -40° to 158° F (-40° to 70° C).



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## VRF® II Standard Cable Unit Ordering Configuration



### Notes:

1. Units have powder coated aluminum Housing Finish.
2. X1 Process Fitting includes a 3/4" NPT 316 stainless steel bin connector.
3. EPDM food grade gasket is standard.
4. Maximum length is 540" (13.7 m), minimum length is 12" (30.5 cm). Length cannot be zero.
5. Process Fitting X1 cannot be used with Hazardous Location Approval.

Technical drawing of a mounting bracket with the following dimensions and labels:

- Dimensions:**
  - Top horizontal dimension: 5.50 (168.3)
  - Horizontal distance from centerline to top hole: 3.34 (84.8)
  - Horizontal distance from centerline to bottom hole: 3.34 (84.8)
  - Vertical distance between holes: 2.1 (53.3)
  - Horizontal distance from centerline to start of thread: 5.50 (139.7)
  - Horizontal distance from end of thread to end of mounting: E
  - Horizontal distance from centerline to end of mounting: D
  - Horizontal distance from centerline to start of mounting: C
  - Horizontal distance from centerline to end of mounting: B
  - Horizontal distance from centerline to end of mounting: F
  - Horizontal distance from centerline to end of mounting: G
  - Horizontal distance from centerline to end of mounting: H
  - Horizontal distance from centerline to end of mounting: I
- Labels:**
  - GREEN L.E.D. (POWER) \*NOTE 1\*
  - RED L.E.D. SIGNAL \*NOTE 1\*
  - 1-1/4" N.P.T. MOUNTING
  - 3/4" N.P.T. MOUNTING
  - (X2) 3/4"NPT or M20 X 1.5 CONDUIT OPENING
  - X1 PROCESS FITTING SHOWN
- Notes:**
  - \*NOTE\*
  - 1—ONLY UNITS WITH ADVANCED ELECTRONICS WILL HAVE L
  - 2—FOR HORIZONTAL MOUNTING, CONDUIT OPENINGS MUST DOWNWARDS AND INCLUDE DRIPLOOP.

I	15.25 (387.5)	19.25 (489)	15.25 (387.25)
H	7.00 (178)	11.75 (298.5)	3.63 (92.2)
G	4.50 (145)	10.00 (254)	3.23 (82.55)
F	3.38 (86)	8.5 (216)	2.75 (69.85)
E	14.25 (362)	18.25 (463.5)	14.25 (362)
D	6.00 (152.5)	10.25 (257)	6.68 (168.8)
C	3.50 (89)	9.00 (228.5)	2.25 (57.2)
B	2.38 (60.5)	7.50 (190.5)	1.75 (44.5)
A	31 DIA. (8)	38 DIA. (9.5)	31 DIA. (8)
APPROX DIM'S	STD & FOODGRADE	H.D.	STUB
PROBE TYPE	0 & 2	5 & 9	4

Technical drawing of the X1 Process Fitting assembly. The drawing shows a side view of the fitting with various dimensions and labels. Key components and dimensions include:

- Dimensions:**
  - 6.62 (168.3)
  - 5.50 (139.7)
  - 3.34 (84.8)
  - 1-1/4" N.P.T. MOUNTING
  - 3/4" N.P.T. MOUNTING
  - 10.81 (274.5)
  - .88 (22.35)
- Labels:**
  - INSERTION LENGTH
  - CABLE EXTENSION LENGTH CUSTOMER SPECIFIED
  - CABLE
  - COUPLING
  - EXT. GROUND
  - GREEN L.E.B. (H.C.) NOTE 1\*
  - M3 L.E.B. (CALANE) NOTE 1\*
  - Ø2 3/4" NPT or M3 x 1.5 (CONDUIT OPENING) NOTE 1\*
- Notes:**
  - \*NOTE 1-ONLY UNITS WITH ADVANCED ELECTRONICS WILL HAVE LIGHTS.
  - 2-FOR HORIZONTAL MOUNTING, CONDUIT OPENINGS MUST FACE DOWNWARDS AND INCLUDE DRIPLOOP.

H	11.55 (292.1)	16.25 (412.8)	8.16 (206.2)
G	7.07 (176.7)	11.25 (281.2)	3.95 (98.6)
F	4.50 (113)	10.00 (254)	3.25 (82.6)
E	3.38 (86)	8.55 (216)	2.75 (69.9)
D	10.50 (266.7)	15.25 (387.4)	7.10 (180.8)
C	6.00 (152.5)	10.75 (273)	2.51 (63.8)
B	3.50 (89)	9.00 (228)	2.25 (57.2)
A	2.38 (60.5)	7.00 (176.5)	1.70 (44.3)
APPROX DIM'S	STD. & FOODGRADE	H.D.	STUB
PROBE TYPE	0 & 2	5	4



800-255-6213

## Bin-Dicator® diaphragm-type level controls



### MODEL 'A'

- 10 1/4" diameter
- Explosion proof model avail.
- 7 diaphragm material options



### AUTO-BIN-DICATOR®

- 8" diameter
- Cast aluminum housing
- Neoprene or SS diaphragm material
- Medium duty



### BANTAM BIN-DICATOR®

- 5 3/4" diameter
- 2 diaphragm material options
- Light duty

### Description

The original electromechanical point level switch, Bin-Dicator® diaphragm-type level controls were the first to enjoy general usage in the industry. Bin-Dicator® controls eliminate bin overflow, empty bins, clogged conveyors, choked elevators and resulting damage and waste.

### How it Works

The Bin-Dicator® control is a pressure actuated switch for use with free flowing bulk materials at atmospheric pressures. Actuation of the switch is the result of pressure exerted by the bulk material against the diaphragm assembly. De-actuation or switch release is a result of the bulk material clearing away from the diaphragm Bin-Dicator®

### Features and Benefits

Simple and Rugged Construction

- Can be mounted outside the bin for lower installation costs.

Simple Operating Mechanism

- Makes entire unit readily accessible for inspection, resulting in lower maintenance costs.

Many Variations Available

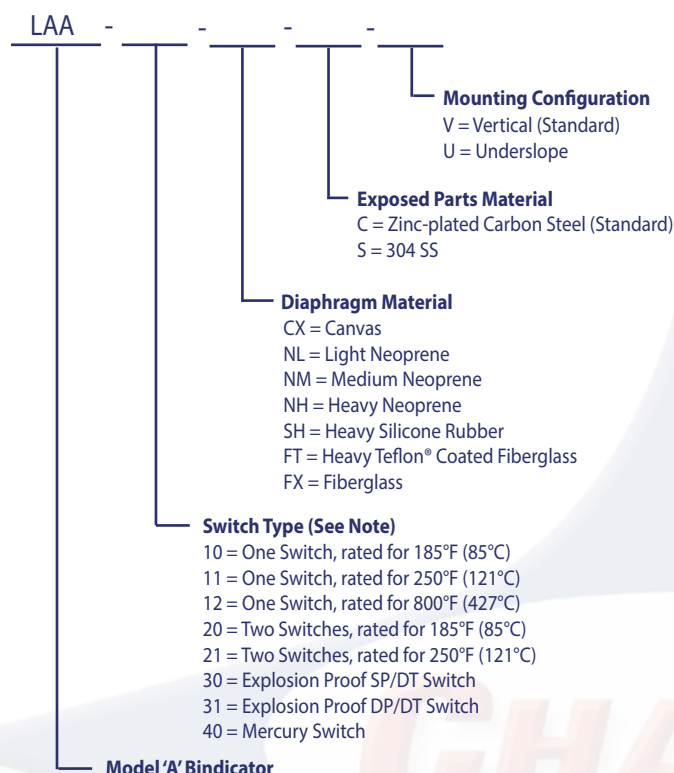
- For use in a wide range of dry materials and conditions of temperature, corrosion and moisture.

SPDT Switch

- No need to power electronics.



## How to Order Model 'A'



Note: High-temperature switches not available with neoprene diaphragms.

## How to Order Auto-Bin-Dicator®

Diaphragm Material	One Switch	Two Switches
Neoprene (Light)	B-1-N, LAB101800	B-2-N, LAB101936
Teflon® Neoprene	B-1-LT, LAB101808	B-2-LT, LAB101944

Note: Specify if all metal parts exposed within the bin need to be stainless steel.

## How to Order Bantam Bin-Dicator®

Diaphragm Material	One Switch	Two Switches
Neoprene (Light)	B-1-N, LAB101800	B-2-N, LAB101936
Teflon® Neoprene	B-1-LT, LAB101808	B-2-LT, LAB101944

Note: Specify if all metal parts exposed within the bin need to be stainless steel.

## Continuous Level Measurement Options

### Cap-Level®



Cap-Level® II & Cap-Level® IIA are designed for level monitoring and control. The 4-20mA output provides a selectable dampening function to stabilize readings where severe agitation is present. Simple zero and span adjustment make calibration easy.

### F78MP Series Radar



The F78MP Series air radar sensor provides non-contact, continuous level measurement for bulk materials in bins, tanks and silos. Accurate and reliable in difficult environments, the F78MP Series is an ideal level meter for powder and bulk solid inventory management. The F78MP Series air radar withstands corrosive environments and takes consistent measurements in steam, dust and other turbulent conditions.

### SONO-1000 Ultrasonic Sensor



The SONO-1000 is a single tank ultrasonic sensor. This unit is a compact ultrasonic transmitter designed to measure the level of free flowing solids such as powders and granules. The SONO-1000 microprocessor is a smart level transmitter that offers a 4-20 mA output, and programmable relay. This is a level measurement technology that is a non-contact ultrasonic principle which is based on sonar or sound echo principles. The SONO-1000 is especially suited for applications where physical contact with the material being measured is undesirable.

### SonoTracker™ Ultrasonic Level System



The SonoTracker™ Ultrasonic Level System can monitor up to 16 vessels with transducers of various frequencies, and vessels of different heights and shapes and accurately measure the level of many different materials. It allows you to read levels from 1 foot to beyond 100 feet in solids, and additionally the same unit can be used for open channel flow and differential level measurements.

## Continuous Level Measurement Options

### TDR-2000 Guided Wave Radar

The TDR-2000 provides continuous, non-mechanical level measurement, utilizing guided wave radar technology. The TDR-2000 is particularly suited for measuring the level of solids, granules, and powders, as well as a wide range of liquids. For many applications, the TDR-2000 is an economical and superior alternative to capacitance, ultrasonic, and plumb bob technologies.



### Yo-Yo™ Series Level Indicator

The Bindicator® Yo-Yo™ is a weight and cable bin level sensor specifically designed for continuous level measurement of dry bulk solids inventory. The Yo-Yo™ automates the use of a drop line for increased safety and accuracy. Available as an option, our Yo-Yo™ Readout is an LCD display that can monitor up to 99 sensors and is used to program each cable and weight Yo-Yo™, which includes assigning identification and measuring ranges.



## Communication Devices

### ORB™ Remote Inventory Management

The ORB™ Remote Inventory System transforms inventory and process data into management information that can increase productivity and reduce supply chain costs. By providing a reliable means of gathering and transmitting real-time inventory and process information via your LAN or the Internet, high volumes of data can be securely monitored, retrieved and organized by various users within the plant or remotely.

