



Aeration Systems

FANS, DUCTWORK, COMPUTERIZED DESIGN



Sukup Aeration System



FREE Computerized Design

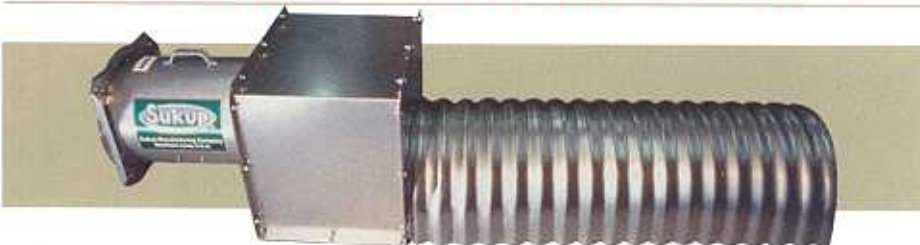
To help you put together the right aeration system for your needs, Sukup offers free computerized aeration system design. With our exclusive computer program, we can produce the necessary design data, an itemized equipment price list and a computer-drawn layout—all free of charge!

Spiral Lock Full-Round Tubing



- Available solid or perforated with all tubing corrugated for extra strength.
- Perforated Spiral Lock Tubing features unique smooth-punched slots for easier handling.
- Available in 12", 15", or 18" dia.
- 10' or 20' lengths
- 16, 18 or 20 gauge galvanized steel.
- Connect with angle ring or connector sleeve.

Green Arch Half-Round Aeration Ductwork



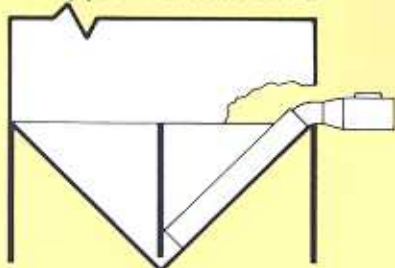
- Greater air delivery is allowed through the large perforated open area.
- 20" half-round design offers 30% more cross-section area than conventional 12" tubing for much greater capacity.
- Installs quickly and easily.
- Unique arch design allows ducts to be nested in a compact pile – requires only 1/5 the storage space of round duct.
- Available solid or perforated in 20" or 30" width at base.
- For use with pressure aeration only. Not for suction systems.

Deep Depth Corrugated Aeration Duct

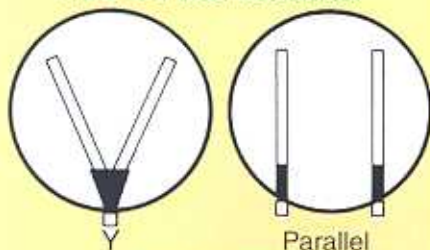


- For grain depths up to 165'.
- Fully corrugated for added strength.
- Solid or perforated duct.
- Available in 12" dia.-18 & 20 gauge
18" dia.-16, 18, & 20 gauge
24" dia.-14 & 16 gauge
- 4', 12' or 20' lengths available.

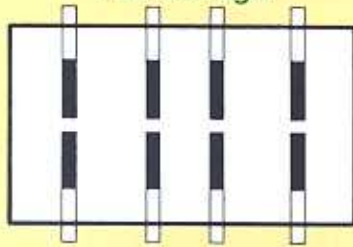
Hopper Bottom Bins



Above Floor Aeration



Flat Storage



FREQUENTLY CHECK YOUR GRAIN!

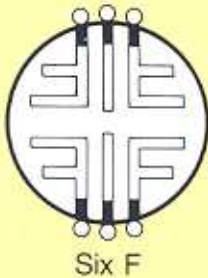
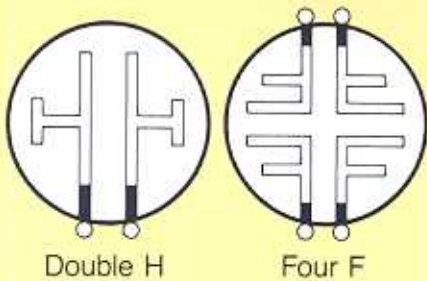
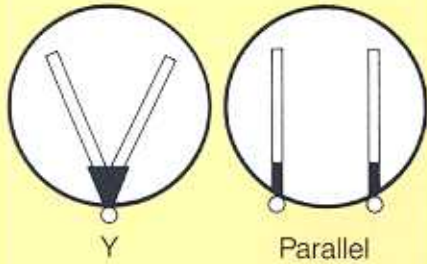
Sukup aeration designs and systems are based on cool, clean, dry grain.

