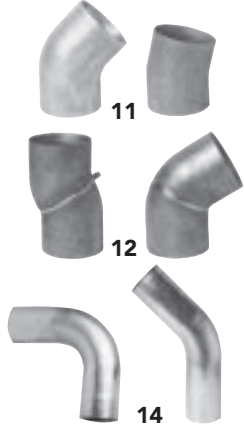




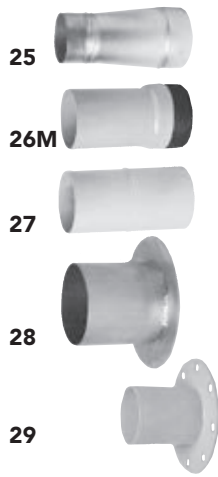
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Series 10



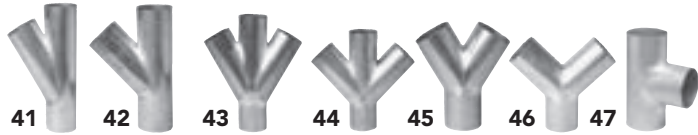
Series 20



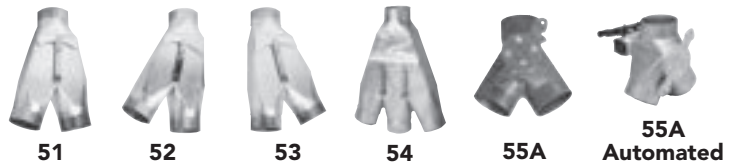
Series 30



Series 40



Series 50



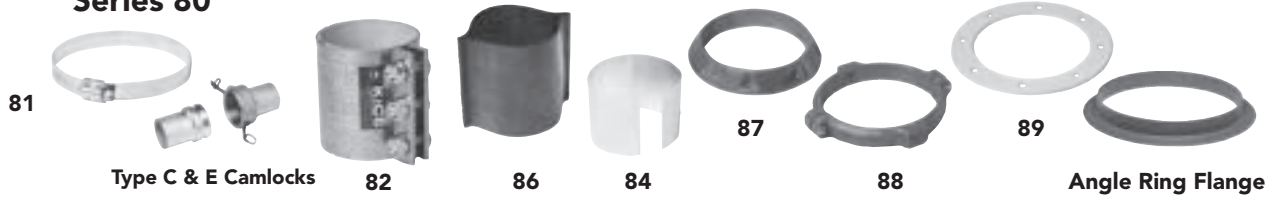
Series 50/60



Series 70



Series 80



Series 90





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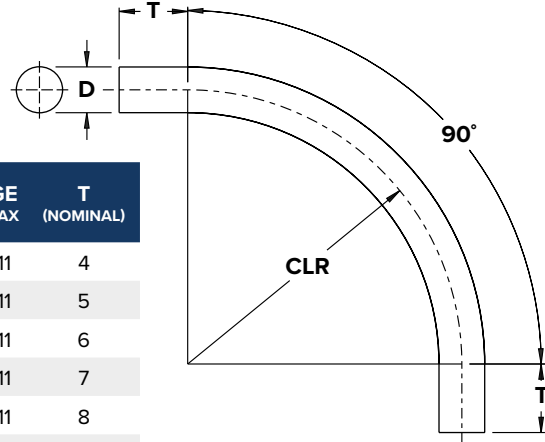
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Kice Formed Long Sweep Tube Elbows

Smooth bore, formed long radius 45° and 90° elbows in Aluminum, C.S. or Stainless Steel in sizes 2"OD through 8"OD readily available. Additional sizes, gauges, and angles available upon request.

FORMED LONG SWEEP 90° TUBE ELBOWS

Elbows are die formed to prevent egg-shape cross section. Common centerline radii, materials, and wall thicknesses shown below. Call for special requirements.

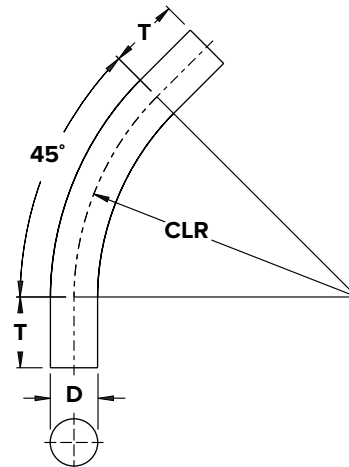


ANGLE	D (OD)	CENTERLINE RADII			GAUGE MIN / MAX	T (NOMINAL)
		2'-0"	3'-0"	4'-0"		
90°	2	2A2 - 90	3A2 - 90	4A2 - 90	16 or 11	4
	2.5	2A2.5 - 90	3A2.5 - 90	4A2.5 - 90	16 or 11	5
	3	2A3 - 90	3A3 - 90	4A3 - 90	16 or 11	6
	3.5	2A3.5 - 90	3A3.5 - 90	4A3.5 - 90	16 or 11	7
	4	2A4 - 90	3A4 - 90	4A4 - 90	16 or 11	8
	4.5	2A4.5 - 90	3A4.5 - 90	4A4.5 - 90	14 or 11	9
	5	2A5 - 90	3A5 - 90	4A5 - 90	14 or 11	10
	6	2A6 - 90	3A6 - 90	4A6 - 90	14 or 11	12
8	—	—	4A8 - 90	14 or 11	16	

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel. Not all sizes available in all materials or centerlines. Other centerlines and gauges available. Due to the manufacturing processes, overall tangent length may vary. To determine Kice part number = Centerline-Material-Size-Bend Degree-Gauge. Example: Kice PN 4A5-90-14 = 4' (48") centerline, Aluminum, 5"OD, 90° elbow, .083" (14 ga.) wall

FORMED LONG SWEEP 45° TUBE ELBOWS

Elbows are die formed to prevent egg-shape cross section. Common centerline radii, materials, and wall thicknesses shown below. Call for special requirements.



ANGLE	D (OD)	CENTERLINE RADII			GAUGE MIN / MAX	T (NOMINAL)
		2'-0"	3'-0"	4'-0"		
45°	2	2A2 - 45	3A2 - 45	4A2 - 45	16 or 11	4
	2.5	2A2.5 - 45	3A2.5 - 45	4A2.5 - 45	16 or 11	5
	3	2A3 - 45	3A3 - 45	4A3 - 45	16 or 11	6
	3.5	2A3.5 - 45	3A3.5 - 45	—	16 or 11	7
	4	2A4 - 45	3A4 - 45	4A4 - 45	16 or 11	8
	4.5	—	3A4.5 - 45	—	14 or 11	9
	5	—	3A5 - 45	4A5 - 45	14 or 11	10
	6	—	3A6 - 45	4A6 - 45	14 or 11	12
8	—	—	4A8 - 45	14 or 11	16	

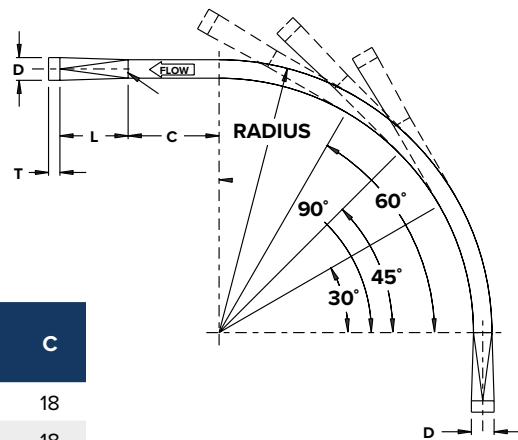
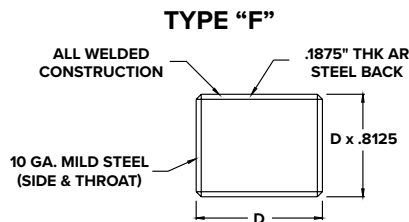
A = ALUMINUM
B = STEEL
S = 304 STAINLESS STEEL

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel. Not all sizes available in all materials or centerlines. Other centerlines and gauges available. Due to the manufacturing processes, overall tangent length may vary. To determine Kice part number = Centerline-Material-Size-Bend Degree-Gauge. Example: Kice PN 3B4-45-11 = 3' (36") centerline, Steel, 4"OD, 45° elbow, 11" ga. wall.

Extended Tangent “T” Series Flat Back Elbows

Flat Back Elbows with extended discharge tangent available in Steel in sizes 2" through 12"OD. Standard angles include 45° and 90°. Additional sizes, gauges, tangents and angles available upon request.

EXTENDED TANGENT “T” SERIES FLAT BACK 45° AND 90° ELBOWS



ANGLE	D (ZOD)	APPROX. BACKLINE RADII		L	T	C
		3'-0"	4'-0"			
90°	3	3FT3 - 90	—	4.5	3	18
	4	3FT4 - 90	—	5	3	18
	5	3FT5 - 90	—	7	3	18
	6	3FT6 - 90	—	9	3	18
	8	—	4FT8 - 90	12	4	24
	10	—	4FT10 - 90	12	4	24
	12	—	4FT12-90	18	6	24
45°	3	3FT3 - 45	—	4.5	3	18
	4	3FT4 - 45	—	5	3	18
	5	3FT5 - 45	—	7	3	18
	6	3FT6 - 45	—	9	3	18
	8	—	4FT8 - 45	12	4	24
	10	—	4FT10 - 45	12	4	24
	12	—	4F12 - 45	18	6	24

The extended tangent on the discharge end protects the discharge transition from wear as the conveyed material comes off the flattened bend. Kice “T” series Flat Back elbows are marked with a directional arrow and available in 3'0" & 4'0" backline radii.

Recommended where wear is a problem. Flat Back elbows, like their name implies, have a flat, wide back to spread wear. The cross section area of the elbow is equal to the area of the collar. Kice Flat Back elbows are manufactured with 10 ga. Steel sides and throat and .1875" thick AR (Abrasion Resistant) Steel back. This special alloy outlasts ordinary steel up to 200%. Transitions back to round OD collars are 11 ga. carbon steel.

Available in Steel only. Flat back elbows measured along backline, not centerline. Not directly interchangeable with formed elbows. To determine Kice part number = Backline-Style-Size-Bend Degree. Example: Kice PN 3FT4-90 = 3' backline, Steel, Type “FT” Welded back, 4"OD, 90° elbow.

Flat Back elbows are fabricated per order and can be supplied in almost any size, radius, and/or angle.

TYPE “F” - The AR Steel back and transitions are solidly welded to throat and side plates. The back can be replaced by welding. This is the most practical flat back elbow.

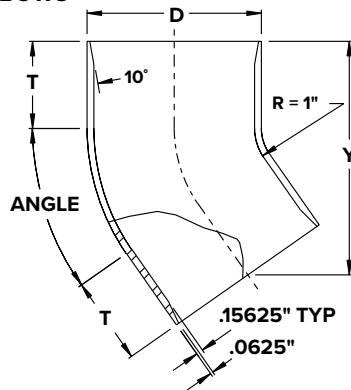
Series 11 & 12 Elbows

Short radius elbows for gravity spouting. See items for specific description.

#11 FREE FLOW CAST ELBOWS

Available in all angles from 5° to 45° in 5° increments, in three diameters, 4", 5" and 6" OD, and two materials - cast aluminum and cast iron. A total of 36 single piece elbows plus the six Rotajust elbows - A total of 42 coordinated types and sizes to handle practically any gravity flow job.

Smoothly curved surfaces inside and out assure good stock flow and excellent sanitation. No segment angles or rough joints.



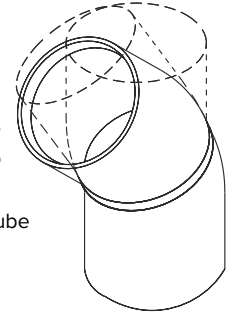
Note: Wall in curved area is double thickness for extra wear protection.

SKETCH	ANGLE	D	Y	T	ALUM. PART NO.	CAST IRON PART NO.
	5°	4	4.5	1.5	11A4-05	—
		5	5.5	2	11A5-05	—
		6	6.5	2.5	11A6-05	—
	10°	4	4.5	1.5	11A4-10	—
		5	6	2	11A5-10	—
		6	6.75	2.5	11A6-10	—
	15°	4	4.75	1.5	11A4-15	11B4-15
		5	6	2	11A5-15	11B5-15
		6	7	2.5	11A6-15	11B6-15
	20°	4	5	1.5	11A4-20	—
		5	6.5	2	11A5-20	—
		6	7.25	2.5	11A6-20	—
	25°	4	5.25	1.5	11A4-25	—
		5	6.5	2	11A5-25	—
		6	7.5	2.5	11A6-25	—
	30°	4	5.25	1.5	11A4-30	11B4-30
		5	6.75	2	11A5-30	11B5-30
		6	7.5	2.5	11A6-30	11B6-30
	35°	4	5	1.5	11A4-35	—
		5	6.25	2	11A5-35	—
		6	8	2.5	11A6-35	—
	40°	4	5.5	2	11A4-40	—
		5	6.75	2.5	11A5-40	—
		6	7.875	2.75	11A6-40	—
	45°	4	5.625	2	11A4-45	11B4-45
		5	6.75	2.5	11A5-45	11B5-45
		6	8	3	11A6-45	11B6-45

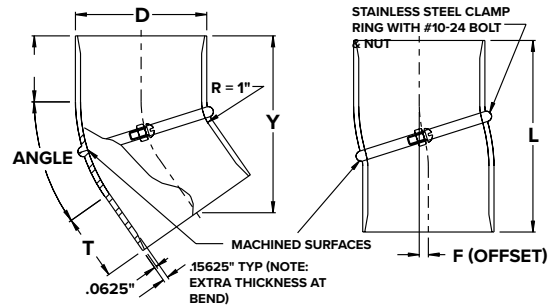
"—" indicates not available in Cast Iron

#12 ROTAJUST ELBOWS

Adjustable from 0° to 60°



- Machined surfaces of two identical halves are drawn tightly together by stainless steel clamp when set at the required angle.
- Diameters match US Standard Tube OD in 4", 5", 6" and 8"OD.
- Available in Aluminum alloy and Cast Grey Iron.
- Aluminum never rusts, is lightweight, excellent appearance, very smooth internal surface for stock flow and weldable.
- Cast Grey Iron is wear resistant.
- Formed with double thickness wall in curved area for extra wearability.
- Smooth full round curved ends - no angular segments.
- Joins to tube and/or other fittings with single band clamp couplings or compression couplings.
- Banded butt joints are machined smooth and sanitary.



SHOWN AT MAXIMUM ANGLE - 60°

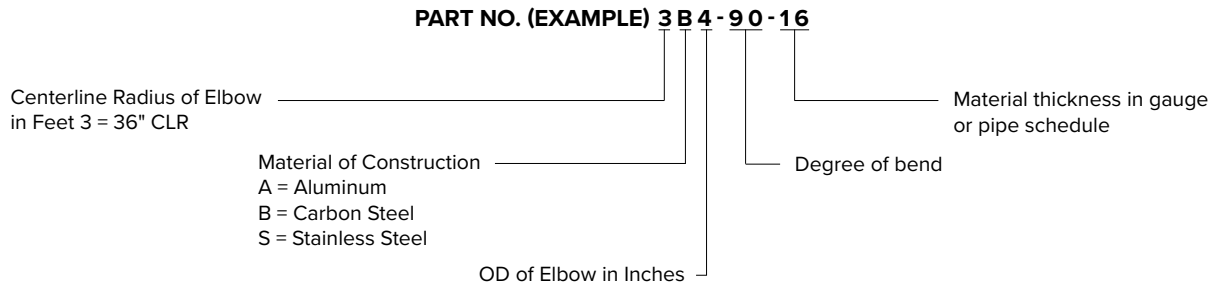
ROTATED TO MINIMUM ANGLE - 0°

PART NO.		DIMENSIONS				
ALUMINUM	CAST IRON	D (OD)	L	B	Y	F
12A4	12B4	4	7.25	7.25	6.125	.875
12A5	12B5	5	8.75	8.75	7.125	1
12A6	12B6	6	10.25	10.25	8.125	1.125
—	12B8	8	12	12	9.75	1.75

"A" in part number specifies Aluminum material. Specify "B" for Cast Iron. **Cast Iron only in 8"OD.**



Standard Long Radius Elbows



3B4-90-16 Elbow = 36"CLR, Carbon Steel, 4"OD, 90deg, 16ga Elbow

PART NO.	D (OD)	GAUGE	B	R	T
2B2-90-16	2"	16GA	28"	24"	4"
2B2.5-90-16	2.5"	16GA	29"	24"	5"
2B3-90-16	3"	16GA	30"	24"	6"
2B3.5-90-11	3.5"	11GA	31"	24"	7"
3B4-90-16	4"	16GA	44"	36"	8"
3B4.5-90-14	4.5"	14GA	45"	36"	9"
3B5-90-14	5"	14GA	46"	36"	10"
3B6-90-14	6"	14GA	48"	36"	12"
4B8-90-11	8"	11GA	64"	48"	16"

PART NO.	D (OD)	GAUGE	X	Y	R	T
2B2-45-16	2"	16GA	9.875	25.750	24"	4"
2B2.5-45-16	2.5"	16GA	10.500	27.500	24"	5"
2B3-45-16	3"	16GA	11.250	27.250	24"	6"
2B3.5-45-11	3.5"	11GA	11.875	31.375	24"	7"
3B4-45-16	4"	16GA	16.250	39.125	36"	8"
3B4.5-45-14	4.5"	14GA	16.875	40.875	36"	9"
3B5-45-14	5"	14GA	17.500	42.500	36"	10"
3B6-45-14	6"	14GA	19.125	49.750	36"	12"
4B8-45-11	8"	11GA	25.375	61.250	48"	16"

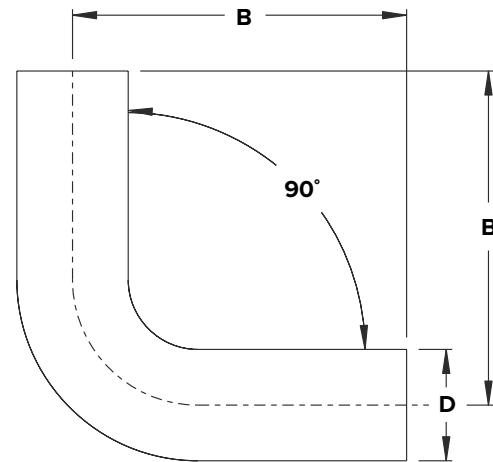
14 Short Radius Elbows

Smooth bore, formed short radius 45° and 90° elbows in Aluminum or Steel. 2"OD through 8"OD readily available. Stainless Steel available on special order. Additional sizes, gauges, and angles available upon request.

#14 SHORT RADIUS FORMED 90° ELBOWS

Kice short radius, formed 90° elbows are available in Aluminum and Steel. Centerline radius dimensions vary from size to size. Used primarily for dust control, vacuum sweeper systems, and clean air applications.

PART NO.	D (OD)	GAUGE	B	R	T
14A2-90-16	2"	16	13	9	4
14A2.5-90-16	2.5"	16	14	9	5
14A3-90-16	3"	16	15	9	6
14A3.5-90-16	3.5"	16	16	9	7
14A4-90-16	4"	16	18	10	8
14A4.5-90-11	4.5"	11	21	12	9
14A5-90-14	5"	14	22	12	10
14A6-90-14	6"	14	27	15	12
14B8-90-15	8"	15	26	12	14



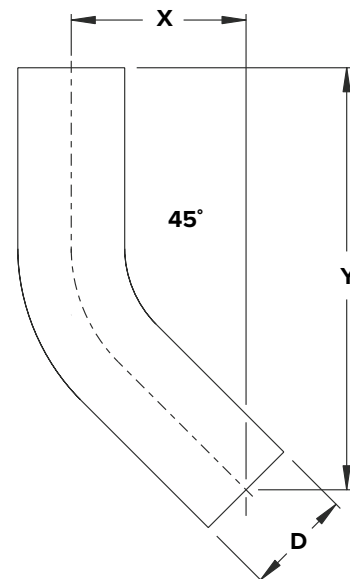
"A" in part number specifies Aluminum material. Specify "B" for Steel. **Steel only in 7"OD and 8"OD.**

Note: Centerline radius and tangent length may vary due to manufacturing tolerances.

#14 SHORT RADIUS FORMED 45° ELBOWS

Kice short radius, formed 45° elbows are available in Aluminum and Steel. Centerline radius dimensions vary from size to size. Used primarily for dust control, vacuum sweeper systems, and clean air applications.