### InvisiLink™ Wireless Radio

InvisiLink™ is a wireless radio solution for devices that communicate via RS-485 or RS-422. A radio is connected to both the measuring device, like a Yo-Yo or controller, and the receiving device, like an ORB. Then the InvisiLink radio sends data back and forth between the devices. This system eliminates the need for cables and conduit connecting a measuring device to a device collecting data. It is also possible to have a single device receive multiple data streams from 'send' devices.

### PRD1000 Multipurpose Display

The PRD1000 is a multi-purpose, easy to use digital process meter ideal for level, flow rate, temperature, or pressure transmitter applications. It accepts current and voltage signals (e.g. 4-20 mA, 0-10 V). It has a dual-line 6-digit display, advanced signal input conditioning, function keys, and Modbus RTU serial communications. The basic model includes an isolated 24 VDC transmitter power supply that can be used to power the input transmitter or other devices.



800-255-6213

## Dust Collector Filter Bags

Besides the common filter bags, we are capable of providing custom filter bags and envelope style bags. Depending on the type of collector and the manufacturer, there are several basic styles of bags available. With a sample, description or drawing, we can produce your special filter bag.

Fiber	Max. Continuous Operating Temp.	Acid Resistance	Alkali Resistance	Flex Abrasion	Support Combustion	Special Properties
Cotton	180°F	Poor	Excellent	Good	Yes	Low cost - can be treated for flame retardancy
Polyester	300°F	Good	Fair	Good	Yes	Degradation may occur in hot, humid conditions
Nylon	300°F	Poor	Excellent	Excellent	Yes	Excellent tensile strength and flex life
Polypropylene	200°F	Excellent	Excellent	Excellent	Yes	Excellent cake release
Nomex™/Conex™	400°F	Fair	Excellent	Good	No	High temperature
Teflon™	450°F	Excellent	Excellent	Fair	No	Excellent chemical resistance

### Common bag top designs:



Open Top w/Cord



Strapped Top



Disc Top



Looped Top



Tapered Top & Grommet



Flat Top



Flat Top w/ Grommets



Top w/Spreader Ring & Grommets

### Common bag bottom designs:



Corded Bottom



Screw Clamp Bottom



Raw Edge Bottom



Overcast Edge Bottom



Sewn In Tie Cord



Sewn in Steel Band



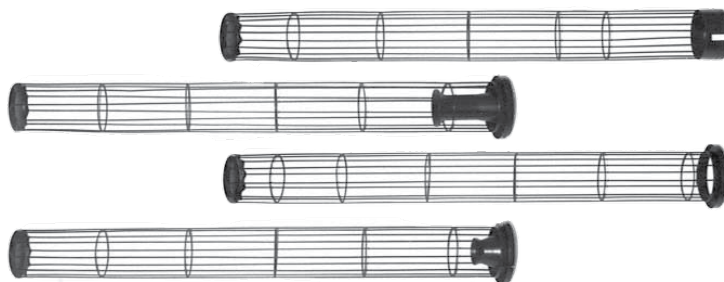
Sewn in Spring



Hemmed Bottom

## Filter Bag Cages

We provide a wide range of cage configurations to best fulfill your needs. Cage constructions consist of 10, 12 or 20 vertical wires. The horizontal ring spacing on the cage can be 4", 6" or 8". If plenum height restrictions are a problem, two piece cages are available.



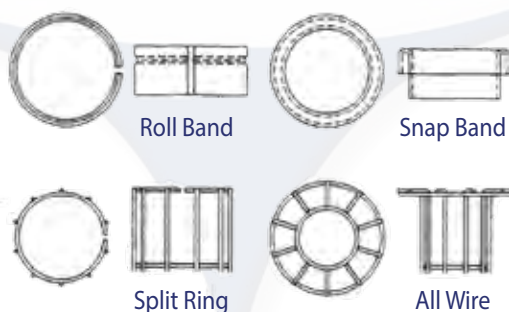
Top load cages: Are available with a T-flange, ring top or several styles of rolled flange tops. Cage diameters range from 4" to 6 1/8". Wire thickness ranges are; 9 gauge, 10 gauge and 11 gauge.

Bottom load cages: Are constructed with a split collar or split ring top. Cage diameters range from 4" to 6 1/8". Wire thickness ranges are 9 gauge, 10 gauge and 11 gauge.

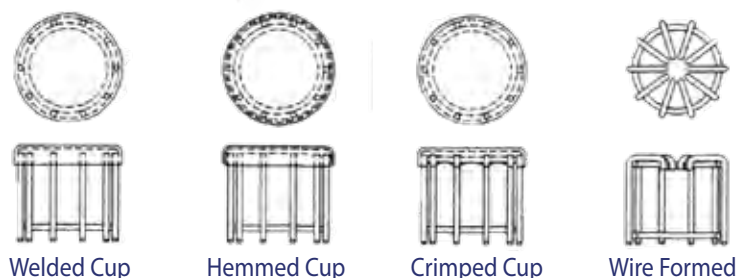
For more efficient cleaning, venturis are available for all diameter cages. Venturis come in 3" to 6" lengths and are made in a variety of materials; aluminum, carbon steel, galvanized and stainless steel.

Materials	Finishes	Packaging
Carbon Steel Galvanized Steel 304 Stainless Steel 316 Stainless Steel	Epoxy: 250° - 350°F service temperature	Cages are packed in custom designed cartons

### Top Construction:



### Bottom Construction:





800-255-6213

## Aerators



An aerator is a simple and efficient means of introducing low pressure air into any dry finely ground material. The air is equally distributed in controlled quantities to give the material an ability to flow by gravity from bins, hoppers or chutes. Aerators incorporate non-clogging diffusers, integral orifice and construction features which insure long, maintenance-free life.

Typical applications include: gypsum, Portland cement, bentonite, casein glue, fuller's earth, soda ash, lime, flour, bran, clay, sawdust, carbon black, chemicals, barites, ore, feed, cereals, diatomaceous earth, pigments, soap powder detergents, fly ash and plastic moulding compounds.

### Features and Benefits:

- Can be installed from inside or outside of the bin
- Only one drilled hole needed per pad
- Easy installation
- Integral orifice – controls air consumption at any recommended pressure
- Non-clogging diffuser – provides equal distribution of air; will not clog when air is on with even the finest materials.

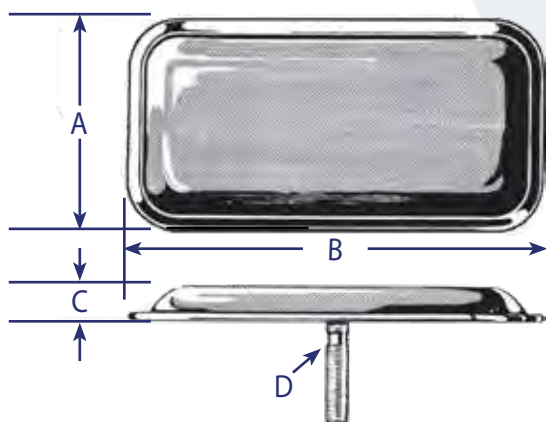
### Specifications:

- Diffuser Cotton (Canvas): Up to 180° F (82° C); Fiberglass: Up to 600° F (316° C)
- Diffuser Frame: Galvanized Steel 16 mesh or 316 Stainless Steel mesh
- Body: Zinc plated steel or stainless steel
- Dimensions L Series: 3.75 x 7.5 in. (9.5 x 19 cm); LL Series: 6 x 12 in. (15 x 30 cm)

### Choose Model Number

Diffuser	Diffuser Support	Body	'L' Series 3 3/4" x 7 1/2"	'LL' Series 6" x 12"
Cotton (Canvas)	Galvanized Steel 16 Mesh	Zinc Plated	L LBF900000	LL LLF900000
	Stainless Steel Mesh Type 316	Stainless Steel	L-SS LBF900002	LL-SS LLF900002
Fiberglass	Galvanized Steel 16 Mesh	Zinc Plated	L-FG LBF900001	LL-FG LLF900001
	Stainless Steel Mesh Type 316	Stainless Steel	L-SS-FG LBF900003	LL-SS-FG LLF900003

### Dimensions:



	"L" Series	"LL" Series
A	3 3/4"	6"
B	7 1/2"	12"
C	7/16"	11/16"
D	1/8" x 2"	1/4" x 2"

## Silo Fluidizer Disks

### Keep Dry Bulk Materials Moving!

ChaDa Sales offers a family of Silo Fluidizers that promote the discharge of dry products from storage silos, dust collectors, weight bins and IBC's. Solimar Fluidizers enable a uniform flow of most dry bulk materials through aeration and hopper wall vibration that helps prevent bridging, rat holing and compacting.

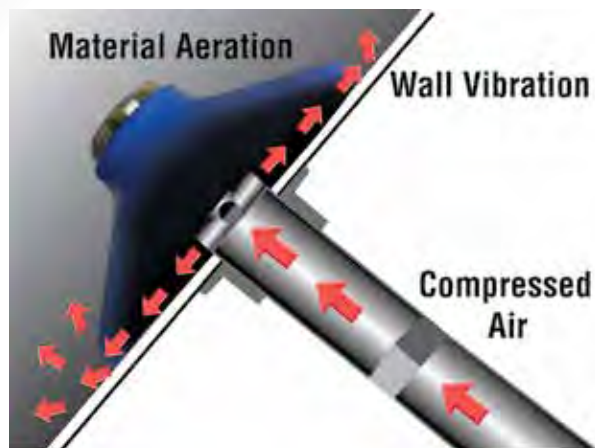
#### Features:

- Aeration - loosens up the product allowing it to flow easier. Minimum back pressure puts air energy where it is needed the most – in the silo.
- Directional Air Flow - The fluidizer disk forces air to move along the bin wall freeing up product and assuring good clean-out.
- Gentle Vibration - keeps the product flowing with-out allowing it to compact or plug.
- No Airline Plugging - The patented disk seals tightly against the silo wall and prevents airline plugging.
- Robust Design - The disk will not tear, pick up moisture and is unaffected by temperatures up to 350°F (170°C).
- Material Compatible - Silicone rubber standard in blue or white (both food grade/FDA approved), or black or white EPDM.

Install From Outside. Available EZ-In (Easy-In) kits for installation without getting inside the bin or replacing out dated screen pads.



Patented Fluidizer used with over 120 different material types in 70 countries around the world.



Hopper cutaway shows Fluidizer in use.

## Vibration Products



### Electric Vibrators

A noiseless, heavy duty electric vibrator that can be force and speed adjusted while running. Unlike old-fashioned, noisy electro-magnetic vibrators, this newly developed silent motor vibrator can meet even the most stringent anti-noise pollution requirement. They are totally enclosed, continuous duty and completely noiseless. They can be used inside or outside, in dust, dirt, rain or snow.



### Pneumatic Ball Vibrators

Compressed air drives a highly chrome finished and hardened steel ball at a high rate of speed around a hardened, highly ground, and polished ball race creating high frequency vibration. Ball Vibrators require lubrication for long, trouble-free operation. They can be mounted directly to the structure to be vibrated or they can be mounted with simple mounting plates for better vibration transfer.



