

# **Specialty Engineering & Fabrication**



**Pneumatic conveying**

**Metal Fabrication**

**Equipment Installation**

### Product List

- Bulk Storage Silos
- Filter Receivers (bag or cartridge models)
- Cages, Venturies, Bags and Filter Cartridges
- Automatic Bin Vents
- Automatic Clean Air Filters
- Railcar Unloading Systems (vacuum or pressure up to 30,000 lbs. per hour)
- Railcar Unloading Accessories
- Vacuum or Pressure Conveying Systems
- Vacuum Receivers (0.6 cu.ft. to 6.0 cu.ft.)
- Vacuum Sequencing Valves (2" to 4" air line)
- High Efficiency Cyclones
- Blenders
- Surge Hoppers (square or round design)
- Bulk Bag Unloading Stations
- Bag Dump Hoppers
- Box and Drum Tilters
- Tubing and Tubing Components (tees, laterals and elbows for 2" to 6" tubing)
- Tubing and Pipe Compression Couplings
- Quick Disconnect Couplers (aluminum or stainless)
- Flex Hose (metal or PVC from 2" to 6")
- Silo Fill Kits
- Silo Discharge Slide Gates (square or round)
- Silo Vacuum Take-Away Boxes and Stubs
- Rotary Airlocks (square or round)
- Material Level Indicators
- Fans and Blowers

Many other items are available upon your specific request

### Railcar Unloading Systems

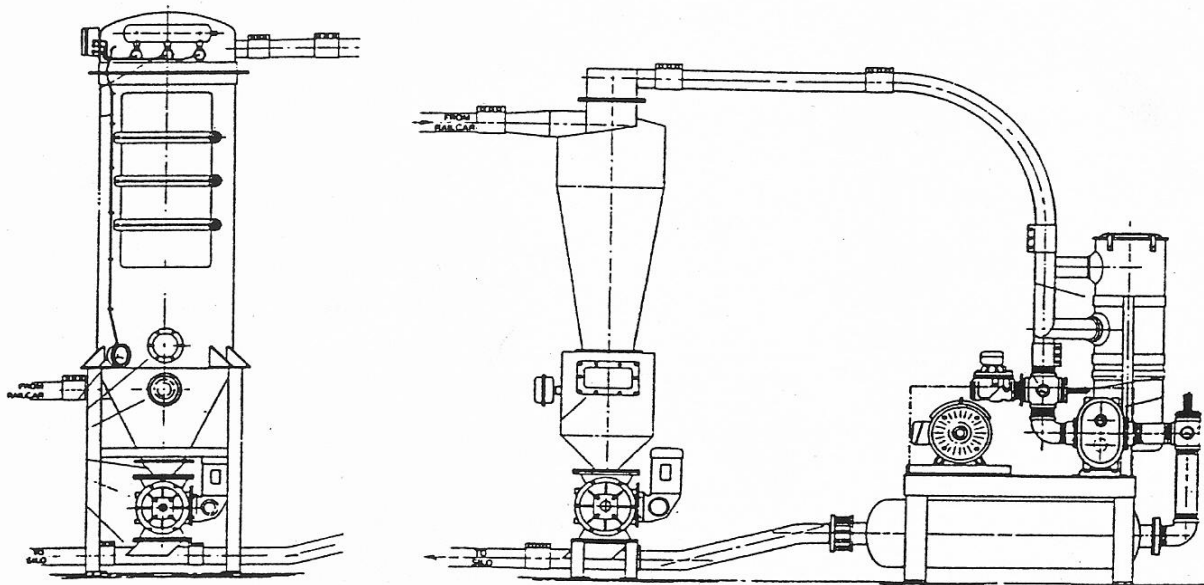
#### Package with High Efficiency Cyclone and Rotary Airlock

Model	Motor/Blower	Cyclone	Clean Air Filter	Airlock	Line Size
DPRC-40C	40HP, 6MVF/6MVF	21"	CAF-4	RCDT, FT-9	4"
DPRC-40CA	40HP, 6MVF/6MVF	21"	CAF-4	RCDT, FT-12	4"
DPRC-50C	50HP, 6MVF/4509	21"	CAF-5	RCDT, FT-12	4"
DPRC-50CA	50HP, 4509/4509	21"	CAF-5	RCDT, FT-12	4"
DPRC-60C	60HP, 4512/6MVF	30"	CAF-7	RCDT, FT-12	5"
DPRC-75C	75HP, 4512/4512	30"	CAF-7	RCDT, FT-16	5"

#### Package with Filter Receiver and Rotary Airlock

Model	Motor/Blower	Filter Receiver	Airlock	Line Size
DPRC-40F	40HP, 6MVF/6MVF	FR-9-8, 30"	RCDT, FT-9	4"
DPRC-40FA	40HP, 6MVF/6MVF	FR-9-8, 30"	RCDT, FT-12	4"
DPRC-50F	50HP, 6MVF/4509	FR-9-8, 30"	RCDT, FT-12	4"
DPRC-50FA	50HP, 4509/4509	FR-9-8, 30"	RCDT, FT-12	4"
DPRC-60F	60HP, 4512/6MVF	FR-14-8, 36"	RCDT, FT-12	5"
DPRC-75F	75HP, 4512/4512	FR-14-8, 36"	RCDT, FT-16	5"