The success of any aeration system is dependent upon proper aeration management. Proper management and moisture barriers are essential to prevent spoilage of grain and corrosion and weakening of ducting.

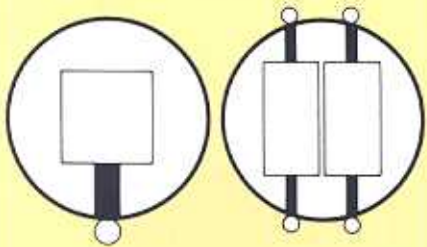
Aeration helps preserve the quality of stored grain. However, in order to ensure this quality, it is critical to carefully monitor the grain through frequent personal observation and/or the use of monitoring devices.

Design and Components

Flush Floor



Square Pad



Heavy-Duty Hawk Cut Flooring



Sukup Hawk Cut™ planks are the backbone of a successful flush floor system. Flush floor systems are an economical approach to aeration, that allow easier grain removal than "above floor" ductwork.

Sukup Hawk Cut™ Flooring is twice as strong as conventional perforated floors, so it makes the perfect base for a Sukup Aeration System. No steel is removed in forming the large open area in the plank, and all the openings are created in the sloped sides of the corrugation, not at the top or bottom ridge, which would weaken the planks. Combined with the high arch of the corrugation, this allows Hawk Cut™ planks to support up to twice the weight of other floors (see inset above).

For even better airflow distribution, install a square pad system, using Sukup Hawk Cut™ planks. For the ultimate in aeration, use a full Hawk Cut™ floor.

U.S. Patent #: 4,418,558

Precision-Engineered Support

Sukup Z-Post Floor Supports provide precision-engineered support for your Hawk Cut™ flooring. The exclusive "Z" shape gives 60% more inches of support than typical "U" shaped posts, and it covers more area, providing a wider, more solid base. The diagonal portion of the "Z" gives 15% more support across the arch of the floor plank for added strength to prevent "cupping" of the floor. The notched sides and spring-type action lock the support in place.



Add a Sukup Power Roof Exhauster

A Sukup Power Roof Exhauster will help to improve the efficiency of your aeration system. A Sukup Power Roof Exhauster will reduce the number of openings needed to exhaust air. A Power Roof Exhauster pulls air from the top of the bin to reduce moisture build-up in the roof area.

- Each unit is equipped with a totally enclosed 1750 rpm motor
- Choose from 2 hp, 1 phase or 2 hp, 3 phase
- Housing and shutters are made of galvanized steel
- Fan airflow rate: 10,000 CFM

FANtastic Airflow!

Sukup Axial Fans

Sukup Axial Fans deliver high airflow at low cost, making them ideal for aeration systems. Features include:

- Cast aluminum blades with close tip clearance for maximum airflow.
- Heavy-duty, totally enclosed motors (3/4 - 3 hp) provide years of dependable operation.
- Square end plates maintain accurate roundness of the housing, give uniform support all around and eliminate the need for extra legs that concentrate stress and distort the housing.
- Trantorque bushings make it easy to remove the blade.
- 12" - 18" Axial Fans can be easily mounted to push or pull air.



Sukup Centrifugal Fans

Sukup fans are #1! Compare airflows - Sukup Centrifugal Fans give you more airflow for your money.

- Centrifugal fans offer quieter operation
- Airfoil blades move air more efficiently than flat blades
- Blades are dynamically balanced for smooth, trouble-free operation
- Sizes from 3 hp to 50 hp

Sukup High Speed (3500 rpm) Centrifugal Fans are ideal for aerating deep grain depths or small grains.

- Operate at high static pressures
- Feature direct drive and totally enclosed motors for dependable operation
- Sizes from 3 hp to 60 hp

Sukup In-Line Fans

Sukup In-Line Fans combine the characteristics of a centrifugal fan with an axial housing to make an economical, practical fan for use on aeration systems.