### Hydraulic Vibrators

Hydraulic vibrators operate in any position and are not affected by dirty, muddy or wet locations. They can operate on pressures up to 3000 PSI making them ideal to use with construction and form equipment for a variety of applications.



### Pneumatic Ball Vibrators

Turbine vibrators maintain 70-75 db's throughout their entire life, as compared to sharp increases in noise levels of ball roller and piston type vibrators. Because of their fool-proof operation and their lessening of noise in production areas, the Silent Air Turbine Vibrators have quickly become the specified and standard units for many industries and in many leading plants.



### Rail Car Shakers

Hydraulic vibrators operate in any position and are not affected by dirty, muddy or wet locations. They can operate on pressures up to 3000 PSI making them ideal to use with construction and form equipment for a variety of applications.



**Vibrators promote flow from bins and hoppers for all types of material - large aggregate to fine sand, powders, flakes, pills, bottle caps, asphalt, flour, salts, cement... you name it, VIBCO helps it flow.**

### **Material Flow Vibrators**

Vibrators are applied to improve the loading and unloading of bulk materials into-or out of-containers and trucks:

- Eliminate hang-ups and bottlenecks
- Discharge material more reliably, feed more consistently, sort more effectively, and compact more efficiently
- Reduce costs and enhance productivity
- More than 1,300 different models to solve material flow problems ranging from spice tins to rail cars
- Our Silent Turbine Vibrator is ultra-quiet, affordable replacement for noisy ball and piston vibrators

### **Concrete Vibrators for Production and Placement**

Vibrators help concrete to reach its rated strength by removing entrapped air. Vibrators are used in both the production and placement of concrete to:

- Improve the flow of aggregate, sand and cement... no more hangups
- Increase the consistency of batches by normalizing bin flow
- Improve the flow of mixed concrete through pump grates and down chutes
- Help to transport pumped or poured concrete evenly throughout the form

### **Mobile Vibrator Applications**

Vibrators assist work truck applications including dump trucks, dump trailers, sand and salt spreaders, agricultural spreaders, and mobile screens:

- Empty sticky/stubborn materials from dump beds and dump trailers without tailgate banging or over-hoisting
- Improve the flow of ice control mix on all sizes and styles of salt and sand spreaders
- Ensure the consistency of flow for agricultural spreaders (fertilizer, inoculant, etc.)
- Install quickly with easy mounting system, including mounting hardware, controls, and required accessories

# Vortex Valves

## Slide Gates, Diverters and Loading Spouts

Ideal for handling dry bulk material in gravity flow, dilute phase or dense phase pneumatic conveying applications. Vortex slide gates and diverters are designed and engineered with two main principals in mind: 1. extend the service life of the valve and 2. perform maintenance without taking the valve out of line. Vortex valves serve many industries including chemical, cement, coal, food, frac sand, grain, minerals, petrochemical, pharmaceutical, plastics, polymer, rubber and mining.



### Hand Slide Orifice Gate

The Vortex® Hand Slide Orifice Gate™ is designed specifically to handle dry bulk solids in gravity flow conveying. A full flow orifice provides unrestricted conveying of material with no disk or ledges to impede flow or cause material bridging. The gate seat and live-loaded seals are protected from material flow by a metal insert. By design, the valve “self cleans” material from the seat on each stroke of the valve blade improving overall seat life.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Mechanically self cleans on open stroke
- Wear compensating hard polymer seals
- Unobstructed opening
- Seals protected from material flow stream
- Narrow profile
- Food friendly options available
- Gravity flow
- Handles non abrasive powders, granulose and pellets
- Horizontal or vertical valve orientation
- Material construction options available
- Standard sizes: 2” – 14”

### Maintenance Gate

The Vortex® Maintenance Gate is designed to shut off material from a hopper or silo when maintenance of downstream equipment is required. In the open position, it positively seals conveying air and material to atmosphere. The hand crank gearing is designed to close through material in case of an upset condition.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Self-cleaning action on closure eliminates material build-up
- Unobstructed opening
- Seals protected from blast abrasion
- Serviceable while in-line
- Narrow profile
- Food friendly options available
- Material construction options available
- Gravity flow or dilute phase pneumatic conveying (pressure or vacuum)
- Handles powder, granules and pellets
- Horizontal or vertical valve orientation
- Standard sizes: 6” – 18”
- Contact us for custom sizes



## Multi-Port Diverter

The Vortex® Multi-Port Wye Line Diverter™ is specifically engineered to handle dry bulk solids in vacuum or dilute phase pneumatic conveying systems with pressures up to 15 psig (1 barg) depending on size. The multi-port eliminates the need for complicated hose manifold stations. This helps address potential errors when manually switching hoses and greatly reduces safety hazards.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Mechanically self cleans on opening stroke
- Shifts "on the fly"
- Wear compensating hard polymer seals
- Unobstructed opening
- Food friendly options available
- Dilute phase pneumatic conveying (pressure or vacuum)
- Handles non abrasive to moderately abrasive powders, granules and pellets
- Serviceable while in-line
- Material construction options available
- Horizontal or vertical valve orientation
- Standard sizes: 6" – 18"
- Contact us for custom sizes



## Fill Pass Diverter

The Vortex® Fill Pass Diverter™ is specifically engineered to handle dry bulk solids in vacuum or dilute phase pneumatic conveying systems with pressures up to 15 psig (1 barg) depending on size. It provides a versatile and reliable solution for filling one or more in-line weigh hoppers when material is conveyed pneumatically through a closed loop system. The design of the Fill Pass Diverter utilizes spread hopper inlet/outlet stacks for improved air and material separation reducing fill time and down line material carryover.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Separates air and material before filling the hopper
- Shifts "on the fly"
- Weigh from up to 5 sources and/or materials
- Positive seal through closed ports
- Unobstructed opening
- Serviceable while in-line
- Food friendly options available
- Designed for vacuum or dilute phase pneumatic conveying
- Handles nonabrasive powders, granules and pellets
- Unique stackable valve design
- Material construction options available
- Standard sizes: 2" – 6"
- Contact us for custom sizes



## Gravity Vee Diverter

The Vortex® Gravity Vee Diverter™ valve is designed to divert dry bulk solids in a gravity flow conveying system. The design allows for material flow through both outlets simultaneously, one outlet at a time, or a complete shut-off of flow. The Gravity Vee Diverter is also capable of metering flow through either outlet port.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Gravity flow
- Handles nonabrasive to abrasive powders, granular or pellets
- Design allows for total material flow control
- Wear compensating hard polymer seals
- Seals protected from material flow stream
- Food friendly options available
- Positive seal of dust and fine powders
- Serviceable while in-line
- Material construction options available
- Standard sizes: 5" – 24" | 125mm – 600mm | Contact us for custom sizes





### Iris Valve

The patented Vortex® Iris Valve is designed specifically to handle dry bulk solids in gravity discharge of free-flowing material from bins, bulk bags, chutes, and hoppers. The Vortex Iris Valve is designed with stainless steel control rings, metal handle and trigger lock, and nylon shim for durability and smooth actuation. A form fitted fabric sleeve provides a dust tight seal and product barrier, which prevents material leakage into the atmosphere.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Gravity flow conveying
- Handles nonabrasive powders, granular or pellets
- Food friendly options available
- Ideal for bulk bag unloading
- Smooth actuation with no binding or galling
- Unrestricted flow of material
- Fabric sleeve prevents material degradation
- Stainless steel control ring
- Standard sizes: 4" – 18"
- Contact us for custom sizes



### Flex Tube Diverter

The unique design of the Vortex® Flex Tube Diverter™ eliminates material cross contamination through a positive seal across the closed port. Pockets where material can lodge and remain trapped have also been eliminated. A smooth unobstructed transition from inlet to outlet shields the wear compensating seals from abrasion.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Eliminates cross contamination
- Diverts or converges material flow
- Unobstructed opening
- Available in 2 or 3-way configurations
- No pinch points or exposed moving parts for safe operation
- Food friendly options available
- Designed for vacuum or dilute phase pneumatic conveying
- Handles non-abrasive to mildly abrasive powders, granules and pellets
- Choice of flexible tube
- Material construction options available
- Standard sizes: 2" – 8"



### Wye Line Diverter

The Vortex Quantum Series Wye Line Diverter is specifically engineered to handle dry bulk solids in vacuum or dilute phase pneumatic conveying systems with pressures up to 15 psig (1 barg) depending on size. A full flow orifice provides unrestricted conveying of material. The live-loaded seals are shielded from abrasion by a metal insert.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Handles powders, granules and pellets
- Shifts "on the fly"
- Wear compensating hard polymer seals
- Unobstructed opening
- Positive seal through closed port
- Serviceable while in-line
- Diverts or converges material flow
- Food friendly options available
- Gravity flow or dilute phase pneumatic conveying (pressure or vacuum)
- Handles non-abrasive to moderately abrasive powders, granules and pellets
- Horizontal or vertical valve orientation
- Open / closed or volume metering of material
- Available in 2, 3, or 4-way configurations
- Material construction options available
- Standard sizes: 2"-12"
- Standard sizes 3-Way & 4-Way: 2" – 6"
- Contact us for custom sizes

## Clear Action Gate

The Vortex® Clear Action Gate™ is designed for use in gravity flow or pneumatic conveying systems up to 15 psig (1 barg) depending on size. Mounted horizontally, the machined square-edged blade of this gate mechanically clears the material from the sealing surfaces on each closing cycle allowing it to discharge beneath the valve. Open cavities where material collects in traditional gate valves have been eliminated with the square blade and seal design.

Traditional knife gates or butterfly valves are designed to handle gases and liquids, not dry materials. These valves rely on soft rubber seals, which erode or tear away during use, allowing leakage of air and material through the valve or into the plant's atmosphere. This causes the frequent need for valve maintenance, production inefficiencies, and unsanitary plant environments. The Clear Action Gate is designed to eliminate these problems, increasing production, while decreasing labor and equipment costs.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Self-cleaning action on closure minimizes material build-up
- Positive seal across the valve and to atmosphere
- Serviceable while in-line
- Accurate metering of materials with optional metering controls
- No internal cavities for material to build up
- No pinch points or exposed moving parts for safe operation
- Food friendly options available
- Gravity flow or dilute phase pneumatic conveying (pressure or vacuum)
- Handles powder, granules and pellets
- Horizontal or vertical valve orientation
- Open / closed or volume metering of material
- Material options available for wetted parts
- Standard sizes: 6" – 16"
- Contact us for custom sizes



## Seal Tite Diverter

The Vortex Seal Tite Diverter is designed for use in gravity flow applications where material can be diverted from one source to either two or three destinations. The Seal Tite Diverter offers a removable access door for interior inspection, cleaning and maintenance.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Leading edge of blade protected from material flow
- Wear compensating shaft seal prevents leakage
- Removable access doors for internal inspection, cleaning and maintenance
- Positive seal of dust and fine powders
- Available in 2 and 3-way configurations
- Internal access without tools
- Food friendly options available
- Gravity flow
- Handles nonabrasive to abrasive powders, granular or pellets
- Carbon or stainless steel material of construction
- Material construction options available
- Standard sizes: 4" – 30"
- Contact us for custom sizes