- Custom control packages available
- Railcar unloading kits sold separately



**Blower Packages**

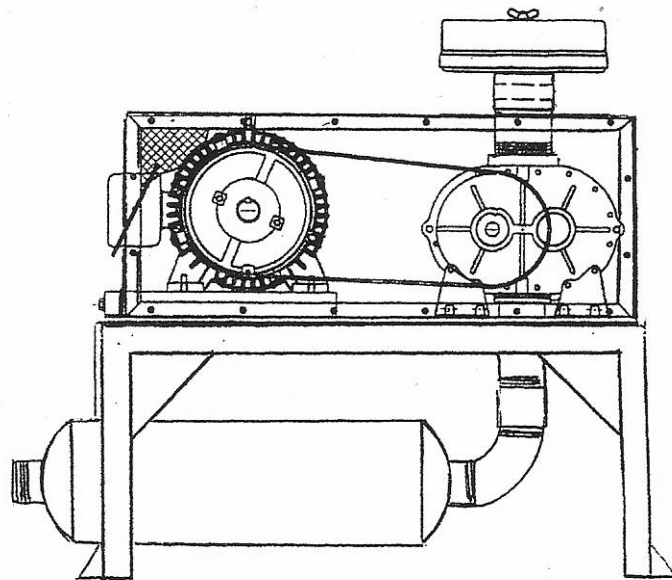
Vacuum	Pressure	HP	Line Size
SEV-5	SEP-5	5	2"
SEV-7.5	SEP-7.5	7.5	2"
SEV-10	SEP-10	10	2.5"
SEV-15	SEP-15	15	3"
SEV-20	SEP-20	20	4"

Standard Vacuum or Pressure Blowers Include:

- TEFC Motor
- Adjustable Slide Base
- Vacuum or Pressure Relief Valve
- Discharge Silencer
- Vacuum or Pressure Gauge
- V-Belt Drive
- Expanded Metal Guard
- Heavy Duty Base
- Inlet Filter

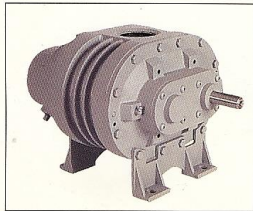
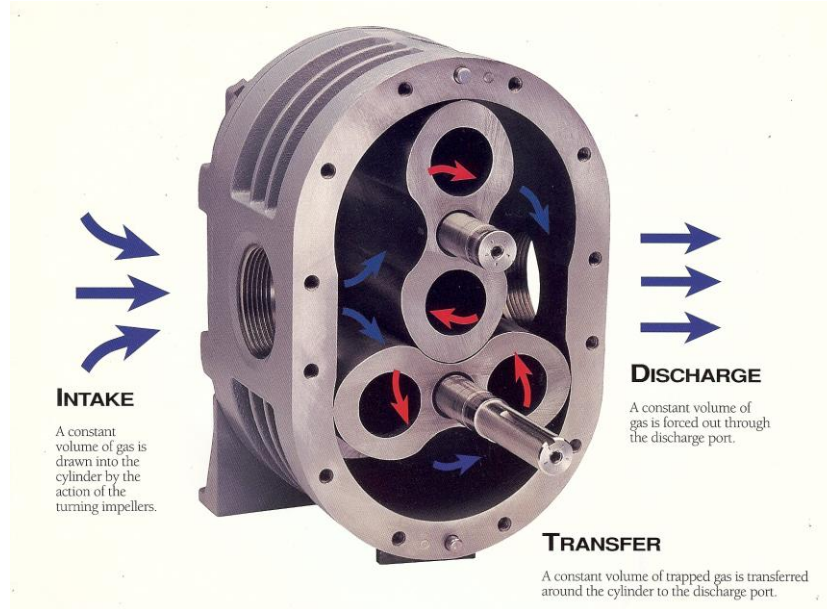
Optional Items Include:

- Sound Dampening Enclosure

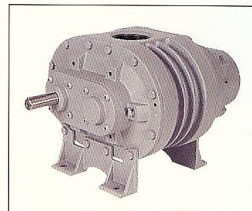


**Positive Displacement Blowers**

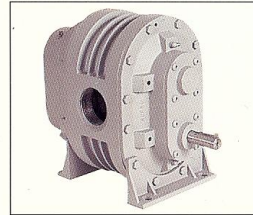
**Roots, Gardner Denver, Tuthill**



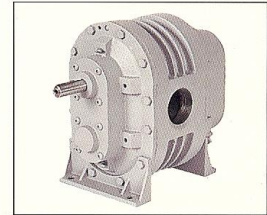
Horizontal Configuration  
Right Hand Drive