Features include:

- Precision-balanced blades.
- Heavy-gauge, galvanized housings, provide greater strength and less air leakage.
- In-line fans are ideal for high static pressure situations, such as aerating small grains and tall bins.



AXIAL FAN AIRFLOW *(CFM)

Fan Size	Static Pressure (inches of water)								
	0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
12" 3/4 hp	1900	1675	1290	815	550	325	100		
12" 1 hp	2308	1963	1460	876	595	305			
14" 1 1/2 hp	3132	2852	2526	2126	1511	1040	720		
18" 1 1/2-2 hp	5450	4850	4250	3600	2800	2000	1500	1050	
18" 3 hp	7000	6600	6150	5575	4850	3950	3100	2400	1900
38" 15 hp	28,000	26,000	24,000	22,300	21,800	19,000	16,500	13,500	
44" 30 hp	46,000	43,900	41,400	38,800	36,300	33,600	30,600	27,000	
Fan Size	0	1	2	3	4	5	6	7	8
24" 5-7 hp	12,800	11,750	10,300	8600	6250	3350	1900	600	
24" 7-10 hp	15,200	13,750	12,250	10,500	7600	3900	2100	400	
28" 10-15 hp	19,050	17,300	15,600	13,600	11,100	7350	4800	2800	700

1750 RPM CENTRIFUGAL FAN AIRFLOW *(CFM)

Fan Size	Static Pressure (inches of water)									
	0	1	2	3	4	5	6	7	8	9
3 hp	5300	4500	3800	3400	3000	2600				
5 hp	9500	8900	7650	6700	6000	5000				
7 1/2 hp	12,000	11,300	10,400	9400	8500	7700	6700			
10 hp	16,000	15,150	14,200	13,200	12,200	11,200	10,100	7800	3300	
15 hp	18,000	17,000	16,100	15,200	14,300	12,700	11,700	11,100	8700	
20 hp	23,600	22,800	21,750	20,650	19,600	18,500	17,200	15,800	14,500	12,000
25 hp	24,100	23,200	22,300	21,300	20,300	19,300	18,200	17,100	16,000	14,000
30 hp	24,701	23,787	22,873	21,958	21,044	20,143	19,251	18,359	17,383	16,403
30 dbl.	34,000	32,200	30,300	28,600	27,000	25,500	23,500	21,800	19,500	16,700
40 dbl.	43,400	41,400	39,300	37,300	34,600	31,800	29,100	27,200	25,000	22,200
50 dbl.	54,000	50,800	47,400	44,000	40,600	37,400	34,000	30,800	28,600	25,800

3500 RPM CENTRIFUGAL FAN AIRFLOW *(CFM)

Fan Size	Static Pressure (inches of water)												
	0	2	4	6	8	10	12	14	16	18	20	22	24
3 hp	3300	2800	2400	6	1350	900							
5 hp	4450	4050	3550	3000	2350	1550							
7 1/2 hp	5050	4600	4250	3850	3400	2900	2350	1650					
10 hp	7300	6850	6350	5800	5400	4700	3950	2400					
15 hp	10,050	9500	8850	8050	7350	6350	4750	2650					
20 hp	10,800	10,350	9850	9300	8700	8150	7550	6850	6150	5200	4100		
30 hp	14,500	13,800	13,000	12,300	11,600	10,800	10,200	9400	8400	7800	6800		
40 hp	19,000	18,300	17,200	16,200	15,300	14,300	13,100	11,700	9500	9000	7800		
50 hp	22,400	21,200	20,100	19,300	18,500	17,750	16,500	15,050	14,175	12,950	11,500		
60 hp	24,000	23,300	22,600	21,500	20,800	19,500	18,800	17,750	17,000	16,000	15,400	14,500	13,400

IN-LINE CENTRIFUGAL FAN AIRFLOW *(CFM)

Fan Size	Static Pressure (inches of water)								
	0	1	2	3	4	5	6	7	8
1.5 hp	2500	2240	1990	1735	1430				
4.5 hp	4450	3970	3480	3060	2630	1890	1075		
5-7 hp	6370	6100	5815	5480	5150	4935	4715	4375	3935
7-10 hp	7645	7240	6830	6540	6245	5835	5440	5170	4470
10-15 hp	9440	8850	8320	7850	7450	7110	6810	6540	6260

* All Airflow rates are based on 60 hertz frequency



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