### HDPV2 Slide Gate

Designed to address higher-pressure applications up to 75 psig (5 barg) depending on size, the Vortex® HDPV2™ sets itself apart from traditional industry slide gates. The rising blade design provides positive material shut-off by means of an O-ring seal on the inlet of the valve. This design feature eliminates the issues related to packing of material causing abrasion to the end seal.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Seals fine material in higher aeration or pressure applications
- Patented rising blade action ensures optimal seal
- Seals protected from blast abrasion
- Serviceable while in-line
- Does not pack material upon closure
- Material construction options available
- Food friendly options available
- Gravity flow, dilute phase, or dense phase conveying
- Designed to handle abrasive or sticky materials
- Horizontal or vertical valve orientation
- Open / closed or volume metering of material
- Standard sizes: 4" – 16"
- Contact us for custom sizes



### Roller Gate

The Vortex® Roller Gate™ is the best choice for handling dry material in gravity flow or low-pressure applications. This gate is available in a wide variety of configurations including rectangular sizes and customer specific hole patterns. It has live-loaded seals that extend the service life by compensating for wear. These seals provide an excellent material seal across the gate and to atmosphere. They can also be replaced while the valve is in-line. Similar slide gates have seals made of soft packing, rubber or felt, which rapidly erode away allowing product leakage.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Positive seal of dust and fine powders
- No pinch points or exposed moving parts for safe operation
- Wear compensating hard polymer seals
- Seal access ports for replacement while in-line
- Serviceable while in-line
- Material construction options available
- Food friendly options available
- Gravity flow
- Handles powder, granules and pellets
- Horizontal or vertical valve orientation
- Open / closed or volume metering of material
- Accurate metering of material with optional control
- Standard sizes: 4" - 30"
- Contact us for custom sizes

## Orifice Gate

The Vortex® Quantum Orifice Gate™ is specifically engineered to handle dry bulk solids in gravity flow, dilute phase, or vacuum conveying systems with pressures up to 15 psig (1 barg) depending on size. Traditional slide gates and butterfly valves commonly allow packing of material, which prevents positive air and material shutoff.

Unlike common knife gates and butterfly valves, the Orifice Gate is specifically engineered to handle dry bulk powders, pellets, and granules. Knife gates rely on soft elastomeric seals which erode or tear away in service. Butterfly valves incorporate discs that cause significant flow restrictions, thus impacting system performance and throughput. Both designs promote wedging and packing of materials, preventing positive air and material shut off. The Orifice Gate eliminates design flaws associated with knife gates and butterfly valves.

Key Industries Served: Agriculture, Chemicals, Foods, Minerals, Petrochemicals, Plastics, Textiles

- Pneumatic (Dense & Dilute Phase) or Gravity Flow Conveying
- Handles non abrasive to moderately abrasive powders, granules, and pellets
- Mechanically self cleans on opening stroke
- No pinch points or exposed moving parts for safe operation
- Wear compensating hard polymer seals
- Unobstructed opening
- Food friendly options available
- Horizontal or vertical valve orientation
- Open / closed or volume metering of material
- Seals protected from material flow stream
- Serviceable while in-line
- Material construction options available
- Standard sizes: 2" – 16"
- Contact us for custom sizes



## Sanitary Quick Clean Orifice Gate

The Vortex® Quick Clean Orifice Gate™ is a "clean out of place" gate valve designed for frequent cleaning. The valve features a full-port opening and self-cleaning design. It can be disassembled and assembled in minutes without tools. The valve carries a USDA Dairy Standard Accepted rating and is an excellent choice for sanitary applications.

Key Industries Served: Chemical, Dairy, Pharmaceuticals, Pigments

- FDA approved materials, USDA Dairy Standard Accepted
- Positive seal of dust and fine powders
- Internal access without tools
- Mechanically self cleans on open stroke
- Wear compensating hard polymer seals
- Gravity flow
- Handles non abrasive powders, granules and pellets
- Open / closed or volume metering of material
- Unrestricted flow of material
- Standard sizes: 2" – 10"
- Contact us for custom sizes





800-255-6213

## Titan Series Valves

Vortex Titan Series slide gates and diverters are engineered for HEAVY-DUTY material handling applications. These applications include materials that pose excessive abrasion or wear issues, situations that call for extremely large sized valves / diverters, and conditions that warrant additional considerations that will allow these valves to be as successful as possible in extremely harsh environments.

Some of the materials handled with Vortex Titan valves include but not limited to: Alumina, Bauxite, Cement, Clinker, Coal, Fly Ash, Frac Sand, Gravel, Glass Cullet, Lime/Limestone, Metal Powders, Potash, Rock and Sand.



**TSG Gate**

- Gravity flow
- Handles Aggregates, Coal, Minerals, Powder, Pellets, Granulars
- Dust tight design
- Open / closed or volume metering of material
- Standard sizes: 6" – 30"



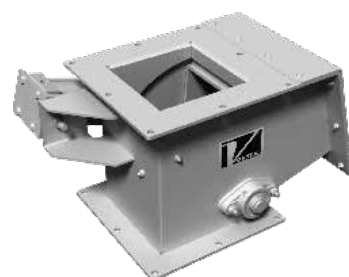
**Aggregate Gate**

- Gravity flow
- Handles abrasive materials like Coal, Gravel, Sand, and Whole Grains
- Narrow profile
- Material displacement pocket minimizes wedging of material as blade closes
- Standard sizes: 6" – 24"



**TPV Gate**

- Dilute and Dense phase pneumatic conveying
- Gravity flow conveying
- Handles abrasive materials like minerals, frac sand, and fly ash
- Mounting boss for the addition of an optional proximity switch
- Standard sizes: 2" - 10"



**RBG Gate**

- Gravity flow
- Handles materials like minerals, frac sand, fly ash and whole grains
- Dust tight design
- Open / closed or volume metering of material
- Standard sizes: 6" - 24"



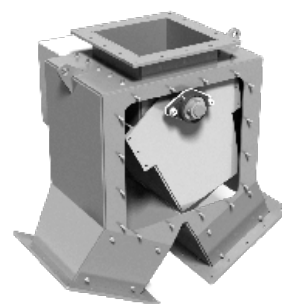
**Aggregate Diverter**

- Gravity flow
- Handles nonabrasive to abrasive materials like Coal, Gravel, Sand, and Whole Grains
- Carbon steel material of construction
- Optional interior dead-pockets allow material to impact on itself reducing wear
- Standard sizes: 6" – 24"



**TLD Diverter**

- Gravity flow
- Handles aggregates, rock, glass cullet, sand, refractory mix and clinker
- Leading edge of blade protected from material flow
- Wear compensating shaft seal preventing leakage
- Positive seal of dust and fine powders
- Standard sizes: 16" – 36"



**Pivoting Chute Diverter**

- Gravity flow
- Handles granules, pellets and larger abrasive materials
- Available in 2-way and 3-way configurations
- Dust tight to atmosphere
- Unobstructed opening
- Shift "on-the-fly"
- Standard sizes: 6' – 24"

## Loading Solutions

Vortex® Loading Solutions provide fast and steady material flow during the loading of dry/bulk solid materials in open and/or enclosed vessels such as trucks, railcars, tank vehicles, ships, barges, and stockpiling. These loading spouts are designed to capture fugitive dust, prevent material waste, and ensure plant and environmental safety, with low maintenance and service expenses. From the retractable loading spout attached to the bottom of a silo/hopper or located at the end of an air conveying system, to the dust collecting filter system, to the loading spout positioner, Vortex Loading Solutions offer a complete line of versatile loading spout systems for your loading process.

### Applications:

- Loading of dry/bulk solid materials: petrochemical powders, plastic granules, wood pellets, cement, grains, sand, gravel, or coal
- Loadout of open, semi-enclosed and closed vessels: trucks, railroad cars, tankers, ships, barges, stockpiling
- Filling of bags, drums and flexible bulk containers
- Normal, abrasive, corrosive, combustible and hazardous environments

### Features:

- 4 cable lifting design with center mounted drive motor protected from elements.
- CNC Machined lifting pulleys reduces wear and increases lifespan of lifting cables
- Open and closed vehicle loading





800-255-6213

## Rotary Airlock Feeders

Rotary Airlock Feeders are used in pneumatic conveying systems, dust control equipment, and as volumetric feed-controls to maintain an even flow of material through processing systems. The basic use of the rotary airlock feeder is as an airlock transition point, sealing pressurized systems against loss of air or gas while maintaining a flow of material between components with different pressure. Rotary Airlock Feeders are also widely used as volumetric feeders for metering materials at precise flow rates from bins, hoppers or silos into conveying or processing systems.

Heavy Duty Extra Tough  
Drop-Thru Square



Heavy Duty Extra Tough  
Drop-Thru Round



Kwik-Klean® Square or Round



Heavy Duty Square Drop-Thru



Heavy Duty Round Drop-Thru



Heavy Duty Side Entry



Standard Duty Square Drop-Thru



Standard Duty Round Drop-Thru



Klean-In-Place® Square or Round



Blow-Thru Square



Blow-Thru Round



Pellet Valve





## Optional Equipment for Rotary Airlock Feeders

<b>Bearings</b>	Re-greaseable and High Temperature Bearings available for special applications.
<b>Packing Glands</b>	Teflon, chevron and other special materials can be specified.
<b>Lantern Rings</b>	Optional
<b>Air Purge</b>	Optional to help prevent leakage and protect packing.
<b>Inspection Door</b>	Feeders 10 x 10 and larger, can be provided with removable inspection panels to facilitate maintenance.
<b>Special Construction</b>	Airlocks can be furnished in cast stainless steels, carbon steel, aluminum and other special alloys.
<b>Vents</b>	Vented housings can be furnished to evacuate pressure in pockets to aid flow of material into airlock.
<b>Interior Coatings</b>	Special interior coatings such as nickel, chrome, Teflon®, tungsten carbide, etc. are available for abrasive and corrosive applications.
<b>Special Rotors</b>	Shallow pocket, closed end, multiple vane rotors are available in a wide range of displacements. Seal strips supplied in neoprene, Teflon®, urethane, stainless steel or brass can be mounted on rotor blade tip and ends. They can be quickly adjusted or replaced. Beveled edges and hard facings also available.



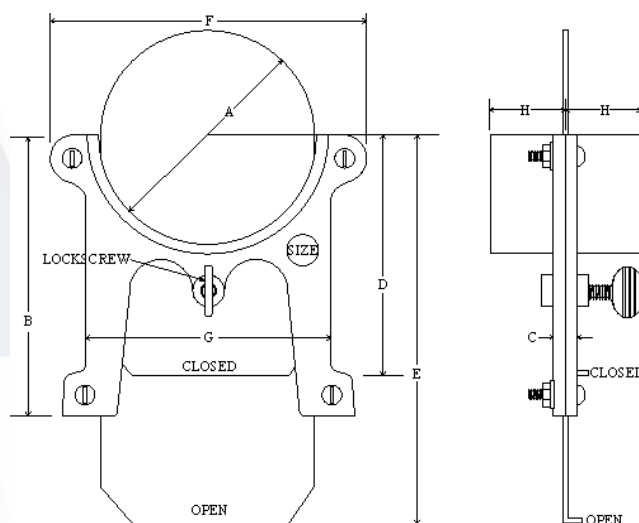
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## Blast Gates

Cast 319 aluminum blast gates are available in both half and whole versions, 2" to 22". Blast gates are used to either control a branch of a system, a run to a specific machine or for balancing. The collar of the whole gates are tapered to allow for a tolerance on the exact diameter of the duct. Half gates are usually used in a retrofit of a system where a 180 degree section is cut out of the duct and the collar is intended to straddle the duct.