Horizontal Configuration  
Left Hand Drive

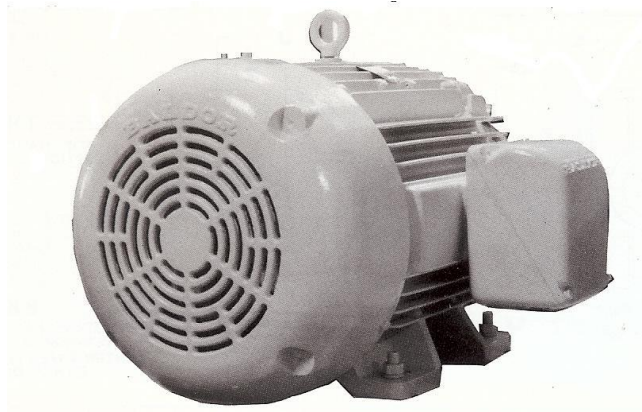


Vertical Configuration  
Bottom Hand Drive



Vertical Configuration  
Top Hand Drive

**Electric Motors**



**Vacuum Relief Valve**



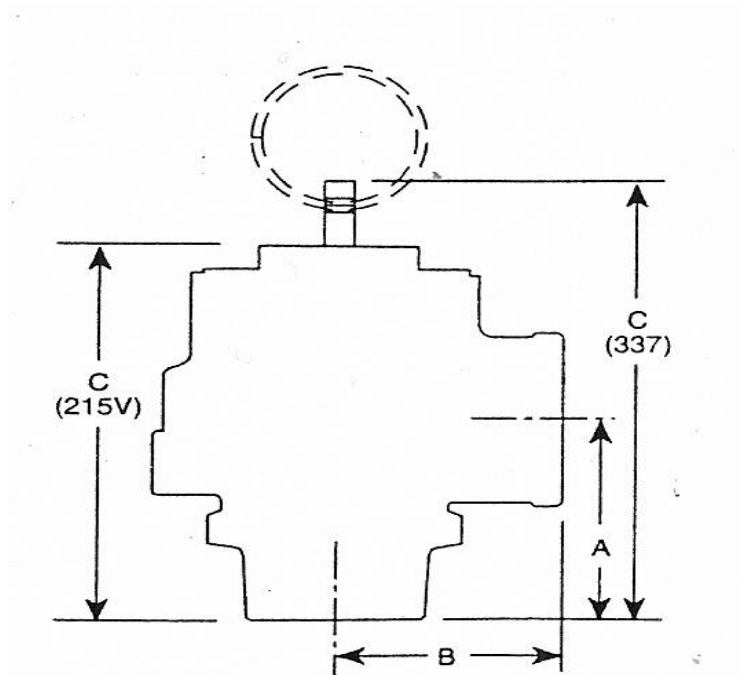
Model 215

**Pressure Relief Valve**



Model 337

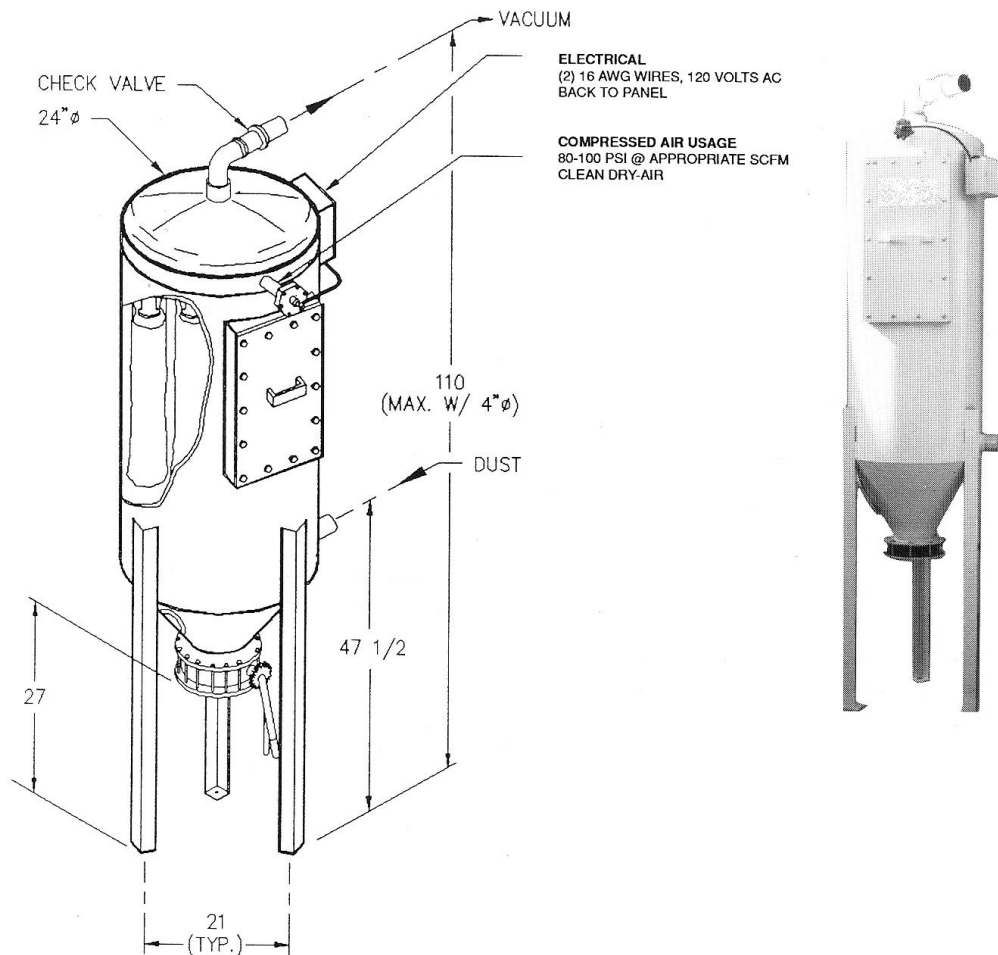
Size Inlet And Outlet	Dimensions, in [mm]								Weight	
	A		B		C 215V		C 337P		lb	[kg]
2" [50.8]	3-1/4 [82.5]	3 [76.2]	6-1/2 [165.1]	7 [177.8]	8 [3.6]					
2-1/2" [63.5]	3-3/4 [95.2]	3-1/2 [88.9]	7-5/8 [194.6]	8 [203.2]	12 [5.4]					
3" [76.2]	4-1/4 [107.9]	4 [101.6]	8-1/2 [215.9]	9 [228.6]	20 [4.1]					



### Clean Air Filter

A Specialty Engineering & Fabrication clean air filter is the best way to decrease maintenance hours and increase the life of your valuable vacuum loader. Clean air filters offer increased capacity, easy maintenance and dust removal. The standard 16 oz. polyester felt bags are cleaned by a 110 volt reverse blow-down unit with timing controls.

Vacuum Loader Size	Recommended Filter	Recommended Line Size
5 HP	CAF - 4	2" O.D.
7.5 HP	CAF - 4	2" O.D.
10 HP	CAF - 5	2½" O.D.
15 HP	CAF - 7	3" O.D.
25 HP	CAF - 7	4" O.D.
40 HP	CAF - 9	4" O.D.

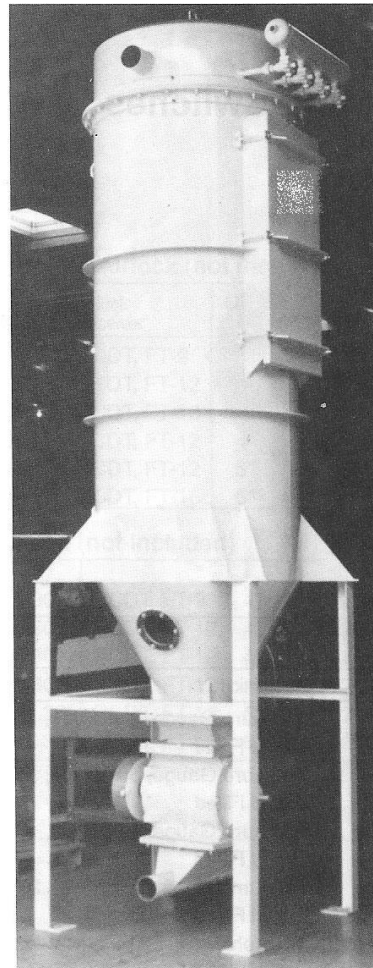
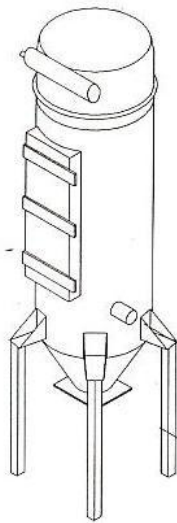


