

Reliable, Efficient Heaters

Heater Options



Centrifugal Fans

HIGH EFFICIENCY FOR DRYING OR AERATION



The Right Choice for Today. The Only Choice for Tomorrow.

- Highest Airflow Has Made Sukup #1 in Centrifugal Fans.
- Excellent for Higher Static Pressure Applications.
- Quiet Operation.



Axial Heaters

A complete line of axial heaters is also available for mounting upstream on centrifugal fans.

Heater Model	Max BTU/HR*			
	Temp Rise	7.5-15	20	30-50
Hi-Temp	50-180°F	2.7M	3.7M	5.4M
Lo-Temp	25-75°F	.72M	.72M	1.44M
Super Lo-Temp	10-30°F	.3M	.5M	1M

*Rates are for liquid propane. Rates will be lower for natural gas.

Heater Specifications

Available Models:

D10 fits 7.5 - 15hp fans

D20 fits 20hp

D40 fits 30 - 50hp

CSA Models available

Fuel Types:

Liquid propane

Vapor propane

Natural gas-regulator not included

-3/4" pipe standard

-1-1/4" required for lower gas pressures.



Warning! To prevent serious injury or death:

- Frequently inspect all mechanical and electrical components.
- Lock out all power and have another person present whenever servicing equipment.
- Keep all shields and service doors in place. Keep away from moving parts or hot surfaces.
- Check for gas leaks before servicing.
- Never operate heater without airflow. Heater must be electrically interlocked with fan. When this is not possible, an air switch kit must be added to the heater.
- Clean under floor- a build-up of fines may cause a bin fire.

Heater Control Options

- Thermostat cycles burner off and on. Not recommended for high temperature systems since cool air is blown into the bin when burner cycles off.
- Modulating valve automatically adjusts gas pressure to maintain constant drying temperature under the bin.
- High-Low continuous flame cycles between higher and lower gas pressures for more uniform temperature with greater reliability. Not for low temperature systems.
- Dual burner controls with optional gauges allow you to control multiple heaters from one control box to ensure that they are cycling on and off together for even heat.
- The deluxe control box includes a static pressure gauge and thermometer, along with the temperature controller.



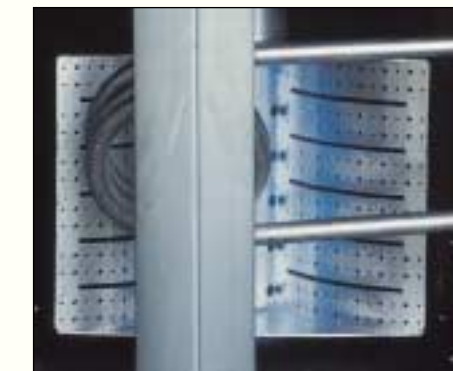
Fuel Oil Heaters

Fuel oil heaters which produce up to 1M BTU/Hr. and utilize a heat exchanger attached to the centrifugal fan inlet are also available.



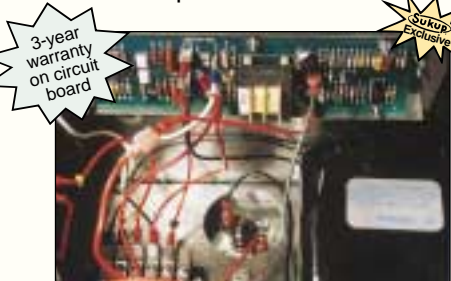
20% Faster Drying

By placing the heater downstream, between the fan and transition, air goes through the fan and then is heated. Because air expands as it is heated, this design gives up to 20% greater drying capacity than a conventional upstream heater placed on the fan inlet.



Reliable Controls

Sukup heaters feature a special solid state circuit board for simpler, more trouble-free operation.



Benefits of Sukup solid state controls include:

- The Sukup stainless steel flame sensor is more reliable and will last longer than flame probes.
- Unique, separate transformer produces an aggressive spark for reliable, easy ignition.
- Solid state circuitry allows additional safety features, for greater reliability.
- Circuit board carries a three-year warranty.