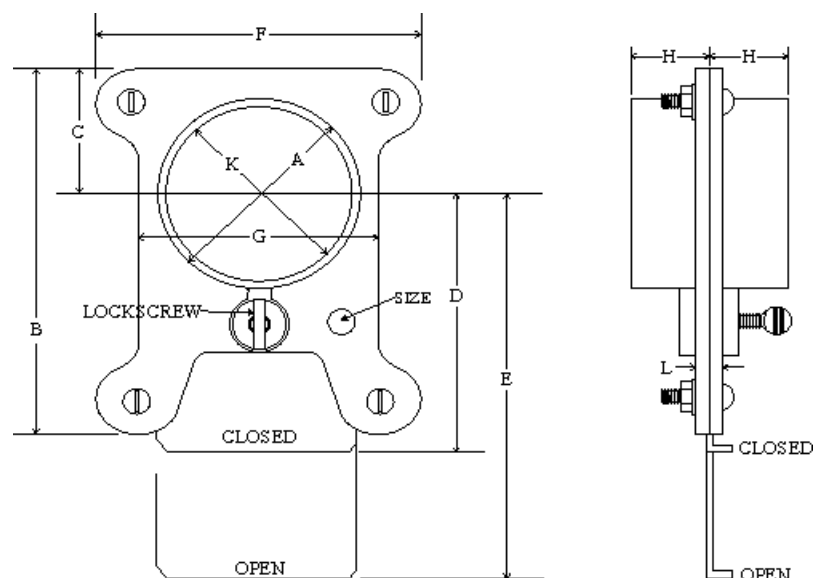
Custom fabricated gates are available in carbon steel, stainless steel with rolled collars or angle rings according to your specification or ours.

### Half Blast Gate Cast Aluminum



Part #	SIZE	A	B	C	D	E	F	G	H	WEIGHT (LBS.)
BFH3.0	3"	3.0	3.88	.375	3.5	6.0	4.5	3.25	1.125	1.75
BFH3.5	3.5"	3.5	4.5	.375	4	7	5.0	3.75	1.125	2.25
BFH4.0	4"	4.0	4.5	.375	3.63	7.12	5.63	4.25	1.19	2.5
BFH4.5	4.5"	4.5	4.88	.5	4.38	8.38	6.13	4.75	1.125	2.75
BFH5.0	5"	5.0	5.38	.4375	4.5	10.5	6.75	5.25	1.125	3.25
BFH6.0	6"	6.0	5.88	.375	5.0	12.13	7.88	6.25	1.37	3.5
BFH7.0	7"	6.875	6.12	.375	5.63	13.0	8.5	7.25	1.25	3.5
BFH8.0	8"	8.0	7.75	.5	5.5	15.13	10	8.25	1.38	4
BFH9.0	9"	9.0	8.63	.4375	7.13	15.63	11.13	9.375	1.387	5.25
BFH10.0	10"	10.0	9.12	.5	7	16.5	12	10.5	1.5	5.75
BFH11.0	11"	11	9.75	.625	7.75	18	12.75	12	1.75	5.75
BFH12.0	12"	12.0	10	.5	7.5	19.0	14.13	11.5	1.5	6.25
BFH14.0	14"	14.0	11.38	.625	10.5	24.0	16.5	15.5	2.125	9.0
BFH16.0	16"	16.0	12.31	.625	11.25	26.75	18.5	17.5	2.125	110

## Full Blast Gate Cast Aluminum

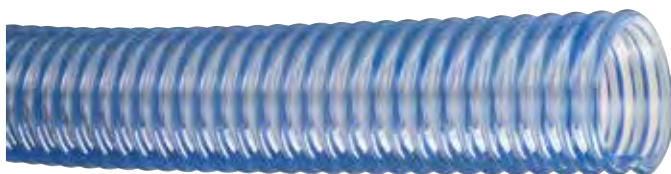


Part #	SIZE	A	B	C	D	E	F	G	H	K	L	WEIGHT (LBS.)
BF2.0	2"	2.375	4.5	1.75	3.0	5.0	3.88	3.0	.94	2.1875	.3125	.5
BF3.0	3"	2.875	5.25	1.88	3.25	5.75	4.25	3.375	1.13	2.625	.4375	.75
BF3.5	3.5"	3.375	6.8	2.13	3.81	6.86	4.62	4.0	1.31	3.0625	.375	1.0
BF4.0	4"	3.875	6.88	2.44	4.13	7.68	5.25	4.375	1.31	3.75	.3125	1.5
BF4.5	4.5"	4.375	7.75	2.62	4.94	8.75	5.75	5.0	1.31	4.0625	.375	2.7
BF5.0	5"	4.875	8.18	2.75	5.13	9.25	6.0	5.375	1.31	4.625	.375	3
BF6.0	6"	5.875	10.0	3.0	6.75	11.75	7.0	6.5	1.37	5.625	.375	3.5
BF7.0	7"	6.875	11.13	3.75	6.5	12.62	7.87	7.25	1.37	6.625	.375	4
BF8.0	8"	7.875	12	4.5	7.0	14.12	9.37	8.625	1.63	7.5	.4375	5
BF9.0	9"	8.8125	13.62	4.87	7.25	15.25	10.62	9.5	1.75	8.5625	.4375	6
BF10.0	10"	9.8125	14.5	5.5	8.62	17.87	11.62	10.625	1.88	9.4375	.5625	7
BF11.0	11"	10.75	15.37	6.25	9.12	20.5	12.25	11.4375	1.88	10.375	.625	8
BF12.0	12"	11.75	16.3	6.75	9.75	21.125	13.25	12.5625	1.88	11.4375	.5625	9.5
BF14.0	14"	13.875	18.87	7.5	9.5	22.75	15.62	14.75	2.25	13.5625	.625	12
BF16.0	16"	16.0625	20.75	8.87	11.5	26.87	17.75	17.0	2.25	15.875	.6875	15
BF18.0	18"	17.9375	32.62	9.75	11.62	33.62	20.25	18.8125	3.5	17.5	.8125	31
BF20.0	20"	19.8125	34.0	10.5	16.75	35.5	22.12	20.9375	3.5	19.375	.8125	39
BF22.0	22"	21.43	33.5	11.0	16.12	37.12	24.12	23.13	3.5	21.93	.8125	42
BF24.0	24"	23.875	33.75	12.5	18.87	41	26.12	25	3.5	23.313	.75	47



800-255-6213

## Industrial Hose



Construction: PVC tube with rigid PVC helix.  
Service Temperature: -4°F to 150°F

Sizes Available: 1" ID through 8" ID in standard roll lengths

### Features and Advantages:

- Superior Product Design – WT™ series hoses are an industry standard for pneumatic material handling due to our specially engineered compound, innovative design and uncompromising quality control. Provides the ideal combination of light weight, flexibility and durability.
- Food Grade Materials – Hose complies with applicable FDA(03) and 3-A(01) requirements. Hose approved by USDA(11) for use in meat and poultry plants.

### WT™ Series

Food Grade PVC  
Material Handling Hose

#### General Applications:

- Food grade liquids such as potable water, beer, wine and juice
- Food grade material handling – standard duty
- Material handling – standard duty
- Pharmaceutical product transfer
- Plastic processing equipment
- Pneumatic conveying equipment
- Poultry processing



Construction: PVC tube with rigid PVC helix and grounding wire.  
Service Temperature: -4°F to 150°F

Sizes Available: 1" ID through 8" ID in standard roll lengths

### Features and Advantages:

- Superior Product Design: WE™ series hoses are an industry standard for pneumatic material handling, due to our specially engineered compound, innovative design and uncompromising quality control. Provides the ideal combination of light weight, flexibility and durability.
- Food Grade Materials: Hose complies with applicable FDA(03) requirements. Hose approved by USDA(11) for use in meat and poultry plants.

### WE™ Series

Food Grade PVC  
Material Handling Hose With Grounding Wire

#### General Applications:

- Food grade material handling – standard duty
- Material handling – standard duty
- Pharmaceutical product transfer
- Plastic processing equipment
- Pneumatic conveying equipment
- Poultry processing
- Grounding Wire: Multi-strand wire helps prevent the build-up of static electricity for added safety and to help keep material flowing smoothly. It's embedded within the rigid helix to prevent contamination of transferred materials.
- Transparent Construction: "See-the-flow." Allows for visual confirmation of material flow.
- Convoluted Outer Cover: Provides increased hose flexibility.
- Phthalate Free



## 2001™ Series

Heavy Duty Food Grade

Polyurethane Lined

Material Handling Hose With Grounding Wire

### General Applications:

- Food grade material handling – heavy duty abrasive
- Material handling – heavy duty abrasive
- Pharmaceutical product transfer
- Plastic processing equipment
- Pneumatic conveying equipment

### Features and Advantages:

- Extra Thick Abrasion Resistant Polyurethane Liner – Designed for dry applications where severe abrasion is a factor. Provides for longer hose life and lower operating costs versus rubber or PVC hoses.
- Food Grade Materials – Hose cover complies with applicable FDA(03) requirements. Hose liner complies with applicable FDA(04) requirements. Hose approved by USDA(12) for use in meat and poultry plants.
- Phthalate Free
- Grounding Wire – Multi-strand wire helps prevent the build-up of static electricity for added safety and to help keep material flowing smoothly. It's embedded within the rigid helix to prevent contamination of transferred materials.
- Transparent Construction – “See-the-flow.” Allows for visual confirmation of material flow.
- Convoluted Outer Cover – Provides increased hose flexibility.
- Oil Resistant Polyurethane Liner – Resists most animal and petroleum based oils.



Construction: PVC cover with polyurethane liner, rigid PVC helix and grounding wire.

Service Temperature: -4°F to 150°F

Sizes Available: 1 1/2" ID through 8" ID in standard roll lengths

## 2020™ Series

Heavy Duty Food Grade

Polyurethane Fabric Reinforced

Material Handling Hose With Grounding Wire

### General Applications:

- Bulk truck and railcar unloading
- Food grade material handling – heavy duty abrasive
- Material handling – heavy duty abrasive
- Suction and discharge

### Features and Advantages:

- Extra Thick Abrasion Resistant Double-Ply Polyurethane Tube – Designed for dry applications where severe abrasion is a factor. Provides for longer hose life and lower operating costs versus rubber or PVC hoses.
- Food Grade Materials – Hose liner complies with applicable FDA(04) requirements. Hose approved by USDA(12) for use in meat and poultry plants.
- Fabric Reinforcement – Designed with high tensile strength, food grade(05), polyester yarn jacket to handle both suction, and higher pressure discharge applications.
- Grounding Wire – Multi-strand wire helps prevent the build-up of static electricity for added safety and to help keep material flowing smoothly. It's embedded within the rigid helix to prevent contamination of transferred materials.
- Transparent Construction – “See-the-flow.” Allows for visual confirmation of material flow.
- “Cold-Flex” Materials – Hose is flexible in sub-zero temperatures
- Easy Slide Helix – Rigid helix design protects hose tube from cover wear, and allows hose to slide easily over rough surfaces.
- Phthalate Free



Construction: Extra thick double-ply polyurethane tube, polyester fabric reinforcement, rigid PVC helix and grounding wire.