PART NO.	D (OD)	GAUGE	X	Y	R	T
14A2-45-16	2"	16	5.375	13.250	9	4
14A2.5-45-16	2.5"	16	6.250	14.875	9	5
14A3-45-16	3"	16	6.875	16.625	9	6
14A3.5-45-16	3.5"	16	7.500	18.375	9	7
14A4-45-16	4"	16	8.500	20.750	10	8
14A4.5-45-11	4.5"	11	9.875	23.875	12	9
14A5-45-14	5"	14	10.500	25.500	12	10
14A6-45-14	6"	14	12.875	31.125	15	12
14B8-45-15	8"	15	14.875	35.875	12	16



"A" in part number specifies Aluminum material. Specify "B" for Steel. Specify "S" for Stainless Steel. **Steel only in 7"OD and 8"OD.**

Note: Centerline radius and tangent length may vary due to manufacturing tolerances.

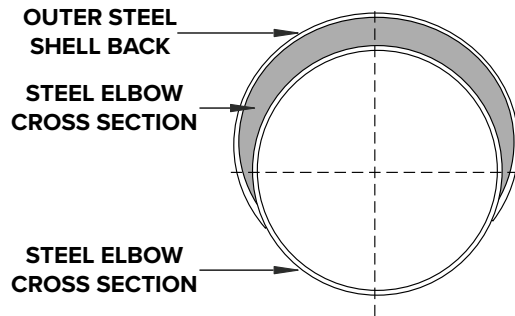
Special Long Sweep Tube Elbows & Sand-T Ells

Kice purchases many special smooth bore, formed long radius elbows. Hard ceramic is commonly applied to these fittings for extended wear life. Materials include Aluminum, Steel, and/or Stainless Steel. In addition, Kice offers a Sand-T Ell designed to provide long life for a low price.

CERAM-BACK ELBOWS

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

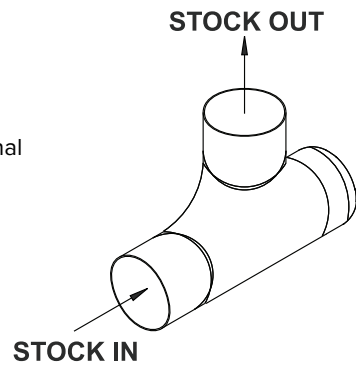
The "Ceram-Back"® elbow has a jacket across the back of the core elbow which is approximately 1/2" of ceramic compound. This compound has a Mohs hardness of 9+, second only to diamond, which has a Mohs hardness of 10. The ceramic jacket and core elbow is then wrapped with an exterior material to maintain 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.



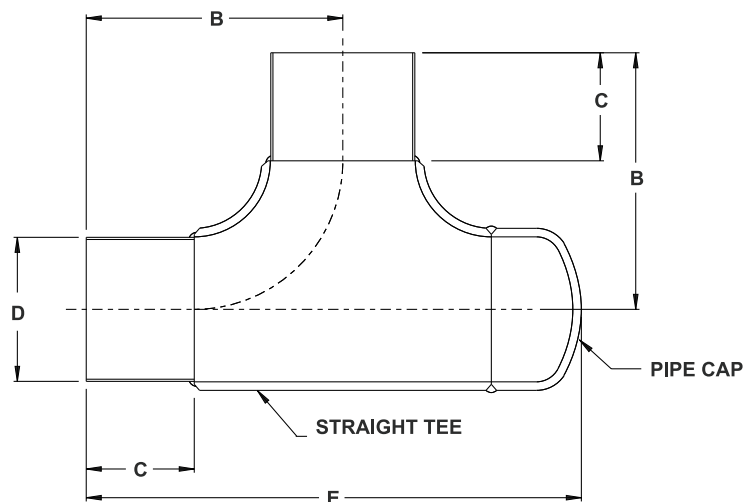
KICE SAND-T ELLS

Kice Sand-T Ells are designed for material-on-material impact to protect internal steel surfaces from abrasion and wear at a turn. Ell ends couple directly to an OD tube.

Note: 45 degree Sand-T Ells available upon request.

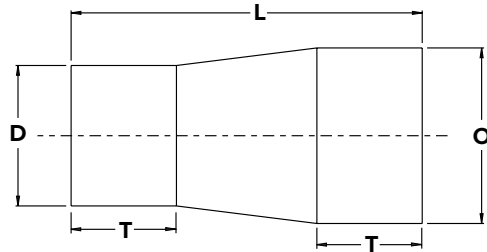


PART NO.	D (OD)	B	C	E
SANDELL2	2"	5.5"	3"	9.5"
SANDELL2.5	2.5"	6"	3"	10.5"
SANDELL3	3"	6.375"	3"	11.75"
SANDELL4	4"	7.125"	3"	13.75"
SANDELL5	5"	7.875"	3"	15.75"
SANDELL6	6"	8.625"	3"	17.75"
SANDELL8	8"	11"	3"	22"
SANDELL10	10"	13.5"	3"	27"
SANDELL12	12"	16"	3"	32"



Series 25/26M/26F Adapters

Adapter fittings are available from stock in Aluminum or Steel. Stainless Steel available on special order. Standard material thickness is 16 ga. Fittings are butt welded without laps. Additional sizes, designs, gauges, and angles available upon request.



#25 TUBE OD TO TUBE OD REDUCING ADAPTER

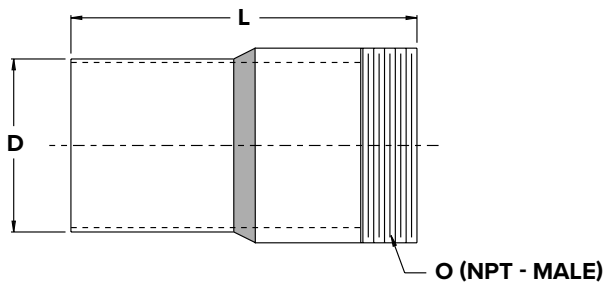
For connecting different sizes of OD tubing.

PART NO.	D (OD)	O (OD)	L	T
25A1.5-2	1.5	2	12	3
25A2-2.5	2	2.5	12	3
25A2-3	2	3	12	3
25A2-4	2	4	12	3
25A2.5-3	2.5	3	12	3
25A2.5-4	2.5	4	12	3
25A3-3.5	3	3.5	12	3
25A3-4	3	4	12	3
25A3-4.5	3	4.5	12	3
25A3-5	3	5	12	3
25A3-6	3	6	12	3

PART NO.	D (OD)	O (OD)	L	T
25A3.5-4	3.5	4	12	3
25A3.5-5	3.5	5	12	3
25A4-4.5	4	4.5	12	3
25A4-5	4	5	12	3
25A4-6	4	6	12	3
25A4.5-5	4.5	5	12	3
25A5-5.5	5	5.5	12	3
25A5-6	5	6	12	3
25A5.5-6	5.5	6	12	3
25A5-8	5	8	12	3
25A6-8	6	8	12	3

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel. Call out smaller size first in part number.

#26M TUBE OD TO NPT-MALE ADAPTER

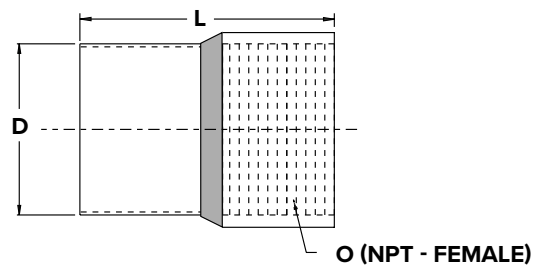


PART NO.	D (OD)	O	L
26MA2-2	2	2" MPT - MALE	8
26MA2.5-2.5	2.5	2.5" MPT - MALE	8
26MA3-3	3	3" MPT - MALE	8
26MA4-4	4	4" MPT - MALE	8
26MA5-5	5	5" MPT - MALE	8
26MA6-6	6	6" MPT - MALE	8

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

For connecting OD tubing to Female Pipe Thread (NPT- Female). Reducing sizes available as special order.

#26F TUBE OD TO NPT-FEMALE ADAPTER



PART NO.	D (OD)	O	L
26FA2-2	2	2" FPT - FEMALE	8
26FA2.5-2.5	2.5	2.5" FPT - FEMALE	8
26FA3-3	3	3" FPT - FEMALE	8
26FA4-4	4	4" FPT - FEMALE	8
26FA5-5	5	5" FPT - FEMALE	8
26FA6-6	6	6" FPT - FEMALE	8

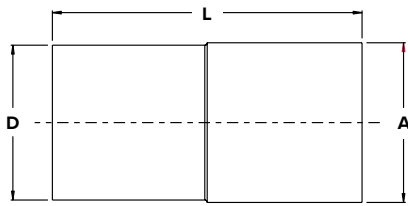
"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

For connecting OD tubing to Male Pipe Thread (NPT- Male). Reducing sizes available as special order.

Series 27/28/29 Adapters

Adapter fittings are available from stock in Aluminum or Steel. Stainless Steel available on special order. Standard material thickness is 16 ga. Fittings are butt welded without laps. Additional sizes, designs, gauges, and angles available upon request.

#27 TUBE OD TO METRIC TUBE ADAPTER



For connecting OD tubing to Metric tubing. Specify Tube OD and wall thickness and Metric Tube OD and wall thickness

PART NO.	D (OD)	A	L
27A2-	2	SPECIFY	8
27A2.5-	2.5	SPECIFY	8
27A3-	3	SPECIFY	8
27A4-	4	SPECIFY	8
27A5-	5	SPECIFY	8
27A6-	6	SPECIFY	8

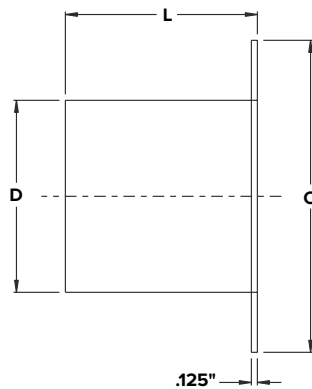
"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

#28 TUBE OD TO FLANGE ADAPTER

For connecting OD tubing to flange or for mating to floor.

Bolt holes drilled when specified.

.125" thick flange is standard, .1875" and .25" thick available on special order. Reducing sizes also available.



PART NO.	D (OD)	L	O	THK	BOLT CIRCLE (BC)
28A3	3	4	6	.125"	UNDRILLED/BLANK
28A4	4	4	7	.125"	UNDRILLED/BLANK
28A5	5	4	8	.125"	UNDRILLED/BLANK
28A6	6	4	9	.125"	UNDRILLED/BLANK
28A8	8	4	11	.125"	UNDRILLED/BLANK

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

Kice manufactures many special fittings for customers and welcomes your inquiries. Other fittings we manufacture, but are not shown, include crosses, TY's, welded manifolds, and special angles, lengths, materials and wall thicknesses. Contact Kice Industries for pricing information.

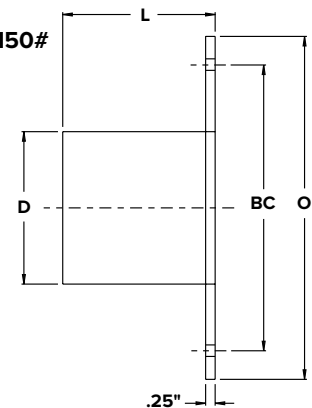
For detailed information on Kice Cyclone Collectors, request Kice Data Sheet IF-2.



#29 TUBE OD TO ANSI 150# FLANGE ADAPTER

For connecting OD tubing to standard ANSI 150# flange.

Standard tube construction is 11 ga. steel. Reducing sizes also available.



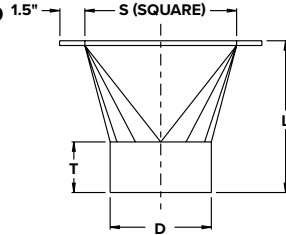
PART NO.	D (OD)	L	O	THK	# OF HOLES, DIA. & BC
29B3	3	4	7.5	.25"	4 EA .75" ON 6" BC
29B4	4	4	9	.25"	8 EA .75" ON 7.5" BC
29B5	5	4	10	.25"	8 EA .875" ON 8.5" BC
29B6	6	4	11	.25"	8 EA .875" ON 9.5" BC
29B8	8	4	13.5	.25"	8 EA .875" ON 11.75" BC

"B" in part number specifies Steel Material. Specify "S" for 304 Stainless Steel. Aluminum available on special order.

Series 31/32/33 Transitions

Square-to-Round transition fittings in Aluminum or Steel. All joints butt welded without laps. Standard material thickness is 16 ga. with 1.5" wide x .134" (10 ga.) thick flange; not drilled. Additional sizes, flange widths, and materials available upon request.

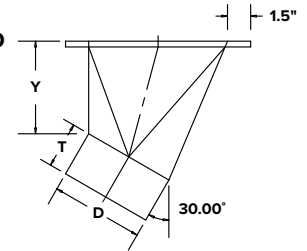
#31 SQUARE-TO-ROUND TRANSITION WITH STRAIGHT COLLAR



PART NO.	D (OD)	S	T	L
31A3-4	3	4	2	6
31A4-4	4	4	2	6
31A4-5	4	5	2	6
31A4-6	4	6	2	6
31A4-8	4	8	2	6
31A5-5	5	5	2.5	6.5
31A5-6	5	6	2.5	6.5
31A5-8	5	8	2.5	6.5
31A6-6	6	6	3	7
31A6-8	6	8	3	7
31A8-8	8	8	4	8

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

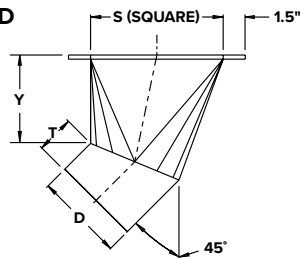
#32 SQUARE-TO-ROUND TRANSITION WITH 30° COLLAR



PART NO.	D (OD)	S	T	Y
32A3-4	3	4	2	4
32A4-4	4	4	2	4
32A4-5	4	5	2	4
32A4-6	4	6	2	4
32A4-8	4	8	2	4
32A5-5	5	5	2.5	4
32A5-6	5	6	2.5	4
32A5-8	5	8	2.5	4
32A6-6	6	6	3	4
32A6-8	6	8	3	4
32A8-8	8	8	4	4

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

#33 SQUARE-TO-ROUND TRANSITION WITH 45° COLLAR



PART NO.	D (OD)	S	T	Y
33A3-4	3	4	2	4
33A4-4	4	4	2	4
33A4-5	4	5	2	4
33A4-6	4	6	2	4
33A4-8	4	8	2	4
33A5-5	5	5	2.5	4
33A5-6	5	6	2.5	4
33A5-8	5	8	2.5	4
33A6-6	6	6	3	4
33A6-8	6	8	3	4
33A8-8	8	8	4	4

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

Kice can supply Series 31, 32, 33, 34, 35, and 36 transitions to match Kice Airlock flanges:
(Includes 1/4" thick flange, drilled to match Kice Airlock Flange)

For Round Kice Flange specify:
"to match Kice VJ Airlock, Ref. Pg. 47"
For Square Kice Flange specify:
"to match Kice VJ Airlock, Ref. Pg. 47"

For more information on Kice Cyclone Collectors, request Kice Data Sheet CY-4.

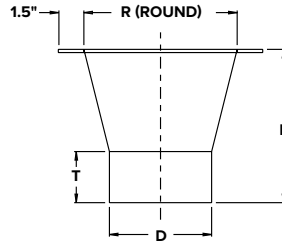
"High efficiency, large range of sizes and variety of options."



Series 34/35/36 Transitions

Round-to-Round transition fittings in Aluminum or Steel. All joints butt welded without laps. Standard material thickness is 16 ga. with 1.5" wide x .134" (10 ga.) thick flange; not drilled. Additional sizes, flange widths, and materials available upon request.

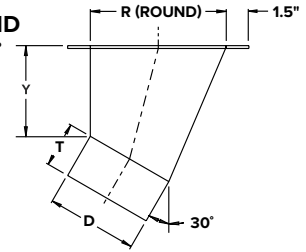
#34 ROUND-TO-ROUND TRANSITION WITH STRAIGHT COLLAR



PART NO.	D (OD)	R	T	L
34A3-4	3	4	2	6
34A4-4	4	4	2	6
34A4-5	4	5	2	6
34A4-6	4	6	2	6
34A4-8	4	8	2	6
34A5-5	5	5	2.5	6.5
34A5-6	5	6	2.5	6.5
34A5-8	5	8	2.5	6.5
34A6-6	6	6	3	7
34A6-8	6	8	3	7
34A8-8	8	8	4	8

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

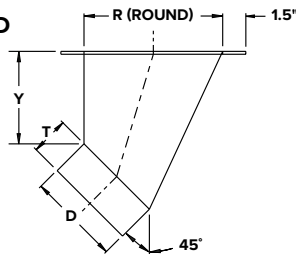
#35 ROUND-TO-ROUND TRANSITION WITH 30° COLLAR



PART NO.	D (OD)	S	T	Y
35A3-4	3	4	2	4
35A4-4	4	4	2	4
35A4-5	4	5	2	4
35A4-6	4	6	2	4
35A4-8	4	8	2	4
35A5-5	5	5	2.5	4
35A5-6	5	6	2.5	4
35A5-8	5	8	2.5	4
35A6-6	6	6	3	4
35A6-8	6	8	3	4
35A8-8	8	8	4	4

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

#36 ROUND-TO-ROUND TRANSITION WITH 45° COLLAR



PART NO.	D (OD)	S	T	Y
36A3-4	3	4	2	4
36A4-4	4	4	2	4
36A4-5	4	5	2	4
36A4-6	4	6	2	4
363A4-8	4	8	2	4
36A5-5	5	5	2.5	4
36A5-6	5	6	2.5	4
36A5-8	5	8	2.5	4
36A6-6	6	6	3	4
36A6-8	6	8	3	4
36A8-8	8	8	4	4

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

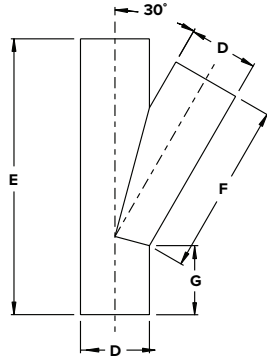
Kice can supply Series 31, 32, 33, 34, 35, and 36 transitions to match Kice Airlock flanges: (Includes .25" thick flange, drilled to match Kice Airlock Flange)

For Round Kice Flange specify:
 "to match Kice VJ Airlock, Ref. Pg. 47"
For Square Kice Flange specify:
 "to match Kice VJ Airlock, Ref. Pg. 47"

Series 41/42/43/44 Branch Fittings

Tube OD Branch fittings are Kice stock in Aluminum or Steel. Stainless Steel available on special order. Fittings are mitered and butt welded without laps. Standard material thickness is 16 ga. Additional sizes, designs, gauges, and angles upon request.

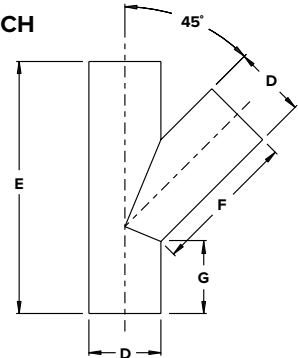
#41 SINGLE “Y” BRANCH WITH 30° LEG



PART NO.	D (OD)	E	F	G
41A3	3	12	7.5	3
41A4	4	16	10	4
41A5	5	20	12.5	5
41A6	6	24	15	6
41A8	8	30	21	7

“A” in part number specifies Aluminum material. Specify “B” for Steel and “S” for 304L Stainless Steel.

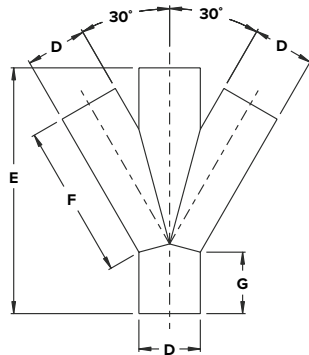
#42 SINGLE “Y” BRANCH WITH 45° LEG



PART NO.	D (OD)	E	F	G
42A3	3	12	6	3
42A4	4	14	8	4
42A5	5	17	10	5
42A6	6	21	12	6
42A8	8	30	16.25	8

“A” in part number specifies Aluminum material. Specify “B” for Steel and “S” for 304L Stainless Steel.