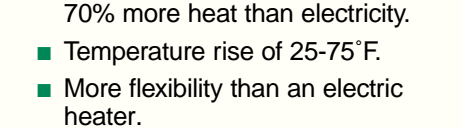
Easy Access Service Door

Sukup heater housings have a large service door to allow easy access to all heater components. A sight glass in the top of the housing allows for easy inspection while burning.

Low-Temp Heater

Sukup manufactures special downstream, low-temp heaters which operate on propane, rather than electricity.

- For equal cost, propane gives up to 70% more heat than electricity.
- Temperature rise of 25-75°F.
- More flexibility than an electric heater.



The standard divided control box separates gas and electrical components while protecting them from the elements.

Highly Efficient Burning

Extensive testing has produced a heater that burns with an intense blue flame, allowing complete, clean combustion up to 6" of static pressure.

In fact, independent tests have shown that the Sukup heater burns within the highest efficiency range.

A coiled vaporizer is available to burn liquid propane where more heat is required, such as in colder climates. Two-way adjustment allows for operation over a wider range of outside temperature.



The exclusive Sukup vaporizer high limit features manual reset, so you can tell if vaporizer needs to be readjusted.

Safety Features

Sukup heaters have more standard safety features than any other brands for your peace of mind.

- Pressure relief valves on piping.
- 30-second purge delay.
- Stainless steel flame sensor shuts off gas if flame is not present.
- Spring-loaded solenoids automatically close when electricity shuts off.
- Exclusive transition high limit shuts burner off if temperature in transition gets too hot.
- Electrical components are grounded.



The standard divided control box separates gas and electrical components while protecting them from the elements.



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FANtastic™ Airflow and Quality Have Made Sukup #1 in Centrifugal Fans

The fan is the key to a successful drying and aeration system. Sukup puts great effort into designing and manufacturing the best fans possible. That's why Sukup is #1 in sales of centrifugal fans.

Compare our prices and airflow (as tested by an independent fan laboratory); you'll discover for yourself why **Sukup is #1**.



Details Make The Difference

- Adjustable leveling legs on single inlet fans allow easy leveling and support while giving more flexibility for adjusting to inconsistencies in concrete pad.



- Special airfoil blades move more air due to the backward-curved, non-overloading design.
- Fan wheels are statically and dynamically balanced for smooth, trouble-free operation.



- Exclusive lip easily connects the fan to the heater or transition to form an air tight seal.



Each One Factory-Tested
All Sukup fans and heaters are factory-tested prior to shipment in order to ensure that our customers are getting a top quality product that works properly from day one. Fans are tested for smoothness, motor performance and general operation. **Plus, Sukup gives you a two-year warranty you can depend on.**

Sukup Fans Purr
A Sukup centrifugal fan sounds like a "purr" compared to a "screaming" axial fan. This quiet operation provides a safer working environment and less irritation to workers and surrounding residential areas.

Top Quality Motors and Controls

- Sukup engineers test motor amperage and temperature under long-term, maximum-load conditions to ensure that the motors will stand up under tough operating conditions.
- Controls include:
 - magnetic starter
 - overload relay
 - start-stop buttons
 - 115v circuit to interlock heater with fan (7.5-50hp 1750 RPM)



- Direct motor drive for greater efficiency and less maintenance.
- Available models:
 - 1 phase 230 volt
 - 3 phase 230 volt
 - 3 phase 460 volt
 - 50 hz and other voltages available upon request
- Integral motor mount.



Double Inlet Fans

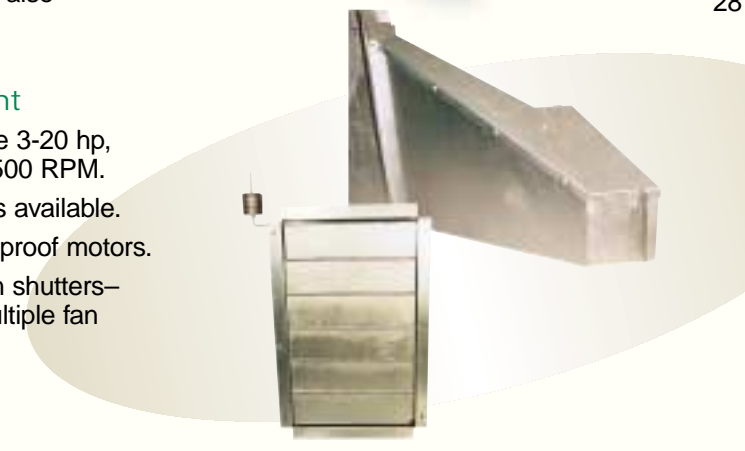
Double inlet fans are available on 30hp and larger 1750 RPM fans. This double blade design blows away comparable single blade fans in airflow and efficiency. The double air inlet pulls air over the motor, completely utilizing motor heat in the process.