Service Temperature: -4°F to 150°F

Sizes Available: 2" ID through 8" ID in standard roll lengths



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Construction: Static dissipative polyurethane tube, rigid helix and grounding wire (patent pending).

Service Temperature: -40°F to 150°F

Sizes Available: 1 1/2" ID through 8" ID in standard roll lengths

#### Features and Advantages:

- Superior Static Protection! – A properly grounded Voltbuster™ hose will not retain an electrostatic charge sufficient to create a propagating brush discharge. Hose material, using the embedded grounding wire, shows a charge decay time constant of < 1 second, based on independent lab testing.
- Food Grade Materials – Hose tube complies with FDA(05) requirements. Grounding wire embedded in external helix to prevent material contamination.
- Extra Thick Abrasion Resistant Single-Ply Polyurethane Tube – Provides for longer hose life and lower operating costs versus rubber or PVC hoses.
- Transparent Construction – “See-the-flow”. Allows for visual confirmation of material flow.
- “Cold-Flex” Materials – Hose remains flexible in sub-zero temperatures.
- Easy Slide Helix – Rigid helix design protects hose tube from wear; allows hose to slide easily over rough surfaces. Easy to handle.
- Oil Resistant Polyurethane Tube – Resists most animal and petroleum based oils.
- Phthalate Free



Construction: Static dissipative polyurethane tube, polyester fabric reinforcement, rigid helix and grounding wire (patent pending).

Service Temperature: -40°F to 150°F

Sizes Available: 2" ID through 8" ID in standard roll lengths

#### Features and Advantages:

- Superior Static Protection! – A properly grounded Voltbuster™ hose will not retain an electrostatic charge sufficient to create a propagating brush discharge. Hose material, using the embedded grounding wire, shows a charge decay time constant of < 1 second, based on independent lab testing.
- Food Grade Materials – Hose tube complies with FDA(05) requirements. Grounding wire embedded in external helix to prevent material contamination.
- Extra Thick Abrasion Resistant Double-Ply Polyurethane Tube – Provides for longer hose life and lower operating costs versus rubber or PVC hoses.
- Phthalate Free
- Fabric Reinforcement – Designed with high tensile strength, food grade FDA(06), polyester yarn jacket to handle both suction, and higher pressure discharge applications.
- Transparent Construction – “See-the-flow”. Allows for visual confirmation of material flow.
- “Cold-Flex” Materials – Hose flexible in sub-zero temperatures.
- Easy Slide Helix – Rigid helix design protects hose from wear; allows hose to slide easily over rough surfaces. Easy to handle.
- Oil Resistant Polyurethane Tube – Resists most animal and petroleum based oils.

## VOLT™ Series

Heavy Duty Food Grade

Static Dissipative Polyurethane

Material Handling Hose

General Applications:

- Bulk truck and railcar unloading
- Fly ash collection
- Food grade material handling –heavy duty abrasive
- Material handling – heavy duty abrasive
- Milling machine scrap recovery
- Plastic processing equipment
- Pneumatic conveying equipment

## VLT-SD™ Series

Heavy Duty Food Grade

Static Dissipative Polyurethane

Fabric Reinforced Material Handling Hose

General Applications:

- Bulk truck and railcar unloading
- Food grade material handling – heavy duty abrasive
- Material handling – heavy duty abrasive
- Milling machine scrap recovery
- Plastic processing equipment
- Pneumatic conveying equipment

## WBS™ Series

Food Grade PVC  
Material Handling Hose  
With Static Dissipative Additives

### General Applications:

- Food grade material handling – standard duty
- Material handling – standard duty
- Pharmaceutical product transfer
- Plastic processing equipment
- Pneumatic conveying equipment

### Features and Advantages:

- Abrasion Resistant PVC Tube – Formulated from highly durable PVC compounds for increased abrasion resistance.
- Food Grade Materials – Hose complies with applicable FDA(03) requirements. Hose approved by USDA(11) for use in meat and poultry plants.
- Static Dissipative Tube – Specially formulated to help prevent the build-up of static electricity for added safety and to help-keep material flowing smoothly.
- Transparent Construction – “See-the-flow.” Allows for visual confirmation of material flow.
- Convoluted Outer Cover – Provides increased hose flexibility.
- Phthalate Free



Construction: Static dissipative PVC tube with rigid PVC helix.  
Service Temperature: -4°F to 150°F

Sizes Available: 1 1/2" ID through 4" ID in standard roll lengths

## UVF™ Series

Food Grade  
Polyurethane Ducting/  
Material Handling Hose

### General Applications:

- Ducting, ventilation and fume removal
- Dust collection
- Food grade blower and ducting systems
- Food grade material handling – standard duty
- Pharmaceutical product transfer

### Features and Advantages:

- Durable Lightweight Polyurethane Tube – Designed for dry applications where abrasion is a factor. Provides longer hose life and lower operating costs versus rubber or PVC hoses.
- Food Grade Materials – Hose complies with applicable FDA(04) requirements. Hose approved by USDA(12) for use in meat and poultry plants.
- Transparent Construction – “See-the-flow”. Allows for visual confirmation of material flow.
- “Cold-Flex” Materials – Hose remains flexible in sub-zero temperatures.
- Easy Slide Helix – Exposed rigid helix design protects hose tube from cover wear, and allows hose to slide easily over rough surfaces. Easy-to-handle.
- Oil Resistant Polyurethane Hose – Resists most animal and petroleum based oils.
- Phthalate Free



Construction: Polyurethane tube with rigid PVC helix.  
Service Temperature: -40°F to 150°F

Sizes Available: 2" ID through 8" ID in standard roll lengths



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## GTF™ Series

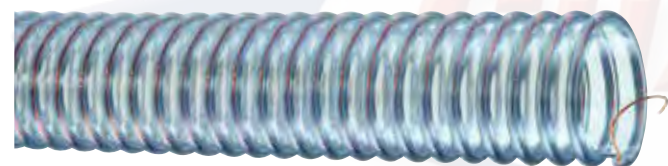
Food Grade PVC  
Ducting/Material Handling Hose

Construction: PVC tube with rigid PVC helix  
Service Temperature: -4°F to 150°F

Sizes Available: 1 1/2" ID through 8" ID in standard roll lengths

### Features and Advantages:

- Food Grade Materials – Hose complies with applicable FDA(03) and 3-A(01) requirements. Hose approved by USDA(11)
- (GTF only) for use in meat and poultry plants.
- Transparent Construction – “See-the-flow.” Allows for visual confirmation of material flow.
- Easy Slide Helix – Exposed rigid helix design protects hose tube from cover wear, and allows hose to slide easily over rough surfaces. Easy-to-handle.
- Phthalate Free



## GTFE™ Series

Food Grade PVC  
Ducting/Material Handling Hose with Grounding Wire

Construction: PVC tube with rigid PVC helix and grounding wire  
Service Temperature: -4°F to 150°F

Sizes Available: 1 1/2" ID through 8" ID in standard roll lengths

### Features and Advantages:

- Food Grade Materials – Hose complies with applicable FDA(03) and 3-A(01) requirements.
- Grounding Wire – Multi-strand wire helps prevent the build-up of static electricity for added safety and to help keep material flowing smoothly. It's embedded within the rigid helix to prevent contamination of transferred materials.
- Transparent Construction – “See-the-flow.” Allows for visual confirmation of material flow.
- Easy Slide Helix – Exposed rigid helix design protects hose tube from cover wear, and allows hose to slide easily over rough surfaces. Easy-to-handle.
- Phthalate Free

## Ureflex UF1™ Series

Heavy Duty Polyurethane  
Lined Material Handling Hose

### General Applications:

- Agricultural dry fertilizers
- Air seeder lines
- Fly ash collection
- Industrial vacuum equipment
- Material chutes
- Material handling – heavy duty abrasive
- Milling machine scrap recovery
- Rock, gravel, sand and crushed concrete vacuuming
- Shot blast recovery

### Features and Advantages:

- Thick Abrasion Resistant Polyurethane Liner – Designed for dry applications where severe abrasion is a factor. Provides for longer hose life and lower operating costs versus rubber or PVC hoses.
- Static Dissipative Cover – Specially formulated to help prevent the build-up of static electricity for added safety and to help keep material flowing smoothly.
- “Cold-Flex” Materials – Hose flexible in sub-zero temperatures.
- Convoluted Outer Cover – Provides increased hose flexibility.
- Oil Resistant Polyurethane Liner – Resists most animal and petroleum based oils.
- Phthalate Free



Construction: PVC cover with polyurethane liner and rigid PVC helix.  
Service Temperature: -40°F to 150°F

Sizes Available: 1 1/4" ID through 10" ID in standard roll lengths

## Ureflex UF2™ Series

Extra Heavy Duty Polyurethane  
Lined Material Handling Hose

### General Applications:

- Fly ash collection
- Industrial vacuum equipment
- Material chutes
- Material handling – heavy duty abrasive
- Milling machine scrap recovery
- Rock, gravel, sand and crushed concrete vacuuming
- Shot blast recovery

### Features and Advantages:

- Extra Thick Abrasion Resistant Polyurethane Liner – Designed for dry applications where severe abrasion is a factor. Provides for longer hose life and lower operating costs versus rubber or PVC hoses.
- Static Dissipative Cover – Specially formulated to help prevent the build-up of static electricity for added safety and to help keep material flowing smoothly.
- “Cold-Flex” Materials – Hose remains flexible in sub-zero temperatures.
- Convoluted Outer Cover – Provides increased hose flexibility.
- Oil Resistant Polyurethane Liner – Resists most animal and petroleum based oils.
- Phthalate Free



Construction: PVC cover with polyurethane liner and rigid PVC helix.  
Service Temperature: -40°F to 150°F

Sizes Available: 1 1/2" ID through 4" ID in standard roll lengths



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## UBK™ Series

Food Grade PVC  
Ducting/Material Handling Hose

### General Applications:

- Agricultural dry fertilizers
- Air seeder lines
- Fly ash collection
- Industrial vacuum equipment
- Material handling – heavy duty abrasive
- Milling machine scrap recovery
- Rock, gravel, sand and crushed concrete vacuuming
- Shot blast recovery

Construction: : PVC cover with polyurethane liner and rigid PVC helix.  
Service Temperature: -40°F to 150°F

Sizes Available: 2" ID through 8" ID in standard roll lengths

### Features and Advantages:

- Thick Abrasion Resistant Polyurethane Liner – Designed for dry applications where severe abrasion is a factor. Provides for longer hose life and lower operating costs versus rubber or PVC hoses.
- Static Dissipative Cover – Specially formulated to help prevent the build-up of static electricity for added safety and to help keep material flowing smoothly.
- "Cold-Flex" Materials – Hose remains flexible in sub-zero temperatures.
- Easy Slide Helix – Rigid helix design protects hose tube from cover wear, and allows hose to slide easily over rough surfaces Easy-to-handle.
- Oil Resistant Polyurethane Liner – Resists most animal and petroleum based oils.
- Phthalate Free



## UFC™ Series

Heavy Duty Polyurethane  
Lined Material Handling Hose

### General Applications:

- Agricultural dry fertilizer
- Air seeder lines
- Industrial vacuum equipment
- Material handling – heavy duty abrasive
- Milling machine scrap recovery
- Plastic processing equipment
- Shot blast recovery

Construction: PVC tube with rigid PVC helix and grounding wire  
Service Temperature: -40°F to 150°F

Sizes Available: 1 1/2" ID through 4" ID in standard roll lengths

### Features and Advantages:

- Thick Abrasion Resistant Polyurethane Liner – Designed for dry applications where severe abrasion is a factor. Provides for longer hose life and lower operating costs versus rubber or PVC hoses.
- Static Dissipative Cover – Specially formulated to help prevent the build-up of static electricity for added safety and to help keep material flowing smoothly.
- Phthalate Free
- Transparent Construction – "See-the-flow." Allows for visual confirmation of material flow.
- "Cold-Flex" Materials – Hose remains flexible in sub-zero temperatures.
- Convuluted Outer Cover – Provides increased hose flexibility.
- Oil Resistant Polyurethane Liner – Resists most animal and petroleum based oils.