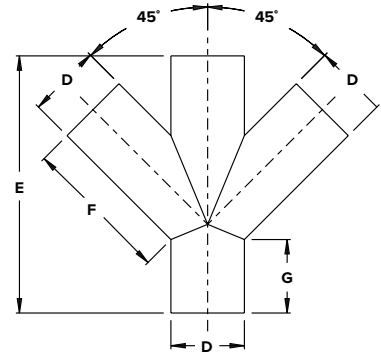
#43 DOUBLE “Y” BRANCH WITH 2 EACH 30° LEGS



PART NO.	D (OD)	E	F	G
43A3	3	12	7.5	3
43A4	4	16	10	4
43A5	5	20	12.5	5
43A6	6	24	15	6
43A8	8	30	21	7

“A” in part number specifies Aluminum material. Specify “B” for Steel and “S” for 304L Stainless Steel.

#44 DOUBLE “Y” BRANCH WITH 2 EACH 45° LEGS



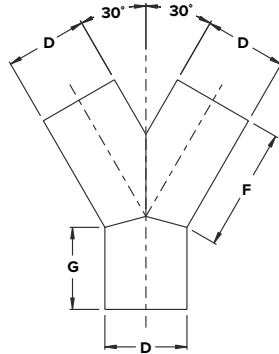
PART NO.	D (OD)	E	F	G
44A3	3	12	6	3
44A4	4	14	8	4
44A5	5	17	10	5
44A6	6	21	12	6
44A8	8	30	16.25	8

“A” in part number specifies Aluminum material. Specify “B” for Steel and “S” for 304L Stainless Steel.

Series 45/46/47 Branch Fittings

Tube OD Branch fittings are Kice stock in Aluminum or Steel. Stainless Steel available on special order. Fittings are mitered and butt welded without laps. Standard material thickness is 16 ga. Additional sizes, designs, gauges, and angles upon request.

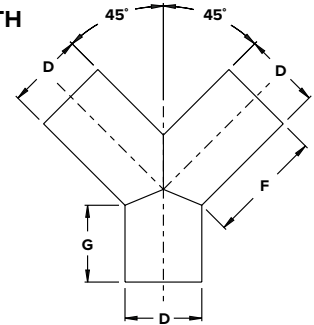
**#45 SYMMETRICAL
“Y” BRANCH WITH
EACH LEG 30°
FROM CENTER**



PART NO.	D (OD)	F	G
45A3	3	5	3
45A4	4	6	4
45A5	5	7.5	5
45A6	6	9	6
45A8	8	10	4.375

“A” in part number specifies Aluminum material. Specify “B” for Steel and “S” for 304L Stainless Steel.

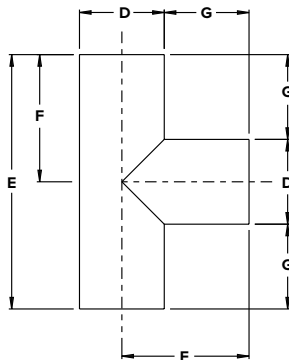
**#46 SYMMETRICAL
“Y” BRANCH WITH
EACH LEG 45°
FROM CENTER**



PART NO.	D (OD)	F	G
46A3	3	4.5	3
46A4	4	6	4
46A5	5	7.5	5
46A6	6	9	6
46A8	8	9	6

“A” in part number specifies Aluminum material. Specify “B” for Steel and “S” for 304L Stainless Steel.

**#47 SINGLE “T”
BRANCH WITH
90° LEG**



PART NO.	D (OD)	E	F	G
47A3	3	12	6	4.5
47A4	4	12	6	4
47A5	5	12	6	3.5
47A6	6	12	6	3
47A8	8	16	8	4

“A” in part number specifies Aluminum material. Specify “B” for Steel and “S” for 304L Stainless Steel.

Kice manufactures many special fittings for customers and welcomes your inquiries. Other fittings we manufacture, but are not shown, include crosses, TY's, welded manifolds, and special angles, lengths, materials, and wall thicknesses. Contact Kice Industries for pricing information.

For detailed information on Kice Diverter, Bin Fill, and Slide Gate Valves, request Kice Data Sheet DV-1.

“Heavy Duty design with proven performance.”



Series 51/52/53 Gravity Diverter Valves

Gravity diverter valves available in Aluminum, Steel or Stainless Steel. Additional sizes, designs, gauges, and angles available upon request. Also available with actuation.

Gravity Diverter Valve with streamlined design. Long taper transitions assure good flow and sanitation. No ledges or laps. Butt weld fabrication. Available in Aluminum, Steel or Stainless Steel.

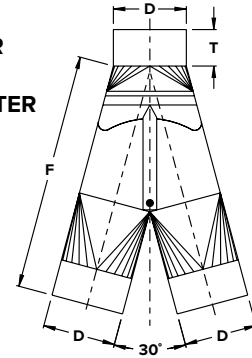
Self centering valve blade is metal laminated with white felt. Quadrant shows blade position and locks in place. Rectangular body section assures good stream splitting action.

Options for Series 51/52/53/54 Gravity Diverter Valves:

- Tongue Seal Material
 - White Food Grade Neoprene Tongue Seal
 - Metal Tongue; no seal
- Automation
 - Rotary Air or Electric Actuation
- Chain and/or Rope Operation Handles
- Additional Sizes

See next page for series 54 Dual Gravity Diverter Valve and automated drawing.

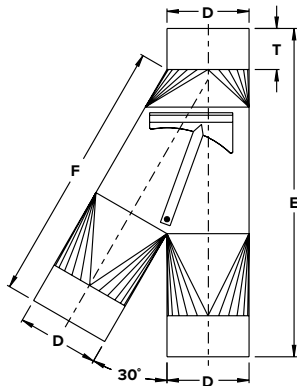
#51 SYMMETRICAL GRAVITY DIVERTER VALVE WITH EACH LEG 15° FROM CENTER



PART NO.	D (OD)	F	T
51A3	3	10.5	2
51A4	4	13	2
51A5	5	16.25	2.5
51A6	6	19.5	3
51A8	8	23	4

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for Stainless Steel.

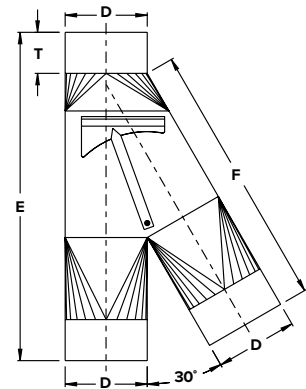
#52 GRAVITY DIVERTER VALVE WITH 30° LEG TO LEFT OF CENTER



PART NO.	D (OD)	E	F	T
52A3	3	12	10	2
52A4	4	16	13	2
52A5	5	20	16.5	2.5
52A6	6	24	19.5	3
52A8	8	32	25.75	4

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for Stainless Steel.

#53 GRAVITY DIVERTER VALVE WITH 30° LEG TO RIGHT OF CENTER



PART NO.	D (OD)	E	F	G
53A3	3	12	10	2
53A4	4	16	13	2
53A5	5	20	16.5	2.5
53A6	6	24	19.5	3
53A8	8	32	25.75	4

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for Stainless Steel.

Series 54 Dual Gravity Diverter Valves

Gravity Diverter valves available in stock in Aluminum or Steel. Stainless Steel available on special order. Additional sizes, designs, gauges, and angles available upon request. Also available with actuation.

Gravity Diverter Valve with streamlined design. Long taper transitions assure good flow and sanitation. No ledges or laps. Butt weld fabrication. Available from Kice stock in Aluminum or Steel. Stainless Steel and other materials available on special order.

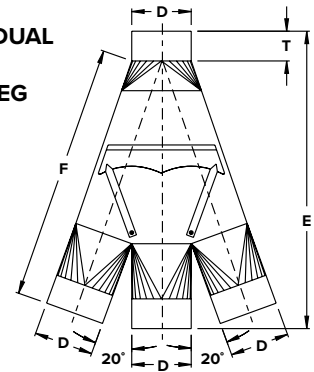
Self centering valve blade is metal laminated with white felt. Quadrant shows blade position and locks in place. Rectangular body section assures good stream splitting action.

Options for Series 51/52/53/54 Diverter Valves:

- Tongue Seal Material
 - White Food Grade Neoprene Tongue Seal
 - Metal Tongue; no seal
- Automation
 - Air Cylinder, Rotary Air or Electric Actuation
- Chain and/or Rope Operation Handles
- Additional Sizes

See previous page for Series 51/52/53 Manual Gravity Diverter Valves

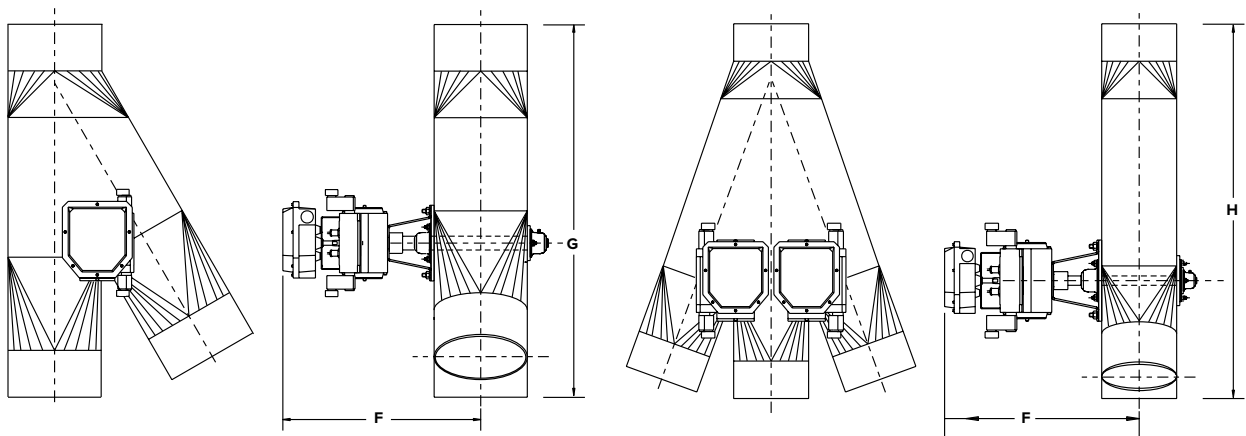
#54 SYMMETRICAL DUAL GRAVITY DIVERTER VALVE WITH EACH LEG 20° FROM CENTER



PART NO.	D (OD)	E	F	T
54A3	3	16	14	2
54A4	4	20	17	2
54A5	5	25	21.5	2.5
54A6	6	30	26	3
54A8	8	39.5	33.5	4

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for Stainless Steel.

KICE GRAVITY DIVERTER VALVES WITH VARIOUS ACTUATION PACKAGES



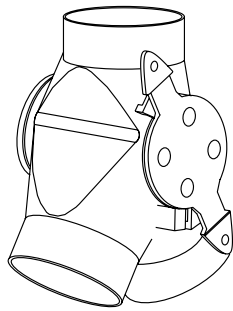
Kice Series 51/52/53 Single and Series 54 Dual Gravity Diverter Valves with Air Actuation package, include as standard, rotary air actuator, position switch and dual coil solenoid valve. Available in Nema 4/4X and Nema 7/9. Includes heavier shaft and bearing seals. Series 54 has separate controls for each tongue. See Speed Spout Technical Manual - Page 23 for automation specifications. Contact Kice Technical Sales with your applications and specifications.

(OD)	F	G	H
3	13.875	12	16
4	14.375	16	20
5	14.875	20	25
6	15.375	24	30
8	16.375	32	39.5

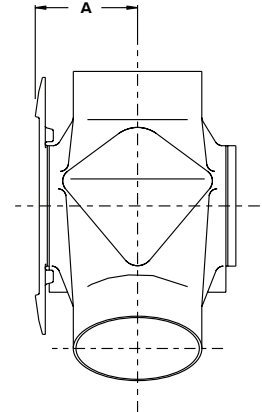
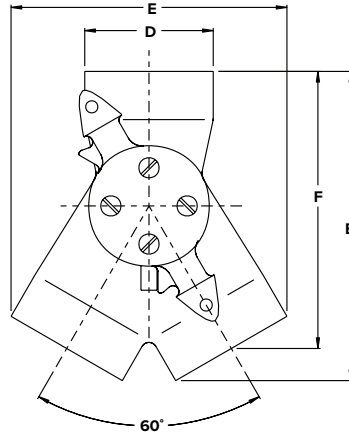
Series 55A Spout Diverter Valve

Kice 55A gravity diverter valves are manufactured from cast Aluminum only. Available in manual operation and pneumatic actuation.

#55A SPOUT DIVERTER VALVE



ISO View

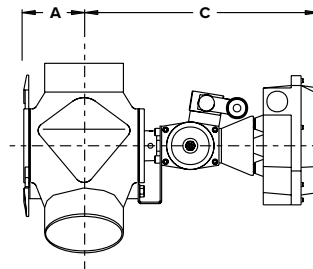
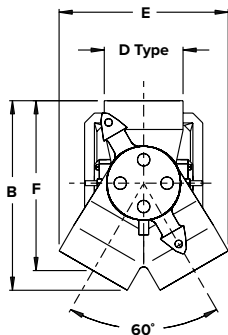


The Kice 55A Diverter Valve is a two-way gravity valve for diverting material flow. The unit is Cast Aluminum with a machined body and rotor to assure positive positioning. The Aluminum rotor has a hard anodized surface to add wear resistance and long life. Normal operation to 150°F. The valve is available in 4", 5" and 6"OD. Available with manual controls and air actuation.

PART NO.	D (OD)	A	B	E	F
55A4	4	3.125	9.5	9.5	8.5
55A5	5	3.75	11.75	11.75	10.5
55A6	6	4.375	13.75	13.625	12.25

Equipped with Self centering spring loaded detent and positive stops. Manual Control adaptable to pull chain operation.

#55A SPOUT DIVERTER VALVE WITH ROTARY AIR ACTUATION (CURRENT STYLE)



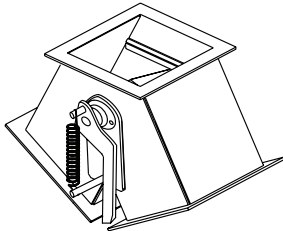
See Kice Speed Spout Technical Manual - Page 23 for automation specifications.

Specify Nema 4/4X or Nema 7/9 controls when ordering.

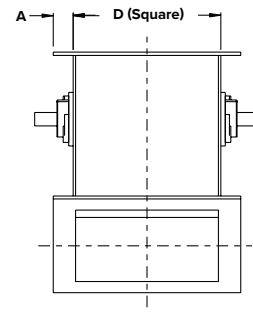
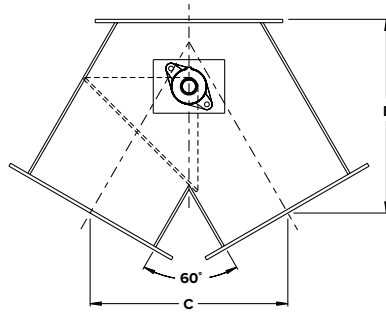
PART NO.	D (OD)	A	B	C	E	F
55A4 W/CONTROLS	4	3.125	9.5	9.875	9.5	8.5
55A5 W/CONTROLS	5	3.75	11.75	10.5	11.75	10.5
55A6 W/CONTROLS	6	4.375	13.75	11.5	13.625	12.25

Series 56 Bucket Valve

Kice 56 carbon steel bucket valves divert flow between two (2) 60° legs. Square inlet and outlet is standard with transitions available to round. Also available in Stainless Steel. Available in manual operation, pneumatic actuation and electric operation.



ISO view shown with manual control

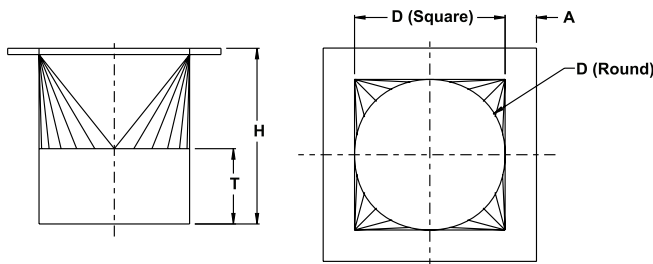


Kice 56 Bucket Valve is a heavy-duty diverter valve constructed of carbon steel with an Abrasion-Resistant (AR) Steel diverting plate. Available in 6" to 24" square inlet and outlet with manual control, rotary air actuator or electric actuation. Undrilled flanges are standard. Inlet and Outlet transitions from square flange to round tubing are available (see below).

PART NO.	D (SIZE)	A	B	C	E (HEIGHT)
56B6	6x6	1.5	9.250	8.625	11.500
56B8	8x8	1.5	11.000	10.375	13.750
56B10	10x10	1.5	12.750	12.125	16.125
56B12	12x12	1.5	16.500	16.125	20.340
56B14	14x14	1.5	18.250	17.875	22.500
56B16	16x16	1.5	20.125	19.500	24.875
56B18	18x18	1.5	21.875	21.250	27.125
56B20	20x20	1.5	23.500	22.875	29.250
56B22	22x22	1.5	25.250	24.500	31.500
56B24	24x24	1.5	27.125	26.340	34.250

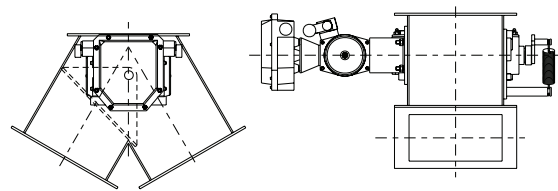
"B" in part number specifies Steel material. Specify "A" for Aluminum and "S" for 304L Stainless Steel.

#56 BUCKET VALVE STEEL TRANSITIONS

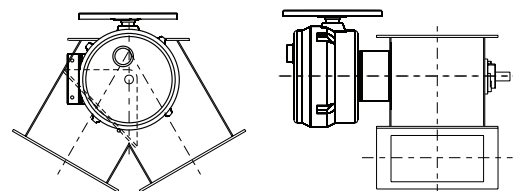


D (Round)	D (Square)	A	H	T
6	6x6	1.5	7	3
7	7x7	1.5	7	3
8	8x8	1.5	8	3
9	9x9	1.5	8.5	3
10	10x10	1.5	10	4
12	12x12	1.5	11	4
14	14x14	1.5	12	4
16	16x16	1.5	13	4

#56 BUCKET VALVE SHOWN WITH ROTARY AIR ACTUATION PACKAGE



#56 BUCKET VALVE SHOWN WITH ELECTRIC AUTOMATION PACKAGE



See Kice Speed Spout Technical Manual - Page 23 for automation specifications.

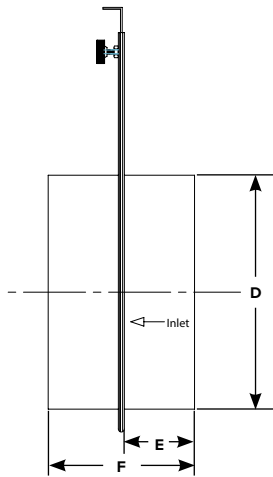
Series 57GM Slide Gate Valves

Kice 57GM Manual Slide Gate Valves are used in gravity and dust control applications to throttle or for "on-off" control of air flow. Carbon Steel is standard; Aluminum and Stainless Steel also available.

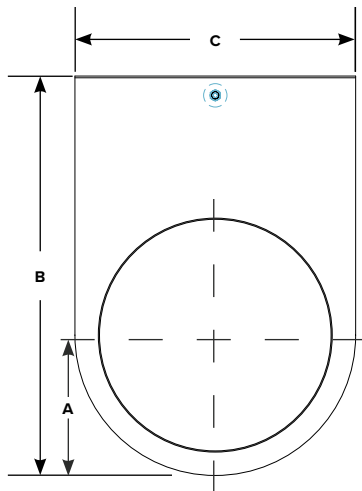
#57GM SLIDE GATE VALVE

Kice 57GM round, Slide Gate valves are designed and used for throttling or shut-off of gravity and/or dust control applications. Standard is painted, carbon steel with round knurled plastic knob for micro adjustment of blade. Also available in aluminum or stainless steel.

Ideal for dust control applications **where an absolute airtight seal is not required**. 45° angle 57GM available on special order.