### Filter Receivers

Filter receivers are designed to filter intrusive materials from air during conveying. This process is done by a bag and cage design. Bags are automatically cleaned by a reverse pulse of air, greatly reducing manual cleaning and changing. Reverse blow-downs, sight glass, level switch openings and hinged door for easy access are standard features.

#### Options:

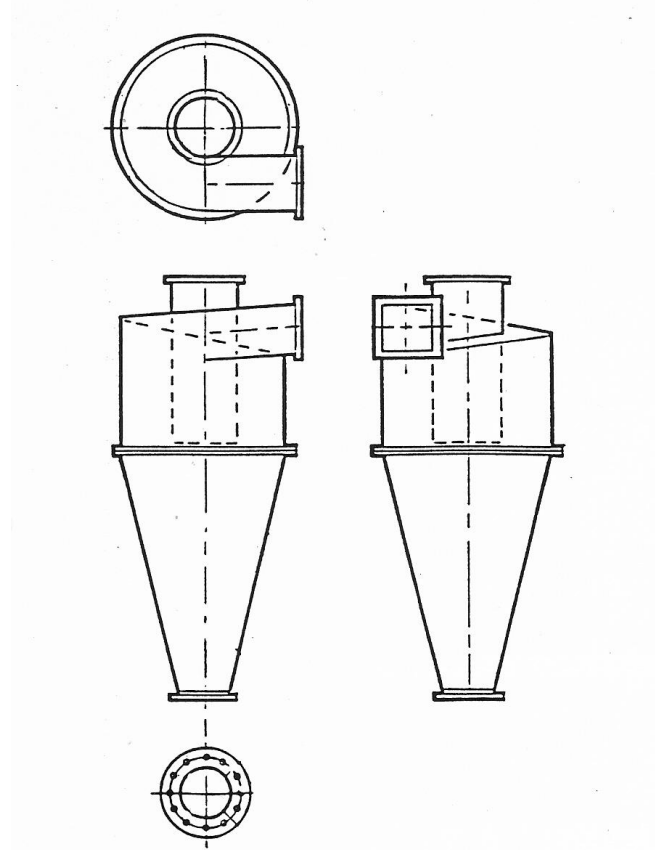
- 30 to 60 inches in diameter
- 9 to 48 bags and cages
- Cloth area from 51 to 415 sq.ft.
- Line size from 2" to 8"
- Butterfly valve or airlock discharge
- Differential pressure gauge
- Broken bag detectors
- Stainless, galvanized or epoxy cages
- Grounded filter bags
- Stainless steel construction
- FDA epoxy interior
- Leg or lug mounting



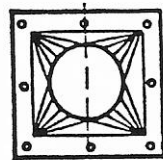
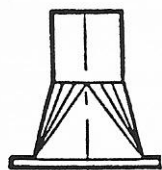


**High Efficiency Cyclones**

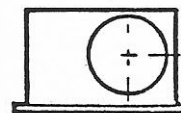
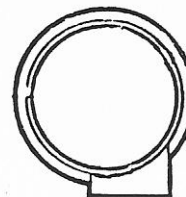
Model	CFM Range
SEFCY 17-13	200 – 525
SEFCY 21-13	300 – 750
SEFCY 30-13	550 – 1500
SEFCY 36-13	850 – 2250
SEFCY 42-13	1250 – 3000



Line Adapter



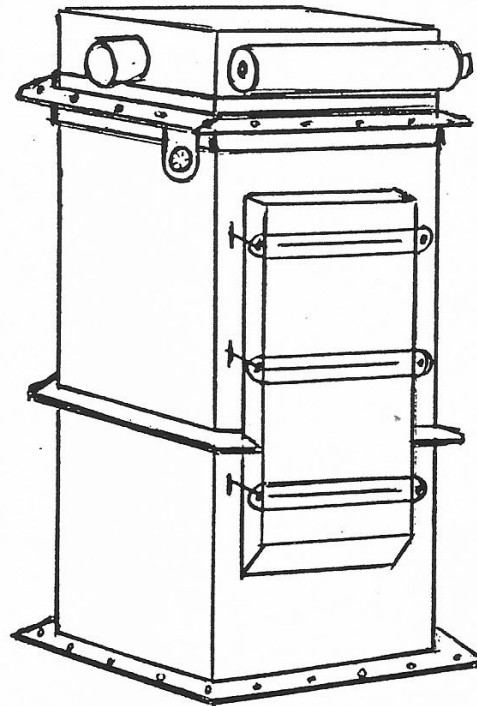
Exhaust Hood



**Automatic Bin Vents**

Automatic bin vents mount on top of silos, storage tanks and large bins. Bin vents are used to filter dirty internal air by venting excess air through a filter media. The unit is provided completely assembled and includes a 110 volt reverse pulse blow-down unit, 16 oz. polyester felt filter bags, differential pressure gauge and exhaust vent. Bin vents are available in stainless, aluminum and carbon steel. FDA epoxy coated interiors are available upon request.