## Plas-T-Flo™ PF™ Series

Heavy Duty Food Grade Polyurethane  
Material Handling Hose With Grounding Wire



### General Applications:

- Bulk truck & railcar unloading
- Material handling – heavy duty abrasive
- Milling machine scrap recovery
- Plastic processing equipment

Construction: Polyurethane tube with rigid PVC helix and grounding wire.  
Service Temperature: -40°F to 150°F

Sizes Available: 3" ID through 6" ID in standard roll lengths

### Features and Advantages:

- Extra Thick Single-Ply Abrasion Resistant Polyurethane Tube – Our thickest single-ply polyurethane tube! Designed for dry applications where severe abrasion is a factor. Provides for longer hose life and lower operating costs versus rubber or PVC hoses.
- Grounding Wire – Multi-strand wire helps prevent the build-up of static electricity for added safety and to help keep material flowing smoothly. It's embedded within the rigid helix to prevent contamination of transferred materials.
- Transparent Construction – "See-the-flow." Allows for visual confirmation of material flow.
- "Cold-Flex" Materials – Hose remains flexible in sub-zero temperatures.
- Easy Slide Helix – Rigid helix design protects hose tube from cover wear, and allows hose to slide easily over rough surfaces. Easy-to-handle.
- Oil Resistant Polyurethane Tube – Resists most animal and petroleum based oils.
- Phthalate Free

## Urevac UV3™ Series

Heavy Duty Polyurethane  
Material Handling Hose With Grounding Wire



### General Applications:

- Dust collection
- Material handling – heavy duty abrasive
- Milling machine scrap recovery
- Plastic processing equipment
- Trench suction

Construction: : Single-ply polyurethane tube with rigid PVC helix and grounding wire.

Service Temperature: -40°F to 150°F

Sizes Available: 3" ID through 8" ID in standard roll lengths

### Features and Advantages:

- Thick Abrasion Resistant Single-Ply Polyurethane Tube – Designed for dry applications where severe abrasion is a factor. Provides for longer hose life and lower operating costs versus rubber or PVC hoses.
- Grounding Wire – Multi-strand wire helps prevent the build-up of static electricity for added safety and to help keep material flowing smoothly. It's embedded within the rigid helix to prevent contamination of transferred materials.
- Phthalate Free
- Transparent Construction – "See-the-flow." Allows for visual confirmation of material flow.
- "Cold-Flex" Materials – Hose remains flexible in sub-zero temperatures.
- Easy Slide Helix – Rigid helix design protects hose tube from cover wear, and allows hose to slide easily over rough surfaces. Easy-to-handle.
- Oil Resistant Polyurethane Tube – Resists most animal and petroleum based oils.



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## Urevac™ UV2™ Series

Heavy Duty Polyurethane  
Lined Ducting/Material Handling Hose

Construction: PVC cover with ester polyurethane (TPU) liner  
and rigid PVC helix

Service Temperature: -40°F to 150°F

Sizes Available: 1 1/2" ID through 8" ID in standard roll lengths

### Features and Advantages:

- Abrasion Resistant Polyurethane Liner – Designed for dry applications where severe abrasion is a factor. Provides for longer hose life and lower operating costs versus similar rubber or PVC hoses.
- "Cold-Flex" Materials – Hose remains flexible in sub-zero temperatures.
- Static Dissipative Cover – Specially formulated to help prevent the build-up of static electricity for added safety and to help keep material flowing smoothly.
- Transparent Construction – "See-the-flow." Allows for visual confirmation of material flow.
- Easy Slide Helix – Rigid helix design protects hose tube from cover wear, and allows hose to slide easily over rough surfaces. Easy-to-handle.
- Oil Resistant Polyurethane Liner – Resists most animal and petroleum based oils.
- Phthalate Free



## UVPE™ Series

Heavy Duty Polyurethane  
Material Handling Hose With Grounding Wire

Construction: PVC tube with rigid PVC helix and grounding wire

Service Temperature: -40°F to 150°F

Sizes Available: 1 1/2" ID through 4" ID in standard roll lengths

### Features and Advantages:

- Thick Abrasion Resistant Polyurethane Tube – Designed for dry applications where severe abrasion is a factor. Provides for longer hose life and lower operating costs versus rubber or PVC hoses.
- Crush Resistant Construction – Hose rebounds to shape without structural damage when crushed; material keeps flowing.
- Grounding Wire – Multi-strand wire helps prevent the build-up of static electricity for added safety and to help keep material flowing smoothly.
- "Cold-Flex" Materials – Hose remains flexible in sub-zero temperatures.
- Convoluted Outer Cover – Provides increased hose flexibility.
- Transparent Construction – "See-the-flow." Allows for visual confirmation of material flow.
- Oil Resistant Polyurethane Tube – Resists most animal and petroleum based oils.
- Phthalate Free

## Urevac UV1™ Series

Polyurethane

Ducting/Material Handling Hose



### General Applications:

- Concrete resurfacing dust collection
- Ducting, ventilation and fume removal
- Dust collection
- Insulation blowing
- Material chutes
- Material handling – standard duty

Construction: Ester polyurethane (TPU) tube with rigid PVC helix

Service Temperature: -40°F to 150°F

Sizes Available: 1 1/2" ID through 8" ID in standard roll lengths

### Features and Advantages:

- Durable Lightweight Polyurethane Tube – Designed for dry applications where abrasion is a factor. Provides longer hose life and lower operating costs versus rubber or PVC hoses.
- Transparent Construction – "See-the-flow." Allows for visual confirmation of material flow.
- Easy Slide Helix – Rigid helix design protects hose tube from cover wear, and allows hose to slide easily over rough surfaces.
- Easy-to-handle.
- "Cold-Flex" Materials – Hose remains flexible in sub-zero temperatures.
- Oil Resistant Polyurethane Tube – Resists most animal and petroleum based oils.
- Phthalate Free

## Urevac UVE™ Series

Polyurethane Ducting

Material Handling Hose With Grounding Wire



### General Applications:

- Concrete resurfacing dust collection
- Ducting, ventilation and fume removal
- Dust collection
- Insulation blowing
- Material chutes
- Material handling – standard duty

Construction: Ester polyurethane (TPU) tube with rigid PVC helix

Service Temperature: -40°F to 150°F

Sizes Available: 1 1/2" ID through 8" ID in standard roll lengths

### Features and Advantages:

- Durable Lightweight Polyurethane Tube – Designed for dry applications where abrasion is a factor. Provides longer hose life and lower operating costs versus rubber or PVC hoses.
- Transparent Construction – "See-the-flow." Allows for visual confirmation of material flow.
- Easy Slide Helix – Rigid helix design protects hose tube from cover wear, and allows hose to slide easily over rough surface.
- Easy-to-handle.
- "Cold-Flex" Materials – Hose remains flexible in sub-zero temperatures.
- Grounding Wire (UVE only) – Multi-strand wire helps prevent the build-up of static electricity for added safety and to help keep material flowing smoothly. It's embedded within the rigid helix to prevent contamination of transferred materials.
- Oil Resistant Polyurethane Tube – Resists most animal and petroleum based oils.
- Phthalate Free



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Sizes Available: 2" ID through 6" ID  
\*Available in standard roll lengths

### 690SB

Food Grade Natural Rubber (Type D2), Grey Bulk Commodity  
Food Grade, Sanitary White Hose

Recommended for – Transfer of bulk food products via suction, pneumatic or gravity systems where FDA sanitary tube stock is not required.  
Examples: Flour, sugar, syrup, edible granins, etc. (Not recommended for vinegar, mustard or other compounds containing acetic acid).  
FDA Compliant, 3/16" thick, with 3/8" thickness available on special order.  
Reinforcement – Synthetic high tensile textile with wire helix.  
Ends – Plain ends standard - enlarged or straight on special order.



Sizes Available: 2" ID through 6" ID  
\*Available in standard roll lengths

### 688SB

Natural Rubber (Type D), Black Bulk Commodity  
Food Grade, Sanitary White Hose

Recommended for – Transfer of bulk materials via suction, gravity or pneumatic systems where abrasion resistance is the primary requirement  
Examples: Dry cement, sand, gravel, feed, seed, slurries, etc.  
Abrasion resistant and static conductive.  
3/16" thick - 3/8" thickness also available.  
Reinforcement – Synthetic high tensile textile with wire helix.  
Cover – Type D (SBR). Black. Abrasion resistant.  
Ends – Plain ends standard - enlarged or straight on special order.



Sizes Available: 1 1/2" ID through 6" ID  
\*Available in standard roll lengths

### 49HW

EPDM (Type P), Black  
Hot Air Blower Hose

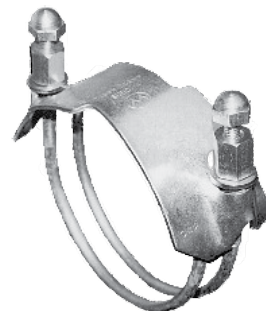
Recommended for – Conveying hot air (up to 350°F) from blower or compressor to storage tank used in transfer of dry bulk commodities.  
Reinforcement – Synthetic high tensile textile with wire helix.  
Cover – Type P (EPDM). Black  
Ends – Plain

## Hose Clamps

### Spiral Double Bolt Clamp

Available for both Clockwise and Counterclockwise Helix Hoses. Zinc plated carbon steel or Stainless Steel constructions. For adequate holding power, a single clamp may be used on each end for 1 1/2" through 4". Two or more are suggested for 5" ID and larger hoses. Both hex nuts should be tightened equally to prevent leakage. Threaded protective cap for safety.

\*Available in 1 1/2" through 12" Sizes



### Quick Release

Our quick release clamp reduces bag change out time. Swivel-action locking of screw to band makes installation simple. The band and housing are constructed of 3090 series stainless steel, with no spot welds.

This eliminates the possibility of rupture under stress. Stronger interlock is achieved with a clamp housing that conforms to the round shape of the bend.