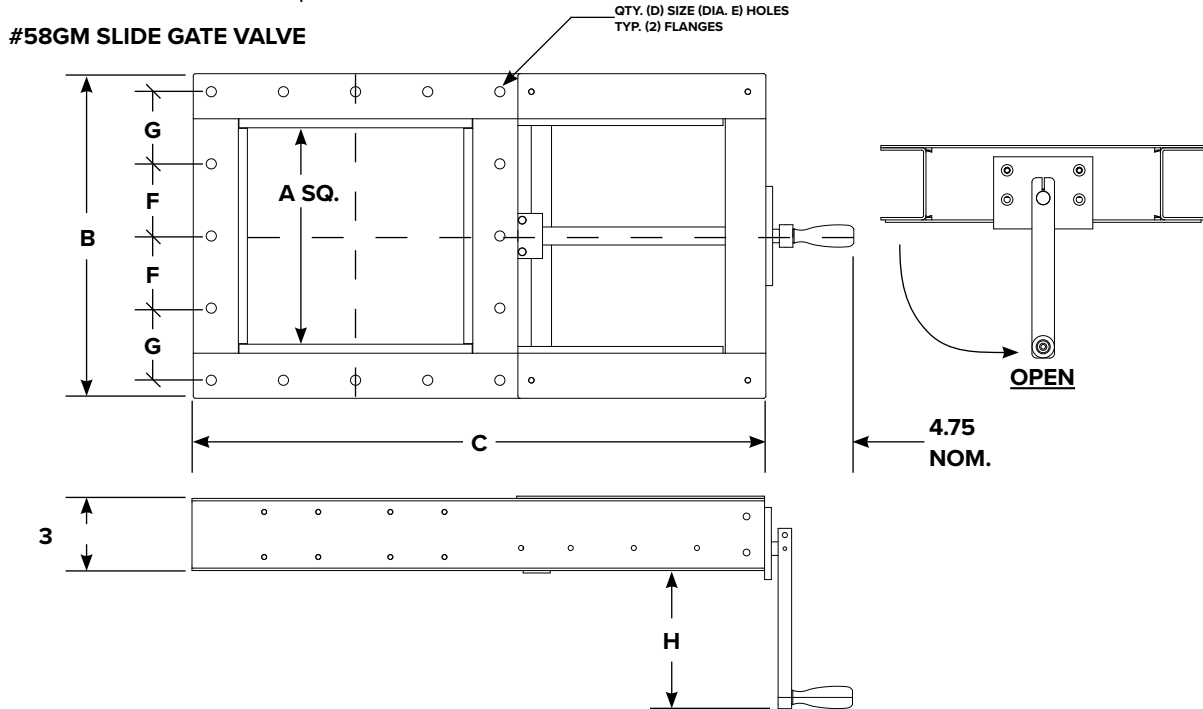


PART NO.	D (OD)	A	B	C	E	F
57GM2	2	2.5	6.5	3.5	3	6.25
57GM2.5	2.5	1.875	5.25	4	3	6.25
57GM3	3	2.25	5.5	4.5	3	6.25
57GM3.5	3.5	2.5	6.25	5	3	6.25
57GM4	4	2.75	7	5.5	3	6.25
57GM4.5	4.5	3	7.75	6	3	6.25
57GM5	5	3.25	8.5	6.5	3	6.25
57GM6	6	3.75	10.5	7.5	3	6.25
57GM7	7	4.25	12.5	8.5	3	6.25
57GM8	8	4.75	14	9.5	3	6.25



Series 58GM Slide Gate Valves

58GM Manual Slide Gate Valves are 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.

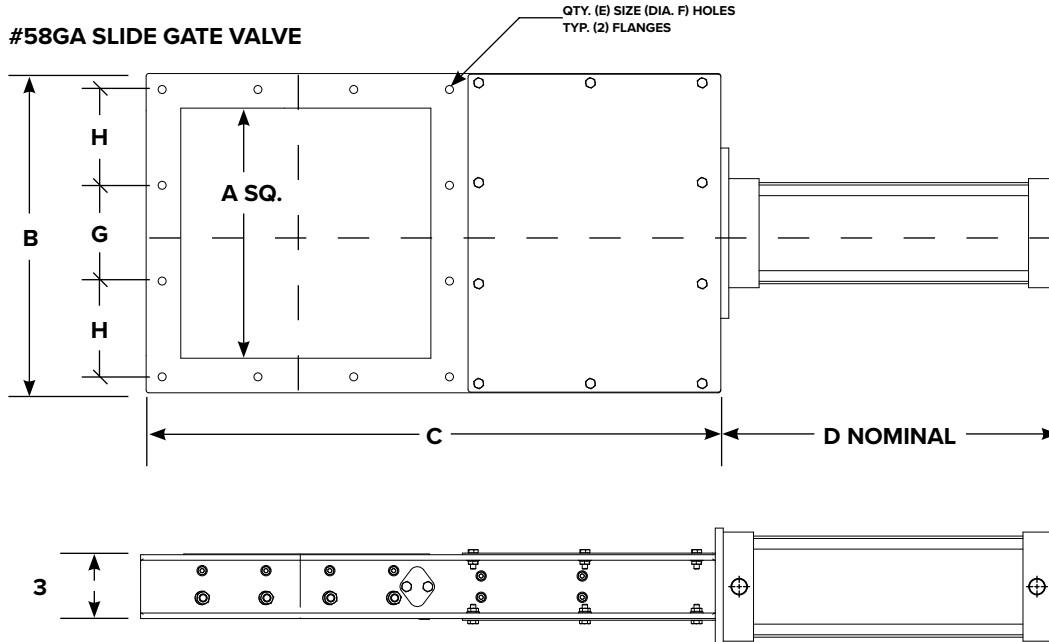


PART NO.	A	B	C	D	E	F	G**	H
58GM4	4	8.5	15	-	-	BLANK FLANGE		4
58GM5	5	9.5	17	-	-	BLANK FLANGE		4
58GM6	5	9.5	17	12	.4375	2.125	3.125	4
58GM7	7	11.5	21	-	-	BLANK FLANGE		4
58GM8	7	11.5	21	12	.4375	3.25	-	4
58GM9	9	13.5	25	-	-	BLANK FLANGE		6
58GM10	9	13.5	25	12	.4375	BLANK FLANGE		6
58GM11	11	15.5	29	-	-	BLANK FLANGE		6
58GM12	11	15.5	29	12	.4375	4.5	-	6
58GM13	13	17.5	33	-	-	BLANK FLANGE		6
58GM14	13	17.5	33	12	.4375	5.25	-	6

**Dashes in these columns indicate that bolt hole spacing is the "G" dimension for the entire pattern.

Series 58GA Slide Gate Valves

58GA Automated Slide Gate Valves are the best choice for handling dry material in gravity flow applications. It has live-loaded seals that extend service life by compensating for wear. These seals provide an excellent material seal across the gate and to atmosphere, and can be replaced while the valve is in service.



PART NO.	A	B	C	D	E	F	G	H**
58GA4	4	8	16.625	8.875	-	-	BLANK FLANGE	
58GA5	5	9	15	9.875	-	-	BLANK FLANGE	
58GA6	5	9	15	9.875	12	.4375	2.125	3.125
58GA7	7	11	19	11.875	-	-	BLANK FLANGE	
58GA8	7	11	19	11.875	12	.4375	3.25	-
58GA9	9	13	23	13.875	-	-	BLANK FLANGE	
58GA10	9	13	23	13.875	12	.4375	3.875	-
58GA11	11	15	27	15.875	-	-	BLANK FLANGE	
58GA12	11	15	27	15.875	12	.4375	4.5	-
58GA13	13	17	31	17.875	-	-	BLANK FLANGE	
58GA14	13	17	31	17.875	12	.4375	5.25	-
58GA15	14	18	33	18.875	12	.4375	5.5	-

**Dashes in these columns indicate that bolt hole spacing is the "G" dimension for the entire pattern.



Kice Automation Control Package Specifications and Options

STANDARD ROTARY ACTUATOR WITH NEMA 4/4X CONTROLS:

- Double Acting Rotary Air Actuator (based on 80-120 PSIG clean, dry, plant air supply).
- Dual Coil Nema 4/4X Solenoid Valve, NAMUR mount, with 120VAC coils and DIN connectors each end, flow control exhaust mufflers, bracketing and mounting.
- Position Switch with 2 each mechanical limit switches, Nema 4/4X, internal terminal strip, 120VAC, .5" NPT conduit connection, bracketing and mounting.

STANDARD ROTARY ACTUATOR WITH NEMA 7/9 CONTROLS:

- Double Acting Rotary Air Actuator (based on 80-120 PSIG clean, dry, plant air supply).
- Dual Coil Nema 4/4X Solenoid Valve, NAMUR mount, with 120VAC coils and DIN connectors each end, flow control exhaust mufflers, bracketing and mounting.
- Position Switch with 2 each mechanical limit switches, Nema 4/4X/7/9, internal terminal strip, 120VAC, .5" NPT conduit connection, bracketing and mounting.

STANDARD ELECTRIC ACTUATION WITH NEMA 4/4X CONTROLS:

- 120vAC Electric Actuator, Nema 4/4X, with internal heater and thermostat, torque-limiting system, 2 each extra limit switches, manual override, .75" NPT conduit connection, bracketing and mounting.

STANDARD AIR CYLINDER ACTUATION WITH NEMA 4/4X CONTROLS:

- Double Acting Air Cylinder (based on 80-120 PSIG clean, dry, plant air supply), covered with expanded metal guard.
- Dual Coil Nema 4/4X Solenoid Valve, with 120VAC coils and DIN connectors each end, flow control exhaust mufflers, bracketing and mounting.
- Position Switch with 2 each mechanical limit switches, Nema 4/4X, internal terminal strip, 120VAC, .5" NPT conduit connection, bracketing and mounting.

STANDARD AIR CYLINDER ACTUATION WITH NEMA 7/9 CONTROLS:

- Double Acting Air Cylinder (based on 80-120 PSIG clean, dry, plant air supply), covered with expanded metal guard.
- Dual Coil Nema 4/4X/7/9 Solenoid Valve, with 120VAC coils and DIN connectors each end, flow control exhaust mufflers, bracketing and mounting.
- Position Switch with 2 each mechanical limit switches, Nema 4/4X/7/9, internal terminal strip, 120VAC, .5" NPT conduit connection, bracketing and mounting.

KICE AUTOMATION OPTIONS:

Single Coil solenoid valves, other voltages & designs, switch configurations, or other branded OEM equipment available upon request and specification.

Contact Kice Technical Sales for more information or your specifications.

Series 67Q 2-Way Diverter Valves

Kice Series 67Q 2-Way Heavy Duty Diverter Valves are designed for pressure applications to divert flow from one conveying line to another with close tolerances to ensure a tight seal and prevent product stream cross contamination.

#67Q 2-WAY DIVERTER VALVE

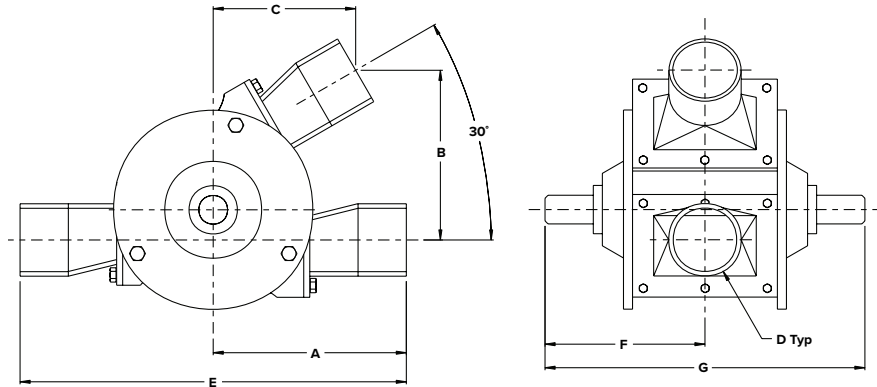
Kice Series 67Q 2-Way Diverter Valves are designed for High Pressure pneumatic conveying applications. Straight thru design with 30° divert leg with close tolerances for tight seal and to prevent product cross contamination. Constructed with cast iron bodies, rotors, and endplates, the Kice 67Q diverter valve is built for long lasting service.

Cast Iron transitions are included and are available in Tube OD and IPS sizes. Fabricated transitions also available. A variety of control options are available, including bare, manual, electric, rotary air actuator and air cylinder operation.

“Converging Valve” configuration (multiple inlets to one common outlet) available when specified.

Chrome and nickel standard.

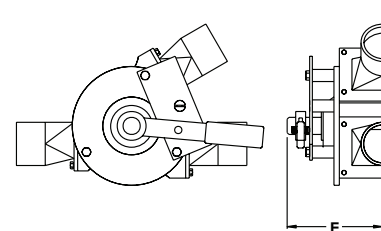
All Kice 67Q 2-way and 3-way Diverter Valves come standard with Chrome Plated Interior body surfaces and Nickel Plated Rotor. The valves are suitable for indoor and/or outdoor service. The treatment prevents rust, corrosion, galling and “sticking” due to moisture.



PART NO.	D (OD)	A	B	C	E	F	G	BARE WT
67Q2-2	2	8	6.875	6	16	6.625	13.25	70
67Q2.5-2	2.5	8	6.875	6	16	6.625	13.25	70
67Q3-2	3	8	6.875	6	16	6.625	13.25	75
67Q4-2	4	10	9.25	8	21.5	7.5	15	125
67Q5-2	5	13	11.5	9.875	26.5	7.75	15.5	200
67Q6-2	6	16	13.875	12.125	32.5	8.5	17	260
67Q8-2	8	21	15.5	17.375	40.25	9.875	19.75	370
67Q10-2	10	25	18.5	20.375	50.625	11.875	23.75	515

Transitions to Tube OD supplied as standard. Half Sizes and Pipe Size Transitions supplied when specified. **Standard mounting of controls as shown below. Other side optional and must be specified.**

Position Switch direct mounted to shaft opposite side as option. Stainless Steel Diverter Valves available on special order. Contact Technical Sales.



67Q shown with manual control

See Kice Speed Spout Technical Manual - Page 23 for automation specifications.

Series 67Q 3-Way Diverter Valves

Kice Series 67Q 3-way Heavy Duty Diverter Valves are designed for pressure applications to divert flow from one conveying line to any of three outlets with close tolerances to ensure a tight seal and prevent product stream cross contamination.

#67Q 3-WAY DIVERTER VALVE

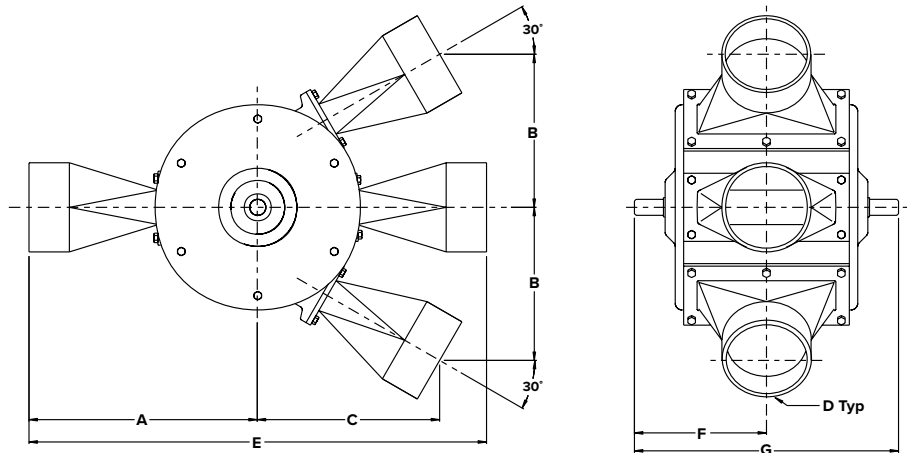
Kice Series 67Q 3-Way Diverter Valves are designed for High Pressure pneumatic conveying applications. Straight thru design with 2 each 30° divert leg with close tolerances for tight seal and to prevent product cross contamination. Constructed with cast iron bodies, rotors, and endplates, the Kice 67Q diverter valve is built for long lasting service.

Cast Iron transitions are included and are available in Tube OD and IPS sizes. Fabricated transitions also available. A variety of control options are available, including bare, manual, electric and air cylinder operation.

“Converging Valve” configuration (multiple inlets to one common outlet) available when specified.

Chrome and nickel standard.

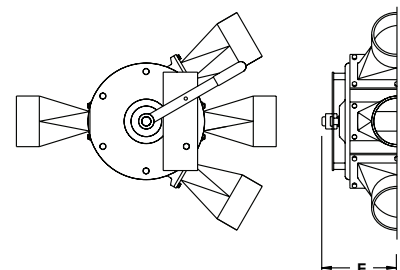
All Kice 67Q 2-way and 3-way Diverter Valves come standard with Chrome Plated Interior body surfaces and Nickel Plated Rotor. The valves are suitable for indoor and/or outdoor service. The treatment prevents rust, corrosion, galling and “sticking” due to moisture.



PART NO.	D (OD)	A	B	C	E	F	G	BARE WT
67Q2-3	2	11.250	7.625	9.250	22.500	7.000	14.000	105
67Q2.5-3	2.5	11.250	7.625	9.250	22.500	7.000	14.000	105
67Q3-3	3	11.250	7.625	9.250	22.500	7.000	14.000	105
67Q4-3	4	12.250	8.125	10.000	24.500	8.125	16.125	130
67Q5-3	5	14.250	9.625	11.500	28.500	8.875	17.875	205
67Q6-3	6	17.125	11.375	13.500	34.250	9.875	19.875	325
67Q8-3	8	22.375	14.375	17.375	44.750	11.875	23.875	590
67Q10-2	10	25.000	18.500	20.375	50.625	11.875	23.750	515

Transitions to Tube OD supplied as standard. Half Sizes and Pipe Size Transitions supplied when specified. **Standard mounting of controls as shown below. Other side optional and must be specified.**

Position Switch direct mounted to shaft opposite side as option. Stainless Steel Diverter Valves available on special order. Contact Technical Sales.



67Q 3-way with manual control

See Kice Speed Spout Technical Manual - Page 23 for automation specifications.

Series 68Q Bin Fill Valves

Kice 68Q Bin Fill Valves are typically installed in pneumatic loop conveying systems, discharging to multiple hoppers, scales or bins. Simultaneously, a second channel in the valve vents the conveying air from the bin back to the point of origin.

#68Q BIN FILL VALVE

Kice Series 68Q Bin Fill Valve are designed for conveying into bins while being able to vent conveying air at the same time. Straight thru design with 90° divert position with close tolerances for tight seal and to prevent product cross contamination. Low height requirements and straight through tube connections simplify installation. Constructed with cast iron bodies, rotors, and endplates, the Kice 68Q Bin Fill Valve is built for long lasting service.

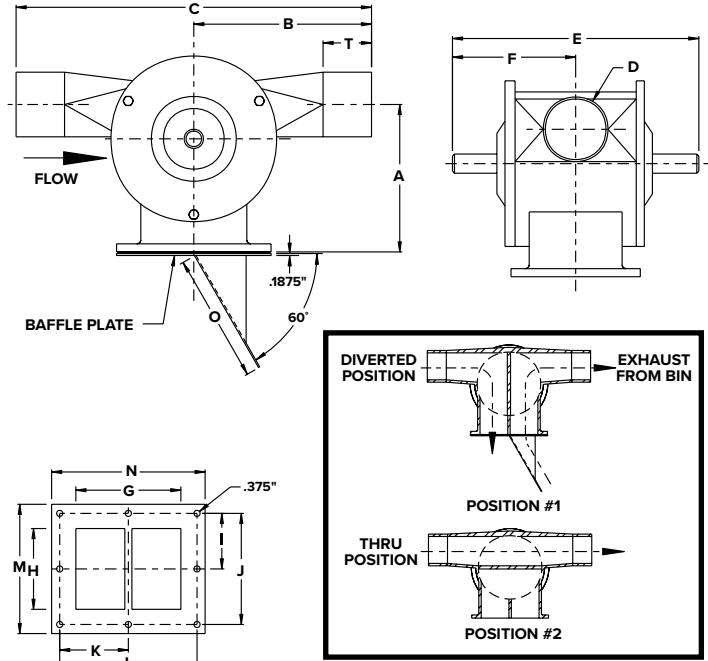
Valves include cast transitions to Tube OD. The sectional drawings to the right illustrate the basic simplicity of our unique design and how it eliminates bin vent bags, cyclones, and vent piping otherwise required. A variety of control options are available, including bare, manual, electric, rotary air actuator and air cylinder operation.