Model	Filter Area	# of Bags
SEFBV - 9	72 sq.ft.	9
SEFBV - 16	128 sq.ft.	16
SEFBV - 25	200 sq.ft.	25
SEFBV - 36	288 sq.ft.	36
SEFBV - 49	392 sq.ft.	49
SEFBV - 64	512 sq.ft.	64



**Airlocks**

Airlock	Rotor RPM	Lbs./min	Lbs./hr
FT-7	10	21.00	1260
	15	31.50	1890
	20	42.00	2520
FT-9	10	47.25	2835
	15	70.88	4252
	20	94.50	5670
FT-11	10	82.25	4935
	15	123.38	7403
	20	164.50	9870
FT-12	10	131.25	7875
	15	196.88	11812
	20	262.50	15750
FT-14	10	192.50	11550
	15	288.75	17325
	20	385.00	23100
FT-16	10	280.00	16800
	15	420.00	25200
	20	560.00	33600
FT-18	10	455.00	27300
	15	682.00	40920
	20	910.00	54600
FT-22	10	700.00	42000
	15	1050.00	63000
	20	1400.00	84000

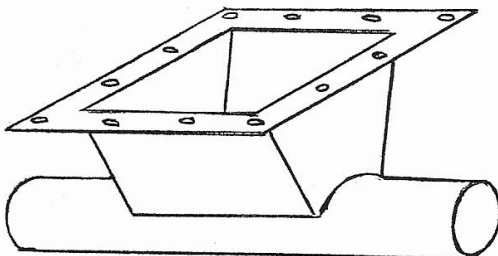
Round Airlock



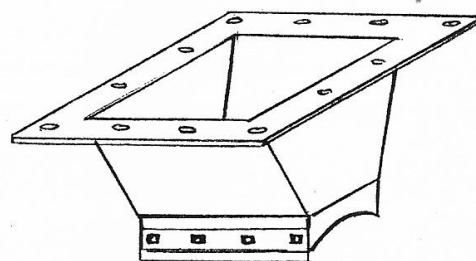
Square Airlock



Airlock Discharge Adapter  
(no legs)



Airlock Shear Plate



**Dust Collector Replacement Parts**



Diaphragm Valve



Timer Board

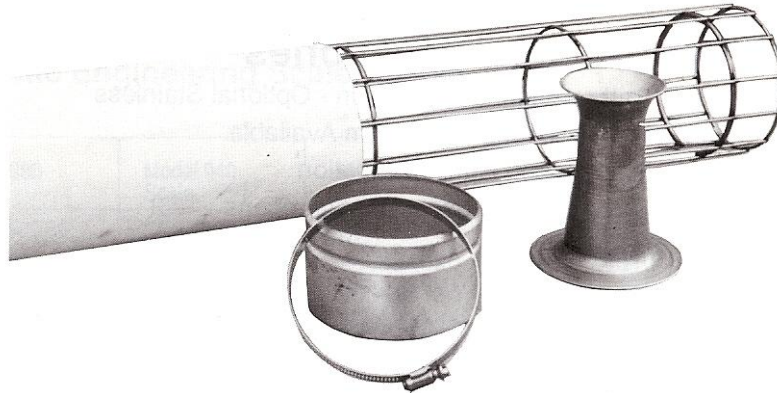


Solenoid Pilot Valve



Magnehelic Gauges

**Filter Bags, Cages, Cups & Venturies**



Cages

Materials	Finishes
Carbon Steel Galvanized Steel Stainless Steel	Plain Epoxy

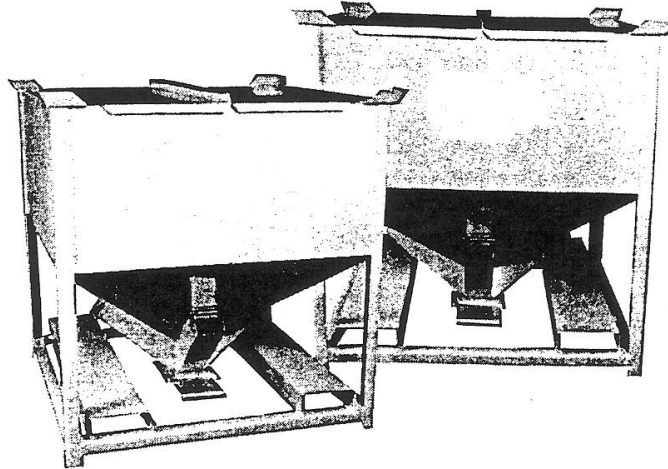
Cups & Venturies

Materials	Finishes
Carbon Steel Galvanized Steel Stainless Steel	Plain

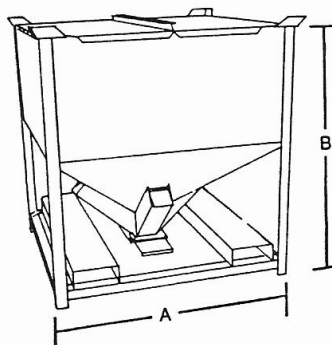
Bags

Materials	
Polyester (Dacron) Nylon Nomex Fiberglass	Polypropylene Homopolymer Acrylic Ryton

**Mobile Storage Hoppers**



Model No.	Capacity		A	B	Discharge Components
	Cu.Ft.	Pounds	Base Dimensions	Overall Height	
22-050	20	700	44" x 44"	36"	Comes Standard with 4" manual slide gate and 4 vacuum ports
22-100	30	1050		46"	
22-110	40	1400		56"	
22-120	50	1750		66"	
22-130	60	2100		76"	
22-250	20	700	44" x 44"	32"	Comes standard with 4" manual slide gate only
22-200	30	1050		42"	
22-210	40	1400		52"	
22-220	50	1750		62"	
22-230	60	2100		72"	

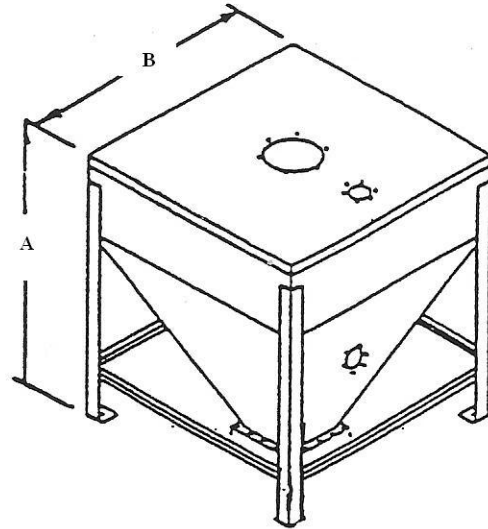


### Surge Bins

Specialty Engineering & Fabrication's fabricated bulk storage bins offer 60° discharge cones, clean-out ports, removable lids with gaskets and support legs constructed of carbon steel. These storage bins are available in stainless steel, aluminum or carbon steel. FDA epoxy coated interiors available upon request.