Engine driven fans are also available.

Optional Equipment

- CSA models available 3-20 hp, 1750 and 3-50 hp, 3500 RPM.
- Engine-driven models available.
- TEFC and explosion-proof motors.
- Counter-balanced fan shutters—recommended for multiple fan installations.



Sukup Transitions

- Galvanized steel for long life.
- All seams overlap to prevent air leakage.
- Special nutserts are attached directly to the sheet metal, so only one wrench is needed to tighten bolts for assembly.
- Transitions that fit between bin stiffeners are available.

Sukup High Speed Fans

Sukup also offers a full line of high speed (3500 RPM) centrifugal fans.

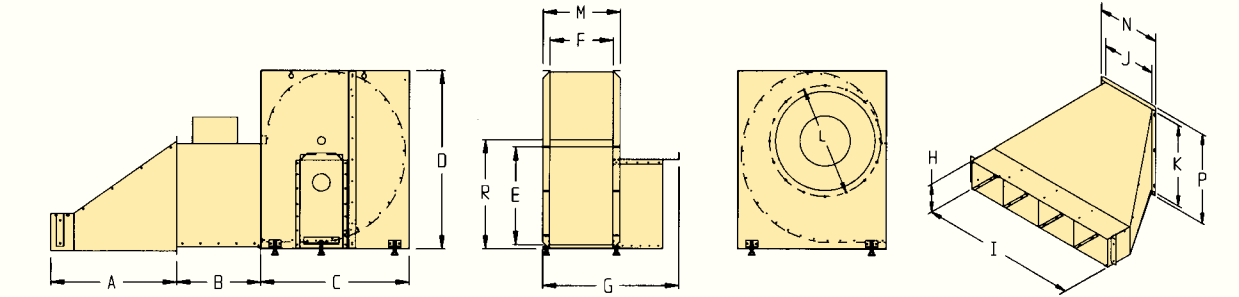
- Ideal for deep grain depths, aerating small grains or where static pressure is high, as in commercial applications.
- Feature totally enclosed motors.
- CSA models available in sizes 3-50hp.

In-Line Centrifugal Fans

Sukup In-Line fans feature a centrifugal fan wheel built into an axial housing.

- 3500 RPM motor is specially engineered for high performance Sukup blades to ensure maximum airflow.
- Ideal for higher static pressures found with small grains and higher grain depths.
- CSA models available in 18", 24" and 28" sizes.