Kice 68Q Bin Fill Valves may be installed in series to control the flow of stock to a number of destinations. A bin level or weight-sensing device may be provided to switch the valve actuator when the scale hopper or bin is filled.

A 10 ga. carbon steel baffle plate to control fine product "carry-over" is supplied as standard. Correct orientation or Baffle Plate shown at right or see Kice Dwg#1-3439A for details.

Transitions to Tube OD supplied as standard. 8" supplied with Bolt-On Transitions.

Position Switch direct mounted to shaft opposite side as option. 68Q8 and all Stainless Steel Diverter Valves are fabricated and available on special order. Contact Technical Sales.



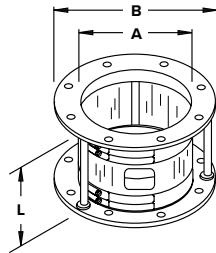
All Kice 68Q Bin Fill Valves come standard with Chrome Plated Interior body surfaces and Nickel Plated Rotor. The valves are suitable for indoor and/or outdoor service. The treatment prevents rust, corrosion, galling and "sticking" due to moisture.

PART NO.	D (OD)	A	B	C	E	F	G	H	I	J	K	L	M	N	O	T	BARE WT
68Q2	2	9	12	24	13.75	6.875	6.5625	5	3.4375	6.875	4.25	8.5	8	9.0625	9	3	110
68Q2.5	2.5	9	12	24	13.75	6.875	6.5625	5	3.4375	6.875	4.25	8.5	8	9.0625	9	3	110
68Q3	3	9	12	24	13.75	6.875	6.5625	5	3.4375	6.875	4.25	8.5	8	9.0625	9	3	115
68Q4	4	9	12	24	13.75	6.875	6.5625	5	3.4375	6.875	4.25	8.5	8	9.0625	9	3	115
68Q5	5	10.75	13	26	14.25	7.125	9.125	6	4	8	5.5	11	9	12.125	10	3	150
68Q6	6	12.5	14	28	15.5	7.5	10.125	7	4.5	9	6.125	12.25	10	13.125	11	3	225
68Q8	8	13.625	22	44	20.125	10.0625	12	9.625	5.8675	11.375	6.625	13.25	12.5	14.875	12	---	325

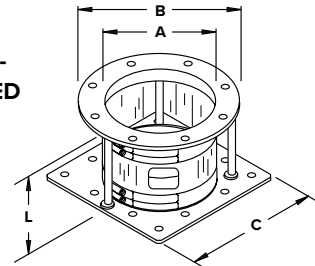
Series 71/72/73 Sight Glasses

Series 70 Kice Sight Glasses are available in flanged and Tube OD. Available from stock in Aluminum or Steel. Stainless Steel available on special order. Additional sizes, designs, and gauges available upon request.

#71-2 ROUND-TO-ROUND FLANGED SIGHT GLASS



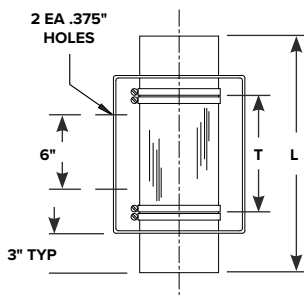
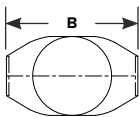
#71-3 ROUND-TO-SQUARE FLANGED SIGHT GLASS



PART NO.	SIZE	A (ID)	B (OD)	L	C
71A6-3	6	5.5	9	6	9
71A8-3	8	7.5	11	6	11
71A10-3	10	9.5	13	6	13.25
71A12-3	12	11.5	15	6	15.25
71A14-3	14	13.5	17.25	6	17.25
71A15-3	15	14.5	18.25	6	18.25

"-2" specifies Round-to-Round Sight Glass and "-3" specifies Round-to-Square Sight Glass. Sight Glass flange patterns shown on Speed Spout Technical Manual - Page 47. "A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel. Series 71 Sight Glass assemblies rated to 15 PSIG and 15 in. Hg. 2" thru 6"OD size uses Polycarbonate tubing and is rated to 240°F; 8" and larger use Acrylic tubing and are rated to 150°F. For 4" long Series 71 Sight Glass replacement tube, specify PN 73P(Size)-4. For replacement Neoprene Garter, specify "Garter for (Size) Sight Glass." For replacement Band Clamp, specify "Band/Clamp Assembly for (Size) Sight Glass"

#72 TUBE OD SIGHT GLASS



PART NO.	D (OD)	L	T	B
72A2	2	18	9	5.5
72A2.5	2.5	18	9	6
72A3	3	18	9	6.5
72A3.5	3.5	18	9	7
72A4	4	18	9	7.5
72A4.5	4.5	18	9	8
72A5	5	18	9	8.5
72A6	6	18	9	9.5
72A7	7	18	9	10
72A8	8	18	9	10.5
72A10	10	18	9	12.5
72A12	12	18	9	14.5
72A14	14	18	9	16.5
72A15	15	18	9	17.5

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel. Note: Aluminum not available in 7", 10" and larger. Replacement Components: Series 72 Sight Glass Tubing: PN 73P(Size)-9. Neoprene Garter: "Garter for (Size) Sight Glass." Band Clamp: "Band/Clamp Assembly for (Size) Sight Glass." Series 72 Sight Glass assemblies rated to 15 PSIG and 15 in. Hg. OD sizes 2" thru 6" rated to 240°F. OD sizes 8" and larger rated to 150°F. Metal bar between tubes is static conductor.

#73 REPLACEMENT SIGHT GLASS TUBE



We maintain a large stock of clear plastic tubing in full lengths, or cut to your specifications. Sight glass is priced per inch, plus a standard cutting charge. When ordering, indicate desired length in inches in place of the "X." Replacement tubes for Kice Series 71 and 72 Sight Glass are indicated below. OD sizes 2", 2.5", 3", 3.5", 4", 5" and 6" are Polycarbonate; Other sizes are Acrylic. Other sizes and wall thicknesses are available on special order.

PART NO.	D (OD)	L	T
73P2-X	2	96"	.125"
73P2.5-X	2.5	96"	.125"
73P3-X	3	96"	.125"
73P3.5-X	3.5	96"	.125"
73P4-X	4	96"	.125"
73P4.5-X	4.5	72"	.125"
73P5-X	5	96"	.125"
73P6-X	6	96"	.125"
73P7-X	7	72"	.1875"
73P8-X	8	72"	.1875"
73P10-X	10	72"	.1875"
73P12-X	12	72"	.1875"
73P14-X	14	72"	.1875"
73P15-X	15	72"	.1875"

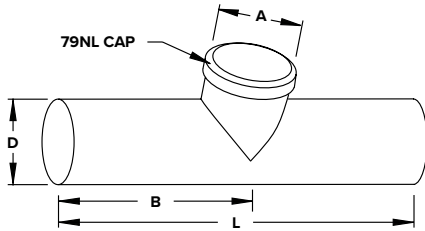
L = Full Length

For Series 71 replacement tube, specify PN 73P(Size)-4
For Series 72 replacement tube, specify PN 73P(Size)-9

Series 74/75/76/77 Fittings

Tube OD fittings are available from stock in Aluminum or Steel. Stainless Steel available on special order. Fittings are mitered and butt welded without laps. Additional sizes, designs, gauges, and angles available upon request.

#74 ROUND INSPECTION PORT

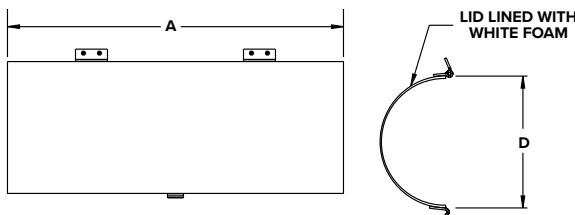


A very practical and convenient inspection port that simply couples in place in a spouting line.

PART NO.	D (OD)	A	L	B
74A4-4	4	4	18	9
74A5-4	5	4	18	9
74A5-5	5	5	18	9
74A6-4	6	4	18	9
74A6-5	6	5	18	9
74A6-6	6	6	18	9
74A8-5	8	5	18	9
74A8-6	8	6	18	9

Each 74 supplied with 79NL Neoprene Cap. "A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

#76 HINGED LIDS



For installation on spouting while on the job. Cut hole, fasten hinges and catch assembly to spouting and latch to spout.

Liner provides dust tight sanitary seal. Use 10" length when space permits: 7" when crowded. Specify length when ordering.

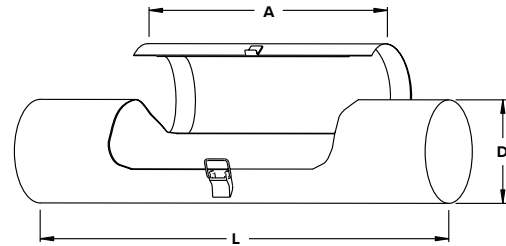
PART NO.	D (OD)	A
76A4-7	4	7
76A4-10	4	10
76A5-7	5	7
76A5-10	5	10
76A6-7	6	7
76A6-10	6	10
76A8-7	8	7
76A8-10	8	10

"A" in specifies Aluminum material. Specify "B" for Steel. Specify "S" for 304L Stainless Steel.

Each 76 hinged lid includes 2 each plated steel hinges and 1 each "latch & catch" assembly and is lined with white foam.

#75 HINGED INSPECTION PORT

Widely recognized to be the milling worlds outstanding spout inspection design!



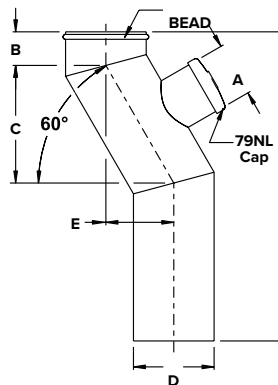
Fitting couples easily in-line.

Liner provides smooth dust-tight seal. Latch pulls lid down to spout under tension.

PART NO.	D (OD)	A	L
75A4	4	10	18
75A5	5	10	18
75A6	6	10	18
75A8	8	10	18

Each 75 supplied with 76 Hinged Lid. "A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for Stainless Steel.

#77 SIFTER KNEE



Very practical design. Top section is beaded to hold sifter sock and lower section is long enough to extend through the floor.

Also available with hinged lid.

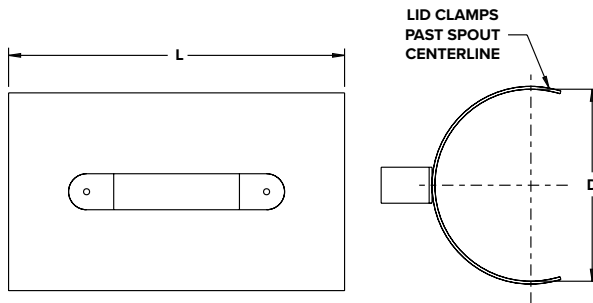
May be varied to fit your requirements. Call Kice with your specifications.

PART NO.	D (OD)	A	B	C	E	L
77A4-4	4	4	2.5	8.75	5	23
77A5-4	5	4	2.5	8.75	5	23
77A5-5	5	5	2.5	8.75	5	23
77A6-4	6	4	2.5	8.75	5	23
77A6-5	6	5	2.5	8.75	5	23
77A6-6	6	6	2.5	8.75	5	23

Series 78/79N/79NL Fittings

Lids, Caps, and Plugs are available from stock in Aluminum, Steel and/or Molded Neoprene. Stainless Steel available on special order. Additional sizes, designs, gauges, and angles available upon request.

#78 SADDLE LID



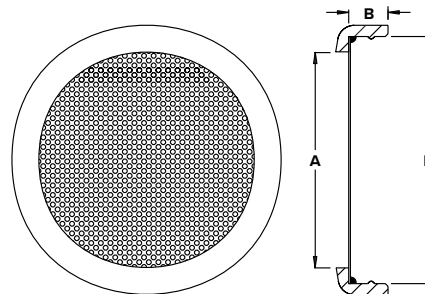
Fits hole cut in spout on job. Hard temper aluminum saddle lid clamps to spout by spring tension. Can slide open without removing.

Available in Aluminum only.

PART NO.	D (OD)	L
78A4	4	7
78A5	5	7
78A6	6	7
78A8	8	7

Handle riveted to saddle lid

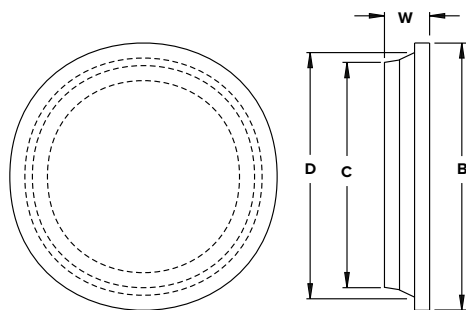
#79NLV MOLDED NEOPRENE VENT CAP



PART NO.	D	A	B
79NLV4	4	3	.875
79NLV5	5	4	.875
79NLV6	6	5	.875

79NL Molded Neoprene Cap (detailed below), bored, with insert of Chrome Plated perforated metal with .0625" diameter holes on .09375" staggered centers. 79As' remain available for plug style and sizes other than 4", 5" and 6"OD.

#79N MOLDED NEOPRENE PLUG

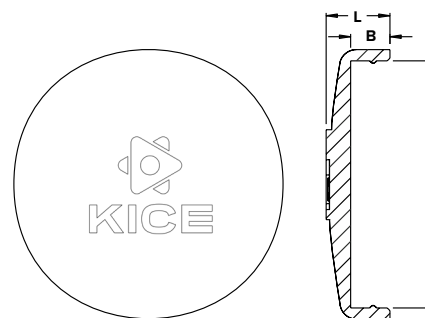


A simple, low cost, plug designed to fit inside OD tubing, for round inspection ports that meet requirements for sanitation and convenience. Solid molded neoprene rubber has no hollow sections or crevices and will not break or bend out of shape. Reusable.

Material: 70 Durometer Food Grade Neoprene Color: Gray

PART NO.	D	W	B	C
79N4	4	.75	4.5	3.8125
79N5	5	.75	5.5	4.8125

#79NL MOLDED NEOPRENE CAP



A simple cap designed to fit over OD tubing, for round inspection ports that meet requirements for sanitation and convenience. Solid molded neoprene rubber has no hollow sections and will not break or bend out of shape. Reusable. Kice logo molded on top.

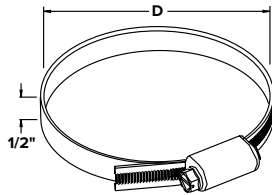
Material: 70 Durometer Food Grade Neoprene, Color: Gray

PART NO.	D	L	B
79NL4	4	1.8125	.875
79NL5	5	1.8125	.875
79NL6	6	1.8125	.875

Series 81S/84A/86N Couplings & Clamps

Joining spouting has never been easier. Practical and reusable screw clamp, band, and sleeve design makes installing Kice Speed Spout easy. Series 82M heavy duty compression couplings are detailed on the following page.

#81S SCREW CLAMPS



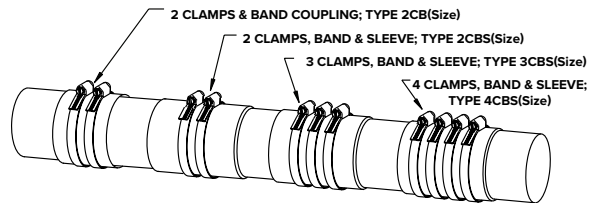
Stainless Steel worm gear clamps provide dependable clamping power for Speed Spout connections

Permanent, but easy to release when necessary using a nut driver, screw driver, or small wrench.

Rust-proof!
Corrosion-proof!
Shake-proof!

WITHOUT 86N		WITH 86N	
PART NO.	(OD)	PART NO.	(OD)
81S1.5-24	1.5	81S1.5-24	1.5
81S2-32	2	81S2-32	2
81S2.5-36	2.5	81S2.5-40	2.5
81S3-44	3	81S3-48	3
81S3.5-52	3.5	81S3.5-56	3.5
81S4-60	4	81S4-64	4
81S4.5-68	4.5	81S4.5-72	4.5
81S5-76	5	81S5-80	5
81S5.5-84	5.5	81S5.5-88	5.5
81S6-92	6	81S6-96	6
81S7-108	7	81S7-112	7
81S8-124	8	81S8-128	8

HOW TO JOIN SPOUTING WITH SCREW CLAMP COUPLINGS

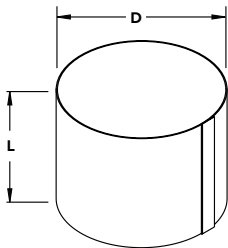


Screw clamp couplings are less expensive and less complicated than other joining systems.

The 2CB coupling shown at the left end of the drawing above is very satisfactory for joining gravity flow spouting. This consists merely of two (2) 81S screw clamps and one (1) 84A aluminum metal band. Installation involves butting the square ends of the two spout sections together, wrapping the band around the joint and screw the clamps tightly. This pulls the band snug - making the connection straight, strong, and leak-proof.

All of these couplings work with butt joints. Besides being simple and quick, they make a smooth self-aligning connection, and are 100% reusable. The couplings can also be used to fasten rubber hose to metal spouting.

#84A STANDARD BANDS

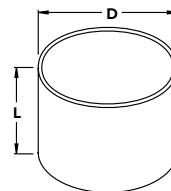


Bands are sheared and ridge formed from a select type of Aluminum. The width is well suited for both gravity spouting and air systems. **Stainless Steel available on special order.**

Bands are shipped flat.

PART NO.	D (OD)	A
84A1.5	1.5	3
84A2	2	3
84A2.5	2.5	3
84A3	3	3
84A3.5	3.5	3.5
84A4	4	3.5
84A4.5	4.5	3.5
84A5	5	4
84A5.5	5.5	4.5
84A6	6	5
84A7	7	6
84A8	8	6

#86N NEOPRENE SLEEVES



Sleeves used in conjunction with Kice 84A Standard Bands are non-toxic neoprene material.

The sleeving ID is .125" smaller than the tubing OD for a snug fit.

Also available in standard rolls of 10' or cut to length.

PART NO.	D	L
86N1.5	1.5	3
86N2	2	3
86N2.5	2.5	3
86N3	3	3
86N3.5	3.5	3.5
86N4	4	3.5
86N4.5	4.5	3.5
86N5	5	4
86N5.5	5.5	4.5
86N6	6	5
86N7	7	6
86N8	8	6

Kice 82M Heavy Duty Tube OD Compression Couplings

Each Kice 82M Series Heavy duty Compression Coupling comes with a White Neoprene Food Grade Gasket and SS grounding strip as standard. OD sizes are typical for Kice systems and equipment. See next page for details regarding sizes, gaskets, and materials of construction.