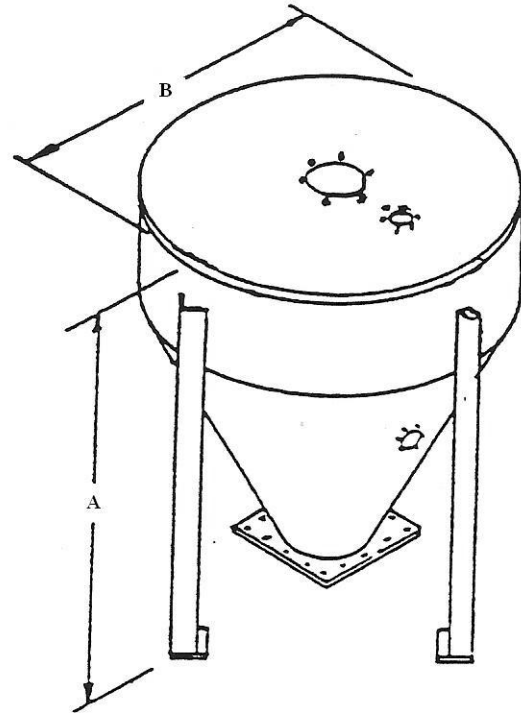
#### Square Bins

Model	Cu.Ft.	Dim A	Dim B
SQ-15	15	74"	48"
SQ-25	25	88"	48"
SQ-40	40	100"	48"
SQ-75	75	124"	48"
SQ-100	100	127"	60"
SQ-125	125	134"	60"



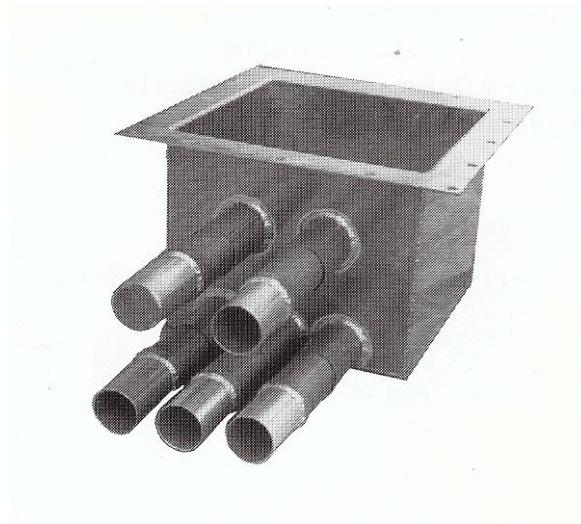
#### Round Bins

Model	Cu.Ft.	Dim A	Dim B
RD-15	15	60"	48"
RD-25	25	66"	48"
RD-40	40	84"	48"
RD-75	75	94"	60"
RD-100	100	108"	60"
RD-125	125	104"	72"



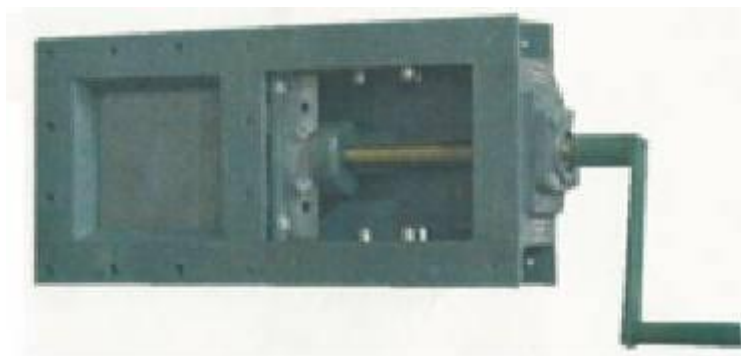
### Vacuum Take-Away Boxes

Vacuum take-away (VTA) boxes can be made to your specific needs. Vacuum stubs from 1½” to 4”, drain gates and clean-out access doors are available.



### Slide Gates

Specialty Engineering & Fabrication’s slide gates provide manual flow control as well as complete shutoff capability at the discharge of surge bins and silos.