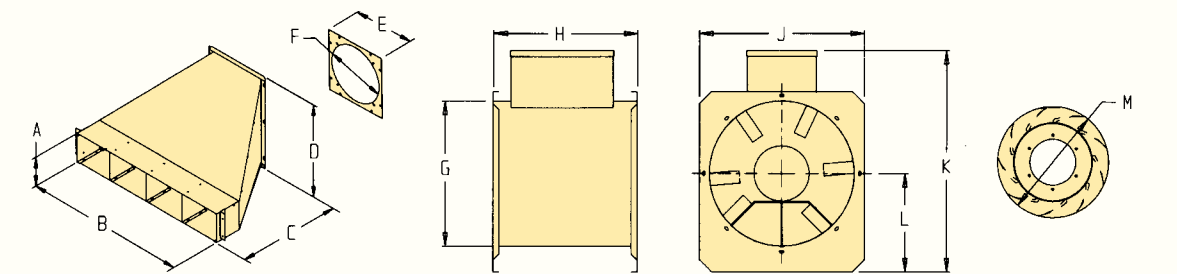
3500 RPM HP	Airflow for 3500 RPM Centrifugal Fans - CFM											
	Static Pressure (inches of water)											
	0	2	4	6	8	10	12	14	16	18	20	22
3	3,300	2,800	2,400	1,950	1,350	900	0	0	0	0	0	0
5	4,450	4,050	3,550	3,000	2,350	1,550	0	0	0	0	0	0
7½	5,050	4,600	4,250	3,850	3,400	2,900	2,350	1,650	0	0	0	0
10	7,300	6,850	6,350	5,800	5,400	4,700	3,950	2,400	0	0	0	0
15	10,050	9,500	8,850	8,050	7,350	6,350	4,750	2,650	0	0	0	0
20	10,800	10,350	9,850	9,300	8,700	8,150	7,550	6,850	6,150	5,200	4,100	0
30	14,500	13,800	13,000	12,300	11,600	10,800	10,200	9,400	8,400	7,800	6,800	0
40	19,000	18,300	17,200	16,200	15,300	14,300	13,100	11,700	9,500	9,000	7,800	0
50	22,400	21,200	20,100	19,300	18,500	17,750	16,500	15,050	14,175	12,950	11,500	0
60	24,000	23,300	22,600	21,500	20,800	19,500	18,800	17,750	17,000	16,000	15,400	14,500



1750 RPM Centrifugal Fan Dimensions - inches																
HP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R
3	36	—	31¼	36¾	19¼	12	29¼	11	45	24	34¼	26	16¼	28	38¾	24¼
5	36	—	42¼	50¼	27¼	15¼	32¼	11	45	24	34¼	26	20	28	38¾	30¾
7½ Std.	36	24	42¼	50¼	29¼	18	38¼	10¼	55¼	18½	29	29	22¼	22	31¼	32½
10 HD*	36	24	42¼	50¼	29¼	18¼	39¼	10¼	55¼	18½	29	31¼	22¼	22	31¼	32½
10 HD*	36	24	42¼	50¼	29¼	18¼	39¼	10¼	55¼	18½	29	31¼	22¼	22	31¼	32½
15 Std.	36	24	42¼	50¼	29¼	19¼	42¼	10¼	55¼	18½	29	31¼	23¼	22	31¼	32½
15 HD*	36	24	42¼	50¼	29¼	19¼	42¼	10¼	55¼	18½	29	31¼	23¼	22	31¼	32½
20 Std.	33	24	48¼	59¼	34	20	43	10¼	68¼	20¼	34	35¼	24¼	23¼	36¼	37¼
20 HD*	33	24	48¼	59¼	34	20	43	10¼	68¼	20¼	34	35¼	24¼	23¼	36¼	37¼
25 Std.	33	24	48¼	59¼	34¼	21	46	10¼	68¼	20¼	34	35¼	25¼	23¼	36¼	37¼
25 HD*	33	24	48¼	59¼	34¼	21	46	10¼	68¼	20¼	34	35¼	25¼	23¼	36¼	37¼
30 Std.	36	28	48¼	59¼	34¼	24	48	10¼	68¼	20¼	34	35¼	28¼	23¼	36¼	37¼
30 HD*	36	28	48¼	59¼	34¼	24	48	10¼	68¼	20¼	34	35¼	28¼	23¼	36¼	37¼
30 dbl.	48	24	49¼	59¼	34¼	42	80	14¼	100¼	42	34¼	35¼	46¼	47	37	37¼
40 dbl.	48	24	49¼	59¼	34¼	42	80	14¼	100¼	42	34¼	35¼	46¼	47	37	37¼
50 dbl.	48	24	49¼	59¼	34¼	44	84	14¼	100¼	42	34¼	35¼	48¼	47	37	37¼