Kice 82M Heavy Duty compression couplings designed for permanent installation in the joining of either plain end, threaded, grooved end, or a combination of any of these joints. The band type construction holds the entire surface of the joint in uniform compression. Couplings are reusable. Coupling consists of galvanized shell, inner sleeve, white food grade gasket and stainless steel grounding strip. **Standard white food grade gaskets have a max. operating temp. of 180 degrees F. High temperature gaskets available upon request.**



SIZE	SHELL	SLEEVE	GASKET
.5" - 2.875"OD	.052	.052	.062
3"OD			.093
3.25" - 5"OD	.062	.062	.125
5.25" - 5.625"OD			
9" - 24"OD			

LINE SIZE	OD	KICE PART NO.	CARTON QUANTITY	NO. OF BOLTS	WEIGHT EACH	COUPLING LENGTH	BOLT SIZE
1.5"OD TUBE	1.5"	82M1.5-2	22	2	2.0	4"	.5" X 1.75"
		1.82M1.5-3	24	3	2.9	6"	
2"OD TUBE	2.0"	82M2-2	30	2	2.1	4"	.5" X 1.75"
		82M2-3	18	3	3.1	6"	
2.5"OD TUBE	2.5"	82M2.5-2	24	2	2.6	4"	.5" X 1.75"
		82M2.5-3	20	3	3.4	6"	
2.5"OD TUBE	2.5"	82M2.5-4	18	4	4.6	8"	.5" X 1.75"
		82M3-2	24	2	3.2	4"	
3"OD TUBE	3.0"	82M3-3	18	3	4.5	6"	.625" X 2"
		82M3-4	13	4	5.9	8"	
3"OD TUBE	3.0"	82M3.5-2	20	2	3.4	4"	.625" X 2"
		82M3.5-3	10	3	5.1	6"	
3.5"OD TUBE	3.5"	82M3.5-4	10	4	6.6	8"	.625" X 2"
		82M4-2	16	2	3.7	4"	
4"OD TUBE	4.0"	82M4-3	12	3	5.3	6"	.625" X 2"
		82M4-4	8	4	7.2	8"	
4"OD TUBE	4.0"	82M4.5-2	12	2	3.8	4"	.625" X 2"
		82M4.5-3	8	3	5.5	6"	
4.5"OD TUBE	4.5"	82M4.5-4	6	4	7.7	8"	.625" X 2"
		82M5-2	12	2	4.2	4"	
5"OD TUBE	5.0"	82M5-3	8	3	6.2	6"	.625" X 2"
		82M5-4	6	4	8.1	8"	
5"OD TUBE	5.0"	82M5.5-2	8	2	4.4	4"	.625" X 2"
		82M5.5-3	8	3	6.8	6"	
5.5"OD TUBE	5.5"	82M5.5-4	8	4	9.0	8"	.625" X 2"
		82M6-2	12	2	4.7	4"	
6"OD TUBE	6.0"	82M6-3	10	3	7.0	6"	.625" X 2"
		82M6-4	7	4	9.4	8"	
6"OD TUBE	6.0"	82M6-5	5	5	11.8	10"	.625" X 2"
		82M7-3	6	3	7.9	6"	
7"OD TUBE	7.0"	82M7-4	5	4	10.8	8"	.625" X 2"
		82M7-5	4	5	13.7	10"	
7"OD TUBE	7.0"	82M8-2	4	2	11.0	6"	.625" X 2"
		82M8-3	4	3	14.3	8"	
8"OD TUBE	8.0"	82M8-4	2	4	18.0	10"	.75" X 3"
		82M8-5	2	5	22	12"	
9"OD TUBE	9.0"	82M9-3	2	3	15.9	8"	.75" X 3"
		82M9-4	2	4	19.9	10"	
9"OD TUBE	9.0"	82M10-3	2	3	17.5	8"	.75" X 3"
		82M10-4	2	4	21.8	10"	
10"OD TUBE	10.0"	82M10-5	2	5	26.1	12"	.75" X 3"
		82M12-3	1	3	20.4	8"	
12"OD TUBE	12.0"	82M12-4	1	4	25.5	10"	.75" X 3"
		82M12-5	1	5	30.2	12"	

Kice has complete couplings available in sizes from 2" IPS to 24" OD. Contact Kice for pricing. Kice Couplings are supplied with a white, food grade, neoprene gasket as standard. Other gaskets (i.e. black neoprene, red rubber, silicone, or high-temperature) are available on special order. All replacement gaskets are supplied with a SS grounding strip. Zinc plated steel couplings are standard. Aluminum & SS Couplings available on special order.

Kice 82M Heavy Duty Pipe Size Compression Couplings

Each Kice 82M Series Heavy duty Compression Coupling comes with a White Neoprene Food Grade Gasket and SS grounding strip as standard. Pipe sizes are special Kice systems and equipment, but available.

Kice 82M Heavy Duty compression couplings designed for permanent installation in the joining of either plain end, threaded, grooved end, or a combination of any of these joints. The band type construction holds the entire surface of the joint in uniform compression. Couplings are reusable. Coupling consists of galvanized shell, inner sleeve, white food grade gasket and stainless steel grounding strip.



SIZE	SHELL	SLEEVE	GASKET
.5" - 2.875"OD	.052		.062
3"OD			.093
3.25" - 5"OD	.062		.125
5.25" - 5.625"OD			
9" - 24"OD		.062	

LINE SIZE	OD	KICE PART NO.	CARTON QUANTITY	NO. OF BOLTS	WEIGHT EACH	COUPLING LENGTH	BOLT SIZE
2" IPS	2.375"	82M2 .375-2	26	2	2.2	4"	.5" X 1.75"
		82M2 .375-3	18	3	3.5	6"	
		82M2 .375-4	12	4	4.7	8"	
2.5" IPS	2.875"	82M2 .875-2	20	2	2.4	4"	.5" X 1.75"
		82M2 .875-3	11	3	3.7	6"	
		82M2 .875-4	10	4	5.0	8"	
3" IPS	3.500"	82M3.5-2	16	2	3.4	4"	.625" X 2"
		82M3.5-3	12	3	5.1	6"	
		82M3.5-4	8	4	6.6	8"	
3.5" IPS	4.000"	82M4-2	14	2	3.7	4"	.625" X 2"
		82M4-3	10	3	5.3	6"	
		82M4-4	7	4	7.2	8"	
4" IPS	4.500"	82M4.5-2	12	2	3.8	4"	.625" X 2"
		82M4.5-3	8	3	5.5	6"	
		82M4.5-4	6	4	7.7	8"	
4.5" IPS	5.000"	82M5-2	12	2	4.2	4"	.625" X 2"
		82M5-3	8	3	6.2	6"	
		82M5-4	6	4	8.1	8"	
5" IPS	5.563"	82M5 .5625-2	9	2	4.6	4"	.625" X 2"
		82M5 .5625-3	10	3	6.8	6"	
		82M5 .5625-4	5	4	8.8	8"	
6" IPS	6.625"	82M6 .625-2	8	2	5.3	4"	.625" X 2"
		82M6 .625-3	5	3	7.8	6"	
		82M6 .625-4	4	4	10.4	8"	
8" IPS	8.625"	82M6 .625-5	4	5	14.3	10"	.75" X 3"
		82M8 .625-2	4	2	11.5	6"	
		82M8 .625-3	4	3	14.6	8"	
10" IPS	10.750"	82M8 .625-4	2	4	18.8	10"	.75" X 3"
		82M8 .625-5	2	5	23.0	12"	
		82M10.75-3	1	3	16.4	8"	
12" IPS	12.750"	82M10.75-4	2	4	20.3	10"	.75" X 3"
		82M10.75-5	2	5	25.2	12"	
		82M12.75-3	1	3	18.7	8"	
		82M12.75-4	1	4	23.3	10"	.75" X 3"
		82M12.75-5	1	5	28.1	12"	

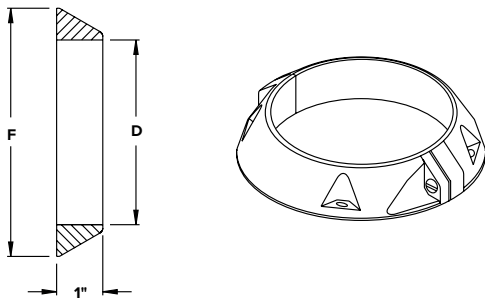
Standard white food grade neoprene gaskets have a maximum operating temperature of 180 degrees F. High temp. gaskets available upon request.

Kice has complete couplings available in sizes from 2" IPS to 24" OD. Contact Kice for pricing. Kice Couplings are supplied with a white, food grade, neoprene gasket as standard. Other gaskets (i.e. black neoprene, red rubber, silicone, or high-temperature) are available on special order. All replacement gaskets are supplied with a SS grounding strip. Zinc plated steel couplings are standard. Aluminum & SS Couplings available on special order.

Series 87A/88A/89 Flanges & Support Rings

Flanges and Support Rings to fit Tube OD fittings are available from stock in Aluminum. Floor flanges and Support Rings are cast aluminum.

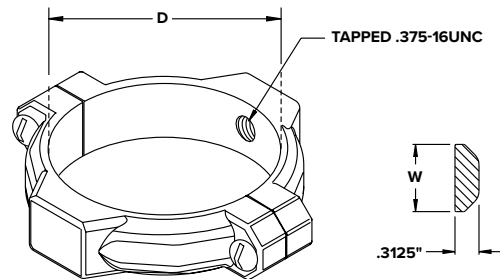
#87 A FLOOR FLANGE



Two piece cast aluminum alloy - clamps to tube and trims around hole through floor. Should be set in caulk and fill each screw recess with caulking.

PART NO.	D	F
87A2	2	3.25
87A2.5	2.5	3.25
87A3	3	4.25
87A3.5	3.5	4.75
87A4	4	5.25
87A4.5	4.5	5.75
87A5	5	6.25
87A5.5	5.5	6.75
87A6	6	7.25

#88A SUPPORT RING



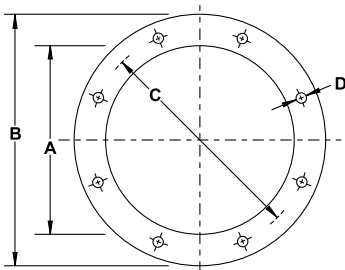
Designed to meet your needs for a more attractive and sanitary tube support.

Polished aluminum alloy casting in two (2) identical halves except one half tapped for clamp bolts and 3/8"-16 tap for support rod.

Supports tube vertically, horizontally, or at any angle - very versatile.

PART NO.	D	W
88A2	2	1
88A2.5	2.5	1
88A3	3	1
88A3.5	3.5	1
88A4	4	1
88A4.5	4.5	1
88A5	5	1
88A5.5	5.5	1
88A6	6	1

#89 MATING FLANGE



Flanges to mate to standard Kice Airlocks. Can be used as a convenient floating flange for hoppers, cyclones, transitions, etc.

PART NO.	A(ID)	B(OD)	C	THK	HOLES	D
89A6	6	9.25	8	.1875"	8	.4375"
89A8	8	11.25	10	.1875"	8	.4375"
89A10	10	13.25	12	.1875"	8	.4375"
89A12	12	15.375	14	.1875"	8	.4375"
89A14	14	17.375	16	.75"	8	.4375"
89A15	15	18.375	16.75	.75"	12	.4375"

"A" in part number specifies Aluminum material. Specify "B" for Steel and "S" for 304L Stainless Steel.

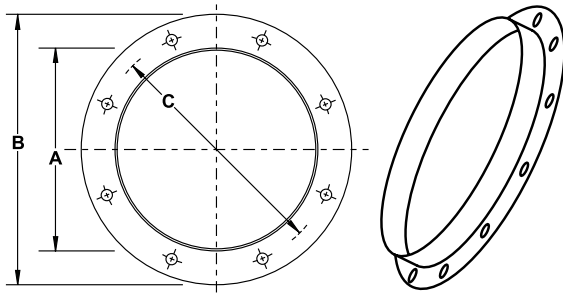
"Locks", "Star Valves", "RV"'s, "Feeders"-- Whatever you call them... Call the industry leader!

Request Kice Data Sheet RA-1 for detailed information on Kice



Kice Angle Ring Flanges

Kice offers fabricated, close tolerance, angle ring flanges for use with our Kice Speed Spout and Dust Duct components. "Leg Out" is standard and shown below, but many other styles are available.



Kice Fabricated Angle Ring Flanges can be attached to all standard Kice Speed Spout components and are easily welded on in the field. 3", 4" and 5" flanges are pressed; Larger flanges are rolled angle iron, "leg out" style. Angle specifications and thickness shown under "Specifications" column. Standard material is mild steel; Aluminum and Stainless Steel are also available. Mild Steel flanges are usually shipped within 48 hours of ordering. Special order sizes, bolt hole dimensions, punching, and patterns available. Oval flanges available on special order. Aluminum and Stainless Steel material, specials and Oval flanges are usually shipped within 7-10 working days. Kice offers a full line of angle ring flanges through 72"ID. Call or consult Dust Duct catalog for larger sizes.

ORDER SIZE	MATERIAL	ANGLE SPECIFICATIONS	WEIGHT (IN LBS)	INSIDE DIAMETER (A)	OUTSIDE DIAMETER (B)	BOLT CIRCLE (C)	NO. OF BOLT HOLES	BOLT HOLE DIAMETER
3"	Mild Steel	10 ga., 1" X 1", PRESSED	.70	3.125	5.125	4.375	6	.28125
4"	Mild Steel	10 ga., 1" X 1", PRESSED	.85	4.125	6.125	5.375	6	.28125
5"	Mild Steel	10 ga., 1" X 1", PRESSED	1.20	5.125	7.125	6.375	6	.28125
6"	Mild Steel	1.25" X 1.25" X .125"	1.75	6.125	8.625	7.500	6	.375
8"	Mild Steel	1.25" X 1.25" X .125"	2.25	8.125	8.625	9.500	8	.375
10"	Mild Steel	1.25" X 1.25" X .125"	2.75	10.125	10.625	11.500	8	.375
11"	Mild Steel	1.25" X 1.25" X .125"	3.00	11.125	11.625	12.500	8	.375
12"	Mild Steel	1.5" X 1.5" X .125"	4.00	12.250	15.250	13.875	12	ZZZ



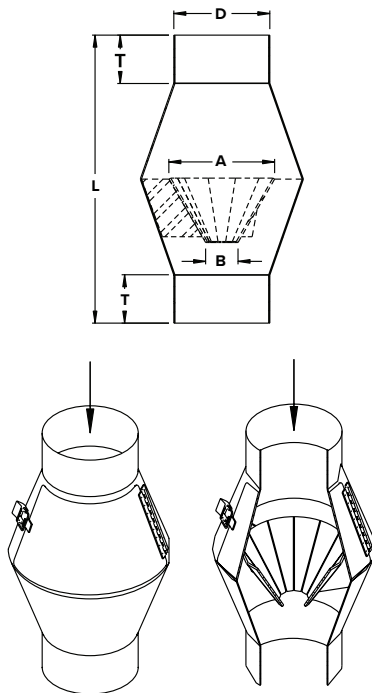
Rotary Stream Splitters mixes and spreads coarse and fine products into a homogeneous mixture, splits it into smaller streams and discharges it into gravity spouts for further processing. Request Kice Data Sheet RSS-1 for detailed information.

Gravity Stream Splitters spreads coarse and fine ground products, splits it into smaller streams and discharges it into gravity spouts for further processing. Request Kice Data Sheet GSS-1 for detailed information.

Series 91/93 Miscellaneous Fittings

Additional components to complete your project are available from Kice in Aluminum or Steel. Stainless Steel available on special order. Fittings are mitered and butt welded without laps. Additional sizes, designs, gauges, and angles available upon request.

#91 SPOUT DEAD FALL BOX

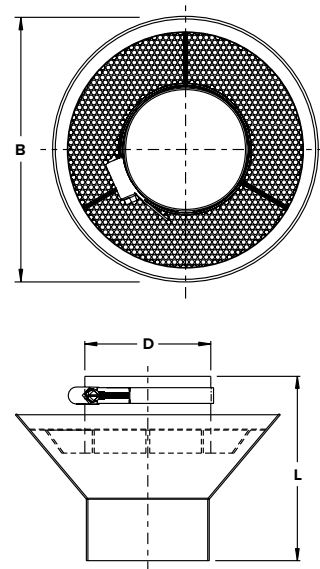


Product speed slows when going through the Kice #91 Dead Fall Box. Self cleaning stock funnel made from 12 ga. carbon steel. Easy access through hinged dust-tight door. For installation in vertical or steep pitch spouting.

PART NO.	D (OD)	L	T	A	B
91B4	4	14.000	2.000	5.000	1.500
91B5	5	15.000	2.500	5.500	1.750
91B6	6	16.000	3.000	5.500	1.750

Steel Only; Replacement Funnel, Hinge & Latch/catch available

#93 SPOUT AIR INLET



Vent fitting relieves excessive vacuum or pressure in gravity spouts. Open area around inlet spout covered by perforated metal. For installation in vertical and sharp pitch spouting.

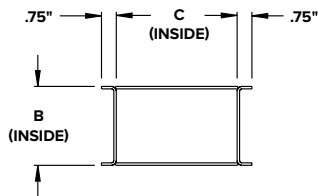
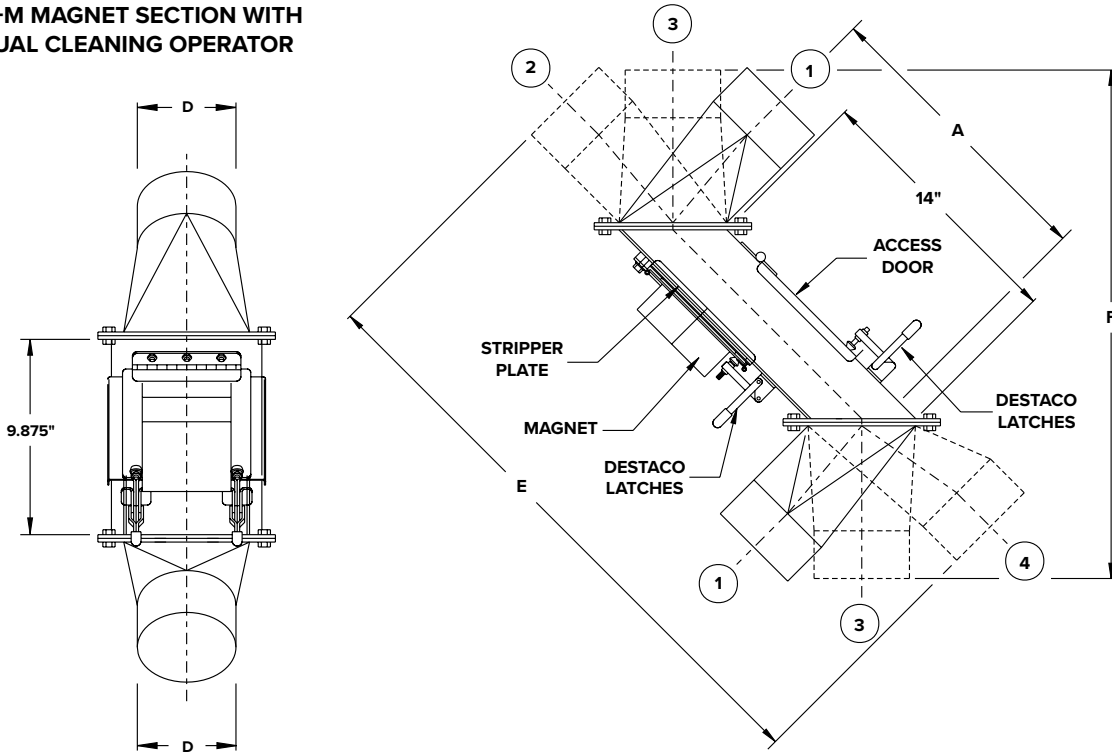
PART NO.	D (OD)	L	B
93A4	4	7	9
93A5	5	7	10
93A6	6	8	11

"A" in part number specifies Aluminum. Specify "B" for Steel. Specify "S" for Stainless Steel.

Series 94 Gravity Flow Magnet Sections

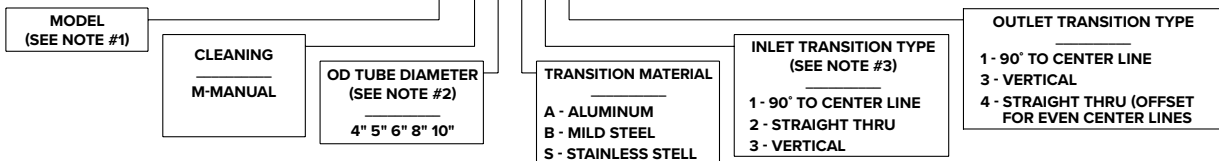
Series 94 Gravity Flow Magnet Sections with manual cleaning operator. Available with three (3) transition arrangements in Aluminum, Carbon Steel, and Stainless Steel.

#94S-M MAGNET SECTION WITH MANUAL CLEANING OPERATOR



PART NO.	D (OD)	A	B	C	E	F
94S-M-4	4	15.5	3	4.125	28	23.75
94S-M-5	5	15.5	4	6.125	31.5	26.75
94S-M-6	6	16.5	4	8.125	35	29.75
94S-M-8	8	17.5	5	10.125	42	35.75
94S-M-10	10	19.25	5.5	14.125	49	42.75

PART NO. (EXAMPLE) 94S-M-5-B-1-1

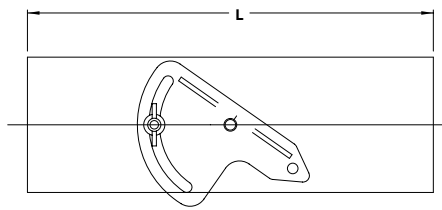


NOTES: (1) Material of Construction for all body components to be 304SS.
 (2) OD tube Diameter to be constant at inlet and outlet transitions.
 (3) Highest percentage of tramp metal retrieved with installed with inlet transition #1 or #2.