**High/Low Bin Level Indicators**



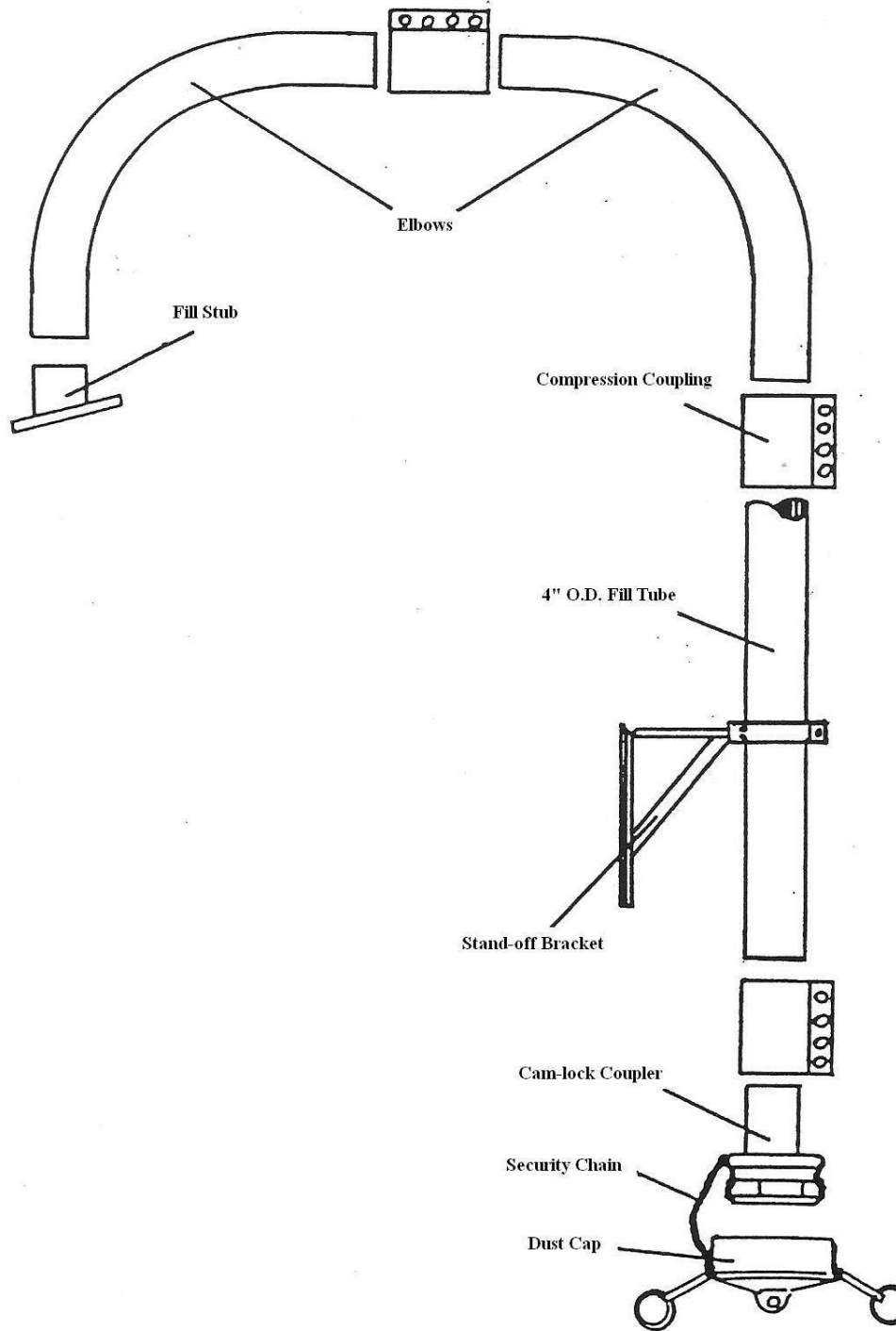
**Silo Inventory Monitoring Units**



**Proximity Switches**

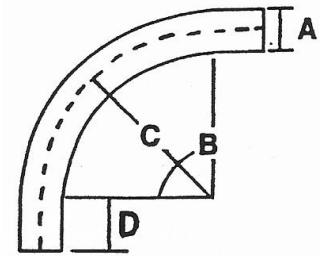


**Silo Fill Kits**


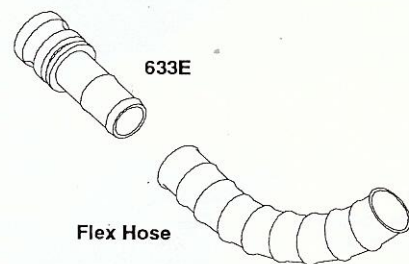

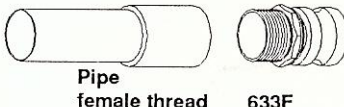

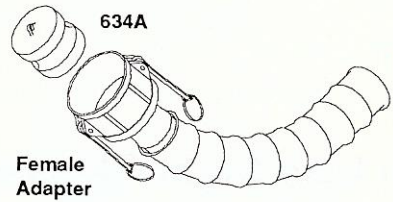
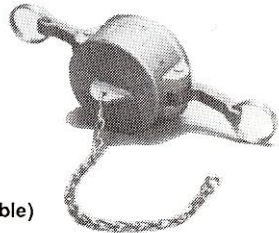
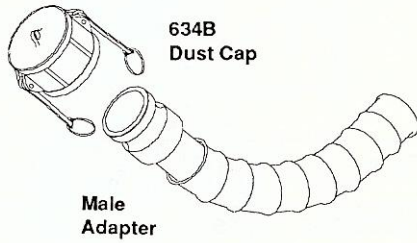
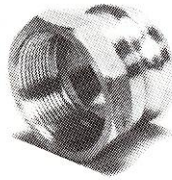
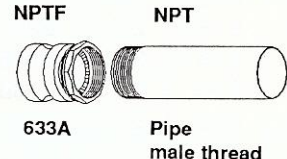


**Conveying Elbows**

A Line Size OD	Material	B Degrees	Wall Thickness	C Centerline Radius
1-1/2"	Aluminum	30, 45, 60, 90	16ga	6, 8, 12, 15, 18 24, 30, 36, 48
	Carbon Steel		16, 14, 11ga Sch 40	
	Stainless Steel		16, 14ga	
2"	Aluminum	30, 45, 60, 90	16, 14, 11ga Sch 10	6, 8, 12, 15, 18 24, 30, 36, 48
	Carbon Steel		16, 14, 11ga Sch 40	
	Stainless Steel		16, 14, 11ga Sch 5, 10	
2-1/4"	Aluminum	30, 45, 60, 90	16, 14ga	8, 12, 15, 18, 24 30, 36, 48
	Carbon Steel		16, 14, 11ga	9, 12, 15, 18, 24 30, 36, 48
	Stainless Steel		16, 14ga	8, 12, 15, 18, 24 30, 36, 48
2-1/2"	Aluminum	30, 45, 60, 90	16, 14, 11ga Sch 10	9, 12, 15, 18, 24 30, 36, 48
	Carbon Steel		16, 14, 11ga Sch 40	
	Stainless Steel		16, 14, 11ga Sch 5, 10	
3"	Aluminum	30, 45, 60, 90	16, 14, 11ga Sch 5, 10	9, 12, 15, 18, 24 30, 36, 48
	Carbon Steel		16, 14, 11ga Sch 40	
	Stainless Steel		16, 14, 11ga Sch 5, 10	
3-1/2"	Aluminum	30, 45, 60, 90	16, 14, 11ga Sch 5, 10	12, 15, 18, 24 30, 36, 48
	Carbon Steel		16, 14, 11ga Sch 40	12, 15, 18, 24 30, 36, 48
	Stainless Steel		16, 14, 11ga Sch 5, 10	9, 12, 15, 18, 24 30, 36, 48
4"	Aluminum	30, 45, 60, 90	16, 14, 11ga Sch 5, 10	12, 15, 18, 24 30, 36, 48
	Carbon Steel		16, 14, 11ga Sch 40	
	Stainless Steel		16, 14, 11ga Sch 5, 10	
4-1/2"	Aluminum	30, 45, 60, 90	14, 11ga	12, 15, 18, 24 30, 36, 48
	Carbon Steel		14, 11ga	
	Stainless Steel		14, 11ga	
5"	Aluminum	30, 45, 60, 90	11ga Sch 10	18, 24, 30, 36, 42 48, 60, 72
	Carbon Steel		14, 11ga Sch 40	24, 30, 36, 48 60, 72
	Stainless Steel		14, 11ga Sch 10	24, 30, 36, 48 60, 72
6"	Aluminum	30, 45, 60, 90	11ga Sch 10	24, 30, 36, 42 48, 60, 72
	Carbon Steel		11ga Sch 40	
	Stainless Steel		11ga Sch 10	