3500 RPM Centrifugal Fan Dimensions - inches																
HP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R
3	36	—	29¼	31¼	16¼	7¼	26¼	11	45	24	34¼	18	11¼	28	38¾	19¾
5	36	—	29¼	31¼	16¼	9	28	11	45	24	34¼	18	13¼	28	38¾	19¾
7½	36	—	30	35¼	19	9¼	30	11	45	24	34¼	21¼	13¼	28	38¾	22½
10	36	—	30	35¼	19	11¼	32	11	45	24	34¼	21¼	15¼	28	38¾	22½
15	36	—	30	35¼	19	12¼	33	11	45	24	34¼	21¼	16¼	28	38¾	22½
20	33	—	31¼	36¾	20¼	11¼	36¼	11	45	24	34¼	26	15¼	28	38¾	24¼
30	36	—	31¼	36¾	20¼	13¼	43¼	11	45	24	34¼	26	18¼	28	38¾	24¼
40	36	—	42¼	50¼	27¼	15¼	45¼	11	45	24	34¼	26	20	28	38¾	30¾
50	36	—	42¼	50¼	29¼	15¼	45¼	11	45	24	34¼	29	20	28	38¾	32½
60	36	—	42¼	50¼	29¼	16¼	47¼	11	45	24	34¼	29	20¼	28	38¾	33

*Heavy-Duty transition is made of 14 gauge galvanized steel. It is also narrower to fit between stiffeners on stiffened bins and for aeration tunnels.



In-Line 3500 RPM Centrifugal Fan Dimensions - inches												
DIA	HP	A	B	C	D	E	F	G	H	J	K	M
18"	4.5	10¼	40¼	36	19½	19½	18¼	18¾	23¼	19½	24	14
24"	5-7	10¼	55¼	38	31½	31½	24	24	27¼	36¼	16¼	17
28"	10-15	10¼	55¼	38	31½	31½	-	28¾	27	31½	41	18½

- Sukup fan housings are made with heavy-duty galvanized steel to resist rust and stand up to the elements.
- Control boxes and motor mounts are also made of galvanized steel. These galvanized components make high quality, long-lasting fans.
- Single inlet fans from 3-40hp.
- Two-year limited warranty on all Sukup fans.
- CSA Models Available
- Plated screen guard over air intake for safe operation.
- Transition assemblies easily with one wrench due to special nutserts.
- Curved spun inlet venturi improves efficiency. Green powder-coated paint over galvanized steel for ultimate rust prevention.

1750 RPM HP	Certified Airflow* For 1750 RPM Centrifugal Fans - CFM										
	Static Pressure (inches of water)										
	0	1	2	3	4	5	6	7	8	9	10
3	5,300	4,500	3,800	3,400	3,000	2,600	0	0	0	0	0
5*	9,500	8,900	7,650	6,700	6,000	5,000	0	0	0	0	0
7½*	12,000	11,300	10,400	9,400	8,500	7,700	6,700	0	0	0	0
10*	16,000	15,150	14,200	13,200	12,200	11,200	10,100	7,800	3,300	0	0
15*	18,000	17,000	16,100	15,200	14,300	12,700	11,700	11,100	8,700	0	0
20*	23,600	22,800	21,750	20,650	19,600	18,500	17,200	15,800	14,500	12,000	0
25	24,100	23,200	22,300	21,300	20,300	19,300	18,200	17,100	16,000	14,000	0
30 sng.	24,701	23,787	22,873	21,958	21,044	20,143	19,251	18,359	17,383	16,403	12,100
30 dbl.	34,000	32,200	30,300	28,600	27,000	25,500	23,500	21,800	19,500	16,700	13,700
40 dbl.	43,400	41,400	39,300	37,300	34,600	31,800	29,100	27,200	25,000	22,200	19,000
50 dbl.	54,000	50,800	47,400	44,000	40,600	37,400	34,000	30,800	28,600	25,800	20,500

*Sukup Manufacturing Co certifies that the airflow for designated fan models has been determined by an INDEPENDENT airflow testing laboratory.

3500 RPM DIA	Airflow for In-Line 3500 RPM Centrifugal Fans - CFM								
	Static Pressure (inches of water)								
	HP	0	1	2	3	4	5	6	8
18"	4.5	4,450	3,970	3,480	3,060	2,630	1,890	1,075	0
24"	5-7	6,370	6,100	5,815	5,480	5,150	4,935	4,715	4,375
24"	7-10	7,645	7,240	6,830	6,540	6,245	5,835	5,440	5,170
28"	10-15	9,440	8,850	8,320	7,850	7,450	7,110	6,810	6,540