Series 95 Damper & 96 Tattle Tale Fittings

Additional components to complete your project are available from Kice in Aluminum or Steel. Stainless Steel available on special order. Fittings are mitered and butt welded without laps. Additional sizes, designs, gauges, and angles available upon request.

#95 DAMPER SECTION



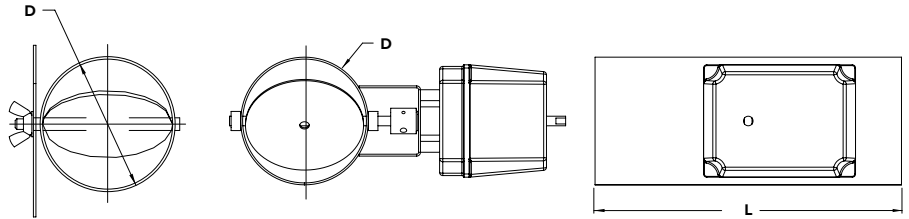
Controls air flow by reducing open area of tube with minimum potential for dust to accumulate on internal surfaces. **Left Hand locking quadrant is standard (shown).**

Quadrant marked for accurate positioning. (Tighten wingnut to lock into position.)

Options:

Right Hand locking quadrant damper- Specify "R/H Damper"

#95 ACTUATED DAMPER SECTION



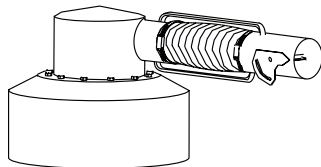
PART NO.	D (OD)	L
95A2	2	12
95A2.5	2.5	12
95A3	3	12
95A3.5	3.5	12
95A4	4	12
95A4.5	4.5	12
95A5	5	12
95A5.5	5.5	12
95A6	6	12
95A8	8	12

Kice Series 95 Dampers are available with an electric rotary actuator. Automated Kice Series 95 Dampers have stem bearings and seals.

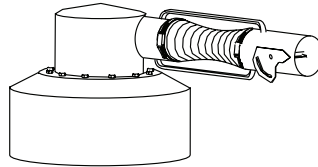
Automated is only full open or full close.

"A" in Specifies Aluminum. Specify "B" for Steel. Specify "S" for Stainless Steel.

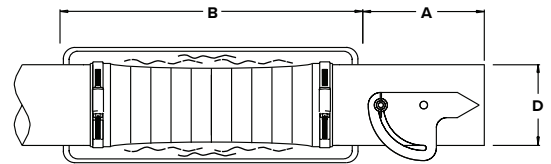
#96 TATTLE TALE SECTION



Insufficient suction is indicated by overinflated sleeve



Slight concave indicates proper suction - severe concave indicates too much suction



Series 96 Tattle Tale sections are often used on the air outlet of a cyclone and/or other pneumatic lines to indicate proper suction. An over inflated sleeve may indicate insufficient suction, while severe suction is shown by a concave sleeve. Adjust and set damper for best results.

Damper is standard Left Hand quadrant. Right Hand quadrant also available upon request.

Replacement Nylon/Satin Sleeve x 12" length available as spare part. Nylon/Satin Sleeve have no UV protection and will deteriorate quicker in outdoor applications.

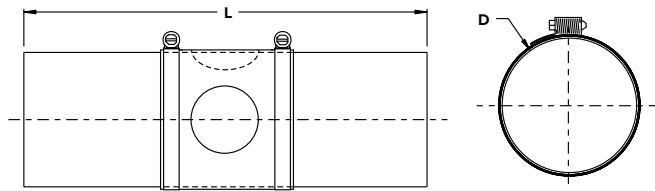
PART NO.	D	A	B
96A2	2	6	15
96A2.5	2.5	6	15
96A3	3	6	15
96A3.5	3.5	6	15
96A4	4	6	15
96A4.5	4.5	6	15
96A5	5	6	15
96A5.5	5.5	6	15
96A6	6	6	15
96A8	8	6	15

"A" in part number Specifies Aluminum. Specify "B" for Steel. Specify "S" for Stainless Steel.

Series 97/99 Fittings

Additional components to complete your project are available from Kice in Aluminum or Steel. Stainless Steel available on special order. Fittings are mitered and butt welded without laps. Additional sizes, designs, gauges, and angles available upon request.

#97 ATMOSPHERIC AIR OPENING



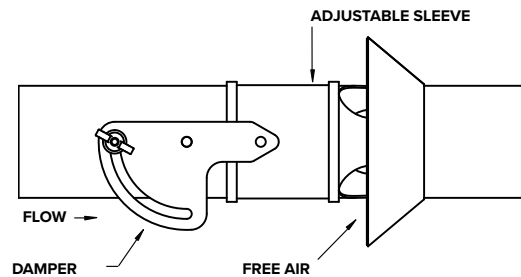
PART NO.	D (OD)	L
97A3	3	12
97A4	4	12
97A5	5	12
97A6	6	12

"A" in Specifies Aluminum. Specify "B" for Steel. Specify "S" for Stainless Steel.

Used to admit free air for maintaining conveying velocity in branch and main lines while reducing air volume being withdrawn from controlled chamber. Adjustment made by loosening screw clamps and rotating to desired position, then tightening screw clamps to maintain position.

#99 KICE NULL POINT FITTINGS

Kice Industries manufactures a variety of styles of free air inlets, also known as "null point fittings." The free air inlet fittings allow air to enter the system. Typically, a sifter performs best at atmospheric conditions, a Kice "Null Point Fitting" on the inlets and outlets prevents excessive vacuum or pressure from developing. In a pneumatic conveying system, a Kice "Null Point Fitting" will allow make-up air into the system to provide conveying velocity. Available in sizes, materials and designs to meet your application.



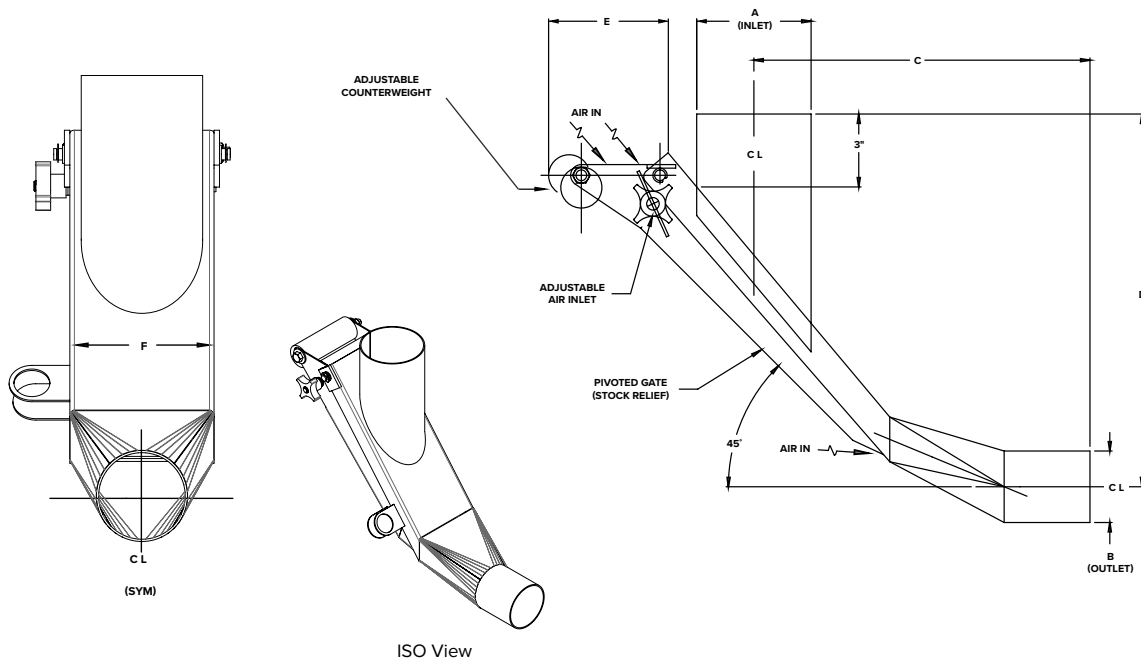
REF: Kice Dwg 2-0134

OVERALL DIAMETER	OVERALL LENGTH	TOP TO CENTERLINE OF DAMPER ROD	TOP TO FREE AIR HOOD	BOTTOM UP TO CENTERLINE OF HOLE	QTY. 3 HOLES DIAMETER
3"	12.000"	2.000"	5.250"	5.250"	1.750"
3.5"	14.000"	2.750"	5.750"	6.625"	2.000"
4"	14.000"	3.000"	3.750"	6.625"	2.500"
5"	18.000"	3.000"	6.250"	9.750"	3.000"
6"	18.000"	3.375"	6.750"	9.000"	3.500"

Series SGH Streamguard Blender Fittings

Standard with a 304L Stainless Steel body and has an adjustable counterweight and adjustable air inlet.

SGH STREAMGUARD BLENDER FITTING



Kice SGH Streamguard Blender Fittings serve as an acceleration zone for pneumatically conveyed stocks and also as an automatic release for overload quantity.

When suction requirements for conveying exceed vacuum being developed by fan, the counter-weighted gate will fall away and permit excess stock to drop out of the system.

When overload condition is corrected, air speed naturally increases and pulls gate back into place. Standard with adjustable makeup air inlet.

Options:

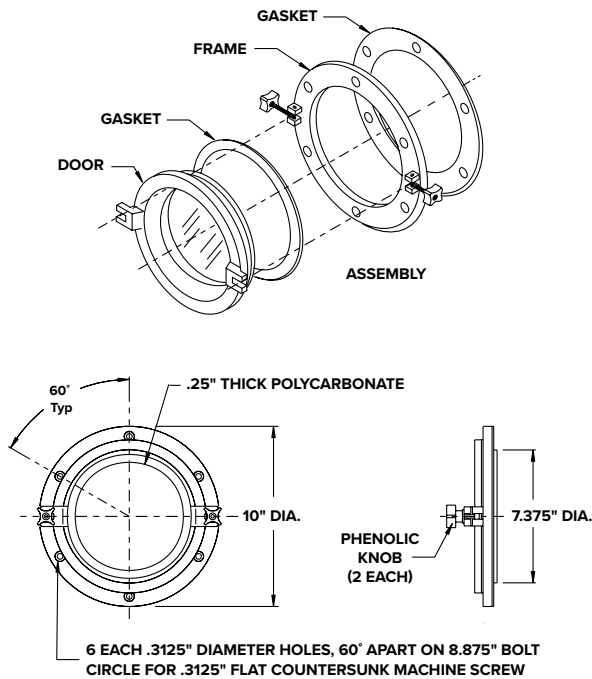
- If larger than standard inlet is required on given body size, inlet transition is required.
- Metric OD outlet sizes available on special order.
- Flanged connections.
- Non-standard sizes available on special order.

PART NO.	A	B	C	D	E	F
SGH -4-3	4	3	11.75	13.875	5.5	4.75
SGH -5-4	5	4	12.625	17.5	6	5.75
SGH -5-5	5	5	12.625	17.5	5.5	5.75
SGH -6-6	6	6	14.0625	19.5625	7	6.75

Porthole Sight Glasses

Additional components to complete your project are available from Kice in Aluminum or Steel. Stainless Steel available on special order. Fittings are mitered and butt welded without laps. Additional sizes, designs, gauges, and angles available upon request.

QUICK ACCESS PORTHOLE SIGHT GLASS



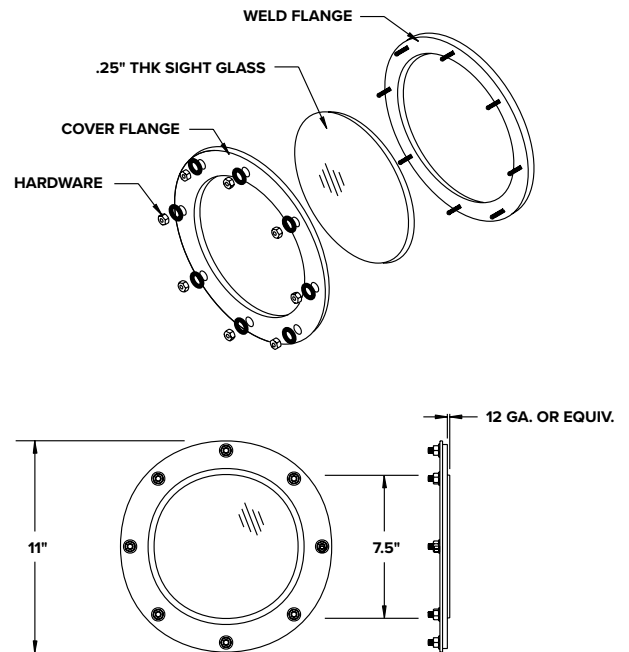
Kice Quick Access Porthole Sight Glass offers a 5 3/4" round viewing area.

The unit has a Cast Aluminum frame and door. There is a machined step in the Plexiglas for a flush internal fit. With a 7.5" diameter hole cut in your flat surface, the Quick Access Porthole Sight Glass can be bolted into place. It offers two phenolic twist knobs that secure the door in place.

Available as an installed option on Kice Filters, Hoppers, and other equipment or as a component part that can easily be installed in the field.

Note: Not for use on or near rotating equipment.

BOLT-ON PORTHOLE SIGHT GLASS



Kice Bolt-On Porthole Sight Glass offers a full 7.5" round viewing area.

The unit has a steel frame, with threaded studs, that can be welded to any flat steel surface. There is a machined step in the Plexiglas for a flush internal fit. A 7.125" hole should be cut into the existing surface. The Cast Aluminum flange aligns with the frame for easy installation. The glass can be caulked for a tight seal.

Available as an installed option on Kice Filters, Hoppers, and other equipment or as a component part that can easily be installed in the field.

Note: bolt style may be used near rotating equipment. Caution is required if glass is removed.

Hose & Hose Connection Products

In addition to rubber, Kice offers Kuriyama of America Tigerflex™ plastic hose as standard for many of our pneumatic handling applications. Kuriyama and other manufacturers' products are available. Please contact Kice Sales for more information.

TIGERCLAMP™ SERIES SB SPIRAL DOUBLE BOLT CLAMPS.

For use on Tigerflex™ hoses with convoluted cover (counter-clockwise spiral only). For adequate holding power, a single clamp may be used on each end of 1 1/4"- 4" hose. Two clamps are recommended for each end on 5" hose and larger. Each clamp now provided with threaded protective caps to help prevent injury. TigerClamp™ Serial Double Bolt Clamps are recommended for use on the following Tigerflex™ convoluted hoses: Series 2001, 2020, F, G, H, J, K, MH (2"), PT, S, UBB, Ureflex-1, Ureflex-2, W, WBS, WE, WG, WH, WT, and WU.



Caution: Proper evaluation of holding power for clamp must be determined for each individual installation.

Note: Use of pneumatic air tools for tightening purposes is not recommended due to potential clamp damage by excess torque. Both hex nuts should be tightened equally to prevent possible leakage. If sockets are used, they should be deep well sockets.

SERIES	FITS HOSE ID (IN.)	SERIES	FITS HOSE ID (IN.)
SDBC-1.5	1.5	SDBC-6	6
SDBC-2	2	SDBC-8	8
SDBC-3	3	SDBC-10	10
SDBC-4	4	SDBC-12	12
SDBC-5	5		

	TAD	688SB	690SB	WE	WT	FT	CWC	HAR	VAC
BLACK COVER	X	X					X		
GRAY COVER			X					X	X
CLEAR COVER				X	X	X			
WHITE BORE			X					X	
CLEAR BORE				X	X	X			
BLACK BORE	X	X					X		
PRESSURE RATED	X	X	X	X	X	X	X	X	
VACUUM RATED		X	X	X	X	X	X	X	X
CORRUGATED COVER		X	X	X	X		X	X	X
SMOOTH COVER						X			
WIRE REINFORCED		X	X				X	X	
STATIC WIRE				X					X
FDA APPROVED			X	X	X	X		X	
OIL RESISTANT			X						
NUMBER OF PLYS	4	2	2	2	2	2	2	2	1
BEND RADIUS (X DIAMETER)	NA	8X	6X	2-4X	3-5X	4-8X	1X	3X	1X

Kice Industries can offer many other types, sizes, styles, and manufacturers of hose beyond those listed. Rubber and thermoplastics hose manufacturers such as Goodyear, Gates, Flexhaust, Duravent, Boston, and Kuriyama of America manufacture many different sizes, styles and types of hoses, many application specific. We welcome your inquiries and will work to meet your plant requirement. We can also provide different styles of flexible metal hoses and coupling connections. Please contact Kice QuikShip or Kice Technical Sales with your application.

Camlock Connections

Kice camlock fittings are available from stock in Aluminum and Brass. Camlock connections meet MIL-C-27487 and are interchangeable with other manufacturers connections through 6" size. Other materials & sizes available on special order.

PART A MALE ADAPTERS - FEMALE THREAD



BSP and BST threads available on request.
Available in 8" and 10" sizes. Please call for more information.

ITEM CODE	SIZE
20A-XX	2"
25A-XX	2.5"
30A-XX	3"
40A-XX	4"
50A-XX	5"
60A-XX	6"

PART B FEMALE COUPLERS - MALE THREAD



BSP and BST threads available on request.
Aluminum couplers are standard with stainless-steel handles. Brass handles available on request.
available in 8" and 10" sizes. Please call for more information.

ITEM CODE	SIZE
20B-XX	2"
25B-XX	2.5"
30B-XX	3"
40B-XX	4"
50B-XX	5"
60B-XX	6"

PART C FEMALE COUPLERS - HOSE SHANK



BSP and BST threads available on request.
Available in 8" and 10" sizes. Please call for more information.

ITEM CODE	SIZE
20C-XX	2"
25C-XX	2.5"
30C-XX	3"
40C-XX	4"
50C-XX	5"
60C-XX	6"

PART D FEMALE COUPLERS - FEMALE THREAD



BSP and BST threads available on request.
Aluminum couplers are standard with stainless-steel handles. Brass handles available on request.
Available in 8" and 10" sizes. Please call for more information.

ITEM CODE	SIZE
20D-XX	2"
25D-XX	2.5"
30D-XX	3"
40D-XX	4"
50D-XX	5"
60D-XX	6"

METAL SELECTION: XX indicates that a metal selection must be designated when ordering: BR = Brass; AL = Aluminum; SS = 316 Stainless Steel

Other available materials include Carbon Steel, Stainless Steel, Ductile Iron, Nylon, and Polypropylene. Many other sizes and types of connections also available. Contact Kice with your special requirements. A complete line of spare parts and accessories, including replacement gaskets, cam arm assemblies, and safety chains, are available from Kice Industries.

PART E MALE ADAPTERS - HOSE SHANK



Available in 8" and 10" sizes. Please call for more information.

ITEM CODE	SIZE
20E-XX	2"
25E-XX	2.5"
30E-XX	3"
40E-XX	4"
50E-XX	5"
60E-XX	6"

PART F MALE ADAPTERS - MALE THREAD



Available in 8" and 10" sizes. Please call for more information.

ITEM CODE	SIZE
20F-XX	2"
25F-XX	2.5"
30F-XX	3"
40F-XX	4"
50F-XX	5"
60F-XX	6"

PART W DUST PLUG FOR USE WITH COUPLERS



Not to be used in pressure applications.
Available in 8" and 10" sizes. Please call for more information.

ITEM CODE	SIZE
20W-XX	2"
25W-XX	2.5"
30W-XX	3"
40W-XX	4"
50W-XX	5"
60W-XX	6"

PART V DUST CAP FOR USE WITH ADAPTERS



Not to be used in pressure applications.

Aluminum couplers are standard with stainless-steel handles. Brass handles available on request.

Available in 8" and 10" sizes. Please call for more information.

ITEM CODE	SIZE
20V-XX	2"
25V-XX	2.5"
30V-XX	3"
40V-XX	4"
50V-XX	5"
60V-XX	6"

FEMALE CAMLOCK LINE ADAPTERS



Female fitting with tube stub welded on.
available in different gauges of tubing.

ITEM CODE	SIZE
20QXX-FXX	2"
25QXX-FXX	2.5"
30QXX-FXX	3"
40QXX-FXX	4"
50QXX-FXX	5"
60QXX-FXX	6"

MALE CAMLOCK LINE ADAPTERS



Male fitting with tube stub welded on.
available in different gauges of tubing.