### Worm Gear

Take the difficulty out of clamp tightening in restricted areas with a worm gear. This clamp is designed specifically for use in tight quarters. Its shorter screw is easier to tighten in close areas for tight, leak-resistant closure.



800-255-6213

## Flexible Metal Hose

ChaDa Sales offers Galvanized and Stainless Steel Metal flex hose for applications that need a more rugged alternative to normal PVC or Poly hoses. These hoses can be used for dry bulk product transfer, dust collection, exhaust, or as a guard for another hose and/or cable. The hoses are made from a strip of steel that is profiled and continuously wound around a mandrel to form a hose. The interlocked, or overlapping, sections of strip are able to slide back and forth, providing the ability to flex.

Types of Stripwound Metal Hose Products:

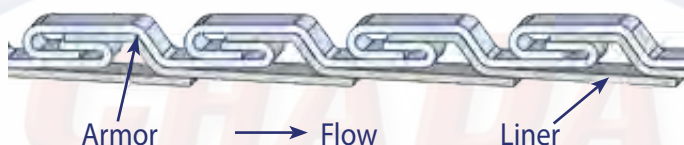
### Roughbore Interlocked

The strip is formed with legs that interlock to form a hose that is flexible and ideally suited for conveying dry bulk materials, gas exhaust, or used as a protective cover.



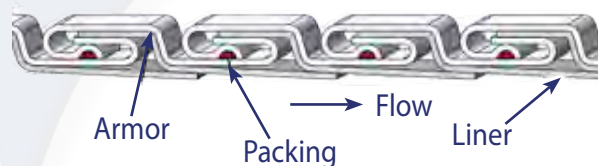
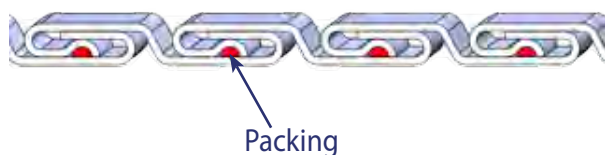
### Smoothbore Interlocked

Designed to reduce damage to delicate materials, another steel strip is added inside a roughbore hose to provide a smooth interior surface. Smoothbore hose is also flexible and used for dry bulk conveying.



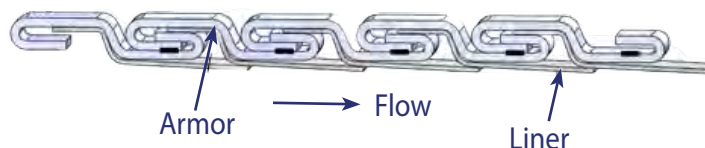
### Packed Interlocked

Packing may be added to interlocked hose to minimize leakage through the hose profile. The most effective packings are made from resilient materials such as elastomers and, to a lesser extent, cotton. Harder materials (stainless steel and copper) are also available if requested.



### Torque-Resistant Interlocked

Designed for torque resistance and enhanced sealability, this product resists twisting, unwinding, and strip flare-up after cutting. Torque-resistant hose is manufactured in either roughbore or smoothbore constructions.





## Flexible Metal Hose Ordering Options

	Stainless	Galvanized	Unlined
Order Code	Light Duty Medium Duty Heavy Duty	150 250 350	R200, R300, R360, R500, R600
Features	Armour (outside) and liner (inside) stainless steel. Extra smooth interior walls. High flow rates. Standard construction is cotton cord packed. Other packings available.	Armor galvanized steel. Liner either stainless or high carbon steel. Standard construction is not packed.	Stainless or galvanized steel. Available in a variety of metal thickness. Aluminum metal also available.
Diameter	1 1/2" to 16"	1 1/2" to 16"	1 1/2" to 16"
Length	25' to 100' (Call for options)	25' to 100' (Call for options)	25' to 100' (Call for options)
Temperature Range	180°F to 1200°F Dependent on packing material	180°F to 1800°F Dependent on packing material	180°F to 1800°F Dependent on packing material
Typical Applications	Pneumatic conveying of grains, powder, pellets, clay ash fertilizers, wood chips, drugs, chemicals and other dry products. Available with an armor of aluminum.	Dry bulk materials transfer	Exhaust systems, conduits, spouts, casing, chimney liner.

### End Fittings:

Selecting the proper fittings for an application is largely determined by the mating fittings to which the hose assembly will be attached. Once the mating fittings have been identified, the hose fittings should complement the mating fittings in type, size and alloy. Even though the selection of hose fittings is determined by the mating fittings, it is a good idea to confirm that the fittings used in the application are appropriate for the application and any necessary changes made. Ensure that the fittings are chemically compatible with and are able to withstand the conditions in which the hose is installed and in which it will be used.

Some of the most commonly used End Fittings include: Pipe Nipples, Flanges, Tube Ends, Cam and Groove fittings

**Please contact us to assist in the ordering process or for any questions you may have.**

# Polyurethane Liners

## Kryptane Xtreme

Kryptane Xtreme is perfect for chutes, spouts, and other high-wear areas. This product is FDA Drygood Handling approved. Kryptane Xtreme is available in a wide variety of sizes and is lightweight, easy to install, and flexible. Custom liners are available to fit your specific applications.



### Typical Applications:

Chutes  
Distributors  
Elbows  
Spouts  
Screw/Drag Conveyor Troughs  
Belt Wipers and Skirting  
Head Sections  
Transitions

### Standard sizes:

- 4' x 8', 4' x 10', 5' x 8', and 5' x 10'
- Thicknesses range from 3/16" to 1"
- Custom liners available to fit your application

Ceramic liners are only available in custom made sizes:

- 1/4" hextile ceramic - 5/8" to 1" thick
- 1/2" hextile ceramic - 1" to 1 3/4" thick

### Backing Options:

- Plain
- Fabric-backed
- Expanded metal\*
- Solid metal\*

\*Only available in 4' x 8' and 4' x 10'

### Roll Specifications:

- Widths: 4' and 5'
- Lengths:
  - Plain - 25' and 50'
  - Fabric - 25', 50', 75', and 100'
- Thickness range: 1/4" to 9/16", call for custom sizes

### Coated Bolts:

Coated bolts are capped with the same polyurethane as our sheets. Installing your liner using these durable fasteners provides an uninterrupted, abrasion-resistant surface.

- No gluing or patching required
- No surface preparation needed
- Incredible holding power

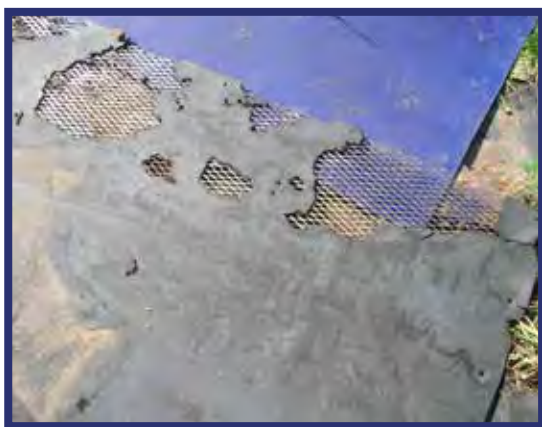
### Counterbore Tool:

A high-quality counterbore tool is essential for proper installation of urethane coated bolts. The counterbore tool is designed to work specifically with our coated bolts.

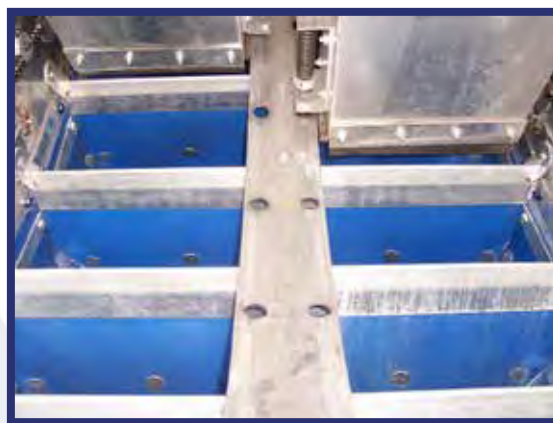


## Blue Ox

Blue Ox is specifically formulated for the agriculture industry. This economically priced sheet is made using a special ether-based formulation that will resist humidity and offers excellent abrasion resistance.



This photo depicts competitor ester-based sheets, which have failed in a humid environment. This deterioration is called hydrolytic degradation.



Our ether-based formulation withstands the effects of humid environments

### Standard sizes:

- 4' x 10' sheets
- Thicknesses from 1/4" to 3/8"

### Backing Options:

- Plain
- Expanded metal
- Fabric-backed

## Sheet Care and Maintenance

### Storage:

Protect liners from the elements. Prolonged solar heat can cause thermal decomposition. Stagnant water may foster hydrolysis, leading to degradation.

### Gouges and Tears:

If damage occurs, use a polyurethane-based caulking adhesive to fill holes or fix affected areas. Clean and dry the damaged area, and strip of grease or other contaminants, then patch. This should be done as soon as possible.

### Seam Care:

Seams are the most vulnerable areas. If material penetration causes problems along a liner seam, damage can spread quickly. Inspect seams often, and reseal or repair as required.

## Mechanical Plugs

One of the major benefits of mechanical plugs over pneumatic plugs is mechanical plugs can be used in long term applications. Unlike pneumatic plugs, which can lose air pressure over time, mechanical plugs do not use air pressure, resulting in a more secure seal.



### Econ-O-Grip® Plug

- A cost-effective method for plugging open ended pipe
- Great pipe dust cover
- Natural Rubber "O" Ring
- Not recommended for use in a pressure test



### Petro Econ-O-Grip® Plug

- Chemical Resistant NBR rubber
- Stainless Hardware
- Cost effective chemical resistant plug
- Not recommended for use in a pressure test



### Sure-Grip® Plug

- Natural Rubber "O" Ring
- Polypropylene Construction - no metal parts
- Fits all types of pipe at nominal sizes
- Can be used as a permanent or temporary plug



### Kwik 'N Sure® Plug

- Works in all types of pipe
- Works well for plugging water line stubs
- Wing nut on the 0.39" through 1.25" sizes
- Hex nut on the 1.5" through 5" sizes
- Natural Rubber "O" Ring

## Gripper Plugs

The Gripper® has become the most popular mechanical plug on the market. And our Gripper plug, unlike other mechanical plugs, are great for long term applications.

### The "Original" Gripper® Plug

- Ideal for plumbing system tests
- Made with glass reinforced ABS Plastic
- Extra-large wing nut (easy to install)
- Natural Rubber "O" Ring
- End of Pipe - seals only at the end of a pipe
- Inside of Pipe - seals inside pipe as far as needed



### Hub-Fit Gripper® Plug

- Ideal for use in hub fittings
- Great for use in bell-end pipe
- Natural Rubber "O" Ring
- Made with glass reinforced ABS Plastic
- Pressure rated for conducting DWV tests
- Yellow color for greater visibility in pipe



### Clean-Out Gripper® Plug

- Patented threaded "O" ring - ensures airtight seal
- Guaranteed to seal any and all damaged threads
- Stainless Steel hardware prevents corrosion
- Made with glass reinforced ABS Plastic
- Natural Rubber "O" Ring
- Black color blends well with cast iron pipe
- NPT sized including hard to find 3 1/2"