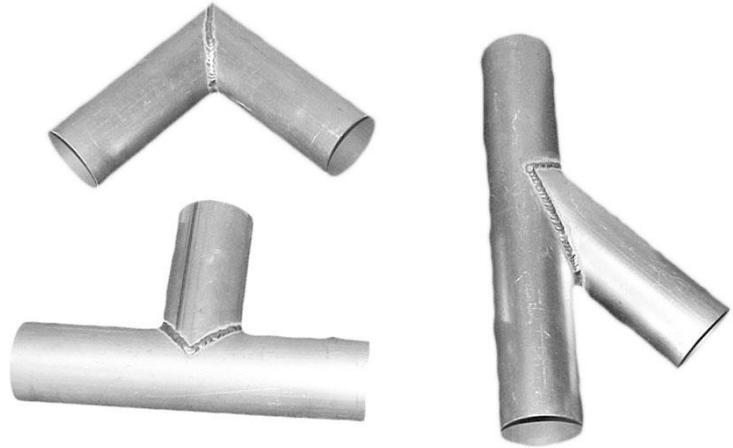
**Cam & Groove Couplings for Hose & Pipe**

		Size (in)		
633 E male adapter, hose shank		1.5		Flex Hose
		2		
		2.5		
		3		
		4		
		5		
633F male adapter, male thread		1.5		Pipe female thread 633F
		2		
		2.5		
		3		
		4		
		5		
634A plug for female adapter		1.5		Female Adapter
		2		
		2.5		
		3		
		4		
		5		
634B Dust Cap for use with adapters  (Locking handles available)		1.5		634B Dust Cap  Male Adapter
		2		
		2.5		
		3		
		4		
		5		
633A male adapter, female thread		1.5		NPTF NPT 633A Pipe male thread
		2		
		2.5		
		3		
		4		
		5		
6				

**Tubing Components**

**Lateral Wyes**

30, 45 and 60 degrees  
2" to 6" O.D.



**Mitered Elbows**

30, 45, 60 and 90 degrees  
2" to 6" O.D.

**Tees**

2" to 6" O.D.

**Compression Couplings**

Tubing or Pipe  
2" to 6" O.D.



**Tubing & Pipe**

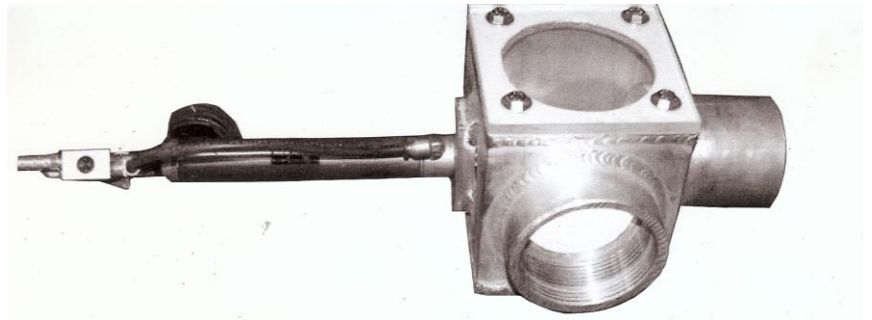
2" to 6" O.D., 20 ft. lengths  
Aluminum, Stainless, Carbon Steel



**Vacuum Chambers and Accessories**



**Vacuum Chambers**  
Non Self Containing & Self Containing  
0.6 cu.ft. to 6.0 cu.ft.



**Vacuum Sequencing  
Valve**



**Filter Plates**



**Check Valves**  
Rubber, Steel, Stainless

### Installation Services

Specialty Engineering & Fabrication offers mechanical installation services for a variety of products. We specialize in silos, pneumatic conveying equipment, mezzanines and platforms and safety products. With over 20 years of experience in mechanical installations, SEF will make sure your installation is completed safely and accurately. Contact us today to see how we can help with your next installation requirement.



### Maintenance Services

At Specialty Engineering & Fabrication we pride ourselves on providing not only quality parts and products but also quality maintenance service as well. Maintenance services include the following:

- Vacuum and Pressure Blower Service
  - Oil Changes
  - Filter Cleaning and Replacement
  - Belt Inspection and Replacement
  - Bi-annual or Quarterly Services Available
- Vacuum and Pressure Blower Inspection and Rebuilds
- Clean Air Filter, Filter Receiver and Bin Vent Service
  - Clean Filter Bags/Cartridges
  - Replace Worn Bags/Cages
  - Inspect and Replace Bag Cages
  - Bi-annual and Quarterly Service Available
- Damaged or Worn Conveying Line Replacement