ITEM CODE	SIZE
20Q-XXMXX	2"
25Q-XXMXX	2.5"
30QXX-MXX	3"
40QXX-MXX	4"
50QXX-MXX	5"
60QXX-MXX	6"

METAL SELECTION: XX indicates that a metal selection must be designated when ordering: BR = Brass; AL = Aluminum; SS = 316 Stainless Steel

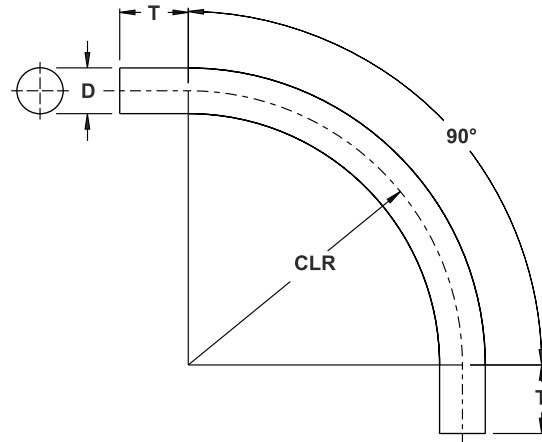
Other available materials include Carbon Steel, Stainless Steel, Ductile Iron, Nylon, and Polypropylene. Many other sizes and types of connections also available. Contact Kice with your special requirements. A complete line of spare parts and accessories, including replacement gaskets, cam arm assemblies, and safety chains, are available from Kice Industries.

Tube & Pipe Bend Availability Chart

Kice utilizes several manufacturers of tubing and tube benders. Combined with our inventory, no other supplier provides the full range of products and services to the pneumatic conveying industry.

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

A large inventory is maintained, available for 72-hour shipment direct from our suppliers. Many popular bend sizes are stocked in carbon steel, aluminum, and stainless steel materials.



TUBE SIZE	PIPE SIZE	D (OD)		AVAILABLE CENTERLINE RADI (CLR) INCHES	TANGENT
		IN	MM		
2"		2.00	50.80	2.5, 6, 8.5, 9, 10, 12, 18, 24, 30, 36, 48	4"
	2"	2.375	60.20	6, 7.5, 10, 12, 17, 24, 30, 36, 48	4"
2.5"		2.50	63.5	4, 6, 9, 12, 15, 17, 24, 30, 36, 48	5"
	2.5"	2.875	73.0	17, 24, 30, 36, 48, 60	5"
3"		3.00	76.2	4.5, 7.5, 9, 10, 12, 15, 18, 24, 30, 36, 48, 52, 60	6"
3.5"	3"	3.50	88.99	6, 12, 15, 16, 18, 24, 30, 36, 48	7" (6" - PIPE)
4"	3.5"	4.00	101.6	12, 18, 20, 24, 30, 32, 36, 48, 60	8" (7" - PIPE)
4.5"	4"	4.50	114.30	12, 16, 18, 20, 24, 30, 32, 36, 48, 60	9" (8" - PIPE)
5"		5.00	127.00	12, 24, 30, 36, 48, 60, 90	10"
	5"	5.563	114.30	20, 30, 36, 42, 48, 60, 72	10"
6"		6.00	152.40	9, 15, 24, 30, 36, 48, 60, 72	12"
	6"	6.625	168.20	24, 30, 36, 48, 60, 72	12"
8"		8.00	203.20	12, 20, 48, 60, 72	16"
	8"	8.625	219.10	32, 40, 48, 60, 72	16"

Standard Tubing OD Wall Thickness:

- 16 ga. (.065")
- 14 ga. (.083")
- 11 ga. (.120")

Iron Pipe Size (IPS):

- Sch. 5
- Sch. 10
- Sch. 40

Other wall thickness available upon request

Standard Material of Construction:

- Aluminum:** 6063-T1 extruded
- Stainless Pipe:** T304 ASTM A312
- Stainless Tube:** T304 ASTM A249
- Carbon Steel Pipe:** ASTM A53
- Carbon Steel Tubing:** ASTM A513
- Galvanized Pipe:** ASTM A53
- Galvanized Tubing:** ASTM A513



Materials of Construction, Tube Data & Formulas

Kice Industries uses common materials of construction and has determined data based on these materials. Other materials of construction are also available. Please contact Kice Technical Sales for help in determining correct material for your application.

TYPICAL MATERIALS OF CONSTRUCTION

Carbon Steel:

Tubing: HREW, Hot Rolled, Electric Weld, Flash Controlled to 0.0015"
 Plate: Hot Rolled to ASTM A36
 Sheet: Hot Rolled to ASTM A569

Aluminum:

Tubing: Welded 3004H26 to ASTM 8210
 Barstock: 2024T3 - Heat Treatable, to ASTM A209 with Mill Finish
 Plate: 3003H14 toASTM 8209 and 6061T6 toASTM 209 with Mill Finish
 Sheet: 3003H14 toASTM 8209 and 6061T6 toASTM 209 with Mill Finish

304L Stainless Steel:

Tubing: Cold Finished, Annealed and Pickled, Welded to ASTM A249/A269
 Plate: Cold Rolled, Annealed and Pickled to ASTM A240, with 28 Finish(annealed, pickled, and bright cold rolled) outside, Mill Finish inside
 Sheet: Cold Rolled, Annealed and Pickled to ASTM A240, with 28 Finish (annealed, pickled, and bright cold rolled) outside, Mill Finish inside.

Other materials are available from Kice Industries. Contact Technical Sales for more information.

COMMON OUTSIDE DIAMETER (OD) TUBING WALL THICKNESSES

TUBE GAUGE WALL THICKNESS	18	17	16	15	14	13	12	11	.125	10	9	.1562	8	7	.1875	6	.25
	.049	.058	.065	.075	.083	.095	.109	.120	.125	.134	.148	.156	.165	.180	.188	.203	.250

Common OD tubing thickness used by Kice Industries, Inc. are noted in the bold boxes above.

TUBE DATA SHEET

TUBE		AREA		VELOCITY - FEET PER MINUTE								
O.D.	I.D.	SQ. IN.	SQ. FT.	3500 @ .76 IN.WC		4000 @ 1.0 IN.WC		4500 @ 1.26 IN.WC		5000 @ 1.55 IN.WC		900 ELLS IN EQUIV. FT.
				CFM	IN.WC/100'	CFM	IN.WC/100'	CFM	IN.WC/100'	CFM	IN.WC/100'	
1 1/2"	1.37"	1.48	.0103	36	15.0"	41	18.0"	46	22"	52	27.5"	4'
2"	1.87"	2.76	.0192	67	9.5"	77	13.0"	86	15.5"	96	18.75"	5'
2 1/2"	2.37"	4.43	.0308	105	6.5"	123	9.5"	138	11.0"	154	13.5"	6'
3"	2.87"	6.49	.0451	158	5.5"	180	7.5"	203	8.75"	225	11.0"	8'
3 1/2"	3.37"	8.95	.0621	217	4.75"	248	6.3"	280	7.75"	310	8.75"	9'
4"	3.87"	11.79	.0819	285	4.0"	328	5.3"	370	6.25"	410	7.5"	10'
4 1/2"	4.37"	15.02	.1043	365	3.5"	418	4.6"	469	5.5"	522	6.5"	11'
5"	4.87"	18.60	.1292	452	3.0"	517	4.0"	580	4.8"	646	5.75"	12'
5 1/2"	5.37"	22.70	.1576	552	2.6"	630	3.7"	710	4.3"	788	5.2"	14'
6"	5.87"	27.01	.1882	659	2.2"	753	3.3"	847	3.9"	941	4.6"	15'
8"	7.87"	48.70	.3382	1184	1.6"	1353	2.3"	1522	2.7"	1691	3.2"	20'
10"	9.75"	74.66	.5185	1815	1.3"	2074	1.7"	2333	2.1"	2593	2.9"	25'
12"	11.75"	108.43	.7530	2635	1.1"	3012	1.4"	3388	1.7"	3765	2.1"	30'

Tube ID and area based on .065" wall thickness, except 1 0" and 12"00 have .125" wall thickness. Based on air@ .075 lbs/cu. ft. standard density.

USEFUL FORMULAS

Area of a Circle (Sq. Ft.)= 3.1416 x r² (or .7854 x D²)

Volume (CFM) =Velocity (Ft./Min.) x Area (Sq. Ft.)

P_v =Velocity Pressure, in.wc

1" of Water Column (W.C.) = 0.03613 lbs. per sq. Inch

For standard air, Velocity (Ft./Minute)= 4005 x √P_v

Standard air at 70°F and sea level weighs 0.075 lbs/cu ft

1 inch = 25.4 millimeters

1 millimeter= 0.03937 inch

Temperature Conversion Formulas:

Celsius = .556 x (F-32), Fahrenheit= (1.8 x C)+32



Pipe & Flange Dimensions

Kice Industries commonly uses 16 ga., 14 ga., and 11 ga. OD tubing for systems and product connections. Iron Pipe Size is also used when specified by the customer. Please use these charts to help determine your system requirements.

COMMON IRON PIPE SIZE (IPS) PIPE DIMENSIONS AND WEIGHTS

PIPE SIZE	OD IN INCHES	PIPE SCHEDULES															
		5S		5		10S		10		40S & STD		40		80S & EH		80	
		WALL	WT/FT	WALL	WT/FT	WALL	WT/FT	WALL	WT/FT	WALL	WT/FT	WALL	WT/FT	WALL	WT/FT	WALL	WT/FT
.125"	.405	---	---	.035	.1383	.049	.1863	.049	.1863	.068	.2447	.068	.2447	.095	.3145	.095	.3145
.25"	.540	---	---	.049	.2570	.065	.3297	.065	.3297	.088	.4248	.088	.4248	.119	.7388	.119	.5351
.375"	.675	---	---	.049	.3276	.065	.4235	.065	.4235	.091	.5676	.091	.5676	.126	.7388	.126	.7388
.5"	.840	.065	.5383	.083	.6710	.083	.6710	.109	.8510	.109	.8510	.109	.8510	.109	.8510	.147	1.088
.75"	1.050	.065	.6838	.065	.6838	.083	.8572	.083	.8572	.113	1.131	.113	1.131	.154	1.474	.154	1.474
1"	1.315	.065	.8678	.065	.8678	.109	1.404	.109	1.404	.133	1.679	.133	1.679	.179	2.172	.179	2.172
1.25"	1.660	.065	1.107	.065	1.107	.109	1.806	.109	1.806	.140	2.723	.140	2.723	.191	2.997	.191	2.997
1.5"	1.900	.065	1.274	.065	1.274	.109	2.085	.109	2.085	.145	2.718	.145	2.718	.200	3.631	.200	3.631
2"	2.375	.065	1.604	.065	1.604	.109	2.638	.109	2.638	.154	3.653	.154	3.653	.218	5.022	.218	5.022
2.5"	2.875	.083	2.475	.083	2.475	.120	3.531	.120	3.531	.203	5.793	.203	5.793	.276	7.661	.276	7.661
3"	3.500	.083	3.209	.083	3.209	.120	4.332	.120	4.332	.216	7.576	.216	7.576	.300	10.25	.300	10.25
3.5"	4.000	.083	3.472	.083	3.472	.120	4.937	.120	4.937	.226	9.109	.226	9.109	.318	12.51	.318	12.51
4"	4.500	.083	3.915	.083	3.915	.120	5.613	.120	5.613	.237	10.79	.237	10.79	.337	14.98	.337	14.98
4.5"	5.000	---	---	---	---	---	---	---	---	.247	12.54	---	---	.355	17.61	---	---
5"	5.563	.109	6.349	.109	6.349	.134	7.770	.134	7.770	.258	14.62	.258	14.62	.375	20.78	.375	20.78
6"	6.625	.109	7.585	.109	7.585	.134	9.290	.134	9.290	.280	18.97	.280	18.97	.432	28.57	.432	28.57
7"	7.625	---	---	---	---	---	---	---	---	.301	23.54	---	---	.500	38.04	---	---
8"	8.625	.109	9.914	.109	9.914	.148	13.40	.148	13.40	.322	28.55	.322	28.55	.500	43.39	.500	43.39
9"	9.625	---	---	---	---	---	---	---	---	.342	33.91	---	---	.500	48.73	---	---
10"	10.75	.134	15.19	.134	15.19	.165	18.65	.165	18.65	.365	40.48	.365	40.48	.500	54.74	.500	54.74
11"	11.75	---	---	---	---	---	---	---	---	.375	45.56	---	---	.500	60.08	---	---
12"	12.75	.156	21.07	.165	22.18	.180	24.16	.180	24.16	.375	49.56	.406	53.52	.500	65.42	.688	88.63
14"	14.00	.156	23.07	---	---	.188	27.73	.250	45.61	.375	54.57	.438	63.44	.500	72.09	.750	106.1
16"	16.00	.165	27.90	---	---	.188	31.75	.250	52.27	.375	62.58	.500	82.77	.500	82.77	.844	136.6
18"	18.00	.165	31.43	---	---	.188	35.76	.250	58.94	.375	70.59	.562	104.7	.500	93.45	.938	170.9
20"	20.00	.188	39.78	---	---	.218	46.05	.250	78.60	.375	78.60	.594	123.1	.500	104.1	1.031	208.9

Although pipe size products are not common in Kice equipment, they are used. This is a guideline for determining if your project requires nominal pipe size (IPS) or Outside Diameter (OD) tubing.

BASIC DIMENSIONS FOR ANSI 150# FLANGES

IRON PIPE SIZE (IPS)	2"	2.5"	3"	3.5"	4"	5"	6"	8"	10"	12"
OUTSIDE DIAMETER	6"	7"	7.5"	8.5"	9"	10"	11"	13.5"	16"	19"
BOLT CIRCLE	4.75"	5.5"	6"	7"	7.5"	8.5"	9.5"	11.75"	14.75"	17"
NUMBER OF BOLT HOLES	4	4	4	8	8	8	8	8	12	12
DIAMETER OF BOLT HOLES	.75"	.75"	.75"	.75"	.75"	.875"	.875"	.875"	1"	1"
IRON PIPE SIZE (IPS)	14"	16"	18"	20"	24"					
OUTSIDE DIAMETER	21"	23.5"	25"	27.5"	32"					
BOLT CIRCLE	18.75"	21.25"	22.75"	25"	29.5"					
NUMBER OF BOLT HOLES	12	16	16	20	20					
DIAMETER OF BOLT HOLES	1.25"	1.125"	1.25"	1.25"	1.3125"					

Flange thicknesses vary depending on type of flange.

Kice Airlock Round & Square Flange Dimensions

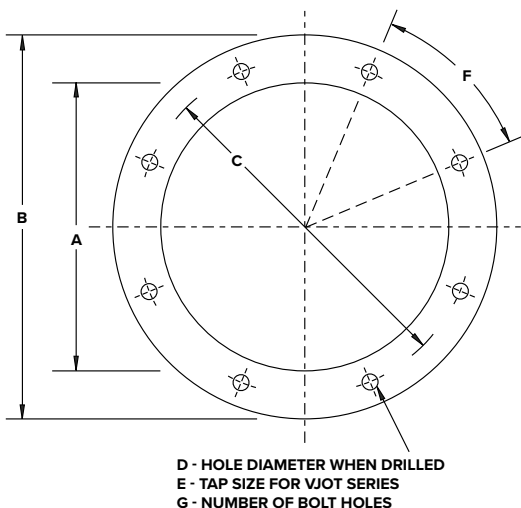
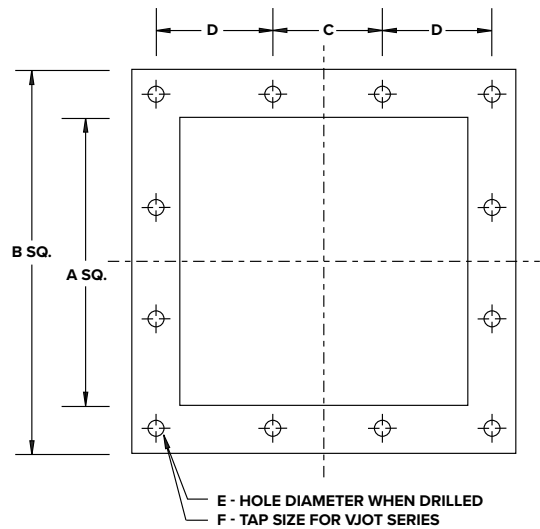
Kice Speed Spout is often connected to Kice Airlocks, Cyclones, and other Kice equipment. Below are the typical flange dimensions for Kice Round & Square VJ & VJOT, Square VD & VDOT, and Round VB & VBOT Kice Airlocks.

VJ & VJOT BODY

MODEL	A	B	C	D	E	F
VJ & VJOT 8X6X6	5.75	9	3.125	2.125	---	.375" UNC
VJ & VJOT 10X8X8	7.75	11	3.25	3.25	---	.375" UNC
VJ & VJOT 12X8X8	7.75	11	3.25	3.25	---	.375" UNC
VJ & VJOT 14X10X10	9.75	13.25	3.875	3.875	---	.375" UNC
VJ & VJOT 16X12X12	11.75	15.25	4.5	4.5	---	.375" UNC
VJ & VJOT 18X12X12	11.75	15.25	4.5	4.5	---	.375" UNC
VJ & VJOT 18X14X14	13.75	17.25	5.25	5.25	---	.375" UNC
VJ & VJOT 20X12X12	11.75	15.25	4.5	4.5	---	.375" UNC
VJ & VJOT 20X15X15	14.75	18.25	5.5	5.5	---	.375" UNC
VJ & VJOT 24X15X15	14.75	18.0625	5.5	5.5	---	.375" UNC
VJ & VJOT 24X20X20						
VJ & VJOT 30X24X24	24	29 1/16	0	4.5	24 HOLES	.625" UNC

VD & VDOT BODY

MODEL	A	B	C	D	E	F
VD 6X6X6	6	9.25	3.125	2.125	.4375	---
VD & VDOT 8X6X6	6	9.25	3.125	2.125	.4375	---
VD & VDOT 10X6X6	6	9.25	3.125	2.125	.4375	---
VD & VDOT 10X8X8	8	11.25	3.25	3.25	.4375	---
VD & VDOT 12X8X8	8	11.25	3.25	3.25	.4375	---
VD & VDOT 14X10X10	10	13.25	3.875	3.875	.4375	---
VD & VDOT 16X12X12	12	15.375	4.5	4.5	.4375	---
VD & VDOT 18X12X12	12	15.375	4.5	4.5	.4375	---
VD & VDOT 18X14X14	14	17.375	5.25	5.25	.4375	---
VD & VDOT 20X12X12	12	15.375	4.5	4.5	.4375	---
VD & VDOT 20X15X15	15	18.375	5.5	5.5	.4375	---
VD & VDOT 24X15X15	15	18.375	5.5	5.5	.4375	---



VJ & VJOT BODY

MODEL	A	B	C	E	F	G
VJ 6X6	5.75	9	8	---	.375" UNC 45 DEG.	8
VJ & VJOT 8X6	5.75	9	8	---	.375" UNC 45 DEG.	8
VJ & VJOT 10X8	7.75	11	10	---	.375" UNC 45 DEG.	8
VJ & VJOT 12X8						

VB & VBOT BODY

MODEL	A	B	C	D	F	G
VB 6X6	6	9.25	8	.4375	---	45 DEG. 8
VB & VBOT 8X6	6	9.25	8	.4375	---	45 DEG. 8
VB & VBOT 10X6	6	9.25	8	.4375	---	45 DEG. 8
VB & VBOT 10X8	8	11.25	10	.4375	---	45 DEG. 8
VB & VBOT 12X8	8	11.25	10	.4375	---	45 DEG. 8
VB & VBOT 14X10	10	13.25	12	.4375	---	45 DEG. 8
VB & VBOT 16X12	12	15.375	14	.4375	---	45 DEG. 8
VB & VBOT 18X12	12	15.375	14	.4375	---	45 DEG. 8
VB & VBOT 18X14	14	17.375	16	.4375	---	45 DEG. 8
VB & VBOT 20X12	12	15.375	14	.4375	---	45 DEG. 8
VB & VBOT 20X15	15	18.375	16.75	.4375	---	30 DEG. 12
VB & VBOT 24X15	15	18.375	16.75	.4375	---	30 DEG. 